



Republic of the Philippines
BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING
SRA Compound, Annex II Building Ext.
North Avenue, Diliman, Quezon City
(02) 8351-8120, (02) 8294-9741

TERMS OF REFERENCE

SUPPLY, DELIVERY, AND INSTALLATION OF VARIOUS COMPUTER SOFTWARE UNDER THE DIGITAL AGRICULTURE PROJECT (SUB-PROJECT: ENHANCED FARM-TO-MARKET ROAD (FMR) AND AGRI-COMMODITY GEODATABASE)

A. RATIONALE

The Bureau of Agricultural and Fisheries Engineering (BAFE) is mandated under Section 24 of Republic Act No. 10601 to prepare, evaluate, validate, and recommend engineering plans, designs, and technical specifications on agri-fisheries mechanization and infrastructure projects. The Engineering Plans, Designs, and Specifications Division (EPDSD) of the BAFE has consistently and diligently performed its function related to engineering plans, designs, and specifications, despite limited fiscal resources, by subscribing to computer software.

In consideration of the impact of implementing shovel-ready programs and projects through the preparation and/or review of detailed engineering drawings (DEDs), the use of perpetual computer software is essential to produce quality DEDs and structural analyses, thereby ensuring the structural integrity of agricultural and fisheries infrastructure projects.

B. SCOPE OF WORK

The winning bidder shall execute the following, ensuring full compliance with all technical specifications and the Government Procurement Reform Act (RA 9184) and its IRR:

1. Supply & Delivery: Provide all procured software licenses (perpetual) as specified in Table 1, delivered to the BAFE Office, Sugar Center Compound, Annex II Building Extension, North Avenue, Diliman, Quezon City.
2. Installation & Configuration:
 - Perform full installation and activation of all software on BAFE-provided hardware (minimum specifications outlined in Annex A).
 - Ensure all software components are fully operational and accessible to designated BAFE users.
3. Licensing & Warranty:
 - Provide perpetual licenses for all software units.



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- Secure a minimum of one (1) year of comprehensive maintenance service and after-sales support, inclusive of major version upgrades, bug fixes, and critical updates from the date of acceptance.
 - Provide a Certificate of Warranty explicitly detailing the duration and scope of support for each software license.
 - Ensure all licenses are legally obtained and fully transferable to BAFE as the end-user.
4. Technical Support Services (Post-Installation):
- Provide dedicated local technical support during the warranty period.
 - Service Level Agreement (SLA) Requirements:
 - Critical Issues (System Down/Major Functionality Failure): Response within 4 business hours; Resolution within 2 business days.
 - High Issues (Major Bug/Workflow Interruption): Response within 8 business hours; Resolution within 5 business days.
 - Medium Issues (Minor Bug/Feature Query): Response within 24 business hours; Resolution within 10 business days.
 - Low Issues (General Inquiry/Enhancement Request): Response within 48 business hours; Resolution as per vendor's standard practice.
 - Support channels must include phone and email, with an option for remote desktop support.
5. Technology Transfer & Training:
- Conduct a comprehensive, hands-on training program for a minimum of ten (10) BAFE technical personnel per Lot.
 - Must cover core functionalities, advanced analysis techniques, code-specific design workflows, report generation, and interoperability with BAFE's existing software ecosystem.
 - Minimum of one (1) full day (8 hours/day) per Lot of training duration.
 - Provide high-quality, reproducible training manuals (hard copy and digital format) and exercise files.
 - Provide a Certificate of Training Completion for each participant, indicating modules covered.
6. Documentation: Provide complete software documentation, user manuals, and technical guides (digital format preferred, hardcopy optional) upon delivery.

C. APPROVED BUDGET FOR THE CONTRACT

The ABC for the **SUPPLY, DELIVERY, AND INSTALLATION OF VARIOUS COMPUTER SOFTWARE UNDER THE DIGITAL AGRICULTURE PROJECT (SUB-PROJECT: ENHANCED FARM-TO-MARKET ROAD (FMR) AND AGRI-COMMODITY GEODATABASE)** is **Four Million Pesos Only (Php 4,000,000.00)** inclusive of all applicable government taxes and charges, professional fees, software



licenses (perpetual), comprehensive maintenance/support for one (1) year, training costs, and other incidental costs.

D. TECHNICAL SPECIFICATIONS

PARTICULAR AND TECHNICAL SPECIFICATIONS	QUANTITY	UNIT COST (in PHP)	TOTAL AMOUNT
LOT 1			
1. Structural Design Software (Vertical) – Perpetual License <ul style="list-style-type: none"> • Version: Latest stable commercial release as of the bid opening date • Core Functionalities: <ul style="list-style-type: none"> ○ Comprehensive structural analysis and design capabilities for buildings, towers, and specialized vertical structures relevant to agri-fisheries infrastructure (e.g., grain silos, processing plant structures, elevated water tanks). ○ Must be capable of analyzing any structure exposed to static loading, dynamic response, wind, earthquake, and moving loads; ○ Integrated load generation based on National Structural Code of the Philippines (NSCP) 2015 for seismic and wind loads. ○ Must have analysis such as linear static, response spectrum, time history, imperfection, non-linear geometric, cable, buckling, and push-over analysis; ○ Must have an Advanced concrete design module compliant with ACI 318-19 and NSCP 2015 provisions for strength design, detailing, and material take-off (rebar schedules, concrete volumes). Must support design for beams, columns, slabs 	2	1,150,000.00	2,300,000.00



