

DOTD FORM: 24-102
CONSULTANT SERVICES PROPOSAL

SHREAD-KUYRKENDALL & ASSOC., INC.
13016 JUSTICE AVE.
BATON ROUGE, LA 70816
(225) 296-1335

US 11 NORFOLK SOUTHERN RR OVERPASS (HBI)

ST. TAMMANY PARISH

CONTRACT NO. 4400032800

STATE PROJECT NO. H.000688.5

FEDERAL AID PROJECT NO. H000688

SEPTEMBER 9, 2025

DOTD FORM: 24-102

PROPOSAL TO PROVIDE CONSULTANT SERVICES

(Revised August 11, 2025)

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.

1. Contract Name as shown in the advertisement	US 11 NORFOLK SOUTHERN RR OVERPASS (HBI)
2. Contract Number(s) as shown in the advertisement	4400032800
3. State Project Number(s), if shown in the advertisement	H.000688.5 / H000688
4. Prime consultant name (name must match <u>exactly</u> as registered with the Louisiana Secretary of State (SOS) where such registration is required by law; including punctuation; <u>include screenshot from SOS at the end of Section 20</u>)	Shread-Kuyrkendall & Associates, Inc.
5. Prime consultant license number (as registered with the Louisiana Professional Engineering and Land Surveying Board (LAPELS) if registration is required under Louisiana law)	EF. 0000767 VF. 0000130
6. Prime consultant mailing address	13016 Justice Ave., Baton Rouge, LA 70816
7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)	13016 Justice Ave., Baton Rouge, LA 70816
8. Name, title, phone number, and email address of prime consultant's contract point of contact	Ripley W. "Gary" McClure, President (225) 296-1335 shread@skaengr.com
9. Name, title, phone number, and email address of the official with signing authority for this proposal	Ripley W. "Gary" McClure, President (225) 296-1335 shread@skaengr.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.

Pursuant to Act No. 581 of the 2024 Louisiana Legislature Regular Session, proposer further certifies that it does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association based solely on the entity's or association's status as a firearm entity or firearm trade association. In addition, proposer certifies it will not discriminate against a firearm entity or firearm trade association during the term of the contract based solely on the entity's or association's status as a firearm entity or firearm trade association.



Signature above shall be the same person listed in Section 9:

September 9, 2025

Date:

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):
N/A

Firm(s)' %:

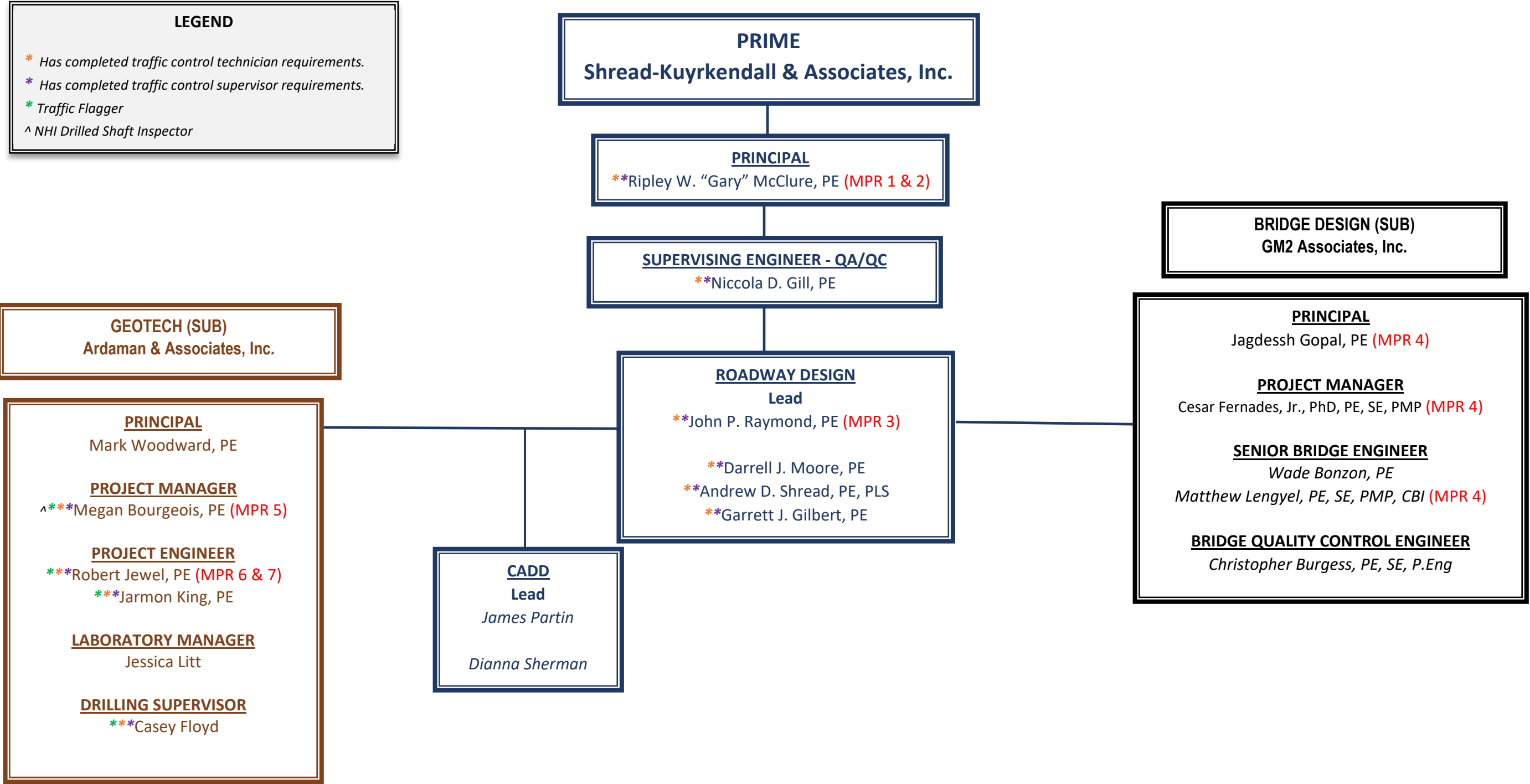
12. Discipline Table

Past Performance Evaluation Discipline(s)	% of Overall Contract *	Prime	Bridge Design Sub	Geotech Sub	Each Discipline must total to 100 %
		Shread-Kuyrkendall & Associates, Inc.	GM2 Associates, Inc.	Ardaman & Associates, Inc.	
Planning	35%	86%	14%		100%
Road	20%	100%			100%
Bridge	40%		100%		100%
Geotech	5%			100%	100%
Identify the percentage of work for the <u>overall contract</u> to be performed by the prime consultant and each sub-consultant.					
<i>Percent of Contract</i>	100%	50%	45%	5%	

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)
Shread-Kuyrkendall & Associates, Inc.	Principal	1	1
	Supervisor-Eng	1	1
	Engineer	4	7
	CADD-Operator	2	3
GM2 Associates, Inc.	Biologist/Wetlands	0	3
	CADD Operator	1	17
	Clerical	1	7
	Engineer	4	8
	Engineer - Other	0	68
	Engineer Intern	0	20
	Geologist	0	2
	Graphics	1	6
	Inspector	0	23
	Inspector - Bridge	0	13
	Professional	0	7
	Project Office Manager	0	4
	Principal	1	8
	Supervisor - Other	1	8
	Supervisor - Eng	1	3
Ardaman & Associates, Inc.	Administrative	1	1
	CADD Technician	2	2
	Clerical	1	2
	Engineer	1	6
	Engineer Intern	3	6
	Principal	2	3
	Senior Technician	8	9
	Supervisor - Eng	3	3
	Supervisor - Other	3	4
	Technician	11	15

14. Organizational Chart



15. Minimum Personnel Requirements

MPR No. Do not insert wording from ad	Personnel being used to meet the MPR (Individual(s) may not satisfy more than one MPR unless specifically allowed by Attachment B of the advertisement)	Firm employed by	Type of license and discipline meeting MPR/ certification & number (Ex: PE # - Civil)	State of license	License / certification expiration date
1	Ripley W. “Gary” McClure, P.E.	Shread-Kuyrkendall & Associates, Inc.	PE. 0024035 – Civil and Environmental	LA	9/30/26
2	Ripley W. “Gary” McClure, P.E.	Shread-Kuyrkendall & Associates, Inc.	PE. 0024035 – Civil and Environmental	LA	9/30/26
3	John P. Raymond, P.E.	Shread-Kuyrkendall & Associates, Inc.	PE. 0027988 - Civil	LA	9/30/26
4	Cesar Fernandes, Jr., PhD, PE, SE, PMP	GM2 Associates, Inc.	PE. 0038411 – Civil	LA	3/31/26
	Matthew Lengyel, PE, SE, PMP, CBI	GM2 Associates, Inc.	PE. 0033881 – Civil	LA	9/30/26
	Jagdeesh Gopal, PE	GM2 Associates, Inc.	PE. 0050327– Civil	LA	9/30/27
5	Megan Bourgeois, P.E.	Ardaman & Associates, Inc.	PE.0036725 – Civil	LA	3/31/26
6	Robert Jewell, P.E.	Ardaman & Associates, Inc.	PE.0038579 – Civil	LA	9/30/26
7	Robert Jewell, P.E.	Ardaman & Associates, Inc.	PE.0038579 – Civil	LA	9/30/26

16. Staff Experience

Firm employed by **Shread-Kuyrkendall & Associates, Inc.**

Name	Ripley W. “Gary” McClure, P.E.		Years of relevant experience with this employer	34
Title	PRINCIPAL		Years of relevant experience with other employer(s)	8
Degree(s) / Years / Specialization			B.S. / 1982 / Civil Engineering	
Active registration number / state / expiration date			PE. 0024035 / LA / September 30, 2026	
Year registered	1988 /1994	Discipline	Civil Engineering / Environmental Engineering	
Contract role(s) / brief description of responsibilities			Meets the roles for MPR 1 and 2 Mr. McClure’s role will be Principal-in-Charge	
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; Experience dates should cover the years of experience specified in the applicable MPR(s).			
	Mr. McClure has over 42 years of experience in the design of roadways and bridges. He has designed and supervised multiple roadways throughout the state and is very knowledgeable of DOTD standards and requirements. Early in his career, he designed sections of I-49 through Alexandria and Shreveport. Mr. McClure has provided design services to DOTD for pavement preservation on one of the most difficult projects for restoration for the Interchange and Interstate for I-10, I-12, & I-59. This project was awarded the DOTD 2016 Transportation Excellence Award.			
03/21 – 01/25	H.010155 / US 90: Rail Spur Removal SE of LA 85: Iberia Parish – Mr. McClure served as Lead Bridge Designer for the future I-49, this project involved the design of roadway widening and reconstruction, including two (2) parallel bridge structures over an existing at-grade railroad crossing. A carefully planned traffic sequence of construction was implemented, utilizing a diverging roadway from US 90 to the frontage roads to maintain continuous traffic flow on US 90 throughout the construction period. SKA was responsible for delivering all comprehensive roadway and bridge design services throughout the project			
03/21-Present	20-CS-HC-0015 / Hennessey Blvd. – Perkins Rd. Connector (Perkins Rd. Improvements): East Baton Rouge Parish – Mr. McClure serves as Principal-in-Charge for the Perkins Road Improvements project which consists of widening Perkins Rd. from Kenilworth Pkwy to approximately 700 feet east of Erica Stanford. The purpose of the project is to improve safety at the intersection of Perkins Road and Kenilworth Pkwy and the intersection of Perkins Rd and One Perkins Place. Access Management will be implemented as part of this project.			
07/20 – Present	H.013284 / Mississippi River Bridge Crossing: EBR, WBR, Iberville, Ascension Parish – Mr. McClure serves as Principal-in-Charge and Lead Roadway Designer. This project involves the construction of a new alignment for a four-lane divided, controlled-access highway extending from LA 1 to LA 30, including a new bridge structure crossing the Mississippi River. SKA leads the roadway design efforts, developing 33 alignment alternatives that were ultimately narrowed to three final options. Detailed line and grade layouts were provided for each final alternative.			
10/16-08/19	H.011152 / I-12 Widening (US 190 to LA 59): St. Tammany Parish – Mr. McClure served as Lead Bridge Design Engineer for this project. He designed all girders, column bents, spans, sign supports and all other aspects of the bridges. This section of I-12 (US 190 to LA 59) was widened from 4 lanes to 6 lanes. Shread-Kuyrkendall’s involvement is with the two bridges over US 190 as a subconsultant. This design includes 3 – 12 foot travel lanes, 12 foot inside shoulder and 12 foot outside shoulder. The design includes AASHTO Type II & Type IV P.S. Girders. Total length of the two bridges is 680 feet each.			

10/12-Present	H.009266 / I-10 (LA 73 to LA 30): Ascension Parish – Mr. McClure serves as Engineering Supervisor and Lead Bridge Designer. This project involves the widening of approximately 4.5 miles of Interstate 10 from LA 73 to LA 30, including widening three (3) existing bridge structures within the project limits. Project scope includes widening the interstate from two lanes in each direction to three lanes in each direction. Phased construction of bridges at the LA 73 interchange with I-10 requires diversion crossovers and ramp modifications. Mr. McClure performed existing bridge inspection, evaluation, and reports for bridges at LA 30 and Smith Bayou as well as oversaw QA/QC.
10/10 – Present	H.013579, H.003047, & H.012290 / Pecue Lane / I-10 Interchange: East Baton Rouge Parish – Mr. McClure served as Engineer Supervisor and Bridge Design Supervisor. Mr. McClure provided engineering design support and he developed all of the multiple alternatives during the environmental Stage 1 phase of the project. This project includes a Diverging Diamond Interchange (DDI) . The project was ultimately broken into three separate phases and design plans to facilitate federal redistribution funding requirements, and the design team was challenged with an accelerated schedule as a result. The DDI includes full eastbound and westbound on and off ramps on I-10 and widens Pecue Lane to six lanes with a connector to Rieger Road. To accommodate the ramps, widening of I-10 was necessary. A Final Level 4 TMP was required for this project.
08/10-01/15	H.003107 / French Branch Bridge – West Pearl River Bridge (I-10 / I-12 / I-59): St. Tammany Parish – Mr. McClure served as Engineering Supervisor and Lead Bridge Designer. This project included the pavement preservation of the I-10 / I-12 / I-59 Interchange. The improvements and repairs included rubblization, pavement replacement, and overlay for cross slope correction. This project was a pavement preservation/restoration project and awarded the DOTD 2016 Transportation Excellence Award .
10/07- 01/10	258-32-0022 / Essen Lane (LA 3064 at Interstate 10): East Baton Rouge Parish – Mr. McClure served as Engineering Supervisor and oversaw QA/QC. This project includes the design for urban intersection improvements (UA-2) for DOTD and the Baton Rouge Green Light Plan. The design includes geometry to implement dual left-turn lanes on Essen Lane and additional I-10 ramp lanes . Mr. McClure oversaw the design of the urban drainage, horizontal and vertical alignments, geometrics, joint layouts, graphical grades, sequence of construction, earthwork and quantities. This project is very similar to pavement preservation in that the roadway was widened along with pavement replacement.
10/06- 08/07	258-31-0015 & 258-33-0006 / Burbank Drive / LA 42 (Bluebonnet to Highland): East Baton Rouge Parish – Mr. McClure served as Engineer Supervisor and oversaw QA/QC on this project which consisted of widening Burbank Drive (LA 42) from a two-lane roadway section to a four-lane roadway section. The roadway section was approximately 2.4 miles long and involved constructing 2 new northbound lanes, turn lanes and improvement to the intersections.
11/04-10/06	014-04-0028 & 014-04-0029 / US 165 (Oberlin to Oakdale): Allen Parish – Mr. McClure served as Engineering Supervisor and oversaw QA/QC on this project which consisted of widening and improving US 165 between Oberlin and Oakdale, Louisiana. This comprehensive project encompassed over 12 miles of urban and rural roadway in Allen Parish and included the addition of two new travel lanes , along with full drainage design and associated infrastructure improvements. Mr. Raymond designed urban and rural drainage, horizontal and vertical alignments, superelevation, geometrics, sequence of construction, earthwork, and quantities.
02/04- 11/09	H.007154, H.007152, H.002303 / Central Thruway: East Baton Rouge Parish – Mr. McClure served as Project Manager and Lead Bridge Design Engineer. This project involved the design and construction of a 4-lane divided thruway for 5.2 miles on a new alignment including seven bridges. Also included in the scope of this project was a corridor study, an environmental assessment, topographic surveys, right-of-way maps and property surveys. Mr. McClure provided engineering design support and he developed all detailed line and grade layouts for the multiple alternatives during the environmental Stage 1 phase of the project.
12/98- 12/06	417-01-0015 / LA 28 (LA 121 to LA 465): Vernon Parish – Mr. McClure served as Engineering Supervisor and oversaw QA/QC on this project which consisted of widening 8.2 miles of LA 28, a rural state highway. The scope of work included the addition of two new travel lanes , converting the existing facility into a four-lane highway with a center median, enhancing traffic flow and safety. SKA's responsibilities included full roadway design, all drainage systems and associated infrastructure.

16. Staff Experience

Firm employed by **Shread-Kuyrkendall & Associates, Inc.**

Name	Nicola D. Gill, P.E.	Years of relevant experience with this employer	23
Title	SENIOR ENGINEER	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization	B.S. / 2002 / Civil Engineering		
Active registration number / state / expiration date	PE. 0032914 / LA / March 31, 2027		
Year registered	2007	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities	<i>Ms. Gill's role will be Supervising Engineer and oversee QA/QC for this project</i>		
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; Experience dates should cover the years of experience specified in the applicable MPR(s).		
	<i>Ms. Gill has been a Project Engineer/Design Engineer on multiple classes of roadways and various complex bridge structures for over 20 years with Shread-Kuyrkendall & Associates. She has designed and managed rural and urban Interstate, Arterials, and local roadway and bridge projects. She is very knowledgeable of DOTD standards and requirements and will serve as the Supervising Engineer overseeing the QA/QC for this project.</i>		
12/22-Present	H.015056, H.015058, H.015619 / IDIQ Pavement Preservation Contract: Vermillion and Evangeline Parishes – Ms. Gill serves as Engineering Supervisor and oversees the QA/QC for this project which includes identification of base failures, recommended repairs, identify drainage improvements, development of typical sections, sequence of construction and quantities. The contract consists of preparing preliminary and final plans for the mill and overlay and reconstruction for the roadways associated with this IDID Pavement Preservation Contract. These roadways were pavement preservation/restoration projects.		
03/21 – 01/25	H.010155 / US 90: Rail Spur Removal SE of LA 85: Iberia Parish – Ms. Gill served as Engineer Supervisor and Road Design Engineer for the future I-49, this project involved the design of roadway widening and reconstruction , including two (2) parallel bridge structures over an existing at-grade railroad crossing. A carefully planned traffic sequence of construction was implemented, utilizing a diverging roadway from US 90 to the frontage roads to maintain continuous traffic flow on US 90 throughout the construction period. SKA was responsible for delivering all comprehensive roadway and bridge design services throughout the project		
3/21-Present	20-CS-HC-0015 / Hennessey Blvd. – Perkins Rd. Connector (Perkins Rd. Improvements): East Baton Rouge Parish – Ms. Gill serves as Engineer Supervisor for the Perkins Road Improvements project which consists of widening Perkins Rd. from Kenilworth Pkwy to approximately 700 feet east of Erica Stanford. The purpose of the project is to improve safety at the intersection of Perkins Road and Kenilworth Pkwy and the intersection of Perkins Rd and One Perkins Place. Access Management will be implemented as part of this project.		
06/20-05/22	H.012588, H.012169, H.012587/ I-10 (Atchafalaya Basin Bridge to LA 415): West Baton Rouge and Iberville Parishes – Ms. Gill oversaw the QA/QC for these improvements which involved the overlay and raising of the grade by 8". The asphalt paving was tapered at bridges to allow for smooth transitions. DOTD design guidelines were followed to bring the interstate up to the guideline standards. Fill was used on fore slopes to tie in and match the new 8" overlay. Guardrail was replaced using MASH special details. Existing cable barrier was removed and replaced closer to the shoulder to improve maintenance. Underdrains and cross drains were modified as needed. These roadways were pavement preservation/restoration projects.		

12/19-Present	MA-17-02 / Roddy Road Widening: US 61 To LA 935: Ascension Parish – Ms. Gill serves as Engineering Supervisor and Bridge Design Engineer. As part of the Move Ascension Program, this project is a reconstruction and safety widening of existing Roddy Road to bring this substandard, 2-lane road with deep ditches up to LADOTD design standards for its roadway classification, Urban Collector. SKA provided a detailed sequence of construction and detour measures that were accommodating to the local area.
04/14 – Present	H.004435 / LA 3241 (LA 36 to LA 435): St. Tammany Parish –Ms. Gill served as the Bridge Design Engineer and oversaw the QA/QC. This project includes three (3) segments of nearly 20 miles of new roadway to connect Interstate 12 to the southern terminus of LA 21 in Bush, LA. SKA's contracted segment consists of approximately eight miles of a new alignment in St. Tammany Parish. This new roadway is a four-lane freeway with two new bridges (4 structures total) will be built for this project to span Bayou Lacombe at two different locations, each approximately 500' long, with Type III Girder Spans. 90% of the project corridor is considered wetland which was considered in hydraulic design of the bridges as well as hydraulic analysis of the roadway. Ms. Gill was responsible for the design of the caps, Type III girders, deck, and other parts of the bridges in accordance with the most recent AASHTO LRFD requirements. Ms. Gill utilized LEAP software for all aspects of the bridge such as girders and caps. Additionally, she performed hydraulic analysis for the bridges using HEC-RAS software to establish the pile spacing and location of the bridges as well as velocities and scour potential.
10/16-08/19	H.011152 / I-12 Widening (US 190 to LA 59): St. Tammany Parish – Ms. Gill served as Engineering Supervisor and assisted in bridge design for this project. She designed girders, column bents, spans, sign supports and all other aspects of the bridges. This section of I-12 (US 190 to LA 59) is being widened from 4 lanes to 6 lanes. Shread-Kuyrkendall's involvement is with the two bridges over US 190 as a subconsultant. This design includes 3 – 12 foot travel lanes, 12 foot inside shoulder and 12 foot outside shoulder. The design includes AASHTO Type II & Type IV P.S. Girders. Total length of the two bridges is 680 feet each.
10/12-Present	H.009266 / I-10 (LA 73 to LA 30): Ascension Parish – Ms. Gill serves as Bridge Design Engineer and oversees QA/QC. This project involves the widening of approximately 4.5 miles of Interstate 10 from LA 73 to LA 30, including widening three (3) existing bridge structures within the project limits. Project scope includes widening the interstate from two lanes in each direction to three lanes in each direction. Phased construction of bridges at the LA 73 interchange with I-10 requires diversion crossovers and ramp modifications. Ms. Gill's responsibilities included assisting in the comprehensive bridge evaluation of three (3) existing structures, bridge design calculations, bridge quantities, and hydraulic analysis.
10/10-Present	H.013579, H.003047, & H.012290 / Pecue Lane / I-10 Interchange: East Baton Rouge Parish – Ms. Gill served as Environmental Support and Hydraulic Design Engineer. This project includes a Diverging Diamond Interchange (DDI) . The project was ultimately broken into three separate phases and design plans to facilitate federal redistribution funding requirements, and the design team was challenged with an accelerated schedule as a result. The DDI includes full eastbound and westbound on and off ramps on I-10 and widens Pecue Lane to six lanes with a connector to Rieger Road. To accommodate the ramps, widening of I-10 was necessary. A Final Level 4 TMP was required for this project. A rolling roadblock was used for demolition and girder placement. SKA led a team of seven local firms to provide preliminary and final plans for this high-profile project which included City-Parish, DOTD, and Federal involvement and funding. Ms. Gill provided engineering/environmental design support during the environmental Stage 1 phase of the project. She was responsible for the hydraulic design needed for the Wetlands Permit and she performed the hydraulic analysis for the Wards Creek Bridge at Pecue Lane as well as the entrance ramp bridge at I-10. SKA also conducted extensive investigations of multiple design alternatives and alignments, delivering detailed line and grade layouts for each alternative considered.
08/10-01/15	H.003107 / French Branch Bridge – West Pearl River Bridge (I-10 / I-12 / I-59): St. Tammany Parish – Ms. Gill performed roadway design and traffic control for the design of this project which included the pavement preservation of the I-10 / I-12 / I-59 Interchange. The improvements and repairs included rubblization, pavement replacement, and overlay for cross slope correction. She was responsible for preparing preliminary and final plans for this project. This project was a pavement preservation/restoration project and awarded the DOTD 2016 Transportation Excellence Award .
02/04- 11/09	H.007154, H.007152, H.002303 / Central Thruway: East Baton Rouge Parish – Ms. Gill performed roadway design, drainage design, and bridge hydraulic analysis for this project which involved the design and construction of a 4-lane divided thruway for 5.2 miles on a new alignment including seven bridges. Also included in the scope of this project was a corridor study, an environmental assessment, topographic surveys, right-of-way maps and property surveys. She assisted in the detailed line and grade layouts for all considered alternatives and preparing preliminary and final plans for this project.

16. Staff Experience

Firm employed by **Shread-Kuyrkendall & Associates, Inc.**

Name	John P. Raymond, P.E.	Years of relevant experience with this employer	33
Title	SENIOR ENGINEER	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization	B.S. / 1992 / Civil Engineering		
Active registration number / state / expiration date	PE. 0027988 / LA / September 30, 2026		
Year registered	1998	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities	Meets the role for MPR 3 <i>Mr. Raymond's role will be Lead Roadway Designer</i>		
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; Experience dates should cover the years of experience specified in the applicable MPR(s).		
	<i>Mr. Raymond has been a Project Manager/Road Design Engineer on multiple classes of roadways throughout his 33-year career with Shread-Kuyrkendall & Associates. He has designed and managed multiple roadway projects including pavement preservation projects, widening projects, new alignments, and intersection improvements throughout the state and is very knowledgeable of DOTD standards and requirements.</i>		
12/22-Present	H.015056, H.015058, H.015619 / IDIQ Pavement Preservation Contract: Vermillion and Evangeline Parishes – Mr. Raymond serves as Project Engineer and is responsible for identification of base failures, recommended repairs, identify drainage improvements, development of typical sections, sequence of construction and quantities. He is responsible for preparing preliminary and final plans for the mill and overlay and reconstruction for the roadways associated with this IDID Pavement Preservation Contract. These roadways were pavement preservation/restoration projects.		
05/21-Present	MA-22-01/ LA 73 Roundabout at Bluff Rd. Connector: Ascension Parish – Mr. Raymond is Project and Lead Road Design Engineer. Mr. Raymond was responsible for the design of the multi-lane roundabout which includes a southbound channelized right turn lane on LA 73, an eastbound channelized right turn lane on the LA 73 at Bluff Rd. Connector, and is a multilane roundabout only in the northbound and southbound directions. This project, LA 73 Roundabout at Bluff Rd. Connector (MA-22-01), will widen an existing section of LA 73 from three lanes to four lanes with a raised median and curb and gutter providing access management. Two bulb-outs will be added for U-turns and control of access at the end of the project limits and a multi-lane roundabout is being designed at the intersection with the future Bluff Road Connector (MA-20-01) and an existing commercial drive. Access Management is being implemented due to the proximity of the roundabout to I-10 at LA 73. Mr. Raymond's responsibilities include project management, geometric and hydraulic design, sequence of construction , earthwork, and tabulation of quantities.		
01/20-05/22	MA-18-08/ Henry Road @ LA 930 Roundabout: Ascension Parish – Mr. Raymond was Project and Lead Roadway Design Engineer. He provided design for a single lane roundabout. This project included a roundabout at the intersection of Henry Road and LA 930 (Daigle Road) to replace the existing stop-controlled intersection with a proposed single lane roundabout. LA 930 is a two-lane roadway running north-south at its intersection with Henry Road. Mr. Raymond's responsibilities include project management, geometric and hydraulic design, sequence of construction , earthwork, and tabulation of quantities. This project required coordination with DOTD for the route LA 930.		
12/19-Present	MA-17-02 / Roddy Road Widening: US 61 To LA 935: Ascension Parish – Mr. Raymond is Project and Lead Road Design Engineer. As part of the Move Ascension Program, this project is a reconstruction and safety widening of existing Roddy Road to bring this substandard, 2-lane		

	road with deep ditches up to LADOTD design standards for its roadway classification, Urban Collector. SKA provided a detailed sequence of construction and detour measures that were accommodating to the local area.
04/14-Present	H.004435 / LA 3241 (LA 36 to LA 435): St. Tammany Parish – Mr. Raymond is Project and Lead Road Design Engineer. This project includes three (3) segments of nearly 20 miles of new roadway to connect Interstate 12 to the southern terminus of LA 21 in Bush, LA. SKA's contracted segment consists of approximately eight miles of a new alignment in St. Tammany Parish. This new roadway is a four-lane freeway with two new bridges (4 structures total) to span Bayou LaCombe at two different locations, each approximately 500' long. Innovative design alternatives were implemented during design as geometry was restricted to Restricted Crossing U-Turns (RCUT) at the major intersections and implementing J-Turns to accommodate U-turns and intersection thru movements. Mr. Raymond's responsibilities include project management, geometric and hydraulic design, sequence of construction, design of superelevation, earthwork, and tabulation of quantities.
10/12-Present	H.009266 / I-10 (LA 73 to LA 30): Ascension Parish – Mr. Raymond is Project Manager and Lead Road Design Engineer. This project involves the widening of approximately 4.5 miles of Interstate 10 from LA 73 to LA 30, including widening three (3) existing bridge structures within the project limits. Project scope includes widening the interstate from two lanes in each direction to three lanes in each direction. Mr. Raymond's responsibilities include project management, geometric and hydraulic design, sequence of construction, earthwork, and tabulation of quantities.
10/10-Present	H.013579, H.003047, & H.012290 / Pecue Lane / I-10 Interchange: East Baton Rouge Parish – Mr. Raymond is Project Manager and Lead Roadway Design Engineer for a Diverging Diamond Interchange (DDI). Mr. Raymond led a team of seven local firms to provide preliminary and final plans for this high-profile project which included City-Parish, DOTD, and Federal involvement and funding. Mr. Raymond designed the proposed roadway and drainage for Pecue Lane. This project includes a Diverging Diamond Interchange (DDI) . The project was ultimately broken into three separate phases and design plans to facilitate federal redistribution funding requirements, and the design team was challenged with an accelerated schedule as a result. The DDI includes full eastbound and westbound on and off ramps on I-10 and widens Pecue Lane to six lanes with a connector to Rieger Road. To accommodate the ramps, widening of I-10 was necessary.
10/07- 01/10	258-32-0022 / Essen Lane (LA 3064 at Interstate 10): East Baton Rouge Parish – Mr. Raymond served as Road Design Engineer. Mr. Raymond designed and managed urban intersection improvements (UA-2) for DOTD and the Baton Rouge Green Light Plan. Designed geometry to implement dual left-turn lanes on Essen Lane and additional I-10 ramp lanes . Designed urban drainage, horizontal and vertical alignments, geometrics, joint layouts, graphical grades, sequence of construction, earthwork and quantities. This project is very similar to pavement preservation in that the roadway was widened along with pavement replacement.
10/06- 08/07	258-31-0015 & 258-33-0006 / Burbank Drive / LA 42 (Bluebonnet to Highland): East Baton Rouge Parish – Mr. Raymond served as Project Manager and Lead Road Design Engineer on this project which consisted of widening Burbank Drive (LA 42) from a two-lane roadway section to a four-lane roadway section. The roadway section was approximately 2.4 miles long and involved constructing 2 new northbound lanes, turn lanes and improvement to the intersections. Mr. Raymond designed and managed the addition of two new lanes of rural highway and urban connecting intersections for DOTD and the Baton Rouge Green Light Plan. Designed urban and rural drainage, horizontal and vertical alignments, superelevation, geometrics, joint layouts, graphical grades, sequence of construction, earthwork, and quantities.
11/04-10/06	014-04-0028 & 014-04-0029 / US 165 (Oberlin to Oakdale): Allen Parish – Mr. Raymond served as Project Manager and Lead Road Design Engineer on this project which consisted of widening and improving US 165 between Oberlin and Oakdale, Louisiana. This comprehensive project encompassed over 12 miles of urban and rural roadway in Allen Parish and included the addition of two new travel lanes , along with full drainage design and associated infrastructure improvements. Mr. Raymond designed urban and rural drainage, horizontal and vertical alignments, superelevation, geometrics, sequence of construction, earthwork, and quantities.
12/98-12/06	417-01-0015 / LA 28 (LA 121 to LA 465): Vernon Parish – Mr. Raymond served as Project Manager and Lead Road Design Engineer on this project which consisted of widening 8.2 miles of LA 28, a rural state highway. The scope of work included the addition of two new travel lanes , converting the existing facility into a four-lane highway with a center median, enhancing traffic flow and safety. SKA's responsibilities included full roadway design, all drainage systems and associated infrastructure. Mr. Raymond designed drainage, horizontal and vertical alignments, superelevation, geometrics, sequence of construction, earthwork, and quantities.

