

**TECHNICAL SPECIFICATIONS**

**IMPLEMENTATION OF THE**

**PROJECT: CONSTRUCTION OF SPORTS FACILITIES**

**OF**

**PHILIPPINE SCIENCE HIGH SCHOOL - MIMAROPA REGION CAMPUS**

**BARANGAY RIZAL, ODIONGAN, ROMBLON**

**SECTION I. BACKGROUND**

The **PHILIPPINE SCIENCE HIGH SCHOOL-MIMAROPA Region Campus (PSHS-MRC)** through the approved allocation for capital outlays under National Expenditure Program (NEP) 2021 intends to apply the sum of **NINE MILLION SEVEN HUNDRED THOUSAND PESOS (₱9,700,000.00)** being the approved budget for the procurement and implementation of the project **CONSTRUCTION OF SPORTS FACILITIES** with the project duration of **Two Hundred Fifteen (215) Calendar Days**.

**SECTION II. PROJECT DESCRIPTION AND LOCATION**

The project will involve the construction of the **CONSTRUCTION OF SPORTS FACILITIES** of Philippine Science High School - MIMAROPA Region Campus, Rizal, Odiongan, Romblon pursuant to the technical specifications indicated in this Technical Specifications, and the PSHS System Building Standards and Specifications, enclosed herein.

This project will include the following scope:

- (a) Construction of Stage and Bleachers
- (b) 200-meter Mini Track Oval
- (c) Athletic Field
- (d) Ground Preparation and Earthworks

(Please refer to the annexes for the attached drawings).

The project will have an Approved Budget for the Contract (ABC) of **NINE MILLION SEVEN HUNDRED THOUSAND PESOS (₱9,700,000.00)** which includes all taxes and applicable permits, licenses, and clearances, for the project mentioned above.

**SECTION III. CONSTRUCTION PHASE**

A. The Construction Project

The structured design shall conform to the provisions of the National Building Code of the Philippines (PD 1096), Accessibility Law (BP 344), National Structural Code of the Philippines, Electrical Engineering Law (RA 7920), Mechanical Engineering Law (RA 5336), Plumbing Code (RA 1378, 1993-1994 Revisions), Fire Code (RA 9514) and other laws and regulations covering environmental concerns and local ordinances and regulations whichever is applicable.

## **Construction of Sports Facilities includes the following Scope of works:**

### **1. CONSTRUCTION OF STAGE AND BLEACHERS**

The Stage and Bleachers shall be constructed along the slope of the existing ground and along the slope protection of the road network leading to the recreational area. It shall serve the purpose of holding athletic and cultural events as well as assembly area in case of emergencies. The stage and bleachers shall be elevated to a height of 2.30 meters from the finished grade line of the mini oval.

#### **1.1 Construction of Stage**

- a. The stage will have a length of 10.00 meters and a width of 4.00 meters.
- b. The PSHS Logo made of marble material with a diameter of 1.00m and the name PHILIPPINE SCIENCE HIGH SCHOOL – MIMAROPA REGION CAMPUS in marble letters 1.00m by 1.00m are laid on the sloped grass in front of the stage.
- c. The center stage will be on the same elevation as the first step of the bleachers.
- d. A ramp will be constructed at the rear of the fourth level bleachers going down to the Comfort rooms, Electrical Room, Storage Room and Control Room
- e. There will also be a Comfort Room, Electrical Room, Control Room, and a Storage Room located at the rear part of the stage.

#### **1.2 Construction of Bleachers**

- a. There are 4 levels of bleachers at the right and left wing of the center stage.
  - i. First Level of bleachers must accommodate a seating capacity of 60 persons. A provision of slab-on-fill with a width of 2.00m will be made in front of the first level bleachers.
  - ii. Second Level can accommodate a seating capacity of 50 persons.
  - iii. Third Level can accommodate a seating capacity of 40 persons.
  - iv. Fourth Level can accommodate a seating capacity of 30 persons. The fourth level bleachers will be accessible from the road network leading to the Recreational Area and provisions of 5 seats both sides for persons with special needs.
- b. The riser height will be 0.40m and the runner width is 0.70m.
- c. The ground slope shall be formed to become ramps. It shall also be supplied and planted with Frog/Bermuda grass.

