

**DEPARTMENT OF SOCIAL WELFARE AND DEVELOPMENT**

**FIELD OFFICE VII**

**CEBU CITY**

**BIDDING DOCUMENTS FOR**

**Repair and Improvement of  
Various Facilities in Regional Rehabilitation  
Center for Youth (RRCY)**

**ITB No. DSWD7-PB-2023-55**

**September 2023**

## TABLE OF CONTENTS

<b>SECTION I. INVITATION TO BID .....</b>	<b>4</b>
<b>SECTION II. INSTRUCTIONS TO BIDDERS.....</b>	<b>7</b>
1. Scope of Bid.....	7
2. Funding Information .....	7
3. Bidding Requirements.....	7
4. Corrupt, Fraudulent, Collusive, Coercive, and Obstructive Practices .....	8
5. Eligible Bidders.....	8
6. Origin of Associated Goods .....	8
7. Subcontracts .....	8
8. Pre-Bid Conference.....	9
9. Clarification and Amendment of Bidding Documents .....	9
10. Documents Comprising the Bid: Eligibility and Technical Components.....	9
11. Documents Comprising the Bid: Financial Component .....	10
12. Alternative Bids .....	10
13. Bid Prices .....	10
14. Bid and Payment Currencies.....	10
15. Bid Security.....	11
16. Sealing and Marking of Bids .....	11
17. Deadline for Submission of Bids .....	11
18. Opening and Preliminary Examination of Bids .....	11
20. Post Qualification.....	11
21. Signing of the Contract .....	11
<b>SECTION III. BID DATA SHEET .....</b>	<b>12</b>
<b>SECTION IV. GENERAL CONDITIONS OF CONTRACT.....</b>	<b>14</b>
1. Scope of Contract.....	14
2. Sectional Completion of Works.....	14
3. Possession of Site.....	14
4. The Contractor's Obligations.....	15
5. Performance Security .....	15
6. Site Investigation Reports .....	15
7. Warranty.....	15
8. Liability of the Contractor.....	16

9.	Termination for Other Causes .....	16
10.	Dayworks.....	16
11.	Program of Work .....	16
12.	Instructions, Inspections and Audits.....	16
13.	Advance Payment .....	17
14.	Progress Payments .....	17
15.	Operating and Maintenance Manuals .....	17
<b>SECTION V. SPECIAL CONDITIONS OF CONTRACT .....</b>		<b>18</b>
<b>SECTION VI. SPECIFICATIONS .....</b>		<b>19</b>
<b>SECTION VII. DRAWINGS .....</b>		<b>40</b>
<b>SECTION VIII. BILL OF QUANTITIES .....</b>		<b>41</b>
<b>SECTION IX. CHECKLIST OF TECHNICAL AND FINANCIAL DOCUMENTS.....</b>		<b>45</b>
<b>SECTION X. BIDDING FORMS .....</b>		<b>48</b>
<b>BID FORM.....</b>		<b>58</b>

## *Section I. Invitation to Bid*

### **Project Title: Repair and Improvement of Various Facilities in Regional Rehabilitation Center for Youth (RRCY)**

**Project Identification No.: ITB No. DSWD7-PB-2023-55**

1. The *Department of Social Welfare and Development, Field Office VII (DSWD-FO VII)*, through the *authorized appropriations for Fiscal Year 2023 General Appropriations Act* intends to apply the sum of **Three Million Two Thousand Three Hundred Pesos Only (Php3,002,300.00)** as payment under the contract for the **Repair and Improvement of Various Facilities in Regional Rehabilitation Center for Youth (RRCY)**, consisting of three (3) lots, broken down below:

LOT NO.	NAME OF PROJECT	ABC
1	Improvement of RRCY Visitors Lounge' Ground and Facilities	<b>Php1,417,500.00</b>
2	Repair and Improvement of RRCY Covered Court	<b>Php723,200.00</b>
3	Repair and Improvement of RRCY School Building and Training Center	<b>Php861,600.00</b>
<b>TOTAL ABC</b>		<b>Php3,002,300.00</b>

Bids received in excess of the ABC shall be automatically rejected at bid opening.

2. The *DSWD Field Office VII* now invites bids from **PhilGEPS registered service provider**. Completion of the Work are reflected as follows:

LOT NO.	NAME OF PROJECT	COMPLETION OF WORK (From receipt of Notice to Proceed)
1	Improvement of RRCY Visitors Lounge' Ground and Facilities	<b>60 Calendar Days</b>
2	Repair and Improvement of RRCY Covered Court	<b>30 Calendar Days</b>
3	Repair and Improvement of RRCY School Building and Training Center	<b>30 Calendar Days</b>

Bidders should have completed a contract similar to the project. A **Single Largest Completed Contract (SLCC)** similar to the Project, **at least 50% of the ABC**. However, it can also be an **aggregate of two or more similar completed contracts**, **provided that there is one contract equivalent to at least half of the 50% of the ABC**. Details are as follows:

<b>Lot No.</b>	<b>50% of the ABC (Single Contract)</b>	<b>Having a largest contract at least 50% of the SLCC (Aggregate Contract)</b>
<b>1</b>	<b>Php 708,750.00</b>	<b>Php 354,375.00</b>
<b>2</b>	<b>Php 361,600.00</b>	<b>Php 180,800.00</b>
<b>3</b>	<b>Php 430,800.00</b>	<b>Php 215,400.00</b>

The SLCC should be supported with the following documents:

- i. Either of **Contract, Purchase Order, Notice of Award or Notice to Proceed**, and
- ii. Either of **Certificate of Completion, Certificate of Acceptance, Inspection and Acceptance, Official Receipt / Collection Receipt or Sales Invoice**.

The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II. Instructions to Bidders.

3. Bidding will be conducted through open competitive bidding procedures using a non-discretionary “*pass/fail*” criterion as specified in the 2016 Revised Implementing Rules and Regulations (IRR) of Republic Act (RA) 9184, otherwise known as the “Government Procurement Reform Act”.
4. Prospective Bidders may obtain further information from *Department of Social Welfare and Development Field Office VII* and inspect the Bidding Documents at the address given below during *office hours, 8:00 AM – 5:00 PM*.
5. A complete set of Bidding Documents may be acquired by interested Bidders on **September 23, 2023** from the given address and website below *and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, in the amount of:*

<b><i>Approved Budget for the Contract</i></b>		<b><i>Bidding Document Fee</i></b>
<b>Lot 1</b>	<b>Php1,417,500.00</b>	Php 5,000.00
<b>Lot 2</b>	<b>Php723,200.00</b>	Php 1,000.00
<b>Lot 3</b>	<b>Php861,600.00</b>	Php 1,000.00
<b><i>All Lots</i></b>	<b><i>Php3,002,300.00</i></b>	Php 5,000.00

The Procuring Entity shall allow the bidder to present its proof of payment for the fees, they may present in person or through electronic means.

It may also be downloaded free of charge from the website of the Philippine Government Electronic Procurement System (PhilGEPS) and the website of the Procuring Entity, provided that Bidders shall pay the applicable fee for the Bidding Documents not later than the submission of their bids.

As stated in GPPB Resolution No. 09-2020, dated 7 May 2020, PEs to maximize the use of existing rules under RA No. 9184, its IRR and related issuances on the conduct of procurement activities, particularly those meant to streamline, simplify and expedite the conduct of procurement and address the challenges and disruptions brought by calamities and crisis such as the COVID-19 pandemic, such as use of videoconferencing, webcasting and similar technology in the conduct of any of the meetings and determination of quorum by the BAC.

6. The *DSWD Field Office VII* will hold a Pre-Bid Conference on ***October 2, 2023 Monday, 2:30PM*** at ***DSWD Field Office VII Conference Room, Cebu City*** and/or through ***video-conferencing via Google Meet using the code: procurement7***, which shall be open to prospective bidders.

***Note:***

DSWD Field Office is implementing health screening and temperature check for all personnel, visitors and client. For your protection, please wear your mask at all times during your visit.

7. Bids must be duly received by the BAC Secretariat through manual submission at the office address indicated below on or before ***October 16, 2023 Monday, 12:45PM***. Late bids shall not be accepted.
8. All Bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in **ITB** Clause 15.
9. Bid opening shall be on ***October 16, 2023 Monday, 1:00PM***, at ***DSWD Field Office VII Conference Room, Cebu City*** and/or ***via Google Meet using the code: procurement7***. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.
10. As stated in Section 22.5.1 of the IRR of RA 9184, request for clarifications on any part of the Bidding Documents or for an interpretation must be in writing and submitted to the BAC of the Procuring Entity concerned at least ten (10) calendar days before the deadline set for the submission and receipt of bids. The BAC shall respond to the said request by issuing a Supplemental/Bid Bulletin, duly signed by the BAC Chairperson, to be made available to all those who have properly secured the Bidding Documents, at least seven (7) calendar days before the deadline for the submission and receipt of bids.
11. The *DSWD Field Office VII* reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Section 35.6 and 41 of the 2016 revised Implementing Rules and Regulations (IRR) of RA 9184, without thereby incurring any liability to the affected bidder or bidders.

**12.** For further information, please refer to:

***MR. GRAEME FERDINAND D. ARMECIN***

*Head, BAC Secretariat*

*DSWD – Field Office VII*

*M.J. Cuenco corner Gen. Maxilom Avenue, Cebu City*

*Tel. Nos. (032) 2338785 local 140 and 149*

*Email Add: [bac.fo7@dswd.gov.ph](mailto:bac.fo7@dswd.gov.ph)*

*Website: <https://fo7.dswd.gov.ph/>*

***September 23, 2023***

***Sgd. PATRICIA R. MEGALBIO***

*Chairperson, Bids and Awards Committee II*

## ***Section II. Instructions to Bidders***

### **1. Scope of Bid**

The Procuring Entity, *Department of Social Welfare and Development Field Office VII* invites Bids for the ***Repair and Improvement of Various Facilities in Regional Rehabilitation Center for Youth (RRCY)***, with Project Identification number **ITB No. DSWD7-PB-2023-55**.

The Procurement Project (referred to herein as “Project”) is for the construction of Works, as described in Section VI (Specifications).

### **2. Funding Information**

2.1. The GOP through the source of funding as indicated below for **CY 2023** in the amount of ***Three Million Two Thousand Three Hundred Pesos Only (Php3,002,300.00)***.

**2.2 The source of funding is NGA, the General Appropriations Act or Special Appropriations.**

### **3. Bidding Requirements**

The Bidding for the Projects shall be governed by all the provisions of RA No. 9184 and its 2016 revised IRR, including its Generic Procurement Manuals and associated policies, rules and regulations as the primary source thereof, while the herein clauses shall serve as the secondary sources thereof.

Any amendments made to the IRR and other GPPB issuances shall be applicable only to the ongoing posting, advertisement, or **IB** by the BAC through the issuance of a supplemental or bid bulletin.

The Bidder, by the act of submitting its Bid, shall be deemed to have inspected the site, determined the general characteristics of the contracted Works and the conditions for this Project, such as the location and the nature of the work; (b) climatic conditions; (c) transportation facilities; (c) nature and condition of the terrain, geological conditions at the site communication facilities, requirements, location and availability of construction aggregates and other materials, labor, water, electric power and access roads; and (d) other factors that may affect the cost, duration and execution or implementation of the contract, project, or work and examine all instructions, forms, terms, and project requirements in the Bidding Documents.

### **4. Corrupt, Fraudulent, Collusive, and Coercive Practices**

The Procuring Entity, as well as the Bidders and Contractors shall observe the highest standard of ethics during the procurement and execution of the contract. They or through an agent shall not engage in corrupt, fraudulent, collusive, coercive, and obstructive practices defined under Annex “I” of the 2016 revised IRR of RA No. 9184 or other integrity violations in competing for the project.

## 5. Eligible Bidders

5.1. Only Bids of Bidders found to be legally, technically and financially capable will be evaluated.

5.2. The Bidder must have an experience of having completed a Single Largest Completed Contract (SLCC) that is similar to this Project, equivalent to at least fifty percent (50%) of the ABC adjusted, if necessary, by the Bidder to current prices using the PSA's CPI, except under conditions provided for in Section 23.4.2.4 of the 2016 revised IRR of RA No. 9184.

A contract is considered to be "similar" to the contract to be bid if it has the major categories of work stated in the **BDS**.

5.3. For Foreign-funded Procurement, the Procuring Entity and the foreign government/foreign or international financing institution may agree on another track record requirement, as specified in the Bidding Document prepared for this purpose.

5.4. The Bidders shall comply with the eligibility criteria under Section 23.4.2 of the 2016 IRR of RA No. 9184.

## 6. Origin of Associated Goods

There is no restriction on the origin of goods other than those prohibited by a decision of the UN Security Council taken under Chapter VII of the Charter of the UN.

## 7. Subcontracts

7.1 The Bidder may subcontract portions of the Project to the extent allowed by the Procuring Entity as stated herein, but in no case more than fifty percent (50%) of the Project.

The Procuring Entity has prescribed that *Subcontracting is not allowed*.

7.2. Subcontracting of any portion of the Project does not relieve the Contractor of any liability or obligation under the Contract. The Supplier will be responsible for the acts, defaults, and negligence of any subcontractor, its agents, servants, or workmen as fully as if these were the Contractor's own acts, defaults, or negligence, or those of its agents, servants, or workmen.

## 8. Pre-Bid Conference

The Procuring Entity will hold a pre-bid conference for this project on **October 2, 2023 Monday, 2:30PM** at **DSWD Field Office VII, M.J. Cuenco Avenue corner General Maxilom Avenue, Carreta, Cebu City** and/or through videoconferencing/webcasting as indicated in paragraph 6 of the **IB**.

## 9. Clarification and Amendment of Bidding Documents

Prospective bidders may request for clarification on and/or interpretation of any part of the Bidding Documents. Such requests must be in writing and received by the Procuring Entity either at its given address or through electronic mail indicated in the **IB**, at least ten (10) days before the deadline set for the submission and receipt of Bids.

## 10. Documents Comprising the Bid: Eligibility and Technical Components

10.1. The first envelope shall contain the eligibility and technical documents of the Bid as specified in **Section IX. Checklist of Technical and Financial Documents**.

10.2. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. For Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.

10.3. A valid PCAB License is required, and in case of joint ventures, a valid special PCAB License, and registration for the type and cost of the contract for this Project. Any additional type of Contractor license or permit shall be indicated in the **BDS**.

10.4. A List of Contractor's key personnel (e.g., Project Manager, Project Engineers, Materials Engineers, and Foremen) assigned to the contract to be bid, with their complete qualification and experience data shall be provided. These key personnel must meet the required minimum years of experience set in the **BDS**.

10.5. A List of Contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership, certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be, must meet the minimum requirements for the contract set in the **BDS**.

## 11. Documents Comprising the Bid: Financial Component

11.1. The second bid envelope shall contain the financial documents for the Bid as specified in **Section IX. Checklist of Technical and Financial Documents**.

11.2. Any bid exceeding the ABC indicated in paragraph 1 of the **IB** shall not be accepted.

11.3. For Foreign-funded procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.

## 12. Alternative Bids

Bidders shall submit offers that comply with the requirements of the Bidding Documents, including the basic technical design as indicated in the drawings and specifications. Unless there is a value engineering clause in the **BDS**, alternative Bids shall not be accepted.

## 13. Bid Prices

All bid prices for the given scope of work in the Project as awarded shall be considered as fixed prices, and therefore not subject to price escalation during contract implementation, except under extraordinary circumstances as determined by the NEDA and approved by the GPPB pursuant to the revised Guidelines for Contract Price Escalation guidelines.

## 14. Bid and Payment Currencies

14.1. Bid prices may be quoted in the local currency or tradeable currency accepted by the BSP at the discretion of the Bidder. However, for purposes of bid evaluation, Bids denominated in foreign currencies shall be converted to Philippine currency based on the exchange rate as published in the BSP reference rate bulletin on the day of the bid opening.

14.2. Payment of the contract price shall be in **Philippine Pesos**.

## 15. Bid Security

15.1. The Bidder shall submit a Bid Securing Declaration or any form of Bid Security in the amount indicated in the BDS, which shall be not less than the percentage of the ABC in accordance with the schedule in the **BDS**.

15.2. The Bid and bid security shall be valid until **120 calendar days** from the date of opening of bids. Any Bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

## 16. Sealing and Marking Bids

*Each Bidder shall submit one copy of the first and second components of its Bid.*

The Procuring Entity may request additional hard copies and/or electronic copies of the Bid. However, failure of the Bidders to comply with the said request shall not be a ground for disqualification.

If the Procuring Entity allows the submission of bids through online submission to the given website or any other electronic means, the Bidder shall submit an electronic copy of its Bid, which must be digitally signed. An electronic copy that cannot be opened or is corrupted shall be considered non-responsive and, thus, automatically disqualified.

## **17. Deadline for Submission of Bids**

The Bidders shall submit on the specified date and time and either at its physical address or through online submission as indicated in paragraph 7 of the **IB**.

## **18. Opening and Preliminary Examination of Bids**

18.1. The BAC shall open the Bids in public at the time, on the date, and at the place specified in paragraph 9 of the **IB**. The Bidders' representatives who are present shall sign a register evidencing their attendance. In case videoconferencing, webcasting or other similar technologies will be used, attendance of participants shall likewise be recorded by the BAC Secretariat.

In case the Bids cannot be opened as scheduled due to justifiable reasons, the rescheduling requirements under Section 29 of the 2016 revised IRR of RA No. 9184 shall prevail.

18.2. The preliminary examination of Bids shall be governed by Section 30 of the 2016 revised IRR of RA No. 9184.

## **19. Detailed Evaluation and Comparison of Bids**

19.1. The Procuring Entity's BAC shall immediately conduct a detailed evaluation of all Bids rated "*passed*" using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of 2016 revised IRR of RA No. 9184.

19.2. If the Project allows partial bids, all Bids and combinations of Bids as indicated in the **BDS** shall be received by the same deadline and opened and evaluated simultaneously so as to determine the Bid or combination of Bids offering the lowest calculated cost to the Procuring Entity. Bid Security as required by **ITB** Clause 16 shall be submitted for each contract (lot) separately.

19.3. In all cases, the NFCC computation pursuant to Section 23.4.2.6 of the 2016 revised IRR of RA No. 9184 must be sufficient for the total of the ABCs for all the lots participated in by the prospective Bidder.

## **20. Post-Qualification**

Within a non-extendible period of five (5) calendar days from receipt by the Bidder of the notice from the BAC that it submitted the Lowest Calculated Bid, the Bidder shall submit its latest income and business tax returns filed and paid through the BIR Electronic Filing and Payment System (eFPS), and other appropriate licenses and permits required by law and stated in the **BDS**.

## **21. Signing of the Contract**

The documents required in Section 37.2 of the 2016 revised IRR of RA No. 9184 shall form part of the Contract. Additional Contract documents are indicated in the **BDS**.

## *Section III. Bid Data Sheet*

ITB Clause																																																																
5.2	For this purpose, contracts similar to the Project refer to contracts which have the same major categories of work, which shall be: <b>REPAIR / IMPROVEMENT / CONSTRUCTION OF BUILDING</b>																																																															
7.1	<i>Subcontracting is not allowed.</i>																																																															
10.3	<i>[Specify if another Contractor license or permit is required.]</i>																																																															
10.4	<p>The key personnel must meet the required minimum years of experience set below:</p> <table><tr><th colspan="3">LOT 1 - IMPROVEMENT OF RRCY VISITORS LOUNGE' GROUND AND FACILITIES</th></tr><tr><th>POSITION</th><th>MIN. EXPERIENCE (NO. OF YEARS)</th><th>DOCUMENT REQUIRED</th></tr><tr><td>Project Manager</td><td>10 years</td><td>As stated in this ITB</td></tr><tr><td>Project/Site Engineer</td><td>5 years</td><td>As stated in this ITB</td></tr><tr><td>Materials Engineer</td><td>5 years</td><td>As stated in this ITB</td></tr><tr><td>Safety Officer</td><td>5 years</td><td>As stated in this ITB</td></tr><tr><td>Foreman</td><td>10 years</td><td>As stated in this ITB</td></tr><tr><th colspan="3">LOT 2 - REPAIR AND IMPROVEMENT OF RRCY COVERED COURT</th></tr><tr><th>POSITION</th><th>MIN. EXPERIENCE (NO. OF YEARS)</th><th>DOCUMENT REQUIRED</th></tr><tr><td>Project Manager</td><td>10 years</td><td>As stated in this ITB</td></tr><tr><td>Project/Site Engineer</td><td>5 years</td><td>As stated in this ITB</td></tr><tr><td>Materials Engineer</td><td>5 years</td><td>As stated in this ITB</td></tr><tr><td>Safety Officer</td><td>5 years</td><td>As stated in this ITB</td></tr><tr><td>Foreman</td><td>10 years</td><td>As stated in this ITB</td></tr><tr><th colspan="3">LOT 3 – REPAIR AND IMPROVEMENT OF RRCY SCHOOL BUILDING AND TRAINING CENTER</th></tr><tr><th>POSITION</th><th>EXPERIENCE (NO. OF YEARS)</th><th>DOCUMENT REQUIRED</th></tr><tr><td>Project Manager</td><td>10 years</td><td>As stated in this ITB</td></tr><tr><td>Project/Site Engineer</td><td>5 years</td><td>As stated in this ITB</td></tr><tr><td>Materials Engineer</td><td>5 years</td><td>As stated in this ITB</td></tr><tr><td>Safety Officer</td><td>5 years</td><td>As stated in this ITB</td></tr><tr><td>Foreman</td><td>10 years</td><td>As stated in this ITB</td></tr></table>	LOT 1 - IMPROVEMENT OF RRCY VISITORS LOUNGE' GROUND AND FACILITIES			POSITION	MIN. EXPERIENCE (NO. OF YEARS)	DOCUMENT REQUIRED	Project Manager	10 years	As stated in this ITB	Project/Site Engineer	5 years	As stated in this ITB	Materials Engineer	5 years	As stated in this ITB	Safety Officer	5 years	As stated in this ITB	Foreman	10 years	As stated in this ITB	LOT 2 - REPAIR AND IMPROVEMENT OF RRCY COVERED COURT			POSITION	MIN. EXPERIENCE (NO. OF YEARS)	DOCUMENT REQUIRED	Project Manager	10 years	As stated in this ITB	Project/Site Engineer	5 years	As stated in this ITB	Materials Engineer	5 years	As stated in this ITB	Safety Officer	5 years	As stated in this ITB	Foreman	10 years	As stated in this ITB	LOT 3 – REPAIR AND IMPROVEMENT OF RRCY SCHOOL BUILDING AND TRAINING CENTER			POSITION	EXPERIENCE (NO. OF YEARS)	DOCUMENT REQUIRED	Project Manager	10 years	As stated in this ITB	Project/Site Engineer	5 years	As stated in this ITB	Materials Engineer	5 years	As stated in this ITB	Safety Officer	5 years	As stated in this ITB	Foreman	10 years	As stated in this ITB
LOT 1 - IMPROVEMENT OF RRCY VISITORS LOUNGE' GROUND AND FACILITIES																																																																
POSITION	MIN. EXPERIENCE (NO. OF YEARS)	DOCUMENT REQUIRED																																																														
Project Manager	10 years	As stated in this ITB																																																														
Project/Site Engineer	5 years	As stated in this ITB																																																														
Materials Engineer	5 years	As stated in this ITB																																																														
Safety Officer	5 years	As stated in this ITB																																																														
Foreman	10 years	As stated in this ITB																																																														
LOT 2 - REPAIR AND IMPROVEMENT OF RRCY COVERED COURT																																																																
POSITION	MIN. EXPERIENCE (NO. OF YEARS)	DOCUMENT REQUIRED																																																														
Project Manager	10 years	As stated in this ITB																																																														
Project/Site Engineer	5 years	As stated in this ITB																																																														
Materials Engineer	5 years	As stated in this ITB																																																														
Safety Officer	5 years	As stated in this ITB																																																														
Foreman	10 years	As stated in this ITB																																																														
LOT 3 – REPAIR AND IMPROVEMENT OF RRCY SCHOOL BUILDING AND TRAINING CENTER																																																																
POSITION	EXPERIENCE (NO. OF YEARS)	DOCUMENT REQUIRED																																																														
Project Manager	10 years	As stated in this ITB																																																														
Project/Site Engineer	5 years	As stated in this ITB																																																														
Materials Engineer	5 years	As stated in this ITB																																																														
Safety Officer	5 years	As stated in this ITB																																																														
Foreman	10 years	As stated in this ITB																																																														

10.5	<p>The minimum major equipment requirements are the following:</p> <table><tr><th colspan="3">LOT 1 - IMPROVEMENT OF RRCY VISITORS LOUNGE' GROUND AND FACILITIES</th></tr><tr><th>EQUIPMENT</th><th>MIN. CAPACITY</th><th>NO. OF UNIT</th></tr><tr><td>Backhoe</td><td>0.8 cu.m.</td><td>1</td></tr><tr><td>Tamping Rammer/Plate Compactor</td><td>5hp</td><td>1</td></tr><tr><td>Bagger Mixer</td><td>1 bagger</td><td>1</td></tr><tr><td>Concrete Vibrator</td><td>n/a</td><td>1</td></tr><tr><td>Cargo Truck/Boom Truck</td><td>2 T</td><td>1</td></tr><tr><td>Welding Machine</td><td>n/a</td><td>1</td></tr><tr><th colspan="3">LOT 2 - REPAIR AND IMPROVEMENT OF RRCY COVERED COURT</th></tr><tr><th>EQUIPMENT</th><th>MIN. CAPACITY</th><th>NO. OF UNIT</th></tr><tr><td>Cargo Truck/Boom Truck</td><td>2 T</td><td>1</td></tr><tr><td>Welding Machine</td><td>n/a</td><td>1</td></tr><tr><th colspan="3">LOT 3 – REPAIR AND IMPROVEMENT OF RRCY SCHOOL BUILDING AND TRAINING CENTER</th></tr><tr><th>EQUIPMENT</th><th>MIN. CAPACITY</th><th>NO. OF UNIT</th></tr><tr><td>None</td><td>n/a</td><td>n/a</td></tr></table>	LOT 1 - IMPROVEMENT OF RRCY VISITORS LOUNGE' GROUND AND FACILITIES			EQUIPMENT	MIN. CAPACITY	NO. OF UNIT	Backhoe	0.8 cu.m.	1	Tamping Rammer/Plate Compactor	5hp	1	Bagger Mixer	1 bagger	1	Concrete Vibrator	n/a	1	Cargo Truck/Boom Truck	2 T	1	Welding Machine	n/a	1	LOT 2 - REPAIR AND IMPROVEMENT OF RRCY COVERED COURT			EQUIPMENT	MIN. CAPACITY	NO. OF UNIT	Cargo Truck/Boom Truck	2 T	1	Welding Machine	n/a	1	LOT 3 – REPAIR AND IMPROVEMENT OF RRCY SCHOOL BUILDING AND TRAINING CENTER			EQUIPMENT	MIN. CAPACITY	NO. OF UNIT	None	n/a	n/a
LOT 1 - IMPROVEMENT OF RRCY VISITORS LOUNGE' GROUND AND FACILITIES																																														
EQUIPMENT	MIN. CAPACITY	NO. OF UNIT																																												
Backhoe	0.8 cu.m.	1																																												
Tamping Rammer/Plate Compactor	5hp	1																																												
Bagger Mixer	1 bagger	1																																												
Concrete Vibrator	n/a	1																																												
Cargo Truck/Boom Truck	2 T	1																																												
Welding Machine	n/a	1																																												
LOT 2 - REPAIR AND IMPROVEMENT OF RRCY COVERED COURT																																														
EQUIPMENT	MIN. CAPACITY	NO. OF UNIT																																												
Cargo Truck/Boom Truck	2 T	1																																												
Welding Machine	n/a	1																																												
LOT 3 – REPAIR AND IMPROVEMENT OF RRCY SCHOOL BUILDING AND TRAINING CENTER																																														
EQUIPMENT	MIN. CAPACITY	NO. OF UNIT																																												
None	n/a	n/a																																												
12	No further instructions																																													
15	Each Bidder shall submit <b>ONLY</b> one (1) original copy of the first and second components of its bid.																																													
15.1	<p>The bid security shall be in the form of a Bid Securing Declaration, or any of the following forms and amounts:</p> <p>a. The amount of not less than <i>two percent (2%) of ABC</i>, if bid security is in cash, cashier’s/manager’s check, bank draft / guarantee or irrevocable letter of credit; or</p> <p>b. The amount of not less than <i>five percent (5%) of ABC</i>, if bid security is in Surety Bond. Details as follows:</p> <table><tr><th>Lot No.</th><th>2% of the ABC</th><th>5% of the ABC</th></tr><tr><td>1</td><td>Php 28,350.00</td><td>Php 70,875.00</td></tr><tr><td>2</td><td>Php 14,464.00</td><td>Php 36,160.00</td></tr><tr><td>3</td><td>Php 17,232.00</td><td>Php 43,080.00</td></tr></table>	Lot No.	2% of the ABC	5% of the ABC	1	Php 28,350.00	Php 70,875.00	2	Php 14,464.00	Php 36,160.00	3	Php 17,232.00	Php 43,080.00																																	
Lot No.	2% of the ABC	5% of the ABC																																												
1	Php 28,350.00	Php 70,875.00																																												
2	Php 14,464.00	Php 36,160.00																																												
3	Php 17,232.00	Php 43,080.00																																												
19.2	Partial bid is not allowed.																																													
20	Certificate of good standing and compliance with statutory obligations from SEC/DTI, PAGIBIG, PHILHEALTH, and SSS																																													

21	<p>Additional contract documents relevant to the Project that may be required by existing laws and/or the Procuring Entity, such as <b><i>construction schedule and S-curve, manpower schedule, construction methods, equipment utilization schedule, construction safety and health program signed by the contractor, Certificate of Site Inspection</i></b> and other acceptable tools of project scheduling.</p> <p><b><i>Construction safety and health program approved by the DOLE shall be submitted by the declared lowest calculated and responsive bidder within the project implementation.</i></b></p>
21.2	<ol style="list-style-type: none"> <li>1. Latest Income and Business Tax Returns, filed and paid through Electronic Filing and Payments System (EFPS), consisting of the following: <ol style="list-style-type: none"> <li>a. Income Tax Return with proof of payment, and</li> <li>b. VAT Returns (Form 2550Q) with proof of payment covering the period.</li> </ol> </li> </ol>

# ***Section IV. General Conditions of Contract***

## **1. Scope of Contract**

This Contract shall include all such items, although not specifically mentioned, that can be reasonably inferred as being required for its completion as if such items were expressly mentioned herein. All the provisions of RA No. 9184 and its 2016 revised IRR, including the Generic Procurement Manual, and associated issuances, constitute the primary source for the terms and conditions of the Contract, and thus, applicable in contract implementation. Herein clauses shall serve as the secondary source for the terms and conditions of the Contract.