16. Staff Experience

Firm employed by **Shread-Kuyrkendall & Associates, Inc.**

Name	Darrell J. Moore, P.E.	Years of relevant experience with this employer	2
Title	SENIOR ENGINEER	Years of relevant experience with other employer(s)	27
Degree(s) / Years / Specialization	B.S. / 1995 / Civil Engineering		
Active registration number / state / expiration date	PE. 0029346 / LA / March 31, 2027		
Year registered	2001	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities	<i>Mr. Moore's role will be Road Design Engineer</i>		
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; Experience dates should cover the years of experience specified in the applicable MPR(s).		
	<i>Mr. Moore has 29 years of experience in project management, design, bidding, and construction support of roadway plans with DOTD. He has served as fact witness and technical expert in roadway design in tort cases against DOTD. He has represented DOTD in meetings with consultants, contractors, local, state, and federal agencies including public meetings and hearings. He has designed multiple roadway projects including pavement preservation projects, widening projects, new alignments, and intersection improvements throughout the state and is very knowledgeable of DOTD standards and requirements.</i>		
012/23-Present	20-CS-HC-0015 / Hennessey Blvd. – Perkins Rd. Connector (Perkins Rd. Improvements): East Baton Rouge Parish – Mr. Moore serves as Road Design Engineer for the Perkins Road Improvements Project, which consists of widening Perkins Rd. from Kenilworth Pkwy to approximately 700 feet east of Erica Stanford under the MOVEBR Program. The purpose of the project is to improve safety at the intersection of Perkins Rd. and Kenilworth Pkwy and the intersection of Perkins Rd and One Perkins Place. Additional turn lanes and thru lanes are being provided, along with sidewalks and Access Management is being implemented as part of this project. Mr. Moore's responsibilities include all design services including subsurface drainage design, geometrics, sidewalks and other tasks associated with completing Final Plans.		
08/23-Present	MA-22-01/ LA 73 Roundabout at Bluff Rd. Connector: Ascension Parish – Mr. Moore serves as Road Design Engineer. Mr. Moore assisted in the design of the multi-lane roundabout which includes a southbound channelized right turn lane on LA 73, an eastbound channelized right turn lane on the LA 73 at Bluff Rd. Connector, and is a multilane roundabout only in the northbound and southbound directions. This project, LA 73 Roundabout at Bluff Rd. Connector (MA-22-01), will convert an existing section of LA 73 from three lanes to four lanes with a raised median and curb and gutter providing access management. Three bulb-outs will be added for U-turns and control of access at the end of the project limits and a multi-lane roundabout is being designed at the intersection with the future Bluff Road Connector (MA-20-01) and an existing commercial drive. Access Management is being implemented due to the proximity of the roundabout to I-10 at LA 73. Mr. Moore's responsibilities include geometric and hydraulic design, sequence of construction, earthwork, and tabulation of quantities.		
02/02-08/04	H.000707 (SP 019-30-0016) / LA 964: LA 64 – E. Feliciana P.L.: East Baton Rouge Parish – Mr. Moore was the Engineer of Record for the reconstruction of 4.2 miles of LA 964 with the addition of left turn lanes at Rollins and Plains Port Hudson Roads. The project also involved approximately 0.5 mile of subsurface drainage and 3.9 miles of sidewalk. Special design consideration was required to avoid impacts at Buhler Plains and Azaela Rest Cemeteries.		
01/06-06/13	H.001263 (SP 052-30-0014) / LA 1: Mansura – Marksville: Avoyelles Parish – Mr. Moore was the Project Manager and Engineer of Record for the 3.8 mile widening of LA 1 to a five-lane section. The project included approximately 1.2 miles of subsurface drainage and sidewalks, traffic signals, and was bid with a Portland cement concrete alternate. Special consideration and involvement were required with the Tunica-		

	Biloxi Tribe, FHWA and the BIA as LA 1 traverses tribal land near the Paragon Casino. The Tribe and Wal-Mart were also in the process of developing a Cultural Resource Center and a new store, respectively, and coordination was required with their consultants to ensure the needs of all parties were met.
01/18-07/23	H.002337 / LA 327-S: Bayou Fountain: <i>East Baton Rouge Parish</i> – Mr. Moore was the <i>Project Manager</i> and supervised the design of 0.7 mile of subsurface drainage and sidewalk for LA 327-S (Gardere Lane). The project scope originally involved a bridge replacement, but an additional scope of 1.8 miles of overlay , subsurface and sidewalks was added as part of the Road Transfer Program. A CEA with the City/Parish of EBR was required to utilize a detour on local streets.
05/2018-07/23	H.010815 & H.012842 / LA 124 Extension (Segments 1, 2 and 3): <i>Catahoula Parish</i> – Mr. Moore was the <i>Project Manager</i> and supervised the design of the first two projects of new State highway LA 124, as part of the DOTD Road Transfer Program. The entire LA 124 corridor will entail 12.2 miles across four projects. Segments 1, 2 and 3 involve upgrading an existing 3.3 mile private drive, 1.7 miles of existing LA 3102, and 2.6 miles of Parish Road to current DOTD design criteria. The hydraulic design presented challenges as there are rivers in the area and is subject to frequent backwater conditions. There is also a Larto Lake drawdown structure that required coordination with WLF. Other special environmental concerns impacting the design are present with WRP and CRP lands.
08/15-05/17	H.011897 / LA 30: Ashland Rd to Tanger Blvd and H.011873 / LA 30: Left TL @ Veterans Blvd: <i>Ascension Parish</i> – Mr. Moore was the <i>Project Manager</i> and supervised the concurrent design of two projects for interim alleviation of traffic congestion on LA 30. The first project consisted of a one mile continuous right turn lane near Tanger Mall involving traffic signals and was subsequently selected as an Asphalt Pilot Project. The second project was a left turn lane at Veterans Boulevard. The final roundabout configurations was designed by others.
10/20-07/23	H.010795 / LA 42: Roundabout at Joe Sevario Rd: <i>Ascension Parish</i> – Mr. Moore was the <i>Project Manager</i> and supervised the design of a single lane roundabout with subsurface drainage at the intersection of LA 42 and Joe Sevario Road.

16. Staff Experience

Firm employed by **Shread-Kuyrkendall & Associates, Inc.**

Name	Andrew D. Shread P.E., P.L.S.		Years of relevant experience with this employer	17
Title	ENGINEER LAND SURVEYOR		Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization			B.S. / 2007 / Civil Engineering	
Active registration number / state / expiration date			P.E. 0040351/ LA/ September 30, 2026 P.L.S. 0005087/ LA/ September 30, 2026	
Year registered	2015 / 2012	Discipline	Civil Engineering / Land Surveying	
Contract role(s) / brief description of responsibilities			<i>Mr. Shread's role will be Road Design Engineer</i>	
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; Experience dates should cover the years of experience specified in the applicable MPR(s).			
	<i>Mr. Shread has experience working as Surveyor and Roadway Design Engineer. Mr. Shread's survey projects consist of topographic surveys, boundary surveys, control surveys, right-of-way surveys, and hydrographic surveys working with various municipalities and various agencies including USCOE, LADOTD, Parish Governments, and Police Juries. He is also a registered Professional Engineer with experience in roadway, including roadway widening projects, new alignments, and pavement preservation and reconstruction projects throughout the state and is very knowledgeable of DOTD standards and requirements.</i>			
06/22-Present	H.014412 / Jean Lafitte Pkwy: LA 39 to Hermitage Dr.: St. Bernard Parish – Mr. Shread serves as Project Engineer and Road Designer for this project which consists of full reconstruction of the existing roadway, spot replacement of damaged sidewalks, replacement of ADA street corners, and some minor drainage, water and sewer design.			
09/21-On-Hold	H.011706 / Baldwin Railroad Crossing Safety Improvements: St. Mary Parish – Mr. Shread serves as Project Engineer and Road Designer for this project. This project is currently on hold due to utility conflicts. This project involves designing a new roadway parallel to the railroad and will eliminate crossing conflict points in an effort to improve safety. The project is approximately 0.47 miles long. Mr. Shread was involved in the geometric design, hydraulic design, quantities, and sequence of construction of the project.			
04/21-08/22	H.014051 / Lakewood Dr. Reconstruction: St. Charles Parish – The Lakewood Dr. Reconstruction is the reconstruction of an urban minor collector. Mr. Shread performed the survey for the project. Mr. Shread also assisted with the drainage analysis and design. The purpose was to investigate observed insufficiencies in the subsurface drainage system along the Lakewood Dr. corridor. The study used LADOTD HYDRWIN programs to confirm the capabilities of the existing drainage system along Lakewood Dr.			
11/20-Present	Port of South Louisiana Road and Parking Area Improvements: St. John the Baptist Parish – Mr. Shread serves as the Project Engineer for this project and performed the topographic survey and design for several roadways and parking area improvements located at the Port of South Louisiana Globalplex facility. Mr. Shread also managed the construction administration for the projects that have been completed thus far. This project, although not a LA DOTD project, was done to the LA DOTD's 2016 Standards and Specifications for Roads and Bridges.			

1/20-5/22	MA-18-08/ Henry Road @ LA 930 Roundabout: Ascension Parish – Mr. Shread provided road design assistance for the Henry Road-LA 930 roundabout project. Mr. Shread's responsibilities included project geometrics and hydraulic design along with coordination between two other intersecting roadway projects. Mr. Shread also completed the right of way maps for the project. The project was a single lane Roundabout to replace a 4-way stop intersection.
12/19-On-Hold	MA-17-02 / Roddy Road Widening: US 61 To LA 935: Ascension Parish – Mr. Shread performed the topographic survey for the Roddy Road widening project. Mr. Shread also established geometric baselines the project. The project was a reconstruction of the existing roadway that widened the existing section to current design standards.
04/14-Present	H.004435 / LA 3241: LA 36 TO LA 435: St. Tammany Parish – Mr. Shread performed the field survey, boundary survey, right of way maps, and the geometrics for the new construction project, LA 3241. The project is new construction of a 4-lane median separated, rural arterial roadway.
10/10-Present	H.013579, H.003047, & H.012290 / Pecue Lane / I-10 Interchange: East Baton Rouge Parish – Mr. Shread served as survey project manager and right of way professional land surveyor for Louisiana's first Diverging Diamond Interchange (DDI). Mr. Shread completed the survey for the LA DOTD standards for topographic and right of way surveys. The project was ultimately broken into three separate phases and design plans to facilitate federal redistribution funding requirements. The DDI includes full eastbound and westbound on and off ramps on I-10 and widens Pecue Lane to six lanes with a connector to Rieger Road.
11/08-11/12	H.009064, H.009987, H.009717, H.009712 et. al./ LADOTD Submerged Roads Program (Paths to Progress) (Phase A and Phase B): Multiple Parishes – Mr. Shread assisted the professional engineers in the repair of urban roadways damaged during Hurricane Katrina. Identified repairs for 25+ urban streets in Orleans, Jefferson, and St. Bernard Parishes. The field work included identification of base failures, recommended repairs, development of typical sections, sequence of construction and quantities. These roadways were pavement preservation/restoration projects.

16. Staff Experience

Firm employed by **Shread-Kuyrkendall & Associates, Inc.**

Name	Garrett J. Gilbert P.E.	Years of relevant experience with this employer	6
Title	CIVIL ENGINEER	Years of relevant experience with other employer(s)	1
Degree(s) / Years / Specialization	B.S. / 2018 / Civil Engineering		
Active registration number / state / expiration date	PE. 0049387 / LA / March 31, 2027		
Year registered	2024	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities	<i>Mr. Gilbert's role will be Roadway Design Engineer</i>		
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; Experience dates should cover the years of experience specified in the applicable MPR(s).		
	<i>Mr. Gilbert has been a Project Manager/Road Design Engineer on multiple classes of roadways including pavement preservation projects, widening projects, new alignments, and intersection improvements. He has experience with vertical alignments, joint layouts, drainage design, erosion control, sequence of construction, signing, earthwork, quantity estimates, and cost estimates for roadway projects.</i>		
12/22-Present	H.015056, H.015058, H.015619 / IDIQ Pavement Preservation Contract: Vermillion and Evangeline Parishes – Mr. Gilbert assists in roadway design under the supervision of an P.E., which included the identification of base failures, recommended repairs , identify drainage improvements, development of typical sections, sequence of construction and quantities. The contract consists of preparing preliminary and final plans for the mill and overlay and reconstruction for the roadways associated with this IDID Pavement Preservation Contract. These roadways were pavement preservation/restoration projects.		
12/22-Present	H.009266/ I-10: LA 73 to LA 30: East Baton Rouge Parish – The I-10: LA 73 to LA 30 project is the addition of a third lane to the I-10 corridor between LA 73 and LA 30, including the widening of the bridges crossing I-10 within project boundaries. Mr. Gilbert has performed quantity calculation and cost estimation for the project. Mr. Gilbert also performed the drainage analysis and joint layout for a portion of the project.		
03/21 – 01/25	H.010155 / US 90: Rail Spur Removal SE of LA 85: Iberia Parish – For the future I-49, this project involved the design of roadway widening and reconstruction , including two (2) parallel bridge structures over an existing at-grade railroad crossing at US 90 in Iberia Parish. The existing at-grade railroad crossing will be replaced with a bridge structure crossing the railroad. The existing frontage road (South) will be improved to carry US 90 traffic on a diversion road during bridge construction. Mr. Gilbert performed the quantity and cost estimation for the roadway elements of the project with addition of the earthwork.		
05/21-Present	MA-20-01/ LA 73 Roundabout at Bluff Rd. Connector: Ascension Parish – The Bluff connector project is a new construction project for a connector road between LA 73 and Bluff Road. Mr. Gilbert managed vertical alignment and drainage design for the project. Mr. Gilbert also managed quantity and cost estimation for the project. A substantial portion of the project was designed using OpenRoads. This work in OpenRoads was also used to perform an inhouse OpenRoads tutorial presented by Mr. Gilbert.		
04/21-Present	H.014051/ Lakewood Dr. Reconstruction: St. Charles Parish – Currently in construction, the Lakewood Dr. Reconstruction Project is the reconstruction of an urban minor collector. Mr. Gilbert performed the quantity and cost estimation for the project. Mr. Gilbert also performed a drainage study in a separate contract with St. Charles Parish. The purpose was to investigate observed insufficiencies in the subsurface drainage system along the Lakewood Dr. corridor. The study used DOTD HYDRWIN programs to inform sufficiency of the existing drainage system on Lakewood Dr. Mr. Gilbert has been performing CE&I duties for DOTD as SKA are the LPA engineers for the project.		

07/20 - Present	H.013284 / Mississippi River Bridge Crossing: EBR, WBR, Iberville, Ascension Parish – Mr. Gilbert assisted in the detailed line and grade layouts. This project involves the construction of a new alignment for a four-lane divided, controlled-access highway extending from LA 1 to LA 30, including a new bridge structure crossing the Mississippi River. SKA leads the roadway design efforts, developing 33 alignment alternatives that were ultimately narrowed to three final options. Detailed line and grade layouts were provided for each final alternative.
06/20-05/22	H.012588/H.012169/H.012587 I-10 Overlays Atchafalaya Basin Bridge To W End Of La 415: Iberville/West Baton Rouge Parishes– These are three separate overlay projects that follow sequentially along I-10. The project intention is to overlay the existing pavement by 8" over existing structure, using transitions to meet tie-ins at project limits and bridges. The majority of the projects were adjusting existing conditions to meet design standards. Mr. Gilbert managed all parts of plan creation under P.E. supervision. This includes adjustments to drainage, road, striping, earthwork, guardrail, sequence of construction , and cable barriers. OpenRoads was used moderately through the projects in attempt to prepare for the eventual switch to the program for DOTD projects. These roadways were pavement preservation/restoration projects.
04/20-04/22	H.001799/ LA 531 Overpass: Webster Parish – The project consists of roundabouts at the interstate ramp termini and the corresponding roadway tie-ins for the LA 531 bridge replacement. This project is approximately 0.3 miles long along LA 531. Roundabouts will be constructed at the I-20 entrance/exit ramp intersections with LA 531 both to the north and south of the LA 531 overpass. Mr. Gilbert performed the quantity and cost estimation. Mr. Gilbert performed the joint layout, drainage design, signing, and erosion control for the project. Mr. Gilbert assisted with sequencing of the project specifically designing the detour roadways.
12/19-Present	MA-17-02 / Roddy Road Widening: US 61 To LA 935: Ascension Parish – As part of the Move Ascension Program, this project is a reconstruction and safety widening of existing Roddy Road to bring this substandard, 2-lane road with deep ditches up to LADOTD design standards for its roadway classification, Urban Collector. SKA provided a detailed sequence of construction and detour measures that were accommodating to the local area. Mr. Gilbert performed the quantity and cost estimation for the Roddy Road widening project. Mr. Gilbert also performed the signing and erosion control for the project.
09/19-03/22	H.004435/ LA 3241: LA 36 TO LA 435: St. Tammany Parish – Mr. Gilbert performed the quantity and cost estimation for the new construction project of LA 3241. Mr. Gilbert designed the erosion control and signing for the project. The project is new construction of a 4-lane median separated, rural arterial roadway.
06/19-Present	H.003047/ Pecue Lane/ I-10 Interchange (PHASE 3): East Baton Rouge Parish – This project includes a Diverging Diamond Interchange (DDI) . The project was ultimately broken into three separate phases and design plans to facilitate federal redistribution funding requirements, and the design team was challenged with an accelerated schedule as a result. The DDI includes full eastbound and westbound on and off ramps on I-10 and widens Pecue Lane to six lanes with a connector to Rieger Road. To accommodate the ramps, widening of I-10 was necessary. Mr. Gilbert performed the quantity estimation and cost estimation for the Pecue Lane DDI Interchange project. The project was the addition of an DDI interstate interchange at Pecue Lane and I-10. Mr. Gilbert is not currently performing work on this project.
05/17-08/17 05/18- 08/18 01/19-06/19	Mississippi Department Of Transportation: Brookhaven Construction Office / Carthage Construction Office / Whitfield Construction Office: Mr. Gilbert interned with MDOT for two summers and was a full-time employee after graduation for five months. Mr. Gilbert worked for various MDOT construction offices which work to insure MDOT projects are constructed to state standards and manages appropriate payment for construction. Mr. Gilbert began in inspection roles, ensuring contractors performed tasks to proper standards and quantities were recorded for payment purposes. Towards the end of his employment with MDOT Mr. Gilbert was being trained to manage projects. Mr. Gilbert spent most of his time with MDOT in the field, overseeing reconstruction, new construction, bridge construction and all-encompassing work related to these types of state transportation projects.

16. Staff Experience

Firm employed by **Shread-Kuyrkendall & Associates, Inc.**

Name	James Partin	Years of relevant experience with this employer	24
Title	CADD TECHNICIAN	Years of relevant experience with other employer(s)	11
Degree(s) / Years / Specialization	Bachelor of Science / 1989 / Engineering Graphics		
Active registration number / state / expiration date	N/A		
Year registered	N/A	Discipline	N/A
Contract role(s) / brief description of responsibilities	<i>Mr. Partin will be lead CADD Technician. Mr. Partin's role includes using MicroStation to create project plan sets that are used for presentations, project bids and construction.</i>		
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; Experience dates should cover the years of experience specified in the applicable MPR(s).		
03/21 – 01/25	H.010155 / US 90: Rail Spur Removal SE of LA 85: Iberia Parish – Mr. Partin provided CADD work for the future I-49, this project involved the design of roadway widening and reconstruction , including two (2) parallel bridge structures over an existing at-grade railroad crossing at US 90 in Iberia Parish. The existing at-grade railroad crossing will be replaced with a bridge structure crossing the railroad. The existing frontage road (South) will be improved to carry US 90 traffic on a diversion road during bridge construction.		
05/21-Present	MA-22-01/ LA 73 Roundabout at Bluff Rd. Connector Ascension Parish – Mr. Partin provided CADD work for the design of the multi-lane roundabout which includes a southbound channelized right turn lane on LA 73, an eastbound channelized right turn lane on the LA 73 at Bluff Rd. Connector, and is a multilane roundabout only in the northbound and southbound directions. This project, LA 73 Roundabout at Bluff Rd. Connector (MA-22-01), will convert an existing section of LA 73 from three lanes to four lanes with a raised median and curb and gutter providing access management. Two bulb-outs will be added for U-turns and control of access at the end of the project limits and a multi-lane roundabout is being designed at the intersection with the future Bluff Road Connector (MA-20-01) and an existing commercial drive. Access Management is being implemented due to the proximity of the roundabout to I-10 at LA 73.		
04/14-Present	H.004435 / LA 3241 (LA 36 to LA 435): St. Tammany Parish – Mr. Partin provided CADD work for this project which includes three (3) segments of nearly 20 miles of new roadway to connect Interstate 12 to the southern terminus of LA 21 in Bush, LA. SKA's contracted segment consists of approximately eight miles of a new alignment in St. Tammany Parish. This new roadway is a four-lane freeway with two new bridges (4 structures total) to span Bayou Lacombe at two different locations, each approximately 500' long. Innovative design alternatives were implemented during design as geometry was restricted to Restricted Crossing U-Turns (RCUT) at the major intersections and implementing J-Turns to accommodate U-turns and intersection thru movements.		
10/12-Present	H.009266 / I-10 (LA 73 to LA 30): Ascension Parish – Mr. Partin provided CADD work for this project which includes widening approximately 4.5 miles of Interstate 10 from LA 73 to LA 30. Project scope includes widening the interstate from two lanes in each direction to three lanes in each direction, existing bridge widening at three locations within the project limits. Phased construction of bridges at the LA 73 interchange with I-10 requires diversion crossovers and ramp modifications. Mr. Partin is assisting in the CADD work for construction plans, which include typical sections, details, quantity calculations, alignment plan and profile sheets, drainage maps, geometric details, bridge plans and details, and cross sections.		

10/06- 08/07	258-31-0015 & 258-33-0006 / Burbank Drive / LA 42 (Bluebonnet to Highland): East Baton Rouge Parish – Mr. Partin provided CADD work for this project which consisted of widening Burbank Drive (LA 42) from a two-lane roadway section to a four-lane roadway section. The roadway section was approximately 2.4 miles long and involved constructing 2 new northbound lanes, turn lanes and improvement to the intersections.
11/04-10/06	014-04-0028 & 014-04-0029 / US 165 (Oberlin to Oakdale): Allen Parish – Mr. Partin provided CADD work for this project which consisted of widening and improving US 165 between Oberlin and Oakdale, Louisiana. This comprehensive project encompassed over 12 miles of urban and rural roadway in Allen Parish and included the addition of two new travel lanes , along with full drainage design and associated infrastructure improvements. Mr. Raymond designed urban and rural drainage, horizontal and vertical alignments, superelevation, geometrics, sequence of construction, earthwork, and quantities.
02/04- 11/09	H.007154, H.007152, H.002303 / Central Thruway: East Baton Rouge Parish – Mr. Partin provided CADD work for this project involved the design and construction of a new alignment for a four-lane divided highway, including seven bridge structures . SKA was responsible for the complete project design, providing detailed line and grade layouts for all considered alternatives and delivering comprehensive roadway and bridge design services throughout the project.
5/02-12/06	417-01-0015 / LA 28 (LA 121 to LA 465): Vernon Parish – Mr. Partin provided CADD work for this project which consisted of widening 8.2 miles of LA 28, a rural state highway. The scope of work included the addition of two new travel lanes , converting the existing facility into a four-lane highway with a center median, enhancing traffic flow and safety. SKA's responsibilities included full roadway design, all drainage systems and associated infrastructure.

16. Staff Experience

Firm employed by **Shread-Kuyrkendall & Associates, Inc.**

Name	Dianna Sherman	Years of relevant experience with this employer	9
Title	CADD TECHNICIAN	Years of relevant experience with other employer(s)	14
Degree(s) / Years / Specialization	Bachelor of Science / 2002 / Industrial Technology Associate Degree / 2002 / Design and Drafting		
Active registration number / state / expiration date	N/A		
Year registered	N/A	Discipline	N/A
Contract role(s) / brief description of responsibilities	<i>Ms. Sherman will assist as a CADD Technician. Ms. Sherman's role includes using MicroStation to create project plan sets that are used for presentations, project bids and construction.</i>		
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; Experience dates should cover the years of experience specified in the applicable MPR(s).		
12/22-Present	H.015056, H.015058, H.015619 / IDIQ Pavement Preservation Contract: Vermillion and Evangeline Parishes – Ms. Sherman provides CADD work for this project which includes identification of base failures, recommended repairs , identify drainage improvements, development of typical sections, sequence of construction and quantities. The contract consists of preparing preliminary and final plans for the mill and overlay and reconstruction for the roadways associated with this IDID Pavement Preservation Contract. These roadways were pavement preservation/restoration projects.		
06/20-05/22	H.012588, H.012169, H.012587/ I-10 (Atchafalaya Basin Bridge to LA 415): West Baton Rouge and Iberville Parishes – Ms. Sherman provided CADD work for these improvements which involved the overlay and raising of the grade by 8". The asphalt paving was tapered at bridges to allow for smooth transitions. DOTD design guidelines were followed to bring the interstate up to the guideline standards. Fill was used on fore slopes to tie in and match the new 8" overlay. Guardrail was replaced using MASH special details. Existing cable barrier was removed and replaced closer to the shoulder to improve maintenance. Underdrains and cross drains were modified as needed. These roadways were pavement preservation/restoration projects.		
12/19-On-Hold	MA-17-02/ Roddy Road Widening: Ascension Parish – This project consisted of widening Roddy Road in Ascension Parish. Ms. Sherman assisted with the process of creating working drawings, using topographic data, and as built drawings to create an accurate layout for plan and profile sheets, typical sections, and geometric layout. As well as creating clearing and grubbing and right of way plans.		
06/17-On Hold	H.011923 / Hooper Rd Roundabout at Sullivan Rd (LA 408 at LA 3034): East Baton Rouge Parish – Shread-Kuyrkendall & Associates designed project plans for the implementation of a multi-lane roundabout with right turn slip lanes at the intersection at Hooper Rd (LA 408) at Sullivan Rd (LA 3034) in Central. The roundabout is being designed in conjunction with planned improvements to both Hooper and Sullivan Roads to improve safety and operation of the intersection. Ms. Sherman assisted with the process of creating working draws for plan and profile sheets, typical sections, and geometric layout. Due to environmental concerns, this project has been put on hold.		
10/12-Present	H.009266 / I-10 (LA 73 to LA 30): Ascension Parish – This project includes widening approximately 4.5 miles of Interstate 10 from LA 73 to LA 30. Project scope includes widening the interstate from two lanes in each direction to three lanes in each direction, existing bridge widening at three locations within the project limits. Phased construction of bridges at the LA 73 interchange with I-10 requires diversion crossovers and ramp modifications. Ms. Sherman is assisting with the process of creating working drawings, using topographic data to create an accurate layout for plan and profile sheets, typical sections, striping, and signage plans.		

16. Staff Experience

Firm employed by **GM2 ASSOCIATES, INC.**

Name	Cesar Fernandes, Jr., PhD, PE, SE, PMP		Years of relevant experience with this employer	1
Title	Senior Project Manager		Years of relevant experience with other employer(s)	32
Degree(s) / Years / Specialization			PhD/1999/Civil Engineering, MBA/2005/Business Administration, MS/1995/Civil Engineering, BS/1990/Civil Engineering	
Active registration number / state / expiration date			38411/LA/03-31-2026, 37923/AZ/09-30-2026	
Year registered	2001, 2002, 2013	Discipline	2001/FL/Civil, 2002/AZ/Structural, 2013/LA/Structural	
Contract role(s) / brief description of responsibilities			Project Manager: Meets the role for MPR 4	
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 years of experience specified in the applicable MPR(s).			
	<i>With more than 32 years of experience in the analysis, design, and project management of major bridges including long-span segmental, steel girders, and precast prestressed beams, Cesar will serve as the Project Manager in charge of the Bridge Type Study and Engineer of Record for the RR Overpass Bridge.</i>			
04/15 – Present	US 181 Harbor Bridge, Corpus Christi, TX. This Design-Build-Maintain Corridor Reconstruction Project at the Port of Corpus Christi, Texas includes reconstruction of 3.9 miles of US-181, 1.6 miles of I-37 and 1 mile of SH-286 (the Crosstown Expressway). The US-181/SH-286/I-37 Interchange is being reconstructed with new direct-connect ramps, new mainline bridges, and widening of several existing bridges. The Harbor Bridge is being replaced, including approach viaducts and a new cable-stayed main-channel bridge. Cesar was Engineer of Record (EOR) for the design of four flyover direct-connect ramps with TxDOT prestressed girders and steel plate girder spans up to 262’ . Cesar also was EOR for the precast concrete segmental approach structures, crossing ground-level roadways and railroad tracks serving the Port of Corpus Christi. These segmental bridges featured spans over 200 ft long over the rail tracks . Cesar is managing the construction services (construction manual, design office support, production of as-built drawings, and on-site construction phase engineering assistance).			
09/06 – 04/08	President George Bush Turnpike Eastern Extension, Dallas, TX. Twin prestressed concrete U-Girder bridge structures with drilled shaft foundations, each over a mile in length and carrying four lanes of traffic in each direction, crossing over Lake Ray Hubbard. Cesar was Engineer of Record (EOR) for the bridge. He designed the superstructure, developed the geometry, and checked the bridge substructure and foundation elements. He managed the bridge engineering team, provided technical leadership, and oversaw plan production. During construction, Cesar analyzed loads from a large overhead erection gantry used by the contractor to deliver and install the U-girders across the completed bridge deck.			
01/06 – 01/07	US 175 over Kings Creek, Kaufman County, TX. Cesar was Engineer of Record (EOR) and Project Manager for the replacement bridge for the existing US 175 bridge over Kings Creek. The bridge consists of 40’ typical prestressed concrete slab beam spans founded on drilled shafts. The bridge was built under staged construction , requiring specific details to accommodate the maintenance of existing traffic during construction. Cesar was responsible for management, coordination, and superstructure and substructure design.			

01/06 – 12/06	Oakmont Pedestrian Bridge portion of the Allegheny River Bridge Replacement, Oakmont, PA . Cesar was Project Manager and Technical Lead for the 190'-long two-span steel girder pedestrian bridge crossing over the Pennsylvania Turnpike. The new bridge provides access for pedestrians and golf carts at the Oakmont Country Club. Cesar was responsible for superstructure and substructure design, drawing reviews, and preparation of cost estimates.
08-06 – 09/06	SH96A (4th St.) Bridge, Pueblo, CO . Cesar was Project Manager for the independent design team of this \$27.6M, 1,137' long bridge carrying four lanes of traffic over the Arkansas River, Floodwall and BNSF/UPRR rail yard . A 378' clear span crosses all 23 UPRR tracks and side spans of 230' clear the five BNSF tracks to the east and the Arkansas River and floodwall to the west for no permanent impacts. The bridge was designed to be built completely from above to eliminate interruption to railroad operations and river recreation, to protect the environment, and to save the owner schedule and cost. The substructure features cast-in-place concrete piers founded on dual drilled shafts minimizing ground impacts to the adjacent rail tracks. The superstructure is post-tensioned concrete single-cell box girders. Cesar was responsible for performing the fully independent check design as a part of the Design QA/QC process.
01/03 – 12/03	TH 52 Lafayette Bridge, St. Paul, MN . Cesar was Project Manager and Technical Lead for preliminary and final design of the concrete alternate for the TH 52 Lafayette Bridge. The twin bridges are each 3,210' long. Located in Downtown St. Paul, the bridge crosses the Mississippi River, city streets, parking lots, heavy rail and light rail tracks , historic property, city parks, and river docks. Approach span lengths range from 145' to 212'. The three span precast concrete balanced cantilever river unit with spans of 229'-362'-239' was designed to be built from above to eliminate impacts to commercial river use. Cesar performed deck transverse analysis and designed the post-tensioning and mild reinforcement and for the various bridge cross sections. Cesar also performed the bridge longitudinal and transverse load ratings.
01/00 – 01/01	Thomas Drive Interchange, Panama City Beach, FL . To facilitate the flow of traffic and improve safety at the intersection of US 98 and Thomas Drive, elements of the intersection were elevated, allowing traffic to bypass three traffic signals. The project was divided into three stages which were designed and constructed following a prescribed funding schedule. Stage 1 included a 3,000' precast concrete box girder ramp over Thomas Drive to carry US 98 eastbound traffic. Cesar was Senior Bridge Engineer, performed foundation and pier designs, optimizing the substructures and saving 11% compared to the initial foundation cost.
01/13 – 12/13	Spur 1966, El Paso, TX . Cesar was project manager and lead engineer for this \$31M complex overpass project. The structure types consisted of TX girders for the typical spans and steel plate girders for the longer spans. Cesar was responsible for performing schematic design and bridge layouts.
01/10 – 12/10	Honolulu Rail Transit Project, West Oahu/Farrington (WOFH) and Kamehameha Highway (KHG) Sections, Honolulu, HI . Cesar was the Project Engineer for guideway superstructure design and construction phase services. This design-build project consists of approximately 10 miles of elevated precast concrete segmental light rail guideway structure that was built along and within existing highway right of way from East Kapolei, around Pearl Harbor to Aloha Stadium on the island of Oahu. The structure crosses over the H-1 freeway twice utilizing long span post-tensioned concrete box girder bridges. Cesar led the analysis of the substructure including transit stations, developing structural analysis models for the substructure design team.

