



EASTERN VISAYAS
STATE UNIVERSITY

TERMS OF REFERENCE

**Construction of a Four-Storey EVSU Main
College of Arts and Sciences Extension [Design and Build]**
Eastern Visayas State University –Main Campus, Tacloban City, Region 8

Fiscal Year 2025



“Building Globally Competitive Professionals”
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TERMS OF REFERENCE

I. PROJECT DESCRIPTION

A. Project Title

Construction of a Four-Storey EVSU Main College of Arts and Sciences Extension
(Design and Build)

B. General Description

The project shall cover the *Design and Build* of the “Construction of a Four-Storey EVSU Main College of Arts and Sciences Extension” at Eastern Visayas State University (EVSU) Main Campus, Tacloban City. The general objective is to provide additional classrooms addressing SDG 4, SDG 9 and SDG 13 by creating a conducive learning environment for students. This will also cater for faculty members by providing adequate space for lectures and laboratories, including offices for its clientele. Specifically, the project seeks to provide a structurally safe and secure environment and to upgrade the university’s carrying capacity through its facilities.

The project is approximately 930 sq. m. based on its building footprint with sufficient parking area that includes PWD services. The Approved Budget for the Contract (ABC) for the Initial shall be in the amount of Php 12,500,000.00. The budget for the building’s completion will be proposed after the completion and approval of the design.

C. Project Components:

The building components are as follows:

1. Slope Protection

CONCRETE

- A. Compressive strength = 20.7mpa (28days)
Cement shall be Portland cement at 40 kg/bag conforming to the Philippines standard, free from lumps or any sign of deterioration, fine aggregates shall be clean, hard coarse river sand, free from injurious amount of clay loam & vegetable matter. Coarse aggregates shall be river run gravel or broken stones.
- B. Reinforcing steel bar
Fy = 275 mpa
Reinforcing steel bar shall be standard commercial deformed bars and shall conform to the requirements of the specification for steel bars for concrete reinforcement of the Philippine Standards.
- C. Rubble concrete
Stones shall be hard, durable, cleaned, and shall be subject to engineers’ approval. One layer of concrete class "B" Shall be placed at the prepared bed prior to placing of stones. Clearance between stones shall not be less than 2 1/2” or maximum size of concrete aggregate for class "B. Stones to be used shall be more than 0.015cu.m. In volume and not less than 75% of the total volume of rock embankment and consist of stones 0.03 cu.m. in volume.

2. Sheet Piles

Steel sheet pile shall be of type and weight and shall conform to the requirements of item 509.

Type II Steel Sheet Piles
(x) = 400mm x (h) = 100mm x
(t) = 10.5mm x (L) = 8m



3. Basement & Ground Floor

- a) Carpark
- b) Lecture/Laboratory Rooms
- c) Student Gallery/ Exhibit Space
- d) Office Space
- e) Comfort Rooms
- f) Waiting Spaces
- g) Lobby & Corridors
- h) Mechanical/Electrical Room
- i) Utility/Storage Room

4. Second to Fourth Floor

- a) Lecture/Laboratory Rooms
- b) Comfort Rooms
- c) Lobby & Corridors
- d) Electrical Room
- e) Utility/Storage Room

5. Roof Deck

- a) Recreational Space
- b) Reservoir

The site shall be developed to accommodate the standard requirements of a modern state university that complies with the standards prescribed by the National Building Code of the Philippines, the relevant Accessibility Law, the inclusivity of the Gender and Development (GAD) Program, Post-COVID-19 design standards, and other referral codes for design standard of buildings.

The EVSU awards all parts of the project of a single contract to a single firm, partnership, corporation, joint venture (JV), or consortium. The Conceptual Design should become as the minimum standard/ basis by the Contractor/Consultant on the Detailed Design.

II. PROCUREMENT MODE AND OBJECTIVES

The Design and Build Scheme of procurement is recommended, pursuant to the guidelines for the Procurement and Implementation of Contracts for Design and Build Infrastructure Projects of Revised IRR of R.A. 9184. The procurement aims to:

1. To prepare complete Design and Engineering Plans, and related studies/investigations that consider the following:
 - a) Optimal benefits for all stakeholders, which include the procuring entity, direct users and the general public.
 - b) Construction of a building that conforms to all relevant laws, design standards and legal procedures.
2. To construct a slope protection and sheet piles as vertical barrier to hold back soil, preventing it from collapsing into excavations for foundations and basement consistent with the following principles:
 - a) Minimize adverse impacts on the natural environment ensuring that all DRR-CCA design principles are adhered to.
 - b) Produce a Comprehensive Engineering Plans which include concepts in:
 - i. Energy savings through daylighting and monitoring power consumption;
 - ii. Natural Ventilation and thermal comfort concepts;
 - iii. Rainwater Harvesting approaches and strategies;
 - iv..Addressing occupational hazards and environmental health concepts;
 - c) Site Development and Building Design that will be resilient, flexible and can accommodate technological change.
3. To implement a turnover procedure in accordance with standard Project Acceptance and Turnover.



III. GENERAL SCOPE OF WORK

The contract shall consist of two (2) stages:

STAGE I:

ENGINEERING DESIGN OF “CONSTRUCTION OF A FOUR-STOREY EVSU MAIN COLLEGE OF ARTS AND SCIENCES EXTENSION”

1. **Pre-Design Phase** where the specific parameter, size and scope of the works to the building shall be established. Preliminary schematic maps/ drawings based on the Conceptual Plan shall be presented by the Winning Bidder for approval by the procuring entity before Final Detailed Architectural and Engineering Design (DAED) Plans are completed. It includes, but is not limited to:
 - a) Conduct of reconnaissance, engineering surveys on utilities locations, on-site investigations of connection/tapping points; and
 - b) Preparation of preliminary engineering designs, layouts, outline specifications, preliminary cost estimates, value engineering/value analysis study and specific recommendations prior to final design. *(See Annexes for Design References).*
2. **Basic Design Phase** includes preparation of final detailed plans and designs, working drawings, specifications, detailed cost estimates for the construction of the “Construction of a Four-Storey EVSU Main College of Arts and Sciences Extension”. Complete Detailed Engineering Design Plans, Technical Specifications, Design Calculations, and Bill of Quantities for the construction of the building. Such plans, designs and specifications shall be subject to review and approval by EVSU. The Design Development (DD) and the Contract Documents (CD) phases of the design shall continue after the bid is awarded. It shall likewise be subject to review and approval by EVSU.

Aside from the A&E professional design fees, other incidental expenses that are also to the account of the winning bidder shall include the geodetic survey of the project lot and other design and construction requirements.
3. **Contract Documentation Phase** will cover preparation of necessary documents for audit purposes until the project’s completion and acceptance.

STAGE II:

“CONSTRUCTION OF A FOUR-STOREY EVSU MAIN COLLEGE OF ARTS AND SCIENCES EXTENSION” WHICH CAN BE COVERED BY THE BUDGET

Stage II shall be the construction of “Construction of a Four-Storey EVSU Main College of Arts and Sciences Extension” which can be covered by the budget:

1. Winning bidder shall prepare supplementary drawings required to suit actual field conditions.
2. The winning bidder shall demolish/uproot/haul the existing obstructions/trees/debris in the assigned lot area based on the site development map and complete the construction of the structural component of the building such as slope protection and sheet piling as specified in the proposed plan.
3. Winning Bidder shall adhere to the strict compliance of all applicable permits/licensing and documentary requirements.
4. All other related tasks until completion and acceptance of the project.



IV. METHODOLOGY

This Project is a “Design and Build” Scheme (DBS) contract is a fixed lump sum cost and changes, or variation orders will only be allowed if the changes in the design and construction requirements were not anticipated in the preparation of contract documents prior to contract signing and approval. The following guidelines shall govern the approval for changes or variation orders for work items under the DBS (Ref. Annex” G” of the revised 2016 IRR of R.A. 9184).

This Design and Build Contract include submission of site investigation reports, preparation of project execution plan, preparation of detailed construction drawings/plans and submission of As-Built Plans.

A. Contract Implementation for the Design and Build Scheme

As a rule, contract implementation guidelines for the procurement of infrastructure projects shall comply with Annex “E” of the IRR of R.A. 9184, as amended. The following provisions shall supplement the procedures specified in Annex “E”.

- 1.) No works shall commence unless the contractor has submitted the required documentary requirements, the procuring entity has given written approval. Work execution shall be in accordance with reviewed and approved documents.
- 2.) The contractor shall be responsible for obtaining all necessary information as to risks, contingencies which may affect the works and shall prepare and submit all necessary documents specified by the procuring entity to meet all regulatory approvals as specified in the contract documents.
- 3.) The contractor shall submit a detailed program of work within seven (7) calendar days after issuance of the Notice to Proceed (NTP) for approval by the procuring entity that shall include, among others:
 - a.) The order in which it intends to carry out the work including anticipated timing for each stage of design/ detailed engineering and construction,
 - b.) Periods for review of specific outputs and any other submissions and approvals,
 - c.) Sequence of timing for inspections and tests as specified in the contract documents,
 - d.) General description of the design and construction methods to be adopted,
 - e.) Number and names of personnel to be assigned for each stage of the work,
 - f.) List of equipment required on site for each major stage of the work, and,
 - g.) Description of the quality control system to be utilized for the project.
- 4.) Any errors, omissions, inconsistencies, inadequacies, or failures submitted by the contractor that do not comply with the requirements shall be rectified, resubmitted, and reviewed at the contractor’s cost. If the Contractor wishes to modify any design or documents which have been previously submitted, reviewed and approved, the contractor shall notify the procuring entity within a reasonable period and shall shoulder the cost of such changes.
- 5.) As a rule, changes in design and construction requirements shall be limited only to those that have not been anticipated in the contract documents prior to contract signing and approval. The following guidelines shall govern approval for change or variation orders:
 - a.) Change Orders resulting from design errors, omissions or non-conformance with the parameters and the contract documents by the contractor shall be implemented by the contractor at no additional cost to the procuring entity.
 - b.) Provided that contractor suffers delay and/or incur costs due to changes



or errors in the procuring entity's performance specifications and parameters, he shall be entitled to either one of the following:

- i) an extension of time for any such delays under Section 10 of Annex "E";
or
 - ii) payment for such costs as specified in the contract documents, provided the cumulative amount of the variation order does not exceed ten percent (10%) of the original contract price.
- 6.) The contract documents shall include the manner and schedule of payment specifying the estimated contract amount and installments in which the contract price will be paid.
 - 7.) The contractor shall be entitled to advance payment subject to the provisions of Section 4 of Annex "E".
 - 8.) The procuring entity shall define the quality control procedures for the design and construction in accordance with agency guidelines and shall issue the proper certificates of acceptance for sections of the works or the whole of the works as provided for in the contract documents.
 - 9.) The contractor shall provide all necessary equipment, personnel, instruments, documents, and others to carry out specified tests.
 - 10.) All design and build projects shall have a minimum Defects Liability Period of one (1) year after contract completion or as provided for in the contract documents. This is without prejudice, however, to the liabilities imposed upon the engineer/architect who drew up the plans and specification for a building sanctioned under Section 1723 of the New Civil Code of the Philippines.
 - 11.) The contractor shall be held liable for design and structural defects and/or failure of the completed project within the warranty periods specified in Section 62.2.3.2 of the IRR.
 - a.) Implement the project taking into consideration the communities and their landscape and achieve enhanced environmental performance and comprehensive environmental compliance.
 - b.) Stimulate the local economy by maximizing local business participation in implementing the project.
 - c.) Maximize use of minority or local business enterprises.
 - d.) Gender perspective.
 - e.) Engage communities and stakeholders to proactively participate in the project from planning stage up to implementation/ construction stage.
 - f.) Develop and implement an effective Quality Program.
 - g.) Achieve swift commencement and timely completion of the project.
 - h.) Provide cost-effective solutions and cost-containment methodologies.
 - i.) Increase Work Zone safety with engineering improvements and enhanced awareness through public information.
 - j.) Minimize life-cycle cost of the project.
 - k.) Any additional project goals will be included in the Special Provisions.