This is without prejudice to Sections 74.1 and 74.2 of the 2016 revised IRR of RA No. 9184 allowing the GPPB to amend the IRR, which shall be applied to all procurement activities, the advertisement, posting, or invitation of which were issued after the effectivity of the said amendment.

## **2. Sectional Completion of Works**

If sectional completion is specified in the **Special Conditions of Contract (SCC)**, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date shall apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).

## **3. Possession of Site**

3.1 The Procuring Entity shall give possession of all or parts of the Site to the Contractor based on the schedule of delivery indicated in the **SCC**, which corresponds to the execution of the Works. If the Contractor suffers delay or incurs cost from failure on the part of the Procuring Entity to give possession in accordance with the terms of this clause, the Procuring Entity's Representative shall give the Contractor a Contract Time Extension and certify such sum as fair to cover the cost incurred, which sum shall be paid by Procuring Entity.

3.2 If possession of a portion is not given by the above date, the Procuring Entity will be deemed to have delayed the start of the relevant activities. The resulting adjustments in contract time to address such delay may be addressed through contract extension provided under Annex "E" of the 2016 revised IRR of RA No. 9184.

## **4. Contractor's Obligation**

The Contractor shall employ the key personnel named in the Schedule of Key Personnel indicating their designation, in accordance with **ITB** Clause 10.3 and specified in the **BDS**, to carry out the supervision of the Works.

The Procuring Entity will approve any proposed replacement of key personnel only if their relevant qualifications and abilities are equal to or better than those of the personnel listed in the Schedule.

## **5. Performance Security**

5.1. Within ten (10) calendar days from receipt of the Notice of Award from the Procuring Entity but in no case later than the signing of the contract by both parties, the successful Bidder shall furnish the performance security in any of the forms prescribed in Section 39 of the 2016 revised IRR.

5.2. The Contractor, by entering into the Contract with the Procuring Entity, acknowledges the right of the Procuring Entity to institute action pursuant to RA No. 3688 against any subcontractor be they an individual, firm, partnership, corporation, or association supplying the Contractor with labor, materials and/or equipment for the performance of this Contract.

## **6. Site Investigation Reports**

The Contractor, in preparing the Bid, shall rely on any Site Investigation Reports referred to in the SCC supplemented by any information obtained by the Contractor.

## **7. Warranty**

7.1. In case the Contractor fails to undertake the repair works under Section 62.2.2 of the 2016 revised IRR, the Procuring Entity shall forfeit its performance security, subject its property(ies) to attachment or garnishment proceedings, and perpetually disqualify it from participating in any public bidding. All payables of the GOP in his favor shall be offset to recover the costs.

7.2. The warranty against Structural Defects/Failures, except that occasioned-on force majeure, shall cover the period from the date of issuance of the Certificate of Final Acceptance by the Procuring Entity. Specific duration of the warranty is found in the SCC.

## **8. Liability of the Contractor**

Subject to additional provisions, if any, set forth in the SCC, the Contractor's liability under this Contract shall be as provided by the laws of the Republic of the Philippines.

If the Contractor is a joint venture, all partners to the joint venture shall be jointly and severally liable to the Procuring Entity.

## **9. Termination for Other Causes**

Contract termination shall be initiated in case it is determined *prima facie* by the Procuring Entity that the Contractor has engaged, before, or during the implementation of the contract, in unlawful deeds and behaviors relative to contract acquisition and implementation, such as, but not limited to corrupt, fraudulent, collusive, coercive, and obstructive practices as stated in **ITB** Clause 4.

## **10. Dayworks**

Subject to the guidelines on Variation Order in Annex “E” of the 2016 revised IRR of RA No. 9184, and if applicable as indicated in the **SCC**, the Dayworks rates in the Contractor’s Bid shall be used for small additional amounts of work only when the Procuring Entity’s Representative has given written instructions in advance for additional work to be paid for in that way.

## **11. Program of Work**

11.1. The Contractor shall submit to the Procuring Entity’s Representative for approval the said Program of Work showing the general methods, arrangements, order, and timing for all the activities in the Works. The submissions of the Program of Work are indicated in the **SCC**.

11.2. The Contractor shall submit to the Procuring Entity’s Representative for approval an updated Program of Work at intervals no longer than the period stated in the **SCC**. If the Contractor does not submit an updated Program of Work within this period, the Procuring Entity’s Representative may withhold the amount stated in the **SCC** from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program of Work has been submitted.

## **12. Instructions, Inspections and Audits**

The Contractor shall permit the GOP or the Procuring Entity to inspect the Contractor’s accounts and records relating to the performance of the Contractor and to have them audited by auditors of the GOP or the Procuring Entity, as may be required.

## **13. Advance Payment**

The Procuring Entity shall, upon a written request of the Contractor which shall be submitted as a Contract document, make an advance payment to the Contractor in an amount not exceeding fifteen percent (15%) of the total contract price, to be made in lump sum, or at the most two installments according to a schedule specified in the **SCC**, subject to the requirements in Annex “E” of the 2016 revised IRR of RA No. 9184.

## **14. Progress Payments**

The Contractor may submit a request for payment for Work accomplished. Such requests for payment shall be verified and certified by the Procuring Entity's Representative/Project Engineer. Except as otherwise stipulated in the **SCC**, materials and equipment delivered on the site but not completely put in place shall not be included for payment.

## **15. Operating and Maintenance Manuals**

15.1. If required, the Contractor will provide "as built" Drawings and/or operating and maintenance manuals as specified in the **SCC**.

15.2. If the Contractor does not provide the Drawings and/or manuals by the dates stated above, or they do not receive the Procuring Entity's Representative's approval, the Procuring Entity's Representative may withhold the amount stated in the **SCC** from payments due to the Contractor.

## *Section V. Special Conditions of Contract*

<b>GCC Clause</b>	
2	No further instructions.
4.1	The <b>Procuring Entity</b> shall give possession of all parts of the Site to the Contractor <i>immediately after issuance of Notice to Proceed</i> .
6	The site investigation reports are: <i>[list here the required site investigation reports.]</i>
7.2	<p><i>[In case of permanent structures, such as buildings of types 4 and 5 as classified under the National Building Code of the Philippines and other structures made of steel, iron, or concrete which comply with relevant structural codes (e.g., DPWH Standard Specifications), such as, but not limited to, steel/concrete bridges, flyovers, aircraft movement areas, ports, dams, tunnels, filtration and treatment plants, sewerage systems, power plants, transmission and communication towers, railway system, and other similar permanent structures:]</i> Fifteen (15) years.</p> <p><i>[In case of semi-permanent structures, such as buildings of types 1, 2, and 3 as classified under the National Building Code of the Philippines, concrete/asphalt roads, concrete river control, drainage, irrigation lined canals, river landing, deep wells, rock causeway, pedestrian overpass, and other similar semi-permanent structures:]</i> Five (5) years.</p> <p><i>[In case of other structures, such as bailey and wooden bridges, shallow wells, spring developments, and other similar structures:]</i> Two (2) years.</p>
10	No day works are applicable to the contract.
11.1	The Contractor shall submit the Program of Work to the Procuring Entity's Representative within <i>five (5) days</i> of delivery of the Notice of Award.
11.2	The amount to be withheld for late submission of an updated Program of Work is <i>[insert amount]</i> .
13	The amount of the advance payment <i>shall not exceed 15% of the total contract price and schedule of payment</i> .
14	Materials and equipment delivered on the site but not completely put in place shall be included for payment.
15.1	<p>The date by which operating and maintenance manuals are required is <i>[date]</i>.</p> <p>The date by which "as built" drawings are required is <i>[date]</i>.</p>
15.2	The amount to be withheld for failing to produce "as built" drawings and/or operating and maintenance manuals by the date required is <i>[amount in local currency]</i> .

# ***Section VI. Specifications***

## **Lot 1 - Improvement of RRCY Visitors Lounge' Ground and Facilities**

### **GENERAL REQUIREMENTS**

#### **RELATED SECTIONS**

All applicable provisions of the different divisions of the Specifications for each work trade shall apply for all items cited in this Summary.

#### **INFERRED ITEMS AND WORK**

Materials and workmanship deemed necessary to complete the works but NOT specifically mentioned in the Specifications, Working Drawings, or in the other Contract Documents, shall be supplied and installed by the Contractor without extra cost to the Owner. Such materials shall be of the highest quality available, and installed or applied in a workmanlike manner at prescribed or appropriate locations.

#### **SPECIFICS**

Materials specifically mentioned in this Summary shall be installed following efficient and sound engineering and construction practice, and especially as per manufacturer's application for installation specifications which shall govern all works alluded to in these Specifications.

#### **ON-SITE ITEMS**

Materials and finishes for on-site improvements and facilities as listed below are part of the scope of work and shall be supplied and installed by the Contractor without extra cost to the Owner.

- A. Construction of:
  - 1. Walks, ramps, steps, posts, perimeter fence and miscellaneous slabs;
  - 2. Concrete catch basins, drainage pipes;
  - 3. Temporary facilities and below grade structures such as septic vaults, cisterns, manholes, open canals, check drains and trenches;
- B. Exterior utility lines, raceway system, fixtures, breakers, switches, buzzers, controls including fittings and accessories as required by the specialty trades under plumbing, mechanical and electrical works.

#### **OFF-SITE ITEMS**

Off-site improvements shall generally be under the responsibility of the Owner and not included in the Contract, with the exception of the following which shall be part of the Contractor's Work:

- A. Construction of drainage lines. This work shall neatly connect to the storm drainage system along the road.
- B. Permanent connections to the local utility lines for electrical, water, drainage, sewer and telephone lines including equipment, facilities, materials, fees, and/or work which utility companies or authorities may require of the applicant Owner, such as electrical transformers, etc.

## **WATER & ELECTRICITY CONNECTION**

**Temporary Water:** The Contractor shall supply in sufficient quantity all necessary potable and other water for construction purposes for all trades at a point within a reasonable distance of the building being constructed. The Contractor shall make arrangements and pay charges for water service installation, maintenance, and removal thereof, and pay the costs of water for all trades.

**B. Temporary Electricity:** The Contractor shall make all necessary arrangements for a temporary electrical service, pay all expenses in connection with the installation, operation and removal thereof, and pay the costs of electricity consumed by all trades.

## **OWNER SUPPLIED ITEMS**

Owner supplied finishing accessories, furnishing and fixtures such as wall clocks, picture frames, fixed furniture etc., shall be installed by the Contractor at no cost to the Owner.

## **QUALITY CONTROL**

The Contractor shall be responsible for the quality control of all materials during the handling, blending, and mixing and placement operations. The Contractor shall furnish the Engineer a Quality Control Plan detailing his production control procedures and the type and frequency of sampling and testing to ensure that the materials and work produces complies with the Specifications. The Engineer shall be provided free access to recent plant production records, and if requested, informational copies of mix design, materials certifications and sampling and testing reports.

The Contractor shall perform all sampling, testing and inspection necessary to assure quality control of the component materials.

## **PERMITS AND CLEARANCES**

The Contractor shall facilitate the compliance of Building Permit, Occupancy Permit, Fencing Permit, Drainage Permit and other clearances before and after the completion of the project.

## **PROJECT BILLBOARD/SIGNBOARD**

Project Signage/COA signages shall be installed near the construction site or before the entrance gate and must be visible for the visitors. Signage must be printed in tarpaulin with wooden frame and plywood backing.

Signage sizes: Project Signage = 4ft. x 8ft.  
COA Signage = 8ft. x 8ft.

## **OCUPATIONAL SAFETY AND HEALTH**

Before the start of work, the contractor shall submit Health and Safety Plan with operational detail of his proposals to the engineer for his approval. The contractor must secure Construction Safety Certificate from DOLE and must implement safety measures during construction stage. The contractor shall provide safety signages within the construction vicinity.

## **MOBILIZATION & DEMOBILIZATION**

All equipment and materials delivered in the area must be functional and for project use only. No storing of materials and equipment in the area that is not intended for the specific project. Stored materials must be arranged in a proper manner and must have barricades and rain/water protection. After project completion, all materials and equipment must be removed in the area.

## **TEMPORARY FENCE**

The whole area affected for the project shall be fenced temporarily with necessary gates as directed by the Engineer. The site must be closed enough and must not be visible for the clients living in the center.

## **EARTHWORK**

### **STRUCTURE EXCAVATION**

All excavation for foundation, catch basins and piping shall be made to grades indicated in the drawings; where excavation will rest on fill, excavation shall be carried deeper until the desired stratum is reached for safe bearing capacity of the soil.

Where rock occurs and footings and walls are indicated to the rest on the same, the rock shall be leveled to a clean and even surface. Whenever water is encountered in the excavation process, it shall be removed by pumping, care being taken that the surrounding particles are not disturbed or removed.

### **EXCAVATION SUPPORT SYSTEM**

Types of shoring and bracing systems include, but are not limited to, the following:

1. Timber Lagging
2. Steel Scaffolds

Provide sufficient shoring and soil retention protection options to prevent displacement and damage to existing adjacent structures, and cave-ins.

### **EMBANKMENT, FILL AND BACKFILL**

Coarse-grained fill materials, such as stone fragments, sand and gravel mix, fine sand, silty or clayey sand and gravel, shall be laboratory approved from off-site source, passing a 75 mm (3") sieve. The fraction passing a 0.425 mm (no. 40) sieve shall have a liquid limit not to exceed 35% and plasticity index not exceeding 12%. Only coarse-grained fill materials shall be used inside buildings and under walkways.

Excavated material approved for use as backfill shall be free of stones larger than 2 inches in longest dimension, roots and organic materials.

Batter boards: Second class, pest free lumber assembled and rendered secure for proper delineation of building lines and grades.

The Contractor shall compact the material placed in all embankment layers and the material scarified to the designated depth below subgrade in cut sections, until a uniform density of not less than 95 mass percent of the maximum dry density is attained. At least one group of three in-situ density tests shall be carried out for each 500 m of each layer of compacted fill. The layer shall be placed not exceeding 200 mm in loose measurement or based on the result of compacted trials.

### **GRAVEL FILL**

All gavel laying shall be properly laid and properly compacted based on the plan specified.

## SOFTSCAPE (GRASS)

This item shall include placing of frog grass or Bermuda grass. This grass shall be delivered healthy and vigorous in growth and free from disease. Garden soil shall be free from termites and alien materials. Watering and maintenance of this grass shall be within 6 months after completion and acceptance.

## PAVER BLOCKS

The work included under this section comprises the furnishing of all materials, labor, equipment, and performance of all operations necessary to complete the installation of paver blocks as shown in the drawings, or as specified herein. All paver blocks must be laid on sand.

## PLAIN AND REINFORCED CONCRETE

### STRUCTURAL CONCRETE

**CEMENT** – Use “CLASS A” PORTLAND CEMENT Type 1 or approved equivalent.

### CONCRETE AGGREGATES

1. **Gravel:** Well graded, clean, hard particles of gravel or crushed rock conforming to the “STANDARD SPECIFICATIONS FOR CONCRETE AGGREGATES” (ASTM Designated C-33 latest revision). Use 25 mm (1”) maximum for slabs and 19 mm (3/4”) for columns and beams and retaining walls.
2. **Sand:** ASTM C 35 – 67, clean, washed river sand, strong, free from organic and other deleterious materials. Sand from salt water or lahar is not allowed.
3. Maximum size of aggregates shall not be larger than 1/5 of the narrowest dimension between sides of the forms, not larger than 3/5 of the maximum clear spacing between reinforcing bars, and in no case larger than 33 mm (1-1/3”) in diameter.

**WATER** - Use only water that is clean and free from injurious amounts of oils, acids, alkali, organic materials or other deleterious substances. Potable/ fit for human consumption.

### CONCRETE MIXES

1. Concrete compressive strength (f'c) requirements:

<b><i>I. Specified Compressive Strength</i></b>			
Class/Type	28 days		Item
	psi	mPa	
A	3000	28	For footings, columns, beams, lintels beam and stiffener columns, slab on grade and for all reinforced work not otherwise indicated or specified
B	1,500	10.34	For all concrete without reinforcement like lean concrete

2. Slump requirements:

Structural Element	Slump for vibrated concrete	
	Minimum	Maximum
Slab on grade, stair landing and tread	75 mm	125 mm
Other components	50 mm	100 mm

## CONCRETE ADDITIVES

1. Use "CLASS A" in the amounts as recommended by the manufacturer, with the approval of the Engineer.
2. **Plasticizer** – Use "CLASS A"
3. **Air-entraining admixtures** – Use "CLASS A" or approved equal to improve workability or durability of concrete mixes.
4. **Accelerators** – Use "CLASS A" or approved equal.
5. **Water Reducing Retarders** – Use "CLASS A" or approved equal.
6. **Integral Waterproofing Compound** – Use "CLASS A" or approved equal for roof slabs, balcony, concrete gutters, cisterns and media aguas. Refer to Manufacturer's manual/instruction for proper application.
7. **Calcium chloride** is not allowed. Secure approval of the Engineer prior to using of any other additive.

**NOTE: PLACEMENT DRAWINGS:** Shop drawings of each reinforcing steel detail and placement drawings shall be submitted for approval in accordance with the requirements of the General Conditions. Any material fabricated before final approval of the shop drawings will be done at Contractor's risk, but no material shall be placed until shop drawings have final approval. Shop drawings shall be in accordance with the "Manual of Standard Practice for Detailing Reinforced Concrete Structures" (ACI 315).

## REINFORCING STEEL (DEFORMED BARS)

**Steel Bars** – Use structural grade ASTM A615 Grade 40 for deformed bars 12mmØ and below. For 16mmØ and above, use structural grade ASTM 615 Grade 60. Deformed bars shall be new and free from rust, oil, grease, defects or kinks. Upgrade to next bigger size if specified standard sizes are unavailable.

Use Ga.16 Galvanized Iron (G.I.) tie wires at joints or laps of placed reinforcements.

**Steel reinforcement** shall be stored above the surface of the ground upon platforms, skids, or other supports and shall be protected as far as practicable from mechanical injury and surface deterioration caused by exposure to conditions producing rust. Distance from the forms shall be maintained by means of stays, blocks, ties, hangers, or other approved supports, so that it does not vary from the position indicated on the Plans. Reinforcement in any member shall be placed and then inspected and approved by the Engineer before the placing of concrete begins. Concrete placed in violation of this provision may be rejected and removal may be required.

**Splices:** Splices shall be staggered as far as possible and with a minimum separation of not less than 40 bar diameters. Lapped splices will not be permitted at locations where the concrete section is insufficient to provide minimum clear distance of one and one-third the maximum size of coarse aggregate between the splice and the nearest adjacent bar.

## FORMWORKS AND FALSEWORKS

1. Use Phenolic forms, plywood, metal or surfaced lumber forms, free from warp and gross deformities, sufficiently braced with solid lumber and applied with form release agent as its casting surface before each casting, where it will best give the most advantage in the specific concrete work involved.
2. For exposed reinforced concrete such as exposed beams and columns, use Phenolic forms or approved equivalent.
3. Provide 40mm-wide chamfers for all exposed corners of columns.
4. Do not use Coco lumber for formwork.
5. Use only good lumber or metal sections for forms.

## CIVIL / FINISHING WORKS

### WELDED STEEL WORKS

Welding shall be performed by the metal-arc process, using the electrodes specified with either direct or alternating current. Conform all materials and workmanship to the requirements of the American Institute of Steel Construction "Specifications for Design, Fabrication and Erection of Structural Steel for Buildings" as amended to date or as may be specifically modified by the drawings or by these Specifications. Welding of Structural Steel shall be done only when shown on the Plans or authorized in writing by the Engineer.

Surfaces to be welded shall be smooth, uniform and free from fins, tears, and other defects which would adversely affect the quality of the weld. Edges of material shall be trimmed by machining, chipping, grinding, or machine gas-cutting to produce a satisfactory welding edge wherever such edge is thicker than: 13 mm for sheared edge of material; 16 mm for toes of angles or rolled shapes (other than wide flange sections); 25 mm for universal mill plate or edges of flange sections.

No operation or actual welding or gas-cutting shall be performed on a member while it is carrying live load stress or while subject to shock and vibration and from moving loads. Welding and gas-cutting shall cease in advance of the application of such loads.

**Plates, Sheets, Flange and Connectors:** Conform to ASTM Designation A36 with specified yield point of 248 Mpa (36,000 psi). From mild steel sheets or plates with standard thickness, size, shape and design as indicated in the plans. For miscellaneous stiffener, bearing anchorage and connector plates or straps. Upgrade to next higher / bigger size and thickness if specified sizes & thicknesses are unavailable.

**Steel Pipes:** It shall conform to the requirements of ASTM A 53, ASTM A 120. AASHTO M 222 and ASTM A 618, as shown on the Plans or in the Special Provisions.

**Bolt Accessories:** Bolts, nuts circular washers shall conform to High-Strength Bolts for Structural Steel Joints, including Suitable Nuts and Plain Hardened Washer, AASHTO M 164 (ASTM A 325).

**Fastenings** - Commercial types, except where special types are shown or required. Fastenings for all exterior work shall be non-ferrous, unless otherwise shown. Fastening for stainless steel and aluminum and other interior work, where exposed shall match the fastened metal.

**Angle bars, Purlins and Rectangular Tube:** Conform to ASTM 611 with specified yield point of 228 Mpa (33,000 psi). Mild steel angles, flat bars, square bars, channels, U and other sections. For purlins, building eaves framing, grill works, miscellaneous fabricated mounting brackets, straps, dowels, frames and connectors. Refer to trusses and purlins schedule for thickness, size, shape and design. Refer to Sun-baffle schedule for rectangular tubing. Upgrade to next higher / bigger size and thickness if specified sizes & thicknesses are unavailable.

**Welding Electrodes:** Conform welding electrodes to ASTM Specification A233 and AWS Specification A5.1 and A5.5 E60 series for manual shielded metal arc welding and E-70 series for structural welding.

**Painting:** Use only approved brand of epoxy zinc chromate paint and linseed oil for all base coat painting for structural steel. For finish painting, use enamel paint or approved equal.

**Metal Hangers** - Use 12mm dia. Threaded rod or approved equal.

**Brass Iron** – 2" Ø pipe for ramps and stairs.

## SOIL POISONING

This section includes pouring of soil poisoning to earth laid with structure. No materials must be installed directly to the soil without the application of liquid soil poisoning. All materials whether specifically mentioned or not, but necessary to complete this item of work shall be furnished and installed in the best workmanship practice.

## CATCH BASIN, STORM DRAIN, DOWNSPOUT & CISTERN

**Downspouts:** shall be polyvinyl chloride (PVC) pipe series 1000 II, Use “CLASS A” with the same brand/type of materials.

**Fittings** shall be solvent cement joint conforming to ASTM D2564. Fittings shall be of the same brand with the pipes used or connected to.

**Storm Drain/Strainer:** Use stainless steel leaf Strainers. Submit sample for Engineer’s approval.

**Joint Mortar:** Joint mortar shall be composed of one part Portland Cement and two parts fine aggregate by volume to which hydrated lime has been added in an amount equal to 10 percent of the cement by weight. All materials for mortar shall meet the requirements of Item 405, Structural Concrete.

## SEPTIC VAULT

### BLACK P.E.

1. Use Black Recycled PE Vertical Purifying Septic Tank, 1000 liters capacity. The tank must be embedded below the ground and must have reinforced concrete top slab as protection for the tank cover.
2. Pipes including fittings shall be Polyvinyl Chloride (PVC) Pipes, series 1000 Class A, 102mm dia. free from defects.