16. Staff Experience

Firm employed by **GM2 ASSOCIATES, INC.**

Name	Christopher Burgess, PE, SE, P.Eng		Years of relevant experience with this employer	1
Title	Principal Bridge Engineer		Years of relevant experience with other employer(s)	34
Degree(s) / Years / Specialization			MS/1991/Civil Engineering, BS/1989/Architectural Engineering	
Active registration number / state / expiration date			43799/LA/03/31/2026, 6530514-2203/UT/03/31/2027	
Year registered	1996, 2007, 2019	Discipline	1996/CO/Civil, 2007/UT/Structural, 2019/LA/Civil	
Contract role(s) / brief description of responsibilities			Bridge Quality Control Engineer:	
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 years of experience specified in the applicable MPR(s).			
	Chris has more than 34 years of experience in the design and construction of major bridges with extensive experience in complex record-setting cable-stay bridges; precast, cast-in-place, and segmentally constructed post-tensioned box girders; and precast concrete girders. Chris will lead the independent bridge design used to check/confirm Cesar’s design team.			
10/12 – 11/18	Sarah Mildred Long Bridge, Kittery, ME and Portsmouth, NH. Chris was Engineer of Record (EOR) and Lead Bridge Engineer for the approach spans of this new \$158.5M bridge. The project includes 2,481’ of vehicle approach spans and 1,556’ of railroad approach spans. The 335’ long vertical lift span provides 135’ of vertical clearance and 250’ of horizontal navigational clearance for the Piscataqua River channel. The roadway spans are stacked above the railroad spans underneath, sharing common piers between the two. The roadway and heavy rail approach structures are precast post-tensioned concrete box girders built in balanced-cantilever. Temporary props for construction of the upper vehicular bridge were supported on the completed railroad spans below. Chris led the technical design for the roadway and rail approach spans.			
08/09 – 07/10	TH 52 Lafayette Bridge, St. Paul, MN. Chris was Engineer of Record (EOR) for preliminary and final design of the concrete alternate for the TH 52 Lafayette Bridge. The twin bridges are each 3,210’ long. Located in Downtown St. Paul, the bridge provides a vital connection between TH52 and I-94 while spanning across the Mississippi River, city streets, parking lots, heavy and light rail, historic property, city parks, and river docks. Approach span lengths range from 145’ to 212’. The three span precast concrete balanced cantilever river unit with spans of 229’-362’-239’ was designed to be built from above to eliminate impacts to commercial river use. Provided all technical direction and leadership for the design of the concrete alternate.			
09/08 – 12/10	Honolulu Rail Transit Project, West O’ahu/Farrington and Kamehameha Highway Sections, Honolulu, HI. Chris was Engineer of Record (EOR) and Lead Bridge Engineer. This \$855M design-build project consists of 10.8 miles of elevated precast concrete segmental light rail guideway structures built within the existing right-of-way and highway median from East Kapolei, around Pearl Harbor, to Aloha Stadium on the island of Oahu to reduce congestion in this urban area. Spans range from 68’ to over 340’ in length, with typical spans measuring 125’ in length. Chris provided all technical direction and leadership for the design of the guideway superstructures. The design included complex dynamic effects of trains on the structure and the analysis			

	of direct fixation tracks attached on the structure. Chris designed seismic connections between the superstructure and substructure. Chris also designed various specialized erection equipment (pier brackets and lifting frames) required for span construction.
08/02 – 07/03	SH96A (4th St.) Bridge, Pueblo, CO. Chris was Technical Lead for the design and construction of this \$27.6M, 1,137' long bridge carrying four lanes of traffic over the Arkansas River, Floodwall and BNSF/UPRR tracks. A 378' clear span crosses all 23 UPRR tracks and side spans of 230' clear the five BNSF tracks to the east and the Arkansas River and floodwall to the west for no permanent impacts. The bridge was designed to be built completely from above to eliminate interruption to railroad operations to save schedule and cost. The substructure features cast-in-place concrete piers founded on dual drilled shafts minimizing ground impacts. Chris provided technical leadership to the design team, developed segmental cross-sections, designed the main superstructure pier segment diaphragms, and developed the erection procedure.
08/02 – 07/03	I-25 Broadway Viaduct, Denver, CO. Project Engineer on this \$78.9M viaduct project crossing city streets, light rail transit, and heavy rail tracks at a 45-degree skew on the most heavily traveled corridor in the state. The viaduct carries ten lanes plus shoulders and an exit ramp. Total structure length is 1,700' with typical spans of 140' and was the first structure to use the Colorado standard concrete precast prestressed U-Girders. To maintain six lanes of Interstate traffic during construction, the viaduct was constructed in three phases from the south to the north. Foundations are drilled shafts. Post-tensioned integral pier caps on variable skew with single columns to maximize space under the viaduct. Chris produced casting deck coordinates (elevations) for the bridge, which included the effects of roadway grade (cross-slope, profile grade and horizontal alignment changes), a gore area, long term displacements (camber) and skewed precast U-girders.
08/94 – 11/97	Wabasha Freedom Bridge, St. Paul, MN. Project Engineer for this \$25.7M, twin 1,250' long bridges carrying Wabasha Street over the Mississippi River in downtown St. Paul. The Wabasha Freedom Bridge features twin variable depth post-tensioned concrete box girder structures with typical spans of 392' over the navigational channel of the Mississippi River with no piers in the water. The superstructure is supported by twin-wall concrete piers and was built from above with no temporary supports and no in-water work leaving the commercial channel, rail tracks, and local roadways fully operational at all times during construction. Chris performed the longitudinal superstructure design and the foundation design.
08/03 – 03/05	I-25 Trinidad Viaducts, Trinidad, CO. Chris was the Engineer of Record (EOR) and Technical Lead for the reconstruction of I-25 through the City of Trinidad, responsible for preliminary and final design of four bridges with ramps. This includes 2,080' long twin viaducts over numerous city streets and several active railroad tracks, and 435' long parallel bridges over the Purgatoire River. The four structures were designed as precast concrete segmental bridges and featured typical spans in the range of 100' to 153' with a main span over the railroad tracks of 260'. The substructure was founded on drilled shafts. Chris performed superstructure and substructure design and produced the segmental casting coordinates for the project, which included variable width superstructure segments and gore areas.
01/94 – 12/94	Redfish Point Road Overpass, Santa Rosa County, FL. Chris was Bridge Designer for this single span structure over Redfish Point Road. The 85' span consists of precast pretensioned AASHTO girders, founded on precast concrete piles. The abutments are placed behind wrap-around MSE walls. Chris designed the AASHTO Type IV beams, deck, diaphragms, abutments, and MSE walls and calculated all quantities associated with the overpass.

16. Staff Experience

Firm employed by **GM2 ASSOCIATES, INC.**

Name	Wade Bonzon, PE		Years of relevant experience with this employer	1
Title	Project Development Manager		Years of relevant experience with other employer(s)	28
Degree(s) / Years / Specialization			MS/1996/Civil Engineering, BS/1994/Civil Engineering	
Active registration number / state / expiration date			42967/LA/03-31-2027	
Year registered	1996, 2007, 2018	Discipline	2001/TN/Civil, 2018/LA/Civil	
Contract role(s) / brief description of responsibilities			Senior Bridge Engineer	
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 years of experience specified in the applicable MPR(s).			
	<i>With more than 29 years of experience in the design, construction engineering & inspection (CEI), and project management of major transportation projects throughout the U.S, Wade will leverage his understanding of construction to help develop the Bridge Type Study report, perform constructability reviews, and assist with the preparation of bridge plans.</i>			
07/20 - Present	MRB South GBR: LA 1 to LA 30 Connector, Baton Rouge, Louisiana: Wade is serving as bridge design project manager overseeing all aspects of the project development related to the various bridges including the interchange bridges, low level crossings over wetlands, the high-level approach spans, and the cable-stayed main span units across the Mississippi River. Wade is working closely with the consultant team to coordinate roadway geometry, geotechnical design data, and scour analysis necessary to perform the conceptual bridge designs. During the first phase of the study, Wade evaluated the feasibility of 30 separate alignments for a variety of criteria. Wade presented main span bridge layouts for fifteen separate alignments during meetings with stakeholders such as the U.S. Coast Guard, U.S. Army Corps. of Engineers, Levee Districts, River Pilots, and other major navigational stakeholders. Wade also participated in public meetings, after which the list of preferred alternates was narrowed to three alignments. Wade is currently evaluating 3 potential crossing locations during the pre-NEPA phase of the project, coordinating conceptual engineering tasks and cost estimating services for the bridges.			
04/15 – 08/20	Ship Channel Bridge – Sam Houston Tollway (East), Houston, Texas: Wade served as Design Manager for this new cable-stayed bridge that features a free span of 1,320’ over the Houston Ship Channel, the second largest port in the U.S. The concrete main span is supported by 514’ tall, sculpted towers. The bridge provides eight lanes of vehicular traffic and more than 187’ of vertical clearance for navigation, allowing future widening and deepening of the channel by the Port of Houston. During design, Wade managed all aspects of the project design and the subconsultant team for the concrete design alternate. He participated in stakeholder meetings with the USCG and the Houston Pilots during development of the bridge design.			
09/96 – 05/97	I-93 Leonard P. Zakim Bunker Hill Bridge, Boston, Massachusetts: Wade was a Project Engineer for this prominent structure which carries ten lanes of traffic over the Charles River. As focal point of the Boston skyline, this unique cable-stayed bridge has twin planes of stay cables in the 745’ main span and a single plane of stays in the back spans. Wade developed design details for the concrete back spans, designed stay cable anchorage details, and performed a complex staged stressing sequence			

	for a unique back span stay-anchoring spline beam. Wade designed the main pylon footings, one of which straddled a subway tunnel, and designed and detailed pylon cantilevered brackets to support merging ramp structures.
09/07 – 09/08	New I-35W Bridge, Minneapolis, Minnesota: As Assistant Design Manager, Wade managed the multidisciplinary design team, including six subconsultants, for the design of all aspects of this emergency replacement, ten-lane interstate project. This signature bridge was designed with world-class aesthetics and has a 504' long main span over the Mississippi River. The backspans were cast-in-place on falsework and the main spans were erected with precast segments to accelerate the construction schedule. Wade was the liaison between the design team and the contractor coordinating the submittal of design packages, QC/QA documentation, responses to RFIs, and constructability reviews to ensure the overall project design was completed within the aggressive project schedule.
06/02 – 08/07	I-280 Veterans' Glass City Skyway, Toledo, Ohio: The project features a single-tower cable-stayed bridge carrying I-280 over the Maumee River near downtown Toledo flanked by 612'-6" spans and more than 20,000 linear feet of approach and ramp box girder spans constructed using precast segments. It was the largest construction project in Ohio DOT's history. The bridge carries six lanes of traffic over a navigable waterway and through urban/suburban terrain, over active rail tracks, and complex environmental conditions. During design, Wade provided design review of various elements including the main pylon, cable-stay system, precast segmental approach piers, and unique variable-width gore area spans. During construction, Wade was the on-site consultant Resident Engineer responsible for managing the multidiscipline consultant and ODOT inspection team in close coordination with the design office and subconsultants.
01/09 – 07/15	I-95 Pearl Harbor Memorial Bridge, New Haven, Connecticut: This project included the demolition and replacement of the I-95 bridge over the Quinnipiac River with a new extradosed cable-stayed bridge, the largest of its kind on the US Interstate System. The concrete main span unit featured a 510' span over the navigation channel and was constructed in balanced-cantilever with self-launching form travelers to avoid impacts to shipping traffic. The approach structures consisted of HPS-70 steel plate girder spans greater than 200 ft in length with cast-in-place composite decks and latex modified concrete overlay. During construction, Wade was on-site responsible for managing the multidiscipline CEI team in close coordination with the design office and subconsultants. Wade provided quality assurance and monitoring of construction activities for conformance with the contract plans and specifications. He reviewed contractor submittals for the drilled shaft installation plans, post-tensioning procedures, segmental concrete erection, steel plate girder erection, and composite concrete deck casting and curing. Wade monitored mass concrete curing temperatures, performed main span geometry control, and inspected stay cable installation and stressing operations.
07/99 – 01/01	Foothills Parkway, Blount County, TN. Designer's On-site Representative at the project site for the construction of Bridges 9 and 10 and the surrounding roadway. This project was constructed along a narrow right-of-way in this environmentally sensitive area near the boundary of Great Smoky Mountains National Park. The two bridges featured precast segmental piers and cast-in-place concrete segmental superstructures built with form travelers. Wade was responsible for providing inspection at all stages of construction and reviewing contractor submittals as a team with the FHWA-EFLHD on-site inspection staff.
06/97 – 01/98	Wabasha Freedom Bridge, St. Paul, MN. Wade was a Field Engineer integrated with the City's CEI team on this project. The twin 1,250' post-tensioned box girder bridges had spans of 392' crossing over the Mississippi River and were constructed from above with form travelers, allowing river traffic, local roadways, and the active rail line operations to continue below uninterrupted. Responsibilities included inspection of rebar and concrete placement, segment casting geometry control, post-tensioning and grouting, and monitoring of mass concrete placements inside extensive cofferdam cells.

16. Staff Experience

Firm employed by **GM2 ASSOCIATES, INC.**

Name	Matthew Lengyel, PE, SE, PMP, CBI		Years of relevant experience with this employer	1
Title	Senior Project Manager		Years of relevant experience with other employer(s)	23
Degree(s) / Years / Specialization			MS/2003Civil Engineering, BS/2000/Civil Engineering	
Active registration number / state / expiration date			33881/LA/09-30-2026, 43390/WA/05-12-2026	
Year registered	2005, 2007, 2008	Discipline	2005/MD/Civil, 2007/WA/Structural, 2008/LA/Civil & Structural	
Contract role(s) / brief description of responsibilities			Senior Bridge Engineer: Meets the role for MPR 4	
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 years of experience specified in the applicable MPR(s).			
	Matt has over 24 years of bridge design, construction engineering & inspection (CEI), and project management experience on major bridge projects across the United States. He will assist with the Bridge Type Study, design of the bridge, and in the preparation of bridge plans.			
07/20 - Present	MRB South GBR: LA 1 to LA 30 Connector, Baton Rouge, Louisiana: Matt is serving as bridge engineer during the pre-NEPA phase of this project development. During the Part 1 study, Matt assisted in preparing materials for various stakeholder meetings with the U.S. Coast Guard, U.S. Army Corps. of Engineers, Levee Districts, and River Pilots. Matt also performed an extensive survey of bridge costs to determine maximum feasible span lengths for the cable-stayed river crossing. During the Part 2 study, Matt performed vessel impact analysis per AASHTO requirements to evaluate the proposed cable-stayed bridge pylon foundations at the 3 potential river crossings and to determine extreme event design loads for use in conceptual design of the sunken caisson foundations. Matt also performed an evaluation of the feasibility and cost to provide supplemental vessel collision structures such as fenders or dolphins for each of the 3 crossings. Matt is currently performing conceptual bridge design for the curved interchange ramp bridges for each of the 3 alignments under consideration.			
07/15 - Present	US 181 Harbor Bridge Replacement, Corpus Christi, Texas: Matt serves as Professional Services Quality Assurance Manager for the Design-Build-Maintain US-181/SH-286/I-37 Corridor Reconstruction Project at the Port of Corpus Christi, Texas which includes reconstruction of 3.9 miles of US-181, 1.6 miles of I-37, and 1 mile of SH-286 (the Crosstown Expressway). The US-181/SH-286/I-37 Interchange is being reconstructed and the Harbor Bridge is being replaced, including approach viaducts and a new cable-stayed main-channel bridge. Matt developed the Design Quality Management Plan and ensured the over 400 separate design submittals were completed in accordance with the project QA/QC requirements. Provided coordination, leadership, and training to a project team that consisted of over 160 engineers, drafters, surveyors, and field technicians across nine subconsultants and 18 separate offices.			
07/15 – 01/16	Crum Creek Viaduct, Philadelphia, PA. Matt was Project Director for this \$55.5M project that replaced the 120-year-old rail viaduct bridge on the busy Media-Elwyn Regional Line in Delaware County. The new steel girder railroad bridge has five spans and is 735’ long. The viaduct was designed and delivered on a fast-paced schedule, which only permitted a nine-week rail shut down to allow completion of existing bridge demolition, superstructure and deck erection, rail work and catenary system			

	installation. The lateral slide Accelerated Bridge Construction technique was used. The new girders were assembled to one side of the existing bridge, including the precast deck and supported by new straddle bents built under the existing bridge. Matt was responsible for bridge analysis, design, and QA/QC services. He provided technical leadership and guidance to the design team and checked complex bridge design calculations and drawings for the project.
09/13 – 06/15	Sound Transit; Reservation Junction Project, Tacoma, WA. Matt was Engineer of Record (EOR) and Lead Structural Engineer for this \$60M, 3,000' long project that included the replacement of a deficient timber railroad trestle and the addition of a second rail line along the corridor and existing right-of-way. A portion of the new concrete railroad trestle and elevated platform was constructed within a few feet of the existing timber trestle while maintaining uninterrupted rail service. Once the first stage of the new concrete trestle was complete, rail service was transferred to the new structure, the timber trestle was demolished, and the remaining portions of the concrete trestle were constructed while maintaining uninterrupted rail service a few feet away from active construction. Matt provided technical leadership and guidance to a structural design team of over 20 engineers and drafters and managed communications across seven subconsultants and 12 design offices.
06/10 – 12/13	Puyallup River Bridge Replacement Project, Tacoma, WA. Matt was Engineer of Record (EOR) and Lead Bridge Engineer for this signature bridge design project replacing the existing deficient steel truss and prestressed concrete beam urban viaduct structure with a 950' long four span bridge. It featured two 404' long curved cable support spans supported by a single composite and 193' foot tall A-frame steel tower. The precast concrete segmental deck sections will carry two shared use paths and four traffic lanes across six heavy rail lines. The bridge was designed to meet seismic zone 4 analysis, design, and detailing requirements and is located in liquefiable soil conditions. Matt led all final design analysis and detailing tasks for the various complex elements of the new cable stayed bridge, providing technical leadership and guidance to a team of engineers and drafters across the Western Region of the United States, England, and India.
04/10 – 12/13	Murray Morgan Bridge Rehabilitation Project, Tacoma, WA. Matt served as Resident Structural Engineer for this design-build project featured the rehabilitation of an over 100-year-old bridge. The bridge is a 1,750' long movable vertical lift bridge with a 220' main span. Matt was responsible for supporting the city throughout the procurement period, final design, and construction. He was responsible for the review and approval of all structural design calculations and drawings. Responsible for reviewing all structural shop drawings, construction work plans, construction submittals, and specifications.
04/08 – 01/10	John James Audubon Bridge, New Roads/St. Francisville, LA. Quality Control Bridge/Roadway Engineer for this \$409M Design/Build project. The Audubon Bridge was the longest cable-stayed bridge span in North America with a 1,583' main span and was the first design-build project for LA DOTD. Construction of the main span required regular communications with marine traffic and unique construction solutions to minimize impacts. Matt was on-site during construction to support the Construction Quality Control Manager. He provided quality control documentation and inspection services, and monitored all construction activities including pile driving activities, rebar and concrete form construction, concrete placements, and other activities related to beam bridge and cable-stayed bridge construction to ensure compliance with the contract documents.
03/04 – 09/05	I-695/MD 702 Bridge Rehabilitation, Baltimore, MD. Project Engineer for this joint replacement and deck rehabilitation of 18 highway bridges around the three-level I-695/MD 702 interchange. The 18 steel girder bridges had a variety of span lengths, horizontal and vertical geometries, width variations, and skew angles. Some of the bridges span active AMTRAK rail lines. Matt was responsible for structural analysis and design services for 18 steel highway bridges.

16. Staff Experience

Firm employed by **GM2 ASSOCIATES, INC.**

Name	Jagdeesh Gopal, PE	Years of relevant experience with this employer	24
Title	Senior Project Manager / Structural Engineer	Years of relevant experience with other employer(s)	24
Degree(s) / Years / Specialization	MS/2001/Structural Engineering, BS/1999/Civil Engineering		
Active registration number / state / expiration date	50327/LA/09-30-2027		
Year registered	2005, 2025	Discipline	2005/CT/Civil, 2025/LA/Civil
Contract role(s) / brief description of responsibilities	Principal In Charge – Bridge: Meets the role for MPR 4		
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 years of experience specified in the applicable MPR(s).		
	<i>Jagdeesh has more than 24 years of experience in the analysis, design, inspection, and rehabilitation of various types of highway/pedestrian/railroad bridges and retaining walls. Jagdeesh leads GM2's Structural Engineering group and serves as President of GM2. Jagdeesh will advise the team during the Bridge Type Study and provide QA Oversight during design of the bridge and bridge plan preparation.</i>		
09/13 – 11/19	Task Based Bridge Engineering Services Contract, Statewide, CT: Jagdeesh serves as Project Manager/Lead Engineer for preservation projects for multiple structures ranging in size from simple bridges carrying local roads to major viaduct structures carrying I-95. The repair work covers every facet of bridge rehabilitation including concrete substructure repairs, pier cap replacements, bearing replacements, beam end and steel repairs, painting, haunch removal, deck rehabilitation, deck joint replacements, waterproofing membrane installation and installation of new pavement. Jagdeesh worked closely with CTDOT and utilized many innovative techniques like passive cathodic protection of concrete repairs, carbon fiber wrap repairs of bearing pedestals, membrane waterproofing of pier caps utilizing reinforcing scrims to bridge cracks, replacement of deck joints on interstates using temporary deck plates and utilizing HRCSA coatings to address crevice corrosion in rocker and pin bearings. To date, these on-call contracts have completed rehab for 38 bridges statewide.		
01/15 – 04/20	Rehabilitation of Bridge No. 0032, I-95 over Local Roads and Metro North Railroad, Stamford, CT: Jagdeesh was Project Manager/Lead Engineer for the rehabilitation of this 17-span, 1,065FT structure, one of the most complex in Connecticut, carrying 7 lanes of I-95 through a highly congested area. Work entailed the development of a rehabilitation study report with findings and recommendations for repairs. The ongoing design entails substantial coordination with MNR, a unique tie-down system for a historically problematic diagonal joint on the main span. Under a previous on-call contract, Jagdeesh developed plans for substructure repairs and the replacement of the Pier 3 pier cap carrying 7 lanes of I-95.		
01/16 – 09/18	Independent Design Review of I-95 Moses Wheeler Bridge, Stratford and Milford, CT: Jagdeesh served as Project Manager/Lead Engineer for this independent design review and analysis of the 14-span Moses Wheeler Bridge carrying I-95 over the Housatonic River with a total length of over 3,000FT. The evaluation consisted of several complex elements, including the curved girder analysis of “as-designed” superstructure using MDX, 3D non-linear analysis of “as-built” superstructure using		

	MIDAS Civil, considering step-by-step construction and effects of pour sequences, staged construction, time dependent properties of concrete including strength/stiffness, creep, shrinkage, p-delta effects, substructure stiffness and calibration of modeled deflections to survey measurements. The evaluation also included identifying retrofit locations for cross-frames and distortions identified after construction was complete.
01/16 – 04/20	Preservation of Bridge No. 00728, Merritt Parkway Bridge over Saugatuck River, Westport, CT: Jagdeesh was Project Manager/Lead Engineer for the \$8M rehabilitation of a historic built-up open spandrel, steel arch bridge with a 130FT main span and six approach spans, totaling 253FT in all and carrying 4 lanes of traffic. Work entailed a fast-track emergency load rating analysis, bridge inspection, and rehabilitation design including addressing constructability issues, traffic control, roadway approach improvements, drainage, and coordination with the Merritt Parkway Committee and Merritt Parkway Advisory Commission, as well as with an adjacent miles long roadway improvements project being designed by CTDOT.
11/13 – 06/18	Reconstruction of I-95 over West River, New Haven, CT: – Jagdeesh served as the Contractor’s Engineer for Developing Working Drawings. He worked closely with the Contractor to develop demolition and erection working drawings, evaluate constructability schemes, design safety restraint systems, temporary trestles to support cranes, and analyzed existing bridges to support cranes during construction. This work required substantial coordination with the Contractor, continuously shifting priorities and phased release of working drawings to meet schedules and construction needs.
06/12 – 11/13	US Route 302 over the Sawyer River, Design-Build, Hart’s Location, NH: This design-build project was an emergency replacement of the original bridge, built in 1991, that was damaged beyond repair in Tropical Storm Irene in 2011. Jagdeesh was the Lead Engineer for the design-build team for this replacement of the US Route 302 bridge over the Sawyer River in the White Mountain National Forest. Jagdeesh worked closely with the design-build team to develop an approach and schedule to meet the quick demands associated with the aggressive project schedule. Phased construction documents were utilized to facilitate concurrent design and construction, resulting in design and approval time frame of just over three months. The replacement bridge span is a 135 feet steel girder bridge utilizing an innovative sub-footing concept to support the foundation (since deep foundations were not an option given geotechnical conditions).
01/15 – 04/20	Rehabilitation of Bridge No. 0032, I-95 over Local Roads and Metro North Railroad, Stamford, CT: Jagdeesh was Project Manager/Lead Engineer for the rehabilitation of this 17-span, 1,065FT structure, one of the most complex in Connecticut, carrying 7 lanes of I-95 through a highly congested area. Work entailed the development of a rehabilitation study report with findings and recommendations for repairs. The ongoing design entails substantial coordination with MNR, a unique tie-down system for a historically problematic diagonal joint on the main span. Under a previous on-call contract, Jagdeesh developed plans for substructure repairs and the replacement of the Pier 3 pier cap carrying 7 lanes of I-95.
05/17 – 01/19	Replacement of Bridge No. 653, I-95 over Oxford Street Design-Build, Providence, RI: Jagdeesh was Design Manager/Lead Engineer responsible for all design elements for the superstructure replacement of Bridge No. 653. Accelerated Bridge Construction techniques were used to minimize impacts to the 9 lanes of I-95 traffic at all times. Substantial site constraints and high traffic volumes require thorough evaluation of constructability and coordination with the Contractor and all affected stakeholders. Permitting, utility coordination, traffic evaluation and bridge/highway design and construction were completed 6-months ahead of schedule.

16. Staff Experience

Firm employed by **Ardaman & Associates, Inc.**

Name	Megan Bourgeois, P.E.		Years of relevant experience with this employer	19
Title	PRINCIPAL ENGINEER / ASSISTANT BRANCH MANAGER		Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization			B.S. / 2006 / Civil Engineering Traffic Control Supervisor / LA / 6-21-2028 DOTD Flagger / LA / 8-14-2028 Certified NHI Drilled Shaft Inspector	
Active registration number / state / expiration date			0036725 / LA / 03-31-2026	
Year registered	2011	Discipline	Civil	
Contract role(s) / brief description of responsibilities			Project Manager: Meets the role for MPR 5	
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 years of experience specified in the applicable MPR(s).			
	<i>Ms. Bourgeois has more than 19 years of experience with design and analyses of countless types of foundations including shallow, embankment settlement analysis, deep foundations (pile and drilled shafts), LRFD design, FHWA & GEC design, slope stability (embankment and excavation) and earth retaining structures. She also has extensive experience with geotechnical instrumentation, installation and monitoring, and construction phase testing and laboratory management. She has served as Ardaman’s project manager for many LADOTD projects for bridges and roadways throughout Louisiana and completed numerous geotechnical investigations, engineering, and reporting in accordance with LADOTD standards. She has successfully overseen several major contracts for LADOTD and other clients. Ms. Bourgeois also serves as the director of our geotechnical engineering and CMT laboratories in Baton Rouge and has overseen the laboratory testing programs in accordance with LADOTD standards. In this role, she supervises the laboratory managers, oversees testing, provides guidance to laboratory staff, and ensures appropriate protocol is followed and deadlines are met in addition to providing training material and maintaining all laboratory certifications, including AMRL, CCRL, DEQ & USACE.</i>			
07/23-Ongoing	SP NO. H.013284 / MRB SOUTH GBRL: LA 1 TO LA 30 CONNECTOR: West Baton Rouge, Iberville, Ascension, and East Baton Rouge Parishes, LA. Project Engineer. The project consists of an Enhanced Planning investigation into S.P. No. H.013284, MRB South GBR: LA 1 to LA 30 Connector, with the objective of constructing a new Mississippi River crossing located between the I-10 and LA 70 River crossings from three proposed alignments. Ms. Bourgeois helped oversee supervision of the field program, development of the laboratory testing program, quality control review, and development of an interactive geotechnical database to compile all the soil borings and ECPT. The preliminary engineering analyses included caisson design, driven piles, drilled shafts, embankments, proposed alignment comparisons, environmental concerns, and testing program recommendations.			
07/21-01/22	SP NO. H.003931 / I-10 CALCASIEU RIVER BRIDGE: Calcasieu Parish, LA. Project Manager. Managed all aspects of this project pertaining to coordination of fieldwork including 37 deep soil borings, 39 ECPTs and 13 geophysical survey transects. A majority of the soil borings were completed from a barge over deep water, some from a marsh buggy over shallow water and thick marsh grass. Ms. Bourgeois also managed and oversaw the laboratory testing program and processing and analyzing of the ECPT and ER data. She also assisted with development of a geotechnical database and preparation and submittal of a geotechnical data report. This project consisted of obtaining geotechnical data under a strict deadline to be used in the design of a replacement of the existing I-10 Calcasieu River Bridge with a new structure and improvements to various other interchanges.			

04/21-Ongoing	SP NOS. 700-29-0112, 700-29-0130, H.012565, H.012891, H.014251, H.014252, H.014253, H.014254, H.014256, H.014257 / RURAL BRIDGE INITIATIVE PHASE II: West Feliciana, East Feliciana, Livingston, St. Bernard Parishes, LA. Project Engineer. This project consists of the replacement of multiple small two-lane bridges throughout rural areas of Southeast Louisiana which generally ranged in length from 100 to 400 feet, over various size rivers and creeks. Ms. Bourgeois leads technical reviews pertaining to selection of design reaches, geotechnical design of pile foundations, drivability, slope stability, settlement analyses, construction testing program recommendations, and report preparation in accordance with LADOTD guidelines.
02/20-Ongoing	SP NO. H.004791 / DESIGN SUPPORT SERVICES LA 23, BELLE CHASSE BRIDGE & TUNNEL: Plaquemine Parish, LA. Project Engineer/Laboratory Director. Ardaman's scope consists of review and acceptance of all geotechnical services including technical design reports, field documentation, drawings, and RFI's for the P3 Project consisting of replacing the Belle Chasse bridge and tunnel. In addition, Ardaman performs acceptance verification sampling and testing during the construction for soils and concrete. Ms. Bourgeois assisted in review and acceptance of geotechnical services as well as quality control and review of all acceptance verification sampling and testing during construction.
10/15-Ongoing	SP NO. H.013579 / PECUE LANE I-10 INTERCHANGE: East Baton Rouge Parish, LA. Project Manager. This project consists of twin bridges with MSE wall abutments for both bridges crossing Interstate I-10, a bridge crossing Ward's Creek, and on/off-ramps in south Baton Rouge. Ms. Bourgeois managed all aspects of the project that included field investigations, laboratory testing, and engineering design. Ms. Bourgeois performed analyses including settlement estimates with recommendations for monitoring, driven pile design including down drag considerations, MSE Wall design, slope stability and pavement section recommendations; all completed according to DOTD standards. She is currently assisting with the field construction monitoring.
10/09-Ongoing	SP NO. H.004646.5 / I-20 MISSISSIPPI RIVER BRIDGE REVIEW: Vicksburg, MS. Project Manager. Ms. Bourgeois manages this multi-million-dollar, highly technical project consisting of investigating movement of the I-20 Bridge in Vicksburg, MS. She managed a highly technical team including academia, experts, including internationally recognized geotechnical engineers, geohydrologists, instrumentation specialists, and 3-D geotechnical modeling experts. She managed and personally oversaw a comprehensive laboratory testing program and was involved in refining the geotechnical site characterization for the bank/bluff where there was evidence of shifting creating movement in the bridge structure. The specialized testing, she personally performed or managed included x-ray diffraction, x-ray scanning to identify existing shearing planes and stress-reversal direct shear tests to determine true residual angles of critical strata. She was instrumental in designing the geotechnical instrumentation program for this project including vibrating wire piezometers, Casagrande type piezometers, SAA inclinometers, and traditional inclinometers. In addition, Ms. Bourgeois performed seepage and drawdown analyses, slope stability analyses, evaluation of remedial measures including design and evaluation of large foundation structures and developed technically feasible solutions to mitigate ground movement. She co-authored the geotechnical analysis and design report. She is currently overseeing the comprehensive monitoring program.
09/22-Ongoing	EVANGELINE ROAD & CN RAILROAD CULVERT: St. Charles Parish, LA. Project Engineer. Ardaman completed subsurface exploration and geotechnical engineering evaluation. The project consists of the installation of two reinforced concrete box culverts (RCBCs) on the north and south sides of the CN Railroad as it crosses over Evangeline Road near Montz, Louisiana in St. Charles Parish. Ardaman performed the geotechnical fieldwork and engineering evaluation including recommendations for site preparation, shoring and bedding recommendations, and pavement design in a final report.
07/23-Ongoing	SP NO. H.012030 / US 371: KCS RAILROAD OVERPASSES HBI: Webster Parish, LA. Project Engineer. The project consists of construction of three bridges for US 371 KC Railroad overpasses that replaced two parallel bridges and one standalone bridge. Ardaman performed the geotechnical investigation and engineering analysis for drilled shafts and made advanced test shaft recommendations.

