



The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at *wvOASIS.gov*. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at *WVPurchasing.gov* with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

## Header 2

List View

**General Information** | Contact | Default Values | Discount | Document Information

Procurement Folder: 730220

SO Doc Code: CRFQ

Procurement Type: Central Master Agreement

SO Dept: 0313

Vendor ID: VS0000007154 

SO Doc ID: DEP2000000039

Legal Name: TUCK MAPPING SOLUTIONS INC

Published Date: 6/18/20

Alias/DBA:

Close Date: 6/30/20

Total Bid: \$257,275.00

Close Time: 13:30

Response Date: 06/30/2020 

Status: Closed

Response Time: 11:49

Solicitation Description: Addendum No.01 Mapping Services in Northern West Virginia

Total of Header Attachments: 2

Total of All Attachments: 2



Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

**State of West Virginia  
 Solicitation Response**

**Proc Folder :** 730220

**Solicitation Description :** Addendum No.01 Mapping Services in Northern West Virginia

**Proc Type :** Central Master Agreement

Date issued	Solicitation Closes	Solicitation Response	Version
	2020-06-30 13:30:00	SR 0313 ESR0630200000008155	1

**VENDOR**

VS0000007154

TUCK MAPPING SOLUTIONS INC

**Solicitation Number:** CRFQ 0313 DEP2000000039

**Total Bid :** \$257,275.00

**Response Date:** 2020-06-30

**Response Time:** 11:49:30

**Comments:**

**FOR INFORMATION CONTACT THE BUYER**

Guy Nisbet  
 (304) 558-2596  
 guy.l.nisbet@wv.gov

**Signature on File**

**FEIN #**

**DATE**

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Control Surveying	600.00000	HOUR	\$75.000000	\$45,000.00

Comm Code	Manufacturer	Specification	Model #
81151601			

Extended Description : (Spec Item 3.1.1.2 & 4.2)

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	Topographic, Planimetric and Check Surveying	1800.00000	HOUR	\$80.000000	\$144,000.00

Comm Code	Manufacturer	Specification	Model #
81151601			

Extended Description : (Spec Item 3.1.1.3 & 4.2)

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
3	Topographic Mapping - (0-25 Acres)	15.00000	ACRE	\$1,200.000000	\$18,000.00

Comm Code	Manufacturer	Specification	Model #
81151601			

Extended Description : (Spec Item 3.2 & 4.2)

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
4	Topographic Mapping - (25-50 Acres)	30.00000	ACRE	\$560.000000	\$16,800.00

Comm Code	Manufacturer	Specification	Model #
81151601			

Extended Description : (Spec Item 3.2 & 4.2)

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
5	Topographic Mapping - (50-100 Acres)	75.00000	ACRE	\$213.000000	\$15,975.00

Comm Code	Manufacturer	Specification	Model #
81151601			

Extended Description : (Spec Item 3.2 & 4.2)

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
6	Topographic Mapping - (Over 100 Acres)	125.00000	ACRE	\$140.000000	\$17,500.00

Comm Code	Manufacturer	Specification	Model #
81151601			

Extended Description : (Spec Item 3.2 & 4.2)



Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

State of West Virginia  
 Request for Quotation  
 34 – Service - Prof

Proc Folder: 730220

Doc Description: Mapping Services in Northern West Virginia

Proc Type: Central Master Agreement

Date Issued	Solicitation Closes	Solicitation No	Version
2020-06-05	2020-06-30 13:30:00	CRFQ 0313 DEP2000000039	1

**BID RECEIVING LOCATION**

BID CLERK  
 DEPARTMENT OF ADMINISTRATION  
 PURCHASING DIVISION  
 2019 WASHINGTON ST E  
 CHARLESTON WV 25305  
 US

**VENDOR**

Vendor Name, Address and Telephone Number:  
 Tuck Mapping Solutions, Inc.  
 PO Box 760, 4632 Aerial Way  
 Big Stone Gap, VA 24219  
 276-523-4669

**FOR INFORMATION CONTACT THE BUYER**

Guy Nisbet  
 (304) 558-2596  
 guy.l.nisbet@wv.gov

Signature X

FEIN # 54-1568570

DATE 06/29/20

All offers subject to all terms and conditions contained in this solicitation

**ADDITIONAL INFORMATION:**

Request for Quotation  
(WV DEP Mapping Services for Northern West Virginia)

In accordance with WV Code 5A-3, The West Virginia Purchasing Division is soliciting bid responses on behalf of the Agency, The West Virginia Department of Environmental Protection (WVDEP) to establish an open-end contract for Mapping Services in the Northern Counties of West Virginia. The scope of work shall include the development of detailed topographical mapping from field survey data, aerial photography, light detection and radar (LIDAR) data, or currently utilized and developing technologies. Per the bid requirements, specifications and terms and conditions as apart of the solicitation documents and attached hereto .

INVOICE TO		SHIP TO	
ENVIRONMENTAL PROTECTION OFFICE OF AML&R 601 57TH ST SE CHARLESTON WV25304 US		ENVIRONMENTAL PROTECTION OFFICE OF AML&R 601 57TH ST SE CHARLESTON WV 25304 US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Control Surveying	600.00000	HOUR	\$75.00	\$45,000.00

Comm Code	Manufacturer	Specification	Model #
81151601			

Extended Description :  
(Spec Item 3.1.1.2 & 4.2)

INVOICE TO		SHIP TO	
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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
2	Topographic, Planimetric and Check Surveying	1800.00000	HOUR	\$80.00	\$144,000.00

Comm Code	Manufacturer	Specification	Model #
81151601			

Extended Description :  
(Spec Item 3.1.1.3 & 4.2)

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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
3	Topographic Mapping - (0-25 Acres)	15.00000	ACRE	\$1,200.00	\$18,000.00

Comm Code	Manufacturer	Specification	Model #
81151601			

Extended Description :  
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ENVIRONMENTAL PROTECTION OFFICE OF AML&R 601 57TH ST SE CHARLESTON WV25304 US		ENVIRONMENTAL PROTECTION OFFICE OF AML&R 601 57TH ST SE CHARLESTON WV 25304 US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
4	Topographic Mapping - (25-50 Acres)	30.00000	ACRE	\$560.00	\$16,800

Comm Code	Manufacturer	Specification	Model #
81151601			

Extended Description :  
(Spec Item 3.2 & 4.2)

INVOICE TO		SHIP TO	
ENVIRONMENTAL PROTECTION OFFICE OF AML&R 601 57TH ST SE CHARLESTON WV25304 US		ENVIRONMENTAL PROTECTION OFFICE OF AML&R 601 57TH ST SE CHARLESTON WV 25304 US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
5	Topographic Mapping - (50-100 Acres)	75.00000	ACRE	\$213.00	\$15,975.00



Comm Code	Manufacturer	Specification	Model #
81151601			

Extended Description :  
 (Spec Item 3.2 & 4.2)

INVOICE TO		SHIP TO	
ENVIRONMENTAL PROTECTION OFFICE OF AML&R 601 57TH ST SE CHARLESTON US	WV25304	ENVIRONMENTAL PROTECTION OFFICE OF AML&R 601 57TH ST SE CHARLESTON US	WV 25304

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
6	Topographic Mapping - (Over 100 Acres)	125.00000	ACRE	\$140.00	\$17,500.00

Comm Code	Manufacturer	Specification	Model #
81151601			

Extended Description :  
 (Spec Item 3.2 & 4.2)

DEP2000000039	<b>Document Phase</b> Final	<b>Document Description</b> Mapping Services in Northern West Virginia	<b>Page 5</b> <b>of 5</b>
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**ADDITIONAL TERMS AND CONDITIONS**

See attached document(s) for additional Terms and Conditions

## INSTRUCTIONS TO VENDORS SUBMITTING BIDS

**1. REVIEW DOCUMENTS THOROUGHLY:** The attached documents contain a solicitation for bids. Please read these instructions and all documents attached in their entirety. These instructions provide critical information about requirements that if overlooked could lead to disqualification of a Vendor's bid. All bids must be submitted in accordance with the provisions contained in these instructions and the Solicitation. Failure to do so may result in disqualification of Vendor's bid.

**2. MANDATORY TERMS:** The Solicitation may contain mandatory provisions identified by the use of the words "must," "will," and "shall." Failure to comply with a mandatory term in the Solicitation will result in bid disqualification.

**3. PREBID MEETING:** The item identified below shall apply to this Solicitation.

A pre-bid meeting will not be held prior to bid opening

A MANDATORY PRE-BID meeting will be held at the following place and time:

All Vendors submitting a bid must attend the mandatory pre-bid meeting. Failure to attend the mandatory pre-bid meeting shall result in disqualification of the Vendor's bid. No one individual is permitted to represent more than one vendor at the pre-bid meeting. Any individual that does attempt to represent two or more vendors will be required to select one vendor to which the individual's attendance will be attributed. The vendors not selected will be deemed to have not attended the pre-bid meeting unless another individual attended on their behalf.

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. Any person attending the pre-bid meeting on behalf of a Vendor must list on the attendance sheet his or her name and the name of the Vendor he or she is representing.

Additionally, the person attending the pre-bid meeting should include the Vendor's E-Mail address, phone number, and Fax number on the attendance sheet. It is the Vendor's responsibility to locate the attendance sheet and provide the required information. Failure to complete the attendance sheet as required may result in disqualification of Vendor's bid.

All Vendors should arrive prior to the starting time for the pre-bid. Vendors who arrive after the starting time but prior to the end of the pre-bid will be permitted to sign in but are charged with knowing all matters discussed at the pre-bid.

Questions submitted at least five business days prior to a scheduled pre-bid will be discussed at the pre-bid meeting if possible. Any discussions or answers to questions at the pre-bid meeting  
Revised 01/09/2020

are preliminary in nature and are non-binding. Official and binding answers to questions will be published in a written addendum to the Solicitation prior to bid opening.

**4. VENDOR QUESTION DEADLINE:** Vendors may submit questions relating to this Solicitation to the Purchasing Division. Questions must be submitted in writing. All questions must be submitted on or before the date listed below and to the address listed below in order to be considered. A written response will be published in a Solicitation addendum if a response is possible and appropriate. Non-written discussions, conversations, or questions and answers regarding this Solicitation are preliminary in nature and are nonbinding.

Submitted e-mails should have solicitation number in the subject line.

Question Submission Deadline: June 18th, 2020 at 9:00 AM. EST.

Submit Questions to: Guy Nisbet  
 2019 Washington Street, East  
 Charleston, WV 25305  
 Fax: (304) 558-4115 (Vendors should not use this fax number for bid submission)  
 Email: Guy.L.Nisbet@WV.Gov.

**5. VERBAL COMMUNICATION:** Any verbal communication between the Vendor and any State personnel is not binding, including verbal communication at the mandatory pre-bid conference. Only information issued in writing and added to the Solicitation by an official written addendum by the Purchasing Division is binding.

**6. BID SUBMISSION:** All bids must be submitted electronically through wvOASIS or signed and delivered by the Vendor to the Purchasing Division at the address listed below on or before the date and time of the bid opening. Any bid received by the Purchasing Division staff is considered to be in the possession of the Purchasing Division and will not be returned for any reason. The Purchasing Division will not accept bids, modification of bids, or addendum acknowledgment forms via e-mail. Acceptable delivery methods include electronic submission via wvOASIS, hand delivery, delivery by courier, or facsimile.

The bid delivery address is:  
 Department of Administration, Purchasing Division  
 2019 Washington Street East  
 Charleston, WV 25305-0130

A bid that is not submitted electronically through wvOASIS should contain the information listed below on the face of the envelope or the bid may be rejected by the Purchasing Division.:

SEALED BID: WV DEP Mapping Services in Northern West Virginia  
 BUYER: Guy Nisbet  
 SOLICITATION NO.:  
 BID OPENING DATE:  
 BID OPENING TIME: 1:30 PM. ET.  
 FAX NUMBER: 304.558.3970

The Purchasing Division may prohibit the submission of bids electronically through wvOASIS at its sole discretion. Such a prohibition will be contained and communicated in the wvOASIS system resulting in the Vendor's inability to submit bids through wvOASIS. Submission of a response to an Expression or Interest or Request for Proposal is not permitted in wvOASIS.

