DOTD FORM: 24-102

PROPOSAL TO PROVIDE CONSULTANT SERVICES

(Revised January 1, 2023)

1. Contract Name as shown in the advertisement	IDIQ Contract for Professional Hydrographic Surveying Services Statewide with Majority of Work in Districts 04,05,08, and 58
2. Contract Number(s) as shown in the advertisement	Contract No. 4400027687
3. State Project Number(s), if shown in the advertisement	N/A
4. Prime consultant name (name must match as registered with the Louisiana Secretary of State where such registration is required by law)	DELTA COAST CONSULTANTS, LLC
5. Prime consultant license number (as registered with the Louisiana Professional Engineering and Land Surveying Board (LAPELS) if registration is required under Louisiana law)	Louisiana Engineering Firm #5462 Louisiana Land Surveying Firm#714
6. Prime consultant mailing address	631 South Hollywood Road Houma, LA 70360
7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)	631 South Hollywood Road Houma, LA 70360
8. Name, title, phone number, and email address of prime consultant's contract point of contact	Chad Robichaux, PLS 985-655-3100 chad.robichaux@deltacoastllc.com
9. Name, title, phone number, and email address of the official with signing authority for this proposal	Barry Jason Kennedy, PE, PLS Principal 985-655-3100 jason.kennedy@deltacoastllc.com

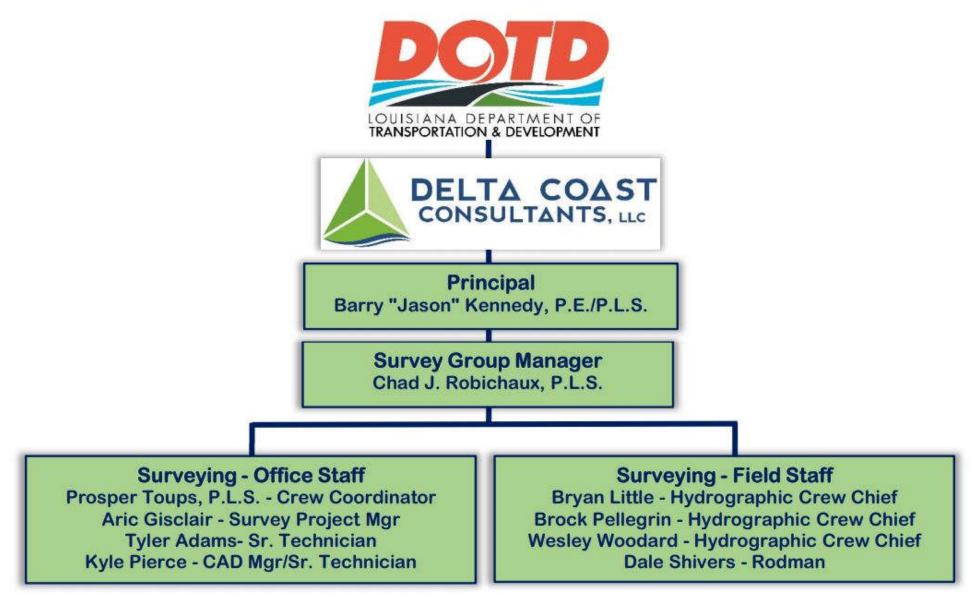
10. This is to certify that all information contained herein is accurate and true, and that the team	
presently has sufficient staff to perform these services within the designated time frame. By	
submitting this proposal, proposer certifies that it is not engaged in a boycott of Israel and it will,	
for the duration of its contract obligations, refrain from a boycott of Israel. Proposer also certifies	0 0
and agrees that the following information is correct: In preparing its response, the proposer has	Ban Kamel
considered all proposals submitted from qualified, potential subcontractors and suppliers, and has	Bang J. Kermedy
not, in the solicitation, selection, or commercial treatment of any subcontractor or supplier, refused	Signature above shall be the same person listed
to transact or terminated business activities, or taken other actions intended to limit commercial	in Section 9:
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	9-19-23
proposer also has not retaliated against any person or other entity for reporting such refusal,	Date:
termination, or commercially limiting actions. DOTD reserves the right to reject the response of	
the bidder or proposer if this certification is subsequently determined to be false, and to terminate	
any contract awarded based on such a false response.	
11. If a Disadvantaged Business Enterprise (DBE) goal has been set for this advertisement,	Firm(s): N/A
indicate which firm(s) will be used to meet the DBE goal and each firm(s)' percentage.	<u>Firm(s)' %: N/A</u>

12. Past Performance Evaluation Discipline Table:

Past Performance Evaluation Discipline(s)	% of Overall Contract	
Survey	100%	
Identify the percentage of work for the <u>overall contract</u> to be performed by the prime consultant and each sub-consultant.		
Percent of Contract 100%		

		-	
Firm name	DOTD Job Classification	Number of personnel committed to this	Total number of personnel available in this DOTD Job Classification
		contract	(if needed)
	Engineer		5
	Engineer Intern		1
	Party Chief	3	6
	Biologist/Wetlands		1
	Environmental Manager		1
	Environmental Professional		1
	Principal	1	2
	Administrative		1
	Project Office Manager		1
	Inspector		4
DELTA COAST	Rodman	1	4
DELIA COASI	Instrument Man		1
	Professional Land Surveyor	2	2
CONSULTANTS, LLC	Other (Project Manager)	1	2
	Other (Land Surveyor Intern)		1
	CADD Drafter		0
	CADD Technician		2
	Senior Technician	2	4

(Add rows as needed)



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	Barry "Jason" Kennedy PE, PLS	DELTA COAST CONSULTANTS, LLC	PLS 4982 15 Years PE 33218 (Civil) 16 Yrs	LA LA	9/30/2023 9/30/2023
2	Chad Robichaux, PLS		PLS 4882 22 Years	LA	9/30/2025

Firm employed by	Delta Coast Consultants, LLC		
	"Jason" Kennedy	Years of relevant experience with this employer	9
	LS, Principal	Years of relevant experience with other employer(s)	12
Degree(s) / Years /	· •	B.S. Civil Engineering / 2002 – M.S. Coastal Engineering / 2011	12
	number / state / expiration date	PLS 4982 / LA / 9/30/2023 – PE 33218 / LA / 9/30/2023	
Year registered	2008 / 2007 Discipline	Survey / Civil Engineering	
0	prief description of responsibilities	QA / QC Manager	
Experience dates (mm/yy-mm/yy)	Experience and qualifications releva intersection", etc. Experience dates s	int to the proposed contract; <i>i.e.</i> , "designed drainage", "designed hould cover the years of experience specified in the applicable MP	R(s).
and surveying of a coastal restoration solutions to engine	Mr. Kennedy is a Louisiana native and a licensed professional engineer and land surveyor with 21 years of engineering experience in the design and surveying of a wide variety of civil engineering projects. He has specialized experience in the planning and design of flood protection and coastal restoration projects in south Louisiana. His background in data collection and analysis aids in development of scientifically defensible solutions to engineering projects. Work experience includes grant applications, feasibility reports, damage assessments, hydraulic modeling, engineering design, construction management, topographic surveys, hydrographic surveys, technical reports, and permitting.		
8/21 - Ongoing	Mr. Kennedy served as the project ma repairs and assessments following Hu identifying damage along TLCD leve organizing the FEMA PW application	urricane Ida-Terrebonne Levee and Conservation District (Terrel mager for emergency response and associated services assisting TL rricane Ida. These services included coordinating other consultants es and structures, coordinating resources deployed to each location as for federal assistance. This work also included numerous underw erways to identify damage and provide route clearance for marine v	CD in emergency and contractors, , and ultimately vater sonar surveys (SS
6/18 - Ongoing	& MB) of various floodgates and waterways to identify damage and provide route clearance for marine vessels and equipment 18 - Ongoing Mid-Breton Sediment Diversion Project, CPRA (Plaquemines Parish, LA) - The Mid-Breton Sediment Diversion Project is located on the east bank of the Mississippi River at Willis Point and is being designed to use the Mississippi River to move sediment and freshwater from the river into nearby basins, mimicking the natural deltaic land-building processes. Mr. Kennedy serves as the project team lead for data collection, instrumentation, and surveying services. Mr. Kennedy helped to develop the data collection procedures and scope used by the project team to validate and calibrate the project modeling efforts. Mr. Kennedy also assisted the project team in development of innovative data collection procedures to gather valuab sediment and flow data in the near-bed regions of the Mississippi River channel.		ippi River to move rocesses. Mr. r. Kennedy helped to roject modeling

