AECOM

US 11 Norfolk Southern RR Overpass (HBI)

Contract No. 4400032800; State Project No. H.000688.5; Federal Aid Project No. H000688

Route: US 11 St. Tammany Parish

Contract Number:
4400032800

September 9, 2025

AECOM

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Louisiana Department of Transportation and Development (DOTD)
Attn: Mr. Ryan Morvant, PE, DOTD Contract Manager (CM)
1201 Capitol Access Road, Room 405-E
Baton Rouge, LA 70802

RE: STATE PROJECT H.000688.5 US 11 NORFOLK SOUTHERN RR OVERPASS (HBI), CONTRACT NO. 4400032800

Dear Mr. Morvant and Members of the Project Evaluation Team:

In August 2022, FHWA approved the FONSI for the US11 Norfolk Southern (NS) Railroad Environmental Assessment (EA) that identified a preferred alternative to replace the existing structurally deficient and functionally obsolete US 11 bridge and provide capacity and safety improvements along the US 11 corridor between US 190 and I-12. This alternative addressed numerous roadway safety concerns (i.e. substandard shoulder widths, site distances, design speeds, and access control, etc.), includes an optional complete streets component, and has identified a three-span, four-lane, bridge replacement solution over NS on a severe skew alignment. However, post-FONSI reviews by DOTD staff had noted this alternative wasn't feasible, it required significant drainage improvements and ROW servitudes, failed to consider any phased construction solutions, and included a complex structure layout that would warrant significant NS reviews leading to additional delays and railroad coordination requirements.

With this in mind, DOTD confirmed additional support would be needed to develop line & grade solutions for both interim 2-lane and ultimate 4-lane alternatives. Solutions that build off the original preferred alternative, yet provide a more practical and constructible approach. A solution developed by a full-service firm that can address all project challenges, a firm with a phased construction approach that offers flexibility to DOTD's available funding, one with strong freight rail experience and one that can provide an innovated approach needed for this project. AECOM is that team! We are ideally positioned to partner with the DOTD to support this program. **In response to this RFP and DOTD's need for additional line & grade design support services, AECOM offers the following benefits:**

Full Service & Experienced	AECOM provides a full-service team – ready to provide additional line grade design solutions. We bring a design team with a comprehensive understanding of the existing conditions, site constraints, and previous preferred EA alternative. We also have the experience to advance DOTD's design using both traditional and alternative delivery methods. We have delivered numerous highway and grade separation projects involving Class I freight-rail industry partners and are ready to support DOTD with this project!
Freight Rail Experts	We have assembled our national rail practice leads with bridge design and railroad coordination experience to provide support for DOTD's project needs. Our rail coordination leader, Josh Amsler, brings direct design and coordination experience with the Norfolk Southern (NS) Railroad and will leverage this relationship to facilitate future reviews and approval.
Innovative Design	We have developed a feasible, conceptual design that accommodates both interim (2-lane) and ultimate (4-lane) configurations, improves capacity while addressing existing safety concerns, and can be constructed with minimal impacts to existing NS operations.

AECOM has been successfully operating in Louisiana for nearly a half century and has a long-standing relation with DOTD providing Transportation Planning, Roadway, Drainage and Bridge Design services. We are currently supporting DOTD with the design of US190 over UPRR, I-49 Lafayette Connector Project, and other task order projects from DOTD's Bridge Preventative Maintenance IDIQ contract.

AECOM Design Consultant Services has nearly 200 employees in Louisiana between our Baton Rouge and New Orleans offices, including Roadway, Bridge, Hydraulics and Traffic Engineers as well as Planning and Environmental Professionals. Our local transportation staff is well integrated with our regional and national transportation professionals and experts successfully working together to complete bridge design and rehabilitation projects throughout the region and nationally.

Our qualified staff include specialized structural, roadway, geotechnical, railroad, traffic operations, and surveying professionals who have dedicated their careers to providing quality engineering services. **Our team is led by AECOM Project Manager, Daniel Boyd, PE, from our Baton Rouge Office. Daniel currently serves as AECOM's Louisiana Bridge Practice Leader and brings nearly 20 years of project management and bridge design experience.** We also bring national experts from AECOM's National Rail Practice including Josh Amsler, Christopher Johnson, and Audra Rodgers. **Josh and Christopher bring significant Norfolk Southern (NS) design and rail coordination experience and have supported NS and other Class I Freight Rail clients designing grade separation projects and coordinating the design and construction for over 19 years.** We have also selected subconsultant partners who will assist in meeting the expanded scope of services and delivering this project to DOTD. Many of these firms successfully teamed with us on our previous DOTD projects.

Elos Environmental, LLC	Environmental Support and Permitting
Eustis Engineering, Inc	Geotechnical
Marrero, Couvillon & Associates, LLC	Lighting
Neel-Schaffer, Inc.	Traffic Engineering, Safety Analysis, and Traffic Modeling
T. Baker Smith, LLC	Roadway Design Support, Supplemental Surveying, and Sub-Surface Utility Investigations

The AECOM Team is committed to delivering a quality design to DOTD for the US11 Norfolk Southern RR Overpass contract, while successfully meeting the contract challenges and exceeding the requirements of DOTD.

Sincerely,

AECOM Technical Services, Inc.

Daniel Boyd, PE
Project Manager/Louisiana Bridge
Practice Leader

M: 225-328-5076
daniel.boyd1@aecom.com

South Loop 375 over Union Pacific Railroad
Prestressed concrete girder bridge over railroad
Services - Detailed bridge design, Maintenance of traffic, Roadway geometry, Drainage design, Retaining wall design, Signing and pavement markings, ITS

Sections

1-13

(Revised August 11, 2025)

DOTD FORM: 24-102

PROPOSAL TO PROVIDE CONSULTANT SERVICES

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

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

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

1. Contract title as shown in the advertisement	US 11 NORFOLK SOUTHERN RR OVERPASS (HBI)
2. Contract number(s) as shown in the advertisement	CONTRACT NO. 4400032800
3. State Project Number(s), if shown in the advertisement	STATE PROJECT NO. H.000688.5
4. Prime consultant name (name must match exactly as registered with the Louisiana Secretary of State (SOS) where such registration is required by law; including punctuation; include screenshot from SOS at the end of Section 20)	AECOM Technical Services, 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)	AECOM Technical Services, Inc. (AECOM) LAPELS No. EF.002331
6. Prime consultant mailing address	8555 United Plaza Blvd., Suite 300 Baton Rouge, LA 70809
7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)	8555 United Plaza Blvd., Suite 300 Baton Rouge, LA 70809
8. Name, title, phone number, and email address of prime consultant's contract point of contact	Daniel Boyd, PE, Louisiana Bridge Practice Leader/Project Manager 225.328.5076 daniel.boyd1@aecom.com
9. Name, title, phone number, and email address of the official with signing authority for this proposal	Jonathan McDowell, PE Associate Vice President 225.922.5700 jonathan.mcdowell@aecom.com

10. This is to certify that all information contained herein is accurate and true, and that the team presently has sufficient staff to perform these services within the designated time frame. By submitting this proposal, proposer certifies that it is not engaged in a boycott of Israel and it will, for the duration of its contract obligations, refrain from a boycott of Israel. Proposer also certifies and agrees that the following information is correct: In preparing its response, the proposer has considered all proposals submitted from qualified, potential subcontractors and suppliers, and has not, in the solicitation, selection, or commercial treatment of any subcontractor or supplier, refused to transact or terminated business activities, or taken other actions intended to limit commercial relations, with a person or entity that is engaging in commercial transactions in Israel or Israeli-controlled territories, with the specific intent to accomplish a boycott or divestment of Israel. The proposer also has not retaliated against any person or other entity for reporting such refusal, termination, or commercially limiting actions. DOTD reserves the right to reject the response of the bidder or proposer if this certification is subsequently determined to be false, and to terminate any contract awarded based on such a false response.	Signature (shall be the same person as #9):  Date: September 9, 2025
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.	N/A

12. Past Performance Evaluation Discipline Table:
As indicated in the advertisement, insert the completed table here. The percentages for the prime and subconsultants must total 100% for **each past performance evaluation discipline**, as well as the overall total percent of the contract.

Evaluation Discipline(s)	% of Overall Contract	AECOM Technical Services, Inc.	Neel Schaffer	T. Baker Smith	Eustis	ELOS	MCA	Totals
Bridge	35%	100%	0%	0%	0%	0%	0%	100%
Environmental	5%	50%	0%	0%	0%	50%	0%	100%
Geotech	8%	0%	0%	0%	100%	0%	0%	100%
Road	30%	50%	20%	30%	0%	0%	0%	100%
Survey	1%	0%	0%	100%	0%	0%	0%	100%
Traffic	20%	40%	60%	0%	0%	0%	0%	100%
Other-Lighting	1%	0%	0%	0%	0%	0%	100%	100%
Identify the percentage of work for the overall contract to be performed by the prime consultant and each sub-consultant.								
Total	100%	60.50%	18.00%	10.00%	8.00%	2.50%	1.00%	100%

The only past performance evaluation disciplines to be used are: Road, Bridge, Traffic, CE&I/OV, Geotech, Survey, Environmental, Data Collection, Planning, Right-of-Way, CPM, ITS, Appraiser and Other.

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

Firm Name	DOTD Job Classification	Number of Personnel Committed to this Contract	Total number of personnel available in this DOTD Job Classification (if needed)
AECOM	Principal	2	3
	Supervisor-Eng	4	8
	Supervisor-Other	2	6
	Engineer	6	12
	Engineer Intern	4	8
	Engineer-Other	3	9
	Environmental Manager	1	3
	Biologist/Wetlands	2	3
	Historian	2	3
	Administrative	2	3
	Senior Technician	3	6

Firm Name	DOTD Job Classification	Number of Personnel Committed to this Contract	Total number of personnel available in this DOTD Job Classification (if needed)
Elos Environmental, LLC	Principal	1	2
	GIS Analyst	2	2
	Environmental Pro	2	2
	Environmental Manager	2	2
	Biologist/Wetlands	3	5
	Archaeologist	1	2
	Geologist	1	1
	Inspector - Lead	1	4
	Clerical	2	2
	Historian	1	2
	Technician	2	5
Eustis Engineering, Inc.	Principal	2	3
	Supervisor - Eng	2	11
	Engineer	1	4
	Engineer Intern	1	7
	Engineering-Aide	2	6
	CADD Technician	1	1
	Clerical	3	13
	Driller	1	6
	Geologist	1	2
	Inspector	6	15
	Inspector - Certified	1	1
	Supervisor - Other	2	8
	Technician	3	6
	Senior Technician	3	6

Firm Name	DOTD Job Classification	Number of Personnel Committed to this Contract	Total number of personnel available in this DOTD Job Classification (if needed)
Marrero, Couvillon & Associates, LLC	Supervisor-Eng	1	1
	Engineer	1	5
Neel-Schaffer, Inc.	Supervisor-Eng	1	2
	Engineer	4	15
T-Baker Smith, LLC	Supervisor-Eng	2	2
	Surveyor	2	4
	Engineer	3	3
	Engineer Intern	2	2
	Senior Technician	4	6
	Party Chief	2	3

US 190 Over Union Pacific Railroad

Relevance to US 11: Road and Bridge design, Railroad Coordination, Drainage Design, Traffic Analysis and Design, Sequence of Construction, Preliminary and Final Design

Sections 14-16

14. Organizational Chart

Subconsultant Legend:
Elos - ELS
Eustis - EUS
Neel-Schaffer - NS
MCA - MCA
T Baker Smith - TBS

Project Manager
Daniel Boyd, PE (MPR 4)

QA/QC
Gary Maji, PE
David Wymore, PE

Deputy Project Manager
Stephen McCullough, PE

Project Principal
Jonathan McDowell, PE
(MPR 1, 2, 3) + #

BRIDGE DESIGN

Task Lead
Doug Hively, PE (MPR 4)

Bridge Design
Doug Hively, PE
Stephen McCullough, PE
Sarah Elsawah, PE
Josh Guitreau, EI
Rob Dean, PE

Bridge Sequence of Construction
Steve Haynes, PE
Sean Voisinet, PE

Cost Estimation/ Quantities
Will Fullilove, EI
Jonathan McDowell, PE + #
Daniel Boyd, PE

Lighting
Kimball Schlafly, PE (MCA)
Gregory DeCoursey, AIA (MCA)

LINE AND GRADE

Task Lead
Jonathan McDowell, PE + #

Design Criteria
Daniel Boyd, PE
Jonathan McDowell, PE + #

Horizontal/Vertical Alignments
Jonathan Giardina, PE
Caden Germann, EI
Jonathan McDowell, PE #
Jonathan Duhe, PE, PTOE, RSP (NS)
Kenny Belou, PE (TBS)
Kelly Radecker, PE (TBS)
Brady Smith, PE, PMP (TBS)
Justin Loup, EI (TBS)
Lisa Osborne (TBS)

Typical Sections
Jonathan Giardina, PE
Corey Serignea

Sequence of Construction/TMP
Gregory Trahan, PE, RSP_1 +#
Jonathan McDowell, PE #

Drainage/Hydraulics
Sreeni Bollu, PE, CFM
Donna Pizzini, EI
Avery Prevot, EI

TRAFFIC

Task Lead
Ellen Howard, PE, PTOE, RSP (NS) #

Traffic Modeling
Vijay Kunana, PE, PTOE, PTP (NS) #
Chuck LeBoeuf, PE (NS)
William Fulcher, PE, PTOE, PTP, RSP2B, RSP 2I (NS)

Traffic and Safety Analysis
Vijay Kunana, PE, PTOE, PTP (NS) #
William Fulcher, PE, PTOE, PTP, RSP2B, RSP 2I (NS)
Jonathan Duhe, PE, PTOE, RSP (NS) #
Gregory Trahan, PE, RSP_1 +#

Roundabout/Intersection Design
Gregory Trahan, PE, RSP_1 +#
Kenny Belou, PE (TBS)
Lisa Osborne (TBS)

RAILROAD COORDINATION

Task Lead
Joshua Amsler, PE ++

Bridge - Railroad Constructability
Audra Rodgers, PE ++
Christopher Johnson, PE, SE ++

Sequence of Construction and Cost Estimating
Gary Maji, PE
Daniel Boyd, PE

TOPOGRAPHIC SURVEY*

Task Lead
Rene Herbert, PLS (TBS)

Property/Boundary
Rene Herbert, PLS (TBS)

SUE/Utility Coordination*
T.J. Stokes, PE (TBS)

*If any additional SUE is required

GEOTECHNICAL DESIGN

Task Lead
Gwendolyn Sanders, PE, (MPR 5) (EUS)

Historical Geotechnical Soils and Investigations
Chad Held, PE (MPR 6) (EUS)

Geotechnical Foundation Design
Chad Held, PE (MPR 6) (EUS)

Geotechnical-NDT-Testing
John Volk, PE
Timothy King, PG
Matthew Morales, PE (MPR 7) (EUS)
Travis Richards, PE (EUS)

ENVIRONMENTAL COMPLIANCE (EA)

Task Lead
Derek Chisholm, AICP, LEED

Environmental
Lucas Watkins (ELS)

ATSSA Certified	+
Traffic Engineering Modules	#
Minimum Personnel Requirement	(MPR)
PE Not Registered in LA	++

AECOM Value-Added Services

AECOM will leverage our national bridge design and rail practice in support of this DOTD US 11 over NS Contract. We can quickly bring these "in-house services" in response to any of DOTD's Grade Separation Guideline requirement questions or freight rail operations and constructability concerns.

Grade Separate Design Experts

At AECOM, our experience encompasses all types of bridge structures for all varieties of rail networks. We have designed thousands of grade overpass and underpass bridge structures throughout the country. Structure types include steel truss, steel through-plate girder, deck steel girder, precast concrete segmental, concrete spliced and precast box girder superstructures over/under NS, CSX, UPRR, BNSF and Canadian Pacific to name few.


US50/BNSF


LEMAY/BNSF


METRO/EMPIRE AVE


GREENVILLE/CSX

Railroad Coordination Experts

We know railroads. AECOM's national rail practice has been supporting Class I and II freight rail agencies throughout the country. We have provided owner's representative, consultant review oversight, and construction administration services of railroad grade separation projects on behalf of numerous rail agencies, including: Norfolk Southern, BNSF Railway, Union Pacific Railroad, CSX, Kansas City Southern and many other others. **AECOM's development and recent updates of Norfolk Southern's Public Improvement Projects Manual will benefit this DOTD project and help facilitate the design coordination, project review, and approval process.**

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/ certification & number	State of license	License/certification expiration date
1.	Jonathan McDowell	AECOM	PE 30508	LA	3/31/2027
2.	Jonathan McDowell	AECOM	PE 30508	LA	3/31/2027
3.	Jonathan McDowell	AECOM	PE 30508	LA	3/31/2027
4.	Doug Hively Daniel Boyd	AECOM AECOM	PE 49334 PE 36728	LA	3/31/2027 3/31/2026
5.	Gwendolyn Sanders	Eustis	PE 27104	LA	9/30/2027
6.	Chad Held	Eustis	PE 30257	LA	9/30/2026
7.	Matthew Morlaes	Eustis	PE 38211	LA	9/30/2025

Firm	AECOM Technical Services, Inc.		
Name	Daniel Boyd, PE	Years of Relevant Experience with this Employer	6
Title	Louisiana Bridge Practice Leader/Project Manager	Years of Relevant Experience with Other Employer(s)	13

Degree(s)/Years/Specialization			BS/2006/Civil Engineering
Active Registration Number/State/Expiration Date			PE.0036728/LA/3.31.2026 Additional active licenses in MS and TX AECOM Certified PM
Year Registered	2011	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Project Manager, Meets MPR 4 **Brief Description:** Daniel is an **AECOM certified Project Manager** with nearly 20 years of structural engineering experience in the transportation industry. He most recently was a part of an DOTD Bridge Preservation IDIQ as a Deputy Project Manager, DOTD's I-49 Lafayette Connector, and multiple design build projects in Dallas and Austin, TX. His technical experience encompasses design of bridges crossing navigable waterways, steel girder design, precast/prestressed concrete girder design, structural steel design, structural concrete design, retaining walls, and drilled shaft and driven pile foundations design. Daniel is also an NHI certified bridge inspector. He has a thorough working knowledge of AASHTO and Louisiana DOTD Standards, and through his project experience, has an understanding of the project delivery process required to guide a transportation project from an idea to a constructed reality.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
02/23-Ongoing	**DOTD, Bridge Preventative Maintenance IDIQ, Statewide, LA.** Deputy Project Manager. Served as a Deputy Project Manager and structural task manager for multiple Task Orders as part of AECOM's ongoing Bridge Preservation IDIQ contract. Responsible for final bridge design of a replacement bridge structure project (H.015603) for LA 10 Bridge over Bayou Carron, providing design and calculations, as well as oversight and discipline coordination, for the entirety of the structural scope of the project. For LA 561 Bridge over Boeuf River (H.001970), provided preliminary bridge and foundation design, discipline coordination, and coordination with DOTD. For LA 641 Bridge over I-10 (H.015603), performed bridge inspection services, load ratings, and bridge repair details and calculations to mitigate damage incurred by an equipment impact to this bridge.
10/06-08/11	**DOTD, US 71/165 Fort Buhlow Bridge/KCS Railroad Overpass, Alexandria, LA.** Bridge Design Engineer. For the navigable channel of the Red River, performed design and calculations for the main river spans consisting of two 3-span units (one each direction) with 300'-400'-300' steel plate girder spans, and multiple steel simple spans greater than 200' crossing the river levees. Designed all aspects and components of the steel plate girder bridge units, including diaphragms, bolted splices, bearings, stiffeners, etc. Also performed analysis and design of prestressed concrete girders, concrete bridge deck and columns, bents, and PPC piles, and performed peer review on other components of the project. Collaborated with steel fabricator to review/approve shop drawings and RFI's.

01/20-Ongoing	**TxDOT, LBJ East Design Build Project, Dallas, TX.** Structural Task Leader and engineer of record. Responsible for the design of Ancillary Structures, consisting of 137 custom Overhead Sign Bridge (OSB) Structures and Cantilever Overhead Sign Structures (COSS), as well as ITS and Tolling equipment structures. The structure inventory included a combination of both ground mounted and bridge mounted applications. Design included analysis of the steel trusses for the OSB and COSS structures, analysis and design of custom aesthetic concrete support columns for the truss structures, and deep drilled shaft foundations for each structure. Designed foundations for High-Mast Lighting and Mast-arm mounted traffic signals in accordance with AASHTO Structural Supports for Highway Signs, Luminaires, & Traffic Signals Specifications. Served as structural task leader during Design Services During Construction (DSDC) phase to answer RFI's, resolve field issues, review shop drawings, plan and schedule drawing and/or calculation revisions, etc.
10/20-04/25	**TxDOT, IH 820 SE Connector Design-Build Project, Fort Worth, TX.** Structural Design and QA/QC. Performed preliminary structural design for multiple substructure and foundation arrangements, including inverted-tee bents, multi-column bents, hammer-head bents, and the foundations for each of these, as part of the preliminary design phase of a large design-build project. Also performed QA/QC on numerous bridge calculations, and detailed plan reviews on bridge plan drawings. Provided engineering support during Design Services During Construction (OSCO) phase to answer RFI's, resolve field issues, review shop drawings, and perform calculations necessary for changes made during construction. Task leader and EOR for the final as-built Load Ratings for all new bridges on the project.
01/07-12/07	**City-Parish of East Baton Rouge, Highland Road (LA 42) Improvements (Perkins to Airline), Baton Rouge, LA.** Civil/ Structural Design Engineer. Performed structural analysis and design on multiple aspects of project. Design responsibilities included concrete bridge deck design, guard rails, analysis and design of prestressed quad beam concrete girders, girder bearing design, and design of prestressed concrete piles and pile bents. Also performed calculation reviews on multiple aspects of project.
03/21-06/24	**TxDOT, Oak Hill Parkway, Austin, TX.** Design Engineer. Design engineer for one bridge package, providing analysis and design for multiple substructures and drilled shaft foundations, Independent Design Check (IDC) engineer for the design of three prestressed bridge packages, and IDC engineer for all Overhead Sign Structures and Toll Gantry Structures for the project. IDC analyses were performed for entirety of each bridge structure, from geometry, superstructure design, substructure design, and foundation design to verify the validity of each design. Provided engineering support during DSDC phase to answer RFI's, resolve field issues, and review shop drawings. Provided layout, design, and calculations necessary for Retaining Walls and drilled shaft foundations that were modified during DSDC phase. Task leader and EOR for the final as-built Load Ratings for all new bridges on the project.
04/20-11/20	**Port of Gulfport, Port of Gulfport Connector, Gulfport, MS.** Deputy Project Manager and Structures Discipline Leader. The project performed a preliminary layout and design for a new bridge structure to carry 30th Ave. across Hwy. 90 to provide direct trucking and heavy haul access to the Port of Gulfport. Performed geometric layout and preliminary structural design for a steel plate girder main span arrangement, prestressed concrete girder approach spans, and preliminary substructure design for the new bridge.
10/19-12/20	**CPRA, LA 23 Bridge, Plaquemines Parish, LA.** Bridge/Structural Engineer. The project consists of a new concrete precast girder bridge, approximately 2,200 feet in length, and the connecting roadway. Assisted with the design plans for the new bridge and roadway structure over the new sediment diversion. Provided QA/QC reviews of structural calculations and bridge plans.

Firm	AECOM Technical Services, Inc.		
Name	Stephen McCullough, PE	Years of Relevant Experience with this Employer	15
Title	Associate Vice President/Business Line Senior Manager	Years of Relevant Experience with Other Employer(s)	3

Degree(s)/Years/Specialization			ME/2010/Structural Engineering; BS/2006/Civil Engineering
Active Registration Number/State/Expiration Date			0050503/LA/03.31.2026 Additional active licenses in AR, TX
Year Registered	2025	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Bridge Design **Brief Description:** Stephen has over 18 years of structural engineering experience in the transportation industry, specializing in bridge design and structural discipline management. He has led multi-office teams across Texas, the U.S., Canada, and Europe to deliver major transportation projects. His work includes collaboration with freight partners such as UPRR, BNSF, and KCS, with 14 rail overpass structures designed under phased and non-phased construction. Stephen is well-versed in AASHTO LRFD, AREMA, ACI, and AISC standards, and has served as discipline/task lead on projects such as the Southeast Connector (Fort Worth), LBJ East (Dallas), and US183 South Bergstrom (Austin). His portfolio includes complex bridge and direct connector designs, underpasses, braided ramps, staging/phasing, and retaining wall systems. Additional expertise includes post-tensioned straddle bents, spliced girders, multilevel bents, culverts, roadway schematics, drainage design, and heavy highway construction inspection. His background in schematic design and alternative delivery enables him to craft innovative solutions for complex transportation challenges.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
01/18-06/18	**DOTD, Red River Bridge at Jimmie Davis Highway, Bossier and Caddo Parishes, LA.** Structural Engineer. Stephen performed in depth structural evaluation of the proposed Jimmie Davis bridges superstructure components including the longitudinal stringers and transverse floor beams and bridge slab. This project included an evaluation of two alternative; (1) a traditional slab and stringer styler superstructure, and (2) a truss superstructure with floor beams supported this cast in place slab deck. In addition to the structural analysis for both these options, Stephen performed cost estimates to provide to DOTD for the structure crossing the Red River. The Red River Bridge transverse floor beams consisted of ASTM Grade 50W built-up steel plate girders spanning between built-up steel plate girders for the longitudinal stringers. The superstructure supported a cast-in-place reinforced concrete deck slab of 9-in and 10-in for the overhangs. The substructure and foundations comprised of Class S cast-in-place reinforced concrete bent caps, columns, and deep foundations. Stephen designed and evaluated these steel structures using STAAD Pro in combination with Excel and MathCAD developed design tools to verify the results of the evaluation.

12/21-Ongoing	**TxDOT, Southeast Connector Design Build Project, Fort Worth, TX.** Structural Discipline Lead and Engineer of Record. Stephen served the role of Structural Discipline Lead for the delivery phase of the Southeast Connector Design Build Project. Stephen led the structural coordination for plan and calculation development for all structures on the project. Stephen led the coordinated design effort of more than 120 structural engineering and structural CADD staff members. Stehen led the design and coordinated tasks of all the complex structures including post-tensioned straddle bents, highly skewed bents, wide underpass structures, live water creek crossings, widenings, and unique overpass/underpass geometry. Stephen led the design for all pre-stressed concrete and steel girder superstructures. Stephen led the design for all substructure and foundations on the project. Stephen led the interchanges comprised of 3 and 4 level stacks and several multi-lane direct connectors spanning 2,000 to 3,000 ft. each with some requiring complex shared straddle-bent and multi-column gore bents.Stephen organized weekly staff activities, led the technical development of the bridge design, schedule delivery, and served as liaison between the contractor, TxDOT, and the structural staff on a daily basis. Stehen led the coordination and design effort for all alternative design investigations throughout the lifecycle of the project. Stephen led the engineering services during construction tasks for the project during construction phase services.
12/19-Ongoing	**TxDOT, LBJ East Design Build Project, Dallas, TX.** Structural Discipline Lead and Engineer of Record. Stephen served the role as both office structural leader and structural discipline lead for the LBJ East Design Build Project in Dallas, TX. Stephen led the design effort for the proposal working closely with the joint venture contractor innovating and incorporating alternative technical concepts for every structural aspect of the project corridor. Stephen led the design effort for the I-30/I-635 interchange during the proposal and designed prestressed concrete girder, built-up steel plate girders, post-tensioned straddle bents, single column and multi column reinforced concrete substructure and foundations. Bridge types included creek crossing, 4 stack multi-level direct connectors, wide underpass structures, long viaducts, and direct connector widenings, and intersection stack flips. The interchange included 8 direct connectors, 5 underpass bridges, and 2 overpass bridges. The 2 underpass bridges were designed for future expansion of the I-20 mainlanes. Stepen worked closely with the traffic control group to effectively create a constructible design for the entire project. During design delivery Stephen served as discipline leading all structural design elements of the project. Stephen led a robust team comprising 18 teams spread across the United States, and Europe to deliver construction plans to the contractor for 61 bridges. Stephen's primary role was to lead all 18 structure teams, technically, through the project delivery process.
01/17-12/17	**MDOT, SR 57 Mississippi Red creek Bridge Replacement, Perkinston, MS, Structural Designer.** Stephen led the design for the substructure and foundation design for a 472.25' long spliced drop-in girder bridge over the Red Creek near Perkinston Mississippi. Stephen designed the foundation system which included cast-in-place bridge abutment caps and cast-in-place bent caps that supported the spliced girders. Stephen designed the foundation system which included straight and battered H-Pile abutment systems as well as cast-in-placed bored piles for the interior bents. Red Creek soil conditions provided a unique opportunity to overcome several foundation challenges. The Red Creek soil and creek scour conditions required 6' diameter, 135' long bored piles.
12/12-12/14	**TxDOT, The Horseshoe Design Build Project, Dallas, TX.** Structural task lead and Engineer of Record. Stephen led the procurement and delivery phase of The Horseshoe design build project. Stephen designed and led the delivery of 21 pre-stressed concrete bridges on the project including a 1,020-ft. spliced girder drop-in unit viaduct bridge spanning the Trinity River. This river crossing is a live river spanning 2 embankment levee system adjacent to downtown Dallas. Stephen served as office lead structural engineer and then structural task leader for the second phase of the project and for construction phase services. Stephen worked directly with both the engineering client, construction client, and the owner on a daily basis to deliver the design of the Horseshoe project.

Firm	AECOM Technical Services, Inc.		
Name	Gary Maji, PE	Years of Relevant Experience with this Employer	25
Title	Vice President, Senior Project Manager	Years of Relevant Experience with Other Employer(s)	11

Degree(s)/Years/Specialization			BS/1988/Civil Engineering
Active Registration Number/State/Expiration Date			PE.0043044/LA/3.31.27 Additional active licenses in CO, UT
Year Registered	2025	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** QA/QC **Brief Description:** Gary has been in responsible charge of the project/program management, design, rehabilitation, and reconstruction of urban streets, highway bridges and railroad bridges and box culverts built in accordance with AASHTO and AREMA specifications. He has led multi-disciplinary teams throughout the development of the conceptual, preliminary and final design phases and on-call engineering contracts for federal, state and local agencies. His experience includes railroad coordination, right-of-way/surveying, environmental, and utility coordination throughout project development. His experience includes the design and preparation of steel and concrete girder bridge plans, project special provisions and project cost estimates formatted in accordance with capital project guidelines.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
03/18-Ongoing	**DOTD (H.004273), I-49 Connector, Lafayette, LA.** Structure Task Manager. Responsible for the conceptual and preliminary design of this 7-mile reconstruction of I-49 through downtown Lafayette, LA. This project includes approximately 20 bridges that span over several interchanges, Vermilion River, BNSF and LDRR railroads and a roadway grid network through the Lafayette Central Business District. Structure designs included the evaluation of a 2-mile viaduct structure and a signature span structure considering cast-in-place segmental, and spliced concrete tub girders. Gary led the development and coordination of both conceptual and preliminary railroad submittals for the BNSF and LDRR.
01/25-Ongoing	**DOTD (H.015603), LA 641 Bridge over I-10, Gramercy, LA**. Project Manager. Responsible for the site assessment, superstructure inspection, and bridge load rating efforts required to prepare bridge girder repair plans, improve the bridge load rating and extend the bridge service life for this 1584-ft, multi-span, pretensioned concrete line girder structure. In April 2023, an over-height equipment trailer impacted a portion of the LA 641 Bridge spanning across the WB lanes of I-10 bridge. The emergency bridge inspection identified damage in Span #10, approximately 31 feet from Bent #11 over the outside WB travel lanes.

02/23-10/24	**DOTD (H.001970), LA 561 Bridge over Boeuf River, Hebert, LA.** Project Manager. Responsible for the preliminary roadway and bridge design required for the replacement of an existing 3-span truss bridge over the Beouf River in Richland and Caldwell Parishes. Gary and the AECOM Team worked integrally with DOTD project manager, geotechnical, environmental, and district staff to confirm approach roadway, drainage, right-of-way, utility, and bridge requirements to replacement this structurally deficient bridge.
0512-Ongoing	**CDOT, I-76 Corridor Design and I-76/BNSF RR, Fort Morgan, CO.** Project Manager and Structures Task Manager. Responsible for the preliminary and final design of more than 27 structures along I-76 within a 16-mile corridor. This design work required safety improvements at four interchanges and complete reconfiguration at three other interchanges. As part of the design of the I-76 Bridges over BNSF and Beaver Creek, Gary worked with CDOT and BNSF Railway to managed the development and submittal process for the conceptual, preliminary and final design submittals. Packages were developed in accordance with the UPRR/BNSF RR Grade Separation Guidelines.
05/20-09/21	**El Paso County, South Academy Blvd.** over BNSF Rehabilitation, El Paso County, CO. Structure lead and in responsible charge for the bridge rehabilitation design for an 800-ft, 6-span, steel plate girder bridge over BNSF tracks in Colorado Springs. As part of the bridge preservation efforts, Gary's team conducted nondestructive testing to evaluate the existing deck condition, performed a fatigue assessment and load rating analysis to develop retrofits for fatigue prone details and identified expansion joint and bearing repair and replacement details to extend the bridge design life. Design efforts include railroad coordination per UPRR/ BNSF RR Grade Separation Guidelines.
01/22-06/23	**Southeast Connector (SEC), TXDOT, Dallas, Texas.** Structures Quality Manager. Responsible to assure the design and details associated with (60) sixty bridges and retaining walls located within the SEC project satisfy the technical and quality requirements. Gary supported the development of technical design approach documents, task protocols, and quality documents for the SEC Quality Manual. The $1.6 billion Southeast Connector Project will rebuild and widen approximately 16 miles of I-20 and I-820.
04/18-09/18	**CDOT, SH 59/I-70 Emergency Bridge Replacement (CDOT NPS Contract), Seibert, CO.** Quality Manager for the emergency bridge replacement project of the SH59 Bridge over I-70 in eastern Colorado. Gary developed project quality schedules, technical protocols and provided quality audits for this multi-disciplinary, blended-team project bridge and interchange reconstruction project. CMAR contracting enabled CDOT's project team to replace the bridge and bring the interchange geometry to current AASTHO standards re-opening the interchange 76-days after the initial closure.
03/13-05/21	**City of Fort Collins, Lemay Avenue over BNSF/Vine Improvements, Fort Collins, CO.** Structure manager for the planning and design development for a new bridge crossing over Vine Street and the BNSF Railway tracks in northeast Fort Collins. Using a CM/GC project delivery, Gary's structure team led the design of a single-span prestressed concrete girder bridge, (13) rockery retaining walls, and a pedestrian underpass structure that improves safety and provides multimodal connectivity to this area of the city. Design efforts included railroad coordination and design submittals developed in accordance with the UPRR/BNSF RR Grade Separation Guidelines.
05/13-07/15	**LADOTD (H.001779), Jimmie Davis Bridge, Shreveport, LA.** Bridge Engineer. Responsible for the conceptual design and report for bridge replacement and rehabilitation alternatives of the Jimmie Davis Bridge over the Red River. Design efforts evaluated spliced-concrete U-girder, cast-in- place concrete segmental and steel plate girder alternatives.

Firm	AECOM Technical Services, Inc.		
Name	Jonathan McDowell, PE	Years of Relevant Experience with this Employer	22
Title	Associate Vice President, Senior Project Manager	Years of Relevant Experience with Other Employer(s)	6

Degree(s)/Years/Specialization			BS/1996/Civil Engineering
Active Registration Number/State/Expiration Date			PE.0030508/LA/3.31.27 Additional active licenses in MS, AR, TX
Year Registered	2025	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Project Principal/Roadway Design Task Leader, Meets MPR's 1, 2, & 3 **Brief Description:** Jonathan will play a lead role in roadway design, benefitting from over 25 years' experience as a Project Engineer and AECOM certified Project Manager for a wide variety of transportation and public infrastructure projects, including the development and review of horizontal and vertical geometry. His roles have included line and grade for feasibility studies, planning, NEPA Environmental studies, preliminary and final design. He also has experience with contract administration, and construction engineering and inspection for all modes of transportation projects involving interstate highways, urban and rural roadways, bridges, streetcars, railroads, drainage canals and culverts, port facilities, and airports. Through his experience, he understands the project delivery process required to bring a transportation project from an idea to a built reality. His computer skills include Civil3D, Microstation, Inroads, MS Office, MS Project, HEC-RAS, STAAD, ArcView, and various other design software platforms.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
05/13-07/15	**DOTD (H.001779), Red River Bridge at Jimmie Davis Highway (LA 511) Environmental Assessment, Bossier and Caddo Parishes, LA.** Lead roadway design engineer to design geometric layout alternatives to improve the capacity and accommodate pedestrian and bicycle access for the bridge crossing of the Red River along Jimmie Davis Highway. Tasks included the development of the purpose and need statement, the project design criteria, and the line and grade alternatives of the bridge, interchange ramps on each side of the bridge, and roadway approaches. Developed a median U-turn concept (super street) for LA 511.
11/04-12/07	**DOTD (State Highway Project No. 700-92-0016), Florida Avenue Bridge over IHNC, New Orleans, LA.** Deputy Project Manager and Project Engineer. Responsible for the geometric design of a high-level bridge with 158 ft vertical clearance and associated interchange ramps and approach roadways. Coordinated with utility companies and railroad agency for proposed relocations of a 48" water main, a 54" sewer force main, a 72" sewer force main, an electrical duct bank, a temporary railroad relocation, and several other utilities that were affected by the construction of the bridge. Proposed modifications to the site layout and parking area for an operator house associated with the existing adjacent draw bridge and a drainage pump station located under the proposed bridge. Prepared cost estimates for the main span and approach bid packages. Assisted in PM duties.

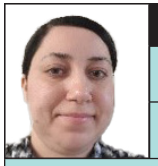
10/20-Ongoing	**City of Baton Rouge/Parish of East Baton Rouge, College Drive Improvements (Perkins Road to Bawell), Baton Rouge, LA.** Project Manager and Task Manager. Responsible for the Urban Road Design and Complete Streets improvements to College Drive. The project include a Design Study to develop a corridor and street network plan that includes potential connecting side road improvements, access management solutions, and other improvements along College Drive and the I-10 ramps to provide congestion relief and improve driver and pedestrian safety. Developed line and grade for road relocations and extension, performed line and grade study for alternative to modify the interstate ramps. Supporting real estate acquisition and utility relocation processes.
09/17-12/23	**State Project No. BA-0153: Mid Barataria Sediment Diversion, Coastal Restoration and Protection Authority of the State of Louisiana, Plaquemines Parish, LA.** Task manager and Lead Engineer. Responsible for the relocation of LA 23 and the NOGC Railroad tracks across the proposed sediment diversion. Developed line and grade for the highway relocation and the rail crossing. Supported the drainage design and utilities relocations tasks. The railroad bridge crossing of the diversion channel which will feature a moveable span bridge, 10,000 feet of new railroad track, and a railyard to support construction. The highway improvements will include a 2,300-foot-long precast LG girder bridge that will carry two lanes in each direction with shoulders. Roadway improvements include converting the existing southbound lanes for access roads on each side of the diversion channel and a relocated alignment of the rural divided highway to provide for better horizontal geometry on the bridge structure.
07/23-Ongoing	**DOTD (H.001970), LA 561 Boeuf River Bridge near Hebert, Caldwell & Richland Parishes, LA.** Road design lead engineer for the replacement of a truss bridge with a new precast girder bridge along the same alignment. Designed line and grade for updated hydraulic design criteria and reduce right-of-way acquisition. Designed line and grade for a gravel local road to serve adjacent residences. Assisted with drainage design and utilities coordination.
02/07-11/09	**City of Baton Rouge/Parish of East Baton Rouge, Siegen Lane Improvements (Highland Road to Perkins Road), Baton Rouge, LA.** Project Manager and Task Manager for the design of corridor improvements to Siegen Lane to upgrade the two lane suburban road to a four lane urban boulevard. Performed road line and grade, developed suggested sequence of construction plans, and reviewed the drainage plans and calculations. Managed and authored the design study which included an alignment analysis, preliminary drainage design, a Phase I Environmental Site Assessment, a wetland study, and a noise study.
05/13-07/15	**New Orleans Regional Transit Authority, Loyola/Rampart Streetcar Rail Expansion, New Orleans LA.** Project Manager and Infrastructure Task Leader to prepare two sets of contract plans and specifications on an accelerated schedule to reconfigure the streetscape to include streetcar tracks in a shared traffic lane. Designed the roadway typical section in accordance with the City of New Orleans Complete Streets Ordinance. Led utility coordination effort and test hole program to locate all underground utilities to resolve utility conflicts. Led the road design, MOT during construction. Performed construction support services.

Firm	AECOM Technical Services, Inc.		
Name	Doug Hively, PE	Years of Relevant Experience with this Employer	19
Title	Associate Vice President, Bridge Group Lead	Years of Relevant Experience with Other Employer(s)	12

Degree(s)/Years/Specialization			BS/1996/Civil Engineering
Active Registration Number/State/Expiration Date			PE49334 / LA / 03/31/2027 Additional active licenses: TX
Year Registered	2025	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Bridge Discipline Lead, Meets MPR 4 **Brief Description:** Mr. Hively is the Bridge Group Lead for the Austin, Texas office where he supervises a staff of 13 which includes PEs, EITs and CADD technicians. He is an engineer with over 30 years of experience in structural and civil design with most of his years spent in the bridge design practice. His primary experience lies in the realm of bridge replacements, widenings, and interchanges using prestressed concrete and steel girders along with complex substructures. His projects have been for federal, state, county, and city level clients as well as private developers and have ranged in scope from multi-level interchanges to pedestrian bridges. Mr. Hively has been involved with ten design-build projects with significant responsibility regarding delivery of bridge design plans and developing design criteria. He has served in leadership and technical roles for the design and production of numerous bridges in each project and efficiently guided staff during the fast-paced projects. Mr. Hively is proficient with a variety of software packages including OpenRoads, MicroStation with GEOPAK, MDX, STAAD, TxDOT Bridge Geometry System (BGS), PGSuper, spColumn, CONSPAN, LPILE, and RCPier.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
09/06–06/10	**North Texas Tollway Authority, Chisholm Trail Parkway (Section 1), Fort Worth, Texas.** Designed a 12-span frontage road bridge that included a 3-span continuous curved steel plate girder unit over the Fort Worth and Western Railroad (FWRR) as well as the I-30 prestressed concrete I-beam bridge replacements over the FWRR using phase construction. Developed the sequence of construction for the I-30 bridges. Design included superstructure, substructure and foundations.
10/17–07/20	**TxDOT – El Paso District, SL 375 Frontage Road Ramps, El Paso, Texas.** Design team lead and engineer of record for three bridges in the project that consisted of ramp reversals and addition of frontage roads along a controlled access highway. Supervised design efforts for two new frontage road bridges over Union Pacific Railroad (UPRR) and the widening of a mainlane bridge over a grade crossing. Design elements included concrete U-beams, Tx54 girders, aesthetic bents and drilled shaft foundations. Developed span arrangement that placed bridge bents and foundations outside of UPRR ROW and worked with Roadway team to meet required vertical clearances over UPRR. Coordinated with other discipline leads during development of Bridge Layouts and details. Developed an Exhibit 'A' for submittal to UPRR.

09/19–07/20	**TxDOT - Dallas District, I-635E Design- Build, Dallas, Texas: One of multiple bridge design team leaders for this $1.7 billion project.** Developed and supervised a work plan for three engineers and two CADD technicians for the design and plan production of four bridges - two were direct connectors in the I-635 / I-30 interchange, one was a phase-constructed underpass, and the other was a temporary bridge for MOT. Design included prestressed concrete girders, curved steel plate girders, hammerhead bents, straddle bents, post-tensioned straddle bent caps, and footings with drilled shaft foundations. Developed sequence of construction for bridge replacements. Worked with construction team to provide optimizations that led to cost-effective bridge type and focusing on constructability.
09/09–12/10	**North Texas Tollway Authority, SH 161 Toll Road Design-Build, Grand Prairie, TX.** Design team lead and engineer of record for three direct connectors at the I-20 and I-30 interchanges and four grade crossings along the mainlanes as part of the large design-build toll facility. Design included curved steel plate girder flyovers, Tx54 prestressed concrete girders, straddle bents, hammerhead bents, and foundations with multiple drilled shafts. Developed Bridge Layouts and checked vertical clearances. Managed the design, detailing and production tasks of support staff.
09/08–09/09	**North Texas Tollway Authority, Sam Rayburn Tollway Interchange at Dallas North Tollway, Collin County, TX.** Designed two direct connectors as part of an 8-directional interchange. Design included curved steel plate girder flyovers, prestressed concrete I-beams, straddle bents, hammerhead bents, and foundations with multiple drilled shafts.
02/22–06/23	**TxDOT – Fort Worth District, Southeast Connector Design-Build, Fort Worth, TX.** Acted in a dual role for this $1.5 billion project. As design team lead and EOR, developed a work plan and supervised the work of two engineers and one technician for the design and plan production of three bridges in the I-20 / I-820 interchange. Design included prestressed concrete girders, inverted-T bent caps, hammerhead, straddle and multi-column bents. As segment lead, oversaw the work of three design teams responsible for design and plan production of nine bridges at the I-20 / US 287 interchange. Assisted the bridge discipline lead in development of standard drawings, bringing optimizations to the construction team and scheduling.
09/20–03/22	**TxDOT – Austin District, Oak Hill Parkway Design-Build, Austin, TX.** Bridge discipline lead for this $675 million design-build project. In charge of plan delivery for all 26 bridges on the project as well as overhead sign structures, bridge-related project standards and miscellaneous structures. Worked with constructor and owner through weekly technical workgroup meetings to ensure design met project specifications. Oversaw the work of six bridge design teams to ensure delivery of bridge plans were on schedule. Developed bridge design criteria for all teams to use to ensure design consistency throughout the project.



Firm	AECOM Technical Services, Inc.		
Name	Sarah Elsawah, PE	Years of Relevant Experience with this Employer	2
Title	Bridge Design	Years of Relevant Experience with Other Employer(s)	7

Degree(s)/Years/Specialization			MASc/Civil Engineering/Syracuse University/2018; Beng/Bridge Engineering/Concordia University/2016
Active Registration Number/State/Expiration Date			PE.0046814/LA/9.30.26
Year Registered	2022	Discipline	Civil Engineering
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Bridge Design **Brief Description:** Sarah has nine years of experience in bridge design, with a strong emphasis on bridge analysis, including but not limited to load rating and bridge testing. Her expertise spans load testing of both simple and complex structures, assessment of bridges in poor condition, and advanced analysis of continuous steel spans and movable bridges. She also has extensive experience in bridge design and rehabilitation projects, contributing to both design-bid and rehabilitation efforts.

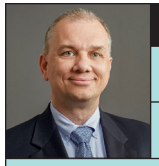
Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
01/25-Ongoing	**DOTD, Bridge Preservation IDIQ 2022-2027-LA 641 Bridge Load Rating & Repair, St. James Parish, LA.** Engineer responsible for calculating the load rating for the entire bridge in its as-condition state and preparing a comprehensive load evaluation report. Additional responsibilities included determining the post-repair load rating and generating the as-designed load rating report. In 2023, a prestressed concrete bridge was damaged in an accident, resulting in concrete spalling and exposed, broken strands on three girders. These services were carried out within the framework of a multi-year task order contract
8/24-12/24	**DOTD, LA 143 Bridge, Ouachita Parish, LA.** Project engineer who reviewed sheets prepared by young engineers and prepared sheets that included bridge geometry (foundation layout, framing plans, etc.) for a new precast prestressed concrete I-beam bridge. The 700-foot bridge superstructure and substructure were designed based on the AASHTO-LRFD and BDEM.
5/24-12/24	**DOTD, Load Rating of 89 Bridges, Statewide, LA.** Project engineer who assisted young engineers by reviewing load rating reports for bridges and prepared load rating reports of 89 on-system bridges in the state of Louisiana. The project consisted of complex and simple bridges, including railroad flat car, steel low truss swing span, suspended steel plate girder, slab spans and continuous deck slab spa
01/24-04/24	**DOTD, NDT of Load Testing, Evaluation and Load Rating Retainer Contact, statewide, LA.** Project engineer who led young engineers in determining the tested members of the 3,455-foot steel plate girder for testing the bridge's superstructure of four steel and concrete bridges, including concrete slab span, Continuous steel I-beam, and 3,455-foot steel plate girder. Responsibilities also involved preparing a finite element model for the test spans to validate the field data, analyzing the field data, submitting a modified BrR model to reflect the load test results, and preparing a detailed report with the load test results. The goal of the project was to eliminate the current posting of the bridges

11/23-3/24	**Dura Stress, Creep Issue, Tampa, FL**. Project engineer who analyzed previous data versus the design camber, investigated the cause of the problem and suggested an alternative procedure to avoid the issue in the future, and prepared a detailed report as part of the research investigating the reason a precast prestressed girder camber measured before erection was much less than that of design camber. The project aimed to provide the manufacturer with guidance and suggestions to improve the casting of the beam and eliminate construction issues.
03/23-06/23	**DOTD, US 190 over US 61 Repair, Baton Rouge, LA**. Quality assurance/quality control specialist who thoroughly reviewed the plans before the final submittal for the rehabilitation of a 200-foot-long reinforced concrete deck span. The repair included concrete patching and CFRP sheets to repair the superstructure and substructure.

Firm	AECOM Technical Services, Inc.		
Name	Josh Guitreau	Years of Relevant Experience with this Employer	3
Title	Structural Engineer 2, EIT	Years of Relevant Experience with Other Employer(s)	0

Degree(s)/Years/Specialization			BS/2022/Civil Engineering
Active Registration Number/State/Expiration Date			EI.0035162/LA/9.30.26
Year Registered	2022	Discipline	Engineering Intern
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Bridge Design **Brief Description:** Joshua has 3 years of experience in structural and bridge engineering across multiple transportation projects. His work has included preliminary and detailed bridge design, reinforced deck design, and substructure analysis for state DOTs including LaDOTD, TxDOT, and SDDOT, as well as bridge load rating evaluations, field assessments, and site visits for LaDOTD, with one year focused on analyzing existing structures to assess capacity and inform maintenance or load decisions. His project experience spans bridge replacement and rehabilitation, box culvert and wingwall design, and construction and quality support for major highway projects. Joshua has demonstrated proficiency with AASHTO LRFD design specifications, reinforced concrete bridge components, and preliminary structural analysis, contributing to the successful execution of projects across multiple states.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., “designed drainage”, “designed girders”, “designed intersection”, etc. Experience dates should cover the time specified in the applicable MPR(s).
05/2023-Ongoing	**LADOTD, LA-561 Boeuf River Bridge Replacement Project, Hebert, LA.** Structural Engineer. Responsible for preliminary bridge layout and design, preliminary structural design to generate pile loads, reinforced deck design, as well as performing site visit meeting with LaDOTD to assess condition of current bridge and determine new bridge design parameters.
08/2023-Ongoing	**LADOTD, LA-10 Bayou Carron Bridge Project, Washington, LA.** Supported geotechnical analysis efforts by determining bridge service loads used in foundation design. Assisted with plan development and coordination to maintain consistency between structural and geotechnical design elements.
10/2023-08/2025	**LADOTD, Bridge Load Rating, Multiple Locations, LA.** Performed substructure analysis for a series of multi-span concrete slab bridges as part of a statewide load rating effort, assessing existing conditions and structural capacity to deliver recommendations supporting effective maintenance and rehabilitation planning.
11/2022-Ongoing	**EBR Parish, College Drive, Baton Rouge, LA.** Structural Engineer. Performed design verification and structural analysis for box culverts and headwalls to ensure compliance with design standards and structural integrity.
07/2022-Ongoing	**TxDOT, I-635 LBJ East Design Build Project, Dallas, TX.** Structural Engineer. Performed construction support activities such as responding to RFI’s, shop drawing review, plan revisions, and quality support/quality assurance tasks for multiple bridge structures throughout project.
11/2022-12/2022	**SDDOT, West River Bridges, Prairie City, SD.** Structural Engineer. Performed structural design for box culvert wingwalls and completed quantity calculations to support project estimation and planning.



Firm	AECOM Technical Services, Inc.		
Name	Rob Dean, PE	Years of Relevant Experience with this Employer	30
Title	Bridge Design	Years of Relevant Experience with Other Employer(s)	0

Degree(s)/Years/Specialization			BS/1993/Civil Engineering MS/1995/Civil Engineering
Active Registration Number/State/Expiration Date			PE.0046730/LA/9.30.22 Additional active licenses: SC, VA
Year Registered	2022	Discipline	Civil Engineering
Contract Role(s)/Brief Description of Responsibilities			**Bridge Design.** Rob is a licensed professional civil engineer who serves as a Bridge Engineer in the Roanoke, Virginia office. His professional experience encompasses a wide range of projects for public and private clients, involving design of new bridge structures, as well as the inspection, rehabilitation, and renovation of existing structures. His responsibilities include condition assessment, rehabilitation alternatives, computation and checking of design calculations, preparation of plans, specifications, and cost estimates. Mr. Dean is a nationally certified Bridge Inspection and Tunnel Inspection Team Leader.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
04/20-04/24	**VDOT, Rehabilitation of Interstate 77 Bridges over Clear Fork Creek, Bland County, VA.** Task Manager. Responsible rehabilitation of four steel bridges on Interstate 77 in Bland County, Virginia. AECOM developed a program for assessment of the existing structure condition, including sampling of the superstructure concrete to test for chloride content, depth of the chloride front, compressive strength and petrographic examination. Based on the results of our investigation, we developed plans for deep hydro-demolition and concrete deck overlay, elimination of deck expansion joints, structural steel repairs, and substructure rehabilitation.
11/20-06/23	**VDOT, Route 360 Corridor Evaluation of 22 Structures, Fredericksburg District.** Task Manager. Responsible for coordinating the collaboration of a multi-discipline team on this task to evaluate rehabilitation needs for 22 structures along the Route 360 corridor. Structures range in length up to 500 feet and include both concrete and steel superstructures. Our assessment of the existing structures including infrared thermography, 3D GPR, and digital image mapping, all performed at traffic speeds. The analysis results supported our data-driven process for rehabilitation recommendations and budget prioritization.
	LADOTD, Grand Ecore Bridge Rehabilitation Study, Grand Ecore, LA. Senior Bridge Engineer. Responsible for development and evaluation of bridge rehabilitation alternatives. 07/25 to present. The Louisiana Department of Transportation and Development (LADOTD) has commissioned AECOM to perform preliminary study of rehabilitation alternatives for the bridge carrying LA 6 over the Red River (Grand Ecore Bridge). The existing structure is 1875 feet long with main spans up to 375 feet. AECOM is evaluating bridge superstructure and substructure rehabilitation alternatives for multiple service life scenarios based on initial cost, durability, constructability, and impacts to traffic.

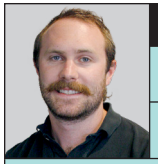
08/15-11/20	**VDOT, Route 685 over Craig Creek (Phoenix Bridge), Botetourt County, VA.** Task Manager. Responsible for bridge design and construction plans. AECOM was commissioned by VDOT to provide engineering services for this project to rehabilitate two 120-year-old steel truss spans over Craig Creek to extend the service life, improve the condition ratings, and increase the live load capacity. This single-lane bridge with a length of 267 feet is the only means of access and emergency service for dozens of residences, so AECOM developed unique modular construction details to allow major rehabilitation of floor beams and complete replacement of all stringers and bracing members in very short windows of road closure.
01/16-11/20	**VDOT, Rehabilitation of 34 Structures in Salem District, VDOT Salem District, VA.** Task Manager. Responsible for guiding the work of multiple design teams for this task to replace superstructures for 34 bridges throughout the VDOT Salem District. New structure types included concrete and steel superstructures. Staged construction details were developed to maintain traffic during construction. Where staged construction was not feasible, plan details were developed to permit rapid replacement within a 12-hour road closure. Bridge rehabilitation plans were prepared and bundled in multiple advertisement packages.
04/17-02/24	**VDOT, Rehabilitation of Five Structures in the Lynchburg District, VDOT Lynchburg District, VA.** Task Manager. Responsible for oversight of five design teams to make field assessments, site survey, develop sequence of construction, bridge engineering, maintenance of traffic, utility relocations, cost estimating, and specifications. AECOM was commissioned by VDOT to provide engineering services for this project for rehabilitation of five structures. Structures ranged in length up to 650 feet. The scope of rehabilitation included concrete deck replacement, deck hydro-demolition and overlay, structural steel repairs, bearing replacement, substructure repairs, and structural steel painting.
02/18 to 08/20	**VDOT, Route 683 and Route 730 Bridges, Virginia DOT Lynchburg District.** Task Manager. Responsible for quality control review of superstructure and substructure design calculations and bridge construction plans. AECOM provided engineering services for this project for complete replacement of two bridges using prestressed concrete beams. The project was designed on an aggressive schedule because the original bridges were both washed out during a flood, leaving both bridges closed to traffic.
05/18-03/19	**VDOT, Route 3 Bridge over Rappahannock River, Middlesex/Lancaster County, VA.** Task Manager. Responsible for coordinating the collaboration of a multi-discipline team for this task to study bridge rehabilitation and replacement alternatives for the Route 3 over the Rappahannock River bridge. The existing bridge is two miles long with a span length of 650 feet over the navigation channel. The study evaluated eight bridge replacement alternatives and provided scoping plans for the recommended alternative based on cost, environmental impacts, constructability, and impacts to traffic.
04/11-05/11	**VDOT, I-81 over Reed Creek Bearing Replacement, Wythe County, VA.** Senior Bridge Engineer. Responsible for field assessment, design of emergency bearing repairs, and preparation of construction plans. AECOM was commissioned by VDOT to perform emergency inspection and prepare emergency repair plans for tilted steel rocker bearings.
02/17-09/21	**VDOT, Route 58 over NS Railway, Norton, VA.** Senior Bridge Engineer and Engineer of Record. Responsible for rehabilitating the superstructure of this steel girder bridge with a total length of 570 feet and a width of 76 feet. Rehabilitation plans included fatigue cracking retrofit, concrete deck overlay, bearing replacement, and substructure repair.
07/19-02/22	**VDOT, Route 667 Piney Creek, Albemarle County, VA.** Mr. Dean served as Task Manager and Engineer of Record with responsibilities for preparation of design calculations for moment slabs and concrete barriers, construction specifications, and construction plans. AECOM provided engineering services for this project for complete replacement of a structurally deficient bridge structural steel plate arch construction.

	**Firm**	**AECOM Technical Services, Inc.**		
	Name	Steven Haynes, PE	Years of Relevant Experience with this Employer	24
	Title	Bridge Design	Years of Relevant Experience with Other Employer(s)	21

Degree(s)/Years/Specialization			BS/1978/Civil Engineering
Active Registration Number/State/Expiration Date			0043319/LA/9.30.2026 Additional active licenses in: CO, TX, WA
Year Registered	2019	Discipline	Civil Engineering
Contract Role(s)/Brief Description of Responsibilities			**Bridge Design:** Steven is a senior project manager and bridge engineer with extensive experience in the analysis, design, and construction management of bridges and other structures. He is well-versed in AASHTO LRFD bridge design and construction specifications and has applied state-specific design procedures in Louisiana, Washington, Colorado, and Texas. His expertise includes designing steel, precast, and post-tensioned concrete bridges, complex substructures, and retaining walls over 30 feet, often incorporating soil-nail, caisson, and tied-back systems. Steven has led multidisciplinary design teams through all project phases—from studies and civil/structural design to specifications, estimates, and construction—on diverse structures such as arches, tied arches, timber bridges, and approach roadways. He is also skilled in evaluating hydrologic, geotechnical, traffic, safety, economic, and aesthetic factors to deliver feasible designs in collaboration with roadway engineers, and he has performed quality control reviews of final contract plans and specifications for numerous bridge and structural projects.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/24 - Ongoing	**Brent Spence Bridge Project – Ohio River, Ohio DOT.** Lead Structural Engineer. This project is a progressive design/build project where Steven is the Lead Structural Engineer for 5 bridges in Cincinatti OH. Two of the bridges are double-decked structures approaching the Ohio River Crossing Bridges. One Bridge spans 2 railroad facilities where shoring designs will be required by the Design Team. The bridges consist of fabricated structural steel and prestressed concrete girders up to 140 feet in length.
07/20-09/21	**Repair Assessment of Bridge No. 93.1, I-20 EB to I-55 NB, Mississippi Department of Transportation, Jackson MS.** Provided technical support for an in-depth finite-element analysis to generate a bridge load rating analysis and repair recommendations for Bridge No. 93.1 in Rankin County, MS. This bridge is in generally fair condition, however, diagonal cracking of the concrete girders with moderate spalling was noted at the dapped girder ends which weakened the structural integrity of the bridge and warranted a load posting

07/19-12/21	**TxDOT, Southeast Connector Design-Build, Fort Worth, TX.** Structure Engineer and Task Manager. Responsible for $1.6 billion design- build project to reconstruct and widen 16.6 miles of I-820, I-20 & US-287. Steven was EOR for 3 of the bridges on the project and designed pre-stressed concrete girders, bent caps, columns, and foundations for these bridges. Steven designed several of the more complicated post-tensioned straddle bents on the projects requiring limited vertical clearance.
7/18-Ongoing	**TxDOT, I-635 LBJ East Design-Build, Dallas, TX.** Lead Structural Design Engineer. Design-Build project to reconstruct and widen 11 miles of interstate roadway. Steve is the lead structural design engineer and engineer of record for the280 ft span Skillman St. Tied Arch Signature Bridge supported on abutment caps and drilled shafts.
07/20-12/20	**El Paso County, South Academy Blvd over BNSF Rehabilitation, El Paso County, CO.** Bridge Engineer. Responsible for the scour mitigation design for a 5-span, prestressed concrete girder bridge over Fountain Creek in Colorado Springs. As part of the bridge preservation efforts, Steve developed bridge foundation strengthening details for the existing piers in the floodplain.
7/15-Ongoing	**LADOTD and Development (H.004273) I-49 Connector, Lafayette, LA.** Technical Task Leader. Task Assignments included the conceptual designs of Signature Bridge Options totaling approximately 840 feet in length and a main span approximately 400' over Johnstown Blvd. Technical Task Leader and for AECOM Denver's portion of this design study report. Mr. Haynes provided QC for the superstructure and design of the substructure elements for this bridge, including straddle bents in excess of 130' in length. AECOM Denver was tasked with the design for Spliced U-Girder Alternative. The viaduct consisted of multiple structures. The study area and was in excess of 15000' long with a number of ramps. Considering the parallel I-49 structures, the overall bridge length studied was in excess of 10,000 feet each and over 120 spans total. Midas and CSiBridge were utilized for the designs of the structures. Designed the structure in accordance with LADOTD's Guidelines and AASHTO LRFD requirements.
10/17-12/19	**Frederick Douglass Memorial Bridge, Washington DC Department of Transportation, Washington DC.** Structural Engineer. Responsible for designing foundations for this 3 span suspended arch bridge crossing the Anacostia River. The bridge is 1445' in length with spans 540' over the main channel. Challenges included designing deep pile foundations in soft soils, including the design of the bridge for active threats, such as ship collisions which could potentially damage several supporting piles at the piers. The design plans comply with Washington D.C's DOT Standards and AASHTO's LRFD Requirements.
09/18-05/19	**LADOTD (H.011670), I-10 at Loyola Avenue Interchange Design-Build Tender Offer, Kenner, LA.** Structure Engineer. Responsible for interchange improvements at the I-10 at Loyola Drive to provide new direct access ramps to handle traffic to and from the new passenger terminal at Louis Armstrong International Airport. Design tasks included evaluating alternative technical concepts, preliminary design and layouts for prestressed concrete LG girder superstructures, proposal plan development and quantity calculations for contractor estimating and bid.
09/12-06/17	**I-225 Light Rail Line Design-Build - Regional Transportation District of Denver, Aurora, CO.** Design-build of a 10.5-mile LRT extension with 8 stations and 7 bridges. Steve was the lead structural engineer and engineer of record for the bridges and various wall structures including cast-in-place cantilever walls, caisson walls, soldier pile walls and geometric layouts and design coordination for mechanically stabilized earth walls and soil nail walls. The bridges were designed as ballasted light rail bridges utilizing prestressed concrete BT girders. Substructure designer for a prefabricated pedestrian bridge supported on abutment caps on drilled caisson foundations. Additional responsibilities included extensive structural drafting and detailing as well as post-design construction support services including structural shop drawing reviews and field design changes.

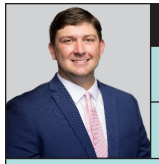


Firm	AECOM Technical Services, Inc.		
Name	Sean Voisinet, PE	Years of Relevant Experience with this Employer	12
Title	Structural Engineer V	Years of Relevant Experience with Other Employer(s)	0

Degree(s)/Years/Specialization			BS/2012/Architectural Engineering
Active Registration Number/State/Expiration Date			PE.0046645/LA/9.30.2026 Additional active licenses in: CO, TX
Year Registered	2017	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Bridge Design.** Sean is a bridge engineer with more than 12 years of experience in the structural design, rehabilitation, and widening of highway and railway bridges in Colorado, Louisiana, Ohio, and Texas. His experience includes technical design and management primarily of prestressed concrete girder superstructures and complex concrete substructures as well as a variety of transportation structures including complex retaining walls, concrete box culverts, drainage junction structures, and traffic sign structures. His experience also includes developing design criteria, preparing design calculations, construction plans, project special provisions and project cost estimates formatted in accordance with client requirements and project criteria.

