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BID BULLETIN NO. 01-2015

Name of Contract: **Supply of Branded GNSS Survey Equipment, Fiber Optic Spectrometer, Workstations and Other Equipment for LiDAR Project**

This Addendum is issued to modify parts of the bid documents, specifically the Delivery Schedule of all items to 30-45 calendar days and the Specifications of the following:

Quantity	Item Description
2 units	<p>DUAL FREQUENCY (RTK) SURVEY GRADE Global Positioning System (GPS)/Global Navigation Satellite System (GNSS) with Real-time Kinematic, Post-processing kinematic, and Static and Fast Static capabilities with data controllers, external UHF radio, and complete accessories.:</p> <p><u>A. GPS/GNSS Receiver Specifications:</u> GNSS Receiver Module/Motherboard: Advanced Trimble BD970 Maxwell(TM) 6 Custom Survey Technology Number of GPS/GNSS Receivers: 2 (1 base + 1 rover) Number of channels: • At least 220 Channels with Universal Tracking Capability Satellite Signal Tracking Capability: • GPS: Simultaneous L1 C/A, L2E, L2C, L5 • GLONASS: Simultaneous L1 C/A, L1 P, L2C/A (GLONASS M only), L2 P • SBAS: Simultaneous L1 C/A, L5 • Galileo: Simultaneous L1 BOC, E5A, E5B, E5AltBOC • Compass: B1, B2 • QZSS: L1 C/A, L1 SAIF, L2C, L5 Code differential GNSS surveying Positioning Accuracy: • Horizontal: 25 mm + 1ppm RMS or lesser • Vertical: 50 mm + 1ppm RMS or lesser • SBAS differential positioning accuracy: less than 5 m 3DRMS Real Time Kinematic Positioning Accuracy: • Horizontal: 8mm + 1 ppm RMS or lesser • Vertical: 15mm + 1 ppm RMS or lesser • Initialization time: less than 8s • Initialization reliability: at least 99.9% Post-processing Kinematic Positioning Accuracy (PPK/Stop-and-Go): • Horizontal: 2 cm + 1 ppm RMS or lesser • Vertical: 3 cm + 1 ppm RMS or lesser Static and Fast Static Positioning Accuracy: • Horizontal: 3mm+0.5ppm RMS or lesser • Vertical: 5mm+0.5ppm RMS or lesser Communication and Data Storage for each GPS/GNSS Receiver: • With standard USB 2.0 port • With RS232 port; Baud rates up to 115200</p>

- With Stollman's BlueMod+B20 inside for Bluetooth Function
 - With fully sealed and integrated 2.4GHz communication Bluetooth port
 - With UHF receiving antenna port
 - With fully sealed and integrated radio receiver/transmitter, 0.5-2W adjustable, 410-430/430-450/450-470MHz; UHF Range: 3-5km typical, 8-10km optimal
 - With Mini GDL5 Radio: 2/5W; UHF Range: 4-6km typical, 8-10km optimal
 - With Standard GDL20 External UHF Radio: at least 25W transmitting power; UHF Range: 8-10km typical, 15-20km optimal
 - With fully sealed and integrated internal GPRS/GSM Module
 - External cellphone support for GPRS/GSM (2G and 3G) module for Network RTK (CORS) operations
 - Network RTK (via CORS) performance: 20-50 km
 - Data storage: At least 64 MB internal data storage for each receiver
 - Recording rate: 1Hz positioning up to 20Hz (must be supported by Bd970 mainboard)
 - Must have all the following reference outputs: CMR, CMR+, CMRx, RTCM 2.1, RTCM 2.2, RTCM 2.3, RTCM 3.0, RTCM 3.1
- Receiver Battery Life: • With built- in Dual Lithium Ion batteries; At least 10 hours battery life for each receiver; re-chargeable batteries
- Other required Receiver features:
- With built- in Digital LCD Display on the main receiver
 - With built- in Control panel for direct setting of working mode
 - With compact metal housing for ruggedness and durability

B. Receiver Controller Specifications:

Number of Receiver Controller/Data Collector: 1 (for the rover)

Controller System Specifications:

- With Windows Mobile 6.5 or later operating system
 - At least 624MHz CPU speed, at least 256MB RAM
 - With Integrated Camera, at least 3.2MP resolution
 - With at least 256 MB internal flash data storage
 - With 8GB TF Card for External memory
 - With VGA Display (at least 480x640 Portrait dimension) sunlight readable transreflective touch screen
 - With Integrated speaker and microphone
 - Working hours: at least 1 week for Standby mode; at least 12 hours for normal operation
 - With 300mAh Li-Ion battery
 - Working hours: at least 1 week for Standby mode; at least 12 hours for normal operation
 - With integrated high-sensitivity professional GPS module and measurement antenna
- Controller GPS Performance:
- With at least 12 Channels
 - With 2-60 meter positioning accuracy
 - With NMEA Protocol Support
- Controller GPS Communication:
- With integrated Bluetooth V2.0
 - With integrated WIFI Communication
 - With GSM/GPRS, 850/900/1800/1900 global four frequency

C. Summary of Required Deliverables:

- 2 units GPS/GNSS Receiver
- 2 pcs. Charger for the GPS/GNSS Receiver
- 2 pc. Receiver UHF Antenna
- 2 pc. Tribach & Connector for the receivers
- 2 pc. Measuring tape
- 2 pc. HI Measuring Plate

- 2 pc. Power/data cable
- 2 pc. GPS/GNSS Operation/Processing Software
- 2 pc. Carrying/transport cases
- 2 units Aluminum Tripods (1 for base, 1 for all-direction antenna)
- 1 unit Receiver Controller with Battery
- 1 unit Receiver Controller Battery Charger
- 1 pc. Data Cable for Controller
- 1 units Carbon Fiber pole with bracket & holder
- 1 units Bi-Pods
- 1 unit External radio
- 1 pc. External radio cable
- 1 pc. 6.5db UHF all-direction antenna
- 1 unit pole extender for all-direction antenna
- 1 pc. tribrach for all-direction antenna
- 1 pc. Field Software
- 1 pc. Post-Processing Software
- 2 pc. QuickGuide & User Manual (CD)

Other requirements:

- Dealer must be equipped with duly trained technical support personnel that can provide a "Hands-on Training" on Hardware/Software operation. Training can be conducted "On-Site" or through dealers' office upon request.
- Dealer must have service repair shop with trained service personnel that can repair the equipment within 24 hours.
- Dealer must have spare parts and other accessories for all delivered equipment. The spare parts and other accessories must be readily available in the service center.
- In case of unit malfunction, dealer must provide service unit with similar specifications to the ones delivered.
- Dealer should have existing Continuously Operating Reference Station (CORS) to check the delivered unit's CORS capability.

Warranty: At least 3 years on services (repair and calibration). At least 2 years on parts.
 Delivery Period: 30-45 calendar days upon receipt of Purchase Order.

This shall form part of the Bid Documents. For guidance and information of all concerned.



Prof. ANTONIO R. OBSIOMA, Ph.D.
 Chair, Bids and Awards Committee