Louisiana Department of Transportation and Development

IDIQ Contract for National Flood Insurance Program and the Cooperating Technical Partnership Program Statewide

Engineering and Related Services

May 15, 2025

Contract No. 4400032201

May 15, 2025

Ms. Pam Lightfoot
DOTD Contract Manager
Louisiana Department of Transportation and Development
1201 Capital Access Road
Baton Rouge, LA 70802
DOTDConsultantAds80@la.gov

WSP USA
8212 Kelwood Avenue
Baton Rouge, LA 70806
www.wsp.com

Re: Contract No. 4400032201 - IDIQ Contract For National Flood Insurance Program (NFIP) and the Cooperating Technical Partnership (CTP) Program Statewide

Dear Ms. Lightfoot,

WSP in the U.S. (WSP) is pleased to submit the enclosed response to the above-referenced advertisement, dated May 1, 2025. WSP brings the following strengths to this contract:

Proven Leadership

The WSP project management team has extensive experience managing all aspects of the Risk MAP program ranging from Discovery and to Post Preliminary Processing and map adoption. Team members on the proposed organization chart have worked with multiple state CTPs to merge CTP, FEMA Region, and FEMA HQ goals and develop synergic combined strategies. Our NFIP program assistance has been featured in ASFPM's guidance document for states.

Engineering and FIRM Production Experience

WSP has developed statewide BLE modeling standards and programs for several CTPs. We have produced H&H studies for state/regional/local agencies and private clients in more than 2,690 communities and flood risk datasets for over 300,000 studied stream miles. WSP has been contracted to produce over 9,000 riverine FIRM panels and over 300 countywide Flood Insurance Study reports.

Extensive FEMA and NFIP/CTP Experience

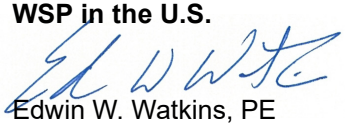
WSP has provided DFIRM and related services to FEMA and 17 other CTPs similar to LaDOTD since 1982. Through our program management assistance, we have coordinated with state and federal agencies to prepare strategic business plans, developed CNMS databases, and helped CTPs with FEMA funding requests.

Demonstrated Community Focus

For WSP, stakeholder engagement is priority number one. Our team has demonstrated our ability to build relationships with the end users of the products, the communities, and engage the communities of our CTP clients in the entire Risk MAP process. WSP has assisted CTPs and community leaders by speaking at county commission meetings, having one-on-one meetings with homeowners, and participating in regional meetings regarding flood mitigation.

WSP appreciates this opportunity to provide NFIP/CTP program services to the State of Louisiana. We respectfully ask for your favorable recommendation.

Sincerely,
WSP in the U.S.



Edwin W. Watkins, PE
Senior Vice President
Email: edwin.watkins@wsp.com

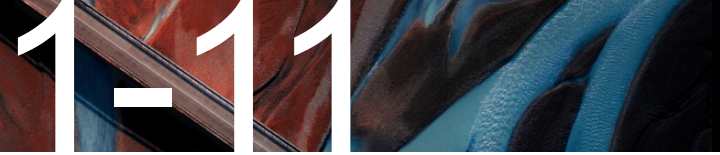
SECTION 1-11

DOTD FORM: 24-102

(Revised December 12, 2024)

PROPOSAL TO PROVIDE CONSULTANT SERVICES

1. Contract Name as shown in the advertisement	IDIQ Contract for National Flood Insurance Program (NFIP) and the Cooperating Technical Partnership (CTP) Program Statewide
2. Contract Number(s) as shown in the advertisement	Contract No. 4400032201
3. State Project Number(s), if shown in the advertisement	N/A
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)	WSP USA INC.
5. Prime consultant license number (as registered with the Louisiana Professional Engineering and Land Surveying Board (LAPELS) if registration is required under Louisiana law)	EF.0000623
6. Prime consultant mailing address	8212 Kelwood Avenue Baton Rouge, LA 70806
7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)	8212 Kelwood Avenue Baton Rouge, LA 70806
8. Name, title, phone number, and email address of prime consultant's contract point of contact	Ashwini Kashelikar, PE, CFM Assistant Vice President - Water Resources (906) 370-7630 ashwini.kashelikar@wsp.com
9. Name, title, phone number, and email address of the official with signing authority for this proposal	Edwin Watkins, PE (AL) Senior Vice President (615) 944-9021 edwin.watkins@wsp.com



CONTRACT INFORMATION

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

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

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

Date: May 15, 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.

Firm(s)	Firm(s) %
GOTECH, Inc.	7%

SECTION 12

DISCIPLINE TABLE

12. DISCIPLINE TABLE:

As indicated in the advertisement, insert a completed table here. The percentages for the prime and sub-consultants must total 100% for each discipline, as well as the overall total percent of the contract.
The **only** disciplines to be used are listed in the drop down in each row (Appraiser, Bridge, CE&I/OV, CPM, Data Collection, Environmental, Geotech, ITS, Other (must specify), Planning, Right-of-Way, Road, Survey, and Traffic). **Remove rows as needed.**

Discipline(s)	% of Overall Contract	WSP USA Inc.	Volkert, Inc.	GOTECH, Inc.	Each Discipline must total to 100%
Survey	10		30	70	**100%**
Data Collection	5	90	10		**100%**
Other (Flood Modeling)	55	95	5		**100%**
Other (Outreach)	4	85	15		**100%**
Other (Floodplain Mapping)	16	100			**100%**
Other (Flood Risk Products)	7	100			**100%**
Other (NFIP)	3	100			**100%**
Identify the percentage of work for the **overall contract** to be performed by the prime consultant and each sub-consultant.					
Percent of Contract	**100%**	**86%**	**7%**	**7%**	

The Office of Water Resources has been contracted with WSP for over 15 years. WSP has been consistently the best for our program."

Casie Pritchard
Risk MAP Program Manager
Alabama Office of Water Resources

SECTION 13

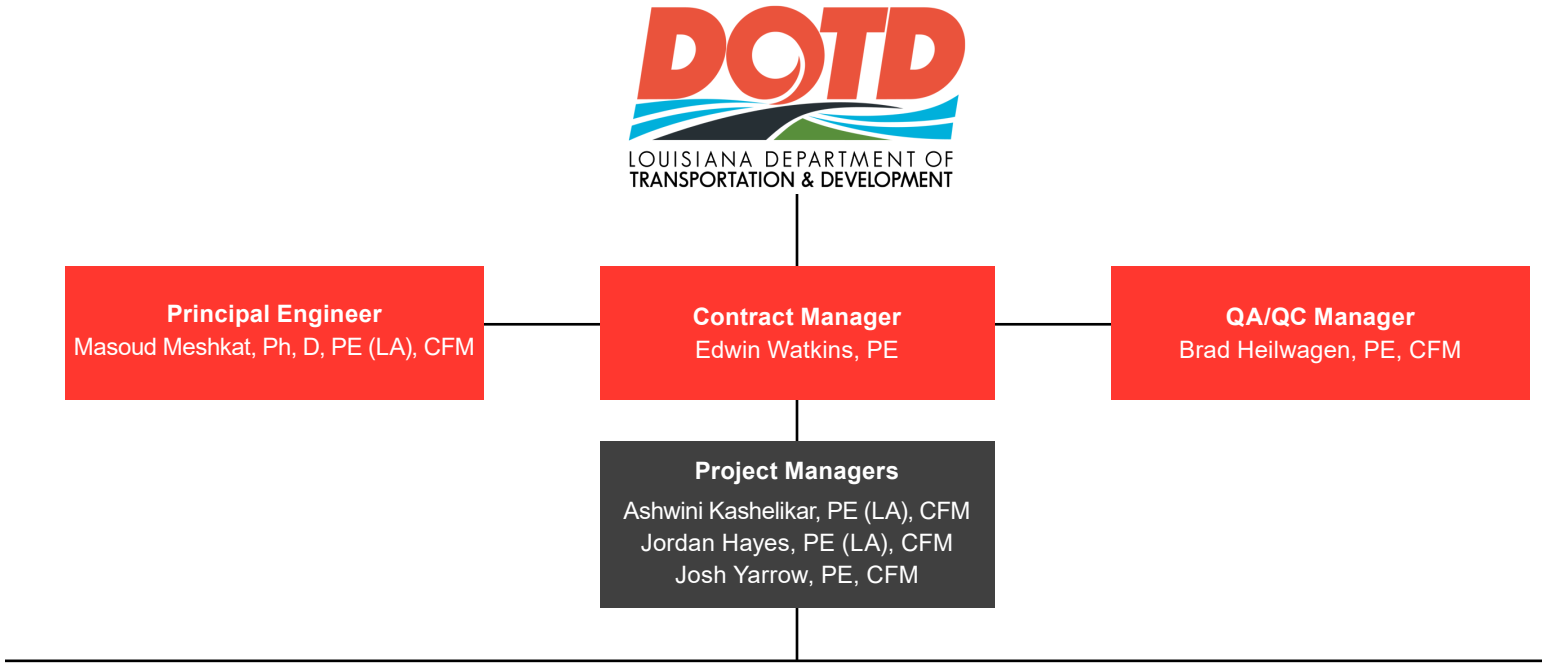
13. FIRM SIZE:

Firm name	DOTD Job Classification	Number of personnel committed to this contract	Total number of personnel available in this DOTD Job Classification (if needed)
WSP USA Inc.	Principal	1	4
WSP USA Inc.	Supervisor - Engineering	3	5
WSP USA Inc.	Supervisor - Other	5	15
WSP USA Inc.	Engineer Intern	25	55
WSP USA Inc.	Engineer	4	25
WSP USA Inc.	Engineer - Other	8	20
WSP USA Inc.	Technician	10	25
WSP USA Inc.	GIS Analyst	5	15
WSP USA Inc.	Clerical	1	3
WSP USA Inc.	CADD Technician	1	2
WSP USA Inc.	Planner	2	5
GOTECH, Inc.	Surveyor	2	2
GOTECH, Inc.	Party Chief	1	2
GOTECH, Inc.	Instrument Man	2	2
Volkert, Inc.	Engineer	2	50
Volkert, Inc.	Senior Technician	1	35
Volkert, Inc.	Party Chief	1	15

(Add rows as needed)

SECTION 14

14. ORGANIZATIONAL CHART:



Discovery, Stakeholder Communication & Meetings

Maggie Weems, PE
Alicia Williams, GISP, CFM

15 Additional Personnel

Field Survey

❷ John Biggs
❷ Bruce Dyson, PE (LA), PLS (LA)
❷ Robert Price, PLS (LA)
❸ Randy Denmon, PE (LA), PLS (LA)
❸ Clinton Patrick, PE (LA), PLS (LA)
❸ Steven Lengefeld
❸ Bryan Ardoin

25 Additional Personnel

H&H Engineers

Jacob Bates, PE (LA), CFM
Rehal Kharel, PE (LA)
Kevan Lee Lum, PE (LA), CFM
Ben Rufenacht, PE, CFM
Larry Sample, PE
Paul Simmons, PE
Al Souid, PhD, PE, BCEE, CFM, PMP
Britton Wells, PE, CFM

60 Additional Personnel

GIS/Mapping/Website

Garrett Boucher
Jim Moore, CFM
Garrett Shields, GISP, CFM
Lisa Tuckwin, GISP, CFM
Michael (Jeff) Zanotti, CFM

35 Additional Personnel

CAP-SSSE

Cindy Popplewell, PE, PMP, CFM
David Stroud, CFM

10 Additional Personnel

Project Team Key	
	WSP
❷	GOTECH, Inc.
❸	Volkert, Inc.

SECTION 15

15. MINIMUM PERSONNEL REQUIREMENTS:

MPR No. Do not insert wording from ad	Personnel being used to meet the MPR (Individual(s) may not satisfy more than one MPR unless specifically allowed by Attachment B of the advertisement)	Firm employed by	Type of license and discipline meeting MPR/ certification & number (Ex: PE # - Civil)	State of license	License / certification expiration date
1	Masoud Meshkat, PhD, PE, CFM	WSP USA Inc.	PE #0043299 - Civil	LA	09/30/2025
2	Masoud Meshkat, PhD, PE, CFM	WSP USA Inc.	PE #0043299 - Civil	LA	09/30/2025
	Ashwini Kashelikar, PE ,CFM	WSP USA Inc.	PE #0043642 - Civil	LA	03/31/2026
	Jacob Bates, PE, CFM	WSP USA Inc.	PE #0046389 - Civil	LA	09/30/2026
	Jordan Hayes, PE, CFM	WSP USA Inc.	PE #0046173 - Civil	LA	03/31/2026
3	Masoud Meshkat, PhD, PE, CFM	WSP USA Inc.	PE #0043299 - Civil	LA	09/30/2025
	Rehal Kharel, PE	WSP USA Inc.	PE #0047965 - Civil	LA	09/30/2025
	Jacob Bates, PE, CFM	WSP USA Inc.	PE #0046389 - Civil	LA	09/30/2026
	Jordan Hayes, PE, CFM	WSP USA Inc.	PE #0046173 - Civil	LA	03/31/2026
4a	Alicia Williams, GISP, CFM	WSP USA Inc.	GISP #37700		08/25/2026
4b	Kevan Lee Lum, PE, CFM	WSP USA Inc.	PE #0047651 - Civil	LA	09/30/2025
	Paul Simmons, PE	WSP USA Inc.	PE #38654	AL	12/31/2025
	Josh Yarrow, PE, CFM	WSP USA Inc.	PE #24498	KS	04/30/2027
	Al Souid, PhD, PE, BCEE, CFM, PMP	WSP USA Inc.	PE #049855	NC	12/31/2025
	Ben Rufenacht, III, PE, CFM	WSP USA Inc.	PE #21729	KS	04/30/2027
	Britton Wells, PE	WSP USA Inc.	PE #114614 - Civil	TN	06/30/2025
	Brad Heilwagen, PE	WSP USA Inc.	PE #29352	AL	12/31/2025
4c	Larry Sample, PE	WSP USA Inc.	PE #15855	KS	04/30/2027
4d	James Moore, CFM	WSP USA Inc.	N/A		
4e	Garrett Shields, GISP, CFM	WSP USA Inc.	GISP #80640		09/25/2025
4f	Lisa Tuckwin, GISP, CFM	WSP USA Inc.	GISP #91622		06/25/2026
4g	Michael (Jeff) Zanotti, CFM	WSP USA Inc.	N/A		
4h	Maggie Weems, PE	WSP USA Inc.	PE #37591	AL	12/31/2025
4i	David Stroud, CFM	WSP USA Inc.	N/A		
4j	Garrett Boucher	WSP USA Inc.	N/A		
4k	Cindy Popplewell, PE, PMP, CFM	WSP USA Inc.	PE #105863 - Civil	TN	01/31/2027
4b	Randy Denmon, PE, PLS	Volkert, Inc.	PE #4798 - Land Surveyor PE #29390 - Civil	LA LA	03/31/2027 03/31/2027

SECTION 16

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	Larry Sample, PE	Years of relevant experience with this employer	28
Title	Project Engineer / LAMP Expert	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization	MS / 1996 / Agricultural Engineering		
Active registration number / state / expiration date	Professional Engineer: 15855 / KS / 04/30/2027; 24160 / OK / 01/31/2027; 2009012207 / MO / 12/31/2025; 109388 / TX / 06/30/2025; E-11949 / NE / 12/31/2026		
Year registered: 2000	Discipline: Civil Engineer (Water Resources)		
Contract role(s) / brief description of responsibilities	Mr. Sample will serve as project engineer, specifically for levees and dam modeling. Mr. Sample has expertise as a water resource engineer and has executed a variety of multidisciplinary projects including dam assessment, design, and construction management projects; levee assessment, design, and construction management projects; and complex hydraulic and hydrologic modeling projects. **Meets MPR #4c**		

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 years of experience specified in the applicable MPR(s).
01/22 - 12/23	**FEMA PTS, Innovations Account, Region 1, 2, 3 and 5** Levee account lead for the ARC JV responsible for providing levee related assistance to FEMA HQ and FEMA Regions 1, 2, 3, and 5. He coordinated with levee subject matter experts from across the US to provide 65.10 reviews, LAMP assistance, and general levee guidance for FEMA regions. He assisted in developing and updating National Levee Database information. He reviewed FEMA levee guidance and best practices documents and make recommendations for updates and assisted FEMA with levee related issues and policy decisions.
01/22 - Ongoing	**Kansas Department of Agriculture, FEMA CTP Risk MAP Services, Multiple Counties, Kansas** Project manager responsible for overseeing 2D hydrologic and hydraulic modeling in Reno, Butler, Cowley Counties using rain-on-mesh modeling methods. Work includes applying LAMP natural valley modeling procedures on one levee system identified in the NLD. Hydraulic models will be used to develop FIRM floodplain maps.
01/10 - 12/15	**Kansas Department of Agriculture, Sedgwick County DFIRM Project, Sedgwick County, Kansas** Phase manager and lead engineer for complex detailed hydrology and hydraulics analysis and modeling on Cowskin Creek and the Ninnescah River in Sedgwick County, KS. The Cowskin Creek watershed is notorious for flash flooding and due to its relatively flat topography has historically been very difficult to model. Through the development of very detailed hydrology modeling in conjunction with a complex unsteady flow HEC-RAS model we were able to accurately simulate flood events in this watershed. This work included using LAMP procedures along levees to properly map the floodplains. The detailed hydrology covered over 300 square miles of drainage area and the detailed hydraulics covered over 200 miles of stream channel. Completed technical reviews on Chisholm Creek, Big Slough South, and Cowskin South as part of the overall project.

STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
12/12 - Ongoing	**City of Topeka, Flood Control Levee Certification, Topeka, Kansas** Project manager providing technical oversight for components of the certification of approximately 30 miles of levee per FEMA’s 44 CFR Section 65.10 criteria. The project consists of a multidisciplinary evaluation of the flood control system, including new geotechnical analysis, new interior drainage analysis, and embankment projection analysis. The project also includes coordination with the State of Kansas and Kansas City District USACE, who both have active projects associated with this levee system. This project includes the evaluation of several floodwalls, with different foundation types. The project also includes the evaluation of the efficiency of relief wells and associated pumping systems.
02/09 - 12/15	**City of Wichita, Levee Certification, Wichita, Kansas** Assisted with inspection of 97-mile levee system to determine compliance with FEMA’s 44 CFR Section 65.10 criteria. Lead Engineer for levee rehabilitation design of Levee L. Oversaw hydrologic and hydraulic analyses using HEC-HMS and HEC_RAS to ensure compliance with freeboard requirements, geotechnical design to ensure structural stability of levee which included the design of an armoring system to protect the levee from excessive erosion. Responsible for developing a clear concise set of design plans with construction specifications and design memorandum.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	Al Souid, PhD, PE, BCEE, CFM, PMP	Years of relevant experience with this employer	20
Title	Project Engineer	Years of relevant experience with other employer(s)	5
Degree(s) / Years / Specialization	PhD / 1999 / Environmental and Resource Engineering; MS / 1991 / Environmental and Resource Engineering; BS / 1988 / Civil Engineering		
Active registration number / state / expiration date	Professional Engineer: 049855 / NC / 12/31/2025; 40330 / SC / 06/30/2026; 046424 / GA / 12/31/2025; 150288 / TX / 09/30/2025; 24GE05915800 / NJ / 04/30/2026; Board-Certified Environmental Engineer: 20-20013; Certified Floodplain Manager; Certified Project Management Professional		
Year registered	2003	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities	Dr. Souid will serve as a project engineer for this contract. His has experience modeling and mapping coastal and riverine flood risks in addition to software tool developments and automations. He has been the technical and quality control lead on many federal, state, municipal and private projects. For coastal projects, he performed modeling and mapping of more than 1,600 transects using a new developed tool and FEMA coastal software (i.e., WHAFIS4.0, RNUUP2.0, CHAMP). For riverine projects, Dr. Souid conducted modeling on varieties of hydrological and hydraulic studies using several HEC products (i.e., RAS, HMS, DSS, SSP, FIA). Dr. Souid presented his works at several local, national and international conferences. **Meets MPR #4b**		

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 years of experience specified in the applicable MPR(s).
11/22 - Ongoing	**ARC PTS JV, New Countywide Coastal Maps and Risk Products, FEMA Region 2, New York** Project engineer for countywide coastal studies in multiple counties in NY - Middlesex, New Jersey and Westchester. Responsibilities include detailed survey collection, field reconnaissance, surge and GIS base maps, engineering modeling and simulations, runup and overtopping calculations, coastal mapping and LiMWA delineations and risk products.
01/10 - 01/18	**State of North Carolina, Flood Mapping Program - CTP - Coastal Flood Studies, Multiple Locations, North Carolina** Project engineer for the Flood Insurance Studies (FIS) and DFIRMs for the coastal counties of Bertie, Camden, Chowan, Currituck, Dare, Pasquotank, Perquimans, Tyrrell and Washington. The flood studies were performed as part of the State’s Cooperating Technical Partnership (CTP) with FEMA. Dr. Souid was the developer who engineered the designs of an Automated Coastal Modeling Tool. The tool, which was built in ESRI ArcGIS was designed to populate the survey and LiDAR data into 3D transect lines (station vs. elevation) then use different layers of data (i.e., land use and building) and FEMA software (WHAFIS4.0 and RUNUP2.0) to simulate coastal flood events. Combined probabilities between riverine and coastal areas were also studied to ensure proper mapping of inland and coastal flooding. In addition, several risk products (i.e., depth grids) and derivatives (i.e., LiMWA, dune peak and heels) were generated to assist communities in their future planning and building codes.
10/05 - 10/20	**State of North Carolina, Flood Mapping Program - CTP - Riverine Flood Studies, Multiple Locations, North Carolina** Project engineer for the riverine studies throughout the State of North Carolina. Varieties of software by FEMA or Corps of Engineers HEC were used to model flood studies and map flood zones.

16 STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
04/15 - 04/17	**ADECA OWR Flood Mapping Program - CTP - Coastal Modeling and Mapping, Multiple Locations, Alabama** Project engineer and reviewer for the newly studied FEMA coastal maps for Baldwin and Mobile Counties. Trained, assisted, and conducted models then reviewed the technical modeling and mapping of the new coastal map.
06/17 - Ongoing	**Missouri SEMA, Watershed Risk MAP Services, Statewide, Missouri** Technical reviewer performing quality assurance/quality control (QA/QC) reviews of 1D and 2D riverine HEC-RAS models across multiple watersheds in the state of Missouri, including Meramec River, Lower Missouri River, Cuivre-James.
02/17 - 02/19	**CSX, Coastal Modeling and Analysis, Mobile County, Alabama** Project engineer to evaluate the coastal flood impact from eliminating two old railroad bridges and then constructing new proposed conditions (new structures with fill). Several scenarios of what-if analyses were studied to fully evaluate the risk from the structural and land-use changes.
03/15 - 03/17	**CSX, Coastal Modeling and Analysis, Prince William and Stafford Counties, Virginia** Coastal modeler to study the current existing coastal flooding near the CSX railroad tracks along Potomac River. Then, a new additional CSX track with geotechnical embankment was evaluated to measure the effect on effective coastal flood zoning and mapping. Letter of Map Revision (LOMR) was submitted to FEMA along with a technical report detailing the new condition of the coastal elevations and zones.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	Edwin W. Watkins, PE	Years of relevant experience with this employer	29
Title	Contract Manager	Years of relevant experience with other employer(s)	2
Degree(s) / Years / Specialization	MS / 1993 / Civil Engineering; BS / 1991 / Civil Engineering		
Active registration number / state / expiration date	Professional Engineer: 103725 / TN / 12/31/2026; 22888 / AL / 12/31/2025		
Year registered 1997	Discipline: Civil Engineer		
Contract role(s) / brief description of responsibilities	Mr. Watkins will serve as the Contract Manager for this contract. He will coordinate staffing between projects; oversee the Project Managers; and ensure all contract/client needs are met. He will handle the administrative components of the program in close coordination with the Principal Engineer and the LA DOTD.		

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 years of experience specified in the applicable MPR(s).
11/20 - Ongoing	**Louisiana Department of Transportation & Development (LaDOTD), Louisiana Watershed Initiative (LWI) Modeling Services, Region 3, Louisiana** Principal-in-Charge for a regional modeling contract in northeast Louisiana. Mr. Watkins oversaw the development of four HUC-8 watershed models that included detailed survey, 1D and 2D H&H modeling, floodplain mapping, and consequence analysis. WSP utilized the newest versions of HEC-RAS and HEC-HMS including full 2D analysis/ rain on-grid methodologies to model highly complex drainage networks with multiple levees and other hydraulic structures.
10/04 - Ongoing	**Alabama Department of Economic and Community Affairs (ADECA) Office of Water Resources (OWR), Map Modernization, Risk MAP, and Support Services, Montgomery, Alabama** Principal-in-Charge for a state-wide program for DFIRM Map Modernization, Risk MAP and updates. Mr. Watkins has overseen the execution of over 100 task orders (valued at over $50m) that include hydrologic and hydraulic modeling using HEC-RAS and HEC-HMS, map production, website development, business plan formulation and program management guidance. Under this contract WSP has prepared modeling and mapping projects for over 47 counties in Alabama and facilitated the review of hundreds of LOMR applications.
07/15 - Ongoing	**Mississippi Department of Transportation (MDOT), Hydraulic Master Contract, Statewide** Principal-in-Charge for the contract that has included 12 Work Orders valued at $1.8M. Responsible for overall company service, responsiveness, and manpower assignments. Work scopes include one and two-dimensional hydraulic modeling, hydraulic design, scour assessments, alternative analysis, conceptual bridge design, and preliminary construction plans.
10/15 - Ongoing	**Mississippi Soil and Water Conservation Commission, Engineering and Environmental Services Contract, Statewide** Principal-in-Charge for performing environmental impact studies, hydraulic analysis, and design services for dams and levees in the State of Mississippi. Responsibilities include program management, overseeing scope and fee development, staffing and client care.
03/04 - 06/12	**Nashville Metro Water Services, Stormwater Management Program; Nashville Tennessee** Principal-in-Charge for providing general oversight and QA/QC for several tasks including stormwater design, floodplain mapping for Zone A areas, Habitable Structure Inventory, Detention Pond Database, ARCIMS tracking program, Watershed Study Review, and Policy and Procedure development. As Office Manager, he managed staff assignments to provide sufficient design capacity to fulfill Small Capital Improvement project requirements.

16 STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
10/04 - 03/15	**Project Manager Training, Internal Course Instructor** Course Instructor for a 2-day project management course taught at Wood. Conducted over 20 sessions with over 400 employees. Course topics included client communications, project objective definition, scope development, change management, schedule management, financial management, invoicing, project closeout and client care.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	Masoud Meshkat, PhD, PE, CFM	Years of relevant experience with this employer	25
Title	Principal Engineer	Years of relevant experience with other employer(s)	5
Degree(s) / Years / Specialization	PhD / 1997 / Biosystems and Agricultural Engineering; MS / 1985 / Agricultural Engineering; BS / 1982 / Agricultural Engineering		
Active registration number / state / expiration date	Professional Engineer: 43299 / LA / 09/30/2025, 107388 / TN / 02/28/2026 Certified Floodplain Manager		
Year registered	2002	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities	Dr. Meshkat will serve as the Principal Engineer for this contract with oversight of all modeling effort. He has over 30 years of experience as a Water Resources Engineer. He has performed hydrologic and hydraulic simulation of unsteady and steady state flow modeling in natural and artificial streams using one- and two-dimensional models. He has extensive experience with application of a variety of surface water modeling techniques and software including HEC-CAVI, HEC-ResSim, HEC-HMS, HEC-RAS, HEC-DSSVue, HEC-SSP. **Meets MPR #1,2,3, 4b**		

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 years of experience specified in the applicable MPR(s).
011/20 - Ongoing	**Louisiana Department of Transportation & Development (LaDOTD), Louisiana Watershed Initiative (LWI) Modeling Services, Region 3, Louisiana** Principal engineer, technical advisor, and QA lead for the LWI Region 3 Study since 2020, guiding a team of engineers and geospatial analysts across four large-scale HUC-8 watershed models in northeastern Louisiana. He led technical strategy, modeling decisions, and multidisciplinary integration across multiple WSP offices. In addition to mentoring junior and mid-level staff, he introduced innovative tools and methods—including gridded precipitation processing and scalable Aerial Reduction Factor applications—to enhance modeling accuracy, efficiency, and project outcomes while fostering long-term team capability and innovation.
10/22 - 12/24	**ARC Production & Technical Services (PTS) JV, FY2024 Regional Production Task Order, Future of Flood Risk Data (FFRD) Pilot Studies, Multiple Watersheds** Principal engineer and Subject Matter Expert (SME) for the FEMA vendor team Advancing Resilience in Communities (ARC) under the FEMA/U.S. Army Corps of Engineers (USACE) FFRD pilot studies. He led WSP’s development of HEC-RAS 2D rain-on-mesh (ROM) models for the Kanawha River Basin in West Virginia (12,000 mi²) and the Trinity River Basin in Texas (22,000 mi²). Dr. Meshkat coordinated closely with FEMA, USACE, and PTS teams, represented ARC in technical forums, and ensured model quality and consistency across efforts by WSP, Michael Baker, and FNI consultants.
04/12 - 06/14	**North Carolina Department of Emergency Management, DFIRM Development, Statewide, North Carolina** Principal engineer for the preparation of Flood Studies and Digital Flood Insurance Rate Maps (DFIRMs) as part of North Carolina’s Cooperating Technical Partnership with FEMA. Acting as both technical lead and QA/QC engineer, he ensured timely and accurate delivery of riverine flood studies in Moore, Hoke, and Cumberland Counties. He oversaw the development of detailed HEC-RAS models for 24 streams, totaling 136 miles. The resulting water surface elevations, digital floodplains, floodways, and cross sections were incorporated into a geodatabase and used to generate DFIRM panels in compliance with FEMA’s mapping guidelines.

STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
11/15 - Ongoing	**Missouri State Emergency Management Agency (SEMA), Watershed Risk MAP Services, Statewide, Missouri** Independent technical reviewer responsible for reviewing hydrologic and hydraulic models, both steady and unsteady 1D for thousands of stream miles across multiple counties in Missouri. He also served as an SME, guiding the development of QA/QC spreadsheets and documenting review comments and backchecks. Additionally, he reviewed watershed-scale HEC-RAS 2D models developed in RAS 5.0 and later upgraded to RAS 6.0 with distributed rain-on-mesh and infiltration capabilities. These enhancements, including improved bridge modeling within 2D areas, significantly increased the accuracy of flood inundation mapping for FEMA H&H studies in the state.
06/14 - 08/18	**USACE Vicksburg District, USACE MMC Production Center - Corps Water Management System (CWMS) Model Development, Multiple Watersheds** Principal technical lead and modeler for the development of CWMS models integrating HEC-HMS, HEC-RAS, HEC-ResSim, and HEC-FIA within the HEC-CAVI interface. He conducted hydrologic and hydraulic modeling for multiple HUC-8 watersheds, including Cape Fear, Lower Arkansas River, Chemung, Mainstem Susquehanna, Red River, Ouachita, Yazoo, and Licking River. Dr. Meshkat presented the fully integrated model packages to USACE Districts in Wilmington, Arkansas, Baltimore, Vicksburg, and Louisville, and trained water control staff on model execution for real-time flood forecasting and reservoir operations.
01/20 - 07/20	**MDOT, Scour Evaluation for I-55 Bridges over the Yalobusha River, Grenada County, Mississippi** Lead engineer for Phase I and Phase II bridge scour evaluations for four I-55 bridges over the Yalobusha River in Grenada County, MS. Two bridges spanning the main channel and two relief/overflow bridges. The project included coordination of hydrographic surveys and development of a 2D hydraulic model using SRH-SMS. Scour analyses were performed in accordance with FHWA guidelines (HEC-18 and HEC-20), utilizing SRH-2D and the FHWA Hydraulic Toolbox to assess potential scour depths and ensure bridge safety under various flow conditions.
02/08 - 05/11	**City of Wichita, Levee Certification of the Wichita Valley Center Flood Control System, Wichita, Kansas** Project task manager and lead project engineer for the H&H studies supporting FEMA certification of approximately 97 miles of earthen levees in Sedgwick County, Kansas. He led engineering coordination efforts, conducted site visits, and oversaw QA/QC of LiDAR deliverables, ground surface DEM development, and creation of automated tools for storage calculations, levee profile generation, and elevation extraction from 3D structure scans. As QA/QC manager and technical advisor, he reviewed hydrologic and hydraulic analyses for over 100 river miles, performed updated rainfall frequency analysis using 50+ years of data from nine gauges, and developed internal drainage procedures based on USACE coincidental probability methods. He also managed internal drainage assessments for over 100 structures and used FLO-2D to evaluate flooding scenarios without levee protection, as required by FEMA.
05/17 - 12/17	**USACE Vicksburg District, CWMS Mississippi River & Tributaries (MR&T) Flowline Assessment** Independent External Peer Reviewer (IEPR) for the Mississippi River and Tributaries (MR&T) Flowline Assessment project, providing expert technical review as a nationally recognized subject matter expert in hydraulic modeling. He evaluated the large-scale HEC-RAS model developed by USACE for the Mississippi River reach from Chester, Illinois, to the Gulf of Mexico. His responsibilities included detailed assessment of model inputs, boundary conditions, calibration, modeling assumptions, and the scientific and engineering methodologies used to support risk-informed decision-making for flood management and system performance. His review ensured technical soundness, transparency, and alignment with best practices.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	Ashwini Kashelikar, PE, CFM	Years of relevant experience with this employer	16
Title	Project Manager	Years of relevant experience with other employer(s)	16
Degree(s) / Years / Specialization	MS / 2009 / Environmental Engineering; BS / 2005 / Chemical Engineering		
Active registration number / state / expiration date	Professional Engineer: 0043642 / LA / 03/31/2026; 116903 / TX / 03/31/2026; Certified Floodplain Manager		
Year registered: 2014	Discipline: Civil Engineer (Water Resources)		
Contract role(s) / brief description of responsibilities	Ms. Kashelikar will be a Project Manager and Engineer. She will manage a team of project engineers and other staff to perform all CTP program activities. She has experience with a wide range of software, including ESRI GIS software, HEC-DSS, HEC-SSP, HEC-RAS, HEC-HMS, PCSWMM. **Meets MPR #2 and 4b**		

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 years of experience specified in the applicable MPR(s).
11/20 - Ongoing	**LaDOTD, LWI Modeling Services, Region 3, Louisiana** Project manager in responsible charge of the development of hydrologic and hydraulic models in four watersheds in northeast Louisiana – Boeuf River, Bayou Macon, Bayou Cocodrie and Tensas River – adding up to over 5,800 square miles. The full scope of this effort has involved conducting a data gap analysis and development of detailed methodologies to model each watershed. The modeling contract also includes scoping, data collection, public outreach, hydrologic and hydraulic analyses, consequence modeling and development of training materials.
11/15 - 06/22	**Missouri SEMA, Watershed Risk MAP Services, Statewide, Missouri** Project manager in responsible charge of a team of engineers, surveyors and geographic information systems personnel in performing field survey, developing hydrologic (HEC-HMS, regression, gage analyses) and hydraulic models (1D and 2D HEC-RAS) for over 2,000 miles of streams in several HUC-8 watersheds, performing floodplain mapping and developing Risk MAP products. Ms. Kashelikar coordinated the modeling and mapping effort, managed the time and budget and assisted with outreach activities including flood risk review meetings and stakeholder engagement. She also served as a technical reviewer for these studies.
03/13 - 03/15	**ADECA OWR, Upper Alabama and Middle Coosa Watershed Risk MAP, Montgomery, Alabama** Project task manager/engineer performed detailed hydraulics studies (HEC-RAS) for streams in Elmore and Autauga counties. Ms. Kashelikar also developed a FLO-2D model to route overflow from Mill Creek in Elmore County, AL and determine the resulting extent and depth of flooding within the City of Millbrook. In Talladega County, Ms. Kashelikar supervised the development of HEC-HMS, regression and HEC-RAS studies and managed the production of non-regulatory flood risk products associated with FEMA’s Risk MAP projects.
04/12 - 01/14	**North Carolina Department of Emergency Management, DFIRM Development, Statewide, North Carolina** Project engineer for the hydraulic modeling of streams in Hoke, Moore, Cumberland, Washington counties. Ms. Kashelikar developed HEC-RAS models for about 50 miles of streams.

STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
01/23 - 12/24	**FEMA Production & Technical Services (PTS) Herkimer County, New York** QA/QC manager responsible for managing the resources for developing 2D HEC-RAS BLE models in Herkimer County, NY (i). Developing 2-D rain-on-mesh models for the entire county and includes modeling of the complex Erie Canal (i, iii, iv). Assisting the project manager with meeting the project’s schedule and budgetary needs.
03/12 - 12/22	**Suwannee River Water Management District (SRWMD), FEMA Risk MAP Program, Live Oak, Florida** Assistant project manager/ lead engineer for the Lower Suwannee, Upper Suwannee, Santa Fe, Withlacoochee, and Waccasassa Watershed Risk MAP projects. Responsibilities included developing and reviewing survey plans and supervising the execution of approximate and detailed studies for both riverine and closed basin flooding sources. Most recently, Ms. Kashelikar has led the large scale 2D modeling effort in over 800 square miles of the Santa Fe River watershed. The modeling effort has involved the use of both ICPR and HEC-RAS. Reviewing survey plans and supervising the execution of approximate and detailed studies for both riverine and closed basin flooding sources.
01/09 - 05/17	**USACE Vicksburg District, MMC Program, Nationwide** Project task manager/engineer for dam breach analysis of high hazard dams utilizing unsteady-state HEC-RAS modeling techniques, HEC-GeoRAS for mapping and HEC-DSSvue for calculating duration exceedance curves. Five scenarios depicting various water levels in the reservoir were modeled according to the procedural guidelines.
08/10 - 05/19	**Southwestern Illinois Flood Prevention District Council, SW Illinois Levee Certification on Mississippi River Tributary Streams, Multiple Locations, Illinois** Project task lead/project engineer for interior drainage analysis utilizing PCSWMM along 16 miles of the Metro East Sanitary District Levee system in St. Clair and Madison counties, Illinois. The analysis also included a probabilistic coincident frequency analysis to determine the water surface elevations in the low-lying areas adjacent to the levees. Ms. Kashelikar also developed HEC-HMS and HEC-RAS models for Mississippi River tributary streams and performed embankment protection analysis in support of certification of levees in Madison County, IL.
03/14 - 05/18	**USACE Vicksburg District, USACE MMC Production Center - CWMS Model Development, Multiple Watersheds** Watershed lead/project engineer supervising the development of HEC-HMS, HEC-RAS, HEC-ResSim, HEC-FIA models and integration into CAVI in Thames River and Chemung River watersheds. As a project engineer, developed and calibrated HEC-RAS models in the Big Sandy River and Blackstone River watersheds and refined the HEC-ResSim model in the Yazoo River watershed.
03/18 - 05/22	**Cannon Creek Floodway and LOMR, North Florida Professional Services, Lake City, Florida** Project manager supervising the development of a HEC-RAS model calibrated to an ICPR study of the Cannon Creek watershed, in order to establish floodway encroachment limits along the creek. Project involved preparing a FEMA Letter of Map Revision submission package for Cannon Creek and getting a full FEMA approval of the revision.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	Jacob Bates, PE, CFM	Years of relevant experience with this employer	10
Title	Project Engineer	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization		BS / 2014 / Civil Engineering	
Active registration number / state / expiration date		Professional Engineer: 0046389 / LA / 09/30/2026; 38288 / AL / 12/31/2025; Certified Floodplain Manager	
Year registered	2019	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities		Mr. Bates will serve as the Project Engineer and lead development of hydrologic and hydraulic models, coordinate with GIS leads for development of mapping and Risk MAP products. **Meets MPR #2 and 3**	

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 years of experience specified in the applicable MPR(s).
02/21 - Ongoing	**LaDOTD, LWI, Tensas River Watershed, Region 3, Louisiana** Project engineer responsible for a team of engineers, geospatial analysts, and software developers performing watershed wide flood study for Tensas River Watershed. This included development of modeling methodology, data gap analysis, modeling scope, and cost and schedule for developing hydrologic and hydraulic (H&H) models, collection of survey, development, calibration, and validation of H&H models, design storm analysis, and consequence assessment. Also led the software development effort in all of Region 3 in support of a wide range of project tasks, including data collection, development, analysis, and optimization, H&H analyses, model data review, and floodplain mapping. The deliverables produced by WSP for the LWI program will serve as the basis for analysis of future developments, flood mitigation feasibility studies, watershed management strategies and consequence and risk assessment throughout the study region.
11/15 - Ongoing	**Missouri SEMA, Watershed Risk MAP Services, Statewide, Missouri** Project engineer responsible for hydrologic and 1D and 2D hydraulic studies conducted for the purpose of flood risk assessment in the Meramec River, Lower Missouri River, Big River watersheds. This included leading and assisting multiple teams of engineers, surveyors, GIS analysts, and computer scientists in performing tasks such as field surveys, developing hydrologic (empirical and physics-based) and hydraulic (1-D and 2-D) models for thousands of miles of streams in various HUC-8 watersheds throughout the state. He coordinated and assisted with the modeling and mapping effort as well as managed the manpower, budget, schedule, and development of advanced H&H models, collected field survey data, performed technical reviews of modeling data, helped drive key engineering methodology decisions, and assisted with outreach activities including flood risk review meetings and stakeholder engagement. He also led and contributed to the design and development of large-scale software applications and tools that improved modeling efficiency and process optimization as well as data quality throughout the life cycle of projects. These apps and tools aided engineering efforts by automating tasks associated with geospatial model parameter development, data management and organization, regression hydrologic computations, model refinement, model results analysis, and quality review of model data.

STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
07/24 - Ongoing	**FEMA PTS, BLE Studies, Region 2 Herkimer County, New York** Technical hydraulic model reviewer for numerous 2D HEC-RAS models developed throughout the Mohawk River Watershed. This entailed performing detailed review of all input data as well as results to ensure that quality standards were met. This project involved the flood risk analysis of the Mohawk River Watershed in Upstate New York and included detailed models along the Mohawk River and Eerie Canal. Results from this study will be carried forward as the effective regulatory flood risk data for use in floodplain management and flood insurance rate mapping.
05/22 - Ongoing	**FEMA PTS, Innovations Account, Region 1, 2, 3 and 5** Innovations lead responsible for floodway testing efforts including working directly with the HEC-RAS team and FEMA to test updated functionality within HEC-RAS 6.4, 6.5, and 6.6 beta releases and working with FEMA to develop and test a proposed future floodway concept that will fit well within the FFRD framework. Contributed to the development of open-source python libraries for reading and writing HEC-RAS data in HDF files as well as analyzing model data for floodway analysis. Developed a comprehensive topographic breakline development tool and participated in an FFRD baselining project which, in coordination with FEMA, aimed to forecast issues/ solutions transitioning to FFRD from current Risk Map regulations. Contributed to a task to partner across FEMA, USACE, and PTS to jointly research, document, and discuss existing and proposed methodologies for achieving the common goal of producing high quality mapping outputs from HEC-RAS results. The FEMA innovations projects are used to improve and modernize mechanisms and technologies used for flood risk analysis. WSP’s involvement on these projects is primarily via the ARC joint venture which includes WSP and other consultants.
04/25 - Ongoing	**City of Chattanooga, Flood Forecast Web Viewer, Chattanooga, Tennessee** Technical lead for flood viewer website development based on NWM forecast data. This involves meeting with the client and project manager to discuss the vision for the website, assembling a project team, developing scope, budget, and schedule for the development phases, facilitating design of the site architecture, coordinating with team members to execute required tasks, and ensuring that all the pieces come together into a final product that the client finds both functional and pleasurable to use. This website is being developed for the City of Chattanooga with the intent of providing real-time access to estimated forecasted flooding data within key stream reaches throughout the city. This includes preparation of hydraulic modeling results data using existing studies performed by the USACE (USACE), compilation and development of geospatial mapping data of interest to the city to be used in supplementing the map display and dashboard data, and development of the website that will be hosted on the cloud and will provide on-demand viewing of inundation mapping for user-defined flooding scenarios based on either stream flow or stream stage, as well as forecast scenarios based on real-time NOAA NWM forecasted flows. Users will be able to subscribe to flood alert notifications and will have access to real-time graphs of gage data as well as forecasted damage estimates displayed through the site dashboard.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	Jordan Hayes, PE, CFM	Years of relevant experience with this employer	11
Title	Project Manager	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization	MS / 2014 / Environmental Engineering; BS / 2012 / Civil Engineering		
Active registration number / state / expiration date	Professional Engineer: 0046173 / LA / 03/31/2026; 37784 / AL / 12/31/2025; 32852 / KY / 06/30/2025; 35677 / MS / 12/31/2026; 131389 / TN / 11/30/2026; Certified Floodplain Manager		
Year registered	2017	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities	Mr. Hayes will serve as a project manager for H&H modeling. He has utilized various modeling software, including HEC RAS, HEC-GeoRAS, HEC HMS, HEC-GeoHMS, HEC-DSS, EPA SWMM, PCSWMM, PeakFQ and various proprietary software designed to work in conjunction with hydrologic and hydraulic software packages. He has experience in performing dam breach analyses, pipeline risk assessments, floodplain risk assessments, stream rehabilitation, sinkhole modeling, and statistical frequency analyses. **Meets MPR #2 and 3**		

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 years of experience specified in the applicable MPR(s).
10/14 - Ongoing	**ADECA OWR, Map Modernization, Risk MAP and Support Services, Statewide** Project manager and lead project engineer specializing in outreach throughout the state. Responsible for innovating discovery outreach strategies that foster a holistic approach to analyzing and communicating flood risk with communities. Manage engineering and GIS staff to create and execute large floodplain mapping efforts. Research and propose solutions to complex H&H problems that develop through the modeling and mapping process. Engaged with communities to tackle complex mapping and modeling needs including karst and sinkhole modeling with floodways, stream networks, piloting 1D and 2D BLE solutions across the state, and complex hydrology solutions. Piloting an FFRD study to provide advanced flood risk projects to the state website and create a platform for thoughtful mitigation. Provides program management support by coordinating with communities, FEMA, Regional support, and state and national conference agencies on all communication and deliverable needs. Helps client navigate FEMA Region IV needs. Contributes to the state's strategic planning by incorporating latest best practices and innovations into community coordination, funding requests, and presentation opportunities. Leads pilot studies for state modeling, mapping, and outreach and planning initiatives.
11/20 - Ongoing	**LaDOTD, LWI Flood Risk Assessment, Region 3, Louisiana** Project engineer responsible for crafting appropriate modeling methodology to ensure proper flood risk assessment, calibration and validation is performed. Teach engineers state-of-the-art modeling suite capabilities and best use cases. Report and communicate to state coordinators the appropriate next steps and natural evolution of the developing flood risk products. Coordinate with hydraulics lead and modelers to ensure inflow needs are met. Collaborate with hydraulics lead for contiguous and hydrology applications between software.
10/18 - Ongoing	**Mississippi Soil & Water Conservation Commission, Rocky Carter Levee Planning and Environmental Assessment, Mississippi** Project engineer responsible for exploring levee alignment options and the impacts of headwater and tailwater flooding. Structured headwater hydrologic determinations in areas of shared, diverted, and stagnant flows within HEC-HMS. Simplified interior drainage and headwater flows for input into leveraged USACE models. Visualized Risk for levee alignments to satiate environmental assessment and stakeholder engagements

STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
08/16 - 12/17	**USACE Vicksburg District, CWMS Ouachita, Vicksburg, Mississippi** Project engineer responsible for exploring levee alignment options and the impacts of headwater and tailwater flooding. Structured headwaengineer responsible for collecting and summarizing all study area data for storm events to determine calibration and verification events through the period of record. Enhanced current HMS and RAS model capabilities by reducing runtimes and developing better input structure and values. Generated high and low flow calibrations and verifications for the HMS and RAS models. Presented a range of calibration parameters and delineated calibration zones for ease of calibration for daily use. Translated daily and monthly needs of the local water management team into more streamlined and robust HMS and RAS models. (25,830 sq mi – 2,190 mi)
10/16 - 05/18	**Missouri SEMA, Meramec Watershed Risk MAP, St. Louis, Missouri** Project Engineer responsible for defining workplan, schedule, and budget for HEC-HMS studies of 18 basins (225 square miles) within the study area. Headed review process to senior staff for guiding staff through the rigorous QA checks on watershed delivery. Developed a methodology for incorporating more local rainfall hyetographs generated into HMS model. Ranked a broad spectrum of rainfall scenarios into a critical duration analysis to develop peak flows throughout the modeling study area. Streamlined and published the incorporation process from generated hyetograph to critical duration analysis for delegation to team members. Prepared and presented findings to technical partners and the client.
01/15 - 01/16	**Louisville & Jefferson County MSD, Louisville and Jefferson County Flood Studies and Mapping, Louisville, Kentucky** Hydrology modeler responsible for related spatial and modeling data for Jefferson County. Documented HMS parameters, flows, and model versions for combined county database. Improved flow accuracy by updating HMS land use values and converting flow data from regression to HMS based values.
09/23 - Ongoing	**Knox County, County Floodplain Mapping, Knoxville, Tennessee** Project Engineer responsible for adherence to FEMA standards for PMR and MT2 updates. Review and teach hydrology products for HMS and PCSWMM. Develop hydrology approach for regression comparisons with detailed TN gage weighting routines.
01/14 - 07/16	**City of Chattanooga, Chattanooga WPA Phase 1, Chattanooga, Tennessee** Project engineer responsible for exploring levee alignment options and the impacts of headwater and tailwater flooding. Structured headwaengineer prioritized neighborhood risk per flood frequencies. Sorted flooding zones into specific reaches. Summarized total risk values by reach and combined to perform prioritization.
01/16 - 12/16	**USACE, CWMS Big Sandy, Vicksburg, Mississippi** Hydrologic/hydraulic modeler created a HEC-HMS model for Big Sandy River for CWMS CAVI integration. Demonstrated our ability to use GeoHMS and delivered a unified GeoHMS product. Calculated all appropriate modeling parameters and incorporated them into the GeoHMS process.
08/15 - 08/16	**USACE, Juniata & Chemung Watershed CWMS, Vicksburg, Mississippi** Hydrologic/hydraulic modeler explored early HEC-GeoHMS inputs for CWMS modeling. Compared inputs against necessary file structures and topics to expand necessities list. Explained which data were most pertinent to model creation. Reorganized the list to allow for GIS and H&H staff to work in parallel.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	Rehal Kharel, PE	Years of relevant experience with this employer	4
Title	Project Engineer	Years of relevant experience with other employer(s)	6
Degree(s) / Years / Specialization		BS / 2015 / Civil Engineering and Physics	
Active registration number / state / expiration date		Professional Engineer: 0047965 / LA / 09/30/2025; 050623 / GA / 12/31/2025; 054924 / NC / 12/31/2025	
Year registered	2022	Discipline	Civil Engineer (Water Resources)
Contract role(s) / brief description of responsibilities		Mr. Kharel will serve as a project engineer supervising engineering teams. He is skilled in 1D (unsteady) and 2D-Rain-On-Mesh HEC-RAS modeling, HEC-HMS, PCSWMM, and HEC-SSP, with expertise in H&H analysis. His work supports FEMA and DOT projects involving LOMRs, no-rise, infrastructure design, regulatory compliance, and QA/QC. He has delivered modeling solutions across diverse hydrologic settings, including low-relief Louisiana watersheds and mountainous or karst regions, focusing on resilient, data-driven strategies for flood risk reduction and stormwater planning. **Meets MPR #3**	

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 years of experience specified in the applicable MPR(s).
09/21 - Ongoing	**LaDOTD, LWI Boeuf River Watershed, Region 3, Louisiana** Project engineer for one of Louisiana’s largest and most hydrologically complex watersheds, in responsible charge of 1D unsteady and 2D Rain-On-Mesh HEC-RAS modeling across low-gradient terrain with perched channels, levee systems, and extensive backwater effects. Responsibilities included model setup, calibration, design storm simulations, proof-of-concept evaluations, and consequence analyses. Supervised junior engineers, developed SOPs, and managed workflows for both rural and urban environments, while coordinating with GIS teams to integrate terrain data, hydrologic boundaries, and structural attributes - addressing complex features such as pump stations and diversion flows. Conducted research to support regional modeling parameter development, coincidence frequency analysis, and synthetic rating curve creation in collaboration with the hydrology team. Also applied remote sensing and supervised machine learning to classify land use/land cover across Region 3, supporting flood modeling and model input development. Work contributed to QA/QC, client coordination, and documentation for regulatory mapping and statewide flood mitigation planning.
12/24 - Ongoing	**FEMA PTS, Herkimer County, New York** QA/QC for 2D hydraulic modeling as part of FEMA’s PTS program. Reviewed rain-on-mesh floodplain models for select 2D BLE Lev E streams in Herkimer County, focusing on model accuracy, stability, and adherence to FEMA guidance. Responsibilities included evaluating mesh design, boundary condition setup, hydraulic assumptions, and overall model performance to ensure defensible and technically sound flood hazard mapping.

STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
12/24 - Ongoing	**Missouri SEMA, Watershed Risk MAP Services, Statewide, Missouri** Conducted technical QA/QC and Independent Technical Reviews (ITRs) for complex 2D rain-on-mesh hydraulic models developed for floodplain mapping across multiple HUC-8 basins in Missouri. Reviewed Zone A and Zone AE models for Dallas and Camden Counties, with a focus on model accuracy, stability, and compliance with FEMA standards. Evaluations included review of hydrologic and hydraulic assumptions, mesh, boundary condition, and structure setup, and calibration performance to ensure reliability of rainfall-on-grid 2D modeling results.
07/21 - 08/23	**SRWMD, Santa Fe River Watershed, Live Oak, Florida** Project engineer in responsible charge of detailed hydrologic and 1D hydraulics modeling. Led the development of a detailed 1D HEC-RAS model spanning 89 river miles across six counties to evaluate regulatory flood behavior and support risk identification. Performed statistical flood frequency analyses using Bulletin 17C and contributed to the integration of groundwater/surface water interaction techniques within the karst-influenced watershed, an innovative approach later presented at a national conference.
10/22 - 11/22	**Illinois Department of Transportation (IDOT), IL-75 Bridge Replacement Project, Rockton, Illinois** Project engineer responsible for QA/QC of HEC-RAS models supporting the IL-75 bridge replacement over the Rock River, including review of both existing and proposed hydraulic conditions. The analysis assessed potential floodway impacts and verified compliance with FEMA regulations and IDOT hydraulic design criteria to ensure no adverse effects on upstream or downstream properties. Technical recommendations were provided to confirm that the proposed bridge design-maintained conveyance capacity and met regulatory performance under the 100-year flood event.
10/22 - 11/22	**FEMA, Levee Breach Analysis, Ventura/Los Angeles Counties, California** Performed hydrologic and hydraulic analysis for 2D levee breach modeling along the Santa Clara River, utilizing levee geometry sourced from the National Levee Database (NLD). Synthetic hydrographs were developed by scaling flow data from nearby regulated gages to represent flood scenarios throughout Ventura and Los Angeles counties. Five levee breach scenarios were simulated in HEC-RAS to evaluate potential flood extents and impacts, supporting FEMA’s levee failure risk assessment process.
12/20 - 06/21	**FEMA Region X, Columbia River, Washington/Oregon** Project engineer in responsible charge of H&H analyses on 130 miles of the Columbia River by leveraging USACE models. Revised the section from Bonneville Dam to McNary Dam. Developed quasi-steady hydrographs for 10%, 4%, 2% and 1% plus annual chance events & performed 1D & 2D unsteady-state analysis to update mapping from Zone A to Zone AE (with floodway).
03/20 - 04/21	**FEMA Region X, Nisqually Watershed, Washington** Project engineer in responsible charge of 1D & 2D multifrequency hydraulic analysis for detailed and approximate streams for Pierce county. Calibrated streams with historic high-water mark for model accuracy. Revised the effective Zone AE with floodway by utilizing new topographic data, surveyed stream bathymetry, and structure data. Developed Flood Risk Products (FRP) such as depth & water surface elevation grids, RASPlot profiles, and technical report in adherence to FEMA Data Capture Submission (DCS) guidelines.
12/18 - 12/19	**FEMA Regional Service Center (RSC-X), Levee Analysis and Mapping Procedure (LAMP), Idaho, Washington, Oregon** Project engineer for engineering analyses on both accredited and non-accredited levees in Region X as the technical lead engineer for LAMP discovery effort. Performed freeboard, significance, and demographic analyses, along with determination of Provisionally Accredited Levee (PAL) eligibility. Oversaw other engineers and GIS analysts and performed QC on all deliverables.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	Alicia Williams, GISP, CFM	Years of relevant experience with this employer	20
Title	Discovery/Outreach/Communications Specialist	Years of relevant experience with other employer(s)	14
Degree(s) / Years / Specialization	MS / 2005 / Agriculture: Plant Science (Specializing in GIS); BS / 1988 / Agriculture: Plant Science		
Active registration number / state / expiration date	Geographic Information Systems Professional: 37700 / 08/25/2026; Certified Floodplain Manager; HAZUS Certified Trained Professional		
Year registered	2009	Discipline	Geographic Information Systems Professional
Contract role(s) / brief description of responsibilities	Ms. Williams will serve as the discovery, outreach and communications specialist. She will provide services related to community engagement outreach activities. She has managed the state-wide Coordinated Needs Management Strategy (CNMS) stream validation projects in Missouri, Arkansas, Kansas and the Papio NRD. She provides quarterly CNMS updates for Region VII for Missouri. She has coordinated more than 500 meetings with local officials for these projects. She also specializes in Data Capture Standards Submittals and in FEMA's Mapping Information Portal (MIP). **MPR #4a**		

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 years of experience specified in the applicable MPR(s).
02/06 - Ongoing	**Missouri SEMA, Watershed Risk MAP Services, Statewide, Missouri** Discovery, outreach and communications manager involved in all aspects of Flood Risk Modeling & Mapping for 114 counties in Missouri. She has coordinated more than 300 meetings for Scoping, Discovery, CNMS, FSR, PDCC and Open Houses for Missouri. She has developed annual 5 Year Business Plans for the state which have led to the State of Missouri receiving $50M+ in funding over the last decade. She has developed numerous Data Capture Submittal compliant scoping reports, discovery reports, FIS reports, base data collection and map production for DFIRM work for these counties. She has overseen the development of websites which show comparisons between old and new floodplains, NFIP awareness data, CFM training and tutorials, Base Flood Assessments, Floodplain Ordinances, HAZUS data and the State-wide Mitigation Plan. She has developed and given more than 15 8- and 10-hour workshops with CEC Credits on how local floodplain administrators and hazard planners can use Risk MAP products in Mitigation planning and will bring that knowledge to bear in the outreach efforts for this project. She was the Project Manager for and developed one of the first in the nation State-wide Disaster Logistics Plans which resulted in the state of Missouri becoming EMAP Certified and receiving hundreds of thousands of additional response and recovery funds over the last decade.
08/05 - Ongoing	**Kansas Department of Agriculture Division of Water Resources, Numerous DFIRM Counties, Kansas** Discovery, outreach and communications specialist for all aspects of the FEMA Map Update program. She has been involved in numerous public notifications and meetings for this work including coordinating a public meeting with 1,200+ citizens in attendance in Salina KS. She was involved in base data collection, Discovery, Scoping and Post Preliminary Process meetings as well as CNMS and 5-year Business Plan meetings for the state.