B. Obligations of the Winning Bidder/Contractor

The Contractor shall be responsible for furnishing all labor, material, plant, equipment, services, and support facilities for the following:

- 1.) Design and Construction of structures in the Project components including utility relocations, if any,
- 2.) All Project reference provided by the client shall be field checked and verified by the Winning Bidder/Contractor,
- 3.) Project construction management including Health and Safety Measures as stated in Department of Public Works (DPWH) Order No. 39, Series of 2020,



- 4.) Project-related Public Information activities,
- 5.) Coordination with Project stakeholders, other contractors, and utility Client EVSUs, if any,
- 6.) Design Quality of temporary structures,
- 7.) Construction Quality and Workmanship,
- 8.) Maintenance and protection of traffic and access to properties (both temporary and permanent access),
- 9.) Project safety and security, as per DOLE RA 9514,
- 10.) Preliminary Engineering (PE), such as surveys, bore hole testing, etc.,
- 11.) Harmful and hazardous materials remediation (design and construction),
- 12.) Drainage and erosion control,
- 13.) Construction waste disposal and handling,
- 14.) Ancillary Work, such as access roads, driveways, temporary fencing, relocation of drainage, work sites, and temporary works,
- 15.) Transportation permits for construction materials,
- 16.) Coordination and relocation of utilities and municipal drainage facilities (when required),
- 17.) Soil poisoning and earthworks to comply with finished ground elevation,
- 18.) Administration of the project during the contract period, and,
- 19.) Implementation and administration require to plan, implement, and maintain a Quality Plan for the Work. The quality plan will detail how the Contractor will establish and operate its quality program management structure, independent from design and construction production, and document its procedures pertaining to all aspects of the work listed below. The quality plan will be established and maintained by the Contractor such that it provides an agency-auditable system that assures the Contractor complies with all contract requirements pertaining to the general areas of the construction work. If new material/technology is to be introduced, the Winning Bidder or Contractor will refund 50% of the cost of the pay item to be replaced regardless of if the cost of the new material/technology is lower or higher compared to the original work item.

V. DELIVERABLES AND TIMELINE:

Deliverables	Timeline	
STAGE I: ENGINEERING DESIGN OF “CONSTRUCTION OF A FOUR-STOREY EVSU MAIN COLLEGE OF ARTS AND SCIENCES EXTENSION”		
1. Detailed program of work, approach, work plan and schedule for the implementation of the contract works. i. The order in which it intends to carry out the work including anticipated timing for each stage of design/detailed engineering design; ii. Periods for review of specific outputs and any other submissions and approvals; iii. General description of the design methods to be adopted; iv. Number and names of personnel to be assigned for each phase of the work;	Within Seven (7) Calendar Days after issuance of NTP	



2. Reconnaissance, Engineering Surveys and On-Site Investigations.	Within Fifty (50) Calendar Days after issuance of NTP	Within Two Hundred Ten (210) Calendar Days after issuance of NTP
3. Preparation of Preliminary Plans, Elevations, Specification Outlines, Preliminary Cost Estimates, Value Engineering/ Value Analysis Study and other specific recommendations by the Consultant for the Design for Civil , Structural and Specialty Works (where required) for Approval before Final Design.		
4. Submission of Final Plans of Approved Preliminary Plans for the Design for Structural and Specialty Works (where required) including Working Drawings, Technical Specifications, Detailed Cost Estimates for permit purposes, wherever required.	Within Sixty (60) Calendar Days after issuance of NTP	
5. Approval of Final Plans duly signed and sealed by respective professionals for Design for Civil, Structural, and Specialty Works (where required) including Working Drawings, Technical Specifications, Detailed Cost Estimates for permit purposes, wherever required, and Bid Documents.	Within Seventy (70) Calendar Days after issuance of NTP	
STAGE II: CONSTRUCTION OF THE FOUR-STOREY EVSU MAIN COLLEGE OF ARTS AND SCIENCES EXTENSION” WHICH CAN BE COVERED BY THE BUDGET		
MOBILIZATION AND SITE PREPARATION	Within Seven (7) Calendar Days after Approval of Final Plans	Within Two Hundred Ten (210) Calendar Days after issuance of NTP
FOUNDATION WORKS	Within Two Hundred Ten (210) Calendar Days after issuance of NTP	
STRUCTURAL WORKS		
CIVIL WORKS		
TESTING AND COMMISSIONING, PUNCHLIST AND RECTIFICATION		
PROJECT ACCEPTANCE AND TURN-OVER		



VI. **STANDARD OF SERVICES:**

The Designer/Contractor shall undertake the design-build services by utilizing its technical knowledge and best-accepted professional standards. The Designer/Contractor shall carry out the services based on sound architectural and engineering theories and practices to ensure that the final works will provide a *cost-efficient, state-of-the-art, “smart” and feasible building*. Further, the contractor shall provide an adequate number of personnel of known qualifications and experience.

VII. **DURATION OF THE CONTRACT:**

The Design and Build Scheme will cover TWO HUNDRED TEN (210) Calendar Days or Six (6) Months and Twenty-Seven (27) days or Thirty (30) Weeks.

1. The **Stage I - Engineering Design of the “Construction of a Four-Storey EVSU Main College of Arts and Sciences Extension”** shall be completed within Seventy (70) CALENDAR DAYS from the receipt of Notice to Proceed (NTP).
2. The **Stage II - “Construction of a Four-Storey EVSU Main College of Arts and Sciences Extension” which can be covered by the budget** shall be completed within TWO HUNDRED TEN (210) CALENDAR DAYS from receipt of Notice to Proceed (NTP).

VIII. **DESIGN AND BUILD SCHEME QUALIFICATIONS:**

A local Design and Build firm with experience in Engineering Design and Construction of Buildings with the following qualifications:

1. Must be operational and engaged as a consultancy and construction firm for at least five (5) years;
2. Must have satisfactorily completed a contract for a similar project with magnitude and complexity at least equivalent to the proposed project; and
3. The contractor must likewise pass the eligibility requirements under Section 24 of Republic Act 9184, otherwise known as the Government Procurement Reform Act and its Revised Implementing Rules and Regulations (IRR).

IX. **PERSONNEL QUALIFICATION REQUIREMENTS:**

As a minimum requirement, the Designer/ Contractor shall provide licensed and professional personnel with adequate technical experience in the design, implementation and supervision of contract works:

MINIMUM CONTRACTOR'S TEAM COMPOSITION/MANPOWER NETWORK

DESIGN TEAM	Number	General Experience	License/ Certification	Relevant Experience
Principal Architect/Engineer	1	10	PRC and UAP/PICE	10
Project Manager/ Coordinator	1	10	PRC and UAP/PICE	5
Project Designer Engineer, Structural/Civil	1	10	PRC and UAP/ PICE/ASEP	10



Engineering Assistant/Draftsman	1	5	Proficient in CAD and Sketchup of the latest version for support and production of design plans/ drawings and other needed documents	2
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Note: All work experiences for the proposed positions are verifiable by EVSU.

CONSTRUCTION TEAM	Number	General Experience	License/ Certification	Relevant Experience
Project Manager	1	10	PRC and UAP/PICE	5
Architect and Engineers (Civil and Electrical)	4	7	PRC and UAP/PICE/IIEE/PSM E/PSSE/IECEP	5-10
QA/QC Civil	1	5	Relevant Certification	5-10
Materials Engineer	1	5	Relevant Certification	5
Environment, Health and Safety Officer	1	5	Relevant Certification	5
Construction Foreman	1	7	Relevant Certification	5

Note: All work experiences for the proposed positions are verifiable by EVSU.

In the execution of the design and build scheme, multi-tasking by or nomination of key personnel to more than one of the above-stated fields or professions is prohibited.

The Designer/Contractor shall provide additional personnel as may be required and pertinent to the accomplishment of the project in its entirety at no additional cost to EVSU.

The Designer/Contractor shall likewise provide copies of the Professional Regulation Commission (PRC) Licenses and Latest Professional Tax Receipt (PTR) of their personnel and list of on-going and completed projects (both private and government) within the years of relevant experience required.

Except as otherwise agreed upon by the EVSU, the personnel for the project shall consist of those indicated in the Work Plan and List of Key Personnel submitted and no changes shall be made in the key staff. In the event any employee resigns, is discharged or withdrawn, the Designer/Consultant shall provide suitable personnel of equivalent or of better qualifications acceptable to EVSU.

X. ESTIMATED BUDGET FOR THE CONTRACT AND TERMS OF PAYMENT:

A. FEE

For and in consideration of the faithful, satisfactory and full performance of all the works and requirements under this contract, EVSU agrees to pay the Designer/Contractor an amount not exceeding the Approved Budget for the Contract of **TWELVE MILLION FIVE HUNDRED THOUSAND PESOS (Php 12,500,000.00)** after observance of the required procedures in compliance with the Government Procurement Reform Act (Republic Act No. 9184) and Government Accounting and Auditing Manual.



Breakdown:

Stage 1	Engineering Design of “Construction of a Four-Storey EVSU Main College of Arts and Sciences Extension”		
Stage 2	“Construction of a Four-Storey EVSU Main College of Arts and Sciences Extension” which can be covered by the budget		
	ABC for the Design-Build	=	Php 12,500,000.00

B. ADVANCE PAYMENT

An advance payment not to exceed fifteen percent (15%) of the Contract Price in Philippine Peso shall be made upon the submission of a written request per stage of work by the Designer/Contractor to cover the cost of Mobilization. The advance payment shall be deducted by the EVSU in equal installments against the statements for the progress billings of the Services until the Advance Payment has been fully deducted.

Advance Payment shall be made only upon the submission to and acceptance by EVSU of an Irrevocable Standby Letter of Credit or equivalent value from a commercial bank, a bank guarantee or a surety bond callable on demand. issued by a duly licensed surety or insurance company and confirmed by EVSU.

C. TERMS OF PAYMENT

The payment scheme below shall be observed in the processing of payment in favor of the Design and Build Scheme.

Mode of Payment/Deliverables		Percentage (%)
1	Down payment/ Mobilization Fee	15%
2	Submission of Pre-Design Plans, Specifications, and other relevant documents required.	10%
3	Submission of duly signed and sealed Final Approved Plans, Cost Estimates, Specifications, and other documents required.	5%
4	Fifty percent (50%) Completion of Works	20%
5	Seventy-Five percent (75%) Completion of Works	20%
6	Substantially Completed Works of Ninety-Five percent (95%)	20%
7	Retention Fee	10%

The following documents must be submitted to EVSU before processing of payments to the Contractor:

- a) Progress Billing
- b) Detailed Statement of Work Accomplished (SWA)
- c) Request for Payment by the Contractor
- d) Photographs of Works Accomplished

In consideration of the payment, the Designer/Contractor agrees and undertakes to execute and complete the Design and Build Services and remedy any defects therein in conformity with the provisions of the Contract.



The Designer/Contractor shall also undertake to pay taxes in full and on time and that failure to do so will entitle the government to suspend payment for any services delivered.

