

ADDENDUM NO. 02

Issue Date: December 2, 2011

By City of Port Aransas

And

TxDOT Aviation Division

Mustang Beach Airport

Automated Weather Observing System

The following revisions and clarifications are to be incorporated into your bid for the above referenced project. Acknowledgment of receipt of this addendum is required on the signature page of the proposal. Failure to acknowledge all addenda could render your bid out of form and result in a non-responsive bid.

The proposal and specifications have been modified as described below. All provisions of the original document remain in full force, except as modified by this addendum.

Notice to bidders:

Sealed proposals should be addressed and delivered to Debbie Hall, City of Port Aransas, 710 West Avenue A, Port Aransas Texas, 78373. Proposals will be received until **December 21, 2011 at 3:00 PM**, then publicly opened and read. Any proposal received after closing time will be returned unopened

If you have any questions, please do not hesitate to call TxDOT Aviation at 1-800-687-4568 or the City of Port Aransas at (361) 749-4111.

BID PROPOSAL

Project Description: Siting, Licensing and Installation of the Automated Weather Observation Systems III.

Proposal by: Name of Bidder _____
Address _____
Telephone _____ Fax _____
E-mail Address _____

Pursuant to the foregoing Instruction to Bidders, the undersigned bidder having examined the plans and specifications with related documents and the site of the proposed work, and being familiar with all the conditions surrounding the construction of the project hereby proposes to furnish all necessary superintendence, labor, machinery, equipment, tools, materials and supplies to complete all the work upon which is bid in accordance with the contract documents, within the time set forth and at the prices stated below:

Base Bid:					
Item	Qty	Unit	Description Written & Numeric <u>Unit Price</u>	Unit Price	Total Price
1	1	LS	Replace in current location, AWOS III, with a self supporting tower, installed complete in place according to specification _____ dollars _____ cents	\$ _____	\$ _____
2	1	LS	One year of AWOS maintenance that meets the requirements of FAA AC No. 150/5220-16 (latest revision) _____ dollars _____ cents	\$ _____	\$ _____
3	1	LS	NADIN/WMSCR Interface Equipment _____ dollars _____ cents	\$ _____	\$ _____

Total Base Bid \$ _____

Alternate Base Bid:					
Item	Qty	Unit	Description Written & Numeric <u>Unit Price</u>	Unit Price	Total Price
1	1	LS	Relocate and replace AWOS III, with self supporting tower, installed complete in place including site selection, site approval by TxDOT and FAA, and acquisition of FCC licensing, according to specification _____ dollars _____ cents	\$_____	\$_____
2	1	LS	One year of AWOS maintenance that meets the requirements of FAA AC No. 150/5220-16 (latest revision) _____ dollars _____ cents	\$_____	\$_____
3	1	LS	NADIN/WMSCR Interface Equipment _____ dollars _____ cents	\$_____	\$_____

Total Alternate Base Bid \$ _____

Additive Alternate Bid 1-3					
Items below should be bid with the option to award depending on the availability of funds					
Item	Qty	Unit	Description Written & Numeric <u>Unit Price</u>	Unit Price	Total Price
A1	1	EA	Present Weather Sensor _____ dollars _____ cents	\$ _____	\$ _____
A2	1	EA	Thunder Strike Alert _____ dollars _____ cents	\$ _____	\$ _____
A3	1	EA	Upgrade to Ultra Sonic Wind Sensor _____ dollars _____ cents	\$ _____	\$ _____

Total Bid \$ _____

It is understood the quantities of work to be done at unit prices are approximate and are intended for bidding purposes only. Amounts are to be shown in both words and numbers. In case of discrepancy the unit price amount shown in words shall govern. Bidders shall bid on the Base Bid, Alternate Base Bid, and Additive Alternates 1 and 2. Bidders may bid on Alternate Number 3.

The Owner reserves the right to award to the responsive lowest bidder for any combination of the base bid and alternates. Funding availability will be considered in selecting the bid award.

Bidder hereby agrees to commence work under this contract on or before a date to be specified in a written "Notice to Proceed" for installation of the equipment. Following issuance of the written "Notice to Proceed" for installation, installation shall be completed within 90 calendar days thereafter. Bidder further agrees to pay as liquidated damages the sum of \$200.00 for each consecutive calendar day to complete the work beyond the allotted time or as extended by an approved change Order.

Bidder understands the Owner reserves the right to reject any irregular proposal and the right to waive technicalities if such waiver is in the best interest of the Owner and conforms to State and local laws and ordinances pertaining to the letting of construction contracts. The bidder agrees this bid shall be good and may not be withdrawn for a period of 60 calendar days after the scheduled closing time for receiving bids.