### **2. Athletic Track Oval**

- a. The track oval must have a total circumference of 200m (218.72yd) in its innermost lane.
- b. A 100-meter length track shall be also constructed in front of the stage and bleachers.
- c. The athletic track oval shall be supplied with base course and aggregate subbase course as finish and will be compacted to be prepared for further improvement.  
*(Please see attached plans for other details and specifications)*

### **3. Athletic Field**

- a. The athletic field ground must be compacted and leveled.
- b. The athletic field ground must be planted with Frog/Bermuda grass.

### **4. Ground Preparation and Earthworks**

This item of the project shall serve the purpose of:

- a. Excavation works for the proposed project and other components.
- b. Backfilling activities at areas that needs to be backfilled.

- c. Removal of Loam and Muddy Soil to a depth of 0.30m and will be replaced with Embankment materials and compaction of earth soil and/or other earth materials mentioned and specified on these Technical Specifications and the attached plans.

**NOTE:**

- a. During hauling of materials, the allowable weight or load for each truck will be 5 ton that passes through the road network.
- b. All excess soil of the project will be dump properly to the proposed Academic Building II, Multipurpose Gymnasium and Admin/Employees Building.

## **SECTION IV. SELECTION OF CONTRACTOR**

The procurement and implementation of the project shall be in accordance with the provisions of RA 9184 specifically its Annex A. Bidding process shall be conducted by the Bids and Awards Committee (BAC) to be assisted by the TWG. The campus director of PSHS-MRC shall create the Design and Build Committee (DBC) to be composed of highly technical personnel in the field of architecture and engineering or construction. The DBC and TWG shall prepare the design brief and performance specifications and parameters, review the detailed engineering design, and assist the BAC in the evaluation of technical and financial proposals in accordance with the criteria set.

### **A. Eligibility Requirements**

The eligibility requirements for infrastructure projects shall comply with the applicable provisions of Section 23-24 of the IRR of RA 9184.

#### **A. Eligibility Documents**

##### **Class “A” Documents**

- i. PhilGEPS Registration
- ii. Registration from the Securities and Exchange Commission ( SEC), Department of trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives;
- iii. Mayor’s permit issued by the city or municipality where the principal of business of the prospective bidders is located;
- iv. List of all its on-going and completed government and private contracts within ten (10) years from the submission of bids
  - a. CPES rating or
  - b. Certificate of Completion
- iv. PCAB licenses and registration for the type and cost of the contract for this project (Small B – License Category C & D) and contractor’s registration certificate from DPWH;
- v. Audited financial statement, stamped “received” by the BIR for the preceding calendar year;
- vi. NFCC computation or CLC.
- vii. Tax clearance

##### **Class “B “ Documents**

- i. Joint Venture Agreement, if applicable.

## 1. Technical Documents

- i. Bid Security (in any form)
- ii. Project Requirements
- iii. Organizational Chart
- iv. List of Contractor's Personnel with complete qualification and experience data.
- v. List of Contractor's Equipment units, which are owned, leased, and/or under purchase agreements, supported by certification of availability of equipment from the equipment lessor/vendor for the duration of the project.
- vi. Construction Safety and Health Program
- vii. Omnibus Sworn Statement

## 2. Financial Documents

- i. Financial Bid Form
- ii. Bill of Quantities
- iii. Detailed Cost Estimates
- iv. Summary Sheet indicating the unit prices of materials, labor rates and equipment rental
- v. Payment schedule

## 3. Additional Requirement

Authorized Representative must present;

- i. Authorization letter / Special Power of Attorney
- ii. Letter of Intent

### **Notes:**

- i. The authorized representative must show proof of employment under the company which he/she represent at least 5 years in the company (e. q. contract of employment etc.)
- ii. Non – compliance of the additional requirements shall not be subjected for the failure or disqualification of the Prospective bidder. These requirements are for the compliance for the statutory and regulatory documents.