1/22 - Ongoing	Instrumentation and Monitoring System for the Terrebonne Levee and Conservation District (Terrebonne Parish, LA) -
	Mr. Kennedy serves as the program lead for TLCD's critical data collection and floodgate monitoring systems installed throughout Terrebonne Parish, LA. This system was started in 2014 with the installation of hydrodynamic monitoring equipment at 3 critical floodgates. Mr. Kennedy developed an online interface for TLCD staff to view water levels, flow, and windspeed in real-time over a mobile connection. This system now includes monitoring systems at 11 total floodgate locations in Terrebonne Parish.
11/17 - 09/19	Valhi Drainage Improvements Project, Terrebonne Parish Consolidated Gov't (Terrebonne Parish, LA) -Mr. Kennedy serves as the modeling / H&H lead on this project. Mr. Kennedy developed a coupled 1D/2D HEC-RAS model to combine the flow effects of the many small interconnected ditches and drainage canals with the 2D flow effects of flooded storage basins and wetlands within the system. This model was built from survey data collected by DCC and combined with LIDAR data of the various drainage basins. The model runs were performed in version 5.0.5 of HEC-RAS.
05/21 - Ongoing	Bayou Lafourche Pumping Capacity Improvements Project, Bayou Lafourche Freshwater District (Ascension Parish, LA)- Mr. Kennedy served as the Assistant Project Manager for the project team (Stantec Prime Consultant). Mr. Kennedy coordinated design efforts with the Owner and helped to guide the project through the modeling, design, and permitting process. Mr. Kennedy also developed the data collection program for in-river hydrodynamic and sediment data to aid in model calibration and validation. In-river sediment sampling was used to determine the sedimentation effects from increased flows into Bayou Lafourche and ultimately design mitigation efforts to reduce these effects.

Firm employed by	Delta Coast Consultants, LLC		
Name Prospe	er Toups, III	Years of relevant experience with this employer	8
Title Profes	ssional Land Surveyor	Years of relevant experience with other employer(s)	19
Degree(s) / Years /	Specialization	Bachelor of General Studies-1991 Applied Science/ 30-hrs Surve	y Course for LA PLS
		Licensure	
Active registration	number / state / expiration date	4967 /LA	
Year registered	2007 Discipline	Survey	
Contract role(s) / br	rief description of responsibilities	PLS/Survey Project Manager/Crew Coordinator	
Experience dates	1 1 1	ant to the proposed contract; i.e., "designed drainage", "designed	6 6
		hould cover the <u>years of experience</u> specified in the applicable MP	
Mr. Toups is a Lou	isiana licensed land surveyor with over	twenty-seven years of land surveying experience ranging from 3D) seismic surveys,
exploration permitt	ing, pipeline anomaly repair, unit surve	eys, right-of-way surveys, boundary & mortgage surveys, land recla	amation surveys,
property line shifts	& subdivision of property surveys, cor	nstruction layout & topographic surveys, geodetic control surveys,	and hydrographic &
marsh restoration s	urveys. His background as a field surve	eyor performing countless hours of data collection and years behind	1 the desk reviewing,
processing, and app	plying this data to projects brings valua	ble experience to the team.	_
10/22 - Ongoing			
	survey and data collection manager for the duration of this project. The purpose of this project is to restore over 300 acres of		
	marsh habitat adjacent to the eastern shoreline of Bayou Grande Cheniere by pumping nearly 3 million cubic yards of material from the Mississippi Biyer. Mr. Tours is tasked with managing the magnetemeter surveys, hydrographic surveys of herrow		
	from the Mississippi River. Mr. Toups is tasked with managing the magnetometer surveys, hydrographic surveys of borrow areas and access routes, and the topographic surveys of the marsh creation areas. Mr. Toups also checks outgoing data for		
	validity and compliance with the scope of work provided by CPRA and the client (Weeks Marine).		
06/18 - Ongoing	Wid-Breton Sediment Diversion Project, CPRA (Plaquemines Parish, LA) - The Mid-Breton Sediment Diversion Project is		
00/10 - Oligoling		sippi River at Willis Point and is being designed to use the Mississ	
		er into nearby basins, mimicking the natural deltaic land-building p	
		and surveying services. Mr. Toups helped to develop the data colle	-
		date and calibrate the project modeling efforts. Mr. Toups also ass	
		collection procedures to gather valuable sediment and flow data in	
	of the Mississippi River channel.	1 0	8
05/21 - Ongoing		⁷ Improvements Project, Bayou Lafourche Freshwater District (A	scension Parish, LA)
		data Collection Manager for the project team (Stantec Prime Cons	
		tion program for in-river hydrodynamic and sediment data to aid in	
	validation. In-river sediment samplin	g was used to determine the sedimentation effects from increased f	lows into Bayou
	Lafourche and ultimately design mitig	gation efforts to reduce these effects.	

01/23 - Ongoing	Ward 7 Levee Mitigation – Marsh Creation Project, Terrebonne Parish Consolidated Government, (Terrebonne Parish,
	<i>LA</i>) - This project will create 37 acres of marsh along the eastern shoreline of Lake Boudreaux as mitigation for impacts
	associated with the Ward 7 Levee Improvements project. Prosper served as the professional surveyor of record for the
	construction phase of this project as a subcontractor to the overall construction contractor. Prosper was responsible for
	completion of magnetometer surveys, pipeline probing and location, hydrographic surveys of the borrow area, shallow water
	topographic surveys of the marsh creation area and rock dike alignments, and compliance / payment surveys.
06/16 - 11/16	Falgout Canal Freshwater Enhancement (CIAP) Project (Terrebonne Parish, LA) - The goal of this CIAP project is to
	reestablish historical north to south flow by constructing a new channel between the Houma Navigation Canal and the interior
	marshes north of Falgout Canal. Prosper was the professional surveyor of record for the construction phase of this project as a
	subcontractor to the overall construction contractor. Prosper was responsible for completion of magnetometer surveys,
	pipeline location, pre-construction cross-sections, post-construction payment surveys, and certified dredging volume
	calculations.

Firm employed by	Delta Coast Consu	Iltants, LLC		
Name Chad R	Chad Robichaux		Years of relevant experience with this employer	2
Title PLS/Su	PLS/Survey Manager		Years of relevant experience with other employer(s)	27
Degree(s) / Years / S	Specialization		Bachelor of Science / 1997 / Civil Engineering Technology - 30-	hrs Survey Course for
			LA PLS Licensure	
	number / state / expira		4882/LA	
Year registered	2001		Survey	
	ief description of resp		Supervising Surveyor	
-			t to the proposed contract; <i>i.e.</i> , "designed drainage", "design	
			ould cover the <u>years of experience</u> specified in the applicable MI	
		•	ver 29 years of land surveying experience including boundary, A	
			ication, hydrographic/bathymetric (single-beam & multibeam), l	• • •
· ·	0 0	· .	ofiler), pipeline construction (new-build and maintenance), pipel	-
-			nment, dredging, construction stakeout, as-built, oil & gas explo	-
-	-	-	ermitting at the local, state and federal level, land rights/ROW p	
-	-		ns, levee and road layout, horizontal directional drill layout, rout	e analysis and
feasibility studies. H	lis diverse backgrour	nd brings valuable e	experience to the team.	
08/21 - 09/21	Post Hurricane Ida	Emergency Hydro	graphic Survey for Newpark Drilling Fluids in Fourchon – Th	e purpose of this
	project was to perfor	rm an emergency si	de scan sonar and single-beam survey of 2 slips in Fourchon to	determine water depths
	and to look for storm debris underwater near the client's docks so that they could determine whether it was safe to dock their			
	vessels to resume operations of transporting drilling fluids to their clients in the Gulf of Mexico. During the survey we			
	discovered a conex box underwater right next to the dock that was standing upright only a few feet below the surface of the			
	water. Our side scan	sonar also indicate	ed other storm related debris resting on the seafloor. Mr. Robicha	ux managed the field
	surveys, data proces	sing and drawing p	reparation. Field surveys included a side scan sonar and water de	<u>epth survey</u> . Office
	work consisted of pr	ocessing the side s	can sonar and single beam echosounder data that collected. Drav	vings were prepared
	showing plan views	of the side scan im	agery, areas that were safe for mooring and coordinates of the so	onar contacts (hazards).
08/21 - 10/21				hell in the Gulf of
	<u>Mexico</u> – The purpo	ose of this project w	as to perform a side scan sonar and multibeam survey of 2 pipel	ines in response to an
	oil leak after Hurrica	ane Ida from the be	ach out to the 3-mile limit line. During the survey we found seve	eral broken pipelines
	and were able to det	ermine that the pipe	elines were not for our client. Mr. Robichaux managed the field	surveys, data
	processing and draw	ving preparation. Fi	eld surveys included a side scan sonar and magnetometer survey	Office work consisted
	-			
	of processing the sid	le scan sonar and m	agnetometer data that was collected. Drawings were prepared sh	-