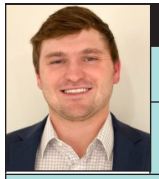
Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
03/18-Ongoing	**LADOTD (H.004273), I-49 Connector, Lafayette, LA.** Structural Engineer. Responsible for the conceptual and preliminary design of this 7-mile reconstruction of I-49 through downtown Lafayette, LA. This project has a budget projected over $1 billion and includes approximately 20 bridges and numerous retaining walls. Sean is responsible for developing conceptual layouts and preliminary design for eight precast concrete segmental span-by-span ramp bridges that frame into the 2-mile viaduct structure through the Lafayette Central Business District.
01/21-03/24	**TxDOT, Southeast Connector Design-Build, Fort Worth, TX.** Structures Task Manager and Segment Lead. Responsible for this $1.6 billion design- build project to reconstruct and widen 16.6 miles of I-820, I-20 & US-287. Sean was a segment lead responsible for coordination and scheduling for 6 teams designing 23 bridges as well as EOR for 7 bridges within the segment. As EOR, Sean led a team of 7 engineers to develop final plans and calculations for 4 prestressed concrete Tx I-girder bridges on multi-column bents and shafts carrying I-20 WB/EB over UPRR. Design tasks included developing superstructure/substructure phasing alternatives for the constructor along with 30% and Final Plan submittals in accordance with the UPRR/BNSF RR Guidelines for Railroad Grade Separation Projects.

07/20-09/21	**CDOT, I-76 over BNSF RR and Badger Creek, Brush, CO.** Structures Engineer. Responsible for the preliminary design and structure layout for a pair of 6-span (680 ft) continuous prestressed concrete BT girder bridges on highly skewed, multi-column piers on caisson foundations. During preliminary design, Sean evaluated alternative structure depths and optimized layout configurations to reduce roadway profile impacts while maintaining the required railroad clearances and completed 30% design plans and specs developed in accordance with the UPRR/BNSF RR Guidelines for Railroad Grade Separation Projects.
07/19-12/21	**TxDOT, I-635 LBJ East Design-Build, Dallas, TX.** Structural Design Engineer. Responsible for a 24-span (3100 ft) direct connector bridge at the I-635/I-30 Interchange comprised of prestressed concrete Tx I-girders on hammerhead bents on two drilled shaft footing caps and multi-column straddle bents on monoshaft foundations. Additional responsibilities included final substructure and foundation design for the 280 ft span Skillman St. Tied Arch Signature Bridge supported on abutment caps and drilled shafts.
09/23-01/25	**TxDOT, I-35 Northeast Expansion (NEX) South Design-Build, San Antonio, TX.** Structures Task Lead. Responsible for $700 million design-build project to construct three elevated lanes in each direction along 4.2 miles of I-35. Lead for a team of four engineers and EOR for final design plans and calculations of a 33-span (4570 ft) segment of the NB elevated lanes bridge comprised of prestressed concrete Tx I-girders. The substructure design consisted of both cast-in-place and precast hammerhead, multi-column, and straddle bent caps, including an eccentric post-tensioned cap and column C-bent with drilled shaft foundations.
02/21-12/21	**City of Fort Collins, Lemay Avenue over BNSF/Vine Improvements, Fort Collins, CO.** Structures Engineer. Responsible for the design development for a new bridge crossing over Vine Street and the BNSF Railway tracks in northeast Fort Collins. Using a CM/GC project delivery, Sean designed the single-span bridge comprised of a prestressed concrete box girder superstructure on integral abutments on steel piles with geosynthetic reinforced soil (GRS) supporting walls and a pedestrian underpass concrete box culvert structure with wingwalls. Design efforts included railroad coordination, construction phasing and design submittals developed in accordance with the UPRR/BNSF RR Guidelines for Railroad Grade Separation Projects.
09/18-05/19	**LADOTD (H.011670), I-10 at Loyola Drive Interchange Design-Build Tender Offer, Kenner, LA.** Structures Engineer for interchange improvements at the I-10 at Loyola Drive to provide new access ramps to and from the new passenger terminal at Louis Armstrong International Airport. Sean's design tasks included evaluating alternative technical concepts, preliminary design and layouts for prestressed concrete LG girder superstructures, proposal plan development and quantity calculations for estimating and bid.

	Firm	AECOM Technical Services, Inc.		
	Name	Will Fullilove, EIT	Years of Relevant Experience with this Employer	3
	Title	Engineering Intern	Years of Relevant Experience with Other Employer(s)	0

Degree(s)/Years/Specialization			BS/2022/Civil Engineering
Active Registration Number/State/Expiration Date			N/A
Year Registered	N/A	Discipline	Civil Engineer Intern
Contract Role(s)/Brief Description of Responsibilities			**Cost Estimation/Quantities.** Mr. Fullilove has 3 years of experience as an engineering intern mainly focused on the transportation sector. His work has been focused mainly on projects located in Louisiana and Mississippi. His roles have included design, construction administration support, and inspection.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
10/23 – 12/23	**Jefferson Parish, LA - Saltwater Intrusion Emergency Project, Jefferson Parish, LA.** Installation of temporary pipeline to pull freshwater from upstream of the Mississippi River to supply freshwater to Jefferson Parish and its citizens. The temporary lay flat pipeline is necessary if the saltwater were to reach existing intake areas. Assisted in field inspection work including quantifying and tracking equipment related to the project. Progress reports taken at intake areas, storage areas, and piping network.
10/22 – 08/23	**MDOT, US 49 - Orange Grove Blvd.** to St. Charles St. Harrison County , MS. Project Description and The US 49 Project consists of converting two median turn locations into directional left turns with a mill and overlay on the remaining six lanes of traffic. In addition to the road work, roadway drainage will be altered to collect the runoff from the new drainage patterns. Worked on design plan development and roadway design calculations for temporary traffic control.
09/22 – Ongoing	**Coastal Protection and Restoration Authority (CPRA) of Louisiana - Maurepas Swamp Diversion, St.** John the Baptist Parish, L.A. Planning, engineering and design services for the reconstruction of US 61 and Airline Rd. The roads will be created in conjunction with the diversion channel to reintroduce sediment and freshwater into Lake Maurepas from the Mississippi River. Provided CAD drafting of roadway plans, estimated project costs, performed roadway design calculations, and checked plans.
07/22 – 7/23	**Coastal Protection and Restoration Authority (CPRA) of Louisiana - Mid-Barataria Sediment Diversion, Plaquemines Parish, LA.** Planning, engineering and design services ($1.5 Billion CMAR Project) for the creation of the Mid-Barataria Sediment Diversion Channel to strategically reintroduce sediment and freshwater inputs into the Barataria Basin. Worked on plan development, cost estimation, roadway design calculations, abutment design, and plan checking.

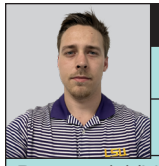


Firm	AECOM Technical Services, Inc.		
Name	Jonathan Giardina, PE	Years of Relevant Experience with this Employer	6
Title	Roadway Design/Alternatives Development & Conceptual Engineering/Cost Estimates/As-Built Utilities	Years of Relevant Experience with Other Employer(s)	1

Degree(s)/Years/Specialization			BS/2019/Civil Engineering
Active Registration Number/State/Expiration Date			PE.49081/LA/09.30.2026
Year Registered	2024	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Horizontal/Vertical Alignments.** Mr. Giardina has experience in technical development for transportation engineering projects. Tasks and project experience include roadway design, waterline design, drainage layout and design, drafting and 3D modeling, construction submittal reviews, design plan development, construction cost estimating, document control, and plan checking.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
09/20 – 01/23	**Feasibility Study and Report / TEPR, College Drive, City of Baton Rouge / Parish of East Baton Rouge, Baton Rouge, LA.** Roadway Design / CADD Design. Project aims to provide access management, signalization and capacity improvements along College Dr. RFP includes a flyover exit ramp from I-10 westbound Ramp to College Drive. Jonathan assisted with estimating costs of high-level design concepts utilizing the DOTD Bid Tab spreadsheet, road design, and plan development
01/2 – 01/23	**East Baton Rouge Parish, MOVEBR Program, Airline Hwy. Jones Creek Road TEPR Study, Baton Rouge, LA.** Traffic Engineering Process and Report for the proposed Jones Creek Road Extension that will connect Tiger Bend Road and Airline Highway. Jonathan assisted with existing intersection analysis, queue and unmet demand traffic counts along the corridor, and traffic study report.
01/21 – Ongoing	**City of Baton Rouge, College Drive Enhancements Perkins Rd. to I-10, Phase 1 Concord Extension and Bennington Connector, Baton Rouge, LA.** Roadway Designer. The overall project consists of planning and design of pedestrian and vehicular mobility enhancements for a 1.0-mile segment of College Drive which aims to provide a proposed road network connectivity and access management improvements that will reduce congestion, specifically in the northbound direction between Perkins Road and I-10. Jonathan worked on the 30% preliminary plans by performing roadway design calculations, corridor modeling, and plan production.
06/18 – 12/23	**Coastal Protection and Restoration Authority (CPRA) of Louisiana, SPN BA-0153, Mid-Barataria Sediment Diversion, Plaquemines Parish, LA.** Planning, engineering and design services ($1.5 Billion CMAR Project) for the creation of the Mid-Barataria Sediment Diversion Channel to strategically reintroduce sediment and freshwater inputs into the Barataria Basin. Jonathan worked on plan development, cost estimation, traffic report, roadway design calculations, guardrail design, plan checking, temporary traffic control planning and design, typical sections, and geometric details

03/23 – Ongoing	**Louisiana Department of Transportation, LA 561 Boeuf River Bridge Replacement Near Hebert, Caldwell and Richland Parishes, LA.** The project consists of the replacement of a 700 ft through truss bridge with a new prestressed concrete girder bridge and development of the horizontal and vertical geometry for the bridge replacement on the existing alignment while updating the typical section of the road to current standards and modifications to the adjacent gravel local road, Womack Road, that serves four residences along the Boeuf River. Jonathan worked on the Preliminary design phases by performing roadway design calculations, roadway and drainage layout, modeling, and plan production.
11/19 – 02/23	**City of New Orleans Department of Public Works, Broadmoor Neighborhood Reconstruction, New Orleans, LA.** Project facilitates a complete reconstruction of 22 neighborhood blocks within the Broadmoor neighborhood in New Orleans. Reconstruction includes the roadway, concrete sidewalks, concrete curbs and/or gutters, driveway aprons, waterlines, and stormwater system and corresponding infrastructure. Jonathan assisted in preliminary design, roadway design, water line design, quantity and cost estimating, design plan development, and client meetings.
08/17 – 09/19	**Port of New Orleans, Nashville Ave Wharf Improvements, New Orleans, LA.** Civil Engineer. The main improvements include upgrading the wharf deck to accommodate for larger rail-mounted cranes. Work includes designing a new rail and supporting crane beam and pilings, demolition and modification or portions of the existing dock, fender and mooring system improvements, and a new sheet pile toe wall along the face of the wharf. Assisted in waterline design, plan development, site visits, invoicing, and document control.
01/19 – 01/24	**City of New Orleans Department of Public Works, Milan Group A, New Orleans, LA.** Civil Engineer. Project consisted of reconstruction/restoration of roadways in the Milan neighborhood, which is bounded by Napoleon Avenue, Claiborne Avenue, Louisiana Avenue and St. Charles Avenue. The project will consist of milling and overlaying with full depth patching of selected streets, incidental patching of other streets, sidewalk repairs, incidental repairs to drainage structures, and the installation of handicap ramps. Jonathan worked on the plan development, tabulation of quantities, and development of cost estimates.
09/18 – 05/19	**Jefferson Parish Department of Public Works, Mounes Street Drainage Improvements, Jefferson Parish, LA.** Civil Engineer. The project consists of the design of traffic control plans and technical specifications for drainage improvements along Mounes Street. Jonathan worked on temporary traffic control design, quantity tabulation, and plan drafting.
11/22 – 06/23	**Mississippi Department of Transportation, Directional Medians for US 49 from Orange Grove Boulevard to St. Charles Street, Harrison County, MS.** The project consists of highway improvements and directional medians on US 49 from Orange Grove Boulevard to St. Charles Street. Jonathan performed J-turn analysis and design, roadway design, and plan development for conceptual plans.

	**Firm**	**AECOM Technical Services, Inc.**		
	Name	Caden Germann, EI	Years of Relevant Experience with this Employer	2
	Title	Civil Engineering	Years of Relevant Experience with Other Employer(s)	0

Degree(s)/Years/Specialization			BS/2023/Civil Engineering
Active Registration Number/State/Expiration Date			N/A
Year Registered	N/A	Discipline	Civil Engineering
Contract Role(s)/Brief Description of Responsibilities			**Horizontal/Vertical Alignments.** Caden has two years of hands-on experience with CAD modeling, Cost Estimate Calculations, and Road Design.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
06/25 – Ongoing	**MOVEBR, College Dr. Corridor Enhancement, Baton Rouge, LA.** Engineering Intern. This project is to provide access management, signalization, and capacity improvements along College Dr. This project will also improve access for pedestrians through signal improvements, sidewalk connections, and transit stop improvements. The MOVEBR Program will work with the selected consultants, DOTD (LA Dept of Transportation), business owners, public stakeholders, and local interest groups for this project. Conducted CAD modeling of roadways and assisted in cost estimation and quantities calculations.
06/23-08/24	**LADOTD, LA-561, Hebert, LA.** Engineering Intern. This project is to replace the existing LA-561 Bridge over Boeuf River as well as alter geometry of neighboring Womack Rd. Changes to Womack geometry and bridge features require drainage structure design and calculations. Aided in quantities & cost estimate calculations.
04/24-08/24	**NOPWD, New Orleans School Zone Sign Replacement and Installation, New Orleans, LA.** Engineering Intern. AECOM was tasked with establishing an inventory of existing school signage for New Orleans high schools, then establishing a framework for all additional signage to be placed in the schools. Plan sheets were prepared using AutoCAD for each individual school, along with specifications for installation. Date: April 2024- August 2024
06/24-Ongoing	**Port of New Orleans, Louisiana International Terminal, Violet, LA.** Engineering Intern. AECOM was tasked with the design of a new container terminal in Livonia, Louisiana. This project involved the design of new rail & road access along with the port infrastructure itself. Tasks include the design of typical sections for EJP interchange, Maintenance & Bike Path corridor design along with Levee overbuild design.
04/25-Ongoing	**Port of Houston Authority, Terminal 3 Planning, La Porte, TX.** Engineering Intern. AECOM was tasked with the design of a new container terminal in La Porte, Texas. This project has involved the design of new road infrastructure to allow access to the new facility. Tasks include the use of Civil3D to develop alternative roadway horizontal and vertical geometry in accordance with TxDOT design guidelines.

	**Firm**	**AECOM Technical Services, Inc.**		
	Name	David Wymore, PE	Years of Relevant Experience with this Employer	10
	Title	QA/QC	Years of Relevant Experience with Other Employer(s)	12

Degree(s)/Years/Specialization			BS/2002/Civil Engineering
Active Registration Number/State/Expiration Date			PE.0043157/LA/3.31.2027
Year Registered	2018	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**QA/QC**

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
12/18-05/19	**LADOTD, S.P. No. H.011670, I-10 to Loyola Dr. Interchange (Design Build), Tender Offer, Boh Bros, Jefferson Parish, LA.** Roadway Design Manager. Responsible for a design build proposal to modify the I-10 interchange at Loyola Drive to provide direct access connector ramps for traffic flowing to and from the new passenger terminal at Louis Armstrong International Airport. Led QC design team in review of proposal plans, proposal narrative, and ATC evaluations. Checked quantity takeoffs for consistency with plan set. Contributed to development of design build teams proposal narrative**.**
01/19-Ongoing	**Broadway St. Design-Build for Reconstruction of Main Lanes from Houston St. to IH 35, City of San Antonio, San Antonio, TX.** Design Manger. Oversaw the design of 1 miles of city street reconstruction. The reconstruction consisted of a complete replacement of the city street. The project consisted of reconstructing an existing 4-lane City of San Antonio street. The project included a complete street concept, side street parking, multiple utility relocates, ESA I&II, sidewalks traffic signals, and drainage improvements. He also managed 6 subconsultants.
08/14-12/16	**IH-10, PS&E, TxDOT, Sealy, TX.** Project Manager. David oversaw the design of Segment 1 which is 3.0 miles of main lane and frontage road reconstruction. The reconstruction consisted of a complete replacement of main lanes, frontage road, cross streets, and bridges. The project consisted of reconstructing an existing 4-lane main lane concrete pavement divided facility to a proposed 6-lane concrete pavement undivided facility and reconstructing existing frontage roads on either side. David developed the horizontal and vertical alignments for the main lanes, 2 frontage roads, 9 ramps, 2 cross streets and 4 bridges. He designed 11 mechanically stabilized earth (MSE) retaining walls. David designed a traffic control plan which narrowed lanes but maintained the existing number of lanes throughout construction including a reversible HOV lane. The existing ingress and egress points between the main lane and frontage roads were maintained the full 24 months of construction. Oversaw the removal, drainage, signing, pavement markings, CTMS, overhead sign bridges, storm water pollution prevention plans, bridge specifications and cost estimates. He also managed 8 subconsultants.
12/10-04/12	**US 79, PS&E for Reconstruction of Two-Lane Roadway to Four-Lane Roadway, TxDOT, Houston, TX.** Project Manager. Prepared construction documents for widening an existing 2 lane undivided facility to four lanes with a continuous left turn lane for 1.4 miles and upgrading the existing 2 lane undivided facility to a four-lane divided facility for 2.9 miles. David used Geopak to develop the horizontal and vertical alignments. The project consisted of widening four existing culverts. He also developed a new drainage scheme to accommodate the additional impervious area. The project required the realignment of two County Roads.

08/06-06/10	**US 290 (Segment 4) PS&E, TxDOT, Houston, TX.** Project Manager. Oversaw the design of Segment 4 which is 2.0 miles of main lane and frontage road reconstruction. The reconstruction consisted of a complete replacement of main lanes, frontage road, cross streets, and bridges and reconstructing an existing 8-lane main lane concrete pavement undivided facility to a proposed 10-lane concrete pavement undivided facility and reconstructing existing frontage roads on either side. David developed the horizontal and vertical alignments for the main lanes, 2 frontage roads, 6 ramps, 4 cross streets and 8 bridges. He designed 10 mechanically stabilized earth (MSE) retaining walls, 9 sound walls, and 4 pedestrian block walls. Designed a traffic control plan which narrowed lanes but maintained the existing number of lanes throughout construction including a reversible HOV lane. The existing ingress and egress points between the main lane, frontage road, and HOV were maintained the full 38 months of construction. The project required the design of 3 diamond intersections and 13 high mast lights to be installed. Extensive grading was required for constructing 8 bridge header banks, 5 detention ponds totaling 140 acre-ft of storage and raising the existing frontage road up by 3 feet. Oversaw the quantities to include removal, drainage, signing, pavement markings, CTMS, overhead sign bridges, storm water pollution prevention plans, bridge specifications and cost estimates
06/11-02/12	**Gaines Road, Widen Intersection and Signal Improvements, Fort Bend County, Houston, TX.** Project Manager. David prepared construction documents for widening the existing intersection along Gaines Road and installing a signalized intersection. David redesigned the existing open ditch to a closed storm sewer.
02/11-06/12	**South Mayde Creek, New Construction of Neighborhood Road, TxDOT, Houston, TX.** Project Manager. David performed construction oversight for approximately 9,600 LF of 10-foot wide trail for pedestrian and bicycle use along South Mayde Creek. The trail is located along the north and south banks of the existing Harris County Flood Control District (HCFCD) drainage channel (South Mayde Creek) between Key Hole Lane and Heathergold Drive. A bridge connects the south and north trail segments across South Mayde Creek at Heathergold Drive, and there is one reinforced concrete box crossing and another bridge crossing at two tributary locations.
12/08-02/11	**PS&E for Widening of Main Lane and Bridges from Four Lanes to Eight Lanes, Sam Houston Tollway, Houston, TX.** Project Engineer. David prepared construction documents for widening an existing 4 lane undivided facility for 2.8 miles. He used Geopak to develop the horizontal and vertical alignments for ramps with toll booths. He designed five mechanically stabilized earth (MSE) retaining walls. The project consisted of widening two existing bridges. One of the bridges was over Union Pacific Railroad which required rail road exhibits and coordination. He developed a new drainage scheme to accommodate the additional impervious area.
12/08-02/11	**CR 257, Reconstruction of Two-Lane Roadway Destroyed by a Hurricane, Brazoria County, Surf Side, TX.** As Project Engineer. David prepared construction documents for spot repairs and full roadway reconstruction from damage received by hurricane Ike for 9.7 miles. He used Geopak to develop horizontal and vertical alignments and cross sections.

	Firm	AECOM Technical Services, Inc.		
	Name	Corey Serignea	Years of Relevant Experience with this Employer	29
	Title	Senior CADD Technician	Years of Relevant Experience with Other Employer(s)	11

Degree(s)/Years/Specialization			Vocational Technical Certificates in Various Graphics/Drafting and Design Applications
Active Registration Number/State/Expiration Date			NA
Year Registered	NA	Discipline	NA
Contract Role(s)/Brief Description of Responsibilities			**Senior CADD Technician.** Corey is a skilled CADD technician with considerable experience in civil engineering projects. He has been responsible for various graphic, cartographic, and CADD applications.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
06/21–Present	**Port of New Orleans, Louisiana International Terminal, LA 46 & LA 39, St. Bernard, LA.** Lead CADD Designer. The project consists of realigning LA 46 (St. Bernard Highway) and a new interchange connecting to LA 39 (East Judge Perez Drive), including access roads for the proposed Louisiana International Terminal Container Facility. The tasks included creating a new alignment for the existing LA 46 (St. Bernard Highway), including proposed horizontal and vertical alignments, typical sections, and detail drawings. The LA 39 interchange includes the horizontal and vertical alignment of access roads connecting the proposed intermodal container facility to a new interchange connecting to existing LA 36 (East Judge Perez Drive).
08/14–07/17	**LADOTD, H.011489.5, Safety Studies Retainer Contract, Low Cost Safety Improvements, Statewide, LA.** CADD Designer. Corey assisted in preparing Safety Improvement Plans (SIP) for 282 systemic curves located throughout Louisiana. The tasks associated with this project include site visits to the curves, plan preparation of safety countermeasures for each curve, cost estimates for the plan set, and a pre-construction meeting with each DOTD district. Each site visit includes a ball bank test, photo, and an existing conditions documentation of each curve. The plan preparation includes deriving safety countermeasures at each curve location, preparing a lettersize plan set of the safety countermeasures, including the Crash Modification Factors (CMFs) within the plan sheet, and preparing cost estimates for the safety countermeasures. After the completion of each letter size plan sets, a meeting will be held with each District to discuss the countermeasures.
05/10–12/12	**LADOTD, 700-92-0024, I-49 South, 11 Stage 0 Interim Improvements for Safety and Efficiency, Wax Lake Outlet to Berwick, St. Mary Parish, LA.** Lead CADD Designer. The project goal was to identify improvements in the US 90/I-49 corridor between Wax Lake and Berwick that can be implemented to improve safety and operations pending construction of I-49. These improvements can include partial construction of segments of I-49, rerouting of I-49, and improvements to US 90. Corey's responsibilities include geometric design (horizontal and vertical) for line/grade conceptual drawings, analyzing and proposing several alignments.

09/17–Present	**Coastal Protection and Restoration Authority, LA 23 Over Mid-Barataria Sediment Diversion, Plaquemines Parish, LA.** CADD Designer. The project consists of a new concrete precast girder bridge, approximately 2,200 feet in length, and the connecting asphalt roadway. Design plans include plan and profile sheets, drainage plan and profile sheets, and sequence of construction plans. Multiple construction activities will be conducted at one time. The sequence of construction is a critical element of design to manage traffic and maintain roadway operations even if evacuation routes would be required. Corey performed 3D modeling using InRoads to develop plan, profile, and typical sections for the relocation of LA 23 across the proposed Mid Barataria Sediment Diversion Channel.
06/21–Present	**City of Baton Rouge/Parish of East Baton Rouge, College Drive Enhancements, Baton Rouge, LA.** CADD Designer. The project is providing capacity and safety enhancements to the College Drive corridor. Corey developed plan and profile views of multiple alternatives
02/07–06/10	**LADOTD, City of Baton Rouge Department of Public Works, 817-40-0008, Siegen Lane Improvements, Highland Road to 650 feet South of Perkins Road, Baton Rouge, LA.** CADD Designer. The goal of this project is to produce a design report and a set of plans and specifications for the construction of a four-lane divided roadway to replace the existing two-lane road. Corey's responsibilities include design horizontal and vertical geometry of the new roadway, develop CADD standards in compliance with the client requirements, as well as preparing CADD standard procedure for the surveyor, and coordination and supervision of CADD production.
11/12–1/13	**LADOTD, H.009998.1, Safety Retainer Contract LA 935 Feasibility Study, Ascension Parish, LA.** CADD Designer. Corey assisted with this Stage 0 feasibility study in accordance with the results of the Roadway Safety Assessment (RSA). The 4-mile study area includes a segment of LA 935 from LA 431 to LA 22 in Ascension Parish. From the RSA, three proposed alternatives were to be considered for a Stage 0.
05/16–07/15	**LADOTD, H.001779.5, Red River Bridge at Jimmie Davis Highway (LA 511), Bossier and Caddo Parishes, LA.** CADD Designer. The project consists of providing all necessary engineering and related services required to prepare a Supplemental EA in accordance with NEPA, as amended, and the FHWA's regulations and guidelines. Corey was responsible for geometric design (horizontal and vertical) of at-grade and elevated structures, as well as organizing, preparing, and producing deliverable sets of plans and exhibits for the report and for public meetings. Corey drafted a portion of the bridge plans for the redecking and widening of the main and approach spans (deck, prestressed girders, and column bents).
05/10–12/13	**LADOTD, 700-92-0024, I-49 South, 23 Stage 0 Interim Improvements for Safety and Efficiency, Raceland to Westbank Expressway, Lafourche, St. Charles, and Jefferson Parishes, LA.** Lead CADD Designer. The goal of the project was to identify improvements in the US 90/I-49 corridor between Raceland and the Westbank Expressway that can be implemented to improve safety and operations pending construction of I-49. These improvements can include partial construction of segments of I-49, rerouting of I-49, and improvements to US 90. Responsibilities include geometric design (horizontal and vertical) for Line/Grade Conceptual Drawings, analyzing and proposing several alignments. 07/16–08/17 LADOTD Safety Studies Retainer Contract, US 190 Barrier Feasibility Study, St. Tammany Parish, LA. CADD Designer. This project involved a study of a median barrier within the limits of an existing structure on LA 22. Tasks within this study include existing data collection, geometric layout analysis, safety analysis, field review, bridge rating and structural analysis. A comprehensive report detailing findings of existing conditions, preliminary

Firm	AECOM Technical Services, Inc.		
Name	Gregory Trahan, PE, RSP$_1$	Years of Relevant Experience with this Employer	19
Title	Traffic Safety/Maintenance of Traffic/TMP	Years of Relevant Experience with Other Employer(s)	1

Degree(s)/Years/Specialization			BS/2005/Civil Engineering
Active Registration Number/State/Expiration Date			PE.0036041/LA/03.31.2027
Year Registered	2011	Discipline	Civil Engineer
Other Training			**Contract Role:** Traffic Safety/Maintenance of Traffic/TMP **Brief Description:** ATSSA Traffic Control Supervisor Refresher – LA State Specific (2027) / ATSSA Flagger Course RSP1 No. 883/ 2028 LADOTD Process and Report Parts 1, 2, and 3 (2018)
Contract Role(s)/Brief Description of Responsibilities			**Maintenance of Traffic/TMP/Traffic Engineering.** Greg will assist in the design of the Maintenance of Traffic (MOT)/TMP plans and traffic engineering analysis. Gregory has almost 20 years of experience in various roadway and traffic projects. He has both assisted and managed roadway plans from the preliminary stage to Final Plans. He has also both assisted and performed traffic studies for corridor development and intersection design. His experience with these projects have allowed him to perform the design and coordination of many different types of disciplines; including roadway, drainage, maintenance of traffic, and signal design.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
05/13-Ongoing	**LADOTD, State Project No. H.001779.5 Red River Bridge at Jimmie Davis Highway (LA 511) EA, Bossier and Caddo Parishes, LA.** Assisted in preparing a feasibility study to widen the existing crossing of the Red River along Jimmie Davis Bridge and to connect shared use bicycle and pedestrian paths on each side of the river. Task included geometrics study of highway and interchange ramps to produce three feasibility alternatives.
11/04-12/07	**DOTD State Project No. 700-92-0016, Florida Avenue Bridge over IHNC, New Orleans, LA**. Assisted in the geometric design of two interchange ramps connecting to Florida Ave. Bridge and two relocated parking areas for two major public installations in the project area. He assisted in the design of girder splices for the steel main span alternative. He also assisted in the preparation of quantity calculations and cost estimates for the steel main span alternative.
09/17-Ongoing	**Coastal Protection and Restoration Authority, LA 23 Over Mid-Barataria Sediment Diversion, Plaquemines Parish, LA.** Project Engineer. Assisted in the Design Plans for the new bridge and roadway structure over the new sediment diversion. The project consists of a new concrete precast girder bridge, approximately 2,200 feet in length, and the connecting asphalt roadway. Design Plans include Plan and Profile sheets, Drainage Plan and Profile sheets, Sequence of Construction Plans. There will be multiple construction activities being conducted at one time, the sequence of Construction is a critical element of design in order to manage traffic and maintain roadway operations even if evacuation routes would be required

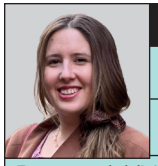
07/14-12/14	**DOTD, Krotz Springs Bridge and Business US 90 Bridge In-Depth Bridge Inspection, LA.** Project Engineer. Assisted in the Maintenance of Traffic Plans for the inspection of the Krotz Springs Bridge and the Business US 90 Bridge. These plans included provisions to detour traffic from the closed portions of the bridge or entrance ramps.
02/07-06/10	**Baton Rouge Dept. of Public Works, Siegen Lane Improvements, Highland Rd. to 650' south of Perkins Rd., Baton Rouge, LA.** Project Engineer. Assisted in the design and plan development to widen 1.18-mile segment of Siegen Lane to a four lane boulevard. Tasks include the geometric design of the roadway, subsurface drainage, and the development of the sequence of construction. The drainage area encompassed approximately 225 acres. A study was conducted on the multiple detention ponds, using a pond modeling program to determine if the box culvert system would need to be upgraded. A HEC-RAS model was conducted on an existing drainage ditch crossing Siegen Lane to ensure that the proposed drainage would not exceed the existing tail water elevation. The sizing and spacing of culverts and inlets was determined using the DOTD HYDRWIN hydraulics program. Prepared quantities and cost estimates for the project.
05/14-Ongoing	**DOTD, Earhart Expressway Extension to US 61, Jefferson Parish, LA.** Project Engineer. Responsible for the traffic study involving the new extension of the Earhart Expressway a six lane urban freeway, to Airline Drive, a four-lane highway, for a total of ten lanes. The study will include analyzing existing and future conditions along the US 61 (Airline Highway) and LA 3154 (Dickory Avenue). As part of this project Greg is analyzing design alternatives, traffic data collection (speed and vehicular classification) along the corridor, and crash data.
12/01-04/17	**DOTD, Safety Studies Retainer Contract, Low Cost Safety Improvements, Statewide, LA.** Project Engineer. Responsible preparation of Safety Improvement Plans (SIP) for 282 systemic curves located throughout the state of Louisiana. The tasks associated with this project include; site visits to the curves, plan preparation of safety countermeasures for each curve, cost estimates for the plan set, and a pre-construction meeting with each DOTD district. Each site visit includes; a ball bank test, photo and an existing conditions documentation of each curve. The plan preparation includes deriving safety countermeasures at each curve location, preparing a letter size plan set of the safety countermeasures, including the Crash Modification Factors (CMFs) within the plan sheet, and preparing cost estimates for the safety countermeasures. After the completing each letter size plan sets, a meeting was held with each District to discuss countermeasures.
05/10-09/12	**DOTD State Project No. H.005171.1, I-49 Study to Identify Interim Improvements for Safety & Efficiency, St. Mary Parish, LA**. Project Engineer. Aided in identifying roadway projects that would provide increased capacity or improved safety along the US 90 corridor. Some of the improvements may upgrade portions of US 90 to interstate standards.
05/10-09/12	**DOTD, LA 935 Feasibility Study, Safety Retainer Contract, Ascension Parish, LA.** Project Engineer. Performed a Stage 0 on a segment of LA 935 from LA 431 to LA 22. Developed a conceptual alternative for the realignment of LA 935, including the typical section, design criteria, plan, and cost estimate. The road paralleling Black Bayou was realigned approximately 20' off the original alignment. This realignment allowed for the road to be widening to 12' lanes and add shoulders to provide a recovery area for drivers. AECOM also performed a cost analysis to ensure the feasibility of a build/no-build condition, minimize required Right-of-Way and/or acquisition of properties.

Firm	AECOM Technical Services, Inc.		
Name	Sreeni Bollu, PE, CFM, PMP	Years of Relevant Experience with this Employer	17
Title	Hydrology/Hydraulics/Scour Analysis	Years of Relevant Experience with Other Employer(s)	3

Degree(s)/Years/Specialization			MS/2003/Civil Engineering;BS/2000/Civil Engineering
Active Registration Number/State/Expiration Date			PE.0034330/LA/03.31.27 Additional active licenses in TX, FL
Year Registered	2009	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Hydrology/Hydraulics/Scour Analysis **Brief Description:** Sreeni is a civil engineer with over 20years of experience in all phases of project development from conceptual design to construction management. He is in charge of project management and the civil engineering personnel, including schedules, staff, budgets, technical review and account management. He has provided professional consulting services to numerous public and private clients, serving as Project Manager or Project Engineer on roadway improvements, drainage studies, hydraulic models and designs, drainage improvements, levees, flood control projects, site developments, commercial & residential subdivisions, and construction management.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
06/21 – present	**New Orleans Department of Public Works, Broadmoor Groups D & E, New Orleans, LA.** Project Manager. Responsible for the development of construction plan sets for reconstruction of multiple roadways in the Broadmoor neighborhood of New Orleans. The project will consist of full reconstruction of the roadways, replacement of all drainage and water lines, sidewalk replacement/ repairs, and the installation of ADA ramps at all intersections. The project is currently in final design and will advance through Construction Administration.
06/21 – present	**New Orleans Department of Public Works, Milan Group A, New Orleans, LA.** Project Manager. Responsible for the development of construction plan sets for reconstruction/restoration of multiple roadways in the Milan neighborhood of New Orleans, which is bounded by Napoleon Avenue, Claiborne Avenue, Louisiana Avenue and St. Charles Avenue. The project will consist of milling and overlaying with full depth patching of selected streets, incidental patching of other streets, sidewalk repairs, incidental repairs to drainage structures, and the installation of handicap ramps. The project is currently in final design and will advance through construction administration and resident inspection.
06/21 – present	**Jefferson Parish West Bank Program Management, Jefferson Parish, LA.** Project Manager. Assisting with the implementation of the West Bank projects for Jefferson Parish's Road Bond Improvement Program, which includes 70 roadway and bridge projects throughout Jefferson Parish. He is responsible for the oversite of approximately 10-20 projects, including overseeing the design contractor's work, coordinating review with various Parish Departments, public and private utility companies, and other impacted agencies. Other responsibilities include review of plans and specifications submittal, scheduling, coordination for environmental clearances, ROW acquisition support, construction oversight, and project closeout.

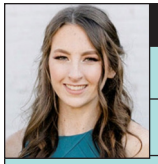
06/21 – present	**Coastal Protection and Restoration Authority (CPRA), Mid-Barataria Diversion Design, .** Project Engineer. Responsible for the planning, engineering, and design services for the creation of the Mid-Barataria sediment diversion basin to strategically reintroduce sediment and freshwater inputs into the Barataria Basin. He assisted with detour roadway alignment creation/ selection, TTC planning, and roadway plan preparation.
02/20 – 05/21	**Lake Vista Group C and Group E, New Orleans, LA.** Project Engineer. Responsible for the design of concrete roadway re-design and replacement, subsurface drainage improvements, and water main improvements.
02/20 – 05/21	**East Bank Drainage Improvements, St.** Charles Parish, LA. Lead Hydraulic Engineer, Project Manager. Responsible for creating H&H models to evaluate flooding within the existing neighborhood, provide alternate solutions to alleviate flooding and develop a report with recommended solutions with cost estimates for 25yr and 100yr rainfall events for Montz: 1,635 acres drainage basin, Norco: 800 acres drainage basin, New Sarpy: 690 acres drainage basin, Ormond: 1,420 acres drainage basin.
08/12 – 01/20	**West Bank Hurricane Protection Levee System (WBHPL), St.** Charles Parish, LA. Project Manager. Responsible for coordination, preparation of plans and specifications, construction administration and resident inspection. This project is approximately a nine mile levee where the alignment extends from the Sunset Levee District on the western flank to the Davis Pond Guide Levee to the east. This project consists of levees, drainage borrow canals, parallel access roads for levee maintenance, pump stations, tidal exchange structures, and concrete floodwalls (T-Walls) at multiple locations.
08/12 – 01/20	**Upper Barataria Risk Reduction (UBRR), Lafourche Basin Levee District, LA.** Project Manager. Responsible for coordination with the design team and regulatory agencies; design of the segment of the project (Segment 1, 2 4 & 5). The details of the project are: The Upper Barataria Risk Reduction project provides continuous hurricane and storm damage risk reduction from LA Hwy 308 in Lafourche Parish to the Davis Pond Freshwater Diversion West Guide Levee in St. Charles Parish, affording risk reduction benefits for the six parishes in the project area, including Ascension, Assumption, Lafourche, St. Charles, St. James, and St. John the Baptist. The UBRR project includes the construction and enlargement of approximately 33 miles of hurricane risk reduction between LA Hwy 308 on the western end and the Davis Pond Diversion West Guide Levee on the eastern end. The project includes earthen levees, a 270' steel barge swing gate floodgate in Bayou Des Allemonds, a steel roller gate across LA Hwy 306, tidal interchange structures, concrete T-wall floodwalls, and pump station frontal protection.
08/12 – 01/20	**Breaux Ditch Improvements, Jefferson Parish, LA.** Project Manager. Responsible for civil design and preparation of the drawings to replace the existing ditch with 8' wide x 4' deep reinforced concrete flume between East Ames Blvd. and Leo Kerner Pkwy. on the West bank of Jefferson Parish to provide improved maintenance and stability. The total project length is approximately 1500 feet.
06/21-Ongoing	**Broadmoor Groups D & E, New Orleans Department of Public Works, New Orleans, LA.** Project Manager. Responsible for the development of construction plan sets for reconstruction of multiple roadways in the Broadmoor neighborhood of New Orleans. The project will consist of full reconstruction of the roadways, replacement of all drainage and water lines, sidewalk replacement/ repairs, and the installation of ADA ramps at all intersections. The project is currently in final design and will advance through Construction Administration.
06/21-Ongoing	**Milan Group A, New Orleans Department of Public Works, New Orleans, LA.** Project Manager. Responsible for the development of construction plan sets for reconstruction/restoration of multiple roadways in the Milan neighborhood of New Orleans, which is bounded by Napoleon Avenue, Claiborne Avenue, Louisiana Avenue and St. Charles Avenue. The project will consist of milling and overlaying with full depth patching of selected streets, incidental patching of other streets, sidewalk repairs, incidental repairs to drainage structures, and the installation of handicap ramps. The project is currently in Final design and will advance through Construction Administration and Resident Inspection.



Firm	AECOM Technical Services, Inc.		
Name	Donna Pizzini, EI	Years of Relevant Experience with this Employer	1
Title	Drainage/Hydraulics	Years of Relevant Experience with Other Employer(s)	3

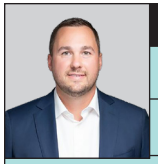
Degree(s)/Years/Specialization			MS/Environmental Engineering/2022/Texas Tech University
Active Registration Number/State/Expiration Date			EIT No. 76588, Texas, September 9th 2030
Year Registered	2022	Discipline	Civil/Environmental Engineering
Contract Role(s)/Brief Description of Responsibilities			**Drainage/Hydraulics.** Graduate civil engineer with 3 years of experience in Water Resources and Drainage design. Experience includes hydrologic and hydraulic modeling, floodplain mapping, terrain building/modifications, drainage design, Low-Impact Development, and benefit-cost analyses. Project involvement has included client/public meetings, report writing, coordination with clients and subcontractors, and project oversight from data collection to cost estimations for bid.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
04/25-Present	**LADOTD, Bundled Bridges, LA.** Project Engineer. Responsible for conducting hydrological and hydraulic analysis of existing bridge crossings for drainage improvements following the standards set by the LaDOTD Hydraulics Manual. This project involved data collection, hydrology calculations, and hydraulic analysis of several culvert crossing alternatives through the HEC-RAS software. Completed a written Drainage Analysis Report outlining the results from the modeling including supporting exhibits showing the proposed design for LaDOTD staff consideration.
02/25-04/25	**City of Seattle, Portage Bay SR 520 I-5 to Montlake I/C and Bridge Replacement, Seattle, WA.** Project Engineer. Responsible for reviewing design plans and preparing design package calculations for the City of Seattle in the roadway improvements and construction plans. This project involved assessments for quality and consistency in the plan production for multiple alignments and package deliverables.
12/22-08/23	**City of San Antonio, Stormwater On-call Regional Flood Planning Group (RFPG) Drainage Projects, San Antonio, TX.** Project Engineer. Responsible for reviewing design plans and project proposals for drainage improvements in the City of San Antonio to evaluate the greatest potential for improvement based on benefit-cost analysis and adverse impact analysis. This project involved prioritization and recommendations to the San Antonio RFPG for consideration in the regional flood plan for grant approval.
07/23-09/23	**Texas State, Clean Coast Texas Collaborative, Aransas County, TX.** Project Engineer. Responsible for siting stormwater control measures and preparing construction plans for each site. This project is part of a program developing demonstration projects to improve water quality, enhance water supplies, and manage runoff through community scale retrofits. This program illustrates methods and techniques in the field of Low Impact Development (LID) that can be used by residents, developers, local governments, and commercial operators in the Coastal Zone.

	**Firm**	**AECOM Technical Services, Inc.**		
	Name	Avery Prevot, EI	Years of Relevant Experience with this Employer	2
	Title	Civil Engineering Intern	Years of Relevant Experience with Other Employer(s)	0

Degree(s)/Years/Specialization			BS/2023/Civil Engineering
Active Registration Number/State/Expiration Date			N/A
Year Registered	N/A	Discipline	Civil Engineer Intern
Contract Role(s)/Brief Description of Responsibilities			**Drainage/Hydraulics.** Her experience includes time with AECOM, an international company with offices across multiple disciplines. At AECOM, she has worked with a wide range of programs, including AutoCAD Civil 3D, MicroStation V8i, OpenRoads Designer, Microsoft Office, and more. She is proficient in preparing sheets for project submittal sets using MicroStation and has contributed to drainage design and hydraulics.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
06/25 – Ongoing	**State Project No.** H.016321: LA 970: Creek Bridge, Pointe Coupee Parish, LA. Drainage analyst and designer for improvements to the existing LA 970 bridge. I created models within HECHMS 4.10, HEC-RAS 6.5, and ArcGIS Pro to gather information needed for establishing proposed box culvert sizes.
03/25 – 05/25	**CPRA No. PO-0029: LA 44 Over Maurepas Swamp Diversion, Coastal Protection and Restoration Authority, St. John the Baptist Parish, LA.** Drainage analyst and designer for proposed improvements along the 0.5-mile segment of LA 44. My work included the analysis of existing drainage patterns, along with coordinating with the proposed Maurepas Swamp Diversion to predict future drainage patterns for the final design.
01/25-03/25	**LADOTD AECOM Safety IDIQ Presentation.** I worked with Microsoft PowerPoint to create a safety history presentation to be presented by AECOM employees to LADOTD. The presentation adhered to AECOM's values starting with a safety moment, along with giving brief descriptions of previously conducted safety studies.
01/25-03/25	**State Project No. H.015603: LA 641: Bridge Over I-10, St. James Parish, LA.** Detailer for proposed bridge repairs for LA 641 over I-10. My work involves assisting with the development of the project's submittal plan set and quantifying the number of signs, barricades, channelizing devices, and more required for a safe work area.
08/23-1/25	**C-P No. 19-EN-HC-0033: College Drive Enhancements (Perkins Road to I-10), City of Baton Rouge Dept. of Public Works, Baton Rouge, LA.** Detailer and drainage designer for the proposed alterations of the existing parking areas located on the eastern side of College Drive. My tasks included the preparation of plan sheets and general markups completed in MicroStation for the submittal set, along with the analysis of existing drainage structures and the addition of new drainage structures.



Firm	AECOM Technical Services, Inc.		
Name	Joshua Amsler, PE	Years of Relevant Experience with this Employer	15
Title	Rail Road Coordination	Years of Relevant Experience with Other Employer(s)	0

Degree(s)/Years/Specialization			BS/Civil Engineering/Temple University/2009 MS/Structural Engineer/Lehigh University/2010
Active Registration Number/State/Expiration Date			PE081742 / PA / 9/30/25 57114 / MD / 1/30/27 24573 / WV / 12/31/26 57182 / NC / 12/31/25 0402067726 / VA / 12/31/25
Year Registered	2014	Discipline	Civil Engineering
Contract Role(s)/Brief Description of Responsibilities			**Rail Road Coordination.** Mr. Amsler is a Project Manager in the Goods Movement Market Sector with extensive experience in the design, inspection, and construction of railway and highway projects. He currently serves as Program Manager for the CSX Public Projects Program and is leading the update of the CSX Public Projects Manual. Previously, he was a Senior Project Engineer with the Norfolk Southern Public Improvement Projects Program. Through his work with both CSX and Norfolk Southern, Josh has reviewed hundreds of projects on behalf of the railroads and has developed a deep understanding of railroad requirements, processes, and schedules.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
05/18-Present	**CSX Corporation, General Engineering Consultant Services, Maryland, District of Columbia, Virginia, West Virginia, North Carolina.** Program Manager for public projects impacting the railroad. Working with CSX, the outside party, the designer, and the contractor to facilitate the design and construction of various projects without impacting present and future railroad operations. Projects include overhead bridge rehabilitations/replacements, undergrade bridge rehabilitations/replacements, adjacent construction, and at-grade crossing modifications. Responsible for generating AECOM's and CSX's cost estimates, plan reviews, organizing and attending project preconstruction and progress meetings on behalf of CSX, coordinating project construction schedules with CSX personnel and train operations, construction submission reviews, and oversight of review/field staff. Working on the current update to the CSX Public Projects Manual.
08/24-Present	**North Carolina Department of Transportation, Raleigh to Richmond (R2R) North Carolina Rail Design – Segment NC-PE-1, Warren & Vance County, North Carolina.** Project Manager for the Preliminary Engineering for the Rail Design for the northern most segment in North Carolina (Segment NC-PE-1). Segment NC-PE-1 consists of approximately 15 miles of track design including approximately 9 miles of abandoned S-Line and 6 miles of active track. The Preliminary Engineering (30%) design includes track design, one undergrade bridge replacement, hydraulic design including five major drainage structures, ES&C design, utility coordination, and geotechnical investigation/recommendations.

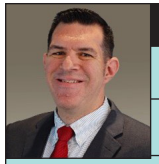
07/21-06/23	**Pennsylvania Department of Transportation, State Highway-Rail Grade Crossing Action Plan.** Project Manager for the preparation of the Pennsylvania State Highway-Rail Grade Crossing Action Plan (SAP) as required by the Federal Railroad Administration. Reviewed available data for over 3,500 crossings in the state, identified a subset of high-risk crossings, identified trends in the high-risk crossings, prioritized the top 50 high-risk crossings, and developed implementation strategies and a timeline to further assess and improve safety at the top high-risk crossings
12/19-04/22	**CSX Corporation, CSX-MTA (MARC) Joint Benefits Program, District of Columbia and Maryland.** Project Manager for various projects benefiting both CSX and MTA (MARC). Responsibilities included oversight of design approach, weekly coordination with all project stakeholders, construction submission/RFI review, preparation of as-builts, and preparation/handling of Addendums (reimbursement agreements). Notable projects include Jessup Automotive Support Yard Lead and Ladder Improvements, Carroll Interlocking Expansion and Deflection Walls, Lansdowne Interlocking Expansion, and West Baltimore Interlocking Expansion.
06/10-05/19	**Norfolk Southern Corporation, General Engineering Consultant Services, Systemwide.** Senior project engineer for public projects impacting the railroad. Working with Norfolk Southern (NS), the project sponsor, the designer, and the contractor to facilitate the design and construction of various projects without impacting present and future railroad operations. Projects include overhead bridge rehabilitations/replacements, undergrade bridge rehabilitations/replacements, adjacent construction, and at-grade crossing modifications. Responsible for generating AECOM's and NS's cost estimates, plan reviews, organizing and attending project preconstruction and progress meetings on behalf of NS, coordinating project construction schedules with NS personnel and train operations, construction submission reviews, and oversight of review/field staff. Involved in the development of AECOM's access database used to manage AECOM's public projects program.

Firm	AECOM Technical Services, Inc.		
Name	Audra Rogers, PE	Years of Relevant Experience with this Employer	13
Title	Rail Road Coordination	Years of Relevant Experience with Other Employer(s)	8

Degree(s)/Years/Specialization			BS/2002/Civil Engineering MS/2003/Civil Engineering
Active Registration Number/State/Expiration Date			130275/TX/3.31.206
Year Registered	2018	Discipline	Civil Engineer
Active Registration Number/State/Expiration Date			E-12245/NE/12.31.2026
	2017		Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Railroad Coordination.** Audra has 21 years of experience in the structural and bridge industry as both a Project Engineer and Project Manager on numerous projects. She has experience in precast concrete fabrication, construction observation, structural assessment and inspection, cellular tower analysis, railroad and highway bridge design and commercial structural engineering. Audra is proficient with computer aided design and drawing tools and is also well versed in bridge survey technical abilities in the field. She has performed public project reviews for both BNSF and UPRR for over 19 years.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
01/15-07/15	**KCS Br. VD34.2 Vicksburg Subdivision, Delhi, LA.** Project Manager and Engineer for the design of precast concrete double box beam spans replacing an existing timber trestle spans on a bridge near Delhi, Louisiana. The main TPG spans were not replaced.
07/15-12/15	**KCS Br. L801.8 New Orleans Subdivision, Baton Rouge, LA.** Project Manager and Engineer for the design of a multi-span precast concrete double box beam bridge replacing an existing 40-span timber trestle bridge near Baton Rouge, Louisiana. H&H analysis and survey services were also provided. The bridge was shortened at one end by filling spans. A golf course path and bridge runs under the railroad bridge and had to be considered in the design.
07/15-07/16	**KCS Br. K646.5 Beaumont Subdivision, LA.** Project Manager and Engineer for the design of a multi-span precast concrete double box beam bridge replacing an existing 66-span timber trestle bridge near Florien, Louisiana. The flood elevation was within the existing bridge depth, requiring the bridge to be raised. Special consideration was given to keeping the bridge open as much as possible during staged construction. The alignment of the track was shifted so that the new bridge could be built adjacent to the existing bridge.

01/17-12-17	**72nd Street Bridge Replacement, Omaha, NE.** Project Coordinator. In charge of all railroad coordination with Union Pacific Railroad (UPRR) for the 72nd Street Bridge Replacement Project for the City of Omaha. The bridge is an overpass structure over UPRR tracks. Ms. Rodgers is responsible to negotiating the project through railroad reviews and approvals.
06/15-Ongoing	**West Dallas Gateway Project, West Dallas, TX.** Bridge Lead, Lead Project Engineer. In charge of the design of three railroad underpass grade separation bridges. The grade separations will allow for Bataan Street, Amonette Street, and Herbert Street to pass under the existing UPRR tracks, which currently separate the two areas of the City. The bridges will be built in phases, with the north half of the bridge being built first while the tracks are shifted to the south and the south half of the bridge built when the tracks are shifted onto the new north bridge. This minimizes the time that the UPRR tracks are out of service on a busy section of track.
02/15-Ongoing	**Springfield Rail Improvement Project, Springfield, IL.** Bridge Review Lead, Lead Project Engineer in charge of the review of the design plans, design calculations, specifications, geotechnical reports and drainage reports on behalf of UPRR for ten underpass structures for the Springfield Rail Improvement Project. Underpass bridges include bridges over Carpenter St., Ash St., Laurel Ave., 5th St., 6th St., Cook St., S Grand Ave., Madison St., Jefferson St., and N Grand Ave. Bridges consist of steel beam or deck plate girder spans with steel deck and drilled shaft substructures. The project includes construction submittal review and some construction observation.
01/19-12/21	**Union Pacific Railroad Annual Bridge Replacement Program, Various Locations.** Layout, design, and coordination on multiple bridge replacements of timber structures on the UPRR system. Bridges were replaced with either new standard precast concrete spans on pile bents or pipe culverts.
04/09-05/10	**Wellborn Road, College Station, TX.** Project Engineer for the design of two double span railroad bridges on the Texas A&M campus over Wellborn Road. The superstructure consisted of steel beam spans. The substructure consisted of drilled shafts, some with tension ties utilized to minimize deflection due to expansive soils.
06/09-05/10	**Westrail By-Pass, Brownsville, TX.** Project Engineer for the design of a multi-span, over 1000 ft. long railroad bridge over the Rio Grande River in Brownsville, Texas. The superstructure consisted of precast concrete box, steel beam, and through plate girder spans. The substructure included pipe piles and drilled shafts. Homeland security requirements were essential considering half of the bridge is located in Mexico.

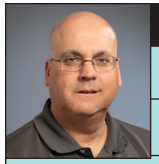


Firm	AECOM Technical Services, Inc.		
Name	Christopher Johnson, PE, SE	Years of Relevant Experience with this Employer	22
Title	Structural Engineer V	Years of Relevant Experience with Other Employer(s)	0

Degree(s)/Years/Specialization			BS/2003/Civil Engineering
Active Registration Number/State/Expiration Date			PE.076466/PA/9.30.2023
Year Registered	2009	Discipline	Civil Engineer
Active Registration Number/State/Expiration Date			PE. 036762/GA/12.31.2022
Year Registered	2012	Discipline	Civil Engineer
Active Registration Number/State/Expiration Date			SE000915/GA/12.31.2022
Year Registered	2021	Discipline	Structural Engineer
Contract Role(s)/Brief Description of Responsibilities			**Bridge Railroad Constructability.** Mr. Johnson has broad experience as a Bridge engineer in the design and inspection of a wide range of bridges and highway structures including bridge superstructures and substructures, foundations, retaining walls, sign structures, and utility support structures. He has acquired experience in the design of steel, reinforced concrete, and prestressed concrete, and is knowledgeable in the analysis of complex structural systems. Mr. Johnson has performed construction services for several large-scale projects including inspection of large bridges and rating of highway bridges. He also has experience in working with railroads.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
10/10-Ongoing	**Norfolk Southern Railway Company, Public Improvements Engineering Services Contract, Various Locations.** Senior Bridge Engineer. Served as the preliminary engineering and construction manager responsible for the preliminary design review and the coordination of construction monitoring services for public and private projects on behalf of various Norfolk Southern design and construction regions. Projects reviewed varied from new highway construction and widening of overhead bridges to adjacent retaining walls and modifications to at-grade crossings. Preliminary engineering responsibilities include project estimates, senior review of preliminary plans, project correspondence, and project meetings. Construction duties include the indirect management and oversight of field inspection forces; review of contractor submissions of demolition plans, erection plans, and sheeting and shoring plans; and general coordination of the construction process to ensure a timely and comprehensive client response. Also responsible for tracking of budgets.
7/16-Ongoing	**Georgia Department of Transportation, SR 15 Bypass from SR 15 to SR 242, Washington County, GA.** Senior Bridge Engineer/Engineer of Record. The project proposes to construct a new bypass of the city of Tennille. The proposed bypass includes 2 lanes in each direction with a raised median. Project includes construction of 2 new bridges over Norfolk Southern Railroad, and one bridge spanning Sun Hill Creek and associated wetlands to limit environmental impacts. Project also included four MSE walls with a total length of approximately 1000 ft and a maximum height of 28 ft.

7/16-12/22	**GDOT, SR 92 from SR 3/US 41 to Glade Rd. Bridge Replacements, PI 0007692 & 0006862, Cobb County, GA.** Senior Bridge Engineer/Engineer of Record. The project widened approximately 2.8 miles of SR 92/Lake Acworth Drive from US 41/SR 3/Cobb Parkway to Glade Road to a divided four-lane facility. The SR 92 bridge over CSXT railroad was replaced with a .three--span bridge constructed in two stages. The design utilized PSC AASHTO Bulb-Tee beams on multi-column bents and completely spans the railroad right-of-way. The SR 92 bridge over Tanyard Creek is a three-span bridge built on a new alignment that also utilized PSC AASHTO Bulb-Tee beams on multi-column bents. The SR 92 bridge over Lake Allatoona is a nine-span bridge over Lake Allatoona. The bridge utilized Florida I-beams with a maximum span length of 160 feet. A 107'-6" long post-tensioned straddle bent was required to span over waterlines. The project also included the design of a concrete cantilever pile supported retaining wall adjacent to the bridge over Lake Allatoona, sound barrier design and architectural wall treatments.
3/19-Ongoing	**GDOT, Bridge Program Management Contract, Statewide Project.** Bridge Design SME. Responsible for the current five-year contract providing Program Management Consulting services for bridge replacement projects statewide for GDOT's Office of Program Delivery (OPD). Responsibilities include identifying risks that could affect the scope, schedule and budget for the project. Available information is utilized to determine required span arrangements and change in profiles. Constructability, utilities and other risks are reviewed and identified.
11/13-7/15	**Floyd Road (CR 2373) Safety and Operational Improvements, Mableton, Cobb Co, GA.** Lead Bridge Engineer. Responsible for the design of a bridge carrying a multi-use path over Norfolk Southern Railroad adjacent to the existing Floyd Road vehicular bridge. The project included design of safety / operational improvements for a 0.6-mile section of Floyd Road to improve the safety and operations for vehicles, pedestrians, and bicyclists, as well as to upgrade the facility.
4/14-7/23	**GDOT, Transportation Investment Act (TIA), Various Locations, GA.** Railroad Coordinator. Responsible for GDOT's Transportation Investment Act. Covering four regions of Georgia, the TIA program utilizes a one percent sales tax to fund regional and local transportation improvement projects. Responsibilities include agreement drafting and review, cursory review of project plans prior to submission to railroad, scheduling meetings with railroad staff, providing design engineers with railroad requirements and coordination with railroad for design reviews, cost estimates, etc.
7/14-Ongoing	**DeKalb County Transportation On-call, DeKalb County, GA.** Lead Bridge Engineer/Deputy Project Manager/Project Manager. Responsible for on-call transportation services contract. Work includes bridge design, bridge inspection, culvert inspection, bridge maintenance, scour repairs and traffic signal installation.
2/16-9/19	**GDOT, Greenville Street Bridge Replacement over CSXT Railroad, Troup County, GA.** Senior Bridge Engineer. Responsible for the replacement of a structurally deficient bridge on CS 1081/Greenville Street over CSXT Railroad consisting of five spans with two 100'± post-tensioned inverted Tee straddle bents over the railroad tracks and adjacent hammerhead bents to meet tight railroad vertical and horizontal clearances.
3/17-12/20	**Cobb County DOT, Old Hwy 41 Bridge Replacement over CSXT Railroad, Cobb County, GA.** Senior Bridge Engineer/Railroad Coordinator/Engineer of Record. Responsible for project that included the planning and design of a bridge replacement on Old Highway 41 over CSX railroad. The proposed project replaces the existing bridge located on Old Highway 41 at CSX with a new wider bridge located slightly north of the existing bridge. Additional improvements include widened approach lanes, ADA-compliant pedestrian facilities and curb & gutter with closed drainage system. AECOM produced a concept matrix in conjunction with an intersection analysis report that compared several alignment alternatives and determined the most viable alternative based on operations, estimated costs and impacts.



Firm	AECOM Technical Services, Inc.		
Name	John Volk, PE	Years of Relevant Experience with this Employer	39
Title	Civil Engineer	Years of Relevant Experience with Other Employer(s)	0

Degree(s)/Years/Specialization			MS/1984/Civil Engineer BS/1983/Civil Engineer
Active Registration Number/State/Expiration Date			38377/LA/03.31.26 Additional PE Licenses: PA, NJ, DE, NY, VA, OH, WI, IN, MD, WV, CT, SC, NC, TX
Year Registered	2013	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Geotechnical-NDT-Testing.** John is a geotechnical engineering manager with significant experience in soft soils and ground improvement for major earthen levees and port projects throughout the Gulf Coast and East Coast with contract values more than $1 billion. He develops cost-effective solutions for foundation improvement and slope stabilization for challenging soils. John's geotechnical analysis and design experience includes seepage and slope stability, settlement, deep foundation design (driven piles, drilled shafts), floodwalls, closure gates, sector gates, and embankment design, following HSDRRS. John has 39 years of experience in the subsurface investigation, foundation design, retaining and earth structures, levees, dam and floodwall design of numerous projects in Pennsylvania and surrounding states (registered in 14 states). He has been significantly involved with Levee/Floodwall Reconstruction in New Orleans and levee design for 15 years.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
11/19-/06/24	**I-635 East Design-Build Reconstruction Project, Dallas, Texas.** Project Geotechnical Engineer. Responsible for retaining wall design for the I-635 East Reconstruction Project in Dallas, Texas. This 11-mile design-build highway project ($1.75 billion) involves 96 MSE retaining walls that range from 15 to 40 feet in height. The highway is underlain by thick deposits of stiff clays. Ground improvement involving limited over-excavation and replacement with crushed aggregate was required to meet stability and bearing requirements. Significant geotechnical investigation and laboratory testing program was performed as part of design.
01/17 - 06/24	**Mid-Barataria Sediment Diversion Project, Plaquemine Parish, Louisiana.** Senior Geotechnical Reviewer. Senior Geotechnical Reviewer for pile foundations and deep soil mixing for key elements of this $1.9 billion project in the soft clays of south Louisiana. Major structures include the 250 by 600 ft inlet structure through the Mississippi River levee, a 2200-ft long railroad bridge, 2200-long highway bridge, 1800 ft long access bridge, and 30-ft high retaining walls. All major structures will be pile supported primarily with 24 to 30-in open-end steel pipe piles up to 120-ft long but also 24 and 30-in square concrete piles, H-piles, and timber piles. Over 2500 piles will be driven, and 27 static load tests will be performed to verify pile design.

01/07 – 12/14	**Design and re-construction of levees of 25 miles in New Orleans East.** Lead Geotechnical Engineer. Lead geotechnical engineer for 7.5 miles of levees utilizing wick drains, high-strength geotextiles, and deep mixing methods for ground improvement. LPV 109.02a is a 7.5 mile reach in New Orleans East that included using I-10 as a levee. The existing levees were raised approximately four to seven feet with a protected side raise on virgin ground. The new levee construction requires embankment construction in two stages to heights of 18 to 22 feet above existing grades of the tidal marsh. The raises were be accomplished with the use of stability berms, wick drains and highstrength geotextiles and geotechnical instrumentation. DMM (soil-cement mixing) was utilized under the drainage structures and pump stations.
01/20 – 12/23	**Galveston District of USACE 11 Miles of Levees, Freeport, Texas for the USACE.** Lead Geotechnical Engineer. Lead Geotechnical Engineer for 11 miles of levees in Freeport, Texas for the Galveston District of USACE. This project includes over 400 explorations (test borings and CPTs) and extensive laboratory testing program. The existing levees will be raised approximately two to seven feet with a protected side raise. The levees protect from the East Brazos River and include earthen levees, T-walls and I-walls. H-piles will be used for the deep foundations of structures.
01/20 – 12/20	**Southern Pennsylvania Transportation Authority (SEPTA), Township Line Station, Havertown, PA.** Project Geotechnical Engineer. Geotechnical investigation and geotechnical recommendations for upgrades to station platform.
01/24 – present	**SEPTA, Wawa to Elwyn Line Reconstruction, Lenni, PA.** Project Geotechnical Engineer. Geotechnical recommendations for design and construction of pile foundations including H-piles and micropiles.
01/24 – present	**SEPTA, Newtown Bridge Reconstruction, Newtown, PA.** Project Geotechnical Engineer. Geotechnical recommendations for design and construction of drilled shaft foundations in Neshaminy Creek.
01/23 – present	**PennDOT, P3 Rapid Delivery Bridge Replacement Project, Districts 4-0, 5-0, 6-0, 8-0, Various Counties, PA.** Lead Geotechnical Engineer. Responsible for the site reconnaissance and site characterization data along with preliminary foundation recommendations for 125 bridges extending across Districts 4, 5, 6, and 8.
01/14 – 05/16	**Design & CM IDIQ Inner Harbor Navigation Canan Miter Gates, LA.** Geotechnical Engineer. AECOM, in joint venture, provided construction management services for the replacement of the miter gates at the Inner Harbor Navigation Canal.
01/16 – 12/16	**Upper Dublin Township, Flood Retarding Structures, Upper Dublin, PA.** Principal Geotechnical Engineer. This project involved two flood control structures on Pine Run and Rapp Run with a storage area of 400 acre-feet. The 15-foot-high dry dams with labyrinth weirs were designed and constructed to reduce flooding in Fort Washington Business Park. Provided a diverse range of services including geotechnical, hydraulics and hydrology, surveying, environmental, permitting, and plans, specs, and cost estimating.

