STATEMENT OF WORK

Commonwealth of Pennsylvania
Department of Conservation and Natural Resources
Bureau of Geological Survey

GEOLOGIST CONTRACTOR
Lidar and Field Mapping the Triassic-Jurassic Gettysburg Basin, Adams County
South-Central Pennsylvania

I. SCOPE OF WORK:

The Pennsylvania Department of Conservation and Natural Resources (DCNR), Bureau of Geological Survey (BGS), requires the technical assistance of a qualified geologic contractor to aid their studies of the Mesozoic basins in Pennsylvania.

The goal of the project is to advance the geologic knowledge of the Mesozoic basins of Pennsylvania and their importance for groundwater resources, environmental concerns such as arsenic and radon, potential critical mineral resources, and to disseminate the knowledge to the public.

The contractor will use a combination of United States Geological Survey (USGS) lidar, ground mapping, strategic paleomagnetic polarity checks, and palynology to work out detailed stratigraphy of Triassic-Jurassic units at the member to sub-member scale in the Pennsylvania portion of the Gettysburg basin in the Adams County area (Refer to Attachment A). The contractor will then work with the Department staff through review and revision processes to produce the final products.

Questions regarding the technical aspects of the work outlined herein should be directed to Stephen Shank at 717-702-2021 or stshank@pa.gov. Questions concerning the contracting or bidding procedure should be directed to Carol Durham at 717-783-3309 or cdurham@pa.gov.

II. PROJECT DESCRIPTION:

Currently existing maps of the Gettysburg basin date from the early to middle 20th century and offer very little predictive ability beyond sandstone, shale, conglomerate, and diabase. New studies will provide needed information of the basin stratigraphy and physical and porosity characteristics of the rock formations. These important properties have significant impact on water quality and availability, pollutant migration and mitigation, and the extent and value of natural resources such as crushed stone and clay. In addition, there are historical as well as potential new critical mineral resources such as cobalt, gold, silver, platinum group elements, and copper associated with the diabase, magnetite skarns and sedimentary strata. All these items align with the missions and priorities of DCNR and BGS and with input received from the Geologic Mapping Advisory Committee.
III. CONTRACT TASKS AND DELIVERABLES:

The following tasks must be completed in performance of contract:

Please see Attachment A for the area of the Gettysburg Basin and quadrangles to be investigated. A total of fourteen quadrangles or parts of quadrangles will be studied. Only the pertinent Mesozoic areas of the quadrangles are to be mapped.

A. Contract Tasks:

- Develop detailed high resolution (10–100 meter scale) base maps from lidar at the 7.5-minute quadrangle scale.
- Field check of lidar based stratigraphic and structural boundaries.
- Correlate stratigraphy in Pennsylvania with work in New Jersey based on paleomagnetic polarity.
- Use palynological samples to augment correlation and to determine thermal maturity of strata.
- Chemical analyses including X-ray fluorescence (XRF) and laser induced breakdown spectroscopy (LIBS) analyses will be conducted on selected samples of key units to assess elemental composition especially with respect to critical metals, boron, and sulfur.

B. Contract Deliverables:

The Contractor will submit to the Department, by June 15, 2022, a 1:24,000 geologic map, and selected cross section(s) of the area, in PDF format. The Contractor will work with the Department staff through review and revision processes to produce the final maps and report for submission in required formats.

Additional products to be included:

- All paleontological and palynological findings
- All thermal maturity and geochemical data

IV. CONTRACTOR EXPERIENCE:

To be rated as qualified, contractor must meet the minimum experience and have the specialized skills and knowledge deemed necessary by the Department to successfully complete the tasks associated with the projects.

- Contractor must have an advanced degree (Master’s or Doctorate) in geology or geological sciences.
- Contractor must have experience with stratigraphy, paleontology, palynology and geologic mapping in the Mesozoic Basins of Pennsylvania and/or similar geology in neighboring states.
- Must have experience with geologic interpretation of lidar.
- Must have experience with use of portable XRF and LIBS.
V. **CONTRACTOR REQUIREMENTS:**

A. **Documentation to be submitted with the bid:**

1. Contractor must submit with bid their resume outlining the qualifications and submitting examples of previous work they have done, along with at least two (2) references (name, address and telephone number).

   References are a tool available to the Department to help determine contractor’s experience and capabilities. If contractor cannot supply the necessary documentation and proof of compliance, the Department reserves the right to reject the contractor. The decision to reject contractor based on inadequate reference information will be made solely at the discretion of the Department.

2. Pursuant to Executive Order 2021-06, Worker Protection and Investment (October 21, 2021), the Commonwealth is responsible for ensuring that every Pennsylvania worker has a safe and healthy work environment and the protections afforded them through labor laws. To that end, contractors and grantees of the Commonwealth must certify that they are in compliance with all applicable Pennsylvania state labor and workforce safety laws. Such certification shall be made through the Worker Protection and Investment Certification Form (BOP-2201) and submitted with the bid, proposal or quote. Failure to submit a completed Worker Protection and Investment Certification Form may render your submission non-responsive.

VI. **CONTRACT TERM:**

The contract will commence upon receipt of Purchase Order and terminate June 30, 2022.

