

SOLICITATION, OFFER, AND AWARD			1. Caption FY20 Integrated Flood Model			Page of Pages 1 90 + attachments	
2. Contract Number TBD		3. Solicitation Number DOC501159		4. Type of Solicitation <input type="checkbox"/> Sealed Bid (IFB) <input checked="" type="checkbox"/> Sealed Proposals (RFP) <input type="checkbox"/> Sole Source <input type="checkbox"/> Emergency		5. Date Issued TBD	6. Type of Market <input checked="" type="checkbox"/> Open <input type="checkbox"/> Set Aside <input type="checkbox"/> Open Market with Set-Aside CBE Designated Category
7. Issued By Office of Contracting and Procurement 441 - 4th Street, N.W., Suite 700 South Washington, D.C. 20001			8. Address Offer to: Department of Energy & Environment Natural Resources Administration- Regulatory Review Division 1200 First Street NE, 5th Floor Washington, D.C. 20002				
NOTE: In sealed bid solicitations "offer" or "offeror" means "bid or "bidder"							
SOLICITATION							
9. Sealed offers in original and <u> 1 </u> copies for furnishing the supplies or services in the Schedule will via <u>electronic format via the on-line solicitation software</u> <u> 2:00 p.m. </u> local time <u> November 24, 2020 </u> (Hour) (Date)							
CAUTION: Late submission, Modifications and Withdrawals: See 27 DCMR chapters 15 & 16 as applicable. All offers are subject to all terms & conditions contained in solicitation.							
10. For Information Contact	A. Name Victory Rich		B. Telephone (Area Code) 202 (Number) 442-7623 (Ext)		C. E-mail Address victory.rich2@dc.gov		
11. Table of Contents							
(X)	Section	Description	Page No.	(X)	Section	Description	Page No.
PART I – THE SCHEDULE				PART II – CONTRACT CLAUSES			
X	A	Solicitation/Contract Form	1	X	I	Contract Clauses	55
X	B	Supplies or Services and Price/Cost	2	PART III – LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS			
X	C	Specifications/Work Statement	12	X	J	List of Attachments	69
X	D	Packaging and Marking	36	PART IV – REPRESENTATIONS AND INSTRUCTIONS			
X	E	Inspection and Acceptance	37	X	K	Representations, certification and other statements of offerors	71
X	F	Deliveries or Performance	38	X	L	Instructions, conditions & notices to Offerors	72
X	G	Contract Administration Data	42	X	M	Evaluation factors for award	84
X	H	Special Contract Requirements	47				
OFFERORS							
12. In conjunction with the above, the undersigned agrees, if this offer is accepted within <u> 120 </u> calendar days from the receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified herein.							
13. Discount for Prompt Payment		10 Calendar days %	20 Calendar days %	30 Calendar days %	___ Calendar days %		
14. Acknowledgement of Amendments (The offeror acknowledges receipt of amendments to the SOLICITATION):			Amendment Number	Date	Amendment Number	Date	
15A. Name and Address of Offeror		16. Name and Title of Person Authorized to Sign Offer/Contract					
15B. Telephone (Area Code) (Number) (Ext)		<input type="checkbox"/> 15 C. Check if remittance address is different from above – Refer to section G			17. Signature		18. Award Date
AWARD (TO BE COMPLETED BY GOVERNMENT)							
19. Accepted as to Items Numbered			20. Amount	21. Accounting and Appropriation			
2. Name of contracting Officer (Type or Print)			23. Signature of Contracting Officer (district of Columbia)			24. Award Date	



SECTION B: CONTRACT TYPE, SUPPLIES OR SERVICES AND PRICE/COST

B.1 INDEFINITE DELIVERY-INDEFINITE QUANTITY (IDIQ) CONTRACT

The District of Columbia (the District) Office of Contracting and Procurement (OCP), on behalf of Department Energy and Environment (DOEE), Natural Resources Administration, Regulatory Review Division (RRD), is seeking a contractor to design, deploy, and provide an Integrated Flood Model (IFM) for the District that will display the depth and extent of flooding (from various Riverine, Coastal, or Interior floods – occurring as a result of various storm scenarios) on a map, taking into consideration the District’s natural and built environment, including sewer conveyance systems and outfalls into receiving waterbodies (generally Project).

B.2 The District contemplates award of a single Indefinite Delivery Indefinite Quantity (IDIQ) contract based on unit prices with a cost-reimbursement component.

B.2.1 This is an IDIQ contract for the supplies or services specified, and effective for the period of performance stated in Section F.

- a) Delivery or performance shall be made only as authorized by orders issued in accordance with the Ordering Clause, G.10. The Contractor shall furnish to the District, when and if ordered, the supplies or services specified in the Schedule up to and including the maximum quantity as designated in Sections B.3.1-B.3.4.2 (Quantity Maximum column). Minimum Order: The District guarantees a \$500 minimum order for the Base Period and for each Option Period. Maximum Order: The cumulative total of all task orders or purchase orders issued during a contract term shall be no greater than the total contract amount for that contract term.
- b) There is no limit on the number of orders that may be issued. The District may issue orders requiring delivery to multiple destinations or performance at multiple locations.
- c) Any order issued during the effective period of this contract and not completed within that period shall be completed by the Contractor within the time specified in the order. The contract shall govern the Contractor's and District's rights and obligations with respect to that order to the same extent as if the order were completed during the contract's effective period; provided that the contractor shall not be required to make any deliveries under this contract after five (5) years from the date of award from this contract.

B.2.2 The District will reimburse the costs for the items in the schedule below. Only costs determining in writing to be reimbursable by the contracting officer, in accordance with the cost principles set forth in Chapter 33 (Contract Cost Principles) of Title 27 of the District of Columbia Municipal Regulations, shall be reimbursable, up to the ceiling prices in the price schedule.

B.3 PRICE SCHEDULE – IDIQ

The fixed hourly rates shall be fully loaded and include wages, benefits, overhead, general and administrative expenses and profit.

B.3.1 BASE PERIOD (24 Months) - Hourly Rates

Contract Line Item No. (CLIN)	Item Description (labor category)	Price Per Unit (per/hour)	Maximum Quantity (hours) Not to Exceed (NTE)	Maximum Total Price (Unit price x Maximum quantity) Not to Exceed (NTE)
0001	Senior Project Manager	\$__ per hour	920	\$_____
0002	Project Manager	\$__ per hour	1,830	\$_____
0003	Staff Assistant	\$__ per hour	770	\$_____
0004	Senior Subject Matter Expert on Climate Adaptation - Senior	\$__ per hour	340	\$_____
0005	Subject Matter Expert on Climate Adaptation - Mid level	\$__ per hour	590	\$_____
0006	Engineer - Senior	\$__ per hour	310	\$_____
0007	Engineer - Mid level	\$__ per hour	750	\$_____
0008	Engineer - Junior	\$__ per hour	590	\$_____
0009	H&H Modeler - Senior	\$__ per hour	2,260	\$_____
0010	H&H Modeler - Mid level	\$__ per hour	3,770	\$_____
0011	H&H Modeler - Junior	\$__ per hour	3,100	\$_____
0012	GIS Analyst	\$__ per hour	820	\$_____
0013	Software Developer - Senior	\$__ per hour	820	\$_____
0014	Software Developer - Mid Level	\$__ per hour	1,620	\$_____
0015	Software Developer - Junior	\$__ per hour	1,240	\$_____
0016	IT Systems Architect - Senior	\$__ per hour	920	\$_____

0017	IT Systems Architect - Mid Level	\$__ per hour	1,780	\$_____
0018	IT Systems Architect - Junior	\$__ per hour	1,540	\$_____
0019	Surveyor - Senior	\$__ per hour	480	\$_____
0020	Surveyor - Technician	\$__ per hour	760	\$_____
0021	Surveyor - Field Staff	\$__ per hour	650	\$_____
0022	Urban Designer - Senior	\$__ per hour	180	\$_____
0023	Urban Designer - Junior	\$__ per hour	280	\$_____
0024	Public Outreach Specialist - Senior	\$__ per hour	130	\$_____
0025	Public Outreach Specialist - Junior	\$__ per hour	190	\$_____
NTE Grand Total Amount for B.3.1				\$_____

B.3.1.2– Base Period - Cost-Reimbursable Components

Contract Line Item No. (CLIN)	Item Description	Cost per item	Maximum Quantity (number) Not to Exceed	Maximum Total Price (Unit price x Maximum quantity) Not to Exceed
0026	Software Licenses	\$	10	\$_____
0027	Hardware	\$	5	\$_____
0028	Software Applications	\$	10	\$_____
0029	Printing Costs (Costs shall be invoiced on a per task basis. Tasks are defined in C.5.1.1)	\$	1	\$_____
0030	Travel Costs (Costs shall be invoiced on a per task basis. Tasks are defined in C.5.1.1)	\$	1	\$_____

Grand Total for B.3.1.2				\$ _____
Grand Total Base Year B.3.1 NTE & B.3.1.2				\$ _____

B.3.2 OPTION YEAR ONE (12 Months) Hourly Rates

Contract Line Item No. (CLIN)	Item Description (labor category)	Price Per Unit (per/hour)	Maximum Quantity Not to Exceed	Maximum Total Price (Unit price x Maximum quantity) Not to Exceed
1001	Senior Project Manager	\$__ per hour	390	\$ _____
1002	Project Manager	\$__ per hour	780	\$ _____
1003	Staff Assistant	\$__ per hour	290	\$ _____
1004	Senior Subject Matter Expert on Climate Adaptation - Senior	\$__ per hour	220	\$ _____
1005	Subject Matter Expert on Climate Adaptation - Mid level	\$__ per hour	340	\$ _____
1006	Engineer - Senior	\$__ per hour	390	\$ _____
1007	Engineer - Mid level	\$__ per hour	760	\$ _____
1008	Engineer - Junior	\$__ per hour	610	\$ _____
1009	H&H Modeler - Senior	\$__ per hour	1,320	\$ _____
1010	H&H Modeler - Mid level	\$__ per hour	2,200	\$ _____
1011	H&H Modeler - Junior	\$__ per hour	1,810	\$ _____

1012	GIS Analyst	\$___ per hour	560	\$_____
1013	Software Developer - Senior	\$___ per hour	330	\$_____
1014	Software Developer - Mid Level	\$___ per hour	660	\$_____
1015	Software Developer - Junior	\$___ per hour	490	\$_____
1016	IT Systems Architect - Senior	\$___ per hour	320	\$_____
1017	IT Systems Architect - Mid Level	\$___ per hour	660	\$_____
1018	IT Systems Architect - Junior	\$___ per hour	490	\$_____
1019	Surveyor - Senior	\$___ per hour	320	\$_____
1020	Surveyor - Technician	\$___ per hour	660	\$_____
1021	Surveyor - Field Staff	\$___ per hour	350	\$_____
1022	Urban Designer - Senior	\$___ per hour	430	\$_____
1023	Urban Designer - Junior	\$___ per hour	650	\$_____
1024	Public Outreach Specialist - Senior	\$___ per hour	300	\$_____
1025	Public Outreach Specialist - Junior	\$___ per hour	480	\$_____
NTE Grand Total Amount for B.3.2				\$_____

B.3.2.2 Option Year One - Cost-Reimbursable Components

Contract Line Item No. (CLIN)	Item Description	Cost Per Item	Quantity Maximum Not to Exceed	Maximum Total Price (Unit price x Maximum quantity) Not to Exceed
1026	Software Licenses	\$	10	\$_____
1027	Hardware	\$	5	\$_____
1028	Software Applications	\$	10	\$_____
1029	Lump Sum Printing Costs (Costs shall be invoiced on a per task basis. Tasks are defined in C.5.1.1)	\$	1	\$_____
1030	Lump Sum Travel Costs (Costs shall be invoiced on a per task basis. Tasks are defined in C.5.1.1)	\$	1	\$_____
Grand Total for B.3.2.2				\$_____
Grand Total for Option Year One B.3.2 NTE & B.3.2.2				\$_____

B.3.3 OPTION YEAR TWO (12 Months) Hourly Rates

Contract Line Item No. (CLIN)	Item Description (labor category)	Price Per Unit (per/hour)	Quantity Maximum Not to Exceed	Maximum Total Price (Unit price x Maximum quantity) Not to Exceed
2001	Senior Project Manager	\$__ per hour	70	\$_____
2002	Project Manager	\$__ per hour	140	\$_____
2003	Staff Assistant	\$__ per hour	200	\$_____
2004	Senior Subject Matter Expert on Climate Adaptation - Senior	\$__ per hour	110	\$_____
2005	Subject Matter Expert on Climate Adaptation - Mid level	\$__ per hour	180	\$_____
2006	Engineer - Senior	\$__ per hour	290	\$_____

2007	Engineer - Mid level	\$__ per hour	530	\$_____
2008	Engineer - Junior	\$__ per hour	450	\$_____
2009	H&H Modeler - Senior	\$__ per hour	570	\$_____
2010	H&H Modeler - Mid level	\$__ per hour	890	\$_____
2011	H&H Modeler - Junior	\$__ per hour	740	\$_____
2012	GIS Analyst	\$__ per hour	280	\$_____
2013	Software Developer - Senior	\$__ per hour	10	\$_____
2014	Software Developer - Mid Level	\$__ per hour	10	\$_____
2015	Software Developer - Junior	\$__ per hour	10	\$_____
2016	IT Systems Architect - Senior	\$__ per hour	30	\$_____
2017	IT Systems Architect - Mid Level	\$__ per hour	90	\$_____
2018	IT Systems Architect - Junior	\$__ per hour	60	\$_____
2019	Surveyor - Senior	\$__ per hour	370	\$_____
2020	Surveyor - Technician	\$__ per hour	650	\$_____
2021	Surveyor - Field Staff	\$__ per hour	520	\$_____
2022	Urban Designer - Senior	\$__ per hour	620	\$_____
2023	Urban Designer - Junior	\$__ per hour	960	\$_____
2024	Public Outreach Specialist - Senior	\$__ per hour	320	\$_____
2025	Public Outreach Specialist – Junior	\$__ per hour	490	\$_____
NTE Grand Total for B.3.3				\$_____

B.3.3.2 Option Year Two - Cost-Reimbursable Components

Contract Line Item No. (CLIN)	Item Description	Cost Per Item	Quantity Maximum Not to Exceed	Maximum Total Price (Unit price x Maximum quantity) Not to Exceed
2026	Software Licenses	\$	10	\$_____
2027	Hardware	\$	5	\$_____
2028	Software Applications	\$	10	\$_____
2029	Lump Sum Printing Costs (Costs shall be invoiced on a per task basis. Tasks are defined in C.5.1.1)	\$	1	\$_____
2030	Lump Sum Travel Costs (Costs shall be invoiced on a per task basis. Tasks are defined in C.5.1.1)	\$	1	\$_____
Grand Total for B.3.3.2				\$_____
Grand Total for Option Year Two B.3.3 NTE & B.3.3.2				\$_____

B.3.4 OPTION YEAR THREE (12 Months) Hourly Rates

Contract Line Item No. (CLIN)	Item Description (labor category)	Price Per Unit (per/hour)	Quantity Maximum Not Exceed	Maximum Total Price (Unit price x Maximum quantity) Not Exceed
3001	Senior Project Manager	\$__ per hour	100	\$_____
3002	Project Manager	\$__ per hour	200	\$_____
3003	Staff Assistant	\$__ per hour	190	\$_____
3004	Senior Subject Matter Expert on Climate Adaptation	\$__ per hour	190	\$_____
3005	Subject Matter Expert on Climate Adaptation - Mid level	\$__ per hour	300	\$_____

3006	Engineer - Senior	\$__ per hour	300	\$_____
3007	Engineer - Mid level	\$__ per hour	550	\$_____
3008	Engineer - Junior	\$__ per hour	460	\$_____
3009	H&H Modeler - Senior	\$__ per hour	600	\$_____
3010	H&H Modeler - Mid level	\$__ per hour	970	\$_____
3011	H&H Modeler - Junior	\$__ per hour	780	\$_____
3012	GIS Analyst	\$__ per hour	330	\$_____
3013	Software Developer - Senior	\$__ per hour	20	\$_____
3014	Software Developer - Mid Level	\$__ per hour	30	\$_____
3015	Software Developer - Junior	\$__ per hour	20	\$_____
3016	IT Systems Architect - Senior	\$__ per hour	40	\$_____
3017	IT Systems Architect - Mid Level	\$__ per hour	90	\$_____
3018	IT Systems Architect - Junior	\$__ per hour	70	\$_____
3019	Surveyor - Senior	\$__ per hour	300	\$_____
3020	Surveyor - Technician	\$__ per hour	540	\$_____
3021	Surveyor - Field Staff	\$__ per hour	430	\$_____
3022	Urban Designer - Senior	\$__ per hour	510	\$_____
3023	Urban Designer - Junior	\$__ per hour	790	\$_____
3024	Public Outreach Specialist - Senior	\$__ per hour	300	\$_____
3025	Public Outreach Specialist - Junior	\$__ per hour	480	\$_____
NTE Grand Total for B.3.4				\$_____

B.3.4.2 Option Year Three - Cost-Reimbursable Components

Contract Line Item No. (CLIN)	Item Description	Cost Per Item	Quantity Maximum Not to Exceed	Maximum Total Price (Unit price x Maximum quantity) Not to Exceed
3026	Software Licenses	\$	10	\$_____
3027	Hardware	\$	5	\$_____
3028	Software Applications	\$	10	\$_____
3029	Lump Sum Printing Costs (Costs shall be invoiced on a per task basis. Tasks are defined in C.5.1.1)	\$	1	\$_____
3030	Lump Sum Travel Costs (Costs shall be invoiced on a per task basis. Tasks are defined in C.5.1.1)	\$	1	\$_____
NTE Grand Total for B.3.4.2				\$_____
Grand Total Option Year Four B.3.4 NTE & B.3.4.2				\$_____
NTE Grand Total for the Base Period & Option Years				\$_____

B.4 An offeror responding to this solicitation that is required to subcontract shall be required to submit with its proposal, any subcontracting plan required by law. **Proposals responding to this RFP will be rejected if the offeror fails to submit a subcontracting plan that is required by law.**

B.5 For contracts in excess of \$250,000, at least 10% of the dollar volume of the contract shall be subcontracted in accordance with section H.9.

A Subcontracting Plan form is available at <http://ocp.dc.gov>, under Quick Links click on "Required Solicitation Documents".

SECTION C: SPECIFICATIONS/WORK STATEMENT

C.1 SCOPE:

The District of Columbia (the District), Office of Contracting and Procurement (OCP) on behalf of the Department of Energy and Environment (DOEE), Natural Resources Administration, Regulatory Review Division (RRD), is seeking a contractor to design, deploy, and provide an Integrated Flood Model (IFM) for the District that will display the depth and extent of flooding (from various Riverine, Coastal, or Interior floods – occurring as a result of various storm scenarios in combination or separately) on a map, taking into consideration the District’s natural and built environment, including sewer conveyance systems and outfalls into receiving waterbodies. The IFM will serve as the basis for the Contractor, if ordered, to also produce flood risk management plans for multiple neighborhoods in the District that describe where flood risk reducing infrastructure should be built, and justification that proposed infrastructure will be cost-effective for the district.

At the conclusion of the contract, DOEE will have a fully developed IFM that will combine hydraulic models of the Combined Sewer System (CSS), the Municipal Separate Storm Sewer System (MS4), and direct drainage areas, including outfalls, with other models that predict overland flow. The IFM will have the capability for the user to input variables on storm size (such as rainfall duration and depth, sea level rise, and storm surge) as well as baseline conditions that could affect how the storm impacts the city (such as the ground infiltration rate, catch basin capacity, sewer conveyance capacity, and pump station capacity). For variables such as ground infiltration rate and rainfall duration and depth, the user will be able to set different variables for different locations. The IFM will also have the capability to automatically pull information from external sources such as the National Weather Service, or U.S. Geological Survey. These user and automatic inputs will set the parameters used to run the IFM to create maps of flooding extent and depth. The H&H (Hydrologic and Hydraulic) models (which combine to form the IFM) will be based on data such as the District’s existing pipe and inlet system for the CSS and MS4, outfalls, topographic data, and locations of green or gray infrastructure and their retention volumes and peak discharge characteristics. The IFM will be able to accommodate changes to this data.

This is an IDIQ contract, with cost-reimbursable components, and the Task Orders (TO) under this contract will be based on hourly rate billing and reimbursement for items with a total not-to-exceed price. Each individual Task Order scope of work (SOW) will delineate its SOW, schedule and deliverables. The tasks and deliverables are identified in C.5 and its subsections represent DOEE’s initial definition of the requirements for the Project.