**For Request For Proposal ("RFP") Responses Only:** In the event that Vendor is responding to a request for proposal, the Vendor shall submit one original technical and one original cost proposal plus       N/A       convenience copies of each to the Purchasing Division at the address shown above. Additionally, the Vendor should identify the bid type as either a technical or cost proposal on the face of each bid envelope submitted in response to a request for proposal as follows:

**BID TYPE:** (This only applies to CRFP)

- Technical  
 Cost

**7. BID OPENING:** Bids submitted in response to this Solicitation will be opened at the location identified below on the date and time listed below. Delivery of a bid after the bid opening date and time will result in bid disqualification. For purposes of this Solicitation, a bid is considered delivered when confirmation of delivery is provided by wvOASIS (in the case of electronic submission) or when the bid is time stamped by the official Purchasing Division time clock (in the case of hand delivery).

**Bid Opening Date and Time:** June 30th, 2020 at 1:30 PM. ET.

**Bid Opening Location:** Department of Administration, Purchasing Division  
 2019 Washington Street East  
 Charleston, WV 25305-0130

**8. ADDENDUM ACKNOWLEDGEMENT:** Changes or revisions to this Solicitation will be made by an official written addendum issued by the Purchasing Division. Vendor should acknowledge receipt of all addenda issued with this Solicitation by completing an Addendum Acknowledgment Form, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

**9. BID FORMATTING:** Vendor should type or electronically enter the information onto its bid to prevent errors in the evaluation. Failure to type or electronically enter the information may result in bid disqualification.

**10. ALTERNATE MODEL OR BRAND:** Unless the box below is checked, any model, brand, or specification listed in this Solicitation establishes the acceptable level of quality only and is not intended to reflect a preference for, or in any way favor, a particular brand or vendor. Vendors may bid alternates to a listed model or brand provided that the alternate is at least equal to the model or brand and complies with the required specifications. The equality of any alternate being bid shall be determined by the State at its sole discretion. Any Vendor bidding an alternate model or brand should clearly identify the alternate items in its bid and should include manufacturer's specifications, industry literature, and/or any other relevant documentation demonstrating the

equality of the alternate items. Failure to provide information for alternate items may be grounds for rejection of a Vendor's bid.

This Solicitation is based upon a standardized commodity established under W. Va. Code § 5A-3-61. Vendors are expected to bid the standardized commodity identified. Failure to bid the standardized commodity will result in your firm's bid being rejected.

**11. EXCEPTIONS AND CLARIFICATIONS:** The Solicitation contains the specifications that shall form the basis of a contractual agreement. Vendor shall clearly mark any exceptions, clarifications, or other proposed modifications in its bid. Exceptions to, clarifications of, or modifications of a requirement or term and condition of the Solicitation may result in bid disqualification.

**12. COMMUNICATION LIMITATIONS:** In accordance with West Virginia Code of State Rules §148-1-6.6, communication with the State of West Virginia or any of its employees regarding this Solicitation during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited without prior Purchasing Division approval. Purchasing Division approval for such communication is implied for all agency delegated and exempt purchases.

**13. REGISTRATION:** Prior to Contract award, the apparent successful Vendor must be properly registered with the West Virginia Purchasing Division and must have paid the \$125 fee, if applicable.

**14. UNIT PRICE:** Unit prices shall prevail in cases of a discrepancy in the Vendor's bid.

**15. PREFERENCE:** Vendor Preference may be requested in purchases of motor vehicles or construction and maintenance equipment and machinery used in highway and other infrastructure projects. Any request for preference must be submitted in writing with the bid, must specifically identify the preference requested with reference to the applicable subsection of West Virginia Code § 5A-3-37, and must include with the bid any information necessary to evaluate and confirm the applicability of the requested preference. A request form to help facilitate the request can be found at:  
<http://www.state.wv.us/admin/purchase/vrc/Venpref.pdf>.

**15A. RECIPROCAL PREFERENCE:** The State of West Virginia applies a reciprocal preference to all solicitations for commodities and printing in accordance with W. Va. Code § 5A-3-37(b). In effect, non-resident vendors receiving a preference in their home states, will see that same preference granted to West Virginia resident vendors bidding against them in West Virginia. Any request for reciprocal preference must include with the bid any information necessary to evaluate and confirm the applicability of the preference. A request form to help facilitate the request can be found at: <http://www.state.wv.us/admin/purchase/vrc/Venpref.pdf>.

**16. SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES:** For any solicitations publicly advertised for bid, in accordance with West Virginia Code §5A-3-37(a)(7) and W. Va. CSR § 148-22-9, any non-resident vendor certified as a small, women-owned, or minority-owned business under W. Va. CSR § 148-22-9 shall be provided the same preference made available to any resident vendor. Any non-resident small, women-owned, or

minority-owned business must identify itself as such in writing, must submit that writing to the Purchasing Division with its bid, and must be properly certified under W. Va. CSR § 148-22-9 prior to contract award to receive the preferences made available to resident vendors. Preference for a non-resident small, women-owned, or minority owned business shall be applied in accordance with W. Va. CSR § 148-22-9.

**17. WAIVER OF MINOR IRREGULARITIES:** The Director reserves the right to waive minor irregularities in bids or specifications in accordance with West Virginia Code of State Rules § 148-1-4.6.

**18. ELECTRONIC FILE ACCESS RESTRICTIONS:** Vendor must ensure that its submission in wvOASIS can be accessed and viewed by the Purchasing Division staff immediately upon bid opening. The Purchasing Division will consider any file that cannot be immediately accessed and viewed at the time of the bid opening (such as, encrypted files, password protected files, or incompatible files) to be blank or incomplete as context requires, and are therefore unacceptable. A vendor will not be permitted to unencrypt files, remove password protections, or resubmit documents after bid opening to make a file viewable if those documents are required with the bid. A Vendor may be required to provide document passwords or remove access restrictions to allow the Purchasing Division to print or electronically save documents provided that those documents are viewable by the Purchasing Division prior to obtaining the password or removing the access restriction.

**19. NON-RESPONSIBLE:** The Purchasing Division Director reserves the right to reject the bid of any vendor as Non-Responsible in accordance with W. Va. Code of State Rules § 148-1-5.3, when the Director determines that the vendor submitting the bid does not have the capability to fully perform, or lacks the integrity and reliability to assure good-faith performance.”

**20. ACCEPTANCE/REJECTION:** The State may accept or reject any bid in whole, or in part in accordance with W. Va. Code of State Rules § 148-1-4.5. and § 148-1-6.4.b.”

**21. YOUR SUBMISSION IS A PUBLIC DOCUMENT:** Vendor’s entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

**DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.**

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled “confidential,” “proprietary,” “trade secret,” “private,” or labeled with any other claim against public disclosure of the documents, to include any “trade secrets” as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

**22. INTERESTED PARTY DISCLOSURE:** West Virginia Code § 6D-1-2 requires that the vendor submit to the Purchasing Division a disclosure of interested parties to the contract for all contracts with an actual or estimated value of at least \$1 Million. That disclosure must occur on the form prescribed and approved by the WV Ethics Commission prior to contract award. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission. This requirement does not apply to publicly traded companies listed on a national or international stock exchange. A more detailed definition of interested parties can be obtained from the form referenced above.

**23. WITH THE BID REQUIREMENTS:** In instances where these specifications require documentation or other information with the bid, and a vendor fails to provide it with the bid, the Director of the Purchasing Division reserves the right to request those items after bid opening and prior to contract award pursuant to the authority to waive minor irregularities in bids or specifications under W. Va. CSR § 148-1-4.6. This authority does not apply to instances where state law mandates receipt with the bid.



## **GENERAL TERMS AND CONDITIONS:**

- 1. CONTRACTUAL AGREEMENT:** Issuance of a Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.
- 2. DEFINITIONS:** As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.
  - 2.1. "Agency" or "Agencies"** means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.
  - 2.2. "Bid" or "Proposal"** means the vendors submitted response to this solicitation.
  - 2.3. "Contract"** means the binding agreement that is entered into between the State and the Vendor to provide the goods or services requested in the Solicitation.
  - 2.4. "Director"** means the Director of the West Virginia Department of Administration, Purchasing Division.
  - 2.5. "Purchasing Division"** means the West Virginia Department of Administration, Purchasing Division.
  - 2.6. "Award Document"** means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the contract holder.
  - 2.7. "Solicitation"** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.
  - 2.8. "State"** means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.
  - 2.9. "Vendor" or "Vendors"** means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

**3. CONTRACT TERM; RENEWAL; EXTENSION:** The term of this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below:

**Term Contract**

**Initial Contract Term:** This Contract becomes effective on award and extends for a period of one (1) year(s).

**Renewal Term:** This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal should be delivered to the Agency and then submitted to the Purchasing Division thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Unless otherwise specified below, renewal of this Contract is limited to three (3) successive one (1) year periods or multiple renewal periods of less than one year, provided that the multiple renewal periods do not exceed the total number of months available in all renewal years combined. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

**Alternate Renewal Term** -- This contract may be renewed for \_\_\_\_\_ successive \_\_\_\_\_ year periods or shorter periods provided that they do not exceed the total number of months contained in all available renewals. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

**Delivery Order Limitations:** In the event that this contract permits delivery orders, a delivery order may only be issued during the time this Contract is in effect. Any delivery order issued within one year of the expiration of this Contract shall be effective for one year from the date the delivery order is issued. No delivery order may be extended beyond one year after this Contract has expired.

**Fixed Period Contract:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and must be completed within \_\_\_\_\_ days.

**Fixed Period Contract with Renewals:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and part of the Contract more fully described in the attached specifications must be completed within \_\_\_\_\_ days. Upon completion of the work covered by the preceding sentence, the vendor agrees that maintenance, monitoring, or warranty services will be provided for \_\_\_\_\_ year(s) thereafter.

**One Time Purchase:** The term of this Contract shall run from the issuance of the Award Document until all of the goods contracted for have been delivered, but in no event will this Contract extend for more than one fiscal year.

**Other:** See attached.

**4. NOTICE TO PROCEED:** Vendor shall begin performance of this Contract immediately upon receiving notice to proceed unless otherwise instructed by the Agency. Unless otherwise specified, the fully executed Award Document will be considered notice to proceed.

**5. QUANTITIES:** The quantities required under this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below.

**Open End Contract:** Quantities listed in this Solicitation are approximations only, based on estimates supplied by the Agency. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.

**Service:** The scope of the service to be provided will be more clearly defined in the specifications included herewith.

**Combined Service and Goods:** The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.

**One Time Purchase:** This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General's office.

**6. EMERGENCY PURCHASES:** The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute of breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One Time Purchase contract.

**7. REQUIRED DOCUMENTS:** All of the items checked below must be provided to the Purchasing Division by the Vendor as specified below.

**BID BOND (Construction Only):** Pursuant to the requirements contained in W. Va. Code § 5-22-1(c), All Vendors submitting a bid on a construction project shall furnish a valid bid bond in the amount of five percent (5%) of the total amount of the bid protecting the State of West Virginia. The bid bond must be submitted with the bid.

**PERFORMANCE BOND:** The apparent successful Vendor shall provide a performance bond in the amount of 100% of the contract. The performance bond must be received by the Purchasing Division prior to Contract award.

**LABOR/MATERIAL PAYMENT BOND:** The apparent successful Vendor shall provide a labor/material payment bond in the amount of 100% of the Contract value. The labor/material payment bond must be delivered to the Purchasing Division prior to Contract award.

In lieu of the Bid Bond, Performance Bond, and Labor/Material Payment Bond, the Vendor may provide certified checks, cashier's checks, or irrevocable letters of credit. Any certified check, cashier's check, or irrevocable letter of credit provided in lieu of a bond must be of the same amount and delivered on the same schedule as the bond it replaces. A letter of credit submitted in lieu of a performance and labor/material payment bond will only be allowed for projects under \$100,000. Personal or business checks are not acceptable. Notwithstanding the foregoing, West Virginia Code § 5-22-1 (d) mandates that a vendor provide a performance and labor/material payment bond for construction projects. Accordingly, substitutions for the performance and labor/material payment bonds for construction projects is not permitted.

**MAINTENANCE BOND:** The apparent successful Vendor shall provide a two (2) year maintenance bond covering the roofing system. The maintenance bond must be issued and delivered to the Purchasing Division prior to Contract award.

**LICENSE(S) / CERTIFICATIONS / PERMITS:** In addition to anything required under the Section of the General Terms and Conditions entitled Licensing, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits upon request and in a form acceptable to the State. The request may be prior to or after contract award at the State's sole discretion.

The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications regardless of whether or not that requirement is listed above.

