



**THIS IS NOT
AN ORDER**

REQUEST FOR BIDS/PROPOSALS COVERSHEET
THE UNIVERSITY OF SOUTHERN MISSISSIPPI
Procurement and Contract Services
118 College Drive #5003, Hattiesburg, Mississippi 39406-0001

Date: May 20, 2026

BID No. 26-45

THE UNIVERSITY OF SOUTHERN MISSISSIPPI is considering the purchase of the following item(s). We ask that you submit your bid and retain one copy for your files. Right is reserved to accept or reject any part of your bid. Your quotation will be given consideration if received in Bond Hall, Room 214 on or before:

2:00 p.m. CT

June 9, 2026

Buyer: Amber Floyd

Name: _____

Company: _____

Address: _____

City/State/Zip: _____

TERMS - Bidder should state terms of sale. Our terms are 2% ten days, net 45 days.

These terms will apply per Mississippi law.

AWARDING CONTRACT - Cash terms will not be used as a basis for awarding contracts; however, the University will accept cash discounts when earned.

NOTE: If you cannot quote on the exact material shown, please indicate any exception giving brand name and complete specifications of any alternate. If additional space is required, use a separate sheet or letter of transmittal.

ITEM	QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL NET PRICE
		<p>BID 26-45 Echo Sounder System</p> <p>RFx # 3160008063</p> <p>PROPOSAL MUST BE RETURNED TO THE UNIVERSITY IN ACCORDANCE WITH THE SPECIFICATIONS. RFP NUMBER AND DATE OF BID OPENING MUST BE SHOWN ON THE OUTSIDE OF THE ENVELOPE IF USING THAT METHOD.</p>		

We quote you as above - F.O.B. The University of Southern Mississippi.
Shipment can be made in _____ days from receipt of order. DATE _____
Return quotation to Procurement Services at above address.

Signature Required _____



THE UNIVERSITY OF
SOUTHERN
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**SYSTEM DESIGN SPECIFICATIONS FOR A WIDE BAND HIGH
RESOLUTION ECHO SOUNDER SYSTEM**

The University of Southern Mississippi

Prepared by Steve Stanic and Landry Bernard

May 1/2026

SYSTEM DESIGN SPECIFICATIONS FOR A WIDE BAND HIGH-RESOLUTION ECHO SOUNDER SYSTEM

I. Background

The University of Southern Mississippi (USM) has received funding to purchase a wideband high-resolution echo sounder (WBES). This system will routinely be deployed from one of USM's survey vessels. This system will be used to map and classify the bottom sediments, fish habitats, and surface backscattering characteristics as a function of frequency. It will also be used for the detection, classification, and localization (DCL) of low/medium/high target strength targets over a broad range of environmental and platform noise conditions.

II. Purpose

This document contains the minimum requirements for a WBES system.

III. General Requirements

1. The WBES shall have three system components, two transmit and receiving split-beam sonar transducers (one high and one lower in frequency), and a system controller with acquisition and data processing software.
2. The system shall support multi frequency target detection, classification, and localization (DCL) in various operating environments
3. The system shall provide calibrated bottom backscattering data.
4. The system shall be able to operate at least 4 individual channels
5. The system shall support the use of multiple displays
6. The system shall be capable of integrating with positioning sensor data for georeferencing acquisitions.
7. The vendor shall provide a list and the cost of all optional spares
8. The delivery arrangements and transportation costs shall be the vendor's responsibility.
9. The side can sonar systems shall be delivered to USM's Marine Research Center, 1030 30th Ave Gulfport, MS 39501.

IV. Specific WBES Technical Specifications

The following tables outline the minimum specifications that the WBES system shall meet to perform the tasks necessary to satisfy USM's project objectives.

Table I	
WBES High frequency split-beam transducer	
Physical System	Description/Value
Bandwidth	At least 150 to 400 kHz
Maximum source level	At least 215 dB
Receive sensitivity	At least -193 dB re 1 V per μPa @ 1 m
Sidelobe levels	Less than -20 dB
Depth Rating	Greater than 1200 meters
Beam width	Less than 8° at transducer center frequency
Output cable	8-pin open ended cable

System Impedance	75 ohms
Duty cycle	At least 1%
Pulse lengths	At least 7 ms
Transducer diameter	Less than 80 mm
Weight in water	Less than 0.75 kg

Table II	
WBES Low frequency split-beam transducer	
Physical System	Description/Value
Bandwidth	At least 150 to 250 kHz
Maximum source level	At least 225 dB
Receive sensitivity	At least -190 dB re 1 V per μ Pa
Sidelobe levels	Less than -20 dB
Depth rating	Greater than 1200 meters
Beam width	Less than 10^0 at transducer center frequency
Output cable	8-pin open ended cable
System impedance	75 ohms
Duty cycle	At least 1%
Depth rating	At least 20 m
Pulse lengths	At least 15 ms
Transducer diameter	Less than 140 mm
Weight in water	Less than less 2 kg

Table III	
WBES wideband echo sounder transceiver and processing unit	
Physical System	Description/Value
Bandwidth	At least 20 to 450 kHz
Pulse length	70 to at least 8000 μ sec
Pulse types	CW and FM type pulses
Max transmit power	Greater than 1800 W
Power requirements	12 to 24 VDC
Power supply	100/230 V AC, 5 A, single phase
Number of channels	At least 4, 500 W each
Operational temperature	0^0 to at least 40^0
Environmental protection	At least IP52
System communications	Ethernet or equivalent high-speed digital interface

V. Specific WBES software requirements.

1. The vendor shall provide software for the operation and control of both split beam and single beam transducers.
2. The software shall be designed to ensure optimum system performance.
3. The software shall provide diagnostic analysis plots.
4. The software shall have dedicated calibration module with full calibration capabilities.
5. The software shall also have a wideband frequency mode with added processing for seabed mapping, sediment acoustic response, and water column backscattering analysis.
6. The software shall provide complex target analysis.

7. The software shall provide access to raw data files via a network interface.
8. The software shall control the transmission of numerous different frequencies within the system bandwidth.
9. The software shall be able to display both single and split beam transducer data.
10. The vendor shall provide complete software package (backup) and product documentation for the WBES system.

VI. Training

The vendor shall provide training on the operation, maintenance, troubleshooting, and integration of all systems. This must include mission planning and basic mission data analysis and display. This training shall take place at the USM facility located in Gulfport MS.

VII. Proof of Performance

The vendor shall provide a proven record of the WBES measurements and operating system performance. The vendor needs to provide references where these systems and their operating system in a similar configuration as specified above have operated successfully within the last 3 years. The above requested information will assist USM in determining the bidder's capability of meeting these requirements.

VIII. Warranty Services

At a minimum, the contractor shall provide software/hardware warranty support for one year from acceptance. Longer warranty periods are preferred. The Vendor shall agree to repair, adjust, and/or replace (as determined by the University to be in its best interest) any defective materials at the Vendor and/or manufacturers' sole cost. The University will incur no costs for service or replacement of materials during the warranty period. The Vendor will be the sole point of contact for warranty issues.

IX. Documentation

The Contractor shall provide Operations and Maintenance manuals to USM. Documentation provided shall include, but not be limited to the following:

- A. Theory of operation
- B. Operating procedures
- C. Interfacing instructions with connector pin outs
- D. Troubleshooting and maintenance procedures
- E. IPB (Isometric Parts Breakout) drawings showing how all parts, especially mechanical parts, relate to one another.
- F. Documentation of the various software packages.
- G. All sensor documentation and manuals.