C.2 APPLICABLE DOCUMENTS

The following documents are applicable to this contract and are hereby incorporated by this reference:

Item No.	Document Type	Title	Date
0001	Market Research Survey	Market Research for an Integrated Flood Model	September 2019
0002	Report	Flood Risk Management Planning Resources for Washington, DC. This provides an overview of available mapping efforts in the region. https://www.npc.gov/docs/Flood_Risk_Management_Planning_Resources_January_2018.pdf	January 2018
0003	Report	Climate Ready DC https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service_content/attachments/CRDC-Report-FINAL-Web.pdf	November 2016
0004	Report	Resilient DC https://resilient.dc.gov/	April 2019
0005	Report	DC Interior Flooding Report https://silverjackets.nfrmp.us/doc/DC/Interior_Flooding_Report_20170825.pdf?ver=2017-09-01-175909-267	August 2017
0006	Report	2010 Flood Insurance Study https://www.npc.gov/docs/DC_Flood_Insurance_Study_Pre-17th_Street_Levee.pdf	2010
0007	Report	Federal Triangle Stormwater Drainage Study https://www.npc.gov/docs/Federal_Triangle_Stormwater_Drainage_Study_Jul2011.pdf	2011
0008	Website	National Capital Planning Commissions webpage on flooding and links to relevant documents. https://www.npc.gov/topics/flooding/	
0009	Website	Dc Silver Jackets webpage and links to relevant documents https://silverjackets.nfrmp.us/State-Teams/Washington-DC.cfm	
0010	Website	Flood Inundation Mapping, also explained in 0002 https://www.weather.gov/lwx/potomacinundationmaps	Updated 2016
0011	Report	Future Conditions Flood Hazard Study District of Columbia, Phase II: Watts Branch https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service_content/attachments/FutureConditionsFHS_PhaseII_Report.pdf	April 2018
0012	Table	Status of Watersheds being surveyed and modeled by US Army Corps of Engineers	March 2020

		https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service-content/attachments/USACE%20Watershed%20Modeling%20Status%20%281%29.pdf	
0013	Report	Data gap analysis of existing pipe models in District of Columbia https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service-content/attachments/Pipe%20Model%20Data%20Gap%20Analysis%20%281%29.pdf	March 2020
0014	Report	Blue Green Infrastructure: Cloudburst Management Strategies for the District of Columbia https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service-content/attachments/BGI_Workshop_Final.pdf	2019
0015	Document	FEMA Policy Standard for Flood Risk Analysis and Mapping, FEMA Policy #FP 204-078-1 (Rev 10). (C.5.6.3 & C.5.6.4.1-C.5.6.4.2) https://www.fema.gov/media-library/assets/documents/35313	2019

C.3 ACRONYMS AND DEFINITIONS

These terms when used in this RFP have the following meanings:

Blue Green Infrastructure (BGI) – BGI refers to a type of infrastructure that can reduce interior flood risk in an urban environment. BGI uses vegetation and landscape systems (green infrastructure) as a means to convey and store flood waters (blue). BGI is an alternative or supplement to gray infrastructure that reduces flood risk, and often times has greater socioeconomic benefits associated with its implementation as compared to gray infrastructure. See Applicable document 0014 for more information and examples of BGI.

Coastal Flooding – Coastal floods refer to inundation caused by the Potomac and Anacostia Rivers’ connection to the Chesapeake Bay and ultimately to the Atlantic Ocean. Coastal flooding includes inundation resulting from high tides (often called tidal, nuisance, or sunny day flooding), but also from coastal storms like hurricanes that drive storm surge and waves up the Potomac River and into Washington, DC

Contract Administrator (CA) – the representative responsible for general administration of this contract and advising the Contracting Officer as to the compliance or noncompliance of the Contractor with this contract. In addition, the CA is responsible for the day-to-day monitoring and supervision of this contract. The CA is not authorized or empowered to make amendments, changes, or revisions to this contract.

Combined Sewer System (CSS) - DC Water operates a wastewater collection system comprised of "separate" and "combined" sewers. One-third of the District is served by a CSS. Combined sewer systems are sewers that are designed to collect rainwater runoff, domestic sewage, and industrial wastewater in the same pipe. Most of the time, combined sewer systems transport all of their wastewater to a sewage treatment plant, where it is treated and then discharged to a water body. During periods of heavy rainfall or

snowmelt, however, the wastewater volume in a combined sewer system can exceed the capacity of the sewer system or treatment plant.

Day or Days – business days, excluding Saturdays, Sundays and holidays unless otherwise specified for a requirement

DOEE – Department of Energy and Environment (an agency of the District of Columbia Government)

DOEE HQ: The main office of the Department of Energy and Environment, located at 1200 First Street NE, Washington, DC, 20002.

DOEE review and approval – This term describes the process for delivering a product that includes up to three submissions by the contractor: Initial submission 1 -> DOEE comments -> submission 2 -> DOEE comments -> submission 3.

IFM – Integrated Flood Model

Interior Flooding – Interior floods, also known as flash floods, urban floods, stormwater floods, and cloudburst floods, are caused by heavy rainfall that cannot be absorbed by the ground and then overwhelm the drainage system. Interior flooding can occur when river elevations are normal because interior floods are attributed to topography, development, localized weather, and the capacity of stormwater systems.

Municipal Separate Storm Sewer System (MS4) – DC Water operates a wastewater collection system comprised of "separate" and "combined" sewers. Separate systems are comprised of two independent piping systems: one system for "sanitary" sewage (i.e. sewage from homes and businesses) and one system for storm water. Approximately two thirds of the District are served by a municipal separate storm sewer system. The MS4 discharges into portions of the Potomac, Anacostia and Rock Creek watersheds.

NRA – Natural Resources Administration (an administration of the DOEE)

Project Approach – see C.5.3.1

Riverine Flooding – Riverine, or freshwater flooding, refers to overbank flooding on the Potomac River caused by its inability to contain the water collected in the Potomac River Basin. Heavy rainfall or snowmelt upstream can cause increased water levels downstream on the Potomac River hours or days later that also can cause backwater flooding on the Anacostia River.

RRD – Regulatory Review Division (a division of the NRA)

C.4 BACKGROUND

The District of Columbia is vulnerable to three types of floods, riverine, coastal, and interior floods, and has experienced each type of flood in its recent past. The District has relatively robust methods to map the extent of coastal and riverine floods but has limited ability to map interior floods. The District has not evaluated the potential for coastal and

riverine flooding to enter through sewer outfalls and back up through sewer conveyances into the District communities, or for flooding that occurs due to the limited conveyance capacity of the sewer systems. The District also does not have the ability to integrate models of the different types of floods, should multiple types occur at once. Furthermore, the available existing maps do not account for climate change and the fact that increased frequency and intensity of storms will increase the District's flood risk. As a result, it is difficult for the District to efficiently plan and install flood risk mitigation measures.

The IFM will provide the District with the missing information described above, and in the case of interior flooding, provide a first-ever comprehensive look at where interior flood risk occurs. The primary result of a completed IFM will be the ability to create maps based on different flooding scenarios that will be used to show the District's flood risk, both now and in the future. Once these maps are created, DOEE may use them to determine which areas of the District have the highest flood risk and may task or order the Contractor to create flood risk management plans for the most flood-vulnerable neighborhoods. The flood risk management plans will identify where flood risk reducing infrastructure should be built (and what kind) and the Contractor will use the IFM to test the effectiveness of proposed infrastructure. If so tasked or ordered, the Contractor will also use the IFM to evaluate potential changes to design standards for stormwater infrastructure.

C.5 REQUIREMENTS

C.5.1 The Contractor shall provide qualified personnel in the specified labor categories to perform the tasks and provide deliverables as ordered under the SOW to be issued with each TO. The District is purchasing labor services to perform tasks to ultimately result in the IFM as ordered under TOs. Each of the 14 separate major tasks in the SOW that are ordered shall be accomplished in the effort to produce an IFM as described herein. These major tasks are bolded in the text below and also listed in C.5.1.1. Please note that not every task will be worked on in every contract year. For example, task C.5.3 "Detailed Work Plans," will be completed in the base period, and may not have any work hours associated with it in any of the option years. Please also note that not every CLIN will be utilized for each task. For example, CLIN 0018, "Surveyor – Senior," may not have any work hours associated with it for task C.5.5, "Systems Architecture Document." Please see attachment J.10 Labor Category by Tasks for DOEE's initial expectation of what year each task is anticipated to take place, and which labor categories will be utilized in each task.

C.5.1.1 The following sections are considered "major tasks." The work, including deliverables, described by all subsections within the subsections within a major task section must be completed for a major task to be complete.

- (i) C.5.2 – Meetings and Reports
- (ii) C.5.3 – Detailed Work Plans
- (iii) C.5.4 – Model Advisory Group
- (iv) C.5.5 – Systems Architecture Document

- (v) C.5.6 – Data Collection and Management
- (vi) C.5.7 – Integrated Flood Model (IFM)
- (vii) C.5.8 – Materials and Connection to the Network
- (viii) C.5.9 – Scenario Recommendations Document
- (ix) C.5.10 – Creation of 15 Scenario Maps
- (x) C.5.11 – Training
- (xi) C.5.12 – Operation Manual
- (xii) C.5.13 – Framework Plan for Flood Risk Management
- (xiii) C.5.14 – Floodshed Management Plans
- (xiv) C.5.15 – Rainfall Sensitivity Analysis

C.5.2 Meetings and Reports

The Contractor shall participate in a kick-off meeting and monthly meetings and provide monthly updates.

C.5.2.1 The Contractor shall participate in a kick-off meeting with DOEE and OCP at DOEE headquarters (1200 First Street NE, 5th Floor) or via webinar within 14 days of the contract award. DOEE will provide the meeting date at contract award.

C.5.2.1.1 No later than one day prior to the kick-off meeting by 3:00PM, the Contractor shall deliver to the CA as an email attachment:

- A. An agenda for the kickoff meeting
- B. A draft Initial Detailed Work Plan (as described in C.5.3.1) to serve as a basis for discussion at the meeting.

C.5.2.2 The Contractor shall meet with DOEE for at least 1 hour once a month throughout all contract terms. Meetings shall be either via webinar or in person at DOEE’s headquarters;

C.5.2.3 The Contractor shall submit a Monthly Progress Report (MPR) as an inclusion with their monthly invoice for payment. The MPR shall include:

- A. Measures of progress of the IFM shall include:
 - a. Tasks in progress, milestones achieved, percentage complete of tasks, and percentage complete of total contract
 - b. Percent of each deliverable (as identified in the Detailed Work Plans described in C.5.3) completed
 - c. Task specific items that are in-progress, such as Percent of District-wide sewersheds modeled and mapped

- B. Contractor shall identify issues encountered during the previous month and present the resolution to the issue
- C. Contractor shall resolve issues identified in the previous month in accordance with the determined resolution
- D. Major issues to be addressed in future months
- E. Work priorities and critical path items for the next month
- F. Changes to the Detailed Work Plans (once delivered) described in C.5.3, and an electronic copy of the revised Detailed Work Plans (if revised).

C.5.3 Detailed Work Plans

The Contractor shall develop two Detailed Work Plans and deliver to the CA via email attachment; an Initial Detailed Work Plan, and a Comprehensive Detailed Work Plan.

C.5.3.1 The Contractor shall develop a draft Initial Detailed Work Plan (IDWP) and deliver electronically to the CA the day before the kickoff meeting as described in C.5.2.1.1. The Contractor shall then revise the draft IDWP based on feedback from DOEE, and deliver electronically to the CA for DOEE’s review and approval within five (5) days of the kick-off meeting. The IDWP shall be the project management plan for completing tasks C.5.5 and C.5.9. It shall include project timelines for tasks and sub tasks and interim deliverables for those tasks. The basis of the IDWP shall be the Project Approach that was provided in response to the RFP.

C.5.3.2 The Contractor shall develop a Comprehensive Detailed Work Plan (CDWP), deliver electronically to the CA and receive DOEE review and approval. The CDWP shall be a proposed project management plan for the entire development of the IFM. It shall include project timelines for tasks and sub tasks, and interim deliverables for the IFM that demonstrate evidence of progress as described in C.5.7.7. The basis of the CDWP shall be the Project Approach that was provided in response to the RFP, and the IDWP. DOEE and the Contractor shall evaluate the CDWP on a monthly basis and discuss any adjustments to the major milestones with the CA. Adjustments to the milestones are subject to the authority of the CO and require prior approval.

C.5.3.2.1 The Contractor shall develop an draft CDWP, deliver electronically to the CA and receive DOEE review and approval within four (4) months of the contract award date;

C.5.3.2.2 The Contractor shall develop a revised CDWP within nine (9) months of the contract award date, based on feedback from DOEE, and deliver electronically to the CA, for DOEE’s review and approval;

C.5.4 Model Advisory Group

The Contractor shall establish a Model Advisory Group (MAG) with the input and direction of DOEE that shall meet four times during the base period and twice during option year one.

C.5.4.1 The MAG shall be composed of experts and stakeholders approved by DOEE;

C.5.4.2 The Contractor shall plan and host meetings via webinar or in-person at DOEE's office, to be conducted at key phases in the development of the IFM, where the MAG members will be updated on the IFM's progress and provide feedback to DOEE and the Contractor. As an example, one MAG meeting could occur during the creation of the Scenario Recommendations Document, as described in C.5.9. At the MAG meeting, members would provide input on the variables that should be adjustable in the IFM and the key scenarios that should be modeled in the IFM.

C.5.4.2.1 While DOEE and the Contractor may adjust the topics to be discussed and the timing of these meetings after contract award, for the purposes of filling out Attachment J.14, the contractor shall assume that four MAG meetings shall be conducted in the base period and two MAG meetings in the first option year.

C.5.5 Systems Architecture Document

The Contractor shall develop a Systems Architecture Document (SAD) that will recommend what hardware and software will be used to run the IFM, and how various software components will interact. The SAD shall include the approach to the following items at a minimum:

C.5.5.1 Model Components and Software: Recommendations for which model components (for example HEC-RAS for riverine flooding and MIKE-Urban for interior flooding) to use, and method of combining them to create the IFM.

A. For each software or model component option, the Contractor shall include an assessment of that option's benefits and disadvantages, including:

1. Estimated cost to purchase and maintain over 20 years
2. Ease of use by DOEE employees
3. Compatibility and ease of integration with existing data and model sources

B. For each option on how to combine various model components to create the IFM, the Contractor shall include an assessment of that option's:

1. Ability to achieve the outcomes described in C.5.7
2. Ability to upgrade the IFM in the future
3. Ease of use by DOEE employees

C. The Contractor shall provide a recommendation on whether or not to use a custom user interface.

C.5.5.2 Hardware and Connection to the Network: Recommendations for what (if any) hardware should be purchased and the method by which the IFM shall be hosted and connected to the DOEE network.

A. At least three options, including but not limited to the following, shall be addressed:

1. A system where cloud-based servers at a private company host and run the IFM

2. A system where physical servers at DOEE host and run the IFM
3. A system where the District Office of Chief Technology (OCTO) hosts (either cloud based or physical) servers to run the IFM.

- B.** For each option, the Contractor shall include an assessment of the following
1. Speed in running the IFM
 2. Cost to purchase and maintain over 20 years
 3. Ease of being maintained by DOEE employees
 4. Ease of being adjusted by DOEE employees to add new features
 5. Security of data stored
 6. Ease/Method by which users outside DOEE could access/run the IFM
 7. Risk of data loss/corruption and method by which DOEE should mitigate that risk.
 8. Downtime – length of time (and probability) that the IFM will be down/inoperable due to no internet connection, lack of power, or need for maintenance upgrades.
- C.** The Contractor shall include recommendations on what the appropriate model run time should be for the two outcomes described in C.5.7, and describe the cost associated with decreasing the model runtime. The Contractor shall work with DOEE Information Technology (DOEE IT) and OCTO on confirming the appropriate model run time and cost.

C.5.5.3 Inventory of Existing Data: A listing of all relevant data and models related to H&H modeling in the District of Columbia. The list shall include details on each dataset, including geographic extent, owner, cost or process to acquire, and compatibility with proposed software components described in C.5.5.1.

C.5.5.4 The Contractor shall consult with DOEE IT and OCTO in developing the SAD;

C.5.5.5 The Contractor shall present a draft SAD to DOEE, DOEE IT, and OCTO;

C.5.5.6 The Contractor shall revise the draft SAD based on feedback, and deliver one (1) electronic copy to the CA, for DOEE’s review and approval;

C.5.5.7 Sections C.5.5.1 through C.5.5.6 describe the requirements for delivering a SAD. For the purposes of filling out Attachment J.14, estimates associated with Section C.5.5 should not include any costs of hardware, software licenses and software applications required for the IFM.

C.5.6 Data Collection and Management

The Contractor shall collect existing data for use in the IFM (such as topography information, building flood protection, metro vents and entrances, locations of green infrastructure or other stormwater components). The data may exist in multiple places such as OCTO, DOEE, DC Water, and WMATA.

C.5.6.1 The Contractor shall develop a method, with the input of the CA and DOEE IT, to create constant access to this data, and any new data created, and a process by which newer versions of the data may be incorporated into the IFM.

For example, this may take the form of a Database hosted by OCTO with all the data elements needed to run the IFM. Each data element may have different permission settings, such as the all pipes model of the CSS which may only be accessed by the IFM and by DC Water employees. Alternatively, data on locations of green infrastructure may be accessed by the public.

C.5.6.1.1 The IFM shall as much as possible create data connections rather than host versions of data that would need to be manually updated. As an example, this could be done by using APIs, (application programming interfaces). Data connections shall include at least:

- A. Locations of green infrastructure from DOEE's online database or OCTO maps
- B. Sewer pipes and inlet infrastructure data from the CSS or MS4
- C. Land use / land cover data
- D. Locations of buildings and roads

C.5.6.1.2 For all data accessed and generated in the development, running, and output of the IFM, data must be transmitted with encryption in transit and at rest. Data connections must be able to pass OCTO security scans.

C.5.6.2 Through the process of an assessment, the Contractor shall determine the quality of each dataset, identify if new data is required for development of the IFM, and present the CA, via electronic copy, a proposal and cost estimate for acquiring new data;

C.5.6.3 Based on the results of the assessment conducted in C.5.6.2., the Contractor shall acquire any necessary additional data, which may require field surveys to verify information such as sewer pipe diameter and depth. The surveys shall be completed using Real Time Kinematic (RTK) Global Positioning System (GPS) technology, or other technology if RTK technology is not available due to circumstances like tree cover. RTK-GPS can be used to determine vertical elevations to within 0.5 ft. accuracy or greater. All survey points will be available in Geographic Information System (GIS) format and will be coded based upon FEMA Policy Standard for Flood Risk Analysis and Mapping (see applicable document 0015).

C.5.6.3.1 For purposes of filling out Attachment J.14, estimates should be based on the need to survey 5,000 stormwater components during the contract term, from base year through option years, including initial surveys (as described in C.5.6), calibration of the IFM (as described in C.5.7), and development of Flood Risk Management Plans (as described in C.13 and C.14). During the contract term, the District will issue task orders specifying survey requirements.

C.5.6.4 The Contractor shall conduct field surveys of the specific watersheds detailed below to obtain updated hydrologic and hydraulic data. Some watersheds (not included below) have already been field surveyed by the U.S. Army Corps of Engineers. See Applicable Document 0011 for more information.

The survey will be focused on capturing existing stormwater regional pond data to support the hydrologic modeling and accurate bridge data and channel data to support hydraulic modeling. The Contractor shall maintain a complete set of survey field notes, calculations, photographs, and any other related material used to support the collection of the data.

For the stormwater pond survey, the outlet control structure will be surveyed in order to incorporate significant storage of rainfall into the hydrologic modeling. Each pond will be visited and the outlet control structure (s) (i.e. riser structure, spillway, etc.) will be measured and surveyed. Bridge data will be collected to support hydraulic modeling efforts. A Contractor field team will visit each bridge and take the following measurements: opening size, distance from top of opening to low chord; low chord to high chord; flow width of opening; and other pertinent measurements to support hydraulic modeling. Stream channel cross-sections will be taken to support hydraulic modeling at select locations.

The surveys shall be completed using Real Time Kinematic (RTK) Global Positioning System (GPS) technology, or other technology if RTK technology is not available due to circumstances like tree cover.. RTK-GPS can be used to determine vertical elevations to within 0.5 ft. accuracy or greater.. All survey points will be available in Geographic Information System (GIS) format and will be coded based upon FEMA Policy Standard for Flood Risk Analysis and Mapping (see applicable document 0015).

C.5.6.4.1 The Contractor shall collect data and conduct field surveys to obtain updated hydrologic and hydraulic data in the Rock Creek watershed including all tributaries, to support the IFM. For the field surveys in the Rock Creek watershed, it is anticipated that no more than 30 stormwater ponds, approximately 50 bridges and no more than 100 channel cross-sections will be surveyed.

C.5.6.4.2 The Contractor shall collect data and conduct field surveys to obtain updated hydrologic and hydraulic data in the Western Watersheds to support the IFM. The western watersheds shall include the tributary near Battle Kemble Park, the tributary near Dalecarlia Reservoir, East Creek A and East Creek B. For the field surveys in the Western Watersheds, it is anticipated that no more than 10 stormwater ponds, approximately 15 bridges and no more than 30 channel cross-sections will be surveyed.

C.5.7 Integrated Flood Model (IFM)

The Contractor shall deliver the IFM capable of achieving the two outcomes: Outcome 1 - Creation of Scenario Maps, and Outcome 2 - Ability to test effectiveness of proposed infrastructure.

