

BUREAU OF CUSTOMS MAKABAGONG ADUANA, MATATAG NA EKONOMIYA



BIDDING DOCUMENTS FOR THE

CONSTRUCTION OF NEW BUREAU OF CUSTOMS BUILDING OF THE MINDANAO CONTAINER TERMINAL SUB-PORT OF TAGOLOAN, MISAMIS ORIENTAL

Project No: BOC-INFRA-2021-01 July 2021

TABLE OF CONTENTS

Section	n I. Invitation to Bid	4
Section	n II. Instructions to Bidders	6
1.	Scope of Bid	8
2.	Funding Information	8
3.	Bidding Requirements	8
4.	Corrupt, Fraudulent, Collusive, Coercive, and Obstructive Practices	9
5.	Eligible Bidders	9
6.	Origin of Associated Goods	9
7.	Subcontracts	9
8.	Pre-Bid Conference	10
9.	Clarification and Amendment of Bidding Documents	10
10.	Documents Comprising the Bid: Eligibility and Technical Components	10
11.	Documents Comprising the Bid: Financial Component	11
12.	Alternative Bids	11
13.	Bid Prices	11
14.	Bid and Payment Currencies	11
15.	Bid Security	11
16.	Sealing and Marking of Bids	12
17.	Deadline for Submission of Bids	12
18.	Opening and Preliminary Examination of Bids	12
19.	Detailed Evaluation and Comparison of Bids	12
20.	Post Qualification	13
21.	Signing of the Contract	13
Section	n III. Bid Data Sheet	14
Section	n IV. General Conditions of Contract	17
1.	Scope of Contract	20
2.	Sectional Completion of Works	20
3.	Possession of Site	20
4.	The Contractor's Obligations	20
5.	Performance Security	21

6.	Site Investigation Reports	21
7.	Warranty	.21
8.	Liability of the Contractor	21
9.	Termination for Other Causes	21
10.	Dayworks	21
11.	Program of Work	22
12.	Instructions, Inspections and Audits	22
13.	Advance Payment	22
14.	Progress Payments	22
15.	Operating and Maintenance Manuals	22
Section	V. Special Conditions of Contract	24
Section	VI. Specifications	25
Section	VII. Drawings	31
Section	VIII. Bill of Quantities	32
Section	IX. Checklist of Technical and Financial Documents	72

Glossary of Terms, Abbreviations, and Acronyms

ABC – Approved Budget for the Contract.

ARCC – Allowable Range of Contract Cost.

BAC – Bids and Awards Committee.

Bid – A signed offer or proposal to undertake a contract submitted by a bidder in response to and in consonance with the requirements of the bidding documents. Also referred to as *Proposal* and *Tender*. (2016 revised IRR, Section 5[c])

Bidder – Refers to a contractor, manufacturer, supplier, distributor and/or consultant who submits a bid in response to the requirements of the Bidding Documents. (2016 revised IRR, Section 5[d])

Bidding Documents – The documents issued by the Procuring Entity as the bases for bids, furnishing all information necessary for a prospective bidder to prepare a bid for the Goods, Infrastructure Projects, and/or Consulting Services required by the Procuring Entity. (2016 revised IRR, Section 5[e])

BIR – Bureau of Internal Revenue.

BSP – Bangko Sentral ng Pilipinas.

CDA – Cooperative Development Authority.

Consulting Services – Refer to services for Infrastructure Projects and other types of projects or activities of the GOP requiring adequate external technical and professional expertise that are beyond the capability and/or capacity of the GOP to undertake such as, but not limited to: (i) advisory and review services; (ii) pre-investment or feasibility studies; (iii) design; (iv) construction supervision; (v) management and related services; and (vi) other technical services or special studies. (2016 revised IRR, Section 5[i])

Contract – Refers to the agreement entered into between the Procuring Entity and the Supplier or Manufacturer or Distributor or Service Provider for procurement of Goods and Services; Contractor for Procurement of Infrastructure Projects; or Consultant or Consulting Firm for Procurement of Consulting Services; as the case may be, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

Contractor – is a natural or juridical entity whose proposal was accepted by the Procuring Entity and to whom the Contract to execute the Work was awarded. Contractor as used in these Bidding Documents may likewise refer to a supplier, distributor, manufacturer, or consultant.

CPI – Consumer Price Index.

DOLE – Department of Labor and Employment.

DTI – Department of Trade and Industry.

Foreign-funded Procurement or Foreign-Assisted Project – Refers to procurement whose funding source is from a foreign government, foreign or international financing institution as

specified in the Treaty or International or Executive Agreement. (2016 revised IRR, Section 5[b]).

GFI – Government Financial Institution.

GOCC – Government-owned and/or –controlled corporation.

Goods – Refer to all items, supplies, materials and general support services, except Consulting Services and Infrastructure Projects, which may be needed in the transaction of public businesses or in the pursuit of any government undertaking, project or activity, whether in the nature of equipment, furniture, stationery, materials for construction, or personal property of any kind, including non-personal or contractual services such as the repair and maintenance of equipment and furniture, as well as trucking, hauling, janitorial, security, and related or analogous services, as well as procurement of materials and supplies provided by the Procuring Entity for such services. The term "related" or "analogous services" shall include, but is not limited to, lease or purchase of office space, media advertisements, health maintenance services, and other services essential to the operation of the Procuring Entity. (2016 revised IRR, Section 5[r])

GOP – Government of the Philippines.

Infrastructure Projects – Include the construction, improvement, rehabilitation, demolition, repair, restoration or maintenance of roads and bridges, railways, airports, seaports, communication facilities, civil works components of information technology projects, irrigation, flood control and drainage, water supply, sanitation, sewerage and solid waste management systems, shore protection, energy/power and electrification facilities, national buildings, school buildings, hospital buildings, and other related construction projects of the government. Also referred to as *civil works or works*. (2016 revised IRR, Section 5[u])

LGUs – Local Government Units.

NFCC – Net Financial Contracting Capacity.

NGA – National Government Agency.

PCAB – Philippine Contractors Accreditation Board.

PhilGEPS - Philippine Government Electronic Procurement System.

Procurement Project – refers to a specific or identified procurement covering goods, infrastructure project or consulting services. A Procurement Project shall be described, detailed, and scheduled in the Project Procurement Management Plan prepared by the agency which shall be consolidated in the procuring entity's Annual Procurement Plan. (GPPB Circular No. 06-2019 dated 17 July 2019)

PSA – Philippine Statistics Authority.

SEC – Securities and Exchange Commission.

SLCC – Single Largest Completed Contract.

UN – United Nations.





Section I. Invitation to Bid

Section I. Invitation to Bid

"Construction of New Bureau of Customs Building of the Mindanao Container Terminal Sub-Port of Tagoloan, Misamis Oriental"

- 1. The Bureau of Customs (BOC), through the FY 2021 General Appropriations Act intends to apply the sum of Forty Million Five Hundred Sixty-Eight Thousand Pesos (Php40,568,000.00) being the Approved Budget for the Contract (ABC) to payments under the contract for the "Construction of New Bureau of Customs Building of the Mindanao Container Terminal Sub-Port of Tagoloan, Misamis Oriental". Bids received in excess of the ABC shall be automatically rejected at bid opening.
- 2. The Bureau of Customs (BOC) now invites bids for "Construction of New Bureau of Customs Building of the Mindanao Container Terminal Sub-Port of Tagoloan". Completion of the Works is required for 360 calendar days. Bidders should have completed a contract similar to the Project.
- 3. Bidding will be conducted through open competitive bidding procedures using a nondiscretionary "pass/fail" criterion as specified in the 2016 Revised Implementing Rules and Regulations (IRR) of Republic Act (RA) 9184.
- 4. Interested bidders may obtain further information from the BOC Bids and Awards Committee (BAC) Secretariat and inspect the Bidding Documents at the address given below during office hours from 8:00 a.m. to 5:00 p.m.
- 5. A complete set of Bidding Documents may be acquired by interested Bidders on July 14, 2021 from the address 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 Twenty-Five Thousand Pesos (P25,000.00). The proof of payment for the fees was presented in person.
- 6. The BOC will hold a Pre-Bid Conference on July 21, 2021, 10:00 a.m. at the GSD Conference Room, Ground Floor, OCOM Building, South Harbor, Gate 3, Port Area, Manila, and/or through videoconferencing/webcasting via Microsoft Teams, which shall be open to prospective bidders.
- 7. Bids must be duly received by the BAC Secretariat through manual submission at the office address as indicated below on or before August 2, 2021, 9:30 a.m. 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 15.1.
- 9. Bid opening shall be on before August 2, 2021, 10:00 a.m. at the GSD Conference Room, Ground Floor, OCOM Building, South Harbor, Gate 3, Port Area, Manila. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.
- 10. The BOC 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 Sections 35.6 and





41 of the 2016 revised Implementing Rules and Regulations (IRR) of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.

11. For further information, please refer to:

BOC-BAC Secretariat General Services Division OCOM Bldg., South Harbor, Gate 3, Port Area, Manila Telefax No. 527-9757 Email address: **bacsecretariat@customs.gov.ph**

12. You may visit the following websites:

For downloading of Bidding Documents: https://customs.gov.ph/bid-opportunities/

Date issued: July 14, 2021

Atty. ALVIN H. EBREO, CESE Chairperson, BOC-BAC

Section II. Instructions to Bidders

TABLE OF CONTENTS

<u>1.</u>	Scope of Bid
<u>2.</u>	Funding Information8
<u>3.</u>	Bidding Requirements8
<u>4.</u>	Corrupt, Fraudulent, Collusive, Coercive, and Obstructive Practices9
<u>5.</u>	Eligible Bidders9
<u>6.</u>	Origin of Associated Goods9
<u>7.</u>	Subcontracts9
<u>8.</u>	Pre-Bid Conference10
<u>9.</u>	Clarification and Amendment of Bidding Documents10
<u>10.</u>	Documents Comprising the Bid: Eligibility and Technical Components10
<u>11.</u>	Documents Comprising the Bid: Financial Component11
<u>12.</u>	Alternative Bids11
<u>13.</u>	Bid Prices
<u>14.</u>	Bid and Payment Currencies11
<u>15.</u>	Bid Security
<u>16.</u>	Sealing and Marking of Bids12
<u>17.</u>	Deadline for Submission of Bids12
<u>18.</u>	Opening and Preliminary Examination of Bids 12
<u>19.</u>	Detailed Evaluation and Comparison of Bids12
<u>20.</u>	Post Qualification
<u>21.</u>	Signing of the Contract

A. General

1. Scope of Bid

The Procuring Entity, BOC invites Bids for the "Construction of New Bureau of Customs Building of the Mindanao Container Terminal Sub-Port of Tagoloan" with Project Identification Number "BOC-INFRA-2021-01".

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 Government of the Philippine (GOP) through the source of funding as indicated below for FY 2021 General Appropriations Act in the amount of Forty Million Five Hundred Sixty-Eight Thousand Pesos (Php40,568,000.00).
- 2.2. The source of funding is: NGA, the General Appropriations Act or Special Appropriations.

3. Bidding Requirements

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

Any amendments made to the IRR and other GPPB issuances shall be applicable only to the ongoing posting, advertisement, or invitation to bid 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, Coercive, and Obstructive 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:

- a. Subcontracting is not allowed.
- 7.1. 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 the specified date and time through Microsoft Teams as indicated in paragraph 6 of the **ITB**.

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 **ITB**, at least ten (10) calendar 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 **ITB** 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 made in:
 - a. 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 November 30, 2021. Any bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

16. Sealing and Marking of Bids

16.1 Bidders shall enclose their original eligibility and technical documents described in **ITB** Clause 10 in one sealed envelope marked "ORIGINAL - TECHNICAL COMPONENT", and the original of their financial component in another sealed envelope marked "ORIGINAL - FINANCIAL COMPONENT", sealing them all in an outer envelope marked "ORIGINAL BID".