## **B. Eligibility Criteria**

- a) The eligibility of contractors shall be based on the legal, technical and financial requirements above-mentioned. In the technical requirements, the contractor (as solo or in joint venture/consortia) should be able to comply with the experience requirements under the IRR of RA 9184, where one of the parties (in a joint venture/consortia) should have at least one similar project in construction, with at least 50% of the cost of the Approved Budget for the Contract (ABC).
- b) If the bidder has no experience in construction projects on its own, it may enter into subcontracting, partnerships or joint venture with engineering firms for the portion of the contract.

## **B. Construction Personnel**

The key professionals and the respective qualifications of the **CONSTRUCTION PERSONNEL** shall be as follows:

### 1. Project Manager

The Project Manager shall be a licensed architect or engineer with at least five (5) years relevant experience on similar and comparable projects in different locations. The Project Manager should have a proven record of managerial capability through the directing/managing of major civil engineering works, including projects of a similar magnitude.

### 2. Project Engineer/Architect

The Project Engineer/Architect shall be a licensed architect or engineer with at least five (5) years of experience in similar and comparable projects and shall preferably be knowledgeable in the application of rapid construction technologies.

### 3. Materials Engineer

The Materials Engineer must be a duly licensed Civil Engineer and an accredited Materials Engineer by the Department of Public Works and Highways (DPWH) that has undergone the prescribed examinations and passed the Accreditation of Contractor's and Consultants' Materials Engineers.

### 4. Registered Mechanical Engineer

The Registered Mechanical Engineer must be a duly licensed Registered Mechanical Engineer and must have at least five (5) years of experience in similar and comparable projects and shall preferably be knowledgeable in the application of Green Building technologies.

### 5. Registered Electrical Engineer

The Registered Electrical Engineer must be a duly licensed Registered Electrical Engineer and must have at least five (5) years of experience in similar and comparable projects and shall preferably be knowledgeable in the application of Green Building technologies.

### 6. Sanitary Engineer

The Sanitary Engineer must be a duly licensed Sanitary Engineer and must have at least five (5) years of experience in similar and comparable projects and shall preferably be knowledgeable in the application of Green Building technologies.

### 7. Safety Officer

The safety officer must be an accredited safety practitioner by the Department of Labor and Employment (DOLE) and has undergone the prescribed 40-hour Construction Safety and Health Training (COSH).

Minimum Classification and number of Safety Officer as per Department Order No. 198 Chapter IV Covered Workplaces Section 14 for all covered workplaces shall be as follows:

<b>Number of Workers</b>	<b>Low Risk</b>	<b>Medium Risk</b>	<b>High Risk</b>
1 to 9	One (1) SO1	One (1) SO1	One (1) SO2
10 to 50	One (1) SO1	One (1) SO2	One (1) SO3
51 to 99	One (1) SO2		One (1) SO2 and One (1) SO3
100 to 199		One (1) SO2 and One (1) SO3	
200 to 250	Two (2) SO2 or One (1) SO3	One (1) SO2 and One (1) SO3	Two (2) SO3
251 to 500	Two (2) SO2 and One (1) SO3	Two (2) SO3	One (1) SO2 and Two (2) SO3
501 to 750	Two (2) SO2 and One (1) SO3	Two (2) SO3	One (1) SO2 and Two (2) SO3
751 to 1000	Two (2) SO3		
Every additional 250 or fraction thereof	-	-	Additional One (1) SO3 or SO4
Every additional 500 or fraction thereof	Additional One (1) SO3	Additional One (1) SO3 or SO4	-

Construction is considered as High Risk workplace, therefore, the requirement for the number of Safety Officer will depend on the High Risk column.

