



NATIONAL POWER CORPORATION

**MinGen**

# **PHILIPPINE BIDDING DOCUMENTS**

(Procurement of INFRASTRUCTURE PROJECTS)

FOR

REHABILITATION OF EXISTING  
HOUSING FOR OVP PERSONNEL (MRSQ  
NO. 7, AGUS 4 NO. 6 AND QUARTER NO.  
17 & 60A)

P.R. No.: MG-MGE23-001

Contracts Management Office  
Logistics Division

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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*



NATIONAL POWER CORPORATION

**MinGen**

## **Invitation to Bid for *Rehab of Existing Housing for OVP Personnel (MRSQ No. 7, Agus 4 No. 6 and Quarter No. 17 & 60 A)***

1. The *NATIONAL POWER CORPORATION-MINDANAO GENERATION*, through the *approved Corporate Budget of NPC for CY 2023* intends to apply the sum of *Three Million One Hundred Twenty Nine Thousand Nine Hundred Ninety Eight & 92/100 Pesos (PHP3,129,998.92)* being the Approved Budget for the Contract (ABC) to payments under the contract for *Rehab of Existing Housing for OVP Personnel (MRSQ No. 7, Agus 4 No. 6 and Quarter No. 17 & 60-A) (INERA2023-OVP-024)*. Bids received in excess of the ABC shall be automatically rejected at bid opening.
2. The *NATIONAL POWER CORPORATION-MINDANAO GENERATION* now invites bids for the above Procurement Project. Completion of the Works is required *One Hundred Twenty (120) 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 non-discretionary *"pass/fail"* criterion as specified in the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.
4. Interested bidders may obtain further information from *BAC Secretariat, NATIONAL POWER CORPORATION-MINDANAO GENERATION* and inspect the Bidding Documents at the address given below from *8:00 AM – 5:00 PM Monday to Friday*.
5. A complete set of Bidding Documents may be acquired by interested Bidders on *May 10-29, 2023* from the given address and website(s) below and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, in the amount of *Five Thousand Pesos (PHP 5,000.00)*. The Procuring Entity shall allow the bidder to pay online and present its proof of payment for the fees *in person, by facsimile, or through electronic means. For those prospective bidders who wish to pay online, below are the details of the account:*

LandbankAccount name : NPC GENCO 5 COLLECTIONS FUND  
LandbankAccount number : 0321-1689-14



- It may also be downloaded free of charge from the website of the Philippine Government Electronic Procurement System (PhilGEPS) provided that Bidders shall pay the applicable fee for the Bidding Documents not later than the submission of their bids.
6. The *NATIONAL POWER CORPORATION-MINDANAO GENERATION* will hold a Pre-Bid Conference on May 17, 2023 at 1:30 PM at *Bidding Room, NPC-Mindanao Generation Headquarters, Maria Cristina, Iligan City* and/or through videoconferencing/webcasting via *ZOOM*, which shall be open to prospective bidders. Interested online attendees are required to pre-register one (1) day before the scheduled pre-bidding conference. For pre-registration, contact tel. no. (063)-222-3459 or email [logistics\\_afd\\_mingen@napocor.gov.ph](mailto:logistics_afd_mingen@napocor.gov.ph).
  7. Bids must be duly received by the BAC Secretariat through manual submission at the office address as indicated below, on or before May 29, 2023 at 9:30 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 15*.
  9. Bid opening shall be on May 29, 2023 at 9:30 AM at the *Bidding Room, NPC-Mindanao Generation Headquarters, Maria Cristina, Iligan City*. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.
  10. *This project requires submission of at least:*
    - *Certificate of Site Inspection*
  11. The *NATIONAL POWER CORPORATION-MINDANAO GENERATION* reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 revised Implementing Rules and Regulations (IRR) of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.
  12. For further information, please refer to:

*BAC Secretariat  
Contracts Management Office  
Logistics Division  
Mindanao Generation Headquarters  
National Power Corporation  
Maria Cristina, Iligan City  
[logistics\\_afd\\_mingen@napocor.gov.ph](mailto:logistics_afd_mingen@napocor.gov.ph)  
Tel. No.: (063)222-3459  
Fax No.: (063)223-8355/(063)223-4604  
[www.napocor.gov.ph](http://www.napocor.gov.ph)*