16. Staff Experience

Firm employed by **Ardaman & Associates, Inc.**

Name	Robert Jewell, P.E.		Years of relevant experience with this employer	18
Title	PROJECT ENGINEER / BRANCH MANAGER		Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization			B.S. / 2009 / Civil Engineering	
Active registration number / state / expiration date			38579 / LA / 09-30-2026 Traffic Control Supervisor / LA / 08-23-2028 DOTD Flagger / LA / 07-31-2029	
Year registered	2013	Discipline	Civil	
Contract role(s) / brief description of responsibilities			Project Engineer: Meets the role for MPR 6 and 7	
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 years of experience specified in the applicable MPR(s).			
	<i>Mr. Jewell serves as the manager of our Baton Rouge office and has over 15 years of experience with design and analyses of countless types of foundations including shallow, embankment settlement analysis, deep foundations (pile and drilled shafts), LRFD design, FHWA & GEC design, slope stability (embankment and excavation) and earth retaining structures. He has managed and coordinated many geotechnical field investigations, including shallow and deep borings, CPT soundings, and performed analyses and prepares design recommendation reports for LADOTD projects. Mr. Jewell has extensive experience in construction phase testing and oversight including dynamic and static testing, pile integrity testing, cross hole sonic logging, settlement monitoring, and geotechnical instrumentation. In particular, he has over 15 years of experience performing, analyzing, and reporting for PDA testing.</i>			
07/23-Ongoing	SP NO. H.013284 / MRB SOUTH GBRL: LA 1 TO LA 30 CONNECTOR: West Baton Rouge, Iberville, Ascension, and East Baton Rouge Parishes, LA. Project Manager. The project consists of an Enhanced Planning investigation into S.P. No. H.013284, MRB South GBR: LA 1 to LA 30 Connector, with the objective of constructing a new Mississippi River crossing located between the I-10 and LA 70 River crossings from three proposed alignments. Mr. Jewell managed supervision of the field program, development of the laboratory testing program, quality control review, and development of an interactive geotechnical database to compile all the soil borings and ECPT. He helped oversee the preliminary engineering analyses which included caisson design, driven piles, drilled shafts, embankments, proposed alignment comparisons, environmental concerns, and testing program recommendations. A data report and preliminary geotechnical assessment report were submitted.			
07/21-Ongoing	SP NO. H.004100.5 / I-10: LA 415 TO ESSEN LANE ON I-10 & I-12 (CMAR): Baton Rouge Parish, LA. Project Manager. The project consists of a Construction Management at Risk (CMAR) project which includes widening of the east and westbound lanes, elevated structures, interchanges, and ramps along I-10 from LA 415 in West Baton Rouge Parish to Essen Lane on I-10 and I-12 in East Baton Rouge Parish spanning approximately 2.5 miles. Mr. Jewell currently oversee all aspects of engineering analyses pertaining to selection of design reaches, geotechnical design of deep foundations, earth retaining structures, slope stability, soil-structure interaction with existing structures and load testing recommendations. Mr. Jewell helped develop the Geotechnical Data reports, memorandums, and Design reports for this project.			
09/22-Ongoing	EVANGELINE ROAD & CN RAILROAD CULVERT: St. Charles Parish, LA. Project Manager. Ardaman completed subsurface exploration and geotechnical engineering evaluation. The project consists of the installation of two reinforced concrete box culverts (RCBCs) on the north and south sides of the CN Railroad as it crosses over Evangeline Road near Montz, Louisiana in St. Charles Parish. Ardaman performed the geotechnical fieldwork and engineering evaluation including recommendations for site preparation, shoring and bedding recommendations, and pavement design in a final report.			

07/23-Ongoing	SP NO. H.012030 / US 371: KCS RAILROAD OVERPASSES HBI: Webster Parish, LA. Project Manager. The project consists of construction of three bridges for US 371 KC Railroad overpasses that replaced two parallel bridges and one standalone bridge. Ardaman performed the geotechnical investigation and engineering analysis for drilled shafts and made advanced test shaft recommendations.
04/21-Ongoing	SP NOS. 700-29-0112, 700-29-0130, H.012565, H.012891, H.014251, H.014252, H.014253, H.014254, H.014256, H.014257 / RURAL BRIDGE INITIATIVE PHASE II: West Feliciana, East Feliciana, Livingston, St. Bernard Parishes, LA. Project Manager. The project consists of the replacement of multiple small two-lane bridges throughout rural areas of Southeast Louisiana which generally ranged in length from 100 to 400 feet, mainly over small rivers, and creeks. Mr. Jewell oversees all aspects of engineering analyses pertaining to selection of design reaches, geotechnical design of pile foundations, drivability, slope stability, settlement analyses and construction testing program recommendations.
10/18-11/21	SP NO. H.003370 / I-220 / I-20 INTERCHANGE IMPROVEMENT AND BARKSDALE AIR FORCE BASE ACCESS ROAD: Bossier Parish, LA. Project Manager. This was a Design Build project which provides direct access to Interstate I-20 from the Barksdale Air Force Base (BAFB) and constructing an interchange and access road from Interstate 20 in Bossier City, Louisiana. Mr. Jewell managed and oversaw the preparation of the preliminary design and planning report. Mr. Jewell also oversaw the field construction services consisting of PDA monitoring, bi-directional load cell load tests, and settlement monitoring. The PDA program consisted of monitoring PPC piles during initial drive and restrikes to allow for evaluation of setup and early acceptance of pile resistances.
10/15-Ongoing	SP NO. H.013579 / PECUE LANE I-10 INTERCHANGE: East Baton Rouge Parish, LA. Project Engineer. This project consists of twin bridges with MSE wall abutments for both bridges crossing Interstate I-10, a bridge crossing Ward's Creek, and on/off-ramps in south Baton Rouge. Mr. Jewell helped perform analyses including settlement estimates with recommendations for monitoring, driven pile and drilled shaft design including down drag considerations, MSE Wall design, slope stability and pavement section recommendations; all completed according to DOTD standards. Mr. Jewell is currently overseeing the construction phase which includes PDA monitoring, static load testing, and settlement monitoring.
07/15-Ongoing	SP NO. H.004273.5 / I-49 CONNECTOR (LAFAYETTE REGIONAL AIRPORT TO I-10/I-49/US 167 INTERCHANGE): Lafayette Parish, LA. Project Manager. The project consists of construction of 5 miles of freeway consisting of a 3.5-mile elevated structure from I-10 to the Airport in Lafayette, LA. Mr. Jewell oversaw the completion of the Phase I geotechnical investigation, which included 116 deep and shallow soil boring, and 15 CPT soundings, and laboratory testing program per LADOTD guidelines. Mr. Jewell oversaw the completion of the Geotechnical Data Report and assisted with technical reviews pertaining to selection of design reaches, geotechnical design of pile and drilled shaft foundations, drivability, slope stability, earth retaining structures, settlement analyses and construction testing program recommendations, including an advanced test pile program. He is currently overseeing development of the Phase 2 field and laboratory program for each segment.
04/14-Ongoing	SP NO. H.004435 / I-12 TO BUSH SEGMENT 2, LA 3241 (LA 36-LA435): St. Tammany Parish, LA. Project Manager. Mr. Jewell oversaw and coordinated the geotechnical investigation which included drilling 32 deep soil borings, 10 culvert borings, and 88 shallow roadway borings, sampling, and laboratory testing along the alignment which includes two bridges: LA 435 over Bayou Lacombe Tributary and LA 36 over Bayou Lacombe Tributary 2. He assisted in developing the geotechnical analyses and design recommendation report which included pile foundations for the bridge structures and shallow foundation design for the culverts. Mr. Jewell oversaw the construction phase which included PDA testing and settlement monitoring.
10/09-Ongoing	SP NO. H.004646.5 / I-20 MISSISSIPPI RIVER BRIDGE REVIEW: Vicksburg, MS. Project Engineer. Mr. Jewell assisted in several aspects of engineering for this multi-million-dollar, high risk, high technical needs, high visibility project consisting of investigating movement of the I-20 Bridge in Vicksburg, MS. This project consisted of a comprehensive laboratory testing program and refinement of the geotechnical site characterization for the bank/bluff where there was evidence of shifting creating movement in the bridge structure. Mr. Jewell helped managed the field investigations and instrumentation programs, along with review of the field data and engineering reporting.

16. Staff Experience

Firm employed by **Ardaman & Associates, Inc.**

Name	Mark Woodward, P.E.		Years of relevant experience with this employer	7
Title	PRINCIPAL ENGINEER		Years of relevant experience with other employer(s)	36
Degree(s) / Years / Specialization			M.S. / 2019 / Risk Management M.S. / 1986 / Civil Engineering B.S. / 1982 / Civil Engineering	
Active registration number / state / expiration date			24206 / LA / 9-30-2025	
Year registered	1991	Discipline	Civil	
Contract role(s) / brief description of responsibilities			Principal Engineer	
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 years of experience specified in the applicable MPR(s).			
	Mr. Woodward served as a geotechnical engineer for 36 years in the geotechnical branch of USACE New Orleans District, retiring as the Deputy Chief of the Geotechnical Branch and Dam and Levee Safety Program Manager. He was responsible for managing all departments in the branch including engineering, drilling, soils laboratory, dredge material testing, concrete testing, and administration. Mr. Woodward has considerable experience designing and managing various types of projects on the Mississippi River, Atchafalaya Basin and Storm Surge Levees in Southeast Louisiana, Mississippi and Texas, as well as mitigation and coastal projects in Louisiana. These projects included design of major foundation elements for dams, earthen levees, hydraulic structures, floodwalls, revetments, channel stabilization, bank degrading, ground improvement, deep excavations, relief wells, wick drains, dewatering systems, seepage and stability berms, preloads, reinforced levees and marsh creation for mitigation, coastal restoration and protection and beneficial use of dredge material in marsh and coastal environments with field investigations requiring use of specialized marine and marsh drilling equipment. Since 2018, Mr. Woodward has served as Principal Geotechnical Engineer of Ardaman for Louisiana, Mississippi, Alabama, Arkansas, and Texas. Mr. Woodward provides oversight and review of design major foundation elements for transportation, industrial, commercial, and municipal projects.			
04/21-01/2025	SP NO. H.013987 / RURAL BRIDGES PHASE I: Claiborne Parish, LA. Principal Engineer. The Rural Bridges project initiative consists of replacing many older bridges throughout the State of Louisiana. Mr. Woodward provided review of the geotechnical design including pile foundations for 3 bridges.			
01/19-12/23	SP NO. H.008226 / CHENIERE SPILLWAY & BRIDGE REPLACEMENT: Ouachita Parish, LA. Principal Engineer. Mr. Woodward served as the Principal Engineer for this project which included the replacement of the current damaged spillway and bridge structure in Ouachita Parish, Louisiana.			
10/18-11/21	SP NO H.003370 / I-220 I-20 INTERCHANGE IMPROVEMENT AND BARKSDALE AIRFORCE BASE ACCESS ROAD: Bossier Parish, LA. Principal Engineer. This Design Build project consisted of direct access to Interstate I-20 from the Barksdale Air Force Base (BAFB) and an interchange and access road from Interstate 20 in Shreveport, Louisiana. Mr. Woodward provided quality assurance oversight for this project, reviewing the work during the design and construction phase.			
05/18-08/19	SP NO. H.011152.5 / I-12 WIDENING (US 190 to LA 59): St. Tammany Parish, LA. Principal Engineer. Mr. Woodward provided technical oversight for this project which included the widening of I-12 in St. Tammany Parish. Ardaman conducted a geotechnical investigation which included 23 deep soil borings, sampling, and laboratory testing along the 3-mile alignment between US 190 and LA 59 for lane			

	widening which included four bridges structures. Mr. Woodward provided oversight to perform additional soil borings, lab testing and engineering analyses for a retaining wall for one of the bridge abutments
07/23-Ongoing	SP NO. H.012030 / US 371: KCS RAILROAD OVERPASSES HBI: Webster Parish, LA. Principal Engineer. The project consists of construction of three bridges for US 371 KC Railroad overpasses that replaced two parallel bridges and one standalone bridge. Ardaman performed the geotechnical investigation and engineering analysis for drilled shafts and made advanced test shaft recommendations.
05/18-08/19	SP NO. H.011152.5 / I-12 WIDENING (US 190 to LA 59): St. Tammany Parish, LA. Principal Engineer. Mr. Woodward provided technical oversight for this project which included the widening of I-12 in St. Tammany Parish. Ardaman conducted a geotechnical investigation which included 23 deep soil borings, sampling, and laboratory testing along the 3-mile alignment between US 190 and LA 59 for lane widening which included four bridges structures. Mr. Woodward provided oversight to perform additional soil borings, lab testing and engineering analyses for a retaining wall for one of the bridge abutments
05/18-09/19	SP NO. H.001344 / US 190: LA 437 TO USE 190 BUS (PH 1): St. Tammany Parish, LA. Principal Engineer. Mr. Woodward provided technical oversight for this project which includes the widening of US 190 to a four-lane boulevard between US 437 and US 190.
05/18-07/18	IMTT ACCESS ROAD PAVEMENT, AVONDALE: Jefferson Parish, LA. Principal Engineer. Served as senior engineer for 2,200-foot-long x 50-foot wide rigid and flexible roadway design for AASHTO loading per LADOTD guidelines, including subsurface exploration and testing, California Bearing Ratio, subbase material and thickness recommendations, wearing course thicknesses, and construction recommendations.
06/16-07/16	SOUTHEAST LOUISIANA URBAN FLOOD CONTROL, LOUISIANA AVENUE PAVING: Orleans Parish, LA. Chief of Structural Design. Served as decision maker as Chief of Structural Design, USACE New Orleans, for asphalt or concrete paving, looking at factors such as construction cost, durability, maintenance cycles and costs, constructability, construction duration, etc.
2014-2018	DAM AND LEVEE SAFETY PROGRAM, USACE NEW ORLEANS DISTRICT: LA. Dam and Levee Safety Program Manager. Mr. Woodward served as the USACE New Orleans District Levee Safety Program Manager for over four years, responsible for Levee Evaluation Reports for Levee Certifications and the National Flood Insurance Program, Levee Inspection Reports on over 1300 miles of levee on an annual basis, Risk Assessments and Communication for all levees in the District's jurisdiction. Responsible for final Section 408 permitting approval to ensure that construction activities do not increase risk or diminish function of levees and do not cause harm to the public.
2006	HOMEPLACE LEVEE WITH GROUND IMPROVEMENT, P24: Plaquemines Parish, LA. Lead Geotechnical Engineer. In the aftermath of Hurricane Katrina, Mr. Woodward was assigned to USACE Task Force Guardian as Geotechnical Engineer for Plaquemines Parish to restore levee damage to pre-Katrina conditions. The Homeplace Floodwall had translated due to loading and had to be removed. In order to replace the risk reduction system with an earthen levee, the foundation had to be improved. Using knowledge gained from full scale test section Mr. Woodward had coordinated pre-Katrina for Deep Mixing. Mr. Woodward designed ground improvement and reviewed/approved all construction submittals and oversaw construction.

16. Staff Experience

Firm employed by **Ardaman & Associates, Inc.**

Name	Jarmon King, P.E.	Years of relevant experience with this employer	6
Title	PROJECT ENGINEER	Years of relevant experience with other employer(s)	1
Degree(s) / Years / Specialization	B.S. / 2019 /Civil Engineering Traffic Control Supervisor / LA / 11-08-2027 DOTD Flagger / LA / 05-29-2028		
Active registration number / state / expiration date	49179 / LA / 03-31-2027		
Year registered	2024	Discipline	Civil
Contract role(s) / brief description of responsibilities	Project Engineer		
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 years of experience specified in the applicable MPR(s).		
	<i>Jarmon King serves as a project engineer of Ardaman in the Baton Rouge office with over 7 years of experience. Mr. King is involved with overseeing and conducting geotechnical investigations. Mr. King also prepares soil boring logs; processes and analyzes Cone Penetration Test (CPT) sounding design and analyses of multiple types of foundations including shallow, embankment settlement analysis, deep foundations (pile and drilled shafts), LRFD design, FHWA & GEC design, slope stability (embankment and excavation) and earth retaining structures. Mr. King has experience in overseeing and performing Pile Driving Analyzer (PDA) testing during the construction phase of projects.</i>		
07/23-Ongoing	SP NO. H.013284 / MRB SOUTH GBRL: LA 1 TO LA 30 CONNECTOR: West Baton Rouge, Iberville, Ascension, and East Baton Rouge Parishes, LA. <i>Project Engineer.</i> The project consists of an Enhanced Planning investigation into S.P. No. H.013284, MRB South GBR: LA 1 to LA 30 Connector, with the objective of constructing a new Mississippi River crossing located between the I-10 and LA 70 River crossings from three proposed alignments. Mr. King helped oversee the field program, development of the laboratory testing program, development of an interactive geotechnical database to compile all the soil borings and ECPT. He helped perform the preliminary engineering analyses included caisson design, driven piles, drilled shafts, embankments, proposed alignment comparisons, environmental concerns, and testing program recommendations. Mr. King assisted in preparation of the Data and Design reports for this project.		
07/21-Ongoing	SP NO. H.004100.5 / I-10: LA 415 TO ESSEN LANE ON I-10 & I-12 (CMAR): Baton Rouge Parish, LA. <i>Project Engineer.</i> The project consists of a Construction Management at Risk (CMAR) project which includes widening of the east and westbound lanes, elevated structures, interchanges, and ramps along I-10 from LA 415 in West Baton Rouge Parish to Essen Lane on I-10 and I-12 in East Baton Rouge Parish spanning approximately 2.5 miles. Mr. King co-manages and oversees the engineering analyses pertaining to selection of design reaches, geotechnical design of deep foundations, earth retaining structures, slope stability, soil-structure interaction with existing structures and load testing recommendations. Mr. King helped develop the Geotechnical Data reports, memorandums, and Design reports for this project.		
04/21-Ongoing	SP NOs. 700-29-0112, 700-29-0130, H.012565, H.012891, H.014251, H.014252, H.014253, H.014254, H.014256, H.014257 / RURAL BRIDGE INITIATIVE PHASE II: West Feliciana, East Feliciana, Livingston, St. Bernard Parishes, LA. <i>Assistant Project Engineer.</i> This project consists of the replacement of multiple small two-lane bridges throughout rural areas of Southeast Louisiana which generally ranged in length from 100 to 400 feet, mainly over small rivers and creeks. Mr. King assisted in engineering design pertaining to selection of design reaches, geotechnical design of pile foundations, drivability, slope stability, settlement analyses, construction testing program recommendations, and report preparation in accordance with LADOTD guidelines.		

07/23-Ongoing	SP NO. H.012030 / US 371: KCS RAILROAD OVERPASSES HBI: Webster Parish, LA. <i>Assistant Project Engineer.</i> The project consists of construction of three bridges for US 371 KC Railroad overpasses that replaced two parallel bridges and one standalone bridge. Ardaman performed the geotechnical investigation and engineering analysis for drilled shafts and made advanced test shaft recommendations.
07/21-01/22	SP NO. H.003931 / I-10 CALCASIEU RIVER BRIDGE: Calcasieu Parish, LA. <i>Assistant Project Engineer.</i> Assisted with all aspects of this project pertaining to coordination of fieldwork including 37 deep soil borings, 39 ECPTs and 13 electrical resistivity (ER) geophysical survey transects. Most of the soil borings were completed from a barge, some over a considerable amount of water. Some soil borings were completed from a marsh buggy over shallow water and thick marsh grass. He also assisted with the laboratory testing program, processing and analyzing of the ECPT and ER data, development of a geotechnical database and preparation and submittal of a geotechnical data report. This project consisted of obtaining preliminary geotechnical data under an extremely strict deadline to be used in the design phase of a project that will consist of replacing the existing I-10 Calcasieu River Bridge with a new structure and improvements to various other interchanges.
06/20-11/22	SP. NO. H.002825 / NICHOLSON DRIVE (LA HWY 30) SEGMENT 1: East Baton Rouge Parish, LA. <i>Assistant Project Engineer.</i> This project consisted of the reconstruction and widening of a section of Nicholson Drive between the intersections of Brightside Lane and Burbank Drive for the MOVEBR Program. Thirteen shallow soil borings and two deep soil borings were drilled at the subject site and associated laboratory testing was performed. Mr. King oversaw the field investigation and engineering analyses which included pavement and culvert crossing design recommendations in accordance with LADOTD specifications.
10/18-06/21	SP NO. H.000263 / CHEF MENTEUR PASS BRIDGE & APPROACH: Orleans Parish, LA. <i>Assistant Project Engineer.</i> Helped produced soil boring logs and CPT soundings in LADOTD format. Assisted with development of the data report.
10/18-11/21	SP NO. H.003370 / I-220 / I-20 INTERCHANGE IMPROVEMENT AND BARKSDALE AIR FORCE BASE ACCESS ROAD: Bossier Parish, LA. <i>Assistant Project Engineer.</i> This was a Design Build project which provides direct access to Interstate I-20 from the Barksdale Air Force Base (BAFB) and constructing an interchange and access road from Interstate 20 in Bossier City, Louisiana. Mr. King assisted with the construction monitoring aspect of the project which included PDA testing and CAPWAP analyses.
03/19-07/20	SP NO. H.004100.5-2 / I-10 WIDENING (LA415 TO HOWARD ST): East Baton Rouge Parish, LA. <i>Assistant Project Engineer.</i> Mr. King evaluated the laboratory test results and produced logs for the widening of the East and Westbound lanes, elevated structures, and construction of interchange and ramps on Westbound lanes along I-10 between LA 415 and Howard Street spanning approximately 1 mile. The geotechnical investigation included 58 deep borings and 11 cone penetrometer (CPT) soundings, associated laboratory testing and the preparation of a geotechnical data report.
03/25-Ongoing	SP NOs. H.016313.5, H.016314.5, H.016315.5, H.016316.5, H.016317.5, H.016318.5, H.016319.5, H.016320.5, H.016325.5 / CULVERT REPLACEMENTS: Rapides, Richland, Vernon, Winn, Evangeline, Jackson, St. Landry Parishes, LA: <i>Project Engineer.</i> The project consisted of geotechnical field investigations throughout Louisiana consisting of ten soil borings to depths ranging from 100 to 120 feet, associated laboratory testing, and reporting for new box culvert structures. Mr. King helped produced soil boring logs and CPT soundings in LADOTD format and developed the data reports.
09/22-Ongoing	EVANGELINE ROAD & CN RAILROAD CULVERT: St. Charles Parish, LA. <i>Project Manager.</i> Ardaman completed subsurface exploration and geotechnical engineering evaluation. The project consists of the installation of two reinforced concrete box culverts (RCBCs) on the north and south sides of the CN Railroad as it crosses over Evangeline Road near Montz, Louisiana in St. Charles Parish. Ardaman performed the geotechnical fieldwork and engineering evaluation including recommendations for site preparation, shoring and bedding recommendations, and pavement design in a final report.
07/23-Ongoing	SP NO. H.012030 / US 371: KCS RAILROAD OVERPASSES HBI: Webster Parish, LA. <i>Project Manager.</i> The project consists of construction of three bridges for US 371 KC Railroad overpasses that replaced two parallel bridges and one standalone bridge. Ardaman performed the geotechnical investigation and engineering analysis for drilled shafts and made advanced test shaft recommendations.

16. Staff Experience

Firm employed by **Ardaman & Associates, Inc.**

Name	Jessica N. Litt		Years of relevant experience with this employer	12
Title	LABORATORY MANAGER		Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization			B.S. / 2010 / Biology	
Active registration number / state / expiration date			NICET / Generalist, Laboratory No. 141243 / 10-01-2027	
Year registered		Discipline		
Contract role(s) / brief description of responsibilities			Laboratory Manager	
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 years of experience specified in the applicable MPR(s).			
	<i>Ms. Litt serves as Laboratory Manager of Ardaman’s Baton Rouge laboratory which is under the direction of a Registered Professional Engineer. She supervises and manages operations of our AMRL Certified, DEQ Accredited, and USACE-validated laboratory and performs and oversees laboratory testing assignments, organizes, and schedules testing, trains and develops technicians, and supervises five laboratory technicians. Ms. Litt is experienced conducting soil mechanics laboratory testing in accordance with appropriate AASHTO and LADOTD testing protocol, which includes Soil Classification, Atterberg Limits, Grain Size Analysis, Gradation Testing, Organic Content, Hydrometer Analysis, Moisture Content, Consolidation Testing, Hydraulic Conductivity, pH, Resistivity, Strength Testing (Unconfined, Unconsolidated-Undrained Triaxial, Consolidated-Undrained Triaxial), Direct Shear, Specific Gravity, and Permeability of Granular Soils.</i>			
03/25-Ongoing	SP NOs. H.016313.5, H.016314.5, H.016315.5, H.016316.5, H.016317.5, H.016318.5, H.016319.5, H.016320.5, H.016325.5 / CULVERT REPLACEMENTS: Evangeline, Jackson, Rapides, Richland, St. Landry, Vernon, and Winn Parishes, LA. Laboratory Manager. Oversaw the completion of a comprehensive laboratory testing program for 100 deep soil borings that included Atterberg Limits, Moisture Content, Visual Classification, Fines Content, Gradation Analysis, Organic Content, Particle Size Analysis, Hydrometer, Unit Weight of Undisturbed Samples, and UU Strength Tests in accordance with LADOTD guidelines. Ms. Litt entered the laboratory test results into gINT in order to produce the LADOTD soil boring logs.			
08/24-Ongoing	SP NOs. H.015568.5, H.015569 / LA 44 ROUNDABOUTS & WIDENING: Ascension Parish, LA. Laboratory Manager. Oversaw the completion of a comprehensive laboratory testing program for 10 deep and 14 shallow soil borings that included Atterberg Limits, Moisture Content, Visual Classification, Fines Content, Gradation Analysis, Organic Content, Particle Size Analysis (Hydrometer), Unit Weight of Undisturbed Samples, and UU Strength Tests in accordance with LADOTD guidelines. Ms. Litt entered the laboratory test results into gINT to produce the LADOTD soil boring logs.			
07/23-Ongoing	SP NO. H.013284 / MRB SOUTH GBR LA 1 TO LA 30 CONNECTOR: West Baton Rouge, Iberville, Ascension, and East Baton Rouge Parishes, LA. Laboratory Manager. Oversaw the completion of a comprehensive laboratory testing program for 18 deep soil borings that included Atterberg Limits, Moisture Content, Visual Classification, Fines Content, Gradation Analysis, Organic Content, Particle Size Analysis (Hydrometer), Unit Weight of Undisturbed Samples, and UU Strength Tests in accordance with LADOTD guidelines. Ms. Litt reviewed the consolidation test results and entered the laboratory test results into gINT in order to produce the LADOTD soil boring logs.			
07/23-Ongoing	SP NOs. H.015489, H.015490, H.015491, H.015492 / IJA: OFF-SYSTEM BRIDGES: Allen, Beauregard, and Calcasieu Parishes, LA. Laboratory Manager. Oversaw the completion of a comprehensive laboratory testing program for 10 deep soil borings that included Atterberg Limits, Moisture Content, Visual Classification, Fines Content, Gradation Analysis, Particle Size Analysis (Hydrometer), Unit Weight of Undisturbed Samples, and UU Strength Tests in accordance with LADOTD guidelines. Ms. Litt entered the laboratory test results into gINT to produce the LADOTD soil boring logs.			

07/23-Ongoing	SP NO. H.012030 / US 371: KCS RAILROAD OVERPASSES HBI: Webster Parish, LA. <i>Laboratory Manager.</i> The project consists of construction of three bridges for US 371 KC Railroad overpasses that replaced two parallel bridges and one standalone bridge. Ardaman performed the geotechnical investigation and engineering analysis for drilled shafts and made advanced test shaft recommendations.
10/18-06/21	SP NO. H.000263.5-1 / CHEF MENTEUR PASS BRIDGE AND APPROACH: Orleans Parish, LA. <i>Laboratory Technician.</i> Assisted with completion of a comprehensive laboratory testing program that included Atterberg Limits, Moisture Content, Visual Classification, Fines Content, Gradation Analysis, Triaxial Permeability (constant head), Conventional Incremental Consolidation, Organic Content, Particle Size Analysis (Hydrometer), Unit Weight of Undisturbed Samples, and UU Strength Tests.
09/22-Ongoing	EVANGELINE ROAD & CN RAILROAD CULVERT: St. Charles Parish, LA. <i>Laboratory Technician.</i> Ardaman completed subsurface exploration and geotechnical engineering evaluation. The project consists of the installation of two reinforced concrete box culverts (RCBCs) on the north and south sides of the CN Railroad as it crosses over Evangeline Road near Montz, Louisiana in St. Charles Parish. Ardaman performed the geotechnical fieldwork and engineering evaluation including recommendations for site preparation, shoring and bedding recommendations, and pavement design in a final report.
11/15-01/21	SP NOS. 700-29-0112, 700-29-0130, H.012565, H.012891, H.014251, H.014252, H.014253, H.014254, H.014256, H.014257 / MACARTHUR INTERCHANGE COMPLETION PHASE 2, ROUTE US 90-Z: Jefferson Parish, LA. <i>Laboratory Technician</i> Assisted with completion of a comprehensive laboratory testing program that included Atterberg Limits, Moisture Content and Visual Classification, Fines Content, Sieve Analysis, Triaxial Permeability (constant head), Conventional Incremental Consolidation, Particle Size Analysis (Hydrometer), Unit Weight of Undisturbed Samples, and UU Strength Tests.
04/14-03/22	SP NO. H.004435 / I-12 TO BUSH SEGMENT 2, LA 3241: St. Tammany Parish, LA. <i>Laboratory Technician.</i> Assisted with completion of a comprehensive laboratory testing program that included Atterberg Limits, Moisture Content, Visual Classification, Fines Content, Gradation Analysis, Triaxial Permeability (constant head), Conventional Incremental Consolidation, Organic Content, Particle Size Analysis (Hydrometer), Unit Weight of Undisturbed Samples, and UU Strength Tests.
04/14-05/18	SP NO. H.004113 / I-12 TO BUSH SEGMENT 3, LA HWY. 3241 (LA 435 TO LA 40 / 41): St. Tammany Parish, LA. <i>Laboratory Technician</i> Assisted with completion of a comprehensive laboratory testing program that included Atterberg Limits, Moisture Content and Visual Classification, Fines Content, Sieve Analysis, Triaxial Permeability (constant head), Conventional Incremental Consolidation, Unit Weight, Particle Size Analysis (Hydrometer), and UU Strength Tests.
10/09-Ongoing	SP NO. H.004646.5 / I-20 MISSISSIPPI RIVER BRIDGE REVIEW: Vicksburg, MS. <i>Laboratory Manager.</i> Assisted with completion of a comprehensive laboratory testing program that included Atterberg Limits, Moisture Content, Visual Classification, Fines Content, Gradation Analysis, Triaxial Permeability (constant head), Conventional Incremental Consolidation, Organic Content, Particle Size Analysis (Hydrometer), Unit Weight of Undisturbed Samples, and UU Strength Tests.