16 STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
05/12 - 09/14	**City of Wichita, Levee Certification, Wichita, Kansas** Task lead for website development for the Historical Documentary on the Flood Control Project which included archival data research on 104 miles of levee and flood control structures the City of Wichita and Sedgwick County Kansas. Ms. Williams was involved in numerous public meetings for this work including coordinating interviews with former Levee Managers and Scoping Meetings. This project was the first of its magnitude in the nation to be approved by FEMA.
10/08 - 09/12	**Kentucky Division of Water, 109 Counties, Kentucky** Discovery, outreach and communications manager involved in all aspects of Flood Risk Modeling & Mapping in Kentucky. She was instrumental in developing annual 5-year Business Plans which mapped the entire state of KY with new floodplain maps, making it one of the first in the nation to make this goal. She coordinated more than 250 meetings across the state for this project. She developed more than 109 scoping reports and coordinated base data collection and map production for DFIRM work for these counties.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	Kevan Lee Lum, PE, CFM	Years of relevant experience with this employer	6
Title	Project Engineer	Years of relevant experience with other employer(s)	4
Degree(s) / Years / Specialization	MS / 2019 / Geoinformatics; BS / 2014 / Civil Engineering		
Active registration number / state / expiration date	Professional Engineer: 0047651 / LA / 09/30/2025; 125190 / TN / 02/28/2026; Certified Floodplain Manager		
Year registered: 2022	Discipline: Civil Engineer		
Contract role(s) / brief description of responsibilities	Mr. Lee Lum will serve as a project engineer for this contract. He has experience leading complex hydrologic and hydraulic analyses by utilizing a variety of modeling software, including HEC-RAS, HEC-SSP, and SMS SRH-2D. He has also assisted in development and testing of proprietary software tools using programming languages such as Python. **Meets MPR #4b**		

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 years of experience specified in the applicable MPR(s).
11/23 - Ongoing	**FEMA PTS Region II, Hamilton County, Herkimer County and Mohawk River Corridor** Project engineer for FEMA PTS project to update FEMA Risk map studies using 2D HEC-RAS Rain-on-Mesh models. Led engineering for over 5,000 square miles of BLE-C and 300 miles of BLE-E streams including floodway development. Study area includes complex hydrologic structures such as movable dams, levee systems, and pump stations. Developed SOPs on the development of 2D HEC-RAS Rain-on-Mesh models
11/21 - Ongoing	**LaDOTD, LWI Modeling Services, Region 3, Louisiana** Project engineer for the Bayou Cocodrie watershed. Developed streams and survey scope and led hydraulics task. Hydraulic modeling performed using 2D rain-on-grid methodologies in HEC-RAS. Calibrated and validated model to several historical events. Developed procedure and python script for downloading gridded rainfall data. Reviewed hydraulic models and prepared technical reports. Wrote Quick Guide that explains how the model should be used.
02/22 - Ongoing	**MDOT, Scour Evaluation for I-55 Bridges over the Yalobusha River, Grenada County, Mississippi** Project engineer responsible for developing and reviewing SMS SRH-2D models for No-Rise analysis and Scour Analysis for bridge crossings in Mississippi.
05/21 - 01/23	**BP, Pipeline Scour Analysis, Multiple Crossings in Multiple Locations** Project engineer responsible for scour analysis for pipeline crossings including the Mississippi River near Ft Madison IA, Mad River near Dayton, OH, Arkansas River near Tulsa, OK, and the Kankakee River near Wilmington IL. Used the results from a HEC-RAS hydraulic model of the area and estimated scour depths based on general scour and local scour using a Depth of Cover study. Potential locations of span were identified based on the scour calculations.

16 STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
08/20 - 10/22	**North Carolina Emergency Management, Dam Breach Analysis, Multiple Locations, North Carolina** Project engineer responsible for developing and reviewing 2D HECRAS dam breach models for dams in North Carolina. Froehlich equations used to compute dam breach hydrograph. Flows obtained from effective studies or regression equations. Prepared technical memos and results datasets such as inundation boundaries and arrival time rasters. Task lead for over 100 dam breach models across several counties in North Carolina.
09/20 - 01/23	**SRWMD, Santa Fe and Waccasassa Watersheds, Live Oak, Florida** Project engineer responsible for developing and reviewing hydrologic and detailed 2D HEC-RAS hydraulic models for the Risk MAP study of the Santa Fe and Waccasassa Watersheds in Florida for the SRWMD.
07/19 - 06/20	**State of Alabama, Map Modernization and Risk MAP, Multiple Watersheds, Alabama** Project engineer responsible for developing 1D models of approximate and detailed streams using HEC-RAS for FEMA Risk Map projects in Alabama across several watersheds including Lower Tallapoosa, Middle Tombigbee-Chickasaw, and Sepulga.
03/19 - 01/21	**Missouri SEMA, Meramec Plus Risk MAP, Statewide, Missouri** Project engineer responsible for developing and reviewing hydrologic and hydraulic models for streams in watersheds in Franklin, Phelps, Crawford, and Gasconade Counties. This work included approximately 3,000 stream miles / 4,200 square miles of rainfall-on-grid 2D modeling across the Meramec, Bourbeuse, Big Piney, and Lower Gasconade HUC-8 basins to determine flooding extents for several percent annual chance events.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	Paul Simmons, PE	Years of relevant experience with this employer	10
Title	Project Engineer	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization	MS / 2014 / Environmental Engineering; BS / 2012 / Civil Engineering		
Active registration number / state / expiration date	Professional Engineer: 38654 / AL / 12/31/2025		
Year registered 2017	Discipline: Civil Engineer (Water Resources)		
Contract role(s) / brief description of responsibilities	Mr. Simmons will be a project engineer for this contract. He will prepare HEC-RAS and HEC-HMS models. He is proficient in several computer programs including HEC-RAS, HEC-HMS, HEC-DSS, RAS Mapper, PCSWMM, and ArcGIS. **Meets MPR #4b**		

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 years of experience specified in the applicable MPR(s).
11/21 - 02/22	**LaDOTD, LWI Data Collection, Region 3, Louisiana** Project engineer assisting in initial phases of the LWI project. This included project scoping, data collection, survey plan, and methodology review particularly for Bayou Cocodrie.
10/19 - Ongoing	**State of Alabama, Multiple Projects, Statewide, Alabama** Project engineer for the Lower Chattahoochee Base Level Engineering (BLE), Lower Choctawhatchee BLE, Lower Tallapoosa Risk MAP, Middle Chattahoochee-Lake Harding BLE, Middle Chattahoochee-Walter F. George BLE, Middle Tombigbee-Lubbub BLE, Middle Tombigbee-Lubbub Discovery, Middle Tombigbee-Lubbub Risk MAP, Patsaliga BLE, Sipsey Fork BLE, Sipsey River BLE, Upper Choctawhatchee BLE, and Upper Conecuh BLE watershed projects. Furthermore, Mr. Simmons has managed 5 independent QA projects. His total project budgets have exceeded $5.8M. These projects have included modeling, DFIRM mapping, non-regulatory product development, preliminary map production, and post-preliminary map production. This has demanded a robust understanding of watershed modeling as well as local and federal regulations. Additionally, this role requires constant communication and coordination, resulting in Mr. Simmons leading over 25 public and stakeholder meetings in support of these projects.
09/19 - Ongoing	**State of Alabama, MT-2 Review Program, Statewide, Alabama** Project engineer for the Alabama CLOMR and LOMR (MT-2) Review Team, where he has served as a project reviewer since 2019 and project manager since 2020, managing over $800,000 of projects. This role is responsible for the technical review, mapping, processing, and regulatory compliance of all, non-coastal, MT-2 requests for the State of Alabama. This role requires exposure and understanding of many different modeling approaches, a strong comprehension of regulatory requirements, and ability to communicate with local floodplain practitioners. Mr. Simmons has also led MT-2 trainings for stakeholders in AL.
06/14 - Ongoing	**State of Alabama, Multiple Projects, Statewide, Alabama** Project engineer for the Lower Tallapoosa and Mulberry Fork watersheds in Alabama. Mr. Simmons has additionally served as a project engineer for various other BLE and Risk MAP projects in Alabama, involving the production and review of modeling and mapping initiatives. These roles have required experience in many different modeling suites including: HEC-RAS (1D and 2D), HEC-HMS, PCSWMM (1D and 2D), and statistical methodologies.

16 STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
02/19 - Ongoing	**Missouri SEMA, Watershed Risk MAP Services, Statewide, Missouri** Project engineer responsible for developing and reviewing 2D rain-on-mesh HEC-RAS models for the State of Missouri Risk MAP project.
02/19 - Ongoing	**State of Kansas, Risk MAP, Statewide, Kansas** Project engineer responsible for developing and reviewing 2D rain-on-mesh BLE HEC-RAS models for the State's Risk MAP project.
03/24 - Ongoing	**FEMA PTS, Herkimer County, New York** Project engineer serving as a technical reviewer for detailed 1D and 2D hydrologic and hydraulic modeling efforts within FEMA Region 2.
12/20 - 12/23	**State of North Carolina, MT-2 Processing, Statewide, North Carolina** Project engineer responsible for performing technical and regulatory review on FEMA MT-2 submittals in North Carolina.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	Josh Yarrow, PE, CFM	Years of relevant experience with this employer	17
Title	Project Manager	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization		BS / 2008 / Civil Engineering	
Active registration number / state / expiration date		Professional Engineer: 24498 / KS / 04/30/2027; Certified Floodplain Manager	
Year registered	2015	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities		Mr. Yarrow will be a project manager and engineer. He will manage a team of project engineers and other staff to perform the required modeling effort. He has experience with ESRI GIS software, HEC-DSS, HEC-SSP, HEC-RAS, HEC-HMS, USGS PeakFQ, and PCSWMM. **Meets MPR #4b**	

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 years of experience specified in the applicable MPR(s).
09/24 - Ongoing	**FEMA, FY23 Zone 1 PTS Production, Region 2, United States Virgin Islands** Project manager responsible for managing 2D Base Level Engineering Level E activities for St. Croix, St. Thomas, and St. John Islands. Tasks include survey, pre-processing, H&H Modeling, calibration, floodplain mapping and outreach.
09/23 - Ongoing	**FEMA, FY23 Zone 1 PTS Production, Region 5, Indiana and Illinois** Project manager responsible for managing 2D Base Level Engineering Level C activities for two watersheds in Indiana and Illinois. Tasks include survey, pre-processing, H&H Modeling, calibration, floodplain mapping and outreach.
09/22 - Ongoing	**FEMA, FY22 Zone 1 PTS Production, Region 5, Ohio** Project manager responsible for planning and facilitating quarterly workgroup discussions with 20 to 30 stakeholders selected by FEMA consisting of members from various state and federal entities. Workgroup discussions cover a variety of relevant topics for that quarter including modeling techniques, calibration, floodplain mapping and project updates.
09/21 - 09/24	**Missouri SEMA, FY21, CTP, Region 7, Statewide, Missouri** Project manager responsible for managing watershed-wide 2D HEC-RAS H&H studies covering 12 counties in Northeast Missouri in compliance with FEMA guidelines and specifications. The latest available version of HEC-RAS software was employed to study the entire watershed using 2D rain-on-grid computations. Performed various project management duties and provided detailed technical reviews.
09/20 - 09/24	**Missouri SEMA, FY20, CTP, FEMA Region 7, Statewide, Missouri** Project manager responsible for managing watershed-wide H&H studies covering Cass, Bates, Henry and Benton counties in compliance with FEMA guidelines and specifications. The latest available version of HEC-RAS software was employed to study the entire watershed using 2D rain-on-grid computations. Performed various project management duties and provided detailed technical reviews.
09/19 - 09/23	**Missouri SEMA, FY19, CTP, FEMA Region 7, Statewide, Missouri** Project manager responsible for managing watershed-wide H&H studies covering Barton, Lawrence, McDonald and Newton counties in compliance with FEMA guidelines and specifications. The latest available version of HEC-RAS software was employed to study the entire watershed using 2D rain-on-grid computations. Performed various project management duties and provided detailed technical reviews.

16 STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
09/18 - 09/23	**Missouri SEMA, FY18, CTP, FEMA Region 7, Statewide, Missouri** Project manager responsible for managing county-wide H&H studies covering Adair, Harrison, Hickory, Maries and St. Clair counties in compliance with FEMA guidelines and specifications. HEC-RAS software was employed to study the entire watershed using 2D rain-on-grid computations. Used the ArcGIS platform to develop and represent spatially accurate data, including hydrologically enforced digital elevation models (derived from LiDAR), vegetative roughness data, and excess rainfall values. Developed output data products from the detailed modeling, including water surface elevations, velocities, depths and floodplain boundaries. Performed various project management duties and provided detailed technical reviews.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	Al Souid, PhD, PE, BCEE, CFM, PMP	Years of relevant experience with this employer	20
Title	Project Engineer	Years of relevant experience with other employer(s)	5
Degree(s) / Years / Specialization	PhD / 1999 / Environmental and Resource Engineering; MS / 1991 / Environmental and Resource Engineering; BS / 1988 / Civil Engineering		
Active registration number / state / expiration date	Professional Engineer: 049855 / NC / 12/31/2025; 40330 / SC / 06/30/2026; 046424 / GA / 12/31/2025; 150288 / TX / 09/30/2025; 24GE05915800 / NJ / 04/30/2026; Board-Certified Environmental Engineer: 20-20013; Certified Floodplain Manager; Certified Project Management Professional		
Year registered	2003	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities	Dr. Souid will serve as a project engineer for this contract. His has experience modeling and mapping coastal and riverine flood risks in addition to software tool developments and automations. He has been the technical and quality control lead on many federal, state, municipal and private projects. For coastal projects, he performed modeling and mapping of more than 1,600 transects using a new developed tool and FEMA coastal software (i.e., WHAFIS4.0, RNUUP2.0, CHAMP). For riverine projects, Dr. Souid conducted modeling on varieties of hydrological and hydraulic studies using several HEC products (i.e., RAS, HMS, DSS, SSP, FIA). Dr. Souid presented his works at several local, national and international conferences. **Meets MPR #4b**		

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 years of experience specified in the applicable MPR(s).
11/22 - Ongoing	**ARC PTS JV, New Countywide Coastal Maps and Risk Products, FEMA Region 2, New York** Project engineer for countywide coastal studies in multiple counties in NY - Middlesex, New Jersey and Westchester. Responsibilities include detailed survey collection, field reconnaissance, surge and GIS base maps, engineering modeling and simulations, runup and overtopping calculations, coastal mapping and LiMWA delineations and risk products.
01/10 - 01/18	**State of North Carolina, Flood Mapping Program - CTP - Coastal Flood Studies, Multiple Locations, North Carolina** Project engineer for the Flood Insurance Studies (FIS) and DFIRMs for the coastal counties of Bertie, Camden, Chowan, Currituck, Dare, Pasquotank, Perquimans, Tyrrell and Washington. The flood studies were performed as part of the State’s Cooperating Technical Partnership (CTP) with FEMA. Dr. Souid was the developer who engineered the designs of an Automated Coastal Modeling Tool. The tool, which was built in ESRI ArcGIS was designed to populate the survey and LiDAR data into 3D transect lines (station vs. elevation) then use different layers of data (i.e., land use and building) and FEMA software (WHAFIS4.0 and RUNUP2.0) to simulate coastal flood events. Combined probabilities between riverine and coastal areas were also studied to ensure proper mapping of inland and coastal flooding. In addition, several risk products (i.e., depth grids) and derivatives (i.e., LiMWA, dune peak and heels) were generated to assist communities in their future planning and building codes.
10/05 - 10/20	**State of North Carolina, Flood Mapping Program - CTP - Riverine Flood Studies, Multiple Locations, North Carolina** Project engineer for the riverine studies throughout the State of North Carolina. Varieties of software by FEMA or Corps of Engineers HEC were used to model flood studies and map flood zones.

16 STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
04/15 - 04/17	**ADECA OWR Flood Mapping Program - CTP - Coastal Modeling and Mapping, Multiple Locations, Alabama** Project engineer and reviewer for the newly studied FEMA coastal maps for Baldwin and Mobile Counties. Trained, assisted, and conducted models then reviewed the technical modeling and mapping of the new coastal map.
06/17 - Ongoing	**Missouri SEMA, Watershed Risk MAP Services, Statewide, Missouri** Technical reviewer performing quality assurance/quality control (QA/QC) reviews of 1D and 2D riverine HEC-RAS models across multiple watersheds in the state of Missouri, including Meramec River, Lower Missouri River, Cuivre-James.
02/17 - 02/19	**CSX, Coastal Modeling and Analysis, Mobile County, Alabama** Project engineer to evaluate the coastal flood impact from eliminating two old railroad bridges and then constructing new proposed conditions (new structures with fill). Several scenarios of what-if analyses were studied to fully evaluate the risk from the structural and land-use changes.
03/15 - 03/17	**CSX, Coastal Modeling and Analysis, Prince William and Stafford Counties, Virginia** Coastal modeler to study the current existing coastal flooding near the CSX railroad tracks along Potomac River. Then, a new additional CSX track with geotechnical embankment was evaluated to measure the effect on effective coastal flood zoning and mapping. Letter of Map Revision (LOMR) was submitted to FEMA along with a technical report detailing the new condition of the coastal elevations and zones.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	Ben Rufenacht, III, PE, CFM	Years of relevant experience with this employer	18
Title	Project Engineer	Years of relevant experience with other employer(s)	18
Degree(s) / Years / Specialization	ME / 2016 / Civil Engineering; BS / 2006 / Civil Engineering		
Active registration number / state / expiration date	Professional Engineer: 21729 / KS / 04/30/2027; Certified Floodplain Manager		
Year registered: 2011	Discipline: Civil Engineer		
Contract role(s) / brief description of responsibilities	Mr. Rufenacht will serve as project engineer leading development of 2D modeling. He will also lead innovation efforts for development of tools and new methodologies. **Meets MPR #4b**		

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 years of experience specified in the applicable MPR(s).
01/18 - Ongoing	**Missouri SEMA, CTP, FEMA Region 7, Multiple Counties, Missouri** Project engineer for 2D Modeling SME and QA/QC support for the 2D HEC-RAS modeling of Cass, Barton, and Hery Counties in Missouri. Assisted with developing the modeling approach and developed tools used throughout the process. Provided modeling QA/QC support to review the approach and execution of the 2D modeling.
08/22 - Ongoing	**Missouri SEMA, CTP, FEMA Region 7, Osage Central Watershed, Missouri** Project engineer for the 2D HEC-RAS modeling and production of floodplain mapping and DFIRM database for the Osage Central Watershed in Missouri. Oversaw the full 2D modeling process from kickoff to floodplain mapping submittal. Modeling included over 3,300 square miles of 2D RoM modeling divided into 36 basins models with 2,485 stream miles of floodplain mapping including 290 miles of 2D floodway.
05/23 - Ongoing	**ARC PTS JV, Innovations Account, Nationwide** Project engineer for 2D Modeling SME and 2D Model Testing Lead for 2D HEC-RAS model testing for 6 projects and counting. Also provided oversight and review for 2D models developed for the FFRD pilot watersheds and reviewed the statistical results completed by the USACE to provide feedback for the process developed for generating the statistical results for 2D modeling.
05/23 - Ongoing	**Kansas Department of Agriculture, Map Modernization and Risk MAP Services, Statewide BLE Studies** Project engineer for 2D Modeling SME and QA/QC support for the 2D HEC-RAS modeling of 5,450 square miles to produce base level engineering floodplain data for community outreach. Project work included 2D hydrologic and hydraulic analyses, floodplain mapping, and public outreach in the Arkansas Watershed in Finney, Ford, Grant, Gray, Greeley, Hamilton, Haskell, Kearney, Scott, Stanton, and Wichita Counties, Kansas.
05/23 - Ongoing	**Kansas Department of Agriculture Map Modernization and Risk MAP Services, Statewide Training** Project engineer and lead 2D trainer for two separate three-day training courses provided to state employees and contractors that work with Kansas Communities on floodplain mapping projects. These courses included developing input data for HEC-RAS 2D RoM models using GIS, building a HEC-RAS 2D RoM model from scratch, and troubleshooting, reviewing, and analyzing the results of HEC-RAS 2D RoM models.
05/23 - Ongoing	**Missouri SEMA, CTP, FEMA Region 7, Real Time Technical Assistance (RTTA)** Project engineer for 2D Modeling Support and review of model alternatives for flood reduction alternatives at several locations in the State of Missouri.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	Britton Wells, PE, CFM	Years of relevant experience with this employer	12
Title	Project Engineer	Years of relevant experience with other employer(s)	7
Degree(s) / Years / Specialization	BS / 2005 / Civil & Environmental Engineering		
Active registration number / state / expiration date	Professional Engineer: 114614 / TN / 06/30/2025; Certified Floodplain Manager		
Year registered 2011	Discipline: Civil Engineer		
Contract role(s) / brief description of responsibilities	Mr. Wells will be a project engineer, tasked with oversight and review of a team of project engineers and other staff to perform the required modeling effort. He has experience with ESRI GIS software, HEC-DSS, HEC-SSP, HEC-RAS, HEC-HMS, USGS PeakFQ, PCSWMM, InfoSWMM, XP-SWMM, and SRH-2D. **Meets MPR #4b**		

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 years of experience specified in the applicable MPR(s).
06/22 - Ongoing	**LaDOTD, LWI Modeling Services, Region 3, Louisiana** Project engineer responsible for development and calibration of watershed scale models for the LWI program to serve as the basis for analysis of future developments, flood mitigation feasibility studies, watershed management strategies and consequence and risk assessment across four watersheds in Region 3. Hydrologic and hydraulic analyses include both one□ and two□dimensional models developed using Hydrologic Engineering Center's (HEC) suite of software products.
09/23 - Ongoing	**Knox County, Floodplain Mapping, Knox County, Tennessee** Project engineer performing flood risk studies in eight watersheds across Knox County. The purpose of the studies is to evaluate the flood risk in each watershed, produce flood risk products, and update the FEMA regulatory FIRM panels and Flood Insurance Study report for four of the watersheds. The FEMA regulatory products are updated through the Physical Map Revision process. The project involves field survey data collection, hydrologic modeling using HEC-HMS, PCSWMM, stream gage analysis; hydraulic analysis using HEC-RAS; developing mapping products, community outreach meetings, and FEMA coordination throughout the PMR process.
01/15 - 07/16	**Louisville Metropolitan Sewer District, Flood Studies and Mapping Enhancement** Project engineer performing hydrologic and hydraulic modeling for the creation Digital Flood Insurance Rate Map (DFIRM) and Flood Insurance Study (FIS) report data for panel production and post preliminary processes in Jefferson County, Kentucky. Project involved the enhancement of existing approximate and limited detailed studies to detailed studies for approximately 115 miles of stream. Project included updating existing studies with new field survey data and topography, inclusion of the 1-percent-annual-chance future conditions scenario for floodway determination, and development of DFIRM database files in accordance with FEMA's Guidelines and Specifications for Flood Hazard Mapping Partners. H&H Analyses consisted of HEC-HMS and steady-state HEC-RAS modeling.
01/14 - 04/15	**USACE Nashville District, Flood Preparedness Phases 3 and 4, Nashville, Tennessee** Project engineer for updating the hydrologic and hydraulic modeling for tributaries to the Stones River using statistical methods, HEC-HMS, and HEC-GeoHMS. Include analysis of significant recent flood events including May 1, 2010 and August 8, 2013. Provided Metro Nashville staff with modeling tools for use during their routine daily floodplain management duties. H&H Analyses consisted of HEC-HMS and steady-state HEC-RAS modeling.

STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
09/14 - 07/16	**USACE Vicksburg District, MMC CWMS Development for the Cape Fear River, Wilmington District** Project engineer responsible for the development and calibration of a 5,409 square mile drainage area HEC-HMS model for inclusion in the Cape Fear CWMS. The watershed included 2 reservoirs modeled in HEC-ResSim and 344 miles of calibrated HEC-RAS modeling. The effort involved developing a suite of models including HEC-HMS, HEC-ResSim, HEC-RAS, and HEC-FIA, and integrating those models into a CWMS CAVI. The suite of models is designed to aid the District in the water control operations decision-making process by providing water managers tools including real-time calibration and execution of model programs to support decisions made in the course of Corps project operations. Upon completion of CAVI Integration, the modeling was documented in a basin report and the CWMS watershed was presented to the Wilmington District.
01/08 - 06/09	**City of Wichita, Levee Certification of the Wichita Valley Center Local Flood Control Project, Wichita, Kansas** Project engineer provided hydrologic and hydraulic modeling support of approximately 100 miles of levee system to determine compliance with FEMA’s Section 65.10 criteria. Project consisted of a multidisciplinary evaluation of flood control system including a visual inspection, hydrologic and hydraulic investigation of both riverine and internal drainage areas, geotechnical analysis, and the development of “as-is” plans and updating the O&M Manual. H&H Analyses consisted of HEC-HMS, HEC-RAS steady and unsteady flow modeling, FLO-2D two-dimensional hydraulic modeling, and PCSWMM for internal drainage areas and joint probability analysis.
09/07 - 09/13	**ADECA OWR, Multiple Projects Risk Map Program, Multiple Locations, Alabama** Lead engineer of a group of engineers providing hydrologic and hydraulic modeling for DFIRM creation in numerous Alabama counties. H&H models varied from stormsewer to large riverine scale. Utilized tools combining geospatial data, H&H data, and historic studies and data. Projects included redelineation of existing detailed studies on updated topography, refinement of Zone A studies with automated hydrologic and hydraulic modeling, field survey, digital ground surface creation, detailed studies (Zone AE), and development of DFIRM mapping files.
09/07 - 08/10	**State of Kansas Division of Water Resources, DFIRM, Multiple Counties, Kansas** Project engineer for the development of hydrologic and hydraulic modeling of both Approximate (Zone A) and Detailed (Zone AE) flood hazard areas for DFIRM mapping in multiple Kansas Counties. Projects included refinement of Zone A studies, redelineation of existing detailed studies on updated topography, development of new HEC-HMS and HEC-RAS models to support the creation of DFIRM mapping files in accordance with the requirements of FEMA Guidelines and Specifications for Flood Hazard Mapping Partners.
06/14 - 06/15	**USACE Nashville District, Flood Preparedness Phase 2, Chattanooga, Tennessee** Assistant project manager for the development new hydrologic and hydraulic models and GIS outputs for streams in the South Chickamauga Creek watershed. Responsible for oversight of modeling, calibration, and mapping. H&H Analyses consisted of HEC-HMS and steady-state HEC-RAS modeling.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	Brad Heilwagen, PE, CFM	Years of relevant experience with this employer	19
Title	QA/QC Manager	Years of relevant experience with other employer(s)	3
Degree(s) / Years / Specialization	BS / 2001 / Agricultural Engineering		
Active registration number / state / expiration date	Professional Engineer: 29352 / AL / 12/31/2025; 2017000120 / MO / 12/31/2025; Certified Floodplain Manager		
Year registered	2008	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities	Mr. Heilwagen will serve as the quality control/quality assurance manager, he will oversee the review process for model development, mapping and Risk MAP product development, and ensure all procedures are followed. He has extensive experience managing FEMA projects. **Meets MPR #4b**		

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 years of experience specified in the applicable MPR(s).
05/20 - Ongoing	**ADECA OWR, FEMA Risk MAP Program, Montgomery, Alabama** QA/QC manager for the Risk MAP Program, overseeing technical reviews of all modeling for base and enhanced level engineering projects. As a former project manager for the program, Brad led a team of engineers and GIS personnel on a multi-year, multi-county series of Map Modernization (DFIRM) and Maintenance projects. In 2010, Brad helped write the business case for LOMR delegation, resulting in the establishment of the State's LOMR delegation program.
05/09 - Ongoing	**SRWMD, FEMA Risk MAP Program, Live Oak, Florida** Project manager overseeing a team of task managers, engineers, and GIS and survey personnel responsible for the multi-year project to develop quality flood risk data, increase public awareness of flood risk, and ensure that communities are taking action against their flood risk in the entire SRWMD. He oversees all aspects of execution, including numerous detailed and approximate studies of closed basin and riverine flooding sources throughout the District, as well as creation of non-regulatory products that will ultimately feed into the Flood Risk Report, Flood Risk Database, and Flood Risk Map. In addition, he also oversees the production of regulatory DFIRM panels. He has facilitated numerous public meetings, including flood risk review, resilience, and post-preliminary DFIRM community coordination meetings, and acts as a functional extension of SRWMD staff.
03/22 - Ongoing	**City of Chattanooga, FEMA Compliance Reviews, Chattanooga, Tennessee** Project manager and senior engineer, performing third-party reviews of no-rise, CLOMR, and LOMR submittals by local engineers on behalf of the City of Chattanooga's Land Development Office. Brad and his team review submitted forms, reports, hydrologic and hydraulic modeling, and existing and proposed floodplain mapping to ensure that the submittal is in compliance with FEMA regulations. At the conclusion of each case, Brad provides a recommendation for City acknowledgment of the no-rise or concurrence with the CLOMR or LOMR application.
04/12 - 01/14	**Sarasota County, Alligator Creek No-Rise and CLOMR, Sarasota, Florida** QA/QC manager of hydraulic modeling and development of a no-rise certification report as part of a larger stream restoration design effort on Alligator Creek. Brad is also leading the compilation and submission of a FEMA CLOMR to document the widening of the floodway due to the restored channel per Title 44 CFR 65.