XI. RESPONSIBILITIES OF THE DESIGNER/CONTRACTOR:

A. General

STAGE I:

ENGINEERING DESIGN OF “CONSTRUCTION OF A FOUR-STOREY EVSU MAIN COLLEGE OF ARTS AND SCIENCES EXTENSION”

- 1) The Designer/Contractor shall undertake all works necessary for the Engineering Design of the “Construction of a Four-Storey EVSU Main College of Arts and Sciences Extension”;
- 2) Conduct preliminary engineering studies and activities required for the Engineering Design of the proposed building project, in compliance with the provisions of relevant laws, ordinances, codes, rules and regulations;
- 3) Consult and verify with EVSU to ascertain the requirements of the proposed project;
- 4) The Designer/Contractor shall provide TEN (10) COMPLETE SETS in A1 Standard Size (including one original) of the approved plans/drawings, specifications, PERT-CPM, Schedule of Timeline, and other related documents of the project. However, when extra sets of plans/drawings are required, the cost of production shall be at the expense of EVSU. The Designer/Contractor shall also provide a soft copy of plans/drawings, cost estimates and other documents related to the Architectural and Engineering Design of the project to EVSU in final editable or raw format (e.g. .dwg, .dxf, .skp, .doc, .xls, etc.). Detailed plans/drawings include but are not limited to:
 - a) Architectural
 - i. Rendered 3D Perspectives
 - ii. Site Development/Location/Vicinity Plans
 - iii. Floor Plans
 - iv. Elevations
 - v. Sections
 - vi. Reflected Ceiling Plan
 - vii. Wall Setting Out Plan
 - viii. Floor Pattern Layout
 - ix. Detail of Stairs
 - x. Bay Sections
 - xi. Schedule of Doors, Windows, Finishes, etc.
 - xii. Details of Construction Elements
 - xiii. Connection Details
 - xiv. Other Blow-up Plans
 - b) Structural/Civil
 - i. Structural Notes and Specifications
 - ii. Demolition Plan
 - iii. Foundation Plan/Details
 - iv. Floor Framing Plan/Details
 - v. Roof Framing Plan/Details
 - vi. Schedule/Details of Beams, Columns, Slabs
 - vii. Structural Detail of Stairs
 - viii. Miscellaneous Masonry and Typical Structural Details
 - ix. Openings and Connection Details
 - x. Bracing and Support Systems Plan
 - xi. Plans/Details of drainage system, roads, sidewalks, covered walks, parks, parking areas, and other site development works



- c) Electrical
 - i. Schedule of Loads
 - ii. Line Diagrams
 - iii. Riser Diagrams
 - iv. Power & Auxiliary Layout
 - v. Lighting Layout
 - vi. Reflected Ceiling Plan
 - vii. Miscellaneous Electrical Details
- d) Plumbing
 - i. Plumbing Notes and Specifications
 - ii. Isometric Diagram
 - iii. Water Supply Plan
 - iv. Sanitary and Storm Drainage Layout
 - v. Detail of Septic/Cistern Tank/ Catch Basin
 - vi. Detail of Drains/Clean-outs
 - vii. Detail of Air Chambers/Vents
 - viii. Detail of Pipe Hanger and Other Connection Details
 - ix. Miscellaneous Plumbing Details
- e) Mechanical
 - i. General Notes and Specifications
 - ii. Air Conditioning System Layout
 - iii. Elevator Plan/Details
 - iv. Exhaust fan in the comfort room
 - v. Ventilation system
 - vi. HVAC system
 - vii. Water Pumps
 - viii. Connection and Mounting Details
 - ix. Miscellaneous Details
- f) Fire Protection/Fire Prevention
 - i. General Notes and Specifications
 - ii. Fire Protection Layout
 - iii. Riser Diagram
 - iv. Details of Switches and Valves
 - v. Details of Sprinkler Heads
 - vi. Details of Fire Hose Cabinets
 - vii. Details of Connections and Brackets
 - viii. Miscellaneous Details
- g) Electronics
 - i. CCTV Plan
 - ii. PA System Plan
 - iii. Structured Cabling System
 - a. Design and layout of data and voice cabling infrastructure (Category 6A or higher)
 - b. Provision of network racks, patch panels, cable management, and labeling
 - c. Fiber optic backbone cabling between communication rooms and building main distribution frame (MDF)
 - d. Compliance with TIA/EIA-568 and TIA/EIA-569 standards
 - iv. Local Area Network (LAN) and Internet Connectivity
 - a. Installation of network switches, wireless access points, and routers to provide Wi-Fi coverage in classrooms, laboratories, offices, and common areas
 - b. Integration with existing campus network backbone
 - c. Design to support high-speed data transfer and multimedia applications
 - v. Public Address (PA) Systems



- a. Centralized public address and paging system for announcements and emergency broadcasts. Provision of speakers in every rooms and other common areas
 - b. Integration with fire alarm and emergency systems
- vi. Security and Surveillance System (in coordination with Security Division)
 - a. CCTV system design with IP-based cameras and network video. Coverage for entrances, corridors, laboratories, and other strategic areas. (Full HD, 1080p (1920 x 1080), WDR/night vision)
- vii. Fire Detection and Alarm System (FDAS) Integration
 - a. Automatic detection system
 - b. Addressable FACP
 - c. Interface provisions for communications between FDAS, PA, and emergency notification systems.
- h) Survey Deliverables
 - i. Conduct onsite survey verification from the building to the top of the hillside to design the appropriate slope protection.
 - ii. Submit a topographic map and cross-sectional survey of every 10 meters.
 - iii. Cross-sectional survey details on the side where the slope protection will be located.
 - iv. Design a proposed slope protection appropriate to mitigate future landslides and slope slipping.
 - v. Determine the Earthworks and the slope protection itself.
- i) Other Specialty Works
 - i. Slope Protection Retaining Wall
 - ii. Sheet Piling

STAGE II:

CONSTRUCTION OF A FOUR-STOREY EVSU MAIN COLLEGE OF ARTS AND SCIENCES EXTENSION WHICH CAN BE COVERED BY THE BUDGET

- 1) The Designer/Contractor shall undertake all necessary Construction Works of the “Construction of a Four-Storey EVSU Main College of Arts and Sciences Extension” as indicated in the program/scope of works;
- 2) Acquire all clearances and permits (*see ANNEX G*) necessary for the Project by providing all documentary requirements without incurring required payments of fees to the Government or Agency of the Government;
- 3) The Designer/Contractor shall verify existing drawings/plans that were the basis of the project and shall make sure that all works conform to regulatory requirements.
- 4) The Designer/Contractor shall also assist EVSU in the Post-Construction Services such as but no limited to:
 - a) Preparation of checklist/punch lists of the defects/deficiencies and monitor rectification works thereof;
 - b) Providing As-Built plans duly signed and sealed by the concerned engineers/designer with his/her valid PRC license number, validity of license and current PTR number affixed/stamped on every page/sheet of the document of the following:
 1. Architectural
 2. Structural/Civil
 3. Electrical
 4. Electronics



5. Mechanical
6. Fire Protection/Fire Prevention
7. Other Specialty Works

5) All As-Built Plans and Documents shall be delivered in sets as follows:

- a) One (1) set Original Copies, of the working drawings with the smallest scale of 1:100 meters prepared in CAD format, printed/plotted in Mylar paper;
 - b) Five (5) sets of Blueprint copies for each plan
 - c) Two (2) sets of soft copies of AutoCAD plans/drawings and PDF and Excel/Word format of Cost Estimates, Specifications, PERT-CPM, Schedule of Timeline, and other related documents in SD Card/Flash Drive Storage device;
 - d) Other documents processed and issued in favor of EVSU during the construction period (i.e. Inspection Reports, Record Book, Building/Fire Safety Reports, Clearances, Certificates and related documents)
- 6) Consolidated Project Records, Operating and Maintenance Manuals and Guides for easy reference.
- 7) Assist in the preparation and issuance of Certificate of Completion of Works and Turn-Over Ceremonies.

B. Special Instruction/Information to Bidders

All the figures given in the TOR except those that are detailed by Client EVSU as a primary requirement parameter will be used only as reference or guide in preparing preliminary conceptual design and financial proposal. All references of the Project shall be field checked and verified by the Winning Bidder/Contractor.

C. Submission of Bids/Proposals

Bidders/Contractors/Developers shall be required to submit their Proposals under a two-envelope system such as the following:

a) 1st Envelope: Technical Proposal

- 1.) Complete set of Plans based from the Client Concept and requirements, statutory requirements from DOLE RA 9514 & National Building Code of the Philippines PD 1096, and other relevant standards, A2 size of convenient size and scale, in two (2) white/blue print copies, duly signed and sealed by a licensed Architect/Civil Engineer.
- 2.) Vicinity Map drawn on A1 size of convenient size and scale, in two (2) white/blue print copies, duly signed and sealed by a licensed Civil Engineer.
- 3.) Project Execution Plan to include but not limited to:
 - a) Containing the list of relevant Management and Design Team, its Staff, Construction Phase Engineer's, Material Engineer, QA/QC Engineer, Safety Engineer and Officers, Construction Foreman, Number of Skilled and Non-Skilled Workers based on Project Timeline PERT and GANTT Chart;
 - b) Hazard Identification Plan (HAZIP);
 - c) Inspection & Test Plan (ITP) for all verifiable activities that needs to be signed-off by Client EVSU;
 - d) Manpower Loading;
 - e) Material Delivery Schedule.
- 4.) Ground Profile Levelling based on Client EVSU minimum requirement in A3 size of convenient size and scale, in two (2) white/blueprint copies, duly signed and sealed by a license Civil Engineer.



- 5.) Design Schematic Diagram with narrative duly signed and sealed by licensed civil engineer in two (2) copies.
- 6.) List of Tools and Equipment to be used for the execution of the contract (refer to list of minimum equipment).
- 7.) Contractor/Bidder are enjoined to provide additional information if deemed necessary to clearly illustrate their respective specifications.
- 8.) All plans, technical specifications, and cost estimates submitted by the Bidders should be correlated with one another. Should there be any difference or variation among these documents, the technical specification shall prevail which shall become the basis of bid evaluation.

b) 2nd Envelope: Commercial Proposal

The Financial Proposal shall comprise all the required documents enumerated in the ITB including the following additional documents:

- 1) Prescribed Financial Proposal Submission Form;
- 2) Schedule of Rates for Managerial, Technical, Supervisory, Skilled and Non-Skilled;
- 3) Schedule of Rates for Tools & Equipment;
- 4) Schedule of Rates in the prescribed form for the Scope of Works;
- 5) Detailed estimates/computation in coming up with the unit cost;
- 6) Summary sheet indicating the unit prices of construction materials, labor rates and equipment rentals used in coming up with the bid; and
- 7) Cash flow by quarter and payment schedule.

D. Eligibility Requirements

Requirements shall conform to the applicable provisions of Section Nos. 23-24 and Annex "G" of the revised IRR of R.A. 9184, as amended.

Procedures in the evaluation of the interested Contractors/Developers shall be in accordance with Section Nos. 9-12 and Annex "G" of the Revised IRR of R.A. 9184, as amended.

To be eligible to participate in the public bidding, prospective Contractor/Developer must pass the following criteria:

- 1.) The Contractor/Developer must have signified its intention to participate in the public bidding pursuant to the provisions of the IRR of R.A. 9184, as amended, as per published invitation to Submit Bids/ Proposals.
- 2.) Basic Qualification: The prospective Contractor/Developer must be registered with the Securities and Exchange Commission (SEC), the Department of Trade and Industry (DTI) or the Cooperative Development Authority (CDA) with authority to conduct business whichever is applicable.
- 3.) Financial Capability: The prospective Contractor/ Developer must meet the Financial Contracting Capacity to undertake the project, as determined through the following formula:



Net Financial Contracting Capacity (NFCC). This will establish the value or cost of the project which the Contractor can undertake. The NFCC is computed as follows.