08/21 - 10/21	Post Hurricane Ida Emergency Hydrographic Survey of 10" Ethylene Pipeline for Shell in the Bonnet Carre Spillway –
	The purpose of this project was to perform a side scan sonar and multibeam survey of an exposed pipeline in the Bonnet Carre
	Spillway. The pipeline was exposed before Hurricane Ida hit and our client wanted to ensure that the pipeline was not
	impacted by any storm debris or moved by the high intensity winds. We discovered that there was in fact some debris hung up
	on the pipeline. Mr. Robichaux managed the field surveys, data processing and drawing preparation. Field surveys included <u>a</u>
	side scan sonar and multibeam survey. Office work consisted of processing the side scan sonar and multibeam data that was
	collected. Drawings were prepared showing plan and profile views of the side scan imagery, multibeam data and coordinates
	of key features.
08/21 - 09/21	Post Hurricane Ida Emergency Hydrographic Survey for Magellan Midstream in Gibson – The purpose of this project was
	to perform an emergency side scan sonar and water depth survey of Bayou Black in Gibson to determine water depths and to
	look for storm debris underwater near the client's docks so that they could determine whether it was safe to access their docks.
	During the survey we discovered some storm related debris resting on the seafloor. Mr. Robichaux managed the field surveys,
	data processing and drawing preparation. Field surveys included <u>a side scan sonar and multibeam survey</u> . Office work
	consisted of processing the side scan sonar and multibeam echosounder data that collected. Drawings were prepared showing
	plan views of the side scan imagery and multibeam data, along with areas that were safe for mooring and coordinates of the
	sonar contacts (hazards).
06/23 - 08/23	Hydrographic Surveys for Shell's 22" Zydeco Pipelines in Berwick – The purpose of this project was to perform a multibeam
	inspection survey of Shell's abandoned and active Zydeco pipelines across Bayou Shaffer and the Atchafalaya River to check
	the depth of cover over the pipelines. During the survey we discovered that the abandoned pipeline was still suspended off of
	the seafloor at both waterway crossings. Mr. Robichaux managed the field surveys, data processing and drawing preparation.
	Field surveys included a multibeam survey. Office work consisted of processing the side scan sonar and multibeam
	echosounder data that collected. Drawings were prepared showing plan and profile views of the multibeam data and
	coordinates of key features.

Firm employed by	Firm employed by Delta Coast Consultants, LLC		
Name Brock	x J. Pellegrin	Years of relevant experience with this employer 3	
Title Surve	ey Party Chief	Years of relevant experience with other employer(s) 10	
Degree(s) / Years	/ Specialization	High School Graduate, 2010 / TWIC	
Active registration	number / state / expiration date	N/A	
Year registered	N/A Discipline	Survey	
Contract role(s) / b	prief description of responsibilities	Brock will serve as a hydrographic survey party chief	
Experience dates (mm/yy–mm/yy)		nt to the proposed contract; <i>i.e.</i> , "designed drainage", "designed girders", "designed nould cover the <u>years of experience</u> specified in the applicable MPR(s).	
surveying principle environment, inclu	Mr. Pellegrin has over 13 years of surveying experience. He has performed surveys in the Louisiana coastal environment, is proficient in GPS surveying principles and operation. He also has extensive experience in the operation of nearly all types of watercraft used in the coastal surveying environment, including Airboats, Marsh-buggies, and various outboard-powered vessels. Furthermore, Brock has performed numerous hydrographic surveys utilizing single beam fathometers, multibeam echosounders, side scan sonar, magnetometers and gradiometers.		
08/21 - Ongoing	TLCD – Flood Gate Side scan and Multibeam Survey (Terrebonne Parish, LA) - Brock was one of the Party Chiefs that performed annual side-scan and multibeam surveys on all flood gates within Terrebonne Parish. Brock was responsible for collecting side-scan and multibeam data used to visually inspect the locking structures of the floodgates for obstructions.		
10/21 - 11/21	<i>LA Scrap Metal and Recycling – Mulit-beam and ALTA Survey (Terrebonne Parish, LA)</i> – The project required a multi- beam survey of the slips that were to be purchased by LA Scrap Metal and Recycling in conjunction with a topographic survey of the surrounding property. Brock was responsible for the collection of significant features surrounding the slips, as well as the multi-beam data of the slips used to display usable water depths and any underwater obstructions.		
08/21 - 09/21	Post Hurricane Ida Emergency Hydrographic Survey for Newpark Drilling Fluids in Fourchon – The purpose of this project was to perform an emergency side scan sonar and single-beam survey of 2 slips in Fourchon to determine water depths and to look for storm debris underwater near the client's docks so that they could determine whether it was safe to dock their vessels to resume operations of transporting drilling fluids to their clients in the Gulf of Mexico. During the survey we discovered a conex box underwater right next to the dock that was standing upright only a few feet below the surface of the water. Our side scan sonar also indicated other storm related debris resting on the seafloor. Brock performed the field data collection work which included a side scan sonar and water depth survey.		
08/21 - 10/21	 Concertion work which included <u>a side scan sonar and water depit survey</u>. Post Hurricane Ida Emergency Hydrographic Survey of 10" Ethylene Pipeline for Shell in the Bonnet Carre Spillway – The purpose of this project was to perform a side scan sonar and multibeam survey of an exposed pipeline in the Bonnet Carre Spillway. The pipeline was exposed before Hurricane Ida hit and our client wanted to ensure that the pipeline was not impacted by any storm debris or moved by the high intensity winds. We discovered that there was in fact some debris hung up on the pipeline. Brock performed the field surveys, which included <u>a side scan sonar and multibeam survey</u>. 		

Firm employed by								
Name Bryan			Years of relevant experience with this employer	6				
Title Survey Party Chief			Years of relevant experience with other employer(s)	20				
Degree(s) / Years /	4		High School Graduate, 1997 / USCG Boaters Safety/ TSA/ TWIC					
Ŭ	number / state / expiration d	late	N/A					
Year registered		-	Survey					
	Contract role(s) / brief description of responsibilities Bryan may serve as a hydrographic survey party chief							
Experience dates			nt to the proposed contract; i.e., "designed drainage", "designe					
(mm/yy–mm/yy)			ould cover the -years of experience specified in the applicable MP					
-	-		xperience performing surveys in the Louisiana coastal environmer	_				
-			nt. Proficient in GPS surveying principles and operation. Bryan a					
field experience wi	th deployment and troublesh	nooting of va	arious water level sensors and Acoustic Doppler Velocimeters (AD	OV's) for				
measurement of rea	al-time water levels and flow	vs in various	waterways. He has extensive experience in the operation of nearly	y all types of				
watercraft used in t	the coastal surveying enviror	nment, inclu	ding Airboats, Marsh-buggies, and various outboard-powered vess	els. Bryan is				
proficient in the Hy	yPack Max – Hydrographic S	Survey Soft	ware, as well as Sea-Spy magnetic data collection software. Bryan	was responsible for				
field data collection	n activities for numerous tas	k orders issu	ed through an A/E CWPPRA Surveying Services contract with US	SDA/NRCS at a				
previous job.								
00/01 0		1.1.4						
08/21 - Ongoing	TLCD – Flood Gate Side scan and Multibeam Survey (Terrebonne Parish, LA) - Bryan was one of the Party Chiefs that							
	performed annual side-scan and multibeam surveys on all flood gates within Terrebonne Parish. Bryan was responsible for collecting side-scan and multibeam data used to visually inspect the locking structures of the floodgates for obstructions.							
	collecting side-scan and m	ultibeam da	a used to visually inspect the locking structures of the floodgates f	or obstructions.				
08/21 - 09/21	Post Hurricane Ida Emergency Hydrographic Survey for Magellan Midstream in Gibson – The purpose of this project was							
			ar and water depth survey of Bayou Black in Gibson to determine					
			the client's docks so that they could determine whether it was safe	-				
			storm related debris resting on the seafloor. Bryan performed the					
	included a side scan sonar			nora surveys, which				
	mended <u>a side sean sona</u>		<u></u>					
08/21 - 10/21			ographic Survey of 24" Mars & 24" Amberjack Pipelines for She					
	<u>Mexico –</u> The purpose of t	his project v	vas to perform a side scan sonar and multibeam survey of 2 pipelin	es in response to an				
	oil leak after Hurricane Ida	a from the be	each out to the 3-mile limit line. During the survey we found sever	al broken pipelines				
	and were able to determine	e that the pip	elines were not for our client. Bryan performed the field surveys,	which included <u>a side</u>				
	scan sonar and magnetome	eter survey.						
		·						

06/23 - 08/23	Hydrographic Surveys for Shell's 22" Zydeco Pipelines in Berwick – The purpose of this project was to perform a multibeam							
	inspection survey of Shell's abandoned and active Zydeco pipelines across Bayou Shaffer and the Atchafalaya River to check							
	the depth of cover over the pipelines. During the survey we discovered that the abandoned pipeline was still suspended off of							
	the seafloor at both waterway crossings. Bryan performed the field surveys, which included data collection with a multibeam							
	echosounder.							
10/22 - Ongoing	Weeks Marine – Grande Cheniere Ridge Marsh Creation Project (BA-0240) – Bryan served as survey lead for a borrow area							
	survey performed in the Mississippi River. Bryan was tasked with collecting magnetometer and multi-beam data in the							
	borrow area prior to dredging. The data collected was used in volume calculations and locating magnetometer anomalies that							
	may interfere with the dredge cutter head. The purpose of this project is to restore over 300 acres of marsh habitat adjacent to							
	the eastern shoreline of Bayou Grande Cheniere by pumping nearly 3 million cubic yards of material from the Mississippi							
	River.							

