



NATIONAL COFFEE RESEARCH, DEVELOPMENT AND EXTENSION CENTER

FABRICATION OF UNMANNED GROUND VEHICLE/ UNMANNED ARIAL VEHICLE SYSTEM – MATERIALS AND LABOR

ABC: Php 1,300,000.00

Funding Source: TRUST (PCAARRD UGV/UAV vis-NIR Project)

Item No.	Qty./ Unit	Item Description	Unit Price (Php)	Total Price (Php)
1	1 lot	Fabrication of Unmanned Ground Vehicle/ Unmanned Arial Vehicle System	1,300,000.00	1,300,000.00
			Total Amount	1,300,000.00

Components/ List of Materials

Qty/Unit	Item Description
1 lot	Unmanned Ground Vehicle Chassis and Structural Parts
2 units	BLDC Geared Motor with Controller (750 watts, 460 rpm)
4 units	Wheel 145/70-6 three-hole Assembly
6 units	Sprockets and Chain Set (#420 - 28T - 14T - 70L)
4 units	Sprockets and Chain Set (#420 - 25T - 14T - 70L)
2 units	Viper-Slide Kit 2 Stage (Belt-Driven, 336mm Slides)
2 units	Planetary Gear Motor (99.5:1 Ratio, 60 RPM, 3.3 - 5V Encoder)
1 unit	U-Channel 1121 Series Low-Side (15 Hole, 384mm Length)
1 unit	ServoBlock (Standard Size, 25 Tooth Spline, Hub-Shaft)
1 unit	Servo Travel Tuner
1 unit	Servo Dual Mode 2000 Series (25-2, Torque, 300:1)
1 unit	1804 Series Servo Stand (32-1)
1 unit	10mm Bore Face Thru-Hole Pillow Block (32mm x 32mm Mounting Pattern)
1 unit	Servo Hub-Shaft 1910 Series (25 Tooth Spline, 10mm Shaft Diameter, 33mm Length)
2 units	Pillow Block 10mm Bore Face Thru-Hole (32mm x 32mm Mounting Pattern)
1 unit	Socket Head Screw (M4 x 0.7mm, 10mm Length) - 25 Pack
1 unit	Socket Head Screw (M4 x 0.7mm, 18mm Length) - 25 Pack
1 unit	Socket Head Screw (M4 x 0.7mm, 25mm Length) - 25 Pack
2 units	Flexible Jaw Coupling (40x66mm 14mm - 19mm)
2 units	Motor Driver for Nema 23 (1.0-4.5A 18-50VDC)
2 units	Motor Shaft (14mm diameter, 102 Length)
4 units	12V Heavy-Duty Linear Actuator (225lb Thrust, 0.3"/sec, 8" Stroke)
2 units	Battery (Lifepo4 24V, 40AH/50AH)
2 units	Linear Guide Rail 1000 mm Length with Bearing Block
1 unit	Linear Actuator (Electro-Hydraulic, 300 mm Stroke)
1 unit	Cordless Electric Earth Auger Drill 20V
2 units	Nema 23 Stepper Motor with Worm Gear
2 units	Flexible Jaw Coupling 40x66mm 14mm - 19mm

2 units	Motor Driver for Nema 23
2 units	Geared Stepper Motor Shaft
2 units	Nema 23 Bracket
2 units	Sprocket (PHS 12B-1BH11 12B-1 Chain Type)
1 unit	Roller Chain (12B-1 Simplex Roller Chain, 5m)
1 unit	Auger Drill Bit (40 mm x 800 mm)
2 units	Ball Screw Linear Guide Actuator with Nema 23 Stepper Motor 100 mm Stroke
12 units	Pillow Block (19.05 mm or 3/4 Inch)
2 units	Unmanned Arial Vehicle/ Drone Landing Gear Module
1 unit	Downward Single Gimbal Damping Module
2 units	Antenna Module
2 units	Drone Motor (CCW)
2 units	Drone Motor (CW)
2 units	Propeller CW (Single) 2110s
2 units	Propeller CCW (Single) 2110s
1 unit	Drone Battery Modules
1 unit	Battery Compartment Bracket and accessories
2 units	Intelligent Flight Battery TB65
1 unit	UAV Aircraft Upper Shell Module and Accessories
1 unit	UAV Aircraft Arm Carbon Tube (M1)
1 unit	UAV Aircraft Arm Carbon Tube (M2)
1 unit	UAV Aircraft Arm Carbon Tube (M3)
1 unit	UAV Aircraft Arm Carbon Tube (M4)
1 unit	ESC Board Module
1 unit	FPV Module
1 unit	Backward & Upward Vision Sensor
1 unit	Lateral Vision Sensor
1 unit	Downward Vision Sensor
1 unit	Forward Vision Sensor
1 unit	Drone Auxiliary System Modules