#### 8. Foreman

The Foreman must have at least five (5) years of experience in similar and comparable projects and shall preferably be knowledgeable in the application of Green Building technologies.

The above list of key personnel required. The **CONTRACTOR** may, as needed and at its own expense, add additional professionals and/or support personnel for the optimal performance of all Construction Services, as stipulated in these Terms of Reference, for the PROJECT. Prospective bidders shall attach everyone's resume and PRC license of the (professional) staff, proof of qualifications, and related documents, as necessary.

## Section V. SCOPE OF WORKS AND PROJECT IMPLEMENTATION

### A. Pre-Construction

1. Secures all necessary building permits prior to construction. All incidental fees shall be included in the cost estimate of the building.
2. Prepares the PERT-CPM of the construction phase.
3. Provides all other necessary documents that shall be required by D & B Committee.

### B. Construction Phase

1. Implements all works indicated in the approved construction drawings and documents. All revisions and deviation from the approved plans, especially if it shall impact the overall cost of the project, shall be subject for approval.
2. Provides soil filling, grading and other soil protection measures of the building and other elements of the site, in response to the results of soil and materials testing.
3. Constructs the buildings and other necessary structures, complete with utilities and finishes, resulting in operable and usable structures.

4. Provides protection or relocation of existing trees indigenous to the area, and proper removal and replacement of all introduced trees and vegetation affected by the construction.
5. Layouts piping, conduits, manholes, boxes and other lines for utilities including tapping to existing utility lines. Facilitate the connection of all utilities (power, water, sewer, structured cabling and telephone) with their corresponding utility companies. All application fees shall be included in the project cost.
6. Installs fire protection systems and fixtures, fire extinguishers, emergency lights and lighted fire exit signs.
7. Prepares shop-drawings for approval.
8. Coordinates with the D&B Committee regarding scheduling of delivery and installation of all owner-furnished materials and equipment during construction.
9. Conducts all necessary tests (to be required by D&B Committee) and issue reports of results.
10. Rectifies punch-listing works to be inspected and issued by the D&B Committee and/or the End-user.
11. Complies with the DOLE-OSH requirements and submit periodic reports concerning occupational safety and health.
12. Provides all other necessary documents that shall be required by the D&B Committee.

#### C. Post Construction Phase

1. Prepares of as-built plans
2. Turn-overs of all manuals, certificates, and warranties of installed items.
3. Secures building certificate of occupancy and fire safety inspection certificate

#### D. Variation Orders

Any errors, omissions, inconsistencies, inadequacies, or failure 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 document which has been previously submitted, reviewed and approved, the contractor shall notify the procuring entity within a reasonable period of time and shall shoulder the cost of such changes.

1. 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:
  - i. Change Orders resulting from design errors, omissions or non-conformance with the performance specifications and parameters and the contract documents by the contractor shall be implemented by the contractor at no additional cost to the procuring entity.
  - ii. Provided that the contractor suffers delay and/or incurs 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:
    - an extension of time for any such delays under Section 10 of Annex "E"; or
    - Payment for such costs as specified in the contract documents, provided, that the cumulative amount of the variation order does not exceed ten percent (10%) of the original contract

#### E. Defects and Liability

1. All 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.

2. The contractor shall be held liable for structural defects and/or failure of the completed project within the warranty periods specified in Section 62.2.3.217 of the IRR.

## **Section VI. OVERALL PROJECT TIME SCHEDULE**

The BUILD CONTRACTOR shall propose the most reasonable time schedule for the completion of the project. It is expected that this period will not exceed **Two Hundred Fifteen (215) calendar days** seven (7) days from the date of the issuance of the Notice to Proceed (NTP).