The IFM will combine hydraulic models of the Combined Sewer System (CSS), the Municipal Separate Storm Sewer System (MS4), and direct drainage areas, including outfalls, with other hydrologic models that predict overland flow. Fluvial/riverine models will also be a part of the combination. The IFM will have the capability for the user to input variables on storm size (including rainfall duration and depth, sea level rise, and storm surge) as well as baseline conditions that could affect how the storm impacts the District (including the ground infiltration rate, catch basin capacity, and pump station capacity). For variables such as ground infiltration rate and rainfall duration and depth, the user will be able to set different variables for different locations (i.e. the Bloomingdale neighborhood will receive 2 inches in 24 hours and the rest of the District will receive 1 inch in 24 hours). The IFM will also have the capability to automatically pull information from non DOEE sources such as the National Weather Service, or U.S. Geological Survey. These user and automatic inputs will set the parameters used to run the IFM to create maps of flooding extent and depth. The H&H models (which combine to form the IFM) will be based on data including the District's existing pipe and inlet system for the CSS and MS4, topographic data, and locations of green or gray infrastructure and their retention volumes and peak discharge characteristics. The IFM will be able to be easily modified to include updated data as underlying data changes. For example, as new green infrastructure locations are added to the Stormwater Database, the IFM will use the latest green infrastructure data layer for its next run. Sewer pipe data, road elevation data, and others may also be updated. Some of the updates would potentially be automated for the data layers that have an automatic connection with the IFM.

The IFM shall enable the following two specific outcomes:

- C.5.7.1** Outcome 1- Creation of scenario maps: These maps – which DOEE will be able to create at any time once the IFM is completed - will show the horizontal extent and vertical depth of flooding caused by Riverine, Coastal, or Interior floods – occurring in combination or separately - for any location in the District. These maps will be in a format that can be uploaded to a web viewer and ArcGIS. DOEE will have the ability to choose the value of variables that the IFM will use to predict the extent and depth of flooding as described in the paragraph above. Note: Unless specifically requested as a deliverable in other parts of this SOW, DOEE would provide the amount of rain that is equivalent to the events it wishes to test (such as the 100-year 1-hour rainfall, or others described in Scenarios 1A-1C).

The scenario maps created in this outcome are not time sensitive (they will not require modeling to be completed within an hour) and will be created with the highest fidelity that is reasonable given the computing power available. DOEE will have the ability to produce an unlimited amount of scenario maps based on manipulating multiple variables in the IFM. Please see the example scenarios below for hypothetical examples of how DOEE may use the IFM to achieve

Outcome 1. Please note they do not represent exact or the only requirements of the contract. They are provided to give a sense of how DOEE anticipates using the IFM.

- a. Example Scenario 1A: DOEE would like to map the current interior flood risk in the District and would run the IFM to produce a map showing the extent and depth of flooding that would occur as a result of 100-year 1-hour rainfall event.
- b. Example Scenario 1B: DOEE would like to map the *future* interior flood risk in the District and would run the IFM to produce a map showing the extent and depth of flooding that would occur as a result of 100-year 1-hour rainfall event that the District would expect in the year 2080.
- c. Example Scenario 1C: DOEE would like to map the extent and depth of flooding if a 500-year 2-hour rainfall occurred over a particular sub watershed, and simultaneously, a 50-year 2-hour rainfall occurred over the rest of the District.
- d. Example Scenario 1D: DOEE would like to map the extent and depth of Coastal flooding in the event that there is 3 feet of sea level rise, and a category 3 Hurricane makes landfall near Virginia Beach, VA.
- e. Example Scenario 1E: DOEE would like to map the extent and depth of flooding if the District was hit simultaneously with heavy rains, storm surge, and riverine flooding (including impacts resulting from submerged stormwater outfalls).
- f. Example Scenario 1F: Hurricane Dorian is in the Caribbean, and some forecast models bring its path near the Chesapeake Bay. DOEE would like to map the extent and depth of flooding (both from surge and rainfall) of the worst-case scenario if Hurricane Dorian passed close to the District. This map would be produced prior to forecasted data for the District being available. Typically, the NWS predicts water surface elevations no more than 3 days out.
- g. Example Scenario 1G: DOEE uses the IFM to map flooding as a result of a range of storms (such as a Category 2 Hurricane, a 100-year flood, or a 500-year 24-hour rainfall). Those maps are then used to identify locations in the District should consider building green or grey infrastructure, including increased sewer conveyance capacity, to reduce flood risk. This identification will be done by DOEE outside the IFM software. DOEE will import the flood map results created by the IFM into ArcGIS. DOEE will then combine the IFM data layers with other data layers (such as resident income, sewershed, heat island impact, and projected development) to determine the neighborhoods in which flood risk reduction infrastructure would be most effective and produce the most co-benefits. Prior to building the infrastructure, DOEE will use the IFM to determine the effectiveness of the designed infrastructure – a process described in Outcome 2.

- h. Example Scenario 1H: DOEE uses the IFM to map flooding as a result of a range of storms (such as a Category 2 Hurricane, a 100-year flood, or a 500-year 24-hour rainfall). Those maps are then used to identify critical facilities that are at risk of flooding. This identification will be done by DOEE outside the IFM software. DOEE will import the flood map results created by the IFM into ArcGIS. DOEE will then combine the IFM data layers with other data layers (such as locations of critical infrastructure) to determine the facilities which should examine their existing level of floodproofing and potentially spend money on additional flood protection, emergency evacuation plans, or emergency operation infrastructure.
- i. Example Scenario 1I: DOEE uses the IFM to map flooding as a result of a 100-year 24-hour rainfall. The resulting output, which in this case is data that contains both the horizontal extent of flooding but also the depth of flooding, will be provided to private insurers who will use that information to underwrite flood insurance policies for the property owners in the District.
- j. Example Scenario 1J: DOEE uses the IFM to produce a suite of 100 maps that show the extent and depths of flooding from 100 different rainfall amounts falling over the entire District and different water surface elevations. This suite of maps would be updated every year to account for changes in impervious surface, new sewer information, and constructed projects. These maps would be stored in an online accessible platform, and once a forecasted rain amount is given, the public or other District agencies could look at the map that most closely corresponds with the predicted rainfall amount to plan for, prepare for, and respond to the predicted flooding. The particular capability described in this scenario is very similar to what is accomplished by the Flood Inundation Maps: <https://www.weather.gov/lwx/potomacinundationmaps> . However, the Flood Inundation Maps only model coastal and riverine flooding separately.

C.5.7.2 Outcome 2- Ability to test the effectiveness of proposed infrastructure: DOEE will use the scenario maps created in Outcome 1 to determine where new flood risk reduction infrastructure should be built and to model the effect of the proposed infrastructure prior to building the infrastructure. DOEE will select one or more scenarios from Outcome 1 to create baseline maps, and then upload proposed infrastructure (such as a new levee, culvert widening, replacement of sewer segment with greater capacity pipe, or floodable street) into the IFM. Uploading is meant to be a broad term, which may not actually include uploading any files, but rather editing or forcing other aspects of the model to account for proposed projects. The process for uploading should be one that DOEE can accomplish on their own. DOEE will then run the IFM to produce maps showing how flood risk would change after implementing the proposed infrastructure and compare those maps with original baseline maps to determine effectiveness of proposed infrastructure. Please see the example scenarios below, for hypothetical examples of how DOEE may use the IFM to achieve Outcome 2. Please note they do not represent exact or the only requirements of the contract. They are provided to give a sense of how DOEE anticipates using the IFM.

- a. Example Scenario 2A: A scenario map produced in Outcome 1, shows that during a 100-year 24-hour rainfall event, a certain intersection is flooded in the Watts Branch Neighborhood. DOEE prepares concept alternatives such as a small levee system, enlarged culvert, and installation of green infrastructure to increase the perviousness of the sub watershed. Each of these alternatives is tested in the IFM, to see their effect on reducing the flood risk in the neighborhood. Based on the results, DOEE will select a preferred alternative to further design.
- b. Example Scenario 2B: Based on the results of Scenario A, DOEE chooses the concept alternative of installing green infrastructure throughout the sub watershed. DOEE selects exact locations (minimum scale = parcel) for green infrastructure and retention volume for each best management practice (BMP). DOEE will use the IFM to run a finer scale assessment of the proposed green infrastructure – including how the BMPs are hydraulically connected to each other and to the sewer system – to determine the extent of flood risk reduction achieved by implementing this solution.
- c. Example Scenario 2C: Based on the results of Scenario B, DOEE constructs green infrastructure throughout the sub watershed. Once as-builts of the green infrastructure are complete DOEE will upload the information to DOEE’s stormwater database (doee.dc.gov/swdb), including updates to database fields that capture key information such as stormwater retention capacity and peak discharge rates for the site. Once the stormwater database has been updated, the IFM will update its “baseline” data to include the new locations and retention volume of green infrastructure. The new locations of green infrastructure and retention data will be available in GIS format to download via DOEE’s Stormwater Database or from DC open data (<https://opendata.dc.gov/>).
- d. Example Scenario 2D: A scenario map produced in Outcome 1 shows that during a 100-year coastal flood in 2080, an area of SW DC will be inundated. DOEE prepares a concept of a new levee system on the shoreline near Buzzard Point and uploads the proposed levee structure into the IFM. The IFM is then used to predict flooding with the proposed levee system in multiple scenarios to see its effect on reducing the flood risk in the neighborhood.

C.5.7.3 The IFM shall have the ability for the user to modify multiple variables that will affect how the IFM is run and what maps are produced. The IFM shall also have the ability for the user to select from preset scenarios that set variable values in a certain way. The variables available for user modification include:

- A. Locations in which rainfall occurs
- B. The amount of rainfall
 1. Rainfall duration
 2. Area of the city (by sewershed) in which the given amount of rain falls
- C. Water surface elevation of tidally influenced rivers and tributaries
 - a. The amount of sea level rise from a base year
 - b. The water surface elevation at the SW waterfront gage
- D. Upstream conditions to determine Riverine Flooding

- a. Water Surface elevation at the Wisconsin Avenue Gage
 - b. CFS at the Little Falls Gage
- E. Infiltration rate
 - a. Citywide infiltration rate
 - b. Infiltration rate of particular sewersheds
- F. Status of individual Pump Stations
 - a. Pumping capacity percentage for each station
- G. Status of outfalls
 - a. Percentage of outfall pipe opening that is open for each outfall
- H. Area to be mapped/modeled with IFM
 - a. By sewershed area

C.5.7.4 The IFM shall be calibrated so that the IFM's predictions of where flooding occurs matches to the maximum extent possible, flood extent and depths from previous floods and recent available flow and level data. The process of calibration may also require field surveys and the creation of new data (such as new pipes or revised pipe attributes) that will need to be revised in the data set and rerun in the model. For purposes of pricing, please include any field survey costs under C.5.6.3.

C.5.7.5 The product of running the IFM for any scenario shall be:

- A. A GIS data package consisting of GIS operable layer(s) that shows the horizontal extent and vertical depth of flooding, and metadata for this layer that can be uploaded and hosted on OCTO's open data website.
- B. A GIS data package consisting of a GIS operable polygon shapefile layer(s) that shows the horizontal extent of flooding, and metadata for this layer that can be uploaded and hosted on OCTO's open data website.
- C. A report detailing the inputs used in to create that particular IFM run, including the settings of every input variable, calculated output data, which model components were used, and length of model run. The report will not provide new data, but instead show the underlying assumptions that were used to create the particular IFM output.

C.5.7.6 The IFM shall have the ability to limit what users can see and do depending on their user role that is defined by the user management system described in C.5.8.3.2.

C.5.7.7 The Contractor shall provide DOEE with evidence of progress on the IFM. DOEE will approve the deliverables associated with evidence of progress in the Detailed Work Plans (See Section C.5.3). These deliverables will explain progress on the IFM. Additionally, these deliverables will serve as a proof of concept showing that the chosen systems architecture and data integration approaches can work successfully. As an example, evidence of progress on the IFM could be using a smaller pilot area (rather than the entire District) to test coupling and integration of various models and data, or a graphic user interface that shows how DOEE will be able to manipulate the model and its variables.

C.5.7.8 The Contractor shall demonstrate that the requirements of C.5.7.1 have been met through an in person or webinar demonstration wherein the Contractor logs in to the IFM server, chooses three test scenarios and sets variables accordingly. The model will not actually be run in this demonstration due to time constraints, however, the

contractor shall have completed a model run prior to this presentation and show the output products (described in C.5.7.5) for that particular model run. The CA will make the determination that the requirements of C.5.7.1 have been met based on this demonstration.

C.5.7.9 Prior to completing the requirements of C.5.7.8, the contractor shall engage in user testing. During this time, the Contractor will work with DOEE to refine the user experience (for each user role as defined in C.5.7.6) in operating the IFM. DOEE will test the portions of the IFM to be demonstrated in C.5.7.8, provide feedback to the Contractor.

C.5.7.10 The Contractor shall demonstrate that the requirements of C.5.7.2 have been met through an in person or webinar demonstration wherein the Contractor logs in to the IFM server and walks through the process for uploading proposed infrastructure into the IFM. Due to time constraints, the contractor may summarize this process and show key steps rather than performing the uploading live. The model may not actually be run in this demonstration to show the results of the infrastructure due to time constraints, however, the contractor will have completed a model run prior to this presentation and show the output products (described in C.5.7.5) for that particular model run. The CA will make the determination that the requirements of C.5.7.2 have been met based on this demonstration.

C.5.7.11 Prior to completing the requirements of C.5.7.10, the Contractor shall engage in user testing. During this time, the Contractor will work with DOEE to refine the user experience (for each user role as defined in C.5.7.6) in operating the IFM. DOEE will test the portions of the IFM to be demonstrated in C.5.7.10, provide feedback to the Contractor.

C.5.8 Materials and Connection to Network

The Contractor shall provide all materials, systems, and software required for hosting and running the IFM and shall install those systems and establish their connection with the District networks.

C.5.8.1 The Contractor shall consult with DOEE Information Technology (DOEE IT) staff and the District Office of Chief Technology Officer (OCTO) staff in selecting and delivering the necessary software and hardware necessary to run the IFM.

C.5.8.2 The Contractor shall deliver all materials, systems, and software required for hosting and running the IFM (i.e. hardware or cloud servers).

C.5.8.2.1 The materials, systems, and software required for hosting and running the IFM shall generally consist of:

- A. Hardware –a computer server(s) capable of running the IFM (and completing the run) in under 12 hours, for any of the scenarios described in C.5.7.1 or C.5.10.
- B. Software Licenses –software licenses necessary to run the IFM, with a ten-year license period, if allowable by the licensor.
- C. Software Applications –software necessary applications required to run the IFM.

C.5.8.2.2 In addition to delivering all materials, systems and software for hosting and running the IFM in a live environment, the Contractor shall also establish a test environment. This test environment will allow the Contractor to work on changes and updates to the IFM (and test them) while not affecting the ability of users to run the existing version of the IFM in the live environment.

C.5.8.3 The Contractor shall work with DOEE IT and OCTO to install and establish connections from hardware and software applications required for the IFM to the District network. This shall include working with OCTO to pass any necessary security scans for hardware and software to function in the District computing environment.

C.5.8.3.1 The computer servers described in C.5.8.2.1 will be operated and maintained by OCTO. The Contractor shall provide a way for District employees to access these servers and run the IFM over the District network.

C.5.8.3.2 The Contractor shall implement a web accessible user management system that allows a DOEE administrator to grant individuals access, or partial access, to the IFM. User roles shall include, but not be limited to:

- A. DOEE Administrator – Users in this role may change the user status of other individuals, set variables and run the IFM, and view past reports and maps.
- B. DOEE User – Users in this role may set variables and run the IFM, and view past reports and maps.
- C. IFM Administrator - Users in this role may make changes to the Systems Architecture of the IFM, make changes to data relationships, modify the IFM or aversion of it to test new infrastructure described in C.5.7.2, set variables and run the IFM, and view past reports and maps.
- D. Limited Data Access User - Users in this role may view past reports and maps, and data tables containing information provide by their specific agency (such as DC Water).

C.5.8.3.3 The Contractor shall demonstrate that the requirements of C.5.8.3 have been met through an in person or webinar demonstration wherein a DOEE employee is able to log in to the IFM server, grant an individual access to the server, set variables in the IFM, and run the IFM.

C.5.9 Scenario Recommendations Document

The Contractor shall deliver a Scenario Recommendations Document (SRD) via email attachment to the CA for DOEE review and approval. The Contractor shall submit the final version via email attachment and via 30 color printed copies to the CA.

C.5.9.1 The SRD shall provide guidance to DOEE on what variables (as described in C.5.7.3) will be adjustable, and to what degree, in the IFM. For example, the SRD might recommend that the status of outfalls be one variable in the IFM, and that users would be able to adjust the percent of the outfall that is open and not blocked

or covered by river water (from zero to one hundred). The SRD would also specify that this variable be adjustable for every outfall in the District.

C.5.9.2 The SRD shall provide guidance to DOEE on how to set the variables described in C.5.7.3. It shall provide recommendations on default settings and an explanation why those numbers were selected. It shall describe the physical conditions that would need to occur that would make a user want to select a different number that was not the default. For example, for the infiltration rate variable, the SRD would recommend a default percentage, and describe the physical conditions (i.e. rain within 24 hours) where the user would want to adjust the percentage away from the default.

C.5.9.3 The SRD shall provide guidance to DOEE on what scenarios will be useful to map by running the IFM. The SRD shall make recommendations on the combinations of variables in C.5.7.3 that should be used in order to present a complete picture of current and future flood risk in the District. For the top 10 scenarios, the SRD shall also provide an explanation on why each scenario was selected. For example, the SRD could recommend that DOEE use the IFM to run one scenario where sea level rise matches the NOAA “High” Projections in 2080, where precipitation matches the predicted precipitation from a 100-year 6-hour storm in 2080, and specific other settings of variables in C.5.7.3. For this specific scenario, the SRD would also provide an explanation on why that scenario map will be useful to understanding the District’s flood risk.

C.5.9.4 The Contractor shall present the draft SRD to the MAG and submit a revised SRD based on MAG and DOEE feedback for DOEE review and approval.

C.5.10 Creation of 15 Scenario Maps

The Contractor shall use the IFM to create 15 scenario maps and a floodshed map. Section C.5.10 and its subsections only describe the production of these maps through running the model with specific variables and displaying its outputs.

C.5.10.1 10 of the 15 scenario maps shall depict the top 10 scenarios selected in C.5.9.3.

C.5.10.2 Five of the 15 scenario maps shall depict flood scenarios that have occurred in the past to be used for calibration as described in C.5.7.4. For these five maps, in addition to the output of the IFM, the maps shall also display the extent of flooding based on historical knowledge. For example, one scenario map could be the great flood of 1936, or 2006 Federal Triangle flood. The Contractor would use the IFM to replicate the conditions that lead to the historic floods and create a map with that specific scenario. The map would also include historic and the actual observed flood extents based on historic photos, maps and written accounts.

C.5.10.3 The floodshed map shall include a map of the District divided into floodsheds, which could be individual watersheds, sewersheds, and/or drainage areas or a combination of them. A starting point for evaluating and determining floodsheds shall be the areas that drain to a National Pollutant Discharge Elimination System (NPDES) CSS outfall or MS4 outfall. These areas may be grouped together or reduced into smaller areas based on the contributing area for flood risk and whether flooding is riverine, coastal, interior, or a combination. The Contractor shall

coordinate with DOEE to determine how the floodsheds will be mapped, and the CA will have final approval.

C.5.10.4 The maps shall be delivered in accordance with C.5.7.5 and shall also be delivered to the CA in the form of one high resolution image, PDF file, and PowerPoint slide per map, and two 24"x36" hard copy print outs per map.

C.5.11 Training

The Contractor shall deliver 10 4-hour training sessions to be held at DOEE HQ or via webinar to provide training to District staff to teach them how to operate and maintain the IFM and its associated hardware and network connections. Each training will include no more than twenty (20) District staff.

C.5.11.1 The training shall include presentations on the following topics over the course of the 10 4-hour training sessions.

- A. Setting variables and running the IFM
- B. Maintaining network connections
- C. Maintaining and troubleshooting data connections between the IFM and datasets hosted outside DOEE
- D. Creating new data connections
- E. Editing the IFM to test proposed outcomes as described in C.5.7.3
- F. Limitations of the IFM and awareness of what the outputs can and cannot predict

C.5.11.2 The Contractor shall provide training materials, presentations, and an agenda at least two weeks in advance of each training session. The CA will review, provide comments, and approve the training materials one week before each training session. Agendas shall be provided to the CA at least two weeks in advance of the training session. DOEE shall create the calendar events, invite trainees, and reserve a room.

C.5.12 Operation Manual

The Contractor shall deliver an Operation Manual (OM) that shall include all information required for DOEE to run and maintain the IFM as if there were no continuing contractor support at the end of the contract. The OM shall cover the following topics and any additional information necessary to operate the IFM.

- A. Running the IFM
 - a. Inputs
 - i. Setting variables and running the IFM
 - ii. Editing the IFM to test proposed outcomes as described in C.5.7.3
 - b. Outputs
 - i. Map and data generation
 - ii. Limitations of the IFM and awareness of what the outputs can and cannot predict
- B. Maintaining the IFM
 - a. Hardware
 - b. Software

- i. Maintaining and troubleshooting data connections between the IFM and datasets hosted outside DOEE
- ii. Creating new data connections

C. Network

- a. Maintaining network connections

C.5.12.1 Draft OM: The Contractor shall deliver a Draft OM to the CA via electronic copy (source file and pdf) and provide 5 printed copies for DOEE’s review and approval after the delivery of the IFM that is capable of producing maps associated with Outcome 1 (C.5.7.1) and Outcome 2 (C.5.7.2).