16 STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
08/23 - Ongoing	**FEMA, FY23 Herkimer County / Mohawk River Corridor Flood Risk Project, Herkimer, New York** Project manager for an effort to perform BLE-C modeling for 4,589 square miles of Upstate New York, along with 306 miles of BLE-E enhanced modeling. The results of the BLE modeling will be used to perform preliminary mapping within Herkimer County. Brad facilitated a virtual and in-person project initiation meeting and leads the overall project execution, MIP uploads, and FEMA reporting.
03/21 - 12/22	**Missouri SEMA, FY18 Meramec Plus Risk MAP, Jefferson City, Missouri** Technical reviewer for 2D HEC-RAS modeling of multiple subbasins within the Meramec Watershed.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	Larry Sample, PE	Years of relevant experience with this employer	28
Title	Project Engineer / LAMP Expert	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization	MS / 1996 / Agricultural Engineering		
Active registration number / state / expiration date	Professional Engineer: 15855 / KS / 04/30/2027; 24160 / OK / 01/31/2027; 2009012207 / MO / 12/31/2025; 109388 / TX / 06/30/2025; E-11949 / NE / 12/31/2026		
Year registered: 2000	Discipline: Civil Engineer (Water Resources)		
Contract role(s) / brief description of responsibilities	Mr. Sample will serve as project engineer, specifically for levees and dam modeling. Mr. Sample has expertise as a water resource engineer and has executed a variety of multidisciplinary projects including dam assessment, design, and construction management projects; levee assessment, design, and construction management projects; and complex hydraulic and hydrologic modeling projects. **Meets MPR #4c**		

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 years of experience specified in the applicable MPR(s).
01/22 - 12/23	**FEMA PTS, Innovations Account, Region 1, 2, 3 and 5** Levee account lead for the ARC JV responsible for providing levee related assistance to FEMA HQ and FEMA Regions 1, 2, 3, and 5. He coordinated with levee subject matter experts from across the US to provide 65.10 reviews, **LAMP** assistance, and general levee guidance for FEMA regions. He assisted in developing and updating National Levee Database information. He reviewed FEMA levee guidance and best practices documents and make recommendations for updates and assisted FEMA with levee related issues and policy decisions.
01/22 - Ongoing	**Kansas Department of Agriculture, FEMA CTP Risk MAP Services, Multiple Counties, Kansas** Project manager responsible for overseeing 2D hydrologic and hydraulic modeling in Reno, Butler, Cowley Counties using rain-on-mesh modeling methods. Work includes applying **LAMP** natural valley modeling procedures on one levee system identified in the NLD. Hydraulic models will be used to develop FIRM floodplain maps.
01/10 - 12/15	**Kansas Department of Agriculture, Sedgwick County DFIRM Project, Sedgwick County, Kansas** Phase manager and lead engineer for complex detailed hydrology and hydraulics analysis and modeling on Cowskin Creek and the Ninnescah River in Sedgwick County, KS. The Cowskin Creek watershed is notorious for flash flooding and due to its relatively flat topography has historically been very difficult to model. Through the development of very detailed hydrology modeling in conjunction with a complex unsteady flow HEC-RAS model we were able to accurately simulate flood events in this watershed. This work included using **LAMP** procedures along levees to properly map the floodplains. The detailed hydrology covered over 300 square miles of drainage area and the detailed hydraulics covered over 200 miles of stream channel. Completed technical reviews on Chisholm Creek, Big Slough South, and Cowskin South as part of the overall project.

STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
12/12 - Ongoing	**City of Topeka, Flood Control Levee Certification, Topeka, Kansas** Project manager providing technical oversight for components of the certification of approximately 30 miles of levee per FEMA’s 44 CFR Section 65.10 criteria. The project consists of a multidisciplinary evaluation of the flood control system, including new geotechnical analysis, new interior drainage analysis, and embankment projection analysis. The project also includes coordination with the State of Kansas and Kansas City District USACE, who both have active projects associated with this levee system. This project includes the evaluation of several floodwalls, with different foundation types. The project also includes the evaluation of the efficiency of relief wells and associated pumping systems.
02/09 - 12/15	**City of Wichita, Levee Certification, Wichita, Kansas** Assisted with inspection of 97-mile levee system to determine compliance with FEMA’s 44 CFR Section 65.10 criteria. Lead Engineer for levee rehabilitation design of Levee L. Oversaw hydrologic and hydraulic analyses using HEC-HMS and HEC-RAS to ensure compliance with freeboard requirements, geotechnical design to ensure structural stability of levee which included the design of an armoring system to protect the levee from excessive erosion. Responsible for developing a clear concise set of design plans with construction specifications and design memorandum.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	James Moore, CFM	Years of relevant experience with this employer	19
Title	GIS Analyst	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization		AAS / 2005 / Computer Information Systems	
Active registration number / state / expiration date		Certified Floodplain Manager	
Year registered	2008	Discipline	Geographic Information Systems
Contract role(s) / brief description of responsibilities		Mr. Moore will serve as a GIS analyst and perform inundation mapping. He has been responsible for establishing and overseeing a QA\QC program for in-house tool development. Other tasks include GIS tool refinement, maintenance and development using Python and/or Model Builder. Mr. Moore has also assisted with land survey data collection for development of stream cross sections for use in hydraulic modeling for floodplain mapping. **Meets MPR #4d**	

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 years of experience specified in the applicable MPR(s).
11/15 - Ongoing	**Missouri SEMA, Watershed Risk MAP Services, Statewide, Missouri** GIS analyst leading a team of geographic information systems personnel to develop Risk MAP products for multiple counties in the State of Missouri. Responsibilities include base map development, hydrology and hydraulics data capture, floodplain mapping, metadata creation and the development of regulatory DFIRM databases. Additional responsibilities include senior review of Data Capture Standard (DCS) submittals as well as development and preparation of large format map products for use in public community/stakeholder outreach efforts. Developed various GIS models and Python script tools to facilitate accurate and consistent data processing and development across all datasets. Also assisted in preparation of community outreach and flood study review meetings by developing mapping products and reports for use by communities.
09/13 - 09/15	**ADECA OWR, Wheeler Lake Watershed Risk MAP Services, Alabama** GIS analyst managed activities in GIS such as floodplain mapping, panel production, database development, and produced all final deliverables to FEMA specifications. Also produced map products for use at client and stakeholder meetings at various stages of progress of the project such as Project Discovery, Scoping, Flood Risk Review, CCO, and Resilience meetings.
03/12 - 12/15	**SRWMD, FEMA Risk MAP Program, Live Oak, Florida** GIS analyst/task lead for several watershed level projects to develop regulatory and non-regulatory Risk MAP products. Responsibilities include managing the panel production team, floodplain merging, profile creation, metadata creation and the development and QA/QC of regulatory DFIRM databases.
03/14 - 03/15	**USACE Vicksburg District, GIS Services, Cadastral Mapping (Terrestrial and Marine), and Geospatial Training, Nationwide** GIS analyst assisting with GIS modeling/tool support and testing, economic analysis and inundation mapping and various final deliverable mapping products for dam breach scenarios for USACE dams nationwide. Also assisted in the development of the various GIS tools, mapping processes, layouts and graphic standards into a Standard Operating Procedure in collaboration with U.S. Army Corp. of Engineers.

16 STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
07/13 - 07/18	**Metropolitan Government of Nashville and Davidson County, Metro Water Services, Stormwater Division–Stormwater Design, Tennessee** GIS analyst supporting the conversion of GIS data to CAD data for the preparation of plans for improvements to the Metro Nashville storm water system. Plan preparation involves determining peak flow rates, modeling the system to size structures, layout of structures to avoid existing utilities, and overall plan preparation in which he has converted design data.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	Garrett Shields, GISP, CFM	Years of relevant experience with this employer	22
Title	Risk Map Products Manager	Years of relevant experience with other employer(s)	6
Degree(s) / Years / Specialization	BS / 2009 / Geography (GIS Specialty)		
Active registration number / state / expiration date	Geographic Information Systems Professional: 80640 / 09/25/2025; Certified Floodplain Manager		
Year registered: 2014	Discipline: Geographic Information Systems		
Contract role(s) / brief description of responsibilities	Mr. Shields will serve as the Risk MAP manager for development of Flood Risk Products. He will also assist with the development of floodplain mapping products and FIS reports. **Meets MPR #4e**		

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 years of experience specified in the applicable MPR(s).
05/24 - Ongoing	**ARC PTS JV, FY2024 Regional Production Task Order, FEMA Region 2** Overall JV flood risk products manager for the ARC PTS JV task order supporting flood risk data development, 1D & 2D hydraulic modeling, flood risk product development and flood study due process administration for FEMA Region 2, covering New York, New Jersey, Puerto Rico and the US Virgin Islands. Overseeing production status and client interaction for 25 separate active project areas.
02/23 - 12/24	**FEMA FFRMS ARC PTS JV, FEMA Regions 1, 2, 3 & 5** Overall JV task order manager/WSP project manager supporting the implementation of the Federal Flood Risk Management Standard (FFRMS). FEMA's Federal Insurance and Mitigation Administration, Risk Management Division (FIMA, RMD) requires architectural and engineering Contractor assistance to develop FFRMS flood hazard mapping, data, and information for areas within FEMA Zone 1. Using all FEMA digital effective flood hazard information, ARC developed FVA floodplains based on the 1% annual chance flood for FVA +1, +2 and +3 scenarios and associated FVA elevations utilizing best available Digital Elevation Models (DEM's) either from USGS or other source if it is readily available for public use for 885 counties within FEMA Zone 1.
09/13 - Ongoing	**State of North Carolina, Risk Map and Support Services, Floodplain Mapping Program (NCFMP), Statewide, North Carolina** Risk MAP products manager developing flood risk products and performing floodplain mapping and data development tasks for 29 Flood Insurance Study updates and various LOMC/LOMRs in the State of North Carolina. He also has provided technical support and consulting services to GTM-NCFMP for the development of NC FRIS, iRISK and FLOOD Database products and procedures. Mr. Shields has led GIS production efforts for FLOOD database population for over 25% of the State.
09/16 - 12/20	**Missouri SEMA, FEMA Risk MAP, Paper Inventory Reduction (PIR) Flood Insurance Studies, Statewide, Missouri** Risk MAP product manager and GIS lead for 7 counties of cradle-to-grave flood insurance studies. This project was in support of a larger effort by WSP to conduct updated and 1st time-countywide flood risk assessments of over 20 counties in the state of MO. Mr. Shields led all GIS production efforts including floodplain mapping, DFIRM creation, FIRM Database population, FIS report creation, table and flood profile generation as well as risk raster production for over 130 miles of detailed study and 4,300 miles of approximate flood modeling.

16 STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
02/18 - 12/19	**State of North Carolina, NCFMP, High-Density LiDAR Classification, Phases 4 & 5, Southwestern, North Carolina** Assistant project manager for WSP’s efforts to classify high-density 30ppsm aerial LiDAR data for 20 counties in southwestern NC. The NCFMP contracted the acquisition of this LIDAR data in the previous year and the resulting LiDAR was processed to 8ppsm. Later, the same data was processed by the originator to 30ppsm, which required classification for final use in the future. WSP partnered with Quantum Spatial to conduct the point classification transfer using the 8ppsm LiDAR as a template for assigning classifications to the 30ppsm dataset.
05/18 - 12/20	**State of North Carolina, NCFMP, NC Dam Inundation Model and FIMAN Map Library Updates, Statewide, North Carolina** GIS production manager coordinating dam failure inundation mapping and flood risk assessments for 100 individual dams in NC. Additionally, the GIS team developed inundation map libraries for 19 new and updated stream gauge locations throughout NC. This task served to assist the NCFMP in updating their dam inundation and risk hazard databases as well as their Flood Inundation Mapping and Alert Network (FIMAN), both are heavily used by emergency management officials during a hazard event.
05/19 - 08/20	**North Carolina Department of Transportation (NCDOT), I-40/I-95 Flood Resilience Feasibility Study, Multiple Locations, North Carolina** GIS manager responsible for all geospatial analyses and mapping efforts using ArcGIS application associated with NCDOT’s Flood Resiliency Feasibility study for Interstates 40 & 95 in North Carolina. This project was a direct response from NCDOT to the extensive flooding that occurred on both interstates during Hurricanes Matthew in 2016 and Florence in 2018 which shut down large sections of both highways for days due to flooding, causing some cities and towns to be completely isolated for days. WSP contracted with NCDOT to conduct a feasibility study to conduct cost estimations and construction improvement recommendations for several sections of both interstates and some surrounding secondary routes. The report required collaboration of both NCDOT and WSP engineers and GIS analysts to produce the final report
04/18 - 12/20	**NCDOT, HydroConnector Data Development, Statewide, North Carolina** GIS manager responsible for the development of a state-wide, semi-automated hydro connector dataset to better inform the field data collection of DOT assets. WSP developed an automated process for producing structure drain lines, known as hydro connectors, which DOT could subsequently leverage to field verify the location of their structure assets.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	Lisa Tuckwin, GISP, CFM	Years of relevant experience with this employer	18
Title	GIS Analyst	Years of relevant experience with other employer(s)	6
Degree(s) / Years / Specialization	BS / 1995 / Fisheries and Wildlife		
Active registration number / state / expiration date	Geographic Information Systems Professional: 1622 / 06/25/2026; Certified Floodplain Manager		
Year registered: 2015	Discipline: Geographic Information Systems		
Contract role(s) / brief description of responsibilities	Ms. Tuckwin will serve as a GIS analyst for floodplain mapping products development, managing the creation of FIRMS, DFIRM DB, FIS reports and DCS submittals. **Meets MPR #4f**		

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 years of experience specified in the applicable MPR(s).
11/06 - Ongoing	**Kansas Department of Agriculture, Map Modernization and Risk MAP Services, Statewide, Kansas** GIS analyst overseeing the data collection and development of Base Map, Topography, Floodplain Mapping, and Draft Flood Insurance Rate Map (FIRMs) Databases. In charge of leading internal quality review of database files and maps, riverine updates, levee mapping, the incorporation of Letters of Map Changes (LOMCs), and the development of Non-Regulatory Flood Risk datasets in accordance with FEMA's Guidance and Standards requirements. Oversee the preparation of Data Capture deliverables and metadata, performing Floodplain Boundary Standards; ensuring all submittals undergo required independent technical reviews. Assist in the preparation of project materials and participate in Kickoff Scoping meetings, Flood Risk Review Community meetings and Open House Public meetings. Distribute draft data to FEMA, Cooperating Technical Partners (CTP), and community officials, uploading submittals to **FEMAs Mapping Information Platform and Citrix server**.
09/07 - Ongoing	**Missouri SEMA, Risk MAP Services and Hazard Mitigation Support, Multiple Watersheds, Missouri** GIS analyst managing a team of GIS Specialists, GIS Analysists, and Application Developers responsible for the data collection and development of Base Map, Topographic, Floodplain Mapping, and Draft Flood Insurance Rate Map (FIRMs) Databases. Oversee resources and procedures to ensure quality completion of the flood risk project adhering to FEMA's Guidance and Standards requirements. Ensure the team prepares high quality Data Capture deliverables and metadata.
08/19 - Ongoing	**Kansas Department of Agriculture, Preliminary & Post-Preliminary Risk MAP Product Development, Multiple Counties, Kansas** Project manager responsible for coordinating public Open House meetings, ensuring effective communication with clients and providing accurate geospatial data for webmaps. These webmaps facilitated discussions, gathering feedback from community officials and the public. Addressed and resolved comments, incorporating feedback into the project. Collaborated with cross-functional teams to ensure project execution of preliminary map products, post-preliminary processing to produce final map products, Flood Risk Products, and provided technical GIS expertise, contributing to the project's success.
07/18 - 05/24	**Kansas Department of Agriculture, BLE Draft FIRM Database Development, Multiple Watersheds, Kansas** GIS analyst providing technical assistance and direction in the development of BLE Draft FIRM Database submittals for 13 HUC8 watersheds in Kansas. This dataset will provide digital data through the Draft NFHL viewer for portions of 37 counties within the HUC8 watershed that are currently unmapped.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	Michael (Jeff) Zanotti, CFM	Years of relevant experience with this employer	17
Title	GIS Analyst	Years of relevant experience with other employer(s)	17
Degree(s) / Years / Specialization	BS / 2008 / Geography		
Active registration number / state / expiration date	Certified Floodplain Manager		
Year registered 2010	Discipline: Civil Engineer		
Contract role(s) / brief description of responsibilities	Mr. Zanotti will serve as GIS analyst lead CNMS efforts, and provide support for modeling data development, development of FIRMS, FIS reports, and Risk MAP products. **Meets MPR #4g**		

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 years of experience specified in the applicable MPR(s).
11/15 - Ongoing	**ADECA OWR, Map Modernization, Risk MAP, and Support Services, Statewide, Alabama** Lead GIS analyst for all Risk MAP non-regulatory product development, preliminary and final map production for over 1,100 miles of approximate flood studies and over 100 miles of detailed flood studies. Led a team of engineers and GIS professionals throughout the process of preliminary issuance to final efforts of becoming effective. The FEMA Mapping Information Platform was utilized for work vital workflow. Coordinated the final products being placed on Alabama's state flood viewer. Performed 5-year **CNMS** validation assessments over the entire state, updated geometries and attributes at project milestone marks. Performed a statewide assessment and correction to account for missing detailed streams to ensure a more accurate Discovery process.
09/11 - 06/20	**ADECA OWR, Map Modernization, Risk MAP, Support Services-Coastal DFIRM Development, Baldwin and Mobile Counties, Alabama** GIS analyst responsible for developing GIS layers needed as inputs in coastal modeling for Mobile and Baldwin Counties. These inputs required field research and closely following software specifications. Created large raster datasets to signify stillwater elevations and storm surge using advanced circulation model data and wave height/return periods. Performed floodplain mapping based upon transect model outputs. Created countywide datasets for non-regulatory products that relied on LiDAR to pull dollar values from local tax assessor data and the lowest adjacent grades pulled from LiDAR in order to get real life loss estimates in dollars for flood recurrence intervals.
02/22 - 04/23	**ARC PTS JV, Regional Production Task Order, FEMA Region 2** CNMS lead for FEMA Region 2 responsible for management of quarterly roll ups for CNMS database. Coordinated with project managers across various contractors and CTPs across Region 2. Identified problem areas to be corrected and investigated validity of proposed discovery scopes. Performed FEMA metric calculations like P-4 reconciliation. Trained other PTS staff to help with routine CNMS QA tasks.
07/11 - Ongoing	**ADECA OWR, Map Modernization, Risk MAP, Support Services – Digital Tools Trainings, Statewide, Alabama** GIS analyst responsible for conducting in person workshops with local stakeholders on how to properly utilize FEMA Risk MAP digital products in GIS. Workshops were coordinated with universities across the state to provide hands-on exercises with GIS data for local municipalities' and regional planning commissions' GIS staff.
07/10 - 02/16	**NRCS Alabama, Watershed Dam Assessments, Statewide, Alabama** GIS analyst responsible for inundation mapping of 37 full watershed dam assessments in multiple counties in Alabama. This mapping included physical site inspections, site surveys, detailed hydrology and hydraulics analyses, dam breach analyses, breach inundation mapping, and hazard classification.

16 STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
09/10 - 05/17	**ADECA OWR, Map Modernization, Risk MAP, Support Services – Dam Inventory, Statewide, Alabama** Project manager responsible for successive grant funded projects to create an inventory of dams from scratch. Devised a work plan for staff to efficiently cover the state and designate significant dams and how to estimate measurements such as height, volume, and flood hazard risk in GIS, Project served as the initial step in the state trying to create a Safe Dams Program.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	Maggie Weems, PE	Years of relevant experience with this employer	9
Title	Outreach / Communications Specialist	Years of relevant experience with other employer(s)	8
Degree(s) / Years / Specialization	MS / 2011 / Civil Engineering; BS / 2008 / Civil Engineering and Science		
Active registration number / state / expiration date	Professional Engineer: 37591 / AL / 12/31/2025		
Year registered: 2018	Discipline: Civil Engineer		
Contract role(s) / brief description of responsibilities	Ms. Weems will serve as an outreach and communications specialist. She will provide services related to community engagement and risk communication, community outreach, and mitigation strategies activities. She is also experienced in the performance of Risk MAP Discovery projects, her experience includes Risk MAP program management, stakeholder engagement, and mitigation strategies; due diligence assessments; and contaminated site corrective action planning and implementation. **Meets MPR #4h**		

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 years of experience specified in the applicable MPR(s).
09/15 - Ongoing	**ADECA OWR, Risk MAP Community Outreach and Program Management, Alabama** Outreach and communications manager providing quarterly reporting, outreach activities, community engagement and risk communication (CERC), community outreach and mitigation strategies (COMS) activities, and program management to include five-year business plans, quarterly reports, outreach activities and engagement plans, mitigation planning and technical assistance, key influencer assessments, watershed and community assessments, action identification and advancement, relationship management plans, AlabamaFlood.com website content updates, and programmatic QA/QC. She has conducted over 20 outreach mapping meetings for the community outreach program.
04/17 - 05/18	**ADECA OWR, Pickwick Lake and Lower Coosa Watershed Discovery, Alabama** Outreach and communications manager for Discovery projects for both Pickwick Lake and Lower Coosa Watershed. Services included preparation and delivery of Discovery Reports, Discovery Maps, Community Assessment Tools, and Community Engagement Plans; interface with FEMA; and overseeing logistics, notifications, agendas, and information development for Discovery Meetings.
11/17 - 03/19	**ADECA OWR, Lower Tallapoosa Watershed Discovery, Alabama** Outreach and communications manager for Discovery project for Lower Tallapoosa Watershed. Services included preparation and delivery of Discovery Report, Discovery Map, Community Assessment Tools, and Community Engagement Plan; interface with FEMA; and overseeing logistics, notifications, agendas, and information development for Discovery Meeting.
08/15 - Ongoing	**ADECA OWR, Stakeholder Engagement for Various Watersheds, Alabama** Outreach and communications manager for community meetings conducted as part of the FEMA Risk MAP process for the following projects: Middle Coosa, Wheeler Lake, Baldwin County, Mobile County, Locust Fork, Cahaba, Upper Black Warrior, Pickwick Lake, Lower Coosa, and Lower Tallapoosa. Services included preparation of meeting materials and exit surveys, compilation and management of stakeholder contact lists, assistance with meeting invitations, participation in Regional Study Team (RST) calls, stakeholder check-in at meetings, recordation of meeting minutes, collection of stakeholder feedback forms, processing of stakeholder feedback, and preparation of meeting summary reports.

16 STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
05/09 - 08/15	**City of Talladega and Freshwater Land Trust, Brownfield Assessment Grants, Talladega, Alabama** Project manager for $1,000,000 in EPA Brownfield Assessment Grants. Services included performing and reporting for Phase I and Phase II Environmental Site Assessments, development of Quality Assurance Project Plans (generic and site-specific), Health & Safety Plans, EPA reporting (quarterly, semi-annually, and annually), outreach development and stakeholder engagement (organizing public meetings and presenting), Community Involvement Plans, property owner and client coordination, metrics analysis, and all invoicing and budget tracking.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	David Stroud, CFM	Years of relevant experience with this employer	16
Title	Flood Ordinance Reviewer	Years of relevant experience with other employer(s)	34
Degree(s) / Years / Specialization	MS / 1990 / Urban & Regional Planning; BS / 1985 / Urban & Regional Planning; AS / 1983 / Architectural Drafting		
Active registration number / state / expiration date	Certified Floodplain Manager		
Year registered: 1998	Discipline: National Flood Insurance Program / Community Rating System / Ordinance Review		
Contract role(s) / brief description of responsibilities	Mr. Stroud will serve as a reviewer for flood ordinances related to local land use. **Meets MPR #4i**		

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 years of experience specified in the applicable MPR(s).
03/22 - Ongoing	**FEMA PTS Region 3** Ordinance reviewer responsible for working with FEMA's PTS team for the review of the community's Flood Damage Prevention Ordinances to ensure the community ordinance met or exceeded the state model ordinance before a community's new Flood Insurance Rate Map (FIRM) goes effective. Through this process, a FEMA checklist is used to make sure each section of the ordinance meets the intent of the state model. After reviewing the ordinance, the updated information including any higher standards are uploaded to FEMA's Community Information System (CIS) and the approved ordinance is also uploaded to FEMA's Risk Analysis Management (RAM) Access Portal (RAP).
06/22 - 11/23	**Loudoun County, Mock Community Assistance Visit (CAV), Loudoun County, Virginia** Ordinance reviewer working with Loudoun County, VA to conduct a "mock CAV" to prepare the community for an up coming visit from FEMA Region 3. This worked started with a detailed review of the community's Flood Damage Prevention Ordinance to determine it met the current state of Virginia model. Additional work related to Executive Order 11988 and other floodplain management issues including permitting and enforcement procedures. A floodplain tour was conducted identifying development that did not conform with the flood damage prevention ordinance. Finally, a "Best Practices Guide" was developed to assist the county with procedures to help make good decision in floodplain management permitting and enforcement.
05/91 - Ongoing	**FEMA, Community Rating System (CRS), Nationwide** Ordinance reviewer reviewing and evaluating higher standards in local Flood Damage Prevention Ordinances. Worked directly with the CRS program for 18 years and consulting back to the CRS for the past 16 years. While working with the CRS (David Stroud) was the Flood Training Coordinator and Hazard Mitigation Planner. The CRS work included all aspects of the National Flood Insurance Program (NFIP), FEMA Community Information System (CIS), Repetitive Loss and Severe Repetitive Loss as well as all activities in the CRS from Activity 310 Elevation Certificates to Activity 430 Higher Regulatory Standards.