13. You may visit the following websites:

For downloading of Bidding Documents: <https://www.philgeps.gov.ph/> or  
<https://www.napocor.gov.ph/BCSD/bids.php>



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**REYNANTE T. CIRUELA**  
Chairman, Bids and Awards Committee  
Mindanao Generation Headquarters



**Date of PhilGEPS Publication:** 10 May 2023

## *Section II. Instructions to Bidders*

## 1. Scope of Bid

The Procuring Entity, **NATIONAL POWER CORPORATION-MINDANAO GENERATION** invites Bids for the **REHAB OF EXISTING HOUSING FOR OVP PERSONNEL (MRSQ NO. 7, AGUS 4 NO. 6 AND QUARTER NO. 17 & 60-A)**, with **Project Identification Number INFRA2023-OVP-024**.

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

## 2. Funding Information

- 2.1. The GOP through the source of funding as indicated below for CY 2023 in the amount of *Three Million One Hundred Thirty Thousand Pesos (PHP3,130,000.00)*
- 2.2. The source of funding is;
  - a. GOCC and GFIs, the proposed Corporate Operating Budget.

## 3. Bidding Requirements

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

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

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

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

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

#### **5. Eligible Bidders**

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

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

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

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

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

#### **6. Origin of Associated Goods**

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

#### **7. Subcontracts**

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

The Procuring Entity has prescribed that:

- a. Subcontracting is not allowed.

#### **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 and/or through videoconferencing/webeasting as indicated in paragraph 6 of the IB.

## **9. Clarification and Amendment of Bidding Documents**

Prospective bidders may request for clarification on and/or interpretation of any part of the Bidding Documents. Such requests must be in writing and received by the Procuring Entity, either at its given address or through electronic mail indicated in the IB, at least ten (10) 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 *One Hundred Twenty (120) Calendar Days from the Scheduled Bid Opening.* Any bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

## 16. Scaling 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 16 shall be submitted for each contract (lot) separately.



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

## **20. Post Qualification**

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

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

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

## *Section III. Bid Data Sheet*

## Bid Data Sheet

ITB Clause			
5.2	For this purpose, contracts similar to the Project refer to contracts which have the same major categories of work, which shall be: <b>Construction of Vertical Structure</b>		
7.1	Subcontracting is not allowed.		
10.3	None		
10.4	The key personnel must meet the required minimum years of experience set below:		
	<u><b>Key Personnel</b></u>	<u><b>General Expertise</b></u>	<u><b>Relevant Experience</b></u>
	1 - Project Engineer	Licensed Civil Engineer	At least five (5) years experience in related works
	1 - Construction Foreman	B.S. Civil Engineering Graduate	At least three (3) years experience in similar works
		Civil Engineering Technology Graduate	At least five (5) years experience in similar works
		Non-graduate	At least five (5) years working experience as Construction Foreman in similar works
	1 - Construction Safety and Health Officer (SO2)	Construction Safety Officer 2	At least forty (40) hours of Construction Safety and Health (COSH) Training from Occupational Safety and Health Center (OSHC) or Safety Training Organizations (STOs) accredited by the Department of Labor and Employment (DOLE). Must be present during the whole duration of the project)
	2 - Welders	NC II	At least three (3) years experience in welding/cutting works.