Firm	AECOM Technical Services, Inc.		
Name	Timothy King, PG	Years of Relevant Experience with this Employer	37
Title	Associate Vice President, Principal Geologist-Geophysical Team Leader	Years of Relevant Experience with Other Employer(s)	2

Degree(s)/Years/Specialization			BS/1988/Geology
Active Registration Number/State/Expiration Date			PG001254-PG/PA/09/2025
Year Registered	1995	Discipline	Professional Geologist
Contract Role(s)/Brief Description of Responsibilities			**Geotechnical-NDT-Testing.** Tim has built and is the leader of a geophysical services team in the Germantown, Maryland office. The team consists of eight staff ranging with experience levels ranging from junior to senior-level. As team leader, Tim's management responsibilities include hiring, mentoring, technical oversight, scheduling and performance reviews. His experience includes geohazards assessment and engineering geophysics, engineering geology, and hydrogeology applied to site investigations to evaluate subsurface conditions related to pipelines, storage tanks, terminals, processing facilities, well pads, tunnels, mines, highways, bridges, dams, and other civil infrastructure. He has been responsible for technical and management aspects of investigations at hundreds of sites across the United States. Tim has expertise in the application of geophysics to engineering and environmental problems. Geophysical and nondestructive testing methods he routinely utilizes include , seismic refraction, multichannel analysis of surface waves, seismic reflection, tomography, microgravity ground penetrating radar, marine geophysics, vibration monitoring, electromagnetics, resistivity, geophysical borehole logging, and crosshole and downhole seismic surveying.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
01/00-10/08	**Project Geologist, Woodrow Wilson Bridge Replacement Project, Federal Highway Administration, Alexandria, VA.** Managed geotechnical/geological field investigation for a large bridge and highway replacement/expansion project. Conducted soil borings, in-situ testing, vertical seismic profiling, ground penetrating radar and multichannel analysis of surface waves (MASW) investigations as part of the geotechnical investigation, feasibility study and construction phase services for the new bridge and related expansion of I-495 in Maryland and Virginia. The GPR surveys successfully located subsurface voids from ground subsidence associated with jack and bore tunneling for new utility line crossings. The MASW survey was conducted to aid delineation of soft soil zones associated with dredging and hydraulic filling at the existing bridge approach on the Maryland side.

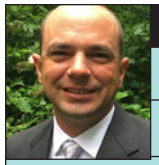
01/00-10/08	**Geologist, Proposed Great River (Charles W. Dean) Bridge, Arkansas Department of Transportation, Desha County, Arkansas and Bolivar County, MS.** Conducted downhole seismic velocity profiling as part of the geotechnical earthquake engineering assessment for the proposed 1,400 feet long cable-stay bridge and approximately 20,000 feet long approach embankments .
01/09-Ongoing	**Principal Geologist, On-Call Bridge Design Services for the Maryland State Highway Administration, Statewide, MD.** Designed and conducted detailed non-destructive testing of the US 40 over Patapsco River at Baltimore County/Howard County Border. The investigation consisted of high resolution penetrating radar (GPR) surveying of the existing concrete arches to detect and delineate voids and other features of potential structural concern. The bridge repairs include construction services for this 3-ribbed – 180-foot span concrete spandrel arch including review of shop drawings and review of temporary bridges over the Patapsco River.
01/95-01/96	**Geologist, Cape Girardeau (Bill Emerson Memorial) Bridge, Missouri Department of Transportation, Cape Girardeau, MO.** Conducted downhole seismic velocity profiling as part of the geotechnical earthquake engineering assessment and design for the 4,000 feet long bridge with 1,150 feet cable-stayed navigation span.
01/02-08/08	**Project Geologist, Maryland State Highway Administration, I-70 Expansion, Frederick, MD.** As part of the design of lane expansions, new interchanges and new access roads for Interstate I-70 from MD Routes 144 to 355, conducted a comprehensive geophysical investigation to characterize subsurface conditions and aid in locating potential sinkholes and delineating Karst conditions. The geophysical investigation consisted of over 20,000 linear feet of electrical resistivity imaging surveys and provided detailed mapping of subsurface conditions.
01/16-06/22	**Principal Geologist, Maryland State Highway Administration, Subsurface Utility Mapping and Avoidance, Statewide On-Call Engineering Services Contracts MD.** Designed, managed and conducted geophysical investigations as part of design projects statewide. Investigations include subsurface utility and avoidance surveys utilizing ground penetrating radar (GPR), electromagnetics (EM) and pipe and cable locators.
01/95-01/96	**Geologist, Seismic Retrofit Evaluation, I-57 Bridge Over Illinois Route 3, Illinois Department of Transportation, Cairo, IL.** Conducted downhole seismic velocity profiling as part of the geotechnical earthquake engineering assessment for the bridge.

Firm	AECOM Technical Services, Inc.		
Name	Derek Chisholm, AICP, LEED	Years of Relevant Experience with this Employer	10
Title	Environmental Compliance Task Leader	Years of Relevant Experience with Other Employer(s)	23

Degree(s)/Years/Specialization			BS/1993/Organizational Management MPA/1997/Environmental Planning Specialty
Active Registration Number/State/Expiration Date			FHWA-NHI-142005 NEPA and Transportation Decision-Making Nov 4-6, 2014 American Institute of Certified Planners #147159 2011 LEED Green Associate (#10148303) 2014 Envision Sustainable Professional Certified in Charrette Management by National Charrette Institute (2006)
Year Registered	2011	Discipline	N/A
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Environmental Compliance Task Lead **Brief Description:** Derek is a senior-level transportation professional with three decades of experience in planning and delivery of bridge projects. He has lead the NEPA and permitting processes for many bridges, in several states, and is focused on streamlining processes and foreseeing roadways and impediments in the process. Derek was contributing writer for two books including ASCE's Engineering for Sustainable Communities.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
05/25-Ongoing	**DOTD, Bundled Bridges, LA.** Planner. Responsible for overseeing field investigations, environmental permitting, development of environmental checklists, and nine Categorical Exclusions.
11/17-04/20	**DOTD State Project No. H.001779.2, Jimmie Davis Bridge Supplemental EA, Bossier and Caddo Parishes, LA.** Derek served as a Senior NEPA Advisor on this project, providing quality control review and assisting on complex issues related to bicycling connectivity, Section 4(f) and the final FHWA comments on the preliminary, draft Supplemental Environmental Assessment. (EA).
10/16-Ongoing	**DOTD, SPN H.004273.5, I-49, Lafayette Connector Project, Lafayette, LA**. Derek started work on the I-49 Connector as an environmental advisor and now leads the NEPA process that will publish a DSEIS this summer. He was also the Context Sensitive Design lead for this $2 billion project consisting of 5.5 miles of interstate and local roadway improvements, including over four miles of elevated structure.
03/19-Ongoing	**Gordie Howe International Bridge, Detroit, MI to Windsor Canada.** AECOM delivered the longest span bridge in North America, crossing between the United States and Canada. Derek was asked to assist the project based on his previous experience working on sustainable design and construction issues for similar projects pursuing both LEED and ISI Envision certification for the bridge and portals.
03/19-Ongoing	**I-11 Corridor Alternative Selection Report and Tier 1 Environmental Impact Statement (EIS), AZ.** The I-11 Corridor Study required conducting alternatives analysis and preparing a Tier 1 Environmental Impact Statement (EIS) to assess a new 280-mile high-capacity, access-controlled transportation corridor in Arizona. Derek served as a Advisor on 4(f), demographics analysis, and the Environmental Justice sections, and provided guidance and quality control

11/18-Ongoing	**FHWA Synthesis Report on Automated Vehicles and NEPA-Nationwide**. Derek was selected a the Project Manager for this national study of the manner in which automated vehicles are being incorporated in NEPA analysis. The report a literature review covering all relevant legislation and guidance as well as the findings from numerous modeling studies showing the benefits of platooning, connectivity and other advancements on highway system performance. The team interviewed various subject matter experts and DOT leaders who were working on Connected and Autonomous Vehicle deployment projects and NEPA studies, nationwide.
05/10-08/13	**Clackamas River-Springwater Road Bridge – Clackamas, OR.** This project developed and evaluated alternative river crossings in the core of Carver, Oregon. Derek led the public involvement discussions and aspects of the alternatives analysis. He also led the NEPA process.
03/06-02/13	**Columbia River Crossing – Portland, OR.** This project included multi-modal improvements between Portland Oregon and Vancouver Washington, including the extension of the Portland Light Rail Transit system. As the Consultant Environmental Team Manager, Derek worked with the design and construction teams to prepare an environmental documentation, plan amendments, and numerous impact analyses. He helped secure a Record of Decision and several permits. The environmental work won the: National Environmental Excellence Award for its Climate Change Evaluation and the Fish Hydroacoustics Impacts Study.
02/08-12/11	**Neighborhood Cohesion Calculator, EPA/ FHWA, Nationwide.** The Neighborhood Cohesion Calculator helps participating communities conduct an audit of the assets in neighborhoods. The calculator can be used to evaluate how major projects may impact neighborhoods. The Calculator and the methods behind it were the focus of a EPA Community Involvement Training and was showcased at the National Neighborhood USA Conference in 2009.
07/08-09/10	**Willamette River Bridge (Tilikum Crossing). Portland OR.** Derek supported the built environment analysis for this project, assisted with the design (elements related to complete streets and the approaches). HE also worked on a shared environmental impact report and mitigation that were caused by a combination of this and other projects requiring the construction of a new facility for the light rail vehicles. This project won numerous awards, mostly for design, and it was the first bridge built in the US exclusive to transit, bicycles, and pedestrians: National Honor Award, 2016 (ACEC), Best Highway/Bridge Project Award, 2016. Engineering News-Record (ENR), Northwest. Project of the Year, 2016. American Segmental Bridge Institute (ASBI)
03/07-11/10	**Highway 99/Alaska Way Viaduct Removal, Seattle, WA.** Derek led the socio-economic and environmental justice analyses, and authored the respective sections of the discipline reports. He also led the development of an analytical model and outreach program to determine potential high and disproportionate impacts related to tolling of the facility.
10/05-04/07	**Oregon DOT, Bridges Visual Performance Standards, Oregon Statewide.** Derek led a team of ODOT project management specialists, engineers, visual specialists, and others in preparing the visual performance standards (VPS) for the Oregon Transportation Investment Act (OTIA) III State Bridge Delivery Program. The VPS established context sensitive, performance-based and programmatic aesthetic guidelines and standards for bridge repair or replacement projects. Derek managed the field investigations of over 200 bridges, and prepared visual context data sheets from which each bridge's visual exposure and prominence in the visual environment was assessed for placement in one of four "Bridge Family" rankings (Gateway, high, moderate or low). The VPS also included a "How To Guide" for developing VPS's for other corridors within the OTIA III State Bridge Delivery Program, which included over 350 bridges statewide.

	**Firm**	**Elos**		
	Name	Lucas Watkins	Years of Relevant Experience with this Employer	19
	Title	Principal/Environmental Scientist	Years of Relevant Experience with Other Employer(s)	4

Degree(s)/Years/Specialization			MS / 2005 / Biological Sciences BS / 2000 / Forest Management
Active Registration Number/State/Expiration Date			National Highway Institute: NEPA & Transportation Decision-Making Process
Year Registered	N/A	Discipline	N/A
Contract Role(s)/Brief Description of Responsibilities			Principal, Project Oversight, NEPA Clearance, Agency Coordination, Stakeholder Outreach, and Public Meetings

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
11/17 - Ongoing	**Move Ascension, Phases I, II, & III; Ascension Parish, LA.** ELOS is contracted to plan projects, perform wetland delineations, conduct cultural resource surveys, and submit permit applications for 60 roadway projects, varying from roundabouts to constructing new lanes and connecting roadways, located throughout Ascension Parish. Mr. Watkins has reviewed delineation details, edited cultural resource reports, developed and analyzed alternatives, reviewed scheduled, assisted with wetland mitigation, and reviewed permit applications.
09/20 - Ongoing	**LADOTD Rural Bridges, Phases I & II; Statewide, LA.** ELOS has been contracted to provide environmental services for the LADOTD Rural Bridge Replacement Initiative projects in six districts across the state. Mr. Watkins ensures that all phases of the project adhere to federal and state environmental regulations. He facilitates effective communication among DOTD officials, environmental organizations, and other stakeholders to address concerns and maintain transparency throughout the project.
09/22 - Ongoing	**DOTD IIJA Off-System Bridges District 62.** This off-system bridge project involves the replacement of six bridges; ELOS is performing wetland delineations, completing permit applications, completing solicitation of views to document categorical exclusions for the work proposed, completing cultural resources research, tribal packets, and reports, and write navigability determination reports. Mr. Watkins has reviewed the findings reports prior to client submission.
10/23 - Ongoing	**EBR Off System Bridge Program; East Baton Rouge Parish, LA.** ELOS is contracted to prepare and submit permit applications to the U.S. Army Corps of Engineers (USACE) to include completing permit application packet, documenting the rationale for the project, providing the summary of project and detailed verbal description of the project location. ELOS is also responsible for generating one site plan for each project and coordinating with USACE for a permit under Section 10/404 of the Clean Water Act. Mr. Watkins the permit application throughout the entire process to ensure success of the permit process.

08/22 - 08/24	**LADOTD Rousseau Bridge Replacement; St. Tammany Parish, LA.** ELOS was contracted to provide professional environmental for the Rousseau Bridge Replacement Project located on approximately 2.62 acres in St. Tammany Parish. Mr. Watkins directed the comprehensive assessment of potential environmental impacts related to transportation infrastructure projects. He ensured the accuracy, completeness, and integrity of environmental reports and documentation submitted to regulatory agencies for review and approval.
02/22 - Ongoing	**STP Lock No. 3 Replacement; St. Tammany Parish, LA.** ELOS has been contracted to perform wetland delineation, submit joint permit applications, perform a State Historic Preservation Office (SHPO) Section 106 desktop review and Consultation, and perform a U.S. Fish and Wildlife (USFWS) Endangered Species Act (ESA) Biological assessment for the St. Tammany Parish Lock No. 3 Bridge Replacement project. Mr. Watkins ensures that all phases of each step of the project complies with all state and federal regulations.
03/24 - Ongoing	**Brownswitch Road Bridge Replacement; St. Tammany Parish, LA.** ELOS was contracted to collect data and prepare a report to support a Wetland Delineation and manage the permit process with the USACE. ELOS will facilitate compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966 by completing a Section 106 Desktop Review. ELOS will conduct a biological survey to determine potential effects on species protected under the Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), Bald and Golden Eagle Protection Act (BGEPA) and all other applicable law and regulations. Mr. Watkins has overseen every step of the process ensuring compliance with all regulations and transparency between all stakeholders in the project.
04/22 - Ongoing	**Yellow Water Road Bridge Replacement; Tangipahoa Parish, LA.** ELOS has been contracted to prepare a Early Section 106 Tribal coordination packet and submit it to the DOTD Project Manager (ELOS will not directly communicate with the tribal governments). ELOS will conduct biological assessment and a review of previous Historic Reviews. Mr. Watkins will review the finding of all reviews and the permit packet prior to submission.
12/22 - Ongoing	**Wildwood Dr. Bridge; Livingston Parish, LA.** ELOS was contracted to perform a Wetlands Delineation Assessment, a Biological Assessment, and a Cultural Resource Survey. Mr. Watkins directed the assessments and ensured the accuracy of the Cultural Resource Survey. He supervised the submission of all pertinent documentation to the appropriate agencies.
08/22 - Ongoing	**H.014362 Lake Road; St. Tammany Parish, LA.** ELOS was contracted to complete the solicitation of views and categorical exclusion notices, conduct a wetland delineation, and submit a joint permit application, scenic rivers permit application, and USCG bridge permit application for the project. Mr. Watkins reviewed the categorical exclusion packet and assisted with agency coordination and requests for more information.
02/23 - Ongoing	**DOTD Roundabout at Minnesota Park and Range Road; Tangipahoa Parish, LA.** ELOS is contracted to complete a wetland delineation report, submit a permit application, as well as assist with a CATEX, Phase I ESA, and the solicitation of views (SOVs) for the roundabout project at the intersection of Minnesota Park and Range Road. Mr. Watkins monitors the project timelines, milestones, and budgets to ensure timely delivery of environmental assessments that align with project schedules. He also reviewed the SOVs and supporting documentation prior to initiating the process with agencies.

Firm	Eustis Engineering, LLC		
Name	Gwendolyn P. Sanders, P.E.	Years of Relevant Experience with this Employer	32
Title	President	Years of Relevant Experience with Other Employer(s)	0

Degree(s)/Years/Specialization			MS / 1992 / Engineering BS / 1990 / Civil Engineering
Active Registration Number/State/Expiration Date			PE.0027104 / Louisiana / 09-30-2027
Year Registered	1997	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			As President, Mrs. Sanders will be responsible for the overall services provided by Eustis Engineering L.L.C. Meets MPR 5

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
03/11 – 08/16	**State of Louisiana - Wisner Boulevard Overpass, Orleans Parish, Louisiana (22972, 22637, 21349, 21966).** Mrs. Sanders helped develop subsoil design parameters at each boring location. These design parameters were used to estimate pile load capacity with ultimate compressive pile load capacity being computed for alternative pile sizes. Precast concrete piles were being considered for support. Other factors considered in our engineering analyses included drag loads due to fill placement, estimated total settlement due to structural loads, pile installation recommendations, and recommended inspection and monitoring of existing structures. Mrs. Sanders was also involved during the construction phase, evaluating the results of dynamic and static load tests for development of installation requirements and verification of permanent pile lengths.
03/20 – 06/25	**State of Louisiana, Department of Transportation and Development, I-10 and I-12 College Flyover Ramp Design-Build Project, East Baton Rouge Parish, Louisiana (B0646).** Services for this project included undisturbed borings, auger borings, and cone penetration tests. Eustis Engineering also provided laboratory testing including Atterberg limits tests, hydrometer analyses, and one-dimensional consolidation tests. As Principal, Mrs. Sanders put in over 300 hours on this project to perform senior level review associated with the design and construction services. She participated in weekly progress meetings both with the design team and with the owner representatives.
02/18 – 09/19	**Greater New Orleans Expressway Commission (GNOEC) - Lake Pontchartrain Causeway, Safety Bay Improvements, Jefferson and St. Tammany Parishes, Louisiana (23800).** As Engineering Manager and Project Principal, Mrs. Sanders was involved in the development of the geotechnical scope of work as well as field and laboratory programs. She provided general oversight and review of the engineering analyses during the geotechnical exploration and design including development of the pile data table and testing program. She also provided oversight and evaluation during the construction phase including review of the verification testing of indicator piles and monitor piles as well as adjustment of driving criteria and acceptance criteria.
08/06 – 12/14	**State of Louisiana - Huey P. Long Bridge Widening, Route U.S. Highway 90, West Bank and East Bank Approaches and Main Bridge Deck Widening, Jefferson Parish, Louisiana (18530, 19483, 20262).** Mrs. Sanders was the Project Manager and lead geotechnical engineer during design and construction. Mrs. Sanders provided design pile and shaft capacity estimates in the engineering/design phase of the project. Prior to construction, she reviewed the geotechnical aspects of the project specifications and provided comments. During construction, she observed/witnessed drilled shaft installations and shaft inspection device (SID) testing prior to concrete placement. She also observed and reviewed the results of pile and shaft load testing and provided final inputs to the pile data tables.

01/12 – 05/19	**State of Louisiana - Route I-10, Williams Boulevard, Veterans Boulevard, and Loyola Drive to Williams Boulevard, Jefferson Parish, Louisiana, S.P. Nos. H009087.5 and H.003074.5 (21687).** Mrs. Sanders served as the Project Manager during the exploration phase of these projects and preliminary design. She assisted with rating determinations of the existing Veterans Boulevard and Duncan Avenue canal bridges and the Loyola Drive and Williams Boulevard overpasses. This rating included recommended resistance factors associated with the available tests to be used to assess the existing structure's ability to meet current Load Resistance Factor Design (LRFD) requirements. Engineering analyses included settlement evaluations for various embankment fill heights and widths, settlement and differential settlement of pile foundations, slope stability of each canal crossing, and ultimate vertical pile capacity estimates. Mrs. Sanders provided senior level review during later project phases when a bridge replacement, rather than widening, was selected. The replacement bridge required the evaluation of a preload/surcharge program that would be implemented in phases to maintain traffic through the corridor during construction.
01/13 – 11/18	**Port of New Orleans - Almonaster Bridge over the Inner Harbor Navigation Canal, New Orleans, Louisiana (22066, .01).** Analyses included estimates of allowable vertical pile load capacities at the land borings for support of the proposed bridge replacement and pavement recommendations based on the auger borings. Slope stability analyses were performed for the proposed channel widening and the cofferdam requirements. Lateral load analyses were performed to evaluate the new fender system and bridge support piles. As part of a response to a Value Engineering study, we evaluated the use of drilled shafts. Mrs. Sanders served as the Project Manger during the development of the site exploration and initial meetings among the project stakeholders which included Port NOLA, the Southern Belt Railroad, CSX Railroad, LaDOTD, the City of New Orleans, the U.S. Coast Guard, and the U.S. Army Corps of Engineers.

Firm	Eustis Engineering, LLC		
Name	Chad Held, PE	Years of Relevant Experience with this Employer	34
Title	Executive Vice President & Senior Project Manager	Years of Relevant Experience with Other Employer(s)	0

Degree(s)/Years/Specialization			Master of Science / 2002 / Civil Engineering Bachelor of Science / 1998 / Civil Engineering
Active Registration Number/State/Expiration Date			PE.0030257/ Louisiana / 09-30-2026
Year Registered	2002	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Historical Geotechnical Soils and Investigations.** Meets MPR 6

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
08/06 – 12/14	**State of Louisiana - Huey P. Long Bridge Widening, Route U.S. Highway 90, West Bank and East Bank Approaches and Main Bridge Deck Widening, Jefferson Parish, Louisiana (18530, 20262).** As a Project Engineer, Mr. Held developed allowable vertical pile load capacity estimates (precast concrete, steel H, and treated ASTM D 25 timber); allowable shaft load capacity estimates (7 and 9 feet in diameter) to support Pier IVA located along the East Bank Approach with and without the benefit of post-grouting the shaft tips; estimates of settlement for the proposed pile/shaft groups; evaluation of pile/shaft group capacity and spacing; lateral load analyses of pile foundations for various pile group configurations and loading conditions, in addition to analyses of a single pile, to evaluate the sensitivity of the point of fixity; dewatering and pressure relief recommendations for construction of Pier IVA; and recommendations for test pile and test shaft programs. Once construction began, Mr. Held performed dynamic pile testing and signal matching verification (CAPWAP® analyses) on selected piles to evaluate capacity for the project. He also interpreted crosshole sonic logging results.
06/21 – 01/22	**State of Louisiana, Department of Transportation and Development (LaDOTD) - I-10 Calcasieu River Bridge Project, Lake Charles, Louisiana (24584).** This project comprised 24, 100 ft borings (75% over land and 25% in marsh). Laboratory testing of samples includes triaxial unconsolidated undrained tests, Atterberg limits, particle size analysis, moisture content, percent passing a U.S. Standard No. 200 mesh sieve, and consolidation with rebound. A geotechnical data report, boring log files, and test results were provided to the client. Mr. Held was responsible for quality control regarding the review of the data being transmitted with the gINT® database and other project summaries.
03/11 – 08/16	**State of Louisiana - Wisner Boulevard Overpass, Orleans Parish, Louisiana (22972, 22637, 21349, 21966).** Mr. Held provided quality control and review during the construction phase of the project. Eustis Engineering performed dynamic pile testing with signal matching on selected monitor piles, indicator piles, and job piles. Mr. Held reviewed and adjusted the results of the signal matching verification using his experience in subsoil conditions encountered at the site and considering the piles and driving system.
06/08 – 02/12	**State of Louisiana - Interstate 12 Widening from O'Neal Lane to Range Avenue, East Baton Rouge Parish, Louisiana (20298).** As Senior Project Manager, Mr. Held provided an independent quality assurance technical review for various aspects of the project's construction. Mr. Held performed dynamic pile testing services and CAPWAP analyses on precast concrete piles being driven as job piles. In addition, Mr. Held performed Wave Equation Analysis of Piles (WEAP) to approve hammers utilized on the project. Upon completion of dynamic pile testing and initial installation of test piles and indicator piles, Mr. Held also developed inspectors' charts and pile driving criteria for respective pile bents

04/08 – 04/14	**U. S. Army Corps of Engineers - Inner Harbor Navigation Canal Surge Protection Project, New Orleans, Louisiana (20243.00-.14).** As Project Engineer, Mr. Held performed dynamic pile testing as well as reviewed dynamic pile tests (DPTs) performed by others to ensure DPT data quality. CAPWAP analyses were performed on the end-of-driving and restrike DPTs to evaluate shaft resistance along the pile, soil setup over time, and ultimate pile capacity. Mr. Held was also on rotational call to provide project management services and assist with quality control and pile installation design questions.
06/22 – 01/24	**State of Louisiana, Department of Transportation and Development, I-10/City Park Bridge Replacement Project, Baton Rouge, Louisiana (24821.**00, .01): Eustis Engineering performed a geotechnical peer review for the proposed City Park crane trestle piles for the I-10/City Park Bridge Replacement project in Baton Rouge, Louisiana. In order to perform the peer review, Eustis Engineering was furnished Kiewit/Boh, AJV's (Kiewit's) design memorandum which outlined the design assumptions associated with the trestle bridge design performed by Kiewit. After authorization, Eustis Engineering was requested to perform independent geotechnical engineering analyses as part of this review. The limited geotechnical analyses included development of axial pile load capacity curves and lateral load analyses of the proposed pile groups to compare with the analyses performed by Kiewit. Eustis Engineering also performed dynamic pile tests (DPTs) on five job piles for the project. Mr. Held performed the consultation on the engineering analyses associated with the peer review and reviewed the results of the DPTs and CAPWAP

	**Firm**	**Eustis Engineering, LLC**		
	Name	Matthew Morales, PE	Years of Relevant Experience with this Employer	16
	Title	Project Manager	Years of Relevant Experience with Other Employer(s)	0

Degree(s)/Years/Specialization			Bachelor of Science / 2008 / Civil Engineering
Active Registration Number/State/Expiration Date			PE.0038211 / Louisiana / 09-30-2025
Year Registered	2013	Discipline	Civil Engineering
Contract Role(s)/Brief Description of Responsibilities			Mr. Morales will meet MPR 7 of this RFQ. Regarding MPR 7, he achieved Master Level in the Pile Dynamics Inc. – Dynamic Measurement and Analysis Proficiency Test.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
01/21 – Ongoing	**State of Louisiana, Department of Transportation and Development (LADOTD), Bayou Barataria Bridge Replacement, Jefferson Parish, Louisiana (24515.00-.03).** The goal of this project is a full replacement of the Bayou Barataria Bridge. Eustis Engineering L.L.C. obtained relevant permits and land access and drilled 24 borings over water, marsh, and pavement. Geotechnical design analyses include vertical and lateral pile capacity with and without scour, pile group settlement, ground settlement, settlement surcharge/remediation, retaining wall recommendations, slope stability, and pavement design. Engineering during construction (EDC) includes Wave Equation Analysis of Piles (WEAP) driveability, dynamic pile testing with signal matching (CAPWAP), development of a vibration monitoring plan, and review of settlement monitoring of surcharged areas. Mr. Morales has been responsible for performing internal reviews of the engineering analyses, the geotechnical data report, and the geotechnical design report completed for this project. He is also leading the EDC efforts.
03/20 – 06/25	**State of Louisiana, Department of Transportation and Development, I-10 and I-12 College Flyover Ramp Design-Build Project, East Baton Rouge Parish, Louisiana (B0646).** Services for this project included a subsurface exploration including undisturbed borings, auger borings, and cone penetration tests. Eustis Engineering also provided laboratory testing including Atterberg limits tests, hydrometer analyses, and one-dimensional consolidation tests. Design services were provided for seven different major project features. Mr. Morales was the geotechnical design engineer for all project features, which included driven pile and drill shaft foundation design, slope stability analyses, retaining wall design, embankment evaluations, roadway pavement design, and developing load test programs. Eustis Engineering evaluated the results of the bi-directional load test performed on a drilled shaft, performed dynamic pile testing with signal matching to verify pile load capacity estimates (CAPWAP), and reviewed installation logs of the production shafts and piles. Mr. Morales' responsibilities on this project included performing engineering design work for the project features in a timely manner allowing construction operations to progress with minimal delays.
08/06 – 12/14	**State of Louisiana - Huey P. Long Bridge Widening, Route U.S. Highway 90, West Bank and East Bank Approaches and Main Bridge Deck Widening (18530, 20262).** Mr. Morales was involved in the later phases of this project as a project engineer. He reviewed and evaluated the results of cone penetration tests used to supplement the soil borings and performed dynamic testing on the piles supporting the approach ramps.

06/11 – 02/13	**State of Louisiana - Essen Lane Interchange Westbound, Route Interstate 12, East Baton Rouge Parish, Louisiana.** Mr. Morales served as a project engineer for this project. He performed engineering analyses to evaluate some of the retaining wall alternatives. He also performed global slope stability analyses using Spencer's Method of Slices as coded within GEOSLOPE International Ltd.'s computer program, SLOPE/W.
02/09 – 04/10	**U.S. Army Corps of Engineers - Inner Harbor Navigation Canal Surge Protection Project, New Orleans, Louisiana (20243.00-.15).** As a project engineer, Mr. Morales performed Wave Equation Analysis of Piles (WEAP) analyses for this project. He also participated in the field exploration phase and dynamic pile testing during the test pile program and job pile installation. In addition, he reviewed some of the construction submittals.
02/09 – 03/15	**U.S. Army Corps of Engineers - Preparation of Design Documentation Report and Plans and Specifications, WBV-74 and WBV 09b, Western Tie-In Closure Structure, St. Charles and Plaquemines Parish, Louisiana (20536).** Eustis Engineering provided design and engineering during construction (EDC) services. The design phase scope, assisted by Mr. Morales, included drilling 5-in. undisturbed soil borings in the marsh; laboratory testing; engineering analyses of levees and structures; and installation, monitoring, and evaluation of geotechnical instrumentation.
10/13 – 02/15	**State of Louisiana – Route Interstate 10, Highland Road to LA Highway 73, East Baton Rouge and Ascension Parishes, Louisiana (21777).** As a project engineer, Mr. Morales oversaw the field investigation phase of this project. He has performed analyses for deep foundations and analyzed settlement for the widening of the overpasses and approach embankments.
01/13 – 11/18	**Port of New Orleans – Almonaster Bridge over the Inner Harbor Navigation Canal, New Orleans, Louisiana (22066, .01).** Analyses included estimates of allowable vertical pile load capacities at the land borings for support of the proposed bridge replacement and pavement recommendations based on the auger borings. Slope stability analyses were performed for the channel widening and the cofferdam requirements. Lateral load analyses evaluated the new fender system and bridge support piles. As part of a response to a Value Engineering study, we evaluated the use of drilled shafts. Mr. Morales performed engineering analyses on this project.

	**Firm**	**Eustis Engineering, LLC**		
	Name	Travis Richards, PE	Years of Relevant Experience with this Employer	19
	Title	Vice President of Testing and Senior Project Manager	Years of Relevant Experience with Other Employer(s)	7

Degree(s)/Years/Specialization			Graduate Certificate / 2018 / Coastal Engineering Master of Science / 2017 / Engineering Master of Science / 2015 / Engineering Management Bachelor of Science / 1998 / Civil Engineering
Active Registration Number/State/Expiration Date			PE.0030992 / Louisiana / 03-31-2027
Year Registered	2004	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			Mr. Richards is the engineer in responsible charge for the quality control, technical functions, and performance of the soil mechanics' laboratory testing regarding our accreditations for geotechnical and construction materials testing in Louisiana.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
03/20 – 06/25	**State of Louisiana, Department of Transportation and Development, I-10 and I-12 College Flyover Ramp Design-Build Project, East Baton Rouge Parish, Louisiana (B0646).** Services for this project included undisturbed borings, auger borings, and cone penetration tests (CPTs). Eustis Engineering L.L.C. also provided laboratory testing including Atterberg limits tests, hydrometer analyses, and one-dimensional consolidation tests. Mr. Richards provided quality review of the laboratory testing services and CPT results.
01/21 - Ongoing	**State of Louisiana, Department of Transportation and Development (LaDOTD), Bayou Barataria Bridge, Jefferson Parish, Louisiana (24515).** The goal of this project is a full replacement of the Bayou Barataria Bridge. Eustis Engineering obtained relevant permits and land access and drilled 24 borings over water, marsh, and pavement. Geotechnical analyses include vertical and lateral pile analyses, pile scour capacity, lateral load analyses, pile group settlement, ground settlement, settlement surcharge/remediation, retaining wall recommendations, slope stability, and pavement design. Mr. Richards oversaw the laboratory testing services and reporting. He adjusted the gINT® database/library to allow for client requested formatting and report generation to complete the data report.
06/21 – 01/22	**State of Louisiana, Department of Transportation and Development (LaDOTD), I-10 Calcasieu River Bridge Project, Lake Charles, Louisiana (24584).** This project comprised 24, 100-ft borings (75% over land and 25% in marsh). Laboratory testing of samples includes triaxial unconsolidated undrained tests, Atterberg limits, particle size analysis, moisture content, the test to establish the percent passing a U.S. Standard No. 200 mesh sieve, and consolidation with rebound. A geotechnical data report, boring log files, and test results were provided to the client. Mr. Richards' responsibilities included adjustments to the gINT library to produce the requested information. He also provided a quality level review of the data and laboratory summaries.

04/08 – 04/14	**U.S. Army Corps of Engineers - Inner Harbor Navigation Canal Surge Protection Project, New Orleans, Louisiana (20243.00 - .15).** Mr. Richards' role as the geotechnical design lead included project management and review of deliverables of other geotechnical engineering consultants during the project, geotechnical design of project features, oversight and acceptance of piles driven to support the project, and served as the liaison for geotechnical matters for the design-build contractor, Shaw E&I, during the project.
02/09 – 03/15	**U.S. Army Corps of Engineers - Preparation of Design Documentation Report and Plans and Specifications, WBV-74 and WBV 09b, Western Tie-In Closure Structure, St. Charles and Plaquemines Parish, Louisiana (20536).** Mr. Richards was the instrumentation engineer assigned to the project. He was involved in the development and implementation of the instrumentation plan and oversaw the field installation of the geotechnical monitoring equipment including data loggers. Mr. Richards processed instrumentation readings and created modeling of the preload/surcharge stacks to evaluate progress of the project preload/ surcharge program. He also summarized the instrumentation readings and observations in the form of geotechnical data reports.
01/12 – 10/17	**State of Louisiana - Route I-10, Williams Boulevard to Veterans Boulevard and Loyola Drive to Williams Boulevard, Jefferson Parish, Louisiana (21687).** Mr. Richards performed settlement analyses for various embankment fill heights and widths as well as slope stability analyses to evaluate each of the canal crossings.
03/18 – 01/19	**Orleans Levee District - West Roadway Street Drainage Repairs, South Roadway Street to Floodgate L-01, New Orleans, Louisiana (23789).** Mr. Richards provided direct oversight of the field inspectors, laboratory testing of soils and concrete, and quality assurance. Mr. Richards also provided review of material submittals, dispute resolution, and acted as a liaison among construction materials testing and project civil and geotechnical engineers.
04/17 – 07/18	**City of New Orleans, Bourbon Street Reconstruction Project, Canal Street to Dumaine Street, New Orleans, Louisiana (23548, .01).** As Project Manager, Mr. Richards provided direct oversight and review of soils and aggregates materials' sampling and laboratory testing, inplace nuclear density testing, and vibration monitoring results. Reporting and managing data were handled through an online database, MetaField.
06/18 – 11/18	**Port of New Orleans - Almonaster Bridge over the Inner Harbor Navigation Canal, New Orleans, Louisiana (22066, .01).** Mr. Richards provided the testing plan for the existing bridge concrete and non-destructive testing. He reviewed the results of the Windsor Probe and Schmidt manual impact hammer tests to provide the structural designers strength data for their assessment of the exiting pier to be incorporated into the new structure foundations.

	**Firm**	**Marrero, Couvillon & Associates, LLC**		
	Name	Gregory DeCoursey, AIA	Years of Relevant Experience with this Employer	25
	Title	Architectural Engineer	Years of Relevant Experience with Other Employer(s)	19

Degree(s)/Years/Specialization			B. Arch / 1977 / Architecture M.Arch / 1982 / Architecture
Active Registration Number/State/Expiration Date			#2620 / LA / 12.31.2021
Year Registered	1980	Discipline	Architecture
Contract Role(s)/Brief Description of Responsibilities			**Lighting.** Gregory has performed services as both Architect and Project Manager for Engineering Projects for the Louisiana Department of Transportation and Development and for other Public Works and Private Sector Commercial projects.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
01/14-Present	**St. Tammany Parishes, U.S. 11 Bridge Over Lake Pontchatrain Rehabilitation, New Orleans, LA.** Architect for the design of the rehabilitation of two Operator's Houses at an existing bridge over Lake Pontchartrain. Work is being done as part of a larger bridge rehabilitation project. Design is sensitive to the historic nature of the bridge and Operator's Houses.
06/12-04/18	**Lafourche Parish, W. Larose Vertical Lift Rehabilitation -Route: LA-1, Larose, LA.** Architect responsible for the architectural design for rehabilitation of the Operator's House at an existing bridge over the Intracoastal Waterway. Work was done as part of a larger bridge rehabilitation project.
10/13-05/16	**Louisiana DOTD, 4th Street Harvey Bridge Rehabilitation, Jefferson Parish, LA.** Architectural Designer for rehabilitation of the Operator's House at an existing bridge over the Harvey Canal. Work was done as part of a larger bridge rehabilitation project.
04/09-04/12	**Louis Armstrong New Orleans International Airport, Airfield Lighting Vault, Kenner, LA.** Architect for the design of a new building to house airfield lighting control equipment. Construction was designed to withstand the effects of a Category 4 hurricane.
3/19-Present	**ExxonMobil Refinery, Roof Rehabilitation Projects – Multiple Buildings, Baton Rouge, LA.** Architect for the design of a roofing replacement and rooftop mechanical equipment at critical facilities in the refinery. Phasing considerations were critical to avoid disruptions to production.
9/07-11/18	**AT&T, Addition to Central Office, Marksville, LA.** Architectural designer for an addition to a telephone switching facility in Marksville. Telephone company standards utilized for design process, including redundant roofing systems, installed to protect switching equipment.
3/04 – 11/06	**Bellsouth, Re-roofing of Telephone Company Facilities, MS and GA.** Architect for the design and preparation of construction documents for re-roofing of 18 buildings that house telephone switching equipment and support facilities

Firm	Marrero, Couvillon & Associates, LLC		
Name	M. Kimball Schlafly, P.E.	Years of Relevant Experience with this Employer	5
Title	Sr. Electrical Engineer	Years of Relevant Experience with Other Employer(s)	32

Degree(s)/Years/Specialization			BS / 1988/ Electrical Engineering
Active Registration Number/State/Expiration Date			PE LA License No. 27699 / Exp. 09/30/2026
Year Registered	1998	Discipline	Architecture
Contract Role(s)/Brief Description of Responsibilities			**Lighting.** Mr. Schlafly has over 35 years of engineering experience in electrical engineering, project engineering and project management. He has been responsible for various projects requiring design of roadway lighting, low and medium voltage power distribution, standby and emergency power systems, telecommunications, fire alarm, access control, video surveillance, and theatrical audio/visual and lighting systems.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
9/2023-Ongoing	**I-10 and Pecue Lane - Lighting design, Baton Rouge. East Baton Rouge, City Parish /LA DOTD.** Sr. Electrical Engineer. Currently, there is no access to I-10 from Pecue Lane and the existing Pecue Lane consists of 2 traffic lanes. The existing overpass will be removed and replaced with two overpass structures, with 3 lanes in each direction. Pecue Lane will be reconstructed to a curb and gutter section, with a raised median and 3 lanes in each direction. South of I-10 there will be two bridge structures for Pecue to cross Ward's Creek. Cost: $36M
07/17 –11/20	**I-10 and 73 Widening – Design Build. LA DOTD.** Sr. Electrical Engineer. Provided electrical engineering and design for lighting on the I-10 Widening from Highland to LA 30 design-build project.
04/18 – 02/19	**Howard Avenue Extension (Loyola Avenue to LaSalle Street) New Orleans, LA.** City of New Orleans. Sr. Electrical Engineer. Marrero, Couvillon & Associates is responsible for the Electrical Services for the Howard Avenue Extension. Work includes revising roadway lighting from high pressure sodium lights to LED lights per new City of New Orleans Standards. Revisions include changing light fixtures, downsizing electrical conductors and revising drawings including bill of materials. Performing lighting calculations and following illumination guidelines per the latest IES roadway lighting recommended practices issued in 2014.
01/20-06/20	**Bluebonnet Blvd. (Picardy to Highland) Roadway Lighting, Baton Rouge. City/Parish of East Baton Rouge.** Sr. Electrical Engineer. The scope of work includes additional lane capacity in each direction. Bluebonnet Blvd is two lanes in each direction currently. Pedestrian facilities are interspersed throughout the corridor and there is commercial development abutting the corridor. The project is to add an additional travel lane in each direction and provide for connected pedestrian facilities throughout the corridor. MCA is responsible for all activities necessary to complete a lighting plan and a photometric analysis report that contains illumination analysis of all roadways and/or interchanges within the project limits and conform to illumination criteria specified in the design guidelines are included in this scope.

09/23-On-going	**I-20 Widening, Wells to LA34 Electrical and Lighting Design , Baton Rouge. LA DOTD.** Sr. Electrical Engineer. The scope of work is to provide additional traffic capacity in each direction. This was accomplished primarily by increasing the entrance/exit ramps. MCA provided design services to analyze the existing conditions of the roadway lighting, which consisted of high pressure sodium fixtures on low mast poles, and provide modifications to the existing lighting systems as necessary to accommodate the changes in roadway geometry. This includes upgrading the existing fixtures to LED, re-position select poles, and upgrading the secondary controllers to current standards.

Firm	Neel-Schaffer, Inc.		
Name	Ellen Howard, PE, PTOE, RSP	Years of Relevant Experience with this Employer	10
Title	Project Manager	Years of Relevant Experience with Other Employer(s)	5

Degree(s)/Years/Specialization			BS / 2009 / Civil Engineering
Active Registration Number/State/Expiration Date			PE No. 38207 / LA / 03-31-2026
Year Registered	2013	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Traffic Task Lead.** Mrs. Howard joined Neel-Schaffer, Inc. in January 2014. Before joining Neel-Schaffer, Mrs. Howard worked as a Traffic Engineer for DOTD District 62. She also worked as a Traffic Engineer Intern for DOTD's Traffic Engineering Management Section in Headquarters. She worked on a variety of projects involving Traffic Engineering Studies, Signal Timing and Coordination, Corridor Studies, traffic modeling using VISSIM and Transportation Management Studies.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
03/23 – Present	**IDIQ for road design projects** - this contract includes five separate Task Order projects which include traffic services, road design, preliminary and final plan development. The projects include pavement preservation, constructing new roads, extend existing roads, construction of roundabouts, turn lanes and drainage improvements. 1. **US 90: Roundabout at LA 101 (Calcasieu) (SPN. H.015226); Traffic Services**. This project includes the design for a roundabout with high-speed approaches. The design avoids impacts to a gas station, and other development at the intersection. It includes minimum right of way taking and detention pond design. 2. **LA 621: Realignment at LA 73 (Ascension) (SPN. H.014366); Traffic Services.** This project will widening LA 73 and realign LA 621 to near its existing intersection with LA 73 to relieve congestion and improve safety. This project includes the design of a multilane roundabout to provide connectivity for local roadways, traffic analysis, Transportation Management Plan, and 1 mile of mill and overlay for LA 621. 3. **LA 16: N 2nd Street to LA 445 (Tangipahoa Parish) SPN. H.009425.5; Traffic Services.** Project includes the mill and overlay of LA 16 from N 2nd Street to east of Duncan Avenue, the in-place base rehabilitation and overlay of LA 16 from east of Duncan Avenue to LA 445. The scope of work will also include the hydraulic analysis and development of construction plans for the rehabilitation of the existing subsurface drainage system to improve drainage along LA 16 from US 51 to approximately 1000'east of Duncan Avenue. 4. **H.016158: LA 182: US 90 - Greenwood St. Overpass;** 3 miles of pavement rehabilitation along LA 182 from the Westbound Exit Ramp to the Green- wood St. Overpass in Morgan City, LA. 5. **H.015640 LA 150 & LA 818: ROUNDABOUT**; project will convert existing intersection to single lane roundabout intersection.

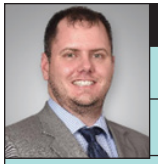
06/22 – Present	**District 03 Safety Investment Plan, LADOTD.** Engineer for this study evaluating crashes at 119 locations on the state and local highway networks using variations in crash statistics to identify possible roadway issues and potential low-cost safety improvements.
04/20 – 07/21	**District 05 Safety Investment Plan, LADOTD.** Engineer for this study evaluating crashes on the state and local highway networks using variations in crash statistics to identify possible roadway issues and potential low-cost safety improvements. There were initially 81 locations with 53 additional locations added as a supplement.
02/19 – 03/20	**District 07 Safety Investment Plan, LADOTD.** Engineer for this study evaluating crashes at 63 locations on the state and local highway networks using variations in crash statistics to identify possible roadway issues and potential low-cost safety improvements.
12/17 – 03/19	**District 08 Safety Investment Plan, LADOTD.** Engineer for this study evaluating crashes at 68 locations on the state and local highway networks using variations in crash statistics to identify possible roadway issues and potential low-cost safety improvements.
01/14 – 05/15	**Safety Study, LA 49 (Williams Blvd.**,) Kenner, LA – Stage 0 / Safety Study (S.P. No. 4400001583, T.O. No. H.010570): Traffic Engineer responsible for data collection, intersection operational signal analyses (Synchro), and Vissim modeling.
07/21 – Present	**US 190 Access Management Stage 0 and Traffic Study: Traffic Engineer responsible for initial and final data collection, existing safety analysis and exist- ing and no build traffic analysis, final traffic report**
03/21 – Present	**MOVEBR N. Sherwood Forest Extension (C-P Proj. No. 20-CP-HC-0014).** raffic Engineer responsible for initial and final data collection, existing safety analysis, existing and no build HCS analysis, alternatives HCS analysis, and final traffic report
09/20 – Present	**MOVEBR College Drive Enhancements (C-P Proj. No. 19-EN-HC-0033).** Traffic Engineer responsible for calibrated Vissim model, existing and no build traffic analysis and alternatives analysis.
09/21 – 07/22	**MOVEBR Harding Boulevard at Interstate I-110 (C-P Proj. No. 20-CP-HC-0016).** Traffic Engineer responsible for initial and final data collection, existing safety analysis and existing and no build traffic analysis, Tier 1 alternative analysis, and final traffic report
08/20 – 10/21	**I-10 & I-12 College Dr. Flyover Ramp Design-Build Project (S.P. H.013897.1).** Traffic Engineer responsible for calibrated Vissim model and traffic analysis, and Interchange Modification Report
12/19 – 03/20	**US 80: Intersection @ Bellevue Rd (S.P. No. 4400010504, T.O. No. H.014044.1).** Traffic Engineer responsible for Initial and final data Collection, existing safety analysis, and Chapter 1 of Final Report and signalized intersection analysis.
02/15 – 12/17	**US 51 (W University to I-55) Corridor Study (Contract No. 4400004064, T.O. No. H.011401.1).** Includes analysis of eight roundabout geometry intersections. Traffic Engineer assisted with Corridor Operational Analyses

Firm	Neel-Schaffer, Inc.		
Name	Vijay Kunada, PE, PTOE, PTP	Years of Relevant Experience with this Employer	18.5
Title	Senior Vice President	Years of Relevant Experience with Other Employer(s)	4.5

Degree(s)/Years/Specialization			BS / 1999 / Civil Engineering; MS / 2001 / Civil Engineering; MS / 2002 / Computer Science
Active Registration Number/State/Expiration Date			PE No. 32145 / LA / 03-31-2026; PTOE No. 2868 / 04-30-2028
Year Registered	2008	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Traffic Modeling.** Vijay serves as a project manager for local and regional transportation plans, traffic impact studies, travel demand models, safety studies, signal warrant analysis, traffic signal timing plans, corridor analysis, interchange modification and justification studies, traffic simulation models (mesoscopic and micro), demographic forecasting, and other traffic engineering related projects for both public and private developments.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
04/18 – 04/20	**LA 328 (Rees Street) Corridor Study and Plan.** Project Manager. Managed the feasibility study of improving LA. Hwy. 328/ Rees Street within the corporate limits of the City of Breaux Bridge, Louisiana from Latiolais Road to E Bridge Street including the intersection of E Mills Ave at LA 328 improvements con- sidering the impacts of the proposed E Mills Ave extension to Doyle Melancon Ext. Along with overall project management, Mr. Kunada lead the traffic and safety study in accordance with DOTD's TEPR, three public meetings and stakeholder outreach. VISSIM was utilized to develop a video rendering of the proposed corridor concept operations to present at the public meetings. A locally preferred corridor concept was also developed.
09/20 – 12/21	**Lafayette (LA) MPO 2050 Metropolitan Transportation Plan, LA.** Project Manager. Mr. Kunada assisted the MPO with the development of performance based multi-modal long range transportation plan . Tasks also included travel demand model (TransCAD) development using big data sources, demo- graphic forecasting, financial analysis, detailed modeling task and project prioritization process to develop the staged improvement plan.
07/20 – Present	**MRB South GBR: LA 1 to LA 30 Connector, LA.** Mesoscopic Modeling Lead. Vijay oversaw the development of regional mesoscopic model using Dynameq software and the analysis of proposed MS River bridge concepts under toll and non-toll options. Calibrated and validated 2019 base mesoscopic model, 2042 no-build model and 2042 build models for 20 bridge alternatives were developed and approved LADOTD. Model results were used as one of the criteria to select the final three alter- natives to bring into the environmental planning process. Phase 2 of the study which includes detailed traffic analysis is currently under contracting process.
08/20 – Present	**I-10 & I-12 College Drive Flyover Ramp Design Build, Baton Rouge, LA.** Mesoscopic Modeling Lead. Responsible for the analysis of Transportation Management Plan (TMP) for the proposed College Drive Ramp improvements. TMP was prepared for the various maintenance of traffic (MOT) phases. Vijay is leading the Dynameq (Mesoscopic Modeling) modeling for evaluating various MOT strategies and completed the modeling of MOT Phase 1.

08/16 – 10/18	**I-10 Mobile River Bridge and Bayway Widening, Mobile, AL.** IMR Lead. Oversaw development of IMR from data collection phase through the approval. Tasks included traffic forecast for toll and non-toll options, analysis of the proposed Mobile River Bridge and the widening of the Bayway using Synchro/HCS, as well as the proposed modifications to the interchanges within the study area including Diverging Diamond Interchange (DDI) configurations at three locations, VISSIM modeling for analyzing complex weave conditions and the development of IMR in accordance with ALDOT guidelines and FHWA Policy Points.
12/18 – 02/19	**I-635 LBJ East Alternative Technical Concepts, Dallas, TX.** Led the traffic analysis and refinement of the Alternative Technical Concepts (ATC) proposed for three interchanges associated the I-635 LBJ East Project in Dallas, TX. Freeway elements, ramp terminals and frontage roads were analyzed for the original build concept and the proposed ATCs and demonstrated the effectiveness of the proposed ATCs over the original build concept.
03/17 – 12/17	**I-210 Bridge Traffic Impact Study, Calcasieu Parish, LA.** Managed a traffic study to develop a preferred alternative by analyzing the impacts of various I-210 bridge closure alternatives, and to develop recommendations to manage the expected congestion related to the planned rehabilitation of I-210 bridge over Prien Lake in Lake Charles, Louisiana. Developed project specific travel demand model to model and understand the impacts of bridge closure scenarios.
11/15 – 03/19	**I-49 Interchange Improvement at US 190 and LA 31, St. Landry Parish, LA.** Tasks included the development of existing and future traffic projections and develop- ment of corridor concepts using Access Management strategies, road diet options and innovative intersection configurations such as R-Cuts, J-turns and Roundabouts.
09/20 – 06/21	**MOVE 2046 Demographics and Travel Demand Model (TDM) Update.** Mr. Kunada managed the development of tour based regional travel demand model (TransCAD) along with a land use allocation model for scenario planning and development of regional demographics. This is the latest model that should be used for all traffic forecasting within the Baton Rouge MPO area. Mr. Kunada also managed the development of all TDMs for the Baton Rouge MPO area since 2006.
09/19 – 12/20	**Monroe (LA) 2045 Metropolitan Transportation Plan (Connecting Ouachita 2045).** As Project Manager, Mr. Kunada oversaw the development of performance based multi-modal long range transportation plan with detailed regional freight component. Tasks also included travel demand model (TransCAD) development using big data sources, demographic forecasting, detailed multi-modal operational and safety needs analysis with robust public and stakeholder engagement element.
05/14 – 03/16	**LA 73 Stage 0, Prairieville, LA.** As Traffic Forecast Lead, Mr. Kunada managed the development of future traffic forecast for the study using the CRPC Travel Demand model and considered future interchanges at I-10 and LA 74 and LA 429.
10/14 – 11/16	**Interstate 10 at Ambassador Caffery Pkwy Interchange Stage 0 Study.** Project Manager for Traffic Analysis. Tasks included the development of existing and future traffic projections, safety analysis and development of future interchange conceptual geometry to improve safety and accommodate future traffic demands. AM strategies include channelized turn lanes, raised medians, RCUTs, limited access driveways.
10/13 – 09/18	**Roundabout Stage 0 Feasibility Studies at Various Intersections, Lafayette, LA: Completed 23 roundabout studies using LADOTD Stage 0 and Round- about Policy. (LADOTD Project No: H.004490).** Project Manager

	**Firm**	**Neel-Schaffer, Inc.**		
	Name	Chuck LeBoeuf, PE, PTOE	Years of Relevant Experience with this Employer	11
	Title	Project Engineer	Years of Relevant Experience with Other Employer(s)	1.5

Degree(s)/Years/Specialization			BS / 2012 / Civil Engineering; MS / 2014 / Civil Engineering
Active Registration Number/State/Expiration Date			PE 0042854 / LA / 03-31-2027
Year Registered	2018	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Traffic Modeling.** Mr. LeBoeuf joined Neel-Schaffer in 2014 and has 12.5 years of experience in the engineering field, including 18 months as a Co-Op student with LADOTD. Since joining Neel-Schaffer, Mr. LeBoeuf has provided a wide variety of transportation-related services, including travel demand modeling, GIS, crash analysis, traffic analysis, and mesoscopic modeling. He also has experience in the collection of turning movement counts for development projects. Mr. LeBoeuf has completed DOTD's Traffic Engineering Process and Report (TEPR) training.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
04/18 – 04/20	**LA 328 (Rees Street) Corridor Study and Plan: Project includes improving LA.** Hwy. 328/Rees Street from Latiolais Road to E Bridge Street including con- sidering the impacts of the proposed E Mills Ave extension LA 328 to Doyle Melancon Ext. roadway and outreach
02/22 – Present	**Pinhook Road at Kaliste Saloom Road, Lafayette, LA.** This project evaluated the conversion of the intersection of Pinhook Road at Kaliste Saloom Road from a full access signalized intersection to a quadrant intersection. For this project, Mr. LeBoeuf analyzed the proposed intersection concept in Synchro and developed signal timings and lane geometry that would reduce intersection delay.
10/21 – Present	**College Drive Enhancement Project, Baton Rouge, LA.** Several off-corridor concepts were considered near College Drive between Perkins Road and I-10. Mr. LeBoeuf analyzed these off-corridor concepts using mesoscopic modeling to determine which concept, or group of concepts, would result in the most improvements within the study area. These improvements include a reduction in vehicle delays and shifts in traffic volumes.
02/21 – Present	**I-10 and I-12 College Flyover Ramp Design-Build Project, Baton Rouge, LA.** This project documented the expected work zone impacts to I-10, I-12, and nearby surface arterials due to the construction of the College Drive Flyover. Mr. LeBoeuf analyzed the expected work zone impacts using mesoscopic modeling (Dynameq) for the first phase of construction. The impacts included queueing, shifts in traffic volumes, and traffic speeds.

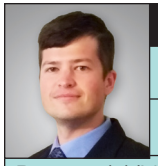
07/20 – Present	**MRB South GBR: LA 1 to LA 30 Connector, Baton Rouge, LA.** This project uses mesoscopic modeling to analyze a proposed new crossing over the Mis- sissippi River from LA 1 to LA 30 between I-10 and LA 70. Mr. LeBoeuf used the existing traffic data to develop peak period volumes and travel times which were to be used in the model calibration and validation. Mr. LeBoeuf developed the Base mesoscopic model by first expanding a previous Dyanmeq me- soscopic model to include the West Bank of the Mississippi River from Baton Rouge to Donaldsonville, and then performing Dynamic Traffic Assignments using Origin-Destination (O-D) matrices. Afterwards, Mr. LeBoeuf used the existing traffic data to calibrate the Base model to better reflect existing traffic conditions. Once the Base model was finished, Mr. LeBoeuf then developed the No Build model, which included proposed highway improvements and an updated O-D matrix. This No Build model was then used as a background model to develop Bridge-specific models for each of the 20 proposed Bridge crossings.
12/18 – 02/19	**I-635 LBJ East Alternative Technical Concepts, Dallas, TX.** Alternative Technical Concepts were proposed for three interchanges associated the I-635 LBJ East Project in Dallas, TX. For this project, Mr. LeBoeuf analyzed the freeway and frontage road elements, comparing the operational changes between the original build concept and the proposed Alternative Technical Concept.
01/17 – 08/18	**I-10 Mobile River Bridge Interchange Modification Report, Mobile, AL.** This project analyzed the impacts of the new I-10 bridge crossing the Mobile Riv- er to the south of the existing I-10 Wallace Tunnels in Mobile, AL. Mr. LeBoeuf developed future peak hour volumes using the Travel Demand Model results for Mobile and Baldwin Counties for the No Build scenario, which involved no improvements to study area roadways, and for the Build scenario, which incorporated the new I-10 Mobile River Bridge, a widened I-10 Bayway from Mobile to Daphne, AL, and interchange improvements along I-10 within the study area. Mr. LeBoeuf performed intersection traffic analyses using the existing and future peak hour traffic volumes and recommended the intersection geometry for study area intersections.
01/17 – 02/18	**Western Beltway Phase II Feasibility Study, Hattiesburg, MS.** This project determined the feasibility of extending MS 42 from I-59 to US 49 north of Hattiesburg, MS. Mr. LeBoeuf developed existing peak hour volumes and volume characteristics such as peak hour factors and heavy vehicle percentages. Mr. LeBoeuf developed future peak hour volumes using the Hattiesburg, MS Metropolitan Planning Organization's Travel Demand Model results for the No Build scenario, which involved no improvements to study area roadways, and for the Build scenario, which incorporated two roadway alignment alternatives. Mr. LeBoeuf performed intersection traffic analyses using the existing and future peak hour traffic volumes and recommended the intersection geom- etry for study area intersections. Mr. LeBoeuf analyzed crash data to determine crash trends and estimate the expected number of crashes for future scenarios. Mr. LeBoeuf also performed a benefit-cost analysis for each scenario using the expected number of crashes and expected changes in travel times.
10/16 – 01/17	**LA 1133 Realignment Study, Carlyss, LA.** This realignment study analyzed the operational impacts of closing South Boudoin Road between Sayles Street and East Dave Dugas Road in Carlyss, LA as part of the expansion of the Westlake Chemicals Plant. Mr. LeBoeuf developed future peak hour volumes using the Lake Charles, LA Metropolitan Planning Organization's Travel Demand Model results for the No Build scenario, which kept South Boudoin Road open. Volumes for the Build scenario were developed by rerouting traffic from Boudoin Road to other roads within the study area. Mr. LeBoeuf performed inter- section traffic analyses using the existing and future peak hour traffic volumes and recommended improvements for signalized and unsignalized study area intersections with the closure of South Boudoin Road.

Firm	Neel-Schaffer, Inc.		
Name	William Fulcher, PE, PTOE, PTP, RSP2B, RSP2I	Years of Relevant Experience with this Employer	8
Title	Senior Traffic Engineer	Years of Relevant Experience with Other Employer(s)	0

Degree(s)/Years/Specialization			BS / 2012 / Civil Engineering; MS / 2015 / Civil Engineering
Active Registration Number/State/Expiration Date			PE No. 45329 / LA / 09–30–2027; PTOE No. 5158 / 11–20–27; PTP No. 786 / 11–20–27; RSP2B No 33 / 07–18–26; RSP2I No 147 / 3–20–26
Year Registered	2021	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Traffic and Safety Analysis**

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
08/20 – Present	**I–10 / I–12 College Drive Flyover Design Build, Baton Rouge, LA.** Traffic Engineer, Safety Analyst. Provided the safety analysis for the interchange modification report (IMR) and traffic management plan for the proposed changes to the merger between I–12 and I–10 in Baton Rouge.
06/22 – 10/24	**LADDOTD, District 03 Safety Investment Plan.** Engineer for this study evaluating crashes at 119 locations on the state and local highway networks using variations in crash statistics to identify possible roadway issues and potential low–cost safety improvements.
02/19 – 03/20	**Retainer Contract for Safety Studies, District 07 Safety Investment Plan, 4400010504, Task Order No.** H.013826.1. Engineer Intern: Analyzed and compared safety countermeasures and analyzed crash history to determine potential improvements. Developed a priority list for future safety projects.
05/20 – 06/21	**Retainer Contract for Safety Studies, District 05 Safety Investment Plan, Ouachita Parish, LA (S.P. No. 44–10504, T.O. No. H.014295.1).** Project Manager, Traffic Engineer, Safety Analyst. Performed area wide safety screening to identify areas with high potential for safety improvements. Identified potential safety improvements to 76 locations including segments and intersections within LaDOTD District 07. Prepared a ranked priority list of projects. Coordinated and led project meetings.
02/18 – 02/19	**Retainer Contract for Safety Studies, District 08 Safety Investment Plan, 4400010504, Task Order No. H.013264.1.** Engineer Intern, Safety Analyst. Identified potential safety improvements to seventy–two locations including both segments and intersections within LaDOTD District 08. Developed an Excel based tool to perform benefit/cost comparisons of safety countermeasures. Prepared a ranked priority list of projects.
12/19 – 12/20	**US 80: Intersection @ Bellevue Rd Stage 0/Feasibility Study (S.P. No. H.014044.1).** Engineer Intern. Performed traffic data collection, safety analysis, and traffic operational analysis.

01/17 – 04/19	**LA 385 Ryan Street Feasibility Study, Lake Charles, LA (S.P. No. 44–4402, T.O. No. H.012685.1).** Engineer Intern. Performed data collection, traffic engineering, and transportation planning services for a feasibility study to determine safety and operational improvements for approximately 1.8 miles of LA 365 in Lake Charles, LA. Services included traffic volume forecasts, intersection and segment analysis, alternative development, and identifying potential safety countermeasures.
02/17 – 02/18	**US 190 & US 171 Signal Timing Study (S.P. No. 44–4064, T.O. No. H.012686.5).** Engineer Intern: Provided traffic engineering services including both the development and implementation of traffic signal timing plans for ten signals in DeRidder, LA.
02/20 – 10/21	**I–59 at US 49 PEL Study, Forrest County, MS: Traffic Engineer, Safety Analyst.** Provided the safety analysis for both existing and future expected conditions. Assisted with traffic engineering services.
04/19 – 12/19	**District 07 Traffic Signal Timing Upgrade, Lake Charles, LA (S.P. No. 44–8851, T.O. No. H.012467.5).** Engineer Intern. Provided traffic engineering services to upgrade the signal timings and coordination at five intersections along LA 14.
03/19 – 11/19	**District 61 Traffic Signal Timing Upgrade, Baton Rouge, LA (S.P. No. 44–8851, T.O. No. H.011186.5).** Engineer Intern. Provided traffic engineering services to upgrade the signal timings and coordination at six intersections along US 61 / LA 408.
01/20 – 09/21	**Mississippi State University Master Plan Update, Mississippi State, MS: Transportation Planner.** Services included identifying improvements to existing circulation, identifying new beneficial connections, determining areas of parking need, identifying potential new parking locations.
02/21 – 09/21	**Transportation Plan for Starkville, Mississippi State University, and Oktibbeha County, Oktibbeha County, MS (S.P. No. SPR– 1(111) /17838 –110000, T.O. No. NS–P/E 2019–01).** Traffic Engineer, Transportation Planner. Provided a regional transportation plan to provide guidance to all governmental entities for a coordinated effort to improve traffic in the area. Services included, traffic volume forecasts, intersection and segment analysis, and alternative development.
03/19 – 011/19	**District 08 Traffic Signal Timing Upgrade, Natchitoches, LA (S.P. No. 44–8851, T.O. No. H.011960.5).** Engineer Intern. Provided traffic engineering services to upgrade the signal timings and coordination at four intersections along LA 1 / LA 6.
9/21 – 04/22	**Retainer Contract for Safety Studies, District 61 Safety Study, LA (S.P. No. 44–10504, T.O. No. H.014684.1).** Safety Analyst. Performed area wide safety screening and crash analysis to identify areas with high potential for safety improvements. Identified potential safety improvements to 9 intersections within LaDOTD District 61.
06/21 – Present	**District 6 Emergency Signal and ITS Repair, Hancock and Harrison Counties, MS.** Traffic Engineer. Performed signal inventories and prepared signal design sheets and quantity takeoffs.