## **Section VII. RESPONSIBILITIES OF THE IMPLEMENTING AGENCY AND THE CONTRACTOR**

### **A. The Implementing Agency's General Responsibility**

The implementing agency for the project is PSHS-MRC. The D & B Committee shall:

1. Prepare the design brief for the project in accordance with PSHS Systems' policies, existing codes, traditions, standards, and the conditions and design criteria enumerated in the Technical Specifications.
2. Coordinate with CONTRACTOR and the Campus Director of PSHS-MRC with regards to the design and implementation of the project.
3. Assist in the coordination of the CONTRACTOR with various utility agencies during the detailed design and implementation phases of the project.
4. Conduct regular coordination meetings between the CONTRACTOR and PSHS-MRC to facilitate the implementation of the project.

### **B. The Contractor's General Responsibility**

1. The CONTRACTOR shall certify that he has, at his own expense, inspected and examined the proposed project site, its surroundings and existing infrastructure and facilities related to the execution of the work and has obtained all the pieces of information that are considered necessary for the proper execution of the work covered under these Technical Specifications.
2. The CONTRACTOR shall ensure that all works at the stages of design, construction, restoration of affected areas, and testing and commissioning shall be carried out efficiently and effectively.
3. The CONTRACTOR shall provide PSHS-MRC with complete reports such as technical analysis, maps and details regarding the existing conditions and proposed improvements within the site.
4. The CONTRACTOR shall consider the academic calendar and critical dates and occasions within PSHS-MRC, in order to align his work schedule with the academic calendar of the



school to avoid unnecessary disruption of school activities due to construction activities such as closure of water and power supply and non-usage of the existing roads.

5. The CONTRACTOR shall inform PSHS-MRC of critical events during construction, especially when such events can potentially disrupt school activities.
6. The CONTRACTOR shall be PCAB accredited and shall have a Construction Safety and Health Program approved by DOLE and designed specifically for the CONSTRUCTION OF SPORTS FACILITIES.
7. The CONTRACTOR will be held accountable for accidents that might occur during the execution of the project. As a precaution, the CONTRACTOR is required to install warning signs and barriers for the safety of the general public and the avoidance of any accidents and provide appropriate and approved type personal protective equipment for their construction personnel.
8. All works designed and constructed should be guaranteed to seamlessly fit into the overall system general design standards of the PSHS System.

### **Section VIII. PROJECTED SUBMITTALS DURING THE PROJECT**

The following submittals and accomplished documents shall be duly completed and turned over by the CONTRACTOR for the project.

#### **A. For the Pre-Construction Phase (7 copies each)**

1. All necessary permits (Fees shall be included in the contract)
2. PERT-CPM / PDM
3. Bar Chart/S-Curve
4. Manpower Utilization
5. Equipment Utilization
6. Construction Methods
7. Derivation of Contract Time
8. Cashflow
9. Occupational Safety and Health Program approved by DOLE

#### **B. For the Construction Phase (7 copies each)**

1. As-built plans (hard copy and soft copy)
2. All necessary permits (Fees shall be included in the contract)
3. Shop drawings (hard copy and soft copy)
4. PERT-CPM
5. Test results
6. Guarantees, warranties and other certificates
7. Fire and Life Safety Assessment Report 2 and 3 (FALAR 2 and 3)

#### **C. For the Post-Construction Phase (7 copies each)**

1. Certificate of Occupancy (if applicable)
2. Fire Safety Inspection Certificate

3. All other necessary documents to be required by D & B Committee

## **Section IX. CODES AND STANDARDS**

The project shall be designed, engineered, installed, tested, commissioned, and handed over in conformity with the Building and Design Standards of the PSHS System and with the latest editions of the National Building Code of the Philippines, the National Structural Code of the Philippines, the Philippine Electrical Code, Philippine Mechanical Code, the National Plumbing Code of the Philippines, National Fire Code of the Philippines and other relevant codes and standards.

## **Section X. INSTALLATION AND WORKMANSHIP**

Personnel of the CONTRACTOR should be specialists highly skilled in their respective trades, performing all labor according to first-class standards. A full time Project Engineer/Architect and Construction Safety Engineer shall be assigned by the CONTRACTOR at the job site during the construction of the project.