	<table border="0"> <tr> <td data-bbox="406 235 710 324">I - Electrician</td> <td data-bbox="710 235 1013 324">NC II</td> <td data-bbox="1013 235 1380 324">At least three (3) years experience in similar works</td> </tr> <tr> <td data-bbox="406 324 710 414">1 - Plumber</td> <td data-bbox="710 324 1013 414">NC II</td> <td data-bbox="1013 324 1380 414">At least three (3) years experience in similar works</td> </tr> </table> <p data-bbox="406 459 1380 728">(1) Valid Professional Regulation Commission (PRC) license for professional personnel; (2) Certificate of Training with accreditation from DOLE for the Construction Safety &amp; Health Officer; (3) TESDA Training Certificate (NC II) of Welders or Electrician; and (4) Diploma and/or Service Record/Certificate of Employment of previous and/or current employer for Construction Foreman, Welders, Electrician &amp; Plumber <i>shall be submitted and included as an attachment in the Standard Form NPCMGNSF-INFR-05: List of Key personnel Proposed to be Assigned to the Contract.</i></p> <p data-bbox="406 761 1380 896">Project Engineer or Foreman and Construction Safety &amp; Health Officer maybe one person, as long as he meets the requirements of the two positions. Provided however, that there is no overlapping of projects undertaken by the same contractor and supervised by the same person.</p> <p data-bbox="406 929 1380 996">The above key personnel must be either employed by the applicant or contracted by the applicant to be employed for the contract to be bid.</p>	I - Electrician	NC II	At least three (3) years experience in similar works	1 - Plumber	NC II	At least three (3) years experience in similar works												
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1 - Plumber	NC II	At least three (3) years experience in similar works																	
10.5	<p data-bbox="494 1030 1276 1064">The minimum major equipment requirements are the following:</p> <table border="0"> <thead> <tr> <th data-bbox="494 1097 638 1131"><u>Equipment</u></th> <th data-bbox="821 1097 933 1131"><u>Capacity</u></th> <th data-bbox="1093 1097 1316 1131"><u>Number of Units</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="414 1131 638 1164">Concrete Mixer</td> <td data-bbox="821 1131 933 1164">1-Bagger</td> <td data-bbox="1157 1131 1252 1164">One (1)</td> </tr> <tr> <td data-bbox="414 1164 638 1198">Concrete Vibrator</td> <td data-bbox="853 1164 901 1198">4 HP</td> <td data-bbox="1157 1164 1252 1198">One (1)</td> </tr> <tr> <td data-bbox="414 1198 638 1232">Welding Machine</td> <td data-bbox="821 1198 933 1232">300 Amp.</td> <td data-bbox="1157 1198 1252 1232">Two (2)</td> </tr> <tr> <td data-bbox="414 1232 638 1265">Plate Compactor</td> <td data-bbox="829 1232 925 1265">2.5 Tons</td> <td data-bbox="1157 1232 1252 1265">One (1)</td> </tr> <tr> <td data-bbox="414 1265 638 1299">Jack/ Demolition Hammer</td> <td data-bbox="782 1265 981 1299">Atleast 1,000 W</td> <td data-bbox="1157 1265 1252 1299">One (1)</td> </tr> </tbody> </table>	<u>Equipment</u>	<u>Capacity</u>	<u>Number of Units</u>	Concrete Mixer	1-Bagger	One (1)	Concrete Vibrator	4 HP	One (1)	Welding Machine	300 Amp.	Two (2)	Plate Compactor	2.5 Tons	One (1)	Jack/ Demolition Hammer	Atleast 1,000 W	One (1)
<u>Equipment</u>	<u>Capacity</u>	<u>Number of Units</u>																	
Concrete Mixer	1-Bagger	One (1)																	
Concrete Vibrator	4 HP	One (1)																	
Welding Machine	300 Amp.	Two (2)																	
Plate Compactor	2.5 Tons	One (1)																	
Jack/ Demolition Hammer	Atleast 1,000 W	One (1)																	
12	N/A																		
15.1	<p data-bbox="406 1377 1380 1444">The bid security shall be in the form of a Bid Securing Declaration or any of the following forms and amounts:</p> <p data-bbox="406 1444 1380 1545">a. The amount of not less than PHP62,599.98(2% of ABC), if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit;</p> <p data-bbox="406 1545 1380 1624">b. The amount of not less than PHP156,499.95(5% of ABC), if bid security is in Surety Bond.</p>																		
19.2	Partial bids are allowed, as follows:																		
20	<p data-bbox="406 1691 1380 1736">Additional documents to be submitted during Post-Qualification:</p> <p data-bbox="438 1758 1380 1823">1. Other appropriate licenses and permits required by law and stated in the Bidding documents.</p>																		