**8. INSURANCE:** The apparent successful Vendor shall furnish proof of the insurance identified by a checkmark below and must include the State as an additional insured on each policy prior to Contract award. The insurance coverages identified below must be maintained throughout the life of this contract. Thirty (30) days prior to the expiration of the insurance policies, Vendor shall provide the Agency with proof that the insurance mandated herein has been continued. Vendor must also provide Agency with immediate notice of any changes in its insurance policies, including but not limited to, policy cancelation, policy reduction, or change in insurers. The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether or not that insurance requirement is listed in this section.

Vendor must maintain:

**Commercial General Liability Insurance** in at least an amount of: \$2,000,000.00 per occurrence.

**Automobile Liability Insurance** in at least an amount of: \$2,000,000.00 per occurrence.

**Professional/Malpractice/Errors and Omission Insurance** in at least an amount of: \_\_\_\_\_ per occurrence. Notwithstanding the forgoing, Vendor's are not required to list the State as an additional insured for this type of policy.

**Commercial Crime and Third Party Fidelity Insurance** in an amount of: \_\_\_\_\_ per occurrence.

**Cyber Liability Insurance** in an amount of: \_\_\_\_\_ per occurrence.

**Builders Risk Insurance** in an amount equal to 100% of the amount of the Contract.

**Pollution Insurance** in an amount of: \_\_\_\_\_ per occurrence.

**Aircraft Liability** in an amount of: \_\_\_\_\_ per occurrence.

Notwithstanding anything contained in this section to the contrary, the Director of the Purchasing Division reserves the right to waive the requirement that the State be named as an additional insured on one or more of the Vendor's insurance policies if the Director finds that doing so is in the State's best interest.

**9. WORKERS' COMPENSATION INSURANCE:** The apparent successful Vendor shall comply with laws relating to workers compensation, shall maintain workers' compensation insurance when required, and shall furnish proof of workers' compensation insurance upon request.

**10. [Reserved]**

**11. LIQUIDATED DAMAGES:** This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue any other available remedy. Vendor shall pay liquidated damages in the amount specified below or as described in the specifications:

\_\_\_\_\_ for \_\_\_\_\_

Liquidated Damages Contained in the Specifications

**12. ACCEPTANCE:** Vendor's signature on its bid, or on the certification and signature page, constitutes an offer to the State that cannot be unilaterally withdrawn, signifies that the product or service proposed by vendor meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise indicated, and signifies acceptance of the terms and conditions contained in the Solicitation unless otherwise indicated.

**13. PRICING:** The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the State. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the State in the Solicitation to do so, may result in bid disqualification. Notwithstanding the foregoing, Vendor must extend any publicly advertised sale price to the State and invoice at the lower of the contract price or the publicly advertised sale price.

**14. PAYMENT IN ARREARS:** Payment in advance is prohibited under this Contract. Payment may only be made after the delivery and acceptance of goods or services. The Vendor shall submit invoices, in arrears.

**15. PAYMENT METHODS:** Vendor must accept payment by electronic funds transfer and P-Card. (The State of West Virginia's Purchasing Card program, administered under contract by a banking institution, processes payment for goods and services through state designated credit cards.)

**16. TAXES:** The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

**17. ADDITIONAL FEES:** Vendor is not permitted to charge additional fees or assess additional charges that were not either expressly provided for in the solicitation published by the State of West Virginia or included in the unit price or lump sum bid amount that Vendor is required by the solicitation to provide. Including such fees or charges as notes to the solicitation may result in rejection of vendor's bid. Requesting such fees or charges be paid after the contract has been awarded may result in cancellation of the contract.

**18. FUNDING:** This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available.

**19. CANCELLATION:** The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may also cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-5.2.b.

**20. TIME:** Time is of the essence with regard to all matters of time and performance in this Contract.

**21. APPLICABLE LAW:** This Contract is governed by and interpreted under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code or West Virginia Code of State Rules is void and of no effect.

**22. COMPLIANCE WITH LAWS:** Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendor acknowledges that it has reviewed, understands, and will comply with all applicable laws, regulations, and ordinances.

**SUBCONTRACTOR COMPLIANCE:** Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to comply with all applicable laws, regulations, and ordinances. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

**23. ARBITRATION:** Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.

- 24. MODIFICATIONS:** This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any change to existing contracts that adds work or changes contract cost, and were not included in the original contract, must be approved by the Purchasing Division and the Attorney General's Office (as to form) prior to the implementation of the change or commencement of work affected by the change.
- 25. WAIVER:** The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.
- 26. SUBSEQUENT FORMS:** The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.
- 27. ASSIGNMENT:** Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments.
- 28. WARRANTY:** The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.
- 29. STATE EMPLOYEES:** State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.
- 30. PRIVACY, SECURITY, AND CONFIDENTIALITY:** The Vendor agrees that it will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the Agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the Agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/default.html>.



**31. YOUR SUBMISSION IS A PUBLIC DOCUMENT:** Vendor's entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

**DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.**

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

**32. LICENSING:** In accordance with West Virginia Code of State Rules § 148-1-6.1.e, Vendor must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities.

**SUBCONTRACTOR COMPLIANCE:** Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to be licensed, in good standing, and up-to-date on all state and local obligations as described in this section. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

**33. ANTITRUST:** In submitting a bid to, signing a contract with, or accepting a Award Document from any agency of the State of West Virginia, the Vendor agrees to convey, sell, assign, or transfer to the State of West Virginia all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to Vendor.

**34. VENDOR CERTIFICATIONS:** By signing its bid or entering into this Contract, Vendor certifies (1) that its bid or offer was made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, person or entity submitting a bid or offer for the same material, supplies, equipment or services; (2) that its bid or offer is in all respects fair and without collusion or fraud; (3) that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; and (4) that it has reviewed this Solicitation in its entirety; understands the requirements, terms and conditions, and other information contained herein.

Vendor's signature on its bid or offer also affirms that neither it nor its representatives have any interest, nor shall acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency. The individual signing this bid or offer on behalf of Vendor certifies that he or she is authorized by the Vendor to execute this bid or offer or any documents related thereto on Vendor's behalf; that he or she is authorized to bind the Vendor in a contractual relationship; and that, to the best of his or her knowledge, the Vendor has properly registered with any State agency that may require registration.

**35. VENDOR RELATIONSHIP:** The relationship of the Vendor to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this Contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents. Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this Solicitation and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the State for any purpose whatsoever. Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but not limited to, Workers' Compensation and Social Security obligations, licensing fees, etc. and the filing of all necessary documents, forms, and returns pertinent to all of the foregoing.

Vendor shall hold harmless the State, and shall provide the State and Agency with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns.

**36. INDEMNIFICATION:** The Vendor agrees to indemnify, defend, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to any person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage and hour laws.

**37. PURCHASING AFFIDAVIT:** In accordance with West Virginia Code §§ 5A-3-10a and 5-22-1(i), the State is prohibited from awarding a contract to any bidder that owes a debt to the State or a political subdivision of the State, Vendors are required to sign, notarize, and submit the Purchasing Affidavit to the Purchasing Division affirming under oath that it is not in default on any monetary obligation owed to the state or a political subdivision of the state.

**38. ADDITIONAL AGENCY AND LOCAL GOVERNMENT USE:** This Contract may be utilized by other agencies, spending units, and political subdivisions of the State of West Virginia; county, municipal, and other local government bodies; and school districts ("Other Government Entities"), provided that both the Other Government Entity and the Vendor agree. Any extension of this Contract to the aforementioned Other Government Entities must be on the same prices, terms, and conditions as those offered and agreed to in this Contract, provided that such extension is in compliance with the applicable laws, rules, and ordinances of the Other Government Entity. A refusal to extend this Contract to the Other Government Entities shall not impact or influence the award of this Contract in any manner.

**39. CONFLICT OF INTEREST:** Vendor, its officers or members or employees, shall not presently have or acquire an interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.

**40. REPORTS:** Vendor shall provide the Agency and/or the Purchasing Division with the following reports identified by a checked box below:

Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.

Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency. Quarterly reports should be delivered to the Purchasing Division via email at [purchasing.requisitions@wv.gov](mailto:purchasing.requisitions@wv.gov).

**41. BACKGROUND CHECK:** In accordance with W. Va. Code § 15-2D-3, the Director of the Division of Protective Services shall require any service provider whose employees are regularly employed on the grounds or in the buildings of the Capitol complex or who have access to sensitive or critical information to submit to a fingerprint-based state and federal background inquiry through the state repository. The service provider is responsible for any costs associated with the fingerprint-based state and federal background inquiry.

After the contract for such services has been approved, but before any such employees are permitted to be on the grounds or in the buildings of the Capitol complex or have access to sensitive or critical information, the service provider shall submit a list of all persons who will be physically present and working at the Capitol complex to the Director of the Division of Protective Services for purposes of verifying compliance with this provision. The State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check.

Revised 01/09/2020

Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

**42. PREFERENCE FOR USE OF DOMESTIC STEEL PRODUCTS:** Except when authorized by the Director of the Purchasing Division pursuant to W. Va. Code § 5A-3-56, no contractor may use or supply steel products for a State Contract Project other than those steel products made in the United States. A contractor who uses steel products in violation of this section may be subject to civil penalties pursuant to W. Va. Code § 5A-3-56. As used in this section:

- a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.
- b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more of such operations, from steel made by the open heath, basic oxygen, electric furnace, Bessemer or other steel making process. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:
  - c. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars (\$2,500.00), whichever is greater. For the purposes of this section, the cost is the value of the steel product as delivered to the project; or
  - d. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

**43. PREFERENCE FOR USE OF DOMESTIC ALUMINUM, GLASS, AND STEEL:** In Accordance with W. Va. Code § 5-19-1 et seq., and W. Va. CSR § 148-10-1 et seq., for every contract or subcontract, subject to the limitations contained herein, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works or for the purchase of any item of machinery or equipment to be used at sites of public works, only domestic aluminum, glass or steel products shall be supplied unless the spending officer determines, in writing, after the receipt of offers or bids, (1) that the cost of domestic aluminum, glass or steel products is unreasonable or inconsistent with the public interest of the State of West Virginia, (2) that domestic aluminum, glass or steel products are not produced in sufficient quantities to meet the contract requirements, or (3) the available domestic aluminum, glass, or steel do not meet the contract specifications. This provision only applies to public works contracts awarded in an amount more than fifty thousand dollars (\$50,000) or public works contracts that require more than ten thousand pounds of steel products.

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a

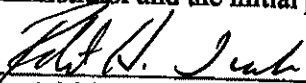
“substantial labor surplus area”, as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products. This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

All bids and offers including domestic aluminum, glass or steel products that exceed bid or offer prices including foreign aluminum, glass or steel products after application of the preferences provided in this provision may be reduced to a price equal to or lower than the lowest bid or offer price for foreign aluminum, glass or steel products plus the applicable preference. If the reduced bid or offer prices are made in writing and supersede the prior bid or offer prices, all bids or offers, including the reduced bid or offer prices, will be reevaluated in accordance with this rule.

**44. INTERESTED PARTY SUPPLEMENTAL DISCLOSURE:** W. Va. Code § 6D-1-2 requires that for contracts with an actual or estimated value of at least \$1 million, the vendor must submit to the Agency a supplemental disclosure of interested parties reflecting any new or differing interested parties to the contract, which were not included in the original pre-award interested party disclosure, within 30 days following the completion or termination of the contract. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission. This requirement does not apply to publicly traded companies listed on a national or international stock exchange. A more detailed definition of interested parties can be obtained from the form referenced above.


**45. PROHIBITION AGAINST USED OR REFURBISHED:** Unless expressly permitted in the solicitation published by the State, Vendor must provide new, unused commodities, and is prohibited from supplying used or refurbished commodities, in fulfilling its responsibilities under this Contract.

**DESIGNATED CONTACT:** Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

  
 \_\_\_\_\_  
 (Name, Title)  
 Robert H. Tuck, President  
 \_\_\_\_\_  
 (Printed Name and Title)  
 4632 Aerial Way, Big Stone Gap, VA 24219  
 \_\_\_\_\_  
 (Address)  
 276-523-4669, 276-523-4673  
 \_\_\_\_\_  
 (Phone Number) / (Fax Number)  
 btuck@tuckmapping.com  
 \_\_\_\_\_  
 (email address)

**CERTIFICATION AND SIGNATURE:** By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

Tuck Mapping Solutions, Inc.