Firm employed by Delta Coast Consultants, LLC								
Name Wesley	Woodard	Years of relevant experience with this employer 3						
Title Survey	Party Chief	Years of relevant experience with other employer(s) 5						
Degree(s) / Years /		N/A						
	number / state / expiration date	N/A						
Year registered	N/A Discipline	Survey						
	rief description of responsibilities	Wesley may serve as a hydrographic survey crew member						
Experience dates (mm/yy-mm/yy)		nt to the proposed contract; <i>i.e.</i> , "designed drainage", "designed girders", "designed nould cover the -years of experience specified in the applicable MPR(s).						
Wesley is a Louisia		experience performing surveys in the Louisiana coastal environment. Experience						
experience in the op various outboard-po	peration of nearly all types of watercraft owered vessels. Wesley is proficient in	ent including Trimble GPS, digital levels, total stations, drones, etc. He has extensive t used in the coastal surveying environment, including Airboats, Marsh-buggies, and the HyPack Max – Hydrographic Survey Software, as well as Sea-Spy magnetic data V (drones). He is also a certified diver.						
08/21 - Ongoing	18/21 - Ongoing TLCD – Flood Gate Side scan and Multibeam Survey (Terrebonne Parish, LA) - Wesley assisted with the annual side-scan and multibeam surveys on all flood gates within Terrebonne Parish. The crew was responsible for collecting side-scan and multibeam data used to visually inspect the locking structures of the floodgates for obstructions.							
11/22 - Ongoing	11/22 - Ongoing Tchefuncte Marsh Creation Project in St. Tammany Parish – Wesley was responsible for performing a bathymetric and magnetometer survey on the North shore of Lake Pontchatrain. He performed surveys of the borrow area, access corridor and fill areas to assist with the design of the marsh creation project.							
08/21 - 10/21	08/21 - 10/21Hydrographic Survey for Bank Erosion Adjacent to an Entergy Transmission Tower - Wesley was responsible for performing a topographic, bathymetric and magnetometer survey of Port Allen Canal. The purpose of the survey was to gather data to remediate a transmission tower that was at risk of falling into the canal.							
10/22 - Ongoing	topographic, bathymetric and magnete	<i>idge Marsh Creation Project (BA-0240)</i> – Wesley was responsible for collecting ometer data along the access corridor and fill areas. The purpose of this project is to adjacent to the eastern shoreline of Bayou Grande Cheniere by pumping nearly 3 he Mississippi River.						

Firm employed by Delta Coast Consultants, LLC							
Name Dale S	Shivers	Years of relevant experience with this employer 3					
Title Surve	y Assistant (Rodman)	Years of relevant experience with other employer(s) 1					
Degree(s) / Years /		N/A					
	number / state / expiration date	N/A					
Year registered	N/A Discipline	Survey					
	orief description of responsibilities	Dale will serve as a survey assistant (rodman)					
Experience dates		vant to the proposed contract; <i>i.e.</i> , "designed drainage", "designed girders", "designed					
(mm/yy–mm/yy)		should cover the -years of experience specified in the applicable MPR(s).					
08/21 - Ongoing		Multibeam Survey (Terrebonne Parish, LA) - Dale assisted with the annual side-scan and					
		s within Terrebonne Parish. The crew was responsible for collecting side-scan and					
	multibeam data used to visually insp	beet the locking structures of the floodgates for obstructions.					
12/19 - 06/22	Townahanna Rasin Rawnian Island a	nd Beach Nourishment/West Belle Headland Restoration Project (TE-143 and TE-118),					
12/19 - 00/22	for CPRA (Terrebonne and Lafour						
		barrier islands/headland within the Terrebonne Basin barrier shoreline system: West					
		nd Trinity Island by hydraulically dredging 9,730,000 cubic yards of material from three					
		iters of the Gulf of Mexico. The sustainable restoration of beach, dune, and marsh habitat					
		rotect the fragile landscape. Dale assisted with the field data collection for various types					
		pographic, magnetometer, and dredge progress/payment surveys.					
	of surveys menualing bathymetric, to	pographic, magnetometer, and dredge progress/payment surveys.					
06/18 - Ongoing	Mid-Breton Sediment Diversion Pr	oject, for CPRA (Plaquemines, LA) – The project will reconnect the Mississippi River					
	with the construction of a control str	cture in the mainline levee along the Mississippi River. The project also includes an					
	associated river inlet channel, and a	conveyance channel. This project is considered key to reversing the coastal land loss					
		the past hundred years. Dale assisted in the field data collection for various types of					
surveys including bathymetric (single and multi-beam), topographic, magnetometer, ADCP and sediment sampling.							
10/22 - Ongoing	Wooks Marina Cranda Chariana	Ridge Marsh Creation Project (BA-0240) – Dale assisted with the collection of					
10/22 - Oligollig		tometer data along the access corridor and fill areas. The purpose of this project is to					
		tat adjacent to the eastern shoreline of Bayou Grande Cheniere by pumping nearly 3					
	million cubic yards of material from						
L							

Firm employed by	Firm employed by Delta Coast Consultants, LLC							
Name Kyle F	Pierce		Years of relevant experience with this employer	9				
Title CAD Manager / Senior Technician			Years of relevant experience with other employer(s)	17				
Degree(s) / Years /		N/A						
Active registration	number / state / expiration date	N/A						
Year registered	N/A Discipline	Surv	ey					
Contract role(s) / br	rief description of responsibilities		processing and drafting					
Experience dates			the proposed contract; i.e., "designed drainage", "designed					
(mm/yy–mm/yy)			cover the <u>years of experience</u> specified in the applicable MP					
			enty-six years of drafting experience in several disciplines. H	-				
on the latest AutoC	CAD Civil 3D software and is responsib	le for	performing duties such as developing construction bid docum	nents from concepts				
prepared by profess	sional engineers. He also has experienc	e with	Bentley MicroStation.					
09/21 0		1-141	$\mathbf{C}_{\mathbf{r}} = \mathbf{C}_{\mathbf{r}} + $	h				
08/21 - Ongoing			eam Survey (Terrebonne Parish, LA) – Kyle performed the	bulk of the drafting				
	work for the annual side-scan and mu	Itibea	m surveys on all flood gates within Terrebonne Parish.					
08/21 - 10/21	Post Hurricane Ida Emergency Hydr	rogra	phic Survey for Newpark Drilling Fluids in Fourchon – The	e purpose of this				
			can sonar and single-beam survey of 2 slips in Fourchon to d					
			ur the client's docks so that they could determine whether it w	1				
			g drilling fluids to their clients in the Gulf of Mexico. During					
		-	ext to the dock that was standing upright only a few feet below	-				
		0	her storm related debris resting on the seafloor. Kyle prepare					
			hat were safe for mooring and coordinates of the sonar contact	6				
08/21 - 09/21			phic Survey for Magellan Midstream in Gibson – The purpo					
			nd water depth survey of Bayou Black in Gibson to determine	-				
	look for storm debris underwater near	the c	lient's docks so that they could determine whether it was safe	e to access their docks.				
	During the survey we discovered som	e stor	m related debris resting on the seafloor. Drawings were prepa	ared by Kyle showing				
	plan views of the side scan imagery a	nd mu	ltibeam data, along with areas that were safe for mooring and	d coordinates of the				
	sonar contacts (hazards).							
09/18 - 08/20	Rayou Lafounaha Emananan Watar	Tontas	I Structure (Assumption Parish, LA) -Mr. Pierce was responsib	la for the properties				
09/18 - 08/20			I structure (Assumption Parisn, LA) - Mr. Pierce was responsed					
	-		nville, La. would need to be shut down. The water control struc					
	1 1		s, and a 35-foot wide swing gate (for marine vessels) would be					
	steer sheet phe noodwall, four (4) sluid	e gale	s, and a 55-1001 while swing gate (101 marine vessels) would be (crosed anowing Bayou				

	Lafourche to act as a freshwater reservoir until the pump station could be re-started. The project is currently estimated to cost \$2,500,000.
05/14 - 08/17	<i>Morganza to the Gulf, Reach G2 & H1 Mitigation / Marsh Creation Project, (Terrebonne Parish, LA)</i> - Delta Coast Consultants was contracted as the prime consultant for this 205-acre marsh creation project near Dulac, LA. The project provided compensatory mitigation for impacts associated with the construction of two nearby levee alignments. The scope of the project included hydraulically dredging material from the Houma Navigation Canal and pumping over 4 miles to the target fill area just north of the Bayou Sale ridge. Mr. Pierce was responsible for processing survey data, calculating quantities, creating terrain models, preparing project plans, checking payment survey drawing packages, & preparing the As-Built survey drawing package. This project was completed in August of 2017.