16. Staff Experience

Firm employed by **Ardaman & Associates, Inc.**

Name	Casey Floyd	Years of relevant experience with this employer	4
Title	DRILLING SUPERVISOR	Years of relevant experience with other employer(s)	30
Degree(s) / Years / Specialization	High School Diploma		
Active registration number / state / expiration date	Traffic Control Technician / LA / 9-5-2027 Traffic Control Supervisor / LA / 9-6-2027 DOTD Flagger / LA / 6-04-2028 Louisiana Water Well Driller's License #WWC-212, 6-30-2026		
Year registered		Discipline	
Contract role(s) / brief description of responsibilities	Drilling Supervisor		
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 years of experience specified in the applicable MPR(s).		
	Mr. Floyd has over 30 years of experience drilling in the Louisiana Gulf Coast Region including performing soil borings (on land and over water), CPT soundings, monitor well installation and abandonment, and installation of geotechnical monitoring instrumentation. Mr. Floyd has planned and supervised many LADOTD geotechnical investigation projects. He has arranged right of entry, utility locations, site clearing, arranging for police assistance (if needed) and traffic control/crew safety, and coordinating between engineering staff and drill crew. He has also successfully completed a multitude of LADOTD projects consisting of shallow borings and deep soil borings to depths of approximately 300 feet.		
03/25-Ongoing	SP NOs. H.016313.5, H.016314.5, H.016315.5, H.016316.5, H.016317.5, H.016318.5, H.016319.5, H.016320.5, H.016325.5 / CULVERT REPLACEMENTS: Evangeline, Jackson, Rapides, Richland, St. Landry, Vernon, and Winn Parishes, LA. Drilling Supervisor. The project consisted of geotechnical field investigations throughout Louisiana consisting of ten soil borings to depths ranging from 100 to 120 feet. Mr. Floyd oversaw the field investigation program consisting of 10 deep soil borings in accordance with LADOTD guidelines. He performed site reconnaissance at each location and coordinated the access along with traffic control.		
08/24-Ongoing	SP NOs. H.015568.5, H.015569 / LA 44 ROUNDABOUTS & WIDENING: Ascension Parish, LA. Drilling Supervisor. Mr. Floyd oversaw the field investigation program consisting of 10 deep and 14 shallow soil borings in accordance with LADOTD guidelines. He performed site reconnaissance, coordinated the access along with traffic control and pavement coring.		
07/23-Ongoing	SP NOs. H.015489, H.015490, H.015491, H.015492 / IJIA: OFF-SYSTEM BRIDGES: Allen, Beauregard, and Calcasieu Parishes, LA. Drilling Supervisor. Mr. Floyd oversaw the field investigation program consisting of 10 deep soil borings in accordance with LADOTD guidelines. He performed site reconnaissance, coordinated the access along with traffic control and pavement coring.		
03/22-01/25	SP NO. H.002244.5 / BOUDREAUX CANAL BRIDGE REPLACEMENT: Terrebonne Parish, LA. Drilling Supervisor. The project consisted of replacement of the existing LA 56: Boudreaux Canal Bridge with a new bridge just west of the center line of the existing bridge. Mr. Floyd oversaw the field investigation program consisting of 8 deep soil borings and 4 CPT soundings in accordance with LADOTD guidelines. He performed site reconnaissance, coordinated the access along with traffic control and pavement coring. Mr. Floyd oversaw the completion of one of the soil borings that was performed on a barge.		

07/23-Ongoing	SP NO. H.012030 / US 371: KCS RAILROAD OVERPASSES HBI: Webster Parish, LA. Drilling Supervisor. The project consists of construction of three bridges for US 371 KC Railroad overpasses that replaced two parallel bridges and one standalone bridge. Ardaman performed the geotechnical investigation and engineering analysis for drilled shafts and made advanced test shaft recommendations.
07/21-01/22	SP NO. H.003931 / I-10 CALCASIEU RIVER BRIDGE: Calcasieu Parish, LA. Drilling Crew Chief. Mr. Floyd helped manage and oversee all aspects of an extensive field investigations program which included 37 deep soil borings and 39 CPT soundings in accordance with LADOTD guidelines. Most of the soil borings were completed from a barge, some over a considerable amount of water. Some soil borings were completed from a marsh buggy over shallow water and thick marsh grass.
09/22-Ongoing	EVANGELINE ROAD & CN RAILROAD CULVERT: St. Charles Parish, LA. Drilling Supervisor. Ardaman completed subsurface exploration and geotechnical engineering evaluation. The project consists of the installation of two reinforced concrete box culverts (RCBCs) on the north and south sides of the CN Railroad as it crosses over Evangeline Road near Montz, Louisiana in St. Charles Parish. Ardaman performed the geotechnical fieldwork and engineering evaluation including recommendations for site preparation, shoring and bedding recommendations, and pavement design in a final report.
04/21-Ongoing	SP NOs. 700-29-0112, 700-29-0130, H.012565, H.012891, H.014251, H.014252, H.014253, H.014254, H.014256, H.014257 / RURAL BRIDGE INITIATIVE PHASE II: West Feliciana, East Feliciana, Livingston, St. Bernard Parishes, LA. Drilling Crew Chief. This project consists of the replacement of multiple small two-lane bridges throughout rural areas of Southeast Louisiana which generally ranged in length from 100 to 400 feet, mainly over small rivers and creeks. Mr. Floyd oversaw all aspects of this project pertaining to coordination of fieldwork including 31 deep soil borings. Some of these borings were performed through the middle of bridges and at hard access locations.
03/19-07/20	SP NO. H.004100.5-2 / I-10 WIDENING (LA 415 TO HOWARD ST): East Baton Rouge Parish, LA. Drilling Crew Chief. Mr. Floyd helped oversee the field investigation included 58 deep borings and 11 cone penetrometer (CPT) soundings in accordance with LADOTD guidelines, and electrical resistivity imaging along the entire alignment for the widening of I-10 project. He performed site reconnaissance at each location and coordinated the access along with traffic control.
10/18 06/21	SP NO. H.000263.5-1 / CHEF MENTEUR PASS BRIDGE & APPROACH: Orleans Parish, LA. Drilling Crew Chief. Mr. Floyd helped manage and oversee all aspects of an extensive field investigation program which included 37 deep soil borings in accordance with LADOTD guidelines, including borings over 200 feet in over 80 feet deep of high flow water.
07/15-Ongoing	SP NO. H.004273.5 / I-49 CONNECTOR (LAFAYETTE REGIONAL AIRPORT TO I-10/I-49/US 167 INTERCHANGE): Lafayette Parish, LA. Drilling Supervisor. The project consists of construction of 5 miles of freeway consisting of a 3.5-mile elevated structure from I-10 to the Airport in Lafayette, LA. Mr. Floyd managed and oversaw the completion of the Phase 2 Kaliste-Saloom Interchange field investigation program which included 26 deep soil borings and 10 CPT soundings in accordance with LADOTD guidelines. He performed site reconnaissance, coordinated the access along with traffic control and pavement coring.
10/09-Ongoing	SP NO. H.004646.5 / I-20 MISSISSIPPI RIVER BRIDGE REVIEW: Vicksburg, MS. Drilling Supervisor. Mr. Floyd has performed and supervised all aspects of field operations associated with this multi-million-dollar, high technical needs project consisting of investigating the movement of the I-20 Bridge in Vicksburg, Mississippi. Ardaman managed a comprehensive laboratory testing program and refined a geotechnical site characterization for the bank/bluff where there was evidence of shifting creating movement in the bridge structure. To allow for this advanced testing program, it was imperative to obtain high quality undisturbed soil samples in difficult drilling conditions. Mr. Floyd was instrumental in completing these tasks as well as installing all types of instrumentation to maintain a highly extensive automated monitoring program at the site including vibrating wire piezometers, SAA inclinometers and traditional inclinometers.

17. Firm Experience

Firm name	Shread-Kuyrkendall & Associates, Inc.		Past Performance Evaluation Discipline(s)*	Survey / Road / Bridge
Project name	Central Thruway		Firm responsibility (prime or sub?)	Prime
Project number	H.007154; H.007152; H.002303	Owner's name	East Baton Rouge City-Parish	
Project location	East Baton Rouge Parish		Owner's Project Manager	Thomas Stephens
Owner's address, phone, email	P.O. Box 1471, Baton Rouge, LA 70821 / (225)389-3189 / TStephens@brla.gov			
Services commenced by this firm (mm/yy)	11/97	Total consultant contract cost (\$1,000's)		\$ 5,400
Services completed by this firm (mm/yy)	05/13	Cost of consultant services provided by this firm (\$1,000's)		\$ 5,162

100% of work was performed in Louisiana

Shread-Kuyrkendall & Associates, Inc. (SKA) was contracted to provide preliminary and final roadway and bridge design services for Central Thruway an Urban Arterial (UA-2) located in the northeast quadrant of East Baton Rouge Parish that was completed with construction in 2013. It was a **new alignment** that connected O'Neal Lane at US 190 (Florida Boulevard) to LA 37 (Greenwell Springs) near Wax Road in the City of Central. Nearly four miles in length, this **new four-lane divided highway** crossed the Comite River, Beaver Bayou, and passed around wetlands, floodplains, and the Waddill Wildlife Refuge. The Central Thruway **consisted of seven bridges** ranging from Pre-Stressed Concrete Bulb-Tee Girder Spans, Type III Girder Spans, and Quad Beams. This project required permitting in accordance with the NEPA process and an Environmental Assessment. Corridor studies were performed with full environmental evaluation including "Line and Grade" studies for eight potential alignments. Public Meetings were held to provide awareness to the public and to receive their input. All tasks were performed by SKA for the Corridor Studies, **Detailed Line and Grade Studies**, Environmental Assessment, Public Meetings, and cost evaluation and comparison to list a few.



Firm Members Involved:

Ripley W. "Gary" McClure, P.E.

John P. Raymond, P.E.

Nicola D. Gill, P.E.

James Partin

17. Firm Experience

Firm name	Shread-Kuyrkendall & Associates, Inc.		Past Performance Evaluation Discipline(s)*	Survey / Road / Bridge
Project name	Pecue Lane / I-10 Interchange		Firm responsibility (prime or sub?)	Prime
Project number	CS-09-US-0041/H.003047	Owner's name	East Baton Rouge City-Parish / LADOTD	
Project location	East Baton Rouge Parish		Owner's Project Manager	Thomas Stephens / Anna Hanks
Owner's address, phone, email	P.O. Box 1471, Baton Rouge, LA 70821 / (225)389-3189 / TStephens@brla.gov			
Services commenced by this firm (mm/yy)	10/10	Total consultant contract cost (\$1,000's)		\$ 7,464
Services completed by this firm (mm/yy)	Present	Cost of consultant services provided by this firm (\$1,000's)		\$ 3,800

**100% of work was performed in Louisiana*

This project consisted of design and preparation of plans for a **new I-10 Diverging Diamond Interchange (DDI)** at Pecue Lane in East Baton Rouge Parish. This project is one of the most significant projects to be designed and constructed under the MOVEBR program, as providing additional I-10 access on this stretch of I-10 will greatly reduce the queues experienced at adjacent I-10 interchanges. This project also had oversight and funding by LADOTD and was designed in compliance with State and City-Parish guidelines. SKA investigated several design alternatives and alignments, and provided **detailed line and grade layouts** for all alternatives that were considered. SKA attended several public meetings and was a major player and intricately involved in seeing the environment (NEPA) process its successful completion. This large scale and very public and high-profile project was ultimately broken into three phases to jump start the project in construction and provide more manageable construction funding. SKA managed all phases of the project and led the design team to **successfully meet a shortened design schedule**. In the end, the project will consist of six bridges, Mechanically Stabilized Earth (MSE) Retaining Walls, four interstate ramps and a six-lane urban arterial section (Pecue Lane) with a Rieger Road connector. This interchange is currently in construction and as previously stated will be an operational Diverging Diamond Interchange (DDI), an innovative approach in interchange design. The Pecue Lane DDI provides a higher level of operational efficiency and is a safer alternative to a conventional diamond interchange. SKA led a design team of seven design consultants and provided lead engineering management and design to the partner team as well as the complete geometric design of the DDI. **Currently in construction.**



Some of the specific project particulars:

- **Widening** existing Pecue Lane from 2-lane open ditch to 6-lane curb and gutter with subsurface drainage.
- **Widening an At-Grade Railroad Crossing**
- Implemented sidewalks in non-control-of-access areas including ADA compliance.
- Access Management implemented to reduce conflicts.
- Diverging Diamond Interchange with traffic signals.
- 4 new I-10 ramps with access to Pecue Lane.

Firm Members Involved:

Ripley W. "Gary" McClure, P.E.

John P. Raymond, P.E.

Nicola D. Gill, P.E.

Garrett Gilbert, P.E.

James Partin

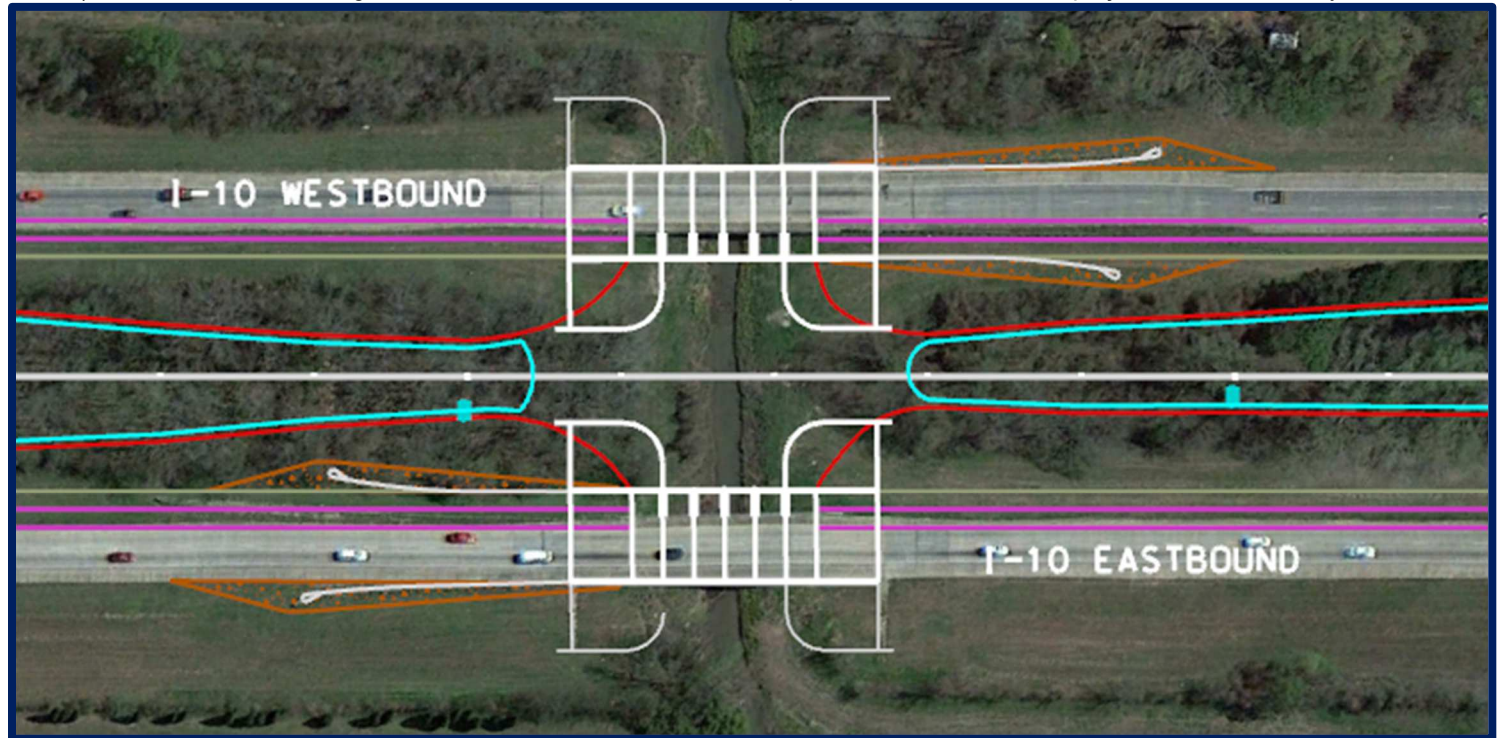
Dianna Sherman

17. Firm Experience

Firm name	Shread-Kuyrkendall & Associates, Inc.		Past Performance Evaluation Discipline(s)*	Survey / Road / Bridge
Project name	I-10 Widening (LA 73 – LA 30)			Firm responsibility (prime or sub?) Prime
Project number	H.009266	Owner's name	LADOTD	
Project location	Ascension Parish		Owner's Project Manager	Kurt Brauner, P.E.
Owner's address, phone, email	P.O. Box 94245, Baton Rouge, LA 70804 / (225)379-1933 / Kurt.Brauner@la.gov			
Services commenced by this firm (mm/yy)	10/12	Total consultant contract cost (\$1,000's)		\$ 1,966
Services completed by this firm (mm/yy)	Present	Cost of consultant services provided by this firm (\$1,000's)		\$ 1,214

**100% of work was performed in Louisiana*

Shread-Kuyrkendall & Associates, Inc. (SKA) was contracted to provide topographic survey services and preliminary and final roadway and bridge design services to **widen** I-10 from a **four-lane freeway section to a six-lane freeway section**. The roadway section is approximately 4.5 miles long and involves removing the inside shoulder and widening to the inside with a new 12' travel lane and 10' inside shoulder, with center barrier rail where median widths are narrow. The bridge design services include the **bridge superstructure replacement** of the overpasses at LA 429 and LA 30, as well as the bridges at Bayou Smith including hydrologic/hydraulic analyses, and full replacement (substructure and superstructure) for the LA 73 interchange to accommodate for future LA 73 improvements. The overall project corridor is nearly 16 miles and is being built to widen interstate 10 from Highland Road to LA 22 in East Baton Rouge and Ascension Parishes. SKA is providing project management, as well as design services for all phases of this project, and is working closely with CDCs of adjacent project to ensure corridor continuity. In addition, at the request of LADOTD, SKA had investigated the feasibility of implementing an innovative interchange design in the form of a Single Point Urban Interchange (SPUI) at LA 73. **SKA is currently in Final Design Phase.**



Firm Members Involved:

Ripley W. "Gary" McClure, P.E.

John P. Raymond, P.E.

Nicola D. Gill, P.E.

Garrett Gilbert, P.E.

James Partin

Dianna Sherman

17. Firm Experience

Firm name	Shread-Kuyrkendall & Associates, Inc.		Past Performance Evaluation Discipline(s)*	Survey / Road / Bridge	
Project name	LA 28 (LA 121 to LA 465)			Firm responsibility (prime or sub?)	Prime
Project number	417-01-0015	Owner's name	LADOTD		
Project location	Vernon Parish		Owner's Project Manager	Brent Waguespack	
Owner's address, phone, email	P.O. Box 94245, Baton Rouge, LA 70804 / (225)379-1100 / Brent.Waguespack@la.gov				
Services commenced by this firm (mm/yy)	12/98	Total consultant contract cost (\$1,000's)			\$ 868
Services completed by this firm (mm/yy)	12/06	Cost of consultant services provided by this firm (\$1,000's)			\$ 868

****100% of work was performed in Louisiana***

Shread-Kuyrkendall & Associates, Inc. (SKA) was contracted to provide both preliminary and final design services for the **widening** of 8.2 miles of LA 28, a rural state highway designated as Design Class RA-4 spanning Vernon, Rapides, and Grant Parishes. The scope of work included the addition of two new travel lanes, converting the existing facility into a four-lane highway with a center median, enhancing traffic flow and safety through Vernon, Rapides, and Grant Parishes. SKA's responsibilities included full roadway design, all drainage systems and associated infrastructure. The project also included the **design of two bridges** featuring Type II Girder spans over Flagon Creek and Greys Creek, along with the design of associated bridge hydraulics. Final design plans were completed in 2006.



Some of the specific project particulars:

- Roadway geometric design for over 8 miles
- Drainage design including cross drains, roadside ditches, side drain design, and erosion control systems.
- Design of two (2) new bridges over Flagon Creek and Greys Creek, consisting of Type II girder spans
- Hydraulic modeling and bridge hydraulic reports
- Plan and profile sheets, typical sections, and quantity takeoffs
- Final construction documents and PS&E submittals

Firm Members Involved:

Ripley W. "Gary" McClure, P.E.

John P. Raymond, P.E.

James Partin

17. Firm Experience

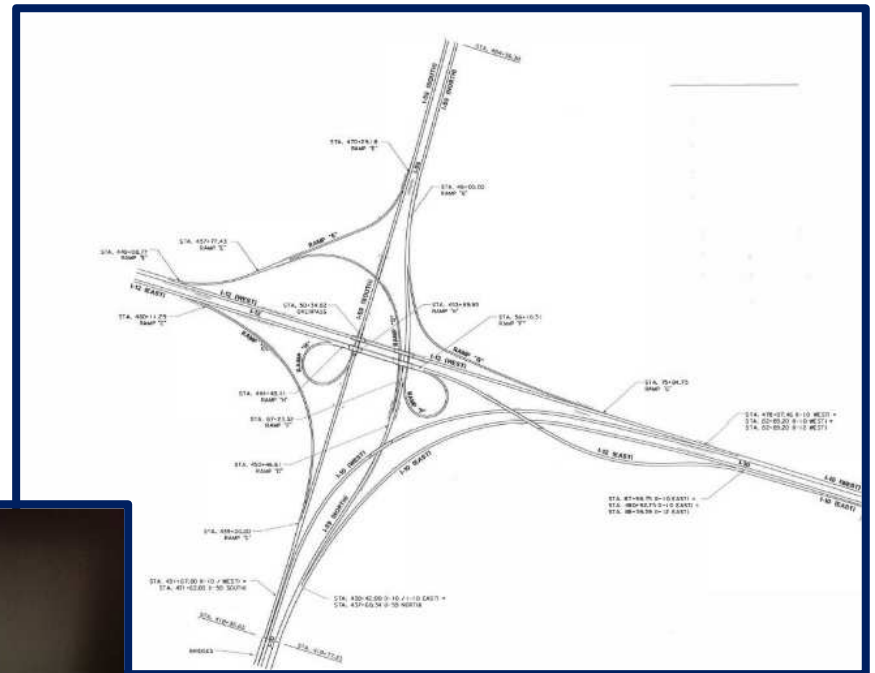
Firm name	Shread-Kuyrkendall & Associates, Inc.		Past Performance Evaluation Discipline(s)*	Road / Bridge
Project name	French Branch Bridge-West Pearl River Bridge (I-10 / I-12 / I-59)		Firm responsibility (prime or sub?)	Prime
Project number	700-52-0205	Owner's name	LADOTD	
Project location	St. Tammany Parish		Owner's Project Manager	Allison Schilling, P.E.
Owner's address, phone, email	P.O. Box 94245, Baton Rouge, LA 70804 / (225)379-1100 / Allison.Schilling@la.gov			
Services commenced by this firm (mm/yy)	08/10	Total consultant contract cost (\$1,000's)		\$ 410
Services completed by this firm (mm/yy)	01/15	Cost of consultant services provided by this firm (\$1,000's)		\$ 410

**100% of work was performed in Louisiana*

French Branch Bridge – West Pearl River Bridge, Route I-10, St. Tammany Parish project included the I-10/I-12/I-59 Interchange. The existing pavement consisted of joint displacement, substandard cross-slopes, and general pavement disrepair. Improvements and repairs include rubblization, pavement replacement, and overlay for cross-slope correction.

Safety improvements such as guard rail replacement, overhead sign adjustment, and adjusting elevations of ramps was included. This project required stage construction with shoulder widening for traffic control. **Traffic control plans with multiple phasing, night construction, and detours was utilized.** SKA provided topographic surveys, evaluation of existing pavement and safety conditions, and engineering design services for preliminary and final plans for repair and improvements. Some realignment of ramps was required to allow for higher levels of safety and to provide better traffic flow for merging and lane drops.

This was a pavement preservation/restoration project.



Sequencing and Traffic Control were an important element of this project. This project was constructed without any issues and SKA was awarded the DOTD 2016 Transportation Excellence Award

Firm Members Involved:

Ripley W. "Gary" McClure, P.E.

John P. Raymond, P.E.

Nicola D. Gill, P.E.

James Partin

Dianna Sherman



17. Firm Experience

Firm name	GM2 ASSOCIATES, INC.		Discipline(s)*		Bridge	
Project name	US 181 Harbor Bridge Replacement Project			Firm responsibility (prime or sub?)		Prime
Project number	0101-06-095	Owner's name	Texas Department of Transportation			
Project location	Corpus Christi, Texas			Owner's Project Manager	Mr. Joseph Briones, PE	
Owner's address, phone, email	1701 South Padre Island Dr., Corpus Christi, TX, 78416, 361.808.2327, joseph.briones@txdot.gov					
Services commenced by this firm (mm/yy)		07/15	Total consultant contract cost (\$1,000's)			\$76,900
Services completed by this firm (mm/yy)		Ongoing	Cost of consultant services provided by this firm (\$1,000's)			\$376

The \$1.2B Design-Build-Maintain US 181 Harbor Bridge Replacement Project at the Port of Corpus Christi, Texas, includes reconstruction of 3.9 miles of US-181, 1.6 miles of I-37, and 1 mile of SH-286 (Crosstown Expressway). In total, the project includes the development, design, construction, and maintenance of 6.5 miles of bridges, highways, roadways, connecting roadways, and interchanges. The new US-181 facility features three travel lanes in each direction with a median barrier, shoulders, and a bicycle/pedestrian shared-use path.

The new Harbor Bridge features a 3,285' long cable-stayed main-channel bridge with a 1,661' long main span, the longest concrete cable-stayed span in the U.S. The 15,000' of approach bridges are twin, precast, post-tensioned segmental box girders built from above in span-by-span and in modified balanced cantilever. Typical spans are 180' with spans exceeding 200' over railroad tracks. The interchange bridges consist of 17 bridges with partial depth precast concrete deck panels (TxDOT PCP) and TX54 prestressed concrete girders on multi-column and single column bents with precast concrete pile or drilled shaft foundations and three precast concrete box culverts. Two direct-connect interchange roadway bridges feature curved steel plate girder units with spans ranging from 131' to 265'. The plate girders vary in depth from 84" to 96".

The GM2 Complex Bridge Team members served as Engineer of Record of the precast concrete segmental approach structures and the direct-connect roadway bridges. GM2 staff also led the design office support team during construction, managing a team of subconsultants in disciplines such as Roadway, Drainage, Walls, Electrical-Illumination, Electrical-ITS, Signing and Pavement Marking, and Landscaping.

Firm Members Involved:

Cesar Fernandes
Chris Burgess
Matt Lengyel



17. Firm Experience

Firm name	GM2 ASSOCIATES, INC.		Discipline(s)*		Bridge	
Project name	SH 96A 4 th Street Bridge				Firm responsibility (prime or sub?)	Prime
Project number	BR 0961-008	Owner's name	Colorado Department of Transportation			
Project location	Pueblo, Colorado			Owner's Project Manager	Mr. Dean Sandoval (retired)	
Owner's address, phone, email	5615 Wills Blvd., Pueblo, CO 81008, 719.546.5440, Dean.Sandoval@state.co.us					
Services commenced by this firm (mm/yy)		03/2001	Total consultant contract cost (\$1,000's)			\$4,300
Services completed by this firm (mm/yy)		12/2010	Cost of consultant services provided by this firm (\$1,000's)			\$2,900

The \$27.6M 4th Street Bridge (State Highway 96A) replaces an aging structure originally built in the late 1950s, while preserving a critical east-west connection through the city. Spanning a small city street, the expansive Pueblo Railroad Yard, and the Arkansas River, the new bridge provides a vital link between the residential neighborhoods to the west and the downtown area to the east.

The 1,137' long twin, cast-in-place concrete segmental bridges were built from above in balanced cantilever with form travelers. This approach preserved uninterrupted rail, vehicular, and recreational river traffic while safeguarding the river environment throughout construction. Each bridge is 54' wide, accommodating two travel lanes and a 10' multi-use sidewalk. The structure consists of five spans, including a record-setting 378' main span, the longest highway bridge span in Colorado. The bridge layout provides clear spans over both the Union Pacific Railroad (23 rails) and Burlington Northern Santa Fe Railroad (5 rails) within the Pueblo Yard, ensuring uninterrupted rail yard operations.

To minimize impacts on the rail yard and active tracks, each bridge pier was supported by a pair of 8' diameter drilled shafts with compact footings, allowing precise placement within the constrained space between existing rails. At each pier location, a single rectangular column was cast integrally with the bridge superstructure, enhancing structural capacity while eliminating the need for bearings, reducing construction costs and minimizing long-term maintenance requirements.

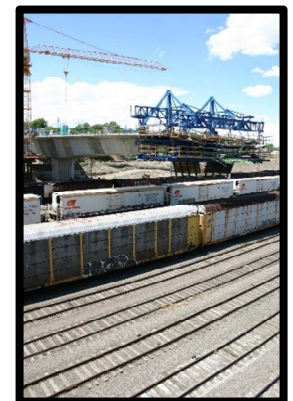
Community and agency input through design charettes helped create a signature bridge for Pueblo. A major theme of "Natural Environment" and minor themes of "Contemporary Sculpture" and "Pueblo Heritage" were chosen by charette participants to guide development of aesthetic bridge features. These themes are reflected in pier medallions, pedestrian railing, sidewalk, end of bridge treatment details, bridge color, and lighting features.

The GM2 Complex Bridge Team performed a structure type selection study, preliminary design phase services, community involvement, final design, and on-site support to CDOT during construction.

Firm Members Involved:

Cesar Fernandes

Chris Burgess



17. Firm Experience

Firm name	GM2 ASSOCIATES, INC.		Discipline(s)*		Bridge	
Project name	I-25 Viaduct over Broadway Blvd.			Firm responsibility (prime or sub?)		Prime
Project number	0252-354	Owner's name	Colorado Department of Transportation			
Project location	Denver, Colorado			Owner's Project Manager	Ms. Jessica Myklebust	
Owner's address, phone, email	2829 W Howard Pl, Denver, CO 80204, 303.759.2368, Jessica.myklebust@state.co.us					
Services commenced by this firm (mm/yy)		08/1999	Total consultant contract cost (\$1,000's)			\$4,800
Services completed by this firm (mm/yy)		04/2005	Cost of consultant services provided by this firm (\$1,000's)			\$3,300

This \$78.9M project encompassed the conceptual, preliminary, and final design of the I-25 Viaduct, which spans Broadway Boulevard (six through lanes and two turn lanes), three Light Rail Transit (LRT) tracks, and three Union Pacific Railroad tracks along Colorado's busiest transportation corridor. As part of the effort, GM2's Complex Bridge Team developed and led the first implementation of CDOT's new precast U-girder standards, improving overall project efficiency and design consistency.

The viaduct carries ten lanes of traffic, including shoulders and an exit ramp. The total structure length is approximately 1,700' with typical spans of 140'. To maintain uninterrupted six-lane I-25 traffic during construction, the viaduct was built in three phases progressing south to north, with each phase measuring approximately 58' in width. The decks of all three phases were post-tensioned across the full width, providing structural continuity and precompression for enhanced durability and performance.

Each phase of the viaduct is supported by a 70' long post-tensioned integral pier cap set at a 45-degree skew angle atop a single column, optimizing space beneath the bridge. This design enabled redevelopment of the area below into expanded parking for the adjacent light rail station. Foundations consist of drilled shafts. The use of integral pier caps minimized structural depth at the piers, creating more usable space below while maintaining consistent bridge deck elevations.

The GM2 Complex Bridge Team performed conceptual, preliminary, and final design and design office support and construction engineering during construction.



Firm Members Involved:

Chris Burgess

17. Firm Experience

Firm name	Ardaman & Associates, Inc.		Discipline(s)*	Geotech	
Project name	I-20 Mississippi River Bridge Review			Firm responsibility (prime or sub?)	Prime
Project number	SP No. H.004646 09-L1049 H.010603.6 13-3720 H.010612.6 20-3729 H.004647.6 22-3746, 22-3753, 24-3707	Owner's name	LADOTD		
Project location	Madison Parish, LA		Owner's Project Manager	Chris Nickel	
Owner's address, phone, email		1201 Capitol Access Road, Baton Rouge, LA; 225.379.1100; Chris.Nickel@la.gov			
Services commenced by this firm (mm/yy)		10/09	Total consultant contract cost (\$1,000's)		\$10,881
Services completed by this firm (mm/yy)		Ongoing	Cost of consultant services provided by this firm (\$1,000's)		\$10,881

**100% of work was performed in Louisiana*

Ardaman conducted a geotechnical study to develop a list of technically feasible remedial alternatives to decrease the potential for ground movements to occur at the site of the I-20 Bridge. Movement of the east abutment of the bridge was first realized in 2001 during an inspection. Over the years Mississippi DOT has retained several consultants who have studied the problem, but no viable solution was identified. Ardaman conducted a comprehensive review of past slope stability evaluations and recommendations. This task was followed by developing a refined geotechnical site characterization plan for the bank/bluff area for further analyses. Drilling operations included obtaining extremely sensitive samples containing prehistoric shear planes from the river via barge and on land, all with extremely difficult access conditions. The drilling program also included installation of geotechnical instrumentation such as Shape Accelerator Arrays, inclinometers, and vibrating wire piezometers. Engineering analyses performed included seepage and drawdown analyses and both equilibrium and finite element numerical modeling slope stability analyses. As part of the project, Ardaman developed a full slope stabilization design and construction remediation strategy and a monitoring program for the bluff instability and ground movements affecting the existing I-20 Mississippi River Bridge.

Ardaman is currently managing a phase of the project which involves upgrading the entire instrumentation communication system. It also includes gathering and continuously monitoring various types of instrumentation data, inspects of the site and monitoring changes in topography by obtaining periodic survey data.