16.2 Each copy of the first and second envelopes shall be similarly sealed duly marking the inner envelopes as "COPY NO. ______ - TECHNICAL COMPONENT" and "COPY NO. ______ – FINANCIAL COMPONENT" and the outer envelope as "COPY NO. ______, respectively. These envelopes containing the original and the copies shall then be enclosed in one single envelope.

16.3 The original and the number of copies of the Bid as indicated in the **BDS** shall be typed or written in ink and shall be signed by the Bidder or its duly authorized representative/s.

All envelopes shall:

- (a) contain the name of the contract to be bid in capital letters;
- (b) bear the name and address of the Bidder in capital letters;
- (c) be addressed to the Procuring Entity's BAC;
- (d) bear the specific identification of this bidding process indicated in the **ITB** Clause 1; and
- (e) bear a warning "DO NOT OPEN BEFORE..." the date and time for the opening of bids; and
- (f) Each envelope must be duly signed by the authorized representative.

16.4 Bid envelopes that are not properly sealed and marked, as required in the bidding documents, shall not be rejected, but the Bidder or its duly authorized representative shall acknowledge such condition of the bid as submitted. The BAC or the Procuring Entity shall assume no responsibility for the misplacement of the contents of the improperly sealed or marked bid, or for its premature opening.

16.5 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.

16.6 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 **ITB**.

18. Opening and Preliminary Examination of the 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 **ITB**. 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 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	
1	The Procuring Entity is the Bureau of Customs (BOC)
	The name of the Contract is "Construction of New Bureau of Customs Building of the Mindanao Container Terminal Sub-Port of Tagoloan" The identification number of the Contract is: BOC-INFRA-2021-01
2	The Funding Source is:
	The Government of the Philippines (GOP) through the authorized appropriations under the FY 2021 General Appropriations Act in the amount of Forty Million Five Hundred Sixty-Eight Thousand Pesos (Php40,568,000.00).
	The name of the Project is "Construction of New Bureau of Customs Building of the Mindanao Container Terminal Sub-Port of Tagoloan" located at Mindanao International Container Terminal (MICT), PHIVIDEC Industrial State, Tagoloan, Misamis Oriental.
5	Only Bids for Bidders found to be legally, technically, and financially capable will be evaluated as defined in ITB Clause 5.1.
5.2	The bidder must have completed, five (5) years prior to August 2, 2021 a single contract that is similar to the project at hand and whose value must be at least fifty percent (50%) of the ABC.
	Bidders shall include in their Bid a photocopy of Single Largest Completed Contract and the corresponding proof of completion, such as (i) Certificate of Final Acceptance or Completion from the bidder's client; or (ii) Official Receipt issued by the bidder.
	Failure to submit a copy of Single Largest Completed Contract with proof of Completion or failure to prove the veracity of such shall be a ground for disqualification of the bidder for award and forfeiture of the bid security.
	For this purpose, similar contracts shall refer to contracts which have the same major categories of work as "building construction" or "repair/renovation of building"
5.4	Joint Venture is not allowed.
7.1 (a)	Subcontracting is not allowed.
8	The BOC will hold a Pre-Bid Conference on July 21, 2021, 10:00 a.m. at the GSD Conference Room, Ground Floor, OCOM Building, South Harbor, Gate 3, Port Area, Manila, and/or through videoconferencing/webcasting via Microsoft Teams, which shall be open to prospective bidders.

9 The Procuring Entity's address is:				
	Bureau of Customs OCOM Building, South Harbor, Gate 3, Port Area, Manila. Telefax Number: 527-9757 Email address: <u>bacsecretariat@customs.gov.ph</u>			
10.4	The minimum work experience requirements for key personnel are the following:			
	Key Personnel	General E	xperience	Relevant Actual Experience
	Project Manager	Building O Management	Construction	10yrs
	Architect	Building Con	struction	5yrs
	Civil Engineer	Building Con	struction	5yrs
	Electrical Engineer	Building System Instal	Electrical lation	5yrs
	Electronic and Communication Engineer	Building Ele Communicati Installation		5yrs
	Mechanical Engineer	Building System Instal	Mechanical llation	5yrs
	Material Engineer	Materials 7 Building Con	Testing in struction	5yrs
	Master Plumber	Plumbing Installation Construction	System in Building	5yrs
	Safety Officer	Building C Safety Requir	Construction rements	5yrs
	General Foreman	Building Con	struction	5yrs
10.5The minimum major equipment requirements are the for		ne following:		
	Equipment Capacity		1	Number of Unit/s
	32KVA Generator Set	1 unit		
	Truck	1 unit		
	Concrete Mixer		1 unit	

	Backhoe	1 unit
	Scaffoldings	250 pcs
	Welding Machine	1 unit
	Power Tools (Jackhammer, Electric Drill, Angle Grinder, Bar Cutter, etc.)	1 set
11	No further instruction.	
11.2	· ·	indred Sixty-Eight Thousand Pesos financial component exceeding this
13	No further instructions.	
14.2 (a)	The bid prices shall be in Philippine Pe	esos.
15.1	the following forms and amounts:1. The amount of not less than P811,3	f a Bid Securing Declaration or any of 60.00 or 2% of the ABC, if bid security ck, bank draft/guarantee or irrevocable
	 letter of credit; 2. The amount of not less than P2,028 is in Surety Bond. 	3,400.00, 5% of the ABC if bid security
15.2	The bid security shall be valid 120 days until the opening of bids.	
16.5	Each Bidder shall submit one (1) origination second components of its bid with prop	· · · · ·
		nd Photocopies), including attachments ountersigned/initialed by the bidder or
	"Failure to comply with the above inst	ructions would rate the bids as failed"
17		Secretariat through manual submission on or before August 2, 2021, 9:30 a.m.
	Address: GSD Conference Room, Gen Floor, OCOM Building, BOC, South H	eral Services Division (GSD), Ground Iarbor, Gate 3, Port Area, Manila.

19.2	Partial bid is not allowed. The infrastructure project is packaged in a single lot and the lot shall not be divided into sub-lots for the purpose of bidding, evaluation, and contract award.	
20	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 the following documents:	
	1. Latest Income Tax Return and business Tax Return with proof of payment (filed and paid through BIR Electronic Filing and Payment System (eFS);	
	2. VAT Returns (Form 2550M and 2550Q) or Percentage Tax Returns (2551M) with proof of payment covering the last 6 months; and3. Other appropriate licenses and permits required by law.	
21	The following documents shall be submitted by the winning bidder within ten (10) calendar days from receipt of the Notice of Award:	
	 Manpower schedule; Equipment/tools utilization schedule 	

Section IV. General Conditions of Contract

TABLE OF CONTENTS

1.	SCOPE OF CONTRACT	19
2.	SECTIONAL COMPLETION OF WORKS	19
3.	POSSESSING SITE	19
4.	THE CONTRACTOR'S OBLIGATION	19
5.	PERFORMANCE SECURITY	20
6.	SITE INVESTIGATION REPORTS	20
7.	WARRANTY	20
8.	LIABILITY OF THE CONTRACTOR	20
9.	TERMINATION FOR OTHER CAUSES	20
10.	DAYWORKS	20
11.	PROGRAM OF WORK	21
12.	INSTRUCTION, INSPECTIONS AND AUDITS	21
13.	ADVANCE PAYMENT	21
14.	PROGRESS PAYMENT	21
15.	OPERATING AND MAINTENANCE MANUALS	22

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

- 4.1. 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.
- 4.2. 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. The Contractor's Obligations

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

GCC Clause	
2	The Intended Completion Date is Three Hundred Sixty (360)calendar daysNOTE: The contract duration shall be reckoned from the start date and
	not from contract effectivity date.
4.1	The Procuring Entity shall give possession of all parts of the Site to the Contractor upon receipt of the Notice to Proceed.
6	Not Applicable.
7.2	1 year warranty on construction defects.
10	No dayworks are applicable to the contract.
11.1	The Contractor shall submit the Program of Work to the Procuring Entity's Representative within ten (10) calendar days of delivery of the Notice of Award.
11.2	The period between Program of Work updates is Ten (10) days.
	The amount to be withheld for late submission of an updated Program of Work is ten percent (10%) of the amount of the next progress billing.
13	The amount of the advance payment is fifteen percent (15%) of the Contract Price, which shall be given to the Contractor not later than fifteen (15) calendar days from receipt by the Procuring Entity of the Contractor's request.
14	The Contractor must submit statement of work accomplished (SWA) and corresponding request for progress payment within 50% and 75% of actual work accomplished and upon final completion.
15.1	The "as built" drawings and operating and maintenance manuals shall be submitted within ten (10) calendar days from accomplishment of ninety- five percent (95%) of the Project.
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 Thirty Thousand Pesos (Php30,000.00).

Section VI. Technical Specifications

A. GENERAL CONDITIONS and SCOPE OF WORKS

DESCRIPTION OF THE PROJECT

Complete all works for the **Construction of New Bureau of Customs Building of the Mindanao Container Terminal Sub-Port of Tagoloan, Misamis Oriental** including supply of all materials, equipment, and systems, as well as performance of all necessary labor and processes, in accordance with the plans, specifications, the Bidding Documents, the Terms of References and other related contract documents.

The contractor is not limited to the scope of works listed. They should verify all plans and actual conditions for the necessity of work. If the actual situation calls for demolition, removal and relocation he shall include such and all concomitant works to finish as part of the scope of work.

Any discrepancies found between the drawings and specifications and the site conditions or any errors or omission in the drawings or specification should be clarified with Architect/Consultant.

Should the contractor fails to verify or clarify discrepancies, errors, conflict or omission in the drawings and specifications, it shall be deemed that the contractor have included in the preparation of his bid the necessary works, materials or items needed to satisfy the general scope of works.

SCOPE OF WORKS:

I. PERMITS, LICENSES AND TAXES

- a. Secure and pay all permits, fees, licenses, taxes, etc. necessary for the execution of the general construction works.
- b. Prepare a monthly progress report which shall include an overall progress chart based on actual physical accomplishment of construction work and a progress chart based on actual value of accomplished construction work, among others.

II. MOBILIZATION AND TEMPORARY FACILITIES

- a. Mobilization of all necessary personnel, labor, tools, facilities, and equipment to commence work on the project.
- b. Construction, proper maintenance, and ordering of Temporary Facilities like field offices, field conference rooms, storage structures such as warehouse or bodega materials storage yard, worker housing, proper sanitation facilities, health and safety facilities, among others.

- c. Secure all existing equipment, materials, structures, and facilities for re-use with proper inventory. Provision of security and safety measures for the protection of the general public during construction works.
- d. Take all necessary measures to project all existing facilities, site development, and equipment from damage, loss and dirt. Contractor is responsible for the restoration of all existing equipment, materials, structures, and facilities damaged or otherwise during construction work.
- e. Setting up of necessary water and power lines required for the Project's.

III. CONSTRUCTION OF SITE UTILITIES

- a. Construction of Site Drainage
- b. Construction of Site Electrical System
- c. Construction Site Water Distribution System
- d. Construction of Site Sewer System
- e. Construction of Site Fire Protection System
- f. Other works

IV. ARCHITECTURAL AND INTERIOR DESIGN WORKS

- a. Construction of all spaces at the ground floor according to architectural and interior design plans and specifications provided.
- b. Construction of all spaces at the second floor according to architectural and interior design plans and specifications provided.
- c. Construction of roof according to architectural and interior design plans and specifications provided.
- d. Construction of Walls (Exterior walls, Interior walls, Curtain walls. etc.).
- e. Construction of Doors and Windows.
- f. Construction of Stairs.
- g. Architectural Finishes (Floor, Wall, Ceiling Finishes).
- h. Verify plans, detailed drawings and technical specifications.
- i. Other necessary works not listed of this scope of works or not shown on the detailed drawing shall be performed to complete the function of architectural works.

