Mississippi State University
Notice of Proposed Sole Source Purchase

Mississippi State University anticipates purchasing the item(s) listed below as a sole source purchase. Anyone objecting to this purchase shall follow the procedures outlined below.

1. Commodity or commodities to be purchased (make, model, description):

WRK of Oklahoma (manufacturer) – WRK String Spectrometer Instrument and WRK Flight-line Sample Collector System with corresponding parts kits, weather & speed kit, and all associated components.

2. Explanation of the need to be fulfilled by this item(s), how is it unique from all other options, and why it is the only one that can meet the specific needs of the department:

The need to be fulfilled by these items is research data collection for aerial application of agricultural products by Unmanned/Uncrewed Aerial Application Systems (UAAS – "spray drones"). MSU AAI has multiple sponsored research awards which require research data collection for aerial application of agricultural products including data for effective swath width, droplet spectrum, %-coverage, deposition uniformity, etc. The WRK String Spectrometer Instrument and WRK Flight-line Sample Collector System are the only equipment that can meet the specific needs of the department because this equipment comprehensively provides all necessary items required to collect and analyze the research data needed for these ongoing research projects. There only exists 1 alternative which is capable of collecting this type of data – the "SwathGobbler" instrument made by Application Insight. However, the SwathGobbler is not designed for string data collection, which is essential for data collection and evaluation for effective swath width. MSU already owns a SwathGobbler instrument and has used it extensively, but has been unable to capture and analyze effective swath width data using it. Therefore, the WRK String Spectrometer Instrument and WRK Flight-line Sample Collector System are the only equipment/means which provide the ability to collect and analyze swath width, and also provide the ability to collect and analyze the additional data types mentioned above.

3. Name of company/individual selling the item and why that source is the only possible source that can provide the required item(s):

WRK of Oklahoma – Dr. Richard Whitney. This is the only possible source that can provide the required items because Mr. Whitney builds these items by hand, and they are purpose built for our exact needs. A variety of spectrometer instruments are available from numerous different manufacturers, however, the spectrometer alone is not designed for string data collection and analysis – which is the only method for effective swath width measurement. The WRK String Spectrometer Instrument and WRK Flight-line Sample Collector System is the only equipment available which integrates a spectrometer instrument into a custom-built String Spectrometer which is specifically designed for this exact purpose (string data collection and analysis).

4. Estimated cost of item(s) and an explanation why the amount to be expended is considered reasonable:

Estimated cost of equipment is $25,695 + shipping/delivery. This amount is considered reasonable because very few "semi-comparable" portable spectrometer instruments are available at considerably higher price ports. "Semi-comparable" meaning that these systems are NOT string spectrometry instruments as needed for effective swath width measurement – but they ARE portable spectrometry instruments, which is ultimately what the WRK equipment also is. An example of a semi-comparable portable spectrometer is the StellarNet PORTA-LIBS System here - https://www.shopstellarnet.com/porta-libs-system/ . Again, this comparable option is not a string spectrometer as we need, but it is a portable spectrometer designed for other field applications and is the closest comparable equipment item we could find to demonstrate the reasonable price of the WRK equipment.

5. Explanation of the efforts taken by the department to determine this is the only source and the efforts used to obtain the best possible price:

Extensive efforts have been taken by the department to support this sole source request and to justify the corresponding equipment price. First, the department has already purchased the only equipment item which can perform comparable data collection – the SwathGobbler made by Application Insight. Unfortunately, the SwathGobbler is not able to collect, measure, and analyze effective swath width – which is one of the primary research considerations of our ongoing research projects. Secondly, the department has previously contracted with WRK to provide professional services by hosting a data collection and training clinic at MSU in June 2025 using this same equipment. During the clinic, we collected extensive data using this same equipment, but the ongoing research projects have a continued need for more data. Ultimately, the purchase of this equipment provides much greater long-term value at a much more reasonable price to the department and to the research sponsors versus paying for additional/annual clinics to support further data collection. Additionally, the department has scoured other available spectrometer equipment options/vendors to determine if any other string spectrometer equipment was available. None have been identified, and no other spectrometer equipment are purpose built as string spectrometers as we need for data

collection and analysis of effective swath width. Finally, the department has also reviewed the scientific literature for comparable research seeking to collect the same data as our ongoing projects. In all instances, this same WRK equipment is consistently used for this data collection included a dedicated study and publication in Applied Engineering in Agriculture journal of the American Society of Agricultural and Biological Engineers here - https://elibrary.asabe.org/pdfviewer.asp?param1=s:/8y9u8/q8qu/tq9q/5tv/J/quqzIGHO/JK/H/ciHIKLK.5tv&param2=M/HM/IGIM&param3=HJG.HO.HLO.HIP&param4=48766

Any person or entity that objects and proposes that the commodity listed is not sole source and can be provided by another person or entity shall submit a written notice to:

Jennifer Mayfield, CPPO
Director of Procurement Services, Chief Procurement Officer
jmayfield@procurement.msstate.edu
Subject Line must read "Sole Source Objection"

The notice shall contain a detailed explanation of why the commodity is not a sole source procurement. Appropriate documentation shall also be submitted if applicable.

If after a review of the submitted notice and documents, MSU determines that the commodity in the proposed sole source request can be provided by another person or entity, then MSU will withdraw the sole source request publication from the procurement portal website and submit the procurement of the commodity to an advertised competitive bid or selection process.

If MSU determines after review that there is only one (1) source for the required commodity, then MSU will appeal to the Public Procurement Review Board. MSU will have the burden of proving that the commodity is only provided by one (1) source.

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