



## NOTICE OF AWARD

16 JUN 2022

Date

**JOSE P. MARQUEZ LIM**

*Authorized Representative*

**STATE ALLIANCE ENTERPRISE INC.**

283 G. De Rivera Street, San Nicolas, Manila

Dear Sir:

This is to inform you that your bid proposal for the **PROCUREMENT OF SUPPLY AND INSTALLATION OF LABORATORY EQUIPMENT FOR THE ENHANCEMENT OF CIVIL ENGINEERING LABORATORIES** which shall be funded under **Trust Fund** after having been post-qualified and declared to have obtained the Single Calculated Responsive Bid, has been recommended for award by the Bids and Awards Committee (BAC) of Central Mindanao University by virtue of **BAC Resolution No. ITB-24-2022**, and the same has been approved by the Central Mindanao University thru the undersigned at the amount of *Nine Million Nine Hundred Ninety Thousand Pesos Only (Php. 9,990,000 .00)*. You are hereby requested to manifest your acceptance of this Notice of Award.

Relative thereto, and in accordance with the provisions of the documents and Revised R.A. No. 9184, otherwise known as the Government Procurement Reform Act and its Implementing Rules and Regulations, you are hereby instructed to submit the following documents with ten (10) calendar days from the date of your receipt of this Notice of Award to within:

### A. PERFORMANCE SECURITY

This is to be posted in favor of the Central Mindanao University, in the form of cash, manager's check, cashier's check, bank draft/guarantee confirmed by local bank, irrevocable letter of credit issued by a reputable bank, surety bond callable upon demand, issued by the Government Service Insurance System or any reputable surety or insurance company duly accredited by the Office the Insurance Commissioners, or a combination thereof **IN ACCORDANCE** with the following schedule:

FORM OF PERFORMANCE SECURITY	AMOUNT OF PERFORMANCE SECURITY (EQUAL TO PERCENTAGE OF THE TOTAL CONTRACT PRICE)
Cash or cashier's/manager's check issued by a Universal or Commercial Bank.	Five percent (5%)
Bank draft/guarantee or irrevocable letter of credit issued by a Universal or Commercial Bank: Provided, however, that it shall be confirmed or authenticated by a Universal or Commercial Bank, if issued by a foreign bank.	
Surety bond callable upon demand issued by a surety or insurance company duly certified by the Insurance Commission as authorized to issue such security; and/or	Thirty percent (30%)
Any combination of the foregoing.	Proportionate to share of form with respect to total amount of security



Republic of the Philippines  
CENTRAL MINDANAO UNIVERSITY  
BIDS AND AWARDS COMMITTEE  
University Town, Musuan, Maramag, Bukidnon  
E-mail: [bac@cmu.edu.ph](mailto:bac@cmu.edu.ph)

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Within the same period of ten (10) days as indicated above, you are directed to enter into and execute the Goods Contract with the University.

This Performance Security shall be forfeited in favor to Central Mindanao University in the event of default on your part in the performance of any of your obligations under the Contract.

Finally, it must be noted that you shall not commence the work nor initiate the procurement of materials for the project prior to your receipt of the Notice to Proceed.

Very truly yours,

  
JESUS ANTONIO G. DERJE  
President

Received, Acknowledged and Accepted:

Name: JASE P. MADRUEZ LIM

Signature: 

Date: \_\_\_\_\_



## CONTRACT OF AGREEMENT

**REF. NO. -ITB-24-2022**

THIS AGREEMENT made this 30 JUN 2022 between CENTRAL MINDANAO UNIVERSITY of the Philippines (hereinafter called "the Entity") of the one part and STATE ALLIANCE ENTERPRISES INC. 283 G De Rivera St. San Nicolas, 025, Barangay 270 Manila (hereinafter called "the Supplier") of the other part:

Whereas, the Entity invited Bids for certain goods and ancillary services, viz., **PROCUREMENT OF SUPPLY AND INSTALLATION OF LABORATORY EQUIPMENT FOR THE ENHANCEMENT OF CIVIL ENGINEERING LABORATORIES** and has accepted a Bid by the Supplier for the supply of those goods and services in the sum of **Nine Million Nine Hundred Ninety Thousand Pesos Only (9,990,000.00)**. the items listed below:

ITEM	UNIT	QTY	DESCRIPTION	OFFER	UNIT PRICE	TOTAL AMOUNT
1.	unit	1	<b>Sediment Transport Demonstration Channel</b>  Experimental: - Regimes of fixed bed flow - Initiation of bedload motion - Fixed, smooth bed flow - Flow over a mobile sand bed - Mechanics of sediment transport - Investigate sediment transport rate and the relationship between the intensity of the flow and its ability to transport sediment - Depositionary features and facies - Demonstrate scour at structures and study erosion effects associated with channel constrictions and flow around structures in the channel - Flow structures - Hysteresis of bedforms during changing stage - Investigate flow resistance in a gravel bed and illustrate the difference between gravel bed flow and the sand bed flow "Fixed, smooth bed flow: The flume may be used without sediment on the bed to demonstrate the following flow phenomena and governing equations: - Tranquil, subcritical flow - movement of surface waves upstream against flow u Rapid, supercritical flow - dominance of inertial over gravity forces, 'shock waves' from flow obstructions - Hydraulic jump - transition from super to subcritical flow, air entrainment, mixing - Turbulence - flow visualization for example by dye injection from a hypodermic syringe (not supplied) - Flow measurement - using sharp crested weirs - Governing equations of open channel flow - Reynolds' number, Froude number, continuity, Bernoulli's equation, weir equations"	<b>"Bench Mounted Frame"</b>  <b>Model:SV-100</b>  <b>Brand: Armfield</b>  <b>Made in U.K</b>  <b>"Structure Interface unit"</b>  <b>Model:SV-101</b>  <b>Brand: Armfield</b>  <b>Made in U.K</b>  <b>"Bending Moments in a Beam"</b>  <b>Model:SV-302</b>  <b>Brand: Armfield</b>  <b>Made in U.K</b>	5,000,000.00 ✓	5,000,000.00 ✓

"Flow over a mobile sand bed: Sequence of bedforms associated with increasing flow intensity and sediment transport rate. The following bedforms are exhibited (as discharge and/or slope are increased):

- Lower regime: - Plane bed (no motion) - Ripples - Ripples and dunes - Dunes - Washed out dunes

- Upper regime: - Plane bed (with motion) - Standing waves - Antidunes - Breaking antidunes - Chutes and pools

Mechanics of sediment transport: Starting from a plane bed with no motion, the movement of grains can be observed with emphasis on the following: - Initiation of motion - Trajectory of initial motion - Movement by rolling and sliding (contact load) - Movement by hopping (saltation load)\*

"Depositionary features and facies: The deposition of sediment load can be observed and the resulting patterns of grains within the sand body (such as cross bedding, foreset beds etc.) may be identified. The significance of such features when found in geological records can be discussed.

Local scour: Scour under boils and vortices in the flow is observed under both the lower and upper regime bedforms. Artificial obstructions may be introduced to represent bridge piers, revetments, sills or other manmade structures, and the resulting pattern of scour examined. Two such models are included."

"Flow structures: The structure of turbulence in the flow may be examined using dye injection (dye injector not included). This is particularly interesting for the dune bedform configuration and clearly demonstrates separation on the lee fac

Bedform hysteresis: If the discharge in the flume changes quickly, there is insufficient time for bedforms to adjust to the new flow regime. Hence, if a flood hydrograph is simulated by increasing and then decreasing the discharge, different depths (stages) will occur for the same discharge on the rising and falling limbs. This effect is of major importance to gauging stations on sand bed rivers. It is easily and clearly demonstrated in the flume."