Note: detailed design is available upon request; supplier/fabricator must sign a confidentiality/non-disclosure agreement before receiving the detailed design

Prepared by:


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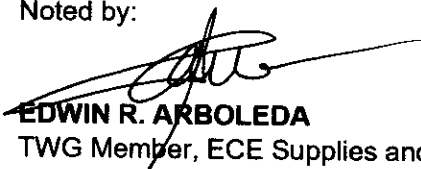

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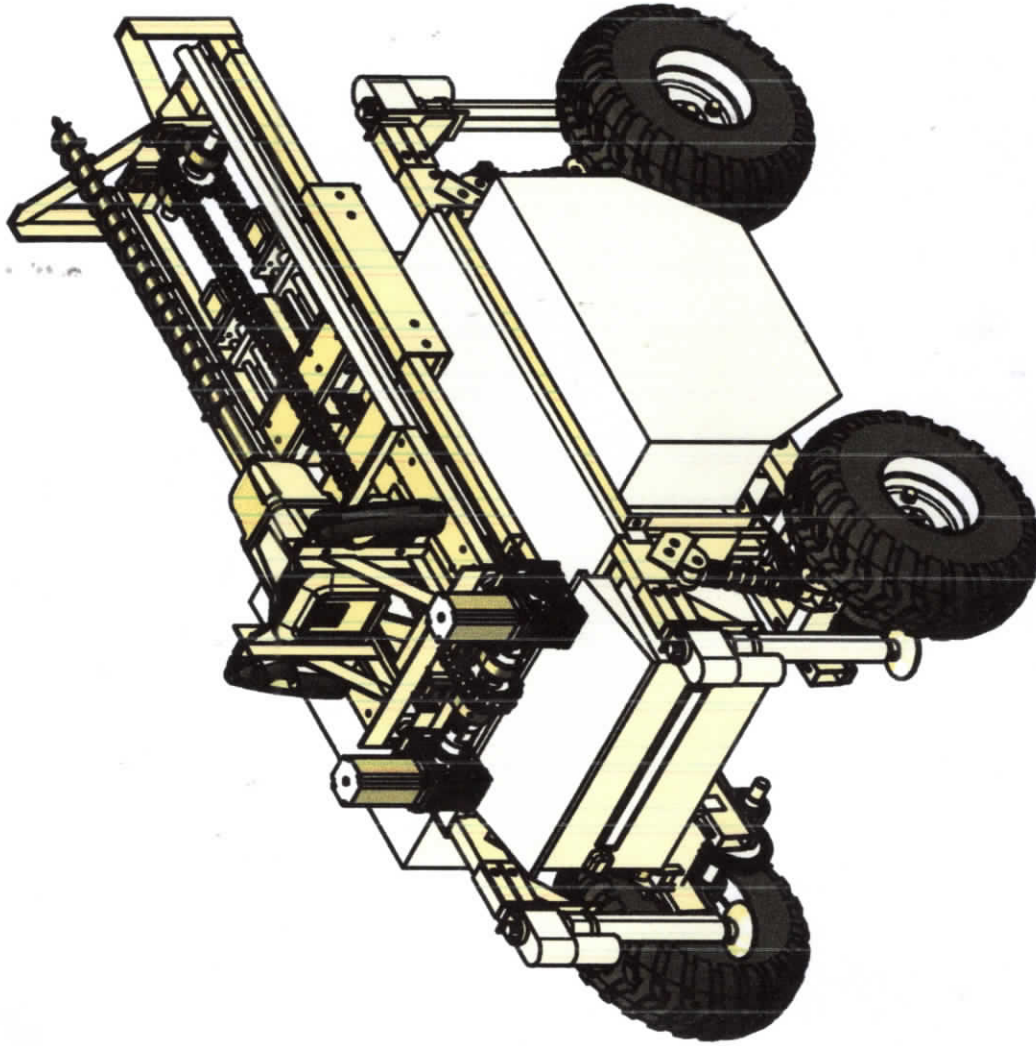
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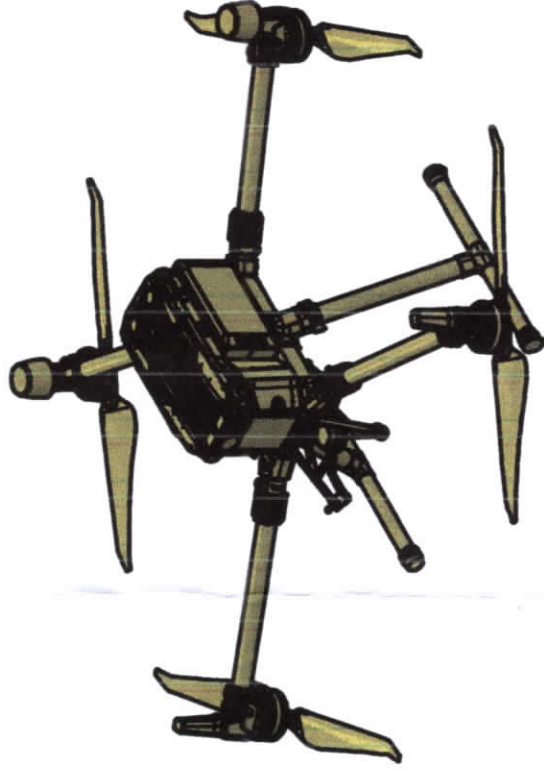