\_\_\_\_\_  
 (Company)  
  
 \_\_\_\_\_  
 (Authorized Signature) (Representative Name, Title)  
 Robert H. Tuck, President  
 \_\_\_\_\_  
 (Printed Name and Title of Authorized Representative)  
 June 29, 2020  
 \_\_\_\_\_  
 (Date)  
 276-523-4669, 276-523-4673  
 \_\_\_\_\_  
 (Phone Number) (Fax Number)

**ADDENDUM ACKNOWLEDGEMENT FORM  
SOLICITATION NO.:**

**Instructions:** Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

**Acknowledgment:** I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

**Addendum Numbers Received:**  
*(Check the box next to each addendum received)*

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6  |
| <input type="checkbox"/> Addendum No. 2            | <input type="checkbox"/> Addendum No. 7  |
| <input type="checkbox"/> Addendum No. 3            | <input type="checkbox"/> Addendum No. 8  |
| <input type="checkbox"/> Addendum No. 4            | <input type="checkbox"/> Addendum No. 9  |
| <input type="checkbox"/> Addendum No. 5            | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Tuck Mapping Solutions, Inc.

Company \_\_\_\_\_



Authorized Signature \_\_\_\_\_

June 29, 2020

Date \_\_\_\_\_

**NOTE:** This addendum acknowledgment should be submitted with the bid to expedite document processing.

REQUEST FOR QUOTATION  
[Mapping Services in Northern WV]

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**SPECIFICATIONS**

- 1. PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia Department of Environmental Protection to establish an open-end contract for Mapping Services in the Southern Counties of West Virginia. The scope of work shall include the development of detailed topographical mapping from field survey data, aerial photography, light detection and radar (LIDAR) data, or currently utilized and developing technologies. Upon delivery, these data should be suitable and adequate for the development of detailed construction plans and specifications. The limits of areas to be mapped shall be outlined on documents included in the Work Directive, and also, as directed and determined during initial on-site meetings.

Counties included on this contract are Cabell, Putnam, Kanawha, Clay, Nicholas, Greenbrier, Fayette, Summers, Mercer, Raleigh, Wyoming, McDowell, Mingo, Logan, Boone, Lincoln, Wayne, Roane, Jackson, Mason, Braxton

Previous Solicitation: CRFQ DEP1600000054 that closed on 06/21/2016. Vendors may view previous solicitation responses on the West Virginia Purchasing Division Bid Opening page:

<http://www.state.wv.us/admin/purchase/Bids/FY2016/BO20160621.html>

Vendors are encouraged to read solicitation thoroughly as specifications and Terms and Conditions most likely have changed since last advertised.

- 2. DEFINITIONS:** The terms listed below shall have the meanings assigned to them below. Additional definitions can be found in section 2 of the General Terms and Conditions.
- 2.1 “Contract Item” or “Contract Items”** means the list of items identified in Section 3.1 below and on the Pricing Pages.
- 2.2 “Pricing Pages”** means the schedule of prices, estimated order quantity, and totals contained in wvOASIS or attached hereto as Exhibit A and used to evaluate the Solicitation responses.
- 2.3 “Solicitation”** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.
- 2.4 “Lidar”** is an optical sensing technology used to determine the position, velocity, or other characteristics of distant objects by analysis of pulsed laser light reflected from their surfaces.
- 2.5 “NAD83/2011”** is the North American Datum of 1983.



REQUEST FOR QUOTATION  
[Mapping Services in Northern WV]

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- 2.6 "NAVD/88" is the North American Vertical Datum of 1988.
- 2.7 "ASCII" is the American Standard Code for Information Interchange.
- 2.8 "ASC" is the American Standard Code which is a text file in which each byte represents one character according to ASCII Code.
- 2.9 "TXT" is a computer file that contains Text (and possibly formatting instructions) using seven-bit ASCII characters.
- 2.10 "GSD" is the Ground Sample Distance which is the physical measure of the level of detail of data collection for remote digital imaging of the surfaces of terrestrial objects.
- 2.11 "NTE" means Not-To-Exceed.
- 2.12 "RGB" means Red-Green-Blue which is a color model based on additive color primaries.
- 2.13 "JPEG" means Joint Photographic Experts Group which is a development group for compressed 24-bit color image stored format, also a file extension.
- 2.14 "TIFF" means Tagged Image File Format which is a graphics file format.
- 2.15 "USB" means Universal Serial Bus which is an industry standard developed in the mid-1990s that defines the cables, connectors and communication protocols in a bus for connection, communication and power supply between computers electronic devices.
- 2.16 "2D" means two-dimensional space which is a geometric model of the planar project.
- 2.17 "3D" means three-dimensional space which is a three-dimensional representation of geometric data.
- 2.18 "CSV" means Comma Separated Values which is a file that stores tabular data (numbers and text) in plain text.
- 2.19 "XML" means Extensible Markup Language which is a markup language that defines a set of rules for encoding documents in a format which is both human-readable and machine-readable.
- 2.20 "LAS" means Laser File Format which is a file format which is used in lidar processing operations.

REQUEST FOR QUOTATION  
[Mapping Services in Northern WV]

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- 2.21 "DWG" means Drawing Format which is a binary file format used for storing two- and three-dimensional design data and metadata. It is the native format for several CAD packages.
- 2.22 "DTM" means Digital Terrain Model which is a utility (command) for AutoCAD that automatically creates an irregular triangular network from a given selection set of 3D objects.
- 2.23 "DEM" means Digital Elevation Model which is a digital model or three-dimensional representation of a terrain's surface.
- 2.24 "AutoCAD" is a commercial software application for two-dimensional and three-dimensional computer aided design (CAD) and drafting.
- 2.25 "GPS" means Global Positioning System which is a space-based navigation system that provides location and time information in all weather conditions, anywhere on or near the Earth where there is an unobstructed line of sight to four or more GPS satellites.
- 2.26 "RFQ" means Request for Quotation.
- 2.27 "F.O.B." is an abbreviation for Free on Board which means that a vendor or consignor will deliver goods without any expense to the consignee.

**3. GENERAL REQUIREMENTS:**

- 3.1 **Contract Items and Mandatory Requirements:** Vendor shall provide Agency with the Contract Items listed below on an open-end and continuing basis. Contract Items must meet or exceed the mandatory requirements as shown below.

**3.1.1 CONTROL, TOPOGRAPHIC, PLANIMETRIC AND CHECK SURVEY**

- 3.1.1.1 Use of publicly available data to generate deliverable must be sited with metadata providing source of data, datum, projection and units of measure. Cite sampling tests to indicate level of precision of data set regarding deliverable.
- 3.1.1.2 All field surveys will be based upon the NAD83/2011 WV State Plane horizontal datum and the NAVD88 vertical datum. Benchmarks and horizontal control shall be of a permanent nature and established outside of the anticipated limits of construction.

The minimum requirements for the installation of control shall be specified in the project Work Directive.

**3.1.1.2.1** The Measurement and payment for control surveying shall be 'per hour' and shall be inclusive of all requirements herein. No additional payment will be made for this work.

**3.1.1.3** Field Surveys for Topographic Mapping – Field surveys will be conducted as needed to establish horizontal and vertical control data for preparation of the topographic map(s) as well as the required check sections and any necessary planimetric locations. The following specifications and stipulations will apply to field survey:

**3.1.1.3a** The maximum allowable relative horizontal positioning precision is 2 cm (0.07 feet) plus 50 parts per million (based upon direct distance between the two points.)

**3.1.1.3b** Horizontal traverses shall be closed. Total angular misclosure shall be less than 5 seconds times the number of angles. Horizontal direction shall be referenced to the horizontal datum specified in Section 3.1.1.2.

**3.1.1.3c** A baseline shall be established across or in close proximity to the site with permanent objects or conventional surveying markers as directed in Item (d) below. Baselines may be established on pre-existing jeep trails, roads or utility rights of way on or in close proximity to the site. A minimum of three (3) baseline stations shall be monumented by conventional survey markers (e.g. galvanized spikes, rebar with plastic caps, etc.) set flush with the ground surface and referenced by guard stakes, and shall be inter-visible to one another and be tied to the horizontal and vertical control.

**3.1.1.3d** All field survey control work on the public right of way where possible, however, the WVDEP/AML shall obtain right of way on private property where needed.

**3.1.1.3e** During the field survey, traverse stations shall be marked and referenced so that they can be readily recovered or re-established. A minimum of two reference points should be set at each horizontal change in the baseline.

Traverse stations shall be marked by conventional survey markers (e.g. galvanized spikes, rebar with plastic caps, etc.) flush with the ground surface and referenced by guard stakes or natural or identifiable permanent objects at the ground surface. The location and description of all traverse stations shall be accurately recorded in the notes or contained within a point list file, such as an ASCII format (i.e. ASC or TXT.) The markings on the guard stakes shall include the station number and elevation of the traverse station.

**3.1.1.3f** Vertical traverses shall be of such precision that the error of closure (in feet) shall not exceed plus or minus 0.05 times the square root of the length of the traverse (in miles). The locations, descriptions and elevations of benchmarks shall be accurately recorded in the notes or contained within a point list file.

**3.1.1.4** The measurement and payment for Topographic, Planimetric and Check Surveying shall be 'per hour' and shall be inclusive of all requirements herein. No additional payment will be made for this work.

## **3.2 Topographic Mapping**

### **3.2.1 TOPOGRAPHICAL MAPPING using Aerial Photography and Airborne or Terrestrial LIDAR**

**3.2.1.1** Aerial Photography – Digital imagery derived from a digital camera shall have a gsd (ground sample distance) NTE of 10.0 cm, RGB (color). NTE 12 microns. The photographs shall be made with a calibrated precision-type aerial camera in a vertical position. The Mapping Consultant or their Sub-Consultant shall supply (1) a copy of a calibration certificate, issued by the National Institute of Standards and Technology (NIST) or other competent testing organizations, which is dated within the past thirty-six (36) months or (2) a copy of a specification document issued by a competent testing organization or the manufacturer citing the fiduciary dimensions of the imaging device upon demand by the DEP. Any commercial aerial film with a fine-grain emulsion may be used. Altitude shall be the height above average ground required to achieve the accuracy listed in these specifications, not to exceed 4,800 feet.

REQUEST FOR QUOTATION  
[Mapping Services in Northern WV]

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The time for taking the photographs shall be such that the sky is clear of clouds and haze, streams are within their normal banks, deciduous trees and other vegetation are without leaves and the ground is free from snow cover. The time for taking of photographs shall be further confined to that portion of the day when the sun is at its highest angle.

The entire project area shall have stereoscopic coverage within the useable distortion-free portion of the field of the lens. Side overlap shall be no less than 25 percent.

At the completion of the work, the following shall be provided the contracting officer.

- 3.2.1.1a** All imagery shall be submitted in both digital format (JPEG or TIFF), and printed photos of the mapped area(s).
- 3.2.1.1b** Copies of cross-sections taken every 300 feet along the baseline, plotted and overlaid on cross-sections developed from the mapping to verify the mapping accuracy. Upon review, WVDEP/AML reserves the right to request corrections to any discrepancies of areas of concern. The requested corrections shall be made at the vendor's cost. These areas shall specifically include areas of mapping in which concentrated design and/or construction efforts are required, as per the Work Directive, and also, as directed and determined during initial and subsequent on-site meetings.
- 3.2.1.1c** Two sources of digital electronic media (e.g. compact disc, USB drive, etc.) containing all survey mapping and data, and all data sets obtained or generated (i.e. point and classification data) contours, 2D base-map, 3D planimetrics and breaklines, surface modeling, flight lines, extents, associated ASCII, CSV, TXT, XML, LAS, DWG files and DTM/DEM model file(s) delivered in digital data files compatible to AutoCAD version 2010 format or later.
- 3.2.1.2** Public Source Data – Use of publicly available data to generate deliverable source of data must be cited with metadata providing source of data, datum, projection and units of measure. Cite sampling test to indicate level of precision of data set regarding deliverable.

