

PHILIPPINE BIDDING DOCUMENTS

Procurement of INFRASTRUCTURE PROJECTS

Government of the Republic of the Philippines

NINE (9) UNITS COLD STORAGE EXPANSION PROJECT

IB No.: DA-RFO 1-2025-INFRA-039

**Sixth Edition
July 2020**

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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



Republic of the Philippines
DEPARTMENT OF AGRICULTURE
Regional Field Office No. 1
Aguila Road, Sevilla, City of San Fernando, La Union
Telephone No. (072) 242 1045/1046



INVITATION TO BID FOR THE NINE (9) UNITS COLD STORAGE EXPANSION PROJECT

1. The Department of Agriculture - Regional Field Office 1 (DA-RFO 1), through the Continuing Fund 2024 and GAA FY 2025 intends to apply the sum of **One Hundred Fifteen Million Eight Hundred Seventeen Thousand Fifty-Six Pesos and Forty-Seven Centavos (PhP115,817,056.47)** being the Approved Budget for the Contract (ABC) to payment under the contract for the **NINE (9) UNITS COLD STORAGE EXPANSION PROJECT** with project identification number **DA-RFO 1-2025-INFRA-039**. Bids received in excess of the ABC shall be automatically rejected at bid opening.
2. The DA-RFO 1 now invites bids for the above procurement project with the following details and specifications:

DETAILS AND SPECIFICATIONS			
Project Location: Region 1 Pangasinan - 5 units Ilocos Sur - 2 units Ilocos Norte - 2 units			
Project Description: Construction of 40 footer Cold Storage Facility (Chiller) with provision of renewable energy system (solar and wind powered), battery and generator			
Scope of work to be done:			
PARTICULARS/DESCRIPTIONS			
	Scope of Work	Qty.	Unit
SPL 1	150mm Polyurethane Insulated Panel (Wall, Ceiling, Flooring), Phase Change Material (PCM) Thermal Panel and 40ft Container Van with Banner and Logo	1.00	set
SPL 2	Cooling System (Condensing Unit, Unit Cooler, Temperature Control and Monitoring System, & Duct Pipe Networks)	1.00	set
SPL 3	Solar Power System	1.00	set
SPL 4	Battery System	1.00	set
SPL 5	Wind Power System	1.00	set
SPL 6	Concrete Signage	1.00	lot
SPL 7	Construction of Temporary Facility	1.00	lot
SPL 8	Transformer and Pole	1.00	lot
B.3	Permits and Clearances	1.00	l.s
B.5	Project Billboard/Signboard	1.00	each
B.7	Construction of Safety & Health	2.00	month
B.9	Mobilization/Demobilization	1.00	l.s

800(1)	Clearing and Grubbing	400.00	sq.m
803(1)a	Structure Excavation (Common Soil)	16.64	cu.m
804 (4)	Gravel Fill	17.26	cu.m
900 (1)c2	Structural Concrete (Footings and Slab on Fill)	25.43	cu.m
900 (1)	Structural Concrete (Footing Tie Beam, Column, Girder/Beam)	1.26	cu.m
902 (1)a	Reinforcing Steel (Deformed)	1,524.00	kg
903 (2)	Formworks and Falseworks	11.00	sq.m
1000 (1)	Soil Poisoning	27.00	liter
1010 (2)b	Panel Door	1.89	sq.m
1027 (1)	Cement Plaster Finish	65.00	sq.m
1032 (1)c	Painting Works (Metal Painting)	124.00	sq.m
1046 (2)a2	150mm CHB Non Loading Bearing	45.00	sq.m
1046 (2)a2	Structural Steel (Roof Truss & Framing)	2,674.00	kg
1047 (3)a	Metal Structure Accessories (Anchor Bolts)	256.00	pc
1047 (5)	Metal Structure Accessories (Steel Plates)	354.00	kg
1100 (10)	Conduits, Boxes and Fittings	1.00	l.s
1101 (33)	Wires & Wiring Devices	1.00	l.s
1102 (1)	Panelboard with Main & Branch Breakers	1.00	l.s
1102 (16)	Generator	1.00	set
1103 (1)	Lighting Fixtures and Lamps	1.00	l.s

MINIMUM TECHNICAL PERSONNEL REQUIRED:

- 1 Project Engineer
- 1 Materials Engineer
- 1 Electrical Engineer
- 1 Construction Foreman
- 1 Registered Master Electrician
- 1 Master Plumber

MINIMUM EQUIPMENT REQUIRED:

- 1 Concrete Bagger Mixer, 1- bagger
- 1 Bar Cutter
- 1 Bar Bender
- 1 Concrete Vibrator
- 1 Portable Welding Machine
- 1 Cut off Wheel

Completion of the Works is within **sixty-one (61) calendar days**. Bidders should have completed a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II. (Instructions to Bidders).

3. Bidding will be conducted through open competitive bidding procedures using a non-discretionary “pass/fail” criterion as specified in the Implementing Rules and Regulations (IRR) of Republic Act (RA) 9184.

Bidding is restricted to Filipino citizens/sole proprietorships, partnerships, or organizations with at least seventy-five percent (75%) interest or outstanding capital stock belonging to citizens of the Philippines.

4. Prospective bidders may obtain further information from and inspect the Bidding Documents at the address given below during **office hours at 8:00 AM to 5:00 PM, Monday to Friday.**

**Department of Agriculture - Regional Field Office 1
Aguila Rd., Sevilla, City of San Fernando, La Union**

5. A complete set of Bidding Documents may be acquired by interested Bidders on **July 11-30, 2025** from the given address and website(s) below in the amount of **PhP50,000.00**. The Procuring Entity shall allow the bidder to present its proof of payment for the fees in person, by facsimile, or through electronic means.
6. The **Department of Agriculture Regional Field Office 1** will hold a Pre-Bid Conference on **18 July 2025, 9:00 AM at 5th Floor Conference Room, Aguila Road, Sevilla, City of San Fernando, La Union**, which shall be open to prospective bidders.
7. Bids must be duly received by the BAC Secretariat through **manual submission** at the office address indicated below, on or before **30 July 2025, 9:00 AM**. 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 14**.
9. Bid opening shall be on **30 July 2025, 9:00 AM** at the given address below. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.

10. **ADDITIONAL INSTRUCTIONS TO BIDDERS:**

- a. The bidders or their duly authorized representatives may attend the bid opening;
- b. In case a representative will be attending the Bid Opening, a Special Power of Attorney (SPA), Secretary's Certificate, Board Resolution or any other forms of authorization (notarized), as the case may be, together with the Company-issued Identification Card or any valid ID must be presented upon submission of the bid proposal at the BAC Secretariat. The name/title of the project must be indicated in the authorization or SPA;
- c. The Technical Specifications (as part of Tab f - Project Requirements), to be signed by the bidder/authorized representative and submit during bid opening, of the unit offered must be duly **SIGNED/COUNTERSIGNED AND SEALED** by a Licensed Agricultural and Biosystems Engineer in accordance with Republic Act 10915, dated 21 July 2016, otherwise known as "Philippine Agricultural and Biosystems Engineering Act of 2016" and Department of Agriculture (DA) Memorandum Order No. 50, Series of 2020.

11. The **DA-RFO 1** 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 Section 41 of the 2016 Revised IRR of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.

12. For further information, please refer to:

DENNIS I. TACTAC, ABE

Chairperson, Bids and Awards Committee

Department of Agriculture - Regional Field Office 1

Aguila Road, Sevilla, City of San Fernando, La Union

Tel. No.:(072) 242/1045-46, Ext. 07

E-mail add: bacsec@ilocos.da.gov.ph

13. For downloading of Bidding Documents, you may visit the following websites:

DA-RFO1 Website: <https://ilocos.da.gov.ph/>

PhilGEPS Website: <https://www.philgeps.gov.ph/>

July 10, 2025

Approved by:

(Sgd.) GILBERT D. RABARA

Vice-Chairperson, Bids and Awards Committee

Invitation to Bid Identification No. DA-RFO 1-2025-INFRA-039

Section II. Instructions to Bidders

1. Scope of Bid

The Procuring Entity, **Department of Agriculture - Regional Field Office 1 (DA-RFO 1)** invites Bids for the **NINE (9) UNITS COLD STORAGE EXPANSION PROJECT** with Project Identification Number **DA-RFO 1-2025-INFRA-039**.

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

2. Funding Information

2.1. The GOP through the source of funding as indicated below for **Continuing Fund 2024 and GAA FY 2025** in the amount of **One Hundred Fifteen Million Eight Hundred Seventeen Thousand Fifty-Six Pesos and Forty-Seven Centavos (PhP115,817,056.47)**.

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 subcontracting is not allowed:

8. Pre-Bid Conference

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time and either at its physical address, **5th Floor Conference Room, Aguila Road, Sevilla, City of San Fernando, La Union** indicated in paragraph 6 of the **IB**.

9. Clarification and Amendment of Bidding Documents

Prospective bidders may request for clarification on and/or interpretation of any part of the Bidding Documents. Such requests must be in writing and received by the Procuring Entity, either at its given address or through electronic mail indicated in the **IB**, at least ten (10) 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 **IB** shall not be accepted.
- 11.3. For Foreign-funded procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.

12. Alternative Bids

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

13. Bid Prices

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

14. Bid and Payment Currencies

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

14.2. *Payment of the contract price shall be 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 27, 2025**. 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

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

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

If the Procuring Entity allows the submission of bids through online submission to the given website or any other electronic means, the Bidder shall submit an electronic copy of its Bid, which must be digitally signed. An electronic copy that cannot be

opened or is corrupted shall be considered non-responsive and, thus, automatically disqualified.

17. Deadline for Submission of Bids

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

18. Opening and Preliminary Examination of Bids

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

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

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

19. Detailed Evaluation and Comparison of Bids

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

19.2. If the Project allows partial bids, all Bids and combinations of Bids as indicated in the **BDS** shall be received by the same deadline and opened and evaluated simultaneously so as to determine the Bid or combination of Bids offering the lowest calculated cost to the Procuring Entity. Bid Security as required by **ITB** Clause 15 shall be submitted for each contract (lot) separately.

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

20. Post Qualification

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

21. Signing of the Contract

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

Section III. Bid Data Sheet

Bid Data Sheet

ITB Clause																						
5.3	For this purpose, contracts similar to the Project shall be: a. Cold Storage or Supply, Delivery, Installation, Testing and Commissioning of Solar and/or Wind Project/s; and b. Completed within 10 years prior to the deadline for the submission and receipts of bids.																					
7.1	N/A																					
10.3	The Bidder must possess a valid Philippine Contractors Accreditation Board (PCAB) license with a classification and category appropriate to the type and cost of the project. In case of a Joint Venture (JV), the JV shall submit a valid Special PCAB License specifically issued for the joint venture, in addition to the valid licenses of each member of the JV. If applicable, the Bidder shall also secure and submit any additional licenses, permits, or certifications required by relevant regulatory agencies, in accordance with the nature and scope of the project.																					
10.4	<div>The key personnel must meet the required minimum years of experience set below:</div> <table><tr><th>Key Personnel</th><th>General Experience</th><th>Relevant Experience</th></tr><tr><td>1 Project Engineer</td><td>3 years</td><td>Construction Supervision</td></tr><tr><td>1 Materials Engineer</td><td>2 years</td><td>Cold Storage Supervision</td></tr><tr><td>1 Electrical Engineer</td><td>2 years</td><td>Electrical Works</td></tr><tr><td>1 Foreman</td><td>4 years</td><td>Masonry/Carpentry</td></tr><tr><td>1 Registered Master Electrician</td><td>2 years</td><td>Electrical Works</td></tr><tr><td>1 Master Plumber</td><td>2 years</td><td>Plumbing Works</td></tr></table>	Key Personnel	General Experience	Relevant Experience	1 Project Engineer	3 years	Construction Supervision	1 Materials Engineer	2 years	Cold Storage Supervision	1 Electrical Engineer	2 years	Electrical Works	1 Foreman	4 years	Masonry/Carpentry	1 Registered Master Electrician	2 years	Electrical Works	1 Master Plumber	2 years	Plumbing Works
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1 Master Plumber	2 years	Plumbing Works																				
10.5	<div>The minimum major equipment requirements are the following:</div> <table><tr><th>Equipment</th><th>Capacity</th><th>No. of Units</th></tr><tr><td>Concrete Bagger Mixer</td><td>1 Bagger</td><td>1</td></tr><tr><td>Bar Cutter</td><td></td><td>1</td></tr><tr><td>Bar Bender</td><td></td><td>1</td></tr><tr><td>Concrete Vibrator</td><td></td><td>1</td></tr><tr><td>Portable Welding Machine</td><td></td><td>1</td></tr><tr><td>Cut off Wheel</td><td></td><td>1</td></tr></table>	Equipment	Capacity	No. of Units	Concrete Bagger Mixer	1 Bagger	1	Bar Cutter		1	Bar Bender		1	Concrete Vibrator		1	Portable Welding Machine		1	Cut off Wheel		1
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Concrete Vibrator		1																				
Portable Welding Machine		1																				
Cut off Wheel		1																				
12	N/A																					
15.1	<div>The bid security shall be in the form of a Bid Securing Declaration or any of the following forms and amounts:</div> <div>a. The amount of not less than Php2,316,341.13 if bid security is in cash, cashier’s/manager’s check, bank draft/guarantee or irrevocable letter of</div>																					

	<p>credit; or</p> <p>b. The amount of not less than <u>Php5,790,852.82</u> if bid security is in Surety Bond.</p>
16	<p>Each Bidder shall submit one (1) Original copy of the first and second component of its Bid. The Procuring entity is requesting an additional three (3) hard copies of the bid.</p> <p>Sealed Original, Copy 1, Copy 2 & Copy 3 in one (1) Single Envelope</p> <ol style="list-style-type: none"> 1. Bidders shall enclose their original eligibility and technical documents 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”. 2. Each copy of the first (technical) and second (financial) envelopes shall be similarly sealed duly marking the inner envelopes as “COPY NO. 1 – TECHNICALCOMPONENT” and “COPY NO. 1 – FINANCIAL COMPONENT” and the outer envelope as “COPY NO. 2”, respectively. These envelopes containing the original and the copies shall then be enclosed in one single envelope. The first component which is the Technical Eligibility requirements must be soft-bound while the second component being the Financial Eligibility requirements can be fastened in a folder. 3. All envelopes shall: <ol style="list-style-type: none"> a. contain the name of the contract to be bid: Nine (9) Units Cold Storage Expansion Project b. bear the name and address of the Bidder; c. be addressed to: BIDS AND AWARDS COMMITTEE Department of Agriculture Regional Field Office 1 Aguila Road, Sevilla, City of San Fernando, La Union Tel. No. :(072) 242/1045-46, Ext. 07 E-mail add: bacsec@ilocos.da.gov.ph d. bear the specific identification of this bidding process indicated in the ITB: DA-RFO 1-2025-INFRA-039 e. bear a warning “DO NOT OPEN BEFORE...” the date and time for the opening of bids, in accordance with the ITB <p>All copies shall be marked Certified True Copy & signed by the bidder or its duly authorized representative.</p>

	Additional instructions: All copies must be marked with index/ear tabs or side end tabs to identify the page components
19.2	Partial bid is not allowed.
20	<p>The bidder having the Lowest Calculated Bid (LCB) or Single Calculated Bid (SCB) shall submit within a non-extendible period of five (5) calendar days from the BAC Notice as the LCB/SCB, the following:</p> <ol style="list-style-type: none"> 1. Securities and Exchange Commission (SEC) Registration Certificate for Corporations, partnerships and/or joint ventures, Department of Trade and Industry (DTI) Registration Certificate for sole proprietorship, or Cooperative Development Authority (CDA) Registration Certificate for cooperatives. 2. Valid Mayor's 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. 3. Valid Tax Clearance Certificate per Executive Order No.398, series of 2005, as finally reviewed and approved by the BIR; 4. Latest AFS stamped "received" by the BIR or its duly accredited and authorized institutions, for the preceding calendar year. In case the AFS for the preceding calendar year is not yet available, said AFS should not be earlier than two (2) years from the deadline for the submission and receipt of bids. 5. Latest income and business tax returns filed and paid through the BIR Electronic Filing and Payment System (Efps) in accordance with Executive Order No 398, Revenue Regulation No 03-2005 and Revenue Memorandum Circular 16-2005, the above-mentioned tax returns shall refer to the following: <ol style="list-style-type: none"> a. Latest Income Tax Return (ITR) shall be the ITR for the preceding year, whether calendar or fiscal, and b. Latest Business Tax Returns shall refer to the Value Added Tax (VAT) or Percentage Tax filed and paid covering the previous six (6) months before the date of Submission, receipt, Opening and Preliminary Examination of Bids. <p>Certificate of Availability of Stocks if available at stockroom/ warehouse or Commitment to Deliver with supporting documents.</p>
21	Additional contract documents relevant to the Project that may be required by existing laws and/or the Procuring Entity, such as construction schedule and S-curve, manpower schedule, construction methods, equipment utilization schedule, construction safety and health program approved by the DOLE, and other acceptable tools of project scheduling.

Section IV. General Conditions of Contract

1. Scope of Contract

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

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

2. Sectional Completion of Works

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

3. Possession of Site

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

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

4. 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

Special Conditions of Contract

GCC Clause	
2	N/A
4.1	Schedule of construction in full shall start within <u>7 calendar days</u> from receipt of the Notice to Proceed
6	N/A
7.2	[In case of permanent structures, such as buildings of types 4 and 5 as classified under the National Building Code of the Philippines and other structures made of steel, iron, or concrete which comply with relevant structural codes (e.g., DPWH Standard Specifications), such as, but not limited to, steel/concrete bridges, flyovers, aircraft movement areas, ports, dams, tunnels, filtration and treatment plants, sewerage systems, power plants, transmission and communication towers, railway system, and other similar permanent structures:] Fifteen (15) years.
10	a. Dayworks are applicable at the rate shown in the Contractor's original Bid.
11.1	The Contractor shall submit the Program of Work (PERT-CPM, Construction Schedule, S-Curve and Construction Methods) to the Procuring Entity's Representative within 10 calendar days of delivery of the Notice of Award.
11.2	The amount to be withheld for late submission of an updated Program of Work is 10% of the 15% Advance Payment.
13	The amount of the advance payment is 15% of the Contract Price.
14	Materials and equipment delivered on the site but not completely put in place (Actual Accomplishment) shall <u>not</u> be included for payment.
15.1	The "as built" Drawings and/or operating and maintenance manuals shall be required prior to the final payment.
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 10% of the final billing.

Section VI. Specifications

Section VII. Drawings

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

Section VIII. Bill of Quantities

Section IX. Checklist of Technical and Financial Documents

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class “A” Documents

Legal Documents

- (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages) in accordance with Section 8.5.2 of the IRR;

Technical Documents

- (b) 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**
- (c) 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**
- (d) Special PCAB License in case of Joint Ventures; **and** registration for the type and cost of the contract to be bid; **and**
- (e) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission; **or**
Original copy of Notarized Bid Securing Declaration; **and**
- (f) 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**
- (g) Original duly signed Omnibus Sworn Statement (OSS); **and** if applicable, Original Notarized Secretary’s Certificate in case of a corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

Financial Documents

- (h) The prospective bidder’s computation of Net Financial Contracting Capacity (NFCC).

Class “B” Documents

- (i) If applicable, duly signed joint venture agreement (JVA) in accordance with RA No. 4566 and its IRR in case the joint venture is already in existence; **or**
duly notarized statements from all the potential joint venture partners stating

that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.

II. FINANCIAL COMPONENT ENVELOPE

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

Other documentary requirements under RA No. 9184

- (k) Original of duly signed Bid Prices in the Bill of Quantities; **and**
- (l) 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**
- (m) Cash Flow by Quarter.



BILL OF QUANTITIES

PROJECT NAME:

Cold Storage Expansion Project (9 units)

PROJECT LOCATION: Region I

PROJECT DESCRIPTION:

Construction of 40-footer Cold Storage Facility (Chiller) with provision of renewable energy system (solar and wind powered)

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
SPL 1	150mm Polyurethane Insulated Panel (Wall, Ceiling, Flooring), Ohase Change Material (PCM) Thermal Panel and 40ft Container Van with Banner and Logo	SET	1.00		
SPL 2	Cooling System (Condensing Unit, Unit Cooler, Temperature Control and Monitoring System, & Duct Pipe Networks)	SET	1.00		
SPL 3	Solar Power System	SET	1.00		
SPL 4	Battery System	SET	1.00		
SPL 5	Wind Power System	SET	1.00		
SPL 6	Concrete Signage	LOT	1.00		
SPL 7	Construction of Temporary Facility	LOT	1.00		
SPL 8	Transformer and Pole	LOT	1.00		
B.3	Permits and Clearances	L.S	1.00		
B.5	Project Billboard/Signboard	EACH	1.00		
B.7	Construction of Safety & Health	MONTH	2.00		
B.9	Mobilization/Demobilization	L.S	1.00		
800(1)	Clearing and Grubbing	SQ.M	400.00		
803(1)a	Structure Excavation (Common Soil)	CU.M	16.64		
804 (4)	Gravel Fill	CU.M	17.26		
900 (1)c2	Structural Concrete (Footings and Slab on Fill)	CU.M	25.43		
900 (1)	Structural Concrete (Footing Tie Beam, Column, Girder/Beam)	CU.M	1.26		
902 (1)a	Reinforcing Steel (Deformed)	KG	1,524.00		
903 (2)	Formworks and Falseworks	SQ.M	11.00		
1000 (1)	Soil Poisoning	LITER	27.00		
1010 (2)b	Panel Door	SQ.M	1.89		
1027 (1)	Cement Plaster Finish	SQ.M	65.00		
1032 (1)c	Painting Works (Metal Painting)	SQ.M	124.00		
1046 (2)a2	150mm CHB Non Loading Bearing	SQ.M	45.00		
1046 (2)a2	Structural Steel (Roof Truss & Framing)	KG	2,674.00		
1047 (3)a	Metal Structure Accessories (Anchor Bolts)	PC	256.00		
1047 (5)	Metal Structure Accessories (Steel Plates)	KG	354.00		
1100 (10)	Conduits, Boxes and Fittings	L.S	1.00		
1101 (33)	Wires & Wiring Devices	L.S	1.00		
1102 (1)	Panelboard with Main & Branch Breakers	L.S	1.00		
1102 (16)	Generator	SET	1.00		
1103(1)	Lighting Fixtures and Lamps	L.S.	1.00		

NUMBER OF DAYS TO COMPLETE THE PROJECT: **61 Calendar Days**

TOTAL AMOUNT OF BID (in words and figures): _____

Name in Print Company/Office/Firm

Full Name of Bidder/Authorize Representative

Address: _____

By: _____
Signature Over Printed Name



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Regional Field Office No. 1
Aguila Road, Sevilla, City of San Fernando, La Union
Telephone No. (072) 242 1045/1046

TECHNICAL SPECIFICATIONS

PROJECT NAME	: Cold Storage Expansion Project (9 units) Php 12,868,561.83 per unit
LOCATION	: Region I
BRIEF DESCRIPTION	: Construction of 40-footer Cold Storage Facility (Chiller) with provision of renewable energy system (solar and wind powered).

The contractor/implementer of the project shall verify all dimensions and conditions of the site and shall notify the DA Project Engineer for any discrepancies between actual conditions and information shown in the drawing before proceeding with the work.

The structural drawings and specifications represent the general framework of the structure. They do not indicate methods of construction, unless so stated, the contractor/implementer shall provide all necessary measures to protect the structure, the contractor/ implementer's obligation to notify the DA Project Engineer of any conditions that may endanger the stability or cause distress in the structure during phases of construction.

This set of specifications shall govern the methods of construction and kinds of materials to be used for the proposed Project shown on the accompanying plans and detailed drawings.

All parts of the construction shall be finished with first class workmanship to the fullest talent and meaning of plans and the specifications, and to the fullest satisfaction of the Department of Agriculture through its Project Engineer. Any defective material or poor workmanship should be replaced or improved by the Contractor without additional cost to the Owner.

I. SPECIAL ITEMS

- **SPL 1: 150mm Polyurethane Insulated Panel (Wall, Ceiling, Flooring) and 40ft Container Van with Banner and Logo** **1 Set**
 - 40 ft. long x 8ft wide x 8ft 6in high Container Van with the Banner Program and DA - Logo (Painted)
 - With 150mm thick Polyurethane insulated panel (interior)
 - With insulated door
 - With PVC plastic curtain
- **SPL 2: Cooling System (Condensing Unit, Unit Cooler, Temperature Control and Monitoring System, and Duct Pipe Networks)** **1 Set**
 - Condensing Unit (5.54kW min.), Compressor (3kW min.), Evaporating Unit Cooler (3kW min.) with temperature control and monitoring system (Chilling Temperature: +1°C to +10°C);
 - Refrigerant: R404a or its equivalent;
 - Complete with insulated duct pipes and connection;
 - Complete with Electrical Wiring and Connection



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▪ **SPL 3: Solar Power System**

1 Set

A. SOLAR PV MODULE:

- The Solar PV module shall have a minimum of 700 Watt-peak/panel;
- monocrystalline;
- with aluminum frame;
- with full cells;
- with mounting structure and support;
- with complete accessories

B. SOLAR INVERTER:

- Output Power Capacity: 15kW minimum
- Built-in maximum power point tracking (MPPT);
- with minimum Input DC Voltage of 180V;
- with minimum Output AC Voltage of 200V;
- shall be AC Compatible;
- with Over-Voltage and Under-Voltage Protection;
- with Over-Current and Under-Current Protection;
- Electrical connections shall be provided with Combiner box and Circuit Breakers;
- Mounting Structure (Aluminum Railings and clamps);
- with complete accessories.

▪ **SPL 4: Battery System**

1 Set

A. BATTERY:

- Total Output Power Capacity: At least 160kWh capacity with minimum battery voltage of 36V;
- Battery life cycle: At least 3,000 cycles;
- Battery type: Lithium Ion;
- Compatible with Solar and Wind Energy;
- Complete with electrical wiring and connections;
- With Battery Rack System/Mounting Structure;

B. CHARGE CONTROLLER:

- Minimum Input PV Voltage of 36V;
- Minimum Input PV Power of 3000 W.

