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MINUTES OF THE PRE-BIDDING CONFERENCE
SUPPLY AND DELIVERY OF HYPERSPECTRAL CAMERA AND VIS-NIR SPECTROMETER FOR THE PCAARRD-FUNDED DEVELOPMENT OF UGV-UAV FOR SOIL NUTRIENT MAPPING OF COFFEE FARMS

Present were:

Lolita G. Herrera	- Chair, BAC for Goods and Consulting Services
Bettina Joyce P. Ilagan	- Vice Chair
Edwina O. Roderos	- Member
Noel A. Sedigo	- Member
Gerry M. Castillo	- Member/ End-User
Jazmin P. Cubillo	- Member
Emeline C. Guevarra	- TWG Chair, Computer and Office Equipment
Dindo C. Marges	- TWG Member, Computer and Office Equipment
Annaliza Amo	- Representative, ALV Technologies
Raisa Aguilar	- Representative, ALV Technologies
Ramon E. Alaba	- Representative, FIL Anaserve Inc.
Mila M. Matel	- Representative, Masangkay Computer Center
Rodney B. Javier	- Staff, NCRDEC
Preciosa G. Eraña	- OIC, Procurement Office
Roselyn M. Maranan	- Chair, Secretariat
Al Eugene L. Torres	- Member, BAC Secretariat
Erla F. Matel	- Member, BAC Secretariat
Ginalyn M. Marzo	- Member, BAC Secretariat

The pre-bidding conference for the SUPPLY AND DELIVERY OF HYPERSPECTRAL CAMERA AND VIS-NIR SPECTROMETER FOR THE PCAARRD-FUNDED DEVELOPMENT OF UGV-UAV FOR SOIL NUTRIENT MAPPING OF COFFEE FARMS held at Hostel Tropicana was called to order at 11:30 am on October 18, 2022, and was presided over by the BAC Chair, Ms. Lolita G. Herrera. The Chair acknowledged the presence of three (3) representatives of the prospective bidders.

The Chair introduced the BAC Members, members of the Technical Working Group, members of the BAC Secretariat, and the End-User. No COA and private sector representatives attended the meeting.

A. The Chair emphasized and clarified the following:

1. The ABC of the project is Two Million Pesos (₱ 2,000,000.00).

2. The source of funds for the project is TRUST (PCAARRD-funded project).

3. The general requirements and technical specifications were presented.

3.1. Hyperspectral Camera (1 unit) – amounting to ₱ 1,000,000.00
- Wavelength band (nm): 450-2290 (Band 2-7: RGB, NIR, SWIR)
- Resolution: 20MP
- Frame Rate: at least 120 fps
- Wavelength resolution-FWHM: less than 5nm
- Spatial Pixel: at least 320 pixels
- Spectral Channel: at least 200 channels
- Battery Operated/ Low Power Consumption
- cross-platform SDK with API included
- Lightweight (less than 1kg)
- for Unmanned Aerial Vehicle application

3.2. vis-NIR Spectrometer Sensor (1 unit) – amounting to ₱ 1,000,000.00
- Wavelength range (nm): 900-1700
- Resolution (nm_fwhm): < 4

- Entrance Fiber: SMA905
- Entrance Slit: <25µm
- Weight: lightweight (<1.25kg)
- Supply USB-powered: (5Vdc or 12Vdc)
- A/D Resolution: 16 bit
- Mode of Detection: Absorbance/Reflectance
- Detector Array: InGaAs detector (at least 128 pixels)
- Software included cross-platform SDK with API integratable on µPU/µCU/µComputer parts and components

3.3. Others:

- All items must have at least one year of preventive maintenance services, and at least 1-year warranty on parts and services.

B. Queries from the prospective bidders/ Agreements:

1. The representative from ALV Technologies raised a clarification if the 2 items are bundled together or if the system will be used in the same application.