C.5.12.2 Final OM: The Contractor shall deliver a final OM to the CA via electronic copy (source file and pdf) and provide 5 printed copies for DOEE’s review and approval, prior to the conclusion of the contract. The final version will reflect any changes made to the IFM and user experience between the Initial OM and the conclusion of the contract.

C.5.12.3 All versions of the OM shall include a data dictionary. The data dictionary shall include the database label of each field used in the IFM along with a description of it and how that field is used or referenced by other databases or programs. For example, the IFM could include a variable (able to be input by the user) that sets the infiltration rate for the District. The data dictionary entry might read:

“INFLRT – Infiltration Rate for the District. Users may set this variable via the graphic user interface. This field is stored in the “Input Database” and is referenced by the 3 models, X, Y and Z.”

C.5.13 Framework Plan for Flood Risk Management

The Contractor shall deliver a Framework Plan for Flood Risk Management (FP) to the CA via electronic copy within six months of the option year renewal. The FP is high level document that provides a scientifically sound basis for the decisions of if, when, and where blue-green and gray infrastructure should be implemented to reduce flooding in the District.

C.5.13.1 The FP shall include a map that divides the city into geographically distinct floodsheds as described in C.5.10.3. There will be multiple floodsheds in the District. For an approximation of the size of individual floodsheds, sewersheds and watersheds, note that the Federal Triangle Area sewershed is approximately 5.2 square miles (3,300 acres), and the Watts Branch watershed (only a portion of which is in the District) is approximately 4 square miles (2,600 acres). The FP shall also include a summary of key statistics on each floodshed. Key statistics shall include:

- A: Area
- B: Population
- C: Structures and by type (i.e. residential, office, critical facility)
- D: Estimates of damage (in dollars) resulting from the scenarios identified in C.5.9.3
- E: Volume of water generated by the scenarios identified in C.5.9.3

F: 5 socioeconomic indicators as selected DOEE (i.e. household income, race, etc.).

C.5.13.2 The FP shall prioritize floodsheds for infrastructure improvements by ranking them according to multiple elements which could include residents, business, and structures at risk, ease of implementation, areas with ongoing development that could reduce implementation costs, and areas where other citywide and DC Water initiatives could be combined with flood risk reduction. DOEE shall provide guidance on what elements to include.

C.5.13.3 The FP shall include an assessment of acceptable flood water levels in the District with DOEE input. As an example, the assessment could conclude that standing water of greater than 8 inches on emergency routes is unacceptable because emergency vehicles are unable to drive through. The assessment shall provide reasoning as to why that water level was chosen.

C.5.13.4 The FP shall include a business case analysis that compares the cost of implementing multiple alternatives (that would be constructed to prevent flood water levels from going above the acceptable standard set in C.5.13.3) to the cost of damage from flooding. The alternatives shall include at least a traditional sewer solution alternative in which upgrading and maintenance to the sewer systems proceeds according to the existing schedule, and alternatives that include blue-green infrastructure.

C.5.13.5 The Contractor shall present a draft FP at a stakeholder meeting organized by DOEE. The Contractor shall revise the proposal based on feedback send a revised FP for DOEE's review and approval.

C.5.14 Floodshed Management Plans

The Contractor shall deliver Floodshed Management Plans (FMP) to the CA via electronic copy. The Contractor shall develop a FMP for each floodshed identified in C.5.13.1, starting with the floodsheds that have the highest priority as defined in C.5.13.2. Development of each FMP will require running the IFM to map a scenario of flood risk, proposing and designing infrastructure solutions to reduce flood risk, and then re-running of the IFM to determine if proposed infrastructure solutions reduce the flood risk. The FMP shall identify typologies of infrastructure and where in the District they should be constructed. Design drawings at the site scale, or resident coordination/engagement are not expected in the FMP. The FMP is a high-level document based on desktop analysis of how streets parks and other surface and subsurface spaces can be used to retain and convey water. For pricing purposes, the Contractor shall assume that they will prepare 12 FMPs that will cover a total area of 10,000 acres (e.g. the Contractor may prepare 12 FMPs that are each 833.33 acres). The actual number of plans may be smaller or larger and will be determined at the time task orders are issued. Any costs for surveying stormwater infrastructure shall be included in task C.5.6.

C.5.14.1 Each FMP shall include:

- A. A map of the floodshed that depicts the concept locations of individual projects (blue-green, gray, and multi-use infrastructure projects) that are designed to flood

and store water during heavy rains, and other blue-green, gray, and multi-use infrastructure designed to convey stormwater to flood storage locations. Projects depicted on the map shall also have a brief description of their function (i.e. levee wall, floodable park) and any co-benefits. The Contractor shall consult with DOEE on what types of public property might be available for these new projects. These projects shall be tested in the IFM and the IFM shall confirm that their implementation will reduce flood risk to the level specified by DOEE in C.5.13.3.

- B. A 10-30-year construction phasing strategy: Strategy will follow a logical phasing, prioritizing projects through an assessment of protection levels, cost benefit (including preliminary cost estimates), and other DOEE priorities.
- C. Rough cost estimates for completing the work, broken down by each implementable project within the FMP. The cost estimates shall also identify which portions of the work have a direct impact on flood risk reduction (i.e. grading of open space to create a flood storage area) vs. other portions of the work (i.e. new park benches or a walking path in the redesigned open space).
- D. Volume Calculations that describe the amount of water that must be stored in the floodshed, sub-sewersheds, and individual projects in order to reduce flood risk to the level specified by DOEE in C.5.13.3.
- E. Illustrations that depict perspectives, sections, or plans of key individual projects.

C.5.14.2 Prior to delivering the first FMP, the Contractor shall provide DOEE with a draft FMP. The draft shall include information described in C.5.14.1 (A) and (D) and shall be used as a proof of concept that the IFM is capable performing the necessary H&H modeling in enough detail to create FMPs.

C.5.15 Rainfall Sensitivity Analysis

The Contractor shall develop a Rainfall Sensitivity Analysis (RSA) that will help DOEE determine the amount(s) of rainfall at which flooding becomes problematic in the city. This information will be used to consider changes in DOEE's stormwater retention and detention requirements, as well as the city's design-storms that are used to build stormwater infrastructure. For example, the contractor could run the IFM multiple times to test rainfall of .5", 1" 1.5", 2" etc. over a 1-hour period, and then test another set of rainfall amounts at a 6-hour period. The goal is that after looking at maps created as a result of the IFM runs and comparing them with damage estimators like HAZUS or overlays of critical infrastructure and facilities, there might emerge a rainfall amount that is a tipping point, where damages jump from the previous level. DOEE could then use this tipping point as a basis for modifying its retention requirements.

C.5.15.1 The RSA shall include:

- A. a description of the method used to select rainfall amounts and scenarios;
- B. The map outputs of the selected rainfall amount and scenarios delivered in accordance with C.5.7.5 and in the form of 1 PDF and PowerPoint slide per map;
- C. A recommendation on the level of rainfall to use as DOEE's stormwater retention and detention requirements.

C.5.15.2 The Contractor shall present a draft RSA at a stakeholder meeting organized by DOEE. The Contractor shall revise the proposal based on feedback send a revised RSA for DOEE's review and approval.

SECTION D: PACKAGING AND MARKING

D.1 RESERVED

SECTION E: INSPECTION AND ACCEPTANCE

- E.1** The inspection and acceptance requirements for this contract shall be governed by clause number clause number six (6), Inspection of Services of the Government of the District of Columbia's Standard Contract Provisions for use with Supplies and Services Contracts, dated July 2010. (Attachment J.1)

SECTION F: PERIOD OF PERFORMANCE AND DELIVERABLES

F.1 TERM OF CONTRACT

The term of the contract shall be for a period of 24 months from date of award specified on the cover page of this contract.

F.2 OPTION TO EXTEND THE TERM OF THE CONTRACT

F.2.1 The District may extend the term of this contract for a period of three (3) 12-month option years, or successive fractions thereof, by written notice to the Contractor before the expiration of the contract; provided that the District will give the Contractor preliminary written notice of its intent to extend at least thirty (30) days before the contract expires. The preliminary notice does not commit the District to an extension. The exercise of this option is subject to the availability of funds at the time of the exercise of this option. The Contractor may waive the thirty (30) day preliminary notice requirement by providing a written waiver to the Contracting Officer prior to expiration of the contract.

F.2.2 If the District exercises this option, the extended contract shall be considered to include this option provision.

F.2.3 The price for the option period shall be as specified in the Section B of the contract.

F.2.4 The total duration of this contract, including the exercise of any options under this clause, shall not exceed five (5) years.

F.3 DELIVERABLES

The Contractor shall perform the activities required to successfully complete the District's requirements and submit each deliverable to the Contract Administrator (CA) identified in section G.9 in accordance with the following:

F.3.1 BASE PERIOD DELIVERABLES

Item No.	Item Description	Quantity	Method of Delivery	Due Date
1	Monthly Progress Report (See Section C.5.2.3)	1	Electronic file	Due the first week of every month beginning 30 days after contract award.
2	Initial Detailed Work Plan (See Section C.5.3.1)	1	Electronic File and 5 printed copies	Within five days of the kickoff meeting.
3	Scenario Recommendations Document (See Section C.5.9)	1	Electronic File and 5 printed copies	Within two months of the contract award.
4	Systems Architecture Document (See Section C.5.5)	1	Electronic File and 5 printed copies	Within four months of the contract award.

5	Draft Comprehensive Detailed Work Plan (See Section C.5.3.2.1)	1	Electronic File and 5 printed copies	Within four months of the contract award.
6	Revised Comprehensive Detailed Work Plan (See Section C.5.3.2.2)	1	Electronic File and 5 printed copies	Within nine months of the contract award.
7	Model Advisory Group Meeting (See Section C.5.4.)	4	In person or webinar meeting	Within twelve months of the contract award.
8	All materials, systems, and software required for hosting and running the IFM (See Section C.5.8.2)	1	Hardware and software delivered and installed.	Within ten months of the contract award.
9	Evidence of Progress on the IFM's capability of producing maps described in C.5.7.1 "Outcome 1 – Creation of Scenario Maps" (See Section C.5.7.7)	1	As described in the IDWP	Within twelve months of the contract award.
10	Install and establish connections from hardware and software applications required for the IFM to the District government network (See Section C.5.8.3)	1	In person or webinar demonstration	Within eighteen months of the contract award.
11	An IFM capable of producing maps described in C.5.7.1 "Outcome 1 – Creation of Scenario Maps"	1	In person or webinar demonstration as described in C.5.7.8	Within twenty-two months of the contract award.
13	Creation of 15 Scenario Maps (See Section C.5.10)	1	As specified in C.5.10.4	Within twenty-four months of the contract award.
14	Evidence of Progress on the IFM's ability to meet requirements described in C.5.7.2 "Outcome 2 – Ability to test the effectiveness of proposed infrastructure" (See Section C.5.7.7)	1	As described in the CDWP	Within twenty-four months of the contract award.

F.3.2 OPTION YEAR ONE DELIVERABLES

Item No.	Item Description	Quantity	Method of Delivery	Due Date
1	Monthly Progress Report (See Section C.5.2.3)	1	Electronic file	The first week of the month, beginning 30 days after the exercise of the option period.
2	Model Advisory Group Meeting (See Section C.5.4.2)	2	In person or webinar meeting	Within six months of the exercise of the option period.
3	Framework Plan for Flood Risk Management (See Section C.5.13)	1	Electronic File and 5 printed copies	Within six months of the exercise of the option period.
4	An IFM capable of producing maps described in C.5.7.2 "Outcome 2 – Ability to test the effectiveness of proposed infrastructure"	1	In person or webinar demonstration as described in C.5.7.10	Within 8 months of the exercise of the option period.
5	Draft Floodshed Management Plan (See Section C.5.14.2)	1	Electronic File and 5 printed copies per plan	Within 10 months of the exercise of the option period.

6	Training Sessions (See Section C.5.11.1)	10	In- person or webinar meeting	Within twelve months of the exercise of the option period.
7	Training agendas, materials, and PowerPoints (See Section C.5.11.2)	10	Electronic File and printed copies for each student	Within twelve months of the exercise of the option period.
8	Initial Operation Manual (See Section C.5.12.1)	1	Electronic File and 5 printed copies	Within twelve months of the exercise of the option period.

F.3.3 OPTION YEAR TWO DELIVERABLES

Item No.	Item Description	Quantity	Method of Delivery	Due Date
1	Monthly Progress Report (See Section C.5.2.3)	1	Electronic file	The first week of the month, Every month beginning 30 days after the exercise of the option period.
2	Floodshed Management Plans (See Section C.5.14)	2	Electronic File and 5 printed copies per plan	Within 10 months of the exercise of the option period.

F.3.4 OPTION YEAR THREE DELIVERABLES

Item No.	Item Description	Quantity	Method of Delivery	Due Date
1	Monthly Progress Report (See Section C.5.2.3)	1	Electronic file	Every month beginning 30 days after contract award.
2	Rainfall Sensitivity Analysis (See Section C.5.15)	1	Electronic File and 5 printed copies	Within 3 months of the option year renewal.
3	Flood shed Management Plans (See Section C.5.14)	2	Electronic File and 5 printed copies per plan	Within 8 months of the contract award.
4	Data and Data Management System (See Section C.5.6)	1	All data layers necessary for the IFM via electronic file and delivery of data management system including network connections to online datasets	Within 9 months of the option year renewal.

5	Final Operation Manual (See Section C.5.12.2)	1	Electronic File and 5 printed copies	Within 9 months of the option year renewal.
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F.3.2 The Contractor shall submit to the District, as a deliverable, the report described in section H.5.5 that is required by the 51% District Residents New Hires Requirements and First Source Employment Agreement. If the Contractor does not submit the report as part of the deliverables, final payment to the Contractor shall not be paid pursuant to section G.3.2.

SECTION G: CONTRACT ADMINISTRATION

G.1 INVOICE PAYMENT

- G.1.1** The District will make payments to the Contractor, upon the submission of proper invoices, at the prices stipulated in this contract, for supplies delivered and accepted or services performed and accepted, less any discounts, allowances or adjustments provided for in this contract.
- G.1.2** The District will pay the Contractor on or before the 30th day after receiving a proper invoice from the Contractor.

G.2 INVOICE SUBMITTAL

- G.2.1** The Contractor shall create and submit payment requests in an electronic format through the DC Vendor Portal, <https://vendorportal.dc.gov>
- G.2.2** The Contractor shall submit proper invoices on a monthly basis or as otherwise specified in Section G.4.
- G.2.3** To constitute a proper invoice, the Contractor shall enter all required information into the Portal after selecting the applicable purchase order number which is listed on the Contractor's profile.

G.3 FIRST SOURCE AGREEMENT REQUEST FOR FINAL PAYMENT

- G.3.1** For contracts subject to the 51% District Residents New Hires Requirements and First Source Employment Agreement requirements, final request for payment must be accompanied by the report or a waiver of compliance discussed in section H.5.5.
- G.3.2** The District shall not make final payment to the Contractor until the agency CFO has received the CO's final determination or approval of waiver of the Contractor's compliance with 51% District Residents New Hires Requirements and First Source Employment Agreement requirements.

G.4 PAYMENT

Invoices shall be submitted on a monthly basis and reflect the percent of work performed toward achieving project deliverables (Section F.3).

G.4.1 PARTIAL PAYMENTS

Unless otherwise specified in this contract, payment will be made on partial deliveries of goods and services accepted by the District if:

- a) The amount due on the deliveries warrants it; or
- b) The Contractor requests it and the amount due on the deliveries is in accordance with the following:

- Payment will be made monthly by invoice utilizing the prices stated in the Schedule in Section B for actual hours worked under each CLIN applicable; and
- Cost reimbursement – that are approved in writing by DOEE prior to purchase.

c) Presentation of a properly executed invoice.

G.5 ASSIGNMENT OF CONTRACT PAYMENTS

G.5.1 In accordance with 27 DCMR 3250, the Contractor may assign to a bank, trust company, or other financing institution funds due or to become due as a result of the performance of this contract.

G.5.2 Any assignment shall cover all unpaid amounts payable under this contract and shall not be made to more than one party.

G.5.3 Notwithstanding an assignment of contract payments, the Contractor, not the assignee, is required to prepare invoices. Where such an assignment has been made, the original copy of the invoice must refer to the assignment and must show that payment of the invoice is to be made directly to the assignee as follows:

“Pursuant to the instrument of assignment dated _____, make payment of this invoice to (name and address of assignee).”

G.6 THE QUICK PAYMENT ACT

G.6.1 Interest Penalties to Contractors

G.6.1.1 The District will pay interest penalties on amounts due to the Contractor under the Quick Payment Act, D.C. Official Code § 2-221.01 *et seq.*, as amended, for the period beginning on the day after the required payment date and ending on the date on which payment of the amount is made. Interest shall be calculated at the rate of at least 1% per month. No interest penalty shall be paid if payment for the completed delivery of the item of property or service is made on or before the required payment date. The required payment date shall be:

G.6.1.1.1 The date on which payment is due under the terms of this contract;

G.6.1.1.2 Not later than 7 calendar days, excluding legal holidays, after the date of delivery of meat or meat food products;

G.6.1.1.3 Not later than 10 calendar days, excluding legal holidays, after the date of delivery of a perishable agricultural commodity; or

G.6.1.1.4 30 calendar days, excluding legal holidays, after receipt of a proper invoice for the amount of the payment due.

G.6.1.2 No interest penalty shall be due to the Contractor if payment for the completed delivery of goods or services is made on or before:

G.6.1.2.1 3rd day after the required payment date for meat or a meat product;

G.6.1.2.2 5th day after the required payment date for an agricultural commodity; or

G.6.1.2.3 15th day after any other required payment date.

G.6.1.3 Any amount of an interest penalty which remains unpaid at the end of any 30-day period shall be added to the principal amount of the debt and thereafter interest penalties shall accrue on the added amount.

(a) **G.6.2** Payments to Subcontractors

G.6.2.1 The Contractor shall take one of the following actions within seven (7) days of receipt of any amount paid to the Contractor by the District for work performed by any subcontractor under the contract:

G.6.2.1.1 Pay the subcontractor(s) for the proportionate share of the total payment received from the District that is attributable to the subcontractor(s) for work performed under the contract; or

G.6.2.1.2 Notify the CO and the subcontractor(s), in writing, of the Contractor's intention to withhold all or part of the subcontractor's payment and state the reason for the nonpayment.

G.6.2.2 The Contractor shall pay subcontractors or suppliers interest penalties on amounts due to the subcontractor or supplier beginning on the day after the payment is due and ending on the date on which the payment is made. Interest shall be calculated at the rate of at least 1% per month. No interest penalty shall be paid on the following if payment for the completed delivery of the item of property or service is made on or before the:

G.6.2.2.1 3rd day after the required payment date for meat or a meat product;

G.6.2.2.2 5th day after the required payment date for an agricultural commodity; or

G.6.2.2.3 15th day after any other required payment date.

G.6.2.3 Any amount of an interest penalty which remains unpaid by the Contractor at the end of any 30-day period shall be added to the principal amount of the debt to the subcontractor and thereafter interest penalties shall accrue on the added amount.

G.6.2.4 A dispute between the Contractor and subcontractor relating to the amounts or entitlement of a subcontractor to a payment or a late payment interest penalty under the Quick Payment Act does not constitute a dispute to which the District is a party. The District may not be interpleaded in any judicial or administrative proceeding involving such a dispute.

G.6.3 Subcontract requirements

G.6.3.1 The Contractor shall include in each subcontract under this contract a provision requiring the subcontractor to include in its contract with any lower-tier subcontractor or supplier the payment and interest clauses required under paragraphs (1) and (2) of D.C. Official Code § 2-221.02(d).

G.6.3.2 The Contractor shall include in each subcontract under this contract a provision that obligates the Contractor, at the election of the subcontractor, to participate in negotiation or mediation as an alternative to administrative or judicial resolution of a dispute between them.

G.7 CONTRACTING OFFICER (CO)

Contracts will be entered into and signed on behalf of the District only by contracting officers. The contact information for the Contracting Officer is:

Tracy Crump, Contracting Officer
Office of Contracting and Procurement
1200 First Street, N.E., 5th Floor
Washington, DC 20002
Phone:202-724-4051
Email: tracy.crump@dc.gov

G.8 AUTHORIZED CHANGES BY THE CONTRACTING OFFICER

G.8.1 The CO is the only person authorized to approve changes in any of the requirements of this contract.

G.8.2 The Contractor shall not comply with any order, directive or request that changes or modifies the requirements of this contract, unless issued in writing and signed by the CO.

G.8.3 In the event the Contractor effects any change at the instruction or request of any person other than the CO, the change will be considered to have been made without authority and no adjustment will be made in the contract price to cover any cost increase incurred as a result thereof.