▪ **SPL 5: Wind Power System**

1 Set

A. WIND TURBINE GENERATOR:

- Rated Power: at least 3 kW, 3-Phase (vertical axis, glass fiber blade)
- Start-up Wind Speed: at least 3m/s
- Rated Wind Speed: at least 15km/s
- Inclusive of tower/post (at least 6m high)
- Inclusive with wind turbine MPPT controller/inverter (with over- and under-load protection);
- AC Compatible MPPT Controller/Inverter;



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- Complete with Accessories, Electrical and Wiring Connection.
- **SPL 6: Concrete Signage** **1 Lot**
- The concrete signage shall be in accordance with the approved plans issued by the office;
- All text letters shall be engraved and colored with "Baguio Green" paint
- **SPL 7: Construction of Temporary Facility** **1 Lot**
- The Contractor shall furnish all materials, labor, equipment, tools and install such temporary works as necessary for the successful completion of the Contract Work. The Contractor shall negotiate the site for his construction camp, office and work areas. The contractor may opt to rental basis subject to availability.
- **SPL 8: Movable Steel Stairs** **1 Lot**
- Heavy-duty steel stair (movable)

II. OTHER GENERAL REQUIREMENTS

- **B.3: Permits and Clearances** **1 Lot**
- This item covers all necessary regulatory permits to commence construction of the project as required.
- **B.5: Project Billboard/ Signboard** **1 each**
- This item covers all necessary materials for the installation of project billboard with mountings as required.
- **B.7: Construction Safety and Health** **4 months**
- The Contractor shall ensure that every person working on or visiting the site, as well as the public in general, shall be made aware of the dangers/hazards likely to arise from site activities, including the precautionary measures to be taken to avoid or minimize those risks associated to those dangers/ hazards. Also, to provide PPEs to all workers in the site under construction.
- **B.9: Mobilization/ Demobilization** **1 Lump sum**
- The work shall consist of the mobilization and demobilization of the Contractor's forces and equipment necessary for performing the work required under the contract.
- Mobilization shall include all activities and associated costs for transportation of Contractor's personnel, equipment, and operating supplies to the site; establishment of offices, buildings, and other necessary general facilities for the Contractor's operations at the site; premiums paid for performance and payment bonds, including coinsurance and reinsurance agreements as applicable; and other items specified in Section 4 of this specification.



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- Demobilization shall include all activities and costs for transportation of personnel, equipment, and supplies not required or included in the contract from the site; including the disassembly, removal and site clean up, of offices, buildings and other facilities assembled on the site specifically for this contract.
- This work includes mobilization and demobilization required by the contract at the time of award. If additional mobilization and demobilization activities and costs are required during the performance of the contract as a result of changed, deleted, or added items of work for which the Contractor is entitled to an adjustment in contract price, compensation for such costs will be included in the price adjustment for the item or items of work changed or added.
 - 1 Concrete Bagger Mixer, 1-bagger
 - 1 Bar Cutter
 - 1 Bar Bender
 - 1 Concrete Vibrator
 - 1 Portable Welding Machine
 - 1 Cut off Wheel

PART A. EARTHWORK

▪ **800 (1): Clearing and Grubbing** **1,400 sq.m.**

- The work under this Section shall include clearing, grubbing and disposal, in a manner approved by DA-RFO I, of all vegetation, trees, stumps, roots, brush, rubbish and all objectionable or undesirable matters within the entire dam site, construction camp site borrow areas, road surfacing materials sources, stockpile areas and elsewhere as may be directed by the Project Engineer.

▪ **803 (1)a: Structure Excavation (Common Soil)** **92 cu.m.**

- The work under this Section shall include clearing, grubbing and disposal, in a manner approved by DA-RFO I, of all vegetation, trees, stumps, roots, brush, rubbish and all objectionable or undesirable matters within the entire dam site, construction camp site borrow areas, road surfacing materials sources, stockpile areas and elsewhere as may be directed by the Project Engineer.

▪ **804 (1)b: Embankment (From borrow)** **47 cu.m.**

- The Backfill material around masonry structures shall not be placed until released by the End-user after consideration of curing and strength requirements for the concrete.
- Care shall be taken to place backfill symmetrically, and in uniform layers, to prevent harmful eccentric loading on a structure or foundation.
- Unless otherwise specified or directed by the End-user, heavy hauling or compacting equipment shall be permitted no closer than three feet to any structure or foundation during backfilling. In all areas closer than three feet, or where workspace is limited, portable equipment such as vibratory plates, rammers, or pneumatic tampers shall be used. The equipment and procedures used shall be subject to the approval of the Owner.



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▪ **804 (4): Gravel Fill**

23 cu.m.

- All such unsuitable materials shall be removed from the site and spread uniformly over the areas adjacent to the project site, or otherwise disposed of as maybe directed by the Architect or Engineer in charge of the construction.

PART B. PLAIN AND REINFORCED CONCRETE WORK

▪ **901 (1)C2: Structural Concrete (Footings and Slab on Fill)**

23 cu.m.

▪ **902 (2): Struc. Concrete (Footing tie beam, col., gir./beam)**

22 cu.m.

Materials

Fine aggregates shall be clean, well graded, hard, natural sand or manufactured sand or a combination of both. The maximum size of the aggregates shall not be larger than one-fifth ($1/5$) of the narrowest dimension between forms and not larger than three-fourths ($3/4$) of the minimum clear spacing between reinforcing bars, and in no case larger than two inches in diameter. Coarse aggregates shall be hard, durable, uncoated gravel, crushed gravel, free from any deleterious materials like alkali, loam, silt and any organic matter.

Water used in making the concrete mass shall reasonably clean, potable, and free from injurious amount of oils, acids, alkali organic materials and other deleterious substances.

Mixing Concrete

No hand mixing shall be allowed except in cases of emergency such as mixer breakdown during pouring operations and shall stop at the first allowed construction joint. All concrete shall be machine-mixed for at least one and one-half minutes after all materials, including water, are in the mixing drum.

The mixer shall be of approved size and type which will ensure a uniform distribution of materials throughout the mass. It shall be equipped with a device for accurately measuring and controlling the amount of water in each batch. The first batch of concrete materials placed in the mixer shall contain a sufficient excess of cement, sand and water to coat inside of the drum without reducing the cement content of the mix to be discharged.

Specified Compressive Strength

Class	Psi	MPa
AA	4,000	27.57
A	3,000	20.68
B	2,500	17.23
C	2,000	13.78

Class AA: For septic tanks and other work as indicated.

Class A: For slabs, beams, and wall above grade, columns and for all reinforced work not otherwise indicated or specified.



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Class B: For slabs on grade, and the beams, footings and for such concrete work as indicated or specified. (Not indicated in the plan).

Class C: For all concrete not reinforce except as otherwise indicated or specified. (Not indicated in the plan).

Conveying and Placing of Concrete

Concrete shall be conveyed from mixer to form as rapidly as practicable. There will be no vertical drop greater than 1.50 meters except where suitable equipment is provided to prevent segregation and where specifically authorized by the Architect and or the Structural Engineer or Project Engineer.

Concrete shall be worked readily into the corners and angles of the forms and around all reinforcements and embedded items without permitting materials to segregate. Concrete shall be deposited as close as possible to its final position so that flow within the mass does not exceed two meters and consequently segregation is reduced to a minimum near forms or embedded items, or elsewhere is directed, the discharge shall be so controlled that the concrete may be effectively connected into horizontal layers not exceeding 30 centimeters in depth within the maximum lateral movement specified.

In placing concrete through reinforcement, care shall be taken that no segregation of the coarse aggregate occurs. On the bottom of beams and slabs, where the congestion of steel near the forms makes placing difficult, a layer of mortar of the same cement-sand ratios as used in concrete shall be first deposited to cover the surfaces.

Curing

Compressive strength of concrete at 28 days curing period shall attain 3000 psi (20.7 MPa) with well graded aggregates having a maximum size of 2 inches (50mm). All plumbing and sanitary work for the building will be done in accordance with the provisions of the National Plumbing Code of the Philippines and such other regulations prescribed by the plumbing and sanitary regulations of the Municipality.

902 (2): Reinforcing Steel (Deformed)	7,630 Kg.
903 (2): Reinforcing Steel (Plain/ Round)	193 Kg.

- All reinforcement shall be placed in accordance with plans furnished by the Engineer. In case of any doubt or ambiguity in placing of steel, the Contractor shall consult the Engineer whose decision shall be final in such cases.
- All reinforcing steel bars used shall be new and free from rust, oil, defects, grease or links. All loose rust or scale, adhering materials and all oil or materials that tend to destroy bond between the concrete and the reinforcement shall be removed before placing the steel and before concreting, begins.
- Metal reinforcement shall be accurately placed and adequately secured by concrete or metal chair spacers. The minimum distance between the parallel bars shall be one and one-half times the diameter for round bars and twice the side dimensions for square bars. In no case shall the clear distance between bars shall be less one or more than one and one-third times the minimum size of the coarse aggregates. Where bars are used in two or more layers, the bars in the upper layers at distance of not less than one inch.



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- All steel reinforcing bars shall be accurately placed and secured against displacement by tying them together at each bar intersection with Gauge No. 16 galvanized iron wire. All main reinforcing steel used in the structure shall conform to ASTM Grade 40 (Intermediate Grade) with yield strength of 40 ksi (276 MPa).
- All temperature bars shall conform to ASTM Grade 30 Structural Grade with minimum yield strength of 30 kpsi (207 MPa) and always apply red oxide for the exposed RSB to eliminate from rusting.

903 (2): Formworks and Falseworks

20 sq.m.

- Provide forms that will produce correctly aligned concrete. Column forms shall be checked for plumpness before concrete is deposited. Hand holes shall be provided in column forms at lowest points of pour lifts to render this space accessible for cleaning.
- Joints in forms shall be horizontal or vertical. Lumber once used in forms shall be nailed withdrawn and surfaces to be in contact with concrete shall be thoroughly wetted with water in advance of pouring. Woods to be used shall be kiln dried and treated with anti-termite chemical. In addition, all lumber surfaces in contact with concrete and masonry shall receive one brush of bituminous paint.
- Immediately after the removal of the form, all projecting wires and bolts and other devices used for holding forms shall be cut off at least one-half centimeter beneath the finished surfaces. All holes and defects shall be thoroughly wetted and then painted up solid with cement putty mortar of the same proportions as the mortar used in the body of the work. All parts protruding beyond the surfacing shall be treated in such manner as to effectively remove all the lines and marks impressed by the form works.
- Forms shall be removed in a manner that will prevent damage to the concrete and shall not be removed until the concrete has attained sufficient strength to support its own weight and any loads that may be placed on it. Side forms of beams and girders may be removed earlier than the bottom forms but additional posts or shoring must be placed under the beams or girders until they have attained their strength. Forms shall not be removed until approval of the Design Engineer. Any repair of surface imperfections shall be performed at once and airing shall be started as soon as the surface is sufficiently hard to permit it without further damage.
- Use Phenolic Board and Good Lumber

PART C. FINISHING AND OTHER CIVIL WORKS

1.) TERMITE CONTROL WORK

▪ 1000 (1): Soil Poisoning

23 Liters

This item shall consist of furnishing and applying termite control chemicals, including the use of equipment and tools in performing such operations in accordance with the Specification.



Materials Requirements

Termite control chemicals or toxicants shall be able to immediately exterminate termites or create barriers to discourage entry of subterranean termites into the building areas. The toxicants may be classified into the following types and according to use.

A. Type I Liquid Termicide Concentrate

This type of toxicant shall be specified for drenching soil beneath foundations of proposed buildings. The concentrate materials shall be diluted with water in the proportion of 1 liter of concentrate material to 65 liters of water or as specified by the Manufacturer.

B. Type II Liquid Termicide Ready Mixed Solution

This type of toxicant, which comes in ready mixed solution, shall be used as wood preservative by chenching wood surfaces to the point of run-off

C. Type III Power Termicide

This type of toxicant shall be applied visible or suspected subterranean termite mounds and tunnels where termites are exterminated through trophallaxes method (exchange or nourishment between termites while greeting each other upon meeting).

Construction Requirements

Before any termite control work is stated, through examination of the site shall be undertaken so that the appropriate method of soil poisoning can be applied. The Contractor shall coordinate with other related trades through the Engineer to avoid delay that may arise during the different phases of application of the termite chemicals.

Soil Poisoning

There are two methods usually adopted in soil poisoning which are as follows:

1. **Cordoning.** This method is usually adopted when there is no visible evidence of termite infestation. Trenches in concentric circles, squares or rectangles are dug 150mm to 220mm wide and at least one meter apart and applied with Type I working solution at the rate of 8 liters per linear meter.

2. **Drenching.** When soil show termite infestation, this method shall be applied. The building area shall be thoroughly drenched with Type I working solution at the rate of 24 liters per square meter. When Powder Termicide is to be applied to eradicate subterranean termites, careful application and precaution shall be given considering that this toxicant is fatal to animal and human lives.



Application

At the time soil poisoning is to be applied, the soil to be treated shall be friable condition with low moisture content to allow uniform distribution of the toxicant agents. Toxicant shall be applied at least twelve (12) hours prior to placement of concrete, which shall be in contact with treated materials. Treatment of the soil on the exterior sides of the foundation walls, grade beams and similar structures shall be done prior to final grading and planting or landscaping work to avoid disturbance work to avoid disturbance of the toxicant barriers by such operations. Areas to be covered by concrete slab shall be treated before placement of granular fill used as capillary water barrier at a rate of 12 liters per square meter with Type I working solution after it has been compacted and set to required elevation. Additional treatment shall be applied as follows:

1. In critical areas such as utility openings for pipes, conduits and ducts, apply additional treatment at the rate of 6 liters per linear meter in a strip 150mm to 200mm wide.
2. Along the exterior perimeter of the slab and under expansion joint, at the rate of 2.5 liters per linear meter in a strip 150mm to 200mm wide in shallow trench.

Wood Protection

Where the application of wood preservative is necessary, the Contractor shall use Type II working solution as recommended by the manufacturer. All wood materials not pressure treated as specified in Item 1003 – Carpentry and Joinery shall be treated with Type II ready mixed solution as herein call for or as directed by the Engineer.

Method of Measurement

Liquid termite control chemicals or toxicants shall be measured by actual number of liters used in the cordoning and drenching of lot areas and soil poisoning of granular fill or actual number of liters used in drenching wood surfaces, while powder chemical/toxicant shall be measured by kilograms applied to suspected subterranean termite mounds and tunnels. The quantity to be paid for shall be determined and accepted by the Engineer.

2.) STORM DRAINAGE AND SEWERAGE SYSTEM

- **1001 (9): Storm Drainage and Downspout Lump sum** 1
- All work shall comply with the pertinent provisions of the Plumbing Code of the concerned city or town, the Code on Sanitation of the Philippines, and/or the National Plumbing Code of the Philippines.
- Domestic water supply and distribution system (potable and non-potable) including supply pipes to the equipment, fixtures and hose bibs inclusive of all valves, fittings, and other accessories to complete the system.



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- All building sanitary drains waste and venting systems including floor drains.
- Building storm drainage system including collection system from roof drains, mechanical drains, plant boxes drains, and storm drainage catch basins up to the street drainage system and non-potable (rainwater) water tank
- Downspouts/Collector Pipes/ AHU and FCU Drains - shall be Polyvinyl Chloride (PVC) pipes conforming to ASTM D2729, Series 1000.
- Storm Drainage Lines – shall be Polyvinyl Chloride (PVC) pipes series 1000 conforming to ASTM D2729 for sizes 100mm to 250mm diameter. Use reinforced concrete drainpipes (RCP), tongue and groove, mortar joints for sizes 300 mm diameter and larger conforming to ASTM C-76 Class IV Wall B.

3.) **HARDWARE, DOORS, WINDOWS AND FRAMES**

▪ **1010 (2)b: Panel Door**

1.89 Sq.m.

This section includes wood flush and sliding doors and frames, complete.

- Interior wood flush, panel and sliding doors shall conform to the best commercial standard. Doors shall have wood preservative treatment, insect treated and kiln-dried.
- Wood flush, panel and sliding doors and frames shall be protected against damage and dampness. Doors shall be stored under cover in a well-ventilated building where they will not be exposed to extreme changes of humidity. They shall not be brought into the building until plastering has been completed and is thoroughly dry.
- Flush Doors shall be hollow core from tanguile kiln dried frames with 6mm thick tanguile plywood veneer or marine plywood as indicated.
- Panel Doors shall be decorative or carving type, from tanguile or narra configuration and sizes as shown.
- Wood Door Frames shall be of the design, size and thickness indicated. This shall be set plumb and true, well-braced to prevent distortion. Frames in masonry or concrete walls shall be secured as indicated, and shall be guijo, paitan or yakal good grade.
- Flush, panel and sliding doors shall be leveled, hung plumbed and fitted accurately allowing 2mm clearance at the jamb and heads. Lock stiles of doors, 45mm thick or thicker, shall be beveled 3mm in the center knobs.
- This section shall include steel doors and frames as indicated in the drawings or as specified herein, complete.
- All painted doors and frames and other steel works delivered to the site shall be stored and handled in a manner as to protect them from damage during the construction period. Installation shall commence only when all flooring finishes have been completed.
- Steel doors and frames shall conform to the best commercial standard as approved and as specified herein.
- Steel-steel doors, louvers and frames shall be factory fabricated from steel conforming to ASTM Specifications A36. Steel shall be zinc coated stretcher level degree of flatness, pickled and oiled of hot rolled materials, and with manufacturer's standard gauges specified hereinafter for the various uses.



- Pressed Steel Frames for doors and other openings shall be of the combination buck, frame, frame and trim type; sizes and details as shown and shall include tubular mullions and transform bars used in conjunction with the frames. Frames shall be gauge 14, knock-down type or welded-unit type, and of continuous channel.
- Welded Unit Type Frames shall have headers and jambs secured at the corners either by internal welding of faces by welded splice plates and shall be further secured at the rabbet either by welding or by mechanical interlock.
- The headers and jambs, as an alternate, shall be secured at the corners by external welding of faces and grounded smoothly. Faces of frames at junction of head and jamb shall present neat line joints. Mullions and transform bars shall be member with heads or jambs, as applicable and shall be butt-welded thereto.
- Anchors, Frames shall be provided with a minimum of three wall anchors per jambs as required for the adjoining wall construction, including ceiling strut anchors as required by the drawings, and anchors for attachment of frame to the floor. Anchors shall be of not less than 18 gauge steel.
- Door Steel Gauges shall not be lighter than 18 gauge for 44mm thick doors nor lighter than 18 gauge for 35mm thick doors or for glazed panels. Doors shall be of the type, size, and design shown and provided with honeycomb core insulation for a high degree of sound deadening. Door clearance shall not exceed the following: 3mm at jambs and heads; 6mm at meeting stiles of pair of doors and 20mm at bottom measured from finished floor line.
- Preparation for Hardware – cutting, reinforcing, drilling and tapping of doors and frames shall be done at the factory except drilling and tapping for surface-applied hardware that shall be done in the field when the hardware is applied.
- Steel Work Painting finishes – all steel doors and frames shall be provided with anti-corrosive primer and oven-baked finish with acrylic enamel paint or powder coated as indicated. Color shall be beige, ivory or wood grain as approved.
- Workmanship – the finished items shall be rigid, neat in appearance and free from defects, warp or buckle. Molded members shall be sharp in detail, straight and true. Corner joints shall be coped or mitered, well formed, and in true alignment. Exposed welded joints shall be dressed smoothly.
- Installation – Frames shall be plumbed, leveled and rigidly secured in place. Temporary spreaders shall be installed until the wall at the frame is completed and the frame is securely anchored in its final position. Wall anchors on door frames shall be installed approximately at the hinge and strike levels. Doors shall be installed in conjunction with the application of hardware.
- Submittal Requirement – Prior to procurement and delivery, brochures or catalogs of the product to be used shall be submitted for approval.

This section includes aluminum frame windows, complete.

- Materials shall be stored out of contact with the ground and shall be arranged to avoid bending, warping or otherwise damaging the fabricated windows.
- Shall be horizontal type; frames shall be standard sizes or as indicated with powdered coated finish. Glass shall be tempered, 6mm thick, tinted or clear, as specified in section: Glass and Glazing and as indicated



- Windows shall be installed without forcing or distortion so that sills and heads are level and jambs are plumb. Windows frames shall be securely anchored into the supporting construction. Joints between aluminum windows and aluminum members including mullions shall be set in mastic and weather stripping of the type recommended by the window manufacturer and as approved, to provide completely water-tight joints.
- Prior to fabrication and delivery, brochure, catalogs or shop drawings, samples of aluminum frames, mullions, weather stripping, type of finish and glass shall be submitted for approval.

This section includes shower enclosure and toilet cubicle partitions, complete.

- Toilet partitions shall be flush type. The partitions shall be provided complete with all fastenings, fittings and hardware necessary for satisfactory installation.
- Materials are dividers enclosing on or more cubicles with door panels that swing on one side. Suitable for high-rise industrial buildings, schools, sports, stadiums, commercial establishments and other community buildings.
- Light weight rigid vinyl frame with specially designed sill slope to allow free drainage system
- Provided with non-corrosive rollers to insure smooth operation against sill.
- Flushes dirt that accumulates on the sill.
- 3.5 thick polystyrene sheet in figured surface design.
- Shall be strong, straight, clean cut, smooth, neat and free from defects in workmanship, materials and appearance. The finished thickness is subject to a tolerance of plus or minus 1.59mm. The finished colors shall be as selected from the manufacturer's standard color charts.
- The work shall be secured in continuous in rigid and substantial manner, straight and plumb, with uniform clearance of 10mm between pilaster and panels 25mm between pilasters and walls, panels and walls, and not more than 4mm between pilasters and doors. Evidence of drilling in walls shall be concealed in the finish work. After installation, all exposed surfaces shall be thoroughly cleaned and all damaged work shall be restored to its original condition, or replaced with new work.

4.) ROOFING WORKS

1013 (2)a: Fabricated Metal Roofing Accessory, Ridge/Hip Rolls & Flashings	34 L.m.
1013 (2)b: Fabricated Metal Roofing Accessory, Gutter	67 L.m.
1014 (1)a2: Fabricated Metal Roofing Accessory, Gutter	352 Sq.m.

- Ridge/hip rolls, valleys, flashing and counter flashings, gutters and downspouts, whenever required, shall be fabricated from plain G.I. sheets. Ridge/hip rolls, flashings and counter flashings shall be gauge 26. Valleys, gutters and downspouts shall be gauge 24 unless otherwise specified on Plans. Wire basket strainers shall be galvanized, gauge 24. Roof ventilators, whenever required shall be fabricated from gauge 26 plain G.I. sheets and constructed to the dimensions and details shown on Plans.



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Preparatory Work

Preparatory Work 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 used such that the centerline of the purlins at end laps are 150 mm from the bottom line of end laps and intermediate purlins are placed equidistantly. Top of purlins should be at the same plane.

Installation of Corrugated G.I. Sheets

Installation of corrugated G.I. sheets with end laps shall start at the lower part of the roof and proceed towards the direct on monsoon wind with side laps of two-and-a-half (2- 1/2) corrugations. End laps shall be 250 mm minimum. Each sheet shall be fastened temporarily by 1.83 mm diameter by 25 mm long galvanized flat head nails at valleys of corrugations covered by side or end laps. Succeeding upper rows of corrugated G.I. sheets shall be installed in the same manner until the entire roof area is covered. Valleys, ridge/hip rolls and flashings when required, shall be installed before fastening the roofing sheets with galvanized straps and rivets. One strap shall be riveted at each alternate corrugation at the gutter line, the ridgeline and at end laps and the straps bent around and nailed to the purlins. Riveting at intermediate purlins between end laps shall be done at every fourth corrugation. Rivet shall be provided with a galvanized mild iron washer below one lead and one galvanized iron washer above the sheet. Rivet 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.

The completed roofing shall be tested for water tightness at side and end laps at joints of roofing sheets with ridge/hips rolls, valleys and flashings by means of water spray system. The water-spray system shall have nozzle which will deliver water pressure of 2 kg/cm² directly to the joint being tested in such manner and for a duration directed by the Engineer. All defective works as determined by this test shall be remedied by the contractor at his expense and the test shall be repeated until the work is found satisfactory.

METHOD OF MEASUREMENT

Roofing sheets shall be measured and paid for on an area basis in square meters or part thereof, such roofing sheets including all laps, fasteners and rivets as installed complete and accepted. Ridge/hip rolls, flashings, valleys, gutters and down-spouts shall be measured in linear meter of completed and accepted work such measurement shall include necessary straps and fixings required for complete installation. Roof ventilators shall be measured and paid for per unit completely installed and accepted.



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5.) FINISHING AND PAINTING

▪ **1027 (1): Cement Plaster Finish 167 Sq.m.**

- This Item shall consist of furnishing all cement plaster materials, labor, tools, and equipment required in undertaking cement plaster finish as shown on the Plans and in accordance with this Specification.
- Material Requirements Manufactured materials shall be delivered in the manufacturer's original unbroken packages or containers which are labeled plainly with the manufacturer's name and trademark.
- Cement Portland cement shall conform with the requirements as defined in Item 700, hydraulic cement.
- Hydrated Lime Hydrated lime shall conform with the requirements as defined in item 701, Hydrated Lime.
- Fine Aggregates Fine aggregates shall be clean, washed sharp river sand and free from dirt, clay, organic matter or other deleterious substances. Sand derived from crushed gravel or stone may be used with the Engineer's approval but in no case shall such sand be derived from stone unsuitable for use as coarse aggregates.

Construction Requirements

Mixture

- a) Mortar mixture for brown coat shall be freshly prepared and uniformly mixed in the proportion by volume of one part Portland Cement, three (3) parts sand and one fourth (1/4) part hydrated lime.
- b) Finish coat shall be pure Portland cement properly graded conforming to the requirements of item 700, Hydraulic cement and mixed with water to approved consistency and plasticity.

Surface Preparation

- a) After removal of formworks reinforce concrete surfaces shall be roughened to improved adhesion of cement plaster. Finish coat shall be pure Portland cement properly graded conforming to the requirements of item 700, Hydraulic cement and mixed with water to approved consistency and plasticity.
- b) Surfaces to receive cement plaster shall be cleaned of all projections, dust, loose particles, grease and bond breakers. Before any application of brown coat is commenced all surfaces that are to be plastered shall be wetted thoroughly with clean water to produce a uniformly condition.

Application

- a) Brown coat mortar mix shall be applied with sufficient pressure starting from the lower portion of the surface to fill the grooved and



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to prevent air pockets in the reinforced concrete/masonry work and avoid mortar mix dropping. The brown coat shall be lightly broomed/ or scratched before surface had properly set and allowed to cure.

- b) Finish coat shall not be applied until after the brown coat has seasoned for seven days and corrective measures had been done by the Contractor on surfaces that are defective. Just before the application of the finish coat, the brown coat surface shall be evenly moistened with portable water. Finish coat shall be floated first to an even surface, then troweled in a manner that will force the mixture to penetrate into the brown coat. Surfaces applied with coat shall then be smooth with paper in a circular motion to remove trowel marks, checks and blemishes. All cement plaster finish shall be 10 mm thick minimum on vertical concrete and/or masonry walls.
- Whenever indicated on the Plans to be "Simulated Red Brick Finish", the Contractor shall render brick design on plaster surface before brown coat had properly set and then allowed to dry. Cement plaster shall not be applied directly to:
 - a) Concrete or masonry surface that had been coated with bituminous compound and,
 - b) Surfaces that had been painted or previously plastered.
- Workmanship Cement plaster finish shall be true to details and plumbed. Finish surface shall have no visible junction marks where one (1) day's work adjoins the other. Where directed by the Engineer or as shown on the Plans vertical and horizontal groove joints shall be 25 mm wide and 10 mm deep. Provision of Additional Pre-Fab Isolation Rooms 1027.4 Method of Measurement All cement plaster finish shall be measured in square meters or part thereof for work actually completed in the building.
- **1032 (1)c: Painting Works (Metal Painting)**
335 Sq.m.