2. The End-User answered that the mode of procurement for this project can be a "for-item-basis" as long as it satisfies the minimum specifications and will be compatible with the drone and aerial vehicle that will be developed by the project team.

3. The representative from ALV Technologies then clarified if the camera and the spectrometer will not be used at the same time. A different sensor will be used in the aerial vehicle, while the spectrometer will be used in the ground vehicle.

4. The End-User answered that the sensor/ software for the aerial vehicle is still under development by the project's programmer, the spectrometer will be attached to the ground vehicle while the camera will be attached to the drone.

5. The representative from ALV Technologies inquired regarding the technical specifications of the 2 items in terms of the wavelength band, resolution, and usage. According to them, the hyperspectral camera, a 20MP resolution, with 200 spectral channels, and 320 spatial pixels seems to collect huge data and the allotted budget seems to be not sufficient. Nevertheless, they affirmed that they will double-check if they can offer something within the budget.

6. With regards to the inquiry of the prospective supplier on the specifications of the hyperspectral camera, Engr. Javier, Computer Programmer II of the PCAARRD-funded project, answered that the wavelength band needed by the project is only from 450-1,700 nm, that they just extended the wavelength band range to mid-infrared for future research as indicated in the specifications. With the resolution, it can be lowered from the original resolution of 20MP.

7. The representative from ALV Technologies stated for the information of everybody, that the image resolution of vis-NIR ranges from 1-2MP, and the requested 20MP of resolution with 200 spectral channels is quite huge given a budget of 1 million pesos only.

8. The TWG Chair emphasized that the set of specifications and the pricing given by the project team are based on similar studies. The Chair suggested that the project team should be given ample time to study further the specifications. In case there are changes in the specifications, a supplemental bid bulletin will be issued.

9. The BAC Chair and the End-User agreed with the suggestion of the TWG Chair and reiterated that the End-User should finalize the current specifications considering the inquiries/ suggestions of the prospective bidders and all changes in the specifications will be included in the bid bulletin.

10. Mr. Alaba of FIL Anaserve Inc. raised his question regarding the vis-NIR spectrometer if the fiber optics is really not included in the specifications. Moreover, he noticed that the specifications given is more than the allotted budget. He also mentioned that the specifications of the requested item are not USB powered, as it should be equipped with a separate power supply.

11. Engr. Javier answered that the fiber optics for the spectrometer will be procured separately. He also emphasized that the specifications given on the spectrometer sensor is based on the market study and within the allotted budget.

C. Other Matters:

1. The BAC is requesting prospective bidders to submit three (3) sets of bidding documents for simultaneous opening and evaluation of the BAC members and TWG.

2. Bid documents should be packaged well and should contain “dog tags” for easy scanning of all the BAC members.

3. Payment of bidding documents is required before the submission of bids. The deadline for bid submission is on November 3, 2022, at 8:00 am, late bids will not be accepted.

4. The face-to-face bid opening will be held on November 3, 2022, at 11:30 am at CvSU Hostel Tropicana.

5. Bid submission through the courier system is also allowed. However, the bid documents must be received by the BAC before the deadline for the submission of bids.

6. For the payment of bid documents, the prospective bidders are requested to coordinate with the BAC Secretariat. Online payment through Landbank LinkBiz is accepted.

7. For those who are interested to attend the face-to-face bid opening, prospective bidders are advised to send one (1) representative only per company. The University is implementing a health protocol to observe following the IATF guidelines, thus, wearing of face masks and social distancing must be observed at all times during the bid conference.

Since there are no queries from the bidders and the BAC members, and there are no other matters to be discussed, the pre-bid conference was adjourned by the BAC Chair at 12:00 nn.

Prepared by:

AL EUGENE L. TORRES
Member, BAC Secretariat

ROSELYN M. MARANAN
Chair, BAC Secretariat

Attested By:

LOLITA G. HERRERA
Chair, BAC for Goods and Consulting Services