Upon receipt of the written "Notice of Award", the bidder will execute the formal contract agreement within 14 days and deliver a surety bond or bonds as required under the contract documents. The bid security attached in the sum of 2% of the total bid price _____ is to become the property of the Owner in the event the contract is not executed as set forth in the contract documents as liquidated damages for the delay and additional expense caused thereby.

_____ Signature	_____ Title
_____ Printed Name	_____ Phone
_____ Mailing Address	_____ City, State, Zip Code

Addendum:

The undersigned Bidder certifies that he has acknowledged the addendum(s) to the contract as indicated below.

Addendum No. _____ dated _____

Addendum No. _____ dated _____

Addendum No. _____ dated _____

Qualification Acknowledgment:

The undersigned Bidder certifies they are a prequalified bidder with the Texas Department of Transportation (TxDOT) and are on the current TxDOT “Bidder’s List” as indicated below:

_____ Full Prequalification with a bidding capacity of \$_____

_____ Bidder’s Questionnaire with a bidding capacity of \$_____

OR

The undersigned Bidder is not a pre-qualified TxDOT bidder and has enclosed the bidder’s qualifications per General Provision 20-02, Prequalification of Bidders.

_____ I have enclosed qualification statements.

Qualification Acknowledgment Signature:

Signature

Title

Mailing Address

City, State, Zip Code

AWOS Technical Specifications

1. Project Description:

- 1.1. The project shall consist of replacing and/or relocating an existing Automated Weather Observing System with an Automated Weather Observing System III with optional Present Weather Sensor and Thunder Strike Alert components (AWOS III P/T) at the Mustang Beach Airport. If the system is to be relocated the Vendor will work with the Owner/State to select the best site for the system in accordance with FAA Order 6560-20 (latest revision), "Siting Criteria for Automated Weather Observation Systems". The system shall be installed in accordance with Federal Aviation Administration Advisory Circular 150/5220-16, (latest revision), "Automated Weather Observing Systems (AWOS) for Non-federal Applications" and as indicated in this specification.

The system as installed will include all labor, equipment, materials, peripherals, training, services, one year warranty, one year of AWOS System Maintenance, and incidentals as necessary to place the system in operation to the satisfaction of the Owner/State and be ready for commissioning by the Federal Aviation Administration (FAA). Vendor shall have FAA certification for the AWOS III P/T at time of bid submittal and will provide copies of such approval with their bid submittal.

- 1.2 The Vendor shall ascertain that all AWOS and VHF system components installed in the system are compatible in all respects with each other and the remainder of any existing system. Any non-compatible components shall be replaced with compatible components at no additional cost to the owner.
- 1.3 The Vendor shall utilize an established and proven equipment configuration.
- 1.4 TxDOT Aviation Division has a long term contract with Vaisala, Inc. for AWOS maintenance as required by FAA AC No. 150/5220-16 (latest revision). If the Vendor system's data processor installed under this contract includes a dial-up or Ethernet input/output port (as specified in FAA AC No. 150/5220-16D – Remote Maintenance Monitoring) that can provide access to TxDOT's contracted AWOS maintenance provider, then the Vendor may participate in this contract. If unable to participate in the TxDOT maintenance contract, the Vendor shall provide or contract for one year of AWOS System Maintenance as required by FAA AC No. 150/5220-16 (latest revision). The initial one year of AWOS System Maintenance will not include any repairs of the system under the one year warranty for the installed system. Entire system shall be installed and operating in test mode, with an AWOS System Maintenance Contract in place before the FAA commissioning visit is scheduled. The effective start date of the one year AWOS System Maintenance Contract will be the date the AWOS is commissioned by the FAA.

- 1.5 Vendor will prepare the Memorandum of Agreement (MOA) and Operations and Maintenance Manual (OMM) as required by FAA Order 6700.20 for owner signature before scheduling FAA commissioning ground inspection and any other checks required before the AWOS can be authorized to operate.
- 1.6 The following documents shall be considered a part of these provisions:
- AC 150/5220-16, (latest revision) “Automated Weather Observing Systems for Non-Federal Applications”
 - FAA Order 6560.20, (latest revision) “Siting for Automated Weather Observing Systems”
 - AC 70/7460-1, (latest revision) “Obstruction Marking and Lighting”
 - TxDOT Aviation Division General Construction Contract Provisions, Volume dated June 2005.