All work to be subcontracted shall be declared by the CONTRACTOR and shall be approved by the Campus Director of PSHS-MRC and its respective technical offices. However, subcontracting of any portion shall not relieve the build contractor from any liability or obligation that may arise from the contract for this project.

Tapping for utilities such as power supply, water supply and sewage drainage shall be coordinated with their respective utilities/ service provider/ companies, and all works involved, including access to utilities tapping point, excavation, removal of obstructions, concrete breaking, backfilling and restoration of affected areas, shall be coordinated and included in the scope of work and cost of the project.

Any errors, omissions, inconsistencies, inadequacies, or failure 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 document which has been previously submitted, reviewed and approved, the CONTRACTOR shall notify the procuring entity within a reasonable period of time and shall shoulder the cost of such changes.

## **Section XI. MATERIALS**

All materials and equipment shall be standard products of manufacturers engaged in the production of such materials and equipment and shall be the manufacturer's latest standard design.

The materials and workmanship supplied shall be of the best grade and constructed and/ or installed in a practical and first-class manner. It will be completed in operation, nothing being omitted in the way of labor and materials required and it will be delivered and turned over in good condition, complete and perfect in every respect.

Materials and systems for structured cabling shall be in accordance with standards set by the PSHS System.

All materials shall be in conformance with the latest standards and with inspection and approval from D&B Committee.

**Section XII. MODE OF PAYMENT**

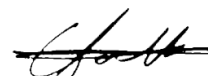
- A. The PSHS-MRC shall pay the winning CONTRACTOR progress payments based on billings for actual works accomplished, as certified by D&B Committee of the PSHS System. In no case shall progress billing be made more than once every **Thirty (30) calendar days**. Materials or equipment delivered on the site but not completely put in place or used in the project shall not be included for payment.
- B. All progress payment shall be subject to retention of ten percent (10%) based on the amount due to the winning CONTRACTOR prior to any deduction. The total retention money shall be released only upon Final Acceptance of the Project. The winning CONTRACTOR may, however, request for its release prior to Final Acceptance subject to the guidelines set forth in R.A. 9184 and its Implementing Rules and Regulations.
- C. The CONTRACTOR may request in writing which must be submitted to form part of the Contract Documents, for an advanced payment equivalent to fifteen percent (15%) of the total Contract Price. The advance payment shall be made once the BUILD CONTRACTOR issues its irrevocable standby letter of credit from a reputable bank acceptable to the PSHS System, or GSIS Surety Bond of equivalent value, within **Fifteen (15) days** from the signing of the Contract Agreement to cover said advanced payment.
- D. First Payment/Billing shall have an accomplishment of at least 20% of the construction phase.
- E. The following documents must be submitted to the D&B Committee before processing of payments to the CONTRACTOR can be made:
  - 1. Progress Billing
  - 2. Detailed Statement of Work Accomplished (SWA)
  - 3. Request for payment by the BUILD CONTRACTOR
  - 4. Pictures/photographs of original site conditions (for Billing)
  - 5. Before, During and After pictures/photographs of work accomplished with date attach during the actual.
  - 6. Payment of utilities (power and water consumption)
  - 7. CONTRACTOR's affidavit

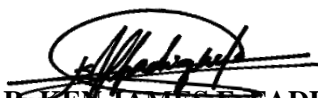
*Note: The CONTRACTOR can bill the PSHS-MRC of up to a maximum of 90% accomplishment.*

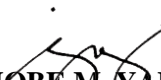
Prepared by:

DESIGN AND BUILD COMMITTEE:

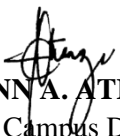
  
**WOODRITZ F. RABINO**  
Chairperson

  
**CLINT JOHN F. FONDEVILLA**  
Member

  
**ENGR. KEN JAMES F. FADRIQUEELA**  
Member

  
**JOBE M. YAP**  
Member

Concurred:

  
**GLENN A. ATIENZA**  
OIC - Campus Director