# **DOTD FORM: 24-102**

## PROPOSAL TO PROVIDE CONSULTANT SERVICES

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

ANY CONSULTANT FAILING TO SUBMIT ANY OF THE INFORMATION REQUIRED ON THE DOTD FORM 24-102, OR PROVIDING INACCURATE INFORMATION ON THE DOTD FORM 24-102, MAY BE CONSIDERED NON-RESPONSIVE. Prime consultant should enter the firm name in the footer at the bottom of this page. (It will carry over to subsequent pages.)

1.	Contract title as shown in the advertisement	Contract Nos. 4400025002 and 4400025003
		IDIQ Contracts for Non-Destructive Testing/Evaluation of
		Structures Statewide
2.	Contract number(s) as shown in the advertisement	4400025002 and 4400025003
3.	State Project Number(s), if shown in the advertisement	
4.	Prime consultant name (as registered with the Louisiana	ECS Southeast, LLP (ECS Limited/ECS)
	Secretary of State where such registration is required by	
	law)	
5.	Prime consultant license number (as registered with the	EF.0005838
	Louisiana Professional Engineering and Land Surveying	
	Board (LAPELS) if registration is required under	
	Louisiana law)	
6.	Prime consultant mailing address	11115 Industriplex Boulevard
		Suite 200
		Baton Rouge, LA 70809
7.	Prime consultant physical address (existing or to be	11115 Industriplex Boulevard
	established, if location is used as an evaluation criteria)	Suite 200
		Baton Rouge, LA 70809
8.	Name, title, phone number, and email address of prime	Joseph Cobena, PE
	consultant's contract point of contact	Principal/Office Manager
		225.224.2583
		jcobena@ecslimited.com



9. Name, title, phone number, and email address of the	Joseph Cobena, PE
official with signing authority for this proposal	Principal/Office Manager
	225.224.2583
	jcobena@ecslimited.com
10. This is to certify that all information contained herein is accurate and true, and that the team presently has sufficient staff to perform these services within the designated time frame. By submitting this proposal, proposer certifies that it is not engaged in a boycott of Israel and it will, for the duration of its contract obligations, refrain from a boycott of Israel. Proposer also certifies and agrees that the following information is correct: In preparing its response, the proposer has considered all proposals submitted from qualified, potential subcontractors and suppliers, and has not, in the solicitation, selection, or commercial treatment of any subcontractor or supplier, refused to transact or terminated business activities, or taken other actions intended to limit commercial relations, with a person or entity that is engaging in commercial transactions in Israel or Israeli-controlled territories, with the specific intent to accomplish a boycott or divestment of Israel. The proposer also has not retaliated against any person or commercially limiting actions. DOTD reserves the right to reject the response of the bidder or proposer if this certification is subsequently determined to be false, and to terminate any contract awarded based on such a false response.	Signature (shall be the same person as #9): Date: 9/29/2022
11. If a Disadvantaged Business Enterprise (DBE) goal has been set for this advertisement, indicate which firm(s) will be used to meet the DBE goal and each firm(s)' percentage.	<u>Firm(s):</u> <u>Firm(s)' %:</u>

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## **<u>12. Past Performance Evaluation Discipline Table:</u>**

Evaluation	% of	Prime	Firm B	Firm C	Firm D	Firm E	Each	
Discipline(s)	Overall						Discipline	
	Contract						must	
							total to 100%	
Road	15%	100%					100%	
Bridge	60%	100%					100%	
CE&I/OV	5%	100%					100%	
Geotech	10%	100%					100%	
Environmental	5%	100%					100%	
СРМ	4%	100%					100%	
Other Traffic Control	1%	100%					100%	
Identify the percentage of work for the <b>overall contract</b> to be performed by the prime								
consultant and each sub-consultant.								
Percent of Contract	100%						100%	

# 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)
ECS	Principal	4	5
ECS	Designer	3	22
ECS	Supervisor Engineer	3	10
ECS	Environmental Pro	3	10
ECS	Environmental Manager	1	6
ECS	Engineering-Aide	8	10
ECS	Inspector-Certified	4	17
ECS	Senior Technician	12	30
ECS	Technician	20	45
ECS	Other (Laboratory Staff)	4	10

#### 14. Organizational Chart:



# 15. Minimum Personnel Requirements:

MPR No. Do not insert wording from ad	Personnel being used to meet the MPR (Individual(s) may not satisfy more than one MPR unless specifically allowed by Attachment B of the advertisement)	Firm employed by	Type of license / certification & number	State of license	License / certification expiration date
1 and 2	Joseph C. Cobena, PE	ECS	PE, 0042069	LA	03/31/2024
3	Mohammed A. Mulla, PE	ECS	PE, 018979	NC, AL, GA, SC, TN	12/31/2022
3	L. Ray Gideon	ECS	ICC Certified Inspector (Multiple Categories)	N/A	N/A
3	James V. Bowen, CWI	ECS	ASNT Level III- #232796	N/A	5/31/2026

## 16. Staff Experience:

Firm employed b	Firm employed by ECS							
Name Joseph	Cobena, PE			Years of relevant experience with this employer	1 Year			
Title Principal/Office Manager				Years of relevant experience with other employer(s)	9 Years			
Degree(s) / Years	s / Specialization		BS /(	Civil Engineering/2013				
Active registration	on number / state / exp	iration date	PE 0	042069 / LA / 03-31-2024				
Year registered	2017	Discipline	Civil	Engineering				
Contract role(s) /	brief description of re	sponsibilities	MPR	<b>1 and 2</b> Point of Contact / Principal Engineer. Mr. Cobena w	ill be the			
			poin	t of contact for the Louisiana Department of Transportation	IDIQ			
			Cont	ract.				
Experience dates	Experience and qua	alifications rele	evant 1	to the proposed contract; i.e., "designed drainage", "designed	ed girders",			
(mm/yy–mm/yy)	"designed intersecti	on", etc. Expe	rience	dates should cover the time specified in the applicable MPR(	<u>(s).</u>			
03/2022-	Dedeaux Storm She	elter Structural	Repa	irs, Kilm, MS: ECS provided special inspections for the struct	ural repairs			
05/2022	required for this sto	orm shelter. EC	S' serv	rices related to structural steel included but were not limited	to			
	documentation of v	velder certifica	tions;	reviewing certified mill test reports; providing visual observa	ition of			
	welded and bolted	connections; p	rovidi	ng visual examination of steel deck installation to document	gage and			
	installation, i.e., bea	aring, side and	end la	p, etc.; visual examination of steel joists to document condit	ions and			
	installation in accor	dance with the	e proje	ct specifications and the Steel Deck Institute and ultrasonic t	esting on			
	CJP and FJP welds.	Mr. Cobena ser	ved a	s the Principal Engineer of this project.				
02/2022-	Keesler Hospital Vi	sual Welding I	nspect	ions, Biloxi, MS: ECS provided visual welding and anchor bol	t			
07/2022	inspections at the n	nedical center	locate	d on the Keesler Air Force Base. Mr. Cobena served as the Pr	incipal			
	Engineer for this pr	oject and mana	aged t	he project staff including the NDT technicians.				
03/2022 -	Atwater – Canadia	n National Rail	Cross	ing, Baton Rouge, LA: The project included the installation o	f a 42-inch			
07/2022	steel water line and	l a 16-inch stee	lsewe	er force main to service the proposed new Atwater developm	nent. In			
	addition to our geo	technical study	, ECS	provided supervision and monitoring of the project site in ac	cordance			
	with CNRR guideline	es to allow for	contin	ued operation of railroad during the construction process. N	Ir. Cobena			
	served as the Princi	pal Engineer of	f this p	project.				
02/2022 -	Hwy 929 and Parke	er Road Wideni	ng, Pr	airieville, LA: The approximately 1.6-mile-long project consis	sts of			
04/2022	04/2022 widening Parker Road and Hwy 929. A total of 13 borings were drilled to the depths of approximately 15 feet							
	below existing grad	es. Laboratory	testin	g consisted of soil classification (index) testing of the soils ob	tained			
	from the soil and ha	and auger borir	ngs. EC	CS provided recommendations for pavement design, and rega	arding site			

	preparation and construction observations and testing. Mr. Cobena served as the Principal Engineer of this project.
02/2022 – 08/2022	HSIP in Harrison County, MS: ECS performed construction materials testing and inspections for Harrison County for a project consisting of a new concrete median estimated at 93 cubic yards. Scope of services included concrete test cylinders. Mr. Cobena served as the Principal Engineer of this project.
02/2022 – 06/2022	<b>Overstreet and Associates Asphalt Testing, Biloxi, MS:</b> ECS performed construction materials testing and inspection throughout the year for several projects. Testing included asphalt field and laboratory testing. Mr. Cobena was the Principal Engineer for this project.
01/2022 – 07/2022	<b>Brookwood Storage – Ames, Marrero, LA:</b> ECS observed the installation and performed static load testing of the driven ASTM D25 Class B Tapered Timber Pile in accordance with the load test program developed by ECS for the project. ECS observed as Hendricks Construction installed five test piles, labeled TP-1 to TP-5 within the proposed building footprint. TP-3 was selected by the structural engineer of record, Brian Smith, PE with BK Smith Engineering and the geotechnical engineer of record, Joe Cobena, PE. with ECS, based on the lower blow counts relative to the other test piles driven on site.

Firm employed by ECS							
Name Mohamn	ned Mulla, Ph.D, PE, CPM		Years of relevant experience with this employer	1 Year			
Title VP, Direc	tor of Special Projects Group		Years of relevant experience with other employer(s)	34 Years			
Degree(s) / Years	/ Specialization	Ph.D	Civil Engineering/2018, MS/Civil Engineering/2011, BS/Ci	ivil			
		Engiı	neering/1986				
Active registration	n number / state / expiration date	PE 02	18979 / NC / 12-31-2022, AL, GA, SC, TN				
Year registered	Current Discipline	Civil	Engineering				
Contract role(s) / l	orief description of responsibilities	MPR	<b>3</b> Principal. Mr. Mulla will review the documents and delive	erables for			
		this o	contract and manage the QA/QC elements of the IDIQ.				
Experience dates	Experience and qualifications rele	vant t	to the proposed contract; i.e., "designed drainage", "design	ed girders",			
(mm/yy–mm/yy)	"designed intersection", etc. Exper	rience	dates should cover the time specified in the applicable MPR	.(s).			
2004-2018	NCDOT Unknown Foundation Pro	gram,	Various Locations, NC: Dr. Mulla managed the Unknown Fo	oundation			
	Program for NCDOT. He performed	d insp	ection and evaluation of unknown foundation for NCDOT by	using non-			
destructive testing known as low strain integrity testing by pulse echo or transient response methods using t							
	PIT device for many bridges. This n	d estimates pile embedment and evaluates steel, concrete p	piles and				
	drilled piers integrity by striking the pile top or side with a handheld hammer. The PIT test is also used to						
	evaluate existing bridge foundation	n for r	reuse.				
Completed	NCDOT U-2525C, Guilford County,	, <b>NC:</b> E	Built a six-lane freeway from U.S. 29 north of Greensboro to	Lawndale			
07/2018	Drive in northern Greensboro. The	typic	al roadway projects involve subsurface investigation, labora	tory			
	testing, slope stability analysis, and	d eartl	h work recommendation. Some of the roadway projects incl	uded slope			
	reinforcement, waiting period, set	tleme	nt monitoring, and soil improvement. Dr. Mulla managed, so	upervised,			
	and approved the final roadway co	onstru	ction recommendation.				
Completed	NCDOT B-4962, Orange County, N	C: Rep	placement of Bridge No. 46 over Eno River on US 70 Bypass.	The typical			
07/2018	bridge foundation types included S	Spread	Footings, Steel Piles (includes HP and pipe piles with differ	ent			
	diameters), concrete piles, and dri	lled sh	nafts. Estimate of potential scour depth, design scour, critica	l scour			
	analysis and determination was pa	rt of t	he foundation design of all bridges over stream crossing as	mandated			
	by FHWA. Also, some of these bridge sites foundation design included soil improvement design such as						
	embankment on piles, undercut, e	mban	kment surcharge and wick drains, light weight fill, and slope	1			
	reinforcement. Dr. Mulla managed	l, cheo	cked, and approved the final temporary shoring recommend	ation.			
Completed	NCDOT R-2582A, Northampton Co	ounty,	NC: Retaining wall for dual Bridge on US 158 over CSX A-Lir	ie. The			
02/2018	typical retaining wall projects invo	lves si	ubsurface investigation and foundation design for the different	ent types of			