16 STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
07/22 - Ongoing	**Village of Palmetto Bay, CRS Application Improvement, Palmetto, Bay, Florida** Ordinance reviewer working with the Village of Palmetto Bay on all aspects of FEMA’s Community Rating System (CRS) program. This work included developing a Floodplain Management Plan, Repetitive Loss Area Analysis, Floodplain Species Assessment, Substantial Damage Plan and a Program for Public Information. Other CRS activity work included updated the Village’s Flood Damage Ordinance to include several higher standards such as enclosure limits below elevated buildings, freeboard in the X/C-Zones, protecting critical facilities, non-conversion agreement, and a lower substantial damage threshold.
01/12 - Ongoing	**City of Charleston, CRS Application Improvement, Charleston, South Carolina** Ordinance reviewer working with the City to improve its CRS application to advance from a CRS Class 7 to a CRS Class 5. This project included review of the City’s Flood Damage Prevention Ordinance and adoption of a 2-foot freeboard requirement. This also included working with the land use and zoning staff to increase the height restrictions on buildings.
03/17 - Ongoing	**City of Folly Beach, CRS Application Improvement, Folly Beach, South Carolina** Ordinance reviewer working with the City to improve its CRS application to advance from a CRS Class 7 to a CRS Class 3. This work included reviewing the City Flood Damage Prevention Ordinance to determine all applicable higher standards including Coastal “A” Zones and 4 feet of freeboard. Additionally, all land use categories were confirmed for Conservation Districts which provided open space credit under Activity 420 – Open Space Preservation.
06/11 - Ongoing	**Town of Cutler Bay, CRS Application Improvement, Cutler Bay, Florida** Ordinance reviewer working with the Town of Cutler Bay to improve its CRS program. As part of this work, a Floodplain Management Plan, Repetitive Loss Area Analysis and a Program for Public Information were developed. Additionally, under CRS Activity 450 several higher regulatory standards were implemented through the Flood Damage Prevention Ordinance such as protecting critical facilities, cumulative substantial improvement, lower substantial threshold, and enclosure limits. Under CRS Activity 450, a stormwater manual and a Stormwater Regulation Ordinance were developed to implement design standards for development which also included Low Impact Development Techniques.
04/11 - 06/12	**City of Wilson, CRS Application Improvement, Wilson, North Carlina** Ordinance reviewer working with the City to improve its CRS application to advance it from a CRS Class 7 to a CRS Class 5. This work included the evaluation of the City’s Flood Damage Prevention Ordinance to identify and score all higher regulatory standards such as freeboard, cumulative substantial improvement, etc.
06/09 - 08/09	**City of Boulder, Critical Facility Ordinance, Boulder, Colorado** Ordinance reviewer working with the City to create and update a Critical Facility Ordinance as an amendment to the City’s Flood Damage Prevention Ordinance. This work also included reviewing the City’s zoning and land use requirements to ensure there were no conflicts in planning rules.
07/18 - 12/18	**Town of Oxford, CRS Application Improvement, Oxford, Maryland** Ordinance reviewer working with the Town to create an application to the CRS Program. Included in this work was a review of the Town’s Flood Damage Prevention Ordinance to identify higher regulatory standards such as 3 foot of freeboard, etc. Additionally, the Town’s land use plan and zoning categories were reviewed to provide credit for open space credit within the program.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	Garrett Boucher	Years of relevant experience with this employer	8.5
Title	GIS Analyst	Years of relevant experience with other employer(s)	1
Degree(s) / Years / Specialization		BS / 2016 / Computer Science, GIS	
Active registration number / state / expiration date			
Year registered	N/A	Discipline	Geographic Information Systems
Contract role(s) / brief description of responsibilities		Mr. Boucher will serve as a GIS analyst for this contract and assist with the development of metadata, acquisition of relevant spatial data, and production of deliverables. He has served as a Principal GIS Analyst for the recent Louisiana Watershed Initiative efforts and has extensive experience in developing Non-Regulatory products in both raster and vector formats. Additionally, he has a background in producing Python scripts to automate complex and repetitive GIS processes. Mr. Boucher is adept with desktop ArcGIS (ArcMap and ArcGIS Pro) as well as enterprise deployments of ESRI environments. Furthermore, he has designed, implemented, and maintained public-facing web-based GIS applications pertaining to flood risk. **Meets MPR #4j**	

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 years of experience specified in the applicable MPR(s).
11/21 - 06/25	**LaDOTD, LWI Geospatial Data Production in Support of Hydrologic and Hydraulic Modeling Products, Region 3, Louisiana** Lead GIS analyst responsible for constructing automated internal workflows, developing best practice documentation, and interfacing with client organizations to determine program data deliverable standards. Organized a team to execute tasks according to stringent data governance requirements, including DEM/Terrain production, H&H model input refinement, GIS database final deliverable assembly, and metadata production and validation. Provided services in the Bayou Cocodrie, Bayou Macon, Tensas, and Boeuf watersheds.
06/19 - Ongoing	**ADECA OWR, AlabamaFlood.com Website Design, Implementation, and Maintenance, Statewide, Alabama** Lead GIS analyst for managing, compiling, and publishing geospatial flood map data on the AlabamaFlood.com website. Tasks include updating datasets as watershed-level projects reach milestones (such as outreach meetings, Flood Risk Review meetings, appeal periods, Preliminary status, etc.), maintaining the health of the website by performing server updates and file management, improving the architecture of the ArcGIS Enterprise deployment, editing webpage code to add features and increase the functionality of the site according to the client’s needs, and producing additional web pages specific to project areas on an as-needed basis.
11/19 - Ongoing	**ADECA OWR, Base Level Engineering Projects, Statewide, Alabama** Lead GIS analyst for topographic surface development and non-regulatory product development, including overlay analysis of vector GIS layers for comparing changes in floodplain mapping as well as water surface elevation and depth rasters. Tasks included creation of seamless LiDAR coverage across the watershed for engineering analysis being performed, database creation and integration, development of custom scripts and tools to define repeatable Base Level Engineering processes, the supervision of a team of analysts, and QA/QC reviews on completed work. BLE watershed efforts have been completed for 17 HUC8 watersheds.

16 STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
01/18 - Ongoing	**ADECA OWR, Risk MAP Services, Statewide, Alabama** GIS analyst for floodplain mapping and non-regulatory product development. Additional tasks included FIRM panel production, DFIRM database development, Flood Insurance Study Report generation, and the production of all final deliverables to FEMA specifications, adhering to delivery procedures via the Mapping Information Platform (MIP). Also produced map products for use at client and stakeholder meetings at various stages of progress of the project such as Project Discovery, Scoping, Flood Risk Review, CCO, and Resilience meetings.
09/24 - Ongoing	**FEMA PTS Contract, Zone 1, FEMA Region 2, New York** GIS analyst overseeing the production of Digital Elevation Model terrain products in Hamilton County, NY. Provided guidance to team members on best practices and provided review services for completed deliverable products. Will provide expertise and review for regulatory floodplain mapping production tasks.
11/16 - 08/20	**Missouri SEMA, Watershed Risk MAP Services, Statewide, Missouri** Lead GIS analyst for non-regulatory products of several HUC8 watersheds including Meramec, Big River, and Lower Missouri. Task included overseeing and executing the production and management of Flood Risk Database vector feature classes, raster datasets, and tabular datasets. Datasets include Areas of Mitigation Interest, User Defined Facilities for HAZUS operations, Changes Since Last FIRM, Water Surface Elevation rasters, Depth rasters, and Annual Chance/30-yr Chance rasters. Adhered to FEMA specifications and guidances. Developed the Flood Risk Report and Flood Risk Map for presentation to SEMA and local communities. Stakeholders benefited from Flood Risk Products through gaining a more complete understanding of flood risk and by entering conversations of mitigation efforts.
10/18 - 06/19	**City of San Diego, GIS Services for Tracing Surface Runoff and Stormwater Network Flow, San Diego, California** GIS analyst responsible for developing custom workflows, Python scripts, and geoprocessing services to create desktop tools as well as web applications for tracing surface flow and network flow in Chollas Creek Watershed. Coordinated with internal ArcGIS Portal administrators, clients, and contractors to produce software meeting client requirements. Website deliverable allows for dynamic flow tracing based on user-defined input locations and parameters. Provided technical support services to the City of San Diego Storm Water Division to reconcile and update the City’s storm drain GIS data layers. Efforts included merging and adjusting storm drain infrastructure locations to match aerial imagery base maps, geo-referencing and digitizing drainage systems from engineering as-built plans, mapping of drainage area boundaries, the development of storm drain geometric networks, and the creation of a storm water flow path trace web application for pollution investigations.
08/19 - Ongoing	**City of Lebanon, GIS Services for the Implementation of Spillman Flex Emergency Routing Software, Lebanon, Tennessee** Client manager, GIS task lead, and team lead for implementing 3rd party software (Flex by Spillman/Motorola) for emergency routing, dispatching, and reporting. Responsibilities include client communication, budget management, knowledge transfer to internal City staff, and recommending best practices. Worked alongside City GIS staff and third-party software vendors to identify needs of the City and configure the software appropriately. Developed Python scripts and ModelBuilder functions to correctly format existing City infrastructure data. Implemented routing functionality for City mobilization responses to emergency calls. Constructed, validated, and published an ESRI Network Dataset and Geocoding Service to be queried for efficient routing. Enabled the functionality for network barriers to account for street closures. Provided assistance, training, and on-call support as needed for City staff. Provided a system of data continuity so the City would be poised to quickly and efficiently respond with emergency services, as well as maintain a resilient, dynamic, and productive data environment for the future.

16. STAFF EXPERIENCE:

Firm employed by	WSP USA Inc.		
Name	Cindy Popplewell, PE, PMP, CFM	Years of relevant experience with this employer	28
Title	NFIP Lead	Years of relevant experience with other employer(s)	1
Degree(s) / Years / Specialization	MS / 1995 / Civil Engineering; BS / 1994 / Civil Engineering		
Active registration number / state / expiration date	Professional Engineer: 105863 / TN / 01/31/2027; Certified Project Management Professional; Certified Floodplain Manager		
Year registered 2000	Discipline: Civil Engineer		
Contract role(s) / brief description of responsibilities	Ms. Popplewell will lead NFIP tasks for this contract. She has served as project manager and senior planner on several Disaster Mitigation Act (DMA) mitigation plans for both State and local communities and is experienced in leading disaster recovery efforts including FEMA grant application preparation/review, benefit-cost analysis, and residential and stormwater infrastructure damage assessments. Additional project work includes floodplain management, hydrologic and hydraulic modeling and FIRM development; NFIP/Community Rating System compliance; and municipal stormwater permitting, and stormwater utility development and billing. **Meets MPR #4k**		

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 years of experience specified in the applicable MPR(s).
08/13 - Ongoing	**ADECA OWR - Map Modernization, Risk MAP and Support Services, Statewide** NFIP lead and senior planner for the development of an Alabama-specific “Post-Flood Recovery Guidebook” to assist communities in: responding to a flood or hurricane event, enforcing the National Flood Insurance Program (NFIP) requirements for rebuilding efforts, and outlining suitable disaster recovery measures that will help reduce future flood damages. The Guidebook not only looks at strategies and methods to reduce future flood damages but also considers multi-objective planning strategies to restore and preserve the natural resources and environments associated with Alabama’s floodplains. Project Manager responsible for drafting the Alabama Rural Floodplain Management Handbook. Tasks included: researching existing materials from similar communities in other states; conducting interviews with Subject Matter Experts on rural community development’ utilizing basic principles for floodplain management from the “Alabama Quick Guide” and the “Alabama Post-Flood Recovery Guidebook” in the handbook; and providing online links and brief descriptions of various FEMA, ASFPM, USACE, and other applicable organizations’ guidance documents that provide basic but essential principles and requirements for compliant floodplain development. Course instructor for one-day course covering FEMA’s SDE Tool objectives and functions, creating SDE Assessments, quality assurance reviews, and field preparations. Multiple hands-on exercises were included to fully utilize the SDE Tool. Developed an automated process for **Community Assistance Contacts (CACs)** and data collection requirements to streamline the interview process with communities and increase the number of CACs performed each year with communities. Prepared summary documents; recommendations for all TSF characteristics addressing such activities as enforcement, **CAVs/Audits**, standard operating procedures, training, outreach and risk awareness products; and tracking reports for improving rankings within the Tiered State Framework.

16 STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
05/13 - Ongoing	**Missouri SEMA, MAP Modernization, Risk MAP, and Hazard Mitigation Services, Statewide, Missouri** Project manager responsible for preparation of the Missouri 2024-2027 NFIP Strategic Plan. Tasks included on-going meetings with the State NFIP Coordinator and staff over several weeks to fully review and evaluate the NFIP coordination efforts within each states’ comprehensive floodplain management programs per the Community Assistance Program – State Support Services Element (CAP-SSSE) Tiered State Framework Playbook v4.0. Prepared summary documents, recommendations, and tracking reports for improving rankings within the Tiered State Framework. Senior planner responsible for the preparation of the State of Enhanced Missouri Multi-Hazard Mitigation Plan Update (2013, 2018, and 2023). Plan preparation included facilitating planning committee meetings, conducting hazard research, local plan roll-up, guiding the development of mitigation strategies, and compiling plan documents for approval by FEMA as an Enhanced State Plan. Additions for the 2023 enhanced plan include review of public assistance projects and future recommendations. Senior planner for preparation outreach flyers for non-NFIP communities.
11/24 - 11/25	**North Carolina DEM, Flood Risk MAP and Support Services, Statewide, North Carolina** Project manager responsible for preparation of the North Carolina 2024-2027 NFIP Strategic Plan. Tasks included on-going meetings with the State NFIP Coordinator and staff over several weeks to fully review and evaluate the NFIP coordination efforts within each states’ comprehensive floodplain management programs per the Community Assistance Program – State Support Services Element (CAP-SSSE) Tiered State Framework Playbook v4.0. Prepared summary documents, recommendations, and tracking reports for improving rankings within the Tiered State Framework. Prepared summary documents; recommendations for all TSF characteristics addressing such activities as enforcement, CAVs/Audits, standard operating procedures, training, outreach and risk awareness products; and tracking reports for improving rankings within the Tiered State Framework.
05/25 - Ongoing	**Iowa Department of Natural Resources, 2025 NFIP Strategic Plan, Statewide** Project manager responsible for preparation of the Iowa 2025-2028 NFIP Strategic Plan. Tasks included on-going meetings with the State NFIP Coordinator and staff over several weeks to fully review and evaluate the NFIP coordination efforts within each states’ comprehensive floodplain management programs per the Community Assistance Program – State Support Services Element (CAP-SSSE) Tiered State Framework Playbook v4.0. Prepared summary documents, recommendations, and tracking reports for improving rankings within the Tiered State Framework.
08/23 - Ongoing	**COVID-19 Pandemic HMA Grant Program Technical Assistance, Multiple Regions, Application Review, 2023 – HMTAP Task Order 70FA6022F00000066** Under this multi-regional Task Order, managed the efforts for FEMA Region 10 Hazard Mitigation Grant Program (HMGP). Coordinated the technical review of over 24 sub-applications under 4 disasters: DR-4499-Oregon, DR-4481-Washington, DR-4593-Washington, DR-4534-Idaho, and DR-4533-Alaska. Each subapplication review included completion of the Region 10 Application Review Tool (ART), evaluating backup documentation for technical feasibility and cost-effectiveness, ensuring project compliance with relevant codes and standards, ensuring compliance with the National Flood Insurance Program, and evaluating project eligibility based on HMA Guidance and relevant statutes.

16. STAFF EXPERIENCE:

Firm employed by	GOTECH, Inc.		
Name	John Biggs	Years of relevant experience with this employer	7
Title	Party Chief	Years of relevant experience with other employer(s)	28
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		Mr. Biggs is presently a Survey Party Chief with over 20 years of survey experience. Mr. Biggs has a working knowledge of total station operation, EDM equipment, Fathometer/Hydro equipment, data collection and GPS equipment. He has been involved in nearly every aspect of field surveying to include: - Levee centerline profile surveys - First order baseline traversing - Property boundary surveys - Cadastral layout - Cross section surveys - Topographic surveys - Construction layout - Automated hydrographic surveys - Photogrammetric surveys - Infra-structure surveys ▪ Certified Traffic Control Technician – ATSSA Expires 7/11/2027 ▪ Certified Traffic Control Supervisor – ATSSA Expires 7/12/2027 ▪ Registered Flagger – ATSSA Expires 10/21/2026 • OSHA 10-hour Construction Safety & Health • TWIC Expires 11/26/2024 • Security Passport – Safety Council – BR ID# 9711780	

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 years of experience specified in the applicable MPR(s).
09/21 - 08/22	LA DOTD (4400017068) Louisiana Watershed Initiative (LWI) Modeling Contract Region No. 2 Jackson, Lincoln, Caldwell, Franklin and Catahoula Parishes / subconsultant to Freese & Nichols Mr. Biggs was the survey technician for the Region 2 Master Drainage Plan work. The sites were in North Louisiana in the Ouachita Basin and lower Red River Basin. Hundreds of miles of streams were surveyed and hundreds of structures were surveyed to provide the raw data for the Freese & Nichols modeling technicians.
11/22 - 06/23	LA DOTD (4400017069) Louisiana Watershed Initiative (LWI) Modeling Contract Region No. 3 Carroll, West Carroll, Morehouse, Richland, Madison and Tensas Parishes / subconsultant to WSP Working as a subconsultant to WSP, GOTECH provided stream cross section data and structure details for the modeling effort. Mr. Biggs was the survey technician for the project providing quality control reviews for the project and providing coordination for the transmittal of raw data to the modelers.

STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
02/19 - Present	Pointe-Marie: A New Village, Baton Rouge, LA Mr. Biggs is currently the Lead Survey Technician for the on-going design and construction of Pointe-Marie. This project entails a planned community development of a mixed-use village encompassing over 120 acres. His duties include the layout of roadways, drainage, grading, sanitary sewer system, utility layout and coordination and overseeing construction activities. Phase I is complete and he is working on Phase II. Mr. Biggs also has been responsible for the boundary survey field work on the development. This work includes geometric calculations, property corner setting, elevation surveys and lot layouts. Working to improve drainage across overhead utilities and underground pipelines in the north end of the property to include Entergy Transmission and Distribution, Shell Pipeline, Baton Rouge Sewer Force Main and Entergy Gulf States.
11/19 - 05/21	New Orleans Street Rehabilitation: RR101, RR102 – New Orleans Department of Public Works, Orleans Parish, LA Mr. Biggs was a Survey Technician providing topographic surveying services for roadway rehabilitation design. The project included static GPS control surveys, elevation level loop runs, and conventional topographic field surveys. Topographic field information gathered included roadway/pavement surface features, drainage structures, both surface and subsurface utilities, and survey data on all features within the apparent right-of-way. All field data was collected in standard DOTD electronic feature code format.
11/19 - 06/21	New Orleans Streets Rehab: RR119 RR120 – New Orleans Department of Public Works, Orleans Parish, LA For the roadway improvement projects in New Orleans, Mr. Biggs was the Lead Survey Technician for GOTECH. He has conducted topographic surveys that were used as the basis for new roadway improvement designs. Gutter line surveys were used for drainage calculation and his pavement surveys were used as the basis for new roadway geometric designs (vertical curves and horizontal geometry). All survey data was compiled in detailed plan/profile sheets resulting in a complete construction document package.

16. STAFF EXPERIENCE:

Firm employed by	GOTECH, Inc.		
Name	Bruce Dyson, PE, PLS	Years of relevant experience with this employer	29
Title	Field Supervisor	Years of relevant experience with other employer(s)	17
Degree(s) / Years / Specialization	BS / 1978 / Civil Engineering		
Active registration number / state / expiration date	Professional Engineer: 20162 / LA / 03/31/2026; Professional Land Surveyor: 4670 / LA / 03/31/2026		
Year registered: 1982; 1992	Discipline: Civil Engineer; Land Surveyor		
Contract role(s) / brief description of responsibilities	Mr. Dyson has been involved in a variety of survey projects. He is experienced in the areas of civil engineering, project management, construction administration and management, and cost estimating. Specific areas of expertise include drainage improvements, land surveying and flood control. Mr. Dyson has supervised up to five survey crews at GOTECH working on a variety of public and private contracts such as contracts with LA DOTD, US Army Corps of Engineers, Federal Aviation Administration, Parish governments, and New Orleans Sewerage & Water Board. ▪ Traffic Control Technician – ATSSA Expires 06/21/2026 ▪ Traffic Control Supervisor – ATSSA Expires 06/22/2026 ▪ Registered Flagger – ATSSA Expires 08/04/2026		

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 years of experience specified in the applicable MPR(s).
11/22 - 06/23	LA DOTD: 4400017069: Louisiana Watershed Initiative (LWI) Modeling Contract Region No. 3 Mr. Dyson was the project manager for the Region 3 Master Drainage Plan Project. GOTECH served as a subconsultant to WSP in Region 3. The work included 105 stream cross sections and 164 structure surveys.
09/21 - 08/22	LA DOTD: 4400017068: Louisiana Watershed Initiative (LWI) Modeling Contract Region No. 2 Mr. Dyson was the project manager for the Region 2 Watershed Initiative Project. GOTECH field crews provided topographic and bathometric surveys in North Louisiana as a part of the master drainage plan work. Over 135 structures were surveyed and over 150 miles of streambeds were surveyed as part of the modeling efforts.
04/15 - 09/19	LADOTD Contract No. 4400004485; State Project No. H.009320: Acadian Rd Roundabout, Route LA 20 (Canal Blvd) & Local Routes (Back Street, Jackson Street, Thompson Place), Thibodaux, LA - Mr. Dyson was the Engineering / Survey Manager providing professional supervision and project management oversight for the right-of-way mapping services to support parcel acquisition required for design of a new road roundabout in Thibodeaux, Louisiana. Project included field property surveys performed to DOTD survey standards and parcel title work reviews of affected properties. Final right-of-way map and parcel description deliverables, along with MicroStation parcel mapping files, were reviewed and submitted in accordance with established DOTD Location and Survey delivery requirements.

STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
10/17 - 03/18	LADOTD Contract No. 4400002746; State Project No. H. 012602.5: I-10 at Morrison Rd Interstate Lighting, Orleans Parish, LA – Mr. Dyson provided project oversight as Engineering / Surveyor Manager with supervision and project management of topographic surveys to support various interstate lighting design projects. The projects included static GPS control surveys and topographic field surveys performed to DOTD survey standards within the full limits of the highway interchange. The survey field information gathered included roadway surface features, drainage structures, designated subsurface utility locations, and structure data on elevated portions of the interstate bridge overpass. Final deliverables, and MicroStation mapping files, were certified and submitted in accordance with established DOTD Location and Survey delivery requirements.
02/14 - 11/16	LADOTD Project No. H.007855: LA Hwy 431 at LA Hwy 934 Intersection Improvements, Ascension Parish, LA – Mr. Dyson was the quality control reviewer for the Hwy 431 / 934 Intersection Improvements project. GOTECH provided topographic surveying and mapping services for the project. The work was located in Ascension Parish on what are currently two-lane highways with narrow shoulders and adjacent open ditch drainage. GOTECH field crews obtained field data in a format that was used in MicroStation CADD drawings with Inroad’s software. GOTECH also mapped the data in an AutoCAD version for the designers to use. The topographic map showed existing features as pavement, ditches, culverts, lighting, signs, utility poles, traffic controls, driveways, and other utilities. GOTECH also developed an existing drainage map for the project. The watershed covered approximately 25 acres of contributing drainage area.
10/12 - 12/14	LADOTD Project No. H.009276: I-10 (LA 30 to LA 22), Ascension Parish, LA – Mr. Dyson was the quality control reviewer for the Interstate 10 project in Ascension Parish. The project included a segment of the Interstate from LA Hwy 30 to LA Hwy 22. Cross Sections were taken from right-of-way line to right-of-way line to provide data for the Interstate widening design. Overpass details were obtained to show bridge details, bent locations, piling spacing and clearance dimensions.
09/07 - 09/13	LADOTD Project No. 704-92-0036 & 704-92-0037: New Orleans Submerged Streets Repair-Permanent Repair to Federal Aid Eligible Roads as a Result of Damage Due to Hurricane Katrina in 2005 - Mr. Dyson was the Engineering Coordinator for this project. GOTECH provided topographic surveying, preliminary and final roadway plans, and construction support for the project streets located in Jefferson and Orleans Parishes.
02/06 - 08/11	LADOTD Project No. 052-02-0024: John James Audubon Bridge Design/Build Project, St. Francisville, LA - Mr. Dyson was an assistant design engineer on the project, performing quality control reviews on the construction documents. The cable-stayed bridge structure crossed the Mississippi River linking the St. Francisville area with the New Roads community. Approximately 3.5 miles of a mainline and sideroad network were designed by GOTECH. The project involved intersection designs, drainage analysis, alignment geometric designs, profile/grade analysis and cost estimating.

16. STAFF EXPERIENCE:

Firm employed by	GOTECH, Inc.		
Name	Robert Price, PLS	Years of relevant experience with this employer	7
Title	Field Supervisor	Years of relevant experience with other employer(s)	20
Degree(s) / Years / Specialization	MS / 2009 / Engineering & Technology Management BS / 1997 / Survey & Mapping BS / 1993 / Industrial Technology & Building Construction		
Active registration number / state / expiration date	Professional Land Surveyor: 4889 / LA / 03/31/2026		
Year registered: 1992	Discipline: Professional Land Surveyor		
Contract role(s) / brief description of responsibilities	Mr. Robert Price is a Licensed Professional Land Surveyor with more than 20 years of experience in land surveying and mapping; project management; and personnel management. He has provided surveying and utility location designation support for pipelines, road improvement, LNG facilities, oil and gas well locations, and private development projects. ▪ Traffic Control Technician – ATSSA Expires 06/21/2026 ▪ Traffic Control Supervisor – ATSSA Expires 06/22/2026 ▪ Registered Flagger – ATSSA Expires 08/12/2026		

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 years of experience specified in the applicable MPR(s).
10/17 - Present	Move Ascension Henry Road Safety Widening (LA 73 Tillotson Road/Akins Road) Ascension Parish, LA Mr. Price is the project manager providing the topographic surveying and mapping services to support the design and right-of-way acquisition for the Move Ascension - Henry Road widening project. Project surveys were in support of a new design to widen approximately 8-miles of roadway in Ascension Parish. GOTECH is a Sub-Consultant to GSA, Inc.
11/22 - 06/23	LA DOTD: 4400017069: Louisiana Watershed Initiative (LWI) Modeling Contract Region No. 3 Working as a subconsultant to WSP, GOTECH provided stream cross section data and structure details for the modeling effort. Mr. Price was the survey coordinator for the project providing quality control reviews for the project and providing coordination for the transmittal of raw data to the modelers.
09/21 - 08/22	LA DOTD: 4400017068: Louisiana Watershed Initiative (LWI) Modeling Contract Region No. 2 Mr. Price was the project survey coordinator for the Region 2 Master Drainage Plan work. The sites were in North Louisiana in the Ouachita Basin and lower Red River Basin. Hundreds of miles of streams were surveyed and hundreds of structures were surveyed to provide the raw data for the Freese & Nichols modeling technicians.

STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
04/15 - 09/19	LADOTD Contract No. 4400004485; State Project No. H.009320: Acadian Rd Roundabout, Route LA 20 (Canal Blvd) & Local Routes (Back Street, Jackson Street, Thompson Place), Thibodaux, LA Mr. Price was the Professional Land Surveyor providing professional supervision and project management oversight for the right-of-way mapping services to support parcel acquisition required for design of a new road roundabout in Thibodeaux, Louisiana. Project included field property surveys performed to DOTD survey standards and parcel title work reviews of affected properties. Final right-of-way map and parcel description deliverables, along with MicroStation parcel mapping files, were reviewed and submitted in accordance with established DOTD Location and Survey delivery requirements.
04/18 - 06/18	LADOTD Contract No. 4400005891; State Project No. H.012479: Local Road Safety Program / Safe Routes to School Peltier Park Sidewalks Mr. Price was the Survey Project Manager managing the topographic survey to support design for various sidewalk, driveway and handicapped curbed ramp improvements along the perimeter of Peltier Park in Thibodeaux, Louisiana. Project field activities included a 2,400-linear foot existing conditions and utility survey utilizing Louisiana DOTD electronic data collection standards. The final deliverables for the project consisted of detailed plan/profile sheets drawn for the project alignment.
05/17 - 07/17	LADOTD Contract No. 4400005660; State Project No. H.012874.5: I-55 at Hwy 22 Interchange Lighting, Tangipahoa Parish, LA As Survey Project Manager, Mr. Price professionally managed the topographic and utility location survey services in support of design plans and specifications for the I-55 at LA Hwy 22 Interchange Lighting in Tangipahoa Parish. Survey crews conducted a complete topographic, elevation and utility survey within the entire limits of the I-55 Interchange with LA Highway 22. The topographic survey included data collected on the highway crossing exit/entrance ramps and elevated overpasses in addition to the location of both above ground and subsurface utilities required to facilitate design of lighting structures. All final deliverables were certified and submitted in strict accordance with DOTD Location and Survey standards.
10/17 - 03/18	LADOTD Contract No. 4400002746; State Project No. H.012602.5: I-10 at Morrison Rd Interstate Lighting, Orleans Parish, LA Mr. Price provided project oversight as a Professional Land Surveyor with supervision and project management of topographic surveys to support various interstate lighting design projects. The projects included static GPS control surveys and topographic field surveys performed to DOTD survey standards within the full limits of the highway interchange. The survey field information gathered included roadway surface features, drainage structures, designated subsurface utility locations, and structure data on elevated portions of the interstate bridge overpass. Final deliverables, and MicroStation mapping files, were certified and submitted in accordance with established DOTD Location and survey delivery requirements.
08/03 - 10/07	LADOTD U.S Hwy 165, Georgetown to Tullos, Grant and LaSalle Parishes, Louisiana Mr. Price served as the Survey Coordinator responsible for deed research and property monument recovery in connection with the property survey along a six (6) mile section of the existing U.S. Hwy 165 roadway from Georgetown to Tullos. The survey consisted of locating and retracing the boundary lines of approximately 100 property owners. Several restorations of Public Land Survey corners were undertaken as required in the determination of boundary lines.