- 3.2.1.3** LiDAR – Airborne or Terrestrial LiDAR data, either obtained from available sources, or generated and compiled, shall meet requirements outlined in the National Geospatial Program LiDAR Base Specification Version 1.2 for Quality Level 2 (aggregate nominal pulse density of no less than 2 pulses per square meter). LiDAR shall be classified for the recovery of bare Earth data.
- 3.2.1.4** Field Surveys – Field surveys will be conducted as needed to establish horizontal and vertical control data for use in compiling mapping from aerial photography. Such surveys shall also be performed to obtain ground surveyed check sections and airborne LiDAR data collections. Typical technologies for survey data collection include the use of conventional and robotic total stations, terrestrial imaging and global positioning system (GPS) survey equipment.
- 3.2.1.5** Topographic Mapping – Topographic base map drawings shall be on 24" x 36" standard map sheets. Every 10' contour interval shall be accentuated with elevations noted. The topographic contour map(s) shall be prepared using stereo photogrammetric or DTM methods. The basic map shall be plotted and mechanically transcribed to a scale of 1" = 50' with a contour interval of 1 foot unless otherwise specified by the DEP based on particular needs established due to the site-specific circumstances. Digitally compiled and triangulated surface model(s) shall be DTM or XML compatible formats.

The topographic drawings shall have included on them (lower right part of map) the following:

- The name of the project
- Inserts showing location and all control and reference points
- The location of the project (county map)
- Legend
- Title block for approval signatures
- Map Scale
- North Arrow
- Coordinate Grid Lines

The various views required to be presented on the drawings shall be oriented in the following manner:

- 3.2.1.5a** If the mapping requires the use of two sheets or more, match lines will be used to relate the sheets together. If the

use of more than two sheets is necessary, an additional sheet will be required with a reduced scale enabling the placement of the entire area on one sheet indicating how the sheets relate to each other.

- 3.2.1.5b** Each topographic sheet shall be oriented, whenever possible so the direction of stream flow is from the left to the right or from the top to the bottom of sheet. Arrows indicating the direction of stream flow will be included. Spot elevations shall be shown to assist in determination of hilltops, saddles and road intersections. Each sheet shall contain a bar scale and a geodetic or polar north arrow.
- 3.2.1.5c** Physical Features – All physical features situated on the ground such as vegetation, rivers, ponds, lakes, small streams, rock outcrops and other unusual features will be located and identified on the topographic map.
- 3.2.1.5d** Cultural Features – All cultural features such as houses, barns, buildings, commercial businesses, highways, railroad, bridges, pipelines, farm ponds, fences, electric power lines, telephone lines, utility lines, gas wells and any other cultural features shall be located and identified on the topographic map. Specific features dealing with mining such as the limits of coal refuse, landslides if determinable, the location of strip mine highwalls and overburden, deep mine openings, both draining and dry and any other mining related feature must be located and identified on the topographic map. This requirement should be accomplished to the best degree possible without an actual detailed survey, such as digital orthophotos.
- 3.2.1.5e** All horizontal and vertical control points – to include permanent or temporary benchmarks, will be located and identified on the map. There shall be a minimum of three vertical points and three horizontal points.
- 3.2.1.5f** The precision of the topographic map for all areas within the actual project area shall not be less than the following:
- Average error shall not exceed 0.01 x the scale of the map expressed in feet per inch.

REQUEST FOR QUOTATION  
[Mapping Services in Northern WV]

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- Percentage errors in scaled errors shall not exceed 0.02 x the scale of the map expressed in feet per inch.
- Of points chosen at random, the percentage whose error in elevation exceeds one-half the specified contour interval shall not exceed 10 percent.
- All maps shall be drawn to the limits as shown on the mapping outline for the individual areas.

**Note:** Areas outside the actual project limits are to be as precise as conditions allow but will not be held to these limits.

**3.2.1.5g** Symbols and abbreviations shall be in accordance with "Standard Map Symbols" published by the Soil Conservation Service, U.S. Department of Agriculture, January 1965 or adopted industry standards.

**3.2.1.6** The measurement and payment for Topographic Mapping shall be 'per acre' and shall be inclusive of all requirements herein. No additional payment will be made for this work.

### **3.3 Mapping Consultant Qualification Requirements**

**3.3.1** The mapping consultant shall demonstrate the capability of providing topographical, design data and construction surveys in accordance with US National Map Standards. Minimum experience is two (2) years. To the extent possible, the Mapping Consultant will utilize available aerial photography, aerial topographic maps and existing or generated, LiDAR data sets and the information contained thereon, in addition to, planimetric locations for the development of mapping. All survey work described below shall be performed under the direction of a Professional Surveyor, licensed or registered in the State of West Virginia, who will certify the work and drawings performed under this contract and as directed in the specific project work directive.

During the performance of this contract, the Mapping Consultant agrees to follow and obey all Federal and State Laws and Regulations, etc.

The Mapping Consultant must meet the requirements listed below in order to be considered qualified to perform the work designated by this RFQ. Successful Mapping Consultants should have the following professional capabilities or staff available at the time of the bid.

- Professional Surveyor



REQUEST FOR QUOTATION  
[Mapping Services in Northern WV]

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- Competent Field Staff and Survey Crew
- Professional Drafting Capabilities
- Adequate Computer Aided Design Capabilities (AutoCAD Version 2010 format (or later) or Engineer approved alternate)
- Capacity to process and complete multiple projects within the designated time frames

**Mapping Consultant must submit the following at the time of bid:**

- Names of individuals performing work including registration/licensing numbers.
- List of similar work completed by your firm (include five (5) recent examples).
- Name of Project Manager anticipated for this work.
- Number of years your company has performed this type of work.

**The Mapping Consultant will be required to have knowledge or experience in the following areas:**

- Development of Topographic Mapping from Field Survey as well as from Aerial Photographs or currently utilized and developing technologies. The use of Sub-Consultants will be permitted under this contract for aerial photography work.

**3.4 Additional Requirements**

- 3.4.1 In accomplishing services to fulfill the requirements of Work Directives, neither the Mapping Consultant or his Sub-Consultant shall create any adverse environmental effects, and shall be responsible for all compliance with all applicable local, state and federal environmental and occupational health and safety laws and regulations pertinent to the work.
- 3.4.2 Any Mapping Consultant shall be ineligible to bid on any aspect of the construction phase of a project if it prepared any part or aided in the preparation of any part of the contract documents for construction.
- 3.4.3 WVDEP/AML may retain ten percent (10%) of the Mapping Consultant's invoices until such time the Department is satisfied that all of the conditions of the contract have been met. The mapping consultant must be responsible for taking any and all such measures as are necessary to correct any defect(s) arising out of the contract which are proven to be as a result of error(s) in the mapping. Such corrective action(s) shall be performed to the satisfaction of the Assistant Director.

REQUEST FOR QUOTATION  
[Mapping Services in Northern WV]

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**3.5 Location of Work:**

- 3.5.1** The mapping consultant shall furnish all personnel, facilities, equipment, material, supplies and services for all of the scope of work required in this contract at the location(s) specified.
- 3.5.2** The area of work shall include the entire State of West Virginia. The counties listed below are the coal producing counties and those in parentheses represent where most of the work required in the contract is located.

**“Northern” Counties**

1. (Hancock)
2. (Brooke)
3. (Ohio)
4. Marshall
5. Wetzell
6. Tyler
7. (Monongalia)
8. (Preston)
9. (Marion)
10. Doddridge
11. (Harrison)
12. (Taylor)
13. Mineral
14. (Grant)
15. (Tucker)
16. (Barbour)
17. (Lewis)
18. (Braxton)
19. (Upshur)
20. (Webster)
21. Pocahontas
22. (Randolph)
23. Pendleton
24. (Gilmer)
25. Calhoun

- 3.6 Contractor Information Form (AVS):** Vendor must complete this form to request an eligibility evaluation from the Office of Surface Mining Reclamation and Enforcement. This requirement applies to contractors and their sub-contractors and is found under OSMRE’s regulations at 30 CFR 874.16. Vendor must sign and date

REQUEST FOR QUOTATION  
[Mapping Services in Northern WV]

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and form must be recent. Vendor should provide this document with their submitted bid response and will be required prior to award.

**4. CONTRACT AWARD:**

- 4.1 Contract Award:** The Contract is intended to provide Agencies with a purchase price on all Contract Items. The Contract shall be awarded to the Vendor that provides the Contract Items meeting the required specifications for the lowest overall Total Bid Amount as shown on the Pricing Pages.
- 4.2 Pricing Pages:** Vendor should complete the Pricing Pages in Oasis with Bid Cost per Unit. Vendor should complete the Pricing Pages in their entirety as failure to do so may result in Vendor's bids being disqualified.

The Pricing Pages contain a list of the Contract Items and estimated purchase volume. The estimated purchase volume for each item represents the approximate volume of anticipated purchases only. No future use of the Contract or any individual item is guaranteed or implied.

For a bid to be accepted, all line items must contain a price or be inclusive in another item. Otherwise, bid will be disqualified.

Vendor should electronically enter the information into the Pricing Pages through wvOASIS, if available, or as an electronic document. If responding with a paper bid, Vendors should download and/or print the assembled CRFQ document (with the highest version number) from wvOASIS and insert their unit price and extended cost for each line item.

**5. ORDERING AND PAYMENT:**

- 5.1 Ordering:** Vendor shall accept orders through wvOASIS, regular mail, facsimile, e-mail, or any other written form of communication. Vendor may, but is not required to, accept on-line orders through a secure internet ordering portal/website. If Vendor has the ability to accept on-line orders, it should include in its response a brief description of how Agencies may utilize the on-line ordering system. Vendor shall ensure that its on-line ordering system is properly secured prior to processing Agency orders on-line.

This is an indefinite quantity contract for the services specified in the Statement of Work and for the period set forth herein. Delivery and performance shall be made in accordance with the provisions of this contract.

Work will be ordered by the WVDEP/AML Project Manager or authorized representative through a Work Directive which shall specify the location of this

REQUEST FOR QUOTATION  
[Mapping Services in Northern WV]

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project site, the specified problem, the work to be performed and the time frame during which the work must be completed. The Mapping Consultant will then be responsible for contacting WVDEP/AML to arrange an on-site meeting. Upon completion of a field reconnaissance with a WVDEP/AML representative, the Mapping Consultant will submit a Cost Proposal for the work requested, signed by a principal of the firm. The individual project cost proposal which contains the quantity estimates shall be in accordance with the unit prices provided in the response to this RFQ.

- 5.2 Payment:** Vendor shall accept payment in accordance with the payment procedures of the State of West Virginia. Payment to the Mapping Consultant will be made on the basis of the items and unit prices outlined in the Purchase Order.

The Mapping Consultant shall invoice after the completion of work specified in the Work Directive and after submission of all required work when the Performance Period is less than thirty (30) days. Invoices may be submitted monthly when the Performance Period exceeds thirty (30) days.

**6. DELIVERY AND RETURN:**

- 6.1 Delivery Time:** The Mapping Consultant shall prepare, submit and deliver all original survey notes, associated data files, base topographic mapping and additional drawings etc., or calculations as may be requested by the specific Work Directive within the time frame established for the project. The submission of all preliminary documents or required revisions must also be accomplished within said time frame. Additional time will be given for completion of any revisions and to provide time for billings. Such time to be defined as the performance period.

The WVDEP/AML will be responsible for obtaining any necessary Rights of Entry for purposes for performing field surveys to provide ground control for topographic mapping from aerial photography. The majority of this work should be done in public access areas such as highway right of way, etc. Additionally, any ground surveys will require the Mapping Consultant to identify to the WVDEP/AML any areas requiring access so that the WVDEP/AML may obtain Right of Entry for those areas.

The work and services to be performed under this contract shall be subject to continuous monitoring and inspection by the State's authorized representatives. Such inspector will ensure compliance. Final Inspection and acceptance will be made by the WVDEP/AML Project Manager or authorized representatives.

- 6.2 Late Delivery:** The Agency placing the order under this Contract must be notified in writing if orders will be delayed for any reason. Any delay in delivery that could cause harm to an Agency will be grounds for cancellation of the delayed order, and/or obtaining the items ordered from a third party. If time frames are not met, the

REQUEST FOR QUOTATION  
[Mapping Services in Northern WV]

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WVDEP/AML may refrain from issuing further Work Directives and if a Mapping Consultant persists in being late with submittals, the WVDEP/AML may refuse to renew the Mapping Consultant's contract.

Any Agency seeking to obtain items from a third party under this provision must first obtain approval of the Purchasing Division.