	<ul style="list-style-type: none"> <li>a. <i>Original Bank Statement year ending prior to bid opening;</i></li> <li>b. <i>Valid and updated PhilGEPS Registration (Platinum Membership)(all pages);</i></li> <li>c. <i>Registration Certificate from Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives or its equivalent document;</i></li> <li>d. <i>Mayor's or Business permit issued by the city or municipality where the principal place of business of the prospective bidder is located, or the equivalent document for Exclusive Economic Zones or Areas;</i></li> <li>e. <i>Valid Tax clearance per E.O. No. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR). Quarterly Income Tax Returns filed and paid through the BIR Electronic Filing and Payment System (eFPS);</i></li> <li>f. <i>The prospective bidder's audited financial statements, showing, among others, the prospective bidder's total and current assets and liabilities, stamped "received" by the BIR or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission;</i></li> <li>g. <i>Philippine Contractors Accreditation Board (PCAB) License;</i></li> <li>h. <i>Board of Accountancy (BOA) Certificate;</i></li> </ul> <ol style="list-style-type: none"> <li>2. <i>Contract and/or Notice of Award as supporting documents for NPC MinGen Form No. NPCMGNSF-INFR-01, if applicable;</i></li> <li>3. <i>(a) Valid Professional Regulation Commission (PRC) license for professional personnel; (b) Certificate of Training with accreditation from DOLE for the Construction Safety &amp; Health Officer; (c) TESDA Training Certificate (NC II) of Welders or Electrician; and (d) Diploma and/or Service Record/Certificate of Employment of previous and/or current employer for Construction Foreman, Welders, Electrician &amp; Plumber - as supporting documents for NPC MinGen Form No. NPCMGNSF-INFR-05, if applicable.</i></li> <li>4. <i>Certificate of Site Inspection issued by Plant/Department Manager or his authorized representative.</i></li> </ol>
21	<p>Additional contract documents relevant to the Project that may be required by existing laws and/or the Procuring Entity, prior to contract signing, such as:</p> <ul style="list-style-type: none"> <li>a) Approved construction schedule and S-curve</li> <li>b) Approved manpower schedule</li> <li>c) Construction methods</li> <li>d) Approved equipment utilization schedule</li> <li>e) Construction safety and health program approved by the DOLE</li> <li>f) Approved Project Evaluation Review Technique/Critical Path Method (PERT/CPM)</li> </ul>

## *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**

- 4.1. The Procuring Entity shall give possession of all or parts of the Site to the Contractor based on the schedule of delivery indicated in the **SCC**, which corresponds to the execution of the Works. If the Contractor suffers delay or incurs cost from failure on the part of the Procuring Entity to give possession in accordance with the terms of this clause, the Procuring Entity's Representative shall give the Contractor a Contract Time Extension and certify such sum as fair to cover the cost incurred, which sum shall be paid by Procuring Entity.
- 4.2. If possession of a portion is not given by the above date, the Procuring Entity will be deemed to have delayed the start of the relevant activities. The resulting adjustments in contract time to address such delay may be addressed through contract extension provided under Annex "E" of the 2016 revised IRR of RA No. 9184.

## **4. The Contractor's Obligations**

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

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

## **5. Performance Security**

- 5.1. Within ten (10) calendar days from receipt of the Notice of Award from the Procuring Entity but in no case later than the signing of the contract by both parties, the successful Bidder shall furnish the performance security in any of the forms prescribed in Section 39 of the 2016 revised IRR.
- 5.2. The Contractor, by entering into the Contract with the Procuring Entity, acknowledges the right of the Procuring Entity to institute action pursuant to RA No. 3688 against any subcontractor be they an individual, firm, partnership, corporation, or association supplying the Contractor with labor, materials and/or equipment for the performance of this Contract.

## **6. Site Investigation Reports**

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

## **7. Warranty**

- 7.1. In case the Contractor fails to undertake the repair works under Section 62.2.2 of the 2016 revised IRR, the Procuring Entity shall forfeit its performance security, subject its property(ies) to attachment or garnishment proceedings, and perpetually disqualify it from participating in any public bidding. All payables of the GOP in his favor shall be offset to recover the costs.
- 7.2. The warranty against Structural Defects/Failures, except that occasioned-on force majeure, shall cover the period from the date of issuance of the Certificate of Final Acceptance by the Procuring Entity. Specific duration of the warranty is found in the SCC,

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

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

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

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



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

## **10. Dayworks**

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

## **11. Program of Work**

- 11.1. The Contractor shall submit to the Procuring Entity's Representative for approval the said Program of Work showing the general methods, arrangements, order, and timing for all the activities in the Works. The submissions of the Program of Work are indicated in the SCC.
- 11.2. The Contractor shall submit to the Procuring Entity's Representative for approval an updated Program of Work at intervals no longer than the period stated in the SCC. If the Contractor does not submit an updated Program of Work within this period, the Procuring Entity's Representative may withhold the amount stated in the SCC from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program of Work has been submitted.