2. Site Location:

- 2.1. The Vendor shall comply with FAA Order 6560.20, (latest revision) “Siting for Automated Weather Observation.”
- 2.2. Vendor shall consider location of available electrical power to reduce sponsor’s cost for installation of power at the site when selecting the AWOS site.
- 2.3. The Vendor must submit locations to Owner/State for approval on furnished copy of Airport Layout Plans marked with latitude/longitude and elevation before submitting FAA Form 7460-1. Owner/State shall approve final site selection.
- 2.4 Site approval and documents/applications for the AWOS installation and VHF equipment will be submitted to the FAA and the FCC by the Vendor. If a UHF data link is used in place of the data/control cable connection to the AWOS processor, licensing of the UHF frequency is the responsibility of the Vendor.
- 2.5 The Vendor must notify Owner/State of telephone and electrical connection requirements for the selected AWOS site. Vendor shall coordinate location and requirements with owner so that necessary utility connections can be installed in sufficient time for the installation of the equipment.
- 2.6 Site selection shall be made and proper forms executed and filed with FAA within 90 days from notice to proceed for site selection. Owner/State review and approval will be in addition to the 90-day time frame.
- 2.7 Vendor shall notify Owner/State of any issues occurring with forms filed with FAA for the selected site, and any re-submission of site selection forms.

2.8 Vendor shall anticipate the possibility of multiple siting visits per airport, if necessary.

3. FCC License(s)

3.1. Vendor must submit necessary forms and acquire Federal Communications Commission License for an AWOS VHF broadcast license. If required, Vendor shall also submit all necessary forms and acquire FCC license for UHF license.

3.2. Vendor shall coordinate and monitor the receipt of the licenses with Owner/State and FCC to insure all necessary licenses are received. Vendor shall submit report to Owner/State with all FCC license call signs and expiration dates.

4. Site Preparation, if AWOS is relocated.

4.1 The Vendor shall provide all necessary site preparation work for installation of the AWOS, which includes, but is not limited to removal of existing AWOS, foundations and grounding systems if necessary, grading, leveling, grubbing, and making the site acceptable for installation of necessary foundations and equipment.

4.2 Electrical power supply and telephone line for the operation of the system shall be provided by the airport sponsor. The electrical power supply shall terminate with an electrical disconnect 25 feet from the designated installation location. The telephone line shall also terminate at this location in an appropriate box.

4.3 Vendor shall provide and install control and data cables in conduit from the AWOS CPU to remote sensors. RF transmitter and receiver shall be provided to the site by the Vendor, if required.

4.4 If needed, Vendor shall construct concrete foundations for tower base and other equipment. AWOS Manufacturer shall submit foundation drawings specific to selected site and equipment with specified concrete compressive strength and reinforcing requirements.

4.5 Following installation, site shall be cleaned, debris removed and surface leveled to that of surrounding areas to allow for mowing and maintenance of the area disturbed.

5. Installation:

5.1. Vendor shall not proceed with installation until approved schedule is developed and only following a notice to proceed by the Owner.

5.2 The work shall be performed by the AWOS manufacturer or approved contractor regularly engaged in work of this type, and shall include furnishing and installing the equipment, calibration, start-up, and commissioning of equipment.

- 5.3 Sensors shall be installed at the locations and elevations as approved by Owner/State and the Federal Aviation Administration. All connections of the cables to the sensors, AWOS tower, processing unit and data terminal will be in accordance with the manufacturer's specifications. VHF antenna shall be mounted at the AWOS site, unless other location is approved by Owner/State.
- 5.4 Vendor shall provide and install control and data cables in conduit from the AWOS CPU to remote sensors. RF transmitter and receiver shall be provided to the site by the Vendor, if required.
- 5.5 Vendor shall anticipate multiple installation visits as conditions dictate.

6. Equipment:

- 6.1. AWOS III Instrumentation: The systems to be installed shall be FAA certified as AWOS III or AWOS III P/T as finally configured at time of contract award. All equipment provided shall be new and meet the specifications in FAA AC 150/5220-16 (latest revision).
 - 6.1.1. Tower: Existing tower can be refurbished and used if it meets current standards and Vendor equipment. If new tower is needed, Vendor shall install either a self supporting or a tilt-over tower as specified by manufacturer for the system and as indicated on the project specific bid form. The tilt-over tower shall have a steel supporting rest in a concrete foundation that is required to hold tower in its tilt-down position without touching ground. Either tower type shall not exceed the height specified for the equipment to be installed on the tower.