16. STAFF EXPERIENCE:

Firm employed by	Volkert, Inc.		
Name	Randy Denmon, PE, PLS	Years of relevant experience with this employer	31
Title	Project Engineer/Surveyor	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization	MS / 1996 / Civil Engineering BS / 1992 / Mathematics		
Active registration number / state / expiration date	Professional Land Surveyor: 4798 | LA | 03/31/2027 Professional Engineer: 29390 | LA | 03/31/2027		
Year registered: 1996; 2001	Discipline: Civil Engineer		
Contract role(s) / brief description of responsibilities	Mr. Denmon has over 30 years' experience in civil engineering/construction management and land surveying, primarily as a Public Works and Flood Control Engineer. Mr. Denmon is a registered Civil Engineer and Surveyor in the State of Louisiana. Mr. Denmon has vast experience working on Water Resource, Flood Control, and Transportation projects, and well as Surveying. His experience includes: hydraulic design, construction management, analysis of water supply structures, watershed and stream modeling, and flood mapping. In his career, Mr. Denmon has been the lead engineer in flood mapping or stream modeling projects on over 50 major, named watersheds in Louisiana for such clients as: La. Department of Transportation, and other State Agencies, Watershed and Lake Districts, and many local governments. He has also managed dozens of roadway projects for the DOTD and local governments. He is a certified DOTD Project Manager. Mr. Denmon has extensive experience with Microstation, AutoCAD, Intergraph, and Bentley computer aided design applications, and the US Army Corps of Engineers' HEC-RAS and HMS hydrologic modeling programs.		

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 years of experience specified in the applicable MPR(s).
04/20 - Ongoing	Retainer Contract For Dam Inspection and Related Engineering of State Regulated Dams, LADOTD Surveying, Field inspection and dam safety reports for State regulated dams. Work includes topographic surveying and H&H modeling of dams, lakes and discharge channels, and field inspection reports with the LADOTD's Terraflex software. Final stamped reports of all inspections submitted to the LADOTD.
12/21 - 01/23	IDIQ Contract for Louisiana Watershed Initiative (LWI) Modeling Contract, Region 3, DOTD, State Contract No. 4400017069. Sub to Wood for topographic surveying on streams and bridges. Four Task Orders for $1,426,244. Surveyor in charge of all survey work.
10/17 -02/23	Retainer Contract for Dam Inspection and Related Engineering, of State-Regulated Dams, Statewide. Project Manager for Surveying, Field inspection and dam safety reports for State regulated dams. Work includes topographic surveying and H&H modeling of dams, lakes and discharge channels, and field inspection reports with the LADOTD's GeoCortex software. Final stamped reports of all inspections submitted to the LADOTD.
06/05 - 07/11	Statewide Dam Breach Analysis (Statewide, LA). Dam Breach Analysis and Emergency Action Plans (EAP) on 20 dams owned or regulated by the State of Louisiana. Work included downstream basin, bridge, and dam surveys on selected dams, the construction of HEC-RAS computer models to model dam breaches, production of final reports, dam hazard level classifications, flood inundation maps, and EAP's.

STAFF EXPERIENCE

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 years of experience specified in the applicable MPR(s).
01/06 - 01/08	Cross Lake Erosion Repairs, Project Manager. Work included: 1) Erosion repair that included underwater concrete and riprap, 2) the completion of an Emergency Action Plan in accordance with LADOTD dam safety regulations; 3) final design, bidding, and award for the clearing and grubbing of the dam; 4) detailed field surveys of the dam; and 5) a full geotechnical analysis of the dam that included 26 borings, lab analysis, the installation of 6 piezometers, groundwater investigation, stability analysis, through see page analysis, undersee page analysis, and recommendations for corrective measures for the dam.

16. STAFF EXPERIENCE:

Firm employed by	Volkert, Inc.		
Name	Clinton Patrick, PE, PLS	Years of relevant experience with this employer	9
Title	Project Engineer/Surveyor	Years of relevant experience with other employer(s)	3
Degree(s) / Years / Specialization	BS / 2012 / Civil Engineering		
Active registration number / state / expiration date	Professional Engineer: 40919 | LA | 03/31/2025 Professional Land Surveyor: 5311 | LA | 09/30/2025		
Year registered	2016; 2023	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities	Mr. Patrick has 10 years' experience. His skills include Team & Project Management, Relationship Building, Critical Analysis, Strategic Planning, Delegation, Budgeting, HEC-RAS, Autodesk Storm 6 Sanitary Sewer Analysis, MicroStation, AutoCAD Civil 3D. His certifications include: Class IV Wastewater Operator		

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 years of experience specified in the applicable MPR(s).
11/24 - 12/27	Kings Highway Improvements, City of Shreveport. Project Manager. Volkert is leading the planning and design efforts for the potential transformation of Kings Highway near Centenary College in Shreveport, Louisiana. The project envisions a strategic road diet, reducing the current four-lane roadway to a two-lane configuration to promote safer and more accessible travel for all users. By incorporating enhanced pedestrian access, dedicated bike lanes, and the option for side street parking, the proposed improvements aim to create a vibrant and inclusive streetscape that meets the needs of the community.
11/24 - 12/26	SportTran Bus Stops, City of Shreveport. Project Manager. Volkert will provide project management and engineering services for the design and construction of 110 bus stops to include bus shelter pads while ensuring compliance with ADA guidelines.
01/15 - 12/25	City of Monroe - Georgia Street Pump Street. Design of a flood pumping station for the City of Monroe to address an area that was identified as a repetitive loss area. The project needed to meet key guidelines to facilitate Louisiana Statewide Flood Control funding while ensuring that the pump station would operate during events of power loss. The project included the pumping station, retention pond for additional flood storage and a backup generator to ensure that the pumping station would be operational during storm events.
05/15 - 12/22	I-20 Economic Board - Nutland Road to Lowes I-20 Frontage Road. Part of the design team for a frontage road along I-20 on the southern side connecting the existing Nutland Road to its termination near Garrett Road on the eastern end of the project. The project included road and drainage structures that required the installation of box culverts to cross major drainage structures in the area. The project also required the expansion of the City's water and sewer system. A new water mail along with a new gravity sewer main and sewer lift station were required to service the future development along the newly constructed Frontage Road.
08/15 - 08/19	Sterlington Park, LLC - Somerset Park. 5-Phase Residential Development with approximately 850 lots which included roadway, drainage, detention, storm sewer, gravity sewer, sewer lift station and main, and water main. Project included 2 detention areas and all underground drainage systems.

16. STAFF EXPERIENCE:

Firm employed by	Volkert, Inc.		
Name	Steven Lengefeld	Years of relevant experience with this employer	3
Title	Survey Support	Years of relevant experience with other employer(s)	26
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		Mr. Lengefeld will be coordinating survey crews and developing plans. Mr. Lengefeld serves as the Survey Manager for Volkert's Monroe, Louisiana office. For the past 23 years, Mr. Lengefeld has been actively engaged in the field of survey. He does the processing of survey data, cost estimates, & drafting, especially as it relates to property plats, easements and right of ways. Mr. Lengefeld has used several Cad platforms and various design packages, such as Microstation V8i, AutoCAD 2018 & 2021, Inroads V8i, Softdesk & Civil 3D and Trimble software to process survey data and produce property plats and other drawings as it pertains to survey. Mr. Lengefeld also writes legals for property plats. He works with the project managers and engineers to provide quality survey that is needed for their projects. Mr. Lengefeld's responsibilities include preparation of preliminary and final plats and legals. He manages the scheduling of five survey crews and does all the purchasing of equipment and survey supplies. Mr. Lengefeld is in contact with clients as it relates to surveying and communicates with each survey crew on a daily basis for direction of each day.	

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 years of experience specified in the applicable MPR(s).
04/20 - Ongoing	Retainer Contract For Dam Inspection and Related Engineering of State Regulated Dams, LADOTD Surveying, Field inspection and dam safety reports for State regulated dams. Work includes topographic surveying and H&H modeling of dams, lakes and discharge channels, and field inspection reports with the LADOTD's Terraflex software. Final stamped reports of all inspections submitted to the LADOTD.
2014 - Ongoing	Atmos Energy. Work directly with Atmos Energy on several projects across North Louisiana. These projects include topographic survey, layout of gas lines and right of ways, property plats and legals for above ground right of way and below ground right of way and easements.
03/23 - 12/23	AEP - Bloomburg to Hosston Station, Bloomburg to South Texarkana, Ashdown to 12th Street Texarkana, Arkansas surveys – Directed the survey crews and processed all survey data for topographic/boundary and right of way stakeout for AEP. Beckville-Rock Hill Texas boundary survey – Directed the survey crews and processed all survey data for topographic and boundary survey for AEP. Tommy Bradley – TCR Booneville-Branch, Arkansas right of way/construction staking survey – Directed the survey crews and processed all survey data for right of way/construction staking survey for AEP.
2014 - 2021	NRCS Conservation Easements. Worked on several NRCS projects throughout North and central Louisiana. His work included courthouse research, managing and directing the survey crew in topographic and boundary survey work on site, processing survey data, creating drawings into property and boundary plats, writing legals and being in communication with property owners as it relates to the progress of each survey.

16. STAFF EXPERIENCE:

Firm employed by	Volkert, Inc.		
Name	Bryan Ardoin	Years of relevant experience with this employer	3
Title	Party Chief	Years of relevant experience with other employer(s)	6
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	Mr. Ardoin will be providing survey services as a party chief. Mr. Ardoin joined Volkert in 2021 and has 6 years of experience as Party Chief and 3 years of experience as an Instrument Person in 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 years of experience specified in the applicable MPR(s).
09/23 - 11/23	DOTD Bridge surveys – Caddo Parish and Red River Parish – Instrument person for topographic surveys of two bridges in Caddo Parish and one bridge in Red River Parish, Louisiana.
11/23 - 12/23	AEP – Booneville-Branch, Arkansas right of way/construction staking survey – Party Chief for right of way/construction staking survey for AEP.
01/23 - 12/23	Atmos Gas Layout/Survey – Party Chief for right of way and topographic surveys for gas line relocations for various Atmos projects throughout Northeast and North-west Louisiana.
03/23 - 12/23	AEP – Bloomburg to Hosston Station, Bloomburg to South Texarkana, Ashdown to 12th Street Texarkana, Arkansas surveys – Party Chief for topographic/boundary and right of way stakeout for AEP.
03/23 - 12/23	Fifth Louisiana Levee District – Items 340-R, 366-R and 393-R Levee surveys. Party Chief for boundary and topographic survey in Tensas Parish and Concordia Parish, La.

SECTION 17

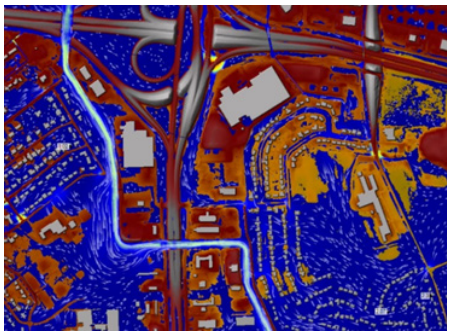
17. FIRM EXPERIENCE:

Firm name	WSP USA Inc.	Discipline(s)*	Data Collection, Survey, Other (Flood Modeling)
Project name	Louisiana Watershed Initiative (LWI) Region 3 Model Development	Firm responsibility (prime or sub?)	Prime
Project number	4400017069	Owner's name	Louisiana Department of Transportation & Development
Project location	Northeast Louisiana	Owner's Project Manager	Jie Gu
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802; (225) 379-1483; jie.gu2@la.gov		
Services commenced by this firm (mm/yy)	11/20	Total consultant contract cost ($1,000's)	$12,000
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$7,500

In 2019, WSP was awarded a contract by LaDOTD to study Modeling Region 3 (Region) as a part of the LWI statewide modeling effort. This Region encompasses four HUC8 watersheds east of the Ouachita River in northeast Louisiana, including the Boeuf River, Tensas River, Bayou Cocodrie, and Bayou Macon watersheds. One of the added-value objectives of the LWI program was supporting development of and updating FEMA flood insurance rate maps. As such, the program guidelines for modeling, survey collection, stakeholder engagement and data collection were based on guidance and minimum standards established for development of FEMA models. In accordance with these guidelines, in Region 3 WSP provided the following services to support the program:

Relevant Features
- H&H Analysis
- Field Surveys
- Discovery (Data Collection)
- Numerical Modeling
- Community Engagement
- Technical Training
- Multi-agency Coordination
- Mitigation Project Support

- **Data Collection:** Similar to FEMA's Discovery efforts, engaged with stakeholders for information about existing models, hydraulic structure plans, and known flooding issues. In the first outreach meeting, WSP provided information about the next steps, model development timeline, and sought information from the communities about watershed characteristics.
- **Field Survey:** For over 1,000 bridge and culvert crossings, over 60 weirs and diversions, and multiple levee outlet structures across all four Region 3 watersheds. Channel cross-section data was collected at over 600 locations. All survey collection followed FEMA guidance.
- **Hydrologic & Hydraulic Analysis:** Developed two HEC-HMS models, and four large scale HUC8-wide HEC-RAS 2D rain-on-mesh models in Region 3. These watershed areas range from 500 to 2,000 square miles. Several complex USACE water control structures were also modeled in these basins. The models were calibrated to six historic events and validated against two events and then used to perform design storm analysis and consequence assessment for seven rainfall frequencies and five durations, including those typically modeled for FEMA Risk MAP studies.



- **Community Engagement:** Similar to a Flood Risk Review (FRR) meeting, WSP conducted a stakeholder meeting for community input for verification of draft calibration results to improve model accuracy.
- **Technical Training:** WSP developed training guides, an online Flipbook, and will provide in-person training to local engineers on use of Region 3 models.
- **Mitigation Project Support:** Modeled solutions for three mitigation projects identified based on community input.
- **Coordination across multiple agencies:** Worked with levee districts, municipalities, USGS, USACE, DOTD for data acquisition and model verification.
- WSP developed a wide range of **ArcGIS tools** to improve modeling efficiency and accuracy of results. These included tools to automate survey incorporation, burning channels in large region-wide LiDAR DEMs, building rating curves to determine discharges at stage-only gages, extracting and generating custom precipitation datasets.

Team Members: Edwin Watkins, Ashwini Kashelikar, Masoud Meshkat, Jacob Bates, Jordan Hayes, Kevan Lee Lum, Britton Wells

17. FIRM EXPERIENCE:

Firm name	WSP USA Inc.	Discipline(s)*	Data Collection, Survey, Other (Flood Modeling, CTP)
Project name	Missouri MAP Modernization, Risk MAP and Hazard Mitigation Services	Firm responsibility (prime or sub?)	Prime
Project number	N/A	Owner's name	Missouri State Emergency Management Agency
Project location	Statewide	Owner's Project Manager	Sydney Roberts, Floodplain Engineering & Mapping Section Manager
Owner's address, phone, email	2302 Militia Dr, Jefferson City, MO 65101; (573) 694-3062; sydney.roberts@sema.dps.mo.gov		
Services commenced by this firm (mm/yy)	10/15	Total consultant contract cost ($1,000's)	$65,000
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$43,000

Since 2005, WSP has worked with SEMA to provide Risk MAP and hazard mitigation/resiliency services across Missouri. This long-term relationship has resulted in over 40 task orders to assist the State with flood risk identification; management of the NFIP, and mitigation of hazard impacts statewide.

NFIP Activities: In support of SEMA's Floodplain Management Division, WSP has facilitated and/or developed the following:

- Training workshops for community officials with recent mapping updates to demonstrate the powerful tools available for mitigation action identification and hazard mitigation planning. Additional workshops covered HEC-RAS, elevation certificates, and building codes.
- Advance Tier in the Tiered State Framework through several rounds of NFIP Strategic Planning (FY18-21; FY21-24; and most recently FY24-27). The strategic plan and associated tracking materials are featured in ASFPM's guidance document for States.
- Outreach flyers for non-NFIP communities. Flyers were prepared to address communities that (1) did not have any existing planning or zoning regulations; (2) had existing flood insurance rate maps; and (3) had never been mapped. Messaging included the community's role within the NFIP and outlined the steps to join the NFIP.

CTP Program Activities: WSP has helped the Missouri CTP:

- Become one of the first in the nation to convert to full 2D modeling for all flood risk studies statewide across varying H&H conditions. The transition of 1D steady and unsteady modeling to 1005 rain-on grid 2D modeling has driven flood risk derivatives to support more resilient communities. To date, WSP modeled 2D studies for 39,000 square miles and is on track to achieve state-wide 2D coverage by 2027.
- Assist SEMA in initiating large-scale BLE development and provided 1D Enhanced BLE in 21 counties, 2D Enhanced BLE studies for 43 counties (which will advance to regulatory studies), and 2D BLEs for 10 counties for use as best available data.
- WSP was among the first in the nation to complete levee certifications per 44 CFR 65.10 criteria, and its National Levee Certification Program has coordinated with more than 650 levee districts, drainage districts, USACE (7), FEMA (4) and communities.
- Prepare a statewide business plan based on Stream Assessments that included analysis of the CNMS database, NFHL data and interviews with local stakeholders on areas of concern. The layout provided a logical sequencing of plans with costs to accomplish both SEMA and FEMA's goals. This business plan then drives the development of funding requests through Mapping Activity Statements.
- Host an Outreach Site that shows the project status throughout the life cycle of the various grants, displays draft data as well as housing meeting materials. Data resides on the Outreach Site for the life of the project. Stakeholder meetings such as Discovery, Project initiation, Flood Risk Review (FRR) and Community Consultation and Outreach (CCO) meetings are conducted both in person and virtually so that stakeholders have more accessibility to participate in the projects.

Relevant NFIP Features

- Conduct NFIP topical workshops
- Train community officials
- Strategic planning
- Template enforcement products
- Promote flood risk products

Relevant CTP Features

- Base level engineering
- Hydrologic & hydraulic analysis
- Field surveys
- Numerical modeling
- Floodplain mapping
- Discovery efforts
- Prelim DFIRM and FIRMs
- Post preliminary processing
- Flood risk data products
- Resilience meetings/open houses
- Business plans
- Community engagement, risk communication, technical training

Team Members: Alicia Williams, Cindy Popplewell, Ashwini Kashelikar, Josh Yarrow, Masoud Meshkat, Jacob Bates, Jordan Hayes, Kevan Lee Lum, Lisa Tuckwin

17. FIRM EXPERIENCE:

Firm name	WSP USA Inc.	Discipline(s)*	Data Collection, Survey, Other (Flood Modeling, CTP)
Project name	Alabama Risk MAP, Community Outreach and Support Services	Firm responsibility (prime or sub?)	Prime
Project number	N/A	Owner's name	Alabama Department of Economic & Community Affairs' Office of Water Resources (ADECA-OWR)
Project location	Statewide	Owner's Project Manager	Casie Pritchard, EI, CFM
Owner's address, phone, email	P.O. Box 5690 Montgomery, AL 36103; (334) 353-5650; casie.pritchard@adeca.alabama.gov		
Services commenced by this firm (mm/yy)	10/04	Total consultant contract cost ($1,000's)	$45,000
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$38,000

Since 2004, WSP has completed over 100 task orders focused on the identification and management of flood risk throughout the state for ADECA-OWR. Our modeling experience includes:

- H&H modeling of over 1,788 miles of detailed studies and over 25,540 miles of approximate studies using regression analysis, HEC-1, HEC-2, HEC-HMS, HEC-RAS, SWMM, and FLO-2D.
- Coastal flood modeling, including overland wave analysis, for 211 miles of Alabama coastline, coastal analysis, and DFIRM mapping.
- 1D and 2D BLE studies in 21 watersheds. They include H&H analysis on all Zone A flooding sources within each watershed. Flood Risk Products such as Changes Since Last Firm layers, Water Surface Elevation and Depth Grids have been developed for publication on AlabamaFlood.com.

Additionally, WSP has supported OWR's CTP program on items listed below:

- Program management, development of business plans, mapping activity statements, and FEMA funding requests.
- Over 245 public meetings including outreach meetings, trainings, and open houses for community leaders and the public.
- Successful life cycle project management on over 180 task orders.
- Preparation of over 3,656 FEMA-standard FIRMs.
- Developing and maintaining the State of Alabama's flood mapping website.
- Establishment of Alabama's LOMR Delegation Program and review of over 190 FEMA LOMR submittals.
- Updates and maintenance of the CNMS for Alabama on a project milestone completion and quarterly basis.
- Production of flood risk identification tools, such as floodplain mapping, and water surface, depth and percent-annual-chance grids, using a suite of WSP proprietary tools.
- Development of an automated process for CACs and data collection requirements to streamline the interview process with communities and increase the number of CACs performed each year with prioritized communities.

Relevant Features

- BLEs, hydrologic & hydraulic analysis
- Field surveys
- Numerical modeling
- Floodplain mapping
- Discovery efforts
- Prelim DFIRM and FIRMs
- Post preliminary processing
- Flood risk data products
- Resilience meetings/open houses
- Business plans
- Community engagement, risk communication, technical training

Community Outreach and Mitigation Strategies: WSP developed training materials and supplementary reports to support communities' business plans for land management and grant funded mitigation projects. WSP added another layer to community engagement efforts with the development of training videos available on YouTube. The video format allows users to learn at their own pace, on their own schedule, and from anywhere. Each video focuses on a different Risk MAP product and walks through a real-world example utilizing the dataset in ESRI's ArcMap to make it more relatable. By providing easily accessible training, WSP helped OWR reach more potential users and increased the use of these products. To assist communities in floodplain management and NFIP compliance, WSP developed, in close coordination with OWR, the Alabama Flood website. This website provides a geospatial interface for communities to view effective data, review preliminary data and view Risk MAP products and download effective HEC-RAS models.

Team Members: Edwin Watkins, Jordan Hayes, Paul Simmons, Jeff Zanotti, Jacob Bates, Ashwini Kashelikar, Masoud Meshkat, Brad Heilwagen

17. FIRM EXPERIENCE:

Firm name	WSP USA Inc.	Discipline(s)*	Data Collection, Survey, Other (Flood Modeling, CTP)
Project name	FEMA Risk MAP Production and Technical Services for Zone 1	Firm responsibility (prime or sub?)	Prime
Project number	N/A	Owner's name	Federal Emergency Management Agency (Ultimate Client)
Project location	FEMA Zone 1 (Regions 1, 2, 3 and 5)	Owner's Project Manager	Chance Caione, COR
Owner's address, phone, email	FEMA HQ; (202) 394-8690; chance.caione@fema.dhs.gov		
Services commenced by this firm (mm/yy)	09/21	Total consultant contract cost ($1,000's)	$205,000
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$50,000

As a primary member of the ARC Joint Venture (JV), WSP supports FEMA through the Zone 1 PTS Risk MAP Contract. Through this contract, WSP supports the efficient development and delivery of accurate, timely and relevant flood risk information to state, local, tribal and territorial (SLTT) partners throughout FEMA Regions 1, 2, 3, and 5. In addition, WSP provides Standard Operations, Risk MAP program delivery, and other technical support services to FEMA HQ and Regions. Through the ARC JV, WSP continues to perform at a high level on the Risk MAP contract, as evidenced by our Contractor Performance Assessment Report Ratings (CPARS).

Since 2021, WSP has been successfully providing comprehensive Risk MAP services across Zone 1 through the ARC JV. Select program area highlights are as follows:

Comprehensive Levee Support: SME, Guidance and Specification support, National Levee Database (NLD) management and Levee Certification Reviews through the FEMA Headquarters national Levee Control Account. In addition, WSP has executed Levee Analysis and Mapping Procedure projects and certification quality reviews through the annual FEMA Regional Production task orders. WSP also assesses and incorporates levee impacts to flood risk modeling in both 1D and 2D environments.

NFIP Ordinance Updates: WSP supports local ordinance reviews and updates in multiple FEMA Zone 1 Regions, working with SLTT partners to ensure that they have adopted compliant floodplain management regulations in coordination with the effective FIRMs. WSP also collaborates with partners on the inclusion of higher standards.

CTP NFIP Training: As part of the PTS contract, WSP supports FEMA with delivering CTP Seminars at the Emergency Management Institute (EMI) that are typically held bi-annually. WSP designed courses on topics including Post-Preliminary Processing, the Mapping Information Platform, Earned Value and Leverage, Discovery, and Mapping Tools. WSP worked on EMI approval which is an intensive review for the accessibility of the training for all audiences. WSP also supports training for three CTP Bootcamps that were shared at the National Association of State Floodplain Mangers Conference. In addition to the training above, proposed team members have developed and delivered training for Best Practices of the NFIP, Letters of Map Change, Hazard Mitigation Planning, and Emergency Operations Plans.

Relevant Features

- Base level engineering
- Hydrologic & hydraulic analysis
- Field surveys
- Numerical modeling
- Floodplain mapping
- LAMP
- Discovery efforts
- Develop FIRMs
- Issue preliminary FIRMS
- Post preliminary processing
- Flood risk data products
- Resilience meetings/open houses
- Community engagement, risk communication, technical training
- Ordinance updates

Innovations and FFRD Transition Support: WSP is in the forefront of FEMA's FFRD transition through our engagement in multiple pilot projects and initiatives. WSP has collaborated with FEMA and the USACE Hydrologic Engineering Center on the development of a new, cloud-based modeling application to enhance the FFRD methodology by developing supporting models, performing reviews, providing technical guidance, and assisting with the development of standard operating procedures. WSP conducted two pilot studies for FEMA and USACE's innovation venture aimed at advancing the FFRD methodology. These studies included the production of 35 2D HEC-RAS models and modeling efforts for nine HUC-8 watersheds in the Kanawha Basin (WV) and 26 HUC-8 watersheds in the Trinity River Basin (TX). WSP's contributions to these projects have significantly advanced the FFRD methodology and demonstrated the capability of cloud-based systems to handle large-scale hydraulic modeling and data processing tasks.

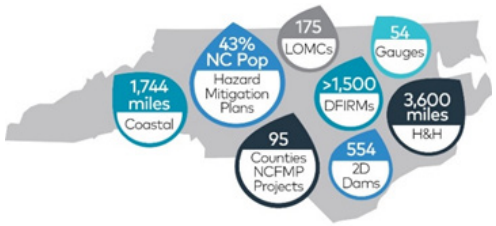
Team Members: Brad Heilwagen, Jacob Bates, Kevan Lee Lum, Masoud Meshkat, Jordan Hayes, Britton Wells, Josh Yarrow, Ben Rufenacht, Jeff Zanotti

17. FIRM EXPERIENCE:

Firm name	WSP USA Inc.	Discipline(s)*	Data Collection, Survey, Other (Flood Modeling)
Project name	North Carolina Flood Risk MAP and Support Services	Firm responsibility (prime or sub?)	Prime
Project number	N/A	Owner's name	NC Department of Public Safety, Division of Emergency Management
Project location	Statewide	Owner's Project Manager	Gary Thompson, PLS
Owner's address, phone, email	4236 Mail Service Center, Raleigh, NC 27699; (919) 733-3836; gary.thompson@ncdps.gov		
Services commenced by this firm (mm/yy)	06/04	Total consultant contract cost ($1,000's)	$28,000
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$25,000

Since 2004, WSP has provided a variety of services as a partner in support of the North Carolina Floodplain Mapping Program.

NFIP Activities
WSP worked with North Carolina's State NFIP Coordinator to prepare the FY25-FY28 NFIP Strategic Plan. WSP staff met with the State NFIP Coordinator and program staff over several weeks to fully review and evaluate the NFIP coordination efforts within North Carolina's comprehensive floodplain management program per the Community Assistance Program – State Support Services Element (CAP-SSSE) Tiered State Framework. Following the review and evaluation, WSP formed recommendations to improve and/or expand current program to ensure effective NFIP coordination efforts that best serve the citizens, property, and resources within the State.



CTP Program Activities
Our 37 assigned Delivery Orders have included work to complete the acquisition of structure and channel survey data, compilation of digital base mapping, LiDAR and aerial imagery acquisition, development of data related to riverine and coastal flood hazard areas, production of digital flood risk work maps, and the compilation of information to support the creation of FEMA Flood Insurance Studies and Digital Flood Insurance Rate Maps (DFIRMs) for 30 counties.

WSP has focused on innovation to leverage the extensive data being acquired and developed by the State to streamline processes to reduce overall cost, allowing for a transition of the scope of funded Delivery Orders to work towards more diverse metrics. WSP utilized our SMART Tool (formerly the Automated Floodplain Generator), Interactive Floodway Editor, Coastal Analysis and Mapping Tool and other custom tools to support more efficient hydrologic and hydraulic analysis and review of flood risk data. WSP has performed:

- Studies in 30 Counties
- >1,100 miles of detailed studies
- 2,000 miles of limited detail studies
- 200 miles of redelineation
- 50 miles of approximate studies
- 5,600 miles of model upgrades
- 1,744 miles of coastal studies
- Survey of nearly 30,000 First Floor Elevations
- Preparation of over 1,500 riverine DFIRM panels including five countywide FIS Reports

In 2024, WSP performed simplified 2D Rain-on-Grid modeling, developed FLOOD rasters, Draft FIRM databases and CNMS, calculated flood hazard risk and evaluated building-level flood mitigation strategies for unstudied streams in 35 HUC-10 watersheds.