NFCC = (Current assets minus current liabilities) (15) minus the value of all outstanding or uncompleted portions of the projects under ongoing contracts, including awarded contracts yet to be started.

- 4.) Experience and Track Record Requirements:
 - The prospective Contractor/Developer must have completed a single contract that is similar to the contract to be bid, and whose value, adjusted to current prices using the National Statistics Office (MSO) consumer price indices, must be at least fifty percent (50%) of the Approved Budget of the Contract (ABC) of the specified project. ***The Contract Similarity shall be defined as similar to the Major Category of Works as indicated in the Scope of Works including its specific item of works herein provided.***
- 5.) PCAB License: The prospective Contractor/Developer must possess a valid PCAB License Category License Category B, Size Range Medium A, and be Registered with classification General Building GB1- (Building or Industrial Plant).
- 6.) For Contractor/Developer who does not possess the required valid PCAB License/Registration and Size Range corresponding to the contract for bidding may enter into a Joint Venture. Agreement (JVA) or *consortium* with a PCAB Licensed Contractor/Developer to secure a Special License prior to the bidding of the project for the purpose of compliance with this requirement.
- 7.) List of Design and Construction Personnel and Equipment as provided under Section 10.1, iii of Annex 'G' of the IRR of R.A. 9184, as amended. The prospective Designer's/Contractor's Key Personnel must have sufficient experience in the relevant aspect of schemes similar or related to the project(s) under bidding and must own, or with lease contract and/or under purchase agreements, sufficient major construction equipment necessary to undertake the Project.
- 8.) Background and Performance Check: The BAC must ensure that a thorough background investigation have been conducted on the prospective Designer/Contractor to gain as much information possible pertinent to the identity of the prospective Designer/Contractor, its completed and ongoing projects, financial capability, track record for the past five years, as well as its reputation.
- 9.) Designer/Contractors who meet all the above-cited criteria shall be considered as eligible Bidders to participate in the procurement of specific project(s) pursuant to the provisions of the IRR of R.A. 9184, as amended.

E. Documents to be provided to the Bidders

The CLIENT EVSU shall provide the following documents to facilitate the Bidders/ Contractors/ Designer in the preparation of their bid proposals:

- 1.) All technical data and documents related to the project.
- 2.) To keep the unity and integrity of the project and facilitate the review of bid proposals, the following plans as provided by the CLIENT EVSU, subject to revisions if found necessary, shall be complied with:
 - a) General Lay-out/ Conceptual Plan such as but not limited to the road plans, facility arrangement plans and lighting plans.
 - b) Structural building plans and details (unless part of the design requirement)
- 3.) Bidders are also encouraged to use new construction materials and/or methods/ technology.



- 4.) The checklist of documents to be provided by the Client EVSU to bidders is hereto attached.
- a) Lot Plan/ Vicinity Map/ Site Development Plan for compliance.
 - b) Conceptual/Structural Building Plans for Compliance (unless part of the design requirement)
 - c) Minimum Technical Specifications in Comparative Form/ Presentation vis-à-vis the Bidders Proposal (unless part of the design requirement)
 - d) Construction Schedule (S-Curve and Bar Chart) (unless part of the design requirement)

a. Evaluation of Bids

For detailed evaluation of the Design and Build proposals, a two-step procedure shall be adopted by the BAC. The Design and Build Committee (DBC) shall serve as the Technical Working Group (TWG) to assist the BAC in the evaluation of Bid proposals.

i. First-Step Procedure

The First Step Evaluation shall involve the review of the Technical Proposal and track record submitted by the Bidder/Contractor/Designer as indicated in this TOR and the Bidding Documents using the non-discretionary “pass/fail” criteria that involve compliance with the following requirements:

- 1.) Compliance to the documentary requirements for submission by the Bidders as enumerated in the Annexes “B” and “B1” (Technical Proposal).
- 2.) Adherence of preliminary design/plans to the required performance specifications and parameters of CLIENT EVSU to be shown in the comparative matrix; duly signed and sealed by the respective Registered License Professionals and the President/CEO of the company, for plans prepared, signed, and sealed by the bidder.
- 3.) Quality of personnel to be assigned to the project which covers suitability of key staff to perform the duties of the particular assignments and general qualifications and competence including education and training of the key staff.

ii. Second-Step Procedure

Only those Bids that passed the above criteria shall be subjected to the Second Step Evaluation

The BAC shall open the Financial Proposal of each Contractor who passed the First-Step Procedure and shall evaluate it using non-discretionary pass or fail criteria including arithmetical corrections for computational errors — as stated in the Bidding Documents and thus determine the correct total Calculated Bid Prices. The BAC shall automatically disqualify any total Calculated Bid Price which exceeds the Approved Budget for the Contract (ABC). The total Calculated Bid Price (not exceeding the ABC) shall be ranked in ascending order, from lowest to highest. The bid with the lowest total Calculated Bid Price shall be identified as the Lowest Calculated Bid (LCB).

The LCB shall be subject to post-qualification in accordance with Section 34, Rule X of the IRR of R.A. 9184, as amended, to determine its responsiveness to the eligibility and bid requirements. If after post-qualification the LCB is determined to be post-qualified it shall be considered the Lowest Calculated and Responsive Bid (LCRB) and the contract shall be awarded to the bidder. In case of post-disqualification of the LCB, the procedure under Section 34 shall also be followed.

XII. DETAILED DESCRIPTION OF SCOPE OF WORKS

“Design and Build” Scheme (DBS) instruction for work items



The Contractor shall be responsible for furnishing all services and support facilities, provision of labor requirement, supply of materials, and deployment of appropriate equipment and machineries for the project. Below are some of the work and action items enumerated:

- 1) General Work and Support Facilities Items includes but is not limited to-
 - a) Mobilization (& Demobilization) of Staff, Personnel, and Equipment,
 - b) Site Clearing and Provision of Field Office for Staff/Personnel,
 - c) Posting of Project Information Billboard,
 - d) Occupational Safety and Health Identification, Hazard Prevention, Mitigation, and Protocols, and,
 - e) Coordination with Client EVSU who will assist the Contractor the necessary permits and clearances for project commencement.
- 2) Design and construct the building complete with structural design analysis/computation, excavation, anchor works, backfill, compaction, all piping system, site development, if required, and all other works as specified in the TOR/specifications and approved drawings.

Site development may include some measure of erosion prevention, provision for diversion ditch for surface runoff, temporary access road, protection against livestock and/or wildlife contamination and instances that could lead to reduced surface run-off yield,

The anticipated Contractor work items for the building construction include but are not limited to:

- a) Temporary Site Access
- b) Construction Safety: Barricade & Early Warning Set-up,
- c) Excavation,
- d) Backfill & Compaction,
- e) Cutting & Breaking of Rock Formation,
- f) Removal of obstruction,
- g) Embankment works on structure excavation,
- h) Embankment works on Cut & Fill Earthworks,
- i) Gravel Fill,
- j) Forms & Scaffolding Works,
- k) Plain & Reinforced Concrete Works.

This project will focus on the foundation work of the Construction of a Four-Storey EVSU Main College of Arts and Sciences Extension.

XIII. CONCEPTUAL DESIGN BASIS. AND PARAMETERS

Division I – Civil Works/Earthworks/General Works

The following schemes are proposed as the conceptual design and basis by the contractor/consultant of the Detailed Design.

- 1.) DETAILED SURVEY WORKS
 - a.) All survey works shall be field checked and verified by the contractor.
- 2.) MATERIALS
 - a.) Standard materials shall follow the Blue Book prescriptions, among other things, the material requirements and construction requirements for different items of work, including the tests to be conducted during construction by any DPWH-accredited testing laboratory. The Blue Book incorporates pertinent provisions of the American Society for Testing and Materials (ASTM) and American Concrete Institute (ACI), among other standards, pertaining to construction.
 - b.) For other materials, these shall be subjected to standard testing procedures and



approved by Client EVSU.

- 3.) ALL OTHER REQUIREMENTS SHALL BE DEFINED AND SPECIFIED IN THE PROJECT DESCRIPTION.
- 4.) FOR ALL STRUCTURAL DESIGN AND ANALYSIS, THE FOLLOWING CRITERIA AND PARAMETERS MUST BE UTILIZED:

Standard Design Codes and References

The following standard codes and references shall be used where applicable.

- a.) American Concrete Institute (ACI) Standards
 - ✓ ACI 318 - Building code requirements for reinforced concrete structures
 - ✓ ACI 315 - Manual of standard practice for details and detailing of concrete reinforcement
 - ✓ ACI 350 - Environmental Engineering Concrete Structures
 - b.) Structural Design Manual Specifications
 - c.) National Structural Code of the Philippines (NSCP) 2015
 - d.) National Building Code of the Philippines and its revised IRR
 - e.) Philippine National Standards (PNS)
 - f.) American Society of Testing and Materials (ASTM)
 - g.) DPWH Blue Book
 - h.) Uniform Building Code (UBC)
 - i.) Steel Construction Manual (AISC)
 - j.) Portland Cement Association (PCA) Concrete Information
 - k.) Accessibility Law
 - l.) Local Codes and Ordinances
- 5.) MATERIAL STANDARD
 - a.) All materials, components, and equipment to be supplied and/or installed shall be of recent manufacture, brand new (at most, three (3) years ex-stock), unused and suitable for intended operation. They shall conform with U.S. Underwriter's Laboratory (U/L) Standard for Safety, ASA, NEMA, IEC, IPCEA and ASTM in every case where such standards have been established, or with any other International Standards acceptable to the Engineer.
 - b.) All materials and components shall be as specified unless specifically exempted, in which case, they shall be the best of their respective kind.
 - c.) Samples of materials to be supplied shall be submitted for approval when required by the Engineer.
 - d.) All electrical equipment and materials shall bear the manufacturer's inspection label, unless exception to this requirement is inherent to a particular item.
 - 6.) SHOP DRAWINGS AND CATALOG DATA
 - a.) The Designer/Contractor shall submit to the Engineer for approval seven (7) copies of the shop drawings of equipment and control components he intends to supply, as indicated in the drawings and specifications.
 - b.) Shop drawings shall provide sufficient information to evaluate the suitability and compliance of the proposed equipment and control components with the plans and specifications.
 - c.) Catalog data shall also be submitted to supplement the shop drawings. Catalog cuts, bulletins, brochures or the like, or photocopies of applicable pages thereof shall be submitted where drawings for certain items are not required to be submitted.
 - d.) Should an error in the shop drawings be encountered during installation, the correction, including any field changes found necessary, shall be incorporated on the drawings and the revised drawing shall be submitted to the Engineer for review and approval.
 - 7.) COORDINATION



The Contractor shall coordinate and work with all other parties with whose apparatus he shall connect part/s of the work required herein. The Contractor shall prepare drawings of details of the equipment he supplied, location of sleeves, conduits and support that may be required by other trades and shall furnish the Client EVSU with at least five (5) copies of these drawings, for the information of all parties concerned. The approval of such drawings shall not relieve the Contractor in any way from the responsibility of properly locating and/or coordinating his work with those of other parties involved.

8.) **WORKMANSHIP**

- a.) The work throughout shall be executed in the best and most thorough manner in accordance with the best practice of the trade involved and to the satisfaction of the Engineer.
- b.) Skilled workmen using proper tools and equipment under continuous competent supervision as required by the trade shall accomplish the works.
- c.) The Contractor shall maintain on file at the job site a set of as-built drawings incorporating all actual installation and deviations from the Drawings. The as-built drawings shall be submitted to the Client EVSU prior to provisional acceptance of the electrical works.