Firm	**Neel-Schaffer, Inc.**			
Name	Jonathan Duhe, PE, PTOE, RSP		Years of Relevant Experience with this Employer	11
Title	Project Engineer		Years of Relevant Experience with Other Employer(s)	1
Degree(s)/Years/Specialization		BS / 2011 / Civil Engineering		
Active Registration Number/State/Expiration Date		PE No. 41047 / LA / 03-31-27; PTOE No. 4418; RSP No. 282		
Year Registered	2016	Discipline	Civil Engineer	
Contract Role(s)/Brief Description of Responsibilities		**Traffic and Safety Analysis**		

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
03/23 - Present	**IDIQ for road design projects - this contract includes five separate Task Order projects which include traffic services, road design, preliminary and final plan development.** The projects include pavement preservation, constructing new roads, extend existing roads, construction of roundabouts, turn lanes and drainage improvements. 1. **US 90: Roundabout at LA 101 (Calcasieu) (SPN. H.015226).** Traffic Services. This project includes the design for a roundabout with high-speed approaches. The design avoids impacts to a gas station, and other development at the intersection. It includes minimum right of way taking and detention pond design. 2. **LA 621: Realignment at LA 73 (Ascension) (SPN. H.014366).** Traffic Services. This project will widening LA 73 and realign LA 621 to near its existing intersection with LA 73 to relieve congestion and improve safety. This project includes the design of a multilane roundabout to provide connectivity for local roadways, traffic analysis, Transportation Management Plan, and 1 mile of mill and overlay for LA 621. 3. **LA 16: N 2nd Street to LA 445 (Tangipahoa Parish) SPN. H.009425.5.** Traffic Services. Project includes the mill and overlay of LA 16 from N 2nd Street to east of Duncan Avenue, the in-place base rehabilitation and overlay of LA 16 from east of Duncan Avenue to LA 445. The scope of work will also include the hydraulic analysis and development of construction plans for the rehabilitation of the existing subsurface drainage system to improve drainage along LA 16 from US 51 to approximately 1000'east of Duncan Avenue. 4. **H.016158: LA 182: US 90 - Greenwood St. Overpass; 3 miles of pavement rehabilitation along LA 182 from the Westbound Exit Ramp to the Green- wood St. Overpass in Morgan City, LA.** 5. **H.015640 LA 150 & LA 818: ROUNDABOUT.** Project will convert existing intersection to single lane roundabout intersection.
02/22 – Present	**W. Broussard Roundabout at Duhon Rd. (LA 724).** This project will construct a roundabout and required drainage improvements. Includes roundabout. Completed the horizontal and vertical alignments (line and grade). Preliminary and final plans.

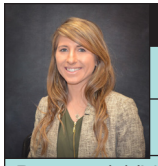
02/20 – Present	**I-20 at LA 544 Overpass Replacement, Lincoln Parish, LA.** This project will replace the existing LA 544 bridge crossing and interchange with a new bridge and roundabouts. This project includes four multilane roundabouts located in a tight project area with many constraints and large grade changes. The roundabouts will connect ramps and service roads with adjacent businesses. The project includes new bridge with sidewalk over I-20. The entire project limits are complete street compliant which means it provides facilities for all users. Tasks similar to Line and Grade completed: Established design criteria, typical roadway sections, horizontal and vertical geometry, ID structure locations and more. Mr. Duhe provided signal design review. Preliminary and final plans.
08/22 – Present	**LRSP Ardenwood Dr Road Diet, Baton Rouge, LA.** Project Engineer, Responsible for Data Collection (Traffic Counts and Peak Hour Observations), Traffic Forecasting, Safety Analyses, Corridor Operational Analyses (HCS, Sidra), Safety Analyses, Traffic Report Preparation
07/21 – Present	**FYA Signal Improvement (LCG), Lafayette, LA: Project Engineer.** Oversaw development of signal plans to upgrade 28 intersections to include flashing yellow arrow signal heads as well as backplates.
09/21 – Present	**Harding Blvd at I-110, Baton Rouge, LA: Traffic Engineer.** Performing a traffic study along Harding Boulevard between Rosewood Street and Merle Gus- tafson Drive including the I-110 Ramps in an effort to improve capacity. Assisted with data collection and Initial Data Collection Report.
09/20 – Present	**College Drive Enhancement Project, Baton Rouge, LA: Traffic Engineer.** Performing a traffic study along College Drive between Perkins Road and Bawell Street/Bankers Avenue including the I-10 Ramps in an effort to improve capacity and safety. Assisted with data collection including peak period observa- tions and travel time runs. Also performed safety analysis along the College Drive corridor.
06/20 – Present	**I-10/12 College Drive Flyover Design Build, Baton Rouge, LA: Traffic Engineer.** Performing a traffic study at the I-10/12 merge in an effort to improve capacity and safety. Assisted with uncalibrated VISSIM model. Assisted with safety analysis and signal design.
04/20 – 06/21	**District 05 Safety Investment Plan District 05, LA: Traffic Engineer.** Assisted with safety analysis including reviewing crashes utilizing LaDOTD's CATScan tool and performing benefit-cost analysis of potential safety improvements. Also assisted with report preparation.
11/17 – 04/19	**District 08 Safety Investment Plan District 08, LA: Traffic Engineer.** Assisted with safety analysis including reviewing crashes utilizing LaDOTD's CATScan tool and performing benefit-cost analysis of potential safety improvements. Also assisted with report preparation.
02/19 – 03/20	**District 07 Safety Investment Plan District 07, LA: Traffic Engineer.** Assisted with safety analysis including reviewing crashes utilizing LaDOTD's CATScan tool and performing benefit-cost analysis of potential safety improvements. Also assisted with report preparation.
11/16 – 04/19	**LA 385 (Ryan St) Feasibility Study, Lake Charles, LA: Traffic Engineer.** Assisted with intersection analysis including Vistro analysis. Assisted with safety analysis including reviewing crashes, creating collision diagrams, identifying conflict points, and using LaDOTD's CATScan tool to analyze safety. Also assist- ed with report preparation.

Firm	T. Baker Smith		
Name	Kenny Belou, PE	Years of Relevant Experience with this Employer	2
Title	Lead Professional, Transportation	Years of Relevant Experience with Other Employer(s)	17

Degree(s)/Years/Specialization			Bachelor of Science / 2009 / Civil Engineering
Active Registration Number/State/Expiration Date			PE.38850 / Louisiana / 09.30.2026
Year Registered	2014	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Roadway.** Kenny Belou, PE is TBS' engineering lead professional for our transportation practice. His duties include overseeing engineering execution for transportation related projects including design activities, report preparation, construction documents, construction administration, and client satisfaction. He has nearly 20 years of experience designing projects in accordance with LADOTD's Road Design Manual, Off-System Highway Bridge Program Guidelines, Hydraulics Manual, Bridge Design and Evaluation Manual, AASHTO's Geometric Design of Highways and Streets, and the LADOTD Standards and Specifications for Roads and Bridges.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
03/23 - Ongoing	**LADOTD, Contract 44-24928, IDIQ Contract for Roadway Design Services; Statewide LA.** Overall Project Manager. Kenny serves as the overall project manager and contract coordinator for this Statewide Roadway Design IDIQ. He coordinates with the engineers of record to ensure staffing needs are met, provides QAQC, and ensures on-time project delivery for three ongoing task orders (H.015576, H.015721, and H.015587). Kenny is also responsible for scoping, manhour estimates, and contract negotiations. He coordinates with LADOTD Project Managers and overall IDIQ Manager.
03/23 - Ongoing	**LADOTD, US 190: LA 437 to US 190 Bus (Ph. 1); St. Tammany Parish, LA.** Project Manager. The project scope includes the design and construction of a new 1,400-foot bridge over the Bogue Falaya River in St. Tammany Parish, LA. The bridge geometry includes both horizontal and vertical curvature and is super-elevated to near 4%. The project also includes roadway improvements and widening for the approaches to the bridge and intersection improvements to the adjacent LA 437 intersection. As project manager, Kenny is responsible for the construction administration.
10/22 – 12/22	**LADOTD, S.P. No. H.012812, US 190 at Northshore and Camp Villere; St. Tammany Parish, LA.** Project Manager. Kenny was responsible for quality control review on plans, design criteria and project calculations for the multi lane roundabout at the intersection of US 190 and Northshore Blvd and a single lane roundabout at the intersection of US 190 and Camp Villere Rd. Responsible for the coordination with subconsultants and LADOTD on the project deliverables. Kenny developed construction sequencing for the complex drainage work and road work required to maintain traffic through the intersection of US 190 and Northshore Blvd.

10/22 – 04/23	**LADOTD, S.P. No. H.013116, LA 20 Widen: LA 307 – S. Vacherie; St. James & Lafourche Parishes, LA.** Engineer of Record (Road) and Project Manager. Kenny was responsible for the asymmetrical widening of 2.7 miles of LA 20 to add 8' shoulders near Vacherie, LA. Project scope included horizontal and vertical geometry, drainage design (subsurface and open ditch), cross section roadway elements, and permanent signing and pavement markings. Provided quality control review of bridge plan set ensuring compliance with LADOTD standards and coordination with in-construction state project located within the project limits. Coordinated with LADOTD project manager, LADOTD pavement design section, LADOTD hydraulic section, and subconsultants to ensure project delivery meeting all necessary standards and coordinated with adjacent project. Oversaw the design of required utility relocations required for the roadway project along the corridor as a separate project let through St. James Parish.
05/23 - Ongoing	**LADOTD, Contract 44-25027, Infrastructure Investment and Jobs Act (IIJA) Off System Bridge Program District 08; District 08, LA.** Supervisor Engineer. This project included the replacement of 12 Off System Bridges and their adjacent roadways throughout LADOTD District 08. The existing bridge lengths range from 40' to 135' and the sites include cross drains, box culverts, and RC slab span bridges. Kenny is the overall project manager and supervisor engineer, responsible for complete contract and schedule execution. He is also responsible for quality control of all design elements including bridge, roadway, and hydraulic design. He works in constant coordination with internal task managers, the LADOTD project manager, District & Area engineers, and sub-consultants to ensure on time and complete deliverables.
10/22 - Ongoing	**LADOTD, Contract 44-17598, Contract 44-19336, Rural Bridge Replacement Initiative, Ph I and Ph II (87 bridge structures); Districts 04, 05, 08, 58.** Project Manager. The scope for phases I and II included the replacement of 87 bridges throughout fourteen Parishes in Northern Louisiana. The bridge lengths ranged from 20' to 340'. Kenny is responsible for construction support for Phase I bridge projects and responsible for contract execution for Phase II. He is also responsible for quality control of all design elements including roadway design, hydraulic design, and bridge design. He works in constant coordination with internal task managers, the LADOTD project manager, and subconsultants for this fast-paced project.
11/23 - Ongoing	**LADOTD, S.P. No. H.015576, LA 447 & LA 1025: Roundabout; Livingston Parish, LA.** Supervisor Engineer. Kenny is the supervisor engineer for this roundabout project in Livingston Parish, issued as a task order through TBS's master contract for LADOTD Roadway Design Services IDIQ. He is responsible for the quality assurance, quality control, and project delivery for this urban single lane roundabout. 100% Preliminary Plans were delivered to LADOTD on schedule in October 2024.
10/24 - Ongoing	**LADOTD, S.P. No. H.015721, LA 30: Roundabout @ St Elizabeth/ S Penn; Ascension Parish, LA.** Supervisor Engineer. Kenny is the supervisor engineer for this roundabout project in Ascension Parish, issued as a task order through TBS's master contract for LADOTD Roadway Design Services IDIQ. He is responsible for the quality assurance, quality control, and project delivery for this urban multi-lane roundabout.
12/22 – 07/24	**Ascension Parish Government, MA-18-12, Hwy 930 Widening (LA 42 to Causey Road); Ascension Parish, LA.** Supervisor Engineer. Kenny was the supervisor engineer for the 1.6 mile roadway reconstruction project in Ascension Parish. He oversaw the redesign of the project's open ditch and subsurface drainage system which was previously designed by LADOTD (H.003790) prior to the road transfer to Ascension Parish. The drainage redesign mitigated conflicts with a major water transmission line located throughout the project length which was identified during utility coordination between Ascension Parish and Baton Rouge Water Company. Following the review and approval of the drainage redesign, he was responsible for the quality assurance, quality control and project delivery for the local urban collector roadway project. The project and project delivery follow all LADOTD design guidelines and milestones. Final Plans were to be delivered to the Parish in mid-2024 ahead of the schedule for the expected 2025 letting and construction.

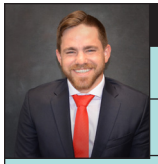


Firm	T. Baker Smith		
Name	Kelly Radecker, PE	Years of Relevant Experience with this Employer	6
Title	Lead Transportation Engineer, Roads	Years of Relevant Experience with Other Employer(s)	5

Degree(s)/Years/Specialization			BS / 2014 / Civil Engineering
Active Registration Number/State/Expiration Date			PE.43919 / Louisiana / 03.31.2026
Year Registered	2019	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Horizontal/Vertical Alignments.** Kelly Radecker, PE is the Lead Roadway Engineer for our Transportation Engineering team. Kelly will serve as the overall road design lead for T. Baker Smith. Prior to joining T. Baker Smith, Kelly gained valuable transportation experience while employed by LADOTD. Kelly is notably experienced in design of roadway widening, roundabouts, drainage, and bridge replacement and reconstruction in accordance with LADOTD's Roadway Design Procedures and Details Manual, LADOTD's Hydraulics Manual, and DOTD plan preparation guidelines. She is familiar with AASHTO standards and guidelines. She is skilled in development of roadway models and design, hydraulic analysis, and sign design utilizing MicroStation, InRoads, AutoTURN, Torus, HYDRWIN, GeoHECRAS, and SignCAD.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
02/20 – 12/22	**S.P. No. H.012812, US 190 at Northshore and Camp Villere; LADOTD; St. Tammany Parish, LA.** Engineer of Record. Kelly was the Lead Roadway Engineer for the design and plan preparation of an urban multi-lane roundabout at the intersection of US 190 and Northshore Blvd. and an urban single lane roundabout at the intersection of US 190 and Camp Villere. She was responsible for the design of several roadway elements including the H&V alignments, roundabout geometrics, AutoTURN movements, drainage design, typical sections, sequence of construction, pay item compilation, and quantity take-offs. Kelly created design report forms and cost estimates as well as assisted in coordinating the environmental process including the creation of exhibits to be utilized at Public Meetings. She also coordinated with subconsultants and provided quality control of design elements performed by the subconsultant including temporary traffic signal design and roadway striping and signing sheets.
11/23 – Ongoing	**S.P. No. H.015576, LA 447 & LA 1025: Roundabout; LADOTD; Livingston Parish, LA**. Engineer of Record. Kelly is the Lead Roadway Engineer for the design and plan preparation of an urban single lane roundabout at the intersection of LA 447 and LA 1025. She was responsible for the job planning, including preliminary schematic layouts and defining the project limits. She is responsible for the design of several roadway elements including the H&V alignments, roundabout geometrics, AutoTURN movements, typical sections, sequence of construction, pay item compilation and quantity take-offs. Kelly is responsible for creating design report forms as well as assisting in coordinating the environmental process including the creation of exhibits to be utilized at Public Meetings.

12/19 – Ongoing	**S.P. No. H.014407, LA 621 at Roddy Rd; Ascension Parish Government; Ascension Parish, LA.** Engineer of Record. Kelly is the Lead Roadway Engineer for the design and plan preparation of an urban single lane roundabout at the intersection of LA 621 and Roddy Rd. She is responsible for the design of several roadway elements including the H&V alignments, roundabout geometrics, AutoTURN movements, drainage design, typical sections, sequence of construction, pay item compilation and quantity take-offs. Kelly created design report forms and cost estimates as well as assisted in coordinating the environmental process including the creation of exhibits to be utilized at Public Meetings.
05/19 – 06/21	**S.P. No. H.004113, I-12 to Bush: LA 3241: LA 435 to LA 40/41; LADOTD; St. Tammany Parish, LA.** Project Engineer. The project scope included the design and construction of approximately 5.5 miles of roadway on virgin terrain consisting of four lanes with inside and outside shoulders and a depressed median. The project also included the coordination of design and construction of a 500' bridge over Talisheek Creek. Kelly provided design support for roadway design and plan production, as well as performed quality control of inroads modeling, provided assistance in quantity take-off calculations, reviewed roadway design plan sheets including Typical Section, Plan & Profile Sheets, and Geometric Layout Sheets, and reviewed permanent signing layout plans (including development of non-standard signs using SignCAD). She also drafted design exceptions and waivers and responded to comments from LADOTD on plan production.
08/20 – Ongoing	**Ph I 05/21 – Ongoing Ph II Contract 44-17598, Contract 44-19336, Rural Bridge Replacement Initiative, Ph I and Ph II (87 bridge structures); LADOTD; Districts 04, 05, 08, 58.** Engineer of Record. Kelly is the Lead Engineer for the design and plan production of 19 bridge replacements (5 state projects) throughout Central and North Louisiana. Prior to design, she conducted project site visits, compiled survey field packs and survey request forms, and reviewed topographic survey deliverables. Kelly is responsible for the development of all road and bridge design elements including H&V alignments, bridge hydraulic design, roadway cross sectional elements, guardrail calculations, geometrical layouts, summary sheets and cost estimates. Kelly reviewed and assisted in the submission of all environmental deliverables including wetland delineations. Kelly oversaw the development of all additional project documentation including Design Report Forms, Bridge and Hydraulic Design Criteria, Design Exceptions, and Design Waivers.
12/23 - Ongoing	**S.P. No. H.015555, LA 1077/Brewster Rd Roundabout; St. Tammany Parish Government; St. Tammany Parish, LA.** Engineer of Record. Kelly is the Lead Roadway Engineer for the design and plan preparation of an urban single lane roundabout at the intersection of LA 1077 and Brewster Rd. She is responsible for the job planning, including preliminary schematic layouts and defining the project limits. She is responsible for the design of several roadway elements including the H&V alignments, roundabout geometrics, AutoTURN movements, typical sections, sequence of construction, pay item compilation and quantity take-offs. Kelly is responsible for creating design report forms as well as assisting in coordinating the environmental process including the creation of exhibits to be utilized at Public Meetings.
03/24 - Ongoing	**S.P. No. H.015554, Loyola Dr: 31st St – W Loyola Resurface; City of Kenner, LA.** Engineer of Record. Kelly is the Lead Roadway Engineer for the design and plan preparation of the resurfacing of Loyola Dr, a Pavement Preservation Project through LADOTD's Urban Systems Program. She was responsible for the job planning, coordinating with LADOTD and City of Kenner. She is responsible for the plan production, quantity take-offs, and cost estimation. The project includes mill and overlay of the 0.6 mile portion of Loyola Dr and includes curb ramp replacement and installation of pedestrian crosswalks. She coordinated with the traffic engineering subconsultant for implementation of the results of the traffic study.
09/17 – 05/19*	**S.P. No. H.012393, LA 98: Roundabout at Mills Street.** Project Engineer. Assisted in the design and plan preparation of a single lane roundabout at the intersection of LA 98 and Mills St. in Lafayette Parish. Responsible for the design of H&V alignments, roundabout geometrics, autoturn movements, typical pavement sections, construction sequencing and quantity take-offs. Also assisted in the creation of plan sheets and design documentation. *Previous employer

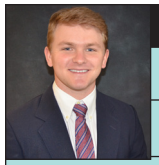


Firm	T. Baker Smith		
Name	Brady Smith, PE, PMP	Years of Relevant Experience with this Employer	3
Title	Project Manager, Transporation	Years of Relevant Experience with Other Employer(s)	6

Degree(s)/Years/Specialization			Bachelor of Science / 2016 / Civil Engineering
Active Registration Number/State/Expiration Date			PE.45362 / Louisiana / 09.30.2025
Year Registered	2021	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Horizontal/Vertical Alignments.** Brady Smith, PE serves as a project manager for projects that include roadway design, bridge replacements, hydrologic and hydraulic analysis, and drainage design. Brady gained valuable transportation experience while employed by LADOTD. He has experience in a wide variety of LADOTD projects including bridge replacements, bridge inspections, bridge load ratings, roundabouts, interstate ramps, and roadway widening. Brady is experienced in AASHTO and LADOTD's Geometric Design Guidelines as well as Bentley InRoads, MicroStation, AutoTURN, Torus, GeoHECRAS, and LADOTD's HYDRWIN programs. Brady has completed CPTP SCS Cybersecurity WBT training as required by LADOTD and is a certified ATSSA Traffic Control Supervisor (TCS).

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
09/24 - Ongoing	**S.P. No. H.015721, LA 30: Roundabout @ St Elizabeth/ S Penn; LADOTD; Ascension Parish, LA.** Engineer of Record. Brady is the Engineer of Record for the design and plan preparation of an urban multi-lane roundabout at the intersection of LA 30, St. Elizabeth St, and S Penn. He was responsible for the job planning, including preliminary schematic layout and defining the project limits. He is responsible for the design of several roadway elements including the H&V alignments, roundabout geometrics, AutoTURN movements, typical sections, sequence of construction, pay item compilation and quantity take-offs. Brady is responsible for creating design report forms as well as assisting in coordinating the environmental process including the creation of exhibits to be utilized at Public Meetings.
05/23-Ongoing	**Contract 44-25027, Infrastructure Investment and Jobs Act (IIJA) Off System Bridge Program District 08; LADOTD; District 08, LA.** Project Manager/Engineer of Record. Brady is responsible for developing the project schedule, drafting subconsultant contracts, manhour estimation, site visits & reconnaissance, coordination with LADOTD and Parish personnel, coordination with topographic surveyor, hydraulic subconsultant, and geotechnical consultants. Brady is also the lead engineer for the design and plan production of 5 bridge replacements (3 state projects). He is responsible for the development of all road and bridge design elements including H&V alignments, bridge hydraulic design, roadway cross sectional elements, guardrail calculations, geometric layouts, and cost estimates. Brady also oversees the development of all additional project documentation including Design Report Forms, Bridge and Hydraulic Design Criteria, Design Exceptions and Design Waivers.

03/23 – 07/2	**S.P. No. H.013116, LA 20 Widen: LA 307 – S. Vacherie; LADOTD; St. James & Lafourche Parishes, LA.** Project Engineer. Brady was responsible for managing the final QA/QC review and implementation of review comments of the construction plans for the asymmetrical widening of 2.7 miles of LA 20 to add 8' shoulders near Vacherie, LA. Project scope included horizontal and vertical geometry, drainage design (subsurface and open ditch), cross section roadway elements, and permanent signing and pavement markings.
02/22 – Ongoing	**Contract 44-19336, Rural Bridge Replacement Initiative, Ph II (40 bridge structures); LADOTD; Districts 04 & 05.** Engineer of Record. Lead engineer for the design and plan production of 13 bridge replacements (6 state projects) throughout North Louisiana. Responsible for the development of all road and bridge design elements including H&V alignments, bridge hydraulic design, roadway cross sectional elements, guardrail calculations, geometric layouts, and cost estimates. Brady is also responsible for the load rating analysis and report for 6 of the proposed structures and quality control for the other 7 proposed structures. Brady is responsible for reviewing and assisting in the submission of all Environmental deliverables including Wetland Delineations. Brady also oversees the development of all additional project documentation including Design Report Forms, Bridge and Hydraulic Design Criteria, Design Exceptions and Design Waivers.
04/17 – 02/19	**S.P. No. H.010124, LA-16: Roundabout @ LA-447; LADOTD; Livingston Parish, LA.** Project Engineer. Brady was responsible for roadway full-sized plan preparation, subsurface drainage design, curb and gutter drainage design, roundabout geometric design, construction phasing, temporary traffic control, required right of way determination and cost estimation.
01/17 – 02/19	**S.P. No. H.008312, LA 1042 Bridges Near Greensburg; LADOTD; St. Helena Parish, LA.** Project Engineer. Brady was responsible for roadway full-sized plan preparation, bridge approach geometric design, diversion road geometric design, construction phasing, temporary traffic control, required right-of-way determination and cost estimation. Scope included replacing three treated timber trestle bridges along LA-1042 with two reinforced concrete box culverts and one slab span bridge. Diversion roads were required at all three sites for traffic maintenance during construction.
10/23 - Ongoing	**S.P. No. H.012864, Carmel Drive Sidewalks; Lafayette Consolidated Government; Lafayette Parish, LA.** Project Manager/ Engineer of Record. Brady is responsible for the design and plan production of 0.7 miles of ADA compliant sidewalks on each side of LA 94 (Carmel Drive) in Lafayette, Louisiana. He is responsible for the development of all design elements including H&V alignments, drainage, sidewalk cross sectional elements, and cost estimates.
09/22 - Ongoing	**Eagle's Nest Ct. Bridge Rehabilitation; Mockler Beverage; Terrebonne Parish, LA.** Project Manager. This project includes the inspection, design, and rehabilitation of the bridge over Little Bayou Black leading into Mockler Beverage in Houma, LA. This bridge services workers and beverage distribution trucks. Brady provided overall project coordination and was the engineer of record for the bridge inspection and subsequent load rating and inspection report, which recommended rehabilitation of superstructure and substructure components. He has also continued to lead the design efforts for the rehabilitation design and construction plans.

	**Firm**	**T. Baker Smith**		
	Name	Justin Loup, EI	Years of Relevant Experience with this Employer	5
	Title	Engineer Intern, Transportation	Years of Relevant Experience with Other Employer(s)	0

Degree(s)/Years/Specialization			BS / 2021 / Civil Engineering
Active Registration Number/State/Expiration Date			EI.35451 / Louisiana / 09.30.2025
Year Registered	2021	Discipline	Civil Engineer Intern
Contract Role(s)/Brief Description of Responsibilities			**Engineer Intern.** Justin Loup, EI is an engineering intern for the TBS transportation group and assists with road design, bridge design, production of engineering drawings and plan sets, and interpretation of LADOTD standard plans. He maintains the ATSSA Traffic Control Supervisor (TCS) and Traffic Control Technician (TCT) certifications.

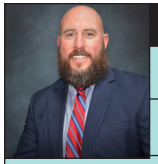
Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
02/24 - Ongoing	**S.P. No. H.015555, LA 1077 & Brewster Rd Roundabout; LADOTD / St. Tammany Parish; Madisonville, LA.** Project Engineer. Justin assists with engineering design, development of horizontal and vertical alignments, hydraulic design, drafting and detailing of road and drainage plans, performing roadway and hydraulic calculations, interpreting LADOTD standard plans, quantifying roadway elements and cost estimates.
09/24 - Ongoing	**S.P. No. H.015721, LA 30: Roundabout @ St Elizabeth/ S Penn; LADOTD; Ascension Parish, LA.** Project Engineer. Justin assists with the engineering design, development of horizontal and vertical alignments, roadway modeling, hydraulic design--including major subsurface networking, and plan preparation. Justin also provides quantity takeoffs for establishment of plan quantities and cost estimation.
06/20 – 11/23 05/21 – Ongoing	**Contract 44-17598, Contract 44-19336, Rural Bridge Replacement Initiative, Ph I and Ph II (87 bridge structures); LADOTD; Districts 04, 05, 08, 58.** Project Engineer. Justin assisted in producing engineering drawings and plan sets, developing horizontal and vertical roadway alignments, reviewing engineering drawings, interpreting LADOTD standard plans, performing bridge calculations, guard rail design, quantifying bridge and roadway elements, cost estimates, and attending plan-in-hand meetings with the client.
05/19 – 07/19 05/20 – 04/23	**S.P. No. H.013116, LA 20 Widen: LA 307 – S. Vacherie; LADOTD; St. James & Lafourche Parishes, LA.** Project Engineer. Justin assisted with bridge design and produced engineering drawings and plan sets, temporary erosion control sheets, pavement marking sheets, and Reference Points and Benchmark Elevation sheets, reviewing engineering drawings, interpreting LADOTD standard plans, performing bridge calculations, guard rail design, quantifying bridge and roadway elements, and cost estimates.

Firm	T. Baker Smith		
Name	Lisa Osborne	Years of Relevant Experience with this Employer	10
Title	Senior Project Designer	Years of Relevant Experience with Other Employer(s)	33

Degree(s)/Years/Specialization			N/A
Active Registration Number/State/Expiration Date			N/A
Year Registered	N/A	Discipline	N/A
Contract Role(s)/Brief Description of Responsibilities			**Traffic and Safety Analysis.** Lisa Osborne is a Senior Project Designer with over 43 years of CAD experience in civil, transportation, and structural engineering. She has extensive experience using MicroStation for roadway and structural projects. Lisa has over 30 years of experience using InRoads for developing horizontal and vertical alignments including generating templates to develop roadway sections and earthwork volumes for multi-lane interstate facilities and roundabout intersections. She has prepared complete sets of drawings for construction on numerous LADOTD projects. Lisa's advanced modeling skills include superelevation design and implementation, complete corridor modeling, berms and sidewalks, bridge embankment and revetment layouts, open ditch and subsurface drainage, and complex roundabout design. Lisa has completed the CAD conform training provided by LADOTD and is proficient in LADOTD's standards of roadway plan preparation. She is skilled in all current versions of MicroStation, InRoads, AutoTURN, and Torus.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
02/20 – 12/22	**S.P. No. H.012812, US 190 at Northshore and Camp Villere; LADOTD; St. Tammany Parish, LA**. Senior Project Designer. Created roadway templates and developed corridor model for the urban multi-lane roundabout at the intersection of US 190 and Northshore Blvd. and the urban single lane roundabout at US 190 and Camp Villere Rd. Created graphical grading sheets from the roadway model to derive accurate cross sections and earthwork volumes. Lisa was also responsible for the creation of several plan sheets including Plan & Profile Sheets, Typical Sections, Geometric Layouts, Joint Layouts and Cross Sections. Assisted in the determination of several quantities including earthwork, asphalt, concrete curb and gutter, and PCC pavement.
12/23 - Ongoing	**S.P. No. H.015576, LA 447 & LA 1025: Roundabout; LADOTD; Livingston Parish, LA.** Senior Project Designer. Created roadway templates and developed corridor model for the urban single lane roundabout at the intersection of LA 447 and LA 1025. Created graphical grading sheets from the roadway model to derive accurate cross sections and earthwork volumes. Lisa was also responsible for the creation of several plan sheets including Plan & Profile Sheets, Typical Sections, Geometric Layouts, Joint Layouts and Cross Sections. She utilized Autoturn to confirm turning movements for all legs of the roundabout for a WB-67 and BUS-45 and assisted in the determination of several quantities including earthwork, asphalt, concrete curb and gutter and PCC pavement.
10/14 – 06/21	**S.P. No. H.004113, I-12 to Bush: LA 3241: LA 435 to LA 40/41; LADOTD; St. Tammany Parish, LA.** Senior Project Designer. Performed topographic survey data processing and deliverable preparation, roadway designer activities including roadway corridor modeling of roadway surface, open ditches, median cross overs and intersections utilizing Inroads and roadway plan production for the new 5.5-mile, four-lane RA-3 roadway from LA 435 to Bush, LA.

07/17 – 04/23	**S.P. No. H.013116, LA 20 Widen: LA 307 – S. Vacherie; LADOTD; St. James & Lafourche Parishes, LA.** Senior Project Designer. Assisted with roadway design efforts for the widening of 2.7 miles of LA 20 to add shoulders. Created roadway templates and corridor model, determined limits of construction, derived roadway quantities, create and annotated cross sections including earthwork volumes. She also assisted in determining the different levels of embankment required due to roadway widening and settlement.
02/18 - Ongoing	**S.P. No. H.001344, US 190: LA 437 to US 190 Bus (Ph 1); LADOTD; St. Tammany Parish, LA.** Senior Project Designer. Develop horizontal and vertical alignments for use in developing the model. Prepare cross sections, volumes, quantities and general plan development. Assist in the development of required retaining walls and revetments for the bridge.
08/20 – Ongoing	**Contract 44-17598, Contract 44-19336, Rural Bridge Replacement Initiative, Ph I and Ph II (87 bridge structures); LADOTD; Districts 04, 05, 08, 58.** Senior Project Designer. Assisted with roadway geometric design including H&V alignments, bridge modeling including embankment and revetment layout. performed advanced roadway design modeling including complete corridor modeling using MicroStation/InRoads, transitions, all cross sectional roadway elements, open ditches, prepared roadway plans using MicroStation, InRoads, CADConform and AutoTURN.
10/16 – 03/23	**S.P. No. H.011152, I-12: US 190 to LA 59; LADOTD; St. Tammany Parish, LA.** Senior Project Designer. Assisted with roadway geometric design including H&V alignments, performed advanced roadway design modeling including complete corridor modeling using MicroStation/InRoads, modeling of median barriers, transitions, all cross sectional roadway elements, open ditches and interchange elements, modeling of construction phasing for Level 4 Traffic Management Plans, prepared roadway plans using MicroStation, InRoads, CADConform and AutoTURN for the four-mile widening and reconstruction of Interstate 12 in Covington, LA.
12/19 - Ongoing	**S.P. No. H.014407, LA 621 at Roddy Rd; Ascension Parish Government; Ascension Parish, LA.** Senior Project Designer. Created roadway templates and developed corridor model for the urban single lane roundabout at LA 621 and Roddy Rd. Created graphical grading sheets from the roadway model to derive accurate cross sections and earthwork volumes. Lisa was also responsible for the creation of several plan sheets including Plan & Profile Sheets, Typical Sections, Geometric Layouts, and Cross Sections. Assisted in the determination of several quantities including earthwork, asphalt, concrete curb and gutter and PCC pavement.
05/23 - Ongoing	**Contract 44-25027, Infrastructure Investment and Jobs Act (IIJA) Off System Bridge Program District 08; LADOTD; District 08, LA.** Senior Project Designer. Assisted with roadway geometric design including H&V alignments, bridge modeling including embankment and revetment layout. performed advanced roadway design modeling including complete corridor modeling using MicroStation/InRoads, transitions, all cross sectional roadway elements, open ditches, prepared roadway plans using MicroStation, InRoads, CADConform and AutoTURN.
03/23 - Ongoing	**S.P. No. H.013199, Country Estates Dr. Over St. Louis Bayou; LADOTD; Terrebonne Parish.** Senior Technician. Lisa serves as the Senior Technician for this Off-System bridge project in Terrebonne Parish. She is responsible for the roadway model, preparing cross sections, and cutting plan sheets. She assists with quantity takeoffs for road and bridge elements.

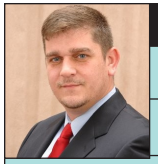


Firm	T. Baker Smith		
Name	Rene Herbert, PLS, PMP	Years of Relevant Experience with this Employer	17
Title	Survey Lead Professional	Years of Relevant Experience with Other Employer(s)	0

Degree(s)/Years/Specialization			BS/2008/Geomatics
Active Registration Number/State/Expiration Date			PLS.5070/LA/3.31.2026
Year Registered	2011	Discipline	Professional Land Surveyor
Contract Role(s)/Brief Description of Responsibilities			**Surveyor.** Rene Hebert, PLS, PMP is a lead professional and project manager at TBS. He is directly involved in the oversight and execution of the technical aspect of surveying projects including producing and revising drawings, sketches, and plans for contract documents and QA/QC of surveying services. He coordinates work among project technicians, field crew coordinator, field survey personnel, and other required project professionals. His experience includes topographic, boundary and GPR surveys; and underwater acoustic hydrographic surveys including multibeam, single beam, side scan sonar, acoustical soundings, magnetometry and other bathymetric surveys. Rene holds the Project Management Professional (PMP #3150916) certification, as well as ATSSA TCS and TCT certifications.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/20 - 02/24	**Contract 44-17598, 4400019336 Rural Bridge Replacement Initiative Phases I & II; LADOTD; Districts 04, 05, 08, and 58.** Survey Lead Professional. Responsible for overseeing topographic surveys, crew coordination, oversight of data processing, TBS performed control, topographic, and right of way surveys for the replacement of 87 bridge structures. Data was captured to detail the existing bridges themselves, roadways on either side, and surrounding terrain to ensure proper tie into to existing surfaces. Cross sections of the channels they cross were also surveyed to provide information for hydraulic modeling. Data is then processed and QA/QCd, and coordinated with in house engineers designing the replacement bridges.
06/23 - Ongoing	**Contract 44-25027, Infrastructure Investment and Jobs Act (IIJA) Off System Bridge Program District 08; LADOTD; District 08, LA.** Survey Lead Professional. Performed resource allocation and oversight for the completion of topographic surveys, property surveys and right of way maps. Project involved the replacement of 12 bridges and all deliverables were prepared according to LADOTD Location and Survey Standards.
11/21 – Ongoing	**Contract 44-21973 IDIQ for Professional Surveying Services; LADOTD; Statewide, LA.** Survey Lead Professional. Rene assists the surveyor with manhour estimate development and project QAQC. He also oversees the allocation of resources to the project, ensuring delivery according to project schedule.
01/23 – 02/24	**1 H.015576 LA 447 & LA 1025: Roundabout; LADOTD; Walker, LA.** Survey Lead Professional. Rene oversaw the completion of a topographic survey for the design and construction of a roundabout. He also assisted the Surveyor with resource allocation in order to maintain project schedule.

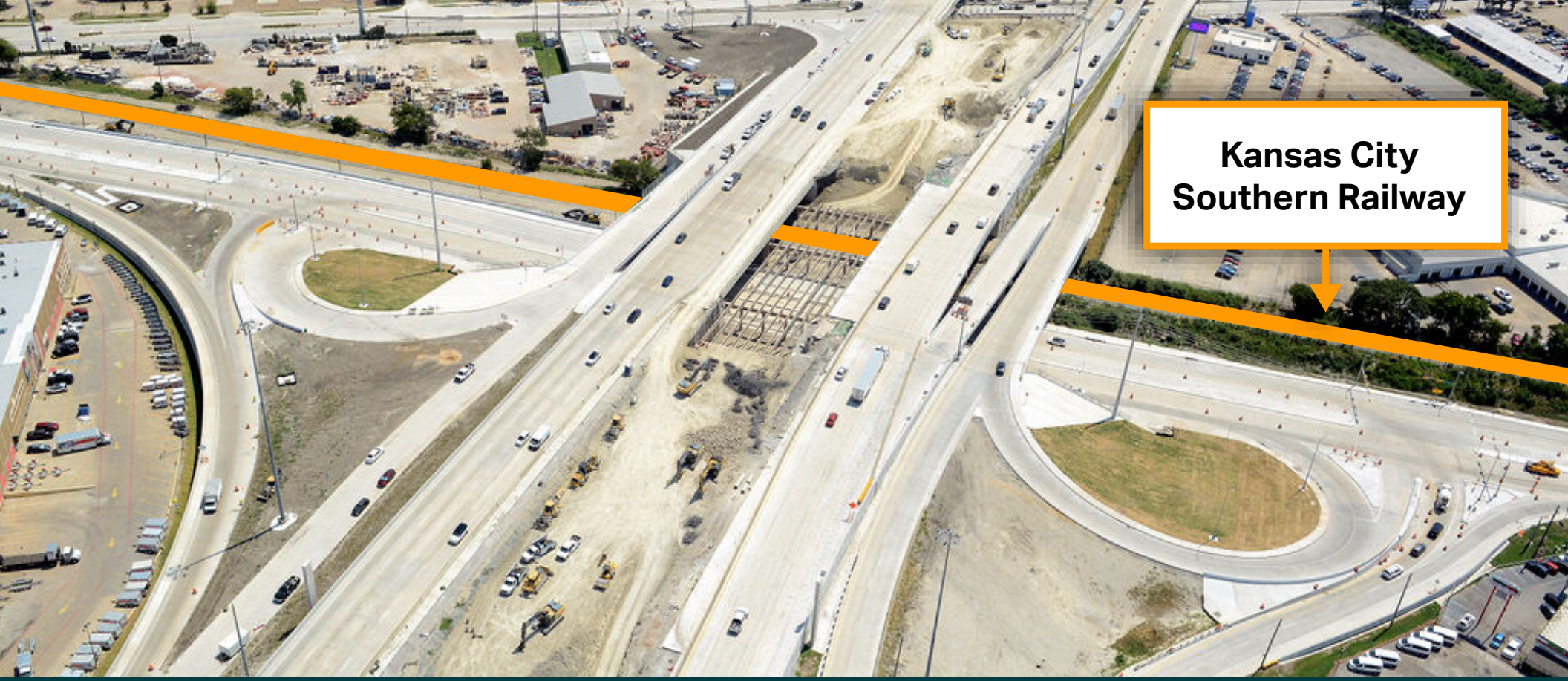
12/23 – 04/24	**S.P. No. H.015555 LA 1077 & Brewster Rd Roundabout; LADOTD / St. Tammany Parish; Madisonville, LA.** Survey Lead Professional. Rene oversaw the completion of a topographic survey for the design and construction of a roundabout. He also assisted the Surveyor with resource allocation in order to maintain project schedule.
07/16 – 09/16	**S.P. No. H.004113, I-12 to Bush: LA 3241: LA 435 to LA 40/41; LADOTD; St. Tammany Parish, LA.** Survey Lead Professional. Oversaw topographic surveying, property surveys and Right of Way map production including 101 parcels for new 5.5-mile, fourlane SA-3 roadway from LA 435 to Bush, LA. Topographic Survey included a DTM width of 300' through heavily wooded terrain and several drainage crossings and bridge structures.
07/17 – 01/22	**S.P. No. H.013116, LA 20 Widen: LA 307 – S. Vacherie; LADOTD; St. James & Lafourche Parishes, LA.** Survey Lead Professional. Responsible for the supervision of the topographic survey of a 2.7 mile stretch of LA 20 near Vacherie, LA. Oversaw crew coordination, data processing, deliverable preparation and also surveyor of record for the Final R/W Maps. Oversaw the survey through challenging environments including forested wetlands, parallel borrow canal, and substandard bridge design width and sight lines.
08/22 - Ongoing	**S.P. No. H.014918 LA 73 Roundabout at Bluff Road Connector; Ascension Parish Government, Ascension Parish, LA.** Survey Lead Professional. Performed resource allocation and oversight for the completion of topographic surveys, property surveys and right of way maps. Project involved the design and construction of a roundabout at the intersection of LA 73 and the proposed Bluff Connector Road.

	**Firm**	**T. Baker Smith**		
	Name	TJ Stokes, PE	Years of Relevant Experience with this Employer	4
	Title	SUE Lead Professional	Years of Relevant Experience with Other Employer(s)	12

Degree(s)/Years/Specialization			BS/2012/Architectural Engineering
Active Registration Number/State/Expiration Date			PE.0046645/LA/9.30.2026
Year Registered	2022	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**SUE/Utility Coordination.** TJ has over 16 years' experience in successfully managing numerous SUE projects specializing in transportation and roadway projects. As the Lead Professional for Subsurface Utility Engineering, he is currently overseeing the completion of DOTD and MDOT retainer contracts along with numerous other public and private client projects. He has thorough knowledge of the Subsurface Utility Engineering standards listed in CI/ASCE Standard 38-02 and is familiar with all SUE technologies and equipment, including but not limited to, ground penetrating radar (GPR), vacuum excavation, and numerous other types of geophysical locating equipment. He also has extensive experience managing and overseeing utility coordination and design projects.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
05/21 – 03/24	**S.P. No. H.003931.5, Calcasieu River Bridge (HBI); LADOTD; Calcasieu Parish, LA.** Project Manager/Engineer of Record. Responsible for all Subsurface Utility Engineering and Utility Coordination. Oversaw all Quality Level B and Quality Level A SUE services and performed QA/QC on the topographic survey submitted to LADOTD to ensure compliance with ASCE 38-02. Reviewed all utility coordination procedures including conflict matrix and conflict plan creation.
11/21 – 02/22	**S.P. No. H.014670.5, LA 1270: LA 77 to End of Control Section; LADOTD; Iberville Parish, LA.** Contract administrator/ Engineer of Record. Responsible for all Subsurface Utility Engineering Quality Level B services and performed QA/QC on the topographic survey performed by LADOTD to ensure compliance with ASCE 38-02. LADOTD Location and Survey field staff performed the topographic survey and we ensured a smooth working environment for data collection.
10/21 – 03/22	**S.P. H.014747.5, Southern University Ravine Protection, LADOTD, East Baton Rouge Parish, LA.** Contract administrator/ Engineer of Record. Responsible for all Subsurface Utility Engineering Quality Level B and Quality Level C services and performed QA/QC on the topographic survey submitted to LADOTD to ensure compliance with ASCE 38-02. Ensured all work was completed within the truncated time frame.
01/22 – 07/22	**S.P. H.012541.5, LA 594; Overpass I-20, LADOTD, Ouachita Parish, LA.** Contract administrator. Responsible for all Subsurface Utility Engineering Quality Level B services and performed QA/QC on the topographic survey performed by external surveyor to ensure compliance with ASCE 38-02.

03/21 – 01/22	**Move Ascension, LA 44 & Parker Roundabout, Subsurface Utility Engineering; Ascension Parish Government; Ascension Parish, LA.** Lead Professional. Provided Subsurface Utility Engineering for the LA 44 & Parker Roundabout as part of the Move Ascension Program. Quality Level B services were provided throughout the project limits to determine the horizontal location of utilities to assist with the roadway design. Quality Level A test holes were also provided to provide vertical information where utilities would conflict with roadway or drainage design.
02/22 – 05/22	**Move Ascension Parker Road and LA 929 Widening; Ascension Parish Government; Ascension Parish, LA.** Lead Professional. Provided Subsurface Utility Engineering for the Parker Road and LA 929 Widening project as part of the Move Ascension Program. Quality Level B services were provided throughout the project limits to determine the horizontal location of utilities to assist with the roadway design. Quality Level A test holes were also provided to provide vertical information where utilities would conflict with roadway or drainage design.
05/23 - Ongoing	**LADOTD, Contract 44-17598, Contract 44-19336, Rural Bridge Replacement Initiative, Ph I and Ph II (87 bridge structures); Districts 04, 05, 08, 58.** Principal/Practice Leader. The scope for phases I and II included the replacement of 87 bridges throughout fourteen Parishes in Northern Louisiana. The bridge lengths ranged from 20' to 340'. TJ leads the coordination effort with the engineering, environmental, and survey discipline leaders to ensure effective project delivery.
05/23 - Ongoing	**LADOTD, Contract 44-25027, Infrastructure Investment and Jobs Act (IIJA) Off System Bridge Program District 08; District 08, LA.** Principal/Practice Leader. This contract includes the replacement of 12 Off System Bridges and their adjacent roadways throughout central Louisiana. The existing bridge lengths range from 40' to 135' and the sites include cross drains, box culverts, and RC slab span bridges. TJ coordinates with the engineering, environmental, and survey discipline leaders to ensure effective project delivery.
05/24 – Ongoing	**23-EN-HC-0029, Highland Road at Pecue Lane; City of Baton Rouge and Parish of East Baton Rouge; East Baton Rouge Parish, LA.** Principal/Practice Leader. Responsible for ensuring quality management plans, and quality of work across engineering design, surveying, and environmental disciplines for this multi-discipline project. Project scope includes the analysis of the existing 2-way stop condition intersection and construction plan development for intersection improvements. TJ is accountable for the development of Project Management Plan and Work Plan submitted to the client.
05/23 - 09/23	**LADOTD, S.P. No. H.010557, Lajaunie Rd./Lateral I Bayou St. Clair; Lafayette Parish, LA.** Practice Leader. TJ led the coordination effort between the engineering team and LADOTD to ensure successful delivery of Final Tracings submittal following Parishspecific requests for this Off-System Bridge project. TJ also oversaw the coordination between Parish and TBS surveying to ensure right-of-way staking was completed to Parish's requirements.
03/24 – Ongoing	**S.P. No. H.015554, Loyola Dr: 31st St – W Loyola Resurface; City of Kenner, LA.** Principal / Practice Leader. TJ coordinates between engineering and design project managers and is responsible for project execution for this Pavement Preservation project located in Jefferson Parish, LA.
12/23 – Ongoing	**LADOTD, S.P. No. H.015555, LA 1077 & Brewster Rd Roundabout; St. Tammany Parish; Madisonville, LA.** Principal/Practice Leader. Responsible for ensuring multi-disciplinary quality management plans and overall quality of work for LADOTD and St. Tammany Parish for the roundabout located at the intersection of LA 1077 and Brewster Road. TJ leads communication efforts with St. Tammany Parish and LADOTD and coordinates with the engineering and survey discipline leaders to ensure project delivery.



LBJ East Design Build Project

Steel Girder/Complex Structures Design, Railroad Coordination/Grade Separation Structure, Construction Phasing, Program Cost Estimating, and Environmental

Sections

17

Firm Name	AECOM Technical Services, Inc.			Past Performance Evaluation Discipline(s)*	Environmental, Bridge, Planning
Project Name	I-49 Lafayette Connector Supplemental EIS, CSS, Bridge/Structural Design			Firm responsibility (prime or sub?)	Sub
Project Number	H.004273	Owner's name	LaDOTD		
Project Location	Lafayette, LA	Owner's Project Manager	Tim Nickel, PE		
Owner's Address, Phone, Email	PO Box 94245, Baton Rouge, LA 70804-9245 Phone: 225.379.1110 Email: timothy.nickel@la.gov				
Services Commenced by This Firm (mm/yy)	2015	Total Consultant Contract Cost ($1,000's)	$32,000		
Services Completed by This Firm (mm/yy)	Ongoing	Cost of Consultant Services Provided by This Firm ($1,000's)	$11,300 AECOM Fee		

Background

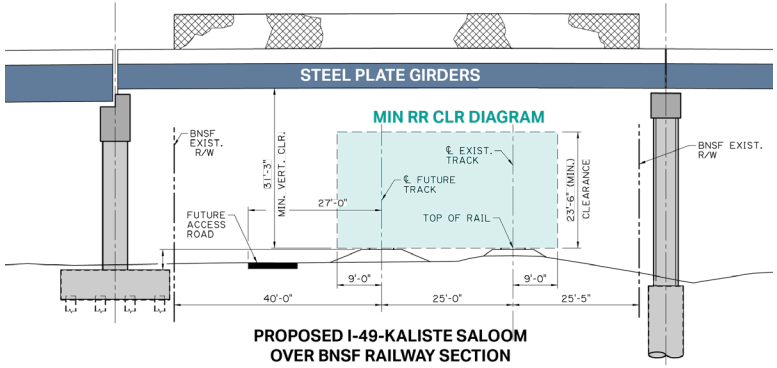
The 5.5-mile I-49 Lafayette Connector project is one of the largest undertaken by the DOTD, with an estimated construction cost of $2.5 billion. AECOM's roles include were multi-discipline primarily supporting CSS, NEPA, Structure Design and Railroad Coordination. The following paragraphs highlight AECOM's structural design and railroad coordination efforts to date.

The AECOM Team is responsible for the design and coordination of all structural design and railroad coordination for the 2-mile continuous elevated six-lane interstate viaduct with signature feature bridge components. Other structure requirements along the corridor include (2) new grade-separated interchanges at Kaliste-Saloom and University/ Surrey, I-49 and University Bridges over the Vermillion River and the development of over (25) retaining and noise wall structures. **Design work also required the development of conceptual and preliminary railroad design submittals for (2) grade separations at BNSF and LDRR. These submittals were led by AECOM's Railroad Coordinator, Jonathan McDowell, who initiated and led pre-submittal meetings with DOTD's Rail Unit Lead and BNSF and LDRR representatives to help facilitate the reviews and approvals.**

The AECOM Team performed an alternative structural analysis evaluating precast LG Girder, LU Girder and Precast Segmental Girder alternatives for a 2-mile, twin-viaduct structure through downtown Lafayette. The alternative analysis efforts evaluated cost (initial & long-term), constructability, maintenance of traffic and bridge aesthetic criteria to identify the best valued structure type. The bridge typical section consists of two separate 75-ft wide structures that provided four (4) continuous through lanes with 12-ft shoulders (new paragraph). The conceptual design analysis required at the Kaliste-Saloom Interchange required the AECOM Team to evaluate curved steel plate girder, steel trapezoidal girder and precast segmental alternatives for this multi-level interchange. This 3-way, elevated interchanage had numerous geometric, right-of-way, railroad and utility coordination challenges that warranted the development of four (4) curved flyover structures supported on hammerhead, C-pier and straddle bent configurations with concrete pile foundations on prestressed concrete pile groups.

RELEVANCE TO LADOTD
Steel Girder/Complex Structures Design, Railroad Coordination/Grade Separation Structure, Construction Phasing, Program Cost Estimating, and Environmental, and Line & Grade (Structures)

PROJECT TEAM
Gary Maji, Daniel Boyd, Jonathan McDowell, Steve Haynes, Sean Voisinet, Derek Chisholm



PROPOSED I-49-KALISTE SALOOM OVER BNSF RAILWAY SECTION

Firm Name	AECOM Technical Services, Inc.		Past Performance Evaluation Discipline(s)*	Bridge, Road, Traffic
Project Name	I-76 over BNSF and Beaver Creek		Firm responsibility (prime or sub?)	Prime
Project Number	N/A	Owner's name	Colorado Department of Transportation	
Project Location	Brush, CO	Owner's Project Manager	Bin Zhang	
Owner's Address, Phone, Email	10601 West 10th Street, Greeley, CO, 970.888.4486, binbin.zhang@state.co.us			
Services Commenced by This Firm (mm/yy)	08/21	Total Consultant Contract Cost ($1,000's)	$3,500	
Services Completed by This Firm (mm/yy)	Ongoing	Cost of Consultant Services Provided by This Firm ($1,000's)	$3,000	

Background

As part of our I-76 Corridor on-call contract to improve 16-miles of rural interstate in Morgan County, AECOM prepared value engineering, conceptual, preliminary and final design engineering services for the replacement of the I-76 main bridges over BNSF Railway and Beaver Creek.

The existing bridges were constructed in the early 1970s and designated structurally deficient and functionally obsolete. Numerous steel and concrete bridge configurations were evaluated throughout the conceptual and preliminary design efforts. Bridge layout considered numerous project site constraints including Beaver Creek floodplain hydraulics, constrained site access, atypical alignment skews, impacts to nearby environmental resources, and BNSF Railway coordination.

Throughout the duration of the conceptual and preliminary bridge designs, AECOM's rail task lead, supported the design team helping to identify, confirm, assess, and implement BNSF's Railroad Grade Separation Guideline criteria into project solutions. AECOM worked closely with CDOT's Rail Manager to review submittal packages and directly collaborate with the BNSF Railway Project Manager to help facilitate BNSF reviews and approvals.

Bridge design alternatives were evaluated against numerous criteria. Geometric constraints associated with a highly skewed alignment and BNSF's 225-ft ROW, required AECOM to investigate span configurations with piers located in and beyond BNSF ROW. Span configurations accommodated two (2) additional future track with access roads resulting in span options extending over 300-ft.

Subsequent discussions with the BNSF Public Projects Manager identified a layout configuration alternative woud allow railroad pier protected substructures within BNSF Railway ROW.

RELEVANCE TO LADOTD

Steel Girder/Complex Structures Design, Railroad Coordination/Grade Separation Structure, Line & Grade Analysis, Construction Phasing, Program Cost Estimating, and Drainage Design

PROJECT TEAM

Gary Maji, Steve Haynes, Sean Voisnet

Firm Name	AECOM Technical Services, Inc.		Past Performance Evaluation Discipline(s)*	Road, Bridge, Traffic, Planning
Project Name	Red River Bridge at Jimmie Davis Highway, Environmental Assessment (EA), Supplemental EA, Line & Grade, and Toll Study		Firm responsibility (prime or sub?)	Prime
Project Number	H.008068, H.008069, H.008244	Owner's name	LaDOTD	
Project Location	Bossier and Caddo Parishes, LA	Owner's Project Manager	Ken Dugas	
Owner's Address, Phone, Email	PO Box 94246, Baton Rouge, LA 70804; 225.379.1071/225.242.4516/225.379.1652; ryan.reviere@la.gov / ezekiel.onyegbunam@la.gov / catherine.mastin@la.gov			
Services Commenced by This Firm (mm/yy)	12/08	Total Consultant Contract Cost ($1,000's)	Stage 0: $291 EA: $915 SEA: $513	
Services Completed by This Firm (mm/yy)	03/23	Cost of Consultant Services Provided by This Firm ($1,000's)	Stage 0: $225 EA: $588 SEA: $489	

Background

The Red River Bridge at Jimmie Davis Highway is the southernmost major crossing of the Red River between Shreveport and Bossier City. Project tasks included bridge type and size studies, **line and grade analysis**, toll evaluation, environmental data collection, traffic and noise studies, development of design criteria, and NEPA documentation. AECOM completed a Stage 0 Feasibility Study to develop conceptual alternatives for a new bridge and potential reuse of the existing bridge, followed by an Environmental Assessment (EA) that secured a FHWA Finding of No Significant Impact (FONSI). In 2017, DOTD initiated a Supplemental EA to identify a preferred alternative incorporating Complete Streets elements.

The scope provides full interchanges with Clyde Fant Parkway and Arthur Ray Teague Parkway, improvements to LA 511 and adjacent roadways, and a bike/pedestrian trail connecting existing trail systems. Bridge alternatives, including concrete and steel options, were developed with cost estimates and presented during public outreach.

Because the existing two-lane Jimmie Davis Bridge is eligible for the National Register of Historic Places, it will be rehabilitated under a separate contract to carry eastbound traffic, while a new westbound bridge will provide two lanes and the trail.

Jonathan McDowell, PE, performed the preliminary **line and grade study** and developed the road geometry and network in the alternatives from the Stage 0 Study and EA.

Gary Maji, PE, was responsible for the conceptual design and report for bridge replacement and rehabilitation alternatives of the Jimmie Davis Bridge over the Red River. Design efforts evaluated spliced-concrete U-girder, cast-in-place concrete segmental and steel plate girder alternatives.

RELEVANCE TO LADOTD
Steel Girder/Complex Structures Design, Railroad Coordination/Grade Separation Structure, Line & Grade Study, Construction Phasing, Program Cost Estimating, and Environmental

PROJECT TEAM
Stephen McCullough, Jonathan McDowell, Gary Maji, Derek Chisholm, Gregory Trahan

Firm Name	AECOM Technical Services, Inc.			Past Performance Evaluation Discipline(s)*	Bridge, Environmental, Road, Traffic
Project Name	Southeast Connector			Firm responsibility (prime or sub?)	Sub
Project Number	N/A	Owner's name	TxDOT		
Project Location	Fort Worth, TX	Owner's Project Manager	Justin Thomey, PE		
Owner's Address, Phone, Email	2501 S W Loop 820, Fort Worth, TX 76133, 817.370.6500, justin.thomey@txdot.gov				
Services Commenced by This Firm (mm/yy)	12/21	Total Consultant Contract Cost ($1,000's)	N/A-Unknown		
Services Completed by This Firm (mm/yy)	Ongoing	Cost of Consultant Services Provided by This Firm ($1,000's)	$42,900		

Background

This Texas Clear Lanes project, located in southeast Tarrant County, spans 16.6 miles along I-20, I-820, and US-287 and includes three major interchanges, numerous underpass and overpass structures, four Union Pacific Railroad (UPRR) overpasses, and two UPRR underpasses. The project limits extend along I-20 from Forest Hill Drive to Park Springs Boulevard, I-820 from I-20 to Brentwood Stair Road, and US-287 from Bishop Street to Sublett Road, with a total of 71 bridges, including deferred work components.

Stephen McCullough, PE, served as Structural Discipline Lead, directing coordination of bridge design and calculations across AECOM, Kiewit, Bridgefarmer, and VRX, Inc. He led more than 120 structural engineering and CADD staff distributed across the U.S. and Europe. His leadership covered technical design, schedule management, and liaison responsibilities with TxDOT, UPRR, and the contractor. Notable challenges included post-tensioned straddle bents, wide and skewed structures, multi-level interchanges, and direct connectors up to 3,000 ft.

Doug Hively, PE, served as segment lead for nine bridges, acting as Engineer of Record (EOR) for three. He designed prestressed concrete girders, bent caps, and foundations, and delivered complex post-tensioned straddle bents and skewed deck geometries. His innovative framing and geometry solutions achieved cost-efficient, constructible designs.

Sean Voisinet, PE, led 23 bridges as segment lead and EOR for seven, managing a team of seven EORs. He designed prestressed concrete girders, bent caps, columns, and foundations, and developed phasing and sequencing for four UPRR bridges to maintain uninterrupted rail traffic while meeting TxDOT and UPRR standards.

Steven Haynes, PE, served as EOR for three bridges, designing prestressed concrete girders, bent caps, columns, foundations, and several post-tensioned straddle bents requiring limited vertical clearance.

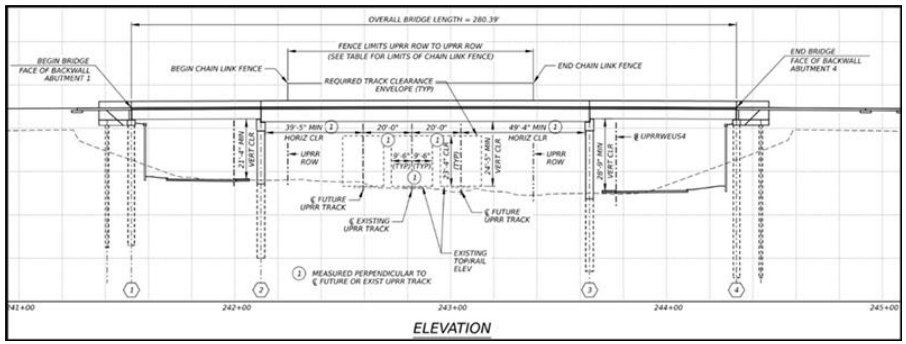
Gary Maji, PE, served as Structures Quality Manager who verfiied the design and details associated with the bridges and retaining walls located within the SEC project satisfied the technical and quality requirements.

RELEVANCE TO LADOTD

Steel Girder/Complex Structures Design, Railroad Coordination/Grade Separation Structure, Construction Phasing, and Line & Grade

PROJECT TEAM

Stephen McCullough, Doug Hively, Sean Voisinet, Steven Haynes, Gary Maji, Daniel Boyd



Firm Name	AECOM Technical Services, Inc.		Past Performance Evaluation Discipline(s)*	Bridge, Road
Project Name	Norfolk Southern Systemwide Engineering and Design Services		Firm responsibility (prime or sub?)	Prime
Project Number	N/A	Owner's name	Norfolk Southern	
Project Location	Systemwide	Owner's Project Manager	Aaron Meyer	
Owner's Address, Phone, Email	650 W Peachtree St NE, Atlanta, GA 30308			
Services Commenced by This Firm (mm/yy)	2007	Total Consultant Contract Cost ($1,000's)	$33,662	
Services Completed by This Firm (mm/yy)	Ongoing	Cost of Consultant Services Provided by This Firm ($1,000's)	$33,662	

Background

Since 2007, AECOM has handled over 1,350 public improvement projects across NS's system. AECOM's current tasks include plan review throughout the design phase, including the writing of comments and evaluation of design approach and calculations when necessary. During construction, AECOM provides review of construction means and methods as well as calculations and drawings provided by project sponsors' contractors. In addition to review during construction, AECOM also monitors construction to confirm that the approved plans and methods are followed and provides field report updates to Norfolk Southern's engineering staff in Atlanta, GA. Projects supported include NS underpass bridge replacement, overhead bridge rehabilitation/replacement, track design and facility designs throughout Norfolk Southern's rail system. AECOM is currently working as the direct liaison with various DOTs, counties, townships and private sponsors on Norfolk Southern's behalf, handling the daily coordination of the projects both in design and construction.

Notable projects reviewed by **Joshua Amsler** and **Christopher Johnson** include the replacement of the Wisner Boulevard Bridge over NS, a 13-span steel plate girder structure, in New Orleans, LA and construction of the SR 317 (Apison Pike) Bridge over NS, a seven-span steel plate girder structure with a skew of 17-degrees to the track, in Collegedale, TN.