	walls such as MSE, tieback walls, fabric walls, steel shoring walls, segmental walls, gravity walls, soil nail walls,
	solider piles, noise walls, and pile panel walls. Dr. Mulla managed, supervised, and approved the retaining wall
	post bid plans for recommendation.
Completed	NCDOT U-5711, Randolph County, NC: Road widening SR 1712 Pine View Street from West of Sylvan Street to
07/2018	US 220 Business. The typical roadway projects involve subsurface investigation, laboratory testing, slope
	stability analysis, and earth work recommendation. Some of the roadway projects included slope
	reinforcement, waiting period, settlement monitoring, and soil improvement. Dr. Mulla managed, supervised,
	and approved the final roadway construction recommendation.
Completed	NCDOT B-4958, Guilford County, NC: Replacement of Bridge No. 106 on SR 2128 (Bunch Road) over Reedy Fork
03/2018	Creek in Oak Ridge. The typical bridge foundation types included Spread Footings, Steel Piles (includes HP and
	pipe piles with different diameters), concrete piles, and drilled shafts. Estimate of potential scour depth, design
	scour, critical scour analysis and determination was part of the foundation design of all bridges over stream
	crossing as mandated by FHWA. Also, some of these bridge sites foundation design included soil improvement
	design such as embankment on piles, undercut, embankment surcharge and wick drains, light weight fill, and
	slope reinforcement.
Completed	NCDOT U-5752, Alamance County, NC: Retaining wall for US 70, Church Street at south Williamson Ave. and
05/18	Saint Marks Church Road. The typical retaining wall projects involves subsurface investigation and foundation
	design for the different types of walls such as MSE, tieback walls, fabric walls, steel shoring walls, segmental
	walls, gravity walls, soil nail walls, solider piles, noise walls, and pile panel walls. Dr. Mulla managed,
	supervised, and approved the type of wall and the final foundation recommendation.
Completed	NCDOT B-3189, Haywood County, NC: Bridge over NS Railroad in Canton, Dr. Mulla was the Geotechnical
2009	manager responsible for preparing and signing the post-bid MSE walls plans. He checked and signed the final
	design of the bridge spread footing which was founded directly on the MSE wall. Dr. Mulla also checked the
	design of the tieback wall for the new bridge to prevent any vibration damage to the existing historic building.

Firm emplo	Firm employed by ECS								
Name L.	Ray Gi	deon			Years of relevant experience with this employer	21 Years			
Title Vio	e Pres	sident/Office Manage	r		Years of relevant experience with other employer(s)	12 Years			
Degree(s) /	Years	/ Specialization							
Active regis	stration	n number / state / exp	ration date	Cert	ifications: ICC/SBCCI Certified Building Inspector, 2001; ICC/I	СВО			
				Certi	ified Reinforced Concrete Special Inspector, 1993; ICC/ICBO (	Certified			
				Strue	ctural Masonry Special Inspector, 1995; ICC/ICBO Certified Pr	estressed			
				Cond	crete Special Inspector, 1994; Third Party Engineering Inspect	tor,			
				Vario	ous Counties in Georgia; ACI Certified Concrete Technician G	rade I,			
				1990	); CPN Certified Radiation Safety Officer, 2003; NPDES Level 1	LB			
				Certi	ification				
Year registe	ered	Multiple: 1990-	Discipline	Cond	crete, Masonry				
		Current							
Contract rol	le(s)/1	brief description of re	sponsibilities	MPR 3 Principal/Vice President. Mr. Gideon will provide project supervision					
				and hands-on performance of inspections and construction engineering. He					
				will manage activities related to high strength concrete, moment resisting					
				concrete frame, auger cast piles, driven concrete piles, drilled shafts, post					
		1		tensioning cables, pre-cast concrete, retaining walls, and bridges.					
Experience	dates	Experience and qua	lifications rele	evant 1	to the proposed contract; <i>i.e.</i> , "designed drainage", "designed	ed girders",			
(mm/yy-mi	n/yy)	"designed intersecti	on", etc. Expe	rience	dates should cover the time specified in the applicable MPR(	<u>s).</u>			
08/2020	)-	101 Riverstone Vist	a – Structural	Visual	Assessment and Remediation Design, Blue Ridge, GA: ECS	provided a			
02/202	1	visual structural ass	essment of thi	s three	e-story, 78,560 SF building to ascertain its structural conditio	n. Visual			
		observations were i	nade of access	sible st	ructural components, and observed distresses and were doc	umented			
		and presented in a	written report.	Photo	ographs and field sketches to document observed conditions	were			
		included as deemed	l appropriate. I	ECS re	commended further in-depth assessment of the floor system	1			
		components and wa	all supporting s	system	n, and review of available design documents. Upon completing	ig the			
	assessment, ECS was retained to perform a structural as-built survey and remediation design. Non-destructive								
	testing, such as GPR, was employed to determine approximate concrete floor construction. As Vice president,								
	_	Mr. Gideon provide	d senior level r	manag	ement on this project.				
01/2022	2-	HIW Blount Street	Parking Deck -	Parkir	ng Deck Consulting, Raleigh, NC: This project involved an exis	sting multi-			
03/202	03/2022 level parking deck constructed in 2007. The deck consists of precast concrete double tees without a deck								

	coating applied to the horizontal traffic-bearing surfaces. The owner observed water infiltration from the upper levels of the deck down to the lower levels, deteriorated sealant, cracked concrete, spalled concrete, and exposed rebar. ECS provided assessments and recommendations to repair failed concrete/voids in concrete, spalled concrete, corrosion, deteriorated and failed sealant, and other failing conditions including but limited to cracks in coatings, exposed electrical wires and efflorescence and apparent mold growth at deteriorated sealants. As Vice president, Mr. Gideon provided senior level management on this project.
06/2021-	ManorCare Rehab Center-Decatur - Crack Monitoring, Decatur, GA: ManorCare requested ECS provide crack
08/2021	monitoring to help identify potential ongoing movement coinciding with previous drainage issues. ECS performed a structural visual assessment which included the following tasks:
	Obtained measurements and photographs as deemed appropriate for documentation of observed field
	conditions and distresses. ECS installed six crack gauges for monitoring of potential crack movement
	within the wall. ECS returned to the site after one week, again after two weeks, and again in after three
	weeks to observe the crack gauges for movement.
	<ul> <li>Prepared a written report of our findings, including photographic documentation and sketches as appropriate.</li> </ul>
	As Vice president, Mr. Gideon provided senior level management on this project.
07/2021-	Biltmore Park Re-Inspection Parking Garages 1, 2, 5 & 7, Ashville, NC: As part of a long-term maintenance
09/2021	program, ECS was retained to perform reassessments of multiple parking garages that had been previously
	assessed by our firm and built in 2008. The 2021 reassessments were performed to update their overall
	condition and to provide recommendations for repairs as appropriate. ECS provided the client with field
	bearing locations, resulting conclusions, and recommendations. ECS observed numerous instances of cracking at bearing locations, isolated areas of surface cracking/snalling, numerous instances of snalling at original precast
	pick-up points, numerous instances of spalling at original precast pick-up points, numerous instances of
	cracking in concrete masonry walls, transverse cracking and exposed rebar in the cantilevered concrete slab.
	joint damage and cracking/spalling, and corrosion of reinforcing. As Vice President, Mr. Gideon provided senior
	level management on this project.

Firm employed by: ECS							
Name Michael	J. Sladki, PE			Years of relevant experience with this employer	9 Years		
Title Vice President / Principal Structural Engineer			r	Years of relevant experience with other employer(s)	13 Years		
Degree(s) / Years	/ Specialization		MS/	1999/Civil Engineering			
Active registration	n number / state / exp	iration date	Prof	essional Engineer: VA, MD, DC, NC, TX, PA, NJ, WV, DE, NY			
Year registered	Multiple: 2004 -	Discipline	Strue	ctural Engineer			
	Present						
Contract role(s) /	brief description of re	sponsibilities	Mr. S	Sladki serves as Principal Structural Engineer in the Chesapea	ake office		
			for N	id-Atlantic Facilities. In addition to being responsible for the	e overall		
			offic	e management, his responsibilities include prescribing and a	nalyzing		
			the s	tructural evaluation and testing aspects of specialty services	s projects.		
			Mr. S	Sladki's experience ranges from detailed design and fabricati	on to		
			insta	llation and through construction and use. Additional engine	ering		
			experience includes extensive work in analyzing existing structural elements				
Evenenian og datag	Experience and av	lifications rale	and	designing new structures.	ad aindana"		
(mm/vy-mm/vy)	"designed intersecti	on" etc. Expe	rience	dates should cover the time specified in the applicable MPR	(s)		
02/2017-	Glenridge Concrete	Crack Assessn	nent.	Lanham. MD: ECS provided crack assessment services for Gl	enridge		
03/2017	Shopping Center. T	ne shopping ce	nter w	vas constructed of a concrete slab on-grade with concrete el	evated		
,	floor slabs. Property	y management	repor	ted that while draining a water heater on the second floor, v	water		
	leaked into the space	ce below. While	e on-s	ite to repair the leaking drain line, the plumber observed cra	icking in		
	the concrete slab b	etween the firs	t and	second floor. ECS performed visual observations from the fir	st level of		
	the interior of the b	uilding where	access	ible, and second level of the building at the location of the d	Irain.		
	Recommendations	were made on	slab t	opside and slab underside. Mr. Sladki served as the Principal	on this		
	project.						
10/2015-	Howard Towers - C	oncrete Pier R	epair,	Washington, DC: ECS performed a site visit and observed th	at the		
10/2015	concrete had cracke	ed and spalled	in larg	e sections on several of the piers. The cracking and spalling v	were likely		
	caused by corrosion of the reinforcement bars and anchor bolts. ECS also performed sounding on several of the						
	concrete piers and	observed that t	the bo	ttom half of the concrete appeared to be in good condition.	ECS		
	services were cond	ucted to repair	the co	oncrete piers without disturbing the existing concrete roof sl	ab or		