## CONCRETE/CONCRETE HOLLOW BLOCK

1. **Pipes** including fittings shall be Polyvinyl Chloride (PVC) Pipes, series 1000 Class A, 102mm dia. free from defects.
2. **Portland Cement:** Use Use “CLASS A” or approved equivalent.
3. **Sand:** ASTM C 35 – 67, clean, washed river sand, strong, free from organic and other deleterious materials. Sand from salt water or lahar is not allowed.
4. Concrete Mortar compressive strength ( $f_c$ ) = 13.8 Mpa (2000 psi).
5. **Steel Bars** –Deformed bars shall be new and free from rust, oil, grease, defects or kinks. Upgrade to next bigger size if specified standard sizes are unavailable.
6. Use Ga.16 Galvanized Iron (G.I.) tie wires at joints or laps of placed reinforcements.
7. Use 6” thk Load Bearing Concrete Hollow Block Units of standard manufacture, machine vibrated with even texture and well-defined edges, conforming to PNS16 Type 1, Class A, with a minimum compressive strength of 4.82 Mpa (700 psi)

## PLUMBING WORKS AND FIXTURES

All plumbing works herein shall be executed according to the requirements of Philippine national plumbing code and the rules and regulations of the existing local codes and ordinances or laws governing the implementation of the plumbing works.

Refer to all electrical, structural and architectural plans and specifications and investigate all possible interference and conditions affecting the plumbing works.

It is not intended that the drawing shall show every pipe fitting, valve and appliances. Furnish and install, if necessary, all such item specially mentioned or not, or indicated on the drawing, to complete the system in accordance to the best practice of the plumbing trade and satisfaction of the engineer/owner.

Perform all labor in a first-class, neat, workmanlike manner by specialist skilled in their trades, and such specialist and their work shall be satisfactory to the engineer.

#### **BASIC MATERIALS:**

1. Provide materials that are new and that conform with the standard of Underwriters laboratories. Inc.
2. For other miscellaneous required materials not specifically mentioned, Provide the best of the respective kind.
3. Submit samples of materials for approval as required by the engineer/owner

#### **PLUMBING FIXTURES:**

1. Install all plumbing fixtures free and open in a manner to access for Cleaning. Furnish with brackets, cleats, plates, and anchors required to Support the fixtures rigidly in place.
2. Keep away, at a sufficient distance but not less 1/2" (12.5 mm.) All service Pipes, valves, and fittings from surfaces and locations which may require Finish coats or covering.
3. Extend the piping to all fixtures, outlets, and equipment from required Gate valves installed in each branch near risers.

#### **SOIL, WASTE, DRAIN, AND VENT PIPINGS:**

1. Install all piping works in conformity with all provisions of the latest Edition of the Philippine national plumbing code and applicable requirements of the existing local codes.
2. Excavate to require depths and grades. All excavations required for the Installations of plumbing and drainage system when rock is encountered, Extend the excavation to a depth 150 mm. Below the pipe bottom of the pipe and rock surface with sand and approved material.
3. Lay water supply pipes and sewers in separate trenches.

#### **TRAPS**

1. Except for the presence of grease trap interceptor and other devices Where the trap is an integral part of the design. Equipped with a trap every Fixture and equipment requiring connections to the drainage system.
2. Set each trap as close as possible to the fixture served and render level with respect to their water seal.

#### **PIPES AND FITTINGS**

1. All materials to be used must be of high quality.
2. Air chamber to be provided for all water line outlets. All necessary fitting Shall be provided.
3. Teflon tape for all waterline connections applied to male threads only.
4. Make all joints air and water tight. For jointing pipes, use the following:
  - a. PVC& CPVC pipes: use appropriate couplers and glue at joints.
  - b. PPR pipes; when connecting with other pipe fittings, do not use, if possible, Male pipe fittings with conic thread and hemp as a sealing material to avoid Buckling stresses which act on female pipe fitting.

## GUARANTEE AND WARRANTY

1. The contractor shall guarantee all materials supplied and the work to be Free from factory defects and workmanship for a period of one (1) year.
2. Any material found to be defective during the time of construction shall be replaced by the contractor free of charge.

## SHUT - OFFS:

Provide the entire system with valve so located that the system or portion of it can be operated, replaced, and repaired, as well as affording complete Control of water supply to each group of fixtures. When required, provide also pressure reducing valve.

## CLEAN OUTS

For clean outs stemming from pvc, provide with long sweep quarter bends or one or two eight bends, extended to an easily accessible place, and generally were indicated in the drawings

## OTHERS

1. Provide cleanouts every 15meters for horizontal piping of more than 15 meters Pipes shall be installed as indicated, any relocation required for proper Execution of other trades shall be prior approval of the engineer.
2. Proposed sanitary utilities shall conform to the actual location, depth, and Invert elevations.
3. All fixtures shall be vented, unless otherwise indicated.

Plumbing fixtures shall be of dense, durable, non-absorbent materials and must have smooth, impervious surfaces, free from unnecessary concealed fouling surfaces. All porcelain enamel surfaces on plumbing fixtures shall be acid resistant. No water supply system or potion thereof shall be covered or concealed until it has been first inspected, tested and approved. The piping system shall be air tested or water tested. The contractor shall notify the Engineer in-charge that said work is ready for inspection.

1. **Cold Water Lines:** Shall be Polypropylene Plastherm (PN-20) PPR Pipes and Fittings, Use CLASS A or approved equal conforming to ISO 4065 standard dimensions, using manufacturer specified method of installation and connection.
2. **Valves:** ASTM B-61 & 62, ASTM A 197, PRICE PFISTER (U.S.), KITZ or CRANE or approved equal. For gate valves and check valves, cast brass, sizes as required in the drawings. 150 psig working connection
3. **Hose Bibb:** Stainless steel faucet for all toilet cubicles and for garden hoses size 12mm male inlet and 12mm hose thread, and Use "CLASS A" lever type with bronze body as indicated in the plans.
4. **Floor Drains:** METMA, M-200-D, MAB or approved equal, 150mm x 150mm (6"x6"). Floor drains shall connect into a trap so constructed that it can be readily cleaned and of a size to serve efficiently the purpose for which it is intended.
5. **Water Closet-** shall be vitreous China, siphon vortex design, close coupled make, flush tank, elongated front and free from defects.
6. **Urinal-** shall be porcelain make, installed at not less than 600mm from the finish floor line to the top of the overflow rim. An approved type vacuum breaker shall protect every water supply to a urinal or other approved backflow prevention device.
7. **Lavatory-** shall be wall hung, ceramic, oval type and free from defects. It shall be rigidly supported by metal supporting members or chairs so that no bending or pullout strain is transmitted to the wall.
8. **Kitchen Sink and Laundry tray-** shall be stainless steel gauge 304 make, hairline finish.
9. **Water Meter-** shall be the same size as to the diameter of the supply pipe, Heavy Duty, brand new and free from defects.

## CEILING, FACIA BOARD & DOUBLE WALL

1. **Fiber Cement Board:** Use “CLASS A”, Install as per manufacturer’s instructions. 6mm thick for all suspended ceilings and walls. 12mm thk. For Facia board on metal frame. See drawing details.
2. **Suspended Ceiling System:** Use 25mm x 50mm x 0.6mm thk metal furring, 12mmØ suspension rod, suspension clips, eyelets, attached to 2” X 4” X 1.2mm thk. C-Purlins Framing. Submit sample and mock-up before installation.
3. Provide edgings, trims and moldings and others as indicated in the drawings.
4. **Hardware and FASTENERS:** Use metal nails, screws, bolts, plates, straps, miscellaneous fasteners or anchorage concealed or countersunk whenever called for, with size, shape and type to ensure a rigid connection for laminated items and at other framing joints.
5. **METAL STUDS:** Use “CLASS A”, 38mm x 100mm x 1.5mm thk. Metal studs spaced at 400mm on center, both ways.

## SPANDREL CEILING

**Pre-formed Metal Spandrel:** Use Pre-painted, Oven-baked Galvanized Metal Sheets, 0.4mm thk. for spandrel with pre-fabricated ventilation holes. Submit sample for Engineer’s approval.

## GRANITE SLAB COUNTERS

Use Quartz granite tiles for kitchen/lounge counters. Granite slabs shall be free from defects and in good quality. Granite Slabs shall be installed properly with approved consumables and other accessories. No Stone shall be incorporated into the work without the sample and approval of the end users/Engineers.

## CABINETRY WORKS

Laminated Marine boards shall be installed for cabinets and must have aT nominal thickness of 18mm with complete accessories. All cutting edges must have PVC lining. The following items are needed for the following

1. **Cabinets-** use ¾” Laminated marine plywood with PVC edging
2. **Hinges-** use heavy duty soft closing concealed hinges
3. **Handle** – use alum C-handle hafele CAT. NO. 12621902
4. **Pull out baskets** – use stainless steel 304 with runners

## DOORS (WOODEN)

**DOORS** must be solid panel, sound and thoroughly seasoned, warp free, treated with pressure impregnated “CLASS A” preservative or approved equal, smooth and level on one side or wherever in contact with paneling for nailers, and all wooden members hidden from viewer.

**Viewing Panel:** Should be 6mm thick tempered glass. Use Class A and install as per manufacturers instruction.

Use “CLASS A” for all door hardware (Schlage or Hafele or approved equivalent), and closet hardware except where indicated otherwise. Provide Master Key for the entire house, for all cylindrical locksets and deadbolt locking devices.

### **Jambs:**

Use 150mm x 50mm kiln-dried, treated S4S, sound, hard and free from lumber.  
Use one color or shade for assembly framing which are exposed. Provide with wood trim for all wooden doors.

**Hardware and Fasteners:** Use metal nails, screws, bolts, plates, straps, miscellaneous fasteners or anchorage concealed or countersunk whenever called for, with size, shape and type to ensure a rigid connection for laminated items and at other framing joints.

## **DOORS (STEEL)**

**Steel Door** must be 2.1m in height and 1m in width with panic door locks. Must be fire rated doors

## **WINDOWS, GLASS DOOR & GLASS WALL**

**Jalousie windows** shall be 6mm thk. tempered glass with heavy duty jalouplus frame. Refer to schedule of windows.

**Awning Windows** shall be 3/8" thk. Tempered glass on aluminum frame.

**Glass Wall** shall be 12mm thk. Tempered Glass on aluminum frame. This wall shall be fixed in full height from finished floor line to the concrete ceiling.

**Glass Door** shall be 12mm thk. Tempered Glass, frameless with 38mm dia. Stainless steel H-Handle and concealed door closer.

**Sealants:** "CLASS A" Sealants shall be used in both sides necessary to carry the structure, watertight and sufficient even during strong winds

## **METAL ROOFING SHEETS, FLASHINGS, GUTTER AND ACCESSORIES**

**Pre-formed Metal Roofing:** Use Pre-painted, Oven-baked Galvanized Metal Sheets, 0.6mm thk. for flashings, gutter, ridge rolls, valley rolls and roofing. All sheets must be free from scratches and daints. Submit sample and mills certificate for Engineer's approval.

**Strainer:** Use "CLASS A" Stainless steel 304 Dome Strainers. Submit sample for Engineer's approval.

**Fasteners and Fixation:** Use appropriate connectors as recommended by the manufacturer and approved by the Architect. Paint same color as roof, all exposed fixation and fastening devices. Apply fasteners in a neat, consistent, even and standard manner. Apply strip of butyl rubber-based caulking compound along all end lap joints and passing over pre-drilled fixation holes. For fixation of metal sheet to "C" purlins and when lapped over another metal sheet. For fixation of flashing. Use Tek screws for roof eaves area, where roof frames are exposed.

**Sealants:** "CLASS A" Sealants shall be used in areas necessary to render structure watertight, sufficient even during strong winds

## **WATERPROOFING**

Apply with surface preparation, methods application and density as per manufacturer's specifications. Apply to all water holding concentrate vessels; like roof slabs, balcony, toilet slabs, parapets and concrete gutters.

## **TILES**

Use glazed tile for walls and unglazed tile for floors. Tiles must be soak to water for at-least 3 hours before installation. Refer to schedule of tiles.

1. **Mortar:** Use Portland Cement or any approved equivalent.
2. **Sand:** ASTM C 35 – 67, clean, washed river sand, strong, free from organic and other deleterious materials. Sand from salt water or lahar is not allowed.

3. **Water:** Fit for drinking, free from injurious amount of oil, acids, alkali, organic materials and other deleterious substances.
4. **Adhesive Mortar:** Use “CLASS A” for laying vitrified ceramic tiles and porcelain tiles.
5. **Grout:** Use “Class A” pre-mixed dry wall filler for floor and wall tile either glazed or semi-glazed tiles. Masonry concrete grout compressive strength (  $f_c'$  ) = 13.8 Mpa (2000 psi).
6. **Plaster Bond:** Use “Class A” or approved equal. Apply on all wall areas, as required, prior to plastering. Suppliers shall furnish product description prior to purchase and delivery.

## **CEMENT PLASTER FINISH**

**PLAIN CEMENT PLASTER FINISH:** Consisting of the scratch and finish coats. Use “CLASS A” for the base/scratch coat, and “CLASS A” for the finish coat. Refer to Manufacturer’s technical data for proper application. Shall apply for all beams and columns if fine finish cannot be achieved from off form finish and for all interior and exterior walls, and where plastering is essential to complete the work. Use Portland Cement or any approved equivalent.

**Sand:** ASTM C 35 – 67, clean, washed river sand, strong, free from organic and other deleterious materials. Sand from salt water or lahar is not allowed.

**Water:** Fit for drinking, free from injurious amount of oil, acids, alkali, organic materials and other deleterious substances

## **DECORATIVE STONE**

**Stone Cladding** shall be free from defects and in good quality. Stone Cladding shall be installed properly with cement mortar. No Stone shall be incorporated into the work without the sample and approval of the Center Heads/Engineers.

## **PAINTINGS (CEMENT, WOOD AND METAL)**

All paint and paint materials called for under this section shall be as manufactured by known manufacturer or owner approved equivalent and must be LEAD-FREE Paint. Use CLASS A only (one brand all throughout). All exposed finish hardware, lighting fixtures and accessories, plumbing fixtures and accessories, glasses and the like shall be adequately protected that these areas are not stained with paint and other painting materials prior to painting works. All other surfaces which would be endangered by stains or paint marks should be taped and covered with craft paper or equal.

**Exterior:** Use “CLASS A” paint PLAIN FINISH for all exterior finishes and as shown in the drawings and for all exposed and/or visible concrete and masonry surfaces, as well as for exterior HARDIFLEX surfaces unless otherwise specified.

**Surface Preparation:** Concrete and masonry surfaces must be fully cured for at least 14 days.

1<sup>st</sup> coat: Use Class A Concrete Primer And Sealer (as manufacturer instruction)

2<sup>nd</sup> coat: Use Class A Putty

3<sup>rd</sup> and 4<sup>th</sup> coats: Use Class A Concrete Primer and Sealer

**Interior:** USE “CLASS A” SKIM COAT PLAIN FINISH for minor interior walls indicated in the drawings and for all interior concrete and masonry surfaces unless otherwise specified.

**Surface Preparation:** Concrete and masonry surfaces must be fully cured for at least 14 days.

**Metal Surfaces:** Use “CLASS A” Liquid Tile. For ferrous surfaces such as steel and roof framing and other exposed steel surfaces unless otherwise specified.

**Surface Preparation:** Must be free from rust.

1<sup>st</sup> coat Use CLASS A Primer Red Oxide

2<sup>nd</sup> and 3<sup>rd</sup> coats: Use CLASS A Aqua Gloss-It

Use only approved brand of epoxy zinc chromate paint and linseed oil for all base coat painting for structural steel. For finish painting, use enamel paint or approved equal.

### **CONCRETE HOLLOW BLOCKS (CHB)**

**Exterior Walls** - Use 6" thk Load Bearing Concrete Hollow Block Units of standard manufacture, machine vibrated with even texture and well-defined edges, conforming to PNS16 Type 1, Class A, with a minimum compressive strength of 4.82 Mpa (700 psi) for exterior walls and all walls with embedded sanitary and drain pipes.

**Interior Walls** - Use 4" thk Load Bearing Concrete Hollow Block Units of standard manufacture, machine vibrated with even texture and well-defined edges, conforming to PNS16 Type 1, Class A, with a minimum compressive strength of 4.82 Mpa (700 psi)

**Steel Bars** – Use structural grade ASTM A615 Grade 40 deformed bars 12mmØ and below. Deformed bars shall be new and free from rust, oil, grease, defects or kinks. Upgrade to next bigger size if specified standard sizes are unavailable. Use Ga.16 Galvanized Iron (G.I.) tie wires at joints or laps of placed reinforcements.

Provide reinforced concrete lintel beams and jambs on all masonry openings.

1. **Cement** – Use “CLASS A” PORTLAND CEMENT or approved equivalent.
2. **Aggregates**
  - a. Aggregates shall be well-graded, clean, hard particles or gravel or crushed rock conforming to the STANDARD SPECIFICATION FOR CONCRETE AGGREGATES (ASTM Designation C-33: latest revision).
  - b. Sand – ASTM C 35 – 67, clean, washed river sand, strong, free from organic and other deleterious materials. Sand from salt water is not allowed.
3. **Water** – Shall be clean and free from injurious amounts of oils, acids, alkali, organic materials or other deleterious substances.

**PLAIN CEMENT PLASTER FINISH:** Consisting of the scratch and finish coats. Use “CLASS A” for the base/scratch coat, and “CLASS A” for the finish coat. Refer to Manufacturer’s technical data for proper application. Shall apply for all beams and columns if fine finish cannot be achieved from off form finish and for all interior and exterior walls, and where plastering is essential to complete the work. Use Portland Cement or any approved equivalent.

**Sand:** ASTM C 35 – 67, clean, washed river sand, strong, free from organic and other deleterious materials. Sand from salt water or lahar is not allowed.

**Water:** Fit for drinking, free from injurious amount of oil, acids, alkali, organic materials and other deleterious substances

### **STRUCTURAL STEEL (TRUSSES, PURLINS), METAL STRUCTURES AND ACCESSORIES**

Conform all materials and workmanship to the requirements of the American Institute of Steel Construction "Specifications for Design, Fabrication and Erection of Structural Steel for Buildings" as amended to date or as may be specifically modified by the drawings or by these Specifications.

Welding shall be performed by the metal-arc process, using the electrodes specified with either direct or alternating current. Conform all materials and workmanship to the requirements of the

American Institute of Steel Construction "Specifications for Design, Fabrication and Erection of Structural Steel for Buildings" as amended to date or as may be specifically modified by the drawings or by these Specifications. Welding of Structural Steel shall be done only when shown on the Plans or authorized in writing by the Engineer.

Surfaces to be welded shall be smooth, uniform and free from fins, tears, and other defects which would adversely affect the quality of the weld. Edges of material shall be trimmed by machining, chipping, grinding, or machine gas-cutting to produce a satisfactory welding edge wherever such edge is thicker than: 13 mm for sheared edge of material; 16 mm for toes of angles or rolled shapes (other than wide flange sections); 25 mm for universal mill plate or edges of flange sections.

No operation or actual welding or gas-cutting shall be performed on a member while it is carrying live load stress or while subject to shock and vibration and from moving loads. Welding and gas-cutting shall cease in advance of the application of such loads.

**Plates, Sheets, Flange and Connectors:** Conform to ASTM Designation A36 with specified yield point of 248 Mpa (36,000 psi). From mild steel sheets or plates with standard thickness, size, shape and design as indicated in the plans. For miscellaneous stiffener, bearing anchorage and connector plates or straps. Upgrade to next higher / bigger size and thickness if specified sizes & thicknesses are unavailable.

**Steel Pipes:** It shall conform to the requirements of ASTM A 53, ASTM A 120. AASHTO M 222 and ASTM A 618, as shown on the Plans or in the Special Provisions.

**Standard solid section:** Conform to ASTM 611 with specified yield point of 228 Mpa (33,000 psi). Mild steel angles, flat bars, square bars, channels, U and other sections. For purlins, building eaves framing, grill works, miscellaneous fabricated mounting brackets, straps, dowels, frames and connectors. Upgrade to next higher / bigger size and thickness if specified sizes & thickness are unavailable.

**Bolt Accessories:** Bolts, nuts circular washers shall conform to High-Strength Bolts for Structural Steel Joints, including Suitable Nuts and Plain Hardened Washer, AASHTO M 164 (ASTM A 325).

**Fastenings** - Commercial types, except where special types are shown or required. Fastenings for all exterior work shall be non-ferrous, unless otherwise shown. Fastening for stainless steel and aluminum and other interior work, where exposed shall match the fastened metal.

**Angle bars, Purlins and Rectangular Tube:** Conform to ASTM 611 with specified yield point of 228 Mpa (33,000 psi). Mild steel angles, flat bars, square bars, channels, U and other sections. For purlins, building eaves framing, grill works, miscellaneous fabricated mounting brackets, straps, dowels, frames and connectors. Refer to trusses and purlins schedule for thickness, size, shape and design. Refer to Sun-baffle schedule for rectangular tubing. Upgrade to next higher / bigger size and thickness if specified sizes & thicknesses are unavailable.

**Welding Electrodes:** Conform welding electrodes to ASTM Specification A233 and AWS Specification A5.1 and A5.5 E60 series for manual shielded metal arc welding and E-70 series for structural welding.

**Painting:** Use only approved brand of epoxy zinc chromate paint and linseed oil for all base coat painting for structural steel. For finish painting, use enamel paint or approved equal.

**Metal Hangers** - Use "CLASS A" or approved equal.

**Brass Iron** – 2" Ø pipe for ramps and stairs.

**Stainless Steel** – 38mm Ø pipe for CR grab bars

**Stair Nosing** – use 2.5” x 2.5” stair nosing and must be welded to the stair dowels before concreting

No operation or actual welding or gas-cutting shall be performed on a member while it is carrying live load stress or while subject to shock and vibration and from moving loads. Welding and gas-cutting shall cease in advance of the application of such loads.

## **PIPE CULVERTS**

Pipes shall be laid in the trench with all ends firmly joined by the applicable methods and means.

Trenches for blind drains shall be excavated to the width and depth shown on the Plans. The trench shall be filled with granular backfill material to the depth required by the Plans. Any remaining upper portion of trench shall be filled with either granular or impervious material in accordance with Item 103, Structure Excavation

After the pipe installation has been inspected and approved, granular backfill material shall be placed to a height of 300 mm above the top of pipe. Care shall be taken not to displace the pipe or the covering at open joints. The remainder of the granular backfill material shall then be placed and compacted in 150 mm maximum layers to the required height. Any remaining portion of trench above the granular backfill shall be filled with either granular or impervious material, as may be specified, and thoroughly compacted.

**Reinforced Concrete Pipe** shall be free from defects and must conform to AASHTO M170. Pipes used for drainage connecting manholes shall be 610mm inside diameter and 75mm wall thickness. Upgrade to next higher / bigger size and thickness if specified sizes & thicknesses are unavailable.

**Joint Mortar** – Joint mortar shall consist of 1 part, by volume of Portland Cement and two (2) parts of approved sand with water as necessary to obtain the required consistency.

**Portland Cement and sand** shall conform to the requirements of Item Structural Concrete. Mortar shall be used within 30 minutes after its preparation.

## **AMENITIES / DECORATIVE BAMBOO STRIPS/PLANTS**

To provide Bamboo sticks decor, at-least 1m length, 16mm in dia. To be installed at the plant cabinet with backlight.

## **ELECTRICAL WORKS &ELECTRONICS**

**WIRES AND CABLES:** Use “CLASS A THHN” or approved equal.

1. All wires shall be copper, soft-drawn and annealed, shall be of 99% conductivity, shall be smooth and true and of a cylindrical form and shall be within 1% of the actual size called for.
2. All wires and cables shall comply with the requirements of the Underwriter’s Laboratories, the A.S.T.M. and the I.P.C.E.A. EIA/TIA as they apply in the particulars.
3. Wire and cables for lighting power and auxiliary systems shall be plastic insulated for 600 volts working pressure, type THHN unless otherwise noted on plans.
4. For lighting and power system, no wire smaller than 2.0mm dia. shall be used.
5. All wires and cables shall be color-coded and as manufactured by cable manufacturers. Colors coding of wires are as follows:

Line A – Blue	Ground – Green
Line B – Red	
Line C – Yellow	Control wires – other color

6. No conductor shall be less than 3.5 mm<sup>2</sup> in size unless otherwise specified. 600-volts wires and cables should meet the requirements of NFPA 70 and UL for the type of insulation, jacket and conductor specified or indicated in all power and lighting wires shall be 600-volt, type THW or THHN.

**CONDUITS:** Use “CLASS A” Schedule 40 PVC for conduits embedded in concrete and inside ceiling. Use “CLASS A” or Rigid Steel Conduit (RSC) for main service entrance exposed to weather.

1. Metallic conduits for interior and exterior systems shall be a standard weight, mild steel, hot-dip galvanized with an interior coating. Non-metallic conduits shall be PVC electrical grade.
2. No conduits shall be used in any system smaller than 15mm dia. electrical trade size, nor shall have more than four 90-degree bends in any one run and when necessary, pull boxes shall be provided as directed. Location and sizes of pull boxes shall be cleared to the engineer prior to fabrication and installation.
3. No wires shall be pulled into any conduit unless the conduit system is complete in all details. In the case of concealed work, until all rough plastering or masonry has been completed and in the case of exposed work, until the conduit has been completed in every detail.
4. The ends of all conduits shall be tightly plugged to exclude plaster, dust and moisture while the building is in the process of construction.
5. All conduit and fittings on exposed work shall be secured by means of Kindoff channels and clamps. Conduit lay outing, in all cases shall run perfectly straight and true, satisfactory to the architect and to the engineer.

## **OUTLET, BOXES, AND FITTINGS**

1. Convenience Outlets: Use “CLASS A”, white color, 220V, 16 amperes or as required. For general building interior use.
2. Weatherproofed Outlets: Use “CLASS A”, double device plate with cover receptacle, heavy duty as indicated on drawings.
3. Boxes: Use “CLASS A” metal utility boxes, sizes and shapes as required.
4. All outlets of whatever kind, for all systems, these shall be provided with suitable fittings, which shall be either a box or other devices especially designed to receive the type of fittings to be mounted thereon.
5. The contractor shall consult with the architect and the engineers as to the nature of the various fittings to be used before installing the outlet fittings and shall conform strictly in the use of such fittings, to the nature of the appliance to be mounted on them, so that the work, when finished will be a completed design.
6. In the case of fixtures, the outlet fittings shall be provided with suitable fixture supports of a size and kind required by the fixture to be hung. Fixture studs in general shall be 9.375mm
7. At all outlets on concealed conduit work, provide galvanized deep-type pressed-steel, outlet boxes of standard make. These boxes shall be especially designed for apparatus required and, in all cases, where such boxes are not available on the market; special boxes shall be made by the contractor at his own expense. Outlet boxes shall be deep type gage # 16.

## **JUNCTION, and PULL BOXES**

Junction and pull boxes per code gage steel, shall only be subject to the permission of the engineer and be provided as indicated or as required for facilitating the pulling of wires and cables. Pull boxes in finished places shall be located and installed only with the permission of and to the satisfaction of the architect and engineer.