1. All painting works for this project, except as hereinafter specified, shall be done with the use of paint products.
2. The painting contractor shall supply all labor, paint materials, tools, staging and equipment necessary, and shall perform all painting and finishing work as shown in the schedule of painting and finishing work for this project. The painting contractor shall store his materials in one place in the building to be kept near and clean, care being taken in the storage of paints, oils, etc. to prevent danger of fire. Oil rags shall be kept in metal containers and shall be removed from the building every end of the working day. All paintings are to be done in good workmanship manner. No painting shall be done on all surfaces before neutralizing and proper sand papering is through. No painting on damp weather is to be done.



3. All concrete surfaces to be painted shall first be coated with concrete neutralizer. Exterior walls shall be finished with Solvent-Based Acrylic Paint, first coated with Penetrating sealer. Interior wall shall be finished with Latex Paint, first Painted with concrete sealer. Steel or iron surfaces must first be painted with anti-rust proofing. All color schemes for painting the building shall be decided by the Architect and end user, to be implemented upon completion of the construction. The Contractor shall submit color samples and finishes for approval by the Architect and End user before final application.
4. Cracks and holes shall be filled with putty compatible with the surface to be painted and the paint materials to be applied. All wooden door jambs and cabinet frames and shelves to come in contact with masonry surfaces must be painted with SOLIGNUM wood preservative.
5. Upon completion of the painting works, the painting Contractor shall remove any paint spots from all finished work. He shall present his work to the in charge of the Construction, free from blemishes and rubbish generated by his workers.
6. It shall be the painting Contractor's responsibility to protect his work and those of other Contractors during the time his work is underway. He shall be responsible for any damage to the work or property of others caused by his employees or by himself.
7. Before any painting is done, all surfaces shall be cleaned, smoothed and freed from dust, dirt, grease, mortar, rust and other foreign substances. All parts where paint remover has been used shall be washed off with paint or lacquer thinner. All paints shall be spread evenly and carefully.
8. All paint and paint materials shall be delivered to the building site in unbroken packages, bearing the marks of the specified brand. No adulteration of specified paints with other brands shall be allowed without the consent of the Architect and End user.
9. All other materials specifically indicated and illustrated on plans shall be taken as part of this specification regardless whether or not written and such other materials shall be approved by the end user before they are set in place.

6.) MASONRY WORKS

▪ 1046 (2)a2: 150mm CHB Non Load Bearing 167 Sq.m.

1. The cells of the concrete hollow blocks to be laid shall be filled with 1:3 cement mortars (1 part Portland cement and three parts sand, by volume). They shall be reinforced with 10mm diameter horizontal deformed bars every three blocks and 10mm diameter vertical bars deformed bars at 400mm O.C. Unless specified on the elevation drawing, the cement plaster mixture for masonry walls shall be 1:3 (1 part cement, and 3 parts sand, by volume).

Minimum Compressive Strength of Concrete Hollow Blocks is as follows:

Class A	900 psi
Class B	750 psi



2. Held in place by horizontal and vertical reinforcing and interior surfaces of hollow blocks shall be thoroughly soaked with water before laying. Hold all units in storage for a period not less than 28 days (including curing period) and do not deliver prior to that time unless strength and other tests indicate compliance with these specifications.
3. Mortar aggregates shall be natural river sand, clean and free from soluble salts and organic matter, graded from fine to coarse, compatible with the thickness of joints in which used. Mix mortar from three to five minutes in such quantities as are needed for immediate use.
4. Lay units in common bond with uniform causing and jointing. All concrete block jointing shall be of uniform thickness. Butler vertical and horizontal jointing full with mortar. Bond course and corners and intersections and tie to abutting walls. Do not lay cracked, broken or deface blocks. Cut edges shall be clean and sharp. The first row of block shall be properly and thoroughly anchored to the concrete columns, walls of slabs. Course shall be laid straight and well plumbed.

7.) METAL STRUCTURES

- **1046 (2)a2: Structural Steel (Roof Truss and Framing)** **10,417 Kg.**
- **1047 (2)b: Structural Steel (Purlins)** **3,172 Kg.**
- This work shall consist of steel structures and steel structures portions of composites structures, constructed in reasonably close conformity with lines, grades and dimensions shown on the plans or established by the engineers
- The work will include the furnishing, fabricating, hauling, erecting, welding and painting of structural metals called for in the special provisions or shown on the plans. Structural metals will include structural steel, rivets, welding, special and alloy steels, steel forgings and casting and iron castings. This work will also include any incidental metal construction not otherwise provided for, all in accordance with these specifications plans and special provisions.
- The quantity, determined as provided, shall be paid for at the unit price per kilogram for structural steel, furnished, fabricated and erected, which price and payment shall constitute full compensation for furnishing, galvanizing, fabricating, radiographing, magnetic particle inspection, delivering, erecting ready for use, and painting all steel and other metal including all labor, equipment, tools and incidentals necessary to complete the work, except as provided in subsection 403.5.2, 403.5.3 and 403.5.4
- **1047 (3)a: Metal structure Accesories (Anchor Bolts)** **180 pcs.**
- **1047 (3)c: Metal structure Accesories (Turnbackle)** **72 pcs.**
- **1047 (4): Metal structure Accesories (Cross Bracing)** **304 Kg.**
- **1047 (5): Metal structure Accesories (Steel Plates)** **1,891 Kg.**
- This work shall consist of steel structures and the steel structure portions of composite structures, constructed in reasonably close conformity with the lines, grades and dimensions shown on the Plans or established by the Engineer.



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- The work will include the furnishing, fabricating, hauling, erecting, welding and painting of structural metals called for in the Special Provision or shown on the Plans. Structural metals will include structural steel, rivet, welding, special and alloy steels, steel forgings and castings and iron castings. This work will also include any incidental metal construction not otherwise provided for, all in accordance with these Specifications, Plans and Special Provisions.
- Materials shall meet the requirements of Item 712, Structural Metal; Item 409, Welded Structural Steel, and Item 409, Welded Structural Steel; and Item 709, Paints.

PART D. ELECTRICAL

- **1100 (10): Conduits, Boxes and Fittings** **1 Lump sum**
 - This item shall consist of the furnishing and installation of the complete conduit work consisting of electrical conduits, conduit boxes such as junction boxes, pull boxes, utility boxes and square boxes, conduit fittings such as coupling, locknuts and bushings and other electrical materials needed to complete the conduit roughing-in work of this project.

Material Requirements

All material shall be brand new and shall be of the approved type meeting all the requirements of the Philippine Electrical Code and bearing the Philippine Standard Agency (PSA) mark.

Conduits

Conduits shall be standard rigid steel, zinc coated or galvanized. Intermediate metal conduit may be used if shown or specified on the approved Plans. PVC conduits if required shall be schedule 40. Enamel coated steel conduits and conduits with rough inner surfaces are not acceptable.

Conduit Boxes

All conduit boxes shall be Code gauge steel and galvanized. Outlet boxes shall be galvanized pressed steel of standard make. In general, outlet boxes shall be at least 100mm square or octagonal, 53 mm deep and 16 mm minimum gauge.

Conduit Fittings

All conduit fittings such as locknuts and bushing shall be galvanized of standard make.



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Construction Requirements

All works throughout shall, be executed in the best practice in a workman like manner by qualified and experienced electricians under the immediate supervision of a duly licensed Electrical Engineer. Conduits shall be cut square with a hacksaw and reamed. Bends shall be made with the require radius. In making bends only conduit bending apparatus will be used. The use of pipe tee or vise for bending conduits shall not be permitted. Conduits which have been crushed, deformed or flattened shall not be installed. No running thread shall be allowed. Conduits runs crossing construction joints of the building shall be provided with standard expansion fittings of the approved type.

No conduits shall be used in any system smaller than 12 mm diameter electric thread size nor shall have more than four (4) 90° bends in any one run and were necessary, pull boxes shall be provided. All ends of conduits which are left empty in cabinets and conduit boxes shall be plugged with lead or approved pipe caps so as to prevent the entrance of white ants and dirt within the conduit system. Pull wires shall be inserted in the empty ducts before they are closed with lead or pipe caps and shall be left therein for future use.

On exposed work, all pipes and outlet boxes shall be secured by means of galvanized metal clamps which shall be held in place by means of machine screws. When running over concrete surfaces, the screws shall be held in place by means of expansion sleeves for big pipes and rolled lead sheet for small pipes. All pipes shall be run at right angles to and parallel with the surrounding walls. No diagonal run shall be allowed and all bends and offsets shall be avoided as much as possible. Conduits shall be supported at 1,500 mm intervals maximum.

Conduit Boxes & Fittings

Provide conduit boxes for pulling and splicing wires and outlet boxes for installation of wiring devices. As a rule, provide junction boxes or pull boxes in all runs greater than 30 meters in length, for horizontal runs. For other lengths, provide boxes as required for splices or pulling. Pull boxes shall be installed in inconspicuous but accessible locations. Support boxes independently of conduits entering by means of bolts, red hangers or other suitable means. Conduit boxes shall be installed plump and securely fastened. They shall be set flush with the surface of the structure in which they are installed where conduits are run concealed. All convenience and wall switch outlet boxes for concealed conduit work shall be deep, rectangular flush type boxes. Four-inch octagonal flush type boxes shall be used for ceiling light outlets and shall be of the deep type where three or more conduits connect to a single box. Floor mounted outlet boxes required shall be waterproof type with flush brass floor plate and brass bell nozzle.30 Provision of Additional Pre-Fab Isolation Rooms All boxes shall be painted with antirust red lead paint after installation. All conduits shall be fitted with approved standard galvanized bushing and lock nuts where they enter cabinets and conduit boxes. Junction and pull boxes of code gauge steel shall be provided as indicated or as required to facilitate the pulling of wires and cables



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▪ **1101 (33): Wires and wiring devices**

1 Lump sum

This Item shall consist of the furnishing and installation of all wires and wiring devices consisting of electric wires and cables, wall switches, convenience receptacles, heavy-duty receptacles and other devices shown on the approved Plans but not mentioned in these specifications.

Materials Requirement Wires and cables shall be of the approved type meeting all the requirements of the Philippine Electrical Code and bearing the PSA mark unless specified or indicated otherwise, all power and lighting conductors shall be insulated for 600 volts. All wires shall be copper, soft drawn and annealed, smooth and of cylindrical form and shall be centrally located inside the insulation. All wiring devices shall be standard products of reputable electrical manufacturers. Wall switches shall be rated at least 10A, 250 volts and shall be spring operated, flush, tumbler type. Duplex convenience receptacles shall be rated at least 15A, 250 volts 3-wire, flush, polarized type.

Construction Requirements Conductors or wires shall not be drawn in conduits until after the cement plaster is dry and the conduits are thoroughly cleaned and free from dirt and moisture. In drawing wires into conduits, sufficient slack shall be allowed to permit easy connections for fixtures, switches, receptacles and other wiring devices without the use of additional splices. All conductors of convenience outlets and lighting branch circuit homeruns shall be wired with a minimum of 3.5 mm² in size. Circuit homeruns to panel board shall not be smaller than 3.5 mm² but all homeruns to panel board more than 30 meters shall not be smaller than 5.5 mm². No conductor shall be less than 2.0 mm² in size. All wires of 14 mm² and larger in size shall be connected to panels and apparatus by means of approved type lugs or connectors of the solderless type, sufficiently large enough to enclose all strands of the conductors and securely fastened. They shall not loosen under vibration or normal strain. All joints, taps and splices on wires larger than 14 mm² shall be made of suitable solderless connectors of the approved type and size. They shall be taped with rubber and PVC tapes providing insulation not less than that of the conductors. No splices or joints shall be permitted in either feeder or branch conductors except within outlet boxes or accessible junction boxes or pull boxes.

All joints in branch circuit wiring shall be made mechanically and electrically secured by approved splicing devices and taped with rubber and PVC tapes in a manner which will make their insulation as that of the conductor. All wall switches and receptacles shall be fitted with standard bakelite face plate covers. Device plates for flush mounting shall be installed with all four edges in continuous contact with finished wall surfaces without the use of coiled wire or similar devices. Plaster filings will not be permitted. Plates installed in wet locations shall be gasketed. When more than one switch or device is indicated in a single location, gang plate shall be used.



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▪ **1102 (1): Panelboard with Main & Branch Breakers** **1 Lump sum**

Panel boards shall conform to the schedule of panel boards as shown on the approved Plans with respect to supply characteristics, rating of main lugs or main circuit breaker, number and ratings and capacities of branch circuit breakers. Panel board shall consist of a factory completed dead front assembly mounted in an enclosing flush type cabinet consisting of code gauge galvanized sheet steel box with trim and door. Each door shall be provided with catch lock and two (2) keys. Panel boards shall be provided with directories and shall be printed to indicate load served by each circuit.

Panel boards cabinets and trims shall be suitable for the type of mounting shown on the approved Plans. The inside and outside of panel board cabinets and trims shall be factory painted with one rust-proofing primer coat and two finish shop coats of pearl gray enamel paint. Main and branch circuit breakers for panel boards shall have the rating, capacity and number of poles as shown on the approved Plans. Breaker shall be thermal magnetic type. Multiple breaker shall be of the common trip type having a single operating handle. For 50-ampere breaker or less, it may consist of single- pole breaker permanently assembled at the factory into a multi-pole unit.

▪ **1102 (16): Generator** **1 Set**

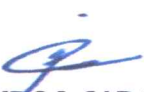
- Diesel Generator, Silent Type, at a minimum of 10kW compatible with the system

▪ **1103 (1): Lighting Fixtures and Lamps** **1 Lump sum**

- "Basic Electrical Materials and Methods," applies to this section, with the additions and modifications specified herein. Materials not considered to be lighting equipment or lighting fixture accessories are specified in Section 1104, "Interior Exterior Lighting." Lighting fixtures and accessories mounted on exterior surfaces of buildings are specified in this section
- Use 18W Fluorescent Lamp with Weather light Fixtures.

The above specifications are intended for the **Cold Storage Expansion Project in Region I**

Prepared by:


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PROPOSED COLD STORAGE EXPANSION PROJECT

COLD STORAGE DESIGN NOTES

- THE MAXIMUM DESIGN CAPACITY OF CHILLER ROOM IS 15 TONS WITH A PRODUCT ENTERING TEMPERATURE OF 28°C AND STORAGE TEMPERATURE OF +1°C TO +10°C. HOWEVER, THE CAPACITY MAYBE REDUCED DEPENDING ON THE BULK DENSITY OF THE COMMODITY STORED.
- THE INSULATION TYPE USED IN THE DESIGN IS POLYURETHANE WITH A THICKNESS OF 150MM.
- THE ROOM SHALL HAVE PVC PLASTIC CURTAIN ATTACHED ON THE DOORS TO PREVENT EXCESSIVE LOSS OF COLD AIR INSIDE THE ROOM.
- THE ROOM HAS DEDICATED REFRIGERATION SYSTEM WHICH COMPOSED OF COMPRESSOR (CAPACITY: 3.0KW), CONDENSING UNIT (CAPACITY: 5.54KW), EVAPORATING UNIT (CAPACITY: 3KW), TEMPERATURE CONTROL AND MONITORING SYSTEMS, AS WELL AS THE DUCTING NETWORKS.
- THESE ASSUMPTIONS SHALL BE USED BY THE ENGINEERS AS REFERENCE FOR THEIR DESIGN. ANY DEVIATION FROM THIS DESIGN SHALL BE RECOMPUTED ACCORDINGLY. MOREOVER, THE SPECIFIC COMMODITY/IES USED FOR THE DESIGN SHALL BE SPECIFIED TO PROPERLY DESIGN THE REQUIRED REFRIGERATION LOAD CAPACITY.

SOLAR POWER DESIGN NOTES

- THE FACTOR USED TO DESIGN THE SOLAR POWER OF THE MODULAR COLD STORAGE FACILITY IS 1.65 OF THE TOTAL REQUIRED POWER OF THE FACILITY.
- THE FACTOR USED TO DESIGN THE SOLAR INVERTER FOR THE FACILITY IS 1.25 OF THE TOTAL REQUIRED POWER OF THE FACILITY.
- THE ANGLE OF INCLINATION FOR THE SOLAR MOUNTING STRUCTURE IS RECOMMENDED TO BE BETWEEN 10° TO 15° FACING SOUTH DIRECTION.
- THESE ASSUMPTIONS SHALL BE USED BY THE ENGINEERS AS REFERENCE FOR THEIR DESIGN. ANY DEVIATION FROM THIS DESIGN SHALL BE RECOMPUTED ACCORDINGLY.

WIND POWER DESIGN NOTES

- A 3KW WIND POWER OUTPUT CAPACITY IS USED IN THE FACILITY TO PROVIDE ADDITIONAL POWER TO THE FACILITY. MOREOVER, THE MINIMUM HEIGHT OF THE MOUNTING POST FOR THE WIND TURBINE IS 5 METERS FROM THE GROUND. ALSO, THE MINIMUM START-UP WIND SPEED OF THE WIND TURBINE IS AT LEAST 3M/S. FURTHERMORE, THE ASSUMED CONTINUOUS OPERATION OF THE TURBINE IS 8 HOURS.
- THESE ASSUMPTIONS SHALL BE USED BY THE ENGINEERS AS REFERENCE FOR THEIR DESIGN. ANY DEVIATION FROM THIS DESIGN SHALL BE RECOMPUTED ACCORDINGLY.

ELECTRICAL DESIGN NOTES

- THE DESIGN TOTAL POWER REQUIREMENT FOR THE CHILLER ROOM IS 10.5 KVA. IN REFERENCE TO THIS, THE CAPACITY OF STANDBY DIESEL GENERATOR TO BE USED IS 10KW. MOREOVER, THE GENERATOR IS USED AS REDUNDANCY BACK-UP POWER IN CASE OF ELECTRICAL POWER INTERRUPTION FROM THE POWER SUPPLY.
- THESE ASSUMPTIONS SHALL BE USED BY THE ENGINEERS AS REFERENCE FOR THEIR DESIGN. ANY DEVIATION FROM THIS DESIGN SHALL BE RECOMPUTED ACCORDINGLY.

STRUCTURAL AND CONSTRUCTIONS NOTES

- IN THE INTERPRETATION OF THE DRAWING, INDICATED DIMENSIONS SHALL GOVERN WHEREIN THE MEASUREMENTS ARE IN MILLIMETERS (MM) UNLESS SPECIFIED DIMENSIONAL UNIT IS SHOWN IN THE PLAN. MOREOVER, THE IDENTIFICATION OF ACTUAL DISTANCES AND SIZES IN THE PLAN THROUGH SCALED MEASUREMENT IS NOT APPLICABLE.
- IN REFERENCE TO OTHER DRAWINGS, SEE ARCHITECTURAL DRAWINGS FOR DEPRESSIONS IN FLOOR SLABS, OPENINGS IN THE WALLS AND SLABS, INTERIOR PARTITIONS, LOCATION OF DRAINS ETC.
- IN CASE OF DISCREPANCIES AS TO THE LAYOUT, DIMENSIONS, AND ELEVATIONS BETWEEN THE STRUCTURAL PLANS, AND ARCHITECTURAL DRAWINGS, THE CONTRACTOR SHALL NOTIFY BOTH THE DESIGN ENGINEER AND THE PROJECT ENGINEER OF THE REGIONAL IMPLEMENTING OFFICE.
- ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH THE ACI 318-05 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AND ALL STRUCTURAL STEEL WORK ACCORDING WITH AISC SPECIFICATION (9th EDITION) IN SO FAR AS THEY DO NOT CONFLICT WITH THE LOCAL BUILDING CODE REQUIREMENT.
- ACI REFERS TO AMERICAN CONCRETE INSTITUTE, AISC TO AMERICAN INSTITUTE OF STEEL CONSTRUCTION AND ASTM TO AMERICAN SOCIETY FOR TESTING MATERIALS.
- CONSTRUCTION NOTES AND TYPICAL DETAILS APPLY TO ALL DRAWINGS UNLESS OTHERWISE SHOWN OR NOTED. TYPICAL DETAILS AS DIRECTED TO MEET SPECIAL CONDITIONS.
- SHOP DRAWINGS WITH ERECTION AND PLACING DIAGRAMS OF ALL STRUCTURAL STEELS, MISCELLANEOUS IRON, PRE-CAST CONCRETE, ETC. SHALL BE SUBMITTED FOR ENGINEERS APPROVAL BEFORE FABRICATION.
- CONTRACTOR SHALL NOTE AND PROVIDE ALL MISCELLANEOUS CURBS, SILLS, STOOLS, EQUIPMENTS AND MECHANICAL BASES THAT ARE REQUIRED BY THE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS.
- ALL RESULTS OF MATERIAL TESTING FOR CONCRETE, REINFORCING BARS, & STRUCTURAL STEEL MUST BE NOTED & APPROVED BY DESIGN ENGINEER, PROJECT ENGINEER, AND THE HEAD OF DA REGIONAL IMPLEMENTING OFFICE.

NOTES ON CONCRETE MIXES & PLACING

- ALL CONCRETE SHALL DEVELOP A MIN. COMPRESSIVE STRENGTH AT THE END OF TWENTY EIGHT (28) DAYS W/ CORRESPONDING MAXIMUM SIZE AGGREGATE & SLUMPS AS FOLLOWS

LOCATION	28 DAYS STRENGTH	MAX. SIZE OF MAX. SLUMP AGGREGATE
ALL OTHERS, INCLUDING SUSPENDED SLABS,	4000 PSI (27.6 MPa)	20mm 100mm
COLUMNS	4000 PSI (27.6 MPa)	20mm 100mm
BEAMS, SLABS	4000 PSI (27.6 MPa)	20mm 100mm
SLAB ON FILL	4000 PSI (27.6 MPa)	20mm 100mm

- MAINTAIN MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS FOLLOWS

SUSPENDED SLABS	20mm
SLAB ON GRADE	40mm
WALLS ABOVE GRADE	25mm
BEAM STIRRUPS AND COLUMN TIES	40mm
WHERE CONCRETE IS EXPOSED TO EARTH BUT POURED AGAINST FORMS	50mm
WHERE CONCRETE IS DEPOSITED DIRECTLY AGAINST EARTH	75mm

- CONCRETE SHALL BE DEPOSITED IN ITS FINAL POSITION WITHOUT SEGREGATION. RE-HAND LIND OR PLACING SHALL BE DONE PREFERABLY WITH BUEGIES, BUCKETS OR WHEELBARROWS. NO CHUTES WILL BE ALLOWED EXCEPT TO TRANSFER CONCRETE FROM HOPPERS TO BUEGIES, WHEELBARROWS OR BUCKETS IN WHICH CASE THEY SHALL NOT EXCEED SIX (6) METERS IN AGGREGATE LENGTH.

- NO DEPOSITING OF CONCRETE SHALL BE ALLOWED WITHOUT THE USE OF VIBRATORS UNLESS AUTHORIZED IN WRITING BY THE DESIGNERS AND ONLY FOR UNUSUAL CONDITIONS WHERE VIBRATIONS ARE EXTREMELY DIFFICULT TO ACCOMPLISH.
- ALL ANCHOR BOLTS, DOWELS, AND OTHER INSERTS, SHALL BE PROPERLY POSITIONED & SECURED IN PLACE PRIOR TO PLACING OF CONCRETE.

- ALL CONCRETE SHALL BE KEPT MOIST FOR A MINIMUM OF SEVEN CONSECUTIVE DAYS IMMEDIATELY AFTER POURING BY THE USE OF WET BURLAP, FOG SPRAYING, CURING COMPOUNDS OR OTHER APPROVED METHODS.

7. STRIPPING OF FORMS AND SHORES:

FOUNDATION	24 HRS @
SUSPENDED SLAB EXCEPT WHEN ADDITIONAL LOADS ARE IMPOSED	8 DAYS
WALLS	21 DAYS
BEAMS	14 DAYS
COLUMNS	21 DAYS

- THE CONTRACTOR SHALL SUBMIT THE SCHEDULE OF POURING AND THE LOCATION OF THE CONSTRUCTION JOINTS TO THE STRUCTURAL ENGINEER AT LEAST (4) DAYS PRIOR TO THE POURING FOR APPROVAL.

- THE CONTRACTOR SHALL FURNISH AND MAINTAIN ADEQUATE FORMS AND SHORINGS UNTIL THE CONCRETE MEMBERS HAVE ATTAINED THEIR WORKING CONDITION AND STRENGTH.

NOTES ON FOOTINGS

- FOOTINGS ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 90 kPa (1870 psf). HOWEVER, THE DESIGN ENGINEER SHALL VERIFY THE ACTUAL SOIL CONDITION OF THE SITE AND CONFIRM ACTUAL BEARING CAPACITY OF SOIL TO PROPERLY ADJUST THE DEPTH AND DIMENSIONS OF FOOTINGS.
- FOOTING SHALL REST AT LEAST 600mm BELOW NATURAL GRADE LINE UNLESS OTHERWISE INDICATED IN PLANS. NO FOOTING SHALL REST ON FILL.
- MINIMUM CONCRETE PROTECTION FOR REINFORCEMENTS SHALL BE 75 mm CLEAR FOR CONCRETE DEPOSITED THE GROUND AND 50mm FOR CONCRETE DEPOSITED AGAINST A FORMWORK.

DESIGN LOADS

- WIND
 - WIND SPEED: 315KM/HR
 - OCCUPANCY CATEGORY: MISCELLANEOUS STRUCTURES (BASED ON NSCP 2015)
 - EXPOSURE CATEGORY: EXPOSURE B (URBAN AND SUB URBAN AREAS)
 - TYPE OF BUILDING: OPEN BUILDING
- SEISMIC
 - DISTANCE TO ACTIVE FAULT: <10KM
 - SEISMIC ZONE: ZONE 4
 - SOIL TYPE: STIFF SOIL PROFILE (SD)

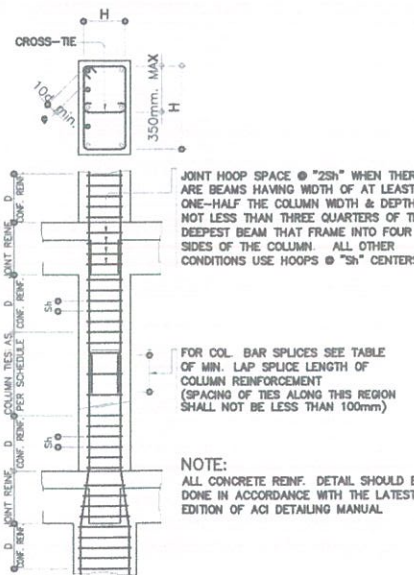
NOTES ON REINFORCEMENT

- UNLESS OTHERWISE NOTED IN PLANS, THE YIELD STRENGTH OF REINFORCING BARS SHALL BE:

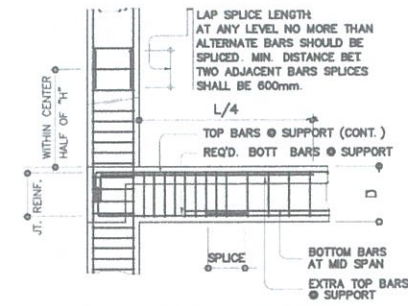
A. FOOTINGS, FOOTING BEAMS, ORDERS	$f_y = 275 \text{ MPa}$ (40,000 psi)
B. COLUMNS AND SHEAR WALLS	$f_y = 275 \text{ MPa}$ (40,000 psi)
C. BEAMS AND ORDER	$f_y = 275 \text{ MPa}$ (40,000 psi)
D. NON-LOAD BEARING WALL PARTITIONS, BEDDED SLABS, FLOOR & ROOF SLABS, PARAPETS, CATCH BASIN, SIDE WALK	$f_y = 2275 \text{ MPa}$ (33,000 psi)
- ALL REINFORCING BARS SIZE 10mm OR LARGER SHALL BE DEFORMED IN ACCORDANCE WITH ASTM A 706.
- SPICES SHALL BE SECURELY WIRED TOGETHER & SHALL LAP OR EXTEND IN ACCORDANCE W/ TABLE A & TABLE B (TABLE OF LAP SPICE & ANCHORAGE LENGTH) UNLESS OTHERWISE SHOWN ON DRAWINGS. SPICES SHALL BE STAGGERED WHENEVER POSSIBLE.