	roofing system. The repair consisted of cutting the concrete piers down to sound concrete and installing new
	reinforcement bars and concrete with preset anchors. Mr. Sladki served as the Principal on this project.
03/2019-	I-64/Armistead Avenue Overpass - GPR, Hampton, VA: ECS understood that Curtis Contracting, Inc. will be
06/2019	replacing two box beams supporting a bridge located on I-64 in Newport News, VA. The new beams will need
	to be tied into the reinforcing steel of two approximately 3' x 68' beams which will remain. ECS provided
	ground penetrating radar (GPR) of the deck to find rebar and other embedded items prior to milling. GPR
	scanning was also requested at the two existing beams to locate the reinforcing steel. Mr. Sladki served as the
	Principal on this project.
01/2018-	Juniper and Locust - Bond and Ultrasonic Testing, Philadelphia, PA: ECS performed in-situ concrete overlay
01/2018	bond testing and ultrasonic pulse velocity testing. Bond testing was performed to verify the bond strength
	between the existing concrete substrate of a beam and newly applied repair material. Prior to testing, ground
	penetrating radar (GPR) scanning was performed to locate and avoid reinforcing steel and other embedded
	items in the concrete. Ultrasonic testing was performed to locate and determine the presence of
	voids/honeycombing at the vertical interface of the ramp slab repair areas with non-conforming 90° corners.
	Using a NDT James V-Meter MK III Ultrasonic Pulse Velocity System, longitudinal stress waves were propagated
	through the concrete/patch interface by a transmitter and the time to receive the waves was measured by a
	receiver. ECS used the times to calculate the pulse velocity of the test area in effort to determine the bond
	quality.
07/2022-	Kingsmill Resort - Bridge Damage Assessment, Williamsbug, VA: ECS provided a bridge damage assessment at
07/2022	the Kingsmill Rd bridge. The bridge located at the intersection of Jefferson Hundred and Carters Grove
	Country road was struck by a delivery truck that caused scrapes that spanned from west to east at the
	underside of the bridge deck. The wood planks appeared to be damaged on the west and east sides of the
	bridge from the truck passing through. Additionally, there was a large concrete spall at west side. A minor
	concrete spall at the underside of the bridge was observed to be directly in the path of incident. ECS did not
	observe damage or distress at the connections to the bridge therefore bridge damage does not represent a life
	safety issue. Mr. Sladki served as the Principal on this project.
11/2015-	Montgomery County Garage No. 2 - GPR, Bethesda, MD: ECS provided ground penetrating radar (GPR)
12/2015	scanning services. GPR scanning was performed in an attempt to locate the placement of reinforcing steel
	within the vertical C-shaped precast wall panels around the perimeter of the building. Mr. Sladki served as the
	Principal on this project.

Firm employed by	y: ECS				
Name Jaime Archie, PE, LEED AP				Years of relevant experience with this employer	6 Years
Title Project E	ingineer			Years of relevant experience with other employer(s)	34 Years
Degree(s) / Years	/ Specialization		MBA	/1997, BS/2016/Civil Engineering, BS/1984/Architectural Eng	gineering
			Tech	nology	
Active registration	n number / state / exp	iration date	Prof	essional Engineer: AL, FL, GA, NC, SC, VA	
		1	LEED	) AP	
Year registered	1993-Present	Discipline	Prino	cipal	
Contract role(s) /	brief description of re	esponsibilities	Mr.	Archie serves as a Principal Engineer for ECS and has almost 4	10 years of
			prof	essional experience in structural and forensic engineering. He	e is part of
			the r	regional Facilities Engineering group at ECS for forensic invest	tigations
			and	overall project management. He has extensive experience in	the design
			and	renovation of commercial and industrial structures, including	; office
			build	aings, schools, warehouse and distribution centers, and mani	Itacturing
			raciii	ities. Mir. Archie has broad experience with assessments of ex-	kisting
			evaluations of loading conditions for existing buildings. He also has		
			eval	prience providing damage assessments for concrete parking of	1212000
Experience dates	Experience and au	alifications rele	vant 1	to the proposed contract: <i>i.e.</i> "designed drainage" "designed	al ages.
(mm/vv-mm/vv)	"designed intersecti	ion", etc. Expe	rience	dates should cover the time specified in the applicable MPR(	(s).
03/2016-	South Carolina Dep	partment of Tra	anspoi	rtation (SCDOT), Task Order #2, 14 Bridge Rehabs, Multiple	Locations,
10/2021	SC: ECS served as a	subconsultant	to CD	M Smith that involved providing repairs for multiple transpo	rtation
	structures through	out the state. E	CS pro	ovided services for the following:	
	• Task #1 - SC	9 W Over CSX			
	• Task #2 - La	ke Marion			
	• Task #7 - I-9	5 SB Over SCL I	RR		
	• Task #9 - I-9	5 Over TV Road	d		
	• Task #10 - S	C 261 Over CSX	(		
	• Task #11 - L	IS 76 E Over Wa	ateree	River	
	• Task #13 - S	C 41 Over US 5	01	-	
	1031(112) 3	0.17.0401.0000	<u> </u>		

	• Task #14 - US 501 Bus. Over SCL RR and Waccamaw
	• Task #15 & 16 - US 17 SB over Santee Rivers
	Mr. Archie served as the Principal Engineer for this project.
06/2021-	Carolina Civic Center – Structural Visual Assessment, Lumberton, NC: ECS was retained to provide building
07/2021	envelope services and a structural visual assessment for this historic structure reportedly constructed in 1928
,	that was undergoing extensive renovations. Mr. Archie served as the Principal Engineer for the structural visual
	assessment that included observations and recommendations.
08/2016-	Matthews Medical Center – GPR, Matthews, NC: Mr. Archie was the Senior Project Manager for ECS' services
09/2016	that consisted of providing GPR scanning to locate reinforcing steel in the slab on grade. Scanning to locate
	embedments was required in four areas.
07/2021-	National Whitewater Center Pavilion – Structural Design, Charlotte, NC: ECS was retained to provide
10/2021	structural design services for this project that consisted of a 40" and 20" pavilion of timber scissor trusses on
	timber posts. ECS' structural design services included foundations and framing. Mr. Archie served as a Principal
	Engineer for this project.
12/2019-	Northeast Medical Center – Steel Pipe UT, Concord, NC: ECS provided ultrasonic thickness (UT) scanning to
12/2019	determine wall thickness of steel piping. Mr. Archie served as the Principal Engineer for this project.
08/2017-	Sycamore at Tyvola Apartments Clubhouse, Charlotte, NC: Mr. Archie was the Principal Engineer for the
09/2017	structural analyses and report for the wood framing and the masonry shaft assessment required for this
	construction project.
04/2017-	Randolph Hospital Pedestrian - Bridge Evaluation, Asheboro, NC: ECS performed a structural visual
06/2017	assessment of a pedestrian bridge that was constructed in 2008 of structural tube steel with a concrete/metal
	composite walkway sab and metal roof. ECS' scope was to observe the accessible structural components of the
	bridge, perform concrete sampling and testing, and conduct non-destructive testing (ultrasonic thickness
	testing) to ascertain the condition of the structural steel. The visual assessment of the structural steel for the
	main superstructure, including the nondestructive testing was performed by Mr. James Bowen. Mr. Archie
	served as the Principal Engineer.

Firm employed by	y: ECS						
Name Alyse Su	derman, PE			Years of relevant experience with this employer	2.5 Years		
Title Project E	Ingineer			Years of relevant experience with other employer(s)	12 Years		
Degree(s) / Years	/ Specialization		BS/20	008/Mechanical Engineer			
Active registratio	n number / state / exp	iration date	Profe	ssional Engineer LA: 00047097, AL, GA, NC, SC, TN			
Year registered	2022	Discipline	Proje	ct Manager			
Contract role(s) /	brief description of re	sponsibilities	Ms. S	uderman services as a Project Engineer for ECS Southeast,	LLP. She has		
			over	12 years of hands-on field experience within construction a	ind		
			engin	eering industries at multiple levels, including project mana	gement and		
			imple	mentation, and inspection. Her experience includes evalua	ting		
			struct	tural and geotechnical measurements for commercial, resid	dential, and		
<b>F</b> 1 (		1.6 ( 1	heavy	/ civil structures.	1 1 1 1		
Experience dates	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , "designed drainage", "designed girders",						
(IIIII/yy–IIIII/yy)	designed intersection, etc. Experience dates should cover the time specified in the applicable MPR(s).						
12/2017-	Sudorman porform	Louisiana Department of Transportation and Development - Bridge Inspections, Multiple Locations, LA: MS.					
12/2017	wood pile bridges, but some metal Lecations included Paten Pouge Laning, Lavfette, Chase, and Natchez. This						
	was completed whi	was completed while Ms. Sudarman was employed by a different firm					
08/2022-Present	2115 Rexford - Structural Assessment Charlotte NC FCS provided structural assessment services for a five-						
00,2022 1100011	story office building	. ECS was requ	lested 1	to perform a structural assessment of the rooftop structure	and		
	determine if the exi	sting structure	can sa	fely support two rooftop sled mounts. A site visit was cond	ucted to		
	visually assess the s	tructural condi	ition of	the roof deck and the structural components directly below	w the roof		
	deck. Visual observa	ations were ma	ade fro	m the roof and the top floor of the building. Based on the v	visual		
	observations and th	e information	provide	ed, the roof structure and the roof system are generally in g	good		
	condition and shou	ld support the j	propos	ed additional equipment. Ms. Suderman served as the proj	ect		
	manager for this pr	oject.					
06/2022-	Blue Ridge Apartm	ents - GPR Serv	vices, R	aleigh, NC: ECS provided GPR Services for this project. ECS	' services		
07/2022	were performed to	locate post ten	nsion ca	ables in the slab of the fitness room. ECS utilized the GSSI 3	000		
	Structural Scan Min	i with 2600 MF	Iz ante	nna to observe the embedded reinforcement, which were	then field		
	marked with a blue	tape.					

05/2020-	Cool Springs Solar Farm - Pile Testing, Bainbridge, GA: ECS provided pile installation monitoring and pull
06/2020	testing services for the Cool Springs Solar Farm. A total of 104 test piles were included in the scope of this
	project, ECS performed pile installation monitoring on all piles. ECS monitored the installation and measured
	the drive time and pile drive depth. Ms. Suderman served as the project manager for this project.
08/2022-Present	Mountaire Farms Candor, NC - Steel Condition Assessment, Candor, NC: ECS is performing a steel visual
	assessment and ultrasonic testing for the associated framing members supporting the conveyor system above
	eight steel grain storage tanks at Mountaire Farms Candor due to corrosion concerns. The tanks are several
	stories tall. ECS services are being performed in phases. The scope of services for the first Phase of this
	assessment includes visiting the facility site to provide a preliminary condition evaluation and to develop the
	needed forensic testing and field survey scope for the Phase II assessment. Phase II of the assessment will be
	determined after the Phase I site assessment. At this time, ECS anticipates the scope of services to include, but
	not be limited to, ultrasonic testing ("UT") to determine material thicknesses and ultimately evaluate the
	extent of section loss in the deteriorated members, and a general condition survey of select critical structural
	elements including a photographic survey.