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Unmanned Ground Vehicle (UGV)



Unmanned Aerial Vehicle (UAV)

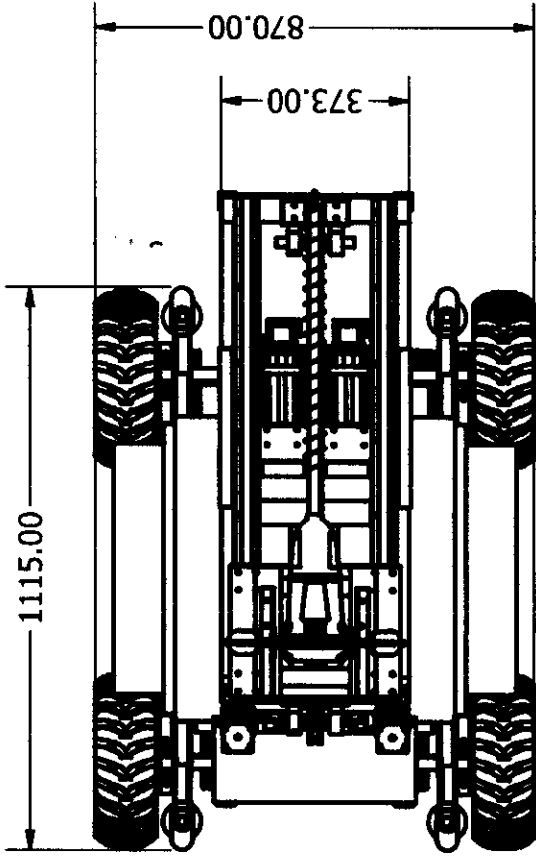
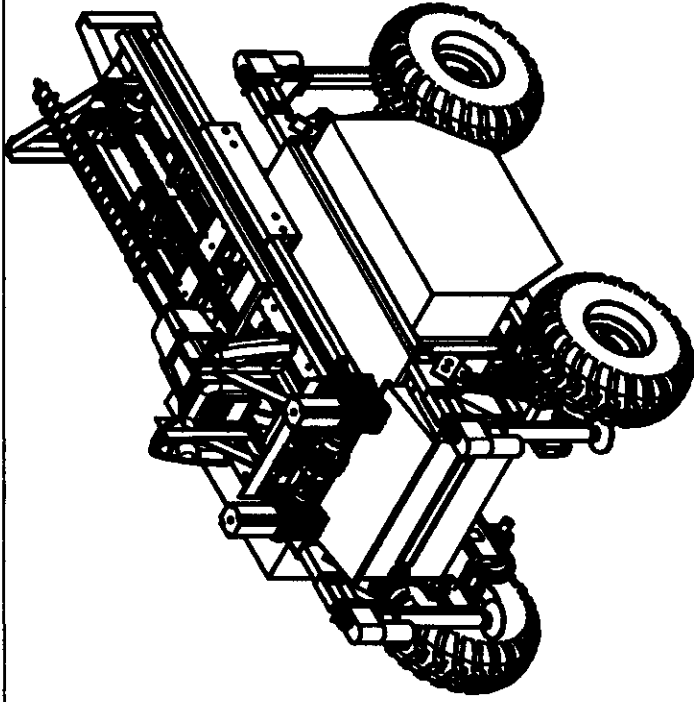
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Designed by:
Project Management Team