## **SWITCHES, AND OUTLETS**

1. Switches Use “CLASS A”, white color, flush type rate 220 volts to 16 amperes. Suited to location and intended purpose. Certain combinations shall be furnished with pilot lights as required where indicated on the drawings.
2. Switches shall be made of quick-connect terminal operated. The type of switch shall be tumbler operation. Samples shall be submitted prior to the purchase of wall switches and wall plates.
3. Receptacle, outlets shall be for flush mounting, duplex rated at 16 ampere, 250 volts, grounding type 3-wire, color: white. Samples of outlets and plates shall be submitted prior to purchase of devices.
4. Circuit Breakers: Use “CLASS A” or equivalent, bolt-on type, pre-painted, surface mounted, with latch lock.
5. Magnetic Starter: with NEMA-3 casing approved equal, surface mounted with latch lock.
6. METAL ENCLOSURES AND CABINETS Use “CLASS A” OR APPROVED EQUAL.

## **PANELS AND CABINETS**

**Panel Boards:** All Panel Boards shall comply with NEMA Standards. All Panel Boards shall be of dead-front construction, furnished with trims for flush or surface mounting, as required.

**Cabinets** shall be code gage steel with gutters at least 150mm and wider, if necessary. The trim for all panels shall be finished in GRAY enamel over a rust inhibitor. Front doors shall be provided with concealed hinges.

**Lighting panels** shall be equipped with two-pole circuit breaker in the branch circuits and three-pole in the main unless noted otherwise on the plans. As indicated on plans, the panels shall be assembled in two or more sections when over 40 one-pole circuits. Ground bus terminals shall be a standard feature to the panel

**Panel Boards Buses:** Provide Copper bus. Support the bus bars on bases independent of the circuit breaker. Main buses and back pans shall be designed so those breakers may change without machining, drilling or tapping. Provide a separate ground bus marked with green stripe along its front and bonded the steel cabinet for type of conductor

**Circuit Breakers:** Circuit breaker shall be ambient compensated thermal magnetic type with interrupting capacity as indicated. Breaker terminals shall be UL listed as suited for type of conductor provided. Use Square-D or equivalent.

## **INDIVIDUAL BREAKERS, and SWITCHES**

Provide individual circuit breakers, and disconnect switches when indicated on the plans. Voltage rating shall be suitable in each case of service application.

Enclosure for indoor application shall be NEMA-1 and for outdoor application shall be NEMA-4X unless otherwise indicated in the plans.

All protective devices shall meet NEMA and Underwriter’s Laboratories, Inc. specifications.

1. Circuit breakers shall consist of a quick-make, quick-break type entirely trip-free operating mechanism contacts with arc interrupter and thermal-magnetic trip used for each pole and enclosed

in a molded phenolic case. The thermal-magnetic trip unit shall provide time delay overload protection and instantaneous short circuit protection and shall operate internal common-trip bar which will open all poles in case of overload or short circuit current in any one-pole. Circuit breaker shall be trip indicating with the tripped position of breaker midway between “ON” and “OFF” positions.

2. Only one single brand of circuit breakers shall be used on the entire project requirement. Acceptable brands are General Electric, Fuji Electric, Square D and Terasaki Electric. Submit brochures for approval.
3. Minimum interrupting capacities of each circuit breaker are indicated on the load schedule, application of circuit breakers shall be approved for the intended load per panel board schedule.
4. Safety and disconnect switches shall be non-fusible and of sizes indicated on plans and shall be normal duty type, except as noted otherwise. Enclosures shall be NEMA 1 for indoor use and NEMA 4X for outdoor use.

## **DISCONNECTING MEANS**

Disconnecting means shall be provided as indicated on the drawings and at each motor and appliance location. The disconnect may be omitted if the same are incorporated in motor controls supplied in other divisions. Unless otherwise noted on drawings, the disconnecting device shall be a momentary push button station that can be locked in the open position. This push-button shall be furnished, installed and connected by the Electrical Contractor.

Circuit breakers shall be used for current protection purposes and shall be enclosed in suitable metal housing of type required by location.

Un-fused safety switches shall be used where disconnecting means only are required and where the current supply to the same is protected by a circuit breaker at the panel boards. Provide disconnect switch at each motor locations where the same is not within sight of respective control starter, unless indicated otherwise on the drawings. All disconnecting switches shall be enclosed and fabricated from Gage # 16 fully protected against corrosion.

## **LOCATION OF WIRING AND OUTLETS**

The contractor shall coordinate his work with all trades involved so that exact locations may be obtained for all outlets, apparatus, appliances and equipment. The circuit numbers indicated as numbers 1, 2, 3, may not correspond to actual panel circuit connection numbers but must be balanced for better load distribution.

The location of outlets shown on diagrammatic wiring plans shall be considered as approximate and it shall be incumbent upon the Contractor, before installation of outlet boxes, to study all pertinent drawings and obtain precise information from the architectural schedules, scale drawings, large scale and full size details of finished rooms and the approved shop drawings of other trades or from the architect. In centering the outlets, due allowance shall be made for window and door trims, variations in thickness of pouring, plastering, etc., as erected, regardless of conditions which may be otherwise shown on small scale drawings. Outlets incorrectly located shall be properly relocated at the contractor's expense. Local switches shown near the doors shall be verified with the architect's drawings before installation.

## **SERVICES**

Power supply shall be three - phase

## **POWER AND LIGHTING DISTRIBUTION**

Furnish and install the lighting panels as indicated on plans and panel board's schedule. From the main breaker, install feeders to the various outlying panels, motors or equipment as shown on plans. Feeders shall be inside the ceiling with hangers, channel and clamps

## LIGHTING SYSTEMS

The lighting shall be complete in every respect, all as indicated on the plans or specified. All wiring's shall be installed in electrical non-metallic tubing using compression type fittings and connectors or as indicated in the plan and in general shall be concealed in the structure. Mounting heights of devices shall be as detailed on the plans or as follows:

- Local switches – 1370mm from center of device to finished floor Line
- Receptacles – 300mm above floor or 150mm above counter or As shown on architectural details.

## GROUNDING WORKS

Ground wires shall be bare copper, stranded, with sized as shown in the drawings and shall be of cylindrical form and variation shall be within 1% of the actual size called for. Grounding connectors shall be "CADWELD" type exothermic process. Contractor to test the grounding system to assure continuity and resistance to ground is not excessive. Submit written results of each test to the Engineer for approval. Ground resistance should be 25 ohms or less and 5 ohms or less for earth ground resistance.

## ELECTRICAL DISTRIBUTION SYSTEM

**Fluorescent Lighting Fixtures:** UL 1570, except lighting fixtures for damp and wet locations shall conform to UL 57.

**Fluorescent lighting fixtures** shall be T5 with Troffer Diffuser (90-95%) power factor and spring-loaded lamp holder.

**Fluorescent lamps:** Provide the number, type and voltage as indicated on the drawings. All fluorescent lamps shall be provided with retainer for safety or using the spring type fluorescent holder.

- A. LIGHTING FIXTURES AND ACCESSORIES: - Refer to plans.
  - 1. Lighting Fixtures – Refer to plans
- B. LOW-VOLTAGE DISTRIBUTION EQUIPMENT
  - 1. Door Chimes: provide brands subject to approval by Engineer.

## CLEANING-UP

The contractor shall at all times keep the construction area, including storage areas used by him, free from accumulations of waste materials or rubbish and prior to completion of work. Remove any rubbish from and about the premises and all tools, scaffolding, equipment and materials not the property of the owner.

Upon the completion of the construction, the contractor shall leave the work and premises in a condition satisfactory to the owner and the engineer.

## PROJECT CLOSE-OUT

Upon completion of the project, the following procedure shall be implemented:

1. Walk-thru inspection by the owner, engineer and contractor. Any discrepancy noted shall be fixed before the project is closed.
2. Compile a complete equipment maintenance manual for all equipment. Submit copy of “As-built” drawings to the owner and engineer.
3. Construction Logbook with complete data (template will be provided by DSWD) must be submitted to the owner/engineer.

\*\*\*\*\**END OF SPECIFICATIONS*\*\*\*\*\*

# ***Section VI. Specifications***

## **Lot 2 - Repair and Improvement of RRCY Covered Court**

### **GENERAL REQUIREMENTS**

#### **RELATED SECTIONS**

All applicable provisions of the different divisions of the Specifications for each work trade shall apply for all items cited in this Summary.

#### **INFERRED ITEMS AND WORK**

Materials and workmanship deemed necessary to complete the works but NOT specifically mentioned in the Specifications, Working Drawings, or in the other Contract Documents, shall be supplied and installed by the Contractor without extra cost to the Owner. Such materials shall be of the highest quality available, and installed or applied in a workmanlike manner at prescribed or appropriate locations.

#### **SPECIFICS**

Materials specifically mentioned in this Summary shall be installed following efficient and sound engineering and construction practice, and especially as per manufacturer's application for installation specifications which shall govern all works alluded to in these Specifications.

#### **ON-SITE ITEMS**

Materials and finishes for on-site improvements and facilities as listed below are part of the scope of work and shall be supplied and installed by the Contractor without extra cost to the Owner.

- A. Construction of:
  - 1. Walks, ramps, steps, posts, perimeter fence and miscellaneous slabs;
  - 2. Concrete catch basins, drainage pipes;
  - 3. Temporary facilities and below grade structures such as septic vaults, cisterns, manholes, open canals, check drains and trenches;
- B. Exterior utility lines, raceway system, fixtures, breakers, switches, buzzers, controls including fittings and accessories as required by the specialty trades under plumbing, mechanical and electrical works.

#### **OFF-SITE ITEMS**

Off-site improvements shall generally be under the responsibility of the Owner and not included in the Contract, with the exception of the following which shall be part of the Contractor's Work:

- A. Construction of drainage lines. This work shall neatly connect to the storm drainage system along the road.
- B. Permanent connections to the local utility lines for electrical, water, drainage, sewer and telephone lines including equipment, facilities, materials, fees, and/or work which utility companies or authorities may require of the applicant Owner, such as electrical transformers, etc.

## **WATER & ELECTRICITY CONNECTION**

**A. Temporary Water:** The Contractor shall supply in sufficient quantity all necessary potable and other water for construction purposes for all trades at a point within a reasonable distance of the building being constructed. The Contractor shall make arrangements and pay charges for water service installation, maintenance, and removal thereof, and pay the costs of water for all trades.

**B. Temporary Electricity:** The Contractor shall make all necessary arrangements for a temporary electrical service, pay all expenses in connection with the installation, operation and removal thereof, and pay the costs of electricity consumed by all trades.

## **OWNER SUPPLIED ITEMS**

Owner supplied finishing accessories, furnishing and fixtures such as wall clocks, picture frames, fixed furniture etc., shall be installed by the Contractor at no cost to the Owner.

## **QUALITY CONTROL**

The Contractor shall be responsible for the quality control of all materials during the handling, blending, and mixing and placement operations. The Contractor shall furnish the Engineer a Quality Control Plan detailing his production control procedures and the type and frequency of sampling and testing to insure that the materials and work produces complies with the Specifications. The Engineer shall be provided free access to recent plant production records, and if requested, informational copies of mix design, materials certifications and sampling and testing reports.

The Contractor shall perform all sampling, testing and inspection necessary to assure quality control of the component materials.

## **PERMITS AND CLEARANCES**

The Contractor shall facilitate the compliance of Building Permit, Occupancy Permit, Fencing Permit, Drainage Permit and other clearances before and after the completion of the project.

## **PROJECT BILLBOARD/SIGNBOARD**

Project Signage/COA signages shall be installed near the construction site or before the entrance gate and must be visible for the visitors. Signage must be printed in tarpaulin with wooden frame and plywood backing.

Signage sizes: Project Signage = 4ft. x 8ft.  
COA Signage = 8ft. x 8ft.

## **OCUPATIONAL SAFETY AND HEALTH**

Before the start of work, the contractor shall submit Health and Safety Plan with operational detail of his proposals to the engineer for his approval. The contractor must secure Construction Safety Certificate from DOLE and must implement safety measures during construction stage. The contractor shall provide safety signages within the construction vicinity.

## **MOBILIZATION & DEMOBILIZATION**

All equipment and materials delivered in the area must be functional and for project use only. No storing of materials and equipment in the area that is not intended for the specific project. Stored materials must be arranged in a proper manner and must have barricades and rain/water protection. After project completion, all materials and equipment must be removed in the area.

## **TEMPORARY FENCE**

The whole area affected for the project shall be fenced temporarily with necessary gates as directed by the Engineer. The site must be closed enough and must not be visible for the clients living in the center.

## **EARTHWORK**

### **STRUCTURE EXCAVATION**

All excavation for foundation, catch basins and piping shall be made to grades indicated in the drawings; where excavation will rest on fill, excavation shall be carried deeper until the desired stratum is reached for safe bearing capacity of the soil.

Where rock occurs and footings and walls are indicated to the rest on the same, the rock shall be leveled to a clean and even surface. Whenever water is encountered in the excavation process, it shall be removed by pumping, care being taken that the surrounding particles are not disturbed or removed.

### **EXCAVATION SUPPORT SYSTEM**

Types of shoring and bracing systems include, but are not limited to, the following:

1. Timber Lagging
2. Steel Scaffolds

Provide sufficient shoring and soil retention protection options to prevent displacement and damage to existing adjacent structures, and cave-ins.

### **EMBANKMENT, FILL AND BACKFILL**

Coarse-grained fill materials, such as stone fragments, sand and gravel mix, fine sand, silty or clayey sand and gravel, shall be laboratory approved from off-site source, passing a 75 mm (3") sieve. The fraction passing a 0.425 mm (no. 40) sieve shall have a liquid limit not to exceed 35% and plasticity index not exceeding 12%. Only coarse-grained fill materials shall be used inside buildings and under walkways.

Excavated material approved for use as backfill shall be free of stones larger than 2 inches in longest dimension, roots and organic materials.

Batter boards: Second class, pest free lumber assembled and rendered secure for proper delineation of building lines and grades.

The Contractor shall compact the material placed in all embankment layers and the material scarified to the designated depth below subgrade in cut sections, until a uniform density of not less than 95 mass percent of the maximum dry density is attained. At least one group of three in-situ density tests shall be carried out for each 500 m of each layer of compacted fill. The layer shall be placed not exceeding 200 mm in loose measurement or based on the result of compacted trials.

### **GRAVEL FILL**

All gavel laying shall be properly laid and properly compacted based on the plan specified.

## SOFTSCAPE (GRASS)

This item shall include placing of frog grass or Bermuda grass. This grass shall be delivered healthy and vigorous in growth and free from disease. Garden soil shall be free from termites and alien materials. Watering and maintenance of this grass shall be within 6 months after completion and acceptance.

## PAVER BLOCKS

The work included under this section comprises the furnishing of all materials, labor, equipment, and performance of all operations necessary to complete the installation of paver blocks as shown in the drawings, or as specified herein. All paver blocks must be laid on sand.

## PLAIN AND REINFORCED CONCRETE

### STRUCTURAL CONCRETE

**CEMENT** – Use “CLASS A” PORTLAND CEMENT Type 1 or approved equivalent.

### CONCRETE AGGREGATES

1. **Gravel:** Well graded, clean, hard particles of gravel or crushed rock conforming to the “STANDARD SPECIFICATIONS FOR CONCRETE AGGREGATES” (ASTM Designated C-33 latest revision). Use 25 mm (1”) maximum for slabs and 19 mm (3/4”) for columns and beams and retaining walls.
2. **Sand:** ASTM C 35 – 67, clean, washed river sand, strong, free from organic and other deleterious materials. Sand from salt water or lahar is not allowed.
3. Maximum size of aggregates shall not be larger than 1/5 of the narrowest dimension between sides of the forms, not larger than 3/5 of the maximum clear spacing between reinforcing bars, and in no case larger than 33 mm (1-1/3”) in diameter.

**WATER** - Use only water that is clean and free from injurious amounts of oils, acids, alkali, organic materials or other deleterious substances. Potable/ fit for human consumption.

### CONCRETE MIXES

1. Concrete compressive strength (f'c) requirements:

<b><i>I. Specified Compressive Strength</i></b>			
Class/Type	28 days		Item
	psi	mPa	
A	3000	28	For footings, columns, beams, lintels beam and stiffener columns, slab on grade and for all reinforced work not otherwise indicated or specified
B	1,500	10.34	For all concrete without reinforcement like lean concrete

2. Slump requirements:

Structural Element	Slump for vibrated concrete	
	Minimum	Maximum
Slab on grade, stair landing and tread	75 mm	125 mm
Other components	50 mm	100 mm

## CONCRETE ADDITIVES

1. Use "CLASS A" in the amounts as recommended by the manufacturer, with the approval of the Engineer.
2. **Plasticizer** – Use "CLASS A"
3. **Air-entraining admixtures** – Use "CLASS A" or approved equal to improve workability or durability of concrete mixes.
4. **Accelerators** – Use "CLASS A" or approved equal.
5. **Water Reducing Retarders** – Use "CLASS A" or approved equal.
6. **Integral Waterproofing Compound** – Use "CLASS A" or approved equal for roof slabs, balcony, concrete gutters, cisterns and media aguas. Refer to Manufacturer's manual/instruction for proper application.
7. **Calcium chloride** is not allowed. Secure approval of the Engineer prior to using of any other additive.

**NOTE: PLACEMENT DRAWINGS:** Shop drawings of each reinforcing steel detail and placement drawings shall be submitted for approval in accordance with the requirements of the General Conditions. Any material fabricated before final approval of the shop drawings will be done at Contractor's risk, but no material shall be placed until shop drawings have final approval. Shop drawings shall be in accordance with the "Manual of Standard Practice for Detailing Reinforced Concrete Structures" (ACI 315).

## REINFORCING STEEL (DEFORMED BARS)

**Steel Bars** – Use structural grade ASTM A615 Grade 40 for deformed bars 12mmØ and below. For 16mmØ and above, use structural grade ASTM 615 Grade 60. Deformed bars shall be new and free from rust, oil, grease, defects or kinks. Upgrade to next bigger size if specified standard sizes are unavailable.

Use Ga.16 Galvanized Iron (G.I.) tie wires at joints or laps of placed reinforcements.

**Steel reinforcement** shall be stored above the surface of the ground upon platforms, skids, or other supports and shall be protected as far as practicable from mechanical injury and surface deterioration caused by exposure to conditions producing rust. Distance from the forms shall be maintained by means of stays, blocks, ties, hangers, or other approved supports, so that it does not vary from the position indicated on the Plans. Reinforcement in any member shall be placed and then inspected and approved by the Engineer before the placing of concrete begins. Concrete placed in violation of this provision may be rejected and removal may be required.

**Splices:** Splices shall be staggered as far as possible and with a minimum separation of not less than 40 bar diameters. Lapped splices will not be permitted at locations where the concrete section is insufficient to provide minimum clear distance of one and one-third the maximum size of coarse aggregate between the splice and the nearest adjacent bar.

## FORMWORKS AND FALSEWORKS

1. Use Phenolic forms, plywood, metal or surfaced lumber forms, free from warp and gross deformities, sufficiently braced with solid lumber and applied with form release agent as its casting surface before each casting, where it will best give the most advantage in the specific concrete work involved.
2. For exposed reinforced concrete such as exposed beams and columns, use Phenolic forms or approved equivalent.
3. Provide 40mm-wide chamfers for all exposed corners of columns.
4. Do not use Coco lumber for formwork.
5. Use only good lumber or metal sections for forms.

## CIVIL / FINISHING WORKS

### WELDED STEEL WORKS

Welding shall be performed by the metal-arc process, using the electrodes specified with either direct or alternating current. Conform all materials and workmanship to the requirements of the American Institute of Steel Construction "Specifications for Design, Fabrication and Erection of Structural Steel for Buildings" as amended to date or as may be specifically modified by the drawings or by these Specifications. Welding of Structural Steel shall be done only when shown on the Plans or authorized in writing by the Engineer.

Surfaces to be welded shall be smooth, uniform and free from fins, tears, and other defects which would adversely affect the quality of the weld. Edges of material shall be trimmed by machining, chipping, grinding, or machine gas-cutting to produce a satisfactory welding edge wherever such edge is thicker than: 13 mm for sheared edge of material; 16 mm for toes of angles or rolled shapes (other than wide flange sections); 25 mm for universal mill plate or edges of flange sections.

No operation or actual welding or gas-cutting shall be performed on a member while it is carrying live load stress or while subject to shock and vibration and from moving loads. Welding and gas-cutting shall cease in advance of the application of such loads.

**Plates, Sheets, Flange and Connectors:** Conform to ASTM Designation A36 with specified yield point of 248 Mpa (36,000 psi). From mild steel sheets or plates with standard thickness, size, shape and design as indicated in the plans. For miscellaneous stiffener, bearing anchorage and connector plates or straps. Upgrade to next higher / bigger size and thickness if specified sizes & thicknesses are unavailable.

**Steel Pipes:** It shall conform to the requirements of ASTM A 53, ASTM A 120. AASHTO M 222 and ASTM A 618, as shown on the Plans or in the Special Provisions.

**Bolt Accessories:** Bolts, nuts circular washers shall conform to High-Strength Bolts for Structural Steel Joints, including Suitable Nuts and Plain Hardened Washer, AASHTO M 164 (ASTM A 325).

**Fastenings** - Commercial types, except where special types are shown or required. Fastenings for all exterior work shall be non-ferrous, unless otherwise shown. Fastening for stainless steel and aluminum and other interior work, where exposed shall match the fastened metal.

**Angle bars, Purlins and Rectangular Tube:** Conform to ASTM 611 with specified yield point of 228 Mpa (33,000 psi). Mild steel angles, flat bars, square bars, channels, U and other sections. For purlins, building eaves framing, grill works, miscellaneous fabricated mounting brackets, straps, dowels, frames and connectors. Refer to trusses and purlins schedule for thickness, size, shape and design. Refer to Sun-baffle schedule for rectangular tubing. Upgrade to next higher / bigger size and thickness if specified sizes & thicknesses are unavailable.

**Welding Electrodes:** Conform welding electrodes to ASTM Specification A233 and AWS Specification A5.1 and A5.5 E60 series for manual shielded metal arc welding and E-70 series for structural welding.

**Painting:** Use only approved brand of epoxy zinc chromate paint and linseed oil for all base coat painting for structural steel. For finish painting, use enamel paint or approved equal.

**Metal Hangers** - Use 12mm dia. Threaded rod or approved equal.

**Brass Iron** – 2" Ø pipe for ramps and stairs.

## SOIL POISONING

This section includes pouring of soil poisoning to earth laid with structure. No materials must be installed directly to the soil without the application of liquid soil poisoning. All materials whether specifically mentioned or not, but necessary to complete this item of work shall be furnished and installed in the best workmanship practice.

## CATCH BASIN, STORM DRAIN, DOWNSPOUT & CISTERN

**Downspouts:** shall be polyvinyl chloride (PVC) pipe series 1000 II, Use “CLASS A” with the same brand/type of materials.

**Fittings** shall be solvent cement joint conforming to ASTM D2564. Fittings shall be of the same brand with the pipes used or connected to.

**Storm Drain/Strainer:** Use stainless steel leaf Strainers. Submit sample for Engineer’s approval.

**Joint Mortar:** Joint mortar shall be composed of one part Portland Cement and two parts fine aggregate by volume to which hydrated lime has been added in an amount equal to 10 percent of the cement by weight. All materials for mortar shall meet the requirements of Item 405, Structural Concrete.

## SEPTIC VAULT

### BLACK P.E.

1. Use Black Recycled PE Vertical Purifying Septic Tank, 1000 liters capacity. The tank must be embedded below the ground and must have reinforced concrete top slab as protection for the tank cover.
2. Pipes including fittings shall be Polyvinyl Chloride (PVC) Pipes, series 1000 Class A, 102mm dia. free from defects.

## CONCRETE/CONCRETE HOLLOW BLOCK

1. **Pipes** including fittings shall be Polyvinyl Chloride (PVC) Pipes, series 1000 Class A, 102mm dia. free from defects.
2. **Portland Cement:** Use Use “CLASS A” or approved equivalent.
3. **Sand:** ASTM C 35 – 67, clean, washed river sand, strong, free from organic and other deleterious materials. Sand from salt water or lahar is not allowed.
4. Concrete Mortar compressive strength ( $f_c$ ) = 13.8 Mpa (2000 psi).
5. **Steel Bars** –Deformed bars shall be new and free from rust, oil, grease, defects or kinks. Upgrade to next bigger size if specified standard sizes are unavailable.
6. Use Ga.16 Galvanized Iron (G.I.) tie wires at joints or laps of placed reinforcements.
7. Use 6” thk Load Bearing Concrete Hollow Block Units of standard manufacture, machine vibrated with even texture and well-defined edges, conforming to PNS16 Type 1, Class A, with a minimum compressive strength of 4.82 Mpa (700 psi)

## PLUMBING WORKS AND FIXTURES

All plumbing works herein shall be executed according to the requirements of Philippine national plumbing code and the rules and regulations of the existing local codes and ordinances or laws governing the implementation of the plumbing works.

Refer to all electrical, structural and architectural plans and specifications and investigate all possible interference and conditions affecting the plumbing works.

It is not intended that the drawing shall show every pipe fitting, valve and appliances. Furnish and install, if necessary, all such item specially mentioned or not, or indicated on the drawing, to complete the system in accordance to the best practice of the plumbing trade and satisfaction of the engineer/owner.

Perform all labor in a first-class, neat, workmanlike manner by specialist skilled in their trades, and such specialist and their work shall be satisfactory to the engineer.

#### **BASIC MATERIALS:**

1. Provide materials that are new and that conform with the standard of Underwriters laboratories. Inc.
2. For other miscellaneous required materials not specifically mentioned, Provide the best of the respective kind.
3. Submit samples of materials for approval as required by the engineer/owner

#### **PLUMBING FIXTURES:**

1. Install all plumbing fixtures free and open in a manner to access for Cleaning. Furnish with brackets, cleats, plates, and anchors required to Support the fixtures rigidly in place.
2. Keep away, at a sufficient distance but not less 1/2" (12.5 mm.) All service Pipes, valves, and fittings from surfaces and locations which may require Finish coats or covering.
3. Extend the piping to all fixtures, outlets, and equipment from required Gate valves installed in each branch near risers.

#### **SOIL, WASTE, DRAIN, AND VENT PIPINGS:**

1. Install all piping works in conformity with all provisions of the latest Edition of the Philippine national plumbing code and applicable requirements of the existing local codes.
2. Excavate to require depths and grades. All excavations required for the Installations of plumbing and drainage system when rock is encountered, Extend the excavation to a depth 150 mm. Below the pipe bottom of the pipe and rock surface with sand and approved material.
3. Lay water supply pipes and sewers in separate trenches.

#### **TRAPS**

1. Except for the presence of grease trap interceptor and other devices Where the trap is an integral part of the design. Equipped with a trap every Fixture and equipment requiring connections to the drainage system.
2. Set each trap as close as possible to the fixture served and render level with respect to their water seal.

#### **PIPES AND FITTINGS**

1. All materials to be used must be of high quality.
2. Air chamber to be provided for all water line outlets. All necessary fitting Shall be provided.
3. Teflon tape for all waterline connections applied to male threads only.
4. Make all joints air and water tight. For jointing pipes, use the following:
  - c. PVC& CPVC pipes: use appropriate couplers and glue at joints.
  - d. PPR pipes; when connecting with other pipe fittings, do not use, if possible, Male pipe fittings with conic thread and hemp as a sealing material to avoid Buckling stresses which act on female pipe fitting.