V. STRUCTURAL WORKS

- a. Construction of Deep Foundation System
- b. Construction of Columns Structure System
- c. Construction on Slab on Fill
- d. Construction of Structural Framing System
- e. Construction of Roof and Roof Framing System
- f. Verify structural plans, detailed drawings and technical specifications
- g. Other necessary works not listed of this scope of works or not shown on the detailed drawing shall be performed to complete the function of structural works.

VI. EARTH WORKS

- a. Excavation
- b. Backfill and Compaction
- c. Gravel Bedding
- d. Lean Concrete
- e. Soil Poisoning

VII. MECHANICAL WORKS

- a. The contractor shall provide the necessary provisions for the installation of airconditioning units, pipes, ducts, riser as indicated on the plans.
- b. Provision of Fire Protection System (Fire Sprinkler and Fire Hose Reel System) as indicated on the plans and specifications provide labor, materials and installation for the entire building of construction.
- c. Provision of required pumping system, pipes, fire hose, fire hose cabinet and accessories-the contractor shall provide the labor, materials and installation as indicated on the plans and specifications.

VIII. ELECTRICAL WORKS

- a. Supply and installation of complete electrical system as indicated on plans.
- b. Supply and installation of complete auxiliary works as indicated on plans.

- c. Supply and installation of complete power and control wiring to various Mechanical and Sanitary equipment unless otherwise specified.
- d. Supply and installation of standard and special lighting fixtures as specified by the Architect and/or owner's representative.
- e. Supply and installation of wiring devices, switches and outlets, wall receptacles, plates and accessories.
- f. Verify electrical plans, detailed drawings and technical specifications to complete the installations.
- g. Termination of all electrical system and auxiliary.
- h. Complete testing and commissioning of all electrical lighting, power and auxiliary systems.
- i. Securing of electrical wiring permit and certificate of electrical final inspection.
- j. Application and securing the approval for the electrical power service connections including the preparation of the necessary plans, forms and related documents, payments of fees and charges and coordination with the involved parties and other authorities or persons involved in the procedures.

IX. PLUMBING WORKS

- a. Arrange for, obtain and bear the cost of necessary permits, bonds and fees for the Plumbing System Work.
- b. All permit fees, private or government shall be paid by the Contractor.
- c. Furnish and install Plumbing System to the entire building where shown on the drawings. System to include all pipes: drainage, storm, potable water, hangers, sway braces, plumbing fixtures, control valves, flexible hoses, water meter, drains, cleanouts, traps.
- d. Water Pressure Tanks and accessories, including connection to the Plumbing System Lines.
- e. Excavation and backfilling in connection with the work. Prepare and installation of pipe sleeve during the progress of work.
- f. All building drains, waste and venting systems including floor drains and equipment drains.
- g. Furnish and install plumbing fixtures, fittings, trims, and accessories.
- h. Furnish and install of pumping system such as transfer pump, booster pump, rainwater pumps, elevator sump pump, and its related accessories.

- i. Testing for leakage of drainage system, sewer, waste and venting system. Hydrostatic testing for all water supply and distribution system and disinfection of the water supply and distribution system.
- j. All opening through which fire may spread from one floor to the other, such holes through floor or walls for the pipe shall be sealed with fire resistant materials.
- k. Chipping and plastering works necessary for the area covered in the installation of Plumbing System.
- 1. Provision of Cistern Tank and Septic Tank.
- m. Furnish the shop drawings and certificates of inspection.
- n. Periodically remove from the jobsite all rubbish and debris resulting from the Plumbing Work.
- o. Miscellaneous items as here-in after specified.

X. DEMOBILIZATION AND CLEANING

- a. Demobilize, dismantle, and remove all temporary facilities, including all workmen's house, construction equipment, tools, personnel and debris out of the project site and premises.
- b. The contractor shall remove all waste and leave the project site in a clean and orderly condition acceptable to the end user.
- c. Submit all as-built architectural and engineering plans to the owner or the end user.

PLANS and SPECIFICATIONS:

All drawings, small scale and detail drawings are intended to collaborate with the specifications and to form part thereof, where figures are given, they are to be followed in preference to measurement by scale. Anything shown in the drawings and not mentioned in the specifications or vice-versa or anything not expressly set forth in either, but which is reasonably implied shall be furnished and installed as thought specifically shown in mentioned both.

The Drawings and Specifications are complementary to each other. Drawings are graphic means of showing work to be done. They are particularly suited to showing where materials are located. Thus, drawings exist essentially to show dimension, location and placement. Not all works, however, can be presented in the drawings. Generalized works are usually statement form and hence, the contractor is required to read the specifications carefully.

Specifications, on the other hand, are used to describe the materials, construction techniques, samples, shop drawings, guarantees and other contract requirements. Together, the drawings and the specifications are used to inform the contractor. In cases where the specified brand carries with it the manufacturer's specifications, the manufacturer's specifications shall hold precedence over these specifications.

SUMMARY OF MATERIALS AND FINISHES:

I. 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 workman like 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.

II. CONCRETE and MASONRY WORKS:

- 1. Delivery, storage and handling of materials.
 - a. All materials shall be so delivered, stored and handled as to prevent the inclusion of foreign materials and the damage of the materials by water or breakage.
 - b. Packed materials shall be so delivered and stored in the original packages until ready for use.
 - c. Packages showing evidence of water or other damages shall be rejected.

2. WATER

a. Water to be use in mixing concrete shall be free from oil, alkali and organic matter on other deleterious substance and shall be reasonably clear and clean. The use of brackish water is not allowed.

2. PORTLAND/POZZOLAN CEMENT

a. Portland /Pozzolan cement shall be, of any standard commercial brand in standard 40kgs

3. FINE AGGREGATES

a. Fine aggregates or sand used in composition of concrete shall be clean, strong and uncoated grains, free from injurious amount of dust, lumps or flaky particles and shall not contain more than 5% clay.

4. COARSE AGGREGATES

a. Coarse aggregates or gravel shall be well graded as top size ranging from 6mm up to the size, which readily pass between all reinforcing bars and between reinforcement and forms.

5. METAL REINFORCEMENT

- a. Reinforcing bars shall be standard commercial, deformed steel such as steel or other locally available equivalent.
- b. Steel bars shall be free from dust scales, splices in bars shall be made at the critical points of maximum stresses.
- c. Tie wire shall be standard commercial G.I. wire gauge no. 16.

6. CONCRETE HOLLOW BLOCKS

- a. Where the use of CHB is indicated, they shall be true to size without cracks or spurs or other defects which may impair their strength or durability. They shall have three cones.
- b. All concrete hollow blocks shall be a product of a reputable manufacturer.

7. EXECUTION

a. Construct form sufficiently tight to prevent leakage securely braced to prevent displacement and to support construction loads, forms shall not be removed until concrete is set.

8. CONCRETE MIXER

Use of Concrete Mixer

- 1. Class "A" concrete-(20Mpa concrete) for all columns, footings, beams, stiffener, slabs mixture (1:2:4)
- 2. Class "B" concrete-(17.5Mpa concrete) for all wall footing, slabs and stairs on fill and CHB fillers mixtures (1:3:5)
- 3. Class "A" mortars 1:3 by volume for all plastering works.

III. CARPENTRY and JOINERY WORKS:

1. SCOPE

- 1.1 The work covered in this section of the specifications consist of furnishing all items, articles, labors, equipment, materials and other mentioned or scheduled on drawings and in performing all operations and methods necessary and required for the completion of all carpentry and joinery works together with the installation of all exterior and interior finished carpentry in accordance with the applicable drawing and full size details.
- 1.2 All doors and windows, transoms or other openings where so indicated on plans and all framing coming in contact with concrete shall be anchored by means of 20d nails spaced not more than 20cm apart. All frames shall be riveted, molded and cut with wash and undercut for water drip.

2. PROTECTION and STORAGE

2.1 Lumber shall be protected and kept under cover both in transit and in the jobsite, and shall be carefully piled off the ground and be insured of proper drainage, ventilation and protection from weather.

2.2 Materials shall be delivered unduly long before it is required for the proper conduct of the work.

3. FASTENINGS

- 3.1 Fastening shall be common nails, due in specified flat head wood screw where specified or call for.
- 3.2 Conceal fastening as far as possible and where not possible locate them in a conspicuous place where nailing is permitted through woodwork face, conceal nail head.

IV. FORMWORKS:

1. Forms shall result in a final structure that conforms to the shape, line in dimensions of the member as required by the design drawing and specification. Forms shall be substantial and sufficiently tight to prevent leakage of the mortar. Forms and their support shall be designed so as not to damage previously placed structure.

V. FOOTINGS, FOUNDATION and WALLS:

The bottom of all excavation for footing and foundation shall be in distributed earth properly leveled off, tamped and approved by the engineer. Excavation shall be entirely free of water during pouring of concrete, hence the use of water pump if necessary.

VI. STEEL TRUSSES and ROOFING WORKS:

- 1. All materials and accessories shall be free from rust or any other form of corrosion.
- 2. Steel trusses shall be done in accordance with the plans and drawings, all plates, angle bars and C-purlins shall be pre-painted to installation and re-painted on welded joints.
- 3. Roofing materials shall be multi-tile pre-painted long span or its equivalent with similar design and quality sheets should be kept dry when stacked, store clear of the ground and under cover should sheets become wet, they must be dried and fillet stacked to allow air circulation. Storage should be kept to a minimum;

all sheets shall be installed in accordance to the manufacturer's specification and by persons specializing on the same.

VII. STRUCTURAL STEEL

The scope of work under this section consists of furnishing of all materials, labor, tools, equipment, and performance of all operations relative to the fabrication, delivery to the site, erection and painting of structural steel trusses and purlins as shown on the Plans.

VII – I DESIGN CONDITIONS

- 1. All structural steel work shall be in accordance with AISC Specification for the Design, fabrication and Erection of Structural steel for buildings.
- 2. Materials, and parts necessary to complete each item through such work which is not shown or specified shall be included, such as miscellaneous bolts, anchor, supports, braces, and connections etc.
- 3. Shop drawings as well as erection drawings shall be prepared and submitted by the Contractor to the supervising Architect or Engineer for approval before and fabrication is made.

VII – II SHOP DRAWINGS

- 1. Shop drawings giving complete information necessary for the fabrication of the component parts of the structures, including the location, type and size of all rivets, bolts and welds, shall clearly distinguish between shop and field rivets, bolts and welds.
- 2. Shop drawings shall be made in conformity with the best modern practice and with due regard to speed and economy in fabrication and erection.

VII – III MATERIALS

- 1. All structural steel shapes and plates shall conform to ASTM A-36.
- 2. Light-Gauge Cold-formed Structural Steel shall conform to pertinent specifications of the American Iron and Steel Institute (AISI).
- 3. Machine Bolts shall conform to ASTM A-307. Each bolt shall be provided with standard nuts and washers.

- 4. Anchor Bolts shall conform to ASTM A-141.
- 5. Cross Bracing with Turnbuckles shall conform to ASTM A-307.
- 6. Welding Electrodes shall conform to AWS A-5.1 or A-5.5; E 70 Electrodes.
- 7. All Stainless-Steel pipes use 1-1/2" OD (outside diameter) schedule 40.