XIV. SPECIAL CONSIDERATIONS ON THE CONCEPTUAL DESIGN:

A. GENDER AND DEVELOPMENT ACTION PLAN

- a) The Gender Action Plan (GAP) shall also form part of the contract. The contractor shall comply with the measures set forth in the GAP. Further highlighting the project's benefits in terms of community development, livelihood and income opportunities, gender and participation.
- b) The contractor shall adhere to RA 6685, apply core labor laws and regulations and incorporate applicable workplace occupational safety norms; strongly encourage to hire at least 20% women in skilled and unskilled positions in civil works; comply with GAD-related legal mandates, including prevention and response to gender-based violence.
- c) Establish and implement a mechanism that will prevent and address incidents of sexual harassment and other forms of gender-based violence occurring in the context of civil works at work and affected or surrounding communities/areas.

XV. TERMS AND CONDITIONS OF THE CONTRACT:

A. Roles and Responsibilities

1. Responsibilities of Contractor/Developer

- a.) Prepare and submit the Architectural, Structural, and cost estimates including the corresponding cash flow and implementation/ delivery schedule for the review and approval of the Client EVSU within the 30-calendar day period reckoned from the issuance of the Notice to Award (NOA).
- b.) Secure all necessary permits and licenses from Client EVSU for the plans and designs on Architectural and Structural. Submit copies of the permits upon approval by the concerned agencies.
- c.) Provide warranty for the complete, satisfactory and faithful performance of all works in accordance with the approved design and specifications. To guarantee the faithful performance by the winning bidder of its obligations under the contract in accordance with the Bidding Documents, it shall post a performance security prior to the signing of the contract as provided for in the Bid Data Sheet.
- d.) Secure, for the account of the project, a Contractors All Risk and Fire Insurance equal to 100% of the project cost and maintain such insurance policy until the project has been completed and accepted by the Client EVSU.
- e.) Coordinate and consult all matters with Client EVSU pertaining to the actual implementation of the Project through monthly submission of reports, requests and recommendations.
- f.) Handle, coordinate, and secure all necessary permits, licenses and clearances for the Project from concerned government agencies outside Client EVSU.
- g.) Assume any and all claims for the damages and/ or liabilities arising out of defects or imperfections in the construction or in the quality of works performed in the



project.

- h.) Shoulder all expenses related to the processing and final approval of the land development with the appropriate government agencies, which includes but not limited to payment of all fees, permits, ECC and licenses that may be required in the implementation of the Project, as well as ROW permits with DENR/ CENRO, and Cutting/ Breaking/ & Restoration Permits with DPWH.
- i.) Facilitate the provision of water and power connection, including the payment of necessary fees.

2. Responsibilities of Client (EVSU)

- a.) Review and approve all plans, designs, technical specifications, cost estimates, cash flow and delivery schedule.
- b.) Secure and shoulder the cost and expenses in acquiring the land for the expansion facilities, as well any privately- owned property where ROW is required.
- c.) Ensure compliance with requirements such as warranty for the complete, satisfactory and faithful performance of all works in accordance with the approved design and specifications.

B. Advance Payment

The winning bidder shall be provided the 15% advance payment based on the total contract cost as indicated in the Special Conditions of the Contract. However, the Advance payment may only be released after the approval of Client EVSU of the final designs of the project, submission of which by the winning bidder should be within the prescribed 30 calendar-day period stated in the Notice of Award.

C. Progress Payment

- 1. The Contractor may submit a Statement of Work Accomplished (SWA) or progress billing and corresponding request for progress payment for work accomplished certified/signed by authorized signatories. The SWA should show the amounts that the Contractor considers itself to be entitled to up to the end of the month.
- 2. The materials and equipment delivered on the site but not completely put in place shall be excluded from payment.
- 3. The Client EVSU shall deduct the following from the certified gross amounts to be paid to the Contractor as progress payment:
- 4. Cumulative value of the work previously certified and paid for.
- 5. Portion of the advance payment to be recouped for the month.
- 6. Retention money in accordance with the condition of contract.
- 7. Amount to cover third party liabilities.
- 8. Amount to cover uncorrected discovered defects in the works.

D. Retention Money

- 1. Progress payments are subject to retention of ten percent (10%) referred to as the "Retention Money". Such retention shall be based on the total amount due to the Contractor prior to any deduction and shall be retained from every progress payment until fifty percent (50%) of the value of works, as determined by the Client EVSU, are completed.
- 2. If, after fifty percent of the works have been completed and the work is satisfactorily done on schedule, no additional retention shall be made; otherwise, the ten percent (10%) retention shall be imposed. A certificate shall be issued by the Implementing Unit attesting to the satisfactory completion and on schedule of the works.
- 3. The total Retention Money shall be due for release upon final acceptance of the Works.
- 4. The contractor may, however, request the substitution of the retention money for each progress billing with irrevocable standby letters of credit of from a commercial bank, bank guarantees or surety bonds callable on demand, of amount equivalent to the retention money substituted for and acceptable to Client EVSU, provided that the project is on schedule and is satisfactorily undertaken. Otherwise, the ten percent (10%) retention shall be made.



5. The irrevocable standby letters of credit, bank guarantee and/or surety bonds, to be posted in favor of the Client (EVSU) shall be valid until Final Acceptance of the Project and will answer for the purpose for which the ten percent (10%) retention is intended, i.e., to cover uncorrected discovered defects and third-party liabilities.

E. Contract Completion

Once the project reaches an accomplishment of ninety-five percent (95%) of the total contract amount, the Client EVSU shall create an Inspectorate Team to make preliminary inspection and submit a punch-list to the Contractor in preparation for the final turnover of the project. Said punch-list will contain, among others, the remaining works, work deficiencies for necessary corrections, and the specific duration/ time to fully complete the project considering the approved remaining contract time. This, however, shall not preclude the Client EVSU's claim for liquidated damages.

F. Liquidated Damages

1. Where the Designer/ Contractor refuses or fails to satisfactorily complete the work within the specified contract time, plus any time extension duly granted and is hereby in default under the contract, the Designer/ Contractor shall pay the Client EVSU for liquidated damages, and not by way of penalty, an amount, as provided in the conditions of contract, equal to at least one tenth (1/10) of one percent (1%) of the cost of the unperformed portion of the works for every month of delay.
2. Such amount shall be deducted from any money due or which may become due to Designer/ Contractor under the contract and/or collect such liquidated damages from the retention money or other securities posted by the Designer/ Contractor, whichever is convenient to the Client EVSU.
3. In case that the delay in the completion of the work exceeds a time duration equivalent to thirty percent (30%) of the specified contract time plus any time extension duly granted to the Designer/ Contractor, the Client EVSU may rescind the contract, forfeit the Designer's/ Contractor's performance security and takeover the prosecution of the project or award the same to a qualified Designer/ Contractor through negotiated contract.
4. The total sum of liquidated damages shall not exceed one percent (1%) of the total contract price, in which event the contract shall automatically be taken over by the Client EVSU or award the same to a qualified Designer/ Contractor through negotiation and the erring Designer's/ Contractor's performance security shall be forfeited. The amount of the forfeited performance security shall be aside from the amount of the liquidated damages that the Designer/ Contractor shall pay the Client EVSU and impose other appropriate sanctions.

G. Suspension of Work

1. The Client EVSU shall have the authority to suspend the work wholly or partly by written order for such period as may be deemed necessary, due to force majeure or any fortuitous events or for failure on the part of the Designer/ Contractor to correct bad conditions which are unsafe for workers or for the general public, to carry Out valid orders given by the Client EVSU or to perform any provisions of the contract, or due to adjustment of plans to suit existing field conditions as found necessary during construction. The Designer/ Contractor shall immediately comply with such order to suspend the work wholly or partly.
2. The Designer/Contractor or its duly authorized representative shall have the right to suspend work operation on any or all activities along the critical path of activities after fifteen (15) calendar days from date of receipt of written notice from the Designer/ Contractor to the Concerned Operating Unit or equivalent official, as the case may be, due to the following:
 - a) Peace and order conditions make it extremely dangerous, if not possible, to work. However, this condition must be certified in writing by the Philippine National Police station which has responsibility over the affected area and confirmed by the Department of Interior and Local Government (DILG) Regional Director.
 - b) Delay in the payment of Designer's/ Contractor's claim for progress billing beyond forty-five (45) calendar days from the time the Contractor's/ Developers claim has been certified to by the Client EVSU's concerned operation unit that the documents



are complete unless there are justifiable reasons thereof which shall be communicated in writing to the Designer/ Contractor.

H. Extension of Contract Time

The conditions of extension of contract time as stipulated in Annex “E” of the IRR of R.A. 9184, as amended, shall apply to this contract.

I. Termination of Contract

The conditions of termination of contract as stipulated in Annex “I” of the IRR of R.A. 9184, as amended, shall apply to this contract.

I. Warranty

In accordance with pertinent provisions of the IRR of R.A. 9184, as amended, the warranty against structural defects and failures shall be fifteen (15) years from final acceptance of the project, except those occasioned by force majeure.

J. As-Built Plans

The contractor shall cause the preparation and submission of “as-built” plans duly signed and sealed by a professional architect/ civil/ electrical/ mechanical/ auxiliary/ sanitary engineer in the same sheet size and scale as the original drawings.

XVI. PROVISIONS FOR STORAGE AND MATERIAL HANDLING:

1. The Designer/Contractor shall store his materials, equipment and tools in one place of the site. The area shall be coordinated with EVSU. It shall be kept neat and clean at all times. Any damage thereto or to the surrounding area arising from any accident or damage shall be repaired and/or restored to its original condition.
2. Provisions for securing and safekeeping of stored materials, tools and equipment during the construction project shall be for the account of the Designer-Builder.

XVII. CLEARING OF THE SITE:

The Designer/Builder shall clean the whole area by removing debris, discards, and other construction wastes and leave the entire premises free from rubbish caused by their work to the satisfaction of EVSU at no extra cost.

XVIII. CONSTRUCTION SAFETY:

The Designer/Contractor shall refer to the Department of Public Works and Highways (DPWH) Department Orders and DOLE Guidelines for the construction safety on site and should be included in the submission of the Project Execution Plan.

XIX. CONFIDENTIALITY:

All relevant data such as maps, reports, plans, diagrams, designs, statistics, specifications, and other supporting records or materials prepared in the course of the design-and-build shall be the property of EVSU and shall not be used by the Designer/Contractor without the prior written approval. Print and electronic copies of such documents shall be turned-over to EVSU.

In addition, all data and information related to the project shall be treated with strict confidentiality and in no instance shall they be released or revealed to a third party without written consent of EVSU.



XX. ASSIGNMENT AND SUBCONTRACTING:

Except with prior written approval of the Procuring Entity, the Designer/Contractor shall not assign nor sub-contract any part of the design-build scheme.

XXI. INDEPENDENT CONTRACTOR:

Nothing contained herein shall be construed as establishing or creating an employer-employee or principal-agent relationship, it being understood that the position of EVSU and Contractor is that of an independent contractor.

XVI. INDENTIFICATION:

The Designer/Contractor shall hold EVSU free and harmless from all claims, liabilities, suits and actions, demands, or damages arising from death, loss, or injuries to persons, entities, or properties, in relation to the delivery of design-and-build scheme

In addition, the Contractor Designer agrees to protect and defend, at its own expense, EVSU against claims and liabilities arising from acts or omissions committed by the Contractor or its staff in the performance of the services including the use of copyrighted materials, patented inventions, articles or appliances, and indemnify EVSU for any damages or liabilities that EVSU may be compelled to assume arising from said acts or omissions.

XXII. CHANGES:

EVSU may at any time, by written notice to Designer/Contractor, issue additional instructions, changes, or alterations to the work with no additional cost unless it is mutually agreed upon and in conformance with R.A. 9184 and its RIRR.