## GUARANTEE AND WARRANTY

1. The contractor shall guarantee all materials supplied and the work to be Free from factory defects and workmanship for a period of one (1) year.
2. Any material found to be defective during the time of construction shall be replaced by the contractor free of charge.

## SHUT - OFFS:

Provide the entire system with valve so located that the system or portion of it can be operated, replaced, and repaired, as well as affording complete Control of water supply to each group of fixtures. When required, provide also pressure reducing valve.

## CLEAN OUTS

For clean outs stemming from pvc, provide with long sweep quarter bends or one or two eight bends, extended to an easily accessible place, and generally where indicated in the drawings

## OTHERS

1. Provide cleanouts every 15meters for horizontal piping of more than 15 meters Pipes shall be installed as indicated, any relocation required for proper Execution of other trades shall be prior approval of the engineer.
2. Proposed sanitary utilities shall conform to the actual location, depth, and Invert elevations.
3. All fixtures shall be vented, unless otherwise indicated.

Plumbing fixtures shall be of dense, durable, non-absorbent materials and must have smooth, impervious surfaces, free from unnecessary concealed fouling surfaces. All porcelain enamel surfaces on plumbing fixtures shall be acid resistant. No water supply system or portion thereof shall be covered or concealed until it has been first inspected, tested and approved. The piping system shall be air tested or water tested. The contractor shall notify the Engineer in-charge that said work is ready for inspection.

1. **Cold Water Lines:** Shall be Polypropylene Plastherm (PN-20) PPR Pipes and Fittings, Use CLASS A or approved equal conforming to ISO 4065 standard dimensions, using manufacturer specified method of installation and connection.
2. **Valves:** ASTM B-61 & 62, ASTM A 197, PRICE PFISTER (U.S.), KITZ or CRANE or approved equal. For gate valves and check valves, cast brass, sizes as required in the drawings. 150 psig working connection
3. **Hose Bibb:** Stainless steel faucet for all toilet cubicles and for garden hoses size 12mm male inlet and 12mm hose thread, and Use "CLASS A" lever type with bronze body as indicated in the plans.
4. **Floor Drains:** METMA, M-200-D, MAB or approved equal, 150mm x 150mm (6"x6"). Floor drains shall connect into a trap so constructed that it can be readily cleaned and of a size to serve efficiently the purpose for which it is intended.
5. **Water Closet-** shall be vitreous China, siphon vortex design, close coupled make, flush tank, elongated front and free from defects.
6. **Urinal-** shall be porcelain make, installed at not less than 600mm from the finish floor line to the top of the overflow rim. An approved type vacuum breaker shall protect every water supply to a urinal or other approved backflow prevention device.
7. **Lavatory-** shall be wall hung, ceramic, oval type and free from defects. It shall be rigidly supported by metal supporting members or chairs so that no bending or pullout strain is transmitted to the wall.
8. **Kitchen Sink and Laundry tray-** shall be stainless steel gauge 304 make, hairline finish.
9. **Water Meter-** shall be the same size as to the diameter of the supply pipe, Heavy Duty, brand new and free from defects.

## CEILING, FACIA BOARD & DOUBLE WALL

1. **Fiber Cement Board:** Use “CLASS A”, Install as per manufacturer’s instructions. 6mm thick for all suspended ceilings and walls. 12mm thk. For Facia board on metal frame. See drawing details.
2. **Suspended Ceiling System:** Use 25mm x 50mm x 0.6mm thk metal furring, 12mmØ suspension rod, suspension clips, eyelets, attached to 2” X 4” X 1.2mm thk. C-Purlins Framing. Submit sample and mock-up before installation.
3. Provide edgings, trims and moldings and others as indicated in the drawings.
4. **Hardware and FASTENERS:** Use metal nails, screws, bolts, plates, straps, miscellaneous fasteners or anchorage concealed or countersunk whenever called for, with size, shape and type to ensure a rigid connection for laminated items and at other framing joints.
5. **METAL STUDS:** Use “CLASS A”, 38mm x 100mm x 1.5mm thk. Metal studs spaced at 400mm on center, both ways.

## SPANDREL CEILING

**Pre-formed Metal Spandrel:** Use Pre-painted, Oven-baked Galvanized Metal Sheets, 0.4mm thk. for spandrel with pre-fabricated ventilation holes. Submit sample for Engineer’s approval.

## GRANITE SLAB COUNTERS

Use Quartz granite tiles for kitchen/lounge counters. Granite slabs shall be free from defects and in good quality. Granite Slabs shall be installed properly with approved consumables and other accessories. No Stone shall be incorporated into the work without the sample and approval of the end users/Engineers.

## CABINETRY WORKS

Laminated Marine boards shall be installed for cabinets and must have aT nominal thickness of 18mm with complete accessories. All cutting edges must have PVC lining. The following items are needed for the following

1. **Cabinets-** use ¾” Laminated marine plywood with PVC edging
2. **Hinges-** use heavy duty soft closing concealed hinges
3. **Handle** – use alum C-handle hafele CAT. NO. 12621902
4. **Pull out baskets** – use stainless steel 304 with runners

## DOORS (WOODEN)

**DOORS** must be solid panel, sound and thoroughly seasoned, warp free, treated with pressure impregnated “CLASS A” preservative or approved equal, smooth and level on one side or wherever in contact with paneling for nailers, and all wooden members hidden from viewer.

**Viewing Panel:** Should be 6mm thick tempered glass. Use Class A and install as per manufacturers instruction.

Use “CLASS A” for all door hardware (Schlage or Hafele or approved equivalent), and closet hardware except where indicated otherwise. Provide Master Key for the entire house, for all cylindrical locksets and deadbolt locking devices.

### **Jambs:**

Use 150mm x 50mm kiln-dried, treated S4S, sound, hard and free from lumber.  
Use one color or shade for assembly framing which are exposed. Provide with wood trim for all wooden doors.

**Hardware and Fasteners:** Use metal nails, screws, bolts, plates, straps, miscellaneous fasteners or anchorage concealed or countersunk whenever called for, with size, shape and type to ensure a rigid connection for laminated items and at other framing joints.

## **DOORS (STEEL)**

**Steel Door** must be 2.1m in height and 1m in width with panic door locks. Must be fire rated doors

## **WINDOWS, GLASS DOOR & GLASS WALL**

**Jalousie windows** shall be 6mm thk. tempered glass with heavy duty jalouplus frame. Refer to schedule of windows.

**Awning Windows** shall be 3/8" thk. Tempered glass on aluminum frame.

**Glass Wall** shall be 12mm thk. Tempered Glass on aluminum frame. This wall shall be fixed in full height from finished floor line to the concrete ceiling.

**Glass Door** shall be 12mm thk. Tempered Glass, frameless with 38mm dia. Stainless steel H-Handle and concealed door closer.

**Sealants:** "CLASS A" Sealants shall be used in both sides necessary to carry the structure, watertight and sufficient even during strong winds

## **METAL ROOFING SHEETS, FLASHINGS, GUTTER AND ACCESSORIES**

**Pre-formed Metal Roofing:** Use Pre-painted, Oven-baked Galvanized Metal Sheets, 0.6mm thk. for flashings, gutter, ridge rolls, valley rolls and roofing. All sheets must be free from scratches and daints. Submit sample and mills certificate for Engineer's approval.

**Strainer:** Use "CLASS A" Stainless steel 304 Dome Strainers. Submit sample for Engineer's approval.

**Fasteners and Fixation:** Use appropriate connectors as recommended by the manufacturer and approved by the Architect. Paint same color as roof, all exposed fixation and fastening devices. Apply fasteners in a neat, consistent, even and standard manner. Apply strip of butyl rubber-based caulking compound along all end lap joints and passing over pre-drilled fixation holes. For fixation of metal sheet to "C" purlins and when lapped over another metal sheet. For fixation of flashing. Use Tek screws for roof eaves area, where roof frames are exposed.

**Sealants:** "CLASS A" Sealants shall be used in areas necessary to render structure watertight, sufficient even during strong winds

## **WATERPROOFING**

Apply with surface preparation, methods application and density as per manufacturer's specifications. Apply to all water holding concentrate vessels; like roof slabs, balcony, toilet slabs, parapets and concrete gutters.

## **TILES**

Use glazed tile for walls and unglazed tile for floors. Tiles must be soak to water for at-least 3 hours before installation. Refer to schedule of tiles.

1. **Mortar :** Use Portland Cement or any approved equivalent.
2. **Sand:** ASTM C 35 – 67, clean, washed river sand, strong, free from organic and other deleterious materials. Sand from salt water or lahar is not allowed.

3. **Water:** Fit for drinking, free from injurious amount of oil, acids, alkali, organic materials and other deleterious substances.
4. **Adhesive Mortar:** Use “CLASS A” for laying vitrified ceramic tiles and porcelain tiles.
5. **Grout:** Use “Class A” pre-mixed dry wall filler for floor and wall tile either glazed or semi-glazed tiles. Masonry concrete grout compressive strength (  $f_c'$  ) = 13.8 Mpa (2000 psi).
6. **Plaster Bond:** Use “Class A” or approved equal. Apply on all wall areas, as required, prior to plastering. Suppliers shall furnish product description prior to purchase and delivery.

## **CEMENT PLASTER FINISH**

**PLAIN CEMENT PLASTER FINISH:** Consisting of the scratch and finish coats. Use “CLASS A” for the base/scratch coat, and “CLASS A” for the finish coat. Refer to Manufacturer’s technical data for proper application. Shall apply for all beams and columns if fine finish cannot be achieved from off form finish and for all interior and exterior walls, and where plastering is essential to complete the work. Use Portland Cement or any approved equivalent.

**Sand:** ASTM C 35 – 67, clean, washed river sand, strong, free from organic and other deleterious materials. Sand from salt water or lahar is not allowed.

**Water:** Fit for drinking, free from injurious amount of oil, acids, alkali, organic materials and other deleterious substances

## **DECORATIVE STONE**

**Stone Cladding** shall be free from defects and in good quality. Stone Cladding shall be installed properly with cement mortar. No Stone shall be incorporated into the work without the sample and approval of the Center Heads/Engineers.

## **PAINTINGS (CEMENT, WOOD AND METAL)**

All paint and paint materials called for under this section shall be as manufactured by known manufacturer or owner approved equivalent and must be LEAD-FREE Paint. Use CLASS A only (one brand all throughout). All exposed finish hardware, lighting fixtures and accessories, plumbing fixtures and accessories, glasses and the like shall be adequately protected that these areas are not stained with paint and other painting materials prior to painting works. All other surfaces which would be endangered by stains or paint marks should be taped and covered with craft paper or equal.

**Exterior:** Use “CLASS A” paint PLAIN FINISH for all exterior finishes and as shown in the drawings and for all exposed and/or visible concrete and masonry surfaces, as well as for exterior HARDIFLEX surfaces unless otherwise specified.

**Surface Preparation:** Concrete and masonry surfaces must be fully cured for at least 14 days.

1<sup>st</sup> coat: Use Class A Concrete Primer And Sealer (as manufacturer instruction)

2<sup>nd</sup> coat: Use Class A Putty

3<sup>rd</sup> and 4<sup>th</sup> coats: Use Class A Concrete Primer and Sealer

**Interior:** USE “CLASS A” SKIM COAT PLAIN FINISH for minor interior walls indicated in the drawings and for all interior concrete and masonry surfaces unless otherwise specified.

**Surface Preparation:** Concrete and masonry surfaces must be fully cured for at least 14 days.

**Metal Surfaces:** Use “CLASS A” Liquid Tile. For ferrous surfaces such as steel and roof framing and other exposed steel surfaces unless otherwise specified.

**Surface Preparation:** Must be free from rust.

1<sup>st</sup> coat Use CLASS A Primer Red Oxide

2<sup>nd</sup> and 3<sup>rd</sup> coats: Use CLASS A Aqua Gloss-It

Use only approved brand of epoxy zinc chromate paint and linseed oil for all base coat painting for structural steel. For finish painting, use enamel paint or approved equal.

### **CONCRETE HOLLOW BLOCKS (CHB)**

**Exterior Walls** - Use 6" thk Load Bearing Concrete Hollow Block Units of standard manufacture, machine vibrated with even texture and well-defined edges, conforming to PNS16 Type 1, Class A, with a minimum compressive strength of 4.82 Mpa (700 psi) for exterior walls and all walls with embedded sanitary and drain pipes.

**Interior Walls** - Use 4" thk Load Bearing Concrete Hollow Block Units of standard manufacture, machine vibrated with even texture and well-defined edges, conforming to PNS16 Type 1, Class A, with a minimum compressive strength of 4.82 Mpa (700 psi)

**Steel Bars** – Use structural grade ASTM A615 Grade 40 deformed bars 12mmØ and below. Deformed bars shall be new and free from rust, oil, grease, defects or kinks. Upgrade to next bigger size if specified standard sizes are unavailable. Use Ga.16 Galvanized Iron (G.I.) tie wires at joints or laps of placed reinforcements.

Provide reinforced concrete lintel beams and jambs on all masonry openings.

1. **Cement** – Use “CLASS A” PORTLAND CEMENT or approved equivalent.
2. **Aggregates**
  - a. Aggregates shall be well-graded, clean, hard particles or gravel or crushed rock conforming to the STANDARD SPECIFICATION FOR CONCRETE AGGREGATES (ASTM Designation C-33: latest revision).
  - b. Sand – ASTM C 35 – 67, clean, washed river sand, strong, free from organic and other deleterious materials. Sand from salt water is not allowed.
3. **Water** – Shall be clean and free from injurious amounts of oils, acids, alkali, organic materials or other deleterious substances.

**PLAIN CEMENT PLASTER FINISH:** Consisting of the scratch and finish coats. Use “CLASS A” for the base/scratch coat, and “CLASS A” for the finish coat. Refer to Manufacturer’s technical data for proper application. Shall apply for all beams and columns if fine finish cannot be achieved from off form finish and for all interior and exterior walls, and where plastering is essential to complete the work. Use Portland Cement or any approved equivalent.

**Sand:** ASTM C 35 – 67, clean, washed river sand, strong, free from organic and other deleterious materials. Sand from salt water or lahar is not allowed.

**Water:** Fit for drinking, free from injurious amount of oil, acids, alkali, organic materials and other deleterious substances

### **STRUCTURAL STEEL (TRUSSES, PURLINS), METAL STRUCTURES AND ACCESSORIES**

Conform all materials and workmanship to the requirements of the American Institute of Steel Construction "Specifications for Design, Fabrication and Erection of Structural Steel for Buildings" as amended to date or as may be specifically modified by the drawings or by these Specifications.

Welding shall be performed by the metal-arc process, using the electrodes specified with either direct or alternating current. Conform all materials and workmanship to the requirements of the

American Institute of Steel Construction "Specifications for Design, Fabrication and Erection of Structural Steel for Buildings" as amended to date or as may be specifically modified by the drawings or by these Specifications. Welding of Structural Steel shall be done only when shown on the Plans or authorized in writing by the Engineer.

Surfaces to be welded shall be smooth, uniform and free from fins, tears, and other defects which would adversely affect the quality of the weld. Edges of material shall be trimmed by machining, chipping, grinding, or machine gas-cutting to produce a satisfactory welding edge wherever such edge is thicker than: 13 mm for sheared edge of material; 16 mm for toes of angles or rolled shapes (other than wide flange sections); 25 mm for universal mill plate or edges of flange sections.

No operation or actual welding or gas-cutting shall be performed on a member while it is carrying live load stress or while subject to shock and vibration and from moving loads. Welding and gas-cutting shall cease in advance of the application of such loads.

**Plates, Sheets, Flange and Connectors:** Conform to ASTM Designation A36 with specified yield point of 248 Mpa (36,000 psi). From mild steel sheets or plates with standard thickness, size, shape and design as indicated in the plans. For miscellaneous stiffener, bearing anchorage and connector plates or straps. Upgrade to next higher / bigger size and thickness if specified sizes & thicknesses are unavailable.

**Steel Pipes:** It shall conform to the requirements of ASTM A 53, ASTM A 120. AASHTO M 222 and ASTM A 618, as shown on the Plans or in the Special Provisions.

**Standard solid section:** Conform to ASTM 611 with specified yield point of 228 Mpa (33,000 psi). Mild steel angles, flat bars, square bars, channels, U and other sections. For purlins, building eaves framing, grill works, miscellaneous fabricated mounting brackets, straps, dowels, frames and connectors. Upgrade to next higher / bigger size and thickness if specified sizes & thickness are unavailable.

**Bolt Accessories:** Bolts, nuts circular washers shall conform to High-Strength Bolts for Structural Steel Joints, including Suitable Nuts and Plain Hardened Washer, AASHTO M 164 (ASTM A 325).

**Fastenings** - Commercial types, except where special types are shown or required. Fastenings for all exterior work shall be non-ferrous, unless otherwise shown. Fastening for stainless steel and aluminum and other interior work, where exposed shall match the fastened metal.

**Angle bars, Purlins and Rectangular Tube:** Conform to ASTM 611 with specified yield point of 228 Mpa (33,000 psi). Mild steel angles, flat bars, square bars, channels, U and other sections. For purlins, building eaves framing, grill works, miscellaneous fabricated mounting brackets, straps, dowels, frames and connectors. Refer to trusses and purlins schedule for thickness, size, shape and design. Refer to Sun-baffle schedule for rectangular tubing. Upgrade to next higher / bigger size and thickness if specified sizes & thicknesses are unavailable.

**Welding Electrodes:** Conform welding electrodes to ASTM Specification A233 and AWS Specification A5.1 and A5.5 E60 series for manual shielded metal arc welding and E-70 series for structural welding.

**Painting:** Use only approved brand of epoxy zinc chromate paint and linseed oil for all base coat painting for structural steel. For finish painting, use enamel paint or approved equal.

**Metal Hangers** - Use "CLASS A" or approved equal.

**Brass Iron** – 2" Ø pipe for ramps and stairs.

**Stainless Steel** – 38mm Ø pipe for CR grab bars

**Stair Nosing** – use 2.5” x 2.5” stair nosing and must be welded to the stair dowels before concreting

No operation or actual welding or gas-cutting shall be performed on a member while it is carrying live load stress or while subject to shock and vibration and from moving loads. Welding and gas-cutting shall cease in advance of the application of such loads.

## **PIPE CULVERTS**

Pipes shall be laid in the trench with all ends firmly joined by the applicable methods and means.

Trenches for blind drains shall be excavated to the width and depth shown on the Plans. The trench shall be filled with granular backfill material to the depth required by the Plans. Any remaining upper portion of trench shall be filled with either granular or impervious material in accordance with Item 103, Structure Excavation

After the pipe installation has been inspected and approved, granular backfill material shall be placed to a height of 300 mm above the top of pipe. Care shall be taken not to displace the pipe or the covering at open joints. The remainder of the granular backfill material shall then be placed and compacted in 150 mm maximum layers to the required height. Any remaining portion of trench above the granular backfill shall be filled with either granular or impervious material, as may be specified, and thoroughly compacted.

**Reinforced Concrete Pipe** shall be free from defects and must conform to AASHTO M170. Pipes used for drainage connecting manholes shall be 610mm inside diameter and 75mm wall thickness. Upgrade to next higher / bigger size and thickness if specified sizes & thicknesses are unavailable.

**Joint Mortar** – Joint mortar shall consist of 1 part, by volume of Portland Cement and two (2) parts of approved sand with water as necessary to obtain the required consistency.

**Portland Cement and sand** shall conform to the requirements of Item Structural Concrete. Mortar shall be used within 30 minutes after its preparation.

## **AMENITIES / DECORATIVE BAMBOO STRIPS/PLANTS**

To provide Bamboo sticks decor, at-least 1m length, 16mm in dia. To be installed at the plant cabinet with backlight.

## **ELECTRICAL WORKS & ELECTRONICS**

**WIRES AND CABLES:** Use “CLASS A THHN” or approved equal.

1. All wires shall be copper, soft-drawn and annealed, shall be of 99% conductivity, shall be smooth and true and of a cylindrical form and shall be within 1% of the actual size called for.
2. All wires and cables shall comply with the requirements of the Underwriter’s Laboratories, the A.S.T.M. and the I.P.C.E.A. EIA/TIA as they apply in the particulars.
3. Wire and cables for lighting power and auxiliary systems shall be plastic insulated for 600 volts working pressure, type THHN unless otherwise noted on plans.
4. For lighting and power system, no wire smaller than 2.0mm dia. shall be used.
5. All wires and cables shall be color-coded and as manufactured by cable manufacturers. Colors coding of wires are as follows:

Line A – Blue	Ground – Green
Line B – Red	
Line C – Yellow	Control wires – other color

6. No conductor shall be less than 3.5 mm<sup>2</sup> in size unless otherwise specified. 600-volts wires and cables should meet the requirements of NFPA 70 and UL for the type of insulation, jacket and conductor specified or indicated in all power and lighting wires shall be 600-volt, type THW or THHN.

**CONDUITS:** Use “CLASS A” Schedule 40 PVC for conduits embedded in concrete and inside ceiling. Use “CLASS A” or Rigid Steel Conduit (RSC) for main service entrance exposed to weather.

1. Metallic conduits for interior and exterior systems shall be a standard weight, mild steel, hot-dip galvanized with an interior coating. Non-metallic conduits shall be PVC electrical grade.
2. No conduits shall be used in any system smaller than 15mm dia. electrical trade size, nor shall have more than four 90-degree bends in any one run and when necessary, pull boxes shall be provided as directed. Location and sizes of pull boxes shall be cleared to the engineer prior to fabrication and installation.
3. No wires shall be pulled into any conduit unless the conduit system is complete in all details. In the case of concealed work, until all rough plastering or masonry has been completed and in the case of exposed work, until the conduit has been completed in every detail.
4. The ends of all conduits shall be tightly plugged to exclude plaster, dust and moisture while the building is in the process of construction.
5. All conduit and fittings on exposed work shall be secured by means of Kindoff channels and clamps. Conduit lay outing, in all cases shall run perfectly straight and true, satisfactory to the architect and to the engineer.

## **OUTLET, BOXES, AND FITTINGS**

1. Convenience Outlets: Use “CLASS A”, white color, 220V, 16 amperes or as required. For general building interior use.
2. Weatherproofed Outlets: Use “CLASS A”, double device plate with cover receptacle, heavy duty as indicated on drawings.
3. Boxes: Use “CLASS A” metal utility boxes, sizes and shapes as required.
4. All outlets of whatever kind, for all systems, these shall be provided with suitable fittings, which shall be either a box or other devices especially designed to receive the type of fittings to be mounted thereon.
5. The contractor shall consult with the architect and the engineers as to the nature of the various fittings to be used before installing the outlet fittings and shall conform strictly in the use of such fittings, to the nature of the appliance to be mounted on them, so that the work, when finished will be a completed design.
6. In the case of fixtures, the outlet fittings shall be provided with suitable fixture supports of a size and kind required by the fixture to be hung. Fixture studs in general shall be 9.375mm
7. At all outlets on concealed conduit work, provide galvanized deep-type pressed-steel, outlet boxes of standard make. These boxes shall be especially designed for apparatus required and, in all cases, where such boxes are not available on the market; special boxes shall be made by the contractor at his own expense. Outlet boxes shall be deep type gage # 16.

## **JUNCTION, and PULL BOXES**

Junction and pull boxes per code gage steel, shall only be subject to the permission of the engineer and be provided as indicated or as required for facilitating the pulling of wires and cables. Pull boxes in finished places shall be located and installed only with the permission of and to the satisfaction of the architect and engineer.

## **SWITCHES, AND OUTLETS**

1. Switches Use “CLASS A”, white color, flush type rate 220 volts to 16 amperes. Suited to location and intended purpose. Certain combinations shall be furnished with pilot lights as required where indicated on the drawings.
2. Switches shall be made of quick-connect terminal operated. The type of switch shall be tumbler operation. Samples shall be submitted prior to the purchase of wall switches and wall plates.
3. Receptacle, outlets shall be for flush mounting, duplex rated at 16 ampere, 250 volts, grounding type 3-wire, color: white. Samples of outlets and plates shall be submitted prior to purchase of devices.
4. Circuit Breakers: Use “CLASS A” or equivalent, bolt-on type, pre-painted, surface mounted, with latch lock.
5. Magnetic Starter: with NEMA-3 casing approved equal, surface mounted with latch lock.
6. METAL ENCLOSURES AND CABINETS Use “CLASS A” OR APPROVED EQUAL.

## **PANELS AND CABINETS**

**Panel Boards:** All Panel Boards shall comply with NEMA Standards. All Panel Boards shall be of dead-front construction, furnished with trims for flush or surface mounting, as required.

**Cabinets** shall be code gauge steel with gutters at least 150mm and wider, if necessary. The trim for all panels shall be finished in GRAY enamel over a rust inhibitor. Front doors shall be provided with concealed hinges.

**Lighting panels** shall be equipped with two-pole circuit breaker in the branch circuits and three-pole in the main unless noted otherwise on the plans. As indicated on plans, the panels shall be assembled in two or more sections when over 40 one-pole circuits. Ground bus terminals shall be a standard feature to the panel

**Panel Boards Buses:** Provide Copper bus. Support the bus bars on bases independent of the circuit breaker. Main buses and back pans shall be designed so those breakers may change without machining, drilling or tapping. Provide a separate ground bus marked with green stripe along its front and bonded the steel cabinet for type of conductor

**Circuit Breakers:** Circuit breaker shall be ambient compensated thermal magnetic type with interrupting capacity as indicated. Breaker terminals shall be UL listed as suited for type of conductor provided. Use Square-D or equivalent.

## **INDIVIDUAL BREAKERS, and SWITCHES**

Provide individual circuit breakers, and disconnect switches when indicated on the plans. Voltage rating shall be suitable in each case of service application.

Enclosure for indoor application shall be NEMA-1 and for outdoor application shall be NEMA-4X unless otherwise indicated in the plans.

All protective devices shall meet NEMA and Underwriter’s Laboratories, Inc. specifications.

1. Circuit breakers shall consist of a quick-make, quick-break type entirely trip-free operating mechanism contacts with arc interrupter and thermal-magnetic trip used for each pole and enclosed

in a molded phenolic case. The thermal-magnetic trip unit shall provide time delay overload protection and instantaneous short circuit protection and shall operate internal common-trip bar which will open all poles in case of overload or short circuit current in any one-pole. Circuit breaker shall be trip indicating with the tripped position of breaker midway between “ON” and “OFF” positions.

2. Only one single brand of circuit breakers shall be used on the entire project requirement. Acceptable brands are General Electric, Fuji Electric, Square D and Terasaki Electric. Submit brochures for approval.
3. Minimum interrupting capacities of each circuit breaker are indicated on the load schedule, application of circuit breakers shall be approved for the intended load per panel board schedule.
4. Safety and disconnect switches shall be non-fusible and of sizes indicated on plans and shall be normal duty type, except as noted otherwise. Enclosures shall be NEMA 1 for indoor use and NEMA 4X for outdoor use.