G.8.4 During the solicitation and evaluation phases, general questions should be directed to the Contract Specialist (CS). The contact information for the CS is:

Victory Rich, Contract Specialist
Office of Contracting and Procurement
1200 First Street, N.E., 5th Floor
Washington, DC 20002
Phone:202-805-3349
Email: victory.rich2@dc.gov

G.9 CONTRACT ADMINSTRATOR (CA)

G.9.1 The CA is responsible for general administration of the contract and advising the CO as to the Contractor's compliance or noncompliance with the contract. The CA has the responsibility of ensuring the work conforms to the requirements of the contract and such other responsibilities and authorities as may be specified in the contract. These include:

G.9.1.1 Keeping the CO fully informed of any technical or contractual difficulties encountered during the performance period and advising the CO of any potential problem areas under the contract;

G.9.1.2 Coordinating site entry for Contractor personnel, if applicable;

G.9.1.3 Reviewing invoices for completed work and recommending approval by the CO if the Contractor's costs are consistent with the negotiated amounts and progress is satisfactory and commensurate with the rate of expenditure;

G.9.1.4 Reviewing and approving invoices for deliverables to ensure receipt of goods and services. This includes the timely processing of invoices and vouchers in accordance with the District's payment provisions; and

G.9.1.5 Maintaining a file that includes all contract correspondence, modifications, records of inspections (site, data, equipment) and invoice or vouchers.

G.9.2 The address and telephone number of the CA will be determined at the time of contract award.

G.9.3 The CA shall NOT have the authority to:

1. Award, agree to, or sign any contract, delivery order or task order. Only the CO shall make contractual agreements, commitments or modifications;
2. Grant deviations from or waive any of the terms and conditions of the contract;
3. Increase the dollar limit of the contract or authorize work beyond the dollar limit of the contract,
4. Authorize the expenditure of funds by the Contractor;
5. Change the period of performance; or
6. Authorize the use of District property, except as specified under the contract.

G.9.4 The Contractor will be fully responsible for any changes not authorized in advance, in writing, by the CO; may be denied compensation or other relief for any additional work performed that is not so authorized; and may also be required, at no additional cost to the District, to take all corrective action necessitated by reason of the unauthorized changes.

G.10 ORDERING CLAUSE

G.10.1 Any supplies and services to be furnished under this contract must be ordered by issuance of delivery orders or task orders by the Contracting Officer. Such orders may be issued during the term of this contract.

G.10.2 All delivery orders or task orders are subject to the terms and conditions of this contract. In the event of a conflict between a delivery order or task order and this contract, the contract shall control. If mailed, a delivery order or task order is considered "issued" when the District deposits the order in the mail. Orders may be issued by facsimile or by electronic commerce methods.

SECTION H: SPECIAL CONTRACT REQUIREMENTS

H.1 HIRING OF DISTRICT RESIDENTS AS APPRENTICES AND TRAINEES

H.1.1 For all new employment resulting from this contract or subcontracts hereto, as defined in Mayor's Order 83-265 and implementing instructions, the Contractor shall use its best efforts to comply with the following basic goal and objectives for utilization of bona fide residents of the District of Columbia in each project's labor force:

H.1.1.1 At least fifty-one (51) percent of apprentices and trainees employed shall be residents of the District of Columbia registered in programs approved by the District of Columbia Apprenticeship Council.

H.1.2 The Contractor shall negotiate an Employment Agreement with the Department of Employment Services (DOES) for jobs created as a result of this contract. The DOES shall be the Contractor's first source of referral for qualified apprentices and trainees in the implementation of employment goals contained in this clause.

H.2 DEPARTMENT OF LABOR WAGE DETERMINATIONS

The Contractor shall be bound by the **Wage Determination No. 2015-4281, dated April 23, 2020, Revision 16**, issued by the U.S. Department of Labor in accordance with the Service Contract Act, 41 U.S.C. § 351 *et seq.*, and incorporated herein as Section J.2. The Contractor shall be bound by the wage rates for the term of the contract subject to revision as stated herein and in accordance with **clause 24 of the standard contract provisions (SCP)**. If an option is exercised, the Contractor shall be bound by the applicable wage rates at the time of the exercise of the option. If the option is exercised and the CO obtains a revised wage determination, the revised wage determination is applicable for the option periods and the Contractor may be entitled to an equitable adjustment.

H.3 PREGNANT WORKERS FAIRNESS

H.3.1 The Contractor shall comply with the Protecting Pregnant Workers Fairness Act of 2016, D.C. Official Code § 32-1231.01 *et seq.* (PPWF Act).

H.3.2 The Contractor shall not:

- (a) Refuse to make reasonable accommodations to the known limitations related to pregnancy, childbirth, related medical conditions, or breastfeeding for an employee, unless the Contractor can demonstrate that the accommodation would impose an undue hardship;
- (b) Take an adverse action against an employee who requests or uses a reasonable accommodation in regard to the employee's conditions or privileges of employment, including failing to reinstate the employee when the need for reasonable accommodations ceases to the employee's original job or to an equivalent position with equivalent:

- (1) Pay;
 - (2) Accumulated seniority and retirement;
 - (3) Benefits; and
 - (4) Other applicable service credits;
- (c) Deny employment opportunities to an employee, or a job applicant, if the denial is based on the need of the employer to make reasonable accommodations to the known limitations related to pregnancy, childbirth, related medical conditions, or breastfeeding;
 - (d) Require an employee affected by pregnancy, childbirth, related medical conditions, or breastfeeding to accept an accommodation that the employee chooses not to accept if the employee does not have a known limitation related to pregnancy, childbirth, related medical conditions, or breastfeeding or the accommodation is not necessary for the employee to perform her duties;
 - (e) Require an employee to take leave if a reasonable accommodation can be provided; or
 - (f) Take adverse action against an employee who has been absent from work as a result of a pregnancy-related condition, including a pre-birth complication.

H.3.3 The Contractor shall post and maintain in a conspicuous place a notice of rights in both English and Spanish and provide written notice of an employee's right to a needed reasonable accommodation related to pregnancy, childbirth, related medical conditions, or breastfeeding pursuant to the PPWF Act to:

- (a) New employees at the commencement of employment;
- (b) Existing employees; and
- (c) An employee who notifies the employer of her pregnancy, or other condition covered by the PPWF Act, within 10 days of the notification.

H.3.4 The Contractor shall provide an accurate written translation of the notice of rights to any non-English or non-Spanish speaking employee.

H.3.5 Violations of the PPWF Act shall be subject to civil penalties as described in the Act.

H.4 UNEMPLOYED ANTI-DISCRIMINATION

H.4.1 The Contractor shall comply with the Unemployed Anti-Discrimination Act of 2012, D.C. Official Code § 32-1361 *et seq.*

H.4.2 The Contractor shall not:

- (a) Fail or refuse to consider for employment, or fail or refuse to hire, an individual as an employee because of the individual's status as unemployed; or
- (b) Publish, in print, on the Internet, or in any other medium, an advertisement or announcement for any vacancy in a job for employment that includes:
 - (1) Any provision stating or indicating that an individual's status as unemployed disqualifies the individual for the job; or
 - (2) Any provision stating or indicating that an employment agency will not consider or hire an individual for employment based on that individual's status as unemployed.

H.4.3 Violations of the Unemployed Anti-Discrimination Act shall be subject to civil penalties as described in the Act.

H.5 51% DISTRICT RESIDENTS NEW HIRES REQUIREMENTS AND FIRST SOURCE EMPLOYMENT AGREEMENT

Delete Article 35, 51% District Residents New Hires Requirements and First Source Employment Agreement, of the Standard Contract Provisions dated July 2010 for use with District of Columbia Government Supplies and Services Contracts and substitute the following Section **H.5 51% DISTRICT RESIDENTS NEW HIRES REQUIREMENTS AND FIRST SOURCE EMPLOYMENT AGREEMENT** in its place:

H.5 51% DISTRICT RESIDENTS NEW HIRES REQUIREMENTS AND FIRST SOURCE EMPLOYMENT AGREEMENT

H.5.1 For contracts for services in the amount of \$300,000 or more, the Contractor shall comply with the First Source Employment Agreement Act of 1984, as amended, D.C. Official Code § 2-219.01 et seq. (First Source Act).

H.5.2 The Contractor shall enter and maintain during the term of the contract, a First Source Employment Agreement (Employment Agreement) with the District of Columbia Department of Employment Service's (DOES), in which the Contractor shall agree that:

- (a) The first source for finding employees to fill all jobs created in order to perform the contract shall be the First Source Register; and
- (b) The first source for finding employees to fill any vacancy occurring in all jobs covered by the Employment Agreement shall be the First Source Register.

H.5.3 The Contractor shall not begin performance of the contract until its Employment Agreement has been accepted by DOES. Once approved, the Employment Agreement shall not be amended except with the approval of DOES.

H.5.4 The Contractor agrees that at least 51% of the new employees hired to perform the contract shall be District residents.

- (a) **H.5.5** The Contractor's hiring and reporting requirements under the First Source Act and any rules promulgated thereunder shall continue for the term of the contract.

H.5.6 The CO may impose penalties, including monetary fines of 5% of the total amount of the direct and indirect labor costs of the contract, for a willful breach of the Employment Agreement, failure to submit the required hiring compliance reports, or deliberate submission of falsified data.

H.5.7 If the Contractor does not receive a good faith waiver, the CO may also impose an additional penalty equal to 1/8 of 1% of the total amount of the direct and indirect labor costs of the contract for each percentage by which the Contractor fails to meet its hiring requirements.

H.5.8 Any contractor which violates, more than once within a 10-year timeframe, the hiring or reporting requirements of the First Source Act shall be referred for debarment for not more than five (5) years.

H.5.9 The contractor may appeal any decision of the CO pursuant to this clause to the D.C. Contract Appeals Board as provided in **clause 14 of the SCP, Disputes**.

H.5.10 The provisions of the First Source Act do not apply to nonprofit organizations which employ 50 employees or less.

H.6 KEY PERSONNEL

The key personnel specified in Sections H.6.1 and L.20 are considered to be essential to the work being performed hereunder. Prior to diverting any of the specified key personnel for any reason, the Contractor shall notify the CO at least thirty (30) calendar days in advance and shall submit justification, including proposed substitutions, in enough detail to permit evaluation of the impact upon the contract. The Contractor shall obtain written approval of the CO for any proposed substitution of key personnel.

H.6.1 The key personnel and their duties are described below.

- a. **Project Manager:** Duties of this labor category include overall contract and project management. This includes contract administration, ensuring adequate personnel and resources are assigned to the Project, and delivery of the project. The Project Manager will be the key liaison for the DOEE Contract Administrator and will provide guidance and make recommendations to DOEE at key decision points. This individual will be responsible for coordinating work amongst multiple contractors (if applicable).
- b. **Senior H&H Modeler:** This position will be responsible for overseeing all aspects of the H&H modeling of this project. This includes making recommendations on what models and software to use, designing how various H&H models will work together to create the IFM, directing the collection of necessary data (such as hydraulic pipes or sidewalk curb heights via surveys) to be used in the IFM, creating the IFM and refinements to it, and training District personnel on how to use and interpret results of the IFM.
- c. **Senior Subject Matter Expert on Climate Adaptation:** This position will be responsible for ensuring that the IFM and mapping outputs accurately incorporate climate projections (such as rainfall and sea level rise). This individual will provide guidance to DOEE on selecting scenarios and maps that will be most

useful to understanding the District’s current and future flood risk. This individual will also provide guidance to DOEE on flood risk mitigation solutions to implement and have knowledge of relevant case studies around the world.

- d. **Senior Urban Designer:** This individual will be responsible for overseeing the design and creation of flood risk reduction masterplans and flood risk reduction projects in affected neighborhoods and sewersheds. This individual will provide an urban design, landscape architecture, and planning perspective to the project.
- e. **Senior IT Systems Architect:** This position will be responsible for overseeing all aspects of the IFM’s connection to the District Government and DOEE networks, procurement of physical servers or cloud servers, and accessibility and security of data used as input for the IFM. Whereas the H&H Modeler will be responsible for creating a model that accurately maps and predicts interior flooding, the IT Systems Architect is responsible for ensuring that the IFM designed by the H&H Modeler can be integrated together, stored on the appropriate server systems, maintain access to data needed for the IFM, be accessed by authorized users through District Government or other networks, and pass all network security requirements.

H.7 RESERVED

H.8 RESERVED

H.9 SUBCONTRACTING REQUIREMENTS

H.9.1 Mandatory Subcontracting Requirements

H.9.1.1 For all contracts in excess of \$250,000, at least 10% of the dollar volume of the contract shall be subcontracted to qualified small business enterprises (SBEs).

H.9.1.2 If there are insufficient SBEs to completely fulfill the requirement of paragraph H.9.1.1, then the subcontracting may be satisfied by subcontracting 10% of the dollar volume to any qualified certified business enterprises (CBEs); provided, however, that all reasonable efforts shall be made to ensure that SBEs are significant participants in the overall subcontracting work.

- (a) A prime contractor that is certified by DSLBD as a small, local or disadvantaged business enterprise shall not be required to comply with the provisions of sections H.9.1.1 and H.9.1.2.
- (b) Except as provided in H.9.2.1 and H.9.3, a prime contractor that is a CBE and has been granted a proposal preference pursuant to D.C. Official Code § 2-218.43, or is selected through a set-aside program, shall perform at least 10% of the contracting effort with its own organization and resources and, if it subcontracts, 10% of the subcontracting effort shall be with CBEs. A CBE prime contractor that performs less than 10% of the contracting effort shall be subject to enforcement actions under D.C. Official Code § 2-218.63.
- (c) If the prime contractor is a certified joint venture and has been granted a bid preference pursuant to D.C. Official Code § 2-218.43, or is selected through a set-aside program, the

CBE member of the certified joint venture shall perform at least 50% of the contracting effort with its own organization and resources and, if it subcontracts, 10% of the subcontracting effort shall be with CBEs. If the CBE member of the certified joint venture prime contractor performs less than 50% of the contracting effort, the certified joint venture shall be subject to enforcement actions under D.C. Official Code § 2-218.63.

- (d) Each CBE utilized to meet these subcontracting requirements shall perform at least 10% of its contracting effort with its own organization and resources.
- (e) A prime contractor that is a CBE and has been granted a proposal preference pursuant to D.C. Official Code § 2-218.43, or is selected through a set-aside program, shall perform at least 50% of the on-site work with its own organization and resources if the contract is \$1 million or less.

H.9.2 Subcontracting Requirements

H.9.2.1 The Director of the Department of Small and Local Business Development (DSLBD) has approved a waiver of the mandatory subcontracting requirements for this contract.

- (a) A prime contractor that is a CBE and has been granted a bid preference pursuant to D.C. Official Code § 2-218.43, or is selected through a set-aside program, shall perform at least 10% of the contracting effort with its own organization and resources and, if it subcontracts, 10% of the subcontracting effort shall be with CBEs. A CBE prime contractor that performs less than 10% of the contracting effort shall be subject to enforcement actions under D.C. Official Code § 2-218.63.
- (b) A prime contractor that is a certified joint venture and has been granted a bid preference pursuant to D.C. Official Code § 2-218.43, or is selected through a set-aside program, shall perform at least 50% of the contracting effort with its own organization and resources and, if it subcontracts, 10% of the subcontracting effort shall be with CBEs. A certified joint venture prime contractor that performs less than 50% of the contracting effort shall be subject to enforcement actions under D.C. Official Code § 2-218.63.
- (c) Each CBE utilized to meet these subcontracting requirements shall perform at least 10% of its contracting effort with its own organization and resources.
- (d) A prime contractor that is a CBE and has been granted a bid preference pursuant to D.C. Official Code § 2-218.43, or is selected through a set-aside program, shall perform at least 50% of the on-site work with its own organization and resources if the contract is \$1 million or less.

H.9.3 Subcontracting Plan

If the prime contractor is required by law to subcontract under this contract, it must subcontract at least 10% of the dollar volume of this contract in accordance with the provisions of section H.9.1. The plan shall be submitted as part of the proposal and may only be amended after award with the prior written approval of the CO and Director of DSLBD. Any reduction in the dollar volume of the subcontracted portion resulting from an amendment of the plan after award shall inure to the benefit of the District.

Each subcontracting plan shall include the following:

- (1) The name and address of each subcontractor;

- (2) A current certification number of the small or certified business enterprise;
- (3) The scope of work to be performed by each subcontractor; and
- (4) The price that the prime contractor will pay each subcontractor.

H.9.3.1 Copies of Subcontracts

Within twenty-one (21) days of the date of award, the Contractor shall provide fully executed copies of all subcontracts identified in the subcontracting plan to the CO, CA, District of Columbia Auditor and the Director of DSLBD.

H.9.4 Subcontracting Plan Compliance Reporting

H.9.4.1 If the Contractor has a subcontracting plan required by law for this contract, the Contractor shall submit a quarterly report to the CO, CA, District of Columbia Auditor and the Director of DSLBD. The quarterly report shall include the following information for each subcontract identified in the subcontracting plan:

- (A) The price that the prime contractor will pay each subcontractor under the subcontract;
- (B) A description of the goods procured, or the services subcontracted for;
- (C) The amount paid by the prime contractor under the subcontract; and
- (D) A copy of the fully executed subcontract, if it was not provided with an earlier quarterly report.

H.9.4.2 If the fully executed subcontract is not provided with the quarterly report, the prime contractor will not receive credit toward its subcontracting requirements for that subcontract.

H.9.5 Annual Meetings

Upon at least 30-days written notice provided by DSLBD, the Contractor shall meet annually with the CO, CA, District of Columbia Auditor and the Director of DSLBD to provide an update on its subcontracting plan.

H.9.6 Notices

The Contractor shall provide written notice to the DSLBD and the District of Columbia Auditor upon commencement of the contract and when the contract is completed.

H.9.7 Enforcement and Penalties for Breach of Subcontracting Plan

H.9.7.1 A contractor shall be deemed to have breached a subcontracting plan required by law, if the contractor (i) fails to submit subcontracting plan monitoring or compliance reports or other required subcontracting information in a reasonably timely manner; (ii) submits a monitoring or compliance report or other required subcontracting information containing a materially false statement; or (iii) fails to meet its subcontracting requirements.

H.9.7.2 A contractor that is found to have breached its subcontracting plan for utilization of CBEs in the performance of a contract shall be subject to the imposition of penalties, including monetary fines in accordance with D.C. Official Code § 2-218.63.

H.9.7.3 If the CO determines the Contractor's failure to be a material breach of the contract, the CO shall have cause to terminate the contract under the default provisions in **clause 8 of the SCP, Default.**

H.10 FAIR CRIMINAL RECORD SCREENING

H.10.1 The Contractor shall comply with the provisions of the Fair Criminal Record Screening Amendment Act of 2014, effective December 17, 2014 (D.C. Law 20-152) (the "Act" as used in this section). This section applies to any employment, including employment on a temporary or contractual basis, where the physical location of the employment is in whole or substantial part within the District of Columbia.

H.10.2 Prior to making a conditional offer of employment, the Contractor shall not require an applicant for employment, or a person who has requested consideration for employment by the Contractor, to reveal or disclose an arrest or criminal accusation that is not then pending or did not result in a criminal conviction.

H.10.3 After making a conditional offer of employment, the Contractor may require an applicant to disclose or reveal a criminal conviction.

H.10.4 The Contractor may only withdraw a conditional offer of employment, or take adverse action against an applicant, for a legitimate business reason as described in the Act.

H.10.5 This section and the provisions of the Act shall not apply:

- (a) Where a federal or District law or regulation requires the consideration of an applicant's criminal history for the purposes of employment;
- (b) To a position designated by the employer as part of a federal or District government program or obligation that is designed to encourage the employment of those with criminal histories;
- (c) To any facility or employer that provides programs, services, or direct care to, children, youth, or vulnerable adults; or
- (d) To employers that employ less than 11 employees.

H.10.6 A person claiming to be aggrieved by a violation of the Act may file an administrative complaint with the District of Columbia Office of Human Rights, and the Commission on Human Rights may impose monetary penalties against the Contractor.

SECTION I: CONTRACT CLAUSES

I.1 APPLICABILITY OF STANDARD CONTRACT PROVISIONS

The Standard Contract Provisions for use with District of Columbia Government Supplies and Services Contracts dated July 2010 (“SCP”) are incorporated as part of the contract. To obtain a copy of the SCP go to <http://ocp.dc.gov> , under Quick Links click on “Required Solicitation Documents”.

I.2 CONTRACTS THAT CROSS FISCAL YEARS

Continuation of this contract beyond the current fiscal year is contingent upon future fiscal appropriations.

I.3 CONFIDENTIALITY OF INFORMATION

The Contractor shall keep all information relating to any employee or customer of the District in absolute confidence and shall not use the information in connection with any other matters; nor shall it disclose any such information to any other person, firm or corporation, in accordance with the District and federal laws governing the confidentiality of records.

I.4 TIME

Time, if stated in a number of days, will include Saturdays, Sundays, and holidays, unless otherwise stated herein.

I.5 RIGHTS IN DATA

Delete Article 42, Rights in Data, of the Standard Contract Provisions dated July 2010 for use with District of Columbia Government Supplies and Services Contracts and substitute the following Article 42, Rights in Data) in its place:

A. Definitions

1. “Products” - A deliverable under any contract that may include commodities, services and/or technology furnished by or through Contractor, including existing and custom Products, such as, but not limited to: a) recorded information, regardless of form or the media on which it may be recorded; b) document research; c) experimental, developmental, or engineering work; d) licensed software; e) components of the hardware environment; f) printed materials (including but not limited to training manuals, system and user documentation, reports, drawings); g) third party software; h) modifications, customizations, custom programs, program listings, programming tools, data, modules, components; and i) any intellectual property embodied therein, whether in tangible or intangible form, including but not limited to utilities, interfaces, templates, subroutines, algorithms, formulas, source code, and object code.
2. “Existing Products” - Tangible Products and intangible licensed Products that exist prior to the commencement of work under the contract. Existing Products must be

identified on the Product prior to commencement of work or else will be presumed to be Custom Products.