NOTES ON COLUMNS

- PROVIDE EXTRA SETS OF TIES AT 100mm OC. TIED COLUMN REINFORCEMENT ABOVE AND BELOW BEAM-COLUMN CONNECTIONS FOR A DISTANCE FROM FACE OF CONNECTION EQUAL TO THE GREATER OF THE OVERALL THICKNESS OF COLUMN, 1/8 THE CLEAR HEIGHT OF COLUMN OR 450mm.
- COLUMN TIES SHALL BE PROTECTED EVERYWHERE BY A COVERING OF CONCRETE CAST MONOLITHICALLY WITH THE CORE WITH THE MINIMUM THICKNESS OF 40mm AND NOT LESS THAN 40 TIMES THE MAXIMUM SIZE OF COARSE AGGREGATE IN MILLIMETERS.
- WHERE COLUMNS CHANGE IN SIZE, VERTICAL REINFORCEMENTS SHALL BE OFFSET AT A SLOPE OF NOT MORE THAN 1 IN 6 AND EXTRA 10mm TIES AT 100mm SHALL BE PROVIDED THRU OUT THE OFFSET REGION.
- UNLESS OTHERWISE INDICATED IN THE PLANS, LAP SPICES FOR VERTICAL COLUMN REINFORCEMENT SHALL BE MADE WITHIN THE CENTER HALF OF COLUMN HEIGHT, AND THE SPICE LENGTH SHALL NOT BE LESS THAN 40 BAR DIAMETERS. WELDING OR APPROVED MECHANICAL DEVICES MAY BE USED PROVIDED THAT NOT MORE THAN ALTERNATE BARS ARE WELDED OR MECHANICALLY SPICED AT ANY LEVEL AND THE VERTICAL DISTANCES BETWEEN THESE WELDS OR SPICES OF ADJACENT BARS IS NOT LESS THAN 600mm.



TYPICAL COLUMN ELEV. SHOWING DOWELS AND TIES SPACING



TYP. DETAIL OF COL LAP SPICE & EXT. GIRDER TO COL. CONNECT

NOTES ON BEAMS AND GIRDERS

- UNLESS, OTHERWISE NOTED IN PLANS, CAMBER ALL BEAMS AND GIRDER AT LEAST 6mm FOR EVERY 4.5M OF SPAN, EXCEPT CANTILEVERS OR WHICH THE CAMBER SHALL BE AS NOTED IN PLANS OR AS ORDERED BY THE ENGINEER BUT IN NO CASE LESS THAN 20mm FOR EVERY 30M OF FREE SPAN.
- TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG B-1.

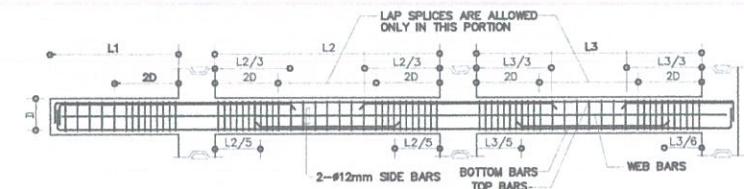


FIG. B-1

TABLE 'A' TENSION BARS EMBEDMENT LENGTHS AND LAPPED SPICES IN MILLIMETERS				TABLE 'B' COMPRESSION BARS EMBEDMENT LENGTHS AND LAPPED SPICES IN MILLIMETERS			
BAR SIZE (DEFORMED)	$f_c = 20.8 \text{ MPa}$ (3000 psi)	$f_c = 27.6 \text{ MPa}$ (4000 psi)	$f_c = 27.6 \text{ MPa}$ (4000 psi)	BAR SIZE (DEFORMED)	$f_c = 20.8 \text{ MPa}$ (3000 psi)	$f_c = 27.6 \text{ MPa}$ (4000 psi)	$f_c = 27.6 \text{ MPa}$ (4000 psi)
10mm #	300	300	300	10mm #	225	300	300
12mm #	300	300	300	12mm #	275	300	290
16mm #	300	400	300	16mm #	350	400	325
20mm #	400	550	350	20mm #	400	500	475
25mm #	600	800	550	25mm #	550	625	550
28mm #	750	1000	650	28mm #	625	675	625
32mm #	950	1300	850	32mm #	700	775	700

NOTE: TOP PLAIN BARS, MULTIPLY VALUE BY 2

NOTE: TOP PLAIN BARS, MULTIPLY VALUE BY 2
VALUES GIVEN ABOVE CAN ALSO BE USED FOR COLUMNS

- IF THE BEAM REINFORCING BARS END IN A WALL THE CLEAR DISTANCE FROM THE BAR TO THE FARTHER FACE OF THE WALL, NOT BE LESS THAN 25 mm. EMBEDMENT LENGTH SHALL BE AS SHOWN IN A TABLE 'A' FOR TENSION BARS AND TABLE 'B' FOR COMPRESSION BARS UNLESS SPECIFIED IN PLAN. TOP BAR SHALL NOT BE SPICED WITHIN THE COLUMN OR WITHIN A DISTANCE TWICE THE MEMBER DEPTH FROM THE FACE OF THE COLUMN AT LEAST TWO STIRRUPS SHALL BE PROVIDED AT ALL SPICES.
- IF THERE ARE TWO OR MORE LAYERS OF REINFORCING BARS, USE 25 mm # BAR SEPARATORS SPACED AT 100 mm ON CENTER. IN NO CASE SHALL THERE BE LESS THAN TWO (2) SEPARATORS BETWEEN TWO LAYERS OF BARS.
- MINIMUM CONCRETE PROTECTION FOR REINFORCING BARS OR STEEL SHAPES SHALL BE AS SHOWN IN FIG B-2 UNLESS SPECIFIED ELSEWHERE.

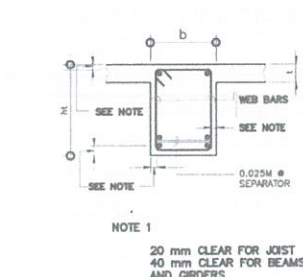


FIG. B-2

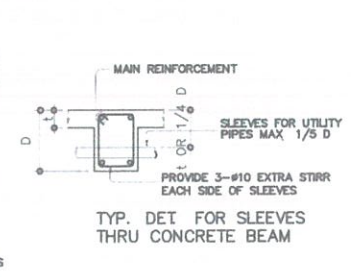


FIG. B-3

- WHEN A BEAM CROSSES A GIRDER, REST BEAM ON TOP OF GIRDER BARS, BEAM REINFORCING BAR SHALL BE SYMMETRICAL ABOUT CENTER LINE WHENEVER POSSIBLE.
- GENERALLY NO SPICES SHALL BE PERMITTED AT POINTS WHERE CRITICAL BONDING STRESSES OCCUR. SPICES WHERE SO PERMITTED SHALL BE INDICATED IN THE TABLE 'A' AND 'B'. WELDED SPICES SHALL DEVELOP IN TENSION AT LEAST 125 % OF THE SPECIFIED YIELD STRENGTH OF THE BAR. NOT MORE THAN 50% OF THE BARS AT ANY ONE SECTION IS ALLOWED TO BE SPICED THEREIN.

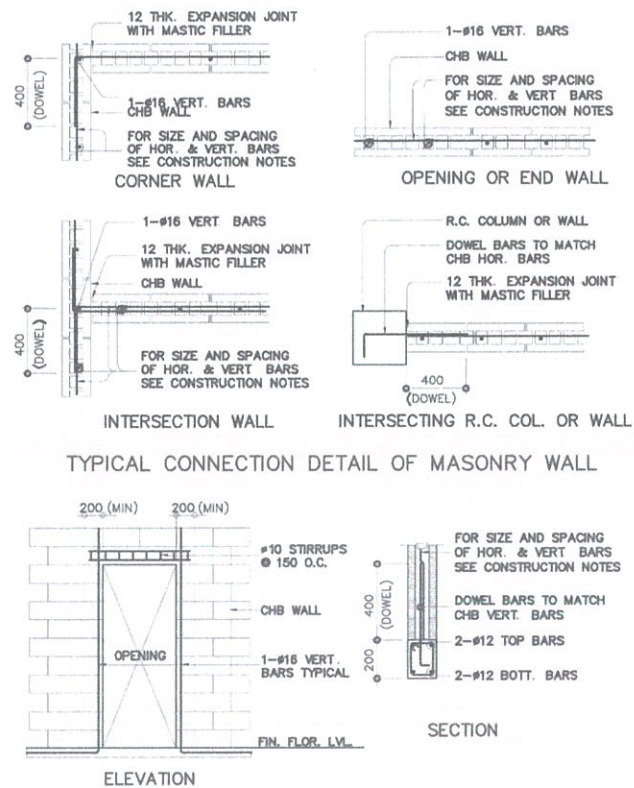
NOTES ON CONCRETE HOLLOW BLOCK WALLS

- UNLESS OTHERWISE SHOWN IN PLANS ALL CONCRETE HOLLOW BLOCKS AND CERAMIC BLOCKS SHALL BE REINFORCED AS SHOWN IN THE SCHEDULE OF CONCRETE HOLLOW BLOCKS AND CERAMIC BLOCK REINFORCEMENT.
- PROVIDE 150mm x 300mm STIFFENER COLUMN REINFORCED WITH 4-12mm WITH 6mm# TIES AT 150mm ON CENTER WHERE CONCRETE HOLLOW BLOCK TERMINATES AND AT EVERY 3.0M LENGTH OF CONCRETE HOLLOW BLOCK WALLS UNLESS NOTED IN STRUCTURAL PLANS.

BLOCK THICKNESS	REINFORCEMENT		NOTES
	HORIZONTAL	VERTICAL	
75 mm	10mm# @ 600mm o.c.	10mm# @ 600mm o.c.	A. MINIMUM LAPS AT SPICE = 0.25 M B. PROVIDE RIGHT ANGLED REINFORCEMENT AT CORNERS 90° LONG
125 mm	10mm# @ 600mm o.c.	10mm# @ 600mm o.c.	C. WHERE CHB OR CER. BLK WALL DOWELS JOIN COL. RC. BEAMS AND WALL DOWELS WITH THE SAME SIZE AS VERT. OR HOR REINFORCEMENTS SHALL BE PROVIDED
150 mm	10mm# @ 600mm o.c.	10mm# @ 600mm o.c.	
200 mm	12mm# @ 600mm o.c.	12mm# @ 600mm o.c.	

REINFORCING CONCRETE LINTEL BEAM IN CONCRETE BLOCK WALLS

CLEAR SPAN (L)	TOTAL LENGTH (L+0.40M)	MIN. H _c (MPa)	HEIGHT OF LINTEL (MM)	REINFORCEMENT		
				BOTTOM	TOP	STIRRUPS
1.20M	1.60M	14.0	200	1-#10	1-#10	#6mm @ 200mm
1.50M	1.90M	14.0	200	1-#10	1-#10	#6mm @ 200mm
1.80M	2.20M	14.0	200	1-#10	1-#10	#6mm @ 200mm
2.10M	2.50M	17.0	250	1-#12	1-#10	#6mm @ 200mm
2.40M	2.80M	17.0	250	1-#12	1-#10	#6mm @ 200mm
2.70M	3.10M	17.0	250	1-#12	1-#10	#6mm @ 200mm
3.00M	3.40M	20.0	300	1-#16	1-#12	#10mm @ 200mm
3.30M	3.70M	20.0	300	1-#16	1-#12	#10mm @ 200mm
3.60M	4.00M	20.0	300	1-#16	1-#12	#10mm @ 200mm



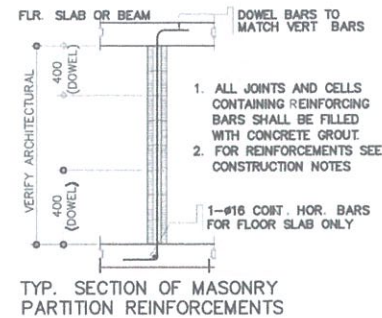
TYP. DET OF LINTEL BEAM AT CHB WALL OPENING

NOTES ON STRUCTURAL STEEL

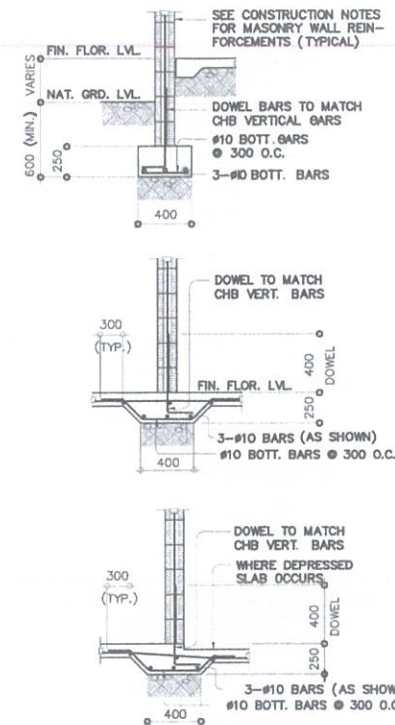
- STRUCTURAL STEEL TO BE USED FOR FABRICATION AND ERECTION OF THIS STRUCTURE SHALL COMPLY WITH ALL THE PERTINENT PROVISION OF AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDING LATEST EDITION.
- ALL STRUCTURAL STEEL SHAPES SHALL CONFORM TO ASTM A36 STRUCTURAL STEEL UNLESS OTHERWISE INDICATED.
- ALL WELDED CONNECTIONS SHALL DEVELOP THE FULL STRENGTH OF THE MEMBERS CONNECTED.
- UNLESS OTHERWISE SPECIFIED ALL WELDING RODS SHALL CONFORM AWS E60 ELECTRODES
- ALL BOLTS USED UNLESS OTHERWISE SPECIFIED SHALL BE ASTM A 307 BOLTS.

NOTES ON WELDS

- USE E60xx ELECTRODES FOR ALL MEMBERS WELDED.
- WELDS SHALL DEVELOP THE FULL STRENGTH OF MEMBERS JOINED UNLESS OTHERWISE SHOWN OR DETAILED IN THE DRAWINGS



TYP. SECTION OF MASONRY PARTITION REINFORCEMENTS



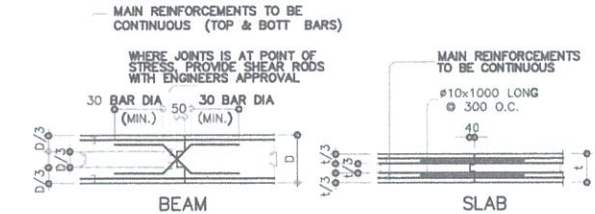
TYPICAL CHB FOOTING DETAILS (WHERE APPLICABLE)

NOTES ON EMBEDDED PIPES

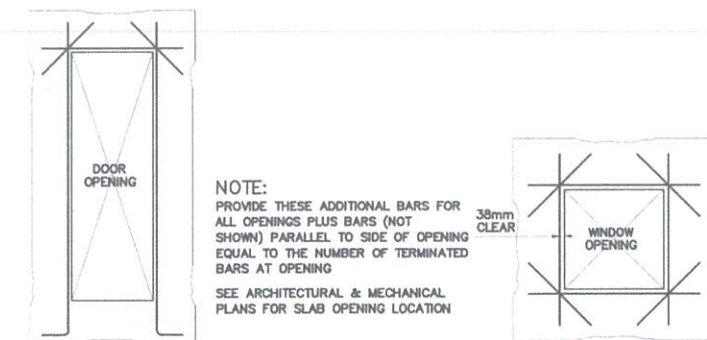
- ALL EMBEDDED PIPES FOR UTILITIES, ETC THAT PASS THRU BEAMS SHALL NOT EXCEED 100mm IN DIAMETER OR 1/3 BEAM DEPTH WHICHEVER IS LESS, UNLESS OTHERWISE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER
- NO PIPES SHALL BE ALLOWED TO PASS THRU BEAMS VERTICALLY
- NO PIPES SHALL BE EMBEDDED IN COLUMNS.

NOTES ON CONSTRUCTION JOINTS IN CONCRETE

- WHERE A CONSTRUCTION JOINT IS TO BE MADE, THE SURFACE OF CONCRETE SHALL BE CLEANED AND ALL LAITANCE AND STANDING WATER REMOVED. SHEAR KEY SHALL BE PROVIDED AT THE JOINT



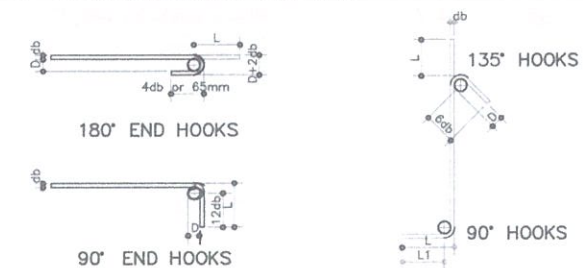
TYPICAL SLAB & BEAM CONSTRUCTION JOINT DET.



TYP. EXTERIOR WINDOW & DOOR OPENING

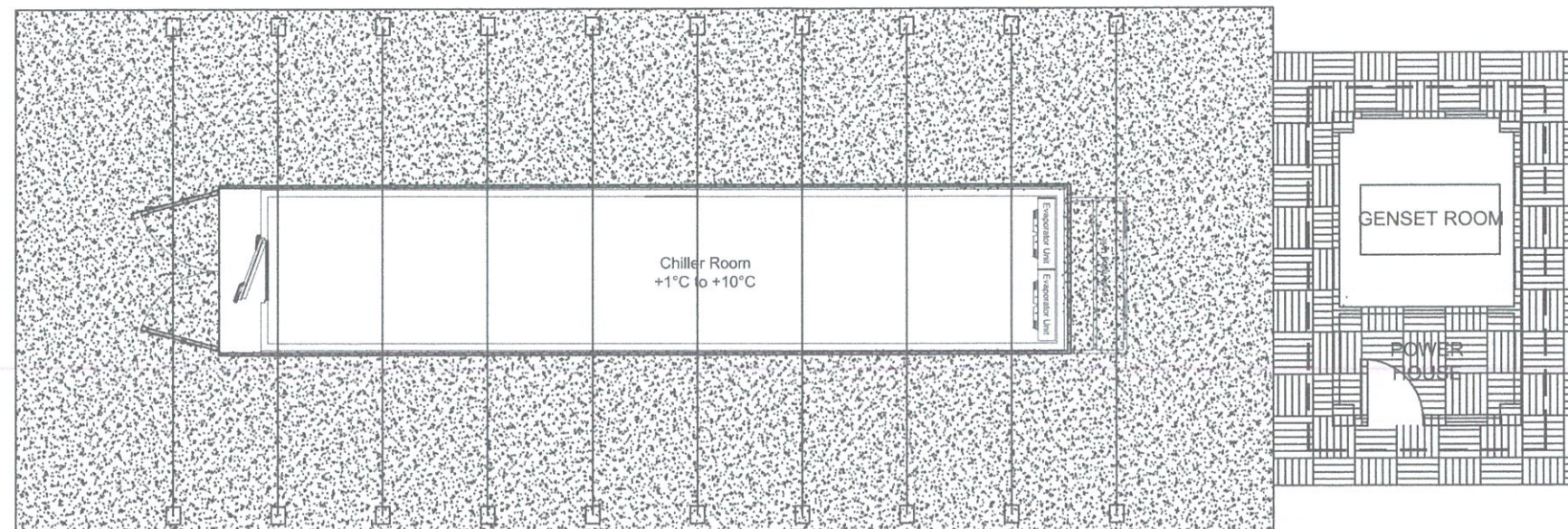
NOTES OF STIRRUPS

- ALL REINFORCEMENT SHALL BE BENT COLD UNLESS OTHERWISE PERMITTED BY THE STRUCTURAL ENGINEER.
- REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FILLED BENT, EXCEPT AS SHOWN IN THE DESIGN DRAWINGS OR PERMITTED BY THE STRUCTURAL ENGINEER.
- TIES & CLOSE STIRRUPS MUST BE BENT AT 135°



BAR SIZE (DEFORMED)	DIAMETER (mm)	180° HOOK	90° HOOK
		D+2db	L
10mm #	60	75	125
12mm #	75	100	150
16mm #	95	125	175
20mm #	115	150	200
25mm #	150	200	230
28mm #	240	300	350
32mm #	300	335	450

BAR SIZE (DEFORMED)	DIAMETER (mm)	180° HOOK	90° HOOK
		D+2db	L
10mm #	40	125	85
12mm #	50	165	115
16mm #	65	200	140
20mm #	115	250	165
25mm #	150	365	230

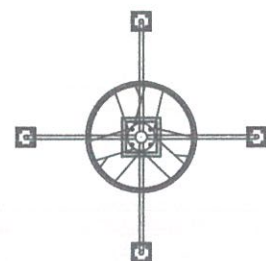


LEGENDS

REPRESENTATION	DESCRIPTION
	NORTH
	3kW VERTICAL AXIS WIND TURBINE
	150mm PCCP
	100mm PCCP
	ROOF LINE

SITE DEVELOPMENT PLAN

NOT TO SCALE



GENERAL NOTES

- 1.) THE PROPOSED SITE SHALL BE ELEVATED ABOVE THE EXISTING ROAD LEVEL TO ENSURE ADEQUATE DRAINAGE AND PREVENT FLOODING OF THE FACILITY. IN AN INSTANCE WHEREIN THE SITE IS BELOW THE ELEVATION OF EXISTING ROAD, THE BENEFICIARY SHALL SHOULD THE EARTH WORKS SUCH AS EMBANKMENT/BACKFILL, EXCAVATION, AND COMPACTION. LOCATION SHALL BE FLOOD FREE.
- 2.) THE MODULAR COLD STORAGE FACILITY IS DESIGNED WHEREIN THE SERVICE POWER WILL BE FROM THREE PHASE SUPPLY WITH SUPPLEMENTAL FROM SOLAR AND WIND ENERGY. IN ADDITION, A STANDBY DIESEL GENERATOR IS ADDED IN THE DESIGN AS BACK-UP POWER IN CASES WHERE THERE IS A FAILURE ON THE MAIN POWER SUPPLY OF THE SAID FACILITY. THE GENERATOR IS DEDICATED ONLY TO RUN THE REFRIGERATION SYSTEM OF THE CHILLER ROOM.
- 3.) THE TOP OF THE CONTAINER VAN MUST HAVE WEEKLY MAINTENANCE TO REMOVE ANY ACCUMULATED WATER/DUST/DEBRI, AND SHOULD BE CLEANED AFTER EVERY HEAVY RAINFALL/UNTOWARD CALAMITIES.
- 4.) THE PREPARED MODULAR DESIGN OF COLD STORAGE FACILITY SHALL BE USED BY DA REGIONAL IMPLEMENTING OFFICES (IOs) AS REFERENCE IN THE DESIGN OF THE AFOREMENTIONED FACILITY. THE DA REGIONAL IOs HAS THE RIGHT TO DEViate FROM THE SHOWN DESIGN BASED ON THE PECULIARITY/UNIQUENESS OF THE IDENTIFIED SITES IN THEIR RESPECTIVE REGIONS.



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING

QA-SP200-Q0P01-04
REV 08
AUGUST 28, 2024

PROJECT TITLE

PROPOSED COLD STORAGE
EXPANSION PROJECT

PREPARED BY:

ENGR. MARK LESTER L. NATIVIDAD

ENGINEER II
ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION

REVIEWED BY:

ENGR. ROMEL A. CABALLERO

ENGINEER III
ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION

RECOMMENDING APPROVAL:

ENGR. ALLAN C. GOLENG

ENGINEER IV
ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION

APPROVED BY:

BALDWIN G. JANIORINA, Ph.D.

DIRECTOR IV
BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING

DANIEL ALONSO N. ATAYDE

ASSISTANT SECRETARY
OFFICE OF THE ASSISTANT SECRETARY FOR LOGISTICS

SHEET CONTENT

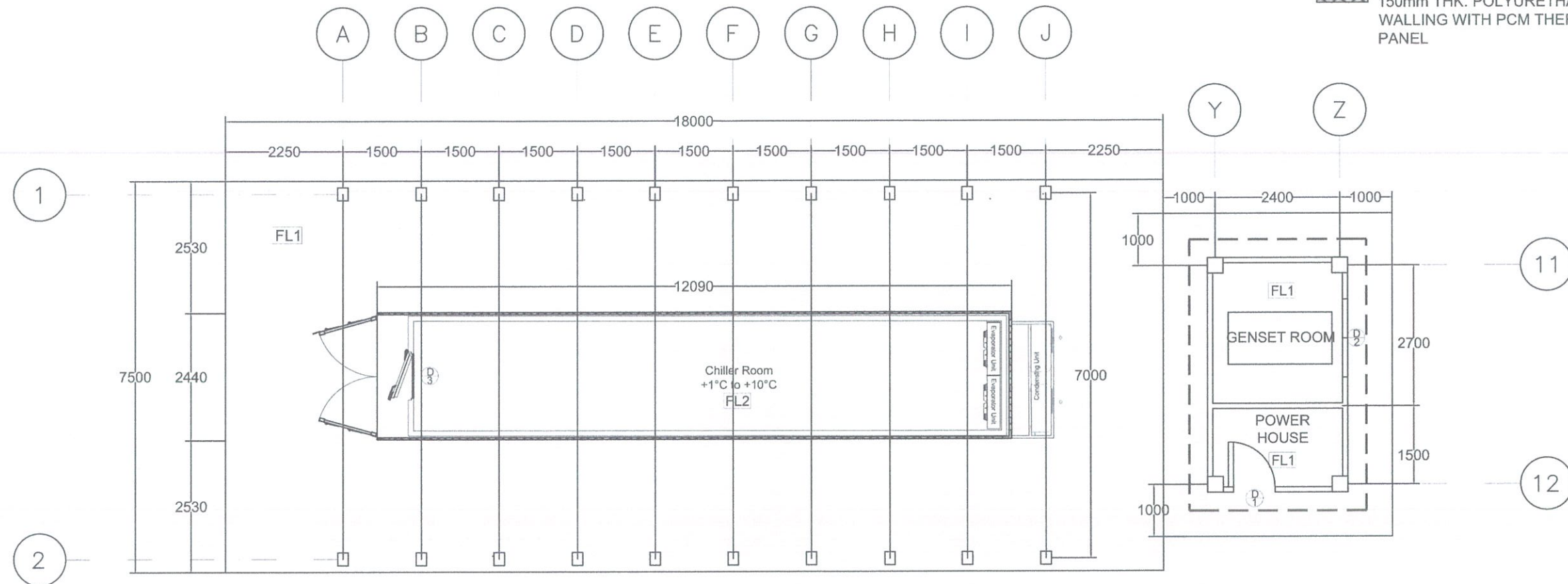
GENERAL NOTES
SITE DEVELOPMENT PLAN

SHEET NO.