## **DISCONNECTING MEANS**

Disconnecting means shall be provided as indicated on the drawings and at each motor and appliance location. The disconnect may be omitted if the same are incorporated in motor controls supplied in other divisions. Unless otherwise noted on drawings, the disconnecting device shall be a momentary push button station that can be locked in the open position. This push-button shall be furnished, installed and connected by the Electrical Contractor.

Circuit breakers shall be used for current protection purposes and shall be enclosed in suitable metal housing of type required by location.

Un-fused safety switches shall be used where disconnecting means only are required and where the current supply to the same is protected by a circuit breaker at the panel boards. Provide disconnect switch at each motor locations where the same is not within sight of respective control starter, unless indicated otherwise on the drawings. All disconnecting switches shall be enclosed and fabricated from Gage # 16 fully protected against corrosion.

## **LOCATION OF WIRING AND OUTLETS**

The contractor shall coordinate his work with all trades involved so that exact locations may be obtained for all outlets, apparatus, appliances and equipment. The circuit numbers indicated as numbers 1, 2, 3, may not correspond to actual panel circuit connection numbers but must be balanced for better load distribution.

The location of outlets shown on diagrammatic wiring plans shall be considered as approximate and it shall be incumbent upon the Contractor, before installation of outlet boxes, to study all pertinent drawings and obtain precise information from the architectural schedules, scale drawings, large scale and full size details of finished rooms and the approved shop drawings of other trades or from the architect. In centering the outlets, due allowance shall be made for window and door trims, variations in thickness of pouring, plastering, etc., as erected, regardless of conditions which may be otherwise shown on small scale drawings. Outlets incorrectly located shall be properly relocated at the contractor's expense. Local switches shown near the doors shall be verified with the architect's drawings before installation.

## **SERVICES**

Power supply shall be three - phase

## **POWER AND LIGHTING DISTRIBUTION**

Furnish and install the lighting panels as indicated on plans and panel board's schedule. From the main breaker, install feeders to the various outlying panels, motors or equipment as shown on plans. Feeders shall be inside the ceiling with hangers, channel and clamps

## LIGHTING SYSTEMS

The lighting shall be complete in every respect, all as indicated on the plans or specified. All wiring's shall be installed in electrical non-metallic tubing using compression type fittings and connectors or as indicated in the plan and in general shall be concealed in the structure. Mounting heights of devices shall be as detailed on the plans or as follows:

- Local switches – 1370mm from center of device to finished floor Line
- Receptacles – 300mm above floor or 150mm above counter or As shown on architectural details.

## GROUNDING WORKS

Ground wires shall be bare copper, stranded, with sized as shown in the drawings and shall be of cylindrical form and variation shall be within 1% of the actual size called for. Grounding connectors shall be "CADWELD" type exothermic process. Contractor to test the grounding system to assure continuity and resistance to ground is not excessive. Submit written results of each test to the Engineer for approval. Ground resistance should be 25 ohms or less and 5 ohms or less for earth ground resistance.

## ELECTRICAL DISTRIBUTION SYSTEM

**Fluorescent Lighting Fixtures:** UL 1570, except lighting fixtures for damp and wet locations shall conform to UL 57.

**Fluorescent lighting fixtures** shall be T5 with Troffer Diffuser (90-95%) power factor and spring-loaded lamp holder.

**Fluorescent lamps:** Provide the number, type and voltage as indicated on the drawings. All fluorescent lamps shall be provided with retainer for safety or using the spring type fluorescent holder.

- A. LIGHTING FIXTURES AND ACCESSORIES: - Refer to plans.
  - 1. Lighting Fixtures – Refer to plans
- B. LOW-VOLTAGE DISTRIBUTION EQUIPMENT
  - 1. Door Chimes: provide brands subject to approval by Engineer.

## CLEANING-UP

The contractor shall at all times keep the construction area, including storage areas used by him, free from accumulations of waste materials or rubbish and prior to completion of work. Remove any rubbish from and about the premises and all tools, scaffolding, equipment and materials not the property of the owner.

Upon the completion of the construction, the contractor shall leave the work and premises in a condition satisfactory to the owner and the engineer.

## **PROJECT CLOSE-OUT**

Upon completion of the project, the following procedure shall be implemented:

1. Walk-thru inspection by the owner, engineer and contractor. Any discrepancy noted shall be fixed before the project is closed.
2. Compile a complete equipment maintenance manual for all equipment. Submit copy of “As-built” drawings to the owner and engineer.
3. Construction Logbook with complete data (template will be provided by DSWD) must be submitted to the owner/engineer.

\*\*\*\*\**END OF SPECIFICATIONS*\*\*\*\*\*

# ***Section VI. Specifications***

## **Lot 3 - Repair and Improvement of RRCY School Building and Training Center**

### **GENERAL REQUIREMENTS**

#### **RELATED SECTIONS**

All applicable provisions of the different divisions of the Specifications for each work trade shall apply for all items cited in this Summary.

#### **INFERRED ITEMS AND WORK**

Materials and workmanship deemed necessary to complete the works but NOT specifically mentioned in the Specifications, Working Drawings, or in the other Contract Documents, shall be supplied and installed by the Contractor without extra cost to the Owner. Such materials shall be of the highest quality available, and installed or applied in a workmanlike manner at prescribed or appropriate locations.

#### **SPECIFICS**

Materials specifically mentioned in this Summary shall be installed following efficient and sound engineering and construction practice, and especially as per manufacturer's application for installation specifications which shall govern all works alluded to in these Specifications.

#### **ON-SITE ITEMS**

Materials and finishes for on-site improvements and facilities as listed below are part of the scope of work and shall be supplied and installed by the Contractor without extra cost to the Owner.

- A. Construction of:
  - 1. Walks, ramps, steps, posts, perimeter fence and miscellaneous slabs;
  - 2. Concrete catch basins, drainage pipes;
  - 3. Temporary facilities and below grade structures such as septic vaults, cisterns, manholes, open canals, check drains and trenches;
- B. Exterior utility lines, raceway system, fixtures, breakers, switches, buzzers, controls including fittings and accessories as required by the specialty trades under plumbing, mechanical and electrical works.

#### **OFF-SITE ITEMS**

Off-site improvements shall generally be under the responsibility of the Owner and not included in the Contract, with the exception of the following which shall be part of the Contractor's Work:

- A. Construction of drainage lines. This work shall neatly connect to the storm drainage system along the road.
- B. Permanent connections to the local utility lines for electrical, water, drainage, sewer and telephone lines including equipment, facilities, materials, fees, and/or work which utility companies or authorities may require of the applicant Owner, such as electrical transformers, etc.

#### **WATER & ELECTRICITY CONNECTION**

- A. Temporary Water:** The Contractor shall supply in sufficient quantity all necessary potable and other water for construction purposes for all trades at a point within a reasonable distance of the

building being constructed. The Contractor shall make arrangements and pay charges for water service installation, maintenance, and removal thereof, and pay the costs of water for all trades.

- B. Temporary Electricity:** The Contractor shall make all necessary arrangements for a temporary electrical service, pay all expenses in connection with the installation, operation and removal thereof, and pay the costs of electricity consumed by all trades.

## **OWNER SUPPLIED ITEMS**

Owner supplied finishing accessories, furnishing and fixtures such as wall clocks, picture frames, fixed furniture etc., shall be installed by the Contractor at no cost to the Owner.

## **QUALITY CONTROL**

The Contractor shall be responsible for the quality control of all materials during the handling, blending, and mixing and placement operations. The Contractor shall furnish the Engineer a Quality Control Plan detailing his production control procedures and the type and frequency of sampling and testing to ensure that the materials and work produces complies with the Specifications. The Engineer shall be provided free access to recent plant production records, and if requested, informational copies of mix design, materials certifications and sampling and testing reports.

The Contractor shall perform all sampling, testing and inspection necessary to assure quality control of the component materials.

## **PERMITS AND CLEARANCES**

The Contractor shall facilitate the compliance of Building Permit, Occupancy Permit, Fencing Permit, Drainage Permit and other clearances before and after the completion of the project.

## **PROJECT BILLBOARD/SIGNBOARD**

Project Signage/COA signages shall be installed near the construction site or before the entrance gate and must be visible for the visitors. Signage must be printed in tarpaulin with wooden frame and plywood backing.

Signage sizes: Project Signage = 4ft. x 8ft.  
COA Signage = 8ft. x 8ft.

## **OCUPATIONAL SAFETY AND HEALTH**

Before the start of work, the contractor shall submit Health and Safety Plan with operational detail of his proposals to the engineer for his approval. The contractor must secure Construction Safety Certificate from DOLE and must implement safety measures during construction stage. The contractor shall provide safety signages within the construction vicinity.

## **MOBILIZATION & DEMOBILIZATION**

All equipment and materials delivered in the area must be functional and for project use only. No storing of materials and equipment in the area that is not intended for the specific project. Stored materials must be arranged in a proper manner and must have barricades and rain/water protection. After project completion, all materials and equipment must be removed in the area.

## **TEMPORARY FENCE**

The whole area affected for the project shall be fenced temporarily with necessary gates as directed by the Engineer. The site must be closed enough and must not be visible for the clients living in the center.

## **EARTHWORK**

### **STRUCTURE EXCAVATION**

All excavation for foundation, catch basins and piping shall be made to grades indicated in the drawings; where excavation will rest on fill, excavation shall be carried deeper until the desired stratum is reached for safe bearing capacity of the soil.

Where rock occurs and footings and walls are indicated to the rest on the same, the rock shall be leveled to a clean and even surface. Whenever water is encountered in the excavation process, it shall be removed by pumping, care being taken that the surrounding particles are not disturbed or removed.

### **EXCAVATION SUPPORT SYSTEM**

Types of shoring and bracing systems include, but are not limited to, the following:

1. Timber Lagging
2. Steel Scaffolds

Provide sufficient shoring and soil retention protection options to prevent displacement and damage to existing adjacent structures, and cave-ins.

### **EMBANKMENT, FILL AND BACKFILL**

Coarse-grained fill materials, such as stone fragments, sand and gravel mix, fine sand, silty or clayey sand and gravel, shall be laboratory approved from off-site source, passing a 75 mm (3") sieve. The fraction passing a 0.425 mm (no. 40) sieve shall have a liquid limit not to exceed 35% and plasticity index not exceeding 12%. Only coarse-grained fill materials shall be used inside buildings and under walkways.

Excavated material approved for use as backfill shall be free of stones larger than 2 inches in longest dimension, roots and organic materials.

Batter boards: Second class, pest free lumber assembled and rendered secure for proper delineation of building lines and grades.

The Contractor shall compact the material placed in all embankment layers and the material scarified to the designated depth below subgrade in cut sections, until a uniform density of not less than 95 mass percent of the maximum dry density is attained. At least one group of three in-situ density tests shall be carried out for each 500 m of each layer of compacted fill. The layer shall be placed not exceeding 200 mm in loose measurement or based on the result of compacted trials.

### **GRAVEL FILL**

All gavel laying shall be properly laid and properly compacted based on the plan specified.

### **SOFTSCAPE (GRASS)**

This item shall include placing of frog grass or Bermuda grass. This grass shall be delivered healthy and vigorous in growth and free from disease. Garden soil shall be free from termites and alien materials. Watering and maintenance of this grass shall be within 6 months after completion and acceptance.

## PAVER BLOCKS

The work included under this section comprises the furnishing of all materials, labor, equipment, and performance of all operations necessary to complete the installation of paver blocks as shown in the drawings, or as specified herein. All paver blocks must be laid on sand.

## PLAIN AND REINFORCED CONCRETE

### STRUCTURAL CONCRETE

**CEMENT** – Use “CLASS A” PORTLAND CEMENT Type 1 or approved equivalent.

### CONCRETE AGGREGATES

1. **Gravel:** Well graded, clean, hard particles of gravel or crushed rock conforming to the “STANDARD SPECIFICATIONS FOR CONCRETE AGGREGATES” (ASTM Designated C-33 latest revision). Use 25 mm (1”) maximum for slabs and 19 mm (3/4”) for columns and beams and retaining walls.
2. **Sand:** ASTM C 35 – 67, clean, washed river sand, strong, free from organic and other deleterious materials. Sand from salt water or lahar is not allowed.
3. Maximum size of aggregates shall not be larger than 1/5 of the narrowest dimension between sides of the forms, not larger than 3/5 of the maximum clear spacing between reinforcing bars, and in no case larger than 33 mm (1-1/3”) in diameter.

**WATER** - Use only water that is clean and free from injurious amounts of oils, acids, alkali, organic materials or other deleterious substances. Potable/ fit for human consumption.

### CONCRETE MIXES

1. Concrete compressive strength (f'c) requirements:

<i><b>I. Specified Compressive Strength</b></i>			
Class/Type	28 days		Item
	psi	mPa	
A	3000	28	For footings, columns, beams, lintels beam and stiffener columns, slab on grade and for all reinforced work not otherwise indicated or specified
B	1,500	10.34	For all concrete without reinforcement like lean concrete

2. Slump requirements:

Structural Element	Slump for vibrated concrete	
	Minimum	Maximum
Slab on grade, stair landing and tread	75 mm	125 mm
Other components	50 mm	100 mm

## CONCRETE ADDITIVES

1. Use "CLASS A" in the amounts as recommended by the manufacturer, with the approval of the Engineer.
2. **Plasticizer** – Use "CLASS A"
3. **Air-entraining admixtures** – Use "CLASS A" or approved equal to improve workability or durability of concrete mixes.
4. **Accelerators** – Use "CLASS A" or approved equal.
5. **Water Reducing Retarders** – Use "CLASS A" or approved equal.
6. **Integral Waterproofing Compound** – Use "CLASS A" or approved equal for roof slabs, balcony, concrete gutters, cisterns and media aguas. Refer to Manufacturer's manual/instruction for proper application.
7. **Calcium chloride** is not allowed. Secure approval of the Engineer prior to using of any other additive.

**NOTE: PLACEMENT DRAWINGS:** Shop drawings of each reinforcing steel detail and placement drawings shall be submitted for approval in accordance with the requirements of the General Conditions. Any material fabricated before final approval of the shop drawings will be done at Contractor's risk, but no material shall be placed until shop drawings have final approval. Shop drawings shall be in accordance with the "Manual of Standard Practice for Detailing Reinforced Concrete Structures" (ACI 315).

## REINFORCING STEEL (DEFORMED BARS)

**Steel Bars** – Use structural grade ASTM A615 Grade 40 for deformed bars 12mmØ and below. For 16mmØ and above, use structural grade ASTM 615 Grade 60. Deformed bars shall be new and free from rust, oil, grease, defects or kinks. Upgrade to next bigger size if specified standard sizes are unavailable.

Use Ga.16 Galvanized Iron (G.I.) tie wires at joints or laps of placed reinforcements.

**Steel reinforcement** shall be stored above the surface of the ground upon platforms, skids, or other supports and shall be protected as far as practicable from mechanical injury and surface deterioration caused by exposure to conditions producing rust. Distance from the forms shall be maintained by means of stays, blocks, ties, hangers, or other approved supports, so that it does not vary from the position indicated on the Plans. Reinforcement in any member shall be placed and then inspected and approved by the Engineer before the placing of concrete begins. Concrete placed in violation of this provision may be rejected and removal may be required.

**Splices:** Splices shall be staggered as far as possible and with a minimum separation of not less than 40 bar diameters. Lapped splices will not be permitted at locations where the concrete section is insufficient to provide minimum clear distance of one and one-third the maximum size of coarse aggregate between the splice and the nearest adjacent bar.

## FORMWORKS AND FALSEWORKS

1. Use Phenolic forms, plywood, metal or surfaced lumber forms, free from warp and gross deformities, sufficiently braced with solid lumber and applied with form release agent as its casting surface before each casting, where it will best give the most advantage in the specific concrete work involved.
2. For exposed reinforced concrete such as exposed beams and columns, use Phenolic forms or approved equivalent.
3. Provide 40mm-wide chamfers for all exposed corners of columns.
4. Do not use Coco lumber for formwork.
5. Use only good lumber or metal sections for forms.

## CIVIL / FINISHING WORKS

### WELDED STEEL WORKS

Welding shall be performed by the metal-arc process, using the electrodes specified with either direct or alternating current. Conform all materials and workmanship to the requirements of the American Institute of Steel Construction "Specifications for Design, Fabrication and Erection of Structural Steel for Buildings" as amended to date or as may be specifically modified by the drawings or by these Specifications. Welding of Structural Steel shall be done only when shown on the Plans or authorized in writing by the Engineer.

Surfaces to be welded shall be smooth, uniform and free from fins, tears, and other defects which would adversely affect the quality of the weld. Edges of material shall be trimmed by machining, chipping, grinding, or machine gas-cutting to produce a satisfactory welding edge wherever such edge is thicker than: 13 mm for sheared edge of material; 16 mm for toes of angles or rolled shapes (other than wide flange sections); 25 mm for universal mill plate or edges of flange sections.

No operation or actual welding or gas-cutting shall be performed on a member while it is carrying live load stress or while subject to shock and vibration and from moving loads. Welding and gas-cutting shall cease in advance of the application of such loads.

**Plates, Sheets, Flange and Connectors:** Conform to ASTM Designation A36 with specified yield point of 248 Mpa (36,000 psi). From mild steel sheets or plates with standard thickness, size, shape and design as indicated in the plans. For miscellaneous stiffener, bearing anchorage and connector plates or straps. Upgrade to next higher / bigger size and thickness if specified sizes & thicknesses are unavailable.

**Steel Pipes:** It shall conform to the requirements of ASTM A 53, ASTM A 120. AASHTO M 222 and ASTM A 618, as shown on the Plans or in the Special Provisions.

**Bolt Accessories:** Bolts, nuts circular washers shall conform to High-Strength Bolts for Structural Steel Joints, including Suitable Nuts and Plain Hardened Washer, AASHTO M 164 (ASTM A 325).

**Fastenings** - Commercial types, except where special types are shown or required. Fastenings for all exterior work shall be non-ferrous, unless otherwise shown. Fastening for stainless steel and aluminum and other interior work, where exposed shall match the fastened metal.

**Angle bars, Purlins and Rectangular Tube:** Conform to ASTM 611 with specified yield point of 228 Mpa (33,000 psi). Mild steel angles, flat bars, square bars, channels, U and other sections. For purlins, building eaves framing, grill works, miscellaneous fabricated mounting brackets, straps, dowels, frames and connectors. Refer to trusses and purlins schedule for thickness, size, shape and design. Refer to Sun-baffle schedule for rectangular tubing. Upgrade to next higher / bigger size and thickness if specified sizes & thicknesses are unavailable.

**Welding Electrodes:** Conform welding electrodes to ASTM Specification A233 and AWS Specification A5.1 and A5.5 E60 series for manual shielded metal arc welding and E-70 series for structural welding.

**Painting:** Use only approved brand of epoxy zinc chromate paint and linseed oil for all base coat painting for structural steel. For finish painting, use enamel paint or approved equal.

**Metal Hangers** - Use 12mm dia. Threaded rod or approved equal.

**Brass Iron** – 2" Ø pipe for ramps and stairs.

## SOIL POISONING

This section includes pouring of soil poisoning to earth laid with structure. No materials must be installed directly to the soil without the application of liquid soil poisoning. All materials whether specifically mentioned or not, but necessary to complete this item of work shall be furnished and installed in the best workmanship practice.

## CATCH BASIN, STORM DRAIN, DOWNSPOUT & CISTERN

**Downspouts:** shall be polyvinyl chloride (PVC) pipe series 1000 II, Use “CLASS A” with the same brand/type of materials.

**Fittings** shall be solvent cement joint conforming to ASTM D2564. Fittings shall be of the same brand with the pipes used or connected to.

**Storm Drain/Strainer:** Use stainless steel leaf Strainers. Submit sample for Engineer’s approval.

**Joint Mortar:** Joint mortar shall be composed of one part Portland Cement and two parts fine aggregate by volume to which hydrated lime has been added in an amount equal to 10 percent of the cement by weight. All materials for mortar shall meet the requirements of Item 405, Structural Concrete.

## SEPTIC VAULT

### BLACK P.E.

1. Use Black Recycled PE Vertical Purifying Septic Tank, 1000 liters capacity. The tank must be embedded below the ground and must have reinforced concrete top slab as protection for the tank cover.
2. Pipes including fittings shall be Polyvinyl Chloride (PVC) Pipes, series 1000 Class A, 102mm dia. free from defects.

## CONCRETE/CONCRETE HOLLOW BLOCK

1. **Pipes** including fittings shall be Polyvinyl Chloride (PVC) Pipes, series 1000 Class A, 102mm dia. free from defects.
2. **Portland Cement:** Use Use “CLASS A” or approved equivalent.
3. **Sand:** ASTM C 35 – 67, clean, washed river sand, strong, free from organic and other deleterious materials. Sand from salt water or lahar is not allowed.
4. Concrete Mortar compressive strength ( f'c ) = 13.8 Mpa (2000 psi).
5. **Steel Bars** –Deformed bars shall be new and free from rust, oil, grease, defects or kinks. Upgrade to next bigger size if specified standard sizes are unavailable.
6. Use Ga.16 Galvanized Iron (G.I.) tie wires at joints or laps of placed reinforcements.
7. Use 6” thk Load Bearing Concrete Hollow Block Units of standard manufacture, machine vibrated with even texture and well-defined edges, conforming to PNS16 Type 1, Class A, with a minimum compressive strength of 4.82 Mpa (700 psi)

## PLUMBING WORKS AND FIXTURES

All plumbing works herein shall be executed according to the requirements of Philippine national plumbing code and the rules and regulations of the existing local codes and ordinances or laws governing the implementation of the plumbing works.

Refer to all electrical, structural and architectural plans and specifications and investigate all possible interference and conditions affecting the plumbing works.

It is not intended that the drawing shall show every pipe fitting, valve and appliances. Furnish and install, if necessary, all such item specially mentioned or not, or indicated on the drawing, to complete the system in accordance to the best practice of the plumbing trade and satisfaction of the engineer/owner.

Perform all labor in a first-class, neat, workmanlike manner by specialist skilled in their trades, and such specialist and their work shall be satisfactory to the engineer.

#### **BASIC MATERIALS:**

1. Provide materials that are new and that conform with the standard of Underwriters laboratories. Inc.
2. For other miscellaneous required materials not specifically mentioned, Provide the best of the respective kind.
3. Submit samples of materials for approval as required by the engineer/owner

#### **PLUMBING FIXTURES:**

1. Install all plumbing fixtures free and open in a manner to access for Cleaning. Furnish with brackets, cleats, plates, and anchors required to Support the fixtures rigidly in place.
2. Keep away, at a sufficient distance but not less 1/2" (12.5 mm.) All service Pipes, valves, and fittings from surfaces and locations which may require Finish coats or covering.
3. Extend the piping to all fixtures, outlets, and equipment from required Gate valves installed in each branch near risers.

#### **SOIL, WASTE, DRAIN, AND VENT PIPINGS:**

1. Install all piping works in conformity with all provisions of the latest Edition of the Philippine national plumbing code and applicable requirements of the existing local codes.
2. Excavate to require depths and grades. All excavations required for the Installations of plumbing and drainage system when rock is encountered, Extend the excavation to a depth 150 mm. Below the pipe bottom of the pipe and rock surface with sand and approved material.
3. Lay water supply pipes and sewers in separate trenches.

#### **TRAPS**

1. Except for the presence of grease trap interceptor and other devices Where the trap is an integral part of the design. Equipped with a trap every Fixture and equipment requiring connections to the drainage system.
2. Set each trap as close as possible to the fixture served and render level with respect to their water seal.

#### **PIPES AND FITTINGS**

1. All materials to be used must be of high quality.
2. Air chamber to be provided for all water line outlets. All necessary fitting Shall be provided.
3. Teflon tape for all waterline connections applied to male threads only.
4. Make all joints air and water tight. For jointing pipes, use the following:
  - a. PVC& CPVC pipes: use appropriate couplers and glue at joints.
  - b. PPR pipes; when connecting with other pipe fittings, do not use, if possible, Male pipe fittings with conic thread and hemp as a sealing material to avoid Buckling stresses which act on female pipe fitting.

## GUARANTEE AND WARRANTY

1. The contractor shall guarantee all materials supplied and the work to be Free from factory defects and workmanship for a period of one (1) year.
2. Any material found to be defective during the time of construction shall be replaced by the contractor free of charge.

## SHUT - OFFS:

Provide the entire system with valve so located that the system or portion of it can be operated, replaced, and repaired, as well as affording complete Control of water supply to each group of fixtures. When required, provide also pressure reducing valve.

## CLEAN OUTS

For clean outs stemming from pvc, provide with long sweep quarter bends or one or two eight bends, extended to an easily accessible place, and generally where indicated in the drawings

## OTHERS

1. Provide cleanouts every 15meters for horizontal piping of more than 15 meters Pipes shall be installed as indicated, any relocation required for proper Execution of other trades shall be prior approval of the engineer.
2. Proposed sanitary utilities shall conform to the actual location, depth, and Invert elevations.
3. All fixtures shall be vented, unless otherwise indicated.

Plumbing fixtures shall be of dense, durable, non-absorbent materials and must have smooth, impervious surfaces, free from unnecessary concealed fouling surfaces. All porcelain enamel surfaces on plumbing fixtures shall be acid resistant. No water supply system or portion thereof shall be covered or concealed until it has been first inspected, tested and approved. The piping system shall be air tested or water tested. The contractor shall notify the Engineer in-charge that said work is ready for inspection.

1. **Cold Water Lines:** Shall be Polypropylene Plastherm (PN-20) PPR Pipes and Fittings, Use CLASS A or approved equal conforming to ISO 4065 standard dimensions, using manufacturer specified method of installation and connection.
2. **Valves:** ASTM B-61 & 62, ASTM A 197, PRICE PFISTER (U.S.), KITZ or CRANE or approved equal. For gate valves and check valves, cast brass, sizes as required in the drawings. 150 psig working connection
3. **Hose Bibb:** Stainless steel faucet for all toilet cubicles and for garden hoses size 12mm male inlet and 12mm hose thread, and Use "CLASS A" lever type with bronze body as indicated in the plans.
4. **Floor Drains:** METMA, M-200-D, MAB or approved equal, 150mm x 150mm (6"x6"). Floor drains shall connect into a trap so constructed that it can be readily cleaned and of a size to serve efficiently the purpose for which it is intended.
5. **Water Closet-** shall be vitreous China, siphon vortex design, close coupled make, flush tank, elongated front and free from defects.
6. **Urinal-** shall be porcelain make, installed at not less than 600mm from the finish floor line to the top of the overflow rim. An approved type vacuum breaker shall protect every water supply to a urinal or other approved backflow prevention device.
7. **Lavatory-** shall be wall hung, ceramic, oval type and free from defects. It shall be rigidly supported by metal supporting members or chairs so that no bending or pullout strain is transmitted to the wall.
8. **Kitchen Sink and Laundry tray-** shall be stainless steel gauge 304 make, hairline finish.
9. **Water Meter-** shall be the same size as to the diameter of the supply pipe, Heavy Duty, brand new and free from defects.