Firm en	nployed by	y ECS					
Name	Name Jason J. Rodgers				Years of relevant experience with this employer	26 Years	
Title	Facilities	Senior Associate			Years of relevant experience with other employer(s)	1 Year	
Degree(	(s) / Years	/ Specialization					
Active 1	registration	n number / state / exp	iration date	Cert	ifications: GSSI Structural Scan Prof GPR Technician, GSSI Stru	uctural	
				Scan	n Opt GPR Technician, Aerial Lift Awareness Technician, OSHA	Confined	
				Spac	ce Technician, Windsor Probe Test System Technician, E-Rail 2	265030	
Year reg	gistered	Multiple: 2003-	Discipline	Stru	ctural		
		Present					
Contrac	ct role(s) /	brief description of re	esponsibilities	Mr.	Rodgers is responsible for testing and consulting services for	the built	
				envi	ronment, property condition assessments, specialized testing	, forensic	
				inve	stigative analysis, and the design of repairs to existing structu	ires.	
Experie	ence dates	Experience and qua	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , "designed drainage", "designed girders",				
(mm/yy	/_mm/yy)	"designed intersecti	"designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).				
05/2	2020-	1509 16th Street N	1509 16th Street NW - Report of Structural Investigation, Washington, DC: As a part of the renovation				
06/	2020	process, and to assi	process, and to assist the design team, ECS was requested to perform structural investigation services of a				
		seven-story steel fr	seven-story steel framed building with brick veneer façade. Our services included floor, beam and column				
		probes; slab docum	entation; and s	steel c	coupon sampling and laboratory testing. Mr. Rodgers manage	d the staff	
		and testing procedu	ures.				
11/2	2016-	VA National Guard	Armories – GP	PR Tes	ting, Multiple Locations, VA: ECS performed a ground penetr	ating	
12/	2016	radar (GPR) survey	on the walls, sl	abs ar	nd ceilings at accessible locations to determine, within a rease	onable	
		level of accuracy (b	level of accuracy (based on GPR equipment tolerances), the typical spacing of horizontal and vertical				
		reinforcing steel, ar	reinforcing steel, and to provide estimates on the thickness of the concrete elements. This non-destructive				
		testing was comple	ted at multiple	locati	ions. Mr. Rodgers managed the staff and testing procedures.		
02/2	2016-	1301 Pennsylvania	Ave – GPR, Wa	ashing	<b>ston, DC:</b> ECS was retained to provide GPR scanning prior to t	he	
04/	2016	demolition of a slat	on grade appr	roxima	ately 25,000 sf parking garage for future renovation and cons	truction.	
		Mr. Rodgers manag	Mr. Rodgers managed the staff and testing procedures.				

Firm employed by	y ECS					
Name Bryan Von Fischer-Benzon				Years of relevant experience with this employer	7 Years	
Title Specialty	Services Project Mar	nager	_	Years of relevant experience with other employer(s)	7 Years	
Degree(s) / Years	/ Specialization		BA/	2006/Geology		
Active registration	n number / state / exp	iration date	Cert	ifications: OSHA Hazardous Materials Site Worker Certificati	on, EIFS	
			Spec	ial Inspector, American Red Cross Adult CPR/AED and First A	٨id	
Year registered	Multiple: 2008 -	Discipline	Spec	ial Inspector		
	Present					
Contract role(s) /	brief description of re	sponsibilities	Mr.	Von Fischer Benzon will serve as a Project Manager for this c	contract.	
			His r	esponsibilities will include testing and consulting services fo	r various	
			assig	ned projects. He will also be overseeing field work and prep	aring the	
	· - · · · · · · · · · · · · · · · · · ·		findi	ngs and reports.		
Experience dates	Experience and qua	alifications rele	evant 1	to the proposed contract; <i>i.e.</i> , "designed drainage", "design	ed girders",	
(mm/yy–mm/yy)	"designed intersecti	on", etc. Expe	rience	dates should cover the time specified in the applicable MPR	<u>(</u> S).	
09/2021-	Route 1 over Bucks	kin Creek - Bri	dge D	eck Evaluation, McKenney, VA: ECS provided bridge samplir	ig and	
10/2021	testing for this VDO	l structure. Re	elated	to the GPR the purpose of the survey was to determine the	asphalt	
	wearing surface this	wearing surface thickness, concrete thickness, and reinforcing steel patterns and cover depths. GPR scanning				
	was also performed on the underside of the bridge deck to locate reinforcing steel prior to concrete chipping to					
05 /2022	determine reinforci	determine reinforcing steel size. IVIR. Von Fischer-Benzon served as the Project Manager.				
05/2022-	Route 211 WBL ove	er South Fork o	of Shel	handoan River – GPR, Luray, VA: ECS performed GPR scanni	ng to	
06/2022	Getermine reinford	ng steel patter	ns and	a concrete depths at select locations on the bridge deck. Mr.	. von	
02/2010		ridge Dock Co		andger.	cting	
03/2019-	VDOT - LSS - GPK B	nuge Deck Cov	Sorvi	rvey naruy, vA: ECS provided engineering consulting and tes	the new	
04/2019	bridge dock and cre	scholo conic lo	Jeivio	of coissons for shaft integrity. Mr. Von Eischer Ponzon song	the new	
	bridge deck and crosshole sonic logging of calssons for shaft integrity. IVIr. Von Fischer-Benzon served as the					
07/2020	VDOT 1778 Pam	as over Clear E	ork C	took Dock Sampling Pocky Can VA: ECS provided sampling	sorvicos for	
07/2020-	the repair of four h	ridges for the L	-77 an	d ramps over Clear Fork Creek. A total of 39 concrete cores	Services for	
03/2020	collected for visual	condition asso	scmon	t and chloride ion testing. Prior to core drilling. GPR scannin		
	utilized to locate re	inforcing steel	for av	oidance of reinforcing hars. GPR was also used to approxima	5 Was	
	denth to the top ma	at of reinforcin	σ stee	I from the deck surface		
			g side			

03/2019-	I-64/Armistead Avenue Overpass – GPR, Hampton, VA: ECS provided ground penetrating radar (GPR) scanning
06/2019	in support of the replacement of two box beams supporting a bridge located on I-64 in Newport News, VA. The
	new beams were needed to be tied into the reinforcing steel of two approximately 3' x 68' beams. GPR
	scanning was conducted to find rebar and other embedded items prior to milling and also to the two existing
	beams to locate the reinforcing steel. The work was performed from the top side of the exposed beams.
09/2019-	VDOT - Route 23 Bridge Deck Sampling, Duffield, VA: ECS provided bridge deck sampling for the existing
10/2019	bridge on Route 23 over the Clinch River as it was being evaluated for potential repairs. A total of 16 four-inch
	diameter concrete cores were collected for visual condition assessment and chloride ion testing. Core sampling
	extended to approximately eight-nine below the current surface, to avoid penetrating the bottom of the deck.
	Prior to core drilling, GPR was utilized to locate reinforcing steel for avoidance of reinforcing bars. Core
	locations and lengths were documented and photographed. Upon completion of cored drilling operations, the
	core holes were patched using high strength, non-shrink grout. Mr. Von Fischer-Benzon served as the Project
	Manager on this project.
08/2021-	VT - Newman Library - Structural Evaluation, Blacksburg, VA: ECS provided a ground penetrating radar (GPR)
08-2021	survey and load capacity analysis for the 4th floor of the Virginia Tech, Newman Library. ECS services were
	conducted to assist Virginia Tech to determine if the building can safely handle the new loads of a new
	machine that weighs approximately 3,000 lbs in a newly renovated room on the 4th floor. Utilizing a GSSI
	Structure Scan Mini XT GPR unit with a 2700 MHz antenna, GPR scanning was performed on the elevated
	concrete slab in the area where the CNC machine was set to be installed. ECS analyzed the typical reinforcing
	steel and provided all findings. Mr. Von Fischer-Benzon served as the Project Manager on this project.

Name Chris The	ne Chris Thompson			Years of relevant experience with this employer	4 Years	
Title Project Manager				Years of relevant experience with other employer(s)	6 Years	
Degree(s) / Years / Specialization						
Active registration	n number / state / exp	iration date	Cert	ifications: Fireproofing, Floor Flatness		
Year registered	2018	Discipline	Test	ing and Observations		
Contract role(s) /	brief description of re	sponsibilities	Mr.	Thompson is responsible for testing and consulting services a	nd the	
			design of repairs to existing structures. His skills include knowledge of			
			build	ling codes and materials codes, building systems, and design	and	
			eval	uation process. As a Project Manager, he prepares reports an	d	
			prop	osals, and mentors staff. Mr. Thompson is responsible for the	e GPR	
			proc	esses in his office.		
Experience dates	Experience and qua	alifications rele	evant 1	to the proposed contract; i.e., "designed drainage", "designe	d girders",	
(mm/yy-mm/yy)	"designed intersecti	"designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).				
04/2021-	Wilkins Rogers - Structural Investigation, Ellicott City, MD: ECS performed a structural investigation for a					
07/2021	historic, eight-story flour mill and a steel framed railroad bridge. It is believed the building was constructed circa					
	1920, and was comprised of a concrete slab on grade, including concrete columns, and beams supporting					
	elevated slabs. The structural investigation consisted of ground penetrating radar (GPR) scanning, limited					
	concrete demolition, concrete core drilling, steel sampling, member dimension documentation, and laboratory					
	material testing. Mr. Thompson was the Project Manager.					
06/2019-	GWU Thurston Hall	GWU Thurston Hall Renovation - Structural Assessment, Washington, DC: ECS provided a structural				
09/2019	assessment. The pro	oject consisted	of nir	ne-story concrete framed building that was set to undergo a f	uture	
	renovation. Per the	direction from	the s	tructural engineer, the structural assessment consisted of gro	ound	
	penetrating radar (	GPR) scanning,	concr	ete core sampling, limited concrete chipping, and documenta	ation, and	
	laboratory material	testing. Mr. Th	nomps	son supported the project team with field work and report pr	eparation.	
03/2020-	IAD 145 - Crack Invo	estigation, Ste	rling, `	VA: ECS provided a crack investigation for the IAD 145, which	consisted	
04/2020	of a building data ce	enter with two	floors	s, a slab on grade first level, and an elevated second floor. The	elevated	
	slab is comprised of	composite ste	el cor	istruction. ECS' services included Ground Penetrating Radar (	GPR)	
	Survey of accessible	e areas to provi	ide the	e depth of the embedded wire mesh fabric and to attempt to	locate	
	shear studs over the	e beams. ECS a	lso pe	rformed concrete core drilling at six locations to determine c	rack	
	depth. Upon investi	gation seven c	rack n	nonitors were placed in various locations. Mr. Thompson sup	ported the	
	project team with f	ield work and r	eport	preparation.		

07/2020- 09/2020	VDOT - I-77 & Ramps over Clear Fork Creek Deck Sampling, Rocky Gap, VA: ECS provided sampling services for the repair of four bridges for the I-77 and ramps over Clear Fork Creek. A total of 39 concrete cores were
00,2020	collected for visual condition assessment and chloride ion testing. Prior to core drilling, GPR scanning was utilized to locate reinforcing steel for avoidance of reinforcing bars. GPR was also used to approximate the
	depth to the top mat of reinforcing steel from the deck surface. Mr. Thompson supported the project team with field work and report preparation
00/2010	Pagancy Square Structural Assessment & Investigation Richmond VA: ECS provided structural investigation
10/2019	and Assessment for the Regency Square project. The project site consisted of what was once the existing Sears
	Retail Store and will be renovated and turned into an apartment building. ECS services included a visual
	assessment, soil auguring, ground penetrating radar (GPR) scanning, concrete chipping and concrete core
	drilling. Mr. Thompson supported the project team with field work and report preparation.