3/17

SCHEDULE OF FINISHES :

- FL1 NON SKID PLAIN CEMENT FLOOR FINISH
- FL2 150mm THK. POLYURETHANE FLOORING WITH ALUMINUM CHECKERED PLATE-FINISHED
- 150mm THK. POLYURETHANE WALLING WITH PCM THERMAL PANEL



FLOOR PLAN
NOT TO SCALE



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING

OF-EPDSD-00P01-04
REV 08
AUGUST 28, 2024

PROJECT TITLE
**PROPOSED COLD STORAGE
EXPANSION PROJECT**

PREPARED BY:
ENGR. MARK LESTER L. NATIVIDAD
ENGINEER II
ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION

REVIEWED BY:
ENGR. ROMEL A. CABALLERO
ENGINEER III
ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION

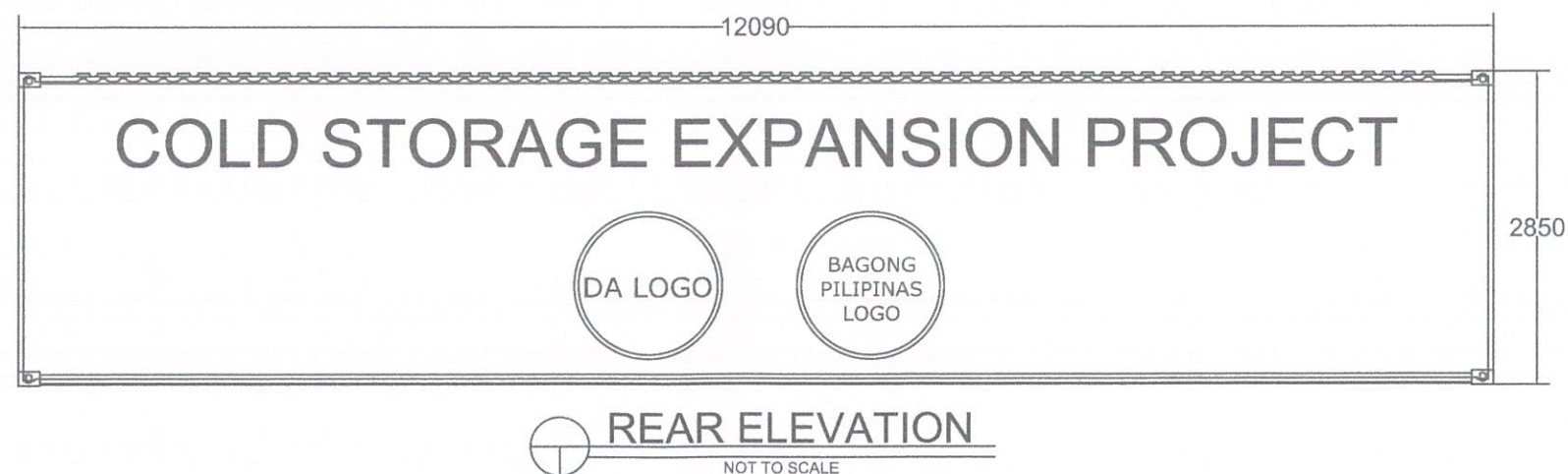
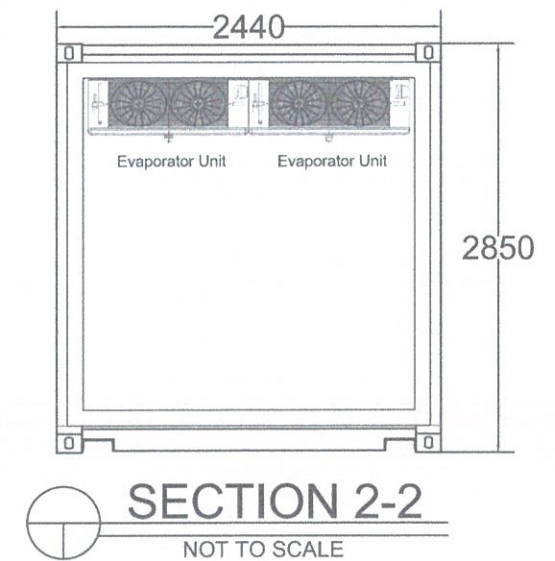
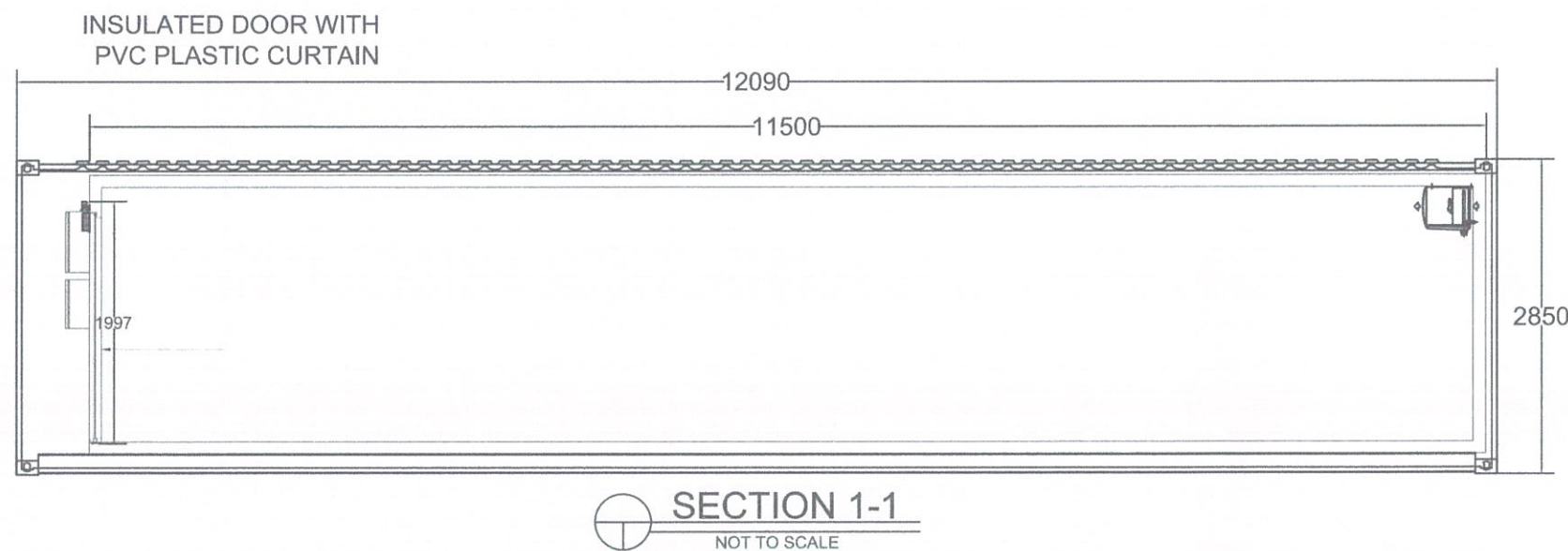
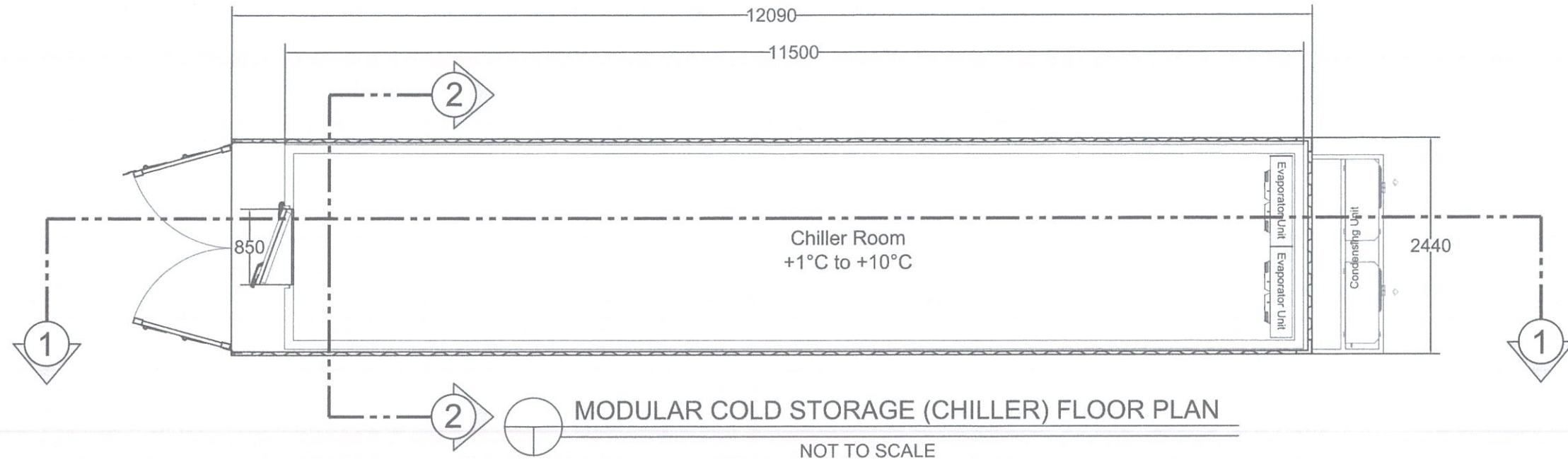
RECOMMENDING APPROVAL:
ENGR. ALLAN C. GOLENG
ENGINEER IV
ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION







APPROVED BY:
BALDWIN G. J. LORONA, Ph.D.
DIRECTOR IV
BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING

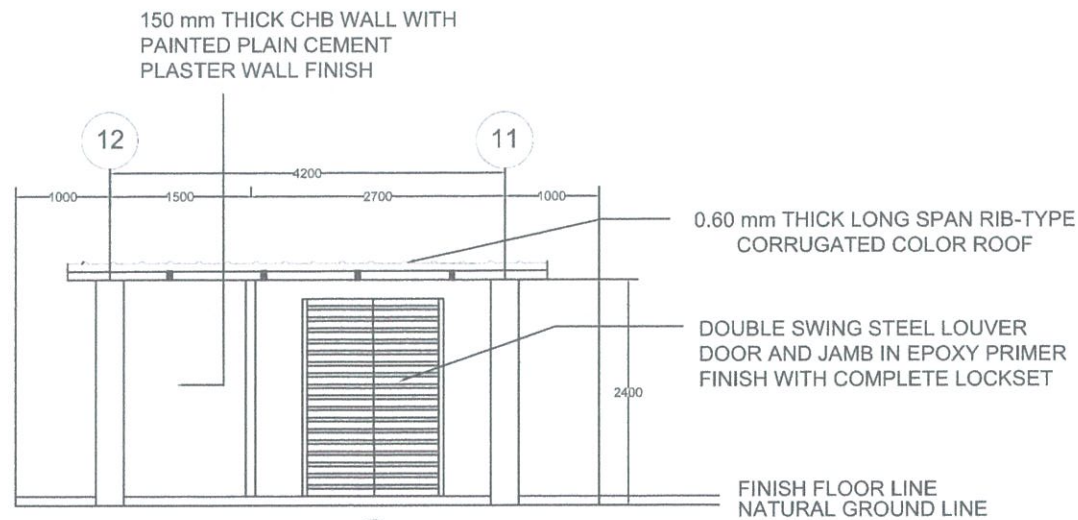
DANIEL ALFONSO N. ATAYDE
ASSISTANT SECRETARY
OFFICE OF THE ASSISTANT SECRETARY FOR LOGISTICS

SHEET CONTENT
FLOOR PLAN

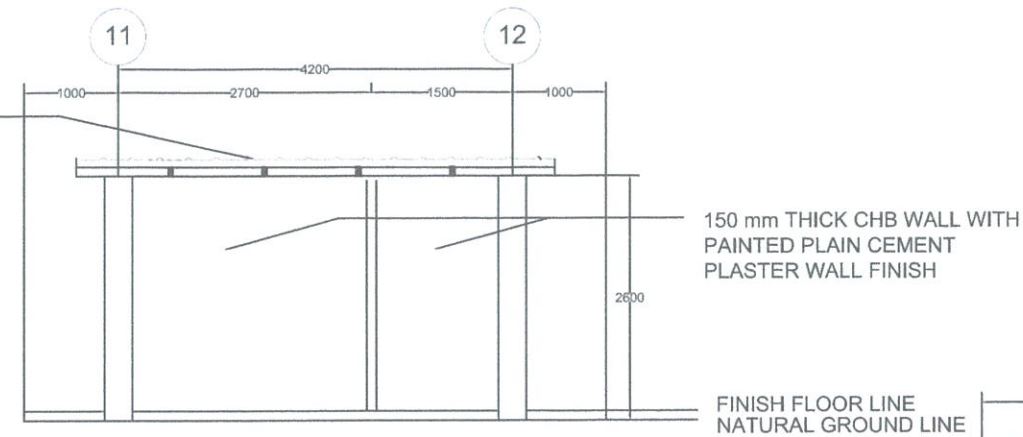
SHEET NO.
4/17



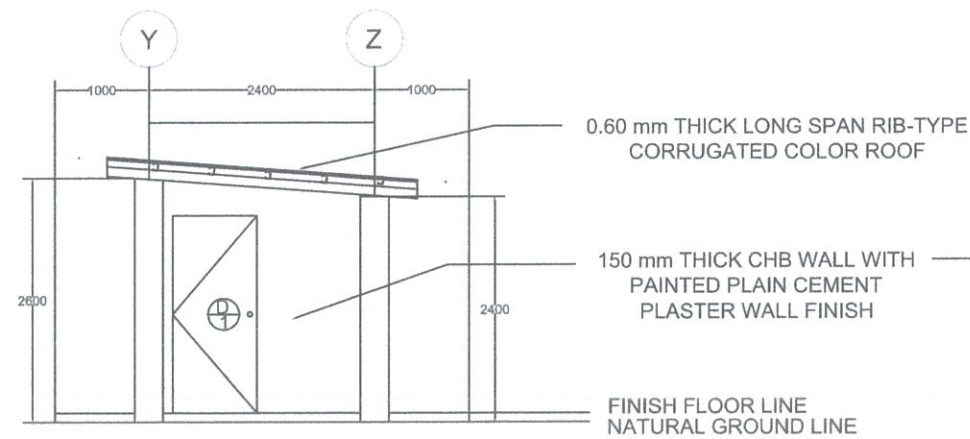
	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF AGRICULTURE BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING	PROJECT TITLE	PREPARED BY:	REVIEWED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
	OF-EPDSD-00P07-44 REV 00 APPROVED 26, 2014	PROPOSED COLD STORAGE EXPANSION PROJECT	 ENGR. MARK LESTER L. NATIVIDAD ENGINEER II ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION	 ENGR. ROMEL A. CABALLERO ENGINEER III ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION	 ENGR. ALLAN C. GOLENG ENGINEER IV ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION	 BALDWIN G. JALORUNA, Ph.D. DIRECTOR IV BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING	 DANIEL ALFONSO N. ATAYDE ASSISTANT SECRETARY OFFICE OF THE ASSISTANT SECRETARY FOR LOGISTICS	SECTIONS & ELEVATIONS 5/17



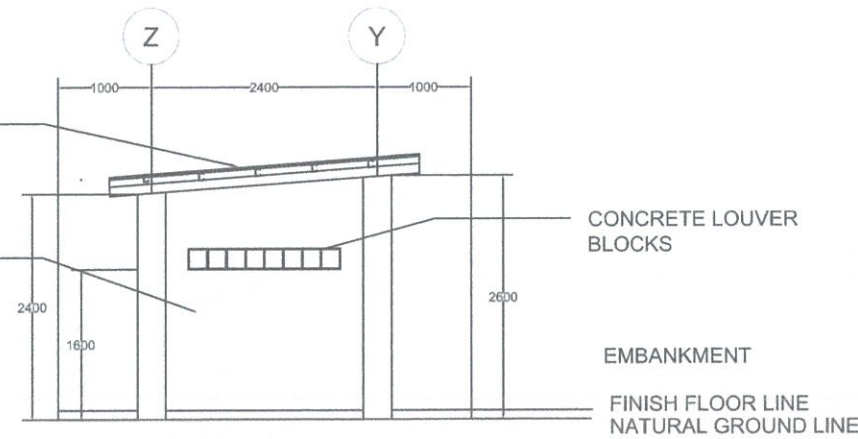
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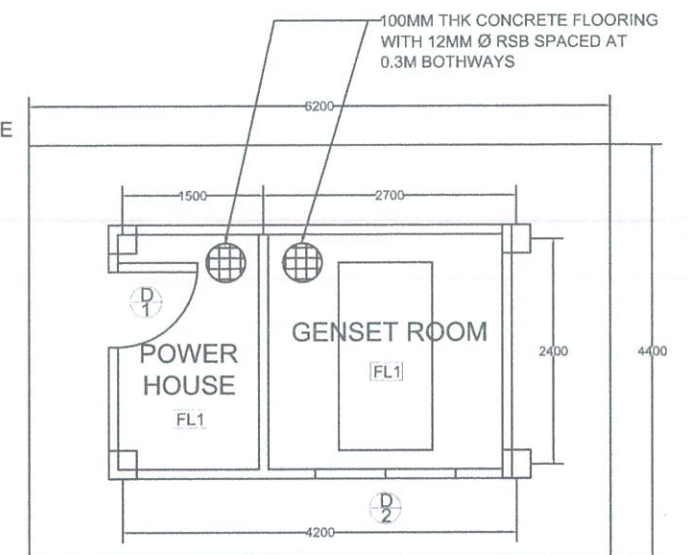
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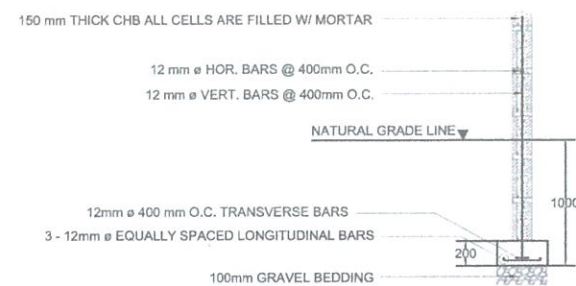
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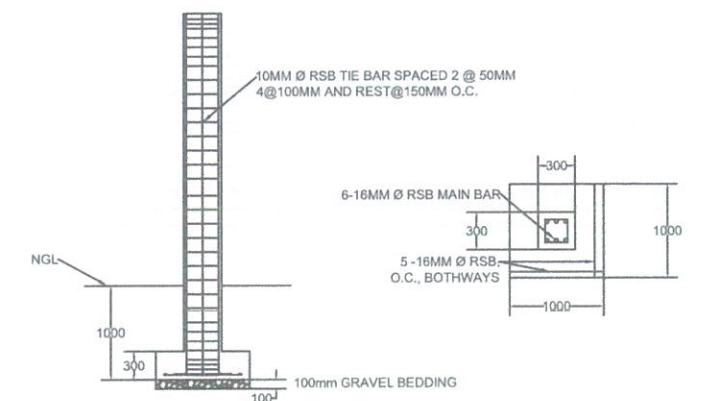
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FLOOR PLAN
NOT TO SCALE

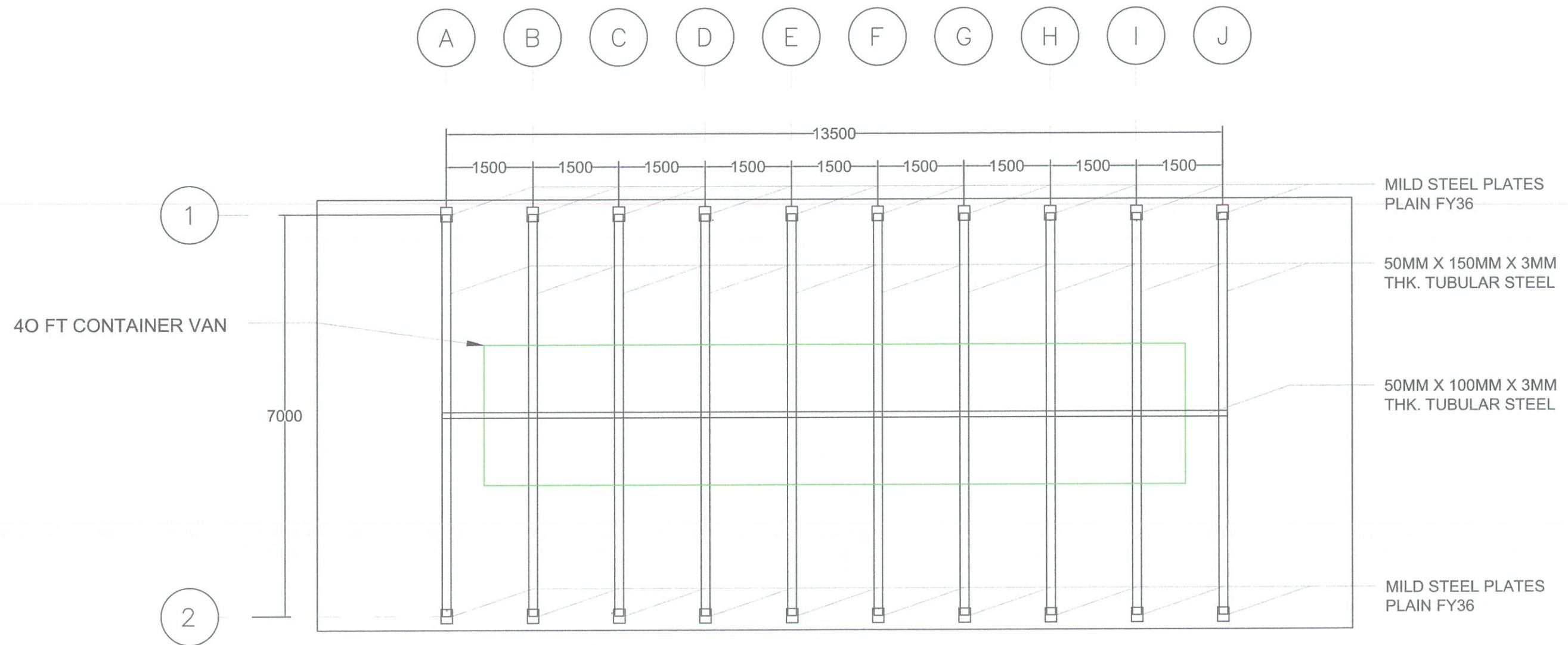


DETAILS OF CHB AND WALL FOOTING
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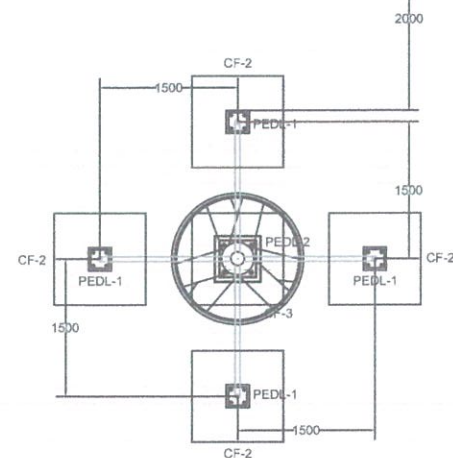
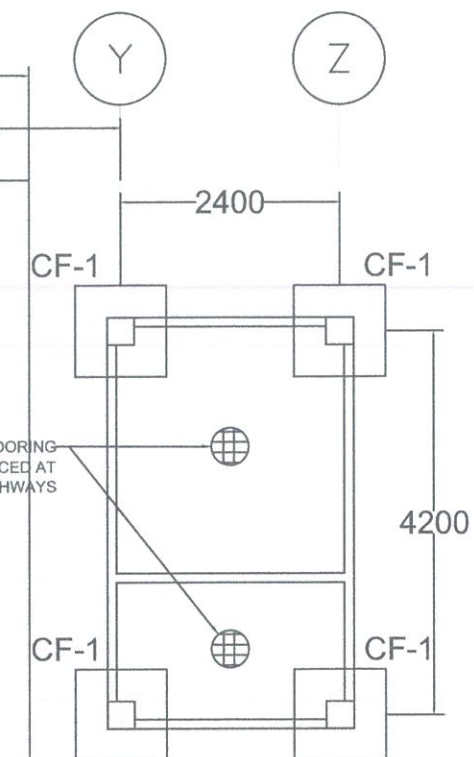
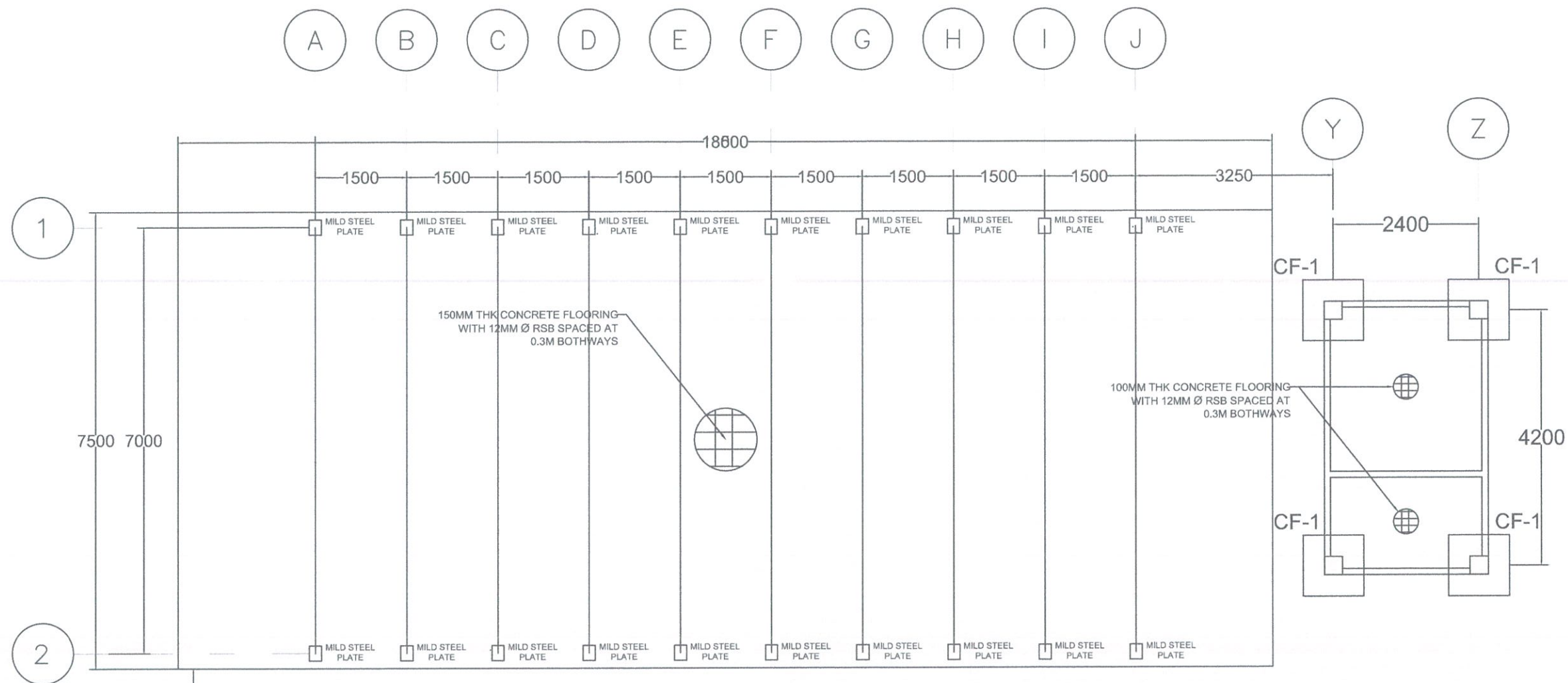