Firm Members Involved:

Megan Bourgeois
Robert Jewell
Jarmon King
Casey Floyd
Jessica Litt



17. Firm Experience

Firm name	Ardaman & Associates, Inc.			Discipline(s)*	Geotech	
Project name	I-10: LA 415 to Essen Lane on I-10 & I-12 (CMAR)				Firm responsibility (prime or sub?)	Sub
Project number	SP No. H.004100.5	Owner's name	LADOTD			
Project location	East Baton Rouge Parish, LA			Owner's Project Manager	Nicholas Olivier	
Owner's address, phone, email		1201 Capitol Access Road, Baton Rouge, LA; 225.379.1133; nicholas.olivier@la.gov				
Services commenced by this firm (mm/yy)		07/21	Total consultant contract cost (\$1,000's)			\$44,000
Services completed by this firm (mm/yy)		Ongoing	Cost of consultant services provided by this firm (\$1,000's)			\$1,217

**100% of work was performed in Louisiana*

The Construction Management at Risk (CMAR) project scope consists of widening of the east and westbound lanes, elevated structures, interchanges, and ramps along I-10 from LA 415 in West Baton Rouge Parish to Essen Lane on I-10 and I-12 in East Baton Rouge Parish spanning approximately 2.5 mile. Ardaman is the Geotechnical Consultant on the CMAR team and is currently providing geotechnical support for Segment 1 which starts near the I-10 and I-110 split between Napoleon and St Joseph Streets to Acadian Thruway entrance and exit ramps.

Ardaman previously completed 58 soil borings and associated laboratory testing based on LADOTD standards, and 11 electronic cone penetration tests (ECPT) in the preliminary portion of the widening project between Napoleon Street and Louise Street under our current retainer contract in support of the project. In addition, Ardaman performed electrical resistivity (ER) geophysical survey transects along the entire alignment, which allowed for survey of the subsurface conditions between the boring locations. Ardaman is currently performing additional soil borings along the Segment 1 area to supplement existing data along the alignment.



Firm Members Involved:

Robert Jewell
Megan Bourgeois
Jarmon King
Mark Woodward
Casey Floyd
Jessica Litt

Engineering services include supervision of the field program, development of the laboratory testing program, quality control review, and development of an interactive geotechnical database to compile and analyze all the supplied soil boring data provide by LADOTD and the additional borings that are currently being performed. The engineering analyses consist of detailed selection of design reaches and design soil parameters, slope stability and settlement of earth retained structures, soil-structure interaction with existing structures, deep foundation design, load testing recommendations, review of load test results and refinement of design. A preliminary geotechnical assessment report was prepared, and a final geotechnical design report will be submitted.

17. Firm Experience

Firm name	Ardaman & Associates, Inc.			Discipline(s)*	Geotech	
Project name	US 371: KCS Railroad Overpasses HBI				Firm responsibility (prime or sub?)	Sub
Project number	H.012030	Owner's name	LADOTD			
Project location	Webster Parish, Louisiana			Owner's Project Manager	Hamed Babaizadeh	
Owner's address, phone, email		1201 Capitol Access Road, Baton Rouge, LA (225)379-1937 Hamed.Babaizadeh@la.gov				
Services commenced by this firm (mm/yy)		07/2023	Total consultant contract cost (\$1,000's)			\$956.8
Services completed by this firm (mm/yy)		Ongoing	Cost of consultant services provided by this firm (\$1,000's)			\$231.4

**100% of work was performed in Louisiana*

The project consists of a geotechnical subsurface exploration and recommendations for S.P. No. H.012030, US 371: KC Railroad Overpasses HBI, with the objective of replacing two parallel bridges and one standalone bridge located on US 371 between Minden and Sibley, Louisiana. The bridges cross over Kansas City (KC) Railroad at each site. The standalone bridge near Sibley, LA was later removed from the project to be placed under another state project, however the geotechnical exploration that was performed for this site will be included in this description. The three bridges range from approximately 200 feet to 250 feet in length including 4 bents per bridge supported on drilled shafts with varying diameters.

For the geotechnical exploration phase of work, Ardaman performed 8 soil borings to a maximum depth of 110 feet below existing ground surface (bgs) targeting the proposed bridge foundations on either side of the KC railroad. Two of the soil borings were performed through the existing bridge deck within the ROW of the KC railroad while occupying one lane of US 371. Coordination with temporary traffic control services and the KC railroad temporary constructions requirements was necessary to perform these soil borings.



Engineering services include supervision of the field program, development of the laboratory testing program, quality control review, and development of an interactive geotechnical database to compile all the soil borings. The engineering analyses included drilled shaft design and advanced test shaft program recommendations. A data report, geotechnical interpretation report, and test shaft memorandum were submitted.

Firm Members Involved:

Megan Bourgeois
Robert Jewell
Jarmon King
Casey Floyd
Jessica Litt

18. Approach and Methodology

EXPERIENCE

Shread-Kuyrkendall & Associates, Inc. (SKA) has over 30 years of successful DOTD experience and has worked closely with DOTD on multiple types of projects for roadway, bridge, safety, and pavement preservation for both Interstate and Non-Interstate Roadways. SKA utilizes the DOTD Roadway Design Procedures and Guidelines, DOTD Minimum Design Guidelines, and Pavement Preservation Manual for design references. Other documents that may be used would be AASHTO's Policy on Geometric Design of Highways, AASHTO's Roadside Design Guide, the Highway Safety Manual, Bridge Design and Evaluation Manual (BDEM), and Bridge Design Technical Memoranda (BDTMs). SKA has selected a successful team to implement the required services as part of this contract, which includes project management, detailed line and grade studies, sequence of construction, preliminary cost estimate, bridge design, and geotechnical services. Additional services may include preliminary plans, final plans, construction support and any additional items required to provide DOTD with a quality constructible final set of plans.

SKA is proficient in coordinating with multidisciplinary teams to ensure that proposed projects are feasible, cost-effective, and minimize disruption throughout the project duration. For this project, GM2 will serve as the bridge subconsultant, while Ardman will be the geotechnical subconsultant.

GM2 ASSOCIATES, INC. (GM2) The GM2 Complex Bridge Team brings unparalleled expertise in the design of long-span concrete segmental bridges, utilizing both cast-in-place and precast balanced cantilever construction methods. With a proven track record of delivering innovative, site-specific solutions, our team has the knowledge and experience to address the unique challenges of this project. Their commitment to excellence is reflected in the numerous successful projects they have completed across the country. **Ardaman & Associates, Inc. (Ardaman)** specializes in geotechnical engineering consulting including field investigations and laboratory testing, foundation evaluation and development of design criteria, geotechnical performance monitoring, and construction quality assurance inspection and testing. Ardaman brings a wealth of experience in the transportation and infrastructure arena with our long-standing relationship with the Louisiana Department of Transportation & Development (DOTD).

Key Personnel Design Experience meeting the Minimum Personnel Requirements

Mr. Ripley W. "Gary" McClure has over 40 years of experience with project management, design and quality control experience on a variety of DOTD projects including roadway design, bridge design, stage 0 studies, and environmental assessments. Mr. McClure will serve as Principal-in-Charge of this project. He has extensive knowledge of the latest design criteria and is a proven innovator of roadway and bridge design to provide the most cost-effective method for constructing roadways and bridges. In addition, Mr. McClure has extensive experience with public meetings and acquiring public input for sensitive projects.

Mr. John Raymond has over 30 years of experience with designing and managing various roadway projects including new alignments, widening projects, reconstruction, pavement preservation, and intersection improvements including roundabouts throughout the state. His knowledge of current DOTD design standards is a great asset to the firm. Mr. Raymond is well versed in and has designed or modeled numerous INNOVATIVE TRANSPORTATION PROJECTS, such as Diverging Diamond Interchanges (DDIs), Single and Multilane Roundabouts, and Superstreets that implement Restricted Crossing U-turn Intersections(R-CUTs) and J-turns.

Mr. Jagdeesh Gopal has more than 24 years of experience in the analysis, design, inspection, and rehabilitation of various types of highway/pedestrian/railroad bridges and retaining walls. Jagdeesh leads GM2's Structural Engineering group and serves as President of GM2. Jagdeesh will advise the team during the Bridge Type Study and provide QA Oversight during design of the bridge and bridge plan preparation.

Mr. Cesar Fernandes has more than 32 years of experience in the analysis, design, and project management of major bridges including long-span segmental, steel girders, and precast prestressed beams. Cesar will serve as the Project Manager in charge of the Bridge Type Study and Engineer of Record for the RR Overpass Bridge.

Mr. Matthew Lengyel has over 24 years of bridge design, construction engineering & inspection (CEI), and project management experience on major bridge projects across the United States. He will assist with the Bridge Type Study, design of the bridge, and in the preparation of bridge plans.

Ms. Megan Bourgeois has more than 19 years of experience with design and analyses of countless types of foundations including shallow, embankment settlement analysis, deep foundations (pile and drilled shafts), LRFD design, FHWA & GEC design, slope stability (embankment and excavation) and earth retaining structures. She also has extensive experience with geotechnical instrumentation, installation and monitoring, and construction phase testing and laboratory management. In this role, she supervises the laboratory managers, oversees testing, provides guidance to laboratory staff, and ensures appropriate protocol is followed and deadlines are met in addition to providing training material and maintaining all laboratory certifications, including AMRL, CCRL, DEQ & USACE.

Mr. Robert Jewell serves as the manager of our Baton Rouge office and has over 15 years of experience with design and analyses of countless types of foundations including shallow, embankment settlement analysis, deep foundations (pile and drilled shafts), LRFD design, FHWA & GEC design, slope stability (embankment and excavation) and earth retaining structures. He has managed and coordinated many geotechnical field investigations, including shallow and deep borings, CPT soundings, and performed analyses and prepares design recommendation reports for LADOTD projects. Mr. Jewell has extensive experience in construction phase testing and oversight including dynamic and static testing, pile integrity testing, cross hole sonic logging, settlement monitoring, and geotechnical instrumentation. In particular, he has over 15 years of experience performing, analyzing, and reporting for PDA testing.

UNDERSTANDING

With over 30 years of experience, SKA understands that successful Line and Grade Studies for roadway and bridge projects require the integration of traffic control planning and construction sequencing. SKA will carefully evaluate horizontal and vertical alignments alongside existing traffic conditions, constructability constraints, and phasing requirements to develop safe, efficient, and buildable design alternatives that minimize disruption and support streamlined project delivery. The proposed project consists of two detailed Line and Grade Studies within the project corridor. The first study will evaluate the widening of US 11 to a four-lane, access-managed corridor, including the replacement of the existing bridge. This study will analyze alignment alternatives, assess right-of-way impacts, drainage needs, and utility conflicts, and incorporate traffic control and construction sequencing to support a constructible and cost-effective solution with minimal disruption during construction. The second study will consider a reduced project scope, limited to replacing the existing

18. Approach and Methodology

bridge with a new two-lane structure including necessary shoulders, with project limits set accordingly. This study will ensure that all design elements are compatible with and do not preclude future roadway reconstruction and widening to the full four-lane corridor as defined in the first study. SKA understands that the initial services will include project management, detailed line and grade studies, development of the sequence of construction, and preliminary cost estimates. Additional services, authorized by a supplement, will encompass preliminary plans, final plans, and construction support.

APPROACH

Our goal is to provide and deliver a quality product that meets the needs of DOTD and project stakeholders. SKA prides itself on its ability to maintain schedules, work closely with DOTD's Project Manager, and to provide a plan set that is ready for construction and minimizes plan changes using a proven QA/QC process. The majority of our staff has been with SKA for more than 20 years with our managers being with SKA even longer. This clearly indicates the level of experience SKA has working with DOTD and our understanding of the Plan Delivery Process. SKA will utilize **Ms. Niccola Gill** as Supervising Engineer overseeing QA/QC. Ms. Gill has over 20 years of experience with SKA as well as working with DOTD. SKA's approach for delivering a quality construction set of plans is summarized as follows:

ESTABLISH A CLEAR UNDERSTANDING OF DOTD'S REQUIREMENTS AND GOALS During the scoping phase, **Mr. John Raymond** will establish open communication with the DOTD Project Manager, provide a detailed schedule, and provide a preliminary construction cost to assist DOTD with managing the project. Establishing a clear scope and understanding expectations will assist with maintaining budgets and schedules.

PROMPT CONTRACT EXECUTION In the event the project time is compressed, SKA has an advantage being a local Baton Rouge consulting firm. Contracts are executed in our local office thereby eliminating the time needed for an out-of-state main office for execution and administration.

STAKEHOLDERS Early in the design phases, DOTD Districts, permitting agencies utilities, and local government agency will be identified to ensure an open communication is established which in turn will provide better coordination and will reduce the chance of misunderstandings. During the preliminary phases of the plan development, SKA will propose potential design solutions to solve project design constraints noticed in the site visit.

SKA has coordinated initiation meetings, public meetings and hearing with DOTD on multiple projects. Some of these being the proposed Mississippi River Bridge Crossing, Pecue Lane / I-10 Interchange, and Stage 0 Feasibility Studies. SKA has the ability to create exhibits, provide handouts, and coordinate meetings as needed for this project.

TEAM MEETINGS Early on, SKA will determine the frequency of meetings needed for the project. Meetings will be determined for the project team, DOTD, and any stakeholders identified. These meetings will assist in addressing issues that may arise that could impact cost or scheduling.

MAINTAINING PROJECT SCHEDULE SKA will establish a critical path for activities that may impact the project schedule such as utility relocations, permitting, and any other items that may become apparent during the design process. SKA will always strive to complete the project ahead of the scheduled completion date, but no later than the scheduled date.

SKA has proven this on multiple projects that were designated for Federal redistribution funds that had a shortened schedule to meet August deadlines.

MONITORING/MANAGING CONSTRUCTION COSTS SKA is acutely aware of the necessity for managing construction costs and coordinating early on with DOTD about any changes that may affect engineering or construction budgets. This assists with minimizing change orders and overruns for the project.

QA/QC This project will be approached using SKA's proven and accepted Quality Assurance and Quality Control as included as part of this proposal. Adjustments will be made if necessary to meet the needs of the project. Our QA/QC allows us to maintain the highest standards of quality from start to finish.

METHODOLOGY

SKA and staff have been providing engineering services to DOTD for more than 30 years. As a result, SKA has a clear understanding of DOTD's Plan Delivery Process.

SCOPING Once a Notice to Proceed is received, our project manager **Mr. John Raymond** will request a scoping meeting from the DOTD Project Manager. During this meeting, SKA will establish a Project Management Plan (PMP) and will develop and refine the scope as needed for the project to incorporate any changes that may have occurred. Defining the project scope clearly ensures the project will progress smoothly with all phases of the project.

KICKOFF MEETING Once the contract is executed and a Notice to Proceed is received, SKA will request a kickoff meeting through the DOTD PM. At this meeting, SKA will request the following data, if available. The project kickoff meeting will be used to (1) establish project design criteria, (2) determine the frequency for project coordination meetings, (3) coordinate an on-site meeting with DOTD/District to discuss project concerns and constructability, (4) discuss and review any questions that may have been revealed after reviewing existing documents, and (5) to revise and update our PMP as needed. SKA will develop a progress schedule depicting milestones and incorporate any needed items that were discussed during the Kickoff Meeting.

LINE AND GRADE STUDIES SKA will be responsible for the Line and Grade Study for the development of the US 11 corridor widening from I-12 to US 90. The proposed project includes expanding the existing roadway to a four-lane, access-managed corridor and replacing the existing bridge structure. The goal is to identify a safe, efficient, and cost-effective alignment that improves mobility, supports future traffic demands, and minimizes impacts to adjacent properties, environmental resources, and existing infrastructure. SKA's approach will incorporate a comprehensive evaluation of multiple alternatives, incorporating best practices in access management, roadway geometry, and bridge design to support the selection of a preferred alignment in coordination with DOTD and project stakeholders.

➤ **Data Collection and Existing Conditions Analysis** SKA will utilize all available project data provided by DOTD, including the topographic survey, subsurface utility engineering (SUE) survey, property survey, environmental assessment, and pavement design. This information will form the foundation for understanding existing site conditions and constraints. SKA will review and validate this data to identify key design considerations, such as utility conflicts, right-of-way limitations, environmental sensitivities, drainage patterns, and pavement conditions. Field visits may also be conducted, as needed, to verify critical features and ensure alignment with current site conditions.

18. Approach and Methodology

- **Development of Alignments** The development of preliminary horizontal and vertical alignments will begin with the establishment of project-specific design criteria. These criteria will be based on a thorough review of DOTD standards, applicable AASHTO guidelines, and relevant documentation from previous environmental and engineering studies. SKA will ensure that the alignments meet current safety, operational, and geometric design requirements while considering context-sensitive solutions and minimizing impacts to existing infrastructure and adjacent properties.
- **Bridge Design** The replacement of the existing US 11 bridge over the Norfolk Southern Railroad will be developed in accordance with current AASHTO LRFD Bridge Design Specifications and DOTD Bridge Design Guidelines. SKA, in coordination with GM2, will evaluate appropriate span lengths, structure types, vertical and horizontal clearances, and construction staging options to minimize impacts on rail operations. Coordination with Norfolk Southern will be critical to ensure compliance with railroad design standards and to obtain necessary approvals for working within the railroad right-of-way. The bridge design will also consider utility conflicts, constructability, and long-term maintenance requirements.
- **Preliminary Bridge Review** Developing a cost-effective solution for the US 11 bridge over the Norfolk Southern Railroad presents significant challenges due to multiple site constraints. The extreme skew of the roadway alignment as it crosses the railroad tracks requires a long-span structure to maintain the minimum 25' clearance between the tracks and the permanent bridge elements, unless railroad crash walls are incorporated into the design. The conceptual design presented in the Final EA attempted to shorten the span length by orienting heavily skewed substructure bents relative to the bridge alignment. Despite this approach, the main span length is still approximately 390'.

In addition, the need for a higher vertical roadway profile may require raising existing overhead power lines running parallel to the track on west side of the railroad right-of-way. These lines will also need to be deenergized during specific construction phases. Maintaining uninterrupted railroad operations with minimal disruptions during construction is essential. The available work zone for cranes and other equipment is also severely limited by the skew angle and the width of the temporary railroad clearance envelope relative to the narrow right-of-way. These factors suggest that structure types that can be constructed from above with minimal on-ground equipment should be strongly considered.

- **Bridge Type** selection will be critical to the overall success of the project from a cost, schedule, and constructability standpoint. Given the project complexities described above, the most effective design solution may differ from the solution shown in the Final EA document. The following alternative bridge structure types could be considered:
 - **Skewed Steel Plate Girder** This option is similar to the proposed concept, which has a 390' clear span across the tracks achieved by heavily skewing the pier bents at an angle of over 70 degrees. This extreme skew angle presents design and constructability challenges. Highly skewed bridges can experience larger differential displacements between girders, out-of-plane bending of the webs, and more significant fatigue effects. These effects often necessitate additional web stiffeners and more robust cross-frames, leading to higher costs compared to a conventional non-skewed bridge. Stiffeners may also need to be skewed relative to the girders to match the support skew, further increasing complexity of fabrication and cost. Bearings must be designed to accommodate higher rotations and larger lateral forces, increasing both complexity and cost. When evaluating the steel plate girder option, the GM2 Complex Bridge Team will carefully study the skew angle to balance span length and pier bent orientation. A variable-depth plate girder may allow longer spans while reducing the skew angle needed. Regardless of the final design, some

railroad outages will be necessary for key construction operations such as girder erection, deck form installation, and deck concrete placement.

- **Non-Skewed Steel Plate Girder** If the pier bents supporting the girders were not skewed, they would need to be placed farther apart to remain outside the permanent 50' wide by 23' high railroad clearance envelope. To reduce the resulting span length over the railroad, single-column post-tensioned pier bents supporting separated parallel bridges could be used to cantilever over the clearance envelope. These substructures would be similar to the pier configuration used by the GM2 Complex Bridge Team for the I-25 Viaduct over Broadway Blvd. Project in Denver, Colorado. In this configuration, the maximum span length could be reduced to approximately 260' while eliminating skewed bents. The steel plate girder depth could also be reduced from 12' to approximately 8'. The depth of the overhanging pier cap will affect the bridge vertical profile, but this can be minimized by post-tensioning the pier caps for a more efficient cap design. This configuration would simplify the steel framing design, reduce structural complexity, and lower overall costs. As with the I-25 Viaduct project, the pier caps and foundations could be designed for phased construction.
- **Concrete Box Girder – Cast-In-Place Balanced Cantilever** This method of construction is well-suited for railroad overpasses because it allows all work to be performed from above, over the railroad envelope, with minimal or no disruption to rail operations. Cast-in-place balanced cantilever construction was successfully used on the 4th Street Bridge in Pueblo, Colorado, with 5 spans up to 378' over 28 active rail lines, the longest roadway bridge span in the state. Similarly constructed bridges in the U.S. have achieved spans up to 855'. For the US 11 bridge over the NSRR, our team estimates that a span of approximately 350' could be achieved using non-skewed piers. All erection operations for this type of structure including launching form travelers, formwork, rebar placement, concrete placement, and post-tensioning can be performed while trains remain in operation. In addition, this method is suitable for complex geometries, such as reverse curves, and the box girder's inherent torsional rigidity makes it ideal for curved alignments. In many cases, including the alternative bidding for the 4th Street Bridge, this solution has proven more cost-effective than steel alternatives. We believe that this structure type is quite viable for the US 11 railroad overpass, where twin parallel structures could be built in the same or separate construction contracts. The Richard S. Thompson Bridge carrying LA 8 over the Red River at Boyce, Louisiana, was constructed with this method in 1982 and is still performing well today.
- **Concrete Box Girder – Precast Balanced Cantilever** A concrete box girder bridge built in balanced cantilever could also be accomplished using precast segments. This construction method was used to build the flyover ramps for the I-49 Segment K interchange in Shreveport, Louisiana, which was bid successfully against a steel alternate design. Spans up to 440' have been accomplished with this method, sufficient to span the NSRR. The key advantage of this bridge type is erection speed: up to three pairs of 9' long segments can be erected in a single shift. Segments are cast off-site and transported to the project location, where they can be erected using ground-based cranes or segment lifters mounted on the cantilevers. This latter method was successfully used on the I-4 Connector project in Tampa, Florida, to erect curved ramp segments over skewed CSX rail crossings, with spans exceeding 250'. While the cost of segment formwork and a small casting yard may be a factor, building twin structures under

18. Approach and Methodology

a single contract could be more economical. More importantly, the ability to erect segments rapidly minimizes impacts to railroad operations and significantly shortens overall project duration.

- **Geotechnical Services** Aradman will perform the geotechnical services through a proven, systematic approach tailored to DOTD requirements and the specific needs of the project site. The process will begin with a review of available geotechnical information from a nearby project to gain an initial understanding of the soil conditions and potential subsurface challenges. This will be followed by a thorough desktop study and site reconnaissance to evaluate existing geologic, soil, and topographic data specific to the project corridor. Using this information, Aradman will develop a site-specific subsurface exploration plan, identifying boring locations and testing requirements in coordination with the design team. Soil borings will be performed at key locations along the proposed bridge alignment, and representative samples will be collected for laboratory testing to determine engineering properties such as strength, compressibility, and moisture content. The results will be used to develop geotechnical design parameters and provide foundation recommendations, with particular emphasis on deep foundation systems suitable for Louisiana soils. PDA (Pile Driving Analyzer) testing will be conducted during construction, followed by CAPWAP (Case Pile Wave Analysis Program) analysis to confirm pile capacities. Non-destructive testing methods will also be employed as needed to ensure structural integrity of the foundations. All findings will be summarized in a detailed geotechnical report prepared in accordance with DOTD standards.

LINE AND GRADE STUDY DEVELOPMENT

- SKA, as the Prime Consultant, will lead the plan development for the Line and Grade Study in full compliance with DOTD Road Design Manual, as well as applicable bridge and geotechnical requirements. SKA will coordinate all disciplines to ensure a cohesive, constructible, and cost-effective preliminary design that meets DOTD standards and project objectives.
- GM2, as the Bridge Subconsultant, will be responsible for developing the preliminary bridge layout, including span configuration, deck width, vertical and horizontal clearances, and estimated foundation locations. GM2 will coordinate closely with SKA and Aradman to ensure alignment compatibility and constructability.
- Aradman, as the Geotechnical Subconsultant, will provide geotechnical support beginning with a review of nearby project data to understand regional soil conditions. Aradman will develop a preliminary exploration plan and provide input on anticipated foundation conditions, supporting bridge layout and construction feasibility during this phase.
- QA/QC will be completed by **Ms. Niccola Gill**. She has over 20 years of roadway and bridge design experience and is very knowledgeable of the latest DOTD Roadway Design Procedures, Guidelines and DOTD Minimum Design Guidelines, and Pavement Preservation Manual for design references, AASHTO's Policy on Geometric Design of Highways, AASHTO's Roadside Design Guide, the Highway Safety Manual, Bridge Design and Evaluation Manual (BDEM), and Bridge Design Technical Memoranda (BDTMs).

Project Schedule (Initial Services)						
Task/Deliverable (Months)	1	2	3	4	5	6
Scoping, Kickoff, and Field Work						
Scoping Meeting						
Kickoff Meeting and NTP						
Field Visit & Data Collection						
Line and Grade Study						
Preliminary Development						
DOTD Review						
Draft Line and Grade Submittal						
DOTD Review						
Final Line and Grade Submittal						

PLAN DEVELOPMENT SKA uses Microstation, OpenRoads (previously INRoads), OpenBridge (previously Leap Bridge), and DOTD's Hydraulic Design Software on all projects. SKA has been using these services simultaneously with DOTD since inception from Bentley Services. Additionally, SKA also uses Transoft Torus and Autoturn for roundabout design and U-turn Analysis. Using these software tools ensures that SKA's plans are compatible with DOTD's requirements and software capabilities.

PLAN SUBMITTALS will to be determined through a supplement for additional services, however typically SKA utilizes the DOTD Road Design Manual for plan delivery. SKA will submit the based on the scope of work provided at the Kick-Off Meeting or as follows:

- **Preliminary Plans:** SKA will submit the design criteria and preliminary plans at 30%, 60%, 90%, and 100%. Additionally, the Plan-in-Hand (PIH) Meeting will be held following the 90% submittal. The preliminary hydraulic report will be submitted with the 60% submittal. Also included in the preliminary submittals will be construction cost estimate with each submittal, bridge rating reports for the existing bridge, bridge evaluation report, bridge design criteria, preliminary design reports, and any design exception or waiver requests.
- **Final Plans:** Once Environmental Clearance is received, SKA will submit final plans at 60%, 95% (Advanced Check Prints), and 100% (Sealed Final Plans). The final hydraulic report will be submitted with the 60% submittal. Also included in the final submittals will be construction cost estimate with each submittal, the final design reports, final bridge evaluation report, final bridge design criteria, special provisions, NS pay items, and final design calculations.
- **Construction:** Once final design is complete, SKA will assist DOTD in completing the construction support proposal. SKA works with various entities and has over 30 years of experience with bidding, reviewing shop drawings, responding to RFIs, and all other items associated with construction support.

Project Schedule (Supplemental Services)																								
Task/Deliverable (Months)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Scoping, Kickoff, and Field Work																								
Scoping Meeting																								
Kickoff Meeting and NTP																								
Preliminary Plans																								
30% Preliminary Plans																								
60% Preliminary Plans																								
90% Preliminary Plans																								
DOTD Review and Plan-in-Hand																								
100% Preliminary Plans																								
Provide Environmental Support / Permit Drawings																								
Final Plans																								
60% Final Plans																								
Joint Plan Review Meeting (if necessary)																								
95% Final Plans																								
Plan Quality Review																								
100% Final Plans																								
Construction Support (For Duration of Construction)																								

19. Workload

Firm(s)	Past Performance Evaluation Discipline(s)	Contract Number and State Project Number	Project Name	Remaining Unpaid Balance
Shread-Kuyrkendall & Associates, Inc.	Road	44-8671 H.009266	I-10 (LA 73 to LA 30) Route I-10, Ascension Parish	\$ 14,325
	Bridge	44-8671 H.009266	I-10 (LA 73 to LA 30) Route I-10, Ascension Parish	\$ 48,814
	CE&I/OV	44-4665 H.004435	I-12 to Bush, LA 3241 (LA 36 – LA 435), St. Tammany Parish	\$ 51,891
	CE&I/OV	No Contract No. H.011152	I-12 Widening (sub to T. Baker Smith)	\$ 5,457
	CE&I/OV	44-14913 H.010155	US 90: Railroad Overpass SE of LA 85	\$ 96,378
	Road	44-17438 H.013284	MRB South GBR: LA 1 to LA 30 Connector (sub to Atlas)	\$ 61
	Road	44-17438 H.013284	MRB South GBR: LA 1 to LA 30 Connector (sub to Atlas) SA#3	\$ 103,211
	CE&I/OV	44-5615 H.000710.6	Comite River Diversion Bridge at LA 964	\$ 50,467
	Road	44-24831 H.0148830.5	LA 14 at LA 674 Intersection Improvements	\$ 6,946
	Road	44-24831 H.010222.5	LA 97: LA 98 – LA368 (Acadia Parish)	\$ 194,954
	Road	44-24831 H.016291.5	LA 10: PALMETTO – US 71 (St. Landry Parish)	\$ 161,796
	Road	44-24831 H.016460.5	LA 92: LA 91 – LA 13 (Acadia Parish)	\$ 238,770
	Road	44-27211 H.0145510.5	Iberia St. Pavement Preservation and Bike Improvements	\$ 109,172
GM2 Associates, Inc.	Bridge	44-17438 H.013284	MRB South GBR: LA 1 to LA 30 Connector	\$229,052.60
Ardaman & Associates, Inc.	Geotech	44-4128 H.004273	I-49 Connector, Lafayette	\$338,752
	Geotech	44-18899 H.004791	LA 23: Belle Chasse Bridge & Tunnel (HBI)	\$40,897

Ardaman & Associates, Inc.	Geotech	44-19013 H.004100.5 & .6	I-10 CMAR Design Continuation: LA 415 TO ESSEN ON I-10 & I-12	\$692,204
	Geotech	H.004435	I-12 to Bush Construction Phase	\$47,370
	Geotech	44-8671 H.009266	I-10 Widening: LA 73 to LA 30	\$25,760
	Geotech	44-19013 H.002244.5	Boudreaux Canal Bridge (LA 56)	\$180
	Geotech	44-17438 H.013284	MRB GBR LA 1 to LA 30 Connector	\$2,781
	Geotech	44-6189 H.004647.6	I-20 Mississippi River Bridge at Vicksburg	\$1,651,052
	Geotech	H.015935	LA 47 @ Bayou Bienvenue Bridge Replacement PDA	\$23,059
	Geotech	44-25025; H.015337, H.015452, H.015453, H.015454, H.015455, H.015456, H.015457, H.015458, H.015459, H.015460, H.015461, H.015462, H.015463	IIJA	\$77,119
	Geotech	44-24652 H.014265.5	N River Road Irving Branch	\$65
	Geotech	44-24652 H.012533.5	LA 1252 Bayou Pt Brule Bridge	\$39
	Geotech	44-24652 H.012607.5	Henderson Bayou Bridge LA 933	\$65
	Geotech	44-24652 H.015568.5, H.015569.5	Pelican Point Roundabout	\$45,870
	Geotech	44-24652 H.012842.5	LA 124 Ext. Larto Lake	\$152
	Geotech	44-21519 H.012030.5	KCS RR Overpasses US 371	\$44,036
	Geotech	44-21887; H.012542, H.012453, H.012544, H.012047	Replacement of 15 Bridges	\$579,165

20. Certifications/Licenses

State of
Louisiana
Secretary of
State



COMMERCIAL DIVISION
225.925.4704

Fax Numbers
225.932.5317 (Admin. Services)
225.932.5314 (Corporations)
225.932.5318 (UCC)

Name	Type	City	Status
SHREAD-KUYRKENDALL & ASSOCIATES, INC.	Business Corporation	BATON ROUGE	Active

Previous Names

STEWART-KUYRKENDALL AND ASSOCIATES, INC. (Changed: 10/24/1990)

Business: SHREAD-KUYRKENDALL & ASSOCIATES, INC.

Charter Number: 31602440D

Registration Date: 10/7/1976

Domicile Address

13016 JUSTICE AVENUE
BATON ROUGE, LA 70816

Mailing Address

C/O RIPLEY W MCCLURE
13016 JUSTICE AVENUE
BATON ROUGE, LA 70816

Principal Office Address

13016 JUSTICE AVENUE
BATON ROUGE, LA 70816

Status

Status: **Active**

Annual Report Status: **In Good Standing**

File Date: 10/7/1976

Last Report Filed: 9/9/2024

Type: Business Corporation

Registered Agent(s)

Agent:	RIPLEY MCCLURE
Address 1:	13016 JUSTICE AVENUE
City, State, Zip:	BATON ROUGE, LA 70816
Appointment Date:	2/19/2024

Officer(s)

Additional Officers: No

Officer:	MIGNONNE GUTIERREZ
Title:	Secretary
Address 1:	13016 JUSTICE AVENUE
City, State, Zip:	BATON ROUGE, LA 70816

Officer:	RIPLEY MCCLURE
Title:	President, Treasurer
Address 1:	13016 JUSTICE AVENUE
City, State, Zip:	BATON ROUGE, LA 70816

Amendments on File (6)

Description	Date
Name Change	10/24/1990
Disclosure of Ownership	1/23/1998
Disclosure of Ownership	3/8/2001
Disclosure of Ownership	1/11/2005
Disclosure of Ownership	2/19/2024
Domicile, Agent Change or Resign of Agent	2/19/2024

Print

State of
Louisiana
Secretary of
State



COMMERCIAL DIVISION
225.925.4704

Fax Numbers
225.932.5317 (Admin. Services)
225.932.5314 (Corporations)
225.932.5318 (UCC)

Name	Type	City	Status
GM2 ASSOCIATES, INC.	Business Corporation (Non-Louisiana)	GLASTONBURY	Active

Previous Names

Business: GM2 ASSOCIATES, INC.