Firm employed by	y ECS					
Name James Bo	owen, CWI, MI			Years of relevant experience with this employer	10 Years	
Title ASNT an	d NDT Level III - Senic	or Inspector		Years of relevant experience with other employer(s)	12 Years	
Degree(s) / Years	/ Specialization					
Active registration	n number / state / exp	iration date	Cert	ifications: ASNT- NDT Level III, ADCI - Certified Commercial D	)iver,	
			FHW	/A-NHI - Certified Bridge Inspector, AWS- Certified Welding In	nspector,	
			ICC -	Master of Special Inspection, SPRAT- Certified Rope Access	Worker	
Year registered	1999-Present	Discipline	Stee	l, Concrete		
Contract role(s) /	brief description of re	esponsibilities	MPR	3 Senior Inspector/Project Manager: Non-Destructive Evalu	ation. Mr.	
			Bow	en will perform quality control/quality assurance tasks relate	ed to	
			struc	ctural steel, including shop fabrication and field erection, nor	า-	
			dest	ructive testing of materials relating to buildings, bridges, pip	elines, and	
			pres	sure vessels using a variety of codes including D1, API, ASME	and ABS,	
			usin	g Ultrasound, Magnetic Particle, Liquid Penetrant and Radiog	graphic	
			methods. He will also perform resident inspection during roadwork, bridge			
				truction, and building site work.		
Experience dates	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , "designed drainage", "designed girders",					
(mm/yy–mm/yy)	"designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).					
08/2017-	Henderson County	Henderson County Bridges, Henderson County, NC: Certified Bridge Safety Inspector. Performed routine				
10/2017	safety inspections of	on six bridges. S	Structu	ures were a mix of timber, concrete, and steel.		
09/2013-	Woodlake Culvert/	Causeway Insp	ectio	ns, Vass, NC: Certified Bridge Safety Inspector. Performed ro	utine	
10/2013	inspections for seve	en corrugated r	netal	culverts including evaluation of the roadway and waterway.	Culverts	
	were completely su	bmerged and r	equir	ed underwater inspection with penetration dives.		
06/2022-	Robbinsville Vehicu	ular Bridge, Ro	bbinsv	ville, NC: Project Manager. Performed visual and ultrasonic t	esting of a	
09/2022	historic steel truss l	oridge as part o	of a sp	ecial inspection to evaluate corrosion and section loss of the		
	superstructure.					
04/2022-	Johnston Public Sat	fety Complex -	UT Te	esting, Smithfield, NC: Senior Level CWI/NDE staff to provide	ultrasonic	
04/2022	testing for a 27,000	sf Public Safet	y Serv	ices Building that opened in early 2008.		
2008-2012	Employer: NCDOT,	Position: Unde	erwate	er Bridge Inspector. Duties: Performing five NBIS inspection	types on	
	approximately 1000	) structures ass	igned	to the Raleigh Dive Team; including initial, routine, in-depth	, damage,	

	and special. Structures ranged from the 5.2 mile long Virginia Dare Bridge to low clearance timber bridges; Concrete, metal, and masonry culverts; in fresh, brackish, and salt water environments.
2001-2008	<b>Employer: Pennoni Associates, Position: Team Leader</b> . Duties: Performed topside and underwater inspections on bridges, marine structures and bulkheads, as well as NDE as required during routine and special inspections, as well as bridge retrofit and rehabilitation work. Clients Included: Naval Facilities, PennDOT, Army Corp of Engineers, Delaware River Bridge Authority, Philadelphia Regional Port Authority
	<ul> <li>Project Highlights:</li> <li>Tacony-Palmyra Bridge: Palmyra, NJ: Team member involved in the fracture critical inspection for the Tacony-Palmyra Bridge. Service included visual assessment of superstructure, substructure and deck. Provided ultrasonic and magnetic particle testing of steel members where needed.</li> <li>PennDOT: District 4-0 Inspections: Team member providing routine and post-flood topside and underwater inspections on over 200 structures in District 4-0.</li> </ul>
	<ul> <li>Girard Point Bridge: Philadelphia, PA: Team member involved in the routine inspection of the Girard Point Bridge. Personal highlights include the use of rope access for the inspection, eliminating the need for lane closure during the inspection. Provided ultrasound, magnetic particle and liquid penetrant testing on the bridge pins and identified fatigue cracks.</li> </ul>
	<ul> <li>Naval Facilities: Eastern Seaboard: Team member providing topside and underwater inspections of structures at Naval Installations from Portsmouth, NH to Parris Island, SC.</li> </ul>
	• M.J. Kirwan Reservoir: Ravenna, OH: Team member providing topside and underwater inspection of the Michael J. Kirwan Dam and intake structure for the Army Corp of Engineers.

Firm employed by	/ ECS							
Name Ralph Pri	dgen, CWI		У	Years of relevant experience with this employer	7 Years			
Title Certified	Inspector		У	Years of relevant experience with other employer(s)	2 Years			
Degree(s) / Years	/ Specialization							
Active registration	n number / state / expi	ration date	Certific	cations: Certified NDT Level II in UT, PT and MT Methods. A	AWS			
			Weldin	ng Inspector; ICC Master of Special Inspections; ICC Structu	ral			
			Mason	rry Special Inspections; ICC Soils Special Inspector; ICC Com	mercial			
			Buildin	ng Inspector; WACEL: Concrete Lab Technician, Firestopping	g Special			
			Inspect	tions, Fireproofing, Concrete, Structural Steel L2				
Year registered	Multiple 2015-	Discipline	Steel a	nd Concrete				
	Present							
Contract role(s) / 1	brief description of re	sponsibilities	Constr	uction Materials Testing Senior Project Coordinator. Mr. Pi	ridgen will			
			be resp	ponsible for the testing of concrete and structural steel. He	e has			
			experie	ence with soil fill and backfill operations, shallow and deep	)			
			foundation systems, reinforced and pre-stressed concrete structures,					
			structural masonry, structural steel, fireproofing, and asphalt pavement					
			systems.					
Experience dates	Experience and qua	lifications rele	vant to	the proposed contract; <i>i.e.</i> , "designed drainage", "designed actor should cover the time specified in the applicable MPP(	ed girders",			
<u>(IIIII/yy=IIII/yy)</u> 12/2021-	BWI DX-DV Ungrad	on , etc. Expe	Inspecti	ions Baltimore MD: ECS provided construction materials	5).			
05/2022	observation and 3 <sup>rd</sup>	narty testing s	ervices	during the ungrade of the HVAC systems at the				
03/2022	Baltimore/Washing	ton Internation	al Thur	good Marshall Airport. The existing system contained struc	tural steel			
	components and th	e addition of h	vdronon	nic nining Specific to the testing and inspection of the struc	ctural steel			
	and welded steel ni	ning FCS nerfc	rmed vi	isual observation of welded and bolted connections: exami	ined			
	tightness of high str	ength bolts at	random	: performed ultrasonic testing on full penetration welds in				
	accordance with spe	ecifications: ex	amined	tightness of bolts on slip critical connections, and provided	ł			
	documentation of e	vents in the fie	ld upon	recognition of deficiencies. Mr. Pridgen served as the Assi	stant			
	Project Manager.		-					
03/2016-	CSX Jessup Road Br	idge Repair, Je	ssup, M	ID: ECS performed testing and observation services for the				
03/2016	renovation of a road	dway bridge. O	ur scope	e included observation and testing of earthwork and aspha	lt; and the			
	observation of reinf	orcing steel an	d concre	ete testing. Mr. Pridgen served as a technician on this proj	ect.			

03/2021-	Route 1 Northbound Bridge at Laurel Park, Laurel, MD: ECS provided construction materials observation and
05/2021	testing services during the repair and improvement of an existing bridge. Improvements and repairs included
	placement of reinforcing steel and concrete. ECS was the structural engineer of record for the project.
05/2021-	Skidmore Testing-Bay Bridge Project, Towson, MD: ECS provided steel welding observations. Mr. Pridgen
12/2021	served as the Project Manager for this bridge rehabilitation project.
08/2018-	St. Georges Bridge, New Castle, DE: ECS' scope of services for this project includes the observation and
12/2019 and	testing of Portland cement concrete and shotcrete being placed as part of the bridge rehabilitation work.
07/2022-	Related to structural steel, ECS performed ultrasonic testing on full penetration welds. Mr. Pridgen served as a
12/2022	Certified Inspector on this project.

y <mark>ECS</mark>								
nlevy			Years of relevant experience with this employer	1 Year				
Inspector			Years of relevant experience with other employer(s) 0					
/ Specialization		AS/2	022/Non-Destructive Examination Technology					
n number / state / expir	ration date	Certi	fications: Certified NDT Level II in UT, PT and MT Methods. A	\PGNA				
		Radia	ation Safety; ICC Structural Steel Bolt					
Special Inspector	Discipline	Spec	ial Inspector					
brief description of res	ponsibilities	Mr. [	Dunlevy will serve as a Specialty Technician for this contract.	His				
		resp	onsibilities will include conducting field observations and obt	taining				
		samp	oles for testing. He will also help perform non-destructive tes	sting using				
T		appr	opriate tools.					
Experience and qual	lifications rele	evant t	to the proposed contract; <i>i.e.</i> , "designed drainage", "designed	ed girders",				
"designed intersectio	on", etc. Exper	rience	dates should cover the time specified in the applicable MPR(	s).				
Blue Heron - The Per	rcn, Pittsboro	, NC: E	CS provided construction materials testing and special inspe-	ctions for				
three multifamily apa	artment build	ings w	Ith one clubhouse structure, three garages, a pool and amer	lity area,				
and supporting drive	e/parking area	S. ECS	scope of services on concrete and wood construction includ	ied:				
<ul> <li>Inspecting rel</li> </ul>	Inforcement to	o cont	irm bar size, grade of steel, lap splices, clearances, support n	netnoas,				
		مامیم						
Inspecting pro	estressed tend	aons						
<ul> <li>Verifying and</li> </ul>	I inspecting re	Intorc	ed bar weiding					
<ul> <li>Inspecting an</li> </ul>	icnors caste in	concr	rete					
<ul> <li>Inspecting an</li> </ul>	icnors post ins		In hardened concrete members					
Verifying use	of required a	esign i	mix					
Verifying grad	de and thickne	ess of :	structural panel sheathing agrees with building plans					
Verifying the	nominal size o	ot tran	ning members at adjoining panel edges					
<ul> <li>Verifying that temporary and permanent restraint/bracing are installed in accordance with approved</li> </ul>								
truss submitt	:al							
<ul> <li>Observing an</li> </ul>	a aocument w	vood f	raming members and connections for compliance					
	y ECS nlevy Inspector / Specialization n number / state / expin Special Inspector brief description of res Experience and qual "designed intersection Blue Heron - The Pe three multifamily ap and supporting drive Inspecting re and cleanline Inspecting pr Verifying and Inspecting ar Verifying use Verifying use Verifying the Verifying the Verifying tha truss submitt Observing an	y ECS nlevy Inspector / Specialization n number / state / expiration date Special Inspector Discipline brief description of responsibilities Experience and qualifications rele "designed intersection", etc. Expective Blue Heron - The Perch, Pittsboro three multifamily apartment build and supporting drive/parking area Inspecting reinforcement t and cleanliness Inspecting prestressed tend Verifying and inspecting re Inspecting anchors caste in Inspecting anchors post ins Verifying use of required d Verifying the nominal size of Verifying that temporary a truss submittal Observing and document v	y ECS nlevy Inspector / Specialization AS/2 n number / state / expiration date Certii Radia Special Inspector Discipline Spector brief description of responsibilities Mr. I response response response brief description of responsibilities Mr. I response response response Blue Heron - The Perch, Pittsboro, NC: E three multifamily apartment buildings we and supporting drive/parking areas. ECS Inspecting reinforcement to confi and cleanliness Inspecting prestressed tendons Verifying and inspecting reinforce Inspecting anchors caste in concri Inspecting anchors post installed Verifying use of required design of Verifying the nominal size of fram Verifying that temporary and per- truss submittal Observing and document wood f	Y ECS         Inspector       Years of relevant experience with this employer         / Specialization       AS/2022/Non-Destructive Examination Technology         n number / state / expiration date       Certifications: Certified NDT Level II in UT, PT and MT Methods. A Radiation Safety; ICC Structural Steel Bolt         Special Inspector       Discipline       Special Inspector         brief description of responsibilities       Mr. Dunlevy will serve as a Specialty Technician for this contract. responsibilities will include conducting field observations and obt samples for testing. He will also help perform non-destructive test appropriate tools.         Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , "designed drainage", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(         Blue Heron - The Perch, Pittsboro, NC: ECS provided construction materials testing and special inspect on and supporting drive/parking areas. ECS' scope of services on concrete and wood construction include         Inspecting reinforcement to confirm bar size, grade of steel, lap splices, clearances, support r and cleanliness         Inspecting anchors caste in concrete         Inspecting anchors caste in concrete         Inspecting anchors post installed in hardened concrete members         Verifying use of required design mix         Verifying the nominal size of framing members at adjoining panel edges         Verifying that temporary and permanent restraint/bracing are installed in accordance with a truss submitta				