"Computational work: In addition to illustrating flow and sediment phenomena, the flume can be used for basic data collection and numerical evaluation of the following:

Flow resistance: - Manning, Chezy and Darcy - Weisbach friction factors for various bedform configurations

Bedform prediction: - Hjulstrom diagram (velocity) - Bogardi diagram (shields parameter) - Simons and Richardson charts (stream power) - Leeder chart (boundary shear stress) - Movement by suspension (suspended load) "

			<p>"Initiation of motion: - Hjulstrom's curve - Shields diagram</p> <ul style="list-style-type: none"> <li>- A transparent, inclinable flow channel through which water can be recirculated by a pump over a mobile bed to demonstrate the whole range of bedforms from incipient particle movement to bed washout</li> <li>- Three different discharge rates can be selected and measured within the range 0.2 to 0.6 litres/sec</li> <li>- The channel slope can be adjusted within the range 0-10%</li> <li>- The working section of the channel is 1.55m long, 78mm wide and 110mm deep</li> <li>- The equipment is self-contained and may be bench mounted in either the classroom or laboratory by virtue of its portability</li> <li>- A model undershot weir and bridge pier are included for local erosion demonstrations</li> <li>- A water level gauge is supplied to calibrate the overshot weir"</li> </ul>			
2	unit	1 ✓	<p><b>Fluid Science</b></p> <p><b>"Service Unit "</b> Features:</p> <ul style="list-style-type: none"> <li>• Integrated Pump</li> <li>• Integrated flowmeter with needle valve</li> <li>• Each service unit can be used as either a hot or cold-water supply</li> <li>• Quick connect couplings for easy connection to experiment modules, self-sealing on supply unit to minimise water loss</li> <li>• Digital Manometer and Thermometer provided</li> <li>• Bespoke system for experimental modules that reduces the risk of spillage</li> <li>• Low voltage within the supply unit to protect users"</li> </ul> <p>"Water Operational temperature range: Ambient to 55°C (131°F) Water Flow Rate: 0-3.5 litres/minute Water Volume: 5 litres DIGITAL THERMOMETER Measuring range: -50°C to 1350°C (-58°F to 2462°F) Accuracy: 0.015% <b>DIGITAL MANOMETER</b> Measuring range: 13.78kPa Accuracy: 0.3% Hardwired thermal cut out switch to prevent over temperature of water Operating Voltage: 24vDC power supply PSU voltage: 100VAC to 240 VAC, 50-60Hz"</p> <p>Flow Measurement Features:</p> <ul style="list-style-type: none"> <li>- Compact high precision comparison of flow meters</li> <li>- Including Venturi Meter and Orifice plate</li> <li>- Quick connect couplings for easy connection to experiment modules, self-sealing on supply unit to minimise water loss</li> <li>- Highly Visual Design</li> <li>- Flow rate control via service unit</li> <li>- Differential pressure reading obtained using digital Manometer</li> </ul> <p>"Demonstrational capabilities: Types of flow measurement and its application - Explain the principles of a venturi meter and an orifice meter and why one is selected over the other in certain applications. - Pressure and velocity changes through a venture meter i.e. increased velocity results in reduced pressure - Energy transition in a venturi and orifice plate meter "</p>	<p><b>"COMPLY"</b></p> <p><b>"Service Unit "</b></p> <p><b>Model:FS-SU</b></p> <p><b>Brand: Armfield</b></p> <p><b>Made in U.K</b></p> <p><b>"Flow Measurement "</b></p> <p><b>Model:FS-1.1</b></p> <p><b>Brand: Armfield</b></p> <p><b>Made in U.K</b></p> <p><b>"Energy Losses-Straight Pipes "</b></p> <p><b>Model:FS-1.2</b></p> <p><b>Brand: Armfield</b></p> <p><b>Made in U.K</b></p> <p><b>"Energy Losses-Bends "</b></p> <p><b>Model:FS-1.3</b></p> <p><b>Brand: Armfield</b></p> <p><b>Made in U.K</b></p> <p><b>"Manometer "</b></p>	3,000,000.00 ✓	3,000,000.00 ✓