<p>(one-way, two-way, flat plates), walls, and foundations (spread footings, combined footings, mat foundations).</p> <ul style="list-style-type: none">○ Must have an intuitive graphical user interface (GUI) for rapid model creation, modification, and visualization, utilizing structural grids, object snapping, and parametric generators.○ Must be suitable for almost all types of material for Design capabilities for steel members (beams, columns, trusses) and connections. Must include cold-formed steel design (AISI standards). Capabilities for other materials, such as timber and aluminum structure analysis.○ Must have the ability to generate customizable engineering reports, including analysis results, design checks, material quantities, and graphical representations (e.g., stress contours, displacement plots, animations).○ Must have robust direct two-way interoperability (import/export with geometric and analytical data retention) with BAFE's primary CAD software. Specific focus on import/export of structural framing, element properties, and analytical nodes/members. <ul style="list-style-type: none">● Operating System: Fully compatible with Windows 10 Professional (64-bit) or latest.● With at least one (1) year of comprehensive software maintenance, including all updates, bug fixes, and technical support as detailed in Section B.			
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<ul style="list-style-type: none"> • With a basic to intermediate technology transfer seminar/training for at least 10 participants (BAFE Engineers/Designers). Must include digital/printed manuals. • must provide a notarized Certificate of Exclusive Dealership/Distributorship from the software publisher, explicitly stating authorization to sell, valid at the time of bid submission and award. 			
LOT 2			
<p>2. Structural Design Software (Horizontal) – Perpetual License</p> <ul style="list-style-type: none"> • Version: Latest stable commercial release as of bid opening date • Core Functionalities: <ul style="list-style-type: none"> ○ Can advanced modeling capabilities for a wide range of horizontal infrastructure relevant to agri-fisheries, including: Reinforced Concrete Deck Girder (RCDG) Bridges, Prestressed Concrete Girder (PSCG) Bridges, Steel Composite Bridges, Culverts (box and pipe), Cable-Stayed and Suspension Bridges (preliminary analysis), Arch Bridges, and Skewed Bridges. Capability for detailed modeling and design of Superstructure Components (deck, girders, bracing) and Substructure Components (abutments, piers, foundations including piles/caissons). ○ Must be capable of comprehensive analysis methods, such as Finite Element Analysis (FEA), Static Analysis, Dynamic Analysis, P-Delta Analysis, Soil-Structure Interaction (SSI) and Foundation Analysis, 	1	1,700,000.00	1,700,000.00



<p>Settlement Analysis, Pushover Analysis, Wave Load Analysis, Thermal Stress Analysis, PSC Analysis, Composite Bridge Analysis, Moving Load Analysis, Construction Stage Analysis, Buckling Analysis, Large Displacement Analysis, and Boundary Nonlinear Dynamic Analysis;</p> <ul style="list-style-type: none">○ Must have integrated design codes and standards: Design Guidelines, Criteria and Standards (DGCS) Volume 5, AASHTO LRFD, AASHTO LFD, Support for AISC LRFD & ASD, ACI 318, UBC, CAN/CSA, Eurocode, BS Code, and AS Code is highly desirable.○ Can perform automated calculation and reporting of: Displacement, Internal Forces (axial, shear, moment), Stresses, Reactions, Steel Reinforcements (for RC/PSC elements), Section Capacities and Dimensions, Vehicle Load Optimization, Artificial Earthquake Generator, Dynamic Report Generator, Tendon Profile Generator, and Section Property Calculator.○ Must have robust direct two-way interoperability (import/export with geometric and analytical data retention) with BAFE's primary CAD software○ With 2D and 3D visualization, animation capabilities (e.g., mode shapes, construction stages), and high-quality rendering for presentations.			
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<ul style="list-style-type: none"> • Operating System: Fully compatible with Windows 10 Professional (64-bit) or latest. • With at least one (1) year of comprehensive software maintenance, including all updates, bug fixes, and technical support as detailed in Section B. • With a basic to intermediate technology transfer seminar/training for at least 10 participants. Must include digital/printed manuals. • During post-qualification, the bidder shall submit a Certificate of Exclusive Dealership/Distributorship issued by the software publisher, confirming the bidder's exclusive authority to sell or distribute the offered software in the Philippines, valid on the dates of bid submission and contract award. 			
TOTAL			4,000,000.00

E. INSPECTION AND TESTS PROCEDURE

- a) The Inspector and/or Supply Officer can reject any software or part thereof that fails to pass any installation, test, and/or inspection or does not conform to the technical specifications.
- b) The End user will issue a Certificate of Acceptance upon determining that the installed computer software is usable and after the completion of the conduct of technology transfer seminar/training.

F. PRODUCTION AND/OR DELIVERY SCHEDULE

All goods and services (including full installation, configuration, and software activation) shall be completed within Thirty (30) calendar days from the receipt of the Notice to Proceed (NTP). This period explicitly includes the conduct of the technology transfer seminar/training.



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Delivery and installation must occur on weekdays (Monday to Friday only), during standard business hours (8:00 AM - 5:00 PM), at the BAFE Office, Sugar Center Compound, Annex II Building Extension, North Avenue, Diliman, Quezon City.

The Winning Bidder is solely responsible for ensuring their readiness to meet this schedule. Delays attributable to the Winning Bidder shall be subject to liquidated damages as per RA 9184 and its IRR.

G. PAYMENT TERMS AND CONDITIONS

One-time payment shall be made upon completion of the supply, delivery, installation/configuration, and acceptance of the computer software, subject to submission of the following documents:

- a. Original Certificate of Warranty for all computer software; and
- b. Official Sales Invoice/Delivery Receipt.

H. MODE OF PROCUREMENT / AWARDING

The supply, delivery, and testing of perpetual computer software will be procured through Public Bidding. The awarding of this project shall be done by LOT.

Prepared by:


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Interim Chief, Interim PKMDD