3. “Custom Products” - Products, preliminary, final or otherwise, which are created or developed by Contractor, its subcontractors, partners, employees, resellers or agents for the District under the contract.
4. “District” – The District of Columbia and its agencies.

B. Title to Project Deliverables

The Contractor acknowledges that it is commissioned by the District to perform services detailed in the contract. The District shall have ownership and rights for the duration set forth in the contract to use, copy, modify, distribute, or adapt Products as follows:

1. Existing Products: Title to all Existing Licensed Product(s), whether or not embedded in, delivered or operating in conjunction with hardware or Custom Products, shall remain with Contractor or third-party proprietary owner, who retains all rights, title and interest (including patent, trademark or copyrights). Effective upon payment, the District shall be granted an irrevocable, non-exclusive, worldwide, paid-up license to use, execute, reproduce, display, perform, adapt (unless Contractor advises the District as part of Contractor’s bid that adaptation will violate existing agreements or statutes and Contractor demonstrates such to the District’s satisfaction), and distribute Existing Product to District users up to the license capacity stated in the contract with all license rights necessary to fully effect the general business purpose of the project or work plan or contract. Licenses shall be granted in the name of the District. The District agrees to reproduce the copyright notice and any other legend of ownership on any copies authorized under this paragraph.
2. Custom Products: Effective upon Product creation, Contractor hereby conveys, assigns, and transfers to the District the sole and exclusive rights, title and interest in Custom Product(s), whether preliminary, final or otherwise, including all patent, trademark and copyrights. Contractor hereby agrees to take all necessary and appropriate steps to ensure that the Custom Products are protected against unauthorized copying, reproduction and marketing by or through Contractor.

C. Transfers or Assignments of Existing or Custom Products by the District

The District may transfer or assign Existing or Custom Products and the licenses thereunder to another District agency. Nothing herein shall preclude the Contractor from otherwise using the related or underlying general knowledge, skills, ideas, concepts, techniques and experience developed under a project or work plan in the course of Contractor’s business.

D. Subcontractor Rights

Whenever any data, including computer software, are to be obtained from a subcontractor under the contract, the Contractor shall use this clause, **Rights in Data**, in the subcontract, without alteration, and no other clause shall be used to enlarge or diminish

the District's or the Contractor's rights in that subcontractor data or computer software which is required for the District.

E. Source Code Escrow

1. For all computer software furnished to the District with the rights specified in section B.2, the Contractor shall furnish to the District, a copy of the source code with such rights of the scope as specified in section B.2 of this clause. For all computer software furnished to the District with the restricted rights specified in section B.1 of this clause, the District, if the Contractor either directly or through a successor or affiliate shall cease to provide the maintenance or warranty services provided the District under the contract or any paid-up maintenance agreement, or if the Contractor should be declared insolvent by a court of competent jurisdiction, shall have the right to obtain, for its own and sole use only, a single copy of the current version of the source code supplied under the contract, and a single copy of the documentation associated therewith, upon payment to the person in control of the source code the reasonable cost of making each copy.
2. If the Contractor or Product manufacturer/developer of software furnished to the District with the rights specified in section B.1 of this clause offers the source code or source code escrow to any other commercial customers, the Contractor shall either: (1) provide the District with the source code for the Product; (2) place the source code in a third party escrow arrangement with a designated escrow agent who shall be named and identified to the District, and who shall be directed to release the deposited source code in accordance with a standard escrow arrangement acceptable to the District; or (3) will certify to the District that the Product manufacturer/ developer has named the District as a named beneficiary of an established escrow arrangement with its designated escrow agent who shall be named and identified to the District, and who shall be directed to release the deposited source code in accordance with the terms of escrow.
3. The Contractor shall update the source code, as well as any corrections or enhancements to the source code, for each new release of the Product in the same manner as provided above and certify such updating of escrow to the District in writing.

F. Indemnification and Limitation of Liability

The Contractor shall indemnify and save and hold harmless the District, its officers, agents and employees acting within the scope of their official duties against any liability, including costs and expenses, (i) for violation of proprietary rights, copyrights, or rights of privacy, arising out of the publication, translation, reproduction, delivery, performance, use or disposition of any data furnished under this contract, or (ii) based upon any data furnished under this contract, or based upon libelous or other unlawful matter contained in such data.

I.6 OTHER CONTRACTORS

The Contractor shall not commit or permit any act that will interfere with the performance of work by another District contractor or by any District employee.

I.7 SUBCONTRACTS

The Contractor hereunder shall not subcontract any of the Contractor's work or services to any subcontractor without the prior written consent of the CO. Any work or service so subcontracted shall be performed pursuant to a subcontract agreement, which the District will have the right to review and approve prior to its execution by the Contractor. Any such subcontract shall specify that the Contractor and the subcontractor shall be subject to every provision of this contract. Notwithstanding any such subcontract approved by the District, the Contractor shall remain liable to the District for all Contractor's work and services required hereunder.

I.8 INSURANCE

- A. **GENERAL REQUIREMENTS.** The Contractor at its sole expense shall procure and maintain, during the entire period of performance under this contract, the types of insurance specified below. The Contractor shall have its insurance broker or insurance company submit a Certificate of Insurance to the CO giving evidence of the required coverage prior to commencing performance under this contract. In no event shall any work be performed until the required Certificates of Insurance signed by an authorized representative of the insurer(s) have been provided to, and accepted by, the CO. All insurance shall be written with financially responsible companies authorized to do business in the District of Columbia or in the jurisdiction where the work is to be performed and have an A.M. Best Company rating of A- / VII or higher. The Contractor shall require all of its subcontractors to carry the same insurance required herein.

All required policies shall contain a waiver of subrogation provision in favor of the Government of the District of Columbia.

The Government of the District of Columbia shall be included in all policies required hereunder to be maintained by the Contractor and its subcontractors (except for workers' compensation and professional liability insurance) as an additional insureds for claims against The Government of the District of Columbia relating to this contract, with the understanding that any affirmative obligation imposed upon the insured Contractor or its subcontractors (including without limitation the liability to pay premiums) shall be the sole obligation of the Contractor or its subcontractors, and not the additional insured. The additional insured status under the Contractor's and its subcontractors' Commercial General Liability insurance policies shall be effected using the ISO Additional Insured Endorsement form CG 20 10 11 85 (or CG 20 10 07 04 **and** CG 20 37 07 04) or such other endorsement or combination of endorsements providing coverage at least as broad and approved by the CO in writing. All of the Contractor's and its subcontractors' liability policies (except for workers' compensation and professional liability insurance) shall be endorsed using ISO form CG 20 01 04 13 or its equivalent so as to indicate that such policies provide primary coverage (without any right of contribution by any other insurance, reinsurance or self-insurance, including any deductible or retention, maintained by an Additional Insured) for all claims against the additional insured arising out of the performance of this Statement of Work by the Contractor or its subcontractors,

or anyone for whom the Contractor or its subcontractors may be liable. These policies shall include a separation of insureds clause applicable to the additional insured.

If the Contractor and/or its subcontractors maintain broader coverage and/or higher limits than the minimums shown below, the District requires and shall be entitled to the broader coverage and/or the higher limits maintained by the Grantee and subcontractors.

1. Commercial General Liability Insurance (“CGL”) - The Contractor shall provide evidence satisfactory to the CO with respect to the services performed that it carries a CGL policy, written on an occurrence (not claims-made) basis, on Insurance Services Office, Inc. (“ISO”) form CG 00 01 04 13 (or another occurrence-based form with coverage at least as broad and approved by the CO in writing), covering liability for all ongoing and completed operations of the Contractor, including ongoing and completed operations under all subcontracts, and covering claims for bodily injury, including without limitation sickness, disease or death of any persons, injury to or destruction of property, including loss of use resulting therefrom, personal and advertising injury, and including coverage for liability arising out of an Insured Contract (including the tort liability of another assumed in a contract) and acts of terrorism (whether caused by a foreign or domestic source). Such coverage shall have limits of liability of not less than \$1,000,000 each occurrence, a \$2,000,000 general aggregate (including a per location or per project aggregate limit endorsement, if applicable) limit, a \$1,000,000 personal and advertising injury limit, and a \$2,000,000 products-completed operations aggregate limit.

2. Automobile Liability Insurance - The Contractor shall provide evidence satisfactory to the CO of commercial (business) automobile liability insurance written on ISO form CA 00 01 10 13 (or another form with coverage at least as broad and approved by the CO in writing) including coverage for all owned, hired, borrowed and non-owned vehicles and equipment used by the Contractor, with minimum per accident limits equal to the greater of (i) the limits set forth in the Contractor’s commercial automobile liability policy or (ii) \$1,000,000 per occurrence combined single limit for bodily injury and property damage.

3. Workers’ Compensation Insurance - The Contractor shall provide evidence satisfactory to the CO of Workers’ Compensation insurance in accordance with the statutory mandates of the District of Columbia or the jurisdiction in which the contract is performed.

Employer’s Liability Insurance - The Contractor shall provide evidence satisfactory to the CO of employer’s liability insurance as follows: \$500,000 per accident for injury; \$500,000 per employee for disease; and \$500,000 for policy disease limit.

All insurance required by this paragraph 3 shall include a waiver of subrogation endorsement for the benefit of Government of the District of Columbia.

4. Cyber Liability Insurance - The Contractor shall provide evidence satisfactory to include a copy of the actual Cyber Liability policy to the Contracting Officer of Cyber Liability Insurance, with limits not less than \$5,000,000 per occurrence or claim, \$5,000,000 aggregate. Coverage shall be sufficiently broad to respond to the duties and obligations as is undertaken by Contractor in this agreement and shall include, but not limited to, claims involving infringement of intellectual property, including but not limited to infringement of copyright, trademark, trade dress, invasion of privacy violations, information theft, damage to or destruction of electronic information, release of private information, alteration of electronic information, extortion and network security. The policy shall provide coverage for breach response costs as well as regulatory fines and penalties as well as credit monitoring expenses with limits sufficient to respond to these obligations. This insurance requirement will be considered met if the general liability insurance includes an affirmative cyber endorsement for the required amounts and coverages.

5. Environmental Liability/Contractors Pollution Liability Insurance - The Contractor shall provide evidence satisfactory to the CO of environmental liability insurance covering losses caused by pollution or other hazardous conditions arising from ongoing or completed operations of the Contractor. Such insurance shall apply to bodily injury, property damage (including loss of use of damaged property or of property that has been physically injured), clean-up costs, transit and non-owned disposal sites. Coverage shall extend to defense costs and expenses incurred in the investigation, civil fines, penalties and damages or settlements. There shall be neither an exclusion nor a sublimit for mold or fungus-related claims. The minimum limits required under this paragraph shall be equal to the greater of (i) the limits set forth in the Contractor's pollution liability policy or (ii) \$5,000,000 per occurrence and \$5,000,000 in the annual aggregate. If such coverage is written on a claims-made basis, the Contractor warrants that any retroactive date applicable to coverages under the policy precedes the Contractor's performance of any work under the Contract and that continuous completed operations coverage will be maintained for at least ten (10) years or an extended reporting period shall be purchased for no less than ten (10) years after completion.

The Contractor also must furnish to CO Owner certificates of insurance evidencing environmental liability insurance maintained by third party transportation and disposal site operators(s) used by the Contractor for losses arising from facility(ies) accepting, storing or disposing hazardous materials or other waste as a result of the Contractor's operations. Such coverages must be maintained with limits of at least the amounts set forth above.

6. Professional Liability Insurance (Errors & Omissions) - The Contractor shall provide Professional Liability Insurance (Errors and Omissions) to cover liability resulting from any error or omission in the performance of professional services under this Contract. The policy shall provide limits of \$5,000,000 per claim or per occurrence for each wrongful act and \$5,000,000 annual aggregate. The Contractor warrants that any applicable retroactive date precedes the date the Contractor first performed any professional services for the Government of the District of Columbia and that continuous coverage will be maintained or an extended reporting period will be exercised for a period of at least ten years after the completion of the professional services.

7. Commercial Umbrella or Excess Liability - The Contractor shall provide evidence satisfactory to the CO of commercial umbrella or excess liability insurance with minimum limits equal to the greater of (i) the limits set forth in the Contractor's umbrella or excess liability policy or (ii) \$10,000,000 per occurrence and \$10,000,000 in the annual aggregate, following the form and in excess of all liability policies. All liability coverages must be scheduled under the umbrella and/or excess policy. The insurance required under this paragraph shall be written in a form that annually reinstates all required limits. Coverage shall be primary to any insurance, self-insurance or reinsurance maintained by the District and the "other insurance" provision must be amended in accordance with this requirement and principles of vertical exhaustion.

B. PRIMARY AND NONCONTRIBUTORY INSURANCE

The insurance required herein shall be primary to and will not seek contribution from any other insurance, reinsurance or self-insurance including any deductible or retention, maintained by the Government of the District of Columbia.

- C. DURATION. The Contractor shall carry all required insurance until all contract work is accepted by the District of Columbia and shall carry listed coverages for ten years for construction projects following final acceptance of the work performed under this contract and two years for non-construction related contracts.

- D. LIABILITY. These are the required minimum insurance requirements established by the District of Columbia. **HOWEVER, THE REQUIRED MINIMUM INSURANCE REQUIREMENTS PROVIDED ABOVE WILL NOT IN ANY WAY LIMIT THE CONTRACTOR'S LIABILITY UNDER THIS CONTRACT.**

- E. CONTRACTOR'S PROPERTY. Contractor and subcontractors are solely responsible for any loss or damage to their personal property, including but not limited to tools and equipment, scaffolding and temporary structures, rented machinery, or owned and leased equipment. A waiver of subrogation shall apply in favor of the District of Columbia.

- F. **MEASURE OF PAYMENT.** The District shall not make any separate measure or payment for the cost of insurance and bonds. The Contractor shall include all of the costs of insurance and bonds in the contract price.
- G. **NOTIFICATION.** The Contractor shall ensure that all policies provide that the CO shall be given thirty (30) days prior written notice in the event of coverage and / or limit changes or if the policy is canceled prior to the expiration date shown on the certificate. The Contractor shall provide the CO with ten (10) days prior written notice in the event of non-payment of premium. The Contractor will also provide the CO with an updated Certificate of Insurance should its insurance coverages renew during the contract.
- H. **CERTIFICATES OF INSURANCE.** The Contractor shall submit certificates of insurance giving evidence of the required coverage as specified in this section prior to commencing work. Certificates of insurance must reference the corresponding contract number. Evidence of insurance shall be submitted to:

The Government of the District of Columbia

And mailed to the attention of:

Tracy Crump, Contracting Officer
Office of Contracting and Procurement
1200 First Street, N.E., 5th Floor
Washington, DC 20002

The CO may request, and the Contractor shall promptly deliver updated certificates of insurance, endorsements indicating the required coverages, and/or certified copies of the insurance policies. If the insurance initially obtained by the Contractor expires prior to completion of the contract, renewal certificates of insurance and additional insured and other endorsements shall be furnished to the CO prior to the date of expiration of all such initial insurance. For all coverage required to be maintained after completion, an additional certificate of insurance evidencing such coverage shall be submitted to the CO on an annual basis as the coverage is renewed (or replaced).

- I. **DISCLOSURE OF INFORMATION.** The Contractor agrees that the District may disclose the name and contact information of its insurers to any third party which presents a claim against the District for any damages or claims resulting from or arising out of work performed by the Contractor, its agents, employees, servants or subcontractors in the performance of this contract.
- J. **CARRIER RATINGS.** All Contractor's and its subcontractors' insurance required in connection with this contract shall be written by insurance companies with an A.M. Best Insurance Guide rating of at least A- VII (or the equivalent by any other rating agency) and licensed in the in the District.

I.9 EQUAL EMPLOYMENT OPPORTUNITY

In accordance with the District of Columbia Administrative Issuance System, Mayor's Order 85-85 dated June 10, 1985, the forms for completion of the Equal Employment Opportunity Information Report are incorporated herein as Section J.3. An award cannot be made to any offeror who has not satisfied the equal employment requirements.

I.10 ORDER OF PRECEDENCE

The contract awarded as a result of this RFP will contain the following clause:

ORDER OF PRECEDENCE

A conflict in language shall be resolved by giving precedence to the document in the highest order of priority that contains language addressing the issue in question. The following documents are incorporated into the contract by reference and made a part of the contract in the following order of precedence:

- (1) An applicable Court Order, if any
- (2) Contract document
- (3) Standard Contract Provisions
- (4) Contract attachments other than the Standard Contract Provisions
- (5) RFP, as amended
- (6) BAFOs (in order of most recent to earliest)
- (7) Proposal

I.11 DISPUTES

Delete Article 14, Disputes, of the Standard Contract Provisions dated July 2010 for use with District of Columbia Government Supplies and Services Contracts and substitute the following Article 14, Disputes, in its place:

14. Disputes

All disputes arising under or relating to the contract shall be resolved as provided herein.

- (a) **Claims by the Contractor against the District:** Claim, as used in paragraph (a) of this clause, means a written assertion by the Contractor seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to the contract. A claim arising under a contract, unlike a claim relating to that contract, is a claim that can be resolved under a contract clause that provides for the relief sought by the claimant

- (1) All claims by a Contractor against the District arising under or relating to a contract shall be in writing and shall be submitted to the CO for a decision. The Contractor's claim shall contain at least the following:
 - (i) A description of the claim and the amount in dispute;
 - (ii) Data or other information in support of the claim;

- (iii) A brief description of the Contractor's efforts to resolve the dispute prior to filing the claim; and
 - (iv) The Contractor's request for relief or other action by the CO.
- (2) The CO may meet with the Contractor in a further attempt to resolve the claim by agreement.
- (3) The CO shall issue a decision on any claim within 120 calendar days after receipt of the claim. Whenever possible, the CO shall consider factors such as the size and complexity of the claim and the adequacy of the information in support of the claim provided by the Contractor.
- (4) The CO's written decision shall do the following:
 - (i) Provide a description of the claim or dispute;
 - (ii) Refer to the pertinent contract terms;
 - (iii) State the factual areas of agreement and disagreement;
 - (iv) State the reasons for the decision, including any specific findings of fact, although specific findings of fact are not required and, if made, shall not be binding in any subsequent proceeding;
 - (v) If all or any part of the claim is determined to be valid, determine the amount of monetary settlement, the contract adjustment to be made, or other relief to be granted;
 - (vi) Indicate that the written document is the CO's final decision; and
 - (vii) Inform the Contractor of the right to seek further redress by appealing the decision to the Contract Appeals Board.
- (5) Failure by the CO to issue a decision on a contract claim within 120 days of receipt of the claim will be deemed to be a denial of the claim, and will authorize the commencement of an appeal to the Contract Appeals Board as provided by D.C. Official Code § 2-360.04.
- (6) If a contractor is unable to support any part of its claim and it is determined that the inability is attributable to a material misrepresentation of fact or fraud on the part of the Contractor, the Contractor shall be liable to the District for an amount equal to the unsupported part of the claim in addition to all costs to the District attributable to the cost of reviewing that part of the Contractor's claim. Liability under this paragraph (a)(6) shall be determined within six (6) years of the commission of the misrepresentation of fact or fraud.
- (7) Pending final decision of an appeal, action, or final settlement, the Contractor shall proceed diligently with performance of the contract in accordance with the decision of the CO.
- (b) **Claims by the District against the Contractor:** Claim as used in paragraph (b) of this clause, means a written demand or written assertion by the District seeking, as a matter of right, the payment of money in a sum certain, the adjustment of contract terms, or other relief arising under or relating to the contract. A claim arising under a contract, unlike a claim relating to that contract, is a claim that can be resolved under a contract clause that provides for the relief sought by the claimant.

- (1) The CO shall decide all claims by the District against a contractor arising under or relating to a contract.
 - (2) The CO shall send written notice of the claim to the contractor. The CO's written decision shall do the following:
 - (i) Provide a description of the claim or dispute;
 - (ii) Refer to the pertinent contract terms;
 - (iii) State the factual areas of agreement and disagreement;
 - (iv) State the reasons for the decision, including any specific findings of fact, although specific findings of fact are not required and, if made, shall not be binding in any subsequent proceeding;
 - (v) If all or any part of the claim is determined to be valid, determine the amount of monetary settlement, the contract adjustment to be made, or other relief to be granted;
 - (vi) Indicate that the written document is the CO's final decision; and
 - (vii) Inform the Contractor of the right to seek further redress by appealing the decision to the Contract Appeals Board.
 - (3) The CO shall support the decision by reasons and shall inform the Contractor of its rights as provided herein.
 - (4) Before or after issuing the decision, the CO may meet with the Contractor to attempt to resolve the claim by agreement.
 - (5) The authority contained in this paragraph (b) shall not apply to a claim or dispute for penalties or forfeitures prescribed by statute or regulation which another District agency is specifically authorized to administer, settle or determine.
 - (6) This paragraph shall not authorize the CO to settle, compromise, pay, or otherwise adjust any claim involving fraud.
- (c) Decisions of the CO shall be final and not subject to review unless the Contractor timely commences an administrative appeal for review of the decision, by filing a complaint with the Contract Appeals Board, as authorized by D.C. Official Code § 2-360.04.
- (d) Pending final decision of an appeal, action, or final settlement, the Contractor shall proceed diligently with performance of the contract in accordance with the decision of the CO.