Team Members: Masoud Meshkat, Ashwini Kashelikar, Al Souid, Cindy Popplewell, Garrett Shields

Relevant Features
- Strategic planning
- Hydrologic & hydraulic analysis
- Field surveys
- Numerical modeling
- Floodplain mapping
- Discovery efforts
- Prelim DFIRM and FIRMs
- Post preliminary processing
- Flood risk data products
- Resilience meetings/open houses
- Business plans
- Community engagement, risk communication, technical training

17. FIRM EXPERIENCE:

Firm name	GOTECH, Inc.	Discipline(s)*	Survey
Project name	Louisiana Watershed Initiative (LWI) Modeling Contract Region No. 3	Firm responsibility (prime or sub?)	Sub
Project number	4400017069	Owner's name	LADOTD
Project location	Ouachita, Richland, Franklin Parishes	Owner's Project Manager	Mark Chenevert
Owner's address, phone, email	1201 Capitol Access Road, Room 405-E, Baton Rouge, LA 70802-4438, (225) 379-1591, mark.chenevert@la.gov		
Services commenced by this firm (mm/yy)	11/22	Total consultant contract cost ($1,000's)	$187,000
Services completed by this firm (mm/yy)	06/23	Cost of consultant services provided by this firm ($1,000's)	$183,188

GOTECH, Inc. was a survey team member for the LA Watershed Initiative Region 3 Project. We served as a subconsultant to WSP Consultants for the drainage master plan project. GOTECH field crews collected survey data in the Bayou Macon Basin. Located in the Monroe area of North Louisiana, the work included 105 stream cross sections and 164 structure surveys. Control surveys were conducted at each structure site. GPS observations were made to establish northing, easting and elevation data for each control point. GOTECH crews obtained specific data on bridges (pier locations, low chord elevation, deck information, railing shots, cross sections) and at culvert structures (invert, geometry, cross sections, etc.). The data was submitted to WSP for their modeling effort.

Project staff includes the following:

Bruce Dyson, P.E., P.L.S., Robert Price, P.L.S.

Survey Crew:

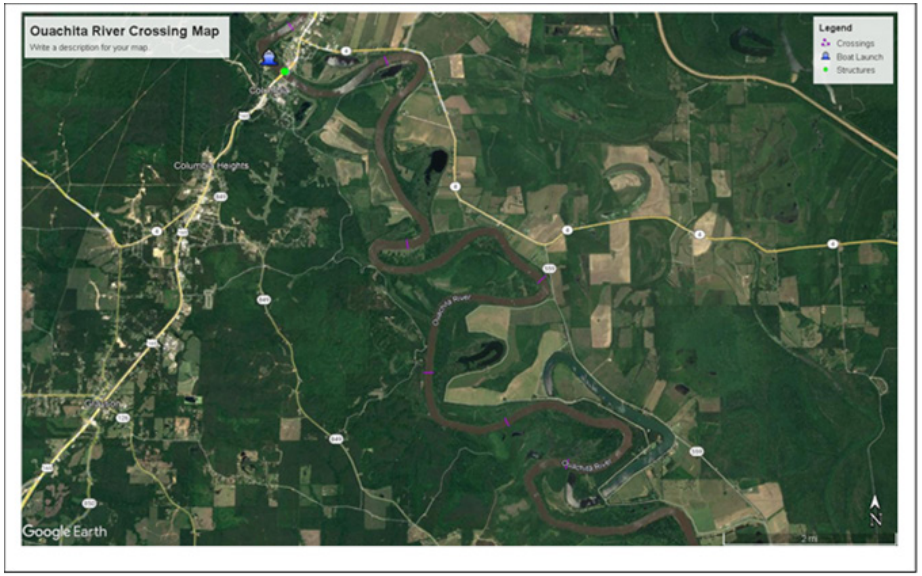
John Biggs

17. FIRM EXPERIENCE:

Firm name	GOTECH, Inc.	Discipline(s)*	Survey
Project name	Louisiana Watershed Initiative (LWI) Modeling Contract Region No. 2	Firm responsibility (prime or sub?)	Sub
Project number	4400017068	Owner's name	LADOTD
Project location	Rapides, Grant, LaSalle, Winn Parishes	Owner's Project Manager	Mark Chenevert
Owner's address, phone, email	1201 Capitol Access Road, Room 405-E, Baton Rouge, LA 70802-4438, 225-379-1591, mark.chenevert@la.gov		
Services commenced by this firm (mm/yy)	09/21	Total consultant contract cost ($1,000's)	$425,767
Services completed by this firm (mm/yy)	08/22	Cost of consultant services provided by this firm ($1,000's)	$359,316

GOTECH was a member of the Freese & Nichols (FNI) Team for the Louisiana Watershed Initiative Modeling Master Drainage Plan Project. Region 2 was an area generally located between Monroe and Alexandria in North Louisiana.

Topographic and bathymetric surveys were completed in the lower Ouachita basin. GOTECH crews collected field data on the lower Ouachita River and the lower Red River areas. Control surveys were completed by way of GPS observations in the field. A minimum of three control points were set at each structure. The Ouachita River surveys covered a stream length of approximately 130 river miles, including 46 cross sections. There were over 100 structures surveyed in the Ouachita River watershed and 35 structures surveyed in the Red River basin. The structures were classified into 5 categories: Bridge Major, Bridge Large, Bridge Small, Culvert Large and Culvert Small. River surveys (hydrographic) were completed using single beam fathometer equipment to produce stream cross section data. Survey data was compiled into electronic spreadsheets for use by the FNI modelers.



Project staff includes the following:

Bruce Dyson, P.E., P.L.S., Robert Price, P.L.S.

Survey Crew:

John Biggs

17. FIRM EXPERIENCE:

Firm name	GOTECH, Inc.	Discipline(s)*	Survey
Project name	Bayou Paul Survey	Firm responsibility (prime or sub?)	Sub
Project number	N/A	Owner's name	Iberville Parish Government
Project location	Iberville Parish	Owner's Project Manager	Chris Daigle
Owner's address, phone, email	58050 Meriam Street, Plaquemine, LA 70764, (225) 687-5190		
Services commenced by this firm (mm/yy)	03/20	Total consultant contract cost ($1,000's)	$49
Services completed by this firm (mm/yy)	11/20	Cost of consultant services provided by this firm ($1,000's)	$49

GOTECH, Inc. participated in the Bayou Paul Hydrologic and Hydraulic (H&H) Study project for Iberville Parish. Bayou Paul, Bayou Braud and Alligator Bayou are waterways that drain a large region of Iberville Parish into Bayou Manchac. The bayous vary from small canals, to swamp areas, to large natural bayous in the area around Spanish Lake and Bayou Manchac. Working as a subconsultant to Manchac Consulting Group, Inc., GOTECH provided survey data for the modelers in the form of channel cross sections, culvert surveys, bridge surveys and channel thalweg surveys. The surveys of the structures included the following:

Limited Survey

- Culverts
  - Culvert type (i.e. circular pipe, box culvert, etc.)
  - Dimensions (length and diameter)
  - Material (concrete, corrugated metal pipe, etc.)
  - Number of barrels
  - Invert elevation for both upstream and downstream sides
- Bridges
  - Low chord elevations
  - High chord elevations
  - Bridge opening size (width between the low chord points)
  - Bridge embankment width
  - Piers (number and width)
  - Channel invert elevation (upstream and downstream side of the bridge)

Detailed Survey

- Culverts
  - All of the requested data in Limited Survey
  - Road embankment elevation shots
  - Channel cross-section survey (upstream and downstream)
  - Elevation shots
- Bridges
  - All of the requested data in Limited Survey
  - Right and left toe embankment elevation
  - Upstream face cross-section survey
  - Downstream face cross-section survey
  - Approach cross-section survey

The final deliverables included detailed topographic drawings (AutoCAD Civil 3D), Point Files, Field Notes and Photographs.

Project staff includes the following: Bruce Dyson, P.E., P.L.S., Robert Price, P.L.S.

Survey Crew: John Biggs

17. FIRM EXPERIENCE:

Firm name	Volkert, Inc.	Discipline(s)*	Other (Dam Survey) and Other (Flood Modeling and Mapping)
Project name	Statewide Dam Breach Analysis	Firm responsibility (prime or sub?)	Prime
Project number	S.P. No. 750-99-0128	Owner's name	LADOTD
Project location	Statewide, LA	Owner's Project Manager	Zahir "Bo" Bolourchi, PE
Owner's address, phone, email	P.O. Box 94245 Baton Rouge, LA 70804-9245, Bo.Bolourchi@LA.GOV		
Services commenced by this firm (mm/yy)	2005	Total consultant contract cost ($1,000's)	N/A
Services completed by this firm (mm/yy)	2011	Cost of consultant services provided by this firm ($1,000's)	$1,051

Dam Breach Analysis and Emergency Action Plans (EAP) on 20 dams owned or regulated by the State of Louisiana. Work included downstream basin, bridge, and dam surveys on selected dams, the construction of a HEC-RAS computer models to model dam breaches, production of final reports, dam hazard level classifications, flood inundation maps, and EAP's. Dams included in study include: Black Bayou Lake, Bundick Lake, Caney Lake, Chicot Lake, Claiborne Lake, Cypress Lake, Black Lake, D'Arbonne Lake, Ivan Lake, Kepler Lake, Mill Creek Lake, Poverty Point Reservoir, Vernon Lake, Turkey Creek Lake, Smithport Lake, Sibley Lake, Saline Lake, Chivery Lake and Grand Bayou Lake.

Work included surveying, modeling, and flood mapping.

Personnel involved in this project: Randy Denmon, Steven Lengefeld

17. FIRM EXPERIENCE:

Firm name	Volkert, Inc.	Discipline(s)*	Other (Modeling)
Project name	Louisiana Watershed Initiative (LWI) Modeling Contract, Region No. 2 & 3	Firm responsibility (prime or sub?)	Sub
Project number	Contract No. 4400017068 - Region 2 Contract No. 4400017069 - Region 3	Owner's name	LADOTD
Project location	East Central, LA	Owner's Project Manager	Pat Landry
Owner's address, phone, email	1201 Capitol Access Rd. Baton Rouge, LA 70802; (225) 379-3010; patrick.landry@la.gov		
Services commenced by this firm (mm/yy)	11/20	Total consultant contract cost ($1,000's)	N/A
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	Region 2 = $268,513 Region 3 = $1,240,000

The Louisiana Watershed Initiative Modeling is a project the develop a HEC based model to address stormwater flooding impacts in response to the 2016 Floods. The analysis focuses on developing models for every USGS Hydraulic Unit Code (HUC) level 8 watershed in the state. Tasks for the project include surveying of channel transects, collection of LiDAR at engineered structures (e.g., bridges, culverts, dams, levees, etc.), HEC-RAS modeling of channel flow, HEC-HMS modeling of surface rainfall and flow to channel cross-sections, and HEC-DSS modeling to understand financial impact of flooding. Volkert is a subconsultant on the teams in Region 2 and 3 for this project. In Region 2, Volkert is providing Quality Assurance / Quality Control (QA/QC) during numerical modeling development and leading public outreach and engagement. In Region 3, Volkert is a subconsultant leading topographic and LiDAR surveying efforts and completing HEC model QA/QC.

As part of QA/QC, Volkert is reviewing all numerical modeling results for consistency of model development, identifying model errors (e.g., leaking at boundary conditions), and ensuring that naming nomenclature meets projects requirements. Outreach and engagement include assisting with coordination of Regional Watershed meetings, as necessary, and planning, organizing, and running public meetings to improve communication, engagement, and ensure all comments are addressed. Volkert is also surveying watershed locations within Region 3 to fill in numerical model data gaps. These include topographic surveys of flow channel cross-sections and LiDAR of hydraulic structures including bridges, culverts, levees, etc.

Personnel involved in this project: Randy Denmon, Steven Lengefeld, Bryan Ardoin

17. FIRM EXPERIENCE:

Firm name	Volkert, Inc.	Discipline(s)*	Other (Outreach and Data Collection)
Project name	Regional Watershed Plan for LWI, Region 3	Firm responsibility (prime or sub?)	Sub
Project number	N/A	Owner's name	Ouachita Parish Police Jury
Project location	Ouachita Parish, LA	Owner's Project Manager	Karen Culpit
Owner's address, phone, email	100 Bry St, Monroe, LA 71201, (318) 327-1345 ext 3003, kcupit@oppj.org		
Services commenced by this firm (mm/yy)	12/24	Total consultant contract cost ($1,000's)	$250
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$25

Volkert was selected as part of the team for the LWI Region 3's Watershed Plan. The Plan Contractor is responsible for attending plan development meetings and developing plan document, including drafting text and creating visuals in assisting the Regional Watershed Coordinator and Floodplain Manager. The goal of the project was to coordinate with local jurisdictions to gather data and information on regional watershed issues and to create a plan in addressing those issues including identifying potential funding sources for those projects. Volkert's task in the project is coordinating with local jurisdictions on gathering data and completing application for funding from Priority Action Funding Plan resources.

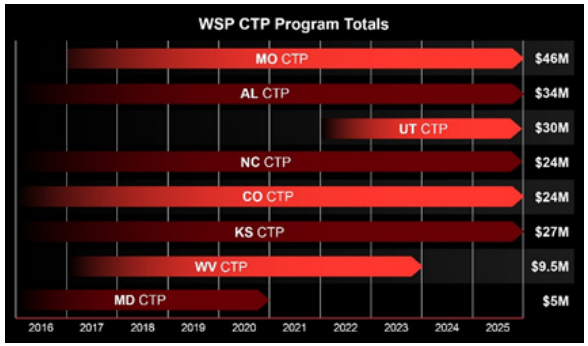
Personnel involved in this project: Randy Denmon, Clinton Patrick

SECTION 18

18. APPROACH AND METHODOLOGY:

WSP is one of the world's leading engineering, environment, and professional services firms. With more than 67,000 people in more than 500 offices across 40 countries, we partner with our clients to help solve their most challenging environmental and infrastructure issues so they can focus on their businesses. WSP is a leading provider of water resources consulting services with over 500 water resources professionals dedicated to providing water resources services in North America. WSP has expertise in a variety of water resources services including surface water modeling, water quality modeling and geographic information system (GIS) applications in water resources, floodplain management, and flood hazard mitigation. *Our approach to performing all the tasks expected under the scope of services outlined in this RFQ will derive from our extensive experience providing such services across the nation, and an understanding of the objectives to be met.*

Nationwide NFIP/CTP Experience



FEMA analysis, map production (and associated risk communication and mitigation services) have been core service lines for WSP since we performed our first flood studies for FEMA in the early 1980s. We have provided Risk MAP services to 15 CTPs, including Alabama, North Carolina, Kentucky, Suwanee River Water Management District in Florida, Kansas, Arkansas, Texas, Indiana, Iowa, Nebraska, Missouri, Utah, Montana, North Dakota, and South Dakota. WSP has more than 300 employees performing Risk MAP services nationally. The adjacent graphic shows our workload distribution over the last nine years across our CTP program.

For this contract, WSP will assist LaDOTD in aligning FEMA Headquarters and Region VI targets with the needs of stakeholders and watersheds across the state. WSP understands that staying in sync with FEMA Region VI goals will help increase and maintain significant FEMA funding for the State of Louisiana.

Project Management

All WSP projects require the development of a project-specific Project Management Plan (PMP) that ensures a chain of accountability for project performance and customer satisfaction. The PMP includes the project scope and schedule, a list of critical success factors, a list of key team members along with contact information, a QA/QC Plan, a Health and Safety Plan, a Communication Plan including an anticipated schedule for progress reports and progress meetings, and the potential project risks and the associated mitigation measures. WSP believes that the PMP is a living document and is expected to be updated and maintained throughout the life of the project.

All of the project managers identified for this contract have experience leading Risk MAP projects from cradle to grave, having worked with multiple CTPs over the years. Most subject matter experts and task leads identified on the organization chart have been with WSP for over a decade, consistently providing NFIP/CTP services for their clients, helping them navigate changes in risk assessment through Map Modernization, Risk MAP versions 1 and 2 and now Risk MAP 2D. Additionally, WSP has worked with all of our subconsultant partners in the past. They will work as an extension of our staff, will utilize all of our tools, and share the same philosophy as us - what's best for the Client is best for all of us.

Leveraging Louisiana Watershed Initiative Models and Deliverables

Following the near completion of the LWI modeling effort, the state of Louisiana is in a unique position of having calibrated hydrologic and hydraulic models developed using the latest available LiDAR data across the entire state. Leveraging these models for FEMA flood risk assessment will bring considerable efficiency to the Risk Identification & Assessment phase and save on monetary investment for model development, which can instead be utilized for other NFIP/CTP tasks.

Being a prime contractor for LWI Region 3, the WSP Team has first-hand experience and understanding of the LWI models, and available products. For this contract, the WSP Team will:

- *Work with LaDOTD to move the LWI models to compliance so they can be used for Risk MAP. This will involve ensuring the new models cover effective FEMA floodplain extents, provide at least identical, if not more detailed, level of analysis as that of effective studies, evaluate the need for floodways and update the models with 1D or 2D floodways as necessary, utilizing WSP's floodway development tools. Develop SOPs to outline the process.*
- *To achieve computational efficiency, the statewide LWI models were developed using a tiered resolution approach that varied the level of detail across the modeled watersheds. WSP will assist LaDOTD with the applicability of these models to determine where these studies would be best suited for BLE vs. detailed study. This effort will also contribute to FEMA Region VI's Phase 0: Investment stage and aid with planning decisions.*

18. APPROACH AND METHODOLOGY:

- *Engage consulting teams that performed the modeling in each LWI Modeling Region to minimize inefficiencies.*
- *Review stakeholder feedback collected throughout the modeling effort and ensure all concerns are addressed as models move to Risk MAP, particularly in watersheds such as Bayou Cocodrie, Black, Amite, Bayou Teche etc. where Discovery projects have already been completed. Help LaDOTD compile this into updated Flood Risk Reports for Phase 1: Discovery.*
- *Breakout Models for Floodway Analysis: WSP would leverage our HEC-RAS 2D geometry extraction tools developed as part of the Missouri CTP program to establish model domains for detailed study reaches requiring floodways, then utilize our 1D and 2D floodway tools to develop floodways.*
- *Format collected survey to follow FEMA guidelines for DCS submittals.*
- *Review available products such as terrain, model inputs, gridded outputs, etc. for applicability of use in generating Risk MAP deliverables. Develop SOPs for bringing these products into Risk MAP compliance.*

Base Level Engineering (BLE)

The WSP Team has led the nation in BLE 2D modeling. The State of Kansas was one of the first states in the nation in 2017 to decide to complete Statewide 2D BLE modeling and WSP led the state through the development of BLE 2D modeling policy for that statewide project.

For this contract, WSP will capitalize on the relationships established with floodplain administrators and other stakeholders in the watershed during the BLE process described in the LWI section above, prior to discovery initiation.

Hydrologic & Hydraulic Analysis

WSP has a proven track record of success in performing numerous types of hydrologic analyses and performing 1D and 2D rain-on-mesh hydraulic analyses using HEC-RAS. In addition to HEC-RAS, WSP is also experienced in many other FEMA-approved hydraulic models, such as HEC-2, QUICK-2, HY8, PondPack, Culvert Master, SWMM, ICPR, FESWMS 2DH, UNET, FLO-2D, SRH-2D, WSPRO, FLDWAV, and DAMBRK.

For this contract, WSP's hydrologic approach is flexible and is dictated by the accuracy of effective studies, community specific needs, hydrologic conditions, and available funding. Three primary types of hydrologic analysis would be typically performed: gage frequency analysis, regression equation analysis, and rainfall runoff modeling. Hydrologic studies will rely on automated ArcGIS processes reviewed by engineers, such as flow accumulation calculators, flow path generators, sub-basin delineators, lag time calculators, and runoff coefficient calculators. The majority of hydraulic studies will be performed using HEC-RAS. WSP's proprietary tools will be used to produce quality parameters for hydrologic and hydraulic analyses to meet FEMA criteria. QAQC gate checks will be introduced at 25-, 50- 75- and 90% model development stages and require sign-off from reviewers at each stage prior to proceeding to the next stage.

Survey Collection

WSP has performed hydrographic survey for multiple CTP clients. WSP's partners for this contract – Volkert and GOTECH - have surveyed floodplain sections, bridges, and culverts for H&H modeling in multiple parishes and watersheds across Louisiana. We worked together as a team on the LWI Region 3 project, developing processes and lines of communication that helped in seamless collection of extensive survey in a condensed timeline. Collected survey points were attributed with LaDOTD codes, as well as FEMA codes for compliance with FEMA's Data Capture Standards (DCS). *For this contract, the team will continue this relationship and assist LaDOTD in new survey collection as necessary, but also to bring survey collected across the state for LWI into FEMA compliance.*

Stakeholder Communication

Stakeholder engagement is perhaps the most important component of the NFIP, and critical to its success. WSP has assisted our CTP clients and community leaders by speaking at county commission meetings, having one-on-one meetings with homeowners, and participating in regional meetings regarding flood mitigation.

For this contract, WSP will engage stakeholders early, and often. This will involve:

- *Engaging communities in the process: Conduct additional meetings between Risk MAP mandated kick-off and flood risk review (FRR) meetings in Phase 2: Risk Identification & Assessment. These meetings will be informal, aimed at giving communities opportunities to provide feedback (does it make sense?) on first draft of model results. They will help ensure additional data is gathered to improve accuracy of models, if necessary, and head-off potential appeals. They will also help keep contact lists up-to-date for preparation of future meetings.*
- *Openly addressing stakeholder concerns and incorporating them into the mapping process.*
- *Developing and maintaining a "front porch conversation" relationship with communities.*
- *Utilizing websites, technical trainings, and workshops to keep stakeholders informed, and fully equipped to make the most use of the available products to lower their communities' floodrisk.*

18. APPROACH AND METHODOLOGY:

Risk MAP Tools & Technologies

WSP's proven automated modeling process produces FEMA compliant products in accordance with the FEMA Guidelines and Specifications guidance, Floodplain Boundary Standards (FBS) and state/agency specific issue papers. These products are then uploaded to FEMA's server on the MIP. Each one of these tools not only saves time but has QAQC functions built into them as checks occur at every step throughout the process.

For this contract, WSP will utilize tools covering the full breadth of Risk MAP product and model development as shown in the graphic to the right.

FloodVue Tool: *WSP understands the needs for stakeholder buy-in, and the importance of effectively communicating flood risk to communities. For this purpose, we have developed an augmented reality tool that helps communities visualize flood risk better than through historical maps. Example output in right image.*

Strategy to Incorporate BLE & Statewide Flood Risk Information into Floodplain Management, Flood Planning & Flood Mitigation

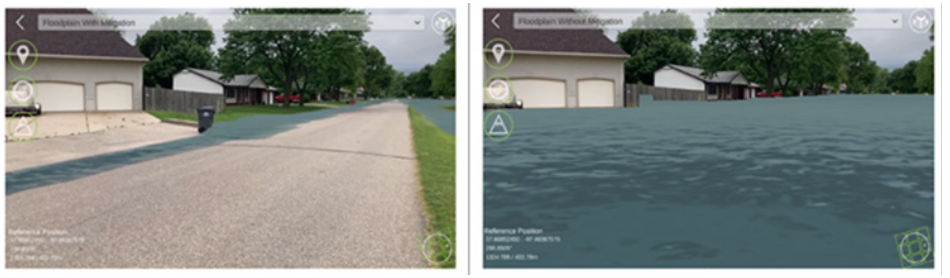
We have developed and successfully implemented CTP Business Plans throughout the Risk MAP Era. The staff presented on the organization chart have extensive city, county and state floodplain management, flood planning and flood mitigation experience.

For this contract, our team will produce a strategy that mixes and matches structural and nonstructural solutions both short and long term. This strategy will empower the local stakeholders with the data and tools to ponder "what if" solutions to select the best options. As we have already begun doing with our proof-of-concept task, WSP will leverage LWI models for identification and evaluation of mitigation projects.

Schedule

WSP has developed a track record of performing projects for multiple CTP clients on time and within budget. We maintain rigorous internal and intermediate schedules to ensure work is not only done on time but is done on a schedule that allows for a thorough internal review prior to sending products out for independent QA/QC.

Through our experience helping multiple CTP clients navigate the FEMA project planning, data development, preliminary FIRM, community outreach and post-preliminary processes, WSP has an acute knowledge of the Key Decision Point (KDP 0 - 5) and Quality Review (QR1 - 8) milestones, along with the deliverables required and timing.



FloodVue Tool - *Augmented Reality allows viewing local flooding on location*

National Flood Insurance Program (NFIP) Activities

WSP has extensive knowledge of the NFIP stemming from a wide variety of experience supporting local, state, and federal government clients with the many components of the NFIP. Our approach to address possible deliverables from the TSF Playbook are as follows:

- **Review and improve floodplain ordinances**
  - WSP has performed ordinance reviews:
    - For FEMA Region 3, ensuring local communities adopted compliant regulations in conjunction with newly updated floodplain mapping; and

18. APPROACH AND METHODOLOGY:

  - For local communities in Florida, North Carolina, and Tennessee to incorporate higher standards such as lower substantial damage thresholds, protection of critical facilities, enclosure limits, and non-conversion agreements.
- *WSP will (1) discuss with LaDOTD current ordinance needs and implementation challenges facing local communities; (2) conduct a gap and compliance analysis comparing the ordinance to current FEMA/ NFIP regulations, state and local mitigation plan requirements, flood insurance implications, new FIS/FIRM data, and best practices for CRS communities; (3) draft revisions of the model ordinance, and provide options for higher standards; (4) conduct both legal and technical reviews for compliance with state statutes; (5) finalize, and publish the model ordinance.*

- **Conduct workshops and provide training**
  - WSP staff developed and facilitated trainings nationwide covering a variety of NFIP topics including substantial damage/substantial improvement, elevation certificates, benefit-cost analysis, mitigation planning, and the CRS Program. Examples of training efforts include:
    - Conducting mock CAV events to identify deficiencies in floodplain management programs ahead of potential CAVs.
    - Development of an automated online tool for the State of Alabama to track and facilitate Community Assistance Contact (CAC) calls, increasing the number of CACs completed each year.
  - *For this contract, (1) WSP will discuss with LaDOTD current training capabilities; (2) conduct a gap analysis to determine training needs; (3) prepare workshop/training materials including presentations, handouts, and examples; (4) work with the State to set a training schedule; and (5) implement the training courses.*
- **Update or revise the Louisiana Floodplain Management Desk Reference**
  - WSP staff are experienced in preparing floodplain reference documents for several clients, such as our efforts with the State of Alabama to develop the Post-Flood Recovery Guidebook and the Rural Floodplain Administrators Handbook.
  - *WSP will work with LaDOTD to define the updated objectives; (2) We will identify needs to address such as policy changes that have occurred, new flood mapping standards, insurance requirements, etc.; (3) identify and update outdated, missing, or unclear content of the current Desk Reference; (4) assemble a team of stakeholders for external feedback on the content changes; (5) draft, finalize, and publish the Desk Reference Update.*
- **Update the State NFIP Strategic Plan**
  - *Similar to our efforts for Missouri, North Carolina, Iowa, and Tennessee, WSP will perform an evaluation of Louisiana's current floodplain management program and recommend strategies in which State coordination of the NFIP may be improved and ensure CAP-SSSE funding needs are identified and substantiated following key categories and characteristics from the TSF. WSP will work with staff to develop a vision for the program accompanied by goals, objectives, and measures tailored to improve program effectiveness. Tasks will include: (1) data collection, (2) conducting a SWOT/gap analysis, (3) strategy development and implementation guidelines, and (4) preparing draft and final plan documents.*
- **Development of various SOPs for the NFIP Program**
  - We recommend developing SOPs for the State's NFIP Program following the strategic planning effort, which encompasses all areas of the program and will identify strengths, weaknesses, and opportunities for improvement. WSP assisted Missouri in developing a tracking system for strategic plan actions to ensure implementation, and assisted Iowa in developing an outreach/training schedule to ensure the State stayed on track to meet TSF requirements for communication, training variety, and community engagement.
  - *Our approach will first (1) discuss with LaDOTD those activities identified in the strategic planning process that would be best served with an SOP; (2) clearly define the purpose of each SOP; (3) prepare step by step instructions; (3) define roles and responsibilities for each step of the SOP.*
- **Development of template enforcement products (letters, memos etc.)**
  - Enforcement products may include floodplain development permits, notification of violations and instructions on corrections, and stop-work orders. *WSP will work with LaDOT to develop template documents as requested.*
- **Develop and implement a plan/strategy to promote flood risk products (e.g. non- regulatory products)**
  - *Similar to our CTP efforts in Alabama and Missouri, and in coordination with FEMA's community engagement approach, WSP will work with LaDOTD to develop an outreach strategy which will (1) engage communities early and often. (2) coordinate with other programs operating in the same community. (3) engage with local associations to provide a third-party perspective and (4) leverage local media and use language people understand. WSP will use plain language in all materials and templates to reinforce that use of terminology that a broad audience of people can understand.*

wsp

SECTION 19-23

19. WORKLOAD:

Firm(s) **ALL FIRMS** MUST BE REPRESENTED IN THIS TABLE	Discipline(s) *	Contract Number and State Project Number	Project Name	Remaining Unpaid Balance**
WSP USA Inc.	Other (Flood Modeling)	4400017069	LWI Region 3 Design Storm Modeling and Consequence Assessment	$370,510
GOTECH, Inc. (Subconsultant to Volkert)	CE&I/OV	4400021740; SPN: H.004100.6	I-10: LA 415 to Essen Ln on I-10 & I-12 (West & East Baton Rouge Parish)	$1,216,546
GOTECH, Inc. (Subconsultant to GEC, Inc.)	Survey	4400025040; SPN: H.015530	Infrastructure Investment Off-System Bridge Program – Devall Rd over Drainage Ditch District 61 (Ascension Parish)	$3,150
GOTECH, Inc. (Subconsultant to GEC, Inc.)	Survey	4400025040; H.015531	Rue De Kajun over Bayou Pierre Part (Ascension Parish)	$3,150
GOTECH, Inc. (Subconsultant to GEC, Inc.)	Survey	4400025040; H.015532	Beco Rd over Duckroos Bayou (Ascension Parish)	$3,150
GOTECH, Inc. (Subconsultant to GEC, Inc.)	Survey	4400025040; H.015540	Section Rd over Poydras (Point Coupee & WBRP)	$3,150
GOTECH, Inc. (Subconsultant to GEC, Inc.)	Survey	4400025040; H.015534	Line Rd over Black Creek (E Feliciana Parish)	$3,150
GOTECH, Inc. (Subconsultant to GEC, Inc.)	Survey	4400025040; H.015535	Billy Goat Rd over Palmers Ranch (E Feliciana Parish)	$3,150
GOTECH, Inc. (Subconsultant to GEC, Inc.)	Survey	4400025040; H.015533	Midway Rd over Black Creek (E Feliciana Parish)	$3,150
GOTECH, Inc. (Subconsultant to GEC, Inc.)	Survey	4400025040; H.015536	Thompson Creek Rd over Shady Grv Bayou (Iberville Parish)	$3,150
GOTECH, Inc. (Subconsultant to GEC, Inc.)	Survey	4400025040; H.015538	Callegan Rd over Drainage Bayou (Iberville Parish)	$3,150
GOTECH, Inc. (Subconsultant to GEC, Inc.)	Survey	4400025040; H.015542	Highland Rd over Madden Creek (W Feliciana Parish)	$3,150
GOTECH, Inc. (Subconsultant to GEC, Inc.)	Survey	4400025040; H.015542	Greenwood Rd over Old Creek (W Feliciana Parish)	$3,150
GOTECH, Inc. (Subconsultant to GEC, Inc.)	Survey	4400025040; H.015541	Canfield Rd over West Fork Bayou (W Feliciana Parish)	$3,150
GOTECH, Inc. (Subconsultant to GEC, Inc.)	Survey	4400025040; H.015539	Lorio Dairy Rd over Bayou Sere (Point Coupee Parish)	$3,150