In 2013, as a result of our intimate knowledge and involvement with the NS Public Improvements team, AECOM created the NS Public Improvement Projects Manual as a comprehensive guide for handling public improvement projects. This manual includes the collection of previously diverse documents and design criteria along with new direction, standards and drawings to be made available to outside parties to streamline the process of working around active NS right-of-way. In 2022 and 2024, AECOM led the effort in assisting NS with updating the manual for new standards, preferences, and best practices that had evolved since the manual's creation. Mr. Amsler provided an independent review of the updates.

RELEVANCE TO LADOTD
Railroad Coordination/Grade Separation Structure

PROJECT TEAM
Joshua Amsler, Christopher Johnson

Firm Name	T. Baker Smith			Past Performance Evaluation Discipline(s)*	Survey, Road, Bridge
Project Name	Rural Bridge Replacement Initiative, Phase I & II			Firm responsibility (prime or sub?)	Prime
Project Number	Multiple #s	Owner's name	LaDOTD		
Project Location	Statewide, LA	Owner's Project Manager	Valerie M. Tourres, PE		
Owner's Address, Phone, Email	1201 Capitol Access Rd., Baton Rouge, LA 70802, 225.379.1894, valerie.tourres@la.gov				
Services Commenced by This Firm (mm/yy)	08/20	Total Consultant Contract Cost ($1,000's)	$14,2354		
Services Completed by This Firm (mm/yy)	Ongoing (Survey Complete)	Cost of Consultant Services Provided by This Firm ($1,000's)	$9,055		

Background

As part of an overall effort by LADOTD to reduce the amount of structurally deficient bridges throughout the state as part of meeting FHWA metrics, LADOTD contracted TBS for the Rural Bridge Replacement Initiative, Phase I and Phase II project which replaced 87 bridge structures, primarily in North Louisiana, within 14 parishes including Claiborne, Webster, and Red River Parish.

The consultant contract was complete turnkey project involving inspection, surveying, ROW, geotechnical, preliminary and final bridge plans, preliminary and final roadway plans, construction services, scour analysis, hydraulic analysis, load rating and permanent signing. TBS was the prime consultant for this contract and is responsible for nearly all contract services including inspection, topographic surveying, right of way mapping, Preliminary and final bridge plans, preliminary and final roadway plans, construction services, scour analysis, hydraulic analysis, load rating and permanent signing for all 87 structures. TBS is coordinating geotechnical investigation and design using sub-consultants. The replacement structures include box culverts, RC Slab spans, and Louisiana Girder (LG) 25 girder span bridges on PPC piles having clear widths ranging from 24' wide to 40' wide.

Typical topographic surveys extended 500' from each end of the existing bridge structure. Due to the rural and heavily wooded nature of these sites, control surveys often required a combination of GPS observations and conventional traversing methods.

Topographic Data was captured to detail the existing bridges, roadways on either side, and surrounding terrain to ensure proper tie into existing surfaces. Cross sections of the channels they cross were also surveyed to provide hydraulic information for hydraulic modeling. TBS Surveyors coordinated with an in-house engineering design team throughout the duration of the project.

All survey deliverables were prepared according to the LADOTD Location and Survey Manual.

RELEVANCE TO LADOTD
Topographic Survey, Subsurface Utility Engineering, Road Design, Bridge Design

PROJECT TEAM
TJ Stokes, PE; Jean Reulet, III; PLS; Anthony Burns; Laramey Leet; Branden Kinnaird; Rene Hebert, PLS, PMP; Perry Smith, Jr.; Kaleb Brooks

Firm Name	T. Baker Smith			Past Performance Evaluation Discipline(s)*	Survey
Project Name	IDIQ Contract for Professional Surveying Services Statewide			Firm responsibility (prime or sub?)	Prime
Project Number	Multiple #s	Owner's name	LaDOTD		
Project Location	Statewide, LA		Owner's Project Manager	Jonathan Herrod, PLS	
Owner's Address, Phone, Email	1201 Capitol Access Rd., Baton Rouge, LA 70802, 225.379.1105, Jonathan.Herrod@la.gov				
Services Commenced by This Firm (mm/yy)	11/21		Total Consultant Contract Cost ($1,000's)		$1,375
Services Completed by This Firm (mm/yy)	Ongoing		Cost of Consultant Services Provided by This Firm ($1,000's)		$1,375

Background

TBS was selected for a statewide surveying retainer contract in 2021. Under this contract, TBS performs Topographic Surveying for LADOTD projects statewide. The limitation for fees is $5 Million under this professional services contract, and projects are initiated via task order. TBS completes all deliverables using Microstation and inroads as certified by CADconform. Below is a partial list of completed Task Orders:

S.P. No. H.009892 – LDRR (New Iberia) US 90 Frontage Road, Iberia Parish. This project was located in Iberia Parish, LA at the intersection of US 90 and LA 329, north of US 90, and along US 90 Frontage Road and LA 329. The project's objective was to connect the US 90 Frontage Road across LA 329 and the existing Louisiana and Delta Railroad (LDRR). A complete topographic survey including all utilities with depths and all drainage was required, along with the finished floor elevations of all buildings that fell within the survey limits and an existing drainage map of the project site.

S.P. No. H.014414 – LA 22: Bedico Creek – Pine Creek Dr, St. Tammany and Tangipahoa Parishes. This project was located near Madisonville, LA along LA 22. The main corridor for this project is approximately 4.5 miles along a highly trafficked roadway through a heavily wooded corridor. The width of the survey and DTM was a total of 140', extending 70' on each side of the project centerline. The project also included the topographic survey for a potential roundabout at Trapagnier Road and an existing drainage map of the project site. Over the course of the year-long survey, TBS encountered ongoing new utility installation and other construction throughout the site. A complete topographic survey including all utilities with depths and all drainage was required, along with the finished floor elevations of all buildings that fell within the survey limits.

S.P. No. H.015587 LA 3211 @ Yokley Road Roundabout, St. Mary Parish. This project was located in Franklin, LA at the intersection of LA 3211 and Yokley Road. The project's objective was to construct a roundabout at the intersection. A complete topographic survey including all utilities with depths and all drainage was required, along with the finished floor elevations of all buildings that fell within the survey limits and an existing drainage map of the project site.

S.P. No. H.016326 LA 36 Drain Bridge, St. Tammany Parish. This project was located in St. Tammany Parish, LA along LA 36. The project's objective was to replace an existing bridge structure over a drainage canal. The site extended for approximately one thousand (1,000) feet in length and one hundred fifty (150) feet in width. A complete topographic survey including all utilities with depths and all drainage was required, along with the finished floor elevations of all buildings that fell within the survey limits.

RELEVANCE TO LADOTD
Topographic Survey

PROJECT TEAM
Rene Hebert, PLS; Jean Reulet, PLS; Anthony Burns, Branden Kinnaird; Laramey Leet; Kaleb Brooks; Perry Smith; TJ Stokes, PE

Firm Name	T. Baker Smith	Past Performance Evaluation Discipline(s)*	Other-Subsurface Utility Engineering
Project Name	Calcasieu River Bridge	Firm responsibility (prime or sub?)	Prime
Project Number	H.003931	Owner's name	LaDOTD
Project Location	Calcasieu Parish, Louisiana	Owner's Project Manager	Peggy Paine, PE
Owner's Address, Phone, Email	1201 Capitol Access Road, Room 501-I Baton Rouge LA 70802; 225.379.1065; peggy.paine@la.gov		
Services Commenced by This Firm (mm/yy)	03/21	Total Consultant Contract Cost ($1,000's)	$1,830
Services Completed by This Firm (mm/yy)	03/24	Cost of Consultant Services Provided by This Firm ($1,000's)	$1,830

Background

TBS provided Quality Level B and Quality Level A SUE services as well as Utility Coordination during Design for this project along I-10 in Lake Charles, Louisiana. The purpose of the project is to replace the existing I-10 bridge crossing Lake Charles. This is one of the largest SUE projects in the history of LADOTD. There are numerous pipelines throughout the corridor due to the abundance of chemical plants in the area, so determining the location of these pipelines was crucial to the design of the project. Our team had to coordinate continuously with the pipeline owners to perform test holes on these facilities which slowed down the production rate of the field staff. The City of Westlake utilities such as water, sewer, and gas proved to be difficult to locate and the records were outdated and unclear. A combination of designating, test holes, and ingenuity was used to properly map out these utilities. Utility coordination was used to inform the utility companies of the impact the project would have on their facilities. The difficult part of the process was the fact that there wasn't a finished design to determine conflicts. A new process and precedent was set to accomplish the goals posed by LADOTD. TBS Team: TJ Stokes, PE; Perry Smith; Kaleb Brooks

RELEVANCE TO LADOTD
Subsurface Utility Engineering

PROJECT TEAM
TJ Stokes, PE; Perry Smith; Kaleb Brooks

Firm Name	Neel-Schaffer, Inc.		Past Performance Evaluation Discipline(s)*	Traffic
Project Name	Traffic Signal Design and Traffic Engineering Retainer Contracts		Firm responsibility (prime or sub?)	Prime
Project Number	44-25299 / 44-0651 / 44-2630 / 44-4064	Owner's name	LaDOTD	
Project Location	Baton Rouge, LA	Owner's Project Manager	VRyan Hoyt, PE, PTOE	
Owner's Address, Phone, Email	P.O. Box 94245, Baton Rouge, LA 70804; (225) 379-1370; ryan.hoyt@la.gov			
Services Commenced by This Firm (mm/yy)	08/20	Total Consultant Contract Cost ($1,000's)	$12,250	
Services Completed by This Firm (mm/yy)	Ongoing	Cost of Consultant Services Provided by This Firm ($1,000's)	$8,280	

Background

From 2009 to present, NSI was selected by the Louisiana Department of Transportation and Development, through its consultant selection process, for the following traffic signal design and traffic engineering retainer contracts.

- Contract No. 4400000651 – Traffic Signal Design and Traffic Engineering Retainer Contact Statewide (2009-2013), $2.25M
- Contract No. 4400002630 – Traffic Signal Design and Traffic Engineering Retainer Contract Statewide (2012-2015), $2.0M
- Contract No. 4400004064 – Traffic Signal Design and Traffic Engineering Retainer Contract Statewide (2014-2017), $3.0M
- Contract No. 4400025299 – IDIQ Contract for Traffic Engineering (2023 – 2028), $5.0M

Under these retainer contracts, traffic counting (data collection), warrant analysis, traffic analysis and modeling using HCS/Synchro/Vissim, intersection/corridor analysis, traffic signal design, and traffic signal inventories (TSI) were performed on a task order basis. Specific projects completed under these task orders are as follows.

Contract 44-0651 Contract 44-2630 Contract 44-4064
LA 24 Signal Upgrade Plans (Houma, LA) LA 16 Corridor Study (Watson, LA)
LA 22 Corridor Study (Mandeville, LA)
US 165 Corridor Study using Vissim (Pineville, LA) District 62 Signal Inventory (255 intersections) US 71/LA 28 Signal Timing Study (Alexandria, LA
US 71/LA 28 Signal / Timing Design (Alexandria, LA) LA 1088 Corridor Study (Mandeville, LA) LA 1208-3 Corridor Study (Alexandria, LA)
US 190 Superstreet Corridor Study (Covington, LA) LA 21 Corridor Study (Covington, LA) LA 22 Corridor Study (Ponchatoula, LA)
LA 447 Corridor Study (Walker, LA) LA 42 Corridor Study (Ascension Parish, LA) US 425/US 84 Corridor Study (Ferriday/Vidalia, LA)
LA 1208-3 Signal Timing Study (Alexandria, LA) US 190 (Collins Blvd.) Corridor Study (Covington, LA US 171 / US 190 Signal Timing Study (DeRidder, LA)
Contract 44-25299
District 02 FYA, Part 2 (Houma, LA)
LA 47 (Haynes Blvd.) Safety Study (New Orleans, LA)
I-49 at LA 3233 Traffic Study (Carencro area)
BTR Northern Bypass Expressway Traffic Study (Baton Rouge)

PROJECT TEAM
Nick Ferlito, Ellen Howard, Jonathan Duhe, Katie Odenthal, William Fulcher, Lonny Territo, Charles Adams, Vijay Kunada and William "Case" Fulcher

Firm Name	Neel-Schaffer, Inc.		Past Performance Evaluation Discipline(s)*	Road, Planning, Traffic
Project Name	IDIQ Contract for Safety Studies		Firm responsibility (prime or sub?)	Prime
Project Number	4400023689	Owner's name	LaDOTD	
Project Location	Statewide, LA	Owner's Project Manager	Adriane McRae, P.E.	
Owner's Address, Phone, Email	P.O. Box 94245, Baton Rouge, LA 70804; (225) 379–1950; Adriane.mcrae@la.gov.			
Services Commenced by This Firm (mm/yy)	6/22	Total Consultant Contract Cost ($1,000's)	$1,500	
Services Completed by This Firm (mm/yy)	Ongoing	Cost of Consultant Services Provided by This Firm ($1,000's)	$1,500	

Background

Current Task Orders issued under this IDIQ Contract include the following:

- H.015227 – US 61 at Victoria Dr. Ped Crossing Study
- H.015148 – District 03 Safety Investment Plan
- H.013622 – Ardenwood Road Diet Tier 2 / Alternative Analysis
- H.015574.5 – LCG FYA Signal Improvements Phase 2

The District Safety Investment Plans evaluated the District's top HPSI segments, roadway departure locations, abnormal intersection, and bike/ped locations to develop prioritized low–cost improvements to reduce crashes. Historical crash data was evaluated using DOTD's CatScan / CARTS to identify overrepresented crash types. Countermeasures were developed to mitigate these crash types using crash modification factors (CMF) from the Highway Safety Manual (HSM)and CMF Clearinghouse. For the selected countermeasures, estimated crash reductions, high level estimated improvement costs, and safety benefit/cost ratios were determined. The safety benefit/cost ratios along with District input was used to develop a priority list for the District. One–page summaries were also prepared for each location. These District Safety Investment Plans have also been completed for Districts 03, 05, 07 and 08.
Neel–Schaffer, Inc. has also held the following previous IDIQ Contracts for Safety Studies (44–10504, 44–04402, 44–01583)
dating back to 2011. As part of these IDIQ contacts, some of the projects that have been completed include the following.

- US 80 at Bellevue Road Stage 0 (Haughton, LA)
- LA 16 Stage 0 (Natchitoches, LA)
- LA 385 Stage 0 (Lake Charles, LA)
- US 167 : I–10 to Willow Street RSA
- Intersection Safety Studies (District 61)

Firm members: Nick Ferlito, William Fulcher, Peter Allain, Ellen Howard, Kirk Gallien, Katie Odenthal, Clarke Chauvin, Jonathan Duhe, Seth Popay

RELEVANCE TO LADOTD
Road, Planning, Traffic

PROJECT TEAM
Nick Ferlito, William Fulcher, Peter Allain, Ellen Howard, Kirk Gallien, Katie Odenthal, Clarke Chauvin, Jonathan Duhe, Seth Popay

 Prime consultant firm name: **AECOM Technical Services, Inc. (AECOM)**

Firm Name	Neel-Schaffer, Inc.		Past Performance Evaluation Discipline(s)*	Traffic, Road, Planning
Project Name	IDIQ for Stage 0 Studies - Statewide		Firm responsibility (prime or sub?)	Prime
Project Number	Multiple #s	Owner's name	LaDOTD	
Project Location	Statewide, LA	Owner's Project Manager	Valerie M. Tourres, PE	
Owner's Address, Phone, Email	1201 Capitol Access Rd., Baton Rouge, LA 70802, 225.379.1894, valerie.tourres@la.gov			
Services Commenced by This Firm (mm/yy)	08/20	Total Consultant Contract Cost ($1,000's)	$2,500	
Services Completed by This Firm (mm/yy)	Ongoing	Cost of Consultant Services Provided by This Firm ($1,000's)	$2,500	

Background

Neel-Schaffer, Inc. (NSI) currently holds an IDIQ contract with DOTD to conduct Stage 0 Feasibility Studies. These Stage 0 Feasibility Studies include preparing the project purpose and need as well as completing the Stage 0 Preliminary Scope and Budget Checklist; and DOTD's Environmental Checklist. In addition, NSI provides all supplemental studies required to support the purpose and need; and checklist. These supplemental studies include Traffic Studies, Safety Studies using the Highway Safety Manual (HSM), as well as providing geometric layouts as required. In addition, preliminary cost estimates are provided that consider engineering, environmental, right of way acquisition, utility relocation and construction.

Neel-Schaffer has experience on the following Stage 0 Studies for the DOTD under this task order contract:

- T.O. No. H.011280.1 – LA 10 Improvements in Bogalusa (Phase 3) - (Traffic/Safety Analysis, Checklists, Geometric Layouts and Cost Estimates)
- T.O. No. H.014054.1 – I-69 Frontage Rd. (Ellerbe Rd. to LA 1) - (Checklists, Geometric Layouts and Cost Estimates)
- T.O. No. H.014056.1 – I-69 Frontage Rd. (Stonewall Frierson) - (Checklists, Geometric Layouts and Cost Estimates)
- T.O. No. H.014514.1 – Earhart Expressway Masterplan

In Phase 2 of this project, Neel-Schaffer will be doing a detailed traffic operations study using Dynamic and HCS at the tie-in points of the proposed bridge in each alternative with LA 1 and LA 30. Additionally, corridor level traffic study will be conducted within the immediate vicinity of the proposed bridge along both LA 1 and LA 30.

RELEVANCE TO LADOTD
Topographic Survey, Subsurface Utility Engineering, Road Design, Bridge Design

PROJECT TEAM
Dishili Young, Mai Nguyen, Steve Perault, Nick Ferlito, Jonathan Duhe, Ellen Howard

Firm Name	Eustis Engineering, LLC		Past Performance Evaluation Discipline(s)*	Geotech
Project Name	Bayou Barataria Bridge		Firm responsibility (prime or sub?)	Prime
Project Number	H.004420.5/H.015028.6	Owner's name	LaDOTD	
Project Location	Jefferson Parish, Louisiana	Owner's Project Manager	Kristy Smith	
Owner's Address, Phone, Email	5080 Florida Boulevard, Baton Rouge, Louisiana, 70806, 225-929-9133, kristy.smith2@la.gov			
Services Commenced by This Firm (mm/yy)	01/21	Total Consultant Contract Cost ($1,000's)	Unknown	
Services Completed by This Firm (mm/yy)	Ongoing	Cost of Consultant Services Provided by This Firm ($1,000's)	$905 (to date)	

Background

The existing Bayou Barataria Bridge is being replaced with a new structure that will be 963 feet long and supported by 13 pile bents comprising square, precast concrete piles. An unequal arm swing span, 183 feet long, is proposed between Bents 6 and 8 to provide a horizontal channel clearance of 85 feet within Bayou Barataria. Mill and overlay of existing pavements along portions of LA Highways 45 and 3257 are planned. Portions of these highways will also be raised and widened, and approximately one mile of LA Highway 45 will be shifted 30 feet to the east into the marsh.

For the design of this project (H.004420.5), Eustis Engineering L.L.C. obtained the relevant Coastal Use Permits for the marsh as well as the roadway and marine locations. We also obtained necessary land access permissions. Drilling comprised 24 soil borings. Of these borings, 20 were drilled over marsh or water to depths ranging from 100 to 200 feet below the mudline. The remaining four borings were drilled to depths of 20 feet through existing pavements to evaluate proposed drainage structures and provide recommendations for mill and overlay of existing pavement sections to be incorporated into the final design. Geotechnical design analyses included estimates of vertical pile load capacity, effects of scour on pile capacity, soil-pile interaction to evaluate lateral loads, and pile group settlement. Additional analyses were performed to evaluate ground settlement, settlement surcharge/remediation programs, retaining walls, slope stability, and pavement design. Deliverables included a geotechnical data report, a geotechnical design report, and an electronic boring log data file.

For the construction phase of this project (H.015028.6), Eustis Engineering is completing engineering during construction services as a prime to the LaDOTD and is also providing selected construction materials testing services as a subcontractor. We have completed a Wave Equation Analysis of Piles (WEAP) driveability study and are performing dynamic pile testing on the monitor piles and selected job piles. We have also developed and implemented a vibration monitoring plan and have reviewed surcharge operations to date. Testing services have included logging the installation of driven square, precast concrete piles.

RELEVANCE TO LADOTD
Geotechnical

PROJECT TEAM
Gwendolyn P. Sanders, P.E., Travis R. Richards, P.E., and Matthew K. Morales, P.E.

Firm Name	Eustis Engineering, LLC		Past Performance Evaluation Discipline(s)*	Geotech
Project Name	I-10 and I-12 College Drive Flyover Ramp Design-Build Project		Firm responsibility (prime or sub?)	Sub
Project Number	H.013897	Owner's name	LaDOTD Through Boh-G.E.C., Inc. Design-Build Team	
Project Location	East Baton Rouge Parish, Louisiana	Owner's Project Manager	Sherri LeBas, P.E.	
Owner's Address, Phone, Email	8282 Goodwood Boulevard, Baton Rouge, Louisiana, 225-612-4107, slebas@gecinc.com			
Services Commenced by This Firm (mm/yy)	03/25	Total Consultant Contract Cost ($1,000's)	Unknown	
Services Completed by This Firm (mm/yy)	06/25	Cost of Consultant Services Provided by This Firm ($1,000's)	$635.7	

Background

This project included a variety of interchange improvements to I-10 West and College Drive including a flyover ramp exit to College Drive in advance of the I-10 and I-12 West merge; a modified exit from I-12 West to College Drive; and a parallel, separated at-grade ramp along I 10 West to the existing College Drive Interchange. Eustis Engineering L.L.C. was part of the design-build team participating in all aspects of this project.

Eustis Engineering L.L.C. completed an exploration of the site to supplement available data comprising ten undisturbed borings, eight cone penetration tests, and fourteen auger or direct push borings. Coordination of traffic control, permitting and safe execution of this exploration in this active and congested interstate corridor were completed by our team. Soil mechanics laboratory tests performed in our accredited laboratory on collected samples consisted of natural water content, unit weight, one-point unconsolidated undrained triaxial compression shear, Atterberg liquid limits and plastic limits, grain size sieve analyses, hydrometer analyses, and one-dimensional consolidation tests. These data were published in a GEOT-01 Geotechnical Exploration Data Report that was reviewed by the State of Louisiana, Department of Transportation and Development (LaDOTD) to confirm compliance with their design requirements.

The design services included developing separate geotechnical design reports for each of seven major project features, specifically a sound barrier/noise-wall; the roadway (mainline and exit ramps); the Ward Creek Bridge widening; the I-10 Westbound Bridge over I-12, including driven piles and drilled shafts; retaining and/or Mechanically Stabilized Earth (MSE) walls at modified bridge abutments; box culverts or flumes for site drainage; high mast lighting, Intelligent Transportation Systems (ITS); and other miscellaneous features. GEOT-09 is the design report for the roadway. This report included evaluation of temporary and permanent asphaltic concrete pavements as well as temporary and permanent Portland Cement Concrete pavements. The LaDOTD provided reviews of draft and final reports and verified design standards were met. We also participated in weekly progress meetings with the project design team and with the project stakeholders. Design review meetings were conducted as part of the quality review process. Our services during construction included observation or performance of testing, including dynamic pile testing.

RELEVANCE TO LADOTD
Geotech, Selected CMT

PROJECT TEAM
Matthew K. Morales, P.E., Gwendolyn P. Sanders, P.E., and Travis R. Richards, P.E.

Firm Name	Eustis Engineering, LLC		Past Performance Evaluation Discipline(s)*	Geotech
Project Name	Huey P. Long Bridge Widening, Route U.S. Highway 90		Firm responsibility (prime or sub?)	Sub
Project Number	EE 18530, 19483, 20262	Owner's name	LADOTD Through Modjeski & Masters, Inc.	
Project Location	Jefferson Parish, Louisiana	Owner's Project Manager	Bruce Peterson	
Owner's Address, Phone, Email	1055 St. Charles Avenue, New Orleans, LA / 504-524-4344 / bpeterson@modjeski.com			
Services Commenced by This Firm (mm/yy)	08/06	Total Consultant Contract Cost ($1,000's)	$Unknown	
Services Completed by This Firm (mm/yy)	12/14	Cost of Consultant Services Provided by This Firm ($1,000's)	$697.5	

Background

In 2004, Eustis Engineering was retained by the LaDOTD to perform 16 soil borings, to depths of 150 to 175 feet, to supplement available subsoil information. In 2005, Eustis Engineering, through a geotechnical subconsultant agreement with Modjeski & Masters, Inc. (MMI), performed the engineering analyses associated with the design of the bridge approaches. Our services included development of allowable vertical pile load capacities (precast concrete, steel H, and treated ASTM D 25 timber); allowable shaft load capacities (7 and 9 feet in diameter) with and without the benefit of post grouting the shaft tips; estimates of settlement for the proposed pile/shaft groups; evaluation of pile/shaft group capacity and spacing; lateral load analyses of pile foundations for various pile group configurations and loading conditions, in addition to analyses of a single pile, to evaluate the sensitivity of the point of fixity; dewatering and pressure relief recommendations for construction of Pier IVA; and recommendations for test pile and test shaft programs.

In 2006 and 2007, Eustis Engineering provided support to MMI and Louisiana TIMED Managers during railroad modifications completed as Phase II of the project. The engineering services performed during this phase of construction included review of contractor submittals and RFIs; performance of WEAP analyses for hammer approval; dynamic pile testing during the initial installation of the test piles; DPTs during restrikes of the piles one to three days after their initial installation; witnessing static pile load tests performed by others; and selecting pile order lengths for piles on the east and west banks to be installed for Phase II. Beginning in June 2008, Eustis Engineering began providing support services during Phase IV of the widening project. These engineering during construction services included those provided during Phase II (i.e., WEAP, DPT, RFIs, etc.) as well as assigning laboratory tests on soil borings performed by the contractor; review of final boring logs and test results; performance and evaluation of cone penetration tests to supplement the soil borings; review of contractor submittals for cofferdams; CAPWAP® analyses; review of load cell calibrations and observation of compression load tests; recommended pile order lengths and installation criteria; observation of test shaft installation; review and evaluation of crosshole sonic logging on test shafts and production shafts; observation of bi-directional (Osterberg) load testing of shafts; review of load test results; evaluation of shaft tip grouting; witnessing mini-SID inspection of the test shafts and production shafts; review of pile driving logs; and project management. Eustis Engineering participated in progress meetings and partnering meetings, performed periodic site visits, and provided other requested services.

Gwendolyn P. Sanders, P.E. was the project manager with Chad L. Held, P.E. and Matthew K. Morales, P.E. performing dynamic pile testing. Mr. Held also interpreted crosshole sonic logging results.

RELEVANCE TO LADOTD
Geotech

PROJECT TEAM
Gwendolyn P. Sanders, P.E. was the project manager with Chad L. Held, P.E. and Matthew K. Morales, P.E. performing dynamic pile testing. Mr. Held also interpreted crosshole sonic logging results.

Firm Name	Elos Environmental, LLC		Past Performance Evaluation Discipline(s)*	Environmental
Project Name	Move Ascension		Firm responsibility (prime or sub?)	Sub
Project Number	Multiple #s	Owner's name	HNTB Corporation/ Ascension Parish Government	
Project Location	Ascension Parish, LA	Owner's Project Manager	John Basilica	
Owner's Address, Phone, Email	10000 Perkins Rowe, Ste. 640, Baton Rouge, LA 70810, 225-368-2881, jbasilica@hntb.com			
Services Commenced by This Firm (mm/yy)	10/17	Total Consultant Contract Cost ($1,000's)	Unknown	
Services Completed by This Firm (mm/yy)	Ongoing	Cost of Consultant Services Provided by This Firm ($1,000's)	$570	

Background

ELOS is contracted to support the engineering and design projects for the Move Ascension Project in Ascension Parish, LA, which consists of multiple roadway and intersection projects. ELOS services include wetland delineations, permit applications for submittal to the U.S. Army Corps of Engineers, and cultural resource evaluations.

Wetland Delineations were preformed to collect the information needed to establish an opinion on the presence and potential extent of jurisdictional "wetlands" and/or "other waters of the United States" in accordance with the requirements of the USACE's 1987 Wetland Delineation Manual and the USACE' "Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region.

Permitting Services were based on the property survey, preliminary design drawings, and listing the names and addresses of all landowners and adjacent property owners for submitting applications to the USACE. Cultural Resource Evaluations were based on the property survey, preliminary design drawings, and any other information that may be required during the application process so that ELOS can establish a professional opinion on the level of, if any, additional cultural resource investigations required within the area of potential effect (APE) for each of the projects as mentioned earlier.

RELEVANCE TO LADOTD
Environmental

PROJECT TEAM
Lucas Watkins, Jay Prather, Flynn Daigle, Brian Fortson, Martin Healey, Maria Bernard Reid, Brittany Berthelot, Cory Ricks, Jesse McQuigg, and Christopher Wilson.

Firm Name	Elos Environmental, LLC		Past Performance Evaluation Discipline(s)*	Environmental
Project Name	LADOTD Rural Bridges: Phases I & II		Firm responsibility (prime or sub?)	Sub
Project Number	Multiple #s	Owner's name	LADOTD	
Project Location	Statewide, LA (Districts 3, 5, 7, 8, 58, 61, and 62)	Owner's Project Manager	Brian Allen	
Owner's Address, Phone, Email	1201 Capitol Access Road, Baton Rouge, LA, 225-379-1840, brian.allen@la.gov			
Services Commenced by This Firm (mm/yy)	08/20	Total Consultant Contract Cost ($1,000's)	Unknown	
Services Completed by This Firm (mm/yy)	Ongoing	Cost of Consultant Services Provided by This Firm ($1,000's)	$541.8	

Background

BKI has contracted ELOS to provide professional environmental consulting services for the Louisiana Department of Transportation and Development (LADOTD) Rural Bridge Replacement Initiative for two project phases. Phase I involved bridge replacements under 16 state project numbers and supplemental task orders, impacting 33 structures in Districts 03, 07, 61, and 62. Phase II is ongoing and involves bridge replacements under 9 state project numbers and supplemental task orders, impacting multiple structures in Districts 05, 08, and 58. Almost all the projects have included wetland delineations, permit applications, cultural resource surveys, and threatened and endangered species surveys. ELOS has also assisted in the early planning stages of some of these projects to identify any possible adverse economic, social, or environmental effects or concerns.

Project Numbers: H.013952, H.013955, H.013956, H.013957, H.013958, H.013959, H.013963, H.013966, H.013968, H.013970, H.013976, H.013982, H.013984, H.013989, H.013996, H.013997 (Phase 1) and H.014242, H.014243, H.014245, H.014246, H.014247, H.014248, H.014249, H.014250, H.014268, H.015685 (Phase II)

ELOS has performed all environmental services according to the standards of the Federal Highway Administration (FHWA). Permits have been coordinated through several federal and state agencies including joint applications to the USACE and the Louisiana Department of Energy and Natural Resources (LDENR) / Office of Coastal Management, Scenic Rivers permits through the Louisiana Department of Wildlife & Fisheries, and cultural resource surveys in coordination with the Louisiana State Historic Preservation Office. ELOS also has personnel recently trained in the tricolored bat identification and surveys, which have been used for some of these bridge replacement projects.

Personnel Assigned: Lucas Watkins, Jay Prather, Brittany Berthelot, Brian Fortson, Cory Ricks, Hunter Perrilloux, Basile Dardar, Savannah Watkins, Sunny Brogan, Rick Henry, Conner Myers, and Christopher Wilson, Mike Hill.

RELEVANCE TO LADOTD
Environmental

PROJECT TEAM
Lucas Watkins, Jay Prather, Brittany Berthelot, Brian Fortson, Cory Ricks, Hunter Perrilloux, Basile Dardar, Savannah Watkins, Sunny Brogan, Rick Henry, Conner Myers, and Christopher Wilson, Mike Hill.

Firm Name	Elos Environmental, LLC		Past Performance Evaluation Discipline(s)*	Environmental
Project Name	DOTD IIJA Off System Bridges District 62		Firm responsibility (prime or sub?)	Prime
Project Number	Multiple #s	Owner's name	LADOTD	
Project Location	Tangipahoa Parish, LA	Owner's Project Manager	Greg Sepeda (Sigma)	
Owner's Address, Phone, Email	10305 Airline Hwy, Baton Rouge, LA 70816; (225)810-3100; gsepeda@sigmacg.com			
Services Commenced by This Firm (mm/yy)	09/22	Total Consultant Contract Cost ($1,000's)	$129	
Services Completed by This Firm (mm/yy)	Ongoing	Cost of Consultant Services Provided by This Firm ($1,000's)	$127	

Background

The Off-System Bridge Program, established under the Infrastructure Investment and Jobs Act (IIJA), is a key federal initiative aimed at improving bridges not located on the federal-aid highway system. The program is designed to address the needs of local and rural bridges, which often fall outside the primary focus of traditional federal bridge programs. The program is managed at the state level and had $264 funded specifically for the repair, replacement, or rehabilitation of bridges. The funds were based on priorities and the overall condition of the bridges. Project Numbers: H.015429, H.015430, H.015431, H.015432, H.015432, H.015433, and H.015434

ELOS is currently contracted for the DOTD IIJA Off-System Bridge Program. The objective of this program was to replace as many poor condition, off-system bridges as possible by initial screenings of eligible "off-system" structures and create a Preliminary Screening Matrix/Spreadsheet. ELOS conducted appropriate technical and environmental studies and prepared necessary environmental documentation for approval from the Federal Highway Administration (FHWA), in accordance with the provisions of the National Environmental Policy Act (NEPA), FHWA Technical Advisory 6640.8a, and applicable laws, rules, guidance, and regulations. ELOS services encompass a comprehensive range of tasks aimed at ensuring compliance with environmental regulations and facilitating the necessary approvals for infrastructure projects. These services include environmental consulting to advise on regulatory requirements, NEPA (National Environmental Policy Act) compliance to assess and mitigate potential environmental impacts, and agency coordination to engage relevant federal, state, and local authorities. Additionally, services involve preparing section 106 tribal packets for consultation with native American tribes, solicitation of views to gather input from stakeholders, and conducting detailed studies such as wetland studies, cultural resources studies, and cultural resources surveys to evaluate the impact on natural and cultural resources. Surveys for threatened & endangered species and the preparation of a navigability determination packet help ensure environmental protections are met. The process also includes the development of an environmental determination checklist and the acquisition of necessary environmental permits to ensure all legal and regulatory requirements are fulfilled before the project proceeds.

RELEVANCE TO LADOTD
Environmental

PROJECT TEAM
Lucas Watkins, Jay Prather, Brittany Berthelot, Basile Dardar, Caroline Simmons, Sunny Brogan, Bradley Comeaux, Conner Myers, Timothy Soileau, and Christopher Wilson.

Firm Name	Marrero, Couvillon & Associates, LLC		Past Performance Evaluation Discipline(s)*	Road
Project Name	I-10 and Pecue Lane - Lighting		Firm responsibility (prime or sub?)	Sub
Project Number	09-CS-US-0041	Owner's name	East Baton Rouge Parish/City of Baton Rouge/LADOTD	
Project Location	Baton Rouge, LA	Owner's Project Manager	Gary McClure (Shread-Kuyrkendall)	
Owner's Address, Phone, Email	13016 Justice Ave, Baton Rouge, LA 70816; 225-296-1335; gmcclure@skaengr.com			
Services Commenced by This Firm (mm/yy)	07/17	Total Consultant Contract Cost ($1,000's)	$3,600	
Services Completed by This Firm (mm/yy)	02/21	Cost of Consultant Services Provided by This Firm ($1,000's)	$131	

Background

The project was a combined effort of East Baton Rouge and the LADOTD. The civil work consisted of adding new access points to I-10, and new overpasses expanded to three lanes. New LED lighting design included low-mast poles along Pecue Lane and the new on/off ramps to I-10, high mast poles at the new diamond interchanges along Pecue Lane, bridge-mounted fixtures at the underpass, and new median-mounted low mast poles along I-10 throughout the entire reach of the new interchange. Lighting design also required the establishment of new electrical services from Entergy, and secondary controllers for all of the new lighting. The construction administration has required additional coordination work with Entergy to accommodate new overhead transmission and distribution lines in conflict with the road right-of-ways, requiring relocation of light poles. Chris Schade provided the construction administration. Kimball Schlafly provided the project management

RELEVANCE TO LADOTD

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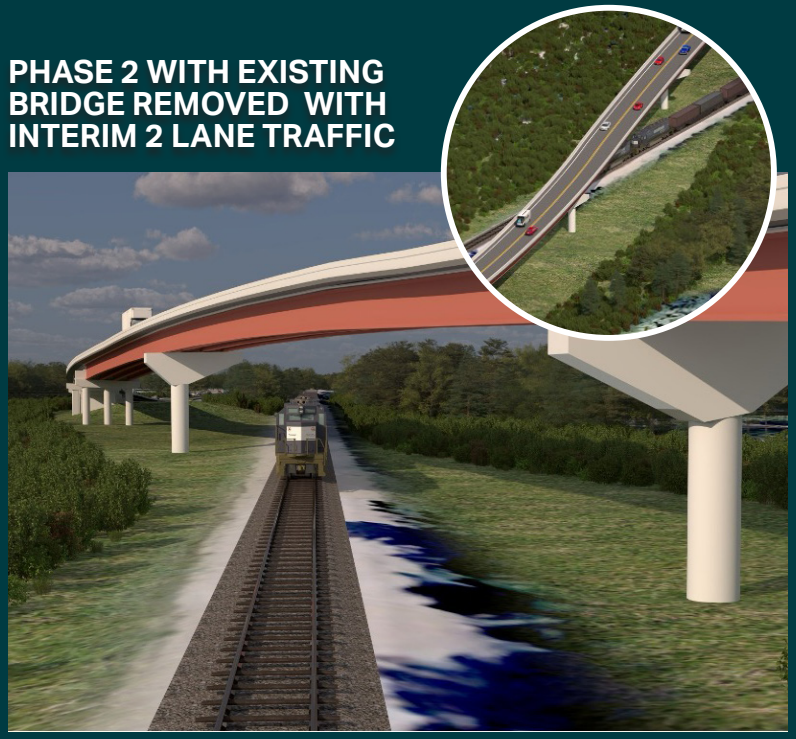
PROJECT TEAM

Kimball Schlafly, P.E.; Christian Schade, P.E.

EXISTING BRIDGE CONFIGURATION

PHASE 1 NEW SOUTHBOUND BRIDGE CONSTRUCTION PARALLEL TO EXISTING BRIDGE

PHASE 2 WITH EXISTING BRIDGE REMOVED WITH INTERIM 2 LANE TRAFFIC



FINAL BRIDGE CONFIGURATION

Section

18

18. Approach and Methodology

AECOM brings years of experience with the Department of Transportation and Development (DOTD) and has assembled a highly skilled team proficient in executing design projects in accordance with the DOTD Project Delivery Manual, Roadway Design Manual, and Bridge Design and Evaluation Manual.

AECOM understands that the purpose of this project is to replace the existing structurally deficient and functionally obsolete bridge crossing the Norfolk Southern (NS) railroad and widen US 11 from two lanes to four lanes from just north of US 190 to just north of Powell Drive.

AECOM also understands that roadway shoulder widths, bridge width, stopping sight distances, and design speed all pose a safety and mobility infringement on the surrounding area. AECOM realizes the need to provide continuity of traffic to Slidell and surrounding communities. This awareness will enable us to meet the needs of the project effectively.

AECOM ADVANTAGE
AECOM has extensive experience in developing plans for numerous rail crossings and has performed detailed line and grade studies for DOTD. Our staff understands the expectations of Norfolk Southern and their requirements and will leverage this experience throughout plan development to facilitate railroad design reviews and approvals.

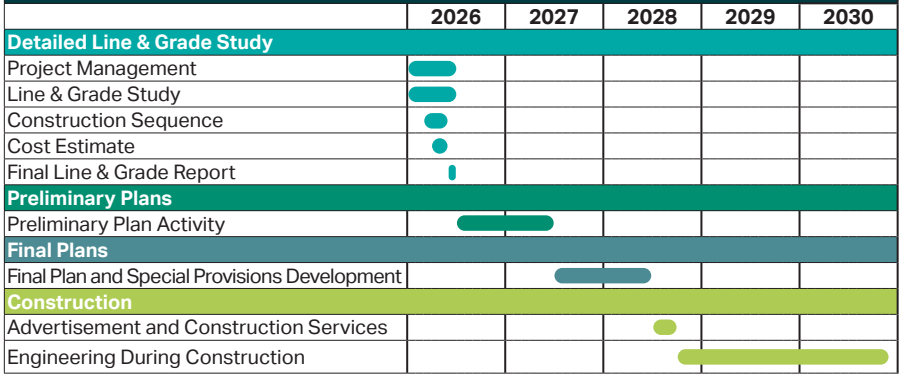
To deliver the best product to DOTD, AECOM is teamed with the following subconsultants, with bringing unique qualities to the project complementing AECOM's prime role.

Subconsultant	Project Role
Neel-Schaffer	Traffic Analysis and Modeling
Eustis Engineering, LLC	Geotechnical Field Work Design/Engineering
T Baker Smith, LLC	Roadway Design
Elos Environmental & Ecological Services	Environmental Permitting and Compliance
Marrero, Couvillion & Associates, LLC	Lighting

Contract Scoping Meeting

After selection, AECOM will request a scoping meeting with the DOTD Project Manager (PM) and other required DOTD Staff to confirm the project scope ensuring all parties fully understand the project goals and objectives. This process will confirm all elements to be delivered to DOTD and ensure all deliverables are accounted for. AECOM will coordinate with DOTD to confirm the content and level of advancement of the line and grade study to accomplish project objectives. This will enable the project to run smoothly for any preliminary and final plans and associated construction support activities. AECOM will develop a project specific Project Management Plan that aligns with the DOTD's processes and protocols. This plan will be used to guide the AECOM Team, throughout all phases of the process ensuring successful completion of deliverables on time and on budget

Proposed US 11 Project Schedule



Kickoff Meeting for Contract

After execution of the contract and Notice to Proceed is issued, the AECOM PM will request a kickoff meeting with the DOTD PM to get the following data:

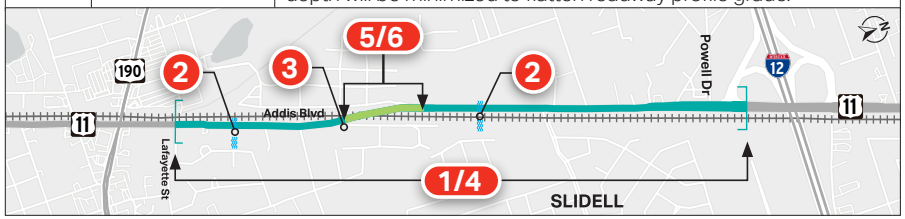
- Existing topographic survey files and SUE files,
- Existing environmental and traffic data,
- Existing soil boring information and geotechnical reports,
- Design criteria from the previously prepared Environmental Document

The project kickoff meeting will be used to: (1) establish project design criteria; (2) determine the frequency for project coordination meetings; (3) schedule an on-site meeting with DOTD; (4) review questions that the project team may have after reviewing existing documents; and (5) coordinate optimizations and solutions to challenges identified from the previously established conceptual line and grade study.

Traffic

The AECOM Team will review the existing traffic reports to further understand traffic demands within the network and to determine a Traffic Management Plan (TMP) for the construction phase. In addition to the TMP, it is anticipated that signal design and review of capacity for the proposed roundabout will be required for Final Design.

US 11 PROJECT CHALLENGES		
Item	**Challenge**	**Solution**
1	**Limiting Additional Drainage onto RR ROW**	Evaluate the current surface drainage implications to the Norfolk Southern RR ROW and design proposed drainage features to eliminate additional drainage onto the NS RR ROW.
2	**Existing Culvert Structural Capacity**	Existing drainage structures to remain in place can pose a challenge and need to be evaluated. Review the latest culvert inspection report to determine if any structural strengthening would be required.
3	**Track Shoring and Foundation Construction**	Consider installing future bridge foundations for the ultimate bridge configuration during the first phase of construction to allow for minimal track interference.
4	**OHE Utility Relocation**	Early and proactive coordination with any utility owner will assist the construction timeline and expedite the completion of the project.
5	**Bridge Sequence of Construction**	Develop a detailed construction phased approach that considers crane placements, girder splice locations, and available track closures to facilitate railroad approvals.
6	**Bridge Superstructure Type Selection**	A three-span curved steel plate girder unit will provide spans long enough to span over the existing and future NS tracks at the severe skew between rail and roadway alignments. Structure depth will be minimized to flatten roadway profile grade.



Bridge Design

The drivers for the bridge layout are the sequence of construction, railroad requirements, and the two detailed line and grade studies that will be developed. US 11, ultimately, will be widened to a four-lane roadway. The proposed bridge will carry two lanes of traffic in each direction divided by a 6-ft wide median with shoulders provided to accommodate cyclists and pedestrian facilities. Our team proposes to provide an open longitudinal joint creating two independent superstructures. This will provide optimum construction phasing and substructure/foundation configuration. The southbound side will be constructed while the existing bridge is still in use. Once the southbound side is completed, traffic will be shifted to the newly built structure while the existing bridge is demolished and the northbound side is constructed. If the reduced project scope is chosen, the southbound structure will be used to carry both directions of traffic indefinitely or until the northbound side can be constructed. This approach allows future widening of the facility to the preferred four lanes with only minor modifications needing to be made to the bridge constructed in the first stage.

The AECOM team has 3D-modeled the proposed bridge and it is required phasing to find the most economical and constructable solution, as seen in the graphic below. Our team's pre-planning and phasing has allowed us to identify where and how the existing bridge and future tracks will harmonize with the proposed bridge construction.

Due to the skew between the US 11 and NS track alignments, a three-span continuous curved steel plate girder unit (264'-320'-264') is recommended to cross existing and future tracks, minimizing substructures and keeping them outside the horizontal clearance envelopes. This balanced span arrangement provides a cost-effective design and ease of construction. Concrete girders will be used for the approach spans.

To keep columns outside the rail clearance envelope, proposed hammerhead bents will be independent in each construction stage, staggered along the alignment. This allows bents to be oriented normal to the roadway, eliminating skewed bents and staggered cross-frames in the steel units. Hammerhead bents also minimize foundation footprints and eliminate the need for straddle bents, improving constructability and railroad coordination. Without straddle bents, vertical clearance is taken to the bottom of the superstructure, allowing the roadway profile to remain as low as possible. The proposal ensures no substructure falls within the railroad vertical clearance envelope. Structure depth will be minimized to keep the roadway profile low over the tracks. Placing columns outside the clearance envelope also eliminates the need for crash walls. Either footings or drilled shaft foundations can be constructed outside NS clearance limits, providing room for excavation and shoring, and set deep enough to accommodate future tracks.

As part of the preliminary line and grade study and conceptual plan development, AECOM will perform a cost comparative analysis of the approach and departure spans, incorporating the most optimal steel span limits.

AECOM ADVANTAGE
AECOM uses a proprietary structural design platform that integrates graphic 3D modeling with industry standard design software to facilitate quick evaluations of various structure alternatives.

Railroad Coordination

US 11 runs parallel to Norfolk Southern's (NS) NO & NE line and serves as the only grade-separated crossing between I-12 and US 190, allowing motorists to safely cross the railroad. Project success will rely on early coordination and regular communication between our team, DOTD's Railroad Coordinator Shawn Luke, and the railroad. AECOM understands there are 13 trains per day at a maximum authorized speed of 60 MPH through the project site. AECOM will craft a reconstruction plan for the bridge, covering both scoping options, and a construction sequence that eliminates disruptions to railroad operations and the identified future tracks at this site.

Given the age of the previous Line & Grade Study, it is critical to re-confirm required future track, access road, and ditch needs with the railroad before advancing the bridge layout, as well as understand how the pending acquisition will impact the project. For example, the UP Public Projects Manual requires overhead bridges to span the right-of-way. This would significantly alter the approach to the proposed bridge replacement since the right-of-way width is about 190' in the bridge area. It would also push the roadway on either side farther from the railroad, requiring additional right-of-way from adjacent property owners. If the acquisition has not been completed at project start, AECOM proposes submitting an initial concept plan showing all permanent clearances and right-of-way impacts, and helping DOTD establish a Memorandum of Understanding with NS.

AECOM ADVANTAGE
In anticipation of the ongoing UPRR acquisition of NS, the AECOM team also includes Audra Rodgers, PE. For more than 18 years, Audra has reviewed grade separation railroad crossing projects for major freight railroads, focusing on UPRR. Her close relationship and "knowhow" with the UPRR will complement Joshua's experience and solidify AECOM's coordination with NS/UP and the DOTD so that a truly seamless and clean, line and grade study is ready for plan advancement.

Besides the bridge, three other significant areas of railroad concern are:

- For the proposed culverts at approximate STA 283+00, AECOM will assess the hydraulic opening for the existing railroad bridge for the 100-year storm and complete a scour analysis to ensure there are no negative impacts to the railroad.
- For the existing culverts at approximate STA 317+50, AECOM will assess the existing and proposed culverts for the 100-year storm and complete a scour analysis to ensure there are no negative impacts to the railroad.
- At the North Blvd. intersection, AECOM will work with DOTD to hold a diagnostic team review to collectively assess any impacts at the adjacent at-grade crossing. AECOM will complete a traffic study to ensure vehicles traveling westbound on North Blvd. don't queue across the track while waiting to turn onto US 11 northbound.

To avoid any surprises to the railroad and minimize the potential for rework, AECOM anticipates providing the following submission packages: concept, 30%, 60%, 90%, and 100% submittals. Upon receipt of railroad comments, AECOM will schedule a meeting with the railroad and their consultant to review the comments and establish a path to resolve the comments.

Environmental

AECOM and Elos staff include NEPA specialists and scientists experienced in obtaining USDOT environmental approvals and permits. The Environmental Assessment and Finding of No Significant Impact are complete and do not need revisiting; little time has passed, and conditions remain unchanged. The team is ready to move forward, obtain permits as needed, and ensure compliance with the Statewide Programmatic Agreement on Management of Historic Bridges in Louisiana. If the design changes and a quick re-evaluation of the EA is needed, the team can swiftly handle it with their prior experience.

Drainage Analysis and Design

Drainage is a key component in the line and grade study. Requirements of DOTD and the railroad must be met. The study will consider two options: full reconstruction and discrete bridge replacement. AECOM will develop drainage ditches, and proposed encroachments will be shown on bridge and roadway plans. The roadway and drainage team will prepare cross sections perpendicular to the track centerline, including at least five at the bridge site, for DOTD and railroad submittals. Maintaining existing drainage and providing for future improvements is critical for railroad approval. Because additional ROW must be acquired from the railroad, AECOM will modify ditch designs for each construction option to secure DOTD and railroad approval. The drainage

team will coordinate with roadway and bridge teams to collect bridge surface drainage into a piping system leading to a protected location off railroad property. They will also evaluate previously sized culvert extensions to ensure same-size box extensions are feasible, simplifying construction and avoiding complex structural analysis. Finally, the drainage and bridge teams will assess existing culverts to confirm they can remain, with or without enhancements.

AECOM ADVANTAGE
As a Program Manager for the Louisiana Watershed Initiative, AECOM is very familiar with the drainage in this immediate area. We have led the development of modelling methods and have used the new LWI models to evaluate and advance capital projects. We are proficient with the new HUC8 model of this area and with break-out models more suitable to the evaluation of small improvements. Sreeni Bollu oversaw and approved the modelling for two of these local projects and will lead the drainage analysis for the US 11.

Design Survey

AECOM understands that DOTD will provide the topographic, SUE surveys, and the property survey relating to the NS railway. AECOM will review the survey after the kickoff meeting to determine if additional survey may be needed to facilitate the completion of the line and grade study.

Detailed Sequence of Construction and Safety of Rail Traffic

AECOM's approach includes a detailed construction sequence that complements each line and grade study. The sequencing and constructability of the bridge reconstruction and corridor widening will be evaluated for not only the vehicular traffic demands in St. Tammany Parish, but also the operational requirements of NS; however, with a single existing track and moderate train volume, it's anticipated the contractor will have ample room to construct the necessary access roads and crane pads to safely construct the new bridge utilizing natural train windows while meeting the railroad's requirements (e.g. crane capacity).

Detailed Line and Grade

AECOM has developed a two-task approach for each line and grade study as outlined in the items below.

Task 1. Preliminary Detailed Line and Grade Development
During the preliminary line and grade analysis, AECOM will establish the foundation for the project through design criteria development and early design coordination. ***Key activities include:***

- Request and review design criteria from the previously prepared environmental document.
- Compare design criteria with project goals and current policies from AASHTO, NS/UP, FHWA, and DOTD. Modify and update design criteria based on any DOTD comments, memorializing changes with DOTD in a Table of Design Criteria for inclusion in the final report.
- Establish roadway typical sections to define corridor width limits and ROW servitude needs, bridge geometry, drainage structure locations, and utility conflicts
- Modify horizontal and vertical geometry for the corridor.
- Prepare a line and grade study report, including horizontal and vertical alignments, major utility conflicts, impacted drainage structures, existing and proposed bridge geometry, corridor cross sections, and sight distance determinations.
- Develop a plan and profile roll plot layout showing geometric alignment elements, major drainage features, and structural features for the bridge and railroad.
- Prepare a sequence of construction exhibit.
- Submit preliminary detailed line and grade study to DOTD for comments.
- Prepare and submit a conceptual railroad package to NS/UP for comments.

Task 2. Final Detailed Line and Grade Development
Before advancing, AECOM will review DOTD and NS comments to identify any design impacts and/or adjustments for the final line and grade development. ***Additional key activities include:***

- Finalize the sequence of construction, roadway typical sections, horizontal and vertical alignments, required ROW servitude limits, and verify drainage structure relocations and improvements.
- Advance a final report of the detailed line and grade study with plans that show both alternatives for the project.
- Develop construction quantities to **prepare and finalize preliminary cost estimates** that include all facets of the construction including temporary and permanent work, CE&I, and estimated railroad flagging costs.
- Perform a detailed QC/QA check of plans and calculations for all disciplines prior to final submittal to DOTD.
- Prepare and submit a preliminary railroad package to NS/UP for comments.

Quality Assurance/Quality Control

A QA/QC program is essential for a successful project and we are committed to this DOTD policy. Please refer to AECOM's QA/QC program for the US 11 Norfolk Southern RR Overpass project that is fully detailed and attached in this proposal.

LA Highway 23 over Mid Barataria Sediment Diversion
RR design, coordination and safety requirements, phased construction with MOT, Roadway/Traffic Design

Sections 19-23

19. Workload

Firm(s)	Past Performance Evaluation Discipline(s) *	State Project Number	Project Name	Remaining Unpaid Balance**
AECOM TECHNNICAL SERVICES, INC.	Bridge	H.015603.5	LA 641 Bridge Load Rating Services	$38,952
	Bridge	H.009859.5	TO#1 Bridge Load Rating Services	$306,027
		H.004273.5	I-49 Connector	See below
	Planning		Tasks 1, 5, 6, 12	$514,189
	Traffic		Task 2	$34,207
	Road		Task 4	$14,923
	Bridge		Task 8	$5,335
	Environmental		Task 10	N/A
	Bridge		Task 301	N/A
	Bridge		Task 302	$95,00
	Bridge		Task 408	$116,440
	Bridge	H.011969.5	Contract 1 for Movable Bridges (LA 1264)	$555,400
	Bridge	H.012044.5	Contract 1 for Movable Bridges (LA 384)	$400,181
	Bridge	H.011988.5	Contract 1 for Movable Bridges (LA 86)	$490,008
	Bridge	H.011973.5	Contract 1 for Movable Bridges (LA 315)	$483,440
	Bridge	H.012737.5	Contract 1 for Movable Bridges (LA 433)	$483,440
	Road	4400023921 H.016313	LA 1206: Creek Bridge	$303,628
	Road	4400023921 H.016315	LA 463: Drain Bridge	$55,313
	Road	4400023921 H.016316	LA 499: Ice Branch Bridge	$73,035
	Road	4400023921 H.016317	LA 1234: Drain Bridges	$100,952

Firm(s)	Past Performance Evaluation Discipline(s) *	State Project Number	Project Name	Remaining Unpaid Balance**
AECOM TECHNNICAL SERVICES, INC.	Road	4400023921 H.016321	LA 970: Creek Bridge	$85,923
	Road	4400023921 H.016322	LA 81: W-11 Lateral & Bayou Black Brs	$118,870
	Road	4400023921 H.016323	LA 37: Glass Branch Brid	$105,256
	Road	4400023921 H.016324	LA 463: Drain Bridge	$105,256
	Road	4400023921 H.016326	LA 36: Drain Bridge	$105,256
	Environmental	4400023921 H.016313	LA 1206: Creek Bridge	$39,656
	Environmental	4400023921 H.016315	LA 463: Drain Bridge	$42,937
	Environmental	4400023921 H.016316	LA 499: Ice Branch Bridge	$49,635
	Environmental	4400023921 H.016317	LA 1234: Drain Bridges	$51,806
	Environmental	4400023921 H.016321	LA 970: Creek Bridge	$46,287
	Environmental	4400023921 H.016322	LA 81: W-11 Lateral & Bayou Black Brs	$48,342
	Environmental	4400023921 H.016323	LA 37: Glass Branch Bridge	$49,351
	Environmental	4400023921 H.016324	LA 1047: Drain Bridge	$49,551
	Environmental	4400023921 H.016326	LA 36: Drain Bridge	$49,551
	Road, Bridge, Traffic	4400023434 H.000445	US 190: UPRR Overpass near Opelousas	$2,458,099

Elos Environmental, LLC	Environmental	44-0019337 / H.014242	LA-124 Big Branch, Sandy, Godfrey, Beech Bridges	N/A
	Environmental	44-0019337 / H.014243	LA-472 Indian and Big Bear Creek	N/A
	Environmental	44-0019337 / H.014245	LA-119 Bayou Pierre and Creek Bridges	$15
	Environmental	44-0019337 / H.014246	LA-1199 Creeks & Spring Creek	$19
	Environmental	44-0019337 / H.014247	LA-399 Creeks, Little 6 Mile Creek, Flat Branch	$45
	Environmental	44-0019337 / H.014247.5	LA-399 Bridges – Supplemental Task Order	N/A
	Environmental	44-0019337 / H.014248	LA-124 Creeks, Broke Leg Bayou, Boggy Bayou	$14
	Environmental	44-0019337 / H.014248.5	LA-124 On site Detours - Supplemental Task Order	$308
	Environmental	44-0019337 / H.014249	LA-126 Creek	$849
	Environmental	44-0019337 / H.014242.5	LA-124 Bridges/Detours – Supplemental Task Order	$21,473
	Environmental	44-0019337 / H.014250	LA-577 Bull Bayou and Creek Bridges	$38

Firm(s)	Past Performance Evaluation Discipline(s) *	State Project Number	Project Name	Remaining Unpaid Balance**
Elos Environmental, LLC	Environmental	44-0019337 / H.014268	LA-4 Creeks, Bear, Squirrel, Sugar, Bill's and Lost Creek Relief	$30
	Environmental	44-0019337 / H.014268.5	LA-4 Creeks, Bear, Squirrel, Sugar, Bill's and Lost Creek Relief – Additional Tasks	$398
	Environmental	44-0019337 / H.014245.5	LA-119 Bayou Pierre and Creek Bridges – Additional Tasks	N/A
	Environmental	44-0027734 / H.014362	Lake Road in St. Tammany Parish	$22,877
	Environmental	44-0024593 / H.015009	OSBR West Metairie Ave Bridge, South Suburban Canal	N/A
	Environmental	44-0025041 / H.015429	Carroll Ave, Middle Colyell Creek - IIJA Off-System Bridges District 62	$61
	Environmental	44-0025041 / H.015430	Hood Rd, Middle Colyell Creek - IIJA Off-System Bridges District 62	$51
	Environmental	44-0025041 / H.015431	Sawmill Rd, Unnamed Creek - IIJA Off-System Bridges District 62	$53
	Environmental	44-0025041 / H.015432	M. Williams Rd, Spring Creek - IIJA Off-System Bridges District 62	$53
	Environmental	44-0025041 / H.015433	George Jenkins Rd, Berrys Creek - IIJA Off-System Bridges District 62	$64
	Environmental	44-0025041 / H.015434	Mitch Rd, Peters Creek - IIJA Off-System Bridges District 62	$49
	Environmental	44-0021326 / H010074.1	DOTD Stage 0 IDIQ-LA 3089 Serve Rd/LA 70 Up	$2,760

Firm(s)	Past Performance Evaluation Discipline(s) *	State Project Number	Project Name	Remaining Unpaid Balance**
Eustis Engineering, LLC	CE&I/OV	DOTD S.P./ Task Order No. H.015028.6. Boh Bros. Subcontract No. 23210-009. Boh Bros. Project No. 2321034. Work Order No. 23210-017	Louisiana, State of - Department of Transportation and Development, LA 302: Bayou Barataria Bridge Replacement, Phase 1, Jefferson Parish, Louisiana, Eustis Engineering Project No. 24515.02 (Construction materials testing services and vibration monitoring)	$15,000
	Geotech	DOTD S.P No. H.015028.6. Contract 4400019017, Task Order 03	Louisiana, State of - Department of Transportation and Development, LA 302: Bayou Barataria Bridge Replacement, Phase 1, Jefferson Parish, Louisiana, Eustis Engineering Project No. 24515.01 (Engineering During Construction including Dynamic Pile Testing)	$51,000
	CE&I/OV	LADOTD Contract No. 4400021740. S.P. No. H.004100.6. F.A.P. No. H004100. 11265001.000 I-10 CMAR	Louisiana, State of - Department of Transportation and Development, I-10: LA Highway 415 to Essen Lane on I-10 and I-12, Phase I: West of Washington Street to Essen Lane, Phase I, Segment 01: West of Washington Street to Acadian Thruway, Route I-10, West and East Baton Rouge Parish, Louisiana, Eustis Engineering Project No. B0771 (Testing services for Volkert)	$14,000

Firm(s)	Past Performance Evaluation Discipline(s) *	State Project Number	Project Name	Remaining Unpaid Balance**
Marrero, Couvillon, & Associates, LLC	Road	H.015052	I-20 Widening Overlay	$249,658

Firm(s)	Past Performance Evaluation Discipline(s) *	State Project Number	Project Name	Remaining Unpaid Balance**
Neel-Schaffer, Inc.	Planning	SPN 736-99-1548	Travel Demand Model Support Services Statewide (PRIME)	$46,821
	ITS	4400010428 EWL 3, H.004774.5; H.007300	Kansas Lane: Garrett Road Connector and I-20 Improvements (SUB)	$805
	Traffic	4400010428 EWL 6, H.004774.5; H.007300	Kansas Lane: Garrett Road Connector and I-20 Improvements (SUB)	n/a
	Planning	4400015733, H.972374.1	Local Public Agency Documented Planning Process, Statewide	$72,185
	Road	4400017293, H.010616	I-20: LA 544 Overpass Replacement	n/a
	ITS	440005459, H.004780.5	Kansas Lane Connector, S.A. #6	$552
	Traffic	4400017438, H.013284	MRB South GBR: LA 1 to LA 30 Connector, Ascension, EBR, Iberville & WBR	$130,966
	Traffic	4400018271, H.014746.1	LA 383 Corridor Study	$10,547
	Traffic	4400018271, H.014746.5, SA #2	LA 383 Corridor Study	$54,445
	Planning	4400018271, H.014746.1	LA 383 Corridor Study	$93,741
	Planning	4400021094	Update Statewide Transportation Plan and Travel Demand Model	$6,170
	Traffic	4400026458, H.014710.5	Cedar Street Ext. to LA 22 and Roundabout	$33,740
	Road	4400024927, H.015226.5, S.A. #2	US 90: Roundabout at LA 101, S.A. #2	$62,647
	Traffic	4400025299, H.013421.5	Dist. 02H Flashing Yellow Arrow Part 2	$71,946

Firm(s)	Past Performance Evaluation Discipline(s) *	State Project Number	Project Name	Remaining Unpaid Balance**
Neel-Schaffer, Inc.	Traffic	4400025299, H.015645.5	LA 47 Hayne Blvd Safety Improvements	$52,589
	Traffic	4400025299, H.016168.1	Baton Rouge Northern Bypass Expressway	$419,673
	Road	4400024927, H.014366.5	LA 621 Realignment at LA 73	$325,925
	Traffic	4400024927, H.014366.5	LA 621 Realignment at LA 73	$68,011
	Traffic	4400023689, H.013622.5	LRSP Ardenwood Dr. Road Diet	$112
	Planning	4400023689, H.013622.5	LRSP Ardenwood Dr. Road Diet	$5,318
	Road	4400023689, H.013622.5	LRSP Ardenwood Dr. Road Diet (awaiting NTP for design and should not count as backlog)	$156,280
	Road	4400024927, H.009425.5	LA 16: N 2nd St. to E. of Duncan Ave.	$150,429
	Traffic	4400025299, H.015986.5	I-49 at LA 3233 (Harry Gilbeau Road) Traffic Study	$80,675
	Road	4400028434, H.015568.5	LA 44: Pelican Point Roundabout and Widen	$88,844
	Traffic	4400023689, H.015574.5	LCG FYA Signal Improvements Phase 2	$207,261
	Other (Program Management)	4400027987, H.015373.1	LRSP and SRTPP Program Management	$910,500
	Road	4400024927, H.016158.5	LA 182: Greenwood St. Overpass	$83,005
	Traffic	4400028585, H.014516.5	Mills Ave & Rees St Intersection Imp	$97,301
	Safety	4400023689, H.015227. S.A. #1	US 51 @ Victoria Dr. Ped Crossing, S.A. #1	$23,323
	ITS	4400029436, H.011504.6	Alexandria Phase 2 Technical Support	$33,611

Firm(s)	Past Performance Evaluation Discipline(s) *	State Project Number	Project Name	Remaining Unpaid Balance**
Neel-Schaffer, Inc.	ITS	4400029436, H.016447.1	DMS Decom & Upgrades SEA	$99,329
	CE&I	4400029441, H.011446.6	Mound Rest Area Renovations	$82,692
	Other (Electrical)	4400029441, H.015218.5	Grand Prairie Safety Rest Area Lighting	$30,575
T. Baker Smith, LLC	Survey	4400021973/ H.016324	LA 1047: Drain Bridge	$42,623
	Survey	4400021973/ /H.015308	I-49: I-10 - St. Landry Parish Line	$139,289
	Survey	4400021973/ H.016326	LA 36: Drain Bridge	$42,057
	Survey	4400021973/ H.016333	LA 95: Over Bayou Bridge	$50,138
	Survey	4400021973/ H.015308	I-49:I-10 - St. Landry P/L	$139,000
	Other (Subsurface Utility Engineering)	4400025511 / H.012449	KCS Xings Betwn Gayosa St. & Louise (BTR)	$138,308
	Other (Subsurface Utility Engineering)	4400025511/ H.014308.5	Pope Ln: IC RR Xing	$13,296

20. Certifications/Licenses: PRIME AND SUB

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

Table of Contents for Certifications and Licenses

Name	Firm	Page Number
Jonathan McDowell, PE	**AECOM Technical Services, Inc.**	127
Gregory Trahan, PE, RSP_1		128
Ellen Howard, PE, PTOE, RSP	**Neel-Schaffer, Inc.**	129
Chuck LeBoeuf, PE		130
William Fulcher, PE, PTOE, PTP, RSP2B, RSP 2I		131
Jonathan Duhe, PE, PTOE, RSP_1		133
Vijay Kundana, PE, PTOE, PTP		135

Jonathan McDowell, PE	AECOM Technical Services, Inc.