VII-IV FABRICATIONS

- 1. Field fabrication shall be kept to a minimum. And shop fabrication shall be employed to the greatest extent possible with members shop fabricated as practicable with a minimum requirement for field connections.
- 2. Welding, shearing, gas cutting, chipping and all other works involved in the fabrication of structural steel shall be done with accuracy and of the highest quality of workmanship, within the allowable tolerance prescribes in AISC specifications.

VII – V WELDING

- 1. The technique, appearance and quality of welds and the method of correcting defective work shall conform to the applicable provisions of "Workmanship of the Standard Code for Welding in Building Construction of the American Welding Society."
- 2. Welding of structural members in shop and on field, shall be done only by certified and experienced welder.
- 3. Surfaces to be welded shall be free from loose side, rust, grease, paint and other foreign materials that will impair the soundness of the weld.
- 4. Temporary weld and assembly attachments shall be kept to a minimum. All temporary attachment that are welded, shall be removed by a flame torch above the parent metal surface and ground to smooth surface by power grinding.
- 5. Note shall be made on the Plans and on the shop drawings of those joints or group of joints in which it is especially important for the welding sequence and technique of welding to be controlled carefully, to minimize welding under restraint, and to avoid undue distortion.

Weld length called on the Plans and on the shop drawings shall be the net effective length.

VII – VI CONNECTIONS AND HOLES

Connections shall be as shown in the drawings and shall develop the full capacity of the members.

- 1. Surfaces or joints prepared for welded or high strength bolted connections shall comply with cleanliness requirements of all joints surfaces and contact surfaces within friction types joints as specified in "Bolted parts" of the AUSC Specifications.
- 2. Holes shall be punched or drilled at right angles to the surface of the metals and shall not be enlarged by burning.
- 3. Holes shall be clean-cut without rugged edges. Outside burrs resulting from drilling or roaming operations shall be removed with a tool which reaches a 1.588mm level around the bolt holes.

VII – VII QUALITY CONTROL PROCEDURES

- 1. Quality control shall be practiced by the Fabricator to assure high quality in the work. In addition to the Fabricator's quality control procedures, materials and workmanship shall be subject to Inspection by qualified inspectors representing the Owner.
- 2. Fabricator shall cooperate harmoniously with the inspector to avoid interpretation in the work when correction will be needed.

VII – VIII REJECTIONS

- 1. Materials or workmanship not in reasonable conformance with the provisions of this Specification shall be rejected at any time during the progress of the work.
- 2. The Fabricator shall receive copies of all reports made by the Inspector authorizes by the Owner and/or his supervising Architect or Engineer.

VII – IX ERECTION

1. The Steel structures shall be erected plumb and true to line and grade. Bracings and supports shall be introduced whenever necessary to take care of all the loads to which the structure may be subjected. Such bracings shall be left in place as long as may be required for safety.

- 2. Base plates and bearing plates shall be supported on steel wedges until the supported members shall have been aligned and plumb, following which the entire bearing area shall be grouted solid with non-shrink cement grout.
- 3. Grouting mortar shall be of the commercial type approved by the supervising Architect or Engineer and the methods of use as recommended by the manufacturer.

VII – X MARKINGS

- 1. Shop fabricated members shall be marked prior to delivery to facilitate the erection of the members.
- 2. Markings shall be listed and given description and copies of which shall be furnished to the Owner.
- 3. Markings shall be neatly painted on the members with a distinctive color of enamel paint.

VII – XI SHOP PAINTING

- 1. Steel works to be encased in concrete shall not be painted. All other steel works shall be given one coat of shop paint or red lead primer, applied thoroughly and evenly to dry surfaces, which have been cleaned, by brush, spray roller coating, floor coating or dipping at the selection of the Fabricator.
- 2. Steel work prior to painting and after inspection and approval shall be cleaned of loose mill scale, loose rust, weld slag or flux deposit, dirt and other foreign materials.
- 3. Oil and grease shall be removed by solvent. Parts of the steel work which shall be fielded, welded or connected shall not be painted. All steel work specified to have no shop paint shall likewise be thoroughly cleaned.

VII – XII FIELD PAINTING

All steel work after complete erection, shall be field painted with the type and color specified in the section of painting of this Specifications. Painting shall not be done on any steel surface that is thoroughly clean and dry.

VIII. ROOFING MATERIALS

A. CORRUGATED METAL ROOFING

This item shall consist of furnishing all plant, equipment, tools, materials and labor required to perform and complete the corrugated metal roofing, together with related accessories such as ridge, hip rolls, valleys, gutters, flashings, straps and rivets, soldering and downspout when called for on the Plans all in conformity with this Specifications.

VIII – IA MATERIAL REQUIREMENTS

1. CORRUGATED GALVANIZED IRON

- a. Corrugated galvanized iron (G.I.) sheets, including plain G.I. sheets for roofing accessories, shall be cold rolled meeting ASTM-153 and with spelter coating of zinc not less than 0.381kg/m².
- b. Unless otherwise specified or shown on Plans, roofing sheets shall be 0.50 mm thick provided in long span sizes to minimize end lapping.
- c. Sheets shall weigh not less than 4.14kg. /m² and shall be marked or stamped showing the thickness, size, amount of zinc coating, brand and name of manufacturer.
- d. Test specimens shall stand being bent through 180 degrees flat on itself without fracture of the base metal and without flaking of the zinc coatings.

VIII – IIA ROOF ACCESSORIES

A. Strap Fasteners

Strap fasteners shall be 0.50mm thick by 2.5cm. wide and sufficiently long to bend up to the opposite face of the purlins with corners chipped off at the riveting ends.

B. Rivets and washers

- 1. Rivets and washers shall be galvanized mild iron and shall not be less than 5mm diameter and 10mm length.
- 2. Washers shall not be less than 1.5mm thick and 20mm in outside diameter and shall provide snug fit to the rivet.

C. Soldering Lead

Soldering lead shall have a composition of 50 % lead, conforming to ASTM B-32. Rivets and burrs for lap joints of gutters, downspouts and flashings shall be copper or aluminum not less than No. 8 or 3.175 diameter.

D. Fabricated Metal Roof Accessories

- 1. Ridge, hip rolls, valleys, flashings and counter flashings, gutters and downspouts, whenever required, shall be fabricated from plain G.I. sheets gauge No. 26.
- 2. Gutters and downspouts shall be 0.60 mm thick unless otherwise specified on Plans. Wire basket strainers shall be gauge 14, galvanized, aluminum or stainless steel.
- 3. If stainless steel is specified for gutter and flashings use gauge 24, 0.60mm thick plain sheet with standard commercial size of 120cm. x 240cm. cut to sizes for fabrication.
- 4. Roof ventilators, whenever required, shall be fabricated from gauge 26, 0.50mm thick plain G.I. sheets and constructed to the dimensions and details shown on Plans.
- 5. Bending of plain G.I. sheets for various accessories shall be done by machine press. Hand bending shall not be permitted.

VIII – IIIA ROOF ACCESSORIES

A. Preparatory Work

1. Preparatory to the installation of the corrugated G.I. roofing, purlins should have been placed and spaced properly to fit the length of roofing sheets to be installed.

- 2. The center line of the purlins at end laps shall be 15 cm. from the bottom line of end laps and intermediated purlins are placed equidistant with each other.
- 3. Ascertain that the top of the purlins should be at the same plane.

B. Installation of Corrugated G.I. Sheet

- 1. Installation of corrugated G.I. sheets with end laps shall start at the lower part of the roof and proceed towards the direction of monsoon wind providing a side laps of $2 \frac{1}{2}$ corrugations.
- 2. Provide an end laps of 25cm. minimum length. Each sheet shall be fastened temporarily by 1.83mm diameter by 2.5 cm. long galvanized flat-head nails at valleys of corrugations covered by side or end laps.
- 3. Succeeding upper rows of corrugated G.I. sheets shall be installed in the same manner until the entire roof area is covered.
- 4. Valleys, ridge, hip rolls and flashings when required, shall be installed before fastening the roofing sheets with galvanized straps and rivets or with G.I. roofing nails and washers.
- 5. One strap shall be riveted at each alternate corrugation at the gutter line, the ridge line and end laps and the straps bent around and nailed to the purlins.
- 6. Rivets shall be provided with a galvanized mild iron washer below and one lead and one galvanized washer above the street.
- 7. Rivets shall be sufficiently long to permit forming a hemispherical head. Riveting shall be done such that the lead washer shall be compressed to provide a watertight fit around the rivet.

C. Installation of Roofing Accessories

1. Ridge, Hip and Valley Roll

a. Ridge and Hip rolls shall lap at least 25 cm. over roof sheets and together shall be riveted at every second corrugation.

- b. Valleys shall lap at least 45 cm. each way under the roofing and shall be secured to the framework with galvanized nails, placed below the roof sheets.
- c. Rivets alongside of the valley shall be at every second corrugation.

B. PRE-PAINTED METAL SHEET

This item consist of furnishing all pre-painted metal sheet materials, tools and equipment, plant including labor required in undertaking the proper installation complete as shown on the Plans and in accordance with this Specifications.

VIII – IB MATERIAL REQUIREMENTS

All pre-painted metal sheet and roofing accessories shall be oven – baked painted true to profiles indicated on the Plans.

Pre – painted roofing sheets shall be fabricated from cold rolled galvanized iron sheets specially tempered from cold rolled galvanized iron sheets specially tempered steel for extra strength and durability. It shall conform to the material requirements defined in PNS 67: 1985.

Profile sections in identifying the architectural molded rib to be used are: Regular corrugated, Quad – rib, Tri- wave, Rig-wave, Twin rib, etc. Desired color shall be subject to the approval of the Architect.

- 1. Gutters, valleys, flashings, Hip and Ridge roll shall be fabricated from gauge 24 (.6mm) thick cold rolled plain galvanized iron sheets specially tempered steel. Profile section shall be as indicated on the Plans.
- 2. Fastening hardware shall be of galvanized iron straps and rivets. G.I. straps are of .50mm thick x 16mm gauge 26 and standard G.I. rivets.
- 3. Base metal thickness shall correspond to the following gauge designation available locally as follows:

SPECIFICATIONS AND CONTRACT

Base Metal Thickness Designated Gauge

.40mm thick	Gauge 28
.50mm thick	Gauge 26
.60mm thick	Gauge 24
.80mm thick	Gauge 22

Length of roof sheets available in cut from 5 feet to 12' long. Long span length up to 18 meters. Special length by arrangements.

VIII – IIB CONSTRUCTION REQUIREMENTS

- 1. Before any installations begin, the Contractor shall ascertain that the top faces of the purlins are in proper alignment.
- 2. Correct the alignment as necessary in order to have the top faces of the purlins on an even plane.
- 3. Sheets shall be handled carefully to prevent damage to the paint coating. Lift all sheets or sheet packs on to the roof frame with the overlapping downturned edge facing towards the side of the roof where installation will commence, otherwise the sheets will have to be turned end to end during installation.
- 4. Start roofing installation by placing the first sheet in position with the down turned edge in line with other building elements and fastened to supports as recommended.
- 5. Place the down-turned edge of the next sheet over the edge of the first sheet, to provide side lap and hold the side lap firmly in place. Continue the same procedure for the subsequent sheets until the whole roofing area is covered and or adopt installation procedure provided in the instruction manual for each type of molded rib profile.
- 6. For walling applications follow the procedure for roofing but allow a minimum end lap of 10 cm. for vertical walling.
- 7. **End lap.** In case handling or transport consideration requires to use two or more end lapped sheets to provide full length coverage for the roof run, install each line of sheets from bottom to top or from eave line to apex of roof framing. Provide 15 cm. minimum end lap.
- 8. **Anchorage.** Pre- painted steel roofing sheets shall be fastened to the wood purlins with standard length G.I. straps and rivets.
- 9. For steel Frame up to 4.5 mm thick, use self-drilling screw No.12 by 3.5 cm. long hexagonal head with neoprene washer.
- 10. For steel support up to 5mm thick or more, use threaded cutting screw No.12 by 4.0 cm. long hexagonal head with neoprene washer.
- 11. For side lap fastener use self-drilling screw No. 10 by 1.6 cm. long hexagonal head with neoprene washer.