- 6.3 Delivery Payment/Risk of Loss:** Standard order delivery shall be F.O.B. destination to the Agency's location. Vendor shall include the cost of standard order delivery charges in its bid pricing/discount and is not permitted to charge the Agency separately for such delivery. The Agency will pay delivery charges on all emergency orders provided that Vendor invoices those delivery costs as a separate charge with the original freight bill attached to the invoice.
- 6.4 Return of Unacceptable Items:** If the Agency deems the Contract Items to be unacceptable, the Contract Items shall be returned to Vendor at Vendor's expense and with no restocking charge. Vendor shall either make arrangements for the return within five (5) days of being notified that items are unacceptable, or permit the Agency to arrange for the return and reimburse Agency for delivery expenses. If the original packaging cannot be utilized for the return, Vendor will supply the Agency with appropriate return packaging upon request. All returns of unacceptable items shall be F.O.B. the Agency's location. The returned product shall either be replaced, or the Agency shall receive a full credit or refund for the purchase price, at the Agency's discretion.
- 6.5 Return Due to Agency Error:** Items ordered in error by the Agency will be returned for credit within 30 days of receipt, F.O.B. Vendor's location. Vendor shall not charge a restocking fee if returned products are in a resalable condition. Items shall be deemed to be in a resalable condition if they are unused and in the original packaging. Any restocking fee for items not in a resalable condition shall be the lower of the Vendor's customary restocking fee or 5% of the total invoiced value of the returned items.

**7. VENDOR DEFAULT:**

- 7.1** The following shall be considered a vendor default under this Contract.
- 7.1.1** Failure to provide Contract Items in accordance with the requirements contained herein.
- 7.1.2** Failure to comply with other specifications and requirements contained herein.

REQUEST FOR QUOTATION  
[Mapping Services in Northern WV]

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7.1.3 Failure to comply with any laws, rules, and ordinances applicable to the Contract Services provided under this Contract.

7.1.4 Failure to remedy deficient performance upon request.

7.2 The following remedies shall be available to Agency upon default.

7.2.1 Immediate cancellation of the Contract.

7.2.2 Immediate cancellation of one or more release orders issued under this Contract.

7.2.3 Any other remedies available in law or equity.

**8. MISCELLANEOUS:**

8.1 **No Substitutions:** Vendor shall supply only Contract Items submitted in response to the Solicitation unless a contract modification is approved in accordance with the provisions contained in this Contract.

8.2 **Vendor Supply:** Vendor must carry sufficient inventory of the Contract Items being offered to fulfill its obligations under this Contract. By signing its bid, Vendor certifies that it can supply the Contract Items contained in its bid response.

8.3 **Reports:** Vendor shall provide quarterly reports and annual summaries to the Agency showing the Agency's items purchased, quantities of items purchased, and total dollar value of the items purchased. Vendor shall also provide reports, upon request, showing the items purchased during the term of this Contract, the quantity purchased for each of those items, and the total value of purchases for each of those items. Failure to supply such reports may be grounds for cancellation of this Contract.

8.4 **Contract Manager:** During its performance of this Contract, Vendor must designate and maintain a primary contract manager responsible for overseeing Vendor's responsibilities under this Contract. The Contract manager must be available during normal business hours to address any customer service or other issues related to this Contract. Vendor should list its Contract manager and his or her contact information below.

**Contract Manager:** Robert H. Tuck

**Telephone Number:** 276-523-4669

**Fax Number:** 276-523-4673

REQUEST FOR QUOTATION  
[Mapping Services in Northern WV]

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**Email Address:** btuck@tuckmapping.com

OMB # 1029-0119  
Expiration Date: 10/31/2021

**ABANDONED MINE LANDS (AML) CONTRACTOR INFORMATION FORM**

You must complete this form for your AML contracting officer to request an eligibility evaluation from the Office of Surface Mining Reclamation and Enforcement (OSMRE) to determine if you are eligible to receive an AML contract. This requirement applies to contractors and their sub-contractors and can be found under OSMRE's regulations at 30 CFR 874.16. **NOTE:** This form must be signed and dated within 30 days of submission to be considered for a current bid.

**Part A: General Information**

Business Name: Tuck Mapping Solutions, Inc.  
Tax ID #: 54-1568570  
Address: 4632 Aerial Way  
City, State, & Zip: Big Stone Gap, VA 24219  
Phone Number: 276-523-4669  
Email Address: btuck@tuckmapping.com

**Part B: Obtain an Organizational Family Tree (OFT) from the Applicant Violator System (AVS)**

If you plan to certify the existing AVS information or submit updates under Part C, you must include an OFT. To obtain an OFT, you may contact the AVS Office at 800-643-9748 or from the AVS website at: <https://avss.osmre.gov/>. Instructions for how to download an OFT from the AVS can be found at: <https://www.osmre.gov/programs/AVS/aml-instructions.pdf>.

**Part C: Certifying and updating information in the AVS**

Select only one of the following options, follow the instructions for that option, and sign and date below.

I, Robert H. Tuck, have express authority to certify that:  
(Print Name)

1. Our business is in the AVS and is accurate, complete, and up-to-date. If you select this option, you must attach an Entity OFT from the AVS to this form. Do not complete Part D.
2. Our business is in the AVS but needs to be updated. If you select this option you must attach an Entity OFT from the AVS to this form. Use Part D to provide the missing or corrected information.
3. Our business is not in the AVS and needs to be added. Complete Part D.

06/29/20  
Date

  
Signature

President  
Title



**Part D: OFT Information**

Contractor's Business Name: Tuck Mapping Solutions, Inc.

If the current Entity OFT information for your business is incomplete in the AVS, or if there is no information in the AVS for your business, you must provide all of the following information as it applies to your business. Please include additional copies of this page if the space below is not sufficient to capture all information.

- Every officer (President, Vice President, Secretary, Treasurer, etc.);
- All Directors, Partners, and Members;
- All persons performing a function similar to a Director;
- Every person or business that owns 10% or more of the voting stock in your business;
- Any other person(s) who has the ability to determine the manner in which the AML reclamation project is being conducted.
- Please list an end date for any person no longer with your business.

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Begin Date: \_\_\_\_\_  
 End Date: \_\_\_\_\_  
 % Ownership: \_\_\_\_\_  
 Position/Title: \_\_\_\_\_  
 Phone Number: \_\_\_\_\_

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Begin Date: \_\_\_\_\_  
 End Date: \_\_\_\_\_  
 % Ownership: \_\_\_\_\_  
 Position/Title: \_\_\_\_\_  
 Phone Number: \_\_\_\_\_

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Begin Date: \_\_\_\_\_  
 End Date: \_\_\_\_\_  
 % Ownership: \_\_\_\_\_  
 Position/Title: \_\_\_\_\_  
 Phone Number: \_\_\_\_\_

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Begin Date: \_\_\_\_\_  
 End Date: \_\_\_\_\_  
 % Ownership: \_\_\_\_\_  
 Position/Title: \_\_\_\_\_  
 Phone Number: \_\_\_\_\_

**PAPERWORK REDUCTION STATEMENT**

The Paperwork Reduction Act of 1995 (44 U.S.C 3501) requires us to inform you that: Federal Agencies may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a current valid OMB control number. This information is necessary for all successful bidders prior to the distribution of AML funds, and is required to obtain a benefit.

Public reporting burden for this form is estimated to range from 15 minutes to one hour, with an average of 30 minutes per response, including time for reviewing instructions, gather and maintaining data, and completing and reviewing the form. You may direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Office of Surface Mining Reclamation and Enforcement, 1849 C Street, NW, Room 4559, Washington, DC 20240.

## West Virginia Ethics Commission



### Disclosure of Interested Parties to Contracts

Pursuant to *W. Va. Code* § 6D-1-2, a state agency may not enter into a contract, or a series of related contracts, that has/have an actual or estimated value of \$1 million or more until the business entity submits to the contracting state agency a Disclosure of Interested Parties to the applicable contract. In addition, the business entity awarded a contract is obligated to submit a supplemental Disclosure of Interested Parties reflecting any new or differing interested parties to the contract within 30 days following the completion or termination of the applicable contract.

For purposes of complying with these requirements, the following definitions apply:

*"Business entity"* means any entity recognized by law through which business is conducted, including a sole proprietorship, partnership or corporation, but does not include publicly traded companies listed on a national or international stock exchange.

*"Interested party"* or *"Interested parties"* means:

- (1) A business entity performing work or service pursuant to, or in furtherance of, the applicable contract, including specifically sub-contractors;
- (2) the person(s) who have an ownership interest equal to or greater than 25% in the business entity performing work or service pursuant to, or in furtherance of, the applicable contract. (This subdivision does not apply to a publicly traded company); and
- (3) the person or business entity, if any, that served as a compensated broker or intermediary to actively facilitate the applicable contract or negotiated the terms of the applicable contract with the state agency. (This subdivision does not apply to persons or business entities performing legal services related to the negotiation or drafting of the applicable contract.)

*"State agency"* means a board, commission, office, department or other agency in the executive, judicial or legislative branch of state government, including publicly funded institutions of higher education: Provided, that for purposes of *W. Va. Code* § 6D-1-2, the West Virginia Investment Management Board shall not be deemed a state agency nor subject to the requirements of that provision.

The contracting business entity must complete this form and submit it to the contracting state agency prior to contract award and to complete another form within 30 days of contract completion or termination.

This form was created by the State of West Virginia Ethics Commission, 210 Brooks Street, Suite 300, Charleston, WV 25301-1804. Telephone: (304)558-0664; fax: (304)558-2169; e-mail: [ethics@wv.gov](mailto:ethics@wv.gov); website: [www.ethics.wv.gov](http://www.ethics.wv.gov).

# West Virginia Ethics Commission Disclosure of Interested Parties to Contracts

(Required by W. Va. Code § 6D-1-2)

Name of Contracting Business Entity: Tuck Mapping Sol. Address: 4632 Aerial Way,  
Big Stone Gap, VA 24219

Name of Authorized Agent: Robert H. Tuck Address: Big Stone Gap, VA

Contract Number: CRFQ0313DEP2000000039 Contract Description: Mapping Services

Governmental agency awarding contract: WVDEP

Check here if this is a Supplemental Disclosure

List the Names of Interested Parties to the contract which are known or reasonably anticipated by the contracting business entity for each category below (attach additional pages if necessary):

1. Subcontractors or other entities performing work or service under the Contract

Check here if none, otherwise list entity/individual names below.

Stahl Engineering, LLC  
250 Lakewood Center  
Morgantown, WV 26508

2. Any person or entity who owns 25% or more of contracting entity (not applicable to publicly traded entities)

Check here if none, otherwise list entity/individual names below.

3. Any person or entity that facilitated, or negotiated the terms of, the applicable contract (excluding legal services related to the negotiation or drafting of the applicable contract)

Check here if none, otherwise list entity/individual names below.

Signature: *Robert H. Tuck*

Date Signed: 06/29/20

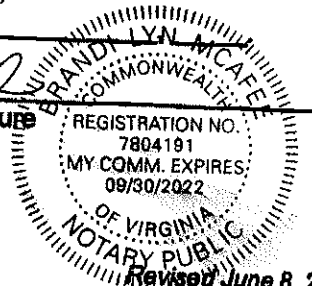
### Notary Verification

State of Virginia, County of Wise  
Robert H. Tuck

I, Robert H. Tuck, the authorized agent of the contracting business entity listed above, being duly sworn, acknowledge that the Disclosure herein is being made under oath and under the penalty of perjury.

Taken, sworn to and subscribed before me this 29th day of June 2020

*Brandi McAfee*  
Notary Public's Signature



**To be completed by State Agency:**  
Date Received by State Agency: \_\_\_\_\_  
Date submitted to Ethics Commission: \_\_\_\_\_  
Governmental agency submitting Disclosure: \_\_\_\_\_

STATE OF WEST VIRGINIA  
Purchasing Division

**PURCHASING AFFIDAVIT**

**CONSTRUCTION CONTRACTS:** Under W. Va. Code § 5-22-1(l), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

**ALL CONTRACTS:** Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

**EXCEPTION:** The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

**DEFINITIONS:**

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

**AFFIRMATION:** By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

**WITNESS THE FOLLOWING SIGNATURE:**

Vendor's Name: Tuck Mapping Solutions, Inc.