Certificate of Completion

presented to

Jonathan McDowell

for completing the

Traffic Engineering Analysis Process & Report
Module 1

Date: September 5, 2018 *Professional Development*
Location: Baton Rouge, Louisiana *Hours (PDHs) Awarded:* 2

Authorized Instructor *Authorized Instructor* *Authorized Instructor*

DOTD LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Jonathan McDowell

for completing the

Traffic Engineering Analysis Process & Report
Module 2

Date: September 17, 2018 *Professional Development*
Location: Baton Rouge, Louisiana *Hours (PDHs) Awarded:* 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Jonathan McDowell

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: October 15, 2018 *Professional Development*
Location: Baton Rouge, Louisiana *Hours (PDHs) Awarded:* 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Jonathan G McDowell
has attended
Traffic Control Supervisor Refresher-LA State Specific
Training Course

5/19/2023 to 5/19/2027
Training Valid Through

New Orleans, LA
Location

Vice President of Education and Technical Services

President, CEO

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

ATSSA American Traffic Safety Services Association ATSSA.com

ATSSA

Beginning Jan. 1, 2022, all flagger cards shall include a serial number. Cards issued without a serial number will not be accepted.

**National flagger certification cards shown below. Utah cards have a slightly different appearance. All serial numbers are exactly 11 characters (1 letter + 10 numbers).*

Flagger Verification Search

By Flagger Number Beginning with "A":
A1000126301

By Flagger Number Beginning with "V":

Last Name
McDowell

Gregory Trahan, PE, RSP1	AECOM Technical Services, Inc.

Certificate of Completion

presented to

Gregory Trahan

for completing the

Traffic Engineering Analysis Process & Report
Module 1

Date: July 16, 2018 *Professional Development Hours (PDHs) Awarded:* 2
Location: Baton Rouge, Louisiana

Authorized Instructor | Authorized Instructor | Authorized Instructor

DOTD Louisiana Department of Transportation & Development

Certificate of Completion

presented to

Gregory Trahan

for completing the

Traffic Engineering Analysis Process & Report
Module 2

Date: July 23, 2018 *Professional Development Hours (PDHs) Awarded:* 3
Location: Baton Rouge, Louisiana

Authorized Instructor | Authorized Instructor | Authorized Instructor

DOTD Louisiana Department of Transportation & Development

Certificate of Completion

presented to

Gregory Trahan

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: October 29, 2018 *Professional Development Hours (PDHs) Awarded:* 3
Location: Baton Rouge, Louisiana

Authorized Instructor | Authorized Instructor | Authorized Instructor

DOTD Louisiana Department of Transportation & Development

TPCB Transportation Professional Certification Board, Inc.

The Transportation Professional Certification Board

Certifies that

Gregory Dale Trahan, P.E., RSP1

successfully holds the Road Safety Professional® (Level 1) certification

Original Certification Date: 3/14/2022

Certification Valid Through: 3/14/2028

Steve Kuciemba,
Executive Director and CEO

Joseph C. Balskus, P.E., PTOE, RSP1
TPCB Chair

Certification Number: 833

Certificate of Training

this certifies that

Gregory Trahan

has successfully completed the training program requirements for

National Flagger Certification Training Course

Awarded on this **11th** *day of* **May 2023**

This certificate is valid for 30 days from the date awarded.

Ellen Howard, PE, PTOE, RSP	Neel-Schaffer, Inc.

Transportation Professional Certification Board Inc.

certifies that

Ellen Lee Bucke

has met all of the requirements established by the Certification Board to use the title of

PROFESSIONAL TRAFFIC OPERATIONS ENGINEER

unless withdrawn by the Certification Board and subject to the provisions for renewal.
Certificate number 3735 issued in Washington, D.C., U.S.A.

August 1, 2014

Timothy P. Harpst
Chair

PTOE PROFESSIONAL TRAFFIC OPERATIONS ENGINEER

Executive Director

Transportation Professional Certification Board, Inc.

certifies that

Ellen Burke Howard

has met all of the requirements established by the Certification Board to use the title of

Road Safety Professional

unless withdrawn by the Certification Board and subject to the provisions for renewal.
Certificate number 349 issued in Washington, DC, USA
12/09/2019

Diane W. Morabito
Chair

RSP ROAD SAFETY PROFESSIONAL

Jeffrey F. Paniati
Executive Director

Certificate of Completion

presented to

Ellen B. Howard

for completing the

Traffic Engineering Analysis Process & Report
Module 1

Date: July 16, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2

Authorized Instructor | Authorized Instructor | Authorized instructor

DOTD LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Ellen Howard

for completing the

Traffic Engineering Analysis Process & Report
Module 2

Date: July 23, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | Authorized Instructor | Authorized instructor

DOTD LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Ellen Howard

for completing the

Traffic Engineering Analysis Process & Report
Module 3

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

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | Authorized Instructor | Authorized instructor

DOTD LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Chuck LeBoeuf, PE	Neel-Schaffer, Inc.

Transportation Professional Certification Board, Inc.

certifies that

Charles W. LeBoeuf

has met all of the requirements established by the Certification Board to use the title of

Professional Traffic Operations Engineer

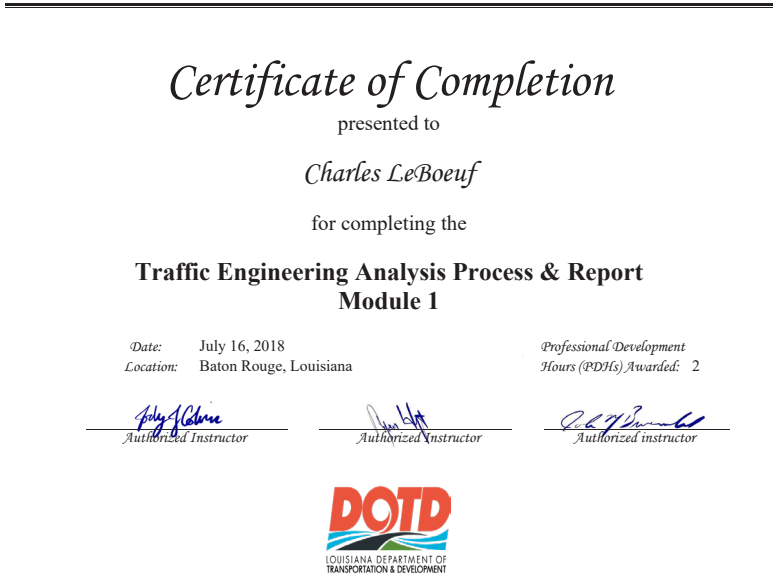
unless withdrawn by the Certification Board and subject to the provisions for renewal.
Certificate number 5397 issued in Washington, DC, USA

11/23/2022

Deborah Snyder
Chair

PTOE PROFESSIONAL TRAFFIC OPERATIONS ENGINEER

Jeffrey F. Paniati
Executive Director



Certificate of Completion

presented to

Charles LeBoeuf

for completing the

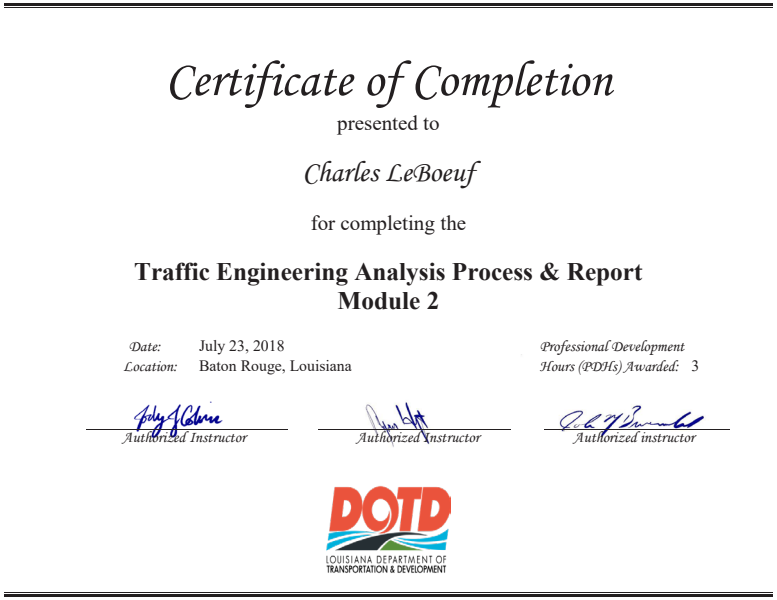
Traffic Engineering Analysis Process & Report
Module 1

Date: July 16, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2

Authorized Instructor | Authorized Instructor | Authorized instructor

DOTD LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Charles LeBoeuf

for completing the

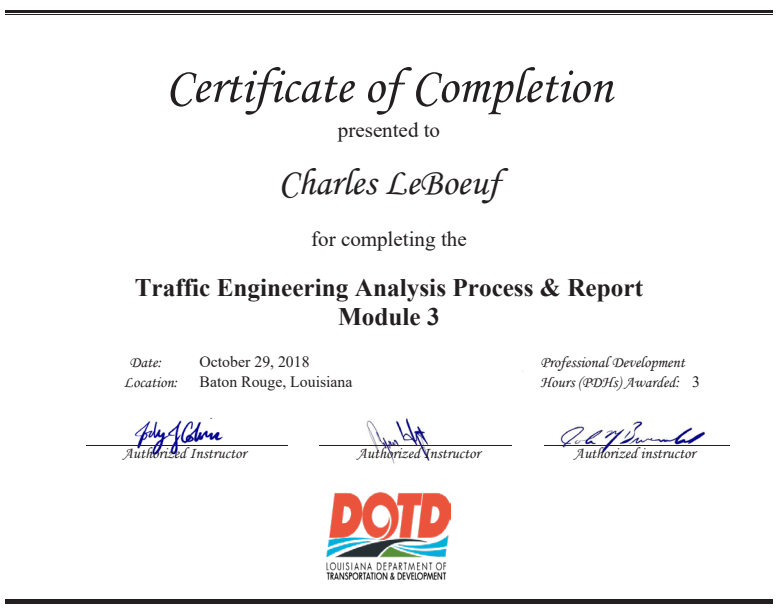
Traffic Engineering Analysis Process & Report
Module 2

Date: July 23, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | Authorized Instructor | Authorized instructor

DOTD LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Charles LeBoeuf

for completing the

Traffic Engineering Analysis Process & Report
Module 3

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

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | Authorized Instructor | Authorized instructor

DOTD LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

William Fulcher, PE, PTOE, PTP, RSP2B, RSP 2I	Neel-Schaffer, Inc.

Transportation Professional Certification Board, Inc.

certifies that

William C. Fulcher

has met all of the requirements established by the Certification Board to use the title of

Professional Traffic Operations Engineer

unless withdrawn by the Certification Board and subject to the provisions for renewal.
Certificate number 5158 issued in Washington, DC, USA
11/20/2021

Deborah Snyder
Chair

PTOE PROFESSIONAL TRAFFIC OPERATIONS ENGINEER

Jeffrey F. Paniati
Executive Director

Transportation Professional Certification Board, Inc.

certifies that

William C. Fulcher

has met all of the requirements established by the Certification Board to use the title of

Professional Transportation Planner

unless withdrawn by the Certification Board and subject to the provisions for renewal.
Certificate number 786 issued in Washington, DC, USA
11/20/2021

Deborah Snyder
Chair

PTP PROFESSIONAL TRANSPORTATION PLANNER

Jeffrey F. Paniati
Executive Director

Transportation Professional Certification Board, Inc.

certifies that

William C. Fulcher

has met all of the requirements established by the Certification Board to use the title of

Road Safety Professional Behavioral

unless withdrawn by the Certification Board and subject to the provisions for renewal.
Certificate number 83 issued in Washington, DC, USA
7/18/23

Joseph C. Balsikus
Chair

RSP2 ROAD SAFETY PROFESSIONAL

Jeffrey F. Paniati
Executive Director

Transportation Professional Certification Board, Inc.

certifies that

William C. Fulcher

has met all of the requirements established by the Certification Board to use the title of

Road Safety Professional Infrastructure

unless withdrawn by the Certification Board and subject to the provisions for renewal.
Certificate number 147 issued in Washington, DC, USA
3/20/23

Joseph C. Balsikus
Chair

RSP2 ROAD SAFETY PROFESSIONAL

Jeffrey F. Paniati
Executive Director

William Fulcher, PE, PTOE, PTP, RSP2B, RSP 2I	Neel-Schaffer, Inc.

Transportation Professional Certification Board, Inc.

certifies that

William Case Fulcher

has met all of the requirements established by the Certification Board to use the title of

Road Safety Professional

unless withdrawn by the Certification Board and subject to the provisions for renewal.
Certificate number 351 issued in Washington, DC, USA

12/09/2019

Diane W. Morabito
Chair

ROAD SAFETY PROFESSIONAL

Jeffrey F. Paniati
Executive Director

Certificate of Completion

presented to

William Case Fulcher

for completing the

Traffic Engineering Analysis Process & Report
Module 1

Date: July 16, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

William Fulcher

for completing the

Traffic Engineering Analysis Process & Report
Module 2

Date: July 23, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

William Fulcher

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: October 18, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Jonathan Duhe, PE, PTOE, RSP	Neel-Schaffer, Inc.

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Jonathan Duhe
has attended
Louisiana Traffic Control Supervisor Refresher
Training Course

9/8/2023 to 9/8/2027
Training Valid Through

Vice President of Education and Technical Services

Baton Rouge, LA
Location

President, CEO

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

ATSSA American Traffic Safety Services Association ATSSA.com

Transportation Professional Certification Board, Inc.

certifies that

Jonathan Paul Duhe

has met all of the requirements established by the Certification Board to use the title of

Professional Traffic Operations Engineer

unless withdrawn by the Certification Board and subject to the provisions for renewal.
Certificate number 4418 issued in Washington, DC, USA

3/18/18

Michael K. Park
Chair

PTOE PROFESSIONAL TRAFFIC OPERATIONS ENGINEER

Jeffrey F. Paniati
Executive Director

Transportation Professional Certification Board, Inc.

certifies that

Jonathan Paul Duhe

has met all of the requirements established by the Certification Board to use the title of

Road Safety Professional

unless withdrawn by the Certification Board and subject to the provisions for renewal.
Certificate number 282 issued in Washington, DC, USA

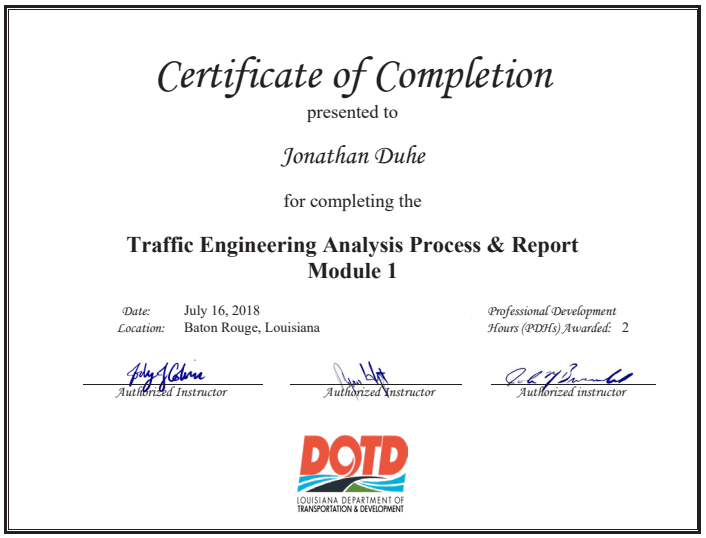
07/17/2019

Diane W. Morabito
Chair

RSP ROAD SAFETY PROFESSIONAL

Jeffrey F. Paniati
Executive Director

Jonathan Duhe, PE, PTOE, RSP	Neel-Schaffer, Inc.



Certificate of Completion

presented to

Jonathan Duhe

for completing the

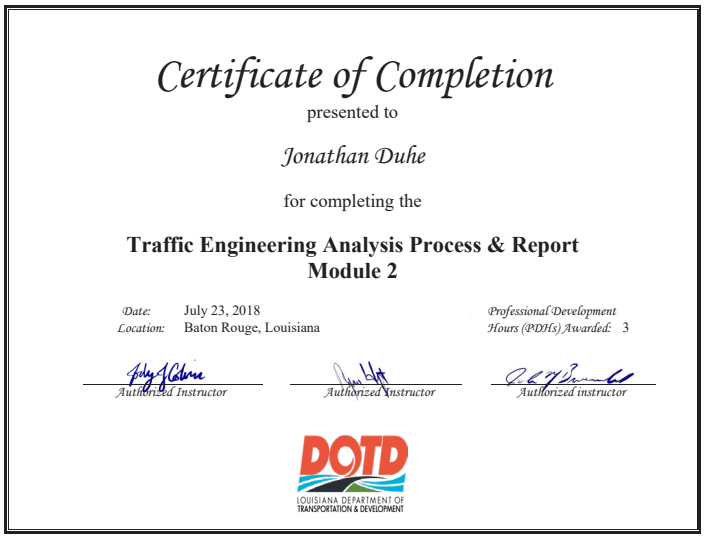
Traffic Engineering Analysis Process & Report
Module 1

Date: July 16, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Jonathan Duhe

for completing the

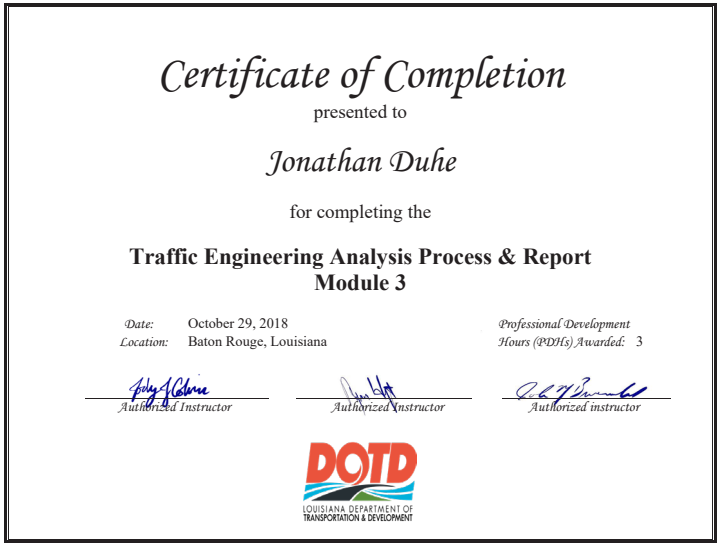
Traffic Engineering Analysis Process & Report
Module 2

Date: July 23, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Jonathan Duhe

for completing the

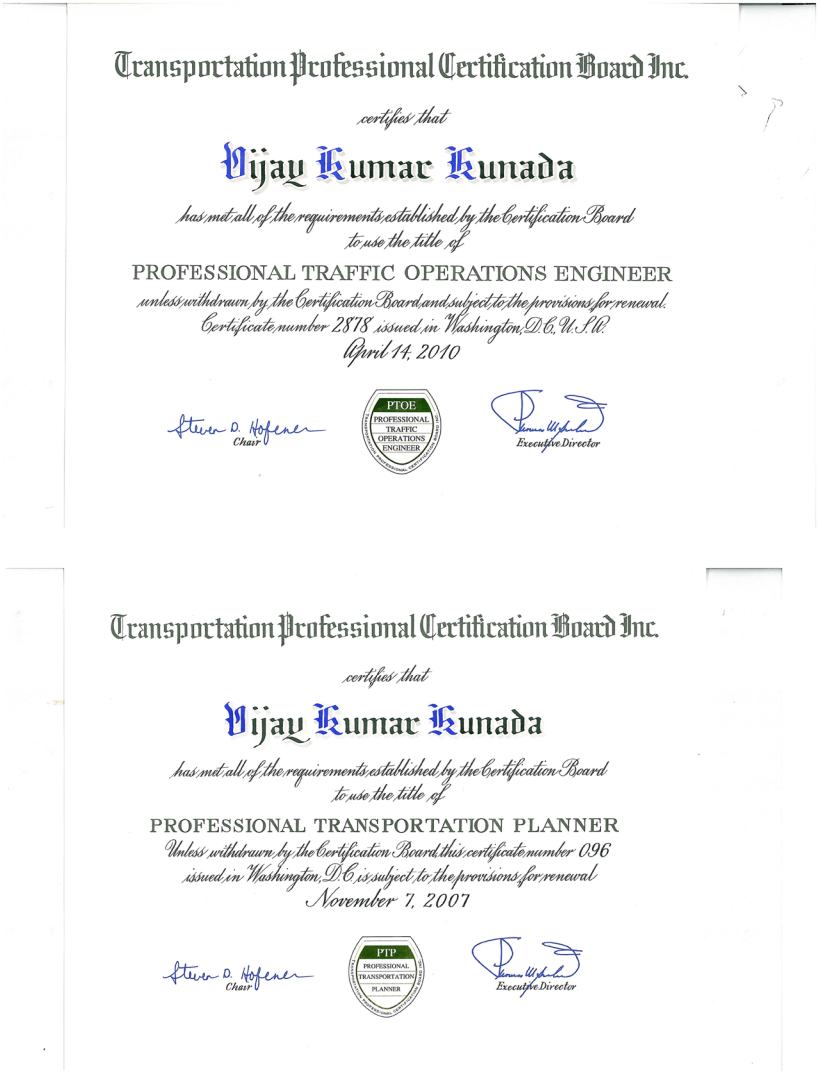
Traffic Engineering Analysis Process & Report
Module 3

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

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Transportation Professional Certification Board Inc.

certifies that

Vijay Kumar Kunada

has met all of the requirements established by the Certification Board to use the title of

PROFESSIONAL TRAFFIC OPERATIONS ENGINEER

unless withdrawn by the Certification Board and subject to the provisions for renewal. Certificate number 2818 issued in Washington, D.C., U.S.A.

April 14, 2010

Steven D. Hofener
Chair

PTOE
PROFESSIONAL TRAFFIC OPERATIONS ENGINEER

Executive Director

Transportation Professional Certification Board Inc.

certifies that

Vijay Kumar Kunada

has met all of the requirements established by the Certification Board to use the title of

PROFESSIONAL TRANSPORTATION PLANNER

Unless withdrawn by the Certification Board this certificate number 096 issued in Washington, D.C., is subject to the provisions for renewal

November 7, 2007

Steven D. Hofener
Chair

PTP
PROFESSIONAL TRANSPORTATION PLANNER

Executive Director

Vijay Kunada

From: info@ite.org
Sent: Tuesday, November 29, 2022 11:35 AM
To: Vijay Kunada
Subject: TPCB Renewal Approval Notice

Transportation Professional Certification Board Inc.

1627 Eye Street, NW • Suite 550 • Washington, DC 20006 USA • Tel: 202-785-0060 • www.tpcb.org

Mr. Vijay K. Kunada, P.E., PTOE, PTP:

We want to congratulate you and thank you for renewing your certification as a PTP. The Transportation Professional Certification Board and staff commend you on your commitment to your profession and stand ready to assist you. Some important things to note:

1. Your certification is renewed through 11/7/2025.
2. You will not be receiving a new certificate as the one sent to your originally does not indicate an expiration date and can be displayed as long as you are a PTP. Your certificate does indicate your original certification date.
3. At the end of the three-year period, your certification will need to be renewed again. This can be done without examination provided you have met the continuing education requirements and submitted the necessary PDHs/CMs.
4. Just a reminder that you can use the free Record-keeping System if you are an ITE member, but if you are a non-member, you may use this template to keep track of your credits. https://www.tpcb.org/TPCB/assets/File/PUBLISHED/TPCB%20Template%20for%20PDH%20Uploading%20Fillable.pdf

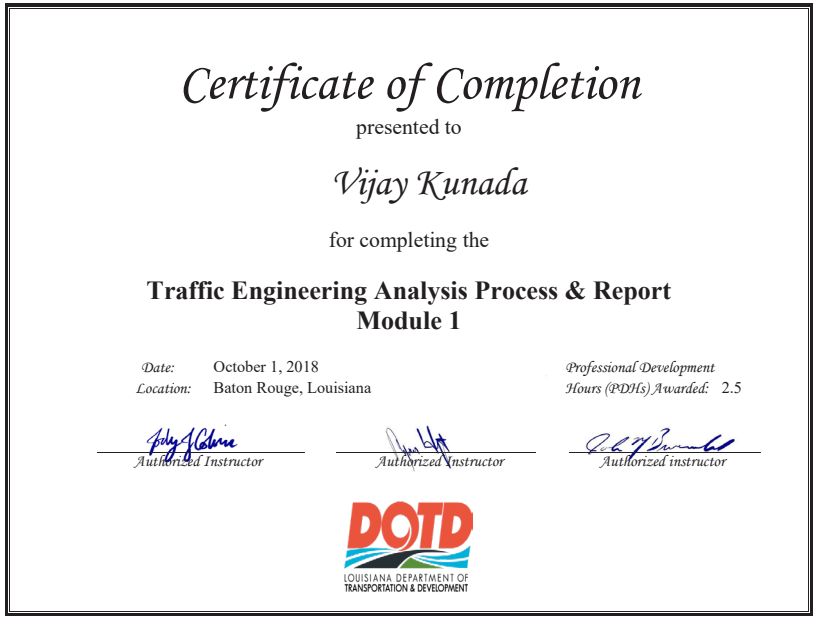
We thank you for your continuing support of the Certification Program and wish you the best of luck in the coming years.

Sincerely,

Deborah Snyder, P.E., PTOE
Chair, Transportation Professional Certification Board

1

Vijay Kunada, PE, PTOE, PTP	Neel-Schaffer, Inc.



Certificate of Completion

presented to

Vijay Kunada

for completing the

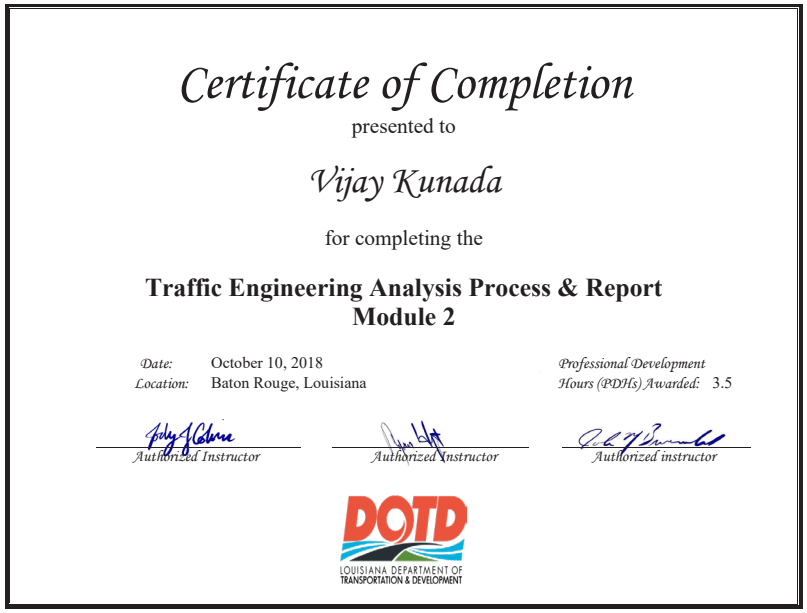
Traffic Engineering Analysis Process & Report
Module 1

Date: October 1, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2.5

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Vijay Kunada

for completing the

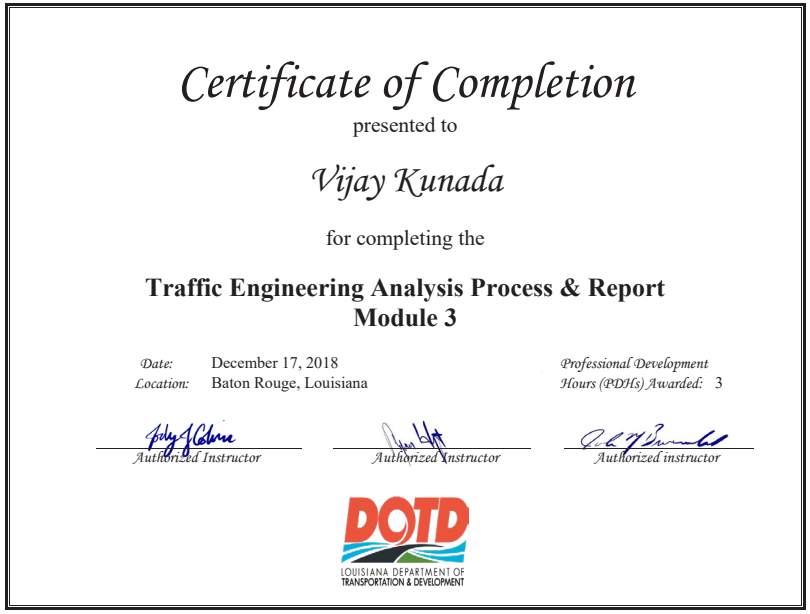
Traffic Engineering Analysis Process & Report
Module 2

Date: October 10, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3.5

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Vijay Kunada

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: December 17, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

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
AECOM TECHNICAL SERVICES, INC.	Business Corporation (Non-Louisiana)	LOS ANGELES	Active

Previous Names

EARTH TECH, INC. (OF CALIFORNIA) (Changed: 12/8/2008)

Business: AECOM TECHNICAL SERVICES, INC.
Charter Number: 34545989F
Registration Date: 12/20/1996

Domicile Address

515 S. FLOWER ST.
SUITE 1050
LOS ANGELES, CA 90071

Mailing Address

300 SOUTH GRAND AVENUE, 9TH FLOOR
LOS ANGELES, CA 90071

Principal Business Office

300 SOUTH GRAND AVENUE, 9TH FLOOR
LOS ANGELES, CA 90071

Registered Office in Louisiana

3867 PLAZA TOWER DR.
BATON ROUGE, LA 70816

Principal Business Establishment in Louisiana

5615 CORPORATE BLVD., STE. 400B
BATON ROUGE, LA 70808

Status

Status: **Active**
Annual Report Status: **In Good Standing**
Qualified: 12/20/1996
Last Report Filed: 11/21/2024
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

State of Louisiana Secretary of State

COMMERCIAL DIVISION
225.925.4704

Fax Numbers
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225.932.5318 (UCC)

Name	Type	City	Status
ELOS ENVIRONMENTAL, L.L.C.	Limited Liability Company	HAMMOND	Inactive

Previous Names

KREBS LASALLE ENVIRONMENTAL, L.L.C. (Changed: 12/16/2011)

Business: ELOS ENVIRONMENTAL, L.L.C.
Charter Number: 36335970K
Registration Date: 12/15/2006
Domicile Address

607 WEST MORRIS AVE
HAMMOND, LA 70403

Mailing Address

C/O LUCAS WATKINS
607 WEST MORRIS AVE
HAMMOND, LA 70403

Status

Status: **Inactive**
Inactive Reason:
File Date: 12/15/2006
Last Report Filed: 11/21/2022
Type: Limited Liability Company

Registered Agent(s)

Agent: JENNIFER LEE
Address 1: 111 NORTH OAK STREET
Address 2: SUITE 200
City, State, Zip: HAMMOND, LA 70401
Appointment Date: 1/24/2019

Officer(s)

Additional Officers: No

Officer: JAMES M. PRATHER, III
Title: Manager
Address 1: 607 WEST MORRIS AVE
City, State, Zip: HAMMOND, LA 70403

Officer: LUCAS WATKINS
Title: Manager

State of Louisiana Secretary of State

COMMERCIAL DIVISION
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Fax Numbers
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225.932.5318 (UCC)

Name	Type	City	Status
EUSTIS ENGINEERING L.L.C.	Limited Liability Company	METAIRIE	Active

Previous Names

EUSTIS ENGINEERING SERVICES, L.L.C. (Changed: 3/31/2016)

Business: EUSTIS ENGINEERING L.L.C.
Charter Number: 36251453K
Registration Date: 8/17/2006

Domicile Address

3011 28TH STREET
METAIRIE, LA 700026019

Mailing Address

C/O GWENDOLYN P. SANDERS
3011 28TH ST.
METAIRIE, LA 700026019

Status

Status: **Active**
Annual Report Status: **In Good Standing**
File Date: 8/17/2006
Last Report Filed: 7/23/2025
Type: Limited Liability Company

Registered Agent(s)

Agent: GWENDOLYN SANDERS
Address 1: 3011 28TH STREET
City, State, Zip: METAIRIE, LA 700026019
Appointment Date: 3/16/2020

Officer(s)

Additional Officers: No

Officer: GWENDOLYN P. SANDERS
Title: Manager
Address 1: 3011 28TH STREET
City, State, Zip: METAIRIE, LA 70002

Officer: JAMES HANCE
Title: Manager
Address 1: 3011 28TH STREET

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
MARRERO, COUVILLON & ASSOCIATES, L.L.C.	Limited Liability Company	BATON ROUGE	Active

Previous Names

Business: MARRERO, COUVILLON & ASSOCIATES, L.L.C.
Charter Number: 34604188K
Registration Date: 12/31/1997

Domicile Address

2644 SOUTH SHERWOOD FOREST BLVD; SUITE 200
BATON ROUGE, LA 70816

Mailing Address

2644 SOUTH SHERWOOD FOREST BLVD
SUITE 200
BATON ROUGE, LA 70816

Status

Status: **Active**
Annual Report Status: **In Good Standing**
File Date: 12/31/1997
Last Report Filed: 12/3/2024
Type: Limited Liability Company

Registered Agent(s)

Agent: ALLEN DARDEN
Address 1: 17904 PRESTWICK AVE.
City, State, Zip: BATON ROUGE, LA 70810
Appointment Date: 7/16/2013

Officer(s)

Additional Officers: No

Officer: CARLOS GIRON
Title: Member
Address 1: 2644 S. SHERWOOD FOREST BLVD
Address 2: SUITE 200
City, State, Zip: BATON ROUGE, LA 70816

Amendments on File (9)

State of Louisiana Secretary of State

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225.932.5318 (UCC)

Name	Type	City	Status
NEEL-SCHAFFER, INC.	Business Corporation (Non-Louisiana)	JACKSON	Active

Previous Names

Business: NEEL-SCHAFFER, INC.
Charter Number: 34112054F
Registration Date: 4/25/1983

Domicile Address
4450 OLD CANTON ROAD
SUITE 100
JACKSON, MS 39211

Mailing Address
4450 OLD CANTON ROAD
SUITE 100
JACKSON, MS 39211

Principal Business Office
4450 OLD CANTON ROAD
SUITE 100
JACKSON, MS 39211

Registered Office in Louisiana
450 LAUREL STREET, 8TH FLOOR
BATON ROUGE, LA 70801

Principal Business Establishment in Louisiana
450 LAUREL STREET
8TH FLOOR
BATON ROUGE, LA 70801

Status

Status: **Active**
Annual Report Status: **In Good Standing**
Qualified: 4/25/1983
Last Report Filed: 4/3/2025
Type: Business Corporation (Non-Louisiana)

Registered Agent(s)

Agent: CORPORATION SERVICE COMPANY

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
T. BAKER SMITH, LLC	Limited Liability Company	HOUMA	Active

Previous Names

T. BAKER SMITH, L.L.C. (Changed: 3/23/2011)
T. BAKER SMITH, INC. (Changed: 12/13/2010)
T. BAKER SMITH & SON, INC. (Changed: 4/20/2005)

Business: T. BAKER SMITH, LLC
Charter Number: 26901340K
Registration Date: 1/7/1965

Domicile Address

412 SOUTH VAN AVENUE
HOUMA, LA 70363

Mailing Address

P.O. BOX 2266
HOUMA, LA 70361

Status

Status: **Active**
Annual Report Status: **In Good Standing**
File Date: 1/7/1965
Last Report Filed: 12/9/2024
Type: Limited Liability Company

Registered Agent(s)

Agent: KENNETH W. SMITH
Address 1: 412 SOUTH VAN AVENUE
City, State, Zip: HOUMA, LA 70363
Appointment Date: 10/29/2001

Officer(s)

Additional Officers: No

Officer: KENNETH W. SMITH
Title: Manager
Address 1: 412 SOUTH VAN AVENUE
City, State, Zip: HOUMA, LA 70363

21. QA/QC Plan and/or Work Plan: If the advertisement requires submission of a QA/QC plan or Work plan, include them here. Otherwise, leave this section blank.

QA/QC Section attached at end of this propoal.

AECOM Imagine it. Delivered.

THE US 11 Norfolk Southern RR Overpass (HBI)

QC/QA PLAN

Contract Nos. 4400032800

Louisiana Department of Transportation and Development

September 9, 2025

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1.0 INTRODUCTION TO THE US 11 NORFOLK SOUTHERN RR OVERPASS QC/QA PLAN

A QC/QA program is an essential component of a successful project. The process, when executed properly by a committed design team, will eliminate critical errors and conflicts in the design and improve plan completeness and accuracy. Most importantly, the process promotes confidence in the owner and engineer that the design and construction documents reduce liability and risk to them. The QC/QA plan for the US 11 Norfolk Southern RR Overpass, will meet or exceed the LADOTD's QC/QA policy described in the LADOTD Bridge Design and Evaluation Manual (BDEM). LADOTD has detailed a Bridge QC/QA policy which sets forth the Department's requirements for this process for all bridge designs performed on LADOTD projects. The LADOTD Bridge QC/QA policy was developed based on the joint FHWA/AASHTO publication *"Guidance on QC/QA in Bridge Design in Response to NTSB Recommendation"* in August of 2011. This QC/QA Plan has been developed in coordination with both the LADOTD and AECOM policies specifically for the US 11 Norfolk Southern RR Overpass contract.

1.1 Alignment of LADOTD and AECOM QC/QA Policies

The LADOTD policy is well aligned with AECOM's QA/QC program, internally named Quality Management System (QMS). AECOM's QMS is BS EN ISO 9001:2015 International Standard certified; AECOM's QMS policy specifics, as described in the paragraphs below, meet or exceed the directives provided in the LADOTD's Bridge QC/QA policy. A copy of our current certification can be provided upon request. One key difference in the two policies is that the LADOTD Bridge QC/QA policy is specific to the design of bridges exclusively, while the AECOM QMS is applicable to all disciplines associated with a specific project.

AECOM is fully committed to the quality management principles underlying the ISO 9001:2015 standard and to AECOM's QMS. These principles emphasize the need to understand our clients' needs and preferences, and to strive to meet or exceed their requirements and expectations. To accomplish this goal, AECOM's Executive Management provides leadership that engages all AECOM employees in the quality processes. By identifying, understanding, and managing interrelated processes as a system, AECOM increases its efficiency and effectiveness in meeting its organizational objectives as well as the objectives of our clients. This approach includes continuous reassessment and improvement of the underlying processes and promotes decision-making based on factual information and data. Through consistent application of this QMS, AECOM's opportunity to create mutually beneficial values is enhanced, which in turn enhances our clients' ability to create value for their end users.

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

From review of LADOTD's Bridge QC/QA policy, it is apparent that the primary expectation is that consulting engineers contracting with LADOTD take full responsibility for their submittals at all stages of the bridge design process. By the assignment of this responsibility, LADOTD's design staff expects to provide oversight on the design process but does not expect to be responsible for the checking of designs and plan documents. The role of LADOTD's design staff is primarily to oversee the design

process. Specifically, the LADOTD's Task Manager will be responsible for the following project tasks, as described in LADOTD's Bridge QC/QA policy:

- Develop the scope of work, man-hour estimate, design team minimum personnel requirements, selection evaluation criteria and to obtain the approval of the Task Manager's direct supervisor for these items. In addition, the Task Manager will coordinate directly with LADOTD's project manager on all bridge design requirements for preparation of the project kickoff.
- Initiate a kickoff meeting, covering items such as the staffing plan, QC/QA plan, project schedule and budget, share expectations and consultant rating criteria, bridge design criteria, and other project management agenda items per the LADOTD checklist.
- Review and approve the Design Criteria and TS&L submittals. Coordinate revisions in the Design Criteria with the design team for the project duration.
- Monitor the Design Team's implementation of their QC/QA plan.
- Maintain a Project Log sheet recording all major project activities (Project Meetings, Submittals, LADOTD Review Comments, Major Decisions, etc.).
- Review all Design Team submittals, intended to be a cursory review for constructability, consistency, and clarity. These reviews are not intended to be a secondary QC of the Design Team's work.
- Monitor project schedule and milestone deliverables.
- Monitor Design Team effort with respect to scope and budget; process supplemental agreements; monitor claims avoidance.
- Review and approve invoices; verify Design Team staff is consistent with the scope and fee; Review and approve qualifications of replacement staff proposed by the Design Team, if necessary.
- Perform a consultant rating for each formal submittal by the Design Team; share ratings and provide feedback to the Design Team.
- Archive final design files.

1.3 Definitions of QC and QA

An understanding of the definition of quality control (QC) and quality assurance (QA), as well as the responsibilities contained in these processes, is a critical component of AECOM's QMS and LADOTD's Bridge QC/QA policy. These key definitions are summarized below:

- **Quality Control (QC):** This process involves the procedure of checking the accuracy and consistency of calculations and drawings, detecting conflicts, design errors and omissions, and the procedure for resolution of internal comments, correcting and verification of revisions. Also, specific to this bridge replacement project, the process verifies that all bridge components are adequately designed for the specified limit states in the AASHTO LRFD Bridge Design Specifications and the LADOTD BDEM and Technical Memoranda, as applicable.

- **Quality Assurance (QA):** This process involves the review of the QC documents to verify that the quality control (QC) procedure has been completed in accordance with AECOM's QMS and the

LADOTD Bridge QC/QA policy. In addition, the QA process verifies that the QC process was effective in preventing design and plan errors and ensuring consistency.

1.4 Evidence/Verification of QC and QA Activities

AECOM's QMS fully documents the QC and QA processes for all intermediate and final submittals, providing evidence to LADOTD that our design team has executed the QC/QA procedures in accordance with this system.

2.0 ROLES AND RESPONSIBILITIES

Meeting the provisions of the LADOTD Bridge QC/QA policy, the AECOM QMS requires that the quality control processes be completed for all design disciplines for all submittals. For the US 11 Norfolk Southern RR Overpass contract, as it pertains to QC/QA, the roles and responsibilities of the design team are described below.

2.1 Quality Assurance Manager

AECOM's QA Manager will be responsible for verifying that the QC process has been completed, documented, and properly filed in project records. The QA Manager will oversee the communication and training of the QC procedures to the project team, including subconsultants. The QA Manager is responsible for certifying that a submittal deliverable has met the requirements of the AECOM QMS and the LADOTD Bridge QC/QA policy, can be released to the client, and is made available for future auditing purposes.

2.2 Original Designers and CADD Design Personnel

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

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

CADD design personnel are responsible for effective preparation of project plans, as supervised by the original designers. Original designers shall work collaboratively with CADD personnel to have project plans match their design. CADD personnel will perform a self-check of their work before the work product is submitted for QC review.

2.3 Discipline QC Reviewers

This level of review will be completed by experienced engineers who are responsible for the detailed checking of all calculations, specifications, special provisions, and plan documents. For the US 11 Norfolk Southern RR Overpass contract, we anticipate this level of review will be completed by AECOM staff. The specialized work performed by subconsultants will be reviewed by the appropriate AECOM Project Leader, as indicated by the organizational chart. For the US 11 Norfolk Southern RR Overpass contract, the original design calculations for critical components will be prepared by a professional engineer, and

the Discipline QC reviewer may be another professional engineer or an engineer in training (EIT). This approach agrees with LADOTD's bridge design policy.

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

2.4 Independent Peer Bridge QC Reviewers

If deemed necessary, an Independent Peer Bridge QC review will proceed after the Discipline QC review has been completed and may take place in parallel sequence with the Inter-Discipline QC review. The Independent Peer Bridge QC team is responsible for documentation of comments, pursuing resolution with the original designer or detailer (with LADOTD representative oversight and documented concurrence). The purpose of this participation is to provide independent oversight of the design development and is intended to identify potential critical conflicts or issues in the design. This process results in keeping the design team progressing the work on the most effective and desirable path. The Independent Bridge QC reviewers will be trained in the QC/QA procedures by the Quality Assurance Manager. Evidence of the training (sign in sheets, copy of training course, etc.) will be filed in the project directory, available for audit.

2.5 Inter-Discipline QC Reviewers

This level of review will be completed by Discipline Project Leaders (i.e. – Bridge, Roadway, MOT, CADD, etc.) who are responsible for an oversight review of the plans intended to identify conflicts between the disciplines and to identify plan consistency issues not identified in the more detailed Discipline QC review. For the US 11 Norfolk Southern RR Overpass contract, we anticipate this level of review will be completed by Discipline Leads, comprising of AECOM and our subconsultant partners as indicated in the organization chart. This level of review is required by AECOM's QMS policy.

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

2.6 Engineer of Record

The Engineer(s) of Record (EOR) for the US 11 Norfolk Southern RR Overpass contract will be assigned by the supervisor or discipline lead on the project team. The EOR is responsible for the supervision of the calculations, plan, and special provision preparation, and is responsible for participation in or oversight of the QC and QA review processes. The EOR must be licensed to practice engineering in the State of Louisiana and must have demonstrated experience in the design of similar structures. In addition to overseeing the calculations and plan submittal through the QC/QA process, the EOR is responsible for

obtaining the seal and signature of any and all co-signed sheets in the plans. The EOR is also responsible for assembling the complete final calculation documents in the format prescribed by the LADOTD, assuring that all plan sheets include the designer's, design checker's, detailer's, and detail checker's initials and for sealing and ensuring special provisions are accurately shown on the construction proposal.

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

3.0 PRE-PLANNING ACTIVITIES

Both LADOTD's and AECOM's QC/QA policies contain careful project execution planning, document control procedures, communication protocols and specific QC and QA procedures.

3.1 Development of the Project Plan and Design Criteria

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

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

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

3.2 Project Directory Structure and Bridge Calculation Document Organization

The AECOM QMS policy has established a standardized project directory structure for the documentation of all projects delivered by AECOM. However, this structure may be modified to meet specific requirements of the client, as is the case with LADOTD, who has provided the preferred project directory structure in Appendix F of their Bridge QC/QA policy. The structural calculations will be organized as directed in Appendix F of the LADOTD Bridge QC/QA policy.

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

The design team will prepare technical task protocols for the purpose of documenting and providing detailed direction on specific design tasks. The protocols will provide direction on the specific use of design tools and validated software involved in the completion of the task. The documents will be controlled; revisions to the protocols will be noted by revision number and updated in the Project Plan.

All revisions to task protocols will be communicated to design staff. Design Tools (i.e. – Spreadsheets, MathCAD sheets, etc.) will be developed and utilized for specific design calculation functions. All design tools that are prepared will be validated as required by the AECOM QMS, documented, filed and available for audit.

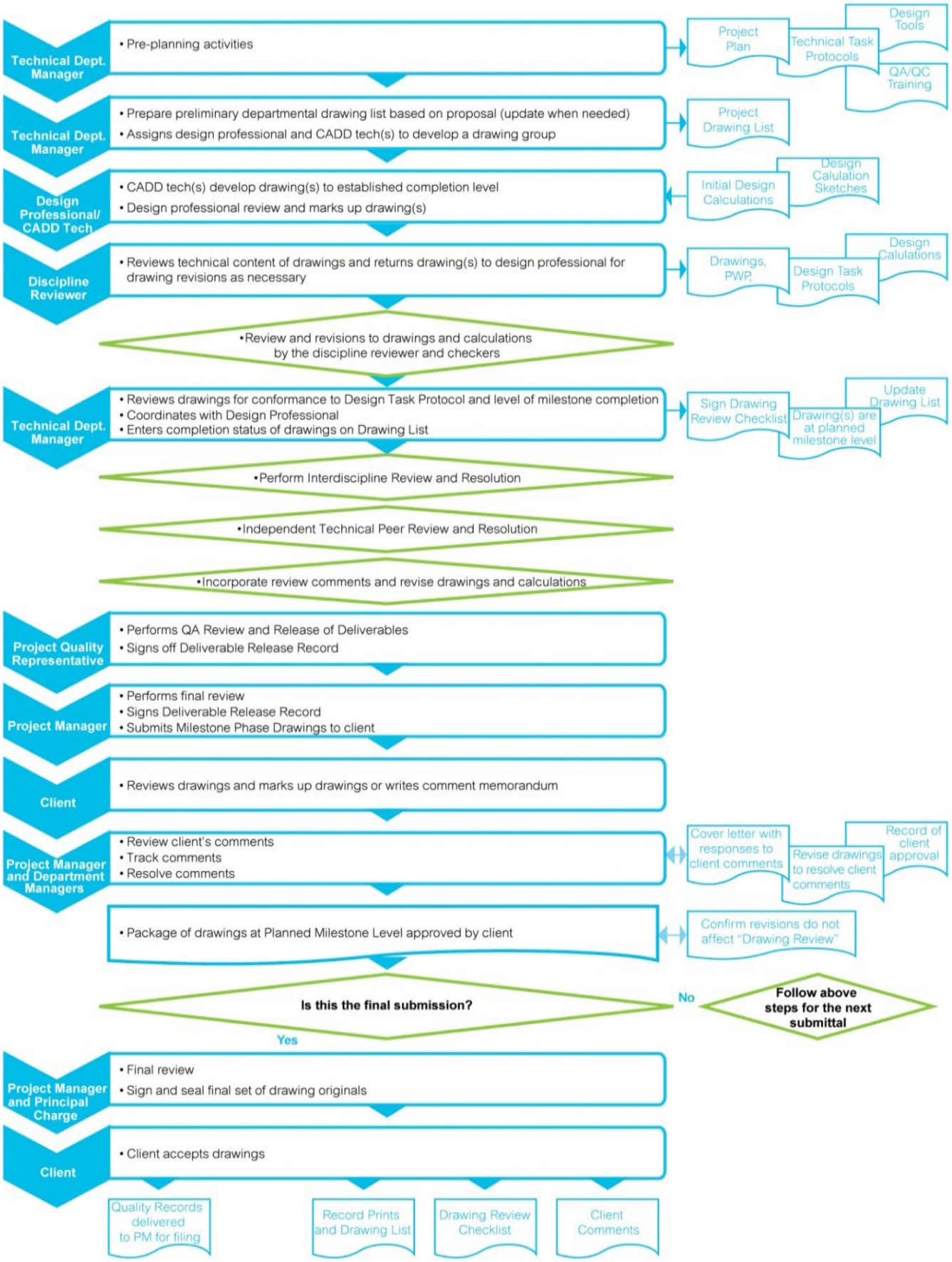
To the extent possible, the design team will select from the pre-approved list of software posted on the LADOTD Bridge Design website. Before using the pre-approved software, the program will be validated as directed in the AECOM QMS prior to use. For special applications where software not included in the pre-approved list must be used, a synopsis of the software will be provided to the LADOTD Bridge Design Engineer for approval prior to use. Similar to the pre-approved software, all specialty software will be validated as directed in the AECOM QMS prior to use.

4.0 QUALITY CONTROL AND QUALITY ASSURANCE REVIEWS

4.1 Design Deliverable Activities

As indicated by the Scope of Services, formal submittals for review by LADOTD staff are expected at the preliminary (30%, 60%, 90%, 100%) and final plan (30%, 60%, 90%, 98%, & 100%) development phases. The plan-in-hand meeting will be performed based on the preliminary submittal. In addition, an independent review of the preliminary submittals will be performed by LADOTD. Comments from these reviews must be resolved prior to proceeding to the final plan milestone.

Prior to each of the formal submittals, a 3-tiered quality control (QC) design review will be performed as well as a quality assurance (QA) review. A flowchart describing the QC/QA process for design plans on the US 11 Norfolk Southern RR Overpass contract and our approach to implementation of these procedures is described below.


Technical Dept. Manager
• Pre-planning activities
Project Plan
Technical Task Protocols
Design Tools
QA/QC Training
Technical Dept. Manager
• Prepare preliminary departmental drawing list based on proposal (update when needed)
• Assigns design professional and CADD tech(s) to develop a drawing group
Project Drawing List
Design Professional/ CADD Tech
• CADD tech(s) develop drawing(s) to established completion level
• Design professional review and marks up drawing(s)
Initial Design Calculations
Design Calulation Sketches
Discipline Reviewer
• Reviews technical content of drawings and returns drawing(s) to design professional for drawing revisions as necessary
Drawings, PWP,
Design Task Protocols
Design Calulations
•Review and revisions to drawings and calculations by the discipline reviewer and checkers
Technical Dept. Manager
• Reviews drawings for conformance to Design Task Protocol and level of milestone completion
• Coordinates with Design Professional
• Enters completion status of drawings on Drawing List
Sign Drawing Review Checklist
Drawing(s) are at planned milestone level
Update Drawing List
•Perform Interdiscipline Review and Resolution
•Independent Technical Peer Review and Resolution
•Incorporate review comments and revise drawings and calculations
Project Quality Representative
• Performs QA Review and Release of Deliverables
• Signs off Deliverable Release Record
Project Manager
• Performs final review
• Signs Deliverable Release Record
• Submits Milestone Phase Drawings to client
Client
• Reviews drawings and marks up drawings or writes comment memorandum
Project Manager and Department Managers
• Review client's comments
• Track comments
• Resolve comments
Cover letter with responses to client comments
Revise drawings to resolve client comments
Record of client approval
• Package of drawings at Planned Milestone Level approved by client
Confirm revisions do not affect "Drawing Review"
Is this the final submission?
No
Follow above steps for the next submittal
Yes
Project Manager and Principal Charge
• Final review
• Sign and seal final set of drawing originals
Client
• Client accepts drawings
Quality Records delivered to PM for filing
Record Prints and Drawing List
Drawing Review Checklist
Client Comments

4.2 Discipline Level QC Review of Inspection & Condition Assessment Reports, Calculations and Drawings

In this first tier of QC review, a detailed review of inspection findings and site information is performed. A similar QC review will be performed on design calculations and drawings if required by the project's scope. Preceding the review, design development for the design phase is completed. Design activity is in a "pencils down" mode and review sets are produced. In the Discipline QC, all inspection findings, design calculations and drawings are thoroughly checked for accuracy, completeness, and for compliance with the project's design task protocols. The reviewer is designated as an engineer within the Quality Control Team. The review is documented in the calculations and drawings using a check print stamp and a color-coded mark as indicated below:

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

Once the Discipline QC review of the reports, drawings, and calculations is completed, verified, and documented using AECOM-based and LADOTD-based checklists, the reports, drawings, and calculations are designated as ready for an independent peer review for LADOTD in parallel with an Inter-Discipline QC Review. Issues that cannot be resolved between the Discipline QC reviewer and the original designer will be elevated to the design team leader or deputy project manager for resolution. These processes are described below.

4.3 Independent Peer QC Review of Inspection & Condition Assessment Reports, Calculations and Drawings

In the next tier of QC review (for items deemed necessary), an independent peer review is performed by an independent design team. AECOM will coordinate any independent reviews deemed necessary. The peer review of the structural design drawings and calculations will be completed using the independent design check method. Preceding the Independent Peer review, the Discipline QC review will be completed, and design activity is in a "pencils down" mode. If structural replacement is deemed necessary, drawing and calculation sets are produced for review and comparison with the independent design, as described in the paragraphs below.

Using the drawing review set, the peer review team will perform analysis and design calculations by independent means and design tools. The independent review will confirm the adequacy of the design and resolve any design discrepancies between the designer and reviewer. Once resolved, if necessary, the original calculations will be further revised to reduce or eliminate the difference in design results. This process is documented in forms, with participants, including LADOTD staff, signing off on resolved issues. The independent calculations will be documented in a separate volume of the calculation set. In addition, the post-Discipline review drawing set will be reviewed by the peer review team. Comments will be documented in the forms noted above and resolved in a similar fashion.

In addition to formal review periods, the peer reviewer may participate in "over the shoulder" review meetings during the design process. The purpose of these reviews is to identify potential pitfalls with the direction the design team is taking and to assist in developing corrective action in a timely manner to avoid significant rework in later stages of the design completion.

4.4 Inter-Discipline QC Review of Drawings

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

4.5 Quality Assurance Review of Calculations and Drawings

Once the drawings and calculations have completed the tiered, Discipline QC, Independent Peer QC (for items deemed necessary) and Inter-Discipline QC review processes, the submittal is ready for a Quality Assurance review. This review is performed by AECOM by a specifically trained senior engineer designated to be the QA Manager for the project. For the US 11 Norfolk Southern RR Overpass contract, Gary Maji, PE will fill the role of QA Manager. The QA reviewer will examine all documented review materials, including plans, calculations, and QC forms for compliance with the AECOM and LADOTD policies and for completeness. In addition, the QA process verifies that the QC process was effective in preventing design and plan errors and in assuring consistency. Any comments provided by the QA reviewer on the QC process or documentation must be resolved and addressed prior to the QA reviewer approving the design package (plans and calculations) may be submitted. Comments that are systemic in nature (e.g., repeated multiple times) will require a repeat of the quality training or a protocol will be added to ensure systemic issues are corrected and not repeated.

4.6 Post QA Review Revisions

If for any reason (e.g., late inputs or other issue not anticipated) revisions are necessary during or after completion of the QA review, all revisions will be documented in drawing or calculation check prints and forwarded with revised drawings or calculations to the QA reviewer for a secondary review, prior to submittal. If the changes are substantial, LADOTD Design Lead and AECOM QA Manager will evaluate and determine if the QC/QA process needs to start over.

4.7 Submittal and Filing

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

5.0 DOCUMENTATION OF COMMENTS/RESPONSES

5.1 Documentation of Internal Comments and Responses

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

5.2 Documentation of Client Comments and Responses

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

5.3 Quality Assurance Records

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

6.0 CONTROL OF SUBCONSULTANT QC PROCESS

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

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

7.0 CLIENT FEEDBACK AND QUALITY AUDITS

7.1 Administrative Oversight and Continuous Improvement

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

7.2 Internal and External Quality Audits

AECOM performs independent internal audits of projects to ensure that the QC/QA program is being implemented correctly. As all quality records are maintained for each formal submittal in the project directory, all QC and QA documents are available for LADOTD quality auditors at their request.

8.0 QUALITY FORMS

8.1 AECOM Quality Forms

AECOM continually updates the quality process. The quality forms and documentation shown in the appendices of this document are examples and should not be used without confirmation that these documents are current and active.

Quality forms for all of AECOM's documentation can be found with the following link. This link is for internal AECOM use only.

AECOM Project Delivery System (PDS)

8.2 LADOTD QA/QC Policy

Similarly, LADOTD's Bridge Design QA/QC policy is defined within the Bridge Design and Evaluation Manual (BDEM), which is also a living document and subject to change. A link to the BDEM is provided below.

LADOTD Bridge Design & Evaluation Manual

APPENDIX A – PROJECT PRE-PLANNING GUIDANCE & FORMS

- *LADOTD Design Criteria Checklist*
- *LADOTD Project Activity Log Sheet*
- *LADOTD Bridge Design Section Records Retention Policy*
- *LADOTD Consultant Project Kick-Off Meeting Agenda Checklist*
- *AECOM QMS Project Plan Procedure and Example Form*
- *AECOM QMS Project File Index*
- *AECOM QMS Technical Task Protocol Procedure and Example Template*
- *AECOM QMS Software Validation Procedure and Example Form*
- *Sample QC/QA Training Module – Technical Quality Review Job Aid*

APPENDIX A—DESIGN CRITERIA CHECKLIST

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

__ **Cover sheet**

The following information must be included on the cover sheet:

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

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

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

__ **Design Assumptions and Design Exceptions**

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

__ **General Information**

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

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

__ **Hydraulic Design Criteria**

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

__ **Design Factors**

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

__ **Design Loads**

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

__ **Limit States**

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

__ **Bridge Barrier Railing**

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

__ **Guardrail**

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

__ **Approach Slab**

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

__ **Deck and Deck Drainage**

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

__ **Bearing**

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

__ **Joint**

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

__ **Superstructure**

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

__ **Substructure**

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

__ **Piles and Drilled Shafts**

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

__ **Geotechnical Design**

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

__ **Mechanical Design**

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

__ **Electrical/Lighting Design**

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

__ **As-Designed Bridge Rating Criteria**

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

__ **Software**

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

APPENDIX J—PROJECT ACTIVITY LOG SHEET

Project No.:

Project Name:

Bridge Task Manager:

Date	Project Activity	Comments

APPENDIX 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 Documents_Reference Materials\Bridge Design Section Archive\Design Manuals-Guidance	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 Documents_Standard Drawings	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 Project folder\Bridge-Facilities\Discipline\Plans *(Subfolders for each revision and change order should be created under Plans)*	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 Project folder_Published Submittals\Project Drawings_Final Plans	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 Project folder_Published Submittals\Project Drawings\Construction Submittals\Shop Drawings or Erection Drawings or RFIs or Other Construction Submittals *(See BDTM.49 for instructions)*	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 Load Rating.	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 Chief Engineer Orders.	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) *(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.)*	ACT* + 1 CY**	Final Project Acceptance Date + 5 Years	Archive electronically in Project-wise under Project Folder\ _Published Submittals\Project Documents\Project Correspondence Emails	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 Bridge Design Subject Files	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.)