10/2020-	Fenton Building Construction CMT/SI, Cary, NC: ECS provided construction materials testing, special inspections,
04/2022	and building envelope services for an approximately 75-acre development consisting of a mix of retail,
	residential, and office uses. The development also contained two precast parking decks as well as onsite and
	offsite civil improvements
07/2021-Present	<ul> <li>HGI and Homewood Suites, Raleigh, NC: ECS provided construction materials testing, special inspections for a 14-story concrete hotel building with 259 guest rooms and amenity spaces. ECS' scope of services for concrete and structural steel special inspections include: <ul> <li>Collecting and reviewing batch tickets to confirm compliance with the approved mix design</li> <li>Observing reinforcing steel prior to concrete placement</li> <li>Documenting general curing procedures</li> <li>Sampling and testing plastic concrete</li> <li>Observing mill test reports and piece markings and high strength bolts</li> <li>Performing visual observation of welded connections</li> <li>Observing steel framing and bracing</li> </ul> </li> </ul>
04/2021- 02/2022	<ul> <li>Tractor Supply – Butner, Butner, NC: ECS provided construction materials testing for the new Tractor Supply store in Buter. The store structure will be steel framed with concrete shallow foundations masonry exterior walls and a concrete slab on grade. A concrete pavement yard was also to be built for equipment that was to be constructed for the store in addition to supporting asphalt paving drive areas. ECS' scope of services for concrete and structural steel inspections included: <ul> <li>Inspecting reinforcement to confirm bar size, grade of steel, lap splices, clearances, support methods, and cleanliness</li> <li>Inspecting anchors caste in concrete</li> <li>Verifying use of required design mix</li> <li>Verifying maintenance of specified curing temperature and techniques</li> <li>Performing ultrasonic testing to determine quality</li> <li>Observing metal decking material and steel framing</li> <li>Observing high strength bolts for compliance</li> </ul> </li> </ul>

Firm employed b	y ECS											
Name Tony Wo	olfe, CWI			Years of relevant experience with this employer	1 Year							
Title Certified	l Inspector			Years of relevant experience with other employer(s)	18 Years							
Degree(s) / Years	s / Specialization:											
Active registratio	on number / state / exp	iration date	Cert	ifications: Certified NDT Level II in UT, PT and MT Methods.	Radiation							
			Safe	ty for NUKE; ICC: Special Inspector, Fireproofing, Structural S	Steel Bolt;							
		1	Spec	ial Inspector; AWS: Welding Inspector								
Year registered	Multiple: 1993 -	Discipline	Stee	l								
	Present											
Contract role(s) /	brief description of re	sponsibilities	Mr.	Wolfe has provided consultation, peer review, and manager	nent on							
			mult	iple projects involving Special Inspection services. He has ex	tensive							
			expe	rience working with owners, construction managers, archite	ects,							
			engi	neers, and contractors to facilitate resolution of questions a	nd							
			prob	lems encountered before and during the construction proce	ess. His							
			relev	vant project experience includes Special Inspections on com	mercial,							
			industrial/manufacturing, institutional, healthcare, utility, and municipal									
			projects. Mr. Wolfe also has Special Inspection experience with soil fill									
			and backfill operations, shallow and deep foundation systems, reinforced									
			and pre-stressed concrete structures, structural masonry, structural steel,									
			fireproofing, as well as asphalt pavement systems									
Experience dates	Experience and qua	alifications rele	evant 1	to the proposed contract; <i>i.e.</i> , "designed drainage", "design	ed girders",							
(mm/yy–mm/yy)	"designed intersecti	on", etc. Expe	rience	dates should cover the time specified in the applicable MPR	<u> (s).</u>							
11/2020-	Ft. Detrick B539 Ph	. 2 Inspections	, Fred	erick, MD: ECS provided structural steel observations servic	es for Fort							
03/2021	Detrick's phase 2 ho	ousing. Mr. Wo	olte wa	as the Certified Inspector for this project.								
03/2022-Present	Hamilton Station A	partments - W	ood F	raming Inspections, Frederick, MD: ECS provided wood fran	ning							
	inspections for a ne	w residential p	project	consisting of five walkup style buildings totaling 80 units. N	1r. Wolfe							
	was the Certified In	spector for this	s proje	ect.								
08/2022-Present	Holy Cross Hospital	- Steel Inspec	tion, S	ilver Spring. MD: ECS provided steel inspections services fo	r a four							
	story hospital towe	r that is approx	kimate	ly 140,000 sf. Mr. Wolfe is serving as the Certified Inspector	for this							
	project.				project.							

04/2020-	46 S Market Street Building Construction, Frederick, MD: ECS provided materials observation and testing
12/2021	services during the construction of the new building. This new proposed building was to consist of a new
	addition to the existing building and parking lot. Sitework is to consist of building a new stormwater
	management system, paving, and utility backfilling operations. Structural elements included masonry and
	concrete for side walk and curb and gutter. Mr. Wolfe served as a certified field technician on the project.
06/2022-	MCPS Steel Inspections, Gaithersburg, MD: : ECS provided steel inspections services for Montgomery County
Present	Public Schools. Inspections were provided for Quince Orchard High School that holds approximately 1,900
	students. Mr. Wolfe is serving as the Certified Inspector for this project.

Firm employed by ECS								
Name Zy Bobb	oitt, CWI			Years of relevant experience with this employer	16 Years			
Title Certifie	d Inspector			Years of relevant experience with other employer(s)	2 Years			
Degree(s) / Year	s / Specialization		BS/P	sychology/2004				
Active registration	on number / state / exp	iration date	Cert	ifications: Certified NDT Level II in UT, PT and MT Methods.	ICC:			
			Strue	ctural Steel Inspector, Level II; Structural Welding Inspector;	Spray			
			Appl	ied Fireproofing Inspector; PTI: Post-Tension Inspection, Lev	el I; ACI:			
			Cond	crete Inspector; Ultrasonic, Level II; MAG Particle, Level II; Lic	quid			
			Pene	etrant, Level II; Radiation Safety Officer, ATI: Radiation Safety	y for NUKE,			
			AWS	: Welding Inspector				
Year registered	Multiple: 2013-	Discipline	Stee	l and Concrete				
	Present							
Contract role(s)	brief description of re	sponsibilities	Certi	ified Inspector. As a Project Manager and Senior Special Insp	ector, Mr.			
			Bobbitt will perform testing and review and monitor operations to confirm					
<b>D</b> 1 (		1.0 1	com	pliance with LA DOID requirements.	1 1 1 1			
Experience dates	Experience and qua	alifications rele	evant 1	dotes should cover the time specified in the applicable MDP	ed girders",			
(IIIII/yy–IIIII/yy	Combridge Structure	oli, etc. Expe	tions	dates should cover the time specified in the applicable MFK	(S).			
00/2022-FTESEI	observe the new sti	ructural steel fr	amino	for multiple residential structures. ECS' scope of services in				
	non-destructive tes	ting using ultra	sonic	testing radiographic magnetic particle testing and null test	t			
	equipment	ting using utra	Some	testing, radiographic, magnetic particle testing, and pull test	L			
08/2021-	Mueller TC1B MOB	Austin TX. F(	^S nro	vided construction materials testing and special inspection s	ervices for			
04/2022	the construction of	a five-level me	dical o	office building, a seven-level above parking garage, a pedest	rian bridge			
• ., _ • •	connecting the two	structures. and	d pave	ements and associated appurtenances. ECS' scope of services	s included			
	earthwork/soils, sha	allow foundation	ons, de	eep foundations, concrete, structural steel, structural mason	nry, sprayed			
	fire-resistant mater	ials, mastic inti	umesc	ent coatings, fire-resistant penetrations, and joints and the	inspection			
	of fabricators. Spec	ific to concrete	, som	e of ECS' tasks included confirming compliance with the app	roved mix			
	design, observing th	ne reinforcing s	teel p	rior to concrete placement, observing anchor bolts prior to o	concrete			
	placement, and doo	umentation of	proce	edures. Specific top structural steel, a partial listing of ECS tag	sks			
	included visiting the	e fabrication sh	op to	review quality control procedures, observing the mill test re	ports and			
	piece markings on s	tructural mem	bers h	igh-strength bolts, nuts and welding electrodes and perform	ning			

	ultrasonic and radiation testing to determine quality per the approved construction documents. Mr. Bobbitt served as a lead technician for this project.
08/2021-	Texas Health Action TI -Structural Steel Inspections, Austin, TX: ECS provided structural steel inspections for
08/2021	this project. ECS; Non-Destructive Testing services included penetrant testing. Mr. Bobbitt served as the
	Certified Welding Inspector.