Firm employed by	Delta Coast Consultants, LLC							
Name Aric C	Bisclair, CST	Years of relevant experience with this employer	7					
Title Surve	y Project Manager	Years of relevant experience with other employer(s) 17						
Degree(s) / Years /	Specialization	A.A.S. in Computer Aided Drafting & Design / 1999						
Active registration number / state / expiration date N/A								
Year registered								
Contract role(s) / b	Contract role(s) / brief description of responsibilities Project Management and data processing							
Experience dates (mm/yy–mm/yy)	· · · ·	ant to the proposed contract; <i>i.e.</i> , "designed drainage", "designed hould cover the years of experience specified in the applicable MP	5 / 5					
	native and Project Manager with a diverse, coastal restoration, and marine const	erse background of experience in sectors such as pipeline, explorat ruction projects.	ion & production,					
8/21 - 10/21	8/21 – 10/21 Hydrographic Survey of Dock Facilities for M-I Swaco (Schlumberger) in Fourchon, LA – The purpose of this project was to perform an emergency side scan sonar survey of 5 facilities located in Fourchon to look for storm debris located underwater near the client's docks so that they could resume loading and unloading vessels. This survey was performed Post-Hurricane Ida. Our survey discovered various objects that required removal by our client prior to resuming normal loading and unloading operations. Mr. Gisclair processed the data and managed the field surveys and drawing preparation. Field surveys included a side scan sonar survey. Office work consisted of processing side scan sonar survey data collected. Drawings were prepared showing plan views of the side scan mosaics and coordinates for all observed sonar contacts (hazards).							
08/21 - 10/21	project was to perform an emergency and to look for storm debris underwat vessels to resume operations of transp discovered a conex box underwater ri	rographic Survey for Newpark Drilling Fluids in Fourchon – The side scan sonar and single-beam survey of 2 slips in Fourchon to d there near the client's docks so that they could determine whether it woorting drilling fluids to their clients in the Gulf of Mexico. During ght next to the dock that was standing upright only a few feet below the other storm related debris resting on the seafloor. Aric handled	letermine water depths vas safe to dock their the survey we w the surface of the					
12/19 - 06/22	<i>Terrebonne Basin Barrier Island an</i> <i>for CPRA (Terrebonne and Lafource</i> The project will restore three critical Belle Headland, Timbalier Island, and sites located in State and Federal wate in a highly eroded area will help to proverse field data collection and map	<i>d Beach Nourishment/West Belle Headland Restoration Project (</i> <i>he, LA)</i> – barrier islands/headland within the Terrebonne Basin barrier shorel d Trinity Island by hydraulically dredging 9,730,000 cubic yards of ers of the Gulf of Mexico. The sustainable restoration of beach, du totect the fragile landscape. Aric's role as a survey consultant in th ping for various types of surveys including bathymetric, topograph also handled all of the data processing.	line system: West f material from three ine, and marsh habitat he project was to					

06/18 - Ongoing	Mid-Breton Sediment Diversion Project, for CPRA (Plaquemines, LA) – The project will reconnect the Mississippi River
	with the construction of a control structure in the mainline levee along the Mississippi River. The project also includes an
	associated river inlet channel, and a conveyance channel. This project is considered key to reversing the coastal land loss
	trend that has plagued Louisiana for the past hundred years. Aric's role as a survey consultant in the project was to oversee
	field data collection and mapping for various types of surveys including bathymetric (single and multi-beam), topographic,
	magnetometer, ADCP and sediment sampling. He also handled all of the data processing.

Firm employed by	Delta Coast Consultants, LLC							
Name Tyler	Adams	Years of relevant experience with this employer	6					
Title Senior	Technician	Years of relevant experience with other employer(s) 5						
Degree(s) / Years /	Specialization	A.A.S. in Computer Aided Drafting & Design / 2012						
Active registration	number / state / expiration date	N/A						
Year registered	N/A Discipline	Survey						
	rief description of responsibilities	Drafting and data processing						
Experience dates		ant to the proposed contract; i.e., "designed drainage", "designed						
(mm/yy–mm/yy)		hould cover the <u>years of experience</u> specified in the applicable MP						
	, e	erse background of experience in sectors such as pipeline, explorat	ion & production,					
public works, levee	es, coastal restoration, and marine const	ruction projects.						
8/21 - 10/21	 8/21 – 10/21 Hydrographic Survey of Dock Facilities for M-I Swaco (Schlumberger) in Fourchon, LA – The purpose of this project was to perform an emergency side scan sonar survey of 5 facilities located in Fourchon to look for storm debris located underwater near the client's docks so that they could resume loading and unloading vessels. This survey was performed Post-Hurricane Ida. Our survey discovered various objects that required removal by our client prior to resuming normal loading and unloading operations. Tyler prepared drawings showing plan views of the side scan mosaics and coordinates for all observed sonar contacts (hazards). 							
10/22 - Ongoing	ng <i>Grande Cheniere Ridge Marsh Creation Project BA-240, CPRA (Plaquemines Parish, LA)</i> –The goal of the project is to create multiple marsh areas Southwest of West Pointe a La Hache using spoil dredged from the Mississippi River. The project involved magnetometer surveys, hydrographic surveys of borrow areas and access routes, and the topographic surveys of the marsh creation areas. Tyler is responsible for handling the majority of the drafting and deliverable preparation.							
12/19 - 06/22	12/19 - 06/22Terrebonne Basin Barrier Island and Beach Nourishment/West Belle Headland Restoration Project (TE-143 and TE-118), for CPRA (Terrebonne and Lafourche, LA) – The project will restore three critical barrier islands/headland within the Terrebonne Basin barrier shoreline system: West Belle Headland, Timbalier Island, and Trinity Island by hydraulically dredging 9,730,000 cubic yards of material from three sites located in State and Federal waters of the Gulf of Mexico. The sustainable restoration of beach, dune, and marsh habitat in a highly eroded area will help to protect the fragile landscape. This project included field data collection and mapping for various types of surveys including bathymetric, topographic, magnetometer, and dredge progress/payment surveys. Tyler was responsible for handling the majority of the drafting and deliverable preparation.							
06/23 - 08/23	inspection survey of Shell's abandone the depth of cover over the pipelines.	<u><i>Zydeco Pipelines in Berwick</i></u> The purpose of this project was to ed and active Zydeco pipelines across Bayou Shaffer and the Atcha During the survey we discovered that the abandoned pipeline was gs. Tyler handled the drafting duties for this project.	afalaya River to check					

Firm employed by Delta Coast Consultants, LLC									
Name Kevin	Rizzo	Years of relevant experience with this employer 3							
Title Engine	eering Manager, P.E., PMP	Years of relevant experience with other employer(s) 31							
Degree(s) / Years /	Specialization	BS Mathematics /1991; BS Civil Engineering/1998							
Active registration	number / state / expiration date	PE #30575 / LA / 03/31/2025							
Year registered	20 Discipline	Professional Engineer (Civil)							
	rief description of responsibilities	Engineering Supervisor							
Experience dates		nt to the proposed contract; i.e., "designed drainage", "designed girders", "designed							
(mm/yy–mm/yy)		nould cover the years of experience specified in the applicable MPR(s).							
10/14 - 12/17		Extension: LA 660 to LA 316, Terrebonne Parish Consolidated Government,							
Previous		ng Supervisor. Supervised roadway design including drainage, geometrics, subsurface							
Employer	e -	fic Management Plans and utility relocation. Supervised the compilation of all project							
		es for a new, 1.6 mile, four-lane roadway extension (Urban Arterial) connecting state							
	routes LA 660 and LA 316. Also supervised Construction Support services including shot drawing review, asphalt mix								
		designs, and reviewing and responding to Contractor RFIs.							
10/14 - 12/17	07-EXT-22, Bayou Gardens Blvd. Extension: LA 660 to LA 316, Terrebonne Parish Consolidated Government,								
Previous	Terrebonne Parish, LA – Engineering Supervisor. Provided supervision and quality control of all preliminary and final								
Employer		ments, drainage, joint layouts, graphical grading, superelevation, sequence of							
		ign and coordination for a 1.6 mile, 4-lane divided roadway extension of Bayou Gardens							
	1 0	he intersection layouts and coordination of the signal improvements at state routes LA							
01/14 00/21	660 and LA 316. 01/14 - 06/21 S.P. H.004113, I-12 to Bush: LA 3241 (LA 435 to LA 40/41), LADOTD, St. Tammany Parish, LA - Engineering								
01/14 – 06/21 Previous									
		preliminary and final roadway design including H&V alignments, drainage, and R-Cut							
Employer		le, 4-lane, divided median, Rural Arterial Roadway from LA 435 to LA 40/41 near Bush,							
	Book.	the 100% Final Plan Submittal and reviewed the Final Cost Estimate and Calculations							
09/16 - 08/19		US 190 to LA 59), LADOTD, St. Tammany Parish, LA – Engineering Supervisor.							
09/10 - 08/19 Previous		juality control of several roadway design elements including H&V alignments, drainage,							
Employer		truction. Also assisted in the development of a Level 4 Traffic Management Plan and							
	1	y and final plan submittals and cost estimates.							
L	oversaw ine preparation of premiminar	j une mui plui suomituis une cost estimates.							