DETAILS OF CF-1
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	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF AGRICULTURE BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING</p> <p>OF-EP260-00P17-04 REV 00 AUGUST 26, 2004</p>	<p>PROJECT TITLE</p> <p>PROPOSED COLD STORAGE EXPANSION PROJECT</p>	<p>PREPARED BY:</p> <p>ENGR. MARK LESTER L. NATIVIDAD ENGINEER II ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION</p>	<p>REVIEWED BY:</p> <p>ENGR. ROMEL A. CABALLERO ENGINEER III ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION</p>	<p>RECOMMENDING APPROVAL:</p> <p>ENGR. ALLAN C. GOLENG ENGINEER IV ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION</p>	<p>APPROVED BY:</p> <p>BALDWIN S. JALLORINA, Ph.D. DIRECTOR IV BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING</p> <p>DANIEL ALFONSO N. ATAYDE ASSISTANT SECRETARY OFFICE OF THE ASSISTANT SECRETARY FOR LOGISTICS</p>	<p>SHEET CONTENT</p> <p>POWER HOUSE & GENSET ROOM DETAILS</p>	<p>SHEET NO.</p> <p>6/17</p>
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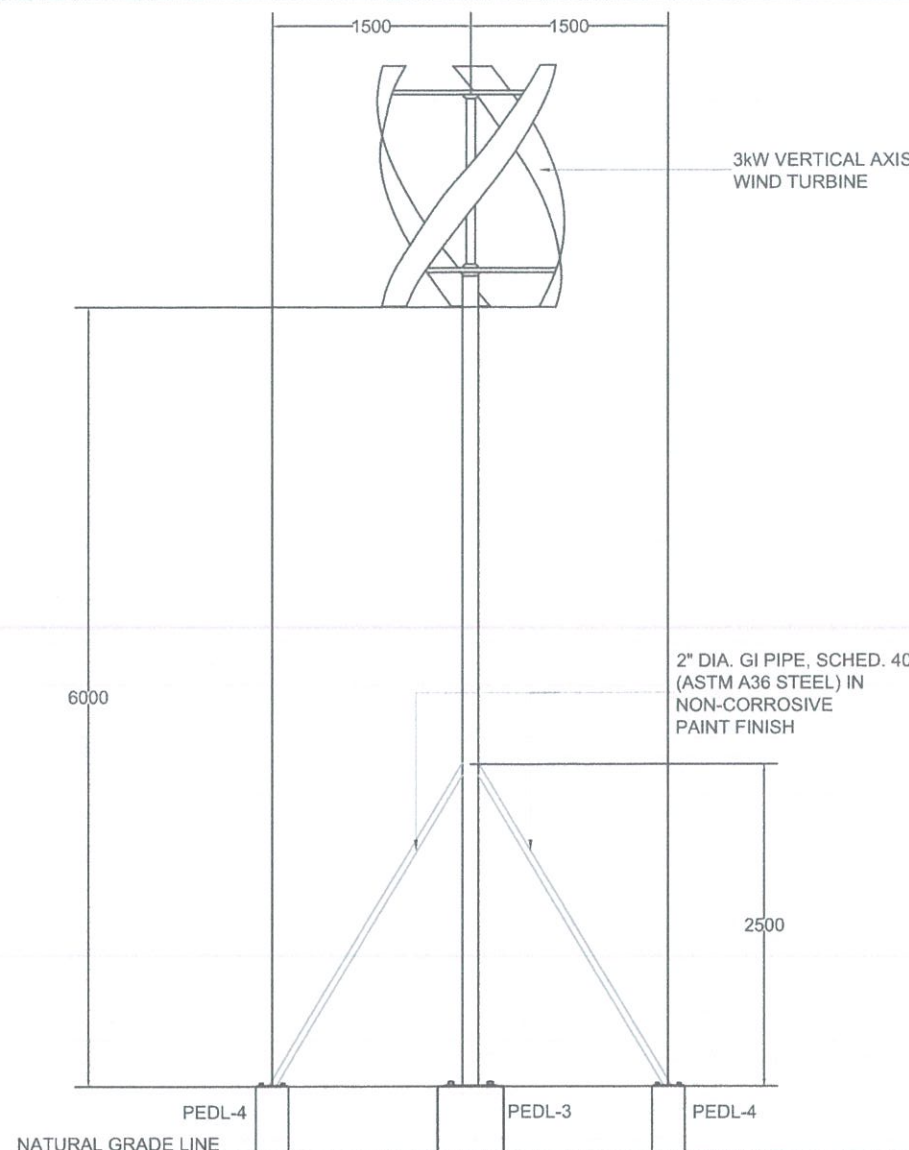


 **FRAMING PLAN OF SOLAR PANEL**
NOT TO SCALE

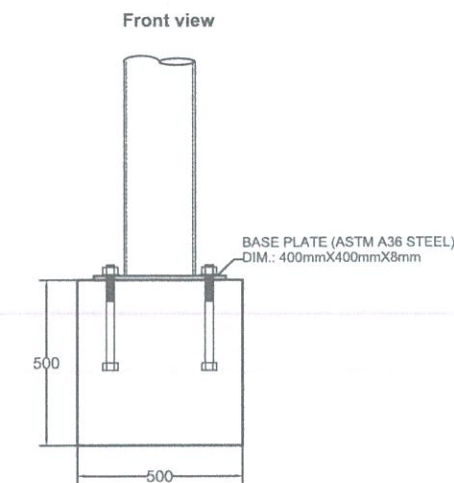
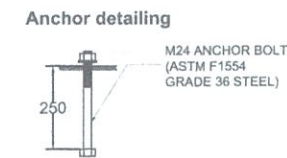
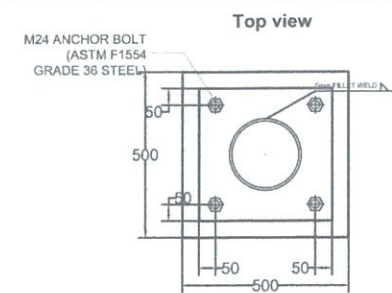
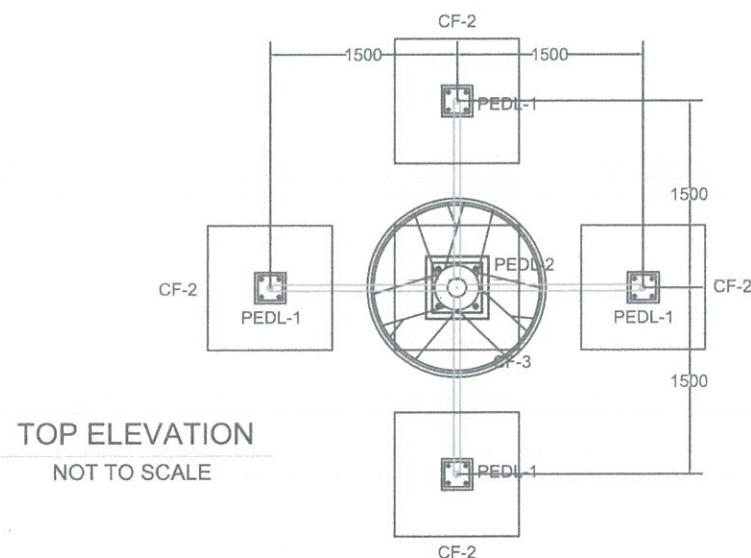


FOUNDATION PLAN
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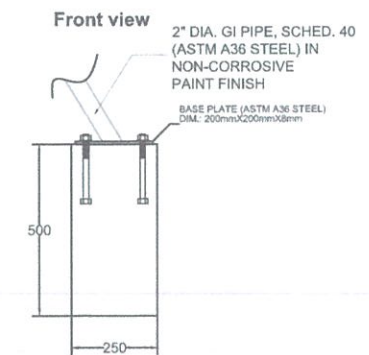
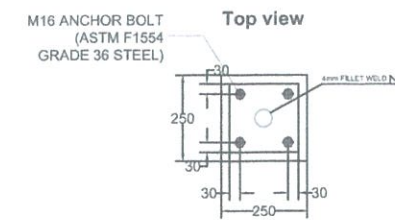
	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF AGRICULTURE BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING</p>	<p>PROJECT TITLE PROPOSED COLD STORAGE EXPANSION PROJECT</p>	<p>PREPARED BY: ENGR. MARK LESTER L. NATIVIDAD ENGINEER II ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION</p>	<p>REVIEWED BY: ENGR. ROMEL A. CABALLERO ENGINEER III ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION</p>	<p>RECOMMENDING APPROVAL: ENGR. ALLAN C. GOLENG ENGINEER IV ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION</p>	<p>APPROVED BY: BALDWIN G. JALLORINA, Ph.D. DIRECTOR IV BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING</p>	<p>DANIEL J. BONSONO N. ATAYDE ASSISTANT SECRETARY OFFICE OF THE ASSISTANT SECRETARY FOR LOGISTICS</p>	<p>SHEET CONTENT FOUNDATION PLAN</p>	<p>SHEET NO. 9/17</p>
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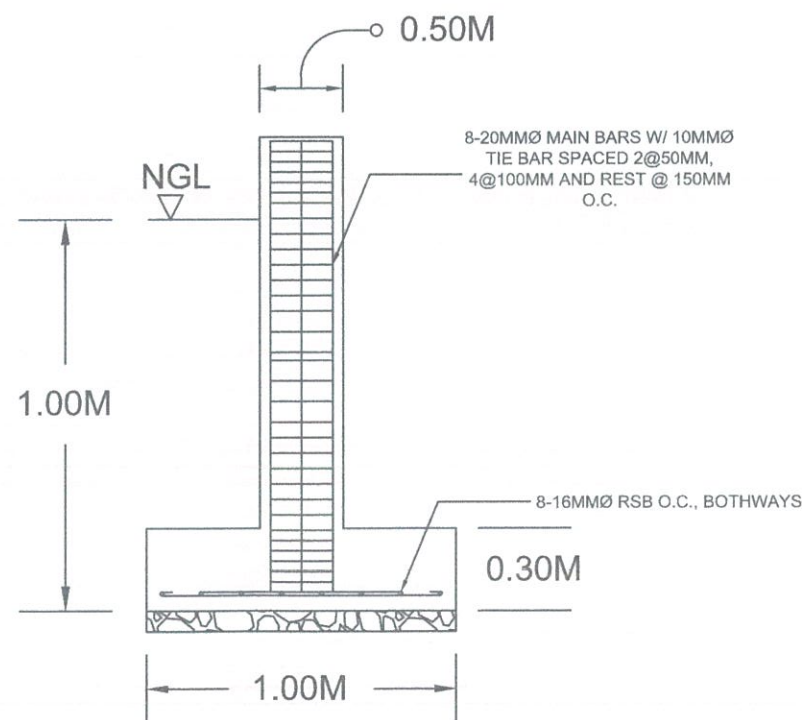
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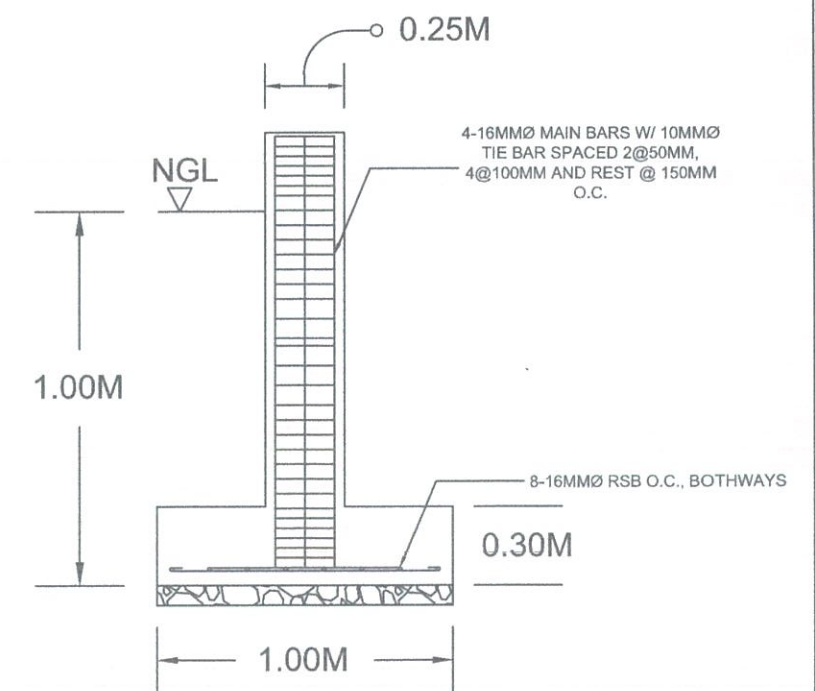
DETAILS OF PEDL-2
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DETAILS OF PEDL-1
NOT TO SCALE



DETAILS OF CF-3
NOT TO SCALE



DETAILS OF CF-2
NOT TO SCALE



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING

OF-EP250-00P17-04
REV 05
AUGUST 28, 2024

PROJECT TITLE
PROPOSED COLD STORAGE
EXPANSION PROJECT

PREPARED BY:
ENGR. MARK LESTER L. NATIVIDAD
ENGINEER II
ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION

REVIEWED BY:
ENGR. ROMEL A. CABALLERO
ENGINEER III
ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION

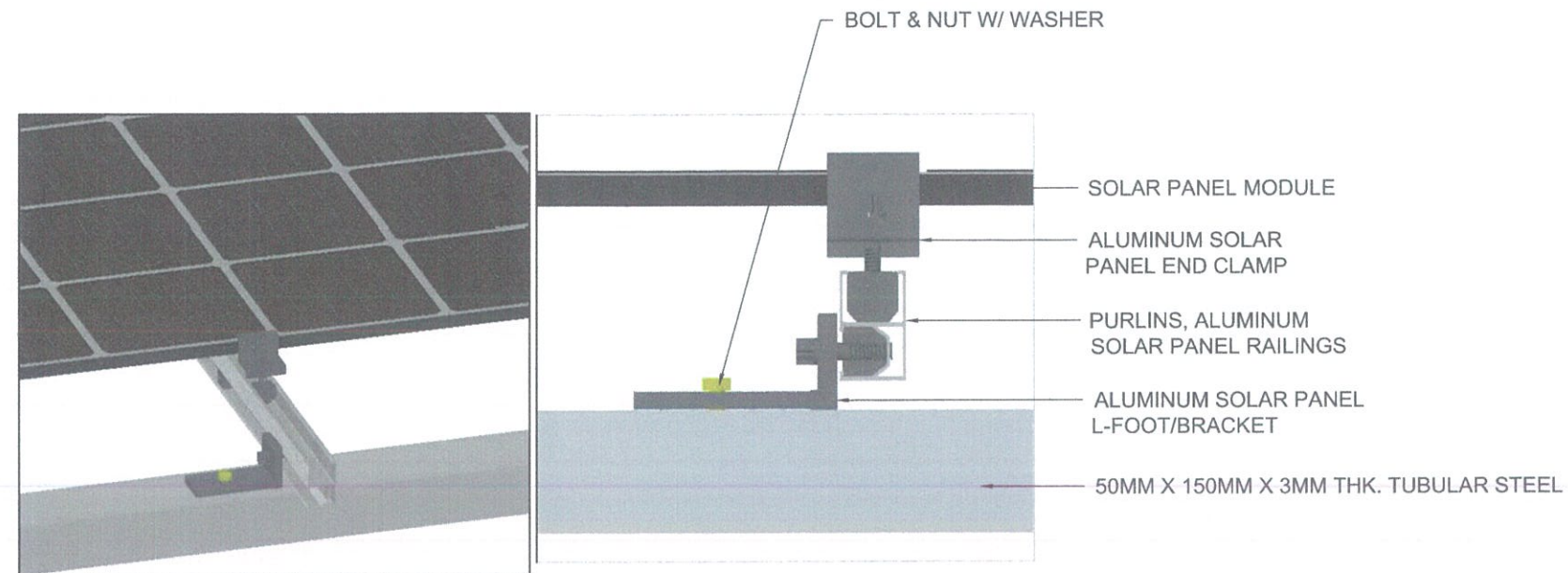
RECOMMENDING APPROVAL:
ENGR. ALZAN Q. GOJENG
ENGINEER IV
ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION

APPROVED BY:
BALDWIN G. JACORINA, Ph.D.
DIRECTOR IV
BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING

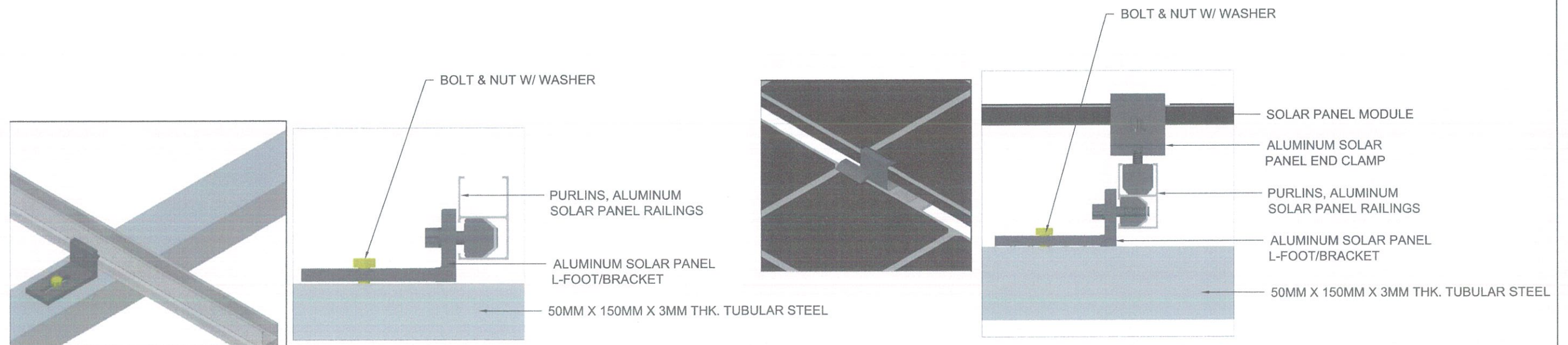
DANIEL ALONSO N. ATAYDE
ASSISTANT SECRETARY
OFFICE OF THE ASSISTANT SECRETARY FOR LOGISTICS

SHEET CONTENT
DETAILS OF VERTICAL AXIS
WIND TURBINE

SHEET NO.
10/17




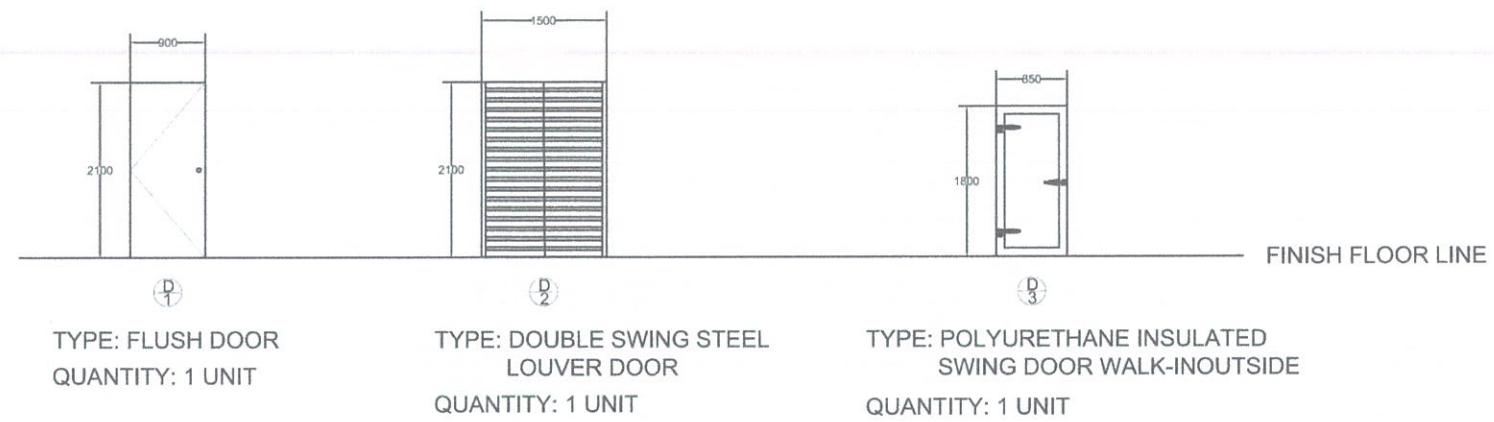
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 **CONNECTION BETWEEN TUBULAR AND RAILINGS**
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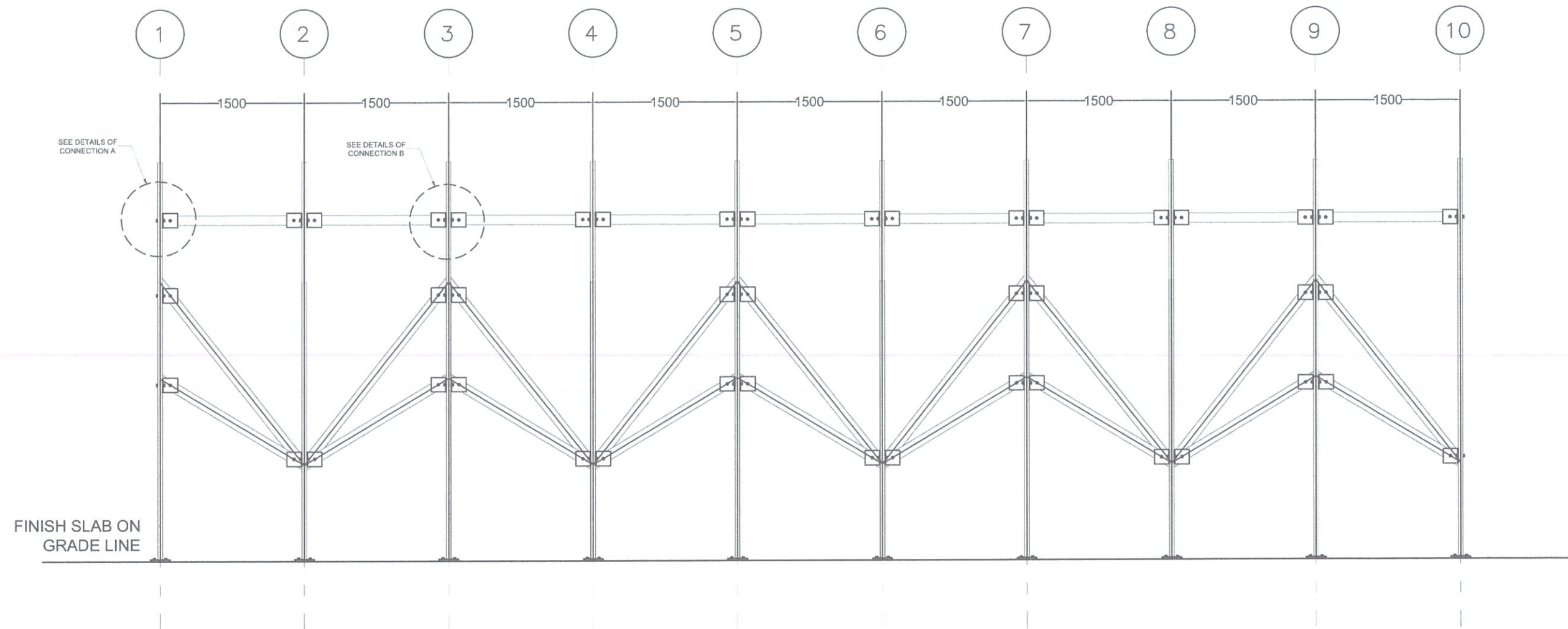
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NOT TO SCALE

	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF AGRICULTURE BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING</p>	<p>PROJECT TITLE</p> <p>PROPOSED COLD STORAGE EXPANSION PROJECT</p>	<p>PREPARED BY:</p> <p><i>Mark Lester L. Natividad</i> ENGR. MARK LESTER L. NATIVIDAD ENGINEER II ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION</p>	<p>REVIEWED BY:</p> <p><i>Rommel A. Caballero</i> ENGR. ROMEL A. CABALLERO ENGINEER III ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION</p>	<p>RECOMMENDING APPROVAL:</p> <p><i>Allan C. Goleng</i> ENGR. ALLAN C. GOLENG ENGINEER IV ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION</p>	<p>APPROVED BY:</p> <p><i>Baldwin G. Jallorina</i> BALDWIN G. JALLORNA, Ph.D. DIRECTOR IV BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING</p>	<p><i>Daniel Alfonso N. Atayde</i> DANIEL ALFONSO N. ATAYDE ASSISTANT SECRETARY OFFICE OF THE ASSISTANT SECRETARY FOR LOGISTICS</p>	<p>SHEET CONTENT</p> <p>CLAMP CONNECTION DETAILS</p>	<p>SHEET NO.</p> <p>11/17</p>
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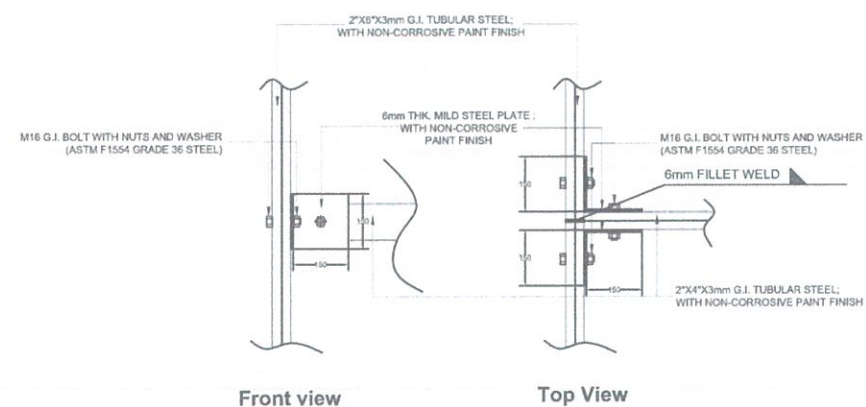
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	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF AGRICULTURE BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING	PROJECT TITLE	PREPARED BY:	REVIEWED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
	QF-EPD06-QDP07-04 REV 01 AUGUST 28, 2024	PROPOSED COLD STORAGE EXPANSION PROJECT	 ENGR. MARK LESTER L. NATIVIDAD	 ENGR. ROMEL A. CABALLERO	 ENGR. ALLAN C. GOLENG	 BALDWIN G. JALLORINA, Ph.D.	 DANIEL PONSO N. ATAYDE	SCHEDULE OF DOORS 12/17
			ENGINEER II ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION	ENGINEER III ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION	ENGINEER IV ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION	DIRECTOR IV BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING		