Firm employed	by ECS								
Name Jeffery	G. Clark, CWI			Years of relevant experience with this employer	2.5				
Title Certifie	ed Inspector			Years of relevant experience with other employer(s) 8					
Degree(s) / Yea	rs / Specialization								
Active registrat	ion number / state / exp	iration date	Certi	fications: Certified NDT Level II in UT, PT and MT Methods.	Welding				
			Inspe	ector; NACE Inspector, Level 1; Magnetic Particle Inspector,	Level II;				
			Dye F	Penetrant Inspector, Level II; Leak Box Detection Inspector,	Level II;				
			Ultra	sonic Technician, Level II; OSHA 30					
Year registered	Multiple 2019-	Discipline	Steel						
	Present								
Contract role(s)	/ brief description of re	sponsibilities	Speci	ialty Technician. Mr. Clark will be responsible for conducting	g and				
			docu	menting field observations and obtaining samples for testir	ng,				
			perfo	orming destructive and non-destructive testing.					
Experience date	perience dates   Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , "designed drainage", "designed girders",								
(mm/yy-mm/yy	y) "designed intersecti	"designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).							
05/2019-Preser	nt Fedex Secondary 2	5 Program, Me	emphis	, TN: ECS is providing special inspections / third party testin	ng for this				
	shipping hub impro	vement projec	t. The	multi-million transformation plan includes the demolition c	of multiple				
	structures, modern	ization to unde	ergrour	nd utilities, and the construction of new office/warehouse s	structures.				
	ECS is involved in pl	hases related to	o the S	Secondary 25 Building, the West Matrix Office Renovation, a	and the RDF				
	Tank Relocation. Sp	ecific to concre	ete, EC	S' scope included concrete compressive strength testing fo	r				
	foundations, slab o	n grade, elevat	ed slat	o, masonry and grout and mortar, and rebar observations. S	Specific to				
	steel, ECS is providi	ng inspections	for ste	el, welds, bolts and framing, and of the fabrication shop. N	1r. Clark is				
	serving as a Structu	ral Steel Inspec	ctor fo	r this project.					
04/2021-Preser	nt I-269 Logistics Cent	er, Byhalia, M	S: ECS	is providing services for the site infrastructure and mass gra	ading for				
	this project that inc	ludes new site	work,	clearing, stripping, grading material to balance site of appro	oximately 2				
	to 10 ft of material,	soil cement of	f soils c	on site at asphalt paving and concrete paving areas, fill place	ement in				
	trenches, curb, wat	er lines, storm	sewer	, sanitary sewer, concrete paving and light pole bases. 110	acres will be				
	developed to serve	five proposed	buildir	ngs (totaling approximately 3,000,000 SF of Warehouse space	ce), two				
	entrances (one off I	Barringer Road	and th	ne other off Access Road), all storm drainage systems, wate	r lines (Fire				
	and Domestic), san	itary sewer line	es, sani	tary sewer lift station, erosion control, temporary and pern	nanent				

seeding, water quality pond with outlet structures, curb and gutter for driveway aprons and spine road, concrete at ditches, soils cement at spine road and driveway cuts, stone base as required and asphalt paving.
ECS' scope includes earthwork observations, reinforcing steel placement, concrete placement, asphalt placement observation and SWPPP inspections. Related to cast-in-place concrete, a partial listing of ECS' tasks include: 1. Observe the installation of concrete pavement and curbing; 2. Test and report concrete for compliance with the provisions of ACI 318, 301, 214, 304, 305 and 306, local building codes, generally accepted construction practices, and specific project requirements; 3. Observe placement of reinforcing steel and document proper size, grade, spacing cover, cleanliness, length, location and type of splices, and report compliance with project plans and specifications. Mr. Clark is serving as a Special Inspector on this project.

#### **<u>17. Firm Experience:</u>**

Firm name	ECS 1			Past Performance Evaluation Discipline(s)*				CE&I/OV, CPM,		
									Other: NDT/	Έ
									Vibration M	onitoring,
									Geotech,	
									Environmen	tal
Project name	2100 PENNSYLV	ANIA AVENUE	, NW				Firm responsib	ility (pı	rime or sub?	) Prime
Project number	Not Applicable		Owner's	s name	e Boston Properties					
Project location	n Washington,	DC			Owner's Project Manager Colin Chi			Chiarodo (Fo	ormerly	
								with E	Boston Prop	erties)
Owner's address	ss, phone, email	2200 Penns	ylvania Av	/e, NW, 9	Suite 200	W, Washingto	on, DC 20037, co	lin@no	vaispartner	s.com
Services commenced by this firm (mm/yy)			08/19	Total consultant contract cost (\$1,000's)			N	/A		
Services completed by this firm (mm/yy)			01/22	Cost of	Cost of consultant services provided by this firm (\$1,			m (\$1,0	000's) \$	69,350

The project site is located at the southwestern quadrant of the intersection of Pennsylvania Avenue, NW and 21st Street, NW. This project included the overall site development with demolition of existing structures and construction of an office building with 11 levels above-grade with penthouse and four below-grade parking levels. The Washington Metropolitan Area Transit Authority (WMATA) Orange/Blue/Silver Line is located immediately south of the project site. WMATA required monitoring of their adjacent tunnel as well as the Support of Excavation (SOE) system that is adjacent to their structure.

### Project Highlights

- ECS provided WMATA monitoring services during pre-, mid- and post-construction phases, which included a preconstruction visual survey and crack monitoring with mid- and post-construction updates as project progressed.
- ECS performed vibration monitoring of the WMATA tunnel, obtaining a baseline record for the tunnel and subsequently providing continuous vibration monitoring during demolition and blasting.
- ECS provided manual 3-D monitoring of Support of Excavation (SOE) adjacent to the WMATA tunnel. The original position of the installed SOE was documented and then monitored for any movement during construction.
- ECS additionally provided automated WMATA track/tunnel monitoring, where points were established in the inbound track tunnel to record any movement during construction.
- ECS also provided environmental consulting and geotechnical services for this project.

Firm name	ECS			]	Past Perfo	rmance Evalu	ation Discipline	(s)* (	Geotech, C	CE&I/	′OV,
								0	CPM, Othe	er:	
								9	Surcharge	and	
								9	Structural		
								ſ	Monitorin	g, Av	iation
Project name	REAGAN NATION	AL AIRPORT	TERMINA	L B/C			Firm responsib	ility (pr	ime or sub	<b>)</b> ?)	Prime
Project number	171191		Owner'	s name	e William H. Gordon & Associates (Contractor)						
Project location	Washington,	DC/Arlington,	VA			Owner's Pro	oject Manager	Wayn	e Foard		
Owner's address	ss, phone, email	4501 Daly D	rive, Suit	e 200, Cl	hantilly, V	A 20151, wfo	ard@gordon.us.	com			
Services commenced by this firm (mm/yy) 11			11/17	Total c	Total consultant contract cost (\$1,000's)				N/A		
Services completed by this firm (mm/yy) 12/19 Cos			Cost of	f consultar	it services pro	ovided by this fir	rm (\$1,0	)00's)	\$150	),745	

ECS has serviced over 20 projects at the Ronald Reagan Washington National Airport. For the New North Concourse, Package 2B Apron Project, ECS provided surcharge monitoring and structural monitoring in support of the preparation of paved apron areas as part of the long-term terminal expansion work underway at the Airport. The project site was within the footprint occupying the demolished hangars 11/12, the Corporate Office Building, and the adjacent airside apron bound by Taxiway N Object Free Area of the East, North Pier Taxi-lane on the south, and Thomas Avenue on the west and the future RON on the north. The project required the installation and automation monitoring of eight vibrating wire piezometers. ECS provided materials, installation, and baseline measurements for up to 48 settlement plates. For 12 months ECS provided web-based reporting for the automated vibrating wire piezometers. Mr. Jason J. Rodgers served as the Project Manager for this project.

### Project Highlights

- ECS installed vibrating wire piezometers and settlement plates at subgrade and within surcharge fills to aid the project team in their assessment of the progress of consolidation settlement of the native soils underlying the planned paved apron areas. Piezometer sensors were connected to a local data logger equipped with cellular modem for automated and remote data collection.
- ECS performed settlement monitoring of the north substation structure during underpinning of the structure.

Firm name	ECS				Past Performance Evaluation Discipline(s)*			(s)*	CE&I/OV, CPM,	
									Other: Joint	
									Monitoring,	Geotech
Project name	MEDSTAR PARKI	NG GARAGE	Д				Firm responsibility (prime or sub?) Prime			Prime
Project number	r Not Applicable Owner's name				e Heery International (Contractor)					
Project location	n Washington,	DC			Owner's Project Manager Robert Carter					
Owner's address	ss, phone, email	8201 Corpo	rate Drive	e, Suite 8	350, Lando	over, MD 2078	85, 202.463.8200	C		
Services commenced by this firm (mm/yy) 09/18 Total				Total c	l consultant contract cost (\$1,000's)			N	/A	
Services completed by this firm (mm/yy) 12/18 Cost of				Cost of	of consultant services provided by this firm (\$1,000's)			,000's) \$2	27,750	

ECS serviced over 50 projects at the Medstar Georgetown University Hospital campus. The Parking Garage A structure is situated within a tight footprint among aging facilities. As part of a structural evaluation to assess cracking elevated slabs, ECS performed joint monitoring of selected slab joints. The joint monitoring was used to assess the performance of the expansion joints and evaluate potential repair measures.

#### Project Highlights

- ECS installed vibrating wire piezometers and settlement plates at subgrade and within surcharge fills to aid the project team in their assessment of the progress of consolidation settlement of the native soils underlying the planned paved apron areas. Piezometer sensors were connected to a local data logger equipped with cellular modem for automated and remote data collection. Data for each meter was automatically collected at one hour intervals and recorded on a local datalogger.
- ECS performed settlement monitoring of the north substation structure during underpinning of the structure.

Firm name	ECS			]	Past Performance Evaluation Discipline(s)*			Other: Movement				
									Monitoring, FM			
Project name	ALEXANDRIA CITY HALL					Firm responsibility (prime or sub?) Prime					Prime	
Project number	· 00000666 Owner's nam			s name	Grunley Construction Company (Contractor)							
Project location	City of Alexandria, VA						Owner's Project Manager Kenneth M. G			neth M. Gru	nley	I.
Owner's address, phone, email 15020 Shady Grove Road, Suite 500, Rockville, MD, 240.399.2000												
Services commenced by this firm (mm/yy)			07/17	Total c	tal consultant contract cost (\$1,000's)				N/A	L.		
Services completed by this firm (mm/yy)			12/18	Cost of consultant services provided by this firm (\$1,000's)			,000's)	\$44,	,922			

ECS provided structural monitoring of the historic City Hall bell tower and chimney stacks. This monitoring is performed as part of on-going structural evaluation and repair design and construction work underway by the City for the building.

#### Project Highlights

- ECS installed four pairs of MEM tilt meters for biaxial tilt monitoring of the bell tower structural frame and two wind stations for wind speed, wind direction and external temperature measurements to aid in the structural evaluation of the tower. Instrumentation was connected to a local datalogger equipped with cellular modem for remote automated monitoring.
- ECS performed 3D movement monitoring of the existing chimney stack to provide settlement and deflection measurements for the masonry structure.

#### Additional Services

• ECS provided construction observation and materials testing during selected structural repairs and renovations.

Firm name	ECS			I	Past Performance Evaluation Discipline(s)*Bridge				
Project name	RIVERVIEW VEHICULAR BRIDGE ULTRASONIC				IEASUREMENTS	UREMENTS Firm responsibility (prime or sub?)			
Project number	Not Applicable Owner's nam			s name	Riverview Estates				
Project location	n Robbinsville, NC			Owner's Pr	oject Manager	Tammy Lewis			
Owner's address, phone, email 421 Riverview Drive, Robbinsville, NC 28771, standingsteele01@aol.com									
Services commenced by this firm (mm/yy) 06/			06/22	Total consultant contract cost (\$1,000's)				N/A	
Services completed by this firm (mm/yy)			09/22	Cost of consultant services provided by this firm (\$1,000's)			\$2,500		

This superstructure was made of unknown steel and required research. Additionally, the channel size was misidentified. Mr. Bowen reviewed historic copies of AISC manuals and identified the base metal type as A7 steel which is no longer produced. The base metal type was required for the rating of the bridge and its associated properties. Mr. Bowen provided this information to the engineer to be analyzed and rated. Additionally, Mr. Bowen provided future maintenance recommendations and created a proper file of bridge-inventory pictures. The file also included information related to the bridge's width and the description of the span deck elements which could be used for future inspections and asset management for the future.