- 12. Valley fastened to lumber and for walling, use self-drilling wood screw No. 12 by 2.6 cm. long hexagonal head with neoprene washer.
- 13. Valley Fastener to steel supports, use self-drilling screws, hexagonal head with neoprene washer, drill size is 5mm diameter.
- 14. In cutting pre-painted steel sheets to place the exposed color side down, cutting shall be carried out on the ground and not over the top of other painted roofing product.
- 15. **Power cutting or drilling** to be done or carried out on pre-painted products already installed or laid in position, the area around holes or cuts shall be masked to shield the paint from hot filings.
- 16. **Storage and Protection.** Pre-painted steel roofing, walling products and accessories should be delivered to the job site in strapped bundles.
- 17. Sheets and or bundles shall be neatly stacked in the ground and if left in the open it shall be protected by covering the stack materials with loose tarpaulin.

IX. CEMENT FINISH for CONCRETE SURFACE, WALL PAPERS:

- 1. All concrete surfaces including those indicated as cement plaster finish on drawings in all interior walls and other concrete surfaces without specified finish, shall be done and applied in accordance with the following specific provisions.
- 2. Immediate after the prepared of the forms, all projecting wires and other design for trying forms shall be cut of at least by open surface finishes. All hole voids, depression and the design shall be enlarged, roughened mortar with the same grade as that even surface similar of concrete surface all to the satisfaction of the engine crack shall be current and the side dove tailed to a depth of at least 5cm and shall thereafter be filled with a mortar of the same grade as that in the original surfaces.

X. DOORS and WINDOWS:

- 1. All panel doors shall be made of hard wood, all flush type doors shall be made of marine plywood and all other doors specified in the plan must be manufactured in accordance to its sizes and by a manufacturer of good quality.
- 2. Doors shall be extended through the full width of sills with ten on and mortised joints glued well and planed. It shall hang straight and true to plump.
- 3. Windows shall be of size and type indicated in the schedule and as specified therein.

XI. HARDWARE:

- 1. Where the exact type of finishing hardware specified is not adaptable type as having as nearly practicable the same operation and quality as the ones specified shall be used upon the approval of the engineer.
- 2. Use 4" nickel-plated cabinet handle (heavy duty)
- 3. All locks shall be new and in good condition in any commercial brand available and shall be installed in the doors frames at the same height of 90cm from finished floor line.
- 4. Each panel of hinged door shall be hanged on loosed pin hinges for doors 1.50m but less than 2.00m high and one additional loose pin for every additional 0.65m height of door or fraction thereof.
- 5. All hinges shall be chromium plated nickel brass or it local equivalent having similar quality.

XII. PAINTING WORKS:

This section of the specification covers the complete painting and finishing of the wood surface, the painting of plasters, concrete, unfinished metal and other surfaces through the interior and exterior of the building.

- 1. The work covered by this section of the specification consist in the proper preparation of surfaces, the furnishing of labor, materials, tools, appliances, scaffoldings, and other necessary equipment and in the performing of all operations in connection with painting, varnishing and wallpaper works, complete in accordance with color schemes and as specified therein.
- 2. All paint materials shall me the requirements of the specifications by the standardization committee on supplies and shall be delivered on the job in the original containing, with labels intact and seal unbroken.
- 3. Tinting colors for all paints shall be colors in oil, ground and pure in linseed oil, and for the highest grade obtainable.
- 4. Color pigments shall be used to produce the exact shades paint, which shall conform to the approved color scheme of the building.
- 5. Except as otherwise noted, color of the priming coat shall be lighter than the body coat and color of the body lighter than the finished coat. The first coat shall be white.
- 6. Wood surfaces shall be thoroughly cleaned, smoothly had pressed and well sandpaper before any paint or oil finished is applied.

- 7. Before applying paint or wallpaper to concrete cement plaster or other cement finishes, etc., this surface must be allowed to dry thoroughly.
- 8. Use quality paints for all surfaces to be painted.

XIII. PLUMBING WORKS, TOILET FIXTURES and TILEWORKS:

- **a.** All works, comply with the requirement and provision of the National Plumbing Code of the Philippines.
- **b.** All fixtures shall be separately trapped. The traps shall be placed as near as possible to the fixtures.
- **c.** No fixtures shall be double trapped.
- **d.** Horizontal waste lines shall be secured by hook to the building frames or embedded in concrete whenever necessary.
- e. Horizontal waste line receiving the discharge from two or more fixtures shall be provided with vents connected to the station at least 1.20m from floor level.
- f. Connection of the water closet shall be made to soil pipe by means of charges and asbestos packing without the use of water, cement.
- **g.** Waste pipe potable water line pipes shall be extended to all the fixtures outlets and equipment from the gate valve near the riser.
- h. Provide and installed complete floor drain shown on plan, brass or nickel plated 4"x4" with waste line, P-trap and vents.
- i. All pipes, fitting traps, fixture, appurtenances and devices of plumbing and drainage system shall be inspected and approved by the engineer to ensure compliance with all requirements of all codes and regulation referred in these specifications.
- j. Use PPR Type 3 pipes for all cold-water lines.
- **k.** Use any commercial brand sanitary pipes, fittings, accessories, materials, and all works obviously necessary for the proper functioning of all specification or indicated in the drawing are included in this works.
- I. Use 30X30cm non-skid tile for flooring and 20x30cm glazed wall tiles and partitions.
- m. Wall to be finished with glazed tiles or elsewhere indicated as such in the drawings, shall be chipped off, cleaned thoroughly with wire brush, washed

with clean water, and painted up solid with 1:2 cement mortar before applying wainscoting.

- n. The tiles and their accessories shall be free from imperfection that affects their quality, appearance, and strength. The tile should be thoroughly soaked in water before installation. All tiles for wainscoting shall be set to correct grades and level true to lines, laid even and shall be set truly vertical in accordance with the details shown on the drawing the tiles shall be firmly laid on 1:2 cement paste.
- **O.** Glazed tiles shall be cushion-edge locally manufactured of the sized or type and pattern shown on drawing and/or specified above. Use synthetic granite and non-skid and glazed tile.
- **p.** Use quality type for toilet fixtures as approved by end user.

XIV. ELECTRICAL WORKS:

The work to be undertaken here under includes the furnishing of all labor, materials, equipment, tools and supervision to the project and to be completed the good working condition of the electrical system for the proposed residential building.

- 1. All works here under shall comply with the requirement of the latest edition of the National Electrical Code of the Philippines.
- 2. MATERIALS and WORKMANSHIP

All materials shall be unused brand new and shall conform with the standard of the underwriter laboratories in every case where such a standard has been establish for the particular type of materials to be installed.

3. SERVICE ENTRANCE

Service entrance shall be 180-250 volts, three phase, 3 wires, 60 cycles as indicated in the plan. The service entrance installation shall be part of the electrical works as indicated therein. The service entrance conduit and accessories shall be installed in the nearest power source up to service entrance cap and the work shall be done in accordance with the latest specification required by Electric Company.

4. DISTRIBUTION SYSTEM

The distribution system shall be Two (2) wire, 220 volts.

5. WIRING METHOD

- 5.1 All wiring shall be installed in standard polyvinyl conduit of the Philippines manufacture or equal and shall conform to the underwriter's standards in code.
- 5.2 Conduit shall not be less than 1.5cm nominal diameter and where so indicated, sizes on the plans are minimum two or more ducts shall be installed in lieu of the larger size.
- 5.3 All wire shall be copper under no circumstance will aluminum or other metallic conductors be permitted helps, dodge brand or approved equivalent size of wire shall be used. All materials to be used shall be new and approved by the underwriters laboratories.
- 5.4 All joints in junction boxes, those for feeders and service wire shall be joint by 3m scotch lock. Provide proper sizes and installed according to the manufacturer's specification for service and feeder conductors, tape shall be made with heavy duty all brass or copper solder less connectors.

6. OUTLET and SWITCH BOXES

- 6.1 All boxes shall be hard plastic, approved product of reputable manufacturer.
- 6.2 All ceiling and wall bracket outlet boxes shall be of deep rectangular flush type gang boxes or section switch boxes shall be installed where required.
- 6.3 All boxes, including junction and pull boxes shall be sufficient size to provide free space for all conductors enclosed in the box in addition to the fittings. Such as witch mechanism, receptacles, fixtures slabs, that may contain in the box.

7. OUTLET and SWITCH BOXES

- 7.1 Suitable single pole and three-way switches of the flush tumbler type with an appropriate white plastic or aluminum cover plate shall be provided where indicated on the plans.
- 7.2 All convenience outlet receptacles shall be flushed, or wall mounted type of various kinds as indicated in the drawings with suitable cover plates.
- 7.3 Switches and receptacles are indicated in the drawings as close as possible to the desired points, however actual constructions condition may required the change of location and in such cases the attention of the engineer shall be called for the final location. The engineer may direct minor changes in

the location of the switches and receptacles depending solely on his engineering judgment.

7.4 Unless otherwise directed by the engineer, outlet shall be mounted at the following heights above the floor or steps.

7.4.1. Wall switches	1.50m.
7.4.2. Wall brackets	2.00m.
7.4.3. Convenience outlet	0.30m.

7.5 Use flush type switches

8. ELECTRICAL LIGHTING FIXTURES

8.1 Pin light

LED lamp with diamond design reflector white ceiling rim recessed mounted or round LED panel light white 6-24w power variant, shall be low maintenance, rust proof, highly efficient, longer life span, environmentally friendly, less power consumption.

8.2 Cove lighting

Waterproof flexible strip lights warm white 12-24w power consumption, dimension $5000 \ge 8 \ge 2.4$ mm.

- 8.3 Use approved quality brand for the entire led lights and slim tube led type or other equivalent brand approved by Electrical Engineer.
- 8.4 Comply with the latest applicable provision and latest recommendation of the following:

Philippine Electrical Code (PEC)

Illuminating Engineering Society (IES)

National Electrical Manufacturers Association (NEMA)

8.5 Use circuit breaker in a good quality.

- 9. Conduit
 - a. Conduit shall be hot dip galvanized mild steel IMC pipe (standard IMC pipe with inside wall epoxy coating) or polyethylene coated (PE Coated) IMC in 3.0 M length. UL. listed. Fittings shall be threaded type as required.

- b. Stainless Conduit Pipe/ PE Coated IMC Pipe All exposed &embedded conduit pipes for power, control circuits, feeders & sub-feeders inside anodizing and/or corrosive areas to be installed by the electrical, mechanical, process and fit-out contractors for the refrigeration systems shall comply with this requirement. Likewise, all installation hardware and materials including clamps, hangers and bolts shall be of the same material as the required stainless conduit pipe or PE Coated IMC pipe.
- c. Metallic conduits for interior and exterior systems shall be standard weight, mild steel, hot-dip galvanized with an interior coating. PVC non-metallic embedded in the concrete slabs, concrete walls and partitions shall be approved of manufacturing standard.
- d. Schedule 40 PVC is acceptable in installations embedded in the concrete wall partitions or concrete slab, no installation of PVC in any exposed layout.
- e. No conduit shall be used in any system smaller than 15mm dia. Electric trade size, nor shall have more than four 90-degree bends in any one run and when necessary, pull boxes gauge 16 shall be provided as directed. Location and sizes of pull boxes shall be cleared to the engineer prior to fabrication and installation.
- f. No wires shall be pulled into any conduit unless the conduit system is complete in all details. In the case of concealed work, no wires shall be pulled 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.
- g. The ends of all conduits shall be tightly plugged to include plaster, dust and moisture while the project is in the process of construction.
- 10. Polyvinyl Chloride Conduit (PVC)
 - a. Conduit shall be polyvinyl chloride, schedule 40, 3.0 M length. Fittings shall be slip-on type with threaded end adapter.
 - Application Power Service Entrance, primary and secondary feeder roughing-ins in duct-bank from transformer secondary terminal to low voltage switchgears and from low voltage switchgear to dry warehouse electrical room.