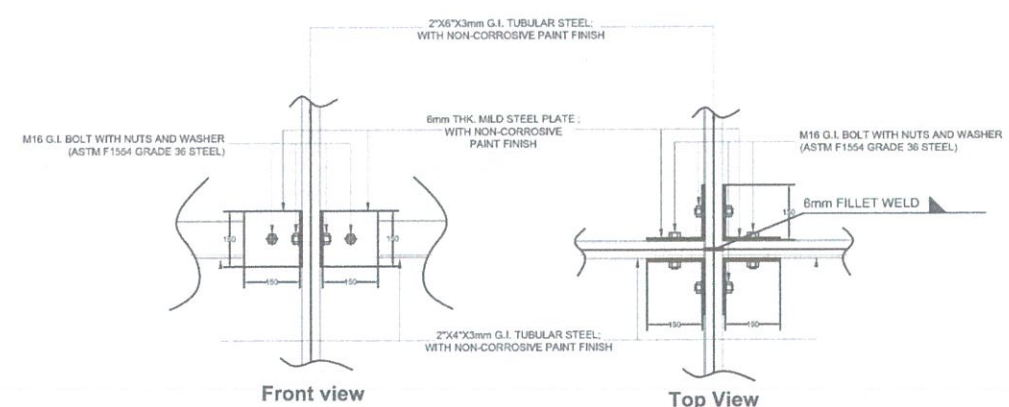


FRONT ELEVATION OF SOLAR MOUNTING STRUCTURE

NOT TO SCALE



DETAILS OF CONNECTION A
NOT TO SCALE



DETAILS OF CONNECTION B
NOT TO SCALE



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING

DE-EP050-Q0P07-04
REV 00
AUGUST 28, 2024

PROJECT TITLE
**PROPOSED COLD STORAGE
EXPANSION PROJECT**

PREPARED BY:
ENGR. MARK LESTER L. NATIVIDAD
ENGINEER II
ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION

REVIEWED BY:
ENGR. ROMEL A. CABALLERO
ENGINEER III
ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION

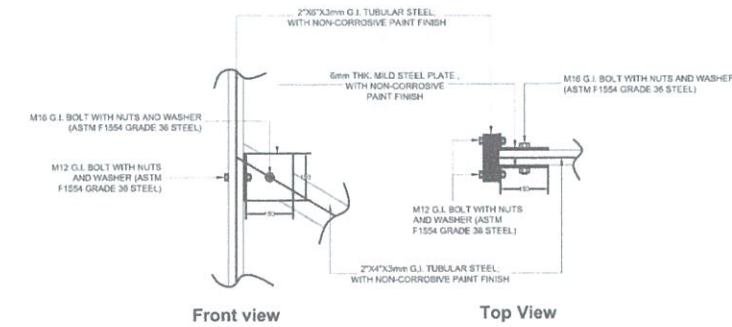
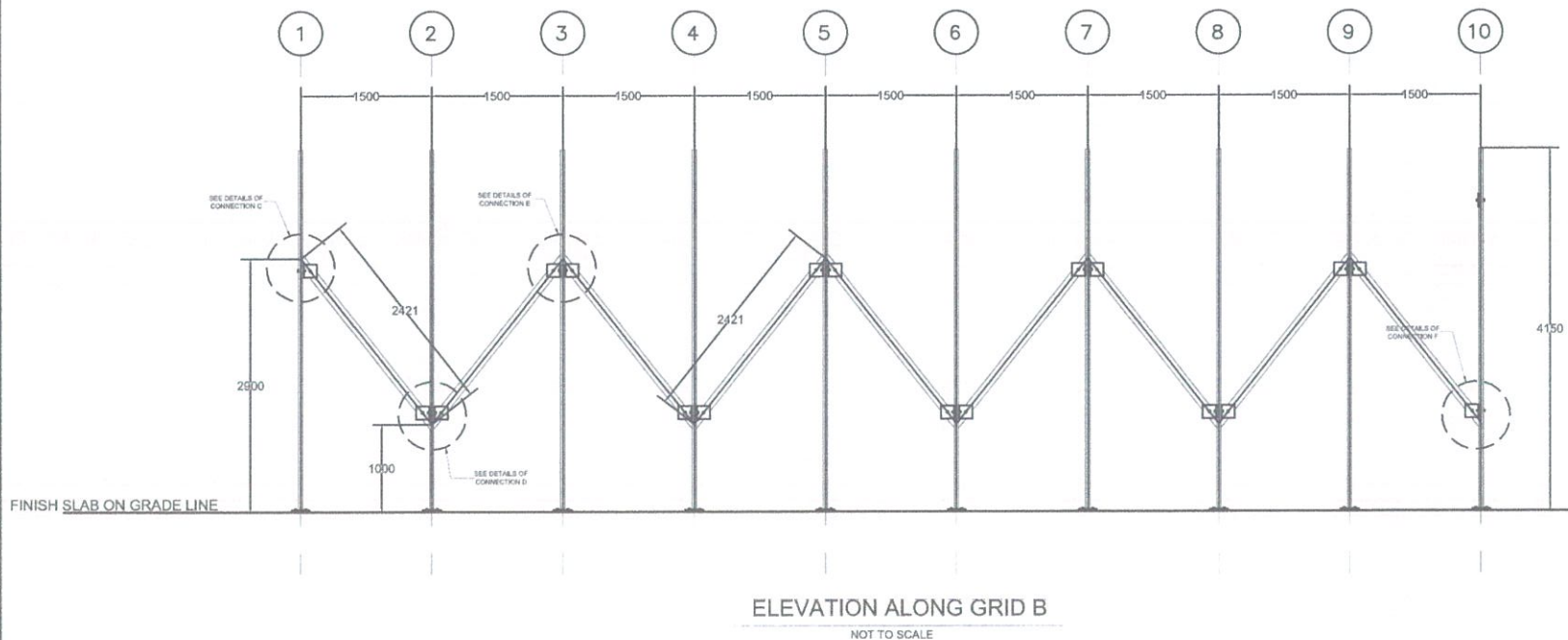
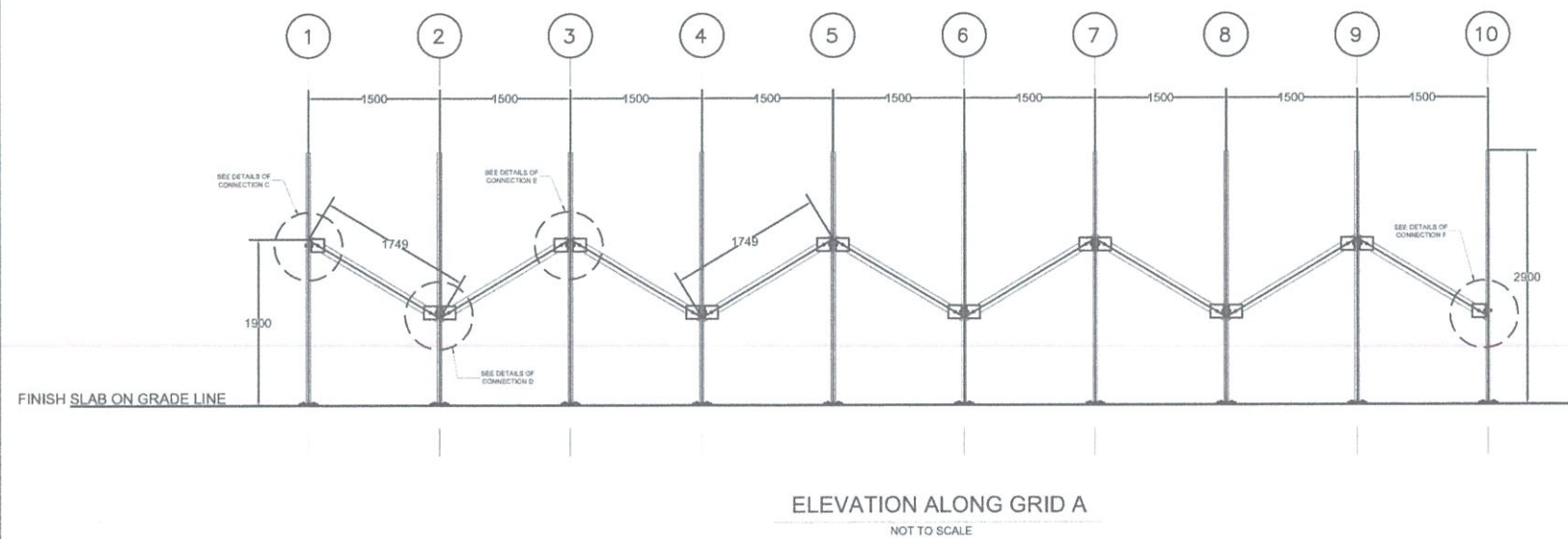
RECOMMENDING APPROVAL:
ENGR. ALLAN C. COLENG
ENGINEER IV
ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION

APPROVED BY:
BALDWIN G. JAILORINA, Ph.D.
DIRECTOR IV
BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING

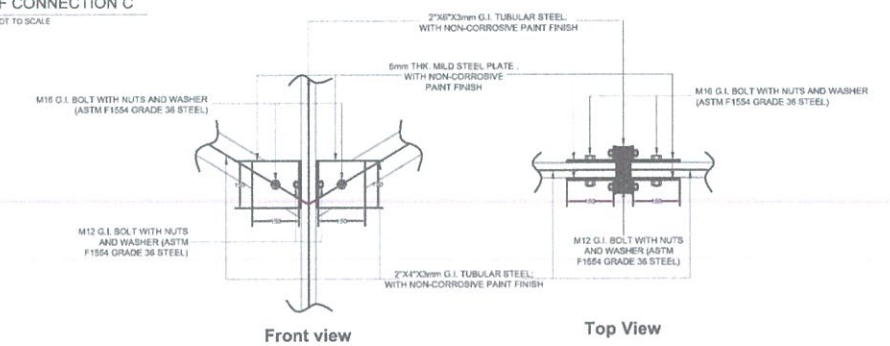
DANIEL REYONSO N. ATAYDE
ASSISTANT SECRETARY
OFFICE OF THE ASSISTANT SECRETARY FOR LOGISTICS

SHEET CONTENT
**FRONT ELEVATION OF SOLAR
MOUNTING STRUCTURE
CONNECTION A-B**

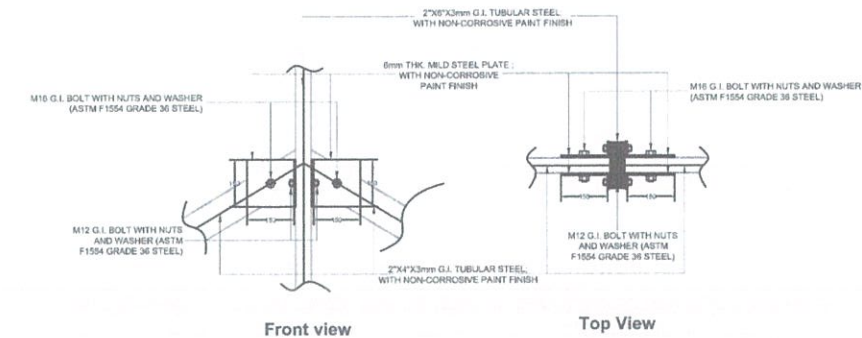
SHEET NO.
13/17



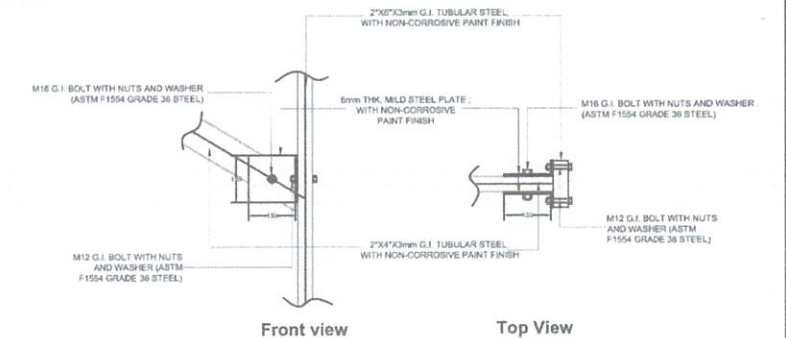
DETAILS OF CONNECTION C
NOT TO SCALE



DETAILS OF CONNECTION D
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DETAILS OF CONNECTION E
NOT TO SCALE



DETAILS OF CONNECTION F
NOT TO SCALE



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING

OF-EPD-0097-04
REV 04
AUGUST 26, 2014

PROJECT TITLE
PROPOSED COLD STORAGE
EXPANSION PROJECT

PREPARED BY:
ENGR. MARK LESTER L. NATIVIDAD
ENGINEER II
ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION

REVIEWED BY:
ENGR. ROMEL A. CABALLERO
ENGINEER III
ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION

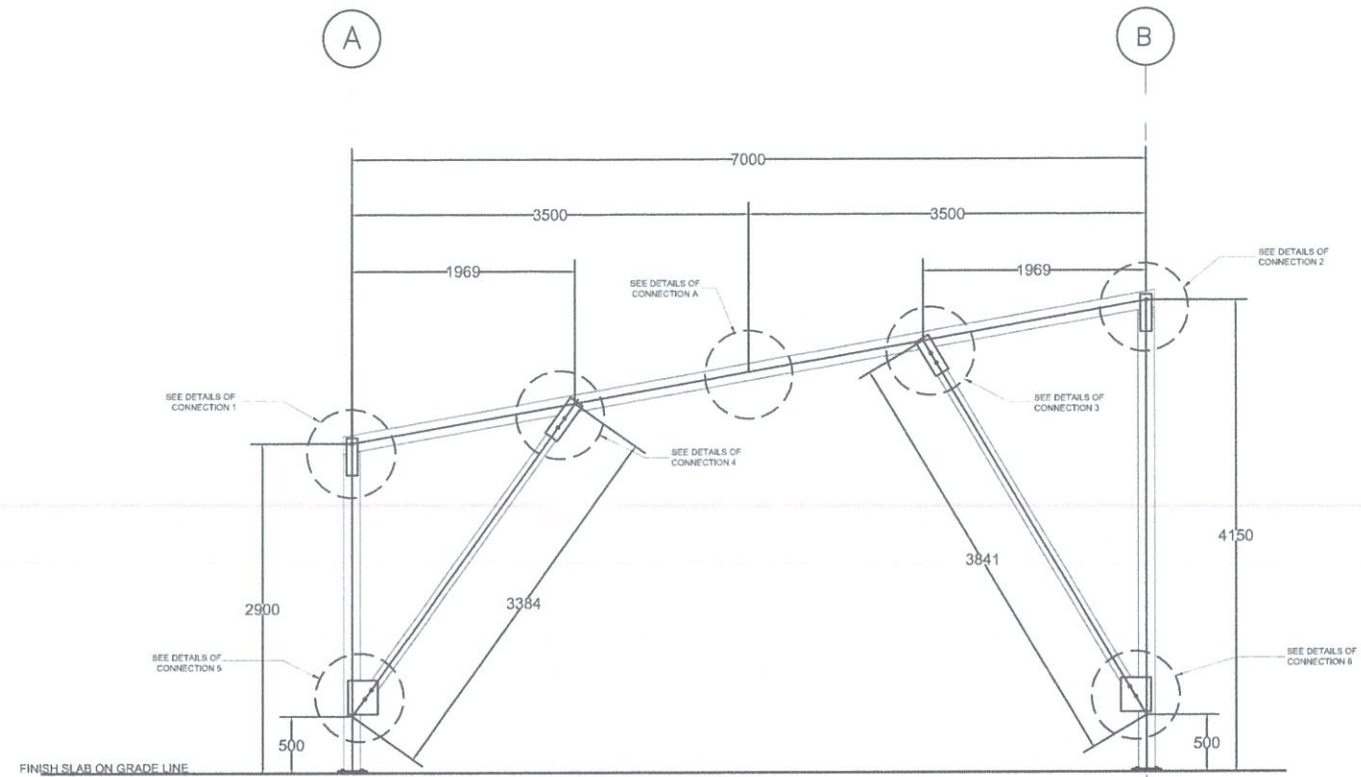
RECOMMENDING APPROVAL:
ENGR. ALLAN C. GOLENG
ENGINEER IV
ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION

APPROVED BY:
BALDWIN G. J. LORINA, Ph.D.
DIRECTOR
BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING

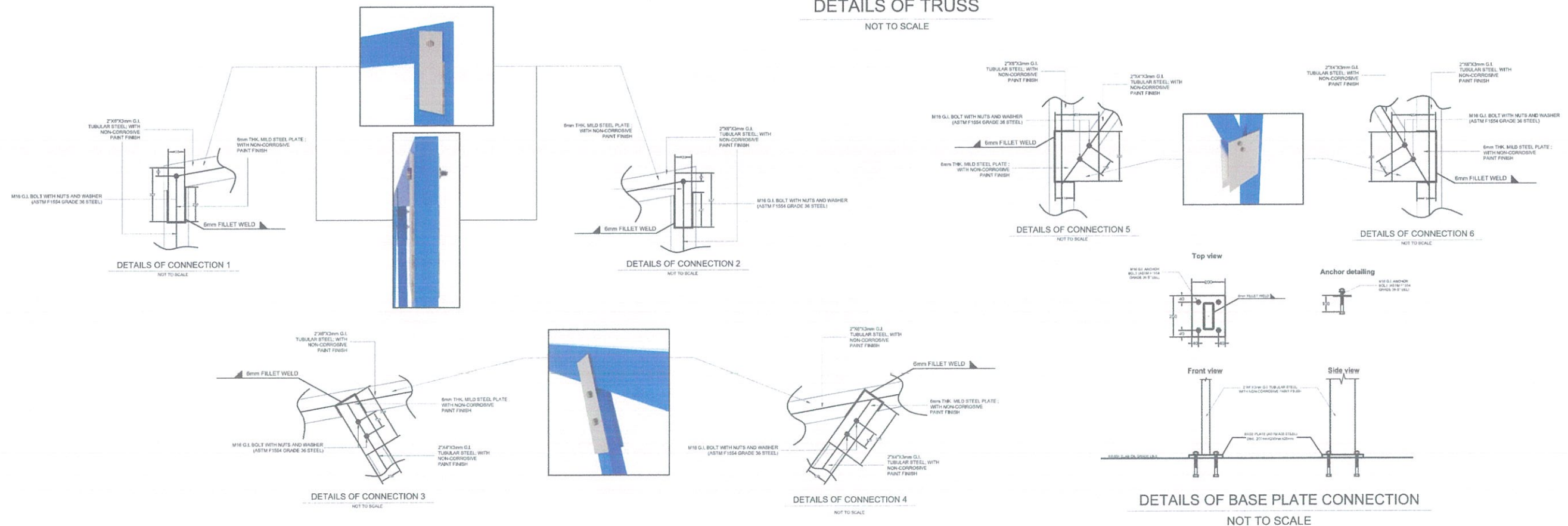
DANIEL ALONSO N. ATAYDE
ASSISTANT SECRETARY
OFFICE OF THE ASSISTANT SECRETARY FOR LOGISTICS

SHEET CONTENT
ELEVATION ALONG GRID A & B
CONNECTION C-D-E-F

SHEET NO.
14/17

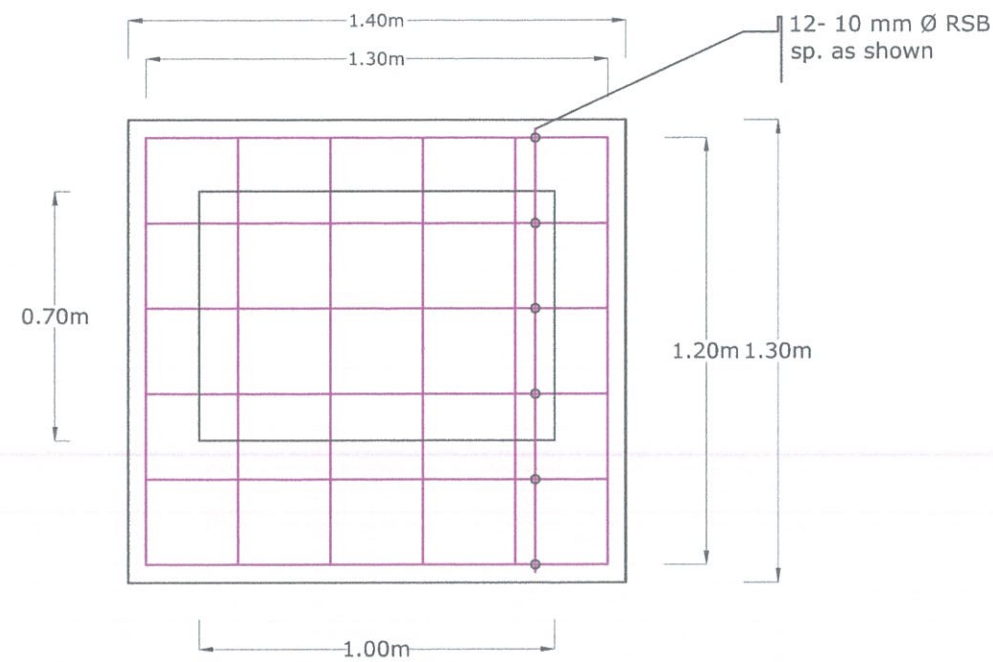


DETAILS OF TRUSS
NOT TO SCALE



DETAILS OF BASE PLATE CONNECTION
NOT TO SCALE

	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF AGRICULTURE BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING</p> <p>OF-SP560-COP13-04 REV 06 AUGUST 26, 2024</p>	<p>PROJECT TITLE</p> <p>PROPOSED COLD STORAGE EXPANSION PROJECT</p>	<p>PREPARED BY:</p> <p><i>Mark Lester L. Natividad</i> ENGR. MARK LESTER L. NATIVIDAD ENGINEER II ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION</p>	<p>REVIEWED BY:</p> <p><i>Rommel A. Caballero</i> ENGR. ROMEL A. CABALLERO ENGINEER III ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION</p>	<p>RECOMMENDING APPROVAL:</p> <p><i>Allan C. Coleng</i> ENGR. ALLAN C. COLENG ENGINEER IV ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION</p>	<p>APPROVED BY:</p> <p><i>Baldwin G. Jalorina, Ph.D.</i> BALDWIN G. JALORINA, Ph.D. DIRECTOR IV BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING</p>	<p><i>Daniel Alfonso N. Atayde</i> DANIEL ALFONSO N. ATAYDE ASSISTANT SECRETARY OFFICE OF THE ASSISTANT SECRETARY FOR LOGISTICS</p>	<p>SHEET CONTENT</p> <p>DETAILS OF TRUSS CONNECTION 1-6 BASE PLATE CONNECTION</p>	<p>SHEET NO.</p> <p>15/17</p>
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Matting Plan

DA LOGO

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF AGRICULTURE
REGIONAL FIELD OFFICE (NO.)
(ADDRESS)

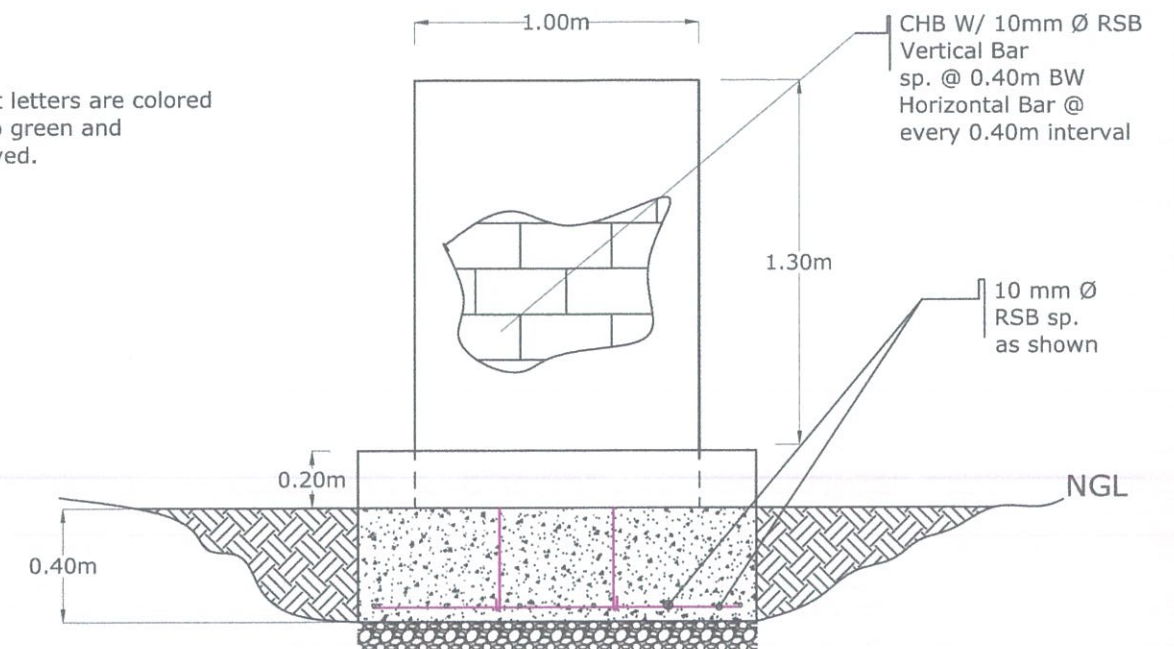
PROJECT TITLE : _____
PROJECT LOCATION: _____
PROPOSER: _____
SECTOR: RICE PROGRAM
CY _____

BROG. CHAIRMAN / IA PRES. / FA Pres.