## CEILING, FACIA BOARD & DOUBLE WALL

1. **Fiber Cement Board:** Use “CLASS A”, Install as per manufacturer’s instructions. 6mm thick for all suspended ceilings and walls. 12mm thk. For Facia board on metal frame. See drawing details.
2. **Suspended Ceiling System:** Use 25mm x 50mm x 0.6mm thk metal furring, 12mmØ suspension rod, suspension clips, eyelets, attached to 2” X 4” X 1.2mm thk. C-Purlins Framing. Submit sample and mock-up before installation.
3. Provide edgings, trims and moldings and others as indicated in the drawings.
4. **Hardware and FASTENERS:** Use metal nails, screws, bolts, plates, straps, miscellaneous fasteners or anchorage concealed or countersunk whenever called for, with size, shape and type to ensure a rigid connection for laminated items and at other framing joints.
5. **METAL STUDS:** Use “CLASS A”, 38mm x 100mm x 1.5mm thk. Metal studs spaced at 400mm on center, both ways.

## SPANDREL CEILING

**Pre-formed Metal Spandrel:** Use Pre-painted, Oven-baked Galvanized Metal Sheets, 0.4mm thk. for spandrel with pre-fabricated ventilation holes. Submit sample for Engineer’s approval.

## GRANITE SLAB COUNTERS

Use Quartz granite tiles for kitchen/lounge counters. Granite slabs shall be free from defects and in good quality. Granite Slabs shall be installed properly with approved consumables and other accessories. No Stone shall be incorporated into the work without the sample and approval of the end users/Engineers.

## CABINETRY WORKS

Laminated Marine boards shall be installed for cabinets and must have aT nominal thickness of 18mm with complete accessories. All cutting edges must have PVC lining. The following items are needed for the following

1. **Cabinets-** use ¾” Laminated marine plywood with PVC edging
2. **Hinges-** use heavy duty soft closing concealed hinges
3. **Handle** – use alum C-handle hafele CAT. NO. 12621902
4. **Pull out baskets** – use stainless steel 304 with runners

## DOORS (WOODEN)

**DOORS** must be solid panel, sound and thoroughly seasoned, warp free, treated with pressure impregnated “CLASS A” preservative or approved equal, smooth and level on one side or wherever in contact with paneling for nailers, and all wooden members hidden from viewer.

**Viewing Panel:** Should be 6mm thick tempered glass. Use Class A and install as per manufacturers instruction.

Use “CLASS A” for all door hardware (Schlage or Hafele or approved equivalent), and closet hardware except where indicated otherwise. Provide Master Key for the entire house, for all cylindrical locksets and deadbolt locking devices.

### **Jambs:**

Use 150mm x 50mm kiln-dried, treated S4S, sound, hard and free from lumber.  
Use one color or shade for assembly framing which are exposed. Provide with wood trim for all wooden doors.

**Hardware and Fasteners:** Use metal nails, screws, bolts, plates, straps, miscellaneous fasteners or anchorage concealed or countersunk whenever called for, with size, shape and type to ensure a rigid connection for laminated items and at other framing joints.

## **DOORS (STEEL)**

**Steel Door** must be 2.1m in height and 1m in width with panic door locks. Must be fire rated doors

## **WINDOWS, GLASS DOOR & GLASS WALL**

**Jalousie windows** shall be 6mm thk. tempered glass with heavy duty jalouplus frame. Refer to schedule of windows.

**Awning Windows** shall be 3/8" thk. Tempered glass on aluminum frame.

**Glass Wall** shall be 12mm thk. Tempered Glass on aluminum frame. This wall shall be fixed in full height from finished floor line to the concrete ceiling.

**Glass Door** shall be 12mm thk. Tempered Glass, frameless with 38mm dia. Stainless steel H-Handle and concealed door closer.

**Sealants:** "CLASS A" Sealants shall be used in both sides necessary to carry the structure, watertight and sufficient even during strong winds

## **METAL ROOFING SHEETS, FLASHINGS, GUTTER AND ACCESSORIES**

**Pre-formed Metal Roofing:** Use Pre-painted, Oven-baked Galvanized Metal Sheets, 0.6mm thk. for flashings, gutter, ridge rolls, valley rolls and roofing. All sheets must be free from scratches and daints. Submit sample and mills certificate for Engineer's approval.

**Strainer:** Use "CLASS A" Stainless steel 304 Dome Strainers. Submit sample for Engineer's approval.

**Fasteners and Fixation:** Use appropriate connectors as recommended by the manufacturer and approved by the Architect. Paint same color as roof, all exposed fixation and fastening devices. Apply fasteners in a neat, consistent, even and standard manner. Apply strip of butyl rubber-based caulking compound along all end lap joints and passing over pre-drilled fixation holes. For fixation of metal sheet to "C" purlins and when lapped over another metal sheet. For fixation of flashing. Use Tek screws for roof eaves area, where roof frames are exposed.

**Sealants:** "CLASS A" Sealants shall be used in areas necessary to render structure watertight, sufficient even during strong winds

## **WATERPROOFING**

Apply with surface preparation, methods application and density as per manufacturer's specifications. Apply to all water holding concentrate vessels; like roof slabs, balcony, toilet slabs, parapets and concrete gutters.

## **TILES**

Use glazed tile for walls and unglazed tile for floors. Tiles must be soak to water for at-least 3 hours before installation. Refer to schedule of tiles.

1. **Mortar :** Use Portland Cement or any approved equivalent.
2. **Sand:** ASTM C 35 – 67, clean, washed river sand, strong, free from organic and other deleterious materials. Sand from salt water or lahar is not allowed.

3. **Water:** Fit for drinking, free from injurious amount of oil, acids, alkali, organic materials and other deleterious substances.
4. **Adhesive Mortar:** Use “CLASS A” for laying vitrified ceramic tiles and porcelain tiles.
5. **Grout:** Use “Class A” pre-mixed dry wall filler for floor and wall tile either glazed or semi-glazed tiles. Masonry concrete grout compressive strength (  $f_c'$  ) = 13.8 Mpa (2000 psi).
6. **Plaster Bond:** Use “Class A” or approved equal. Apply on all wall areas, as required, prior to plastering. Suppliers shall furnish product description prior to purchase and delivery.

## **CEMENT PLASTER FINISH**

**PLAIN CEMENT PLASTER FINISH:** Consisting of the scratch and finish coats. Use “CLASS A” for the base/scratch coat, and “CLASS A” for the finish coat. Refer to Manufacturer’s technical data for proper application. Shall apply for all beams and columns if fine finish cannot be achieved from off form finish and for all interior and exterior walls, and where plastering is essential to complete the work. Use Portland Cement or any approved equivalent.

**Sand:** ASTM C 35 – 67, clean, washed river sand, strong, free from organic and other deleterious materials. Sand from salt water or lahar is not allowed.

**Water:** Fit for drinking, free from injurious amount of oil, acids, alkali, organic materials and other deleterious substances

## **DECORATIVE STONE**

**Stone Cladding** shall be free from defects and in good quality. Stone Cladding shall be installed properly with cement mortar. No Stone shall be incorporated into the work without the sample and approval of the Center Heads/Engineers.

## **PAINTINGS (CEMENT, WOOD AND METAL)**

All paint and paint materials called for under this section shall be as manufactured by known manufacturer or owner approved equivalent and must be LEAD-FREE Paint. Use CLASS A only (one brand all throughout). All exposed finish hardware, lighting fixtures and accessories, plumbing fixtures and accessories, glasses and the like shall be adequately protected that these areas are not stained with paint and other painting materials prior to painting works. All other surfaces which would be endangered by stains or paint marks should be taped and covered with craft paper or equal.

**Exterior:** Use “CLASS A” paint PLAIN FINISH for all exterior finishes and as shown in the drawings and for all exposed and/or visible concrete and masonry surfaces, as well as for exterior HARDIFLEX surfaces unless otherwise specified.

**Surface Preparation:** Concrete and masonry surfaces must be fully cured for at least 14 days.

1<sup>st</sup> coat: Use Class A Concrete Primer And Sealer (as manufacturer instruction)

2<sup>nd</sup> coat: Use Class A Putty

3<sup>rd</sup> and 4<sup>th</sup> coats: Use Class A Concrete Primer and Sealer

**Interior:** USE “CLASS A” SKIM COAT PLAIN FINISH for minor interior walls indicated in the drawings and for all interior concrete and masonry surfaces unless otherwise specified.

**Surface Preparation:** Concrete and masonry surfaces must be fully cured for at least 14 days.

**Metal Surfaces:** Use “CLASS A” Liquid Tile. For ferrous surfaces such as steel and roof framing and other exposed steel surfaces unless otherwise specified.

**Surface Preparation:** Must be free from rust.

1<sup>st</sup> coat Use CLASS A Primer Red Oxide

2<sup>nd</sup> and 3<sup>rd</sup> coats: Use CLASS A Aqua Gloss-It

Use only approved brand of epoxy zinc chromate paint and linseed oil for all base coat painting for structural steel. For finish painting, use enamel paint or approved equal.

### **CONCRETE HOLLOW BLOCKS (CHB)**

**Exterior Walls** - Use 6" thk Load Bearing Concrete Hollow Block Units of standard manufacture, machine vibrated with even texture and well-defined edges, conforming to PNS16 Type 1, Class A, with a minimum compressive strength of 4.82 Mpa (700 psi) for exterior walls and all walls with embedded sanitary and drain pipes.

**Interior Walls** - Use 4" thk Load Bearing Concrete Hollow Block Units of standard manufacture, machine vibrated with even texture and well-defined edges, conforming to PNS16 Type 1, Class A, with a minimum compressive strength of 4.82 Mpa (700 psi)

**Steel Bars** – Use structural grade ASTM A615 Grade 40 deformed bars 12mmØ and below. Deformed bars shall be new and free from rust, oil, grease, defects or kinks. Upgrade to next bigger size if specified standard sizes are unavailable. Use Ga.16 Galvanized Iron (G.I.) tie wires at joints or laps of placed reinforcements.

Provide reinforced concrete lintel beams and jambs on all masonry openings.

1. **Cement** – Use “CLASS A” PORTLAND CEMENT or approved equivalent.
2. **Aggregates**
  - a. Aggregates shall be well-graded, clean, hard particles or gravel or crushed rock conforming to the STANDARD SPECIFICATION FOR CONCRETE AGGREGATES (ASTM Designation C-33: latest revision).
  - b. Sand – ASTM C 35 – 67, clean, washed river sand, strong, free from organic and other deleterious materials. Sand from salt water is not allowed.
3. **Water** – Shall be clean and free from injurious amounts of oils, acids, alkali, organic materials or other deleterious substances.

**PLAIN CEMENT PLASTER FINISH:** Consisting of the scratch and finish coats. Use “CLASS A” for the base/scratch coat, and “CLASS A” for the finish coat. Refer to Manufacturer’s technical data for proper application. Shall apply for all beams and columns if fine finish cannot be achieved from off form finish and for all interior and exterior walls, and where plastering is essential to complete the work. Use Portland Cement or any approved equivalent.

**Sand:** ASTM C 35 – 67, clean, washed river sand, strong, free from organic and other deleterious materials. Sand from salt water or lahar is not allowed.

**Water:** Fit for drinking, free from injurious amount of oil, acids, alkali, organic materials and other deleterious substances

### **STRUCTURAL STEEL (TRUSSES, PURLINS), METAL STRUCTURES AND ACCESSORIES**

Conform all materials and workmanship to the requirements of the American Institute of Steel Construction "Specifications for Design, Fabrication and Erection of Structural Steel for Buildings" as amended to date or as may be specifically modified by the drawings or by these Specifications.

Welding shall be performed by the metal-arc process, using the electrodes specified with either direct or alternating current. Conform all materials and workmanship to the requirements of the

American Institute of Steel Construction "Specifications for Design, Fabrication and Erection of Structural Steel for Buildings" as amended to date or as may be specifically modified by the drawings or by these Specifications. Welding of Structural Steel shall be done only when shown on the Plans or authorized in writing by the Engineer.

Surfaces to be welded shall be smooth, uniform and free from fins, tears, and other defects which would adversely affect the quality of the weld. Edges of material shall be trimmed by machining, chipping, grinding, or machine gas-cutting to produce a satisfactory welding edge wherever such edge is thicker than: 13 mm for sheared edge of material; 16 mm for toes of angles or rolled shapes (other than wide flange sections); 25 mm for universal mill plate or edges of flange sections.

No operation or actual welding or gas-cutting shall be performed on a member while it is carrying live load stress or while subject to shock and vibration and from moving loads. Welding and gas-cutting shall cease in advance of the application of such loads.

**Plates, Sheets, Flange and Connectors:** Conform to ASTM Designation A36 with specified yield point of 248 Mpa (36,000 psi). From mild steel sheets or plates with standard thickness, size, shape and design as indicated in the plans. For miscellaneous stiffener, bearing anchorage and connector plates or straps. Upgrade to next higher / bigger size and thickness if specified sizes & thicknesses are unavailable.

**Steel Pipes:** It shall conform to the requirements of ASTM A 53, ASTM A 120. AASHTO M 222 and ASTM A 618, as shown on the Plans or in the Special Provisions.

**Standard solid section:** Conform to ASTM 611 with specified yield point of 228 Mpa (33,000 psi). Mild steel angles, flat bars, square bars, channels, U and other sections. For purlins, building eaves framing, grill works, miscellaneous fabricated mounting brackets, straps, dowels, frames and connectors. Upgrade to next higher / bigger size and thickness if specified sizes & thickness are unavailable.

**Bolt Accessories:** Bolts, nuts circular washers shall conform to High-Strength Bolts for Structural Steel Joints, including Suitable Nuts and Plain Hardened Washer, AASHTO M 164 (ASTM A 325).

**Fastenings** - Commercial types, except where special types are shown or required. Fastenings for all exterior work shall be non-ferrous, unless otherwise shown. Fastening for stainless steel and aluminum and other interior work, where exposed shall match the fastened metal.

**Angle bars, Purlins and Rectangular Tube:** Conform to ASTM 611 with specified yield point of 228 Mpa (33,000 psi). Mild steel angles, flat bars, square bars, channels, U and other sections. For purlins, building eaves framing, grill works, miscellaneous fabricated mounting brackets, straps, dowels, frames and connectors. Refer to trusses and purlins schedule for thickness, size, shape and design. Refer to Sun-baffle schedule for rectangular tubing. Upgrade to next higher / bigger size and thickness if specified sizes & thicknesses are unavailable.

**Welding Electrodes:** Conform welding electrodes to ASTM Specification A233 and AWS Specification A5.1 and A5.5 E60 series for manual shielded metal arc welding and E-70 series for structural welding.

**Painting:** Use only approved brand of epoxy zinc chromate paint and linseed oil for all base coat painting for structural steel. For finish painting, use enamel paint or approved equal.

**Metal Hangers** - Use "CLASS A" or approved equal.

**Brass Iron** – 2" Ø pipe for ramps and stairs.

**Stainless Steel** – 38mm Ø pipe for CR grab bars

**Stair Nosing** – use 2.5” x 2.5” stair nosing and must be welded to the stair dowels before concreting

No operation or actual welding or gas-cutting shall be performed on a member while it is carrying live load stress or while subject to shock and vibration and from moving loads. Welding and gas-cutting shall cease in advance of the application of such loads.

## **PIPE CULVERTS**

Pipes shall be laid in the trench with all ends firmly joined by the applicable methods and means.

Trenches for blind drains shall be excavated to the width and depth shown on the Plans. The trench shall be filled with granular backfill material to the depth required by the Plans. Any remaining upper portion of trench shall be filled with either granular or impervious material in accordance with Item 103, Structure Excavation

After the pipe installation has been inspected and approved, granular backfill material shall be placed to a height of 300 mm above the top of pipe. Care shall be taken not to displace the pipe or the covering at open joints. The remainder of the granular backfill material shall then be placed and compacted in 150 mm maximum layers to the required height. Any remaining portion of trench above the granular backfill shall be filled with either granular or impervious material, as may be specified, and thoroughly compacted.

**Reinforced Concrete Pipe** shall be free from defects and must conform to AASHTO M170. Pipes used for drainage connecting manholes shall be 610mm inside diameter and 75mm wall thickness. Upgrade to next higher / bigger size and thickness if specified sizes & thicknesses are unavailable.

**Joint Mortar** – Joint mortar shall consist of 1 part, by volume of Portland Cement and two (2) parts of approved sand with water as necessary to obtain the required consistency.

**Portland Cement and sand** shall conform to the requirements of Item Structural Concrete. Mortar shall be used within 30 minutes after its preparation.

## **AMENITIES / DECORATIVE BAMBOO STRIPS/PLANTS**

To provide Bamboo sticks decor, at-least 1m length, 16mm in dia. To be installed at the plant cabinet with backlight.

## **ELECTRICAL WORKS & ELECTRONICS**

**WIRES AND CABLES:** Use “CLASS A THHN” or approved equal.

1. All wires shall be copper, soft-drawn and annealed, shall be of 99% conductivity, shall be smooth and true and of a cylindrical form and shall be within 1% of the actual size called for.
2. All wires and cables shall comply with the requirements of the Underwriter’s Laboratories, the A.S.T.M. and the I.P.C.E.A. EIA/TIA as they apply in the particulars.
3. Wire and cables for lighting power and auxiliary systems shall be plastic insulated for 600 volts working pressure, type THHN unless otherwise noted on plans.
4. For lighting and power system, no wire smaller than 2.0mm dia. shall be used.
5. All wires and cables shall be color-coded and as manufactured by cable manufacturers. Colors coding of wires are as follows:

Line A – Blue	Ground – Green
Line B – Red	
Line C – Yellow	Control wires – other color

6. No conductor shall be less than 3.5 mm<sup>2</sup> in size unless otherwise specified. 600-volts wires and cables should meet the requirements of NFPA 70 and UL for the type of insulation, jacket and conductor specified or indicated in all power and lighting wires shall be 600-volt, type THW or THHN.

**CONDUITS:** Use “CLASS A” Schedule 40 PVC for conduits embedded in concrete and inside ceiling. Use “CLASS A” or Rigid Steel Conduit (RSC) for main service entrance exposed to weather.

1. Metallic conduits for interior and exterior systems shall be a standard weight, mild steel, hot-dip galvanized with an interior coating. Non-metallic conduits shall be PVC electrical grade.
2. No conduits shall be used in any system smaller than 15mm dia. electrical trade size, nor shall have more than four 90-degree bends in any one run and when necessary, pull boxes shall be provided as directed. Location and sizes of pull boxes shall be cleared to the engineer prior to fabrication and installation.
3. No wires shall be pulled into any conduit unless the conduit system is complete in all details. In the case of concealed work, until all rough plastering or masonry has been completed and in the case of exposed work, until the conduit has been completed in every detail.
4. The ends of all conduits shall be tightly plugged to exclude plaster, dust and moisture while the building is in the process of construction.
5. All conduit and fittings on exposed work shall be secured by means of Kindoff channels and clamps. Conduit lay outing, in all cases shall run perfectly straight and true, satisfactory to the architect and to the engineer.

## **OUTLET, BOXES, AND FITTINGS**

1. Convenience Outlets: Use “CLASS A”, white color, 220V, 16 amperes or as required. For general building interior use.
2. Weatherproofed Outlets: Use “CLASS A”, double device plate with cover receptacle, heavy duty as indicated on drawings.
3. Boxes: Use “CLASS A” metal utility boxes, sizes and shapes as required.
4. All outlets of whatever kind, for all systems, these shall be provided with suitable fittings, which shall be either a box or other devices especially designed to receive the type of fittings to be mounted thereon.
5. The contractor shall consult with the architect and the engineers as to the nature of the various fittings to be used before installing the outlet fittings and shall conform strictly in the use of such fittings, to the nature of the appliance to be mounted on them, so that the work, when finished will be a completed design.
6. In the case of fixtures, the outlet fittings shall be provided with suitable fixture supports of a size and kind required by the fixture to be hung. Fixture studs in general shall be 9.375mm
7. At all outlets on concealed conduit work, provide galvanized deep-type pressed-steel, outlet boxes of standard make. These boxes shall be especially designed for apparatus required and, in all cases, where such boxes are not available on the market; special boxes shall be made by the contractor at his own expense. Outlet boxes shall be deep type gage # 16.

## **JUNCTION, and PULL BOXES**

Junction and pull boxes per code gage steel, shall only be subject to the permission of the engineer and be provided as indicated or as required for facilitating the pulling of wires and cables. Pull boxes in finished places shall be located and installed only with the permission of and to the satisfaction of the architect and engineer.

## **SWITCHES, AND OUTLETS**

1. Switches Use “CLASS A”, white color, flush type rate 220 volts to 16 amperes. Suited to location and intended purpose. Certain combinations shall be furnished with pilot lights as required where indicated on the drawings.
2. Switches shall be made of quick-connect terminal operated. The type of switch shall be tumbler operation. Samples shall be submitted prior to the purchase of wall switches and wall plates.
3. Receptacle, outlets shall be for flush mounting, duplex rated at 16 ampere, 250 volts, grounding type 3-wire, color: white. Samples of outlets and plates shall be submitted prior to purchase of devices.
4. Circuit Breakers: Use “CLASS A” or equivalent, bolt-on type, pre-painted, surface mounted, with latch lock.
5. Magnetic Starter: with NEMA-3 casing approved equal, surface mounted with latch lock.
6. METAL ENCLOSURES AND CABINETS Use “CLASS A” OR APPROVED EQUAL.

## **PANELS AND CABINETS**

**Panel Boards:** All Panel Boards shall comply with NEMA Standards. All Panel Boards shall be of dead-front construction, furnished with trims for flush or surface mounting, as required.

**Cabinets** shall be code gage steel with gutters at least 150mm and wider, if necessary. The trim for all panels shall be finished in GRAY enamel over a rust inhibitor. Front doors shall be provided with concealed hinges.

**Lighting panels** shall be equipped with two-pole circuit breaker in the branch circuits and three-pole in the main unless noted otherwise on the plans. As indicated on plans, the panels shall be assembled in two or more sections when over 40 one-pole circuits. Ground bus terminals shall be a standard feature to the panel

**Panel Boards Buses:** Provide Copper bus. Support the bus bars on bases independent of the circuit breaker. Main buses and back pans shall be designed so those breakers may change without machining, drilling or tapping. Provide a separate ground bus marked with green stripe along its front and bonded the steel cabinet for type of conductor

**Circuit Breakers:** Circuit breaker shall be ambient compensated thermal magnetic type with interrupting capacity as indicated. Breaker terminals shall be UL listed as suited for type of conductor provided. Use Square-D or equivalent.

## **INDIVIDUAL BREAKERS, and SWITCHES**

Provide individual circuit breakers, and disconnect switches when indicated on the plans. Voltage rating shall be suitable in each case of service application.

Enclosure for indoor application shall be NEMA-1 and for outdoor application shall be NEMA-4X unless otherwise indicated in the plans.

All protective devices shall meet NEMA and Underwriter’s Laboratories, Inc. specifications.

1. Circuit breakers shall consist of a quick-make, quick-break type entirely trip-free operating mechanism contacts with arc interrupter and thermal-magnetic trip used for each pole and enclosed

in a molded phenolic case. The thermal-magnetic trip unit shall provide time delay overload protection and instantaneous short circuit protection and shall operate internal common-trip bar which will open all poles in case of overload or short circuit current in any one-pole. Circuit breaker shall be trip indicating with the tripped position of breaker midway between “ON” and “OFF” positions.

2. Only one single brand of circuit breakers shall be used on the entire project requirement. Acceptable brands are General Electric, Fuji Electric, Square D and Terasaki Electric. Submit brochures for approval.
3. Minimum interrupting capacities of each circuit breaker are indicated on the load schedule, application of circuit breakers shall be approved for the intended load per panel board schedule.
4. Safety and disconnect switches shall be non-fusible and of sizes indicated on plans and shall be normal duty type, except as noted otherwise. Enclosures shall be NEMA 1 for indoor use and NEMA 4X for outdoor use.

## **DISCONNECTING MEANS**

Disconnecting means shall be provided as indicated on the drawings and at each motor and appliance location. The disconnect may be omitted if the same are incorporated in motor controls supplied in other divisions. Unless otherwise noted on drawings, the disconnecting device shall be a momentary push button station that can be locked in the open position. This push-button shall be furnished, installed and connected by the Electrical Contractor.

Circuit breakers shall be used for current protection purposes and shall be enclosed in suitable metal housing of type required by location.

Un-fused safety switches shall be used where disconnecting means only are required and where the current supply to the same is protected by a circuit breaker at the panel boards. Provide disconnect switch at each motor locations where the same is not within sight of respective control starter, unless indicated otherwise on the drawings. All disconnecting switches shall be enclosed and fabricated from Gage # 16 fully protected against corrosion.

## **LOCATION OF WIRING AND OUTLETS**

The contractor shall coordinate his work with all trades involved so that exact locations may be obtained for all outlets, apparatus, appliances and equipment. The circuit numbers indicated as numbers 1, 2, 3, may not correspond to actual panel circuit connection numbers but must be balanced for better load distribution.

The location of outlets shown on diagrammatic wiring plans shall be considered as approximate and it shall be incumbent upon the Contractor, before installation of outlet boxes, to study all pertinent drawings and obtain precise information from the architectural schedules, scale drawings, large scale and full-size details of finished rooms and the approved shop drawings of other trades or from the architect. In centering the outlets, due allowance shall be made for window and door trims, variations in thickness of pouring, plastering, etc., as erected, regardless of conditions which may be otherwise shown on small scale drawings. Outlets incorrectly located shall be properly relocated at the contractor's expense. Local switches shown near the doors shall be verified with the architect's drawings before installation.

## **SERVICES**

Power supply shall be three - phase

## **POWER AND LIGHTING DISTRIBUTION**

Furnish and install the lighting panels as indicated on plans and panel board's schedule. From the main breaker, install feeders to the various outlying panels, motors or equipment as shown on plans. Feeders shall be inside the ceiling with hangers, channel and clamps

## LIGHTING SYSTEMS

The lighting shall be complete in every respect, all as indicated on the plans or specified. All wiring's shall be installed in electrical non-metallic tubing using compression type fittings and connectors or as indicated in the plan and in general shall be concealed in the structure. Mounting heights of devices shall be as detailed on the plans or as follows:

- Local switches – 1370mm from center of device to finished floor Line
- Receptacles – 300mm above floor or 150mm above counter or As shown on architectural details.

## GROUNDING WORKS

Ground wires shall be bare copper, stranded, with sized as shown in the drawings and shall be of cylindrical form and variation shall be within 1% of the actual size called for. Grounding connectors shall be "CADWELD" type exothermic process. Contractor to test the grounding system to assure continuity and resistance to ground is not excessive. Submit written results of each test to the Engineer for approval. Ground resistance should be 25 ohms or less and 5 ohms or less for earth ground resistance.

## ELECTRICAL DISTRIBUTION SYSTEM

**Fluorescent Lighting Fixtures:** UL 1570, except lighting fixtures for damp and wet locations shall conform to UL 57.

**Fluorescent lighting fixtures** shall be T5 with Troffer Diffuser (90-95%) power factor and spring-loaded lamp holder.

**Fluorescent lamps:** Provide the number, type and voltage as indicated on the drawings. All fluorescent lamps shall be provided with retainer for safety or using the spring type fluorescent holder.

- A. LIGHTING FIXTURES AND ACCESSORIES: - Refer to plans.
  - 1. Lighting Fixtures – Refer to plans
- B. LOW-VOLTAGE DISTRIBUTION EQUIPMENT
  - 1. Door Chimes: provide brands subject to approval by Engineer.