Firm name	Delta Coast Consultants, LLC			Past Performanc	Past Performance Evaluation Discipline(s)* Survey			
Project name	Emergency Response to Damage from Hurricane Ida on the Morganza Hurricane Protection System			rganza	Firm responsibi	ility (prime or sub?)	Prime	
Project number	N/A Owner's name Terrebonne Le			Terrebonne Levee	and Con	servation District ((TLCD),	
Project location	on Terrebonne Parish, Louisiana			Owne	er's Pro	ject Manager	Reggie Dupre, Jr.	
Owner's address, phone, email 220A Clendenning Road, Houma, LA 7036, 985.262.85233,								
Services commenced by this firm (mm/yy)			08/21	Total consultant contract cost (\$1,000's)			Ongoing	
Services completed by this firm (mm/yy)			Ongoing	Cost of consultant services provided by this firm (\$1,000's)		\$5,600		

This project demonstrates DCC's ability and expertise in managing large scale emergency conditions, involving multi-disciplinary project teams for storm damaged repairs of Flood

Relevance to Scope of Services:

- ✓ Post Hurricane Emergency Response
- ✓ Public Safety Concern
- ✓ Responsiveness
- ✓ High Quality Deliverables
- ✓ Excellent Communication Skills During an Emergency

Services Provided:

- ✓ Side Scan Sonar Surveys
- ✓ Multibeam Surveys
- ✓ Data Collection & Processing
- ✓ Mapping Services
- ✓ Assessment of Flood Protection Services
- ✓ Technical Presentations
- ✓ Cost Estimating
- Project Scoping
- Report Preparation and Presentation

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Key Personnel:

M. Marmande, J. Kennedy, K. Rizzo, D. Boudreaux, P. Toups, K, Pierce, A. Gisclair

Control Structures. Delta Coast Consultants provides overall Program Management services for the Terrebonne Levee and Conservation District on the Morganza to the Gulf – Hurricane Protection Project. Through this contract, DCC provides multi-level

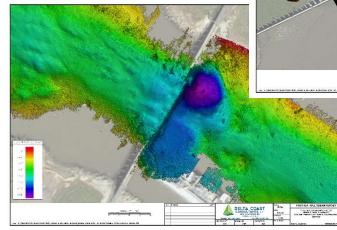


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nearly every aspect of project implementation including Emergency Response after tropical events. During Hurricane Ida, both the Bubba Dove and Humble Canal flood control structures failed and needed repair.

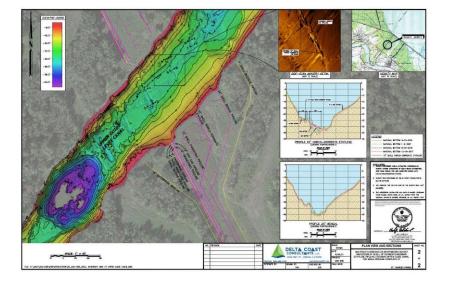
Immediately following the storm, DCC's team was able to access each of these structures with the use of side-scan sonar to determine the extent of the underwater damage and provide a competent repair plan that was then implemented by contractors and managed by DCC to put these structures back into service for the remainder of the 2021 hurricane season.

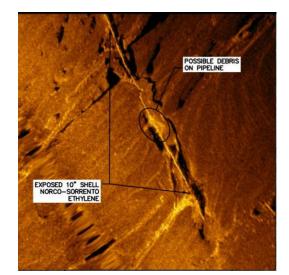
Delta Coast Consultants, LLC

Firm name	Delta Coast Consultants,	LLC	Past Performance Evalu	ation Discipline	(s)* Survey	
Project name	Emergency Response to I	lurricane Ida – 10"	Ethylene	Firm responsib	ility (prime or sub?)	Prime
	PipelineInspection At Bo	-				
Project number	N/A	Owner's name	Shell Pipeline Company	LP		
Project location	St. Charles Parish, Louisia	ana	Owner's Pro	ject Manager	Shane Degruise	
Owner's address, phot	ne, email 15601 Airline H	ighway, Norco, LA i	70079, 985-856-7572, shane	e.degruise@shell	.com	
Services commenced by this firm (mm/yy) 08/21			Total consultant contract cost (\$1,000's)\$8.5			\$8.5
Services completed by this firm (mm/yy) 10/21			Cost of consultant services	s provided by this	s firm (\$1,000's)	\$8.5

This project demonstrates DCC's ability and expertise in quickly responding to the needs of our clients during emergency conditions to ensure the integrity of their assets and the safety of the public.

The purpose of this project was to perform a hydrographic survey of an exposed pipeline in the Bonnet Carre Spillway. The pipeline was exposed before Hurricane Ida hit and our client wanted to ensure that the pipeline was not impacted by any storm debris or moved by the high intensity winds. We discovered that there was in fact some debris hung up on the pipeline (see image to the right). Delta Coast performed the field surveys, data processing and drawing preparation. Field surveys included a side scan sonar and multibeam survey. Office work consisted of processing the side scan sonar and multibeam data that was collected. Drawings were prepared showing plan and profile views of the side scan imagery, multibeam data and details of key features.





Relevance to Scope of Services:

- ✓ Post Hurricane Emergency Response
- ✓ Public Safety Concern
- ✓ Responsiveness
- ✓ High Quality Deliverables
- Excellent Communication Skills During an Emergency

Services Provided:

- ✓ Side Scan Sonar Survey
- ✓ Multibeam Survey
- ✓ Data Collection & Processing
- ✓ Cost Estimating
- ✓ Project Scoping
- ✓ Mapping Services
- ✓ Deliverable & Report Preparation

Key Personnel:

M. Marmande, J. Kennedy, C. Robichaux, K, Pierce, A. Gisclair, B. Little, B. Pellegrin, T. Adams

Firm name	Delta Coast Consultants, LLC			Past Performance Eval			
Project name	Emergenc Inspection	Emergency Response to Hurricane Ida – Side Scan Sonar Survey Firm responsibility (prime or sub?) Pr Inspection of Docks in Fourchon				Prime	
Project number	N/A Owner's name Newpark Drilling Fluids						
Project location	Lafourche Parish, Louisiana			Owner's Pr	oject Manager	Sam Smith	
Owner's address, phor	Owner's address, phone, email 1340 Poydras Street, Suite 1750, New Orleans, LA 70112, 504-523-8446, ssmith@newpark.com						
Services commenced by this firm (mm/yy) 08/21 T		Total consultant contract cost (\$1,000's)			\$8.5		
Services completed by	v this firm	(mm/yy)	10/21	Cost of consultant service	s provided by thi	s firm (\$1,000's)	\$8.5

This project demonstrates DCC's ability and expertise in quickly responding to the needs of our clients during emergency conditions to ensure public safety and to allow Newpark to safely and quickly resume shipping operations to minimize down time, loss of revenue and responsiveness to their GOM clients.

Relevance to Scope of Services:

✓ Post Hurricane Emergency Response

- ✓ Public Safety Concern
- ✓ Responsiveness
- ✓ High Quality Deliverables
- ✓ Excellent Communication Skills During an Emergency

Services Provided:

- ✓ Side Scan Sonar Survey
- ✓ Single-beam Survey
- ✓ Data Collection & Processing
- ✓ Cost Estimating
- ✓ Project Scoping
- ✓ Mapping Services
- ✓ Deliverable & Report Preparation

Key Personnel:

M. Marmande, J. Kennedy, C. Robichaux, K, Pierce, A. Gisclair, B. Little, B. Pellegrin, P. Toups The purpose of this project was to perform an emergency side scan sonar and bathymetric survey of 2 slips in Fourchon to determine water depths and to look for storm debris underwater near the client's docks so that they could determine whether it was safe to dock their vessels to resume operations of transporting drilling fluids to their clients in the Gulf of Mexico. During the survey we discovered a conex box underwater right next to the dock that was standing upright only a few feet below the surface of the water. Our side scan sonar also indicated other storm related debris resting on the seafloor. Drawings were



Firm name	Delta Coast Consultants, LLCPast Performance Evaluation Discipline(s)*Survey						
Project name	Emergency Response to Inspection of Docks in Gil	Hurricane Ida – oson	Side Scan Sonar Survey	Firm responsibility (prime or sub?	r) Prime		
Project number	N/A Owner's name Magellan Midstream Partr			ers LP			
Project location	Lafourche Parish, Louisiana Owner's Pr			ject Manager Mark Brown			
Owner's address, phone, email One Williams Center, OTC-8, Tulsa, OK 74172, 918-574-7066, EMAIL							
Services commenced by this firm (mm/yy) 08/21			Total consultant contract c	\$8.5			
Services completed by this firm (mm/yy) 10/21			Cost of consultant services provided by this firm (\$1,000's) \$8.5				

This project demonstrates DCC's ability and expertise in quickly responding to the needs of our clients during emergency conditions to ensure public safety and to allow Magellan to safely and quickly resume crude oil delivery operations to minimize down time, loss of revenue and responsiveness to their clients.