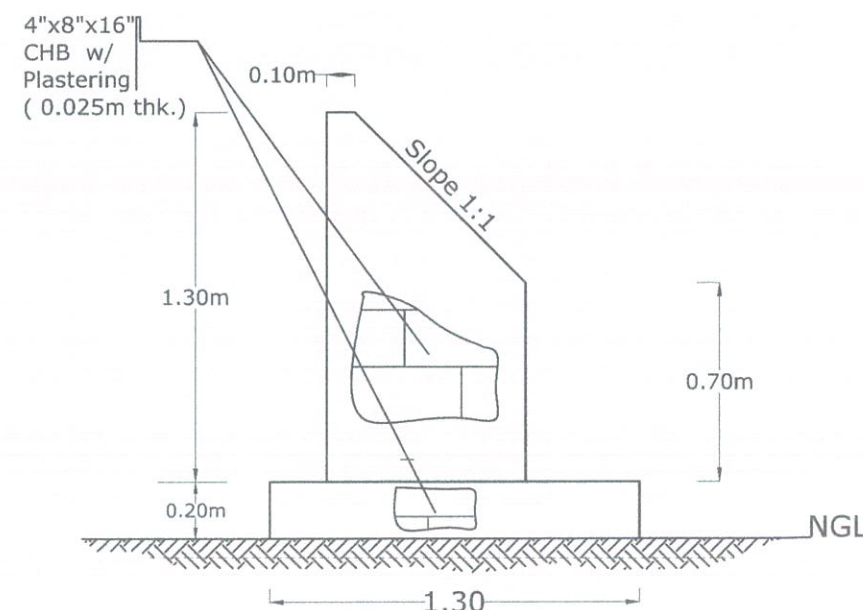
(NAME) Sec. FRANCISCO P. TIU LAUREL, JR.
Regional Executive Director Secretary, Department of Agriculture

H.E. FERDINAND R. MARCOS, JR.
President, Republic of the Philippines

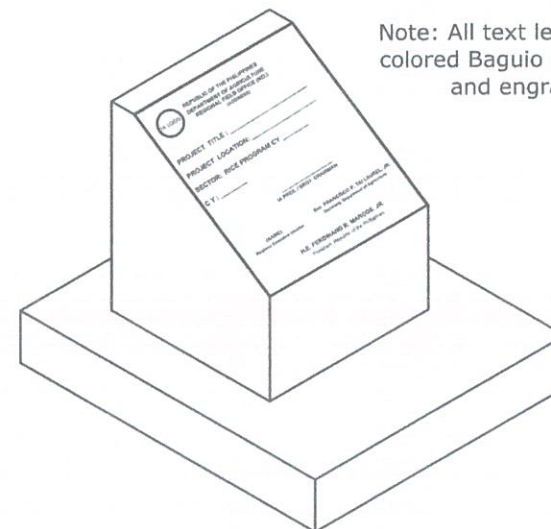
Note: All text letters are colored
Baguio green and
engraved.



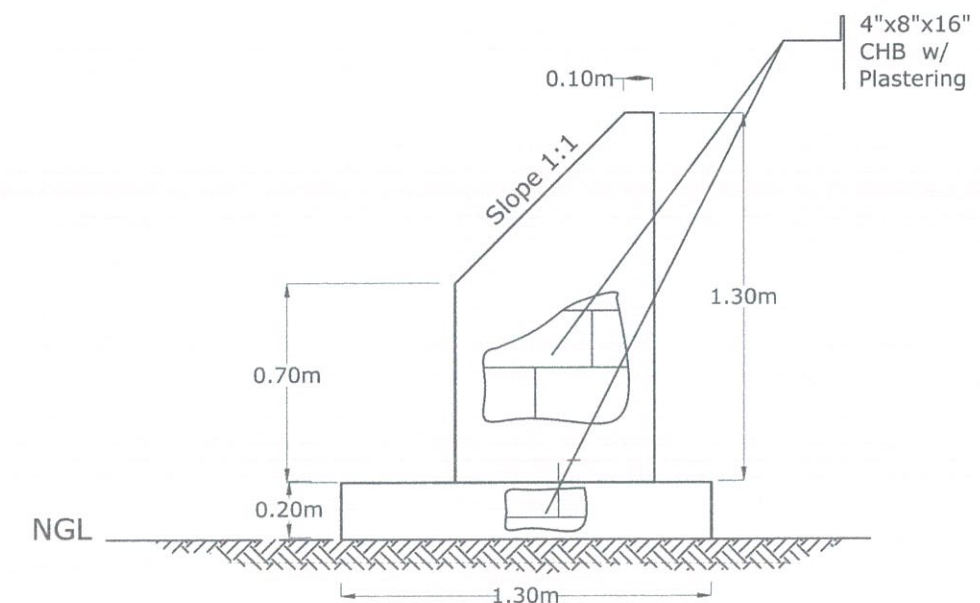
FRONT SIDE VIEW W/ Footing Section



Left Side View



Isometric View



Right Side View

PLAN AND ISOMETRIC VIEWS OF CONCRETE SIGNAGE

NOT TO SCALE



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING

QF-SP200-Q0P01-04
REV 08
AUGUST 28, 2024

PROJECT TITLE
**PROPOSED COLD STORAGE
EXPANSION PROJECT**

PREPARED BY:
ENGR. MARK LESTER L. NATIVIDAD
ENGINEER II
ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION

REVIEWED BY:
ENGR. ROMEL A. CABALLERO
ENGINEER III
ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION


RECOMMENDING APPROVAL:
ENGR. ALLAN C. COLENG
ENGINEER IV
ENGINEERING PLANS DESIGNS AND SPECIFICATIONS DIVISION

APPROVED BY:
BALDWIN G. JALLORNA, Ph.D.
DIRECTOR IV
BUREAU OF AGRICULTURAL AND FISHERIES ENGINEERING

DANIEL DEFONSO N. ATAYDE
ASSISTANT SECRETARY
OFFICE OF THE ASSISTANT SECRETARY FOR LOGISTICS

SHEET CONTENT
**PROJECT CONCRETE
SIGNAGE**

SHEET NO.
16/17



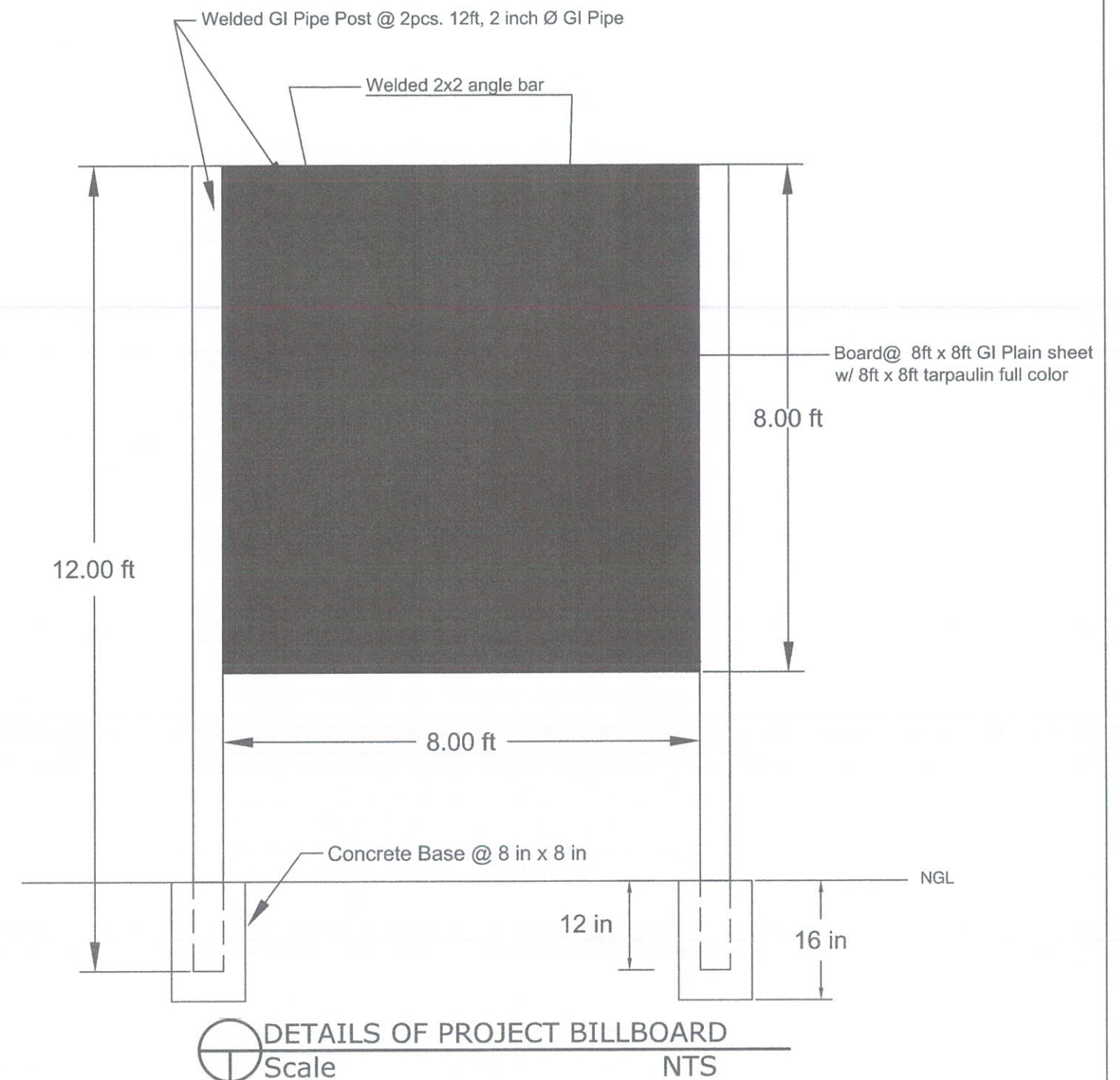
DEPARTMENT OF AGRICULTURE
REGIONAL FIELD OFFICE (NO.)
(ADDRESS)

Project Name: _____
 Location: _____
 Cost: _____
 Fund Source/s: _____
 Implementing Agency/ies: _____
 Development Partner/s: _____
 Contractor/Supplier: _____
 Brief Description: _____

Project Details:

Project Date		Project Status		Remarks

FOR PARTICULAR COMPLAINTS ON THIS PROJECT PLEASE CONTACT THE REGIONAL OFFICE
 DEPARTMENT OF AGRICULTURE REGION (NO.)
 (ADDRESS)
 TEL. NO. (XXXX) & WEBSITE: www.(XXXX).da.gov.ph



DETAILS OF PROJECT TARPAULIN
Scale NTS

Technical Specifications

Instructions:

[Bidders must state here either “Comply” or “Not Comply” against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment/goods offered. Statements of “Comply” or “Not Comply” must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer’s un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate.

The Technical Specification must be supported with the following:

- Brochures of major components with details of brand name, model and technical specifications;

A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidder's statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the applicable laws and issuances.

Item	Specification	Statement of Compliance
SPL 2	Cooling System (Condensing Unit, Unit Cooler, Temperature Control and Monitoring System, and Duct Pipe Networks) 1 Set	
	- Condensing Unit (5.54kW min.), Compressor (3kW min.), Evaporating Unit Cooler (3kW min.) with temperature control and monitoring system (Chilling Temperature: +1°C to +10°C);	
	- Refrigerant: R404a or its equivalent;	
	- Complete with insulated duct pipes and connection;	
	- Complete with Electrical Wiring and Connection	
SPL 3	Solar Power System 1 Set	
	A. SOLAR PV MODULE:	
	- The Solar PV module shall have a minimum of 700Watt-peak/panel;	
	- monocrystalline;	
	- with aluminum frame;	
	- with full cells;	
	- with mounting structure and support;	
	- with complete accessories	
	B. SOLAR INVERTER:	
	- Output Power Capacity: 15kW minimum	
	- Built-in maximum power point tracking (MPPT);	
	- with minimum Input DC Voltage of 180V;	
	- with minimum Output AC Voltage of 200V;	
	- shall be AC Compatible;	
	- with Over-Voltage and Under-Voltage Protection;	
	- with Over-Current and Under-Current Protection;	
	- Electrical connections shall be provided with Combiner box and Circuit Breakers;	
	- Mounting Structure (Aluminum Railings and clamps);	
	- with complete accessories.	
SPL 4	Battery System 1 Set	
	A. BATTERY:	
	- Total Output Power Capacity: At least 160kWh capacity with minimum battery voltage of 36V;	
	- Battery life cycle: At least 3,000 cycles;	

	- Battery type: Lithium Ion;	
	- Compatible with Solar and Wind Energy;	
	- Complete with electrical wiring and connections;	
	- With Battery Rack System/Mounting Structure;	
	B. CHARGE CONTROLLER:	
	- Minimum Input PV Voltage of 36V;	
	- Minimum Input PV Power of 3000 W.	
SPL 5	Wind Power System 1 Set	
	A. WIND TURBINE GENERATOR:	
	- Rated Power: at least 3 kW, 3-Phase (vertical axis, glass fiber blade)	
	- Start-up Wind Speed: at least 3m/s	
	- Rated Wind Speed: at least 315km/s	
	- Inclusive of tower/post (at least 6m high)	
	- Inclusive with wind turbine MPPT controller/inverter (with over- and under-load protection);	
	- AC Compatible MPPT Controller/Inverter;	
	- Complete with Accessories, Electrical and Wiring Connection.	
1102 (16)	Generator 1 Set	
	- Diesel Generator, Silent Type, at a minimum of 10kW compatible with the system	

DEPARTMENT OF AGRICULTURE-REGIONAL FIELD OFFICE 1

NAME OF PROCURING ENTITY _____

PROJECT REFERENCE NO.: _____

NAME OF PROJECT: _____

**STATEMENT OF ALL ON-GOING 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****CONTRACT TO BE BID:** _____**BUSINESS NAME:** _____**BUSINESS ADDRESS:** _____

Name of Contract/ Location Project Cost	a. Owner's Name b. Address c. Telephone Nos.	NATURE OF WORK	CONTRACTOR'S ROLE		a. Date Awarded b. Date Started c. Date Completion	% Accomplishment		Value of Outstanding Works
			Description	%		Planned	Actual	

Note: This statement shall be supported with:

1. Notice of Award and/or Contract
2. Notice to Proceed issued by the Owner

Submitted by:

Name of Representative of BidderPosition

Date: _____

DEPARTMENT OF AGRICULTURE-REGIONAL FIELD OFFICE 1
NAME OF PROCURING ENTITY

Project Reference No.: _____
Name of the Project: _____
Location of the Project: _____

Statement identifying the Bidder's Single Largest Completed Contract (SLCC) similar in nature

Contract to be Bid: _____
Business Name: _____
Business Address: _____

Name of Client	a. Owner's Name b. Address c. Telephone Nos.	Title of the Project in the Contract	Nature of Work	a. Date Awarded b. Contract Effectivity c. Date Completed	Contractor's Role (whether sole contractor, subcontractor, or partner in a JV)		a. Total Contract Value at Award b. Total Contract Value at Completion c. Contract Duration
					Description	%	
<u>Government</u>							
<u>Private</u>							

Note: This statement shall be supported with:

1. Notice of Award
2. Notice to Proceed
3. Contract
4. Owner's Certificate of Acceptance OR Constructors Performance Evaluation Summary (CPES) Rating

Submitted by : _____
(Printed Name and Signature)
Designation : _____
Date : _____

Bid Securing Declaration Form

[shall be submitted with the Bid if bidder opts to provide this form of bid security]

REPUBLIC OF THE PHILIPPINES)
CITY OF _____) S.S.

BID SECURING DECLARATION Project Identification No.: *[Insert number]*

To: **DEPARTMENT OF AGRICULTURE REGIONAL FIELD OFFICE 1
City of San Fernando, La Union**

I/We, the undersigned, declare that:

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

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

*[Insert NAME OF BIDDER OR ITS AUTHORIZED
REPRESENTATIVE*

[Insert signatory's legal capacity]

Affiant

[Jurat]

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

DEPARTMENT OF AGRICULTURE-REGIONAL FIELD OFFICE 1

NAME OF PROCURING ENTITY

Standard Form Number: SF-INFR-48

Revised on: August 11, 2004

Contract Reference No.: _____

Name of the Contract: _____

Location of the Contract: _____

(LIST) Qualification of Key Personnel Proposed to be Assigned to the Contract

Business Name: _____

Business Address: _____

		Project Manager/Engineer	Materials Engineer	Foreman	Construction Safety and Health Personnel	Other positions deemed required by the Applicant for the project
1	Name					
2	Address					
3	Date of Birth					
4	Employed since					
5	Experience					
6	Previous Employment					
7	Education					
8	PRC Licence					

Minimum Requirements : Project Manager/Engineer
: Materials Engineer
: Foreman
: Foreman

Note : Attached individual resume and PRC License of the (professional) personnel

Submitted by : _____
(Printed Name and Signature)

Designation : _____

Date : _____

One of the requirements from the bidder to be included in its Technical Envelope is a list of contractor's key personnel (viz, Project Manager, Project Engineers, Materials Engineers and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data (including the key personnel signed written commitment to work for the project once awarded the contract).

DEPARTMENT OF AGRICULTURE-REGIONAL FIELD OFFICE 1
NAME OF PROCURING ENTITY

Contract Reference Number
Name of the Contract
Location of the Contract

1. Name : _____
2. Name and Address of Owner : _____
3. Name and Address of the
Owner's Engineer
(Consultant) : _____
- 3-4. Indicate the Features of Project
(particulars of the project
Components and any other particular
Interest connected with the project): _____
5. Contract Amount Expressed in
Philippine currency : _____
6. Position : _____
7. Structures for which the employee
was responsible : _____
8. Assignment Period : from _____ (months)
: to _____ (months)

Name and Signature of Employee

It is hereby certified that the above personnel can be assigned to this project, if the contract is awarded to our company.

(Place and Date)

(The Authorized Representative)

One of the requirements from the bidder to be included in its Technical Envelope is a list of contractor's key personnel (viz, Project Manager, Project Engineers, Materials Engineers and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data (including the key personnel signed written commitment to work for the project once awarded the contract). _____ **SF-INFR-47b**

DEPARTMENT OF AGRICULTURE-REGIONAL FIELD OFFICE 1
NAME OF PROCURING ENTITY

Contract Reference Number
Name of the Contract
Location of the Contract

Standard Form Number: SF-INFR-47
Revised on: August 11, 2004

KEY PERSONNEL
(FORMAT OF BIO-DATA)

Give the detailed information of the following personnel who are to be assigned as full-time field staff for the project. Fill up a form for each person.

- Authorized Managing Officer/Representative
- Sustained Technical Employee

1. Name : _____
2. Date of Birth : _____
3. Nationality : _____
4. Education and Degrees : _____
5. Specialty : _____
6. Registration : _____
7. Length of service with the Firm : _____
8. Years of Experience : _____

9. If item 7 is less than ten (10) years, give name and length of service with previous employers for a ten (10)-year period (attach additional sheet/s), if necessary:

<u>Name and Address of employer</u>	<u>Length of Service</u>
_____	_____ year(s) from _____ to _____
_____	_____ year(s) from _____ to _____
_____	_____ year(s) from _____ to _____

10. Experience:

This should cover the past ten (10) years of experience. (Attach as many pages as necessary to show involvement of personnel in projects using the format below).

One of the requirements from the bidder to be included in its Technical Envelope is a list of contractor's key personnel (viz, Project Manager, Project Engineers, Materials Engineers and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data (including the key personnel signed written commitment to work for the project once awarded the contract). SF-INFR-47a

DEPARTMENT OF AGRICULTURE-REGIONAL FIELD OFFICE 1
NAME OF PROCURING ENTITY

Contract Reference Number
Name of the Contract
Location of the Contract

Standard Form Number: SF-INFR-46
Revised on: August 11, 2004

Key Personnel's Certificate of Employment

Issuance Date

DIR. NESTOR

Position of the Head of the Procuring Entity

DEPARTMENT OF AGRICULTURE REGIONAL FIELD OFFICE 1

CITY OF SAN FERNANDO, LA UNION

Dear Sir/Madame:

I am (Name of Nominee) a Licensed _____ Engineer with Professional License No. _____ issued on (Date of Issuance) at (place of issuance).

I hereby certify that (Name of Bidder) has engaged my services as (designation) for (name of the Contract), if awarded to it.

As (designation), I supervised the following completed projects similar to the contract under bidding:

NAME OF PROJECT	OWNER	COST	DATE COMPLETED
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

At present, I am supervising the following projects:

NAME OF PROJECT	OWNER	COST	DATE COMPLETED
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

In case of my separation for any reason whatsoever from the above-mentioned contractor, I shall notify the (Name of the Procuring Entity) at least twenty one (21) days before the effective date of my separation.

As (Designation), I know I will have to stay in the job site all the time to supervise and manage the Contract works to the best of my ability, and aware that I am authorized to handle only one (1) contract at a time.

I do not allow the use of my name for the purpose of enabling the above-mentioned Contractor to qualify for the Contract without any firm commitment on my part to assume the post of (Designation) thereof, if the contract is awarded to him since I understand that to do so will be

a sufficient ground for my disqualification as (Designation) in any future ____ (*Name of the Procuring Entity*) bidding or employment with any Contractor doing business with the *Name of the Procuring Entity*_____.

(Signature of Engineer)

DRY SEAL

Republic of the Philippines)
_____) S.S.

SUBSCRIBED AND SWORN TO before me this _____ day of _____ 2022 affiant exhibiting to me his/her Residence Certificate No. _____ issued on _____ at _____.

Notary Public
Until December 31, 20____

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

*One of the requirements from the bidder to be included in its Technical Envelope is a list of contractor's key personnel (viz, Project Manager, Project Engineers, Materials Engineers and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data (including the key personnel signed written commitment to work for the project once awarded the contract).*_____ SF-INFR-46a

Standard Form Number: SF-INFR-49

Revised on August 11, 2004

LIST OF EQUIPMENT, OWNED OF LEASED and/or under PURCHASE AGREEMENT, PLEDGED TO THE PROPOSED PROJECT

Business Name : _____

Business Address : _____

Description	Model/Year	Capacity/ Performance/ Size	Plate No.	Motor No./ Body No.	Location	Condition	Proof of Ownership/ Lessor or Vendor

List of minimum equipment required for the project

Submitted by : _____

(Print name and affix signature)

Designation : _____

Date : _____

Omnibus Sworn Statement (Revised)

[shall be submitted with the Bid]

REPUBLIC OF THE PHILIPPINES)
CITY/MUNICIPALITY OF _____) S.S.

AFFIDAVIT

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

1. *[Select one, delete the other:]*

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

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

2. *[Select one, delete the other:]*

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

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

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

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

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

6. *[Select one, delete the rest:]*

[If a sole proprietorship:] The owner or sole proprietor is not related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the

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

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

7. *[Name of Bidder]* complies with existing labor laws and standards; and
8. *[Name of Bidder]* is aware of and has undertaken the responsibilities as a Bidder in compliance with the Philippine Bidding Documents, which includes:
 - a. Carefully examining all of the Bidding Documents;
 - b. Acknowledging all conditions, local or otherwise, affecting the implementation of the Contract;
 - c. Making an estimate of the facilities available and needed for the contract to be bid, if any; and
 - d. Inquiring or securing Supplemental/Bid Bulletin(s) issued for the *[Name of the Project]*.
9. *[Name of Bidder]* did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.
10. **In case advance payment was made or given, failure to perform or deliver any of the obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability for Swindling (Estafa) or the commission of fraud with unfaithfulness or abuse of confidence through misappropriating or converting any payment received by a person or entity under an obligation involving the duty to deliver certain goods or services, to the prejudice of the public and the government of the Philippines pursuant to Article 315 of Act No. 3815 s. 1930, as amended, or the Revised Penal Code.**

IN WITNESS WHEREOF, I have hereunto set my hand this ____ day of ____, 20__ at _____, Philippines.

[Insert NAME OF BIDDER OR ITS AUTHORIZED REPRESENTATIVE]

[Insert signatory's legal capacity]

Affiant

[Jurat]

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

COMPUTATION OF NET FINANCIAL CONTRACTING CAPACITY (NFCC)

Summary of the Applicant Supplier's/Distributor's assets and liabilities on the basis of the attached Income Tax Return and Audited Financial Statement, stamped "RECEIVED" by the Bureau of Internal Revenue or BIR authorized collecting agent for the immediately preceding year.

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

The Net Financial Contracting Capacity (NFCC), which must be at least equal to the ABC to be bid, based on the above data is calculated as follows:

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

Or,

If the prospective bidder opts to submit a Committed Line of Credit (CLC), it must be at least equal to ten percent (10%) of the ABC to be bid and shall be confirmed or authenticated by a local universal or commercial bank.

Name of Bank _____ Amount _____

Herewith attached are certified true copies of the Income Tax Return and Audited Financial Statement Stamped "RECEIVED" by the BIR authorized collecting agent for the immediately preceding year.

Submitted by:

Name of Supplier/Distributor/Manufacturer

Printed Name and Signature of Authorized Representative

Date:

Bid Form for the Procurement of Infrastructure Projects

[shall be submitted with the Bid]

BID FORM

Date: _____

Project Identification No.: _____

To: **DEPARTMENT OF AGRICULTURE REGIONAL FIELD OFFICE 1**
City of San Fernando, La Union

Having examined the Philippine Bidding Documents (PBDs) including the Supplemental or Bid Bulletin Numbers [insert numbers], the receipt of which is hereby duly acknowledged, we, the undersigned, declare that:

- a. We have no reservation to the PBDs, including the Supplemental or Bid Bulletins, for the Procurement Project: *[insert name of contract]*;
- b. We offer to execute the Works for this Contract in accordance with the PBDs;
- c. The total price of our Bid in words and figures, excluding any discounts offered below is: *[insert information]*;
- d. The discounts offered and the methodology for their application are: *[insert information]*;
- e. The total bid price includes the cost of all taxes, such as, but not limited to: *[specify the applicable taxes, e.g. (i) value added tax (VAT), (ii) income tax, (iii) local taxes, and (iv) other fiscal levies and duties]*, which are itemized herein and reflected in the detailed estimates,
- f. Our Bid shall be valid within the period stated in the PBDs, and it shall remain binding upon us at any time before the expiration of that period;
- g. If our Bid is accepted, we commit to obtain a Performance Security in the amount of *[insert percentage amount]* percent of the Contract Price for the due performance of the Contract, or a Performance Securing Declaration in lieu of the allowable forms of Performance Security, subject to the terms and conditions of issued GPPB guidelines¹² for this purpose;
- h. We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Documents;
- i. We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed; and
- j. We understand that you are not bound to accept the Lowest Calculated Bid or any other Bid that you may receive.

- k. We likewise certify/confirm that the undersigned, is the duly authorized representative of the bidder, and granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for the *[Name of Project]* of the *[Name of the Procuring Entity]*.
- l. We acknowledge that failure to sign each and every page of this Bid Form, including the Bill of Quantities, shall be a ground for the rejection of our bid.

Name: _____

Legal capacity: _____

Signature: _____

Duly authorized to sign the Bid for and behalf of: _____

Date: _____