The tower shall be painted with a six-band marking with alternating bands of aviation surface orange (the top band) and white. The bandwidths shall be 1/6 of the height of the tower and perpendicular to the vertical axis of the tower with the bands at each end colored orange. Paint and aviation colors shall conform to Federal Standards. The tower shall be primed in accordance with the tower manufacturer's specifications prior to painting.

A Dual L-810 obstruction light shall be placed within 5 feet of the top of the tower in accordance with FAA requirements. The two lamps on the L810 shall be wired in parallel on a dedicated circuit.

- 6.1.2 Voice Subsystem: A. The voice subsystem shall provide high quality, computer-generated speech for output of the AWOS observation. The voice subsystem should also provide the speech for the local ground-air radio broadcast and for telephone dial-up users. The system shall have the capability of hooking up to a minimum of two (2) phone lines, and for the addition of a manually input voice message at the end of the computer generated voice message. The system shall have the capability of remotely programming a voice message via telephone. A

security access code shall prevent unauthorized use, and the system will automatically play back the recorded message and allow the user to reprogram, delete, or accept the message.

- 6.1.3 Uninterruptible Power Supply: The Vendor shall provide a UPS to regulate power and provide a back-up power supply source for power outages. The UPS shall be capable of powering the AWOS for a minimum of one (1) hour.
- 6.1.4 NADIN/WMSCR Interface: The AWOS shall include equipment for interfacing with a Vendor that is approved to download information through the National Airspace Data Interchange Network (NADIN) and into the Weather Message Switching Center Replacement (WMSCR).
- 6.1.5 Transient and Lightning Protection: AWOS equipment should be protected against damage or operational upset due to lightning surges, power line transients and surges, and from other electromagnetic fields and charges on all sensor input lines, sensor supply lines, and incoming power and data communications lines. Lightning protection systems shall be designed and installed in accordance with the Lightning Protection Code, NFPA 780, and the manufacturer recommendations for all equipment.
- 6.1.6 Test Equipment: The Contractor shall supply the Owner with the necessary test equipment to maintain the AWOS weather sensors according to the manufacturer's FAA approved maintenance plan.
- 6.1.7 Spare Components: The Contractor shall provide the Owner with the manufacturer's minimum recommended spare components necessary to restore the AWOS to service following a malfunction.
- 6.1.8 Maintenance Agreement: The Vendor shall provide a one (1) year AWOS maintenance agreement that meets the requirements of FAA AC No. 150/5220-16 (latest revision) and begins on the date of FAA commissioning. The maintenance agreement shall include all required inspections and maintenance as defined by AC No. 150/5220-16 (latest revision), but will not include any repairs made under the one year warranty for the installed system.

7. Additional Services

- 7.1. The Vendor will perform the following:
 - a. Conduct all required systems performance tests. System must be in total working condition before scheduling FAA site commissioning. If multiple FAA commissioning visits are necessary, Vendor shall reimburse other contractors, the FAA, and the owner for associated additional travel costs if requested.

- b. Prepare the AWOS for the FAA ground check. Place and keep the AWOS in an operational test mode until it is certified by the FAA. If the FAA disapproves either the ground check or flight check, the Vendor shall correct the discrepancies and re-schedule the FAA ground or flight check.
- c. Provide a qualified technician on site for any required FAA ground check, flight check, and site commissioning of the AWOS.
- d. Post any certificates and notices required in AC 150/5220-16, (latest version).
- e. Vendor to schedule a session after commissioning at the airport to provide complete system operation, maintenance, and repair training. Vendor will ensure that all airport representatives and operators as designated by the owner are notified of the training session, and will personally conduct the training on site.
- f. Provide one complete set of AWOS system manuals to the owner.

8. Basis of Payment

8.1 Siting, Licensing and Installation:

- a. Vendor shall be paid for the installed AWOS system less 5% retainage. Each system shall be installed in accordance with the Plans and General and Special Provisions. The unit price shall be full compensation for all labor, equipment, materials, peripherals, training, services, one year warranty, one year of AWOS System Maintenance, and incidentals as necessary to place the system in operation to the satisfaction of the Owner/State and be ready for commissioning by the Federal Aviation Administration.
- b. Five (5) percent retainage shall be held until final inspection and acceptance by Owner/State. Release of retainage does not release Vendor of obligation to have equipment certified and commissioned by FAA. Vendor shall correct, repair and/or replace any equipment necessary to have equipment commissioned by FAA. Vendor is not released from this contract until final commissioning of the system.
- c. Vendor shall make all necessary repairs, corrections, changes, and modifications to the AWOS system before acceptance by Owner/State. The airport owner should not be relied upon at any time to assist or make the necessary repairs, corrections, changes, or modifications.