Charter Number: 45939566F

Registration Date: 5/13/2024

Domicile Address

115 GLASTONBURY BLVD
GLASTONBURY, CT 06033

Mailing Address

115 GLASTONBURY BLVD
GLASTONBURY, CT 06033

Principal Business Office

115 GLASTONBURY BLVD
GLASTONBURY, CT 06033

Registered Office in Louisiana

3867 PLAZA TOWER DR., 1ST FLOOR
BATON ROUGE, LA 70816

Principal Business Establishment in Louisiana

3867 PLAZA TOWER DRIVE, 1ST FLOOR
BATON ROUGE, LA 70816

Status

Status: **Active**

Annual Report Status: In Good Standing

Qualified: 5/13/2024

Last Report Filed: 5/1/2025

Type: Business Corporation (Non-Louisiana)

Registered Agent(s)

Agent:	INCORP SERVICES, INC.
Address 1:	3867 PLAZA TOWER DR., 1ST FLOOR
City, State, Zip:	BATON ROUGE, LA 70816
Appointment Date:	5/13/2024

Officer(s)

Additional Officers: No

Officer:	MANISH GUPTA
Title:	President, Secretary/Treasurer, Director
Address 1:	115 GLASTONBURY BLVD
City, State, Zip:	GLASTONBURY, CT 06033

Officer:	DARREN BLOOD
Title:	Executive Vice-President
Address 1:	115 GLASTONBURY BLVD
City, State, Zip:	GLASTONBURY, CT 06033

Officer:	JAGDEESH GOPAL
Title:	Executive Vice-President
Address 1:	115 GLASTONBURY BLVD
City, State, Zip:	GLASTONBURY, CT 06033

Officer:	DEAN BAGDASARIAN
Title:	Executive Vice-President
Address 1:	115 GLASTONBURY BLVD
City, State, Zip:	GLASTONBURY, CT 06033

Officer:	FAISAL AZIZ
Title:	Executive Vice-President
Address 1:	115 GLASTONBURY BLVD
City, State, Zip:	GLASTONBURY, CT 06033

State of
Louisiana
Secretary of
State



COMMERCIAL DIVISION
225.925.4704

Fax Numbers
225.932.5317 (Admin. Services)
225.932.5314 (Corporations)
225.932.5318 (UCC)

Name	Type	City	Status
ARDAMAN & ASSOCIATES, INC.	Business Corporation (Non-Louisiana)	ORLANDO	Active

Previous Names

Business: ARDAMAN & ASSOCIATES, INC.

Charter Number: 34396031F

Registration Date: 12/13/1991

Domicile Address

8008 SOUTH ORANGE AVENUE
ORLANDO, FL 32809

Mailing Address

3475 E. FOOTHILL BLVD.
PASADENA, CA 91107

Principal Business Office

8008 SOUTH ORANGE AVENUE
ORLANDO, FL 32809

Registered Office in Louisiana

3867 PLAZA TOWER DR.
BATON ROUGE, LA 70816

Principal Business Establishment in Louisiana

316 HIGHLANDIA DR.
BATON ROUGE, LA 70816

Status

Status: **Active**

Annual Report Status: In Good Standing

Qualified: 12/13/1991

Last Report Filed: 11/19/2024

Type: Business Corporation (Non-Louisiana)

Registered Agent(s)

Agent:	C T CORPORATION SYSTEM
Address 1:	3867 PLAZA TOWER DR.
City, State, Zip:	BATON ROUGE, LA 70816
Appointment Date:	12/13/1991

Officer(s)

Additional Officers: No

Officer:	MOHAMAD AL-HAWAREE
Title:	President
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107

Officer:	DAN L. BATRACK
Title:	Vice-President
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107

Officer:	WILLIAM R. BROWNLIE
Title:	Vice-President
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107

Officer:	STEVEN M. BURDICK
Title:	Treasurer
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107

Officer:	FRANCIS K. CHEUNG
Title:	Vice-President
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107

Officer:	ERNEST A. COX, III
-----------------	--------------------

Title:	Officer
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107
Officer:	CHARLES H. CUNNINGHAM
Title:	Vice-President
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107
Officer:	ROBERT E. DODSON
Title:	Officer
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107
Officer:	JOHN E. GARLANGER
Title:	Officer
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107
Officer:	VIRGINIA A. GOFF
Title:	Officer
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107
Officer:	RODRIGO HOME
Title:	Vice-President
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107
Officer:	ASHBY HOOVER
Title:	Officer
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107
Officer:	PRESTON HOPSON
Title:	Secretary
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107
Officer:	EVELIO N. HORTA
Title:	Vice-President

Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107
Officer:	THOMAS S. INGRA
Title:	Vice-President
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107
Officer:	ROBERT E. JEWELL
Title:	Vice-President
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107
Officer:	COLIN T. JEWSBURY,
Title:	Vice-President
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107
Officer:	RICHARD A. LEMMON
Title:	Vice-President, Director
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107
Officer:	THOMAS J. LETO
Title:	Officer
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107
Officer:	JASON P. MANNING
Title:	Vice-President
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107
Officer:	MARTIN E. MILLBURG
Title:	Officer
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107
Officer:	JASON M. PARKER
Title:	Vice-President
Address 1:	3475 E. FOOTHILL BLVD.

City, State, Zip:	PASADENA, CA 91107
Officer:	ASHRAF H. RIAD
Title:	Vice-President
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107
Officer:	REINALDO ROLO
Title:	Officer
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107
Officer:	ROBERT E. ROUSSET
Title:	Vice-President
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107
Officer:	BRIAN D. RUNKLES
Title:	Officer
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107
Officer:	RAJENDRA K. SHRESTHA
Title:	Vice-President
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107
Officer:	IVAN SOKOLIC
Title:	Officer
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107
Officer:	MICHAEL WILSON
Title:	Vice-President
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107
Officer:	MARK ZRALLACK
Title:	Officer
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107

Officer:	AMR SALLAM
Title:	Officer
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107

Officer:	ETHAN DREW
Title:	Officer
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107

Officer:	EVELIO HORTA JR.
Title:	Officer
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107

Officer:	IRFAN RIYAJ
Title:	Officer
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107

Officer:	JEYISANKER MATHIYAPARANAM
Title:	Officer
Address 1:	3475 E. FOOTHILL BLVD.
City, State, Zip:	PASADENA, CA 91107

Amendments on File (7)

Description	Date
Stmt of Chg or Chg Prin Bus Off	2/1/1993
Revoked	3/21/2003
Reinstatement	12/31/2003
Stmt of Chg or Chg Prin Bus Off	1/29/2008
Disclosure of Ownership	8/21/2008
Merger	9/22/2009
Stmt of Chg or Chg Prin Bus Off	10/18/2015

Print

21. QA/QC Plan

Quality Control and Quality Assurance (QC/QA) for Bridge Design Projects

**CONTRACT NO. 4400032800
STATE PROJECT NO. H.000688.5
FEDERAL AID PROJECT NO. H000688
US 11 NORFOLK SOUTHERN RR OVERPASS (HBI)
ROUTE: US 11
ST. TAMMANY PARISH**



September 9, 2025



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Introduction

Proper procedures for a QC/QA (Quality Control and Quality Assurance) plan make up the initial steps in the process essential for bridge safety. Oversight, establishment, and implementation of a detailed QC/QA plan then follow.

DOTD and Consultant's Role in QC/QA Process

GM2 Associates, Inc. (GM2) is obliged to provide an extensive and all-encompassing QC/QA Plan for this project and to provide documentation for the LADOTD or stakeholder agencies to verify that an appropriate QC/QA Plan has been implemented as well as followed. Along with documentation, periodic meetings are necessary to discuss the Plan to allow for adjustments or improvements as the Project progresses from the NTP to Final PS&E. Being open to improvements adds credibility to an effective plan and provides for a mutual agreed upon process ending with a desired design for all parties involved. This is not to be misinterpreted as to mean the LADOTD or any other agency is responsible for GM2's design or plan preparation, but only to suggest that we are open to scrutiny. GM2 is solely responsible for all aspects of our design and for the finished product which is a safely designed bridge that will maintain the integrity of our profession and promote the end users trust in the system.

QC/QA as applied to Bridge Design Projects

Exercising an effective QC/QA Plan for bridge projects ensures that all parties agree with the latest standards to be used, most recent specifications, and design methods. It is the intent of an implemented QC/QA Plan to identify and correct bridge design errors before the design plans are made final.

An effective plan ensures that adequate and proper load conditions are analyzed for the level of use, that all calculations have been performed and checked, and that any corrections have been made prior to final stamped plans. A safe bridge is of the utmost importance and requires cooperation from all parties involved.

Quality Control (QC): Procedures for checking the accuracy and consistency of the calculations and the drawings, detecting and correcting design omissions and errors before the design plans are finalized, and verifying the specifications for the load-carrying members are adequate for the service and operation loads.

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

Responsibilities of Team Members

A Bridge Team consists of a Project Manager (PM), Engineer of Record (EOR), Designers, Checkers, and Reviewers.

- The **PM** is a licensed engineer with bridge design experience commensurate with this project and is responsible for development of a Design Quality Control Plan and coordination of this project with all disciplines involved, subconsultants, the LADOTD, and stakeholder agencies. He is the ultimate reviewer and final voice for allocation of personnel. All changes and adjustments to the project team, procedures, or policies must be reviewed and approved by the PM.



- The **EOR** is a licensed engineer with bridge design experience commensurate with this project and is responsible for ensuring that the level of design necessary for this project is utilized and implemented correctly. ***The EOR will also act as Designer for many aspects of this project that require a higher level of bridge design experience.*** The EOR shall follow the QC/QA Plan and shall attest that all design team members follow the Plan as well. The EOR is responsible for the quality of work and for any corrective actions needed to ensure this quality is maintained. The EOR along with the PM and other team members will compile and provide schedules necessary for observance and review of the status of this project by the LADOTD and stakeholder agencies.
- The **Designer(s)** is a licensed engineer or intern with bridge design experience and is qualified to perform design duties (other than those provided by the EOR) under the supervision and direction of the EOR relative to this project. The designer is responsible for ensuring that all assumptions, design calculations, details, and any other aspect performed by him/her are checked in accordance with the QC/QA Plan and are recorded and documented properly. He/she is to ensure that all corrections are made, or an approved explanation has been reviewed and documented.
- The **Checker** is a licensed engineer with bridge design experience commensurate with this project. He is involved in all meetings, and is knowledgeable regarding design criteria, concepts, procedures, specifications, standards, and details.
- The **Reviewer(s)** is typically the PM. The reviewer is responsible for ensuring that the QC/QA Plan has been followed and that all checks and corrections have been made, to allow for a level of redundancy.

QC/QA Plan and Process for this contract: 4400032800

Task 1

Upon receipt of an NTP and after the “kickoff meeting”, the PM, EOR, and other necessary personnel shall meet with the LADOTD Bridge Team to discuss and/or establish:

- Design Criteria
- Software
- Deliverables
- Expectations
- Scheduling requirements
- QC/QA Plan
- Miscellaneous information



Objective: *To ensure the project is being approached and designed in accordance with DOTD requirements. Establish an open channel with DOTD to allow for a free flow of comments and ideas.*

Task 2

Review of the environmental study, geotechnical data, traffic data, parish maps, scaled aerial photos of site, and DOTD roadway classification within the project limits. Advise DOTD of any discrepancies, conflicts, design concerns, or other issues that may impact the project now or in the future.

Objective: *To identify aspects of existing data and information that could impact the project negatively by causing delays or invalid design assumptions.*

Task 3

Conduct field visit(s) to the bridge sites and assess the site conditions. Evaluate and identify possible constructability issues and conditions that may impact alignment alternatives and structure types. Meet with and promote input from the local District.

Objective: *To establish job site assets and identify difficulties that could impact the project advantageously or adversely. Identifying constructability issues prior to design minimizes delays, cost overruns, corrective actions, and redesign. It enhances and streamlines the design phase and provides for a safer bridge supported by agency confidence.*

Task 4

Prepare construction cost estimates (itemizing construction, right-of-way, and utility relocation costs).

Objective: *To provide a useful estimate necessary for determining the most cost-effective alternative and bridge structure set.*

Task 5

Submit cost estimates (as stated in Task 4) to DOTD for review and comment.

Objective: *To create redundancy in the decision making.*

Task 6

Revise as needed for final bridge plans

QC procedures

- PM and EOR determine tasks for design team and checker(s)
- The Designer is responsible for ensuring that drawings are checked for compliance with good engineering/architectural practice and are in compliance with contract requirements. It is required that each Designer maintain a record of reviews made, the check sheets and final drawings.



- Drawings are checked for errors, ambiguities, omissions, consistency with other project documents or drawings, constructability, and conformance with the adopted standards.
- Drawings showing different elements of a project are checked for conflicts. Any conflicts noted are resolved prior to subsequent submittals for review or approval.
- All comments, red-marks and questions on the drawings made by the Checker(s), client or others are documented and delivered to the Designer for review and response. The PM maintains a log detailing the response or corrective action needed, the date, the responsible Designer/Checker and type of corrective action taken. All comments are responded to in writing by the Designer in a timely manner and resubmitted to the PM for review prior to taking corrective action. After approval by the PM, the Designer shall resubmit the Drawings with a set of the previous drawings showing the corrections in red.
- The PM has the ultimate responsibility for the tracking, resolution and incorporation of all issues and discrepancies internal and external. Any nonconformance items will be brought to the attention of the client in writing for their comment and approval. Before each submittal, the PM will review all documentation regarding any previous comments, issues discrepancies and nonconformance items to ensure that appropriate responses have been incorporated into the deliverable.
- Copies of all project correspondence are maintained in the project files located in GM2's office. Project correspondence from sub-consultants directed to personnel other than the Project Manager, are copied to the Project Manager. No correspondence is directed to client without prior approval of the PM. Correspondence is logged as to addressee and sender, date received or sent, subject, and where filed. Any follow up correspondence shall show the document reference number assigned to original correspondence.
- Bridge plan sheets shall include the initials of the designer, checker, reviewer, and detailer
- Bridge plans shall be sealed by the Engineer of Record (EOR)
- Design calculations, checked calculations, review comments/resolutions shall be maintained in a permanent design file.
- QC checklists, cost estimates, correspondence, design procedures and policies, and schedules shall be maintained in a permanent design file
- Keep records of sub consultant's documentation in a permanent design file.



QA procedures

- Provide monthly project meetings. This allows the PM and EOR to review project status and to be sure that QC is being followed with effective checking. Allows interdisciplinary comments and keeps the team informed of schedules and problems
- Meet with LADOTD departments to discuss status of design.
- Checker shall be independent from design but shall have full knowledge of project.
- Provide redundancy evaluation as often as necessary through independent reviews and checks.
- Promote questioning and evaluation of the project from all team members of all disciplines

Objective: *To provide procedures and policies to detect and correct bridge design errors before design plans are made final. To provide a means for verifying that the appropriate design calculations have been performed, that the calculations are accurate, and that the specifications for the load-carrying members are adequate regarding the expected service loads of the structure.*

Qualified Personnel (see attached Submittal for qualifications)

Project Manager (PM) – Cesar Fernandes, Jr., PhD, PE, SE, PMP

Engineer of Record (EOR) – Cesar Fernandes, Jr., PhD, PE, SE, PMP

Designer – Matthew Lengyel, PE, SE, PMP, CBI

Independent Checker – Chris Burgess, PE, SE, P. Eng.

Detail Checker – Wade Bonzon, PE

QA Reviewer – Jagdeesh Gopal, PE

QC/QA Tools

Each Designer is responsible to have a QA checklist developed to assist in the review of deliverables. This form incorporates the basic aspects of their work as well as the aspects where coordination with others is necessary. The checklist is delivered to the PM and EOR along with the submitted deliverable. The PM shall also develop a QA checklist focusing on the project-wide aspects, coordination of individual issues, and incorporation of previous comments as well as pertinent design aspects.



QC/QA Plan – CONTRACT NO. 4400032800
STATE PROJECT NO. H.000688.5
FEDERAL AID PROJECT NO. H000688
US 11 NORFOLK SOUTHERN RR OVERPASS (HBI)

Appendix A - Project Pre-Planning Guidance and Forms

- LADOTD Design Criteria Checklist
- LADOTD Project Activity Log Sheet
- LADOTD Bridge Design Section Records Retention Policy
- LADOTD Consultant Project Bridge Design Kick-Off Meeting Agenda Checklist
- GM2 QMP Definitions and Roles

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 Γ_D , redundancy factor Γ_R , and operational importance factor Γ_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.

Project No.:
Project Name:
Bridge Task Manager:

[illegible]

APPENDIX F—BRIDGE DESIGN SECTION RECORDS RETENTION POLICY

Item No.	Record Title	In Office Retention Period (by Bridge Design Section)	DOTD Total Retention (by General Files)	Archiving Instruction	Responsible Party
001	Design Manuals/Guidance and Bridge Design Technical Memoranda	ACT* + 1 CY**	Life of the Agency	Archive electronically in Project-wise under <u>Documents\ Reference Materials\Bridge Design Section Archive\Design Manuals-Guidance</u>	Assistant Bridge Design Administrator responsible for design manuals
002	Bridge Design Standard Plans	ACT* + 1 CY**	Life of the Agency	Archive electronically in Project-wise under <u>Documents\ Standard Drawings</u>	Bridge Design Standards Manager
003	Final Plans, Revisions, and Change Orders (CAD files)	ACT* + 1 CY**	Life of the Agency	Archive electronically in Project-wise under <u>Project folder\Bridge-Facilities\Discipline\Plans</u> <i>(Subfolders for each revision and change order should be created under Plans)</i>	Bridge Task Managers
004	Final Plans, Revisions, and Change Orders (Original signed hard copies)	ACT* + 1 CY**	Final Project Acceptance Date + 5 Years	Transmit to General Files and archive electronically in DOTD Network Plan Room by General Files	Bridge Task Managers
005	Final Plans, Revisions, and Change Orders (Digital signed copies in pdf format, to be implemented)	ACT* + 1 CY**	Life of the Agency	Archive electronically in Project-wise under <u>Project folder\ _Published Submittals\Project Drawings\ _Final Plans</u>	Bridge Task Managers
006	Shop Drawings , Erection Drawings, RFIs, and Other Construction Submittals (Final Distribution Copy in pdf format)	ACT* + 1 CY**	Life of the Agency	Archive electronically in Project-wise under <u>Project folder\ _Published Submittals\Project Drawings\Construction Submittals\Shop Drawings</u> or Erection Drawings or RFIs or Other Construction Submittals <i>(See BDTM.49 for instructions)</i>	Bridge Task Managers

*ACT = End of activity or final project acceptance date for project related items

**CY = Calendar Year

APPENDIX F—BRIDGE DESIGN SECTION RECORDS RETENTION POLICY (CONTINUED)

Item No.	Record Title	In Office Retention Period (by Bridge Design Section)	DOTD Total Retention (by General Files)	Archiving Instruction	Responsible Party
007	Shop Drawings (Final distribution hard copies and pdf files)	ACT* + 1 CY**	Life of the Agency	Transmit to General Files and archive electronically in DOTD Network Plan Room by General Files (See BDTM.49 for instructions)	Bridge Task Managers
008	Final Design Calculation Files for In-House and Consultant Projects (Stamped calculation book in pdf format, stamped final reports, and final electronic design models)	ACT* + 1 CY**	Life of the Agency	Archive electronically in Project-wise under Project Folder\ _Published Submittals\Project Documents\Final Design Calculations & Reports	Bridge Task Managers
009	Bridge Rating Reports	ACT* + 1 CY**	Life of the Agency	Archive electronically in Content Manager under <u>Load Rating</u> .	Bridge Rating Engineer
010	Truck Permits Calculations	ACT* + 1 CY**	Life of the Agency	Archive electronically in a designated folder on the Bridge Design server.	Bridge Rating Engineer
011	Chief Engineer Orders (Bridge Posting)	ACT* + 1 CY**	Life of the Agency	Archive electronically in Content Manager under <u>Chief Engineer Orders</u> .	Bridge Rating Engineer
012	Project Related Correspondences (Original Hard Copies)	ACT* + 1 CY**	Final Project Acceptance Date + 5 Years	Archive electronically in Content Manager under Design Projects. At the end of in office retention period, the hard copies shall be boxed, marked with project number and record item No. with description, and then transmitted to General Files for their handling.	Project Managers/Bridge Task Managers

*ACT = End of activity or final project acceptance date for project related items.

**CY = Calendar Year

APPENDIX F—BRIDGE DESIGN SECTION RECORDS RETENTION POLICY (CONTINUED)

Item No.	Record Title	In Office Retention Period (by Bridge Design Section)	DOTD Total Retention (by General Files)	Archiving Instruction	Responsible Party
013	Project Related Correspondences (Emails) <i>(Note: If the email is considered as important project correspondence and needs to be kept for the life of agency, then the email should be printed and treated as item 012.)</i>	ACT* + 1 CY**	Final Project Acceptance Date + 5 Years	Archive electronically in Project-wise under <u>Project Folder\Published Submittals\Project Documents\Project Correspondence Emails</u>	Project Managers/Bridge Task Managers
014	Administrative or Other Types of Correspondences	ACT* + 1 CY**	Life of the Agency	Archive electronically in Content Manager under <u>Bridge Design Subject Files</u>	Everyone

*ACT = End of activity or final project acceptance date for project related items

**CY = Calendar Year

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.)

1.0 PURPOSE

This **Quality Management Plan (QMP)** is a guide establishing quality standards for all Deliverables by defining quality control (QC) review procedures and outlining general guidelines for quality assurance (QA). It also serves as the basis for the creation and implementation of a project specific Quality Management Plan. QC is implemented during the creation of documents while QA is implemented to assure these documents are in compliance with contract requirements. Together they are used to ensure the professional quality, technical accuracy, constructability, and coordination of all design plans and documents with the intent to reduce as much as is practical errors and deficiencies from all deliverables. Quality control and quality assurance should be conducted in accordance with the direction stated in these procedures.

Quality is important to GM2, and it is important to our clients. By executing a QMP, deficiencies and errors can be minimized, the cost of poor quality is reduced and client satisfaction is boosted. Quality must be part of our culture and an integral part of the design development process. It should be employed at each step in the life cycle of a project. The bottom line is that quality is good for business.

2.0 DEFINITIONS

A **Quality Management Plan (QMP)** for engineering design outlines the general principles associated with ensuring a quality design is produced. It establishes review processes and minimum quality standards to be met for Deliverables to clients.

Quality Control Procedures (QCP) are formal review processes established to ensure that minimum quality standards are met for each Work Product and Deliverable.

A **Work Product** is defined as the set of plans, specifications, calculations, reports, and other documentation that is completed as part of a project Deliverable.

A **Deliverable** is defined as a Work Product or compilation of Work Products that is to be submitted to a client or agency for review and approval, or to be used for construction.

Quality Control (QC) refers to those actions, procedures, and methods that are employed to check the accuracy and consistency of the Work Product, detecting and correcting omissions and errors prior to finalizing of the Work Product and checking that Work Product satisfies the scope. It is essentially the process of performing quality checks and reviews.

Quality Assurance (QA) is the oversight and verification of the quality control process to insure that requisite quality control procedures are in place, are being carried out, and that the desired result of quality services and deliverable products are being achieved. It is essentially the process of ensuring compliance with the QMP and/or a project specific Quality Management Plan. The QA process varies depending on the stage of design development.

The **Quality Review Record (QRR)** is the QMP Form 1 provided in Appendix A of this document which serves as the quality review cover sheet containing the pertinent review information and required sign-offs.

The **Project Quality Review Verification (PQRV)** is the QMP Form 2 provided in Appendix A of this document which serves to verify that all the required quality reviews have been performed for a Work Product at a milestone. This form is signed at the conclusion of all reviews for a Work Product at a milestone.

3.0 ROLES AND RESPONSIBILITIES

The **Project Manager (PM)** is responsible for implementing the Quality Management Plan throughout the course of the project including scheduling and monitoring quality review activities, and signing off on all deliverables on the QRR. The PM is also responsible for verifying that the Work Product was prepared by qualified staff (Originator), the work was checked by qualified staff (Reviewer) who did not produce the original work, and the resulting review comments and any outstanding comments from previous reviews have been satisfactorily resolved.

The **Originator** is the qualified staff that has the overall responsibility for producing the original Work Product. In producing the Work Product, the Originator is responsible for design completeness, accuracy, and adequacy of the design and ensuring the design complies with the scope. The Originator is also responsible for self-checking the Work Product prior to submitting it for reviews.

The **Reviewer (a/k/a Checker)** has the responsibility for an assigned review of the Work Product typically within a specific discipline, technical field, or practice area. In terms of checking and verification, the Reviewer needs to be qualified staff who did not produce the original work they are reviewing, responsible for completing reviews in the scheduled time frame, verifying comments were incorporated or working to resolve outstanding comments, and ensuring the work complies with the scope.

The **Back-Checker** is responsible for reviewing and responding to comments made by the Reviewer and deciding what action to take with the comment, i.e. agree, disagree, or alternative action. The Back-Checker is normally the Originator.

The **Corrector** is responsible for implementing and revising the Work Product for comments that were agreed upon. The Corrector is commonly the Originator or someone working in conjunction with the Originator.

The **Chief Engineer (CE)** is responsible for confirming that quality review processes have been satisfactorily concluded for a project and all required sign-offs are complete.

The **Engineer-of-Record (EOR)** is a licensed professional engineer who signs and seals the final Work Product or Deliverable, usually the PM serves in this role.

4.0 QUALITY CONTROL PROCEDURES (QCP'S)

The execution of a QMP is comprised of formal review processes involving basic quality checks and reviews of a Work Product for accuracy and consistency, ensuring the work complies with the scope, identifying issues, correcting, and verifying that the corrections have been incorporated. All comments are documented and must be responded to, i.e. agree, disagree, or alternative action, and resolved prior to formal completion of the review and delivery of the Work Product.

To accomplish the basic quality control checks and reviews, the scopes for Quality Control Procedures (QCPs) are defined below with the specific instructions for each procedure presented in Appendix B. These QCPs provide a standardized approach with prescribed methods for the performance of QC reviews and QA activities.

Self-Check: An informal review that is performed by the Originator on his own Work Product. This should be done on a continual basis to verify and double-check their own work. This is the first line of defense.

Calculation Check [QCP-01]: A review that is a complete formal checking of all hand calculations, spreadsheets, computer input/output, etc. that are the basis for all study, design, construction, maintenance, and procurement documents. Check calculations as soon as practical after their completion.

Discipline Review [QCP-02]: A review that is a detail check of drawings within a particular discipline prior to submitting for milestone reviews. In general, these reviews will consist of verification of conformance to design criteria and permit applications, consistency between the calculations and drawings, adherence to CADD standards and accuracy of the information conveyed.

Interdisciplinary Review [QCP-03]: A review that focuses on coordination with other disciplines or aspects of the project, with other associated project documents, as well as coordination with project elements being developed or planned on adjacent projects. This review should ensure that there are no conflicts with other disciplines work, projects, or other plan work and that all work is being correctly and clearly represented on that discipline's Work Product.

Constructability Review [QCP-04]: A review of the Work Product with constructability and biddability as an objective. The review is intended to anticipate and mitigate field problems, minimize potential change orders, and improve the overall project schedule. Some of the items to be considered include scheduling requirements, sequencing, phase conflicts, completeness and clarity, omissions, inconsistencies, change order potential, construction means and methods, construction materials and fabrication requirements. This review usually occurs at about 60% plan completion or later.

Independent Technical Review (ITR) [QCP-05]: This review is an independent peer review that is a comprehensive examination of the technical aspects of the Work Product which includes all disciplines. It is performed by a qualified, experienced Reviewer that is independent of the project. This review is typically performed at the 90% completion threshold, but can be performed at any stage and can be performed multiple times with different focuses.

Study/Report Review [QCP-06]: A review aimed at all studies, technical reports, and technical memoranda to be performed before their submittal. All drawings, tables, and calculations included in or appended to such documents are to be checked per specified procedures for those documents, including calculations, sketches, and drawings.

Specifications Review [QCP-07]: A review of the project specifications intended to assess the completeness and applicability of the specifications provided and verify the accuracy between the plans and the specifications. A review will include a review of materials proposed, technical content, organization, formatting, and compliance with Federal or State policy.

Subconsultant, Client or Third Party Review [QCP-08]: A review of plans and documents supplied by a third party with the intention of use or incorporation into a Work Product(s) or Deliverable. The review should focus on the accuracy, compatibility and completeness of the information provided.

5.0 DOCUMENT CONTROL

Once a QC review has concluded, the QRR and marked up Work Product are scanned to a PDF file and stored in a dedicated quality review directory within the project's directory structure on the company's network. The original QRR is filed in a separate quality folder within the project file in the office's central filing system. Once the final submission of the Deliverable containing the Work product has been made, the original marked-up Work Product may be disposed of.

6.0 AUDITS

Independent QC/QA audits of a project may be conducted to verify that the requisite quality reviews are being effectively implemented. An audit report will be generated that will include any findings or deficiencies and corrective actions to be implemented. Before the closing meeting, the audit report will be prepared as a complete, accurate, and concise record of the audit. At the closing meeting, the findings will be presented and reviewed, any possible disagreements with the findings will be discussed along with any corrective actions that are required to be implemented. The audit report will be reviewed and approved by the parties.

7.0 SUBCONSULTANT QUALITY MANAGEMENT

Subconsultants working with GM2 have three options for a quality plan. They may:

1. Use their own quality program. This is the preferred approach, especially for subconsultants that have an established, certified quality program within their organization (e.g., an ISO-certified or compliant program). Subconsultants choosing to use their own program must submit it for review and acceptance by GM2. The program's content must be specific in addressing how work products are checked and verified prior to delivery to GM2 and how documents are managed and controlled.
2. Agree to utilize the GM2's QMP. This is the preferred approach for subconsultants without an established or certified quality program. Subconsultants choosing this option must work with the GM2 project manager to determine which aspects of the QMP are appropriate based on their scope of work and as designated in their agreement with GM2. The GM2 PM will then provide the specific GM2 quality procedures, forms and/or checklists for the subconsultant to document compliance. A confidentiality agreement may be required.
3. Prepare a project-specific QMP describing the process for reviewing deliverables and managing documents and records. At a minimum, the plan must describe the subconsultant's deliverable review and records management processes. Depending on the scope and complexity of the assignment, this may be as basic as a one- or two-page plan describing the processes.



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Appendix B – Discipline and Inter-Discipline Forms

- LADOTD Final Calculation Book Index Checklist
- GM2 QMP Review Form and Instructions
- GM2 QMP Guidelines for Color-Coded Marking of Work Products

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.