Relevance to Scope of Services:

- ✓ Post Hurricane Emergency Response
- ✓ Public Safety Concern
- ✓ Responsiveness
- ✓ High Quality Deliverables
- ✓ Excellent Communication Skills During an Emergency

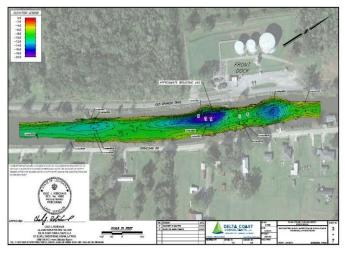
Services Provided:

- ✓ Side Scan Sonar Survey
- ✓ Multibeam Survey
- ✓ Data Collection & Processing
- ✓ Cost Estimating
- Project Scoping
- ✓ Mapping Services
- ✓ Deliverable & Report Preparation

Key Personnel:

M. Marmande, J. Kennedy, C. Robichaux, K, Pierce, A. Gisclair, B. Little, B. Pellegrin, P. Toups The purpose of this project was to perform an emergency side scan sonar and water depth survey of Bayou Black in Gibson to determine water depths and to look for storm debris underwater near the client's docks so that they could determine whether it was safe to access their docks. During the survey we discovered some storm related debris resting on the seafloor. Field surveys included <u>a side scan sonar and water depth</u> <u>survey</u>. Office work consisted of processing the side scan sonar and multibeam echosounder data that was collected. Drawings



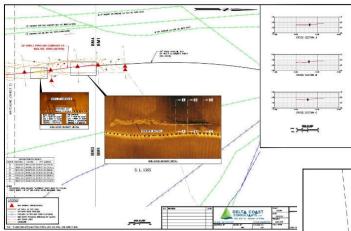


were prepared showing plan views of the side scan imagery and multibeam data, along with areas that were safe for mooring and coordinates of the sonar contacts (hazards).

Firm name	Delta Coast Consultants,		Past Performance Evalu			
Project name	Emergency Response to F 24" Mars & 24" Amberjack	Scan Survey Inspection of	1	ility (prime or sub?)	Prime	
Project number	N/A	Owner's name	Shell Pipeline Company LP			
Project location	Lafourche Parish, Louisia	na	Owner's Pro	ject Manager	Micah Shanks	
Owner's address, phor	Owner's address, phone, email 150 N. Dairy Ashford Road, Houston, TX 77079, 832-762-2606, micah.shanks@shell.com					
Services commenced by this firm (mm/yy) 08/21			Total consultant contract cost (\$1,000's)			\$20
Services completed by this firm (mm/yy) 10/21			Cost of consultant services	provided by this	s firm (\$1,000's)	\$20

This project demonstrates DCC's ability and expertise in quickly responding to the needs of our clients during emergency conditions to ensure the integrity of their assets and the safety of the public

The purpose of this project was to perform a side scan sonar survey of 2 pipelines in response to an oil leak after Hurricane Ida from the beach out to the 3-mile limit line. During the survey we found several broken pipelines and were able to determine



that the pipelines were not for our client. Field surveys included a side scan sonar and magnetometer survey. Office work consisted of processing the side scan sonar and magnetometer data that was collected. Drawings were prepared showing plan views of the side scan imagery, magnetic targets and coordinates of key features.

Relevance to Scope of Services:

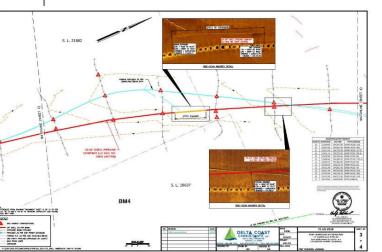
- Post Hurricane Emergency \checkmark Response
- Public Safety Concern \checkmark
- Responsiveness \checkmark
- High Quality Deliverables \checkmark
- **Excellent Communication Skills** \checkmark During an Emergency

Services Provided:

- Side Scan Sonar Survey \checkmark
- Single-beam Survey \checkmark
- \checkmark Magnetometer Survey
- Data Collection & Processing \checkmark
- Cost Estimating \checkmark
- Project Scoping \checkmark
- Mapping Services \checkmark
- Deliverable & Report Preparation \checkmark

Key Personnel:

M. Marmande, J. Kennedy, C. Robichaux, K, Pierce, A. Gisclair, B. Little, B. Pellegrin, P. Toups

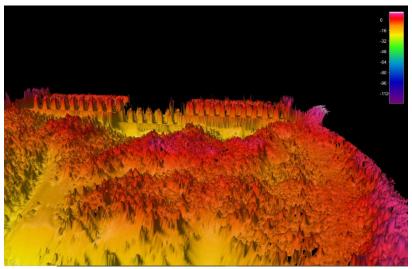


18. Approach and Methodology:

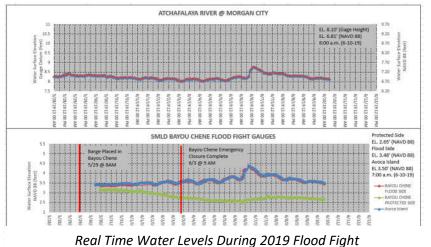
Delta Coast Consultants offers a specialized group of local experts with sound experience in engineering and surveying knowledge. We are uniquely positioned to assist with the planning, design and implementation of a wide range of projects throughout Louisiana. Our specialized experience is based on many years of hard work on coastal projects in our region; from Barrier Island restoration to the development of the Morganza to the Gulf Hurricane protection project, we have worked to fight for the implementation and continuation of these critical features. Our engineers and surveyors have an extensive working knowledge of both past and future projects planned in Louisiana. This knowledge allows our team to compile data, evaluate alternatives, and incorporate stakeholder comments more efficiently, which will translate into cost and time savings for DOTD.

Modeling Survey Support & Data Collection:

Our associates are experts at evaluating, scoping, and collecting accurate hydraulic and hydrographic data in support of modeling efforts on water resource projects. DCC is currently the data collection lead for the Mid-Breton Sediment Diversion Projects (Subconsultant to Stantec), responsible for collection of multibeam bathymetry, ADCP surveys, installation of CTD sensors (Conductivity, Temp, Depth), and other water quality parameters for validation and calibration of various modeling effects on the project. Our staff is highly skilled and experienced in deployment of various remote-sensing instrumentation; including real-time water-level gauges, ADCP's, turbidity probes, and other measurement techniques. DCC was tasked with deployment of real-time water level gauges and review/adjustment of various existing gauges throughout the Atchafalaya/Terrebonne Basin to assist the local flood protection authorities with maintaining and management of the Bayou Chene emergency Closure and other Flood-fight actions for a past Atchafalaya River Flood event. Our surveyors and engineers understand survey datum relationships and height modernization adjustments and the importance of accurate vertical adjustments to gauge data and survey data to ensure proper model validation and calibration. Our associates have performed numerous surveys for FEMA Flood Studies in accordance with FEMA Standards and Quality Control Procedures.