XXIII. WARRANTIES OF THE DESIGNER/CONTRACTOR:

- 1) The Designer/Contractor warrants that it shall conform strictly with the terms and conditions of the Terms of Reference.
- 2) The Designer/Contractor warrants, represents and undertakes reliability of the service and that their manpower complement is hardworking, qualified, reliable and dedicated to do the service required to the satisfaction of EVSU. It shall employ highly skilled, well-behaved and honest employees with proper identification cards displayed conspicuously while working within the compound. It shall not obtain the services of any personnel of EVSU to work in any category.
- 3) The Designer/Contractor shall comply with the laws governing employee's compensation, PhilHealth, Social Security, labor standards and other laws, rules and regulations applicable to its personnel employed on account of the contracted services.
- 4) The Designer/Contractor, in the performance of its services, shall secure and maintain at its own expense all registration, licenses or permits required by national or local laws and shall comply with the rules, regulations and directives of regulatory authorities and commissions;
- 5) The Designer/Contractor, shall coordinate with authorized and/or designated personnel of EVSU in the performance of their services;
- 6) The Designer/Contractor shall be liable for loss, damage, or injury as may be due



directly through the fault or negligence of its personnel. It shall assume responsibility, and EVSU shall be specifically released from any responsibility arising therein;

- 7) The Designer/Contractor shall comply with all the documentation to be required by the Commission on Audit (COA) even after completion of the Project at no additional cost to EVSU;
- 8) The Designer/Contractor shall neither assign, transfer, pledge, nor subcontract any part of or interest in the design-build contract; and
- 9) The Designer/Contractor who drew up the plans and specifications for a building shall be held liable for damages within fifteen (15) years for the design of the fit-out works they designed from the completion of the structure; the same should collapse by reason of a defect in those plans and specifications, or due to the defects in the ground.

XXIV. PROJECT ACCEPTANCE AND TURNOVER:

- 1) EVSU shall coordinate with concerned entities to ensure that the Contractor and its completed work is:
 - a. In accordance with the Construction Contract documents (plans and specifications) approved by EVSU.
 - b. Able to perform as expected and that the building was properly constructed to allow successful testing, commissioning, and certification.
- 2) Should EVSU and concerned entities notice minor defects after completing the punch list, new items may be added to the list which the Contractor shall correct prior to final acceptance without cost to EVSU.
- 3) EVSU shall release the retention money upon Final Acceptance of the project.

The Warranty Security shall be returned after the completion of the “Construction of a Four-Storey EVSU Main College of Arts and Sciences Extension” at EVSU Main Campus one (1) year after the issuance of the Certificate of Final Acceptance.

XXV. CONFLICT OF INTEREST:

The Designer/Builder/Contractor shall provide professional, objective, and impartial advice and at all times hold EVSU’s interest paramount, without any consideration for future work, and strictly avoid situations where a conflict of interest shall arise with their other projects or their own interests. The Designer/Builder/Contractor shall not be hired for any project that would be in conflict with their prior or current obligations to other entities, or that may place them in a position of not being able to carry out the Project in the best interest of EVSU.

Should a conflict-of-interest situation arise during the implementation of this Design-Build scheme, not attributable to any act of the Designer/Contractor, the Contractor must disclose the nature and extent of the conflict within ten (10) days from notice.



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CHECKLIST OF TECHNICAL AND FINANCIAL DOCUMENTS
“CONSTRUCTION OF A FOUR-STOREY EVSU MAIN COLLEGE OF ARTS AND
SCIENCES EXTENSION”
ITB No. _____

I. TECHNICAL COMPONENT ENVELOPE

Class “A” Documents

Legal Documents

- ☐ (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages); and
- ☐ (b) Registration certificate from Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives or its equivalent document; and
- ☐ (c) Mayor’s or Business permit for 2021 issued by the city or municipality where the principal place of business of the prospective bidder is located, or the equivalent document for Exclusive Economic Zones or Areas; and
- ☐ (e) Tax clearance per E.O. No. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR).

Technical Documents

- ☐ (f) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; and
- ☐ (g) Statement of the bidder’s Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided under the rules; and
- ☐ (h) Philippine Contractors Accreditation Board (PCAB) License; at least Category D or Special PCAB License in case of Joint Ventures; and registration for the type and cost of the contract to be bid; and
- ☐ (i) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission; Or Original copy of Notarized Bid Securing Declaration; and
- ☐ (j) Project Requirements, which shall include the following:
 - a. Organizational chart for the contract to be bid;
 - b. List of contractor’s key personnel (e.g., Project Manager, Project Engineers, Materials Engineers, and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data;
 - c. List of contractor’s major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership or certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be; and
- ☐ (k) Original duly signed Omnibus Sworn Statement (OSS); and if applicable, Original Notarized Secretary’s Certificate in case of a corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

Financial Documents

- ☐ (l) The prospective bidder’s Audited Financial Statement for 2020, showing, among others, the prospective bidder’s total and current assets and liabilities, stamped “received” by the BIR, or its duly accredited banks and other authorized institutions; and
- ☐ (m) Income Tax Returns (ITR) 2020 and proof of payment/official receipts;



- and
- ☐ (n) VAT Returns for the months of July 2021 to December 2021 with proof of payment/official receipts; and
 - ☐ (o) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC).

Class "B" Documents

- ☐ (p) If applicable, duly signed joint venture agreement (JVA) in accordance with RA No. 4566 and its IRR in case the joint venture is already in existence; or duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.

Document required to be attached in the bid documents:

- ☐ (q) Certificate of Site Inspection

II. FINANCIAL COMPONENT ENVELOPE

- ☐ a. Original duly signed and accomplished Financial Bid Form;
- ☐ b. Original duly signed Bid Prices/Bill of Quantities;
- ☐ c. Duly accomplished Detailed Estimates, including a summary sheet indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the Bid;
- ☐ d. Detailed Plans and Drawings;
- ☐ e. Signed Terms of Reference/Technical Specifications of the project;
- ☐ f. Cash Flow;
- ☐ g. PERT/CPM;
- ☐ h. Construction Schedule/S-Curve.



ANNEX – A

Architectural Design/Works Checklist of Requirements/References

Architectural Design/Works shall conform to the following standards:

1. National Building Code of the Philippines (PD 1096) and its latest amended IRR;
2. The Architectural Act of 2004 (RA 9266) and its latest amended IRR;
3. Accessibility Law (BP 344) and its latest amended IRR;
4. Fire Code of the Philippines (RA 9514) and its latest amended IRR;
5. National Structural Code of the Philippines (NSCP) 2015;
6. National Plumbing Code of the Philippines (NPCP);
7. Sanitation Code of the Philippines;
8. Mechanical Engineering Code of the Philippines;
9. Philippine Electrical Code;
10. National Electric Code;
11. Existing Local Codes and Ordinances;
12. City Green Building Ordinance;
13. Bureau of Product Standards;
14. Energy Efficiency and Conservation Act (RA11285);
15. The Philippine Green Building Code (RA 11393)



ANNEX - B

Structural Design/Works Checklist of Requirements/References

Structural Design/Works shall conform to the following standards:

- 1. National Building Code of the Philippines (PD 1096) and its latest amended IRR;
- 2. National Structural Code of the Philippines (NSCP) 2015;
- 3. Accessibility Law (BP 344) and its latest amended IRR;
- 4. Existing Local Codes and Ordinances;
- 5. City Green Building Ordinance;

Standards:

- 1. Bureau of Product Standards (BPS);
- 2. Philippine National Standards (PNS)
- 3. Underwriters Laboratory (UL);
- 4. DPWH Blue Book;
- 5. American Concrete Institute (ACI);
- 6. American Society for Testing Materials (ASTM);



ANNEX - C

Sanitary/Plumbing Design/Works Checklist of Requirements/References

Sanitary/Plumbing Design/Works shall conform to the following standards:

Codes:

1. National Building Code of the Philippines (PD 1096) and its latest amended IRR;
2. Fire Code of the Philippines (RA 9514) and its latest amended IRR;
3. National Plumbing Code of the Philippines (NPCP);
4. Sanitation Code of the Philippines;
5. Existing Local Codes and Ordinances;
6. The Philippine Green Building Code (RA 11393)

Standards:

1. Bureau of Product Standards (BPS);
2. Philippine National Standards for Drinking Water;
3. Underwriters Laboratory (UL);
4. National Water Resources Board (NWRB);
5. National Plumbers Association of the Philippines (NAMPAP);
6. Philippine Society of Sanitary Engineers, Inc. (PSSE)



ANNEX - D

Mechanical Design/Works Checklist of Requirements/References

Mechanical Design/Works shall conform to the following standards:

Codes:

1. National Building Code of the Philippines (PD 1096) and its latest amended IRR;
2. Fire Code of the Philippines (RA 9514) and its latest amended IRR;
3. Mechanical Engineering Code of the Philippines (ME Code);
4. Existing Local Codes and Ordinances;
5. Energy Efficiency and Conservation Act (RA11285);
6. The Philippine Green Building Code (RA 11393)

Standards:

1. Bureau of Product Standards (BPS);
2. Philippine National Standards for Drinking Water;
3. Underwriters Laboratory (UL) and Factory Manual (FM);
4. International Electro-Technical Commission (IEC) 1998;



ANNEX - E

**Electrical and Electrical Auxiliaries Design/Works Checklist of
Requirements/References**

Electrical and Electrical Auxiliaries design/works shall conform to the following standards:

Codes:

1. National Building Code of the Philippines (PD 1096) and its latest amended IRR;
2. Fire Code of the Philippines (RA 9514) and its latest amended IRR;
3. Philippine Electrical Code;
4. Existing Local Codes and Ordinances;
5. Energy Efficiency and Conservation Act (RA11285);
6. The Philippine Green Building Code (RA 11393)

Standards:

1. Bureau of Product Standards (BPS);
2. Underwriters Laboratory (UL);
3. International Electro-Technical Commission (IEC) 1998;
4. Illumination Engineering Society (IES);
5. National Electrical Manufacturers Association (NEMA)



ANNEX - F

Fire Protection Design/Works Checklist of Requirements/References

Fire Protection design/works shall conform to the following standards:

Codes:

- 1. National Building Code of the Philippines (PD 1096) and its latest amended IRR;
- 2. Fire Code of the Philippines (RA 9514) and its latest amended IRR;
- 3. Mechanical Engineering Code of the Philippines (ME Code);
- 4. National Plumbing Code of the Philippines (NPCP);
- 5. Existing Local Codes and Ordinances;



ANNEX - G

CHECKLIST OF DRAWING REQUIREMENTS AND DESIGN PARAMETERS

I. Governing Codes and Standards (minimum)

- Codes
 - a. National Structural Code of the Philippines (NSCP)
 - b. National Building Code of the Philippines (PD 1096) and its IRR
 - c. Civil Engineering Law (R.A. 544)
 - d. Local Codes and Ordinances
 - e. Fire Code of the Philippines of 2008 (R.A. 9514) and its IRR
 - f. Accessibility Law
 - g. Other Laws applicable to the project
- Standards
 - a. American Concrete Institute (ACI)
 - b. American Institute of Steel Construction (AISC)
 - c. American Welding Society (AWS)
 - d. American Society of Civil Engineers (ASCE)
 - e. American Iron and Steel Institute (AISI)
 - f. The Masonry Society (TMS)
 - g. Philippine National Standard (PNS)
 - h. Bureau of Product Standards (BPS)
 - i. Standard Specifications for Public Works and Highways (DPWH Blue Book)