11. Flexible Conduit

- a. Flexible conduit shall be hot dip galvanized mild steel. This requirement covers installation on indoor electrical rooms and equipment rooms where possible damping or presence of liquids are ruled out.
- b. Liquid-tight flexible metallic conduit shall be UL listed to be coupled with liquid-tight die cast metal conduit connectors.
- c. Applications: Liquid-tight flexible conduit shall be used on all wet or damped areas and control gear areas of installations where liquids materials and dusts are prevalent.
- 12. Wires and Cables
 - a. All wires shall be copper, soft-drawn and annealed, shall be of 99% conductivity, shall be smooth and true and of the cylindrical form and shall be within +/-1% variation of the actual size called for.
 - b. Wires and cables shall be plastic insulated for 600 volts working pressure, type THHN/THWN unless otherwise noted.
 - c. All wires and cables shall be color coded, color-coding of wires are as follows:

Line 1 – red Line 2 – yellow Line 3 – blue

- d. Minimum size of branch circuit wire shall be 3.5 mm2 THW or THWN for power and lighting system with 2.0mm2 THW minimum ground wire.
- e. Wires 2.5 mm2 and smaller shall be solid or stranded and 3.5 mm2 and bigger shall be stranded.
- 13. Conduits & Cable Supports
 - a. All conduits and suspended electrical gears and equipment shall be supported by using NEMA Rated and Approved channel support systems. All support systems shall be properly sized and installed as per code requirements.
 - b. The channel support systems including its mounting and hanger accessories shall be hot-dipped galvanized finished.

- c. Cable ladders and wire-way shall be NEMA rated and approved. It shall be hot-dipped galvanized finished. Hangers and support system for cable ladders & wire-way shall be approved brand conforming to NEMA rating & standards.
- d. All conduits and cable support systems inside the building areas shall be of stainless materials including installation accessories including bolts & nuts.
- 14. Outlet Boxes and Covers
 - Outlet boxes and covers shall be cast hot-dip galvanized steel. Thickness of the outlet boxes and covers shall be code gage and no less than gage #16. Boxes shall be deep type unless otherwise noted. This should be conformed and be used on all dry areas of installations.
 - b. Stainless steel outlet boxes and covers shall be required on all exposed or hazardous location and wet meas.
- 15. Junction and Pull Boxes
 - a. Junction and pull boxes, per code gauge steel, shall 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 with the permission of and to the satisfaction of the architect and engineer.
 - b. Sizes shall be subject to the approval of the engineer.
 - c. Pull boxes shall be fabricated with hinged type, demountable and lockable covers if necessary. Knockouts shall be maintained for straight pull installation along two opposite side of the box only.
 - d. Pull boxes for straight pulls shall have the length of the box not less than forty-eight times the outside diameter of the largest non-shielded conductor or cable.
- 16. Receptacles
 - a. Receptacles shall be duplex, flush mounted and rated at 10 Amps., 250 volts, parallel or tandem slots with grounding slots as required. All 110 volts receptacle outlets shall be rated 15 Amps, 120 volts. 220 volts receptacle outlets shall be distinct from the 110 volts receptacle outlets in terms of configurations and shall be provided with markings.

- b. Cover plates shall be subject to the approval of the Architect and the Engineer. Stainless steel cover plate shall be required on all wet or damped area.
- c. All receptacle outlets with GFCI shall be rated for 250 volts application with a sensitivity setting of 300 milliamps.
- 17. Individual Breaker and Switches
 - a. Provide individual circuit breakers and disconnect switches when indicated on the plans. Voltage rating shall be suitable in each case of service application.
 - b. Enclosure for indoor application shall be NEMA-1, and for outdoor application shall be NEMA 3R unless otherwise indicated on the plans.
 - c. Circuit breakers shall consist of quick-make, quick-break type entirely tip free operating mechanism contacts with arc interrupter and thermal magnetic trip used for each pole and enclosed in molded phenolic case. The thermal magnetic trip shall be 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 in any one pole. Circuit breaker shall be trip indicating with the trip position of breaker midway between "ON" and "OFF" positions.
 - d. Only one single brand of circuit breaker shall be used on the entire project requirements.
 - e. Minimum interrupting capacities of each circuit breaker are 10kaic; application of circuit breakers shall be approved for the intended load per panel board schedule.
 - f. Safety and disconnect switches shall be non-fusible and of sizes indicated on the plans and shall be normal duty type, except as noted otherwise. Enclosure shall be NEMA-1 for indoor use and NEMA3R for outdoor use.
- 18. Circuit Breakers
 - a. Circuit breaker shall be thermal magnetic type with quick make, quick break trip free operating mechanism with contacts.

- b. Circuit breaker shall be molded case bolt-on type complying with NEMA and UL or IEC standards.
- c. All main circuit breaker shall be bolt-on, molded case and industrial type circuit breaker located at center complying with NEMA and UL standards.
- d. The thermal magnetic trip unit shall provide time-delayed for overload protection and instantaneous for short circuit in any on pole.
- e. Multi-pole breaker shall operate on a common internal trip which will open all poles in case of overload or short circuit in any on pole.
- f. Breaker minimum interrupting capacity shall be as specified in plans.
- g. Circuit breakers with GFCI are to be rated for the voltage applied and with sensitivity setting of 300 milliamps.
- h. All feeder circuit breakers of the main switchgear (LVSG) shall be Draw-out type unless otherwise specified or indicated but should have shunt trip mechanism and accessories for future additional protection relays that should be field mountable.

19. Panel board

- a. Wall mounted gauge no.16 steel sheet, baked enamel finish (color gray), 1 enclosure with grounding terminal bus with lugs.
- b. Individual CB: Indoor NEMA 1 Enclosure

XV. MECHANICAL WORKS:

FIRE PROTECTION SYSTEM:

A. PIPES: shall be new, steel, schedule 40, black, designed for 175 psi working pressure, conforming to ASTM A 120 or A53.

FITTINGS:

1. Screwed fittings: malleable iron, 300 lbs. and 150 lbs. class, black, ANSI B16.3, VICTAULIC brand for mechanical tee and elbow, or UL/FM.

- 2. Flanged fittings: steel, short body, 150, black, ANSI B16.1.
- 3. Weld fittings: steel, standard weight, black, ANSI B16.25, ASTM A234, ANSI B16.5 or ANSI B16.11.
- B. GASKETS: full face 1/8" minimum thickness red sheet rubber. Flange bolts and heavy semi-finished hexagon head nuts, cadmium plated, ANSI B18.2.
- C. OUTSIDE SCREW AND YOKE (O.S.&Y.) GATE VALVES: flanged, iron body, bronze mounted, 175 psi working pressure, with hand wheel turning counterclockwise to open.
- D. CHECK VALVE: flanged, swing type, iron body bronze seat ring and disc ring, and 175 psi working pressure rating.
- E. FIRE DEPARTMENT CONNECTIONS: 1-1/2" x 2-1/2" x 4" Siamese connection, brass body, brass chain and plugs, and brass escutcheon, lettered "AUTOMATIC SPRINKLER" for sprinkler system, and/or "STANDPIPE" for standpipe system. Inlet threading shall be same as municipal fire department connection, shall be tested and listed by UL and/or FM and be 175 psi rating. 123
- F. VALVE FOR MAIN RISER DRAIN: angle type or globe type, bronze body, screwed 175 psi pressure rating, 2'size, and a renewable composition soft disc.
- G. VALVE FOR AUXILIARY DRAIN AND INSPECTOR'S TEST CONNECTION: globe type, bronze body, screwed 175 psi pressure rating, 1" size, and a renewable composition disc.
- H. RETARD-TYPE ELECTRIC FLOW ALARM SWITCH: Provide alarm bell as required.
- I. INTERIOR BELL OR HORN: 24 VDC, horn or bell, tested and listed by UL and/or FM.
- J. FLOW SWITCH: vane type, 24 VDC tested and listed by UL and/or FM.
- K. VALVES FOR FIRE DEPARTMENT VALVE STATION (DRY STANDPIPE): angle type, 2-1/2" female iron pipe threads by 2-1/2" male NST hose threads, chromium plated with chromium plated cap and chain. Valve hose threads shall be same as the Municipal fire department, tested and listed by UL and/or FM with pressure ratings of 175 psi.

- L. VALVES FOR FIRE HOSE STATIONS: angle type, pressure restricting, 1- 1/2" female iron pipe threads, rough brass x male NST threads, polished brass, chromium plated, tested and listed by UL and/or FM.
- M. FIRE HOSE CABINET: recessed, 16 gauge steel body, ANOLOK finish aluminum door trim, to fit a 100 feet hose pin rack and a fire extinguisher, with full panel glass door. Cabinet finish shall be baked white enamel inside with "Fire Red" coat outside. Cabinet may be locally made of approved quality.
- N. PIN RACK FOR FIRE HOSE STATION CABINET: semi-automatic type, baked red enamel finish, designed for 100 feet of 1-1/2" hose, and furnished with 1-1/2" chrome plated brass rack nipple.
- O. FIRE HOSE FOR FIRE HOSE STATION: 100 feet of 1-1/2" cotton single jacket, rubber lined hose with wax and gum treatment. Hose couplings shall be 1-1/2" chrome plated, male-female National Standard hose threads. Fire hose and couplings shall be approved by UL and/or FM. Provide 1-1/2" spanner to each fire hose cabinet (FHC).
- P. NOZZLE FOR FIRE HOSE STATION: 1-1/2" adjustable, capable of complete shut off, solid straight stream or any degree of solid conical fog, chrome plated. Threads shall be hose threads. Nozzle shall be approved by UL and/or FM.
- Q. ABC DRY POWDER CHEMICAL: multi-purpose type portable fire extinguisher UL Listed and Factory Mutual Approved. Furnish and install one (1) each – 4.5 Kgs. (10Lbs.) Capacity to each fire hose cabinet.
- R. PUMPS:124
 - Fire Pump Vertical Type: Refer to Fire Protection (FP) Plans. Multi-Stage Vertical Turbine Centrifugal Fire Pump, UL Listed & FM Approved, Suitable for 500 gpm at 100 psi, Six (6) stages. Complete with standard components: threaded & coupled OLS column, 6x6x12G cast iron surface discharge head assembly, cast iron with bronze impeller bowl assembly, basket strainer. Coupled to Vertical Hollow Shaft, WP1, 40Hp, 230Volts, 3Phase, 60 Hz, 1750Rpm Motor 1.15 Service Factor, UL Listed; complete with ff. standard accessories; Pilot Operated Relief Valve, Enclosed Type Overflow Cone, Butt Weld, Flow Meter, Discharge Pressure Gauge, Automatic Air Release Valve and "FIRETOL" or approved equal Fire Pump Controller.
 - 2. Jockey Pump Vertical Type: Refer to Fire Protection Plans. Vertical Multi-Stage, Submersible Pump, in stainless steel (AISI 304) bowl, impeller and shaft, built-in non return valve, capable to deliver 50 gpm at 110 psi TDH, couple to submersible, 7.5hp, 230 volts, 3phase, 60hz, 3500rpm, with cable

guard and lead wire. With "FIRETOL" (U.S.A) or approved equal Jockey pump Controller.