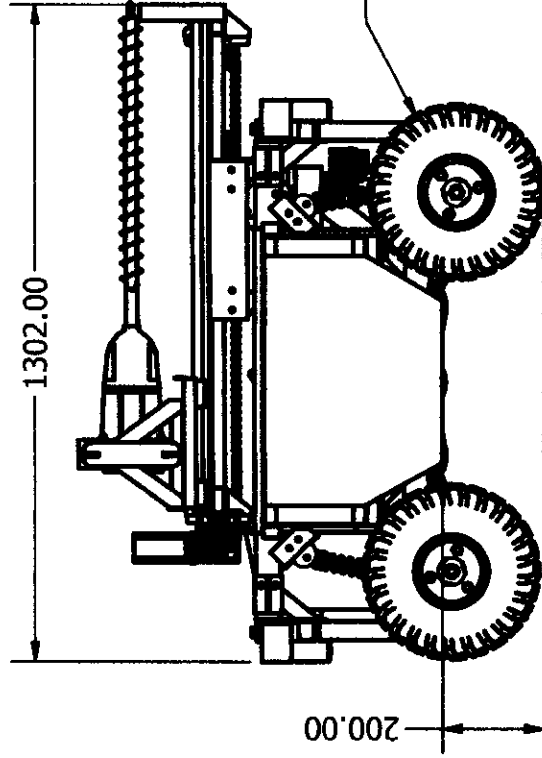
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UGV-UAV Soil Nutrient Analysis System

Part No.:
NIR01

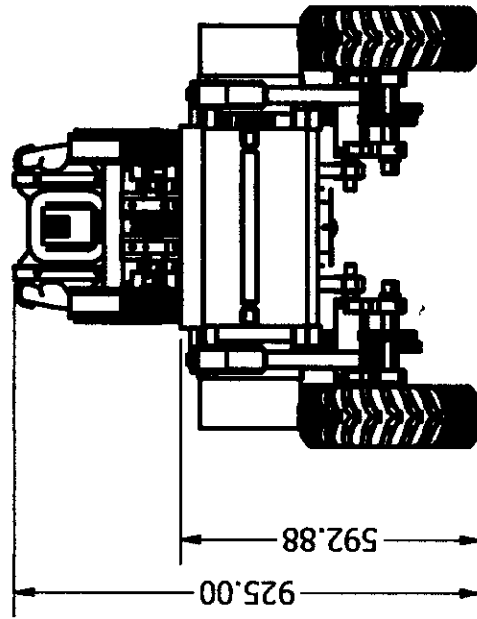
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Top View