II. Design Deliverables

- Structural Design and Analysis
 - a. Complete load analysis, modeling, and member design per NSCP
 - b. Certified output sheets for computer-generated computations per NBC
- Structural Plans and Details
 - a. General notes and design criteria sheet
 - b. Structural framing plan (for all levels including basement and roof)
 - c. Foundation plan and footing details
 - d. Column layout and schedules
 - e. Beam layout and schedules
 - f. Slab reinforcement plans
 - g. Shear wall details
 - h. Core wall details (if applicable)
 - i. Elevator, staircase and ramp structural details
 - j. Roof framing and truss details (if any)
 - k. Typical rebar details and bar bending schedules
 - l. Structural connection details
 - m. Sectional views showing typical reinforcement and construction joints
- Civil Drawings
 - a. General notes and construction standards
 - b. Site development plan
 - c. Grading and drainage plan
 - d. Storm drainage layout with pipe sizing and invert levels
 - e. Water supply and sewerage layout (coordination with plumbing)
 - f. Retaining wall and slope protection details (if needed)
 - g. Elevator waterproofing details, pit drainage layout, and access and maintenance clearances
 - h. Basement waterproofing and perimeter drain details



- i. Landscaping and surface finish elevations (for coordination with architecture)
- Design Certification
- Seismic Analysis
- Soil Investigation and Geotechnical Report
- Bill of Quantities and Cost Estimate
- Technical Specifications
- Construction Schedule and Methodology
- Quality Assurance and Quality Control
 - a. Approved material request
 - b. Mill certificate (if applicable)
 - c. Material test results
 - d. Checklists
 - e. Quality execution records
 - f. Inspection and test plan
 - g. Approved plan approved by QC Engineer
- As-Built Drawings (upon completion)
 - a. Structural drawings
 - b. Updated calculation sheets (if there were changes)

STRUCTURAL DESIGN PARAMETERS

I. Design Life and Performance Objectives

- Design Life
 - a. The structure shall be designed for a minimum design life of 50 years in accordance with NSCP 2015 and relevant international standards.
- Performance
 - a. The structure shall be designed to serve its intended function as a four-story classroom building with a basement, satisfying both strength (ultimate limit states) and serviceability requirements (including, but not limited to, deflection, story drift, soft story, vibration, and differential settlement) under applicable code load combinations. Special attention shall be given to seismic performance in consideration of Philippine seismicity.
 - b. The design shall allow for functional flexibility and adaptability, considering possible future reconfiguration or conversion (e.g., to a data center or laboratory facility).
 - c. The structure shall have sufficient load-bearing capacity and floor system strength to accommodate potential heavy equipment, computer servers, or mechanical systems that may be introduced in future use.
 - d. The basement and cistern tank shall be provided with adequate waterproofing to prevent water ingress and ensure the durability and serviceability of the structure.
- Structural System
 - a. The design shall adopt a dual structural system with special reinforced concrete shear walls to resist lateral loads.
 - b. The structure shall include a cistern tank, which shall be designed either as a shear wall or bearing wall, as appropriate to its function and location.

II. Pre-Design and Pre-Analysis Requirements

- Soil Investigation
 - a. The engineer-in-charge shall perform soil investigations to determine the necessary data needed to design the structure. The report shall include but not be limited to:



1. Site Coordinates
 2. SPT or Number of blows
 3. Depth of the water table
 4. Soil Type
 5. Soil Bearing Capacity
 6. Foundation Recommendations
- b. Minimum required number of boreholes: 3 (NSCP, Table 303-1)
 - c. Minimum required depth of borehole^[1]: $30m^{[2]} \leq d \leq 47.5\ m$ (NSCP 303.1)
[1] Referring to NSCP 303.1, depth of borehole may be taken less than the above-mentioned depth provided that suitable bearing layer is reached or if specified by the consulting Geotechnical Engineer.
[2] The depth satisfies the requirement for seismic-related soil classification.
- Other investigations required to ensure the adequacy of the structural design

III. Analysis and Modelling Requirements

- Three-dimensional analysis using approved software
- Manual or spreadsheet verification for representative members
- Seismic design based on site classification and zoning per NSCP
- Equivalent static method for regular structures; dynamic response spectrum if required
- Consideration of P-Δ effects and second-order behavior
- Soil-structure interaction through spring or allowable bearing pressure representation

IV. Loads and Load Combinations

- Loads
 - a. Design loads shall be determined in accordance with NSCP 2015.
 1. Dead Load
 - a. The weights of laboratory equipment, computer servers, and other equipment in reference to the purpose of the structure shall be considered in addition to the usual loads.
 - b. The weight of cars shall be considered at the basement level.
 2. Live Load
 - a. The loads shall be determined based on usage or the type of occupancy per level.
 - i. For first to fourth floor, the following type of occupancy shall be considered: classroom, office, laboratory room, storage room, restroom, corridors and stairways.
 - ii. For roof top, the roof live load shall be considered for maintenance access.
 - iii. For basement, it shall be considered as the building's parking area.
 3. Wind Load
 - a. The following parameters shall apply by default, unless verified otherwise through proper calculations:
 - i. Occupancy Category: I, Essential Facilities (NSCP, Table 103-1)
 - ii. Basic Wind Speed: 310 kph (NSCP 207A.5-1C)
 - iii. Wind Directionality Factor, K_d : 0.85 (both MWFRS and C&C, NSCP, Table 207A.6-1)
 - iv. Exposure Category: B (NSCP 207A.7.3)
 - v. Topographic Factor, K_{zt} : 1.0 (NSCP 207A.8.2)



- vi. Gust Effect Factor: 0.85 (NSCP 207A.9.1)
 - vii. Enclosure Classification: Enclosed (NSCP 207A.10)
 - viii. Internal Pressure Coefficient, GC_{pi} : +0.18 and -0.18 (NSCP, Table 207A.11-1)
 - b. For Components and Cladding (C&C), simplified calculations may be made in reference to NSCP 207E.5 for $h \leq 18m$ and NSCP 207E.7 for $18m < h \leq 48m$.
 - c. For the Main Wind-Force Resisting System (MWFRS), the provisions of NSCP Section 207B shall govern unless wind loads are analyzed using approved engineering software.
4. Seismic Load
- a. The following parameters shall apply by default, unless verified otherwise through proper calculations. It shall also be noted that the use of approved engineering software in seismic loading/analysis is permitted.
 - i. Seismic Importance Factor, I : 1.5 (NSCP, Table 208- 1)
 - ii. Soil Profile Type: S_D [1] (NSCP, Table 208-2)
 - iii. Seismic Zone Factor, Z : 0.4 (NSCP 208.4.4.1)
 - iv. Seismic Type Source: A (NSCP, Table 208-4)
 - v. Near Source Factor, N_a : 1.0 [2] (NSCP, Table 208-5)
 - vi. Near Source Factor, N_v : 1.0 [2] (NSCP, Table 208-6)
 - vii. Seismic Coefficient, C_a : $0.44N_a$ (NSCP, Table 208-7)
 - viii. Seismic Coefficient, C_v : $0.64N_v$ (NSCP, Table 208-8)

[1] *Result from geotechnical report will prevail.*

[2] *Distance from project site to the nearest active Faultline needs to be verified.*

- Load Combinations
 - a. The Load and Resistance Factor Design and its corresponding load combinations shall be used in evaluating the ultimate strength of critical members. The designer may refer to NSCP 203.3.1.
 - 1. Seismic effects shall also be considered in this type of design. Refer to NSCP 203.5.
 - b. The Allowable Strength Design and its corresponding load combinations shall be used in evaluating the serviceability of the structure. The designer may refer to NSCP 203.4.1

V. Member and Connection Design

- Reinforced concrete design per ACI 318 provisions
- Steel design per AISC 360 provisions (if applicable)
- Foundation design based on geotechnical report
- Shear, bending, axial, and combined load checks for all members
- Punching shear and deflection checks for slabs
- Proper development length and anchorage detailing
 - a. Development length or lap splice length shall be taken as $40d_b$ (NSCP 425) unless verified otherwise through proper calculations.
- Strong column–weak beam principle for seismic framing

VI. Serviceability and Durability

- Story drift within NSCP limits



- Deflection limits per ACI 318 or NSCP, Table 424.2.2
- Concrete cover and exposure class appropriate for basement environment
- Corrosion protection for reinforcement in carpark and exposed areas
- Adequate clearances and constructability per local practices

VII. Acceptance Criteria

- Demand-to-capacity ratio ≤ 1.0 for all members
- Story drift $\leq$ code-prescribed limits (NSCP 208.6.4.2)
- Base shear comparison between equivalent static and dynamic analysis per NSCP
- Foundation bearing pressure $\leq$ allowable per geotechnical report

VIII. Materials and Testing

- Concrete
 - a. Concrete compressive strength for the first two floors shall be 5,000 psi.
 - b. Concrete compressive strength for the remaining floors and non-critical members shall be designed per structural requirements but not less than 4,000 psi.
- Reinforcement
 - a. ASTM A615 Grade 60 or equivalent
- Structural steel
 - a. ASTM A36 or A572 Grade 50 (if applicable)
- Welds and bolts per AISC specifications
- Site testing and quality control per DPWH guidelines

IX. Summary of Design Deliverable

- Concept or Schematic Design
 - a. Design basis memorandum (codes, load assumptions, soil class, materials)
 - b. Preliminary framing plans with typical member sizes
 - c. Initial analysis using approved software (ETABS / STAAD / equivalent)
- Design Development
 - a. Updated framing and foundation plans
 - b. Analysis model results summary
 - c. Coordination drawings with architectural plans
 - d. Typical details for beams, slabs, columns, and footings
- Final Design
 - a. Complete structural drawings (plans, elevations, sections, details)
 - b. Full design calculation book (PDF + editable file)
 - c. Static and dynamic analysis results (response spectrum or equivalent static per NSCP)
 - d. Summary of member design checks
 - e. Bar bending and footing schedules
 - f. Cost estimate summary for structural works
 - g. Computer-generated output (if engineering software was used)

X. Issued for Construction (IFC)

- Signed and sealed structural drawings
- Final design calculations signed and sealed by the Structural Engineer of Record
- Foundation and rebar detailing sheets

XI. Quality Assurance

- All drawings and computations signed and sealed by a licensed Structural Engineer
- Internal or third-party design check prior to submission



- Design compliance matrix referencing applicable NSCP clauses
- Documentation of revisions and check results



Permits and Clearances

1. BUILDING PERMIT

A. Locational Clearance Requirements (1 Copy per Document)

1. Locational Clearance Application Form duly accomplished and notarized.
2. Certified True Copy of Transfer Certificate Title (Blue Copy from Register of Deeds).
3. Certified True Copy of Tax Declaration of the property from the City Assessor's Office.
4. Tax Clearance (Current Year) from the City Treasurer's Office.
5. Barangay Clearance giving consent to the construction of the building.
6. Project Cost (including Bill of Materials and Machineries/Capitalization).
7. Sketch of Subdivision Plan (whichever is applicable).
8. First Page of Plans (Site Development and Vicinity Map).
9. Long File Folder with Fastener.
10. Long Brown Envelope.

ADDITIONAL REQUIREMENTS (AS MAY BE APPLICABLE)

11. Plumbing and Drainage Plan for two (2) or multi-storey buildings.
12. Certificate of Non-Coverage (CNC) from EMB-DENR for commercial buildings and residential buildings with 2-Storey with Roof Deck or Multi-Storey Building.
13. Environmental Compliance Certificate (ECC) for projects such as gasoline stations, warehouses, hotels, etc.
14. In case the property is not registered in the name of the applicant, submit a duly notarized Deed of Sale or Deed of Donation or Contract of Lease or Authorization allowing the use of the property whichever is applicable.
15. Special Power of Attorney (SPA) for non-owner or representative.
16. Other requirements deemed necessary for the approval of the application.