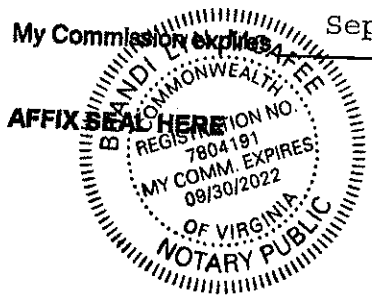
Authorized Signature: [Signature] Date: 06/29/20

State of Virginia

County of Wise, to-wit:

Taken, subscribed, and sworn to before me this 29 day of June, 2020  
September 30, 2022

My Commission Expires 2022



NOTARY PUBLIC [Signature]  
Purchasing Affidavit (Revised 01/19/2018)

## PROSPECTUS OF TUCK MAPPING SOLUTIONS, INC.

The Tuck Mapping Solutions, Inc. (TMSI) team is capable of providing full aerial photography/ mapping services, aerial photography (oblique, vertical ortho, mapping), target and project control installation and triangulation, varying scaled maps and two and three-dimensional models. We are also experienced in the digital compilation of maps through stereo photogrammetric methods, and the delivery of mapping data files in both Auto Cad and MicroStation formats. The TMSI team has generated over 40,000 mi<sup>2</sup> of orthophotography and high-resolution topographic products. Their most notable clients include WVDOT, NCDOT, VDOT, TXDOT, 17 other Departments of Transportation, the Tennessee Valley Authority (TVA), U.S. Army Corps of Engineers (USACE), and a host of other governmental and private firms. The following information demonstrates our knowledge and expertise related to aerial photography/mapping services.

For over 30 years, **Tuck Mapping Solutions, Inc.** has been a leader in the aerial mapping industry, recognized for innovation and its professionals are trained to anticipate client needs, to offer valuable advice, and to provide solutions. Our staff of trained professionals has completed more than 8,000 projects in the past five years delivering services such as digital and conventional aerial photography, aerial LiDAR acquisition and processing, orthophotography, volumetric calculations, conventional and GPS surveys, cross-section surveys, and digital elevation models. TMSI has official designation as a Virginia “small business” and is located in a Small Business Administration certified HUBZone area.

**Stahl Sheaffer Engineering, LLC** (Stahl Sheaffer) is a multi-discipline civil/structural engineering firm that has been providing structural and site engineering services since 2006. Stahl Sheaffer specializes in building design and rehabilitation, bridge design and NBIS inspection, surveying, land development, transportation engineering, geotechnical testing and design, construction inspection, and asset management. We are constantly updating our technologies to support our services, including a survey-grade LiDAR system and a mid-sized Matrice 200 Series drone.

### Professional Qualifications for West Virginia

TMSI has assembled a team of surveying professionals that have the technical expertise to complete any project assigned by the West Virginia Department of Environmental Protection (WVDEP).

Tuck Mapping Solutions, Inc. Team Personnel		
Personnel	Tuck	Stahl Sheaffer
WV PLS	1	6
WV PE	1	12
Project Manager	3	13
Quality Control Manager	2	4
Certified Photogrammetrist (CP)	2	0
GIS Professional (GISP)	2	0
Survey Crews	1	13
Party Chiefs	1	13
Survey Technicians	2	13
CADD Specialists	6	8
GIS Analyst	2	0

Tuck Mapping Solutions, Inc. Key Personnel		
Name	Contract Role	Years of Experience
Robert H. Tuck, PE (WV), PLS (WV), CP	Contract Manager, WV RLS	44
Michael Hobbs, PS	Photogrammetric Manager	30
Matt Doty, CP, GISP, CMT-LiDAR	LiDAR Manager	12
Steven Smeltzer, PS	Photogrammetric Analyst	30
William Hughes	Photogrammetric/ CADD Technician	13
Justin Bentley	LiDAR Analyst/Sensor Operator	8
Cody Wolford	Airplane Pilot	3
Stahl Sheaffer - Key Personnel		
Tim Kinder, PLS, CFM	Survey Manager	25
Adam Leister	LiDAR Technician	4
Andrew Gouty	LiDAR Technician	8
Gregory Kuckuck	LiDAR Technician	12
Chelsea White	GIS Analyst & UAS Pilot	5

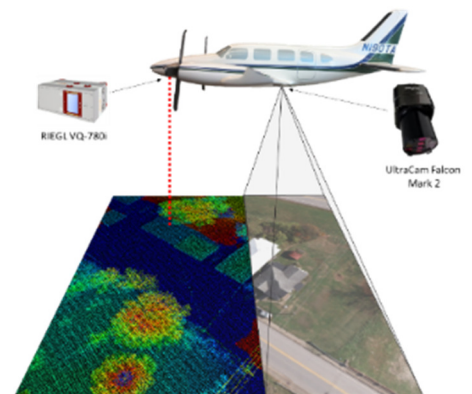
### Specialized Experience and Technical Competence

Owned Aircraft Inventory		
Make/Model	Registration No.	Operating Ceiling
Piper Navajo Panther 310	N190TA	24,000' MSL
Cessna 206 Stationair II	N193TA	15,000' MSL
Bell JetRanger 206 BIII Helicopter	N192TA	13,000' MSL
Bell LongRanger LIII Helicopter	N194TA	13,000' MSL

Owned High-Precision Aerial Photogrammetric Sensors				
Sensor	Manufacturer	Spectral Range	Calibrated?	Quantity
Leica	RCD30	RGB, NIR	Yes	2
Vexcel	Falcon Prime (195 MP)	RGB, NIR	Yes	1

#### Aerial Photography

TMSI has been acquiring aerial imagery for over 30 years and specializes in executing all aspects of aerial imagery acquisition and processing for large- and small-scale photogrammetric mapping. Aerial photography would be collected by one of the four TMSI aircraft. All aircraft are equipped with a precisely surveyed Global Positioning System (GPS) antenna capable of receiving highly accurate positional signals. Additionally, each aircraft is equipped with a flight management system, which provides precision navigation guidance to flight crews during data collection, as well as functionality for project management and data logging. Sensor platforms are supplemented with a combination of additional equipment including stabilized mounts, dual frequency GPS receivers, and inertial measurement units (IMU). TMSI has two fixed-wing aircraft and two helicopters stationed in southwest Virginia



that can be mobilized on short notice. We frequently acquire imagery in West Virginia for several of our clients and are very familiar with the terrain and local ordinances.

POSTrack collects and stores the raw data from the onboard GPS and the IMU systems. TMSI always uses one CORS, multiple CORS, or multiple base stations to produce highly accurate positional readings. The observation data from the GPS unit in the aircraft is used to perform post-processing with the data from the dual frequency ground units to determine the coordinates of the center of the photograph and the orientation of the photograph at the instant the photo was taken. At the end of each mission this data is post processed with the base station data to establish a baseline from the known National Geodetic Survey (NGS) station to the aircraft at one second epochs. The one second epochs establish the trajectory of the aircraft or helicopter during the flight. The IMU is initialized on the ground and it then records the movement of the aircraft in all axes and it also records the acceleration in each axis. The resultant vector analysis produces the center of each photo. The resultant EO files provides for the Exterior Orientation of the imagery so the imagery can be set up in the stereo plotters or used for the creation of digital ortho photography.

TMSI has been involved in photogrammetric mapping, aerotriangulation, and orthophotography for over 30 years. TMSI's stereo compilers have extensive mapping experience with photogrammetric mapping involving projects at mapping scales ranging from 1:240 to 1:24,000, and photogrammetric mapping for design, construction, development, operation, and maintenance of various engineering projects.

*Tuck Mapping Solutions, Inc. has collected imagery for over 20,000mi<sup>2</sup>.*

*Project Example:* Since 1998, TMSI has held an open-end contract with the Tennessee Valley Authority (TVA). TMSI has captured B&W, Color, CIR film and digital imagery in seven states within the TVA service boundary. TMSI has provided mapping projects from a scale of 1" = 25' with ½ ft. contours through 1" = 400' with 10' contour mapping specifications. TMSI has provided TVA with orthophotography of areas as small as a few acres to areas as large as several square miles.

### **Aerial LiDAR Surveys**

TMSI is one of the North American leaders in producing high accuracy LiDAR from helicopters and aircraft typically used for the development of engineering plans. They own four Riegl scanners and their accuracy is consistently in the range of 0.10 feet. Their LiDAR is processed using RiProcess, PosPAC, and TerraScan. The *eagleeye™* mapping system includes a high frequency full waveform Riegl laser, a high-resolution Vexcel Falcon Prime and Leica RCD-30 metric digital camera, dual frequency GPS and 200 Hz IMU. The IMU, laser, and digital camera are integrated via proprietary software and mounted together to ensure accuracy and reliability.



This accuracy is a result of careful planning, attention to satellite availability, accurate bore sighting, post processing to eliminate any systematic bias, intense classification of the point cloud, and QC tools that allow TMSI to determine areas that need special attention. Each project is planned based on the point density required by the client and the vertical accuracy that is needed. Their point density ranges from 10 points per meter to 600 points per meter. Each project plan is designed to meet all specifications. The pilots are highly trained in the acquisition of LiDAR and imagery data.



An automated macro process determines which LiDAR points are ground (Class 2) and unclassified (Class 1) throughout the point cloud. This is followed by two manual QC steps to check for points that were removed or brought into ground that shouldn't be present. Following this step for the project and special class such as bridges (Class 13) and water features (Class 9) are classified as specified in the solicitation. The point cloud is now in 4 classes, Class 1, 2, 9 and 13. Any points determined to be "noise" are sent from the original classes to Class 7. With the point cloud properly classified the accuracy is tested against collected ground control check points using a surface generated from Class 2 (ground points).

Following accuracy verification product generation begins. Each product, such as contours, DEMs, or intensity images is generated from the point cloud and quality controlled by manual inspection to ensure they meet the specifications of the project. The Digital Elevation Model (DEM) filtered to the required file size for use by the WVDEP, and contour maps to represent the LiDAR point cloud, are then generated and delivered. The TMSI team is fully capable of providing LiDAR in ASPRS LAS file format, and adheres to the standards presented by ASPRS in regard to file formatting, classifications, headers, data types, encoding, etc. Products derived include: Raw point cloud data, classified LiDAR data, DEM filtered to the required file size, contour maps to represent the LiDAR point cloud. Data deliverables will comply with WVDEP standards.

Owned Airborne LiDAR Systems, Software, and Relevant Equipment			
Make/Model	Quantity	Make / Model	Quantity
Riegl VQ-680i	1	RiProcess Riegl Post Processing Software	5
Riegl LMS-Q560	1	TerraMatch	2
Riegl VQ480	1	TerraPhoto	3
Riegl VQ-780i	1	TerraScan	12
Q'Coherent LP360	1	AutoCad	4
Applanix 410 IMU	5	GeoCue Management	11
ESRI ArcGIS	2	Bentley MicroStation	9

*Tuck Mapping Solutions, Inc. has collected LiDAR data for over 15,000m<sup>2</sup> in 40 states.*

In 2018-2019, TMSI provided high resolution low altitude LiDAR mapping for 16 projects that covered 100+ miles of multiple corridor projects for South Carolina Department of Transportation. MA Engineering was responsible for level run ground control surveys to support and register the aerial surveying. As a team, SCDOT gave a very successful rating for the services and work performed under the current contract. The planimetric and bare earth DTM mapping included a corridor width of approximately 320' (110' on either side of the interstate mainline centerline) and include all un-observed planimetric features. The topographic mapping included 0.05' vertical accuracies on all paved surfaces (to include entrance and exit ramps) and Federal Geographic Data Committee (FGDC) Geospatial Positioning Accuracy Standards and applicable extensions and revisions for vertical accuracies on soft surfaces.

**Target and Project Control Installation and Triangulation**

The TMSI team has conducted digital mapping surveys in over 40 states. The team has expertise in establishing geodetic control utilizing FCGS standards as well as those adopted by State agencies. They routinely perform static, RTK and digital differential applications. The TMSI team utilizes AutoDesk terrain modeler, Civil 3D, GeoPAK, MicroStation, GeoCUE, Terra Model and Cyclone to generate digital terrain models with contours. TMSI will provide the survey control planning for the acquisition of both photogrammetric and LiDAR data sets. However, Stahl Sheaffer will take the lead in the field surveying due to their multi-state presence and vast survey resources. Once TMSI plans the missions and detail the requirements of the project, they will assign the





surveying to team members that have the resources to complete the survey in the most cost effective and time sensitive manner. Specific to GPS control surveys in support of LiDAR and photogrammetric projects, the team brings experienced, qualified personnel who are familiar with all aspects and procedures specified by the Federal Geodetic Control Committee’s (FGCC) manual “Geometric Geodetic Accuracy Standards and Specification for using GPS relative positioning techniques” for high order geodetic surveys. This includes specific input formats and standards that allow data to be entered into the National Spatial Reference System (NSRS) and become part of the National Geodetic Survey NGS database. These standards are strictly adhered to in order to achieve the level of accuracy desired.