Project Plan Procedure

Q2[DCS]-221-PR1

Proposal/ Prelim Plan (Pre-Award)

Executable Project Plan (Post-Award)

Review and Approval of Project Plan

Project Plan Management

WHO[1]	WHAT	WHEN
Project Manager (PM), Bid Manager (BM), or Capture Manager (CM)	• Complete CRM opportunity record in CRM system, as applicable. • Include research found in Crisis24 Horizon for any location threat risks.	**Go/No Go Gate 1**
PM or BM/CM and Technical Lead (TL)	• For C-3, C-2, C-1, and C-0 projects, draft a preliminary Project Plan. • Develop a preliminary technical approach to include in the proposal per the Technical Approach - Planning & Review Procedure - DCS. Include any and all recommendations made by the Technical Quality and Review Board (TQRB), as applicable. • For Enterprise Critical Pursuits (ECPs) or Tier 2 Pursuits, obtain the completed Pursuit Commitment – ECPs and Tier 2 Pursuits – DCS from Client Account Manager (CAM) and include in preliminary Project Plan.	**Proposal Gate 2**
PM, Profit & Loss Manager (P&LM) or Project Approver	• Prepare proposal in accordance with Go/No Go Procedure – DCS and Proposal Preparation and Review – DCS.	
PM and TLs	• Following award, complete the Project Plan (using the appropriate template/App for all C-categories). • Ensure it captures/reflects any changes made between proposal submission, award, and contract review, any exceptions to the AECOM Quality Management System (QMS), and any context or changes as discussed with the client. • Use the Project Plan as input in the Healthy Start (HS) meeting, when required, update per HS discussion. • When worksharing with other offices and/or Enterprise Capabilities (EC) (Partners) - request they draft an addendum to the Project Plan for their scope of work (SOW) or include their SOW in the Lead Office Project Plan.	**Execution Gate 3**
PM	• Submit the Project Plan for review and approval per regional requirements – Refer Section 2	**Execution**
P&LM or Project Approver	• Review and approve the Project Plan – confirm at a minimum an appropriate risk register, document control instructions and the Project Plan is appropriately baselined in accordance with the negotiated, agreed client proposal.	
PM	• Communicate and distribute to the project team, including any partner office, prior to work commencing. • Review Project Plan regularly. Update with changes throughout lifecycle of the project, including actions from HS and Project Reviews, where appropriate. Save in the project UFI or as a tab in project MS Teams site. • Identify significant changes in the Project Plan clearly and communicate to all team members. • Use Microsoft 365 versioning controls and the 1st section of the project plan for awareness of most current version by team members. • Consider any client-required controls in the management and distribution of the Project Plan.	**Execution**

1. All roles mentioned throughout refer to “Lead Region/Office/Project Team” unless otherwise defined.

Related PPI

- Project Review Procedure – AECOM Global R1-200-PR1
- Project Healthy Start/Restart Review Procedure – DCS R2[DCS]-200-PR1
- Go/No Go Procedure – DCS Q2[DCS]-121-PR1
- Proposal Preparation and Review – DCS Q2[DCS]-151-PR1
- Project Quality Management and Plans – DCS Q2[DCS]-221-PR2
- Project Document and Records Control (Information Management) – DCS Q2[DCS]-222-PR1
- Project Meeting & Communications – DCS Q2[DCS]-251-PR1
- Project Risk Management Procedure – DCS Q2[DCS]-231-PR1
- Graded Risk Approach: Project Delivery Requirements – DCS Q2[DCS]-231-WI1
- Project Type - Graded Approach - DCS – EC Q3[DCS](EC)-231-WI1
- Technical Approach – Planning & Review – DCS Q2[DCS]-321-PR1
- Technical Quality Review – DCS Q2[DCS]-351-PR1
- SH&E Management System Manual – AECOM Global S2-001-SM1
- Subs Management Procedure – DCS Q2[DCS]-141-PR1

References

- AECOM Approval Matrix Dashboard + AECOM Approval Matrix & Process
- Collaborative Working (ISO 44001)
- Project Plan App

Terms & Definitions

- AECOM Glossary

Change Log

1. Purpose and Scope

a. The document defines the minimum requirements of the Project Plan and the methodology for preparing and updating the Project Plan through the life of the project. It has been demonstrated through AECOM trends and metrics and external client benchmarking that poor project planning leads to delivery performance issues including lost margin, late delivery, inconsistent quality of deliverables, and client and AECOM team dissatisfaction.

b. All projects shall have a Project Plan of sufficient detail to manage the risks of the project. Where appropriate, the Project Plan should link to reference documents either attached or hyperlinked. Citation of these in the relevant Project Plan section constitutes conformance to this required process.

c. The Project Plan will at a minimum:

   i. describe how the scope of services as specified in the contract (or as subsequently agreed to with the client) will be accomplished to meet the expectations and objectives of both the client and AECOM team and to achieve the expected business results and client outcomes.

   ii. identify project and business risks with a plan to manage these through exclusions and contingency.

   iii. describe the agreed communication plan with the client (method, timing and approach to project changes with client and project team).

   iv. is the overarching control document. Any Sub-Plans or Project Plan elements (e.g., master schedule, risk register, registers, project quality plan, project execution plan etc.) must be controlled as per the Project Plan.

   v. is used as a planning and management tool and means to share project information and expectations with the Project Team.

   vi. shall address joint venture relationships and work- sharing between AECOM Partner Offices and regions, where applicable.

   vii. must be developed using the Project Plan Template (Long or Short, or C-3A Project Plan), Project Plan App or Project Plan document required by the Client if equivalent to the Project Plan Template.

   viii. Is sufficiently detailed and appropriate for the risk and complexity of the project.

Note: For projects involving multiple AECOM partner offices or regions, it is the Lead Office's responsibility to develop the overall Project Plan and communicate it with its global stakeholders. Of special note is the need to clearly define how checking and verification is to be accomplished, coordinated, and documented.

2. Graded Approach

The graded risk approach applies to this procedure. The project's risk category (C-category) is determined by the AECOM Risk Assessment (ARA) completed as part of the Workbench project setup. Use the below matrix for the required rigor of this procedure based on the risk category of the project.

Regions	C-3A	C-3	C-2	C-1	C-0
DCSA EUR&I MEA ANZ	C3A Project Plan or equivalent document content approved by PM and Project Approver	Short Form – Project Plan or equivalent document content approved by PM and Project Approver.	Long Form – Project Plan or equivalent document content approved by PM and Project Approver.	Long Form – Project Plan or equivalent document content approved by PM and Project Approver.	Long Form – Project Plan or equivalent document content approved by PM and Project Approver.
Asia	Not Applicable	Project Plan– Asia or equivalent or Project Plan – Short Form – Asia (if the C3 project meets all the criteria listed on the form) document content approved by Project Approver and Local Quality Manager.	Project Plan– Asia or equivalent document content approved by Project Approver and Local Quality Manager.	Project Plan– Asia or equivalent document content approved by Project Approver and Local Quality Manager.	Project Plan– Asia or equivalent document content approved by Project Approver and Local Quality Manager.
Workshare Office and/or EC	Completion of the Project Plan – Addendum – DCS and hyperlinked in the Lead Offices' Project Plan				

Exceptions and modification to the requirement for a Project Plan are as follows:

a. Master Services Agreements (MSA's) or (Indefinite Delivery/Indefinite Quality (IDIQ) programs may have a Program Project Plan and then use either the Project Plan - C3A – DCS or the Project Plan – Addendum – DCS to the Program Project Plan instead of creating a stand-alone project plan for each task.

b. Projects with continuing services where Finance requires a new project number is initiated year-over-year, should review, and confirm the current Project Plan remains applicable. If it does, the existing Project Plan can be used for the new project number (prepare 1-page addendum noting the new project number or note in plan revision the old/new project numbers).

c. AECOM seconded employee projects to a client do not require an AECOM Project Plan.

d. The client or certain project circumstances may require exception to AECOM standard operational procedures. These variations (e.g., document and records control for confidential projects) shall be described in the Project Plan and reviewed/approved by Project Approver.

3. Implementation

a. The Project Plan shall contain a level of detail commensurate with the complexity of the project and knowledge of special concerns and issues at the time using the Project Plan template options above as per the project risk category.

Action By	Action
Project Manager (PM) and/or Deputy PM (DPM)	1. Develop Project Plan using the template or Project Plan App (including SOW for all offices and EC) according to the project risk category and issue to the project team at the Kick-Off Meeting. Where the DCS template has not been used, the PM MUST ensure the document used includes all items included in the DCS template. 2. Update Project Plan throughout the lifecycle of the project for reference by the project team to the most up-to-date scope, standards, budget, schedule and client communication requirements, including actions from Healthy Start Reviews and Project Reviews where appropriate.

Action By	Action
	3. Clearly define the quality assurance/control requirements within the Project Plan or where required in a separate Project Quality Plan to be referenced and linked in the Project Plan.

b. The content of the Project Plan is driven by the Project Plan template options according to the project risk category If, another Project Plan is developed, the contents of the Project Plan **must be equivalent** to the templates.

c. Other project-related plans may be required by the client as a part of our scope of services (e.g., Quality Assurance Plan, Design Quality Management Plan or Project Quality Management Plan) or internal AECOM policy (e.g., Health and Safety Plan, Operational Security Plan). These stand-alone plans should be developed in accordance with the Project Plan and referenced, attached, or hyperlinked to the Project Plan where appropriate generic templates for these plans are available for use in the regions on the Project Delivery System (PDS) or the functional area home page on the AECOM intranet. Projects implementing ISO44001 will also be required to develop project Collaborative Relationship Management Plans, and these should be referenced in the Project Plan.

d. When AECOM is the primary or majority joint venture partner, PM will prepare an overall project plan in conformance with this procedure and/or any client requirements (topics and approvals) and direct the joint venture partners conform to the requirements of the Project Plan, when included as part of our contract agreement.

e. When AECOM is a secondary or minority joint venture, PM will prepare a project plan for those portions of the work being performed by AECOM in conformance with this procedure.

4. Terms and Definitions

a.	**ECP**	Enterprise Critical Pursuit – refer to the AECOM Pursuit Process Definitions
b.	**Lead Region/Office/ Project Team (Lead Team)**	The team who “owns” the contract with the Client and is leading the work in line with the contract.
c.	**Partners**	Offices providing internal work to another office, region, business line.
d.	**Tier 2 Pursuits**	Refer to the AECOM Pursuit Process Definitions
e.	**Workshare**	Shared work across offices, regions, business lines, Enterprise Capabilities (EC). There would be a Lead Region and Partner(s) (supplies resources and/or services to the Lead Region).

5. Records

a. AECOM Risk Assessment – Workbench

b. Approved Project Plan and Referenced Documents

c. Pursuit Commitment – ECPs and Tier 2 Pursuits – DCS Q2[DCS]-151-FM3

d. Project Plan App

e. Project Plan – Long Form – DCS Q2[DCS]-221-FM1

f. Project Plan – Short Form – DCS Q2[DCS]-221-FM2

g. Project Plan – C3A – DCS Q2[DCS]-221-FM3

h. Project Plan – Addendum Q2[DCS]-221-FM4

i. Project Plan – Asia Q3AS-221-FM1

j. Project Plan – Short Form – Asia Q3AS-221-FM2

k. Project Execution Plan – DCS – EC Q3[DCS](EC)-221-FM1

6. Appendices

a. N/A

7. Change Log

Rev #	Change Date	Description of Change	Location of Change
0	11-May-2011	Initial Release as Q2-221-PR1	
1	01-Oct-2012	2012 Review – minor editorial changes	All
2	10-Oct-2014	2014 Review – minor editorial changes and issued as I2-221-PR1	All
3	21-Mar-2016	2016 Review – updated to new IMS Template and implemented ePM elements.	All
4	07-May-2018	2017 Review – put into new IMS Template, changed to 2 column layout, updated cross-references and issued as Q2[DCS]-221-PR1.	All
5	20-Jan-2020	2020 Review – minor edits; removal of references to ePM; introduced Graded Approach; removal of Appendices 1 and 2 – Flow Diagram and Project Plan Content Descriptions.	All
6	04-Aug-2020	Minor edits; new exception of Asia using own Project Plan Template; introduced the Project Plan – Addendum option	Section 2, 4
7	11-Sep-2020	Addition of Asia requirement on the use of the Project Plan – Short Form – APAC – Asia Q3AS-221-FM2.	Section 2, 4
8	31-Mar-2022	2022 Review; put into new Template; added link to revised Project Healthy Start/Restart Procedure; minor edits to clarify need for a prelim project plan for C-3 projects and highlighting a plan is needed for all categories, including C-3A at Post-Award.	Page 1, Related PPI, Section 2, 3.1 (1), 4.
9	06-May-2024	2024 Interim Review; update to highlight the use of project plans to support Healthy Start and Project Reviews; replaced “geography/ies” with “region/s”; introducing Collaborative Working elements in Project Plans and use of the Project Plan App as alternative to the Project Plan – Short Form template for C-3 /C-3A projects.	Page 1, References, Section 1 (c) (ii), (vi), (vii), (viii) Section 2, 2 (c) Section 3 (a) (1) and (2), (c), Section 4 (d).
10	14-Oct-2024	• 2024 Review. • Updated AECOM’s travel security provider and link. • Clarified all roles mentioned throughout refer to “Lead Region/Office/Project Team” unless otherwise defined. • Promoting “Workshare” and “Partner Offices” to enhance working practices across extended project teams. • Added reference to the new Project Quality Management and Plans – DCS Q2[DCS]-221-PR2 replacing ECs GEP 250 Project Quality Management Procedure – DCS – EC. • Added Project Type - Graded Approach - DCS - EC Q3[DCS](EC)-231-WI1 to the “Related PP” list. • Updated “Graded Approach” section to identify the AECOM Risk Assessment (ARA) is now part of project setup in Workbench. • Emphasized the need for Partner Offices (including EC) to document and submit their scope of work for direct inclusion in the Project Plan or via the Addendum option and attach. • Added Terms and Definitions section to promote new terms of “Lead Region/Office/ Project Team (Lead Team)”, “Partners” and “Workshare”. • Minor edits and updated links.	Page 1 Related PPI Section 2 Section 4 Section 5

Rev #	Change Date	Description of Change	Location of Change
11	07-Feb-2025	• Page 1 – “Who/What/When” table > Proposal/Prelim Plan > new bullet asking the PM/BM/CM and TL to obtain a copy of the completed Pursuits Commitment for ECPs and Tier 2s – DCS. • T&Ds – added ECP and Tier 2 Pursuits linking readers to the AECOM Pursuit Process Definitions. • Records – added reference to new form and hyperlinked.	Page 1 Section 4 Section 5

Unified File Index

Legend

C0-C3A	Level 1 = for Risk Categories C0, C1, C2, C3, C3A - cannot be deleted
C0-C2	Level 2 = for Risk Categories C0, C1, C2
C0-C1	Level 3 = C0, C1 - at the discretion of the Project's Requirements
RN	= Renameable Folder, folder's name can be changed to suit project needs
Note	1: Refrain from using illegal characters in the folder naming convention: # % & " * / : < > ? \ | + , . ; = [ ] { } 2: Where necessary, use an 'underscore'.

Lvl 1	Lvl 2	Lvl 3 (C0-C1)	Guidance	Folder Permissions: Cannot Delete	Restrict Deletion BUT May Add To	RN = Renameable
(Project Number and Name)				**C0 - C3A**	**C0-C2**	**RN**
Client Name and Project Name (if project name is not above)				**Optional**		**RN**
000_PreContract [BID]			**This folder is intended as a repository for records of activities leading up to the client's notice-to-proceed on a project. Some of this information may need to be obtained from marketing/business development group.**	**C0 - C3A**		
	010_Go_NoGo [GNG]		In lieu of copy saved here, can be held in approved system.			
	020_RFP_RFQ [RFP]		The document, as received from the eventual client, that requests or invites the submittal of a proposal for the project.			
	030_Pricing [PRICE]		Records of pricing strategies, calculations, projections, etc. used to submit a cost quotation, either prior to, or after, selection.			
	040_Proposal [PROP]		The actual signed version of the final proposal submitted, and any relevant records leading up to it.			
	050_Presentation [PRES]		When applicable, a copy of the PowerPoint or other media used in a presentation to elaborate on our qualifications for the project.			
	060_Legal_Review [LEGAL]		Records of legal review of contract and terms and conditions; copy of Contract Review form if online tool not used.			
	070_Negotiations [NEG]		Records of negotiations regarding scope, schedule and pricing between AECOM and client.			
	080_Superseded [SS]		Superseded version of documents in the Pre-Contract folder.			
100_Contract [CONT]			**This folder is intended to hold all legal agreements, contracts, POs, insurance certificates or other documents that bind AECOM in a business relationship with another entity.**	**C0 - C3A**		
	110_Client_Contract [CL_CONT]		General records related to contracting process and signed version of the primary contract between AECOM and the Client; establish Level 3 folders as needed for Changes.			
	120_TO_PO [PO]		Signed and executed task orders, purchase orders and notice to proceed as required by the client's contract. Must include corresponding scope of work, cost estimate and schedule.			
	130_Approval_Matrix [APPVL_MTX]		Records of Approval Matrix approvals during the pre-contract and contract review process.			
	140_Risk_Committee [RSK_COM]		Store correspondence for RA/RFA/RFPAs, especially when required to submit quarterly Risk Committee approval update forms.			
	150_Subcontracts [SUBS]		Signed versions of contracts with technical/professional subs; establish Level 3 folders as needed for Subs Invoices, QA/QC, Insurance Certificates.			RN
	160_Vendors_Suppliers [VENDOR]		Signed versions of contracts/POs with materials, equipment, supply providers; establish Level 3 folders as needed.			RN
	170_Superseded [SS]		Superseded versions of documents in the Contract folder.			
200_Project_Control [PROJ_CONT]			**This folder is intended to contain records related to the overall project management and business administration of the project.**	**C0 - C3A**		
	210_Project_Plan_Risk [PLAN]		Save project plan and updates throughout project execution.			
	220_Risk_Assessment_Register [RISK_REG]		Save here for risk assessment (if online Risk Assessment Tool not used) and risk register (if not a part of the project plan) or electronic tool. Update throughout project.			
	230_WBS_Schedule [WBS_SCH]		Work breakdown structure and schedules. Include schedule bar charts, MS Project output/file, critical path analyses, other supporting documentation. Staffing worksheets, projections, assignment memos, etc.			
	240_Budget [BUDG]		Main budget is in APIC; here include supporting budget worksheets, projections, summaries for project team, etc.			
	250_Client_Invoices [INV]		Invoices submitted to the client. Level 3 folders, as needed, for things like Progress Reports.			
	260_Healthy_Start_Reviews [HS]		Healthy start reports, action items, follow-up documentation for evidence of closure .			
	270_Project_Reviews [PROJ_REV]		Review schedules, agenda, discussion summaries, action item lists. This is for overall status reviews; EACs, monthly/quarterly project status reviews, etc. QC reviews go in 420.			
	280_Closeout [CLOSE]		Records related to the pending or actual closure of the project.			
	290_Superseded [SS]		Superseded versions of documents in the Project Control folder.			
300_Communications [COMM]			**This folder is intended to house correspondence, records of calls, emails (<u>depending on local IT requirements</u>), meeting minutes and other forms of communication between AECOM and outside entities as well as internally within the AECOM team.** *** Meeting minutes can linked to meeting minutes in this folder.** *** It is anticipated Level 3 subfolders would be used appropriately according to the complexity of the project's organizational structure and as-needed to facilitate quick and easy retrieval.** *** As email is a primary form of communication, a separate email folder should not be necessary as the different file types (.pst, .pdf, etc.) of emails can be stored in the same folders with hard-copy scans of .doc, .ppt, .xls or other file types. Alternatively, a PM may elect to set up Level 3 subfolders within each of the four Level 2 folders as separate folders for emails, or for "incoming" and "outgoing" communications.** *** When documents that carry signatures are stored, these should either be electronically signed versions, or scans of wet-signed documents.** **Note: Must defer to local IT requirements/practice for storing email (e.g. '.msg' and '.pst').**	**C0 - C3A**		
	310_Client [CLIENT]		Emails, meeting minutes, communications to and from client. Can add a Level 3 to differentiate between different types of communications.			
	320_Subs [SUBS]		General communication outside contract negotiations. Can add a Level 3 set of folders to differentiate between multiple Subs.			
	330_External [EXT]		Outside/Third Party/Regulatory entities other than those AECOM has a contractual relationship with (agencies, authorities, commissions, etc.)			
	340_Internal [INT]		File notes, records of conversations.			
	350_Feedback [FEEDBK]		Include informal and/or formal client feedback, evaluations, ratings, etc.			
	360_Superseded [SS]		Superseded versions of documents in the Communications folder.			
400_Technical [TECH]			**Store data, input, standards, guidelines, manuals, calculations, software information and validation and other similar materials that support the development of the technical aspects of the work.** *** Examples of Level 2 folders: Reports, Calculations, Data, Information, etc. Includes all non-CAD, non-GIS working documents.** *** Replace "431_TechnicalArea_X" with appropriate naming convention.**	**C0 - C3A**		
	410_Technical_Approach_Review [TAR]		Record of Technical Approach Review and follow-up; resolution of TAR comments.			
	420_Technical_Quality_Reviews [TQR]		Supporting evidence of quality review activity (markups, check sets, comments log, TQRRs, etc.). May include optional QC Review checklists or other discipline-specific checklists.			
	425_Calculation_Review [CALC]		Record of Calculation Review and follow-up and resolutions.			
	430_Technical Working Documents					
	431_TechnicalArea_X					RN
	432_TechnicalArea_X					RN
	433_TechnicalArea_X					RN
	434_TechnicalArea_X					RN
	440_Field_and_laboratory_data [DATA]		Intended as a location for field forms, field data, boring logs, laboratory data and analyses, research data, permits, etc. Used to develop deliverables.			RN
	450_Photos [PHOTO]		Project photos, field photos and corresponding photo logs.			RN
	460_Superseded [SS]		Superseded versions of documents in the Technical folder.			
500_Deliverables [DELIV]			**File the record set (.pdf/locked version) of issued deliverables submitted to the client / outside entities (e.g. funding agencies, permitting agencies, etc.):** *** Replace "50X_Deliverable_X" with the appropriate naming convention matching the deliverable naming convention.** *** It is a requirement that these deliverables will be reviewed in accordance with the Technical Quality Review Procedure - DCS. Records of this review (TQRR) are stored in the respective deliverable folder (501, 502, etc.), or storage in folder 420 as determined by the PM.** *** Include client's interview review comments and transmittals associated to deliverables.**	**C0 - C3A**		
	501_Deliverable_X					RN
	502_Deliverable_X					RN
	503_Deliverable_X					RN
	504_Deliverable_X					RN
	580_Other		Where superseded drawings exist as a deliverable, include in this folder for a record of the entire issued set.			RN
	590_Superseded [SS]					
600_Construction Support [CSUP]			**This folder is intended to house records of AECOM's interaction with third-party contractors that are building the work designed by AECOM. Projects where construction management or administration is the primary service may be required to follow a different file organization structure by contract.**			**RN**
	610_Addenda [ADDENDA]		Copy of issued contract addenda, as well as other supporting documents leading up to the addenda release.			
	620_Communications [COMMS]		Use Level 3 subfolders as desired to separate among various entities and/or types of communications (emails, meeting minutes, claim documents, etc.).			
	630_RFIs [RFI]		Requests for Information submitted by contractors and our replies.			
	640_Shop_Dwg_Submittals [SHP_DWG_REV		Review of shop drawings and other submittals received from contractors.			
	650_Pay_Applications [PAY_APPL]		Pay requests from the contractor, including AECOM's review and response.			
	660_Change_Orders [CHG_ORD]		Use Level 3 subfolders as needed to contain information related to each change order including permit approvals.			
	670_Site_Visits_Inspections [SITE_INSP]		Records and notes resulting from AECOM inspections of the work performed.			
	680_Punch_List_Closeout [PUNCH]		Documentation and progress records of contractor efforts to complete the work. Add Level 3 folders for items such as Maintenance Manuals, etc.			
	690_Superseded [SS]		Superseded versions of documents from Construction Support folder.			
700_Quality_Env_Sust [QES]			**The electronic tools (iQT, AECOM U) serves as the primary repository for some of these documents. When desired, or when electronic tools are not accessible to a project, this folder is used to house these records.**	**C0 - C3A**		
	710_Plans [Q_E_PLAN]		Project-specific quality, environmental management and sustainability plans requested by clients above and beyond the sections in the project plan. If a deliverable, can be the work product in this folder with the final deliverable in a deliverable folder above.			
	720_Audits_and_CARs [AUDIT_CAR]		Project safety, quality, EMS audit findings, nonconformities and corrective action documentation (If documentation not retained in iQT).			
	730_Training [TRAIN]		Evidence of EMS, QMS, etc. training performed for the project.			
	740_Reserved_for_PMs_option					RN
	750_Superseded [SS]		Superseded versions of documents in the QES folder.			
800_Safety [SAFETY]			**This folder would be used on projects that involve field work or other-than-ordinary office-based physical activities that present a safety hazard.**	**C0 - C3A**		
	810_Safety_Plan [SFTY_PLN]		Project-specific safe work plan, safety and health plan, Task Hazard Analyses (THAs), and hazard checklists as applicable.			
	820_Training [TRAIN]		Include records of project-specific S&H training.			
	830_Meetings [MTGS]		Include attendance/agenda of on-site tool box meetings, attendance at contractor mtgs, etc.			
	840_Incidents [INCID]		Investigation of safety incidents. Coordinate with SH&E and Legal regarding records to keep in project files.			
	850_Safety_in_Design [SiD]		Include records and reports.			
	860_Superseded [SS]		Superseded versions of documents in the QES folder.			
900_CAD_GIS			**Intended as a location for CAD/BIM files, GIS graphics, works-in-progress and collaborative working documents. Finished deliverables are stored in Section 500. If clients require alternate file structure, that requirement takes precedence over the below structure.**	**C0 - C3A**		
	910_CAD		Intended as folder structure for design working documents that use CAD technologies, processes, and procedures to create, compose, and deliver project deliverable content. For example, AutoCAD (and design apps), Micro Station (and design apps), and Revit (design apps.) are examples of CAD/BIM technologies that will use this folder structure to manage and deliver project content. Other design technologies such as water modeling, traffic simulation, or structural analysis applications may choose to use these folders to integrate data more efficiently with CAD/BIM technologies.			RN
	911_Discipline_X					
	911_1_WIP					
	911_2_Shared					
	911_3_Published					
	911_4_Archived					
	912_Discipline_X					
	912_1_WIP					
	912_2_Shared					
	912_3_Published					
	912_4_Archived					
	920_929_(GIS_Graphics)		Customizable based on scope of services and GIS and/or Graphics needs.			RN
	930_BIM		Intended as folder structure for design working documents that use BIM technologies, processes, and procedures to create, compose, and deliver project deliverable content. For example, BIM (and design apps) or REVIT will use this folder structure to manage and deliver project content. Other design technologies such as water modeling, traffic simulation, or structural analysis applications may choose to use these folders to integrate data more efficiently with BIM technologies.			RN
	940_999_Reserved_for_PMs_option					RN

Unified File Index

Rev	Rev Date	Details
1	15-Jul-16	Initial Release as Q2[DCS]-222-WI1
2	15-Jul-16	Minor edits.
3	23-Oct-16	1. Level 2 folder abbreviations added in [ ]. 2. If abbreviations are not used, do not add the brackets or information inside of the bracket in the folder set up.
4		1. Instruction not to use illegal characters in folder naming convention - use 'underscore' instead.
5	07-Dec-16	1. Updates to CAD_GIS folder per Global CAD/BIM teams request
6	01-Feb-17	1. Updated 130_DOA [DOA] to 130_Approval matrix [APPVL_MTX] 2. Updated CAD Discipline and CAD_GIS folder to correct sub-folder structures. 3. Removed further illegal characters i.e. dashes and forward slash. 4. Amended '400' + '500' renamable and put in their numbers.
7	02-Mar-17	1. Updated 270_Project_Reviews_APIC [PROJ_REV] to 270_Project Reviews [PROJ_REV] 2. Corrected number sequence for 700_. 740_Training is now 730_, 750_Reserved_for_PMs_options is now 740. 3. Removed references to Q-Dash and VPO
8	27-Jan-20	1. Updated to address Graded Approach and transition from ePM to APIC. 2. G18, replaced Salesforce for CRM System. 3. G52, removed statement 'May be in electronic tool (ePM, ePMP) as meeting minutes. 4. G81, removed 'Healthy Start audit review.
9	21-Oct-20	1. Moved 'Change Log' detail from main page to its own Tab called 'Change Log'. 2. I8 – Replaced 'Cannot Delete' with 'Restrict Deletion……' 3. G12 – Replaced '……CRM System.' with '…… approved system.' 4. G29 – Deleted '….. and Risk Register……' 5. G38 – Reworded to highlight local IT requirements/practices are deferred to when storing email (e.g. .msg and .pst). 6. G45 – Reworded to better explain content to be stored in this location. 7. Row 48 - Added '425_Calculation_Review [CALC]' 8. G57 – Reworded to better explain content to be stored in this location. 9. G62 – Replaced '……. CD Set.' with '……. Issued set.' 10. G81 – added 'hazard checklists' as an another example of content type for this area. 11. Row 85 - Renamed '850_Superseded [SS] ' to '850_Safety_in_Design [SiD] 12. Row 86 - Added '860_Superseded [SS]'

Technical Task Protocol (TTP)

Q2[DCS]-321-PR2

1. Purpose and Scope

a. This procedure supplements and is read in conjunction with the procedure, Technical Approach – Planning and Review - DCS.

b. The purpose of this procedure is to outline a process for using a Technical Task Protocol (TTP) to help guide the performance of specific technical work tasks in accordance with established requirements and full knowledge of input sources and guidance documents.

2. Procedure

a. The intent of a Technical Task Protocol (TTP) is to provide those preparing technical documents with the input, references, criteria, direction, and background information necessary to carry out the task in a complete and efficient manner. TTPs are mainly useful for calculations, and may be used as input to specifications, drawings, and technical reports and studies. Exceptions are cases where the tasks are simple or for information only, or where the input information is readily available or developed in another manner for the project (e.g., Design Criteria Document). Depending on the scope and complexity of a task, TTPs may be developed for individual tasks or a series of tasks. In addition, standard TTPs may be developed by offices or other business units to address work that is performed for a given client on an ongoing or repetitive basis. Typically, **discipline leads** determine the value, necessity, and scope of TTPs on the projects their discipline is working on, or for their departments in general.

b. **Discipline leads** shall assign competent individuals the task of preparing calculations. Refer to the Calculation Preparation Instructions – DCS for guidance on the preparation of calculations.

c. Technical Task Protocol preparation – **Discipline leads**, or **designee**, prepare TTPs prior to the performance of technical tasks. TTPs generally include the information as described in the Technical Task Protocol Outline – DCS. Content is also based on the complexity of the task, size of project, project team familiarity with design requirements, new design requirements, etc.

d. Technical Task Protocol format – TTPs are to be formatted in a manner that provides a clear understanding of the task and the conveyance of the required information.

e. Control of Technical Task Protocols – TTPs are to be kept up to date throughout the development of **t**echnical documents and assigned revision numbers as appropriate. TTPs that have been supe**r**seded or cancelled are to be so noted. Revisions to TTPs should be given the same review and approval as the original.

f. Review and Approval of Technical Task Protocols – TTPs shall be reviewed and approved by a **competent individual other than the preparer** to ensure the information is identified and presented correctly. The date and signatures of the preparer and reviewer appear on the cover sheet or first page of the TTP, signifying their review and approval for use.

g. Approved Technical Task Protocols should be referenced as a design input in the related design document.

3. Terms and Definitions

a.	Technical Task Protocol (TTP)	A document that provides instructions on how to set up, plan and conduct a specific technical work activity.
b.	Discipline Lead	The manager or supervisory level person that is responsible overall for the project's technical work in a specific discipline.

4. References

a. Technical Approach – Planning and Review – DCS Q2[DCS]-321-PR1

b. Calculation Preparation Instructions – DCS Q2[DCS]-351-WI5

5. Records

a. Technical Task Protocol (TTP) Outline – DCS Q2[DCS]-321-FM2

b. Approved Technical Task Protocol

6. Appendices

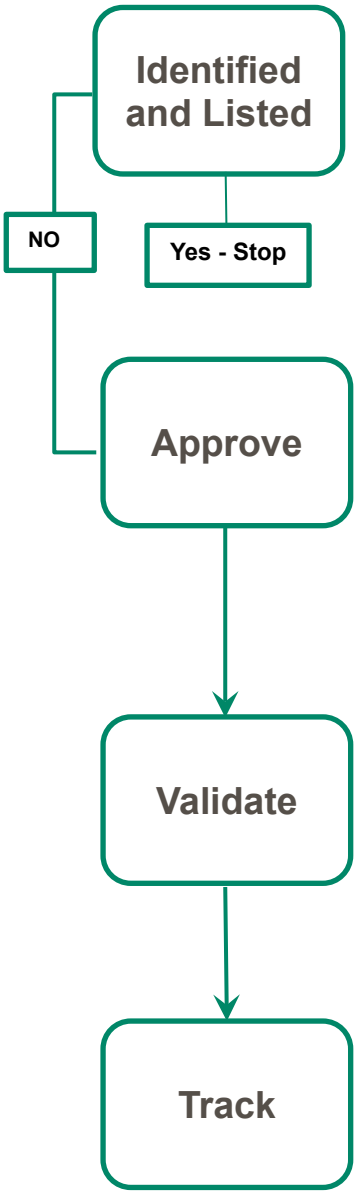
a. N/A

7. Change Log

Rev #	Change Date	Description of Change	Location of Change
1	26-July-2012	Initial release as Q4NA-321-PR1	
2	15-Sept-2016	Re-released as Q4NA-321-GL1	
3	15-Aug-2022	Re-released as Q3[DCS]AM-321-PR1	
4	14-Oct-2024	2024 Review; elevated from DCS Americas to DCS level procedure; re-released as Q2[DCS]-321-PR2.	

Validation of Software and Data Management Tools

Q2[DCS]-311-PR1



WHO	WHAT/HOW	PDS Phase
Technical Lead and Technical Team	• Identify technical software in Project Plan. • Confirm it is listed on the geography/region/office specific validated software listing. If **yes, Stop,** requirement is met. • If **no**, continue. Assign Validator and Approver to perform validation. Specify the method to be used for validation. • If software is developed by AECOM, implement Section 3.3 verification and validation.	Execution
Software Approver	• Review the information and, if found acceptable, approve the software for use. • Take the necessary steps to have the technical software added to the Geography/Business Line/Location validated software register.	Execution
Validator / Discipline Lead	1. Perform validation using one of the following: a. Run the software using input from a known solution and verify that the program output matches the known solution. All significant design options/methodologies offered by the program shall be verified. b. Perform a manual calculation to verify the results obtained using the software. c. Obtain manufacturer documentation of production of software under a recognized quality standard. 2. Provide results and documentation of the validation process to assigned Approver.	Execution
Geography Quality	• Develop and maintain a register accessible to all staff listing technical software that has been validated for use in above step. • The register shall include, at a minimum, the vendor name, software name/description, version number and AECOM's Discipline Manager/ Approver and contact person for the software.	Execution

Related PPI

- IMS Manual - DCS Q2[DCS]-001-PR1
- Improvement Procedure – DCS Q2[DCS]-003-PR2
- Technical Quality Planning and Review - DCS Q2[DCS]-351-PR1

References

- Project Plan Template – DCS Q2[DCS]-221-FM1
- Project Plan – Short Form – DCS Q2[DCS]-221-FM2
- Project Plan – C3A – DCS Q2[DCS]-221-FM3
- Software Validation Form - DCS Q2[DCS]-311-FM1(Fillable PDF)
- Software Validation Form - DCS Q2[DCS]-311-FM1 (MS Word)
- DCSA Validated Software List
- Geo/Regional Validation Software Registers
- Technical Practice Groups (TPGs)

Terms & Definitions

- AECOM Glossary

Help & Training

- None

Change Log

1. Purpose and Scope

This procedure describes minimum requirements to ensure software, including data management tools, used on AECOM DCS projects has been adequately selected and validated before use. Project Managers shall validate data management tools and software used to collect, store and process data used to develop project related deliverables, to ensure they meet the technical discipline and client requirements.

2. Procedure

When software is used to create inputs to work products or advice to clients, the validity of the software and its outputs, and its ability to satisfy the intended application, must be established. Software must be validated prior to initial use, and reconfirmed as necessary.

During the proposal stage, the Technical Leader should include in the Technical Approach development a list of appropriate technical software that will be used on the project, along with if the software has been/or needs to be validated. This list should be provided to the Project Manager to include as a link in the project plan and resources appropriately budgeted for where validation is needed.

If the software (and current version) is not already included on the geography/region software registers, the technical team member utilizing the software shall perform a validation that would be logged on the appropriate register for use by other technical team members.

The validation must be documented using Software Validation Form – DCS or equivalent and the documentation must be readily available (e.g., in the project central file or central register of validated software). Technical team members are required to confirm validation has occurred or are responsible for software validation for their technical software. Control of the software (including licenses, loading onto computer and addressing software errors and maintenance) is the responsibility of the IT Department.

This document focuses on the software validation, output review and testing and applies to “technical software” which is used for any of the following:

a. Performing calculations;

b. Developing input for use in calculations;

c. Creating designs or drawings using embedded calculations;

d. Generating output provided directly to clients;

e. Generating output included in deliverables to clients; or

f. Developing software for delivery to a client as a contractual obligation.

2.1 Technical Software Includes

a. Advanced or complex programs developed within standard office-type platforms such as MS Excel and MS Access which are not amenable to standard checking/verification.

b. Mathematical, formulaic, and logic-based programming developed within standard office-type platforms such as MS Excel and MS Access that cannot be validated as simple calculations.

c. Industry Standard and non-standard software performing technical calculations to confirm/develop designs (e.g. STAAD, GT STRUDL, etc.).

d. AECOM Data Management Tool (e.g. MS Excel macros, software developed to analyze data for a deliverable, etc.).

2.2 Technical Software Excludes

a. Software that does not conform to the definitions provided in the list above;

b. Used to produce output that is checked and verified manually;

c. Inherent to equipment for measuring and testing, which is periodically verified and calibrated in accordance with the manufacturer's specifications; or

d. Designed to enable the operation and maintenance of a computer system and its associated programs (systems software).

e. Simple MS Excel and MS Access formulas or logic that can be validated as calculations in accordance with the Technical Quality Planning and Review Procedure - DCS.

The project technical lead and/or lead verifier are to confirm the appropriate technical software is being validated and implemented.

Geographies/Business Lines may develop supplemental procedures to include additional details or specifics. These may include the establishment of higher-level management control or coordination of the validation process.

3. Software and Data Management Tool Development Considerations

Prior to selecting or developing software, including data management tools, the PM and developers must agree on a few key elements of design as follows:

- Functionality
- Capability
- Scalability
- Desired Output
- Speed
- Compatibility
- Method of validation
- Stability

"Non-standard" software (e.g. written in programmable third-party software such as C++, Visual Basic, MathCAD, MS Excel models, and extensions or revisions of verified software such as MS Excel macros or advanced formulas or logic based programming) or procured and employed by AECOM (STAAD, Roof View, etc.) shall be adequately documented, including authorship, revision history, description, applicability, testing and references. Such software shall be validated taking into account the applicable range of intended use, and software options and parameters consistent with the intended range of applications.

Where software not developed by AECOM is to be used to conduct AECOM business, that software must be currently licensed for use by AECOM.

- All software to be used on the AECOM network must be licensed and approved by the Information Technology (IT) group before it can be utilized.
- AECOM staff may not use software that they privately own in the conduct of AECOM business.

3.1 Purchased Technical Software Validation

Follow the flow diagram on Page 1 of this document (and itemized below) to add technical software to the validated software listing/register:

a. Identify software to be used in the Project Plan;

b. Determine whether validation is required;

c. If validation is required, determine if validated, if not, assign technical team member to validate;

d. Discipline lead review validation process and confirm accurate results are being output by the software;

e. Transmit the validation documentation to the Software Approver (defined on Geo/Region/Location register);

f. Software Approver request the software to be added to the register; and

g. Perform a verification after use of the software to confirm the software provided reasonable results (could be in the Technical Quality Review process).

3.2 Client Specified Software

Follow the flow diagram on Page 1 of this document (and itemized below) to add technical software to the validated software listing/register:

a. Identify software and confirm the software is fit for purpose and included in the Project Plan;

b. Assign technical team member to prepare the validation form with links to the client/regulatory internet site with the clients/regulatory software verification and validation process or request documentation of verification and validation and attach to the Software Validation Form – DCS;

c. Discipline lead review validation package and confirm accurate results are being output by the software;

d. Transmit the validation documentation to the Software Approver; and

e. Perform a verification after use of the software to confirm the software provided reasonable results (could be in the Technical Quality Review process).

3.3 AECOM Software/Data Management Tool Verification and Validation

Software developed by AECOM starts at the proposal stage and is included in the project schedule and budget, the table below identifies specific assignments for originators, reviewers and lead verifiers for the verification and validation process.

Proposal & Planning

- Project Manager and Technical Lead identify technical quality reviews applicability based on the project's data management and software validation needs and review software and tool development considerations.
- Categorize software as Legacy, Industry Standard, or Non-standard per Section 4.0, Terms and Definitions.
- For each non-standard software, confirm validation has occurred or assign Validator, Verifier and Approver to perform validation, and if appropriate, specify the method to be used for validation.

Check

- Originator should conduct self-check and test prior to release to reviewer.
- Reviewer should select test data and perform validation following the specified validation method and address applicable Technical Quality Review needs.
- Reviewer will conduct validation tests to ensure that results are consitent with technical practice and expected outcome, provide results, comments and documentation.
- Reviewer does the initial testing of end user interface such as forms, filters, commands, reports, etc. to ensure proper functionality and error handling.
- The originator addresses the comments, either making corrections or stating why the comment is not accepted. Disagreements are taken to the lead verifier; if the lead verifier cannot resolve the disagreement, the Department Lead/Manager makes the final decision.

Verify

- The Lead Verifier confirms that all comments have been addressed appropriately and that the software includes all required elements.
- The Lead Verifier conducts a discipline specific technical review of the deliverables or deliverable elements generated using the data and\or software.
- Verify that any comments or errors during testing of final user interface elements such as forms, filters, commands, reports, etc. have been resolved and confirm proper functionality and error handling.
- If the Lead Verifier has additional comments or disagrees with something in the software, the originator addresses the comments or states why the comment should not be incorporated. Disagreements are resolved by the Department Lead/Manager.
- The Lead Verifier completes and submits validation form to Software Validation Approver once all comments have been resolved.
- Provide results and documentation of the validation process to the assigned Approver. Changes that may affect previous output shall be noted and communicated to Approver and Department Lead/Manager.

Approve

- The Department Lead/Manager approves the software and requests the software be added to the validated software register.
- The PM approves deliverables or deliverable elements created with the software.

3.4 Validation of Software Revisions

New versions of previously validated software shall be validated again in accordance with the original process. Consideration shall be given to whether only the latest version of the software is to be maintained, keeping in mind that the use of older versions may still be required by clients or for continuity with earlier output.

3.5 Software Error and Errata Data

Errors identified by software vendors or by project team members during the use of the software must be reported to the Discipline Manager and the contact person identified on the relevant software register. The Discipline Manager shall:

a. Notify the software developer/vendor and AECOM IT.

b. Identify projects that have used or are using the software. Assess the impact of the error on both completed and ongoing projects.

c. Notify the affected project managers.

d. Notify the affected client if necessary.

e. Develop a corrective action plan for all affected work products and deliverables.

f. Revise the validation documentation, including the software register, as necessary.

3.6 Documentation

Validated Software records such as those listed below must be maintained in the local 'approved' Geography/ Business Line/Location validated software register:

- Completed the Software Validation Form - DCS (or equivalent) and supporting records, calculation check, comment sheets and software revision/version history maintained by the geography and business line Software Approver.
- Whenever possible developer should include the corresponding "About" Section and summarize licensing, copyright, and version information.

4. Terms and Definitions

a.	**Data Management Tool**	Any software, programming, template, spreadsheet or platform used to store, evaluate, format or manipulate data in any way from an Excel table to advanced software.
b.	**Discipline Manager/ Approver**	Leader that supervises and is responsible for the work performed in a specific discipline, market sector or practice area. Responsible for reviewing validation records from technical team members under his/her direction and providing to the Business Line Approver.
c.	**Industry Standard Software**	Commercially available technical software that is widely used and accepted in a discipline, market sector or practice area, and that does not require significant adaptation for use by AECOM (i.e. Primavera, ArcGIS, REVIT, etc.)
d.	**Legacy Software**	Technical software validated and regularly used in the current version at an AECOM legacy or newly acquired company for at least three years and for which no problems have been reported, or for which problems have been reported and corrected.
e.	**Non-standard Software**	Technical software that is not widely used and accepted in the industry.
f.	**Software Approver**	The individual, independent of the validator, who reviews the validation output and accepts the software for use by AECOM.
g.	**Software Register**	An up-to-date listing of validated technical software maintained by each Geography/Business Line/Location and posted in a location accessible to all staff.
h.	**TL**	Technical Lead; An individual competent in a technical discipline accountable to the PM for technical excellence on the project and for delivery of the technical tasks or technical packages of work within the scope, budget and schedule.
i.	**Validation**	The process of accepting technical software for use by AECOM. Validation may include verification of conformance with requirements.

j. **Verification** The process, normally performed by the software vendor, demonstrating that the software will perform its intended function prior to distributing to users of the software (AECOM).

k. **Validator** The individual who performs the validation – technical team member.

5. Appendices

a. N/A

6. Change Log

Rev #	Change Date	Description of Change	Location of Change
0	05-11-2011	Initial Release as Q2-311-PR	All
1	04-18-2016	2015 Annual Review and released as Q2[DCS]-311-PR1	Minor edits throughout.
2	05-07-2018	2017 Review, in new IMS Template, major changes including title change from ‘Software Validation Procedure – DCS’.	Read as new document.
3	20-Jan-2020	2020 Review; removal of all ePM references.	Page 1; S3.1
4	12-Oct-2021	2021 Review; put into new AECOM branded template; swapped order of “Approve” and “Track” in flow diagram; removed reference to the AECOM Software Catalog; new section for Client Specified Software; general edits.	Page 1, References, Section 2, 2.2, 3.2, 3.6,

AECOM

DCS

Software Validation Form

Q2[DCS]-311-FM1

Instructions:

1. Refer to the Validation of Software and Data Management Tools – DCS Q2[DCS]-311-PR1 for information on this process.
2. Completed and approved forms are to be maintained in the local 'approved' Geography/Business Line/Location validated software registers.

1. Software Information			
Software Name		**Version**	
AECOM Contact Person		**Date**	
Source	☐ Internal* ☐ External	**Business Line**	
Vendor/Developer			
Software Classification	☐ Legacy	☐ Industry Standard	☐ Non-Standard

* Validation of software developed by AECOM may not be performed by the software developer.

2. Software Validation		
Validation Type	☐ Initial	☐ Revision
Purpose & Description		
Validation Method		
Legacy	☐	Documented evidence of previous satisfactory use.
Industry Standard	☐ ☐	Signed Statement / Certification of QC validation by vendor / developer. Sample data run for proper functioning on AECOM computers / system.
Non-Standard	☐ ☐	Software run w/input having a known solution / output matches solution. Manual calculation verification.
Other (specify method)	☐	

Validation Performed by		
Name	**Signature**	**Date**

3. Validation Approved by		
Discipline Approver:		
Name	**Signature**	**Date**
Software Approver:		
Name	**Signature**	**Date**

4. Notes/Comments

5. Documentation			
Attached (check)	☐	Previous internal use documentation.	☐ Known solution input data & output.
	☐	Vendor / Developer Statement or Certification.	☐ Manual calculation verification.
	☐	Other:	

Technical Quality Review - Job Aid

Technical Quality Review Scope

Purpose:

1) Clarify the nature of technical quality review (TQR) by outlining the various technical review types and related scope. This complements existing procedures which provide more detailed guidance for implementation.
2) Provide guidance on TQR roles and responsibilities, realizing the Project Manager has the ultimate accountability to ensure the quality of the project and deliverables in accordance with scope, budget and schedule.
3) Refer to the Technical Quality Review (TQR) Procedure - DCS Q2[DCS]-351-PR1 for additional information: Click here
4) In the spirit of continuous improvement, we welcome comments and suggestions to keep this document relevant and useful. You can find the current version in the: Project Delivery System

Roles & Responsibilities

R - Responsible (completes the task)
A - Accountable (approves the task)
C - Consulted (has information or capability to help complete the task)
I - Informed (needs to be notified of task result)

Recommended scope when TQR Type is conducted
Determine need based on project scope

Technical Quality Review Type	Appropriate Budget, Schedule and Resources	Conformance with Standards & Regulatory Requirements	Review of Client, Sub & Third-Party Information	Compliance with Scope	Basis & Validity of Conclusion / Recommendation	Soundness of Approach / Design	Adequacy of Statements of Limitations	Technical Risk & Mitigation	Verification of Technical Solution	Validation of Assumptions	Software Verification & Validation	Check of Calculations	Check of Drawings & Graphics	Client Input Review	Organization, Clarity & Completeness	Edit for Elements such as Grammar, Punctuation, Formatting & Graphics	Notes	Project Manager	Technical Lead	Originator	Lead Verifier	Reviewer	Interdisciplinary Reviewer	Independent Reviewer	Project Quality Manager
Technical Approach Review (TAR) A review of the Technical Approach **(including the technical solution)** conducted to confirm that a project's creative, technical and client objectives are being addressed during the initial stages of the project to minimize risks resulting from an inadequate technical approach.	■	■		■	■	■	■	■	■	■	■			■			Performed at or before the project reaches 15% complete or as described in the Project Plan. Document on TQRR, TAR checklist or meeting notes from TAR meeting, or equivalent.	C	C	C	R/A				I
Calculation Check Performed to validate the accuracy and completeness of discipline specific calculations prior to deliverable hand-off to other task owners, disciplines, sub-contractors or the client.		■	■	■	■	■	■	■	■	■	■	■			■	■	Project or client needs may also require an Independent Reviewer on calculations. Document calculation check on the calculation checklist.	C	A	C		R			I
Discipline Review/Check A detailed examination performed within a single discipline to verify the correctness, completeness and technical adequacy of work, conformance with referenced standards, compliance with input requirements, acceptance criteria, relevant laws and regulations, anticipate safety standards (Safety in Design), basis and validity of assumptions, opinions, conclusions, recommendations, appropriate standard of care and potential for errors or omissions.		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	Perform mark-ups and document on a TQRR as applicable to Graded Approach and Geography.	C	A	C	C	R			I
Interdisciplinary Review Conducted to align critical design elements and eliminate possible conflicts and gaps between elements developed and reviewed in different disciplines, office locations, and/or companies, including sub consultants.		■	■	■	■	■	■		■	■			■	■	■	■	Perform mark-ups and document on a TQRR as applicable to Graded Approach and Geography.	C	A	C	C		R		I
Specification Package Review A review that references to standards and codes are correct and the relevant specification sections are included. Usually coordinated with drawings and applicable conditions.		■		■			■						■		■	■	Perform mark-ups and document on a TQRR as applicable to Graded Approach and Geography.	C	A	C	C	R			I
Bidability / Contract Documents Review A comprehensive review of pre-final (90%) or final (100%) contract documents to determine if the documents are ready to bid in an effort to reduce the risk of RFIs, change orders, disputes and claims resulting from the quality of the contract documents.		■	■	■		■	■	■		■			■	■	■	■	A bidability review team, which may be different than the TQR Team members, may need to be engaged.	A	C		C	R			I
Constructability Review Intended to identify issues in designs and contract documents that could adversely impact the construction process, such as standards, compatibility, existing facilities/utilities, interface with existing operations, access and egress, availability of building materials and, long lead procurement and labor resources. This enables rational bidding, reduces uncertainties and minimizes potential changes during construction. An independent review of design documents to ensure work requirements are clear, documents are coordinated, and that they assist the contractor in bidding, construction and project administration to result in reduced adverse impacts to the project. To minimise delays and costs associated with the need to revise design after commencement of construction.		■	■	■		■	■	■		■			■	■	■		A constructability review team, which may be different than the TQR Team members, may need to be engaged.	A	C		C	R			I
Independent Peer Review (C0 projects) A critical evaluation of work products, deliverables, material or data to verify or validate assumptions, plans, results, opinions, analysis, recommendations or conclusions at key milestones and prior to delivery to the client or other non-company entity.		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	The Independent Reviewer is completely independent from the team. This review is required on C0 projects or as required by the client, Geo-specific graded approach or other requirements. The review is documented on the TQRR or approved equivalent.	A	C	C				R	I
Sub Consultant, Client, or Third-party Info Review A review of materials for completeness and verification that appropriate quality assurance and control checks have been completed by the sub consultant, client or third party.	■	■	■			■			■	■	■		■				Perform mark-ups and document on a TQRR as applicable to Graded Approach and Geography.	A	R			I			I

Technical Quality Review - Job Aid

Technical Quality Reviews - Overall

In addition to the Review Types on the Technical Quality Review Record - DCS Q2[DCS]-351-FM1 (TQRR), the below reviews take place in the overall process of the deliverable review, verification and approval process.

Type	Who	Responsibility	Record
Self-Check	**The Originator**	Check that the work product (deliverable) is complete and appropriate to the deliverable phase before sending to other reviewers or checkers.	No specific record required.
Reviews & Checking	**Refer to the RACI* Page 1**	Refer to the RACI Proofread content to review spelling, grammar and punctuation.	Signed and dated Technical Quality Review Record (TQRR) or equivalent documentation in the form of mark-ups with stamps/signatures, spreadsheets, etc.
Verification & Validation	**Lead Verifier**	Confirm the deliverable satisfies the technical approach/solution/methodology developed at the start of the project through a high-level review of the overall submittal. Confirm that the required quality checks and reviews have been performed. Achieve correction as needed by resolution with Originator and technical lead.	Signed and dated Technical Quality Review Record (TQRR) or equivalent documentation in the form of mark-ups with stamps/signatures, spreadsheets, etc.
Deliverable Approval and Issue	**Project Manager**	Final review of deliverable and authorization to issue.	Signed and dated Technical Quality Review Record (TQRR) or equivalent documentation in the form of mark-ups with stamps/signatures, spreadsheets, etc.

Rev	Change Date	Description of Change	Location of Change
0	02-February-2017	Initial Release as Q2[DCS]-351-WI2	All
1	20-July-2018	Minor editorial changes to accommodate ePM updates and referencing	A5, S5, A57-Q87
2	27-January-2020	2020 Review – minor edits; removal of references to ePM; introduced Graded Approach. Incorporate equivalent information from the Technical Quality Review Summary - DCS Q2[DCS]-351-WI1 and Technical Quality Review Types - DCS Q2[DCS]-351-WI3 and retired both these 2 Instruction documents.	All
3	09-April-2020	Revised 'TQR Review Types' tab: 1. Removed the word 'holistic' from Point (1) of 'Purpose'. 2. Reworded the 'Specification Package Review' section. 3. Reword the 'Independent Reviewer' wording. Revised 'TQR Reviews' tab: 1. Changed 'Checks' to 'Check' 2. Provided explanation for 'RACI' acronym 3. Corrected capitalization of 'technical' in the title of the TQRR. 4. Added 'if not performed by a Project Quality Manager' at the end of the sentence: *Confirm that the required quality checks and reviews have been performed,.....* 5. Added 'transmittals' and clarified 'submittals' by adding 'shop drawing' - Exception to TQQR Requirements section.	All A3 A26 R38 C4 A9 D5 C6 B13
4	28-June-2021	Updated to new AECOM colors and logo. **TQR Review Types** tab: 1. Added box to against TAR x Verification of Technical Solution. 2. Added '.... or equivalent' to the end of the Notes for TAR. 3. Changed 'R' to 'C' against Technical Lead for TAR. 4. Added 'C' to Lead Verifier against Discipline Review/Check, Interdisciplinary Review, Specification package Review, Bidability / Contract Documents Review. 5. Added a new sentence to the end of the 'Constructability Review' description. 6. Added '.... or other requirements.' to the 2nd last sentence of the 'Notes' for Independent Peer Review. 7. Changed 'C' to 'A' against PM for 'Sub Consultant, Client, or Third-party Info Review'. 8. Changed 'A' to 'R' against Technical Lead for 'Sub Consultant, Client, or Third-party Info Review'. 9. Changed 'R' to nothing against Originator for Sub Consultant, Client, or Third-party Info Review'. **TQR Reviews** tab**:** 1. Deleted '.... if not performed by a Project Quality Manager.' from the end of 2nd last sentence of the 'Verification and Validation' responsibility wording.	 J9 R9 T9 V18, V22, V26, V30 A34 R38 S42 T42 U42 C6
5	14-October-2024	**TQR Review Types** tab**:** 1. Deleted "Suggestions/Changes + 'Click Here' link to email address" **TQR Reviews** tab: 1. Added statement on proofreading to allow for the removal of repetitive information on Self-Check, Checking, Verification and Inter-Disciplinary Review in the new Technical Quality Review Plan - Partner Office - DCS.	 S2 C5

APPENDIX B – DISCIPLINE & INTER-DISCIPLINE QC FORMS

- *LADOTD Final Calculation Book Index Checklist*
- *AECOM QMS Technical Quality Review Procedure*
- *AECOM QMS Guidelines for the Preparation of Calculations*
- *AECOM QMS Calculation Cover Page Forms*
- *AECOM QMS Calculation Log Form*
- *AECOM QMS Calculation Discipline QC Review Checklist Form*
- *AECOM QMS Drawing Discipline and Inter-Discipline QC Review Checklist Form*
- *AECOM QMS Specification Discipline QC Review Checklist Form*
- *AECOM QMS Study/Report Discipline QC Review Checklist Form*
- *AECOM QMS Document Review Comment Sheet*

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)**

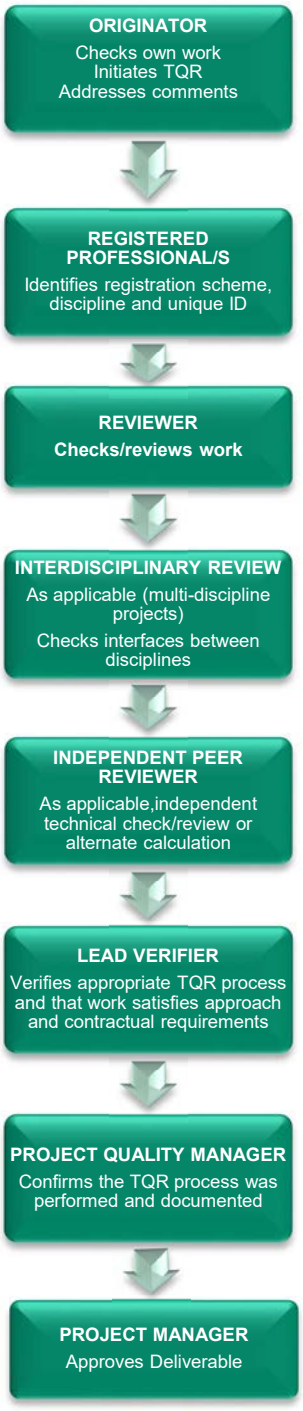
__ **All Electronic Design Files**

__ **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.

Technical Quality Review Procedure

Q2[DCS]-351-PR1



Who[1]	What/How	When (before a deliverable is submitted to 3rd party)
Originator	• Is the "responsible" person responsible for work product. • Checks the work for accuracy and completeness before submitting the work for review or check. • Initiates the TQR. • After a review or check, addresses all comments, either by accepting the revision or discussing the comment with the reviewer. • After the review and/or check is complete, submits the deliverable to the PM for approval.	Execution Gate 3
Registered Professional/s	When required, the registered professional/s responsible for the work product (who could also be the Originator) shall identify the registration scheme (e.g., Registered Professional Engineer), the discipline, and provide their unique identification per the scheme requirements.	Execution Gate 3
Disciplinary Reviewer	• Checks (reviews) the work for accuracy etc., in line with the review scope section of the Technical Quality Review Record - DCS. • Signs the TQRR and/or TQR stamp, or equivalent.	Execution Gate 3
Inter-Disciplinary Reviewer(s)	• Confirms compatibility among portions of deliverables that were developed, checked and reviewed by different disciplines, offices and/or companies. Document and review comments with Originators and confirms that comments are addressed. • Signs the TQRR and/or TQR stamp, or equivalent.	Execution Gate 3
Independent Peer Reviewer (IPR)	• When required by the project scope, client, or AECOM risk committee the IPR will provide an independent technical review, possibly including alternative calculations, confirming the work product is accurate and complete. • Signs the TQRR and/or TQR stamp, or equivalent.	Execution Gate 3
Lead Verifier(s)[2] (LV)	• Verifies the solution (deliverable) meets contractual requirements and professional standards of care. • Verifies that the reviews have been completed and the comments have been addressed appropriately. • If the project does not have an assigned Project Quality Manager, the Lead Verifier verifies that the TQR process has been followed. Signs the TQRR and/or TQR stamp, or equivalent.	Execution Gate 3
Project Quality Manager	For projects that have identified a Project Quality Manager (PQM), the PQM verifies that the TQR process has been followed – otherwise the Lead Verifier or Project Manager performs this responsibility.	Execution Gate 3
Project Manager/ delegate	Approves the deliverable.	Execution Gate 3

1. All roles mentioned throughout refer to "Lead Region/Office/Project Team" unless otherwise defined.
2. Assign Senior LV for C-0/C-1 projects with multiple LVs.

Related PPI

- IMS Manual - DCS Q2[DCS]-001-PR1
- Improvement Procedure - DCS Q2[DCS]-003-PR2
- Subs Management - DCS Q2[DCS]-141-PR1
- Project Plan Procedure - DCS Q2[DCS]-221-PR1
- Project Document and Records Control (Information Management) - DCS Q2[DCS]-222-PR1
- Project Risk Management - DCS Q2[DCS]-231-PR1
- Graded Risk Approach: Project Delivery Requirements - DCS Q2[DCS]-231-WI1
- Project Type - Graded Approach - DCS - EC Q3[DCS](EC)-231-WI1
- Validation of Software and Data Management Tools - DCS Q2[DCS]-311-PR1
- Technical Approach – Planning & Review – DCS Q2[DCS]-321-PR1
- Technical Quality Review Job Aid - DCS Q2[DCS]-351-WI2
- Calculation Preparation Instructions – DCS Q2[DCS]-351-WI5
- Records Management & Retention Procedure – AECOM Global Q1-004-PR1
- Bluebeam Instructions

Records & Checklists

- Section 6

Terms & Definitions

- Glossary + Section 5

Help & Training

- Continual Improvement Library
- Multiple Hats How to

Change Log

1. Purpose and Scope

a. This procedure establishes the process, roles, responsibilities and requirements for conducting a Technical Quality Review (TQR) of an AECOM Design Consulting Services (DCS) deliverable. It is mandatory for any project deliverable to a 3rd party. This includes deliverables developed in “Workshare” either by the Lead or Partner offices.

b. Implementing this procedure supports a right first-time approach and promotes successful project outcomes, reducing the possibility of errors and omissions which can lead to rework and poor team morale, or even lead to legal claims effecting affect AECOM’s reputation and ability to win work.

c. Refer to Appendix 1 for an understanding of what is expected as part of a project’s Technical Quality Review plan. Partner offices may use the Technical Quality Review Plan – Partner Office – DCS, to define the details for the TQR process if not included in the Lead Office Project and/or Quality Plan documents.

2. Graded Approach

a. The graded risk approach applies to this procedure. The project’s risk category (C-category) is determined by the AECOM Risk Assessment (ARA) completed as part of the Workbench project setup.

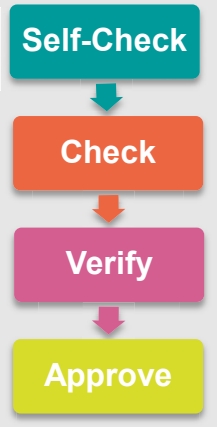
b. The matrix below defines the graded requirements of this procedure according to the risk category of the project. Partners (including Enterprise Capabilities – EC) will follow the Lead Office C-Category for the TQR process. The Lead Office Technical Lead, Project Management and Lead Verifier(s) provide guidance to the Partner Office for performing and documenting the TQR on their portion of the project work.

Table 1. Technical Quality Review Graded Approach

C-3A	C-3	C-2	C-1	C-0
	• LV approval that deliverable meets approach and client requirements. • Software validation - Calculation Checklist to document fit for use and functionality.	• LV approval that deliverable meets approach and client requirements. • Software validation - Calculation Checklist to document fit for use and functionality.	• LV approval that deliverable meets approach and client requirements. • Software validation - Calculation Checklist to document fit for use and functionality. • Functionality checked prior to use through alternative calculation or problem with known solution.	• LV approval that deliverable meets approach and client requirements. • IPR as appropriate to project scope. • Software validation - Calculation Checklist to document fit for use and functionality. • Functionality checked prior to use through alternative calculation or problem with known solution. • Software validation plan in project plan.
Calculation Checklist*				
C3A Category:	Retain evidence of internal deliverable review using TQRR or equivalent documented content in the Lead Office project UFI. Retain client comments and dispositions (resolutions) in Lead Office project UFI. Retain evidence of calculation review and software validation using the Calculation Checklist. C-3, C-2, C-1, C-0 require a TQRR as evidence of deliverable review along with mark-ups in Americas Regions.			

* = is optional in ANZ, Asia, EUR&I and MEA

3. Procedure



The basic process for a TQR is illustrated at the right. Specific requirements are included in the Process Flow.

This process is required for all deliverables, although its application should vary based on the Project Risk Category described in Section 2, Graded Approach. Each project and deliverable are different; the review requirements are subject to the type and complexity of the deliverable, the requirements of the client or regulatory agency, and the character of the personnel actively involved with the work.

Recognizing these differences, the Project Manager, Technical Lead and project team must determine what level of effort will be necessary to routinely meet the requirements of this procedure. The process shall then be described and documented within the Technical Approach, Project Plan and Project Quality Plans and communicated to all technical team members within the Lead Office and Partner office(s).

Identification and centralization of the TQR review comments to prevent loss and rework between offices is critical. It is recommended using a digital process, such as Bluebeam, Revizto, BIM360, Autodesk Construction Cloud (ACC) etc. to document work product comments and collaborate within the digital deliverable document until resolution of all comments are clearly documented.

a. This process applies to:

   i. All types of deliverables, including reports, documents, plans, drawings, digital models, data tables, specifications, fact sheets, figures, logs, presentations etc. For projects involving more than one discipline with deliverables interfacing with other disciplines, an ***interdisciplinary review*** is required to be conducted (after the discipline review during the "Check & Review" phase) and the requirements and participants should be defined in the Project Plan/Project Quality Plan.

   ii. Deliverables provided by Partners (including Enterprise Capabilities).

   iii. Deliverables provided by our subcontractors, even though we may not conduct a thorough review of their work ourselves. See Section 4 for more detail on reviewing subcontractor work.

b. All drafts, versions, and iterations of deliverables shall be reviewed prior to delivery.