## CLEANING-UP

The contractor shall at all times keep the construction area, including storage areas used by him, free from accumulations of waste materials or rubbish and prior to completion of work. Remove any rubbish from and about the premises and all tools, scaffolding, equipment and materials not the property of the owner.

Upon the completion of the construction, the contractor shall leave the work and premises in a condition satisfactory to the owner and the engineer.

## PROJECT CLOSE-OUT

Upon completion of the project, the following procedure shall be implemented:

1. Walk-thru inspection by the owner, engineer and contractor. Any discrepancy noted shall be fixed before the project is closed.
2. Compile a complete equipment maintenance manual for all equipment. Submit copy of “As-built” drawings to the owner and engineer.
3. Construction Logbook with complete data (template will be provided by DSWD) must be submitted to the owner/engineer.

\*\*\*\*\**END OF SPECIFICATIONS*\*\*\*\*\*

## ***Section VII. Drawings***

*[Insert here a list of Drawings. The actual Drawings, including site plans, should be attached to this section, or annexed in a separate folder.]*

## *Section VIII. Bill of Quantities*

LOT 1 - Improvement of RRCY Visitors Lounge' Ground and Facilities					
ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
<b>PART I: GENERAL REQUIREMENTS</b>					
1.1	Project Billboard/Signboard -1set 4'X8' Construction Tarpaulin -1set 8'x8' COA Tarpaulin	1.00	Set		
1.2	Mobilization and Demobilization	1.00	L.S.		
1.3	Temporary Fence and storage rooms	1.00	L.S.		
<b>SUB-TOTAL (PART I: GENERAL REQUIREMENTS)</b>					
<b>PART II: EARTHWORK</b>					
2.1	Removal and Disposal of Structures and Obstruction	1.00	L.S.		
2.2	Structure Excavation (Common Soil)	16.00	cu.m.		
2.3	Embankment & Compaction	18.00	cu.m.		
2.4	Fill and Backfill (from borrow)	11.00	cu.m.		
<b>SUB-TOTAL (PART II: EARTHWORK)</b>					
<b>PART III: PLAIN AND REINFORCED CONCRETE WORK</b>					
3.1	Structural Concrete (Class A, 3000psi @ 28 days)	14.00	cu.m.		
3.2	Reinforcing Steel (Deformed, Grade 40)	867.00	kg.		
3.3	Formworks, Falsework and Scaffoldings	44.00	sq.m.		
<b>SUB-TOTAL (PART III: PLAIN AND REINFORCED CONCRETE WORK)</b>					
<b>PART IV: FINISHING</b>					
4.1	Welded Structural Steel (columns, trusses, purlins, beams, fascia frame, etc.)	649.00	kg.		
4.2	Soil Poisoning	3.00	lit		
4.3	Catch Basin (CHB)	3.00	set		
4.4	Storm Drain and Downspout, including leaf strainer and pipe connection to catch basin	1.00	L.S.		
4.5	Plumbing Works (waterline, sanitary and fixtures)	1.00	L.S.		
4.6	Ceiling, 6mm Fiber Cement Board with Metal Frame spaced @ 0.4m x 0.4m O.C.	45.00	sq.m.		
4.7	Granite Slab (sink counter), quartz, 20mm thk.	1.00	slab		
4.8	Aluminum Glass Windows, Awning Type, 3/8" thk. glass	0.72	sq.m.		
4.9	Doors, Solid panel Door with accessories	2.10	sq.m.		
4.10	Fabricated Metal Roofing Accesories, 0.6mm thk., flashings	35.00	L.m.		
4.11	Fabricated Metal Roofing Accesories, 0.6mm thk., valley rolls/gutter	42.00	L.m.		
4.12	Prepainted Galvanized Metal Sheets,	45.00	sq.m.		

	0.6mm thk. Rib Type, Long Span with 10mm thk, double sided insulation foam laid on G.I. screen				
4.13	Waterproofing of parapet & walls	21.00	sq.m.		
4.14	Glazed Tiles and Trims	20.00	sq.m.		
4.15	Unglazed Tiles	43.00	sq.m.		
4.16	Cement Plaster Finish	81.00	sq.m.		
4.17	Painting Works (Masonry/ Concrete), including repainting of guardhouse building	165.00	sq.m.		
4.18	Painting Works (Steel)	63.00	sq.m.		
4.19	CHB (including Reinforcing Steel)100mm	27.00	sq.m.		
4.20	CHB (including Reinforcing Steel)150mm	41.00	sq.m.		
4.21	Steel Bolts	40.00	pc.		
4.22	Steel Plates, 12mmthk. x 0.3m x 0.3m	75.00	kg.		
4.23	Installation of Stainless steel 304 & acrylic signage with backlights	1.00	set		
4.24	Supply and installation of furniture and fixtures - 1set - Sofa, (1-3seater, 2-single & center table) - 4sets - foldable fiber plastic table, 4-seater - 16pcs - foldable fiber plastic chair - 1set - wall cabinet with mirror	1.00	lot		
<b>SUB-TOTAL (PART IV: FINISHING)</b>					
<b>PART V: ELECTRICAL</b>					
5.1	Conduits, Boxes and Fittings	1.00	L.S.		
5.2	Wires and Wiring Devices	1.00	L.S.		
5.3	Panelboard with Main and Branch Breakers	1.00	L.S.		
5.4	Lighting Fixtures and Lamps including emergency light and ceiling fans	1.00	L.S.		
<b>SUB-TOTAL (PART V: ELECTRICAL)</b>					
<b>TOTAL DIRECT COST FOR IMPROVEMENT OF RRCY VISITORS LOUNGE' GROUND AND FACILITIES</b>					
<b>TOTAL BID COST</b>					

## *Section VIII. Bill of Quantities*

LOT 2 - Repair and Improvement of RRCY Covered Court					
ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
<b>PART I: GENERAL REQUIREMENTS</b>					
1.1	Project Billboard/Signboard -1set 4'X8' Construction Tarpaulin -1set 8'x8' COA Tarpaulin	1.00	each		
1.2	Mobilization and Demobilization	1.00	L.S.		
1.3	Temporary Fence and storage rooms	1.00	L.S.		
1.4	Scaffoldings	1.00	l.s.		
1.5	Stage Rear Wall, 6mm Fiber Cement Board with Metal Frame spaced @ 0.4m x 0.4m O.C.	76.00	sq.m.		
1.6	Fabricated Metal Flashings, 0.6mm thk., oven baked, prepainted	57.20	L.m.		
1.7	Fabricated Metal Gutter, 0.6mm thk., oven baked, prepainted including installation of aluminum chicken wire screen on aluminum clip	77.00	L.m.		
1.8	Removal and disposal of Insulation foam and waste materials and reinstallation of roofing, including sealing of roof holes and fixing of partially detached roofing	963.00	sq.m.		
1.9	Replacement of damaged roofing using oven baked prepainted metal sheets, 0.6mm thk. Rib Type, Long Span	100.00	sq.m.		
1.10	Painting Works (Masonry/ Concrete)	76.00	sq.m.		
<b>TOTAL DIRECT COST FOR REPAIR AND IMPROVEMENT OF RRCY COVERED COURT</b>					
<b>TOTAL BID COST</b>					

## *Section VIII. Bill of Quantities*

LOT 3 - Repair and Improvement of RRCY School Building and Training Center					
ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
<b>PART I: GENERAL REQUIREMENTS</b>					
1.1	Project Billboard/Signboard -1set 4'X8' Construction Tarpaulin -1set 8'x8' COA Tarpaulin	1.00	set		
1.2	Mobilization and Demobilization	1.00	L.S.		
1.3	Temporary Fence and storage rooms	1.00	L.S.		
1.4	Removal and Disposal of Structures and Obstruction	1.00	L.S.		
1.5	Structural Concrete (Class A, 3000psi @ 28 days)	0.43	cu.m.		
1.6	Reinforcing Steel (Deformed, Grade 40)	26.00	kg.		
1.7	Formworks, Falsework and Scaffoldings	5.00	sq.m.		
1.8	Scaffoldings	1.00	lot		
1.9	Ceiling, 6mm Fiber Cement Board with Metal Frame spaced @ 0.4m x 0.4m O.C.	101.00	sq.m.		
1.10	Wall, 6mm Fiber Cement Board with metal frame spaced at 0.4m x 0.4m O.C. (double wall)	6.00	sq.m.		
1.11	Aluminum Glass Windows, Awning Type, 10mm thk. glass	4.80	sq.m.		
1.12	Repair and Improvement of Door, including application of epoxy & painting	15.00	sets		
1.13	Replacement of Door Lock, lever type, and installation of door closer and deadbolt, heavy duty	15.00	sets		
1.14	Curtain Wall, Tempered Glass, 10mm thk. on aluminum frame	10.08	sq.m.		
1.15	Painting Works, including repainting of window jambs, grilles & railings	136.00	sq.m.		
1.16	Polycarbonate Sheets,solid, 3mm thk.	20.00	l.m.		
<b>TOTAL DIRECT COST FOR REPAIR AND IMPROVEMENT OF RRCY SCHOOL BUILDING AND TRAINING CENTER</b>					
<b>TOTAL BID COST</b>					

# ***Section IX. Checklist of Technical and Financial Documents***

## **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 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**

NOTE: This statement shall be supported with:

- i) Either of Contract, Purchase Order, Notice of Award or Notice to Proceed; and
- ii) Either of Certificate of Completion, Certificate of Acceptance, Inspection and Acceptance, Official Receipt/Collection Receipt or Sales Invoice.

(h) Philippine Contractors Accreditation Board (PCAB) License; **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, Safety Officer 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;
- d. **Certificate of Site Inspection signed by the Head of the Procuring Entity (HoPE) or its authorized representative;**

Additional contract documents relevant to the Project that may be required by existing laws and/or the Procuring Entity, such as:

- e. ***construction schedule and S-curve,***
- f. ***manpower schedule,***
- g. ***construction methods,***
- h. ***equipment utilization schedule,***
- i. ***construction safety and health program signed by the contractor, 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 statements, showing, among others, the prospective bidder's total and current assets and liabilities, stamped "received" by the BIR or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission; **and**

(m) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC);

### ***Class "B" Documents***

(n) 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.

## II. FINANCIAL COMPONENT ENVELOPE

- (o) Original of duly signed and accomplished Financial Bid Form; **and**

### *Other documentary requirements under RA No. 9184*

- (p) Original duly signed Bid Prices in the Bill of Quantities; **and**
- (q) Duly accomplished Detailed Estimates Form; **and**
- (r) A summary sheet indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the Bid; **and**
- (s) Cash Flow by Quarter or Monthly.

## ***Section X. BIDDING FORMS***

**Omnibus Sworn Statement**  
**Project Identification No. ITB No. DSWD7-PB-2023-55**

---

REPUBLIC OF THE PHILIPPINES )  
CITY/MUNICIPALITY OF \_\_\_\_\_ ) S.S.

**AFFIDAVIT**

I, [Name of Affiant], of legal age, [Civil Status], [Nationality], and residing at [Address of Affiant], after having been duly sworn in accordance with law, do hereby depose and state that:

1. [Select one, delete the other:]

[If a sole proprietorship:] I am the sole proprietor or authorized representative of [Name of Bidder] with office address at [address of Bidder];

[If a partnership, corporation, cooperative, or joint venture:] I am the duly authorized and designated representative of [Name of Bidder] with office address at [address of Bidder];

2. [Select one, delete the other:]

[If a sole proprietorship:] As the owner and sole proprietor, or authorized representative of [Name of Bidder], I have full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for [Name of the Project] of the [Name of the Procuring Entity], as shown in the attached duly notarized Special Power of Attorney;

[If a partnership, corporation, cooperative, or joint venture:] I am granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for [Name of the Project] of the [Name of the Procuring Entity], as shown in the attached [state title of attached document showing proof of authorization (e.g., duly notarized Secretary's Certificate, Board/Partnership Resolution, or Special Power of Attorney, whichever is applicable)];

3. [Name of Bidder] is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board, **by itself or by relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity as defined and provided for in the Uniform Guidelines on Blacklisting;**

4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;

5. [Name of Bidder] is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;

6. [Select one, delete the rest:]

[If a sole proprietorship:] The owner or sole proprietor is not related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

[If a partnership or cooperative:] None of the officers and members of [Name of Bidder] is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working

Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

*[If a corporation or joint venture:]* None of the officers, directors, and controlling stockholders of *[Name of Bidder]* is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

7. *[Name of Bidder]* complies with existing labor laws and standards; and

8. *[Name of Bidder]* is aware of and has undertaken the responsibilities as a Bidder in compliance with the Philippine Bidding Documents, which includes:

- a. Carefully examining all of the Bidding Documents;
- b. Acknowledging all conditions, local or otherwise, affecting the implementation of the Contract;
- c. Making an estimate of the facilities available and needed for the contract to be bid, if any; and
- d. Inquiring or securing Supplemental/Bid Bulletin(s) issued for the *[Name of the Project]*.

9. *[Name of Bidder]* did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.

10. **In case advance payment was made or given, failure to perform or deliver any of the obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability for Swindling (Estafa) or the commission of fraud with unfaithfulness or abuse of confidence through misappropriating or converting any payment received by a person or entity under an obligation involving the duty to deliver certain goods or services, to the prejudice of the public and the government of the Philippines pursuant to Article 315 of Act No. 3815 s. 1930, as amended, or the Revised Penal Code.**

IN WITNESS WHEREOF, I have hereunto set my hand this \_\_ day of \_\_, 20\_\_ at \_\_\_\_\_, Philippines.

*[Insert NAME OF BIDDER OR ITS AUTHORIZED REPRESENTATIVE]*

*[Insert signatory's legal capacity]*

Affiant

**[Jurat]**

*[Format shall be based on the latest Rules on Notarial Practice]*

Republic of the Philippines )  
In the City of \_\_\_\_\_ ) s.s

**SECRETARY CERTIFICATE**

I, \_\_\_\_\_, of legal age, single/married, Filipino citizen, resident of \_\_\_\_\_ City, after having been duly sworn in accordance with law, hereby certify:

1. That I am the duly designated Corporate Secretary of \_\_\_\_\_, a corporation duly organized and existing under and virtue of the laws of the Republic of the Philippines, with principal address at \_\_\_\_\_ City.

2. That at the special meeting of the Board of Directors at its principal office on \_\_\_\_\_ 2023, during which a quorum was present and acted throughout, the following resolution was unanimously approved:

“Resolution No. 2021- xxx

RESOLVED, that \_\_\_\_\_ of legal age, single/married, resident of \_\_\_\_\_ is hereby authorized to appear, participate, bid, transact, contract, agree, communicate, correspond, sign, receive documents and receipts for and in behalf of \_\_\_\_\_(corporation), in the bidding/contract/agreement with DSWD Field Office VII.”

a. That the foregoing resolution has not been altered, modified, nor revoked; and that the same is now in full force and in effect; and

This is to certify that the foregoing Board Resolution duly passed and approved, is true and correct.

**IN WITNESS WHEREOF**, I have hereunto set my hand on this \_\_\_\_\_ day of \_\_\_\_\_, 2023 at \_\_\_\_\_ City, Philippines

\_\_\_\_\_  
Corporate Secretary

**SUBSCRIBED AND SWORN** to before me this \_\_\_\_\_ day of \_\_\_\_\_ 2023, at \_\_\_\_\_, Philippines. Affiant exhibited to me his/her (government issued ID), issued at \_\_\_\_\_, on \_\_\_\_\_.

Notary Public

Doc No. \_\_\_\_\_  
Page No. \_\_\_\_\_  
Book No. \_\_\_\_\_  
Series of 2023

## List of all Ongoing Government & Private Contracts including Contracts awarded but not yet started

Business Name : \_\_\_\_\_

Business Address : \_\_\_\_\_

Name of Contract	Date of the Contract	Contract Duration	Owner's name and address	Kinds of Goods/Services	Amount of Contract and Value of Outstanding Contracts	Date of Delivery
<u>Government</u>						
<u>Private</u>						

Submitted by : \_\_\_\_\_  
(Printed Name & Signature)

Designation : \_\_\_\_\_

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

### Instructions:

1. State all ongoing contracts including those awarded but not yet started.
2. If there is no ongoing contract including contract awarded but not yet started, state **none** or equivalent term.
3. The total amount of the ongoing and awarded but not yet started contracts should be consistent with those used in the Net Financial Contracting Capacity (NFCC).

**Statement of Single Largest Completed Contract  
which is similar in nature**

Business Name : \_\_\_\_\_

Business Address : \_\_\_\_\_

Name of Contract	Date of Contract	Contract Duration	Owner's Name & Address	Kinds of Goods/Services	Amount of Completed Contract	Date of Delivery

NOTE: This statement shall be supported with:

- i) Either of Contract, Purchase Order, Notice of Award or Notice to Proceed, and
- ii) Either of Certificate of Completion, Certificate of Acceptance, Inspection and Acceptance, Official Receipt/Collection Receipt or Sales Invoice.

Submitted by : \_\_\_\_\_

(Printed Name & Signature) Designation: \_\_\_\_\_

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

REPUBLIC OF THE PHILIPPINES)  
CITY OF \_\_\_\_\_) S.S.

**BID SECURING DECLARATION**  
**Project Identification No.: ITB No. DSWD7-PB-2023-55**

To: *[Insert name and address of the Procuring Entity]*

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Bid Security, which may be in the form of a Bid Securing Declaration.
2. I/We accept that: (a) I/we will be automatically disqualified from bidding for any procurement contract with any procuring entity for a period of two (2) years upon receipt of your Blacklisting Order; and, (b) I/we will pay the applicable fine provided under Section 6 of the Guidelines on the Use of Bid Securing Declaration, within fifteen (15) days from receipt of the written demand by the procuring entity for the commission of acts resulting to the enforcement of the bid securing declaration under Sections 23.1(b), 34.2, 40.1 and 69.1, except 69.1(f), of the IRR of RA No. 9184; without prejudice to other legal action the government may undertake.
3. I/We understand that this Bid Securing Declaration shall cease to be valid on the following circumstances:
  - a. Upon expiration of the bid validity period, or any extension thereof pursuant to your request;
  - b. I am/we are declared ineligible or post-disqualified upon receipt of your notice to such effect, and (i) I/we failed to timely file a request for reconsideration or (ii) I/we filed a waiver to avail of said right; and
  - c. I am/we are declared the bidder with the Lowest Calculated Responsive Bid, and I/we have furnished the performance security and signed the Contract.

IN WITNESS WHEREOF, I/We have hereunto set my/our hand/s this \_\_\_\_ day of *[month]* *[year]* at *[place of execution]*.

*[Insert NAME OF BIDDER OR ITS AUTHORIZED REPRESENTATIVE]*  
*[Insert signatory's legal capacity]*

Affiant

**[Jurat]**

*[Format shall be based on the latest Rules on Notarial Practice]*

## Net Financial Contracting Capacity (NFCC) Form

a. Summary of the Bidder-Supplier's/Distributor's/Manufacturer's assets and liabilities on the basis of the attached audited financial statements, stamped "RECEIVED" by the Bureau of Internal Revenue (BIR) or its duly accredited and authorized institutions, for the preceding calendar/tax year which should not be earlier than two (2) years from the date of bid submission.

		Year 20_____
1.	Total Assets	
2.	Current Assets	
3.	Total Liabilities	
4.	Current Liabilities	
5.	Net Worth (1-3)	
6.	Net Working Capital (2-4)	

b. The Net Financial Contracting Capacity (NFCC) based on the above data 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, coinciding with the contract to be bid.

The values of the domestic bidder's current assets and current liabilities shall be based on the latest Audited Financial Statements (AFS) submitted to the BIR.

**NFCC = ₱** \_\_\_\_\_

Submitted by:

Signature over Printed Name of Authorized Representative

Business Name of Bidder

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

## BID FORM

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

Project Identification No.: **ITB No. DSWD7-PB-2023-55**  
**(Lot 1 - Improvement of RRCY Visitors Lounge' Ground and Facilities)**

To: **THE BIDS AND AWARDS COMMITTEE**  
Department of Social Welfare & Development, Field Office VII  
Cor. M.J. Cuenco and Gen. Maxilom Ave., Cebu City

Having examined the Philippine Bidding Documents (PBDs) including the Supplemental or Bid Bulletin Numbers *[insert numbers]*, the receipt of which is hereby duly acknowledged, we, the undersigned, declare that:

- a. We have no reservation to the PBDs, including the Supplemental or Bid Bulletins, for the Procurement Project: *[insert name of contract]*;
- b. We offer to execute the Works for this Contract in accordance with the PBDs;
- c. The total price of our Bid in words and figures, excluding any discounts offered below is: *[insert information]*;
- d. The discounts offered and the methodology for their application are: *[insert information]*;
- e. The total bid price includes the cost of all taxes, such as, but not limited to: *[specify the applicable taxes, e.g. (i) value added tax (VAT), (ii) income tax, (iii) local taxes, and (iv) other fiscal levies and duties]*, which are itemized herein and reflected in the detailed estimates,
- f. Our Bid shall be valid within the period stated in the PBDs, and it shall remain binding upon us at any time before the expiration of that period;
- g. If our Bid is accepted, we commit to obtain a Performance Security in the amount of *[insert percentage amount]* percent of the Contract Price for the due performance of the Contract, or a Performance Securing Declaration in lieu of the allowable forms of Performance Security, subject to the terms and conditions of issued GPPB guidelines<sup>1</sup> for this purpose;
- h. We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Documents;
- i. We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed; and
- j. We understand that you are not bound to accept the Lowest Calculated Bid or any other Bid that you may receive.

---

<sup>1</sup> currently based on GPPB Resolution No. 09-2020

- k. We likewise certify/confirm that the undersigned, is the duly authorized representative of the bidder, and granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for the [Name of Project] of the [Name of the Procuring Entity].
- l. We acknowledge that failure to sign each and every page of this Bid Form, including the Bill of Quantities, shall be a ground for the rejection of our bid.

Name: \_\_\_\_\_

Legal Capacity: \_\_\_\_\_

Signature: \_\_\_\_\_

Duly authorized to sign the Bid for and behalf of: \_\_\_\_\_

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

## BID FORM

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

Project Identification No.: **ITB No. DSWD7-PB-2023-55**  
**(Lot 2 - Repair and Improvement of RRCY Covered Court)**

To: **THE BIDS AND AWARDS COMMITTEE**  
Department of Social Welfare & Development, Field Office VII  
Cor. M.J. Cuenco and Gen. Maxilom Ave., Cebu City

Having examined the Philippine Bidding Documents (PBDs) including the Supplemental or Bid Bulletin Numbers *[insert numbers]*, the receipt of which is hereby duly acknowledged, we, the undersigned, declare that:

- a. We have no reservation to the PBDs, including the Supplemental or Bid Bulletins, for the Procurement Project: *[insert name of contract]*;
- b. We offer to execute the Works for this Contract in accordance with the PBDs;
- c. The total price of our Bid in words and figures, excluding any discounts offered below is: *[insert information]*;
- d. The discounts offered and the methodology for their application are: *[insert information]*;
- e. The total bid price includes the cost of all taxes, such as, but not limited to: *[specify the applicable taxes, e.g. (i) value added tax (VAT), (ii) income tax, (iii) local taxes, and (iv) other fiscal levies and duties]*, which are itemized herein and reflected in the detailed estimates,
- f. Our Bid shall be valid within the a period stated in the PBDs, and it shall remain binding upon us at any time before the expiration of that period;
- g. If our Bid is accepted, we commit to obtain a Performance Security in the amount of *[insert percentage amount]* percent of the Contract Price for the due performance of the Contract, or a Performance Securing Declaration in lieu of the allowable forms of Performance Security, subject to the terms and conditions of issued GPPB guidelines<sup>2</sup> for this purpose;
- h. We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Documents;
- i. We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed; and
- j. We understand that you are not bound to accept the Lowest Calculated Bid or any other Bid that you may receive.
- k. We likewise certify/confirm that the undersigned, is the duly authorized representative of the

---

<sup>2</sup> currently based on GPPB Resolution No. 09-2020

bidder, and granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for the [Name of Project] of the [Name of the Procuring Entity].

- 1. We acknowledge that failure to sign each and every page of this Bid Form, including the Bill of Quantities, shall be a ground for the rejection of our bid.

Name: \_\_\_\_\_

Legal Capacity: \_\_\_\_\_

Signature: \_\_\_\_\_

Duly authorized to sign the Bid for and behalf of: \_\_\_\_\_

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

## BID FORM

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

Project Identification No.: **ITB No. DSWD7-PB-2023-55**  
**(Lot 3 - Repair and Improvement of RRCY**  
**School Building and Training Center)**

To: **THE BIDS AND AWARDS COMMITTEE**  
Department of Social Welfare & Development, Field Office VII  
Cor. M.J. Cuenco and Gen. Maxilom Ave., Cebu City

Having examined the Philippine Bidding Documents (PBDs) including the Supplemental or Bid Bulletin Numbers *[insert numbers]*, the receipt of which is hereby duly acknowledged, we, the undersigned, declare that:

- a. We have no reservation to the PBDs, including the Supplemental or Bid Bulletins, for the Procurement Project: *[insert name of contract]*;
- b. We offer to execute the Works for this Contract in accordance with the PBDs;
- c. The total price of our Bid in words and figures, excluding any discounts offered below is: *[insert information]*;
- d. The discounts offered and the methodology for their application are: *[insert information]*;
- e. The total bid price includes the cost of all taxes, such as, but not limited to: *[specify the applicable taxes, e.g. (i) value added tax (VAT), (ii) income tax, (iii) local taxes, and (iv) other fiscal levies and duties]*, which are itemized herein and reflected in the detailed estimates,
- f. Our Bid shall be valid within the a period stated in the PBDs, and it shall remain binding upon us at any time before the expiration of that period;
- g. If our Bid is accepted, we commit to obtain a Performance Security in the amount of *[insert percentage amount]* percent of the Contract Price for the due performance of the Contract, or a Performance Securing Declaration in lieu of the allowable forms of Performance Security, subject to the terms and conditions of issued GPPB guidelines<sup>3</sup> for this purpose;
- h. We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Documents;
- i. We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed; and
- j. We understand that you are not bound to accept the Lowest Calculated Bid or any other Bid that you may receive.

---

<sup>3</sup> currently based on GPPB Resolution No. 09-2020

- k. We likewise certify/confirm that the undersigned, is the duly authorized representative of the bidder, and granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for the [Name of Project] of the [Name of the Procuring Entity].
- l. We acknowledge that failure to sign each and every page of this Bid Form, including the Bill of Quantities, shall be a ground for the rejection of our bid.

Name: \_\_\_\_\_

Legal Capacity: \_\_\_\_\_

Signature: \_\_\_\_\_

Duly authorized to sign the Bid for and behalf of: \_\_\_\_\_

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

## SUPPLIER / SERVICE PROVIDER'S BANK INFORMATION

Name of Bank	
Branch	
Bank Account Name	
Account No.	
TIN No.	

*PLEASE CHECK IF TIN NUMBER is VAT or NON-VAT*

VAT ☐

NON-VAT ☐

Signature:

\_\_\_\_\_

Name of Authorized Representative:

\_\_\_\_\_

Position:

\_\_\_\_\_