VII. **INSURANCE:**

The Contractor shall purchase and maintain, at its expense, the following types of insurance, issued by companies acceptable to the Commonwealth.

A. Workmen’s Compensation Insurance for all the Contractor’s employees and those of any subcontractor, engaged in work at the site of the project as required by law.

B. Public Liability and Property Damage Insurance to protect the Commonwealth, the Contractor, and any and all subcontractors from claims for damages for personal injury (including bodily injury), sickness or disease, accidental death and damage to property including the loss of use resulting from any property damage, which may arise from the activities performed under the contract, or the failure to perform under the contract, whether such performance or non-performance be by the Contractor, by any subcontractor, or by anyone directly or indirectly employed by either. The minimum amounts of coverage shall be $250,000 per person and $1,000,000 per occurrence for bodily injury, including death, and $250,000 per person and $1,000,000 per occurrence for property damage. Such policies shall be occurrence rather than claims-made policies and shall not contain any endorsements or any other form designated to limit and restrict any action by the
Commonwealth, as an additional insured, against the insurance coverage in regard to work performed for the Commonwealth.

Prior to commencement of the work under the contract and at each insurance renewal date during the term of the contract, the Contractor shall provide the Commonwealth with current certificates of insurance. These certificates or policies shall name “The Commonwealth of PA–DCNR” as an additional insured and shall contain a provision that the coverage afforded under the policies will not be cancelled or changed until at least thirty (30) days written notice has been given to the Commonwealth. These certificates shall include the locations and a brief description of the work to be performed under the contract.

The Commonwealth shall be under no obligation to obtain such certificates from the Contractor(s). Failure by the Commonwealth to obtain the certificates shall not be deemed a waiver of the Contractor’s obligation to obtain and furnish certificates. The Commonwealth shall have the right to inspect the original insurance policies.

A copy of the insurance certificates can be mailed to DCNR, Bureau of Administrative Services, Attn: Carol Durham, PO Box 8769, Harrisburg, PA 17105-8769 and/or it can be emailed to cdurham@pa.gov.

VIII.  BID AWARD:

Bidder must complete and return the following:

A. The electronic Invitation for Bid (IFB) to be found at www.pasupplierportal.state.pa.us.

B. The required resume and references as outline in Section V. Contractor Experience.

C. A properly executed Worker Protection and Investment Certification Form.

The unit price must include all labor, materials, equipment, tools, insurance and all items necessary for the completion of the project.

The bid will be awarded based on the lowest total.

The contract quantities are estimated only and may increase or decrease, depending on the needs of the Department. The Contractor will be paid at the unit price for the actual work performed.

Please note that the Department will only accept out to two (2) decimal points when entering your pricing.

IX.  PAYMENT TERMS:

Payment will be made upon satisfactory completion of the contract tasks and deliverables. The Contractor must submit invoices by June 30, 2022.

This contract will be paid by Automated Clearing House (ACH), commonly referred to as direct deposit. Contractor should review Section V.20 CONTRACT-016.2 Payment - Electronic Funds Transfer of the attached Commonwealth’s Terms and Conditions for complete details and contractor’s responsibilities.
X. **REIMBURSABLE EXPENSES:**

Payment will be made on a reimbursement basis for actual parking and approved travel expenses incurred during the period of the contract.

Travel reimbursement will be at or below state rates found in the most current version of the Commonwealth’s Management Directive 230.10, Travel and Subsistence Allowances, and will require the same documentation as required of state employees.

Travel reimbursement will be added after the solicitation is closed for award, as this is not a competitively biddable item.

XI. **INVOICES:**

Invoice format must be in accordance with the IFB-Invitation for Bid. All invoices for this contract MUST either be:

A. Emailed to the following for a Paperless Email Invoice Option:
   Email a copy of the correctly executed invoice to: 69180@pa.gov.

   For information on the Commonwealth’s E-Invoicing Program, visit: http://www.budget.pa.gov/Programs/Pages/E-Invoicing.aspx.

B. Or mailed to the following address:

   Commonwealth of Pennsylvania–PO Invoice
   PO Box 69180
   Harrisburg PA 17106

All invoices MUST have the purchase order number as well as your SAP Number on the invoice. The name and address listed on the purchase order must also be listed on each invoice. Failure to provide this information may result in a delay of payment.

**Please Note:** Contractors are reminded to NOT include employer identification numbers, Social Security Numbers, bank account information, or other personally identifiable information on their invoices. That information is uniquely tied to your SAP Number and, for security purposes, should not be explicitly stated on an invoice.

XII. **RECEIPT AND OPENING OF BIDS:**

Bids must be submitted via the PA Supplier Portal, to be found at www.pasupplierportal.state.pa.us. Emailed, faxed and mailed bids will not be accepted.

No responsibility will be attached to any employee of the Department for the premature opening of, or the failure to open, a bid not properly addressed and identified, or for any reason whatsoever.
XIII. BID RESULTS:

Bidder can obtain bid results by accessing www.emarketplace.state.pa.us/bidtabs.aspx. The bid results will be posted as soon as practicable. The results are the apparent bidders and all bids are under review until final award of the purchase order.

Attachment:

Attachment A – Project Location Map & Quadrangle List