			<p>- Civil energy balance on a venturi meter  - Compare pressure drop across the entrance and exit of the meter (i.e. <math>\Delta P</math> across entrance /throat and <math>\Delta P</math> across throat/ exit) and explain results. - Explain the importance of discharge coefficient and calculate ideal flow rate across the both meters  - Explain the term "vena contracta", why it occurs in an orifice meter and its result (i.e. its permanent pressure loss – making it less suitable for certain applications"</p> <p>"Energy Losses – Straight Pipes</p> <p>The tray includes the following Hydraulic Circuits:  - Smooth and Roughened pipe 6mm diameter  - Contraction and expansion 8mm – 4mm – 8mm diameters  "</p> <p>"Demonstrational capabilities:  Explanation of basic principles such as conservation of mass  - Conservation of energy  - Explain energy loss and frictional loss  - Types of flow steady and unsteady flow, uniform and non-uniform flow etc  - Types of fluid flow regime i.e. laminar, turbulent and transitional flow  - Compare measured pressure drop from 3 different pipe forms, explaining the effect of geometry on pressure drop.  - Using Bernoulli's equation, calculate the pressures and compare results with experimental values.  - Calculate the frictional head loss and pressure drop using Darcy's equation  "</p> <p>"Features:  - Shallow bend radii 75mm, 6mm diameter  - Tight bend radii 25mm, 6mm diameter  - Mitre bend, 6mm diameter  - Smooth and roughened pipe 6mm diameter  - Contraction and expansion 8mm – 4mm – 8mm diameters  - Differential pressure reading obtained using digital manometer  - Highly visual design  Manometer – inclined  Manometer – U tube "</p>	<p><b>Model:FS-2.1</b></p> <p><b>Brand: Armfield</b></p> <p><b>Made in U.K</b></p>	
3	unit	1 ✓	<p><b>STRUCTURES</b></p> <p>Bench mounted frame  Internal Working Area: Height: 600mm Width: 950mm  Assembled Dimensions: Height: 920mm Width: 1110mm (Frame only) 1176mm with carry handles  Frame dimensions: 80mm x 40mm  Frame Construction: Aluminium</p> <p>Structures Interface unit  Features:  - Consoles can be daisy chained together  - Provides power for Load cells  - Provides data logging and connectivity up to 13 Strain gauges per unit</p> <p>Structures Interface Connections  - Input voltage = 24VDC  - 13 x Strain gauges (SG) Snap-in connectors  - 2 x Load Cell (LC) 2kg load cells snap-in connectors  - 3 x Load Cell (LC) 100kg load cells threaded connectors  - USB-B connector  - 1 x ABMC connector Multi Channel connection  - DC jack (to rear)</p> <p>Bending Moments in a Beam  - Split beam allows the internal bending moment at the split to be measured  - Up to 3kg of point loads can be applied to the beam across three movable weight hangers  - Adjustable simple supports</p> <p>Experimental content:</p>	<p><b>"Bench Mounted Frame"</b></p> <p><b>Model:SV-100</b></p> <p><b>Brand: Armfield</b></p> <p><b>Made in U.K</b></p> <p><b>"Structure Interface unit"</b></p> <p><b>Model:SV-101</b></p> <p><b>Brand: Armfield</b></p> <p><b>Made in U.K</b></p> <p><b>"Bending Moments in a Beam"</b></p> <p><b>Model:SV-302</b></p> <p><b>Brand:</b></p>	<p>1,990,000.00 ✓</p> <p>1,990,000.00 ✓</p>

	<p>Bending moment variation at the point of loading</p> <ul style="list-style-type: none"> <li>- Creation of bending moment diagram (BMD)</li> <li>- Variation of bending moment away from the point of loading</li> </ul> <p>Features:</p> <ul style="list-style-type: none"> <li>- Split beam allows the internal bending moment at the split to be measured</li> <li>- Up to 3kg of point loads can be applied to the beam across three movable weight hangers</li> <li>- Adjustable simple supports</li> <li>- Supplied with structures software as standard</li> <li>- Bending moments</li> <li>- Strain</li> <li>- Stress</li> <li>- Young's modulus</li> <li>- Bending moment diagrams (BMD)</li> <li>- Verification of equilibrium of vertical forces and moments</li> </ul> <p>Technical Specifications:</p> <ul style="list-style-type: none"> <li>- Long Beam Length: 550mm</li> <li>- Short Beam Length: 350mm</li> <li>- Beam Total Length: 900mm</li> <li>- Bending Moment Force Offset: 87.9mm</li> <li>- Measurement Type at Beam Split: Bending Moment</li> </ul> <ul style="list-style-type: none"> <li>- 2 x Universal Frame Mounts</li> <li>- 2 x Sliding Simple Supports</li> <li>- 3 x 1000g Weight Hangers</li> <li>- 3 x Extended Weight Hangers 24g</li> <li>- 1 x Instrument Level</li> <li>- 1 x 300mm Steel Rule</li> <li>- 1 x Detent Pins</li> <li>- Split Beam Connecting Hardware</li> <li>- Universal Frame Mounting Hardware</li> <li>- Instrument Level Sensitivity: 60 seconds per 2mm division</li> </ul> <p>Bidder Additional Requirements:</p> <ol style="list-style-type: none"> <li>1. Bidder should provide 1 (One) year warranty on parts and labor</li> <li>2. Bidder should provide installation and training at site</li> </ol>	<p><b>Armfield</b></p> <p><b>Made in U.K</b></p>	
	<b>GRAND TOTAL</b>		<b>9,990,000.00</b>

**NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:**

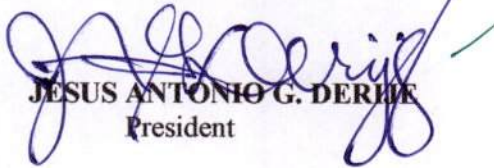
1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this agreement, viz,:
  - (a) the Bid Form and the Price Schedule submitted by the Bidder;
  - (b) the Schedule of Requirements;
  - (c) the Technical Specifications;
  - (d) the General Conditions of Contract;
  - (e) the Special Conditions of Contract; and,
  - (f) the Entity's Notification of Award.
3. In consideration of the payments to be made by the Entity to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Entity to provide the goods and services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Entity hereby covenants to pay the Supplier in consideration of the provision of the goods and services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the contract at the time and in the manner prescribed by the contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of the Republic of the Philippines on the day and year first above written.

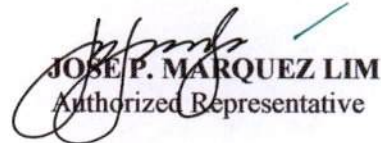
The Common Seal of CMU, Musuan, Bukidnon was herein affixed in the presence of **DR. JESUS ANTONIO G. DERIJE**

Signed, sealed, and delivered by **STATE ALLIANCE ENTERPRISES INC.** in the presence of **JOSE P. MARQUEZ LIM.**

Binding Signature of Entity:


  
**JESUS ANTONIO G. DERIJE**  
President

Binding Signature of Supplier:

  
**JOSE P. MARQUEZ LIM**  
Authorized Representative

Witness:

\_\_\_\_\_

  
**MARIA JAMELLIAH CELESTE M. MAGALONA**  
Chief, Accounting Unit

**ACKNOWLEDGEMENT**

REPUBLIC OF THE PHILIPPINES)  
PROVINCE OF BUKIDNON ) s.s.  
MUNICIPALITY OF **VALENCIA CITY**

BEFORE ME, a Notary Public for in the above jurisdiction, on this \_\_\_\_\_ day of \_\_\_\_\_ at **VALENCIA CITY** personally appeared the following, exhibiting to me following described Competent Evidence of Identity (CEI) in accordance with the 20m Rules on Notarial Practice.


Name	Competent Evidence of Identity	Date/place Issued
<b>JESUS ANTONIO G. DERIJE</b>		
<b>JOSE P. MARQUEZ LIM</b>		

Known to me to be the same person who executed the foregoing instrument and who acknowledge to me that the same is their free and voluntary act and deed.

This instrument refers to the Contract of Agreement consisting of (3) pages including this page, signed by the parties and their witnesses on each and every hereof and thereof, including this page whereon the acknowledgement is written.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed on every page hereof my notarial seal this \_\_\_\_\_ day of \_\_\_\_\_ in the Municipality of \_\_\_\_\_, Province of **VALENCIA CITY**

**DOC. NO.** 387  
**PAGE NO.** 77  
**BOOK NO.** 850  
**SERIES OF** 202

  
**FRANCISCO L. VASIG, JR.**  
NOTARY PUBLIC  
UNTIL JUNE 30, 2022  
IBP NO. 169667 12/3/2021  
PTR NO. 4621271 1/3/2022  
TIN 106-036-894  
ROLL NO. 23109  
NOT. COMM. NO. 02-20