Rev.: 1.1
Date: 4/15/2020

Quality Review Record

Project #		Date	
Project Name		PM	
Project Location		Originator	
Client		Reviewer	
Work Product			

Review Type	☐ Calculation Check	☐ Interdisciplinary Review	☐ Independent Technical Review (ITR)
	☐ Discipline Review	☐ Constructability Review	☐ Study/Report Review
	☐ Subconsultant, Client or Third Party Information Review		☐ Specifications Review
	☐ Other		

Review Scope	Scope of Review:
	Specific Instructions:
	Other:

Comments	Select:	
	or A. ☐ Reviewer has no comments. B. ☐ Comments have been provided on: ☐ Marked directly on Work Product ☐ Comment or Disposition Form ☐ Other; specify	
	_____ Reviewer Signature	_____ Date

Verification	Select:	
	or C. ☐ Verification of comment incorporation has been performed by the Reviewer. There are no outstanding issues.	
	D. ☐ Verification of comment incorporation has been performed by the Reviewer. Unresolved issues have been submitted to the Project Manager for resolution.	
	<u>and</u> E. ☐ Reviewer asserts the Work Product Review is complete.	
	_____ Reviewer Signature	_____ Date

Approval	☐ Review is complete.
	_____ Project Manager Signature

QCP-01	Calculation Check
Purpose	To check and validate the accuracy of engineering calculations.
Scope	This review is a complete formal checking of all hand calculations, spreadsheets, computer input/output, etc. that serve as the basis for all study, design, plan, and procurement documents.
Instructions	Line by Line: Check each component of the calculations including arithmetic against any references, plan sheets, formulas, computer programs, and identify any potential errors. Independent Calculations: Perform an independent set of calculations and verify against the designer's calculations and assumptions. Computer Calculations: Check inputs and verify output is reasonable and meets objectives. Spreadsheets: Check input, formulas, and perform spot manual calculations to verify accuracy.
Process	- Submitting for review: The Originator shall provide a check print of all calculations by completing the following: - Scan or copy the original calculations for hand calculations. The check print does not have to be a hard copy. It may be a PDF or other format that the Originator and Reviewer/Checker can appropriately review and annotate as required. - Print all applicable spreadsheets calculations showing inputs and results. Provide additional print outs showing formulas if requested by the Reviewer/Checker. - Place a check print stamp on the front sheet of the calculations then number, sign, and date it. - Prepare a QRR (Form 1) as a cover sheet and attach it to the check print. - Checking: The Reviewer/Checker completes a thorough review of each component of the calculations using the guidelines for color-coded mark-ups on the check print to document the QC review. Sign and date the check print stamp when the check is complete. - Back-Checking: The Originator reviews the Reviewer's/Checker's corrections on the check print. All agreed upon comments shall be indicated as such using the guidelines for color-coded mark-ups. Any differences encountered during the back-checking process should be resolved between the Originator and Reviewer/Checker. The PM is consulted to resolve a dispute if resolution cannot be reached on a comment. Sign and date the check print stamp when back-checking is completed. - Corrections: All agreed upon corrections are incorporated into the Work Product by a Corrector. All incorporated corrections are indicated on the check print using the guidelines for color-coded mark-ups. Sign and date the check print stamp

	when all the corrections are made. Provide the Reviewer with the original check print and an updated check print. 5. Verifying: The Reviewer compares the check print corrections with the updated version to confirm that all corrections are incorporated without error. Verify any necessary design corrections. Sign and date the check print stamp once all corrections are verified. Initial all original calculations as checked with the date. Document conclusion of verification on the QRR form. 6. Sign-Off: The Originator then submits the QRR form and marked-up check print to the PM for review. PM to document conclusion of the quality review procedure on the QRR form. QRR and check print to be kept in the project file. 7. Revisions to Checked Calculations: Make a new check print when a change is made to checked calculations to check the area that has changed. The check print is stamped and labeled check print 2, 3, 4, etc., as applicable and attached to the previous check prints. The checking follows the same procedure as the original check print except only the portions that changed need to be checked.
Additional Instructions	• For hand or manual engineering calculations, use either line by line or independent check method. • Check calculations as soon as practical after their completion. • Perform independent calculations as needed to verify/concur with the results calculated by the Originator. Submit these calculations along with the check print as documentation.

QCP-02	Discipline Review
Purpose	To review and verify a Work Product for conflicts, consistency, formatting, standard plan references, etc.
Scope	This review is a detail check of a Work Product which involves plans/sketches/drawings within a discipline. In general, these reviews will consist of verification of conformance to design criteria, standards, and permits, consistency check between the calculations and drawings, adherence to CADD standards and accuracy of the information conveyed.
Instructions	The check is performed by a reviewer that did not produce the Work Product. Review is typically performed prior to a milestone or final submission.
Process	- Submitting for review: The Originator shall provide a check print of the Work Product by completing the following: - Print, scan or copy all the original plans/sketches/drawings. The check print does not have to be a hard copy. It may be a PDF or other format that the Originator and Reviewer can appropriately review and annotate as required. - Place a check print stamp on the front sheet of the Work product then sign, and date it. - Prepare a QRR (Form 1) as a cover sheet and attach it to the check print. - Checking: The Reviewer completes a thorough review of the Work Product. Comments may be made directly on the Work Product using the guidelines for color-coded mark-ups or on a Quality Review Comment Form (Form 2) or both. Sign and date the check print stamp when the check is complete. - Back-Checking: The Originator reviews the Reviewer's comments and corrections noted on the Work Product. All agreed upon corrections on the Work Product shall be indicated as such using the guidelines for color-coded mark-ups. All agreed upon comments that are on the Quality Review Comment Form shall be indicated as such on the form. Any differences encountered during the back-checking process should be resolved between the Originator and Reviewer. The PM is consulted to resolve a dispute if resolution cannot be reached on a comment. Sign and date the check print stamp when back checking is completed. - Corrections: All agreed upon comments and corrections are incorporated into the Work Product by a Corrector. All incorporated comments are indicated on the Quality Review Comment Form. All incorporated corrections are indicated on the Work Product using the guidelines for color-coded mark-ups. Sign and date the check print stamp when all the corrections are made. Provide the Reviewer with the original marked-up check print and an updated Work Product. - Verifying: The Reviewer compares the responses on the comment form and check print corrections with the updated Work Product to confirm that all comments and corrections were incorporated without error. Verify any necessary design corrections. Sign and date the check print stamp once all corrections are verified. Document conclusion of verification on the QRR form.

	6. Sign-Off: The Originator then submits the QRR form, final Review Comment Summary Form, and original marked-up Work Product to the PM for review. PM to document conclusion of the quality review procedure on the QRR form. QRR, Quality Review Comment Form and check print to be kept in the project file. 7. Revisions to Checked Work Product: Make a new check print when a change is made to checked Work Product to check the area that has changed. The check print is stamped and labeled check print 2, 3, 4, etc., as applicable and attached to the previous check prints. The checking follows the same procedure as the original check print except only the portions that changed need to be checked.
Additional Instructions	•

QCP-03	Interdisciplinary Review
Purpose	A review of a Work Product looking for conflicts and consistency between disciplines.
Scope	This is a cross-discipline review of a Work Product. It entails reviewing how information from other disciplines or project elements is shown and depicted on plans/sketches/drawings and how work is coordinated between disciplines. In general, these reviews will look for design conflicts between disciplines, consistency of how information is shown, adherence to CADD standards, and accuracy of the information conveyed.
Instructions	The check is performed by a reviewer that did not produce the Work Product. Review is typically performed prior to a major milestone or final submission. On smaller projects, Discipline Reviews may cover this QCP.
Process	1. Submitting for review: The Originator shall provide a check print of the Work Product by completing the following: a. Print, scan or copy all the original plans/sketches/drawings. The check print does not have to be a hard copy. It may be a PDF or other format that the Originator and Reviewer can appropriately review and annotate as required. b. Place a check print stamp on the front sheet of the Work product then sign, and date it. c. Prepare a QRR (Form 1) as a cover sheet and attach it to the check print. 2. Checking: The Reviewer completes a thorough review of the Work Product. Comments may be made directly on the Work Product using the guidelines for color-coded mark-ups or on a Quality Review Comment Form (Form 2) or both. Sign and date the check print stamp when the check is complete. 3. Back-Checking: The Originator reviews the Reviewer's comments and corrections noted on the Work Product. All agreed upon corrections on the Work Product shall be indicated as such using the guidelines for color-coded mark-ups. All agreed upon comments that are on the Quality Review Comment Form shall be indicated as such on the form. Any differences encountered during the back-checking process should be resolved between the Originator and Reviewer. The PM is consulted to resolve a dispute if resolution cannot be reached on a comment. Sign and date the check print stamp when back checking is completed. 4. Corrections: All agreed upon comments and corrections are incorporated into the Work Product by a Corrector. All incorporated comments are indicated on the Quality Review Comment Form. All incorporated corrections are indicated on the Work Product using the guidelines for color-coded mark-ups. Sign and date the check print stamp when all the corrections are made. Provide the Reviewer with the original marked-up check print and an updated Work Product. 5. Verifying: The Reviewer compares the responses on the comment form and check print corrections with the updated Work Product to confirm that all comments and corrections were incorporated without error. Verify any necessary design

	corrections. Sign and date the check print stamp once all corrections are verified. Document conclusion of verification on the QRR form. 6. Sign-Off: The Originator then submits the QRR form, final Review Comment Summary Form, and original marked-up Work Product to the PM for review. PM to document conclusion of the quality review procedure on the QRR form. QRR, Quality Review Comment Form and check print to be kept in the project file. 7. Revisions to Checked Work Product: Make a new check print when a change is made to checked Work Product to check the area that has changed. The check print is stamped and labeled check print 2, 3, 4, etc., as applicable and attached to the previous check prints. The checking follows the same procedure as the original check print except only the portions that changed need to be checked.
Additional Instructions	•

QCP-04	Constructability Review
Purpose	A review of a Work Product to ensure that projects are buildable, biddable, and cost-effective.
Scope	A review of the Work Product with constructability and biddability as an objective. The review is intended to anticipate and mitigate field problems, minimize potential change orders, and improve the overall project schedule. Some of the items to be considered include scheduling requirements, sequencing, phase conflicts, completeness and clarity, omissions, inconsistencies, change order potential, construction means and methods, construction materials and fabrication requirements.
Instructions	The review is performed by a reviewer with knowledge of construction and that did not produce the Work Product. This review usually occurs at about 60% plan completion or later. The Work Product package should consist of plans, specifications, and schedule.
Process	1. Submitting for review: The Originator shall provide a check print of the Work Product by completing the following: a. Print, scan or copy all the original Work Product. The check print does not have to be a hard copy. It may be a PDF or other format that the Originator and Reviewer can appropriately review and annotate as required. b. Place a check print stamp on the front sheet of the Work product then sign, and date it. c. Prepare a QRR (Form 1) as a cover sheet and attach it to the check print. 2. Checking: The Reviewer completes a thorough review of the Work Product. Comments may be made directly on the Work Product using the guidelines for color-coded mark-ups or on a Quality Review Comment Form (Form 2) or both. Sign and date the check print stamp when the check is complete. 3. Back-Checking: The Originator reviews the Reviewer's comments and corrections noted on the Work Product. All agreed upon corrections on the Work Product shall be indicated as such using the guidelines for color-coded mark-ups. All agreed upon comments that are on the Quality Review Comment Form shall be indicated as such on the form. Any differences encountered during the back-checking process should be resolved between the Originator and Reviewer. The PM is consulted to resolve a dispute if resolution cannot be reached on a comment. Sign and date the check print stamp when back checking is completed. 4. Corrections: All agreed upon comments and corrections are incorporated into the Work Product by a Corrector. All incorporated comments are indicated on the Quality Review Comment Form. All incorporated corrections are indicated on the Work Product using the guidelines for color-coded mark-ups. Sign and date the check print stamp when all the corrections are made. Provide the Reviewer with the original marked-up check print and an updated Work Product. 5. Verifying: The Reviewer compares the responses on the comment form and check print corrections with the updated Work Product to confirm that all comments and

	corrections were incorporated without error. Verify any necessary design corrections. Sign and date the check print stamp once all corrections are verified. Document conclusion of verification on the QRR form. 6. Sign-Off: The Originator then submits the QRR form, final Review Comment Summary Form, and original marked-up Work Product to the PM for review. PM to document conclusion of the quality review procedure on the QRR form. QRR, Quality Review Comment Form and check print to be kept in the project file. 7. Revisions to Checked Work Product: Make a new check print when a change is made to checked Work Product to check the area that has changed. The check print is stamped and labeled check print 2, 3, 4, etc., as applicable and attached to the previous check prints. The checking follows the same procedure as the original check print except only the portions that changed need to be checked.
Additional Instructions	

QCP-05	Independent Technical Review
Purpose	A peer review conducted by a qualified, experienced Reviewer to provide an independent critical review of a Work Product.
Scope	This review is an independent peer review that is a comprehensive examination of the technical aspects of the Work Product which includes all disciplines. It is performed by a qualified, experienced Reviewer that is independent of the project.
Instructions	This review is typically performed at the 90% completion threshold, but can be performed at any stage and can be performed multiple times with different focuses. The Work Product package should consist of plans, specifications, schedule, and estimate.
Process	1. Submitting for review: The Originator shall provide a check print of the Work Product by completing the following: a. Print, scan or copy all the original Work Product. The check print does not have to be a hard copy. It may be a PDF or other format that the Originator and Reviewer can appropriately review and annotate as required. b. Place a check print stamp on the front sheet of the Work product then sign, and date it. c. Prepare a QRR (Form 1) as a cover sheet and attach it to the check print. 2. Checking: The Reviewer completes a thorough review of the Work Product. Comments may be made directly on the Work Product using the guidelines for color-coded mark-ups or on a Quality Review Comment Form (Form 2) or both. Sign and date the check print stamp when the check is complete. 3. Back-Checking: The Originator reviews the Reviewer's comments and corrections noted on the Work Product. All agreed upon corrections on the Work Product shall be indicated as such using the guidelines for color-coded mark-ups. All agreed upon comments that are on the Quality Review Comment Form shall be indicated as such on the form. Any differences encountered during the back-checking process should be resolved between the Originator and Reviewer. The PM is consulted to resolve a dispute if resolution cannot be reached on a comment. Sign and date the check print stamp when back checking is completed. 4. Corrections: All agreed upon comments and corrections are incorporated into the Work Product by a Corrector. All incorporated comments are indicated on the Quality Review Comment Form. All incorporated corrections are indicated on the Work Product using the guidelines for color-coded mark-ups. Sign and date the check print stamp when all the corrections are made. Provide the Reviewer with the original marked-up check print and an updated Work Product. 5. Verifying: The Reviewer compares the responses on the comment form and check print corrections with the updated Work Product to confirm that all comments and corrections were incorporated without error. Verify any necessary design corrections. Sign and date the check print stamp once all corrections are verified. Document conclusion of verification on the QRR form.

	6. Sign-Off: The Originator then submits the QRR form, final Review Comment Summary Form, and original marked-up Work Product to the PM for review. PM to document conclusion of the quality review procedure on the QRR form. QRR, Quality Review Comment Form and check print to be kept in the project file. 7. Revisions to Checked Work Product: Make a new check print when a change is made to checked Work Product to check the area that has changed. The check print is stamped and labeled check print 2, 3, 4, etc., as applicable and attached to the previous check prints. The checking follows the same procedure as the original check print except only the portions that changed need to be checked.
Additional Instructions	•

QCP-06	Study/Report Review
Purpose	A review to verify accuracy and completeness of information in technical reports, studies, memoranda, and other technical written documents.
Scope	A review aimed at all studies, technical reports, memoranda, and technical documents to be performed before their submittal. All drawings, tables, and calculations included in or appended to such documents are to be checked per specified procedures for those documents, including calculations, drawings, and specifications.
Instructions	This review is typically performed prior to submission of the Deliverable. The Work Product package should consist of technical documents and relevant back-up information.
Process	1. Submitting for review: The Originator shall provide a check print of the Work Product by completing the following: a. Print, scan or copy all the original Work Product. The check print does not have to be a hard copy. It may be a PDF or other format that the Originator and Reviewer can appropriately review and annotate as required. b. Place a check print stamp on the front sheet of the Work product then sign, and date it. c. Prepare a QRR (Form 1) as a cover sheet and attach it to the check print. 2. Checking: The Reviewer completes a thorough review of the Work Product. Comments may be made directly on the Work Product using the guidelines for color-coded mark-ups or on a Quality Review Comment Form (Form 2) or both. Sign and date the check print stamp when the check is complete. 3. Back-Checking: The Originator reviews the Reviewer's comments and corrections noted on the Work Product. All agreed upon corrections on the Work Product shall be indicated as such using the guidelines for color-coded mark-ups. All agreed upon comments that are on the Quality Review Comment Form shall be indicated as such on the form. Any differences encountered during the back-checking process should be resolved between the Originator and Reviewer. The PM is consulted to resolve a dispute if resolution cannot be reached on a comment. Sign and date the check print stamp when back checking is completed. 4. Corrections: All agreed upon comments and corrections are incorporated into the Work Product by a Corrector. All incorporated comments are indicated on the Quality Review Comment Form. All incorporated corrections are indicated on the Work Product using the guidelines for color-coded mark-ups. Sign and date the check print stamp when all the corrections are made. Provide the Reviewer with the original marked-up Work Product and an updated Work Product. 5. Verifying: The Reviewer compares the responses on the comment form and Work Product corrections with the updated Work Product to confirm that all comments and corrections were incorporated without error. Verify any necessary design

	corrections. Sign and date the check print stamp once all corrections are verified. Document conclusion of verification on the QRR form. 6. Sign-Off: The Originator then submits the QRR form, final Review Comment Summary Form, and original marked-up Work Product to the PM for review. PM to document conclusion of the quality review procedure on the QRR form. QRR, Quality Review Comment Form and marked-up Work Product to be kept in the project file. 7. Revisions to Checked Work Product: Make a new check print when a change is made to checked Work Product to check the area that has changed. The check print is stamped and labeled check print 2, 3, 4, etc., as applicable and attached to the previous check prints. The checking follows the same procedure as the original check print except only the portions that changed need to be checked.
Additional Instructions	•

QCP-07	Specification Review
Purpose	A review to validate accuracy and completeness the specifications for a project. Verify all required special provisions are included, and ensure non-standard items have the appropriate technical provisions.
Scope	A review of the project specifications intended to assess the completeness and applicability of the specifications provided and verify the accuracy between the plans and the specifications. A review will include a review of materials proposed, technical content, organization, formatting, and compliance with Federal or State policy.
Instructions	This review is typically performed prior to submission of the 90% submission. The Work Product package should consist of special provision documents, technical specifications, and any other contract documents.
Process	1. Submitting for review: The Originator shall provide a check print of the Work Product by completing the following: a. Print, scan or copy all the original Work Product. The check print does not have to be a hard copy. It may be a PDF or other format that the Originator and Reviewer can appropriately review and annotate as required. b. Place a check print stamp on the front sheet of the Work product then sign, and date it. c. Prepare a QRR (Form 1) as a cover sheet and attach it to the check print. 2. Checking: The Reviewer completes a thorough review of the Work Product. Comments may be made directly on the Work Product using the guidelines for color-coded mark-ups or on a Quality Review Comment Form (Form 2) or both. Sign and date the check print stamp when the check is complete. 3. Back-Checking: The Originator reviews the Reviewer's comments and corrections noted on the Work Product. All agreed upon corrections on the Work Product shall be indicated as such using the guidelines for color-coded mark-ups. All agreed upon comments that are on the Quality Review Comment Form shall be indicated as such on the form. Any differences encountered during the back-checking process should be resolved between the Originator and Reviewer. The PM is consulted to resolve a dispute if resolution cannot be reached on a comment. Sign and date the check print stamp when back checking is completed. 4. Corrections: All agreed upon comments and corrections are incorporated into the Work Product by a Corrector. All incorporated comments are indicated on the Quality Review Comment Form. All incorporated corrections are indicated on the Work Product using the guidelines for color-coded mark-ups. Sign and date the check print stamp when all the corrections are made. Provide the Reviewer with the original marked-up Work Product and an updated Work Product. 5. Verifying: The Reviewer compares the responses on the comment form and Work Product corrections with the updated Work Product to confirm that all comments and corrections were incorporated without error. Verify any necessary design

	corrections. Sign and date the check print stamp once all corrections are verified. Document conclusion of verification on the QRR form. 6. Sign-Off: The Originator then submits the QRR form, final Review Comment Summary Form, and original marked-up Work Product to the PM for review. PM to document conclusion of the quality review procedure on the QRR form. QRR, Quality Review Comment Form and marked-up Work Product to be kept in the project file. 7. Revisions to Checked Work Product: Make a new check print when a change is made to checked Work Product to check the area that has changed. The check print is stamped and labeled check print 2, 3, 4, etc., as applicable and attached to the previous check prints. The checking follows the same procedure as the original check print except only the portions that changed need to be checked.
Additional Instructions	

QCP-08	Subconsultant, Client or Third Party Review
Purpose	A review to validate accuracy and completeness of a document prepared by a subconsultant, client, or third party.
Scope	A review of plans and documents supplied by a third party with the intention of use or incorporation into a Work Product(s) or Deliverable. The review should focus on the accuracy, compatibility and completeness of the information provided.
Instructions	This review is typically performed prior to submission of the 90% submission. This review will look for conflicts with the design, consistency of how information is shown, and accuracy of the information conveyed.
Process	- Submitting for review: The Originator shall provide a check print of the Work Product by completing the following: - Print, scan or copy all the original Work Product. The check print does not have to be a hard copy. It may be a PDF or other format that the Originator and Reviewer can appropriately review and annotate as required. - Place a check print stamp on the front sheet of the Work product then sign, and date it. - Prepare a QRR (Form 1) as a cover sheet and attach it to the check print. - Checking: The Reviewer completes a thorough review of the Work Product. Comments may be made directly on the Work Product using the guidelines for color-coded mark-ups or on a Quality Review Comment Form (Form 2) or both. Sign and date the check print stamp when the check is complete. - Back-Checking: The Originator reviews the Reviewer's comments and corrections noted on the Work Product. All agreed upon corrections on the Work Product shall be indicated as such using the guidelines for color-coded mark-ups. All agreed upon comments that are on the Quality Review Comment Form shall be indicated as such on the form. Any differences encountered during the back-checking process should be resolved between the Originator and Reviewer. The PM is consulted to resolve a dispute if resolution cannot be reached on a comment. Sign and date the check print stamp when back checking is completed. - Corrections: All agreed upon comments and corrections are incorporated into the Work Product by a Corrector. All incorporated comments are indicated on the Quality Review Comment Form. All incorporated corrections are indicated on the Work Product using the guidelines for color-coded mark-ups. Sign and date the check print stamp when all the corrections are made. Provide the Reviewer with the original marked-up Work Product and an updated Work Product. - Verifying: The Reviewer compares the responses on the comment form and Work Product corrections with the updated Work Product to confirm that all comments and corrections were incorporated without error. Verify any necessary design corrections. Sign and date the check print stamp once all corrections are verified. Document conclusion of verification on the QRR form.

	6. Sign-Off: The Originator then submits the QRR form, final Review Comment Summary Form, and original marked-up Work Product to the PM for review. PM to document conclusion of the quality review procedure on the QRR form. QRR, Quality Review Comment Form and marked-up Work Product to be kept in the project file. 7. Revisions to Checked Work Product: Make a new check print when a change is made to checked Work Product to check the area that has changed. The check print is stamped and labeled check print 2, 3, 4, etc., as applicable and attached to the previous check prints. The checking follows the same procedure as the original check print except only the portions that changed need to be checked.
Additional Instructions	•

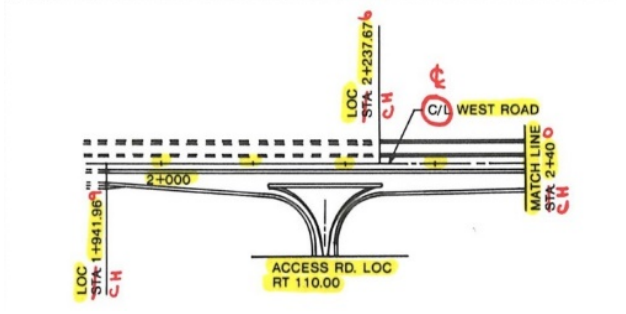
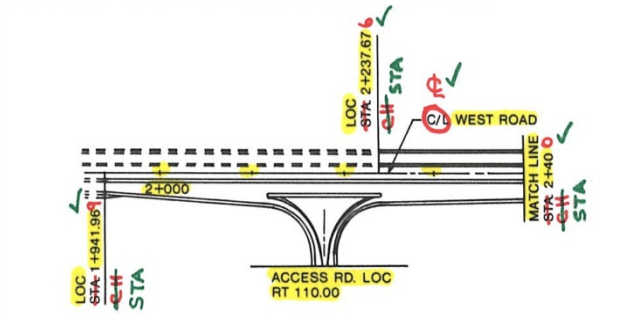
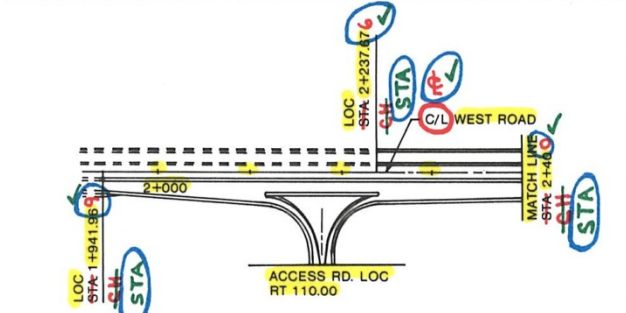
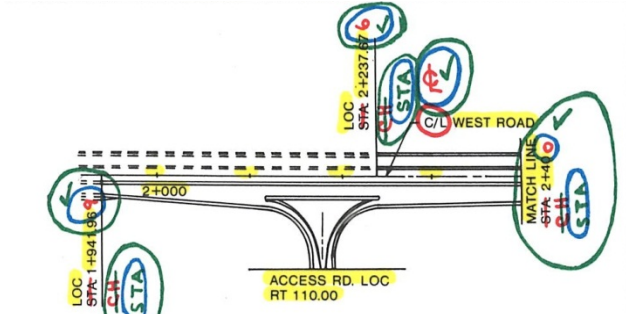
Guidelines for Color-Coded Marking of Work Products

For detail checking and review of work products, the following color-coded marking procedure is made available to facilitate communication between the Originator and the Reviewer and to promote a comprehensive and thorough review of work products. Other color-coded marking procedures may be used as long as the requirements are communicated to the project team.

1. **Correct information shall be highlighted in yellow** by the Reviewer to signify that the information has been subjected to check/review and is found to be correct. For text-rich documents, checked and correct text does not need to be highlighted in yellow. However, information such as tables, figures, equations and values, and references to them, should be highlighted as appropriate to indicate that they have been reviewed.
2. **Incorrect information shall be marked in red** by the Reviewer for literal correction or addition by the Originator.

Suggestions, comments, and notes shall be written in clouded red.

3. Marked-up information shall be back-checked by the Originator and check-marked in **green** if the Originator agrees.
4. Marked-up information about which the Originator disagrees with the Reviewer shall be resolved through discussion. If they are unable to reach an agreement, the Project Manager shall decide upon the resolution.
5. All marked-up and agreed upon or decided upon information shall be corrected/incorporated into the original Work Product by the Originator. After applying a procedure of self-checking, the Originator shall signify that the correction is complete by circling or highlighting the marked-up information in **blue on the check/review Work Product**.
6. The corrections subsequently shall be verified by the Reviewer to ensure they have been correctly incorporated into the Work Product. The Reviewer shall signify the proper correction by circling or highlighting the marked-up information in **green on the checking/review Work Product**.
7. The Project Manager shall complete the detail-check or review procedure by signifying their approval with his/her signature on the appropriate check or review report form.

Checking	 Fig A: Yellow is used by the Checker to indicate approval as shown. Red is used to indicate corrections or additions.
Back-Checking	 Fig B: Green is used by the Back-Checker to indicate agreement with the Checker.
Correcting	 Fig C: Blue is used by the Corrector to indicate corrections have been made.
Verifying	 Fig D: Green is used to verify that corrections have been properly incorporated into the Work Product.



QC/QA Plan – CONTRACT NO. 4400032800
STATE PROJECT NO. H.000688.5
FEDERAL AID PROJECT NO. H000688
US 11 NORFOLK SOUTHERN RR OVERPASS (HBI)

Appendix C – Independent Peer Review Bridge QC Forms

- LADOTD Peer Review Resolution Agreement Form
- GM2 QMP Independent Technical Review Form
- GM2 QMP QCP-05 Independent Technical Review Instructions

APPENDIX E—PEER REVIEW RESOLUTION AGREEMENT

Project No.:

Project Name:

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

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



Rev.: 1.1
Date: 4/15/2020

Quality Review Record

Project #		Date	
Project Name		PM	
Project Location		Originator	
Client		Reviewer	
Work Product			

Review Type	☐ Calculation Check	☐ Interdisciplinary Review	☒ Independent Technical Review (ITR)
	☐ Discipline Review	☐ Constructability Review	☐ Study/Report Review
	☐ Subconsultant, Client or Third Party Information Review		☐ Specifications Review
	☐ Other		

Review Scope	Scope of Review:
	Specific Instructions:
	Other:

Comments	Select:	
	or A. ☐ Reviewer has no comments. B. ☐ Comments have been provided on: ☐ Marked directly on Work Product ☐ Comment or Disposition Form ☐ Other; specify	
	_____ Reviewer Signature	_____ Date

Verification	Select:	
	or C. ☐ Verification of comment incorporation has been performed by the Reviewer. There are no outstanding issues. D. ☐ Verification of comment incorporation has been performed by the Reviewer. Unresolved issues have been submitted to the Project Manager for resolution. <u>and</u> E. ☐ Reviewer asserts the Work Product Review is complete.	
	_____ Reviewer Signature	_____ Date

Approval	☐ Review is complete.
	_____ Project Manager Signature

QCP-05	Independent Technical Review
Purpose	A peer review conducted by a qualified, experienced Reviewer to provide an independent critical review of a Work Product.
Scope	This review is an independent peer review that is a comprehensive examination of the technical aspects of the Work Product which includes all disciplines. It is performed by a qualified, experienced Reviewer that is independent of the project.
Instructions	This review is typically performed at the 90% completion threshold, but can be performed at any stage and can be performed multiple times with different focuses. The Work Product package should consist of plans, specifications, schedule, and estimate.
Process	1. Submitting for review: The Originator shall provide a check print of the Work Product by completing the following: a. Print, scan or copy all the original Work Product. The check print does not have to be a hard copy. It may be a PDF or other format that the Originator and Reviewer can appropriately review and annotate as required. b. Place a check print stamp on the front sheet of the Work product then sign, and date it. c. Prepare a QRR (Form 1) as a cover sheet and attach it to the check print. 2. Checking: The Reviewer completes a thorough review of the Work Product. Comments may be made directly on the Work Product using the guidelines for color-coded mark-ups or on a Quality Review Comment Form (Form 2) or both. Sign and date the check print stamp when the check is complete. 3. Back-Checking: The Originator reviews the Reviewer's comments and corrections noted on the Work Product. All agreed upon corrections on the Work Product shall be indicated as such using the guidelines for color-coded mark-ups. All agreed upon comments that are on the Quality Review Comment Form shall be indicated as such on the form. Any differences encountered during the back-checking process should be resolved between the Originator and Reviewer. The PM is consulted to resolve a dispute if resolution cannot be reached on a comment. Sign and date the check print stamp when back checking is completed. 4. Corrections: All agreed upon comments and corrections are incorporated into the Work Product by a Corrector. All incorporated comments are indicated on the Quality Review Comment Form. All incorporated corrections are indicated on the Work Product using the guidelines for color-coded mark-ups. Sign and date the check print stamp when all the corrections are made. Provide the Reviewer with the original marked-up check print and an updated Work Product. 5. Verifying: The Reviewer compares the responses on the comment form and check print corrections with the updated Work Product to confirm that all comments and corrections were incorporated without error. Verify any necessary design corrections. Sign and date the check print stamp once all corrections are verified. Document conclusion of verification on the QRR form.

	6. Sign-Off: The Originator then submits the QRR form, final Review Comment Summary Form, and original marked-up Work Product to the PM for review. PM to document conclusion of the quality review procedure on the QRR form. QRR, Quality Review Comment Form and check print to be kept in the project file. 7. Revisions to Checked Work Product: Make a new check print when a change is made to checked Work Product to check the area that has changed. The check print is stamped and labeled check print 2, 3, 4, etc., as applicable and attached to the previous check prints. The checking follows the same procedure as the original check print except only the portions that changed need to be checked.
Additional Instructions	•



QC/QA Plan – CONTRACT NO. 4400032800
STATE PROJECT NO. H.000688.5
FEDERAL AID PROJECT NO. H000688
US 11 NORFOLK SOUTHERN RR OVERPASS (HBI)

Appendix D – Quality Assurance & Deliverable Release Record

Forms

- LADOTD QA Information Package Checklist
- LADOTD QC/QA Certification
- LADOTD Consultant Submittal QC/QA Certification
- GM2 QMP Project Quality Review Verification Form

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						
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



Rev.: 1.1
Date: 4/15/2020

Project Quality Review Verification

GM2 Project #		Date	
Project Name		PM	
Project Location		QM	
Client		Client Proj. No.	

	☐ Review is complete. This project has completed all required QA/QC reviews
	Comments
	_____ Project Manager Signature _____ Date

Verification	☐ Review is complete.
	Comments
	_____ Quality Manager Signature _____ Date

22. Sub-consultant information

Firm Name (Name must match <u>exactly</u> as registered with Louisiana's Secretary of State (SOS): <u>including punctuation, include screenshot(s)</u> <u>from SOS at the end of Section 20</u>)	Address	Point of Contact and email address	Phone Number
GM2 ASSOCIATES, INC.	115 Glastonbury Blvd. Glastonbury, CT 06033	Wade Bonzon wbonzon@gm2inc.com	(214) 304-1080
Ardaman & Associates, Inc.	316 Highlandia Drive, Baton Rouge, LA 70810	Robert (Robb) Jewel RJewell@ardaman.com	225-752-4790

23. Location

If location is an evaluation criterion for this advertisement (see page 2) and the prime consultant intends to establish a local presence, describe the plan for doing so. **Otherwise, leave this section blank. Any information included in this section will be redacted if not required by the Evaluation Criteria section of the advertisement.**