ECS provided visual and ultrasonic testing of a historic steel truss bridge as part of a special inspection to evaluate corrosion and section loss of the superstructure. Our scope included the following:

- Access bearing areas of the bridge with a ladder to visually assess the condition of the superstructure.
- Remove debris and rust to obtain ultrasound readings on accessible steel elements.
- Measure elements to try to determine original nominal dimensions.
- Take photographs of the areas of interest.
- Provide a written report of findings, including sketches and photologs.

Mr. James V. Bowen, CWI (NDE Level III) was the Project Manager for this project.

## 18. Approach and Methodology:

**PROJECT UNDERSTANDING** - ECS understands that the Louisiana Department of Transportation and Development (DOTD) is requesting on-call services related to Non-Destructive Testing Evaluation (NDT/E) of Structures to include. but not limited to:

- Concrete:
  - Deficiency Location & Size (Delamination, Spalls, Honey Comb and Voids)
- Integrity
- Strength
- Stiffness (Dynamic Modulus)
- Rebar Cover
- Dimensions (Thickness / Size of Member)
- Corrosion (Probability / Potential)

- Timber
  - $\circ$  Integrity
  - o Moisture
- Steel
  - $\circ$   $\;$  Deficiency Location and Size
    - Corrosion
    - Cracks
    - Weld Flaws (Porosity, Slag, Cracking)

ECS shall recommend and provide equipment and testing services to perform the following monitoring services:

- In-place measurements for:
  - o Strain
  - $\circ$  Acceleration / Vibration
  - o Tilt
  - $\circ$  Wind Speed
  - Slope Stability

- UAV inspection capture and/or processing
  - $\circ$   $\,$  3D digital twin  $\,$
  - $\circ$  Crack detection

UAV inspection ca
 D digital twin



ECS will provide consulting and testing services as well as equipment and monitoring to evaluate structures in Louisiana. ECS has the capability to perform the services referenced above as well as acoustic and electromagnetic testing of bridge decks with minimal traffic invasiveness and impact. ECS will purchase and provide any additional NDT/E equipment required to service the contract.

**CONTRACT APPROACH** - Each project will initiate when the DOTD Contract Manager contacts the ECS Point-of-Contact (POC), Mr. Joseph Cobena, PE, with a potential NDT/E project. The ECS POC will engage a Lead NDT/E Inspector/Certified Technician/Project Engineer based on the individual technical demand and project location. The Lead NDT/E Inspector/Certified Technician/Project Engineer and ECS POC will review existing site conditions and project information to develop an appropriate approach for the necessary inspection. In some instances, ECS will make site visits during the scoping phase of the project to evaluate needs for

clearing, traffic control or other safety, and accessibility issues. The DOTD will be apprised of the site visits prior to any ECS personnel's arrival on site.

ECS has abundant resources that allow us to staff projects to meet client requirements related to project schedules, milestones, and deliverables. We strive to make the client aware of the progress on the jobsite and keep the client conscious of any discrepancies or issues that may have arisen on site.

**CAPACITY** - Our locations in Louisiana include Baton Rouge and West Monroe. These two locations allow ECS to service LA DOTD projects throughout Louisiana with ease. The West Monroe location is a full-service office with a fully accredited laboratory. With the strength of over 2,200 employees, 56 of whom are NDE Certified Professionals, and more than 60 accredited laboratories throughout the country, ECS has the resources to dedicate to a given project or group of project assignments to meet project schedule requirements.

ECS provides a wide array of Non-Destructive Testing/Evaluation services to as-built existing structures without drawings. The key personnel included in this submittal have completed hundreds of DOT projects across the country. ECS has assembled a team of professionals who are highly experienced in the field of Non-Destructive Testing/Evaluation on both small- and large-scale transportation projects from Texas to Maryland and throughout the southeast United States. Our team includes Certified Inspectors in the following services:

- Visual Inspection (VT)
- Ultrasonic Inspection (UT)
- Certified Welding Inspectors
   NACE CIP III

- Magnetic Particle Inspection (MT)
   Thermal Infrared Testing
  - Penetrant Inspection (PT)

ECS has the equipment, technology, and software programs required for the LA DOTD'S NDT/E tasks. ECS uses the following geophysical applications for roadway and bridge projects such as Unmanned Aerial Vehicles (Drones); Ground Penetrating Radar (GPR); Light Detection and Ranging (LiDAR); 2-D Electrical Resistivity Profiling; 2-D Refraction Microtremor S-Wave Profiling; 2-D Seismic Refraction; P-Wave Profiling; Down-Hole and Cross-Hole Seismic; Magnetics; and Vibration and Noise Instrumentation and Monitoring. Each of our geophysical programs have dedicated software for data collection, interpretation, and presentation. ECS has developed proprietary software related to management systems, project procedures, and report distribution, however, we will produce electronic deliverables in conformance with DOTD Software and Deliverable Standards for Electronic Plans. We will upload electronic deliverables into the DOTD Project Wise repository at each plan delivery milestone.

**TEAM QUALIFICATIONS** - Our team includes five professional engineers, one Certified Bridge Inspector and ASNT NDE Level III, five certified NDT Level II Inspectors and four additional staff to support with testing and evaluation efforts. In addition to the staff in this proposal, we have the ability to call on 165 additional staff if needed to service LA DOTD projects. ECS has serviced more than 17,000 transportation projects nationwide some of which include the I-64 Southside Widening and High Rise Bridge Replacement, the I-95 Northbound and Southbound River Crossings, and the I-495 and I-270 P3 Program. ECS is thoroughly versed in executing large and small projects on short notice, under budget and on schedule. ECS has the ability to mobilize to multiple large projects at a time. In addition, our staff is familiar with the challenges that may arise during NDT/E inspections, and they are prepared to provide solutions.

The Contract Point-of-Contact, Mr. Joe Cobena, PE is located in Baton Rouge, Louisiana and is readily available to respond to Task Order requests on short notice. Mr. Cobena has a sense of urgency that will assist in progressing the task orders quickly and efficiently.

Mr. Mohammed Mulla, PE has personally inspected over 80 bridges in North Carolina where he was key to the state's Unknown Foundation program. Mr. Mulla, previously the Assistant State Geotechnical Engineer at the North Carolina Department of Transportation (NCDOT), provided an overview of the unknown bridge foundation program in North Carolina. Early efforts focused on records searches and field testing to identify the foundation type, with estimates of minimum pile embedment or footing size and depth, and an evaluation of the foundation with respect to scour using soundings. By 2005, a rigorous unknown foundation process had been developed. Mr. Mulla detailed the process used for unknown foundations in the bridge management system, including the sorting of microfilms. The non-destructive testing (NDT) was conducted by consultants and in-house staff. The testing procedures were reviewed in detail, with examples shown of their use on bridges and foundations in the State. In 2010, the use of risk-based management guidelines for scour was suggested to evaluate remaining unknown foundation low risk bridges. By November 2012, review of all unknown foundation bridges had been completed.

Mr. James Bowen, CBSI is an ASNT NDE Level III with 22 years of experience providing NDE services. Mr. Bowen has performed a variety of logistically challenging inspections on structures, such as causeway bridges, low clearance timber bridges and submerged culverts. He has experience evaluating structures in Louisiana, including the emergency structural evaluation on the Norfolk Southern Rail Bridge over Lake Pontchartrain in the aftermath of Hurricane Katrina. He will utilize his experience and our technology and equipment such as 3D renderings and remote survey to provide the LA DOTD with creative methods required for testing and inspecting of structures with a goal of minimizing disruption to the traveling public. As an example, Mr. Bowen utilized rope access during a routine inspection on the Girard Point Bridge, a double decked steel truss that carries I-95 into Philadelphia, PA. The hands-

on inspection which included extensive NDT to measure corrosion, evaluate pins and identify and measure fatigue cracks required no lane closure.

Mr. L. Ray Gideon currently serves as Principal for ECS Southeast, LLC. Mr. Gideon's technical experience includes project supervision and hands-on performance of construction engineering inspection of multi-story commercial structures, municipal and infrastructure, education, and amusement projects. Mr. Gideon also has extensive survey and assessment experience on existing facilities, including forensic investigations for premature failures and workmanship defects, incorporating various methods of non-destructive and destructive testing. Mr. Gideon also performs various levels of specialty testing and surveys including use of Ground Penetrating Radar (GPR) equipment, load testing and pull-out testing, infrared camera equipment, videoscope and probe equipment, moisture meters, and slab vapor emissions/pH/relative humidity testing. Mr. Gideon is experienced with a wide variety of construction practices and activities on high strength concrete, moment resisting concrete frame, auger cast piles, driven concrete piles, drilled shafts, post tensioning cables, pre-cast concrete, retaining walls, bridges, high rise buildings, and large quantity fill sites.

Mr. Michael Sladki, PE, is a registered Professional Engineer in multiple states including VA, MD, DC, NC, TX, NJ, PA, DE, WV, and NY and has over 22 years of experience providing structural engineering services for a variety of structures. He has provided technical oversight and inspections on multiple transportation projects, including bridge investigations. Mr. Sladki has provided consulting and testing services for the Virginia Department of Transportation for a replacement bridge. As the Principal Engineer, Mr. Sladki brings the ability to provide unique technical oversight of concrete core sampling for compressive strength testing, concrete chipping to expose reinforcing steel for rebar size, and GPR scanning to verify asphalt wearing surface thickness, total slab thickness and reinforcing steel patterns and cover depths. His experience also covers half-cell potential testing, epoxy overlay testing, and post-installed anchor load testing.

**QUALITY CONTROL** - Quality control procedures are commonly utilized as routine procedures by ECS. These include cross and doublecheck of calculations, senior and principal professional review of the reports and recommendations prior to submittal to the client, calibration of testing equipment at prescribed intervals as outlined by the American Society for Testing and Materials, Occupational Safety and Health Administration, and other standards, and routine in-house training. Additionally, ECS provides continuing education for our professionals in their fields of practice. Monthly safety training is performed for technical and professional staff as well. Training is provided through a combination of professional education, short courses, seminars, university and community college courses, and in-house training. Our professionals obtain registrations and maintain proficiency in the states in which we offer our services.

## 19. Workload:

Firm(s)	Past Performance Evaluation Discipline(s) *	State project number	Project name	Remaining Unpaid Balance**
ECS	Not Applicable	N/A	ECS was recently awarded the LA DOTD Geotechnical Engineering IDIQ 5-year, \$5-million contract. At the time of this submission, we have not been authorized to perform work for any LA DOTD tasks.	\$0.00

20. Certifications/Licenses:

WORDING REMOVED FROM THIS SECTION - NOT REQUIRED PER CCS

**<u>21. QA/QC Plan and/or Work Plan:</u>** 

## 22. Sub-consultant information:

Firm Name (as registered with Louisiana's Secretary of State)	Address	Point of Contact and email address	Phone Number
Not Applicable			

23. Location:

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