ZONING CERTIFICATION (1 Copy per Document)

1. Duly accomplished and notarized Application Form.
2. Vicinity Map indicating clearly and specifically the exact location of the proposed site and the existing land uses and/or landmarks with a radius of at least 500 meters duly signed by a Licensed Geodetic/Civil Engineer or Architect.
3. Lot/Sketch Plan (for new structures, lot plans should be signed and sealed by a Geodetic Engineer).
4. Photocopy of Title or any proof of ownership, or right over the property and or Latest Tax Declaration.
5. Fencing Plan (for Fencing Permit).
6. Photocopy of Deed of Sale or any applicable instrument of transfer (ROD).
7. Long File Folder with fastener.
8. Long Brown Envelope.

B. Fire Safety Evaluation Clearance Requirements

1. Fire Safety Evaluation Clearance Application Form
2. Fire Protection Plans, if applicable (refer to the Fire Code of the Philippines)



3. Cost Estimate/Bill of Materials (signed and sealed)

C. Building Permit Requirements

Technical Documents: Application forms must be duly accomplished, signed and sealed by the professionals & signed by the owner/s)

1. Building Permit Application duly filled-up and notarized Form (7 copies)
2. Sanitary/Plumbing Permit Form (5 copies)
3. Electrical Permit Form (5 copies)
4. Mechanical Permit Form (5 copies)
5. Electronic Permit (5 copies)
6. Materials Specifications (3 copies)
7. Bill of Materials, Scope of Works & Cost Estimates (4 copies)
8. Construction Log Book (2 pcs)
9. Long Folder with Fastener (2 pcs)
10. Long Expanding Envelope (1 pc)
11. Prescribed Tarpaulin Construction Project Signage
12. Photocopies of each professional's valid Professional Regulation Commission (PRC) ID and current Professional Tax Receipts with seal; and 3 specimen signatures of each professional
13. Additional Requirements
 - 13.1 Barangay Clearance for Building Permit (3 copies)
 - 13.2 Barangay Drainage Certificate (3 copies)
 - 13.3 Locational Clearance from City Planning (3 copies)
 - 13.4 Latest Tax Declaration 93 copies)
 - 13.5 Latest Tax Clearance (3 copies)
 - 13.6 Certified True Copy of Title of Property by Register of Deeds (3 copies)
 - 13.7 Sketch Plan of Lot duly certified by Geodetic Engineer (3 copies)
 - 13.8 Approved Subdivision Plan from D.E.N.R. (3 copies)

D. Building Plans at Minimum Scale 1:100m

Plans must be duly accomplished, signed and sealed by the professionals & signed by the owner/s) in Standard A1 Blueprint.

1. **Architectural Plans** (signed and sealed by Architect with IAPOA ID (6sets)
2. **Structural Plans** (with PRC ID & PTR of the Structural Engineer/Civil Engineer who signed the plans) (6sets)
3. **Structural Design Analysis** (for 2-Storey and above) (signed and sealed by Structural Engineer/Civil Engineer) - ATTACH SOIL BORING TEST FOR 3-STOREY AND ABOVE BUILDINGS (6sets)
2. **Sanitary/Plumbing Plans** (signed and sealed by Sanitary Engineer/Master Plumber Engineer) (6sets)
3. **Electrical Plans** (signed and sealed by Professional Electrical Engineer) - ATTACH ELECTRICAL DESIGN ANALYSIS (6sets)
4. **Mechanical Plans** (signed and sealed by Professional Mechanical Engineer) (6sets)
5. **Electronics Plan** for CCTV & Fire Detection and Alarm System (signed and sealed by Electronics Engineer) (6sets)

2. GREEN BUILDING PERMIT

A. Preliminary Certificate

- a. Mandatory Requirements
 1. Construction Activity Control Pollution Prevention System



2. Energy Efficiency Plan
3. Water Use Reduction System with Water Efficient Fixtures
4. Waste Management Plan
5. Designated Smoking Area in the building layout
6. Sewage Treatment Plant

b. Elective Requirements

- Land/Site Sustainability

- i. Construction Plan with flood mitigation study
- ii. Construction plan providing access of the public (for mixed use neighborhood)
- iii. Construction plan providing access to establishments or services (for community connectivity)
- iv. Parking lots with bicycles and attendant storage cabinets (for transportation involving bike racks on parking lots)
- v. Parking Plan and layout prescribed by NBC (for transportation involving provision of adequate parking capacity)
- vi. Construction Plan and layout showing landscape in open spaces
- vii. Construction Plan with light-colored paving or open grid
- viii. Construction Plan with Green Roof for plants and trees
- ix. Construction Plan with Storm Water Management

c. Energy Efficiency (RA 1152)

- i. Building Envelope Design
 - ii. Electrical Plan and calculations adopting highest Energy Efficient Ratio (EER)
 - iii. Architectural Plan with natural ventilation
 - iv. Electrical Plan with electric consumption reduction
Renewable Energy
 - v. Construction Plan with Renewable Energy System
Water Efficiency
 - vi. Construction Plan with water use reduction
 - vii. Construction Plan with water use reduction involving grey water or rainwater
- Materials and Resources
 - i. Construction Plan for construction waste management
 - ii. Architectural and Structural Plan showing layout, elevation and sectional views
 - iii. Use of rapidly renewable materials from plant
 - iv. Construction Plan of water diversion/reduction
 - v. Construction Plan of refuse disposal equipment

d. Indoor Environment

- i. Construction Plan with indoor air quality performance
- ii. Construction Plan with low-emitting materials involving Volatile Organic Compound
- iii. Construction Plan with refrigerant management involving low Ozone Depleting Potential (ODP) or Global Warming Potential (GWP)
- iv. Refrigerant Management with use of equipment long service life

• e. Green Points for Management

- i. Professionals are BERDE accredited

B. Final Certificate



- a. Application for Final Certification for Green Building (must be applied within the time of construction period)

2. DENR CERTIFICATE OF NON-COVERAGE

Documents required:

- 1) Project Plan with Project Description, Project Layout, and Vicinity Map;
- 2) Statement of Accountability by Project Proponent on DENR Template;
- 3) Photo Documentation of the Project Site; and
- 4) Photo Documentation of the Environmental Impact Area.

ANNEX - I



Electronics Design/Works Checklist of Requirements/References

Electronics design/works shall conform to the following standards:

Codes / law:

1. National Building Code of the Philippines (PD 1096) and its latest amended IRR;
2. Fire Code of the Philippines (RA 9514) and its latest amended IRR;
3. Philippine Electronic Code;
4. Existing Local Codes and Ordinances;
5. RA 9292 (Electronics Engineering law);
6. Energy Efficiency and Conservation Act (RA11285);
7. The Philippine Green Building Code (RA 11393)

Standards:

1. American National Standards Institute / Telecommunications Industry Association ANSI/TIA-568.2-D
2. ISO/IEC 11801-1 Ed 1.0
3. Copper certification
4. Fiber certification



ANNEX - J

ELECTRICAL SYSTEM GUIDELINES FOR FOUR-STOREY CAS EXTENSION

1.0 GENERAL REQUIREMENTS

All electrical works shall comply with the Philippine Electrical Code (PEC), the Philippine Fire Code (RA 9514), and the Department of Energy (DOE) Guidelines on Energy Conserving Design of Buildings, 2020.

All design documents shall be signed and sealed by a Professional Electrical Engineer (PEE), and all electrical installations shall be supervised by a Registered Electrical Engineer (REE) or PEE.

The electrical system shall ensure safety, reliability, and energy efficiency, providing adequate power distribution, lighting, and protection systems for classrooms, laboratories, offices, and other functional areas.

2.0 DESIGN AND DELIVERABLES

The electrical design shall include:

- a. Detailed electrical plans and design analysis compliant with PEC.
- b. Single-line diagram, load schedule, panel board schedules, feeder layout, and short-circuit study.
- c. Energy efficiency provisions in accordance with DOE 2020 Guidelines.
- d. Fire Detection and Alarm System (FDAS) layout and integration with fire extinguishing systems.
- e. Emergency lighting and exit signage plans per Fire Code requirements.

The design submission shall also include:

1. Detailed cost estimates, including:
 - a. Material and equipment cost breakdown
 - b. Manpower and labor estimates
 - c. Overhead, Contingencies, and Miscellaneous (OCM)
 - d. Applicable taxes and markups, etc.
2. Technical specifications for all electrical components and equipment.
3. Testing and commissioning plan, including acceptance criteria.
4. As-built drawings, operation and maintenance (O&M) manuals, and test reports upon project completion.

3.0 POWER DISTRIBUTION SYSTEM

Provide a properly sized feeder from the main supply to the building, including main switchboard, service entrance, and protective devices. Implement a zoned distribution system to ensure reliable operation and facilitate maintenance without full system shutdown.

Install a panel board per room (classroom, office, or laboratory) to serve lighting, general-purpose, and special circuits.

Provide capability for remote shutdown of electrical devices or room circuits from an external control point for safety and energy management.

4.0 LIGHTING SYSTEM

Use LED lighting fixtures for all areas to ensure energy efficiency and long service life. Install occupancy sensors and daylight sensors in classrooms, offices, and corridors to reduce energy consumption.

Maintain the following minimum illumination levels:



- Lecture Room – 300 Lux
 - Laboratory Room, Office, Conference Room – 500 Lux
 - Hallway, Staircase, Comfort Room – 150 Lux
- Provide emergency lighting and illuminated exit signs as required by the Fire Code.

5.0 OUTLETS AND EQUIPMENT

Provide ACU outlets with enclosed circuit breakers and individual circuit protection. Classrooms and laboratories shall be equipped with outlets for special loads such as laboratory instruments, projectors, and AV equipment.

Use GFCI protection for outlets near water sources or for portable electrical devices. All outlets shall be properly grounded and clearly labeled by circuit and load.

6.0 FIRE PROTECTION AND SAFETY SYSTEMS

Install a Fire Detection and Alarm System (FDAS) covering all occupied areas in compliance with the Fire Code.

The FDAS shall include detectors, manual call points, alarm bells, strobes, and control panels with battery backup.

Provide electrical power and control wiring for fire pumps, automatic sprinkler systems, and fire suppression systems (e.g., CO₂ or clean agent).

All wiring for fire protection shall be fire-rated, properly enclosed, and connected to emergency power sources.

Coordinate the electrical design with the fire protection system for signal, alarm, and automatic shutdown interfaces.

7.0 TESTING AND COMMISSIONING

Conduct standard electrical tests including:

- Continuity and insulation resistance
- Polarity and grounding resistance
- Phase rotation and voltage checks

Perform integrated testing of the FDAS, emergency lighting, and fire protection systems in the presence of the supervising engineer and fire safety officer.

Submit certified test reports, system performance records, and final as-built drawings prior to project turnover.

8.0 GENERAL SPECIFICATIONS

Follow DOE 2020 guidelines for illumination and energy conservation.

Provide dedicated circuits for ACUs and special equipment.

Install surge protection, grounding, and lightning protection systems per PEC standards.

All electrical components, panels, and circuits shall be properly labeled, documented, and reflected in as-built drawings.

Ensure compliance with all safety, efficiency, and maintenance provisions of the project specifications.



Summary of Deliverables Checklist

No	Deliverable	Description
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1	Signed & Sealed Electrical Plans	By PEE
2	Design Analysis & Calculations	Load, fault, voltage drop, etc.
3	Single-Line Diagram & Schedules	Panels, feeders, circuits
4	Fire & Emergency Systems	FDAS, lighting, suppression
5	Detailed Cost Estimate	Includes materials, labor, OCM, tax, etc.
6	Testing & Commissioning Plan	Procedures and acceptance tests
7	As-Built Drawings & O&M Manual	Final submission package