Notes:

1. When deliverables must be signed and sealed, follow applicable statutory registration requirements and document on the Technical Quality Review Record – DCS or equivalent, making sure to have at least one person, other than the Originator or registered party, a part of the review process.
2. Where stand-alone calculations are prepared, the Calculation Checklist - DCS and Technical Quality Review Record – DCS should both be completed, unless the calculation is simple arithmetic included in a report where the calculation will be checked as a part of the report review and documented on a TQRR or equivalent.
3. **Check with the applicable regional statement of limitations/disclaimers for applicability to deliverable documents.**

4. TQR Process

a. Each deliverable is planned and scheduled in the Project Plan and/or a list of deliverables with a TQR set up in a timely manner to notify the project team and reviewers of the upcoming required review.

b. TQRs may be conducted at various phases of a deliverable, depending on the type of deliverable and its complexity. There may also be several *types* of TQRs but regardless of type, the process is the same as shown on Page 1.

c. TQR Types consist of Disciplinary, Interdisciplinary (when multiple disciplines are involved), Independent (when required by contract or when the project is a C-0 Project Risk Category). See definitions for definition details on these reviews.

d. Information about TQR Types, Review Scope, and Roles and Responsibilities for personnel involved in the Technical Quality Review process is found in Appendix 1 for Category-C-3A and Category-C-3 projects and the Technical Quality Review Job Aid - DCS for all project risk category projects.

4.1 Documentation of TQRs

a. Should client and or Joint Venture projects require adjustments to the TQR documentation process, this is to be specified in the Project Plan or Digital Plan/Digital Delivery Plan or Project Quality Plan hyperlinked into the Project Plan.

b. TQR evidence must be retrievable for long term evidence that AECOM used qualified personnel to prepare, review, verify and approve its deliverable for issuance. TQRs are documented by using the Technical Quality Review Record (TQRR) form or Project Deliverable Manager (TQR App) or equivalent, which must be maintained in the project file or through stamps and markups directly on the document.

c. Refer to the geography specific documentation requirements below:

Table 2. Technical Quality Review Documentation Requirements by Geography

Geography	C-3A	C-3	C-2	C-1	C-0
DCSA	TQRR or Equivalent Evidence	TQRR	TQRR	TQRR	TQRR
EUR&I	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence
MEA	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence
Asia	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence
ANZ	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence

Exception: A TQRR is **not required** if a deliverable is general correspondence e.g., emails, letters, monthly reports (without technical content). RFIs and Contractor Submittals such as Material Submittals, Method Statements, Shop Drawings etc. should go through the technical review process but a TQRR record is not required.

d. When a client asks for a preliminary copy of the deliverable, prior to the internal TQR, a disclaimer – “Draft - has not gone through internal review” must be applied.

e. Evidence of the review, such as written comments made during a TQR must be maintained in the project file, as follows:

i. Maintain markups, check sets, comment sheets, etc., in the project file until:

1. At minimum, after the next submittal is accepted.

2. Unless otherwise directed by the client or PM. Markups/check sets may be disposed after the submittal unless a TQRR was not used to document the review process.

3. Project closeout. Discard all markups unless a TQRR was not used to document the review process, upon project closeout.

ii. For additional information on maintaining project records, see the Project Document and Records Control (Information Management) - DCS.

4.1.1 Hardcopy TQR Process

The Technical Lead and Project Manager are responsible for defining and documenting with the Project Quality Manager (where a PQM applies), how and when the TQR process shall be performed in the Technical Approach, Project Plan and if required, Project Quality Plan. At a minimum, the following is documented:

a. Schedule for deliverable reviews

b. Resources to perform these reviews

c. Definition of roles and responsibilities for each resource, e.g. Checker/Reviewer(s), Verifier (s) and Approver to be included.

d. How to document the reviews along with the color-coding process – refer to Appendix 2 and Appendix 3 for version control of the check “prints” (documents) and where check “prints” are retained within the project UFI. To present as ‘One AECOM’ the arrangements or color-coding must be determined and consistently applied across the project (all disciplines and Partner offices being consistent).

Note: Understanding that schedules change – create an online document with a hyperlink within the Project Plan – this allows the schedule to be easily updated and the most current version to be available to the project team at all times.

4.1.2 Digital Tools for Technical Quality Review

a. AECOM DCS encourages the use of digital review software tools like Bluebeam, Revizto, BIM360, ProjectWise Deliverables Management (PWDM), ProjectWise PDF markup, Autodesk Construction Cloud (ACC), etc.

b. In such cases the Lead Office PM deliverable Technical Quality Review process shall be followed, and evidence of the process identified in Section 4.1.1 provided within the tool, as applicable. Any deviation of the process shall be explained in the Project Plan, Technical Approach or Digital Plan/Digital Delivery Plan (as applicable) and approved by the Project Manager or Project Approver (and PQM where required) through approval/release of the Project Plan or Project Plan revision.

c. The Lead Office PM is responsible for collaborating with their Region Digital Lead to select the appropriate digital tool for the Technical Quality Review process. The tool and process will be identified in the Project Plan and could be detailed in a Technical Approach or Digital Plan/Digital Delivery Plan hyperlinked into the Project Plan. The Lead Office and all Partner offices will follow the process defined.

4.2 Client or Stakeholder Review Comments

a. All comments received from a client or regulatory agency must be reviewed and included as agreed with the client or regulatory agency by the authorized project team member.

b. Documentation of the reviews and agreement shall be maintained in the Lead Office project UFI.

c. When deliverables are revised based on the Client or Stakeholder comments, the Comment Response Sheet (CRS) – DCS or equivalent, shall be included as part of the revised deliverables to assist efficient review/approval process. Where practical the CRS should identify the comment, how and where (drawing/document number and title) it was addressed. Where comments are not addressed, justification for not addressing the comments should be provided under the “Response” column. Discipline Review should be performed on the CRS as part of the deliverable internal review process to ensure all the comments are adequately addressed in the revised documents.

d. The external drafts containing the client or regulatory agency comments must be retained in the project file in alignment with the Records Management & Retention Procedure – AECOM Global, the client contract or regulatory requirements.

e. Changes to the work product or deliverable resulting from these reviews are subject to the same verification, review, and documentation requirements as the original work product, except when the changes are editorial or minor in content and do not change the risk content of the document. For these changes, a review process shall be performed but evidence of review is directly on the work product, in an email or another documented form.

4.3 Project Input from External Stakeholders

a. The PM or Technical Lead is responsible to take steps to confirm the Sub's deliverable or other project input (client or others) is suitable to be included in the project deliverable. The confirmation can be performed by:

   i. Requesting evidence input was checked and reviewed by the provider, equivalent to this procedure; or

   ii. Confirm the inputs meet the requirements of the project by including in the internal review process.

b. Where the Sub is using measuring, monitoring, inspection and testing equipment that may impact the deliverable, check the deliverable e.g., report to ascertain whether the equipment used is identified in the deliverable to confirm traceability. Documentation to confirm validity e.g., calibration certificate, should also be submitted as part of the deliverable.

5. Terms and Definitions

The following definitions supplement those found in the AECOM Glossary.

a.	**Deliverable**	Work product that is intended for delivery to a 3rd party to meet final, interim, or milestone submittal obligations as defined in the contract or regulatory requirements. Deliverables subject to the TQR process are understood to mean those work products that fulfil the contract obligations (should be listed in the Project Plan). Deliverables can include reports, plans, drawings, data tables, specifications, calculations, models, conclusions and recommendations, fact sheets, white papers, letter reports, responses to comments, or any other project related document. Deliverables are not general correspondence (including emails, letters, monthly status reports (without technical content), etc.)
b.	**Deliverable Component**	A specific piece or part of a deliverable, such as calculations, drawings, specifications, studies and reports. One or more components may be packaged to comprise the overall deliverable. Calculations, even when not submitted to the client, are considered a deliverable component and shall follow the TQR process to the same rigor as the deliverable components. Calculations developed from MSExcel, MathCAD and similar tools shall have internal logic statements, embedded equations and macros checked. The Lead Verifier(s) is (are) responsible for confirming the tool is acceptable for the proposed application and meets these requirements.
c.	**Lead Region/Office/ Project Team (Lead Team)**	The team who "owns" the contract with the Client and is leading the work in line with the contract.
d.	**Lead Verifier**	Reviews the technical approach and each deliverable for overall compliance with SOW, approach, requirements and regulations. Not involved in developing the work. Must be on the AECOM Approved Lead Verifiers list (Lead Verifier Information). A project may have more than one Lead Verifier to help address all discipline elements.
e.	**Originator**	The individual or team of people who create a deliverable or work product. In the case of a team, the Originator includes the responsible person directing the work and having final decision authority over the work product. For example, a CAD designer may prepare a design under the supervision and direction of a lead engineer. Both the CAD designer and the lead engineer would be considered Originators of the work.
f.	**Partner**	Offices providing internal work to another office, region, business line.
g.	**Registered Professional**	In "Jurisdictions" where this is required, the responsible professional who either created the work product as the originator or who directly supervised the creation of the work product.
h.	**Technical Lead**	An individual competent in a technical discipline accountable to the PM for technical excellence on the project and for delivery of the technical tasks or technical packages of work within the scope, budget and schedule.

i.	**Third (3Rd) Party**	Job applicants, contractors, sub-contractors, joint ventures, partnerships, client and vendor staff, and members of the general public.
j.	**Work Product**	Reports, drawings, specifications, data sheets, virtual deliverables, calculations or other output that may serve as input to subsequent project stages or be delivered to the client, regulatory agency or other stakeholder. Work product goes through stages of development internally and becomes a deliverable when handed over to the client.
k.	**Workshare**	Shared work across offices, regions, business lines, Enterprise Capabilities (EC). There would be a Lead Region and Partner(s) (supplies resources and/or services to the Lead Region)

6. Records

a. Technical Quality Review Record – DCS Q2[DCS]-351-FM1 (Word / Fillable PDF)

b. Calculation Checklist - DCS Q2[DCS]-351-FM3 (Word / Fillable PDF)

c. Technical Quality Review Plan – Partner Office – DCS Q2[DCS]-351-FM6

d. Comment Response Sheet (CRS) – DCS Q2[DCS]-351-FM7

7. Appendices

a. Appendix 1 – Matrix of Acceptability – C-3A/C-3 Project Roles and Responsibilities.

b. Appendix 2 – Check Prints

c. Appendix 3 – Examples – Color Coding and Quality Control stamps for Hardcopy/Printed Copies

d. Appendix 4 - Examples – Quality Control Color Codes for Bluebeam Technical Review Process

8. Change Log

Rev #	Change Date	Description of Change	Location of Change
1	01-Oct-2012	Initial Release as Annual Review.	Sections 1, 2, and 4
2	01-Oct-2014	2014 Review – Updated with SHE comments and DEKRA Americas Observations in reference to monitoring and measurement.	Sections 3 and 4
3	18-Apr-2016	Released as Technical Quality Planning and Review Procedure Q2[DCS]-351-PR1.	All
4	----	-----	----
5	22-Jun-2016	Updated to better define actions for non-complex/low risk projects and team members performing multiple roles.	
6	21-Dec-2016	Minor updates to adjust role responsibilities and updates in ePM.	Sections 4, 5 and 6
7	20-Jul-2018	2017 Review; put into new IMS Procedure template and restructured to 2 column format; update references and removal of appendices prepared as independent documents.	All
8	01-Aug-2018	Added instruction around signing/sealing; amended the ‘Originator’ definition; and updated the responsibility matrix + redefined the ‘key quality principles’.	Sections 2, 5 and Appendix 1
9	25-Jan-2019	Qualified that the TQRR form is not required to be used for review of minor-editorial changes to the work product.	Section 4.2

Rev #	Change Date	Description of Change	Location of Change
10	08-Aug-2019	Remove link to IMS Policy with its retirement; Updated retired linked location for Lead Verifiers to new location on Ecosystem; Amend 'Interdisciplinary Review' and Project Quality Manager actions in Flow Diagram on Page 1; Bold and underline Section 2, Point 4; Amend Section 4.2 Para 1 around client comments; Amended PQM line in Appendix 1 around who is responsible if a separate PQM is assigned.	Related PPI Section 2 Point 4 Section 4.2 Para 1 Section 5 (c) Appendix 1 – PQM
11	29-Jan-2020	2020 Review – minor edits; removal of references to ePM; introduced Graded Approach.	All
12	15-Jul-2020	Minor edits; added Project Manager as alternative Lead Verifier if project does not have an assigned Project Quality Manager; exemption clarifications on the use of the Technical Quality Review Record – DCS and amendment to 'Deliverable' definition.	Page 1, Sections 2, 3, 4.1, 5 and App 1 - PQM
13	14-Dec-2021	2021 Review; put into new Template; revised Page 1's "What/ How"; general edits; added optional use of Calculation Review Checklist for regions until review of Graded Approach; updated T&Ds; updated Appendix 1 to clarify roles and exceptions to overlapping.	ALL
14	15-Aug-2022	2022 Review; introducing the recognition of "Registered Professional/s" in jurisdictions where this is required; clarifying the need for "Interdisciplinary Review" for projects with more than one discipline jointly collaborating on deliverables; added definition for "Registered Professional"; minor edits.	Page 1, Section 3(a), 4.1, 5 and App 1.
15	18-Oct-2023	Minor edits; updated Graded Approach table to align with "Graded Risk Approach: Project Delivery Requirements – DCS; updated the Matrix of Acceptability for C-3A/C-3 projects to identify PQMs as Reviewer/Checker with a "Proceed with caution" icon.	Section 2 Appendix 1
16	14-Oct-2024	• 2024 Review. • Clarified all roles mentioned throughout refer to "Lead Region/Office/Project Team" unless otherwise defined. • Promoting "Workshare" and "Partner Offices" to enhance working practices across extended project teams. • Promoting "Digital" as an integral part of project planning and execution. • Updated "What/How" adding "Signs the TQRR and/or TQR stamp, or equivalent" for reviews. • Added reference to needing a Senior LV for C-0/C-1s with multiple LVs. • Added Graded Risk Approach: Project Delivery Requirements – DCS Q2[DCS]-231-WI1 and Project Type - Graded Approach - DCS - EC Q3[DCS](EC)-231-WI1 to the "Related PP" list. • Added links to the "Continual Improvement Library" and "Multiple Hats How to" to Help & Training. • Introducing information from EC to retire GEP 251 Checking and Verification – DCS – EC. • Elevated EC's Bluebeam set of instruction documents to DCS level. • Elevated MEA's Comment Response Sheet – MEA to DCS level. • Elevated EC's GEP 250-1 Quality Plan (C&V) – DCS – EC to DCS level – now Technical Quality Review Plan - Partner Office – DCS. • Updated "Graded Approach" section to identify the AECOM Risk Assessment (ARA) is now part of project setup in Workbench. • Updated Graded Approach area to emphasize EC follows the Project Risk Category of the Lead Office project for the TQR process and minor edit to C-0 streamline wording against Software Validation.	Page 1 Related PPIs Help & Training Section 1 Section 2 Section 3 Section 4 – all Section 5 Section 6 Section 7 Appendix 1, 2, 3, 4

Rev #	Change Date	Description of Change	Location of Change
		• Update main process wording emphasizing documenting, communicating and centralizing comments to prevent loss and rework across Partner Offices, including the use of the appropriate tools to do it in. • Modified Table 2 splitting out EURIMEA to make EUR&I and MEA rows. • New sections covering documenting of hardcopy TQR process; check prints; digital tools for TQR. • Added “Lead Region/Office/Project Team (Lead Team)”, “Partner” and “Workshare” definitions and updated LV with a project may have more than one LV to address all disciplines. • Updated Appendix 1 with a new training video link “Multiple Hats How to” and amended the role of the PQM to against “Reviewer/Checker” to proceed with caution. • New appendices – 2, 3 and 4. • Minor edits and updated links.	

Appendix 1 Matrix of Acceptability –C-3A/C-3 Project Roles and Responsibilities

The expectation inherent in the TQR process is the PM will coordinate with the Technical Leads to think through the project requirements and risks to verify:

- Technical Quality Review arrangements are appropriate and fit for purpose; and
- The completed deliverable is thorough, correct, accurate, professionally appropriate and meets contractual obligations.

In some instances, it may be necessary for one person to fulfil multiple roles on a project. Duplication of roles should be the *exception* (only C-3A and C-3 projects), not the rule. This matrix illustrates which roles may or may not overlap.

Note: For C-0, C-1, and C-2 **no roles should overlap,** and this matrix cannot be used. Only in exceptional circumstances, the Project Manager and Lead Verifier may agree to overlapping roles and shall be explained in the Project Plan and/or Technical Approach – refer to the "Multiple Hats How to" outlining the different roles and responsibilities.

	Project Manager	Lead Verifier	Technical Lead	Originator	Reviewer/Checker	PQM
Project Manager		△	△	△	✓	△
Lead Verifier	△		✖	✖	✓	✓
Technical Lead	△	✖		✓	△	△
Originator	△	✖	✓		✖	✖
Reviewer/ Checker	✓	✓	△	✖		△
PQM	△	✓	△	✖	△	
Legend	✓ = acceptable	△ = Proceed with caution	✖ = not allowed			

The **key quality principle** behind this distribution of roles is:

1. The Originator ***cannot be the*** Reviewer (checker) of their own work but is expected to self-check their work before submitting it for TQR.
2. Where the PM and Technical Lead are the same person, **they cannot be the Lead Verifier.**
3. Where the PM and Technical Lead are not the same person, the PM could act as the Lead Verifier **only if they are an approved Lead Verifier.**

Note:

PM	May be the Technical Lead and/or Originator; however, use caution to avoid compromising technical quality delivery due to schedule or budget constraints.
Technical Lead	Focuses solely on project technical quality, its planning and resources.
Originator	Performs the work and self-checks; could also be the PM and Technical Lead but cannot serve in a review/check or verify role. See the **Key Quality Principle** above.
Reviewer/Checker	Reviews (checks) work prepared by others. See the **Key Quality Principle** above. May also verify the work.
Lead Verifier	Reviews the technical approach and each deliverable for overall compliance with approach, requirements and regulations. Lead Verifier – not involved in developing the work – brings an independent viewpoint to the review process, an industry best practice. Also see PQM role below.
PQM	Confirms completeness of the TQR process per procedure. If separate PQM has not been assigned, LV or PM takes on this responsibility and their signature signifies that they are performing these responsibilities. On C-3A projects, the PM must take on the responsibility and their signature on the mark-up, email, TQRR or other equivalent document signifies they are performing these responsibilities.

Appendix 2 Check Prints

Digital Check Prints and mark-up process is defined by the tool to be used. Request your regional Digital Lead to provide guidance on which tool will be appropriate for your project. If using Bluebeam, refer to the Work Instructions listed below and linked in the Project Delivery System (PDS) for guidance.

For each cycle of Self-Check, Review, and Update (refer to Appendix 3 and Appendix 4 for check print stamps or digital tool steps options), the Project Plan shall identify one color-code mark-up process for all disciplines and Partners on the project. If there is not already a requirement from the Client for a specific process identified by the office/region, the color-code scheme in the Appendix shall be used.

a. Check Prints:

   i. Produce the check print with the applicable stamps identified in the Project Plan.

   ii. If errors are found during the first check, create a second check print with updates and provide both the version with errors and the clean second set to the Reviewer/Checker to back check that their comments were properly incorporated. If they are not incorporated a discussion is held that determines no change needed – document agreement of no change on the second check print.

   iii. Reviewer/Checker mark each update one at a time to confirm all comments were incorporated. If the comments were not incorporated – document why they were not, and agreement with not incorporating them.

   iv. During back-check review, the reviewer/checker can add new comments.

   v. Repeat until the deliverable is technically accurate.

   vi. The final check print will only have check marks placed by the Checker/Reviewer.

b. Technical Quality Hardcopy Mark-up Record:

   i. All check prints for a deliverable's revision form the quality record.

   ii. For hard copy check prints, staple them together.

c. Projects Across Offices/Regions:

   i. Lead Teams may perform additional checks and should append their mark-ups to the Partner office set using the same mark-up process as above.

   ii. It is recommended for retention to scan the TQR set and retain in the project UFI defined by the Lead Office PM in the project plan.

d. TQRRs (if required by region):

The Lead Office PM will discuss this during the Kick-Off Meeting and document in the project plan whether the TQR Record (TQRR) with the mark-ups or just the mark-ups with stamps equivalent to the TQRR is the process for the final TQR Record (TQRR).

e. Bluebeam Workflow and Review Instructions

   i. Bluebeam Studio Account Setup – DCS Q2[DCS]-351-WI6

   ii. Bluebeam Studio Workflow – DCS Q2[DCS]-351-WI7

   iii. Bluebeam Workflow Process – DCS Q2[DCS]-351-WI8

   iv. Bluebeam Review Instruction - Originator (Small Projects) – DCS Q2[DCS]-351-WI9

   v. Bluebeam Review Instruction - Originator/Lead Project Office - DCS Q2[DCS]-351-WI10

   vi. Bluebeam Review Instruction - Studio Administrator – DCS Q2[DCS]-351-WI11

   vii. Bluebeam Review Instruction - Technical Reviewer – DCS Q2[DCS]-351-WI12

Appendix 3 Examples – Color Coding and Quality Control Stamps for Hardcopy/Printed Copies

a. Sample Color-Coding - Color and Markups on Printed Copies

i. If a client, project or office color-coding process is not already identified, the project shall identify a standard for the project. Below is a recommended set of colors that can be used when marking up check/verification prints, when a required alternative is not defined. As a minimum, the final color to indicate that the changes are correct must be green.

ii. Where the client or project requires alternative colors, those shall be documented in the Project Plan or Project Quality Plan.

iii. The Partner Office shall be directed by the Lead Office on the color-coding process for the project and all disciplines will implement the same color-coding process to eliminate any misunderstanding during Inter-disciplinary Review or when the final product from all Partner offices is pulled together.

iv. Collaboration is greater when the entire project team is using the same color-coding process and the same digital tool when hard copies are not used.

HIGHLIGHTER	Item has been reviewed and found to be correct
PEN	RED shall be used by the Reviewer for any errors, changes or additions that are required.
PEN	Black Pen/Pencil shall be used by the Reviewer(s) for any comments, queries or any other items that need to be brought to the attention to the Originator but not incorporated in the Master document.
PEN	GREEN PEN for Originator, check marks if an agreement with the comments of the Reviewer, discusses to come to agreement with any comments the Originator does not agree with.
PEN	BLUE PEN shall be used by the Originator circling the RED mark-ups, after the relevant changes have been made on the Master document.
HIGHLIGHTER	The Reviewer may use GREEN to document the review, indicating that any errors, changes or additions have been incorporated with a green tick/check mark over the blue pen circle.

Note: For the Lead Verifier or Independent Reviewer comment process, the above process is to be performed on a separate version of the deliverable documents.

b. Sample Stamp for Single Discipline Checking

The explanatory notes provided herein are not intended to be included on stamps. These stamps may be applied physically to a hard copy print using ink and traditional hard stamps, or they may be applied electronically in a digitally enabled work process.

Discipline Review			
Seq. No.:		IDR required ☐	
	Name	**Signature**	**Date**
Self-Check (Originator)			
CAD/BIM Check			
Review/Tech. Check (Reviewer)			

Note: The sequence number block is optional for cases where it is desired to track the individual cycling of check prints; place an incremental number for each check print used in the checking process. DO NOT use revision or version number here, since those terms are used for document control of individual deliverables.

c. Sample Stamp for Inter-Disciplinary Review (IDR)

Inter-Discipline Review				
Owning Discipline:				
Disciplines		**Name**	**Signature**	**Date**
Originator:				
Discipline Reviewer(s)				

d. Sample Stamp for Verification (LV performed by Partner)

* * * * * Verified * * * * *			
	Name	Signature	Date
Worksharing Office Lead Verifier			
Lead Team Verifier			

Note: When the IDR is fully or partially performed by the Partner, the Partner verification step is performed after the IDR (where applicable) is completed. This sample stamp can be applied to leave space for the Lead Team to record their verification after the Partner completes verification since the two steps are sequential.

e. Sample Stamp for Verification (LV performed by Lead Team)

* * * * * Verified * * * * *			
	Name	Signature	Date
Lead Team Verifier			

Note: When the IDR is fully performed by the Lead Team, the Partner verification step is performed prior to the deliverable(s) being released to the Lead Team to perform the IDR. After the Lead Team performs the IDR, they would then apply their own Verification Stamp.

Appendix 4 Examples – Quality Control Color Codes for Bluebeam Technical Quality Review Process

This Appendix will provide example for color-coding and stamps that can be used to document the TQR process in the absence of guidance from the client or region/office/business line for **Bluebeam digital checking and verification**.

Note: Other Digital Tools are available, but guidance is currently not complete. Contact your Region/Business Line lead when using other digital tools for guidance.

When the client or Lead office does not have required mark-up colors, the below is a standard AECOM profile in Bluebeam that should be used when marking up check/verification prints. As a minimum, the final color to indicate the changes are correct must be “Green”.

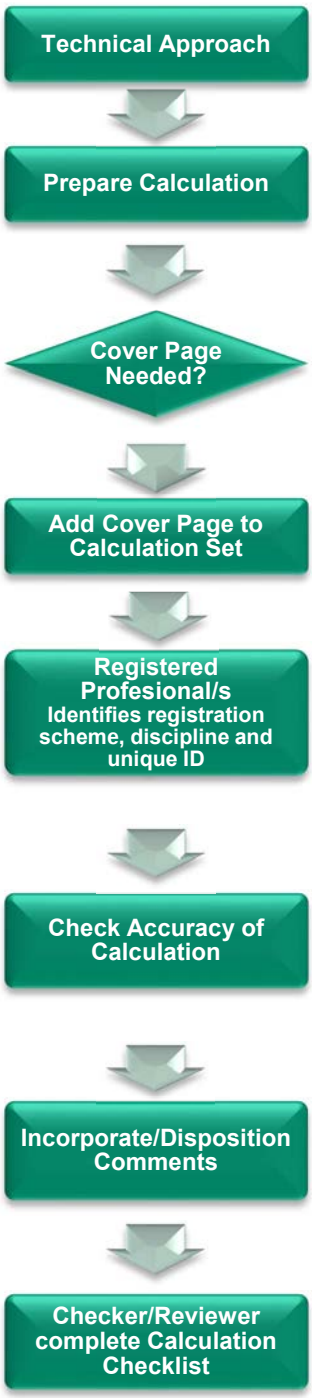
When using other digital tools for Technical Quality Review, like Revizto, a common color-coding mark-up process shall be set-up using similar guidance within the Project Plan or, where applicable, Digital Plan/Digital Delivery Plan.

Table 3. AECOM TQR – Internal and External (Client)

TQR Comment	TQR Comment Color
Original "Revision" Comment Added by Reviewer	**Red Comment**
Status Change (from DB or TQR Reviewer)	**Comment Color (Change)**
****RESPONSE to Reviewer / Lead Verifier Comment**	
AGREE / ACCEPT	**Dark Orange Comment**
DISCUSS (see Reply) - Requires Reviewer Response	**Red Comment**
ANSWER PROVIDED to Question Asked (see Reply)	**Dark Orange Comment**
****ACTION to be Taken by Originator**	
Markup HAS BEEN INCORPORATED	**Dark Blue Comment**
Markup WILL BE INCORPORATED into Next Submittal (see Reply)	**Dark Orange Comment**
Will NOT be INCORPORATED (see Reply)	**Magenta Comment**
Markup will be DEFERRED to a Later Submittal (see Reply)	**Red Comment**
ESCALATE Issue to PM (see Reply)	**Red Comment**
CLIENT RESPONSE Needed: Out of Scope (see Reply)	**Red Comment**
CLIENT RESPONSE Needed: Needs Client's Input (see Reply)	**Red Comment**
****Comment RESOLUTION by Reviewer / Lead Verifier**	
CLOSED by REVIEWER - Comment Addressed	**Green Comment**
OPEN - Comment NOT Addressed or Resolved. Returned to Originator	**Red Comment**
CLOSED by PM / Designee - Comment Addressed	**Green Comment**
COMMENT FORWARDED to Next Phase	(No Color Change)
VERIFIED: CLOSED - Set by Verifier	**Green Comment**
VERIFIED: OPEN - Set by Verifier	**Red Comment**
Checked / Correct (Yellow Highlighter)	**(same as closed)**
Client Comment	**Client Comment Color**
Original "Revision" Comment Added by Reviewer	**Red Comment**

Status Change (from TQR)	Comment Color (Change)
**Response to CLIENT Comment by Consultants	
Accepted	Dark Yellow Comment
Clarification Needed	Red Comment
Deferred	Purple Comment
Rejected	Red Comment
Out of Scope	Red Comment
Needs Client Response	Red Comment
Minor Editorial Major Technical Change	(Types of comments)

Calculation Preparation Instructions



Who[1]	How	Stage
PM and Technical Lead	Determine appropriate technical team, approach and technical solution.	Planning/ Execution
Originator	Based on technical approach and project requirements, prepare/perform calculations in a legible manner. Include a cover page – refer to the Calculation Cover Page Template – DCS. Self-check calculations using the Calculation Review Checklist - DCS	Execution
Registered Professional/s	In "Jurisdictions" where this is required, the registered professional/s responsible for the calculation (who could also be the Originator) shall identify the registration scheme (e.g., Registered Professional Engineer), the discipline and provides their unique identification per the scheme requirements.	Execution Gate 3
Checker/Reviewer	Perform checks on the calculations including verifying the results/recommendations from the evaluation/analysis/design has addressed the problem to be solved for the client. Prepare tracking log to identify comments and actions.	Execution
Originator	Review comments with Reviewers and incorporate and/or disposition comments.	Execution
Checker/Reviewer	Complete calculation checklist and save in project file with calculation or design package that relies on the calculations. When identified by TL, pass calculation to Independent Peer Reviewer for review, comment disposition and checklist signing.	Execution

1. All roles mentioned throughout refer to "Lead Region/Office/Project Team" unless otherwise defined.

Related PPI

- Project Plan Procedure - DCS Q2[DCS]-221-PR1
- Project Document and Records Control (Information Management) - DCS Q2[DCS]-222-PR1
- Technical Quality Review Procedure - DCS Q2[DCS]-351-PR1
- Validation of Software and Data Management Procedure - DCS Q2[DCS]-311-PR1
- Project Closure Procedure - DCS Q2[DCS]-401-PR1
- Unified File Index - DCS Q2[DCS]-222-WI1
- Records Management & Retention Procedure - AECOM Global Q1-004-PR1

References

N/A

Terms & Definitions

- AECOM Glossary

Help & Training

- Quality Insights - Calculation Preparation & Review

Change Log

1. Purpose and Scope

The purpose of this document is to assist technical staff in the preparation of models and/or calculations and outlines the mandatory step of checking all calculations as part of the overall preparation and review of a project's deliverables – refer to the Technical Quality Review Procedure – DCS. Checking of calculations occurs throughout the Execution Phase and is to be completed prior to deliverables being approved for use/issue.

The key participants involved are as follows and their role in the process, is outlined in Appendix 1.

2. Graded Approach

The graded risk approach applies to this document. The project's risk category (C-category) is determined by the AECOM Risk Assessment (ARA) completed as part of the Workbench project setup. Use the below matrix for the required rigor of this procedure based on the Risk Category of project.

C-3A	C-3	C-2	C-1	C-0
Calculation Review Checklist*	Calculation Review Checklist*	Calculation Review Checklist*	Calculation Review Checklist*	Calculation Review Checklist*

* = is optional in ANZ, Asia and EUR&I and MEA.

3. Instructions

a. For specific projects or programs, the Project Manager, Project Approver and/or Profit & Loss Manager or Business Line technical management group shall indicate in the Project Plan if exceptions to this instruction should occur. The same level of quality is required for the preparation of calculations regardless of the level of complexity of the project.

b. Checking of calculations is required on all projects, but the rigor and documentation of the check depends on the complexity of the calculation. A calculation review checklist is required for all calculations unless:

   i. Simple math is included in a technical report and checked as a part of the report review process (documented on the TQRR); or

   ii. if there is equivalent evidence of checks i.e., stamps/initials on each page; or

   iii. there is a client equivalent calculation checklist required.

c. In "Jurisdictions" where this is required, a registered professional must either conduct the calculation or directly supervise the work undertaken. This professional must identify the registration scheme (e.g., Registered Professional Engineer), the discipline and provide their unique identification per the scheme requirements on the calculation review record.

3.1 Calculation Preparation

a. The following information should be provided in the calculation, or on a cover or summary page:

i.	Objective	A statement of the problem or question to be solved (if not obvious from the title).
ii.	Method	Identify the methods to be used, including software.
iii.	Assumptions	Clearly state any assumptions applied.
iv.	References and Inputs	Identify the inputs to the calculation and the references for inputs, equations, methods, etc. Design inputs used as the basis for calculations shall be verified by the Originator as obtained from a reliable source. Design equations, tables, field data etc., shall be referenced to the specific section of the applicable design code or manual. Any information not readily available to a reviewer should be attached as an appendix to the calculation.
v.	Conclusions	Clearly state the conclusions of the calculations including any limitations, conditions and/or exceptions

b. Confirmations – Critical assumptions, as defined in the AECOM Glossary, need to be tracked and confirmed by the Originator as soon as valid and current data becomes available. The impact of any variances between assumptions and confirmed information must be evaluated, and any necessary revisions to calculations made.

c. In assembling larger sets of calculations, or where providing summary information will be useful, the use of a calculation cover page may be helpful – refer to the Calculation Cover Page Template - DCS.

d. Prior to the results of a calculation being utilized for subsequent work, relevant calculations shall be reviewed and verified in accordance with the Technical Quality Review Procedure - DCS and documented on the Calculation Review Checklist – DCS. As stated in Appendix 1, C-0 projects with technical calculations require an Independent Peer Review, if assigned by the Technical Lead, in addition to the technical review/check.

e. Computer calculations shall include or reference documentation clearly explaining the program's function, nomenclature, and sign conventions utilized. All technical software must be validated in accordance with the Validation of Software and Data Management Tools Procedure - DCS.

f. Calculations utilizing computer programs to perform analyses or design shall include the following:

   i. Name of the program including version or revision level.

   ii. Identification and/or location of associated electronic files.

g. Spreadsheet calculations shall be documented and organized so formulae used in the spreadsheet can be checked for accuracy of incorporation into the spreadsheet, using a calculator or other method. After validation of the spreadsheet calculations, the spreadsheet shall be protected to prevent inadvertent modification of the embedded formulae.

h. Calculations are to be neat, legible, and suitable for reproduction, including a header with space for identifying the calculation title, page numbers, project name and number, and the Originator's and Reviewer's names, initials, and dates.

i. Calculations must be organized and logically presented, and are to include sufficient notes, explanations, and sketches to make the calculation easily followed. The intent is to make calculations understandable by an individual competent in the subject matter without going back to the Originator.

3.2 Revisions to Calculations

Revisions (or cancellations) may be required after an initial set of calculations has been reviewed. These revisions may be a result of client comments, scope changes, or errors found during checking. Revisions to the calculations do not necessarily warrant a second review of the entire set of calculations. Only the revised portion of the calculations may need to be reviewed. Required revisions shall, therefore, be completed as follows to appropriately document the revisions made:

a. Revisions shall be reviewed and approved in the same manner as the original. The Originator and Reviewer of the calculations shall be responsible for the revision. The revision to the calculation shall be clearly identified and dated or shall be replaced by a new calculation.

b. Revisions shall be prepared in a manner that provides a clear record of the content of the calculation, both prior to and after the revision. The reason for the revision should be identified.

c. Revisions to calculations that impact other disciplines shall be immediately reported to the Project Manager and the affected disciplines.

3.3 Control of Calculations

a. All calculations shall be organized and adequately indexed to facilitate retrieval of results and verification of completeness. A calculation index may be useful as a tool to help plan and organize the work, or may be developed upon completion of the calculations for record and archival purposes – refer to the Calculation Index Template - DCS.

b. The calculation review process shall be documented using the Calculation Review Checklist – DCS unless one of the three exceptions noted in Section 3b exist.

c. Upon completion of the calculation review process, original calculations, including calculation cover pages, checklists, index pages and other associated documents shall be filed in the project's Unified File Index (UFI) with revision numbers and/or version dates for control in accordance with Project Document and Records Control Procedure - DCS.

4. Records

a. Technical Quality Review Record – DCS Q2[DCS]-351-FM1 (Word / Fillable PDF)

b. Calculation Checklist - DCS Q2[DCS]-351-FM3 (Word / Fillable PDF)

a. Calculation Index Template – DCS Q2[DCS]-351-FM4

b. Calculation Cover Page Template – DCS Q2[DCS]-351-FM5

5. Appendices

a. Appendix 1 – Calculation Preparation RACI

6. Change Log

Rev #	Change Date	Description of Change	Location of Change
0	05-31-2011	Previously Issued as NA Guidelines for the Preparation of Calculations (Q4NA-331-GL1).	Retired
0	05-16-2018	Elevated to a DCS Level 2 instruction and released as Q2[DCS]-351-WI1.	All
1	23-Mar-2020	2020 Review; introduced the Graded Risk Approach; minor edits.	All
2	15-Aug-2022	2022 Review; introducing the recognition of "Registered Professional/s" in jurisdictions where this is required; added optional use of Calculation Review Checklist for regions until review of Graded Approach; added Professional Registration line into App 1 RACI; minor edits.	Page 1, Section 2, 3(c), App 1.

Rev #	Change Date	Description of Change	Location of Change
3	14-Oct-2024	• 2024 Review. • Clarified all roles mentioned throughout refer to “Lead Region/Office/Project Team” unless otherwise defined. • Updated “Graded Approach” section to identify the AECOM Risk Assessment (ARA) is now part of project setup in Workbench. • Merged Sections 3.1 and 3.2 and reordered the steps. • Removed “Manual” from Section 3.1 title. • Minor edits and updated links.	Page 1 Section 2 Section 3.1

Appendix 1 Calculation Preparation RACI

R Responsible (completes the task) A Accountable (approves the task) C Consulted (has information or capability to help complete the task) I Informed (needs to be notified of task result)	Project Manager	Technical Lead	Originator	Reviewer	Independent Peer Reviewer*	Reference/Notes: Procedures (P) Template (T) Forms (F)	
Prepare Calculation (Work Product/Project Work)							
1. Assign originator(s).	A	C					
2. Confirm Professional Registration	A	C	R				
3. Confirm design basis in technical approach.		A	R	C			
4. Develop the calculation cover page, optional.		A	R	C		Calculation Cover Page Template Q2[DCS]-351-FM5.	T
5. Perform the calculation.		I	R	C			
6. Assure completeness and accuracy relative to design basis and technical approach.		I	R	C			
7. Complete conclusion portion of calculation cover page, optional.		I	R	C		Calculation Cover Page Template Q2[DCS]-351-FM5.	T
8. Perform checks on the calculations including verifying the results/recommendations from the evaluation/analysis/design has addressed the problem to be solved for the client.	I	I	C	R	R*	*C-0 technical calculations assigned by Technical Lead.	
9. Reconcile and incorporate Reviewers comments into Calculation.	I	A	R	C	C		
10. Sign Calculation Review Checklist.	I	C	R	A	R*	*C-0 technical calculations assigned by Technical Lead. Calculation Review Checklist – DCS Q2[DCS]-351-FM3	F

* Independent Peer Reviewer is required for C-0 project risk category projects when assigned by Technical Lead.

Calculation

EP 3.3-2F

Instructions:

1. Refer to EP 3.3 Engineering Calculations for information on this process.
2. Completed forms are to be kept in the project UFI Folder.
3. Delete highlighted instructions before submittal.

Calculation Number *(####-#CAL-###)*:	**Calculation Title:**	**Revision:**	**Page:** 1 of 3
Project Number:	**Project Title:**		**Date:**

Calculation Type:	**Design Verification Required?**	**Superseded by Calculation No.:**
☐ Scoping ☐ Preliminary ☐ Final ☐ Voided	*(Select Yes if calculation is part of a design package required to be independently verified or the calculation is for items that have been classified as "Important to Nuclear Safety")* ☐ Yes ☐ No	**Supersedes Calculation No.:**

Was Software used: ☐ Yes ☐ No	**AECOM Computer Number:**
☐ Non-safety software ☐ Safety Software	**Software Name and Version:** **V&V package number:** *(V&V cover sheet must be an attachment to safety-related calculations using software).*

Original and Revised Calculation / Analysis Approval (Sign and Date)

- *The signatures below shall denote that the checker has reviewed the text and attachment portion of the calculation.*
- *For Final Calculations (AECOM considers the calculation to be 100%, Revision 0 = Issue for Construction, etc.)*
- *Scoping and Preliminary Calculations require Originator and Checker Signatures (Revision A, etc.)*
- *Final Calculations (Revision 0, etc.) require Originator, Checker, and Engineering Manager Approval signatures*
- *Other signature is used for AECOM's acceptance of a subcontractor calculation performed per AECOM procedure*

		Revision	Revision	Revision
Originated By:	**Name:**	Click or tap to enter a date.	Click or tap to enter a date.	Click or tap to enter a date.
	Signature:			
Checked By:	**Name:**	Click or tap to enter a date.	Click or tap to enter a date.	Click or tap to enter a date.
	Signature:			
Approved By:	**Name:**	Click or tap to enter a date.	Click or tap to enter a date.	Click or tap to enter a date.
	Signature:			
Other:	**Name:**	Click or tap to enter a date.	Click or tap to enter a date.	Click or tap to enter a date.
	Signature:			

Record of Revision

Enter the Revision Number and Reason for Revision of the calculation. The list may start with Revision 0 for the initial issue or Revision 1 with reason for the revision. The reason shall include a description of the change(s) (i.e., added Sheet 3a, revised Sheet 6 to address correspondence XYZ).

Revision No.	Reason for Revision

Attachments

When available, enter each Attachment Number (A, B, etc.), Title, and total number of pages for each Attachment. Add a cover page for each attachment and include in the total page count. Include the Calculation Number, Revision No. and Page numbers to every page of the attachments (including cover).

Attachment No.	Title	Total Pages
	Total Calculation Page Count	

1.0 Introduction

This section shall state the reason for originating the calculation and may describe alternatives examined. Limits of applicability shall be included (i.e., 1.1 Purpose, 1.2 Scope)

1.1 Purpose

1.2 Scope

2.0 Basis

This section shall state supporting information used to develop the calculation. References and sources shall be cited for basis values (see Section 3.0, "References," for citation requirements). Subsections should cover Section 2.1, "Design Inputs," Section 2.2, "Criteria," and Section 2.3, "Assumptions." Additional subsections should be provided as appropriate. Sources for basis values shall be identified.

2.1 Design Inputs

This paragraph shall include published or validated data with referenceable sources.

2.2 Criteria

This paragraph shall provide the criteria that apply specifically to the calculation.

2.3 Assumptions

This subsection shall list suppositions necessary to perform the calculation, identifying those that must be verified as the design proceeds. If it becomes necessary to release the calculation before assumptions can be verified, the assumptions shall be discussed in Section 5.0, "Results and Conclusions." Explicitly state or reference assumptions used in the calculation along with supporting data. Clearly state assumptions resulting from engineering judgment with the basis for that engineering judgment.

3.0 References

This section should provide page numbers, sections, and paragraphs or table numbers, and revision and date of issue for the cited reference in text.

4.0 Methods

Non-safety related calculations shall describe the basic approach taken in the analysis. Safety-related calculations shall describe the basic approach taken in the analysis.

5.0 Results and Conclusions

This section shall briefly state the results of the calculation and condition under which they apply. This section should be reconciled with the calculation Section 1.1, "Purpose" and Section 1.2, "Scope."

6.0 Calculations and Analyses

This section can be presented as additional pages (i.e., MathCAD, handwritten notes) or scanned images into the Word document.

DCS - Americas

Calculation Log

EP 3.3-1F

Instructions:

1. Refer to EP 3.3 Engineering Calculations for information on this process.
2. Completed logs are to be kept in the project UFI Folder.
3. Add rows as required.

Project Number:	
Project Manager:	
Project Title:	
Discipline:	

Calculation Number	Revision Number	Calculation Title	Originated By	Checked By	Design Verification Required (Yes/No)	Date of Release

AECOM

DCS

Calculation Review Checklist

Q2[DCS]-351-FM3

Instructions:
1. **Review of calculations can be guided by the questions listed below but not limited to. Add additional requirements where necessary.**
2. **Independent Peer Review, where required, concurrences as recorded on the Technical Quality Review Record Q2[DCS]-351-FM1.**
3. **File completed form on the front of the calculation.**

Details			
Project Name		**Date**	
Project No.		**Discipline**	
Client		**Subject**	
Calculation No.		**Rev No.**	
Software Name (if used)		**Software Version** (if used)	
Originator			
Electronic File Name (if applicable)			
File Location of Versions Checked			

Review	**Yes**	**No**	**N/A**
1. Is the calculation in accordance with a standard approach to preparing the design?	☐	☐	☐
2. Have input data and information been verified and accepted?	☐	☐	☐
3. Do the calculations adopt the latest/necessary data? Tick “No” if calculations need to be updated when additional data becomes available and/or when assumptions have been confirmed?	☐	☐	☐
4. Have assumptions requiring follow-up been reviewed and confirmed?	☐	☐	☐
5. Have calculations prepared using technical software or excel spreadsheets (with macros or equations) been confirmed through a secondary method (i.e., manual, alternate software)?	☐	☐	☐
6. Are results and conclusions consistent and reasonable considering the inputs and approach?	☐	☐	☐
7. Have the Originator and the Checker/Reviewer signed and dated the calculation?	☐	☐	☐
8. Are the calculations associated with a “professional service” requiring the Originator (or individual who provided direct supervision for these deliverables) to be a “Registered Professional”? *(For Regions where it is required)*. If “Yes” complete “Professional Registration” section in Approvals.	☐	☐	☐
9. Have all previous internal review comments been addressed and closed out with the originator?	☐	☐	☐
10. Have all previous client review comments been addressed and closed out?	☐	☐	☐
11. Are there any other considerations which require listing as additional scope to this review? – List if ‘Yes’	☐	☐	☐
12. Is software used validated in accordance with AECOM procedure?	☐	☐	☐
13. Has an independent review and check of calculation been completed (if required)?	☐	☐	☐
14. Calculation/model version is archived in the relevant project folder structure?	☐	☐	☐

For any 'No' responses, please explain:

Approvals

Reviewer Name	**Signature**	**Date**

☐ **Professional Registration (where required)**

By completing the below, I confirm I am the Originator or have provided direct supervision for this deliverable.

Registration Scheme	Discipline / Area of Practice	Name of Registered Professional	Signature	Registration No.	Date

☐ **Independent Calculations (C-0 Projects ONLY)**

A separate, independent set of calculations has been prepared, validating the original calculations.

Independent Calculation Preparer	**Signature**	**Date**

AECOM

DCS - Americas

Drawing Review Checklist

Q3[DCS]AM-351-FM3

Instructions:
1. **This form is optional to assist the review of drawings, which can be guided by the questions listed below but is not limited to them.**
2. **It should be attached to the Technical Quality Review Record – DCS Q2[DCS]-351-FM1 to support this process.**
3. **Attach/add additional information when necessary.**
4. **File completed form with deliverable.**

Details

Project Name				**Date**	Click or tap to enter a date.
Project No.				**Discipline**	
Client				**Rev No.**	
Drawing Nos.					
Review Level	☐ Final Submission	☐ Pre-Final Submission	☐ Other:		% Submission
Originator			**Reviewer**		
Lead Verifier			Project Manager		
Electronic File Name (if applicable)					
File Location of Versions Checked					

Discipline Review	**Yes**	**No**	**N/A**
1. Is the set of drawings consistent with the design intent and the calculation output?	☐	☐	☐
2. Do the drawings meet the percent (%) completion for this submission level?	☐	☐	☐
3. Is there consistent presentation within the discipline?	☐	☐	☐
4. Have drawings been initialled/signed?	☐	☐	☐
5. Are the materials properly coordinated with the specifications at this submission level?	☐	☐	☐
6. Are the items constructible as shown?	☐	☐	☐
7. Have the appropriate CADD/BIM standards been followed?	☐	☐	☐
8. Have duplications and redundancy of information, data and dimensions been eliminated?	☐	☐	☐
9. Are drawing titles and numbers consistent and do they agree with the cover sheet index of drawings?	☐	☐	☐
10. Have sheet cross references been verified?	☐	☐	☐
11. Have all previous internal review comments been addressed and closed out?	☐	☐	☐
12. Have all previous client review comments been addressed and closed out?	☐	☐	☐

For any 'No' responses, please explain:

Approvals

		Click or tap to enter a date.
Reviewer	**Signature**	**Date**

Inter- discipline Review

Compatibility, interfaces, and potential interferences/conflicts between the designated discipline and all other disciplines have been reviewed using a complete set of drawings by the following reviewers.

Discipline (please specify)		Signature	Date	OK	Comments Made	Comments Resolved
☐			Click or tap to enter a date.	☐	☐	☐
☐			Click or tap to enter a date.	☐	☐	☐
☐			Click or tap to enter a date.	☐	☐	☐
☐			Click or tap to enter a date.	☐	☐	☐
☐			Click or tap to enter a date.	☐	☐	☐
☐			Click or tap to enter a date.	☐	☐	☐
☐			Click or tap to enter a date.	☐	☐	☐
☐			Click or tap to enter a date.	☐	☐	☐
☐			Click or tap to enter a date.	☐	☐	☐

For any ‘No’ responses, please explain:

AECOM

DCS - Americas

Specification Review Checklist

Q3[DCS]AM-351-FM4

Instructions:
1. **This form is optional to assist the review of specifications, which can be guided by the questions listed below but is not limited to them.**
2. **It should be attached to the Technical Quality Review Record – DCS Q2[DCS]-351-FM1 to support this process.**
3. **Attach/add additional information when necessary.**
4. **File completed form with deliverable.**

Details

Project Name		**Date**	
Project No.		**Discipline**	
Client		**Rev No.**	
Specification Sections			
Review Level	☐ Final Submission ☐ Pre-Final Submission ☐ Other:		% Submission
Originator		**Specification Coordinator**	
Discipline Reviewer		**Lead Verifier**	
Electronic File Name (if applicable)			
File Location of Versions Checked			

Discipline Review		**Yes**	**No**	**N/A**
1.	Has the correct specification format been used?	☐	☐	☐
2.	Is the specification section coordinated with applicable general and special provisions?	☐	☐	☐
3.	Have duplications or variances between drawings and specifications been eliminated?	☐	☐	☐
4.	Are nomenclature and item numbering used in specifications exactly as used on drawings and other contract documents?	☐	☐	☐
5.	Are requirements for shop drawings specified, both as to content and timely submission?	☐	☐	☐
6.	Have cited products and equipment been checked for updates and availability?	☐	☐	☐
7.	Have all previous internal review comments been addressed and closed out?	☐	☐	☐
8.	Have all of the client's review comments to previous drafts been closed out?	☐	☐	☐
	Additional questions for non-standard specifications (only those which have not been created and maintained as a company or client standard):			
9.	Are material / equipment identification requirements properly identified?	☐	☐	☐
10.	Are appropriate codes, standards, processes etc referenced and dated?	☐	☐	☐
11.	Are measurement units and basis of payment properly specified?	☐	☐	☐
12.	Are shipping, cleaning, storage and handling requirements properly specified?	☐	☐	☐
13.	Are provisions made for the qualification and approval of special construction processes?	☐	☐	☐
14.	Are the acceptance criteria tests (tolerances, etc) specified and are they adequate, realistic and in line with industry practice?	☐	☐	☐
15.	Is test and inspection documentation properly specified?	☐	☐	☐
16.	Have client's sole-source requirements been followed?	☐	☐	☐

Discipline Review	Yes	No	N/A
17. Are manufacturers' installation requirements referenced?	☐	☐	☐

For any 'No' responses, please explain:

Approvals

Discipline Reviewer	**Signature**	**Date**

Inter- discipline Review

Compatibility, interfaces, and potential interferences/conflicts between the designated discipline and all other disciplines have been reviewed using the specification(s) and supporting data by the following reviewers.

	Discipline (please specify)	Signature	Date	OK	Comments Made	Comments Resolved
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐

For any 'No' responses, please explain:

Specifications Coordinator or Project Manager Review (to be completed on Lead Discipline Checklist ONLY)	**Yes**	**No**	**N/A**
1. Are the specification format, type, nomenclature, item numbering, and level of detail consistent for all specification sections?	☐	☐	☐
2. Have required discipline reviews been completed and documented for all specification sections?	☐	☐	☐
3. Have all specification sections been reviewed for inter-discipline conflicts?	☐	☐	☐
4. Have methods and measurements of payment been checked for consistency and conflicts?	☐	☐	☐

For any 'No' responses, please explain:

Approvals

Specifications or Project Manager Coordinator	**Signature**	**Date**

AECOM

DCS - Americas

Study/Report Review Checklist

Q3[DCS]AM-351-FM5

Instructions:
1. **This form is optional to assist the review of study/reports, which can be guided by the questions listed below but is not limited to them.**
2. **It should be attached to the Technical Quality Review Record – DCS Q2[DCS]-351-FM1 to support this process.**
3. **Attach/add additional information when necessary.**
4. **File completed form with deliverable.**

Details

Project Name			**Date**	
Project No.			**Discipline**	
Client			**Rev No.**	
Study/Report Title/Chapter				
Review Level	☐ Final Submission	☐ Pre-Final Submission	☐ Other:	% Submission
Originator			**Project Manager**	
Discipline Reviewer			**Lead Verifier**	
Electronic File Name (if applicable)				
File Location of Versions Checked				

Discipline Review

		Yes	No	N/A
1.	Has the discipline portion of the study/report meet or support the stated objectives of the project?	☐	☐	☐
2.	Are assumptions, criteria, or basis for evaluation of alternatives clearly described?	☐	☐	☐
3.	Is supporting material identified appropriate and accessible?	☐	☐	☐
4.	Have backup calculations been checked, reviewed and documented?	☐	☐	☐
5.	Have embedded drawings, sketches, figures, and other graphics been checked and reviewed?	☐	☐	☐
6.	Are results logical and reasonable and are they stated accurately?	☐	☐	☐
7.	Have embedded tables been checked and reviewed?	☐	☐	☐

For any 'No' responses, please explain:

Approvals

Discipline Reviewer	**Signature**	**Date**

Inter- discipline Review

Compatibility, interfaces, and potential interferences/conflicts between the designated discipline and all other disciplines have been reviewed using the study/report(s) and supporting data by the following reviewers.

	Discipline (please specify)	Signature	Date	OK	Comments Made	Comments Resolved
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐

For any 'No' responses, please explain:

Project Manager (to be completed on Lead Discipline Checklist ONLY)	Yes	No	N/A
1. Is the study or report format consistent with the client's requirements?	☐	☐	☐
2. Are all conclusions and recommendations fully supported and explained in the text?	☐	☐	☐
3. Has the report been completed in accordance with the scope of work?	☐	☐	☐
4. Is the index or table of contents complete and accurate?	☐	☐	☐
5. Is tense consistent and has the text been spell/grammar checked?	☐	☐	☐
6. Has the report been properly titled and dated?	☐	☐	☐
7. Have all contractually specified alternatives been addressed?	☐	☐	☐
8. Have all previous internal review comments been addressed and closed out?	☐	☐	☐
9. Have all previous client review comments been addressed and closed out?	☐	☐	☐

For any 'No' responses, please explain:

Approvals

Project Manager	**Signature**	**Date**

AECOM

DCS - Americas

Document Review Comment Sheet

Q3[DCS]AM-351-FM1

Instruction:

1. Use Action Code "D" only with concurrence of Reviewer.
2. Responder: Indicate action in right hand column. Discuss exceptions with Reviewer.
3. File completed Document Review Comment Sheet with deliverables.

Document Review Comments

Project Name		**Date**	Click or tap to enter a date.
Project No.		**Project Manager**	
Originator		**Reviewer**	
Responder		**Discipline**	
Status	☐ Criteria ☐ 100% ☐ 90% ☐ 60% ☐ 30% ☐		
Review Purpose	☐ Independent Peer Review	☐ Discipline	☐ Project Approach Review
	☐ Inter-discipline	☐ Other	

Disposition & Reviewer Action Codes (response/agreement required)	**A:** Agree, will comply	**B:** Best Practice – Share with other projects.	**C:** Critical – Must address.	**D:** Delete comment	**E:** Exception taken	**F:** Future incorporation next project.	**S:** Suggested – Recommended/Not Critical

Comment No.	Drawing, Spec, or Page No.	Comment	Reviewer Action Code	Disposition Action/ Response

APPENDIX C – INDEPENDENT PEER REVIEW BRIDGE QC FORMS

- *LADOTD Peer Review Resolution Agreement Form*
- *AECOM QMS Independent Peer Review Bridge QC Form – Technical Quality Review Record*

APPENDIX C—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		

AECOM

DCS

Technical Quality Review Record

Q2[DCS]-351-FM1

Instructions

For further information on the Technical Review process, refer to the Technical Quality Review Procedure – DCS Q2[DCS]-351-PR1 and the Technical Quality Review Job Aid – DCS Q2[DCS]-351-WI2.

Project Details		**TQRR No. (Optional)**	
Project No.		**Delivery Date**	
Project Name		**PM Name**	
C- Category	Select....	**Comments Due By**	
Client/Client POC		**Technical Lead**	
Title of Work Product		**TQR Team Assigned**	

Type

- ☐ Calculation Check (complete Calculation Review Checklist - DCS - required).
- ☐ Independent Peer Review (IPR).
- ☐ Biddability / Contract Documents Review.
- ☐ Subconsultant, Client, or Third-Party Information Review.
- ☐ Constructability Review.
- ☐ Interdisciplinary Review.
- ☐ Discipline Review.
- ☐ Technical Approach and solution review.
- ☐ Specification Package Review.
- ☐ Contract Document Review.
- ☐ Other: (e.g. Construction Services documentation)

Specify

Review Scope

- ☐ Appropriate budget, schedule and resources.
- ☐ Soundness of approach/design.
- ☐ Technical risk and mitigation.
- ☐ Validation of assumptions.
- ☐ Conformance with standards and regulatory requirements.
- ☐ Check of calculations.
- ☐ Client input review.
- ☐ Review of client, sub and third-party information.
- ☐ Edit for elements such as grammar, punctuation, formatting and graphics.
- ☐ Adequacy of Statements of Limitations.
- ☐ Verify technical solution.
- ☐ Basis and validity of conclusion / recommendation.
- ☐ Check of drawings and graphics.
- ☐ Compliance with scope.
- ☐ Organization, clarity and completeness.
- ☐ Specification Review.
- ☐ Contract Document Review.
- ☐ Other: Specify.

Checking (Required for All Projects)

For **"Format"** columns, type N (None), HC (Hard Copy), EF (Electronic File – add network link), or RCF (Review Comment Form).

Discipline	Description (Calc/Rpt/Dwg/Specs)	Format / Network Link	Originator Initials	Reviewer/Checker Signature	Date

Reviewer/Checker signature above indicates verification of the accuracy and completeness of the work product and Reviewer/ Checker comments have been incorporated, including subsequent or new comments; further, Reviewer is not an Originator of the work product.

*For additional disciplines/reviewers/deliverables attach a table to this TQRR with the above content.

Verification (Required for C-3, C-2, C-1 and C-0 Projects)

Lead Verifier signature indicates confirmation the work product is complete and in accordance with the technical approach/ solution.

Lead Verifier Select One:

☐ Lead Verifier has verified that review(s) have been adequately completed and documented. There are no outstanding issues.

or

☐ Lead Verifier has verified that review(s) have been adequately completed and documented, except for unresolved items (items not impacting adequacy of submittal). Any unresolved items have been submitted to the Project Manager or Designee for final resolution.

Lead Verifier Name	**Lead Verifier Signature**	**Date**
Lead Verifier Name	**Lead Verifier Signature**	**Date**
Lead Verifier Name	**Lead Verifier Signature**	**Date**
Lead Verifier Name	**Lead Verifier Signature**	**Date**
Lead Verifier Name	**Lead Verifier Signature**	**Date**

Professional Registration (Where Necessary)

By completing the below, I confirm I am the Originator or have provided direct supervision for this deliverable.

Registration Scheme	Discipline / Area of Practice	Name of Registered Professional	Signature	Registration No.	Date

Approval (Required for All Projects)

☐ Confirmation the deliverable has been reviewed for overall completeness, compatibility and conformance with scope and other contract requirements; all applicable reviews have been completed and deliverable is ready for submission to the client.

Project Manager Signature		**Date**
Project Quality Manager Name (If not performed by LV or PM)	**Project Quality Manager Signature (If not performed by LV or PM)**	**Date**

Independent Peer Review (C-0 Projects)

Comments have been provided on:

☐ Directly on work product (electronic or on hard copy) ☐ Comment and Disposition Form

☐ Other (paste link to network file):

Independent Peer Reviewer Name (as applicable)	**Independent Peer Reviewer Signature (as applicable)**	**Date**

DISTRIBUTION	Project Central File – Quality File Folder	Other – Specify:	

APPENDIX D – QUALITY ASSURANCE & DELIVERABLE RELEASE RECORD FORMS

- *LADOTD QA Information Package Checklist*
- *LADOTD QC/QA Certification*
- *LADOTD Consultant Submittal QC/QA Certification*
- *AECOM QMS Document Transmittal*

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

AECOM

Document Transmittal

Note: Sign and return this page via Fax (509- 375-5331) or e-mail.	1. Date:	2. Technical Document ID No.: #####-TTC-###
3. To:	4. cc: Name, Company	5. Return Responses To: 6. Return By:
7. Project:		8. No. of Copies:
9. Description:		

10. Client Action Items:

- ☐ For Approval
- ☐ For Review
- ☐ For Reference
- ☐ QA Original Records
- ☐ Change Request
- ☐ Document Control Submittal for Records Filing
- ☐ Other:

11. AECOM Action Items:

- ☐ Not Applicable
- ☐ UCNI Controlled Document
- ☒ Records Index No.: 370.1
  - ☒ Non-Permanent ☐ Lifetime
- ☐ Scanned
- ☐ CD to Client Dual Storage CD Made? ☐ Yes ☐ No
- ☐ For QA Files
- ☐ Other:

12. Instructions/Remarks:

13. Action: (A=Approval; R=Review; I=Information; and N/A=Not Applicable)

Action	Disciple	Printed Name	Signature	Date	Action	Disciple	Printed Name	Signature	Date
	Project Mgr:					ES&H Mgr:			
	Engineering Mgr/Technical Lead:					Contract/Project Supt Mgr:			
	Business Line Lead					Process Technology Mgr:			
	Quality Assurance:					Other:			
	Program Director:					Other:			

Client Receipt:
(Sign and return)

Printed Name _____ Signature _____ Date _____

AECOM QA Record Receipt/Authentication:

☐ **Authentication documented in DoCS**

Printed Name _____ Signature _____ Date _____

14. Documents Transmitted:

Number	Revision	Title	No. of Pages	Dated

22. Subconsultant information

Firm Name (as registered with Louisiana's Secretary of State)	Address	Point of Contact and Email Address	Phone Number
ELOS Environmental, L.L.C.	607 W. Morris Avenue Hammond, LA 70403	Lucas Watkins, lwatkins@elosenv.com	985-662-5501
Eustis Engineering L.L.C.	3011 28th Street Metairie, Louisiana 70002	Gwendolyn P. Sanders, P.E. gsanders@eustiseng.com	504-834-0157
Marrero, Couvillon & Associates, L.L.C.	3525 Hessmer Ave, Suite 304 Metairie, Louisiana 70002	M. Kimball Schlafly, P.E.	504-834-3448
Neel-Schaffer, Inc.	10000 Perkins Rowe, Suite G360 Baton Rouge, LA 70810	Nick J. Ferlito, Jr., PE, PTOE nick.ferlito@neel-schaffer.com	225-924-0235
T. Baker Smith, LLC	17927 Old Jefferson Highway Prairieville, LA 70769	TJ Stokes, PE TJ.Stokes@tbsmith.com	985-302-0728

23. Location:

If location is an evaluation criterion for this advertisement and the prime consultant intends to establish a local presence, describe the plan for doing so. Otherwise, leave this section blank.

Section left intentionally blank.

AECOM

About AECOM

AECOM is the world's trusted infrastructure consulting firm, delivering professional services throughout the project lifecycle – from planning, design and engineering to program and construction management. On projects spanning transportation, buildings, water, new energy and the environment, our public-and private-sector clients trust us to solve their most complex challenges. Our teams are driven by a common purpose to deliver a better world through our unrivaled technical expertise and innovation, a culture of equity, diversity and inclusion, and a commitment to environmental, social and governance priorities. AECOM is a Fortune 500 firm and its Professional Services business had revenue of $13.3 billion in fiscal year 2021. See how we are delivering sustainable legacies for generations to come at aecom.com and @AECOM.

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