NOTES:

- 1. Install all fire and jockey pumps and their respective accessories, complete and ready for use, wire all fire and jockey pumps up to their respective breakers, test and commission.
- 2. Install and wire all pump breakers to MDP and all FACPs to float switches, complete and ready for use, test and commission.

B. ADDITIONAL WORKS:

- 1. In case of additional works not shown in the plans and not specified herein, the Contractor shall be paid an additional amount corresponding to the work added.
- 2. Demolitions and works due to Contractor's fault shall be done by the Contractor without extra compensation to the Owner.

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

PROJECT: Construction of New Bureau of Customs Building of the Mindanao Container Terminal Sub-Port of Tagoloan, Misamis Oriental

LOCATION: Mindanao International Container Terminal (MICT), PHIVIDEC Industrial State, Tagoloan, Misamis Oriental. **(See below Bill of Quantities)**

	DECODIDEION	QTY		MATERIAL COST		LABOR	TOTAL
	DESCRIPTION	# Units	UM	P/Unit	Total	COST	TOTAL
Α.	General Requirements						
	Mobilization and Demobilization	1	lot				
	Permits and Fees	1	lot				
	Bonds and Insurances	1	lot				
	Power and Water Consumption	1	lot				
	Safety and Protection	1	lot				
	Temporary Fencing	1	lot				
	As-built	1	lot				
	Testing and Materials	1	lot				
	Hauling of Debris	1	lot				
				sub-			
				total=			
_							
в.	Site Clearing and Layout	500	sq.m.				
~							
C.	Temporary Facilities						
	1/4" thk. Ordinary Plywood	60	pcs				
		00	pes				
	Ga #26 Corr. G.I. Sht 12'	70	pcs				
	Asstd CW Nails		-				
		10	kls.				
	Umbrella Nails	10					
		10	kls.				
	2" x 2" Coco Lumber	700	bdft				
		700	bure				
	2" x 3" Coco Lumber	600	bdft				
				sub-			
				total=			
D.	Earth Works						
	Excavation	50	cu.m.				
	Backfilling and Compaction	450	cu.m.				
	Gravel Bedding and Compaction	56.25	cu.m.				
	Embackment	135	cu.m.				
	Soil Poisoning Treatment	500	sq.m.				
				sub-			
				total=			

E.	Structural/Civil Works Reinforced Concrete Structure		
	Portland Cement	3,500	bags
	Washed Sand	180	cu.m.
	Washed Gravel	350	cu.m.
	RSB - 20mm x 7.5m	3,800	kgs
	RSB - 20mm x 6m	4,000	kgs
	RSB - 16mm x 6m	6,500	kgs
	RSB - 12mm x 6m	6,500	kgs
	RSB - 10mm x 6m	9,800	kgs
	Tie - wire #16	130	rolls
	Waterproofing Form and Scaffolding	70 540	gals sq.m.
	Masonry Works		
	Portland Cement	1,350	bags
	Washed Sand	700	cu.m.
	Limestone Bricks	550	sq.m.
	RSB - 10mm x 6m	9,500	kgs
	Tie - wire #16	35	rolls
	CHB 6"	9,500	pcs
	CHB 4" Steel Trusses and Roofing Long span roofing system, Super V-crimp, 0.40 mm thick including accessories such as ridge,	3,500	pcs
	stainless gutter, flushing and insulation	540	sq.m.

Steel trusses, steel purlins, sagrods and cross bracing complete with base plate, gusset plate and standard turnbuckles, including primer paint and anti- rust Thermal Protection	1	lot			
Insulator	540	sq.m.			
			sub-		
F. Architectural Works			total=		
Doors and Windows					
D1-Solid Panel Door, Duco					
Finised, Doorknob Chrome, 4-pcs					
Losepin Hinges, Both Panels (1.8m x 2.10m)	4	set			
D2-Clear Glass Swing Door on					
Aluminum Frame (.90m x 2.10m)	2	sets			
D3-Clear Glass Double Swing					
Door on Aluminum Frame (1.6m	2	sets			
x 2.10m)	2	5015			
D4-Solid Panel Door, Duco Finised, Door Knob Chrome, 4-pcs Losepin Hinges (0.8m x 2.10m) D5-Solid Panel Door, Duco	14	sets			
Finised, Door Knob Chrome, 3-pcs Losepin Hinges (0.8m x 2.10m) D6-Steel Fire Exit Door, Duco	4	sets			
Finished with Panic Door Device (.90m x 2.10m)	2	sets			
W1-Aluminum Casement					
Windows Clear Glass (2.4m x	18	sets			
1.6m) W2-Aluminum Casement					
Windows Clear Glass (1.6m x					
1.6m)	1	sets			
W3-Aluminum Casement					
Windows Clear Glass (1.6m x	18	set			
1.2m)	10	500			
W4-Aluminum Casement					
Windows Clear Glass (2.4m x 0.5m)	2	set			
0.500	۷	ડરા			
Carpentry Works					

1" x 2" Alum. Farring	850	pcs
2" x 2" Alum. Farring	350	pcs
Asstd. CW Nails	20	kls.
#16 Tie Wire	80	kls
Concrete nail	50	kls
Blind Rivet	120	boxes
Tox w/ Screw	150	boxes
SCG Smart board	550	pcs.
Metal Studs	550	lgth
Metal Tracks	145	lgth
Gypsum MR	210	sht/s
Fiber Cement Board 4.5mm	250	, sht/s
Black Screw	120	box/s
Masonry Drill Bit 1/8	150	pcs
Metal Drill Bit 1/8	150	pcs
3/4" Plyboard	50	shts
Laminate	50	shts
Contact Cement	20	bags
Stickwell	25	gals
Rugby	20	gals
Miscellaneous	1	lot
Tile Works		
600mm x 600mm Glazed Tiles	3,600	pcs.
400mm x 400mm Glazed Tiles	1,500	pcs.
300mm x 300mm Glazed Tiles	1,600	pcs.
300mm x 300mm Unglazed Tiles	580	pcs.
400mm x 400mm Non-Skid Tile	300	pcs.
Tile Groute	180	kls.

			1	I	I
Tile Adhesive	350	bags			
Tile Trim	20	pcs.			
Painting Works					
Flat Latex Paint	80	pails			
Gloss Latex Paint	80	pails			
Semi Gloss Latex Paint	80	pails			
Flat Wall Enamel paint	60	pails			
QDE Paint	140	gals			
Concrete Neutralizer	110	gals			
Polytuff	160	gals			
Calsumine	300	kls.			
Masonry Putty	130	gals			
Glazing Putty	130	gals			
Emulsion Paint	160	gals			
Acry Color	180	ltrs			
Paint Thinner	15	gals			
Roller Brush w/ Tray	55	sets			
Asstd. Paint Brush	50	pcs			
Stainless Steel and Glass Works					
Chrome Design Letters	1	lot			
Stainless Steel	1	lot			
Glass Panel	1	lot	b		
			sub- total=		
Mechanical Works					

G.

Upright type sprinkler head	280	рс			
recessed type sprinkler head	200	ΡC			
(chromed finish)	280	рс			
recessed escutcheon (chrome		•			
plated)	280	рс			
25.4 x 12.7 reducer	470	рс			
25mm dia. closed nipple	470	рс			
50mm dia. riser nipple	47	рс			
40mm dia. riser nipple	4	рс			
100 x 40mm dia. nipple	4	рс			
40mm dia. pipe cap	4	рс			
25mm dia. galvanized iron pipe,	110	рс			
6m	110	pc			
32mm dia. galvanized iron pipe,	40	рс			
6m 40mm dia, galvanizod iron nino		•			
40mm dia. galvanized iron pipe, 6m	18	рс			
50mm dia. galvanized iron pipe,					
6m	18	рс			
75mm dia. galvanized iron pipe,	20				
6m	28	рс			
100mm dia. pipe	6	рс			
40mm dia. FHC pipe <i>,</i> 6m	18	рс			
75mm dia. pipe hanger	42	рс			
40mm dia. pipe hanger	72	рс			
32mm dia. pipe hanger	84	рс			
25mm dia. pipe hanger	240	рс			
40 x 25 x 32mm dia. reducer tee	72	рс			
32 x 25 x 25mm dia. reducer tee	84	рс			
25mm dia. tee	450	рс			
50 x 25 x 40mm dia. reducer tee	4	рс			
75 x 50 x 75mm dia. reducer tee	50	рс			
32 x 50 x 40mm dia. reducer tee	12	рс			
40 x 50 x 40mm dia. reducer tee	14	рс			
25 x 50 x 40mm dia. reducer tee	24	рс			
50 x 50 x 40mm dia. reducer tee	4	рс			
75 x 40 x 75mm dia. reducer tee	4	рс			
25mm dia. 90 deg. Elbow	480	рс рс			
40mm dia. 90 deg. Elbow fhc pipe	8	рс рс			
two way lateral sway brace	14	pc			
portable fire extinguisher, dry	40	22			
chem type (10lbs)	40	рс	1	1	1

I	Indicating type floor control valve				I	1
	w/ supervisory	1	рс			
	switch	-	pe			
	system pressure gauge	4	рс			
	water flow switch	1	рс			
	100mm dia. ball valve	1	рс			
	25mm ball valve type drain valve	1	рс			
	sight glass	2	рс			
	consumables	1	lot			
	fire hose cabinet	2	set			
	300 PSI single jacket coupled fire hose 40mm dia. x 30m	2	рс			
	40mm dia. angle hose valve	2	рс			
	40mm dia. cap with chain	2	рс			
	40mm dia. pressure restricting	2	рс			
	hose valves		pc			
	40mm dia. brass fog nozzle	2	рс			
				sub-		
н.	Plumbing Works			total=		
п.	Plumbing Works Toilet Fixtures					
	Tollet Fixtures					
	Water Closet	14	sets			
	Countertop Lavatory	8	sets			
	Pedestal Type Lavatory	4	sets			
	Wall Hung Urinal	2	sets			
	Soap Holder	14	sets			
	Tissue Holder	14	sets			
	Mirror	8	sets			
	Plumbing Fixtures & Fittings					
	Electric Water Pump 3HP	2	units			
	PVC Pipe 4" dia.	70	pcs			
	PVC Elbow 4" dia.x 90 deg.	85	pcs			
	PVC Wye 4" x 4"	15	pcs			

PVC P-Trap 4"	8	pcs
PVC Clean Out 4"	6	pcs
PVC Pipe 3"	28	pcs
PVC elbow 3" x 90 deg.	20	pcs
PVC wye 3" x 4"	16	pcs
PVC Clean-Out 3"	6	pcs
Stainless Faucet	31	pcs
PVC Pipe 1/2"	100	pcs
PVC Elbow 1/2" x 90 deg.	65	pcs
PVC Coupling 1/2"	33	pcs
PVC Tee 1/2"	25	pcs
Floor Drain 4"	12	pcs
Nipple 1/2" x 4"	22	pcs
Teplon Tape	8	doz
Solvent Cement	15	ltrs
RCP 0.30m dia. X 1.00m	100	pcs
PVC P-Trap 3"	8	pcs
Septic Tank (4 Units)		
6" CHB	1,600	pcs
Cement	50	bags
Sand	10	cu.m.
Gravel	15	cu.m.
10 mm Ø RSB	900	kgs

					l	1 1
	# 16 G.I Tie Wire	10	kgs			
	Cistern Tank		0			
	Cement	60	bags			
		4.5				
	Sand	15	cu.m.			
	Gravel	2	cu.m.			
	10 mm Ø RSB	1,500	kgs			
		45				
	# 16 G.I Tie Wire	15	kgs	sub-		
				total=		
١.	Auxiliary Works			totai-		
	Main Distribution Frame	1	set			
	Fire Alarm Control Panel	1	set			
	Switch Hub	1	set			
	Main Telephone Terminal	1	cot			
	Cabinet	1	set			
	Main CATV Terminal Cabinet	1	set			
	Date Terminal	182	set			
	Telephone Terminal	18	set			
	Smoke Detector	28	set			
	Sound Strobe	9	set			
	Manual Callpoint	9	set			
	Pull Box	1	рс			
	4-TF Twisted #16 AWG wire	300	meter			
	Coaxial cable RG6 + 2-TF wire #16	50	meter			
	UTP Cable cat6	1,500	meter			
	15mm diameter EMT pipe	90	length			
	25mm diameter conduit pipe	15	length			
	15mm IMC Elbow	9	рс			
	15mm IMC coupling	25	рс			
	15mm IMC locknut	83	рс			
	15mm IMC Bushing	83	рс			
	15mm IMC Adapter	83	рс			
	25mm IMC Elbow	2	рс			
	25mm IMC coupling	5	рс			
	25mm IMC locknut	3	рс			
	25mm IMC Bushing	3	pc			
	25mm IMC Adapter	3	pc			
	pvc utility box	219	рс			I I