I.12 CHANGES

Delete clause 15, Changes, of the Standard Contract Provisions dated July 2010 for use with District of Columbia Government Supplies and Services Contracts and substitute the following clause 15, Changes in its place:

15. Changes:

- (a) The CO may, at any time, by written order, and without notice to the surety, if any, make changes in the contract within the general scope hereof. If such change causes an increase or decrease in the cost of performance of the contract, or in the time required for performance, an equitable adjustment shall be made. Any claim for adjustment for a change within the general scope must be asserted within ten (10) days from the date the change is ordered; provided, however, that the CO, if he or she determines that the facts justify such action, may receive, consider and adjust any such claim asserted at any time prior to the date of final settlement of the contract. If the parties fail to agree upon the adjustment to be made, the dispute shall be determined as provided in **clause 14 Disputes**.
- (b) The District shall not require the Contractor, and the Contractor shall not require a subcontractor, to undertake any work that is beyond the original scope of the contract or subcontract, including work under a District-issued change order, when the additional work increases the contract price beyond the not-to-exceed price or negotiated maximum price of this contract, unless the CO:
- (1) Agrees with Contractor, and if applicable, the subcontractor on a price for the additional work;
 - (2) Obtains a certification of funding to pay for the additional work;
 - (3) Makes a written, binding commitment with the Contractor to pay for the additional work within 30-days after the Contractor submits a proper invoice; and
 - (4) Provides the Contractor with written notice of the funding certification.
- (c) The Contractor shall include in its subcontracts a clause that requires the Contractor to:
- (1) Within 5 business days of its receipt of notice the approved additional funding, provide the subcontractor with notice of the amount to be paid to the subcontractor for the additional work to be performed by the subcontractor;
 - (2) Pay the subcontractor any undisputed amount to which the subcontractor is entitled for the additional work within 10 days of receipt of payment from the District; and
 - (3) Notify the subcontractor and CO in writing of the reason the Contractor withholds any payment from a subcontractor for the additional work.
- (d) Neither the District, Contractor, nor any subcontractor may declare another party to be in default, or assess, claim, or pursue damages for delays, until the parties to agree on a price for the additional work.

I.13 NON-DISCRIMINATION CLAUSE

Delete clause 19, Non-Discrimination Clause, of the Standard Contract Provisions dated July 2010 for use with District of Columbia Government Supplies and Services Contracts and substitute the following clause 19, Non-Discrimination Clause, in its place:

19. Non-Discrimination Clause:

- (a) The Contractor shall not discriminate in any manner against any employee or applicant for employment that would constitute a violation of the District of Columbia Human Rights Act, effective December 13, 1977, as amended (D.C. Law 2-38; D.C. Official Code § 2-1401.01 *et seq.*) (“Act”, as used in this clause). The Contractor shall include a similar clause in all subcontracts, except subcontracts for standard commercial supplies or raw materials. In addition, the Contractor agrees, and any subcontractor shall agree, to post in conspicuous places, available to employees and applicants for employment, a notice setting forth the provisions of this non-discrimination clause as provided in section 251 of the Act.
- (b) Pursuant to Mayor’s Order 85-85, (6/10/85), Mayor’s Order 2002-175 (10/23/02), Mayor’s Order 2011-155 (9/9/11) and the rules of the Office of Human Rights, Chapter 11 of Title 4 of the D.C. Municipal Regulations, the following clauses apply to the contract:
- (b)
- (1) The Contractor shall not discriminate against any employee or applicant for employment because of actual or perceived: race, color, religion, national origin, sex, age, marital status, personal appearance, sexual orientation, gender identity or expression, family responsibilities, genetic information, disability, matriculation, political affiliation, or credit information. Sexual harassment is a form of sex discrimination which is prohibited by the Act. In addition, harassment based on any of the above protected categories is prohibited by the Act.
 - (2) The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their actual or perceived: race, color, religion, national origin, sex, age, marital status, personal appearance, sexual orientation, gender identity or expression, family responsibilities, genetic information, disability, matriculation, political affiliation, or credit information. The affirmative action shall include, but not be limited to the following:
 - (a) employment, upgrading or transfer;
 - (b) recruitment, or recruitment advertising;
 - (c) demotion, layoff or termination;
 - (d) rates of pay, or other forms of compensation; and
 - (e) selection for training and apprenticeship.
 - (3) The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting agency, setting forth the provisions in paragraphs 19(b)(1) and (b)(2) concerning non-discrimination and affirmative action.
 - (4) The Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment pursuant to the non-discrimination requirements set forth in paragraph 19(b)(2).
 - (5) The Contractor agrees to send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided by the contracting agency, advising the said labor union or workers’ representative of that contractor’s commitments under this

nondiscrimination clause and the Act, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

- (6) The Contractor agrees to permit access to its books, records, and accounts pertaining to its employment practices, by the Chief Procurement Officer or designee, or the Director of the Office of Human Rights or designee, for purposes of investigation to ascertain compliance with the Act, and to require under terms of any subcontractor agreement each subcontractor to permit access of such subcontractors' books, records, and accounts for such purposes.
- (7) The Contractor agrees to comply with the provisions of the Act and with all guidelines for equal employment opportunity applicable in the District adopted by the Director of the Office of Human Rights, or any authorized official.
- (8) The Contractor shall include in every subcontract the equal opportunity clauses, i.e., paragraphs 19(b)(1) through (b)(9) of this clause, so that such provisions shall be binding upon each subcontractor.
- (9) The Contractor shall take such action with respect to any subcontract as the CO may direct as a means of enforcing these provisions, including sanctions for noncompliance; provided, however, that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the Contractor may request the District to enter into such litigation to protect the interest of the District.

I.14 COST AND PRICING DATA

Delete Article 25, Cost and Pricing Data, of the Standard Contract Provisions dated July 2010 for use with District of Columbia Government Supplies and Services Contracts.

SECTION J: ATTACHMENTS

The following list of attachments is incorporated into the solicitation by reference.

Attachment Number	Document
J.1	Government of the District of Columbia Standard Contract Provisions for Use with the Supplies and Services Contracts (July 2010) available at http://ocp.dc.gov , under Quick Links click on “Required Solicitation Documents”
J.2	U.S. Department of Labor Wage Determination Service Contract Act WD #: 2015-4281 Revision 16, dated April 23, 2020, available at https://beta.sam.gov
J.3	Equal Employment Opportunity Employer Information Report and Mayor’s Order 85-85 available at http://ocp.dc.gov , under Quick Links click on “Required Solicitation Documents”
J.4	Department of Employment Services First Source Employment Agreement available at http://ocp.dc.gov , under Quick Links click on “Required Solicitation Documents”
J.5	Way to Work Amendment Act of 2006 - Living Wage Notice available at http://ocp.dc.gov , under Quick Links click on “Required Solicitation Documents”
J.6	Way to Work Amendment Act of 2006 - Living Wage Fact Sheet available at http://ocp.dc.gov , under Quick Links click on “Required Solicitation Documents”
J.7	Tax Certification Affidavit available at http://ocp.dc.gov , under Quick Links click on “Required Solicitation Documents”
J.8	Subcontracting Plan available at http://ocp.dc.gov , under Quick Links click on “Required Solicitation Documents”
J.9	First Source Initial Employment Plan available at http://ocp.dc.gov , under Quick Links click on “Required Solicitation Documents”
J.10	Labor Category by Tasks (L.2.6 Technical Proposal)
J.11	Loaded Rate Sheet (L.2.5 Price Proposal)
J.12	Price Schedule by Labor Hour (L.2.5 Price Proposal)
J.13	Past Performance Evaluation Form (L.2.6.2.4 Technical Proposal)
J.14	Project Team Level of Effort per Task (L.2.6.1 F (ii) Technical Proposal)

Attachment Number	Document
J.15	Labor Category Descriptions

SECTION K: REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS

Bidder/Offeror Certification Form

available at <http://ocp.dc.gov>,
under Quick Links click on “Required Solicitation Documents”

SECTION L: INSTRUCTIONS, CONDITIONS AND NOTICES TO OFFERORS

L.1 CONTRACT AWARD

L.1.1 Most Advantageous to the District

The District intends to award a single contract resulting from this solicitation to the responsible offeror whose offer conforming to the solicitation will be most advantageous to the District, cost or price, technical and other factors, specified elsewhere in this solicitation considered.

L.1.2 SELECTION OF NEGOTIATION PROCESS

In accordance with 27 DCMR § 1632, after evaluation of the proposals using only the criteria stated in the RFP and in accordance with weightings provided in the RFP, the CO may elect to proceed with any method of negotiations, discussions or award of the contract without negotiations, which is set forth in subsections (a), (b), (c), or (d) of 27 DCMR § 1632.1. If the CO elects to proceed with negotiations under subsection (c) of 27 DCMR §1632.1, the CO may limit, for purposes of efficiency, the number of proposals in the competitive range to the greatest number that will permit an efficient competition among the most highly rated proposals.

L.2 PROPOSAL ORGANIZATION AND CONTENT

L.2.1 This solicitation will be conducted electronically using the District's Ariba E-Sourcing system. To be considered, an offeror must submit the required attachments via the Ariba E-Sourcing system before the closing date and time. Paper, telephonic, telegraphic, and facsimile proposals may not be accepted.

L.2.2 All attachments shall be submitted as a .pdf or excel file as directed. The District will not be responsible for corruption of any file submitted. If the submitted file cannot be viewed and printed as submitted, it will not be considered.

L.2.3 The offeror shall submit two (2) attachments in its electronic submittal: (1) a technical proposal, and (2) a price proposal. The maximum page count for the technical proposal shall not exceed 125 pages. **Please note that each attachment is limited to a maximum size of 25 MB.**

L.2.4 The offeror shall label each attachment, i.e., "Technical Proposal," "Price Proposal."

L.2.5 Offerors are directed to the specific proposal evaluation criteria found in Section M of this solicitation, Evaluation Factors. The offeror shall respond to each factor in a way that will allow the District to evaluate the offeror's response. The offeror shall submit information in a clear, concise, factual and logical manner providing a comprehensive description of program supplies and services and delivery thereof. The information requested for the technical proposal shall facilitate evaluation for all proposals. The technical proposal must contain sufficient detail to provide a clear and concise response fully reflecting the manner in which the offeror proposes to fully meet the requirements in Section C.

The Offeror shall provide the following information for the prime contractor and its subcontractors, if any:

- 1) Legal Name(s);
- 2) Address(es);
- 3) Role(s) of each firm (including all subcontractors);
- 4) Company profile(s), including:
 - a) Age;
 - b) History(ies); and
 - c) Size;
- 5) Description of the Offeror's existing workload; and
- 6) A list of any contracts held by the Offeror where the contract was terminated (either for default or convenience). This list should also identify any contracts that resulted in litigation or arbitration between the contracting entity and the Offeror.

L.2.6 TECHNICAL PROPOSAL

The Offeror's Technical Proposal shall be organized and presented in the following clearly marked sections:

L.2.6.1 FACTOR A: TECHNICAL APPROACH (40 points)

The Offeror shall provide the following information to demonstrate the Offeror's technical approach and methodology to provide the required services. The Offeror shall provide at a minimum, the information described in this section below:

A. A detailed Project Proposal.

- (i) The Project Proposal shall demonstrate the Offeror's understanding of the required services and describe the Offeror's approach to successfully provide the required services, each requirement specified in C.5, and all its subsections.
- (ii) The Project Proposal shall include a project management plan for the entire development of the IFM (that could be used as the basis for meeting the Detailed Work Plans requirements of C.5.3) which shall include project timelines for tasks and sub tasks. The Project Proposal shall also include a Gantt Chart showing the projected timelines (in month increments) for meeting each of the following requirements identified in C.5 and its subsections.
 1. C.5.3 – Detailed Work Plans
 2. C.5.4 – Model Advisory Group
 3. C.5.5 – Systems Architecture Document
 4. C.5.6 – Data Collection and Management

5. C.5.7 – Integrated Flood Model (IFM)
6. C.5.8 – Materials and Connection to the Network
7. C.5.9 – Scenario Recommendations Document
8. C.5.10 – Creation of 15 Scenario Maps
9. C.5.11 – Training
10. C.5.12 – Operation Manual
11. C.5.13 – Framework Plan for Flood Risk Management
12. C.5.14 – Floodshed Management Plans
13. C.5.15 – Rainfall Sensitivity Analysis

(iii) Offerors shall include in their Project Proposal a narrative describing any foreseen deviations from the initial list of requirements described in C.5.3 through C.5.15, and an explanation of why the offeror feels the deviation should be considered.

B. A description of the Offeror’s understanding of interior flood risk, how sewershed scale planning and blue –green or gray infrastructure can be used to reduce that risk in the District, and how these concepts are incorporated into the Offeror’s Project Proposal.

C. A description of:

- (i) anticipated challenges and opportunities with meeting the requirements described in C.5 and its subsections;
- (ii) any past challenges with large-scale planning efforts and stormwater/flood modeling efforts and how it will inform the Offeror’s work on this contract.

D. A description of the Offeror’s capability to adapt and adjust project schedules or bring additional resources to bear as necessary to meet project deadlines; and a description of the system to be used to manage the schedule, cost, quality assessment, and quality control for the project.

E. A description of how the Offeror’s technical approach will minimize ongoing operational costs of the IFM such as maintenance and software license fees and how the Offeror will design the IFM to enable DOEE to easily incorporate new

data, expand or enhance the IFM functionality, troubleshoot data connection issues or other potential issues, and perform maintenance on the IFM after the contract is over.

F. Demonstration of the Offeror's value added and unique approach:

- i) A description (250 words or less) of the Offeror's unique capabilities and how the Offeror's technical expertise sets it apart from other potential Offerors.
- ii) Offerors shall provide an estimate of the hours by labor category by task in the form of an excel spreadsheet provided as Attachment J.14.

L.2.6.2 FACTOR B: SPECIALIZED EXPERIENCE & TECHNICAL COMPETENCE (25 points)

The Offeror's proposal shall provide information relating to the Offeror's qualifications, experience, and past performance providing services similar in size, scope and complexity to those described in Section C. The Offeror shall demonstrate this by providing examples of work performed in the last seven years by the Offeror's proposed project team.

L.2.6.2.1 The Offeror shall include a minimum of one example of work and a maximum of three examples of work in each of the following five subcategories (A(i), A(ii), A(iii), B, and C):

A. Modeling

- (i) **H&H Modeling for Interior Flooding** - Examples in this category should demonstrate capability in using H&H modeling for interior flooding and storm sewer systems, and design and operation of sewer conveyances and outfalls. Examples in this category should demonstrate capability in meeting requirements in C.5.7.
- (ii) **Coastal and Riverine Flood Modeling** - Examples in this category should demonstrate capability in using computer systems and software to map riverine and coastal flooding including sea level rise, storm surge, tides, and waves. Examples in this category should demonstrate capability in meeting requirements in C.5.7.
- (iii) **Model Coupling and Interfaces**- Examples in this category should demonstrate capability in coupling models together, integrating data systems with the model, and developing a method for users to set variables via a custom or stock user interfaces. Examples in this category should demonstrate capability in meeting requirements in C.5.5, C.5.6, C.5.7 and C.5.8.

B. Masterplans and Urban Site Design - Examples in this category should demonstrate capability to create masterplans and large-scale urban site design with water infrastructure and landscape elements at the city, neighborhood, and/or site scale. These examples should demonstrate capability in designing

infrastructure that reduces flood risk or increases water quality while providing co-benefits for the community. Examples in this category should demonstrate capability in meeting requirements in C.5.13 and C.5.14.

- C. **Climate Adaptation Analysis and Resiliency Planning** - Examples in this category should demonstrate capability in creating climate projections, helping communities to take climate projections and make them into actionable guidance, and helping communities strategize ways to adapt to climate change and make themselves more resilient. Examples in this category should demonstrate capability in meeting requirements in C.5.9, C.5.13, and C.5.15.

L.2.6.2.2 Each example provided in response to section L.2.6.2.1 shall include the following write-up in consistent order and format in 500 words or less. The word limit does not apply to the text within the screenshots (subsection E). The same project may be used in multiple categories.

- A. Title of project;
- B. Dollar amount and period of performance;
- C. Description of the Project;
- D. Description of the Offeror's involvement in the project, including the work performed by the Offeror, whether as the prime contractor or a subcontractor (and which tier);
- E. Up to four images or screenshots showing the user interface of models, system architecture diagrams, model outputs, plan images, or any other images that are useful to understanding the example. A link to a website allowing further exploration of the example may also be provided.
- F. Description of whether the project was delivered on time and on budget, and if not, what caused deviations; and

L.2.6.2.3 The Offeror shall include a summary document describing all the examples presented in L.2.6.2.1. The document shall include information on how each example is relevant to the work required for this contract.

L.2.6.2.4 Provide information of the Offeror's past performance within the last seven (7) years in achieving a high degree of customer satisfaction. Evaluation of this factor will be based on the quantity and quality of Offeror's performance on projects of comparable size, highly technical nature, and complexity. For purposes of this paragraph, comparable shall mean design of projects with comparable scope, size and budget similar to this project. The currency and relevance of the information, source of information, context of the data, and general trends in Offeror's performance shall be considered.

L.2.6.3 FACTOR C: PROPOSED PROJECT TEAM (15 points)

This evaluation factor considers the education, experience, knowledge, past experience, necessary skills, and expertise of the key personnel directly assigned to the Project. The Offeror shall provide at a minimum the following:

- A. Offerors shall provide resumes for its Key Personnel expected to be assigned to the Project which shall include qualifications, education, experience and responsibilities. Proposals should identify, at a minimum the key personnel identified in Section L.20. Provide a resume for any other personnel the Offeror deems relevant, including subcontractors. Resumes for Key Personnel shall be no more than two pages. Resumes for all others shall be no more than one page.
- B. Offerors shall provide an organizational chart showing the Project Manager and personnel (including name, project role, and labor category) that will be committed to this project.
- C. If there are multiple subcontractors that are part of the offer, the Offeror shall identify the lead project manager for each proposed subcontractor and provide a description (200 words or less) describing how differences of opinion will be resolved across a multi-organization team.

L.2.7 PRICE PROPOSAL

Label as “Price Proposal.” Offerors’ Price Proposal shall be organized and presented in a separate document. **NO PRICING INFORMATION SHALL BE INCLUDED WITH THE SEPARATE TECHNICAL PROPOSAL.** All prices offered by the Contractor shall be based on fully loaded hourly rates, to include overhead, general and administrative (G&A) expenses, and profit.

- a. A cover letter.
- b. A completed Loaded Rate Sheet (Attachment J.11).
- c. A completed Price Schedule by Labor Hour (Attachment J.12).

L.2.8 Offerors shall complete, sign and submit all Representations, Certifications and Acknowledgments as appropriate.

L.2.9 The District will reject any offer that fails to include a subcontracting plan that is required by law.

L.3 In addition to the proposal submission requirements in Section L.2 above, the offeror must submit electronic copies of its proposal, 1) a technical proposal, 2) a price proposal, 3) a redacted technical proposal in accordance with any applicable exemptions from disclosure under D.C. Official Code § 2-534. Redacted copies of the offeror’s proposal must be submitted by e-mail attachment to the contact person designated in the solicitation. D.C. Official Code § 2-536(b) requires the District to make available electronically copies of records that must be made public. The District’s policy is to release documents relating to District proposals following award of the contract, subject to applicable Freedom of Information Act (FOIA) exemption under § 2-534(a)(1). Successful proposals will be published on the OCP website in accordance with D.C. Official Code § 2-361.04, subject to applicable FOIA exemptions.

L.4 PROPOSAL SUBMISSION DATE AND TIME, AND LATE SUBMISSIONS, LATE MODIFICATIONS, WITHDRAWAL OR MODIFICATION OF PROPOSALS AND LATE PROPOSALS

L.4.1 Proposal Submission

L.4.1.1 Proposals must be fully uploaded into the District's E-Sourcing system no later than the closing date and time. The system will not allow late proposals, modifications to proposals, or requests for withdrawals after the exact closing date and time.

L.4.1.2 Paper, telephonic, telegraphic, and facsimile proposals may not be accepted or considered for award.

L.4.1.3 It is solely the offeror's responsibility to ensure that it begins the upload process in enough time to get the attachments uploaded into the District's E-Sourcing system before the closing time. **You may use Microsoft Internet Explorer versions 6, 7, 8, 9, 10, or 11, Mozilla Firefox (esr 17 or esr 24), Safari (4 or 5), Mobile Safari (6 or 7), or Google Chrome 26 to upload the attachments.**

L.4.2 Withdrawal or Modification of Proposals

An offeror may modify or withdraw its proposal via the District's E-Sourcing system at any time before the closing date and time for receipt of proposals.

L.4.3 Late Proposals

The District's E-Sourcing system will not accept late proposals or modifications to proposals after the closing date and time for receipt of proposals.

L.4.4 Late Modifications

A late modification of a successful proposal, which makes its terms more favorable to the District, shall be considered at any time it is received and may be accepted.