Multibeam Survey – Old River Structure



Surveying and Data Collection Resources:

Our associates have provided high quality data collection and field surveying services for water resource projects throughout their careers. Mr. Chad Robichaux, PLS, has over 29 years of experience providing boundary, geodetic, control, hydrographic, and topographic surveys throughout the Gulf Coast and beyond. Delta Coast also maintains a highly efficient and skilled staff of surveying technicians and field personnel capable of collecting multiple types of data on a variety of projects. We maintain the most up-to-date surveying equipment and marine vessels to ensure the efficiency of our field personnel. Delta Coast Consultants has the personnel and equipment to complete any data collection task issued under this contract. The following is summary of our in-house equipment available for infrastructure projects:

Topographic Surveys:

Mr. Chad Robichaux, PLS will manage all topographic survey tasks issued under this contract. Mr. Robichaux's past work history on a variety of projects includes topographic cross-sections / transects for beach nourishment projects, channel dredging projects, marsh creation projects, pipeline, land development, and construction projects. Mr. Robichaux serves as the survey manager at Delta Coast, and is responsible for daily coordination of field crews, preparation of crew field packet information, quality control checks, and data transfer. Mr. Robichaux has excellent technical knowledge of Global Positioning Satellite (GPS) principles and

procedures, as well as conventional EDM style total stations, robotic total stations, and leveling equipment. Below is a listing of the topographic survey capabilities of our firm:

- Real-Time Kinematic (RTK) GPS surveys, including LSU-C4G real time network
- Robotic Total Station (EDM) surveys
- Geodetic / Static GPS/GNSS surveys for primary and secondary control
- Pipeline / Utility location using magnetic locators and jet probing
- Shallow water / wetland bathymetry surveys using conventional soundings / rod readings

Bathymetric and Hydrographic Surveys:

Equipment Name / Type	#	Equipment Name / Type	#
RTK GPS Total Stations – Trimble R10/R12 /Spectra Precision SP80 (2 GNSS receivers per unit)	5	Proton / Cesium Magnetometer	1*
Conventional Total Stations / Robotic Total Station - Trimble	1	Gradiometer / Metal Detector	2
Single Frequency Echosounder (200kHz) – Odom Hydrotrac II	1	Twin Engine Survey Vessel (Over 24')	1
Dual Frequency Echosounder (24 / 200 kHz) – Odom Mark III	1	Single Engine Survey Vessel (Under 24')	1
Multi-beam Echosounder – Norbit Winghead B 44	1	Airboats	2
Pipeline / Utility locator – Ditch Witch Utiliguard T12	1	RTV / ATV	1
Handheld Field Data Collectors – Trimble TSC3	4	Conventional Levels	3

Mr. Barry "Jason" Kennedy, PE, PLS will manage all hydrographic surveying tasks for projects issued under this contract. Mr. Kennedy has an extensive background in performance of shallow-water hydrographic surveys for offshore / inshore borrow areas, river / channel dredging, and navigation projects. Mr. Kennedy has excellent technical knowledge of hydrographic surveying software, single beam (single and dual frequency) echosounders, multi-beam echosounders, and

cesium/proton magnetometers. Mr. Bryan Little will lead the inshore hydrographic field data collection efforts. Mr. Little has over 9 years of experience in performance of hydrographic surveys conforming to USACE Hydrographic Surveying Manual. Delta Coast Consultants exclusively uses RTK GPS onboard the survey vessel for real-time tidal corrections and highly accurate vertical and horizontal positioning of soundings. Below is a listing of the hydrographic surveying capabilities at Delta Coast Consultants:

- Single-Beam (Single & Dual Frequency) Bathymetric Surveys
- Multi-Beam Bathymetric Surveys
- Acoustic Doppler Current Profiler (ADCP) Surveys
- Side-Scan Sonar (Acoustic Imagery) Surveys
- Extreme Shallow-water, Light vessel, Bathymetric Surveys
- Dual-Frequency single-beam surveys for riverine / dredging turbidity layer penetration
- Hypack® Max data editing, line merging, tin-model construction, and volume calculation



Magnetometer Surveys:

Our associates have developed their surveying skills primarily in the coastal marshes and waterways of Terrebonne and Lafourche parishes. These areas contain some of the largest networks of decades-old underground oil / gas pipelines and flowlines in Louisiana. A vast majority of these pipelines are un-mapped and unmarked lines that have been abandoned or forgotten through subsequent sales of oilfield infrastructure. Mr. Chad Robichaux, PLS and Mr. Bryan Little have been providing oil/gas infrastructure and pipeline surveys for over 20 years in these areas. Mr. Kennedy also has an excellent working knowledge of underwater magnetic detection principles and procedures and has developed a proven methodology for pipeline/flowline detection in shallow coastal waters.

Property and Right-of-Way Surveys:

Mr. Prosper Toups, PLS has excellent experience in performance of boundary surveys in Louisiana, with particular expertise in riparian boundaries. He has over 27 years of experience in the surveying industry and was formerly the sole owner of a land-surveying firm in Houma, LA. Delta Coast Consultants has also gained experience with land-rights and right-of-way acquisition on coastal properties in performance of our program management responsibilities for the Terrebonne Levee and Conservation District. Our firm performs approximately 3-4 large boundary surveys each month, which keeps our associate's boundary surveying skills tested and sharp.

Capability and Capacity:

Delta Coast Consultants has the large project experience, credentials, and knowledge necessary to assist this project team and become a true local asset for DOTD. We already know the region, the people, the history and the challenges. Our team is positioned to respond quickly and efficiently.

Our firm focuses and specializes in data collection and surveying to support engineering and construction efforts on coastal restoration, flood protection and other infrastructure projects in South Louisiana. Unlike many surveying firms in our region, DCC is not committed to large oil/gas pipeline clients which require dedication of a large volume of staff and resources for their projects. We have 5 independent field crews assembled for the specific purpose of data collection needs on coastal restoration and infrastructure projects.

The capabilities of our firm are evident from the wide range of projects and clients that have used our services across Coastal Louisiana over the past 9 years. We feel that our firm is a perfect fit to assist DOTD in their effort to perform hydrographic survey inspections of their assets across the state due to our extensive experience in performing these types of surveys.

Firm(s) ALL FIRMS MUST BE REPRESENTED IN THIS TABLE	Past Performance Evaluation Discipline(s) *	Contract Number and State Project Number	Project Name	Remaining Unpaid Balance**
N/A	N/A	N/A	N/A	N/A

8/26/22, 10:08 AM			Print	Lookup Details			
The Louisiana l	Professiona	l Engineering and	l Land Surveyin	ng Board has the following information on file:			
Name:		Public Address:					
	Delta Coast Consultants,		Ms. Brandi Voisin 631 South Hollywood Road				
LLC		Houma, Louisiana 70360					
License/Certific	cate Inforn	nation w/ Supervis	sion				
License	Status	First Issuance Date	Expiration Date	Supervisor(s)			
EF.0005462	Active	02/03/2014	09/30/2024	Mr. Barry Jason Kennedy # PE.0033218 - Active			

8/26/22, 10:07 AM

Print Lookup Details

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

Name:	Public Address:
Delta Coast Consultants,	Ms. Brandi Voisin 631 South Hollywood Road
LLC	Houma, Louisiana 70360

License/Certificate Information w/ Supervision

License	Status	First Issuance Date	Expiration Date	Supervisor(s)
VF.0000714	Active	02/03/2014	09/30/2024	Mr. Mitchell John Marmande # PLS.0005012 - Active

QC and QA Procedures for Single Beam Surveys

Procedure	Recommended Application
Bar Check	Perform calibration periodically. Frequency of bar checks can be reduced if average velocity repeatedly correlates with velocity cast data. Perform at the beginning of critical projects. Correlate with dynamic draft variations.
Dynamic Draft Corrections	Monitor every 0.1 ft trim change.
Velocity Cast Calibration	Perform, at minimum, once daily. More often in highly variable waters. Correlate with bar check velocity.
Squat/Settlement Calibration	Perform annually over different vessel speeds and loading conditions.
Latency Calibration	Perform periodically to obtain average correction over time. Perform at beginning of any critical survey.
Horizontal Position Check	Conduct daily checks to project benchmarks where possible.
Vertical Calibration (RTK)	Conduct daily checks to project benchmarks where possible.
Motion Compensation	Apply if river or sea conditions warrant correction.
Survey Coverage (Density)	On most projects, single beam cross-sections should generally not exceed 200 ft line spacing.

QC and QA Procedures for Multibeam Surveys

Procedure	Recommended Frequency or Comment
Bar Check Calibration	Perform periodically (e.g., monthly or quarterly); recommended at start of new projects.
Sound Velocity Calibration	Once daily minimum, or more often in varying conditions
Horizontal Position Check	Conduct daily checks to project benchmarks where possible.
Vertical Elevation Check (RTK)	Conduct daily checks to project benchmarks where possible.
System Alignment/Orientation Tests (e.g., Latency/Patch Test	Perform periodically (e.g., quarterly) or as required. Recommended at start of new projects.
Vessel Squat/Settlement Test	Annually
Survey Coverage (Density)	100% coverage is recommended for maintenance dredging projects. 200% coverage is recommended for deep-draft projects with critical under keel clearances over rock.
Object or Shoal Detection: Minimum object size	3 ft cube (periodically verify by independent detection test)
Minimum number of acoustic hits to confirm a shoal or strike above grade	3 acoustic hits recommended. (successive passes over object)

22. Sub-consultant information:

Firm Name (Name must match as registered with Louisiana's Secretary of State)	Address	Point of Contact and email address	Phone Number
N/A	N/A	N/A	N/A

(Add rows as needed)

23. Location:

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