	Junction Box GI #16	37	рс			
	Utility Box GI #16	9	рс			
				sub-		
				total=		
J.	Electrical Works					
	PanelBoards and Circuit Breakers Panelboard: MDP	1	set			
	main: 1-500AT/800AF, 3P, 240	Ť	301			
	VAC IND TYPE CB					
	Branch circuit					
	2-250AT/250AF, 3P, 240 VAC					
	BOLT-ON TYPE CB 1-160AT/250AF, 3P, 240 VAC					
	BOLT-ON TYPE CB					
	3-Spare					
	Panelboard: P1	1	set			
	main: 1-160AT/250AF, 3P, 240					
	VAC IND TYPE CB Branch circuit					
	9-15AT/50AF, 2P, 240 VAC					
	BOLT-ON TYPE CB					
	10-20AT/50AF, 2P, 240 VAC					
	BOLT-ON TYPE CB					
	1-Spare Panelboard: P2	1	set			
	main: 1-250AT/250AF, 3P, 240	Ť	SEL			
	VAC IND TYPE CB					
	Branch circuit					
	21-20AT/50AF, 2P, 240 VAC					
	BOLT-ON TYPE CB 3-Spare					
	Panelboard: P3	1	set			
	main: 1-250AT/250AF, 3P, 240					
	VAC IND TYPE CB					
	Branch circuit					
	18-30AT/50AF, 2P, 240 VAC BOLT-ON TYPE CB					
	ECB, 30AT/50AF, 2P, 240 VAC in					
	NEMA 1 Enclosure	22	set			
	Wiring devices and accessories					
	Single pole switch in one plate	31	set			
	cover	_	-		l	

	1	
Two Single pole switch in one	25	set
plate cover		
Three Single pole switch in one plate cover	2	set
Duplex two-pronged convenience		
outlet	10	set
Single three-pronged	22	1
convenience outlet	22	set
Three-way switch	8	set
Roughing-ins and accessories		
110mm dia. Rigid PVC conduit	5	length
pipe		_
80mm dia. Rigid PVC conduit pipe	1	length
50mm dia. Rigid PVC conduit pipe	12	length
32mm dia. Rigid PVC conduit pipe	3	length
15mm dia. Rigid PVC conduit pipe	560	length
110mm dia. PVC Elbow	15	рс
110mm dia. PVC adaptor	15	рс
110mm dia. PVC locknut	15	рс
110mm dia. PVC bushing	15	рс
80mm dia. PVC Elbow	15	рс
80mm dia. PVC adaptor	15	рс
80mm dia. PVC locknut	15	рс
80mm dia. PVC bushing	15	рс
50mm dia. PVC Elbow	15	рс
50mm dia. PVC adaptor	15	рс
50mm dia. PVC locknut	1	рс
50mm dia. PVC bushing	15	рс
32mm dia. PVC Elbow	50	рс
32mm dia. PVC adaptor	50	рс
32mm dia. PVC locknut	50	рс
32mm dia. PVC bushing	50	pc
15mm dia. PVC Elbow	290	рс рс
15mm dia. PVC adaptor	502	pc
15mm dia. PVC locknut	502	рс
15mm dia. PVC bushing	502	рс
15mm dia. Flexible PVC conduit	10	roll
Wires and cables		
325 mm sq. THHN wire stranded	250	meter
80 mm sq. THHN wire stranded	50	meter

60 mm sq. THHN wire stranded	50	meter		
30 mm sq. THHN wire stranded	50	meter		
5.5 mm sq. THHN wire stranded	45	box		
3.5 mm sq. THHN wire stranded	50	box		
Lighting fixtures and accessories				
Pinlight	230	set		
Wall mounted light	50	set		
Boxes and Gutters				
PVC Junction box	250	рс		
PVC utility box	300	рс		
Utility Box GI #16	190	рс		
Junction Box GI #16	288	рс		
Square Box GI #16	40	рс		
Pull box GI#16	5	рс		
wire gutter	1	lot		
Others				
Class 20 Ct rated, 4 wire, 3 phase,				
digital kilowatt meter with base	1	set		
Class 100, 2 wine single share				
Class 100, 3 wire, single phase, digital kilowatt meter with base	1	set		
-				
250:5 Current Transformer	1	set		
350:5 Current Transformer	1	set		
ACU Drain Pipes	1	lot		
8" dia. Duct type Exhaust fan	15	set		
Testing and Commissioning	1	lot		
			sub-	
			total=	

Direct Cost

Material Cost	
Labor Cost	

Mobilization

Total Direct Cost

Indirect Cost

OCM (15% of DC)

	Contractors Profit (10% of DC)		
	Total Indirect Cost		
	Tax (5% of DC + IC)		
	TOTAL PROJECT COST		
Total Amount in Words			
Submitted by :			

Date: _____

Section IX. Checklist of Technical and Financial Documents

3. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

Legal Documents

- (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages);
 - <u>and</u>
- (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

(j)

- (f) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; **and**
- (g) Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided under the rules; **and**
- (h) Philippine Contractors Accreditation Board (PCAB) License Category B, Size Range Medium A or Higher; <u>and</u>
- (i) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commissioner;

<u>or</u>

Original copy of Notarized Bid Securing Declaration; and

- Project Requirements, which shall include the following:
 - a. Organizational chart for the contract to be bid;
 - b. List of contractor's key personnel (*e.g.*, Project Manager, Project Engineers, Materials Engineers, and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data;
 - c. List of contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership or certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be; **and**
- (k) Original duly signed Omnibus Sworn Statement (OSS);
 <u>and</u> 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; <u>and</u>
 - (l) Certificate of Inspection.

Financial Documents

- (1) 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).

4. FINANCIAL COMPONENT ENVELOPE

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

Other documentary requirements under RA No. 9184

- (o) Original of duly signed Bid Prices in the Bill of Quantities; <u>and</u>
-] (p) Duly accomplished Detailed Estimates Form, including a summary sheet indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the Bid; **and**
- (q) Cash Flow by Quarter.

Bid Form

Date : _____

Project Identification No. : _____

To: [name and address of Procuring Entity]

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 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 the allowable forms of Performance Security, subject to the terms and conditions of issued GPPB guidelines¹ 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

¹ currently based on GPPB Resolution No. 09-2020

other Bid that you may receive.

- 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].
- 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:

Form of Contract Agreement

THIS AGREEMENT made this [insert date] day of [insert month], [insert year] between [name and address of PROCURING ENTITY]_(hereinafter called the "Entity") and [name and address of Contractor] (hereinafter called the "Contractor").

WHEREAS, the Entity is desirous that the Contractor execute [name and identification number of contract] (hereinafter called "the Works") and the Entity has accepted the Bid for [insert the amount in specified currency in numbers and words] by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

- 1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
- 2. The following documents shall be attached, deemed to form, and be read and construed as integral part of this Agreement, to wit:
 - (a) General and Special Conditions of Contract;
 - (b) Drawings/Plans;
 - (c) Specifications;
 - (d) Invitation to Bid;
 - (e) Instructions to Bidders;
 - (f) Bid Data Sheet;
 - (g) Addenda and/or Supplemental/Bid Bulletins, if any;
 - (h) Bid form, including all the documents/statements contained in the Bidder's bidding envelopes, as annexes, and all other documents submitted (e.g., Bidder's response to request for clarifications on the bid), including corrections to the bid, if any, resulting from the Procuring Entity's bid evaluation;
 - (i) Eligibility requirements, documents and/or statements;
 - (j) Performance Security;
 - (k) Notice of Award of Contract and the Bidder's conforme thereto;
 - (1) Other contract documents that may be required by existing laws and/or the Entity.
- 3. In consideration of the payments to be made by the Entity to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Entity to execute and complete the Works and remedy any defects therein in conformity with the provisions of this Contract in all respects.

4. The Entity hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects wherein, the Contract Price or such other sum as may become payable under the provisions of this Contract at the times and in the manner prescribed by this Contract.

IN WITNESS whereof the parties thereto have caused this Agreement to be executed the day and year first before written.

Signed, sealed, delivered by ______ the _____ (for the Entity)

Signed, sealed, delivered by ______the _____(for the Contractor).

Binding Signature of Procuring Entity

Binding Signature of Contractor

[Addendum showing the corrections, if any, made during the Bid evaluation should be attached with this agreement]

Statement of Single Largest Completed Contract which is similar in nature

Business Name: _____

Business Address:_____

Name of Contract	Date of the Contract	Kinds of Goods	Amount of Contract	Date of Delivery	End User's Acceptance or Official Receipt(s) Issued for the Contract

Submitted by :_____

(Printed Name & Signature)

Designation :_____

Date :_____

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	Kinds of Goods	Value of Outstanding Contracts	Date of Delivery
Government				
Private				

Submitted by :_____

(Printed Name & Signature)

Designation :_____

Date :_____

Instructions:

- i. State all ongoing contracts including those awarded but not yet started within five (5) years (government and private contracts, which may be similar or not similar to the project being bidded) prior to opening of bids.
- ii. If there is no ongoing contract including awarded but not yet started as of the aforementioned period, state none or equivalent term.
- iii. 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) in case an NFCC is submitted as an eligibility document.

Omnibus Sworn Statement

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, <u>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;</u>
- 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

SUBSCRIBED AND SWORN to before me this ____ day of [month] [year] at [place of execution], Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her [insert type of government identification card used], with his/her photograph and signature appearing thereon, with no. _____ and his/her Community Tax Certificate No. _____ issued on _____ at ____.

Witness my hand and seal this ____ day of [month] [year].

NAME OF NOTARY PUBLIC

Serial No. of Commission	
Notary Public for	_until
Roll of Attorneys No.	
PTR No [date issi	ued], [place issued]
IBP No [date issi	ued], [place issued]

Doc. No	
Page No	
Book No	
Series of	

Bid-Securing Declaration

REPUBLIC OF THE PHILIPPINES)

CITY OF ______) S.S.

BID SECURING DECLARATION

Project Identification No.: [Insert number]

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

SUBSCRIBED AND SWORN to before me this ____ day of [month] [year] at [place of execution], Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her [insert type of government identification card used], with his/her photograph and signature appearing thereon, with no. _____ and his/her Community Tax Certificate No. _____ issued on _____ at ____.

Witness my hand and seal this ____ day of [month] [year].

NAME OF NOTARY PUBLIC

Serial No. of Commis	sion
Notary Public for	until
Roll of Attorneys No.	
PTR No [dat	e issued], [place issued]
IBP No [dat	e issued], [place issued]

Doc. No. _____ Page No. _____ Book No. _____ Series of _____

####