The team has experience providing geodetic control services using dual frequency receivers for such organizations as the Department of Transportation, U.S. Army Corps of Engineers, all branches of the military, Tennessee Valley Authority (TVA), and numerous other governmental and private companies. The team maintains the highest standard of accuracy by using precision GPS receivers. All antenna models are approved by the NGS, to conduct any order geodetic survey.

Specific steps utilized by the team to ensure an accurate network for the intended purposes include the following:

1. Reconnaissance and Planning
2. Submittal and Approval of a GPS Project Control Plan
3. Monumentation per NGS specifications
4. Instrumentation Field Calibration - Determine Systematic errors
5. Field Observation in accordance with the Federal Geodetic Control Committee
6. Analysis and Adjustments using Trimble Geomatics or NGS software
7. Final Report, Data Submittal and Acceptance by District of Network

For locating and/or verifying planimetrics as well as LiDAR validation surveys the team utilizes OTF (Real-Time Kinematic, RTK) GPS technology extensively for this type of data collection. OTF (RTK) GPS technology provides an effective tool for mapping large areas with high degrees of horizontal and vertical accuracy. When RTK is utilized for topographic mapping the geoidal-ellipsoidal modeling shall be conducted in and around the proposed mapping area.

The TMSI team extensive inventory of equipment ensures that all field survey crews are capable of performing any item tasked under this contract. Each crew is outfitted with Real Time Kinematic (RTK) GPS, electronic total stations and conventional differential level equipment. This assortment of equipment allows the crews to collect data in any environment.

Surveying and Associated Equipment Inventory		
Firm	Equipment	Quantity
TMSI	TRIMBLE R6&R8 GPS Receivers	6
TMSI	Leica GS Receivers	5
TMSI	Topcon DL-101 Digital Electronic Level with Bar Code Rod	2
TMSI	Topcon GTS Series - 2 and 5 Second	4
Stahl	Total Stations with Electronic Field Books	3
Stahl	GPS survey-grade systems	3



### **Varying Scaled Maps and Three-Dimensional Models**

All digital elevation models (DEMs) are generated from either LiDAR ground points or first-order softcopy workstations. Digital terrain models (DTMs) are DEMs that are further enhanced with breaklines that are collected for all significant features that represent a break in the slope. Random spot elevations supplement the breakline data in areas where the topography is relatively flat or gently rolling. Each stereo model is processed through a triangulation that generates a surface. Contour data is generated from the surface and superimposed over the imagery or planimetric features because they are 3-D points that will hold the feature in its correct position. A dashed line style is applied to contours that fall in areas obscured by heavy vegetation or shadow. Elevation text is added, contours are broken for buildings and final topographic map sheets are produced. Contours, spot elevations and DTM features (break lines and random points) are processed into final file formats to match the client's geographic software systems. The client is provided with both the contour map and the points file so they can be inserted into engineering design programs such as In-Roads. Feature clipping and snapping are performed to ensure good topographic structure. Project sheet layouts are compiled, and final sheets of mapping data are generated with map legends, scale bars and titles. Imagery such as digital orthophotography may be plotted as a background layer to final sheets.

The scale of the photography is determined by the details that are required for the aerial mapping project. When TMSI maps a large area at a scale of 1" = 400', the list of planimetrics required is different than if mapping a corridor for a highway project. At the 400' scale, TMSI maps features such as roads, major streams, houses, and major power line structures. If TMSI is mapping for highway design, they will be mapping all portions of a house such as porches and overhangs, hydrologic structures such as water valves, fire hydrants, electrical boxes, manholes, drop inlets, curb and gutter, sidewalks, steps, highway and street paint stripping, power poles, signs, billboards, and bridge details.

The amount of detail that is specified for a project is determined by the final use of the mapping. The more detail that is required, the lower the flight and the smaller the pixel size. Stereo pairs are used to compile 2D and 3D planimetric and topographic data, such as transportation networks, hydrography, electrical transmission structures, building footprints, breaklines, and spot heights. The 3D feature of the planimetrics help in the definition of the terrain by showing breaks in the terrains such as at the edge of a road or the banks of a stream or drainage ditch. TMSI ensures the planimetrics detail matches the engineering requirements for the project.

### **Digital Compilation of Maps through Stereo Photogrammetric Methods**

The TMSI team has been compiling photogrammetric products for engineers, surveyors, developers, and government agencies for over 30 years. Each company has encountered many clients with various requirements for their mapping from 1" = 20' mapping to 1" = 400' scale mapping for regional planning projects. All operators are highly skilled in the compilation of both large- and small-scale photogrammetric production for implementation into CADD systems, GIS systems, and facility management and planning systems. Operators have compiled from analog and digital cameras. With the large number of compilers and workstations, the team can take on most any size project and complete it within any reasonable time constraints. All digital files are reviewed carefully for accuracy of digital data and format of the data. The files are pulled into the system and are ultimately finalized in MicroStation or AutoCAD. Layering schemes, symbols, and text are checked against standards for each of the items. Planimetrics are checked for completeness, contours are checked, and the topological structure is edited. The files are then cut to sheet size specified by the DOT. Graphics review and editing departments have extensive experience with digital data formats (DWG, DGN, and/or ESRI) that will be required for this contract.



Data from orthophotography has been used in the following applications: planimetric feature extraction, engineering design, asset management, right-of-way mapping, urban planning, image analysis, GIS base layer, municipal maps, public and private land development, watershed management, environmental assessment, post-incident management, soils science, wind farm analysis, etc.

<b>Digital Orthophoto, Photogrammetry, LiDAR, and GIS Software/ Licenses</b>			
<b>QTY.</b>	<b>DESCRIPTION</b>	<b>QTY.</b>	<b>DESCRIPTION</b>
1	Autometric KORK stereo compilation licenses	8	BAE SocetSet digital stereo plotter licenses with VR-1 Feature Extraction
5	BAE NOAA Feature Extraction Software	4	AutoDesk AutoCAD
5	Bentley MicroStation network licenses	1	ERDAS Imagine license
1	OrthoVista OrthoMaster	1	Spectra Precision TerraModel Contour Mod.
1	OrthosVista Match AT	1	BAE BINGO aerotriangulation software
8	TerraPhoto LiDAR Processing Software	8	TerraScan LiDAR Processing Software
8	GeoCue LiDAR Management	2	TerraMatch LiDAR Processing Software
3	ArcGIS for Desktop Advanced	1	Q'Coherent LP360 Software

**Delivering Data Files in AutoCAD and MicroStation Formats**

All digital files are reviewed carefully for accuracy of digital data and format of the data. The files are pulled into the system and are ultimately finalized in MicroStation or AutoCAD. Layering schemes, symbols, and text are checked against standards for each of the items. Planimetrics are checked for completeness, contours are checked, and the topological structure is edited. The files are then cut to sheet size specified by the client. Check plots are produced on paper for a quality control check of the mapping and all errors are marked for correction at the edit station. Our graphics review and editing departments have extensive experience with digital data formats (DWG, DGN, and/or ESRI) that will be required for this contract.

**Technical Approach**

It is imperative for successful managers of these projects to implement refined workflows, task management, effective communication, and standardized quality control protocols throughout the duration of each project. Accelerated project schedules increase the importance of establishing a “one-pass” approach to successfully completing tasks and the overall project in a timely manner.

Robert H. Tuck, PE, PLS, CP, PMP from TMSI will be the Program Manager for this contract. Each assigned project begins with a scoping meeting between all necessary TMSI project manager(s) and a WVDEP Project Manager. The purpose of this meeting is to discuss all of the project details (i.e. limits, tasks, deliverables, formats, procedures, accuracies, control parameters, safety, due date, etc.) that will directly affect the cost and methods TMSI will use to perform the services requested. We consider the WVDEP Project Manager as a member of our team to accomplish this project. We want to work with them to ensure we give the WVDEP exactly what it needs in a timely and cost-effective manner. A Microsoft Project Management Chart or a similar management chart is developed for all large projects so both the project schedule and progress can be easily tracked. The status of each phase is shown on the diagram at the end of each shift or week. We will not have a defined schedule until the Task Order is received but TMSI and Team have the staff to complete any Task Order assigned by the WVDEP.

TMSI will receive the task order from the WVDEP and determine how TMSI and Stahl can work together to complete the task effectively. TMSI will be responsible for project management, aerotriangulation, orthophotography, DTM data, planimetric data generation, base plan sheets, and topographic data generation. Stahl will work under TMSI and be responsible for ground control, ground checking, cadastral mapping, field classification, and excess planimetric mapping, topographic data production, and base plan sheets.



TMSI and Stahl have partnered on West Virginia projects in the past. Stahl collected ground control while TMSI completed the aerial mission. To ensure that quality products are being provided to the WVDEP, TMSI will complete the final quality control check on all products using a licensed surveyor and/or certified photogrammetrist.

It is our goal to submit a product that can be effortlessly streamlined into the WVDEP workflow. The final task of each project involves the submission of a specific set of associated documents to WVDEP that is necessary for project closeout and procedural compliance. Lastly, our crews, managers, and office personnel all understand that personal and public safety is our top priority. At no time will safety be compromised for schedule or production.

The TMSI team has statewide knowledge of local ordinances, regulations, county registrars, and other statewide experience that minimizes setbacks and possible project delays. Employees have long-term working and personal relationships that provide an invaluable resource when it comes to sharing experiences and working knowledge throughout West Virginia.

The TMSI team also has vast experience with statewide GPS control and is aware of the "anomalies" occurring in various pockets throughout high-volume data/voice traffic areas/times. We are well-versed in using the appropriate methods to obtain accurate GPS survey control (static, fast-static, VRS, RTK, or OPUS) in mountainous, piedmont and coastal terrain, and are aware of the limitations of this technology in certain field conditions. Our utilization of emerging technologies ensures our field crews have the best tools available for the specific work area to maximize efficiency.

As shown throughout this proposal, the TMSI team has both the personnel and equipment capacity to complete any task order required by the WVDEP.

## Past Performance on Contracts with Government Agencies

*Texas DOT Photogrammetry Open-End Contract (2012-Present)* – Since 2012, TMSI has worked with TxDOT to develop mapping standards starting with a demonstration project in Dallas. The project was so successful in combining mobile mapping with airborne helicopter mapping that TxDOT recommended we team with them on future surveying/mapping contracts. In 2015, TMSI provided digital aerial photography for low altitude mapping to cover an area 1200' wide, centered on the existing roadway for 8.5 miles. This project included aerotriangulation processes, stereo 3-D 1" = 50' map compilation, 0.25' GSD color orthorectified mosaic production and TxDOT standard planimetric and DTM CAD models. Point-of-Contact: Mark Eder at (214) 319-6477.

*Vulcan Materials Stockpiles (Ongoing)* – TMSI has been mapping over 100 stockpiles for Vulcan Materials for the past 15 years. There are 23 stockpiles in NC, 13 in SC, 30 in VA, 25 in GA, 3 in DE, 2 in PA, and 10 in MD. This project involves planimetrics, DTMs, orthophotography, and topographic mapping. TMSI also generates a "Blast Map" for each stockpile. These maps encompass 1mi<sup>2</sup> around each stockpile and all planimetric features, including homes, roads, fire hydrants, etc. Point-of-Contact: Jared Key at (800) 477-7625.

*Tennessee Valley Authority Open End Photogrammetry Contract (Ongoing)* – TMSI recently mapped every power plant owned by TVA as part of their ongoing contract. TMSI is currently in the process of collecting and processing 3,700 miles of right-of-way vegetation plots and transmission lines throughout Tennessee. This project will be completed within three months. Since 1998, TMSI has held an open-end contract with the Tennessee Valley Authority (TVA). TMSI has captured B&W, Color, CIR film and digital imagery in seven states



within the TVA service boundary. They have completed photogrammetric mapping and collected LiDAR data for use in DTMs. TMSI has provided mapping projects from a scale of 1" =25' with ½ ft. contours through 1" =400' with 10' contour mapping specifications. TMSI has provided TVA with orthophotography of areas as small as a few acres to areas as large as several square miles. Point-of-Contact: Pat Hamlett, GISP at (423) 751-2870.

### Location of Consultant Office

The office for Tuck Mapping Solutions, Inc. is located at 4632 Aerial Way, P. O. Box 760, Big Stone Gap, VA 24219. The offices for Stahl Sheaffer are in Morgantown, WV.