L.5 EXPLANATION TO PROSPECTIVE OFFERORS

If a prospective offeror has any questions relating to this solicitation, the prospective offeror shall submit the question electronically via the District's E-Sourcing system's instructions. **The prospective offeror should submit questions via Ariba PASS no later than October 19, 2020.** The District will furnish responses via the District's E-Sourcing system's messaging process. An amendment to the solicitation will be issued if the CO decides that information is necessary in submitting offers, or if the lack of it would be prejudicial to any prospective offeror. Oral explanations or instructions given by District officials before the award of the contract will not be binding.

L.6 RESTRICTION ON DISCLOSURE AND USE OF DATA

L.6.1 Offerors who include in their proposal data that they do not want disclosed to the public or used by the District except for use in the procurement process shall mark the title page with the following legend:

"This proposal includes data that shall not be disclosed outside the District and shall not be duplicated, used or disclosed in whole or in part for any purpose except for use in the procurement process.

If, however, a contract is awarded to this offeror as a result of or in connection with the submission of this data, the District will have the right to duplicate, use, or disclose the data to the extent consistent with the District's needs in the procurement process. This restriction does not limit the District's rights to use, without restriction, information contained in this proposal if it is obtained from another source. The data subject to this restriction are contained in sheets (insert page numbers or other identification of sheets)."

L.6.2 Mark each sheet of data it wishes to restrict with the following legend:

"Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal."

L.7 PROPOSALS WITH OPTION YEARS

The offeror shall include option year prices in its price/cost proposal. An offer may be determined to be unacceptable if it fails to include pricing for the option year(s).

L.8 PROPOSAL PROTESTS

Any actual or prospective offeror or contractor who is aggrieved in connection with the solicitation or award of a contract, must file with the D.C. Contract Appeals Board (Board) a protest no later than ten (10) business days after the basis of protest is known or should have been known, whichever is earlier. A protest based on alleged improprieties in a solicitation which are apparent at the time set for receipt of initial proposals shall be filed with the Board prior to the time set for receipt of initial proposals. In procurements in which proposals are requested, alleged improprieties which do not exist in the initial solicitation, but which are subsequently incorporated into the solicitation, must be protested no later than the next closing time for receipt of proposals following the incorporation. The protest shall be filed in writing, with the Contract Appeals Board, 441 4th Street, N.W., Suite 350N, Washington, D.C. 20001. The aggrieved person shall also mail a copy of the protest to the CO for the solicitation.

L.9 UNNECESSARILY ELABORATE PROPOSALS

Unnecessarily elaborate brochures or other presentations beyond those sufficient to present a complete and effective response to this solicitation are not desired and may be construed as an indication of the offeror's lack of cost consciousness. Elaborate artwork, expensive visual and other presentation aids are neither necessary nor desired.

L.10 RETENTION OF PROPOSALS

All proposal documents will be the property of the District and retained by the District, and therefore will not be returned to the offerors.

L.11 PROPOSAL COSTS

The District is not liable for any costs incurred by the offerors in submitting proposals in response to this solicitation.

L.12 CERTIFICATES OF INSURANCE

Prior to commencing work, the Contractor shall have its insurance broker or insurance company submit certificates of insurance giving evidence of the required coverages as specified in Section I.8 to:

Tracy Crump, Contracting Officer
Office of Contracting and Procurement
1200 First Street, N.E., 5th Floor
Washington, DC 20002
tracy.crump@dc.gov
(Re: Contract Number)

PDF copies of the certificates of insurance shall also be emailed to the contracting officer and contract specialist until further notice due to COVID-19 access restrictions.

L.13 ACKNOWLEDGMENT OF AMENDMENTS

The offeror shall acknowledge receipt of any amendment to this solicitation electronically via the District's E-Sourcing system's messaging process. The District must receive the acknowledgment by the date and time specified for receipt of proposals. An offeror's failure to acknowledge an amendment may result in rejection of its offer.

L.14 BEST AND FINAL OFFERS

If, subsequent to receiving original proposals, negotiations are conducted under 27 DCMR § 1632.1(c), all offerors within the competitive range will be so notified and will be provided an opportunity to submit written best and final offers at a designated date and time. Best and final offers will be subject to the Late Submissions, Late Modifications and Late Withdrawals of Proposals provisions of the solicitation. After evaluation of best and final offers, the CO may award the contract to the highest-ranked offeror or negotiate with the highest ranked offeror in accordance with 27 DCMR § 1634.

L.15 LEGAL STATUS OF OFFEROR

Each proposal must provide the following information:

L.15.1 Name, address, telephone number and federal tax identification number of the offeror;

L.15.2 A copy of each District of Columbia license, registration or certification that the offeror is required by law to obtain. If the offeror is a corporation or partnership and does not provide a copy of its license, registration or certification to transact business in the District of Columbia, the offer shall certify its intent to obtain the necessary license, registration or certification prior to contract award or its exemption from such requirements; and

L.15.3 If the offeror is a partnership or joint venture, the names and addresses of the general partners or individual members of the joint venture, and copies of any joint venture or teaming agreements.

L.16 FAMILIARIZATION WITH CONDITIONS

Offerors shall thoroughly familiarize themselves with the terms and conditions of this solicitation, acquainting themselves with all available information regarding difficulties which may be encountered, and the conditions under which the work is to be accomplished. Contractors will not be relieved from assuming all responsibility for properly estimating the difficulties and the cost of performing the services required herein due to their failure to investigate the conditions or to become acquainted with all information, schedules and liability concerning the services to be performed.

L.17 GENERAL STANDARDS OF RESPONSIBILITY

The prospective contractor must demonstrate to the satisfaction of the District its capability in all respects to perform fully the contract requirements; therefore, the prospective contractor must submit relevant documentation within five (5) days of the request by the District.

L.17.1 To be determined responsible, a prospective contractor must demonstrate that it:

- (a) Has adequate financial resources, or the ability to obtain such resources, required to perform the contract;
- (b) Is able to comply with the required or proposed delivery or performance schedule, taking into consideration all existing commercial and government contract commitments;
- (c) Has a satisfactory performance record;
- (d) Has a satisfactory record of integrity and business ethics;
- (e) Has a satisfactory record of compliance with the applicable District licensing and tax laws and regulations;
- (f) Has a satisfactory record of compliance with the law, including labor and civil rights laws and rules, and the First Source Employment Agreement Act of 1984, as amended, D.C. Official Code § 2-219.01 *et seq.*;
- (g) Has, or has the ability to obtain, the necessary organization, experience, accounting, and operational control, and technical skills;
- (h) Has, or has the ability to obtain, the necessary production, construction, technical equipment, and facilities;
- (i) Has not exhibited a pattern of overcharging the District;
- (j) Does not have an outstanding debt with the District or the federal government in a delinquent status; and
- (k) Is otherwise qualified and is eligible to receive an award under applicable laws and regulations.

L.17.2 If the prospective contractor fails to supply the information requested, the CO shall make the determination of responsibility or non-responsibility based upon available information. If the available information is insufficient to make a determination of responsibility, the CO shall determine the prospective contractor to be non-responsible.

L.18 SPECIAL STANDARDS OF RESPONSIBILITY

RESERVED

L.19 PRE-PROPOSAL CONFERENCE

A pre-proposal conference will be held on October 5, 2020, at 10:00 AM EST via webinar. Please join the webinar by following the instructions below:

Meeting link: <https://dcnet.webex.com/dcnet/j.php?MTID=m95ea8ae1b48d5d75c03993612752bf82>

Meeting number: 172 779 5082

Password: IFMRFP2020

Join by video system:

Dial [1727795082@dcnet.webex.com](tel:1727795082@dcnet.webex.com)

You can also dial 173.243.2.68 and enter your meeting number.

Join by phone:

+1-202-860-2110 United States Toll (Washington D.C.)

1-650-479-3208 Call-in number (US/Canada)

Access code: 172 779 5082

Prospective offerors will be given an opportunity to ask questions regarding this solicitation at the conference. The purpose of the conference is to provide a structured and formal opportunity for the District to accept questions from offerors on the solicitation document as well as to clarify the contents of the solicitation. Attending offerors must provide information such as name, company name, a phone number, and e-mail to be recorded on the pre-proposal conference Attendance Roster at the conference so that their attendance can be properly recorded.

Impromptu questions will be permitted, and spontaneous answers will be provided at the District's discretion. Verbal answers given at the pre-proposal conference are only intended for general discussion and do not represent the District's final position. All oral questions must be submitted in writing following the close of the pre-proposal conference but no later than five working days after the pre-proposal conference in order to generate an official answer. The District will furnish responses via the District's E-Sourcing system's messaging process. An amendment to the solicitation will be issued if the CO decides that information is necessary in submitting proposals, or if the lack of it would be prejudicial to any prospective offeror. Oral explanations or instructions given by District officials before the award of the contract will not be binding.

L.20 KEY PERSONNEL

L.20.1 The District considers the following positions to be key personnel for this contract (see section H.6.1 for more details on the expected role of each key personnel). Key personnel named in the proposal are expected to work on the Contract at and after award of the Contract.

:

L.20.1.1 Project Manager

The individual billing to this labor category should have a bachelor's degree and at least 10 years of experience in managing multi-discipline projects. Project management experience is preferred in projects involving water resources, software modeling programs, urban design, flood risk mitigation, and resiliency.

L.20.1.2 Senior H&H Modeler

This individual should have a bachelor's degree and at least 15 years of experience in the field of Hydrologic and Hydraulic modeling. The Senior H&H modeler should have demonstrated experience on projects that include modeling of urban sewer pipe systems and working with multiple H&H models to show performance at specific sites. Experience coupling multiple models to create an integrated model is preferred.

L.20.1.3 Senior Subject Matter Expert on Climate Adaptation

This individual should have a bachelor's degree and at least 15 years of experience in the field of climate adaptation and climate projections. The range of preferred experience includes infrastructure solutions to reduce flood risk, future flood risk analysis and projections, and business case analysis comparing grey infrastructure solutions to green or blue-green infrastructure solutions.

L.20.1.4 Senior Urban Designer

This individual should have a degree in Architecture, Landscape Architecture, Urban Design, or Urban Planning, and at least 10 years of experience in Architecture, Landscape Architecture, Urban Design, or Urban Planning. The Senior Urban Designer should have experience in large urban area masterplans, urban green infrastructure design, community engagement, community-oriented design, flood risk reduction, and resiliency planning.

L.20.1.5 Senior IT Systems Architect

This individual should have a bachelor's degree and at least 15 years of experience in software systems integration and data management. This individual will be responsible for overseeing all aspects of the IFM's connection to the District Government and DOEE networks, procurement of physical servers or cloud servers, and accessibility and security of data used as input for the IFM. This individual should have experience in integrating multiple software systems together, hosting client platforms in physical and cloud servers, integrating physical and cloud servers into government networks, integrating data from multiple sources into client platforms, and maintaining secure networks.

L.20.2 The offeror shall set forth in its proposal the names and reporting relationships of the key personnel the offeror will use to perform the work under the proposed contract.

Their resumes shall be included as well as any information required in section L.2.6.3.

SECTION M - EVALUATION FACTORS

M.1 EVALUATION FOR AWARD

The contract will be awarded to the responsible offeror whose offer is most advantageous to the District, based upon the evaluation criteria specified below. Thus, while the points in the evaluation criteria indicate their relative importance, the total scores will not necessarily be determinative of the award. Rather, the total scores will guide the District in making an intelligent award decision based upon the evaluation criteria.

M.2 TECHNICAL RATING

M.2.1 The Technical Rating Scale is as follows:

<u>Numeric Rating</u>	<u>Adjective</u>	<u>Description</u>
0	Unacceptable	Fails to meet minimum requirements; e.g., no demonstrated capacity, major deficiencies which are not correctable; offeror did not address the factor.
1	Poor	Marginally meets minimum requirements; major deficiencies which may be correctable.
2	Minimally Acceptable	Marginally meets minimum requirements; minor deficiencies which may be correctable.
3	Acceptable	Meets requirements; no deficiencies.
4	Good	Meets requirements and exceeds some requirements; no deficiencies.
5	Excellent	Exceeds most, if not all requirements; no deficiencies.

M.2.2 The technical rating is a weighting mechanism that will be applied to the point value for each evaluation factor to determine the offeror's score for each factor. The offeror's total technical score will be determined by adding the offeror's score in each evaluation factor. For example, if an evaluation factor has a point value range of zero (0) to forty (40) points, using the Technical Rating Scale above, if the District evaluates the offeror's response as "Good," then the score for that evaluation factor is 4/5 of 40 or 32.

If subfactors are applied, the offeror's total technical score will be determined by adding the offeror's score for each subfactor. For example, if an evaluation factor has a point value range of zero (0) to forty (40) points, with two subfactors of twenty (20) points each, using the Technical Rating Scale above, if the District evaluates the offeror's response as "Good" for the first subfactor and "Poor" for the second

subfactor, then the total score for that evaluation factor is 4/5 of 20 or 16 for the first subfactor plus 1/5 of 20 or 4 for the second subfactor, for a total of 20 for the entire factor.

M.3 EVALUATION CRITERIA

Proposals will be evaluated based on the following evaluation factors in the manner described below:

M.3.1 TECHNICAL CRITERIA (80 Points Maximum)

Description: These factors consider the Offeror’s past performance, experience and key personnel used in performing services similar to the required services as described in Section C. These factors include an examination of the quality of services provided, timeliness in service delivery, business practices, and overall satisfaction with the Offeror’s performance.

Technical Evaluation Factors	Points
Factor A – Technical Approach	35
Factor B – Specialized Experience & Technical Competence	30
Factor C – Proposed Project Team	15
Total	80

M.3.1.1 Factor A – Technical Approach (35 Points Maximum)

The Department desires that the Offeror have a complete and thorough understanding of the required services, applicable District and federal laws and the District’s requirements as described in C.5. Offerors will be evaluated based on the degree the Offeror’s demonstrated knowledge and understanding of the District’s requirements as well as the Offeror’s approach to deliver the required services described in C.5 in an efficient, professional manner. This evaluation factor considers the responses required in Section Land the Offeror will be evaluated based on the following:

M.3.1.1.1 A detailed project proposal, and the Offeror’s understanding of the required services and ability to provide them. This should include the Offeror’s understanding of interior flood risk, sewershed scale planning, how blue–green infrastructure can be used to reduce that risk in the District, and how these concepts are incorporated into the Offeror’s proposal. See Section L.2.6.1 (A) and (B) for more information. (20 points)

M.3.1.1.2 The Offeror’s understanding of challenges, past or foreseen, with meeting the requirements described in section C.5. The Offeror’s capability to adapt and adjust project schedules or bring additional resources to bear as necessary to meet project deadlines; and a description of the system to be used to manage the schedule, cost, quality assessment, and quality control for the project. The Offeror’s capability and plan to minimize ongoing operational costs of the IFM after the contract is over. See Section L.2.6.1 (C), (D), and (E) for more information. (5 points)

M.3.1.1.3 The Offeror's unique approach, capabilities and value proposition relative to other potential offerors. See Section L. (F) for more information. (10 points)

M.3.1.2 Factor B – Specialized Experience & Technical Competence (30 Points Maximum)

The Department desires to engage a Contractor with the experience necessary to successfully perform the required services. Offerors will be evaluated based on the quality and how relevant the Offeror's specialized experience and technical competence on projects in similar in size and scope as those described in C.5 and its subsections. This evaluation factor considers work examples required in response to Section L.2.6.2 and will be evaluated based on the following:

M.3.1.2.1 Experience in H&H Modeling for Interior Flooding, Coastal and Riverine Flood Modeling, and Model Coupling and Interfaces. See Section L.2.6.2.1 A. for more information. (15 points)

M.3.1.2.2 Experience in Masterplan Creation. See Section L.2.6.2.1 B for more information. (5 points)

M.3.1.2.3 Experience in Climate Adaptation Analysis and Resiliency Planning. See Section L.2.6.2.1 C for more information. (5 points)

M.3.1.2.4 This factor considers the extent of the Offeror's past performance within the past seven (7) years in achieving a high degree of customer satisfaction (J.13). Evaluation of this factor will be based on the quantity and quality of Offeror's performance on projects of comparable size, highly technical nature, and complexity. For purposes of this paragraph, comparable shall mean design and construction projects involving scope, size and budget similar to this project. See Section L.2.6.2.4 for more information. (5 points)

M.3.1.3 Factor C – Proposed Project Team (15 Points Maximum)

The project team shall include key personnel, specialized expertise, and support staff that demonstrates knowledge of requirements outlined in Section C.5 of the solicitation. The key personnel are identified in Sections H.6 and L.20 as Project Manager, Senior H&H Modeler, Senior Subject Matter Expert on Climate Adaptation, Senior Urban Designer, and Senior IT Systems Architect.

The Offeror shall be evaluated based on the project team's demonstrated qualifications, expertise, and professional and/or educational background advantageous to perform the work. The Offeror shall also be evaluated on describing a clear and logical organizational structure for project staff and their proposed involvement. See Section L.2.6.3 for more information. (15 points)

M.3.2 PRICE CRITERION (20 Points Maximum)

The price evaluation will be objective. The offeror with the lowest price will receive the maximum price points. All other proposals will receive a proportionately lower total score. The following formula will be used to determine each offeror's evaluated price score:

$$\frac{\text{Lowest price proposal}}{\text{Price of proposal being evaluated}} \times \text{weight} = \text{Evaluated price score}$$

M.3.3 PREFERENCE POINTS AWARDED PURSUANT TO SECTION M.5.2 (12 Points Maximum)

M.3.4 TOTAL POINTS (112 Points Maximum)

Total points shall be the cumulative total of the offeror's technical criteria points, price criterion points and preference points, if any.

M.4 EVALUATION OF OPTION YEARS

The District will evaluate offers for award purposes by evaluating the total price for all options as well as the base year. Evaluation of options shall not obligate the District to exercise them. The total District's requirements may change during the option years. Quantities to be awarded will be determined at the time each option is exercised.

M.5. PREFERENCES FOR CERTIFIED BUSINESS ENTERPRISES

Under the provisions of the "Small and Certified Business Enterprise Development and Assistance Act of 2014", D.C. Official Code § 2-218.01 *et seq.*, as amended ("Act", as used in this section), the District shall apply preferences in evaluating proposals from businesses that are certified by the Department of Small and Local Business Development (DSLBD) pursuant to Part D of the Act.

M.5.1 Application of Preferences

For evaluation purposes, the allowable preferences under the Act shall be applicable to prime contractors as follows:

- M.5.1.1** Any prime contractor that is a small business enterprise (SBE) certified by the DSLBD will receive the addition of three points on a 100-point scale added to the overall score.
- M.5.1.2** Any prime contractor that is a resident-owned business (ROB) certified by DSLBD will receive the addition of five points on a 100-point scale added to the overall score.
- M.5.1.3** Any prime contractor that is a longtime resident business (LRB) certified by DSLBD will receive the addition of five points on a 100-point scale added to the overall score.

- M.5.1.4** Any prime contractor that is a local business enterprise (LBE) certified by DSLBD will receive the addition of two points on a 100-point scale added to the overall score.
- M.5.1.5** Any prime contractor that is a local business enterprise with its principal offices located in an enterprise zone (DZE) certified by DSLBD will receive the addition of two points on a 100-point scale added to the overall score.
- M.5.1.6** Any prime contractor that is a disadvantaged business enterprise (DBE) certified by DSLBD will receive the addition of two points on a 100-point scale added to the overall score.
- M.5.1.7** Any prime contractor that is a veteran-owned business (VOB) certified by DSLBD will receive the addition of two points on a 100-point scale added to the overall score.
- M.5.1.8** Any prime contractor that is a local manufacturing business enterprise (LMBE) certified by DSLBD will receive the addition of two points on a 100-point scale added to the overall score.

M.5.2 Maximum Preference Awarded

Notwithstanding the availability of the preceding preferences, the maximum total preference to which a certified business enterprise is entitled under the Act is the equivalent of twelve (12) points on a 100-point scale for proposals submitted in response to this RFP. There will be no preference awarded for subcontracting by the prime contractor with certified business enterprises.

M.5.3 Preferences for Certified Joint Ventures

A certified joint venture will receive preferences as determined by DSLBD in accordance with D.C. Official Code § 2-218.39a(h).

M.5.4 Verification of Offeror's Certification as a Certified Business Enterprise

- M.5.4.1** Any vendor seeking to receive preferences on this solicitation must be certified at the time of submission of its proposal. The CO will verify the offeror's certification with DSLBD, and the offeror should not submit with its proposal any additional documentation regarding its certification as a certified business enterprise.
- M.5.4.2** Any vendor seeking certification in order to receive preferences under this solicitation should contact the:

Department of Small and Local Business Development
ATTN: CBE Certification Program
441 Fourth Street, NW, Suite 850N
Washington DC 20001

- M.5.4.3** All vendors are encouraged to contact DSLBD at (202) 727-3900 if additional information is required on certification procedures and requirements.

M.6 EVALUATION OF PROMPT PAYMENT DISCOUNT

M.6.1 Prompt payment discounts shall not be considered in the evaluation of offers. However, any discount offered will form a part of the award and will be taken by the District if payment is made within the discount period specified by the offeror.

M.6.2 In connection with any discount offered, time will be computed from the date of delivery of the supplies to carrier when delivery and acceptance are at point of origin, or from date of delivery at destination when delivery, installation and acceptance are at that, or from the date correct invoice or voucher is received in the office specified by the District, if the latter date is later than date of delivery. Payment is deemed to be made for the purpose of earning the discount on the date of mailing of the District check.