Side View



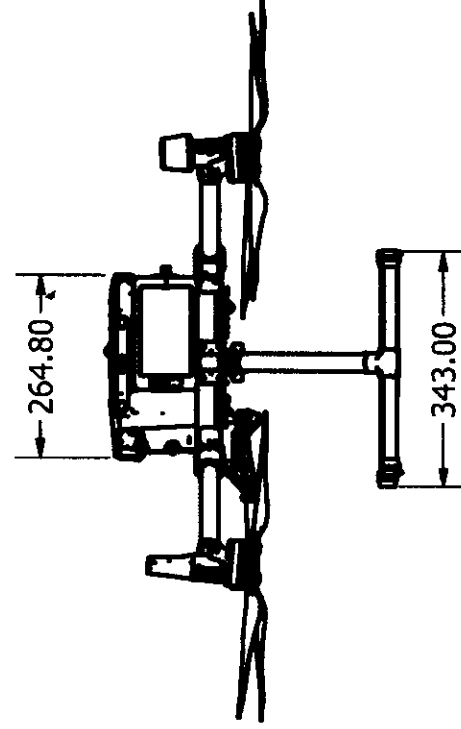
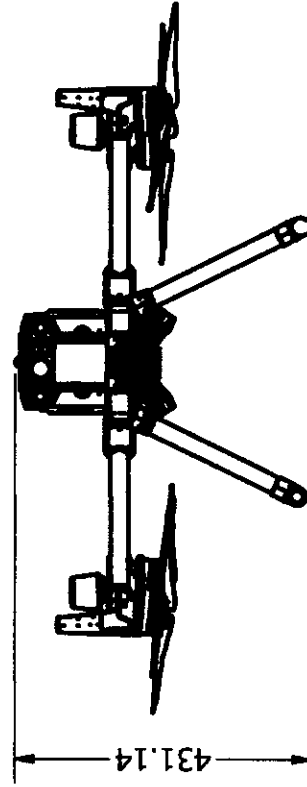
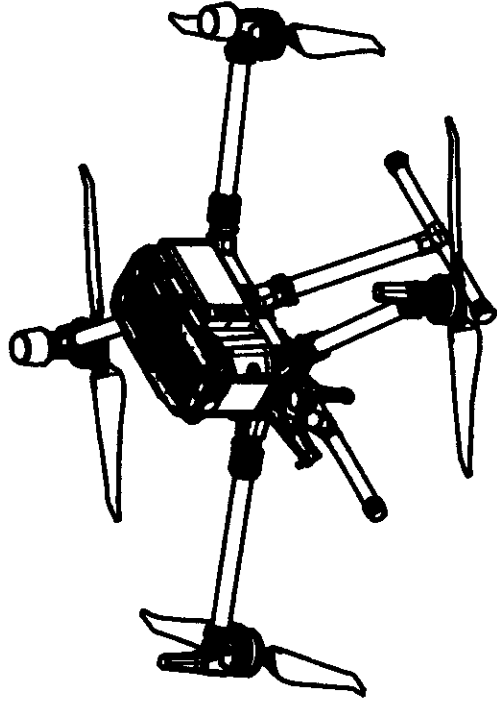
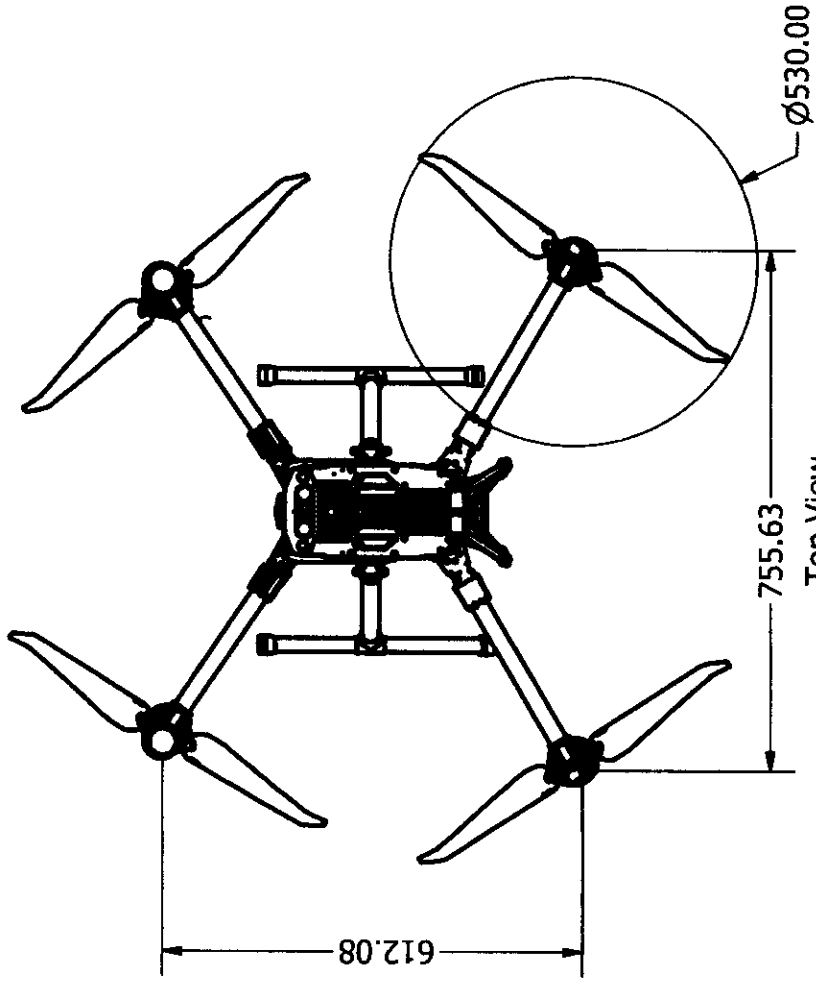
Front View

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Part No.: NIR01-1
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Project Title:
Unmanned Ground Vehicle (UGV)

Designed by:
Project Management Team



Front View

Side View

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Designed by:
Project Management Team

Project Title:
Unmanned Aerial Vehicle (UAV)

Part No.: NIR01-2
1/1