WORKLOAD

Firm(s) **ALL FIRMS** MUST BE REPRESENTED IN THIS TABLE	Discipline(s) *	Contract Number and State Project Number	Project Name	Remaining Unpaid Balance**
GOTECH, Inc. (Subconsultant to GEC, Inc.)	CE&I/OV	4400024438; SPN: H.010673 Control Section No. 283-09	US90Z: Harvey Canal Tunnel Rehab Route US 90-Z Federal Aid Project (Jefferson Parish)	$166,480
GOTECH, Inc. (Subconsultant to ECM)	CE&I/OV Survey	4400021680; SPN: H.008145.6	LA 1: Leeville to Golden Meadow (Lafourche Parish)	$657,432
GOTECH, Inc. (Subconsultant to GEC, Inc.)	CE&I/OV	4400028884; SPN: H.003931.5	Calcasieu River Bridge (Calcasieu Parish)	$48,597
GOTECH, Inc. (Subconsultant to Hardesty & Hanover, LLC)	CE&I/OV	H.001498.6	LA 24 & LA 306: Company Canal Bridge	$399,600
GOTECH, Inc. (Subconsultant to Greenman-Pederson, Inc.)	CE&I/OV Survey	4400023897; H.011965.6	LA 47: IWGO Bridge Rehab Orleans Parish	$255,000
GOTECH, Inc. (Subconsultant to GEC, Inc.)	CE&I/OV Survey	4400027349; H.003931.6	Calcasieu River Bridge – Hm & Field	$2,134,826
GOTECH, Inc. (Subconsultant to HNTB)	Survey	4400023512; H.009730.5	Luling Bridge Inspection	$94,555
GOTECH, Inc. (Subconsultant to Infrastructure Consulting & Engineering)	CE&I/OV	4400026468	Lafayette Traffic Signals	$79,280
GOTECH, Inc. (Subconsultant to Michael Baker)	CE&I/OV	4400025536; H.014993.6	Lemon Rd Bridge over Drainage Bayou	$114,735
Volkert, Inc.	Survey	Contract No. 44-17068	IDIQ Contract for Louisiana Watershed Initiative (LWI) Modeling Contract Region 2, Sub Consultant, Task Order 4	$37,965
Volkert, Inc.	CE&I/OV	Contract No. 44-16173 S.P. No. H.003370	I-220/I-20 Interchange Improvements & Barksdale AFB Access, Bossier Parish, LA	$375,978
Volkert, Inc.	CE&I/OV	H.004791	LA 23: Belle Chasse Bridge and Tunnel Replacement (HBI) Plaquemines Parish, LA	$3,851,398
Volkert, Inc.	CE&I/OV	Contract No. 44-16980 H.013897	College Drive Flyover Ramp. I-10/I-12 West East Baton Rouge Parish, LA	$101,417

WORKLOAD

Firm(s) **ALL FIRMS** MUST BE REPRESENTED IN THIS TABLE	Discipline(s) *	Contract Number and State Project Number	Project Name	Remaining Unpaid Balance**
Volkert, Inc.	CE&I/OV	Contract No. 44-21740 H.004100.6	Phase I W. of Washington Street to Essen Lane (CE&I) Phase I Segment 01. W. of Washington Street to Acadian Thruway, Route I-18. East & West Baton Rouge Parishes, LA	$627,700
Volkert, Inc.	CE&I/OV	Contract No. 4400026587 S.P. No. H.001779.6	Jimmie Davis Bridge (LA 511) (HBI) (Owner Verification Services) Route LA 511, Caddo and Bossier Parishes	$7,684,234
Volkert, Inc.	CE&I/OV	H.007811.6, H.000710.6,H.002273.6, and H.001352.6	Comite Diversion Canal CE&I and Utility Relocation, East Baton Rouge Parish, LA – Subconsultant	$119,200
Volkert, Inc.	CE&I/OV	H.008145.6	LA 1: Leeville to Golden Meadow Phase 2 (CE&I) & SA 1 Fabrication Lafourche Parish (Subconsultant to ECM)	$5,055,709
Volkert, Inc.	CE&I/OV	H.011965.6	LA 47: IWGO Bridge Replacement (HBI) (CE&I), Orleans Parish -Subconsultant	$315,340
Volkert, Inc.	CE&I/OV	H.002868.6	Retainer Contract 44-26334 IDIQ Contract for Precast Prestress Concrete Fabrication Inspection, Task Order 3 Fabrication, I-49 S Ambassador Caffery US 90 Interchange, Lafayette Parish	$19,173
Volkert, Inc.	CE&I/OV	H.011808.6	Retainer Contract 44-26334 IDIQ Contract for Precast Prestress Concrete Fabrication Inspection, Task Order 4 SA # 1 Fabrication, LA 10: Palmetto Company Canal Br	$38,869
Volkert, Inc.	Bridge	Contract No. 44-25024 S. P. No. H.01551.8	Ridge Road Over Castor Creek, Bienville Parish, LA	$111,275
Volkert, Inc.	Bridge	Contract No. 44-25024 S. P. No. H.015520	Collinsburg Creek over Collinsburg Creek, Bossier Parish, LA	$79,410
Volkert, Inc.	Bridge	Contract No. 44-25024 S. P. No. H. 015522	Barnette Road over Trib to Walnut Bayou, Caddo Parish, LA	$13,625
Volkert, Inc.	Bridge	Contract No. 44-25024 S. P. No. H.015524	Self Road Over Dooley Canal, Caddo Parish, LA	$4,050
Volkert, Inc.	Bridge	Contract No. 44-25024 S. P. No. H.015525	Bailey Town Rd Over Little Corney Bayou, Claiborne Parish, LA	$110,875
Volkert, Inc.	Bridge	Contract No. 44-25024 S. P. No. H.015527	Hinds Road Over Wallace Bayou, DeSoto Parish, LA	$110,675
Volkert, Inc.	Bridge	Contract No. 44-25024 S. P. No. H.015528	Courtney Road Over Dry Creek, Red River Parish , LA	$22,550

19 WORKLOAD

Firm(s) **ALL FIRMS** MUST BE REPRESENTED IN THIS TABLE	Discipline(s) *	Contract Number and State Project Number	Project Name	Remaining Unpaid Balance**
Volkert, Inc.	Bridge	Contract No. 44-25024 S. P. No. H.015529	Dorcheat Road Over Cow Branch, Webster Parish, LA	$87,300
Volkert, Inc.	Bridge	Contract No. 44-25024 S. P. No. H.015336	Marathon Road over Gray Creek, Webster Parish, LA	$82,850
Volkert, Inc.	Traffic	Contract No. 44-4787 S.P. No. H.009250	IMR I-10 Highland Road to LA 73, East Baton Rouge and Ascension Parishes, LA	$1,066,640

20. CERTIFICATIONS/LICENSES:

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

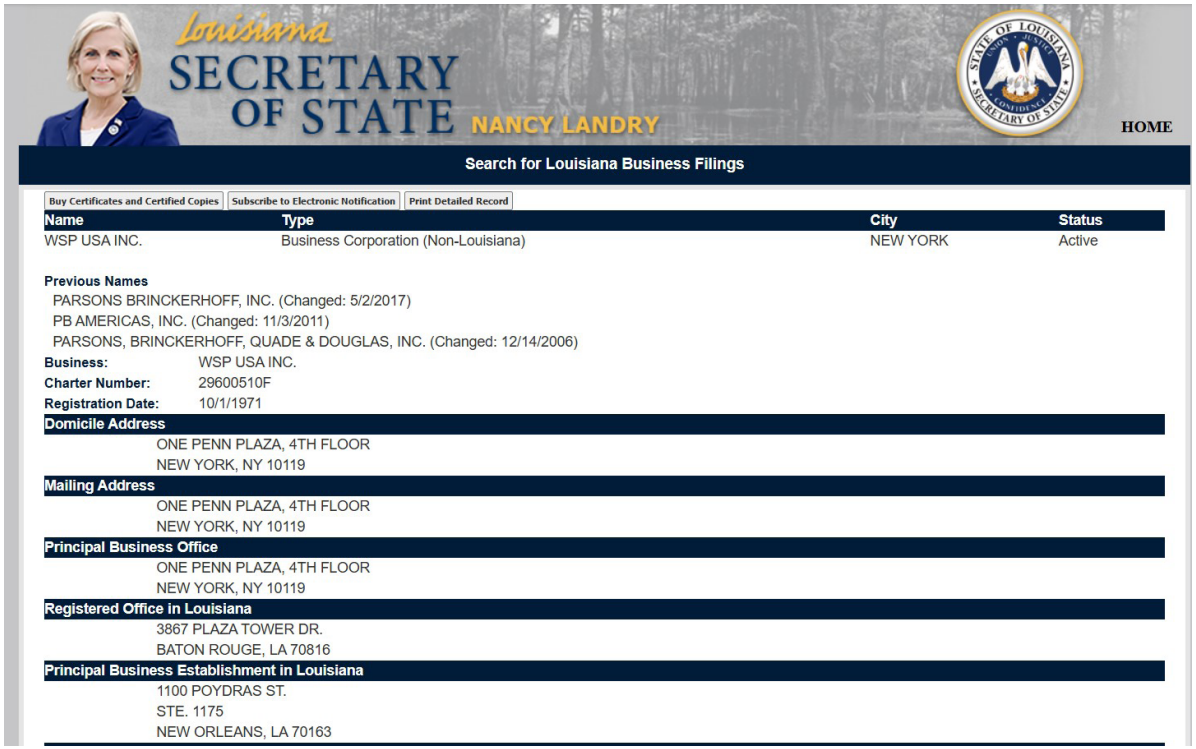
The Louisiana Professional Engineering and Land Surveying Board has the following information on file:

Name: WSP USA Inc.

Public Address: One Penn Plaza, 4th Floor

License/Certificate Information w/ Supervision

License	Status	First Issuance Date	Expiration Date	Supervisor(s)
EF.0000623	Active	09/26/1984	03/31/2026	Mrs. Rebecca Davezac Howell # PE.0042559



Louisiana SECRETARY OF STATE NANCY LANDRY

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Name	Type	City	Status
WSP USA INC.	Business Corporation (Non-Louisiana)	NEW YORK	Active

Previous Names
PARSONS BRINCKERHOFF, INC. (Changed: 5/2/2017)
PB AMERICAS, INC. (Changed: 11/3/2011)
PARSONS, BRINCKERHOFF, QUADE & DOUGLAS, INC. (Changed: 12/14/2006)

Business: WSP USA INC.
Charter Number: 29600510F
Registration Date: 10/1/1971

Domicile Address
ONE PENN PLAZA, 4TH FLOOR
NEW YORK, NY 10119

Mailing Address
ONE PENN PLAZA, 4TH FLOOR
NEW YORK, NY 10119

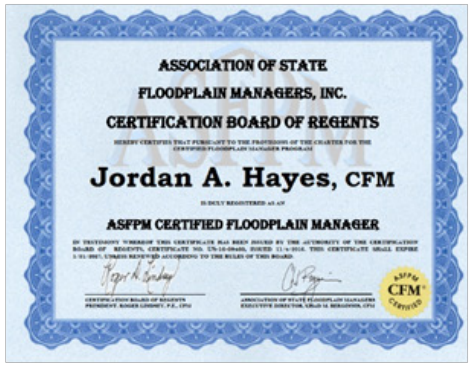
Principal Business Office
ONE PENN PLAZA, 4TH FLOOR
NEW YORK, NY 10119

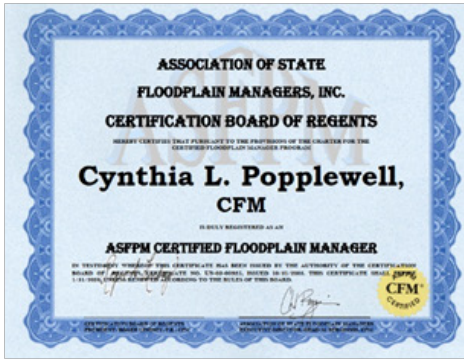
Registered Office in Louisiana
3867 PLAZA TOWER DR.
BATON ROUGE, LA 70816

Principal Business Establishment in Louisiana
1100 POYDRAS ST.
STE. 1175
NEW ORLEANS, LA 70163

20. CERTIFICATIONS/LICENSES:

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





20. CERTIFICATIONS/LICENSES:

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

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
GOTECH, INC.	Business Corporation	BATON ROUGE	Active

Previous Names

Business: GOTECH, INC.
Charter Number: 33323660D
Registration Date: 2/11/1981
Domicile Address
8383 BLUEBONNET BLVD.
BATON ROUGE, LA 70810
Mailing Address
C/O RHAOUL A. GUILLAUME
8383 BLUEBONNET BLVD.
BATON ROUGE, LA 70810
Principal Office Address
8383 BLUEBONNET BLVD
BATON ROUGE, LA 70810

Status

Status: Active
Annual Report Status: In Good Standing
File Date: 2/11/1981
Last Report Filed: 1/14/2025
Type: Business Corporation

Registered Agent(s)

Agent: RHAOUL A. GUILLAUME
Address 1: 8383 BLUEBONNET BLVD.
City, State, Zip: BATON ROUGE, LA 70810
Appointment Date: 2/4/1983

Officer(s)

Additional Officers: No

Officer: GERETTA H. GUILLAUME
Title: Secretary
Address 1: 203 W. WOODGATE CT.
City, State, Zip: BATON ROUGE, LA 70808

Officer: RHAOUL A. GUILLAME

20. CERTIFICATIONS/LICENSES:

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

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Robert Price
has attended
Traffic Control Technician-LA State Specific
Training Course

6/21/2022 to 6/21/2026
Training Valid Through

Baton Rouge, LA
Location

Director of Training
President, CEO

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

ATSSA American Traffic Safety Services Association ATSSA.com

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Bruce K Dyson
has attended
Traffic Control Technician-LA State Specific
Training Course

6/21/2022 to 6/21/2026
Training Valid Through

Baton Rouge, LA
Location

Director of Training
President, CEO

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

ATSSA American Traffic Safety Services Association ATSSA.com

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Robert Price
has attended
Traffic Control Supervisor-LA State Specific
Training Course

6/22/2022 to 6/22/2026
Training Valid Through

Baton Rouge, LA
Location

Director of Training
President, CEO

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

ATSSA American Traffic Safety Services Association ATSSA.com

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Bruce K Dyson
has attended
Traffic Control Supervisor-LA State Specific
Training Course

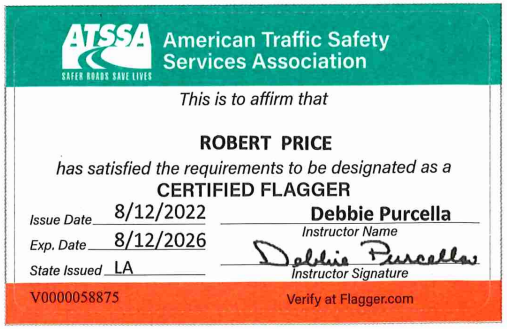
6/22/2022 to 6/22/2026
Training Valid Through

Baton Rouge, LA
Location

Director of Training
President, CEO

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

ATSSA American Traffic Safety Services Association ATSSA.com



ATSSA American Traffic Safety Services Association
SAFER ROADS SAVE LIVES

This is to affirm that

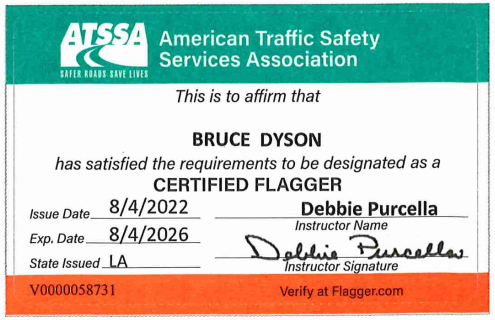
ROBERT PRICE

has satisfied the requirements to be designated as a
CERTIFIED FLAGGER

Issue Date 8/12/2022
Exp. Date 8/12/2026
State Issued LA

Debbie Purcella
Instructor Name
Debbie Purcella
Instructor Signature

V0000058875
Verify at Flagger.com



ATSSA American Traffic Safety Services Association
SAFER ROADS SAVE LIVES

This is to affirm that

BRUCE DYSON

has satisfied the requirements to be designated as a
CERTIFIED FLAGGER

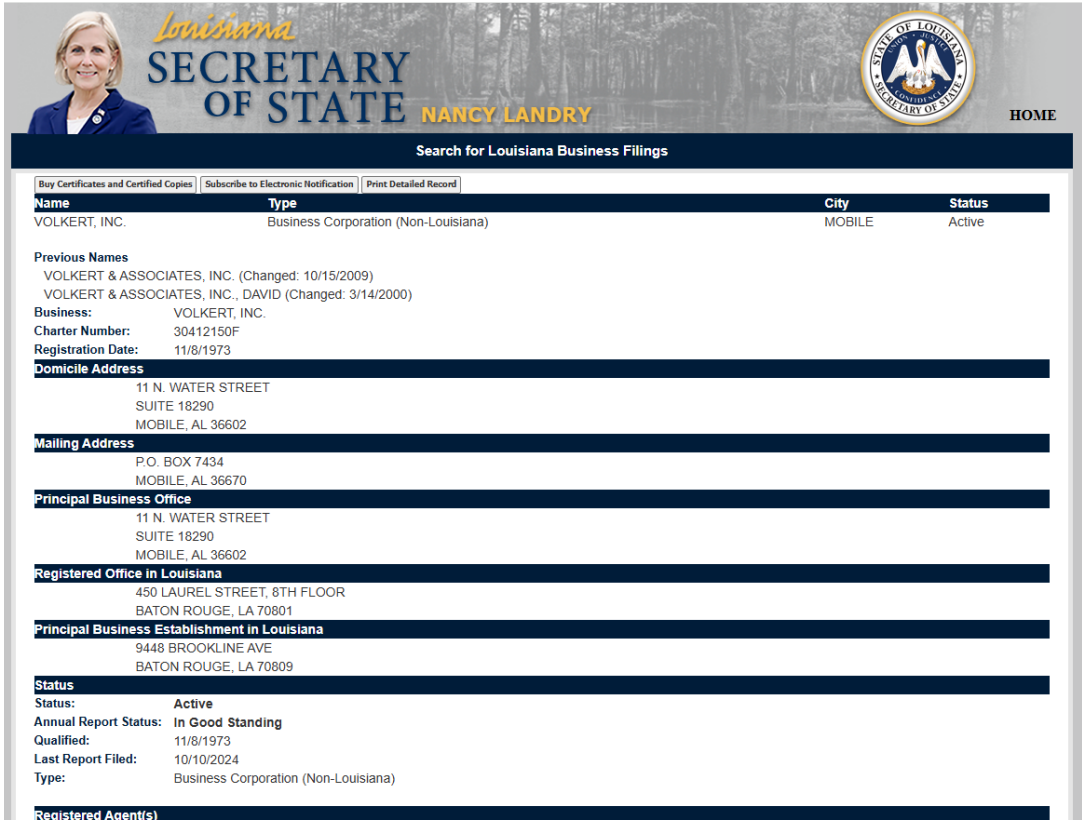
Issue Date 8/4/2022
Exp. Date 8/4/2026
State Issued LA

Debbie Purcella
Instructor Name
Debbie Purcella
Instructor Signature

V0000058731
Verify at Flagger.com

20. CERTIFICATIONS/LICENSES:

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



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Name	Type	City	Status
VOLKERT, INC.	Business Corporation (Non-Louisiana)	MOBILE	Active

Previous Names
VOLKERT & ASSOCIATES, INC. (Changed: 10/15/2009)
VOLKERT & ASSOCIATES, INC., DAVID (Changed: 3/14/2000)

Business: VOLKERT, INC.
Charter Number: 30412150F
Registration Date: 11/8/1973

Domicile Address
11 N. WATER STREET
SUITE 18290
MOBILE, AL 36602

Mailing Address
P.O. BOX 7434
MOBILE, AL 36670

Principal Business Office
11 N. WATER STREET
SUITE 18290
MOBILE, AL 36602

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

Principal Business Establishment in Louisiana
9448 BROOKLINE AVE
BATON ROUGE, LA 70809

Status
Status: Active
Annual Report Status: In Good Standing
Qualified: 11/8/1973
Last Report Filed: 10/10/2024
Type: Business Corporation (Non-Louisiana)

Registered Agent(s)

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Bryan Ardoin
has attended
Traffic Control Supervisor-LA State Specific
Training Course

6/7/2023 to 6/7/2027
Training Valid Through

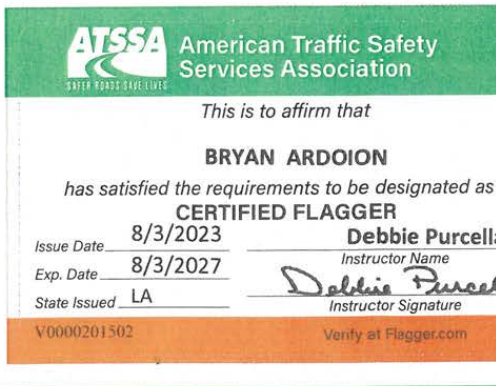
Monroe, LA
Location

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 American Traffic Safety Services Association

This is to affirm that

BRYAN ARDOION

has satisfied the requirements to be designated as

CERTIFIED FLAGGER

Issue Date 8/3/2023
Exp. Date 8/3/2027
State Issued LA

Debbie Purcell
Instructor Name

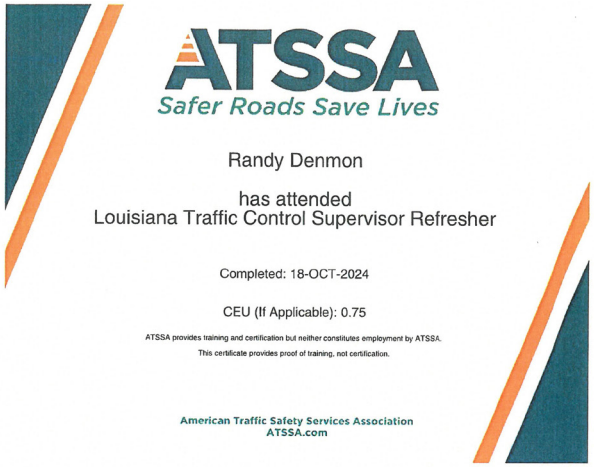
Instructor Signature

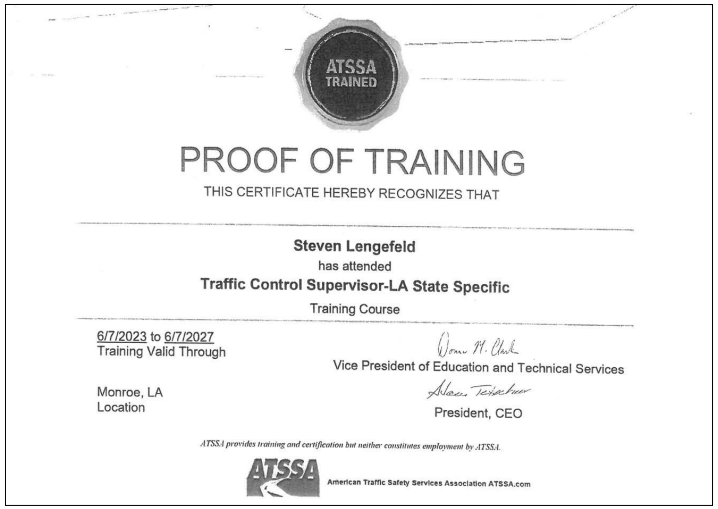
V0000201502

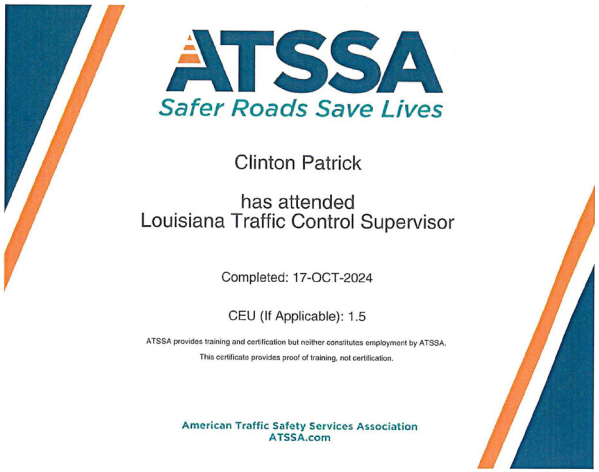
Verify at Flagger.com

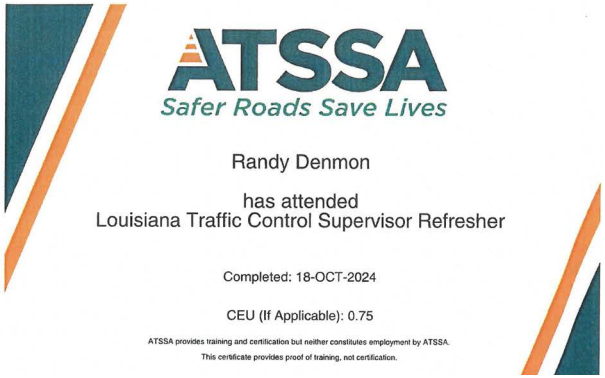
20. CERTIFICATIONS/LICENSES:

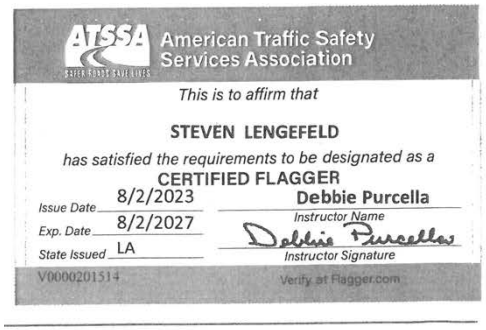
If the advertisement requires submission of licenses and/or certificates, include them here. **Otherwise, leave this section blank**.











21. QA/QC PLAN:

If the advertisement requires submission of a QA/QC plan, include it here. **Otherwise, leave this section blank. If a QA/QC plan is included in this section and was not required by the advertisement, it will be redacted**.

N/A

22. SUB-CONSULTANT INFORMATION:

If one or more sub-consultants will be used, provide the name, address, point of contact and phone number for each. Otherwise, leave this section blank.

Firm Name (Name must match exactly as registered with Louisiana's Secretary of State (SOS): including punctuation, include screenshot(s) from SOS at the end of Section 20)	Address	Point of Contact and email address	Phone Number
GOTECH, INC.	8383 Bluebonnet Boulevard Baton Rouge, LA 70810	Rhaoul A. Guillaume, Sr., PE, F.ASCE rhaoul@gotech-inc.com	(225) 766-5358
Volkert, Inc.	9448 Brookline Ave Baton Rouge, LA 70809	Janet Evans, PE, MBA Jan.evans@volkert.com	(225) 218-9440

(Add rows as needed)

23. LOCATION:

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

N/A