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

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

## **13. Advance Payment**

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

#### **14. Progress Payments**

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

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

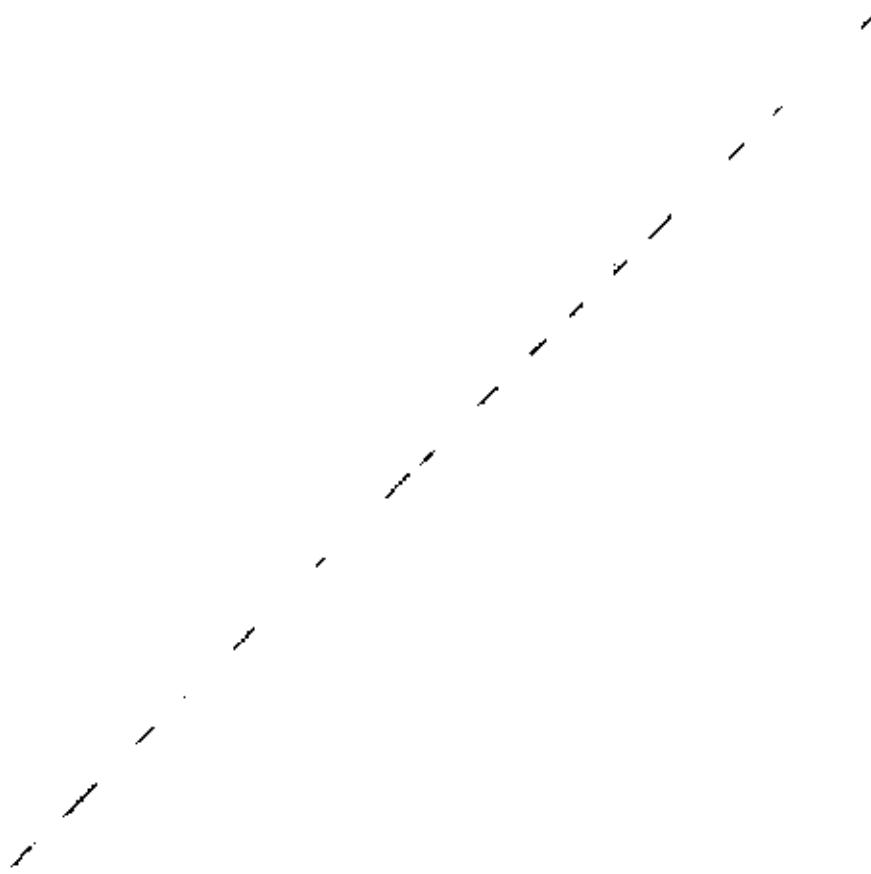
- 15.1. If required, the Contractor will provide "as built" Drawings and/or operating and maintenance manuals as specified in the SCC.
- 15.2. If the Contractor does not provide the Drawings and/or manuals by the dates stated above, or they do not receive the Procuring Entity's Representative's approval, the Procuring Entity's Representative may withhold the amount stated in the SCC from payments due to the Contractor.

## *Section V. Special Conditions of Contract*

## Special Conditions of Contract

GCC Clause	
2	Sectional completion is not specified.
4.1	The Procuring Entity shall give possession of the Site to the Contractor <i>on the start date.</i>
6	The site investigation reports are: NONE
7.2	Fifteen (15) years
10	Dayworks are not applicable to the contract.
11.1	The Contractor shall submit the Program of Work to the Procuring Entity's Representative <u>upon contract signing</u> or within <u>three (3) days</u> of delivery of the Notice of Award.
11.2	The amount to be withheld for late submission of an updated Program of Work is Fifty (50) % of the billed amount. The updating of Program of Work shall be done bi-monthly.
13	The amount of the advance payment is 15% of contract amount and paid in lump sum.
14	No further instruction.
15.1	The date by which operating and maintenance manuals are required is upon completion of the project.  The date by which "as built" drawings are required is upon completion of the project.
15.2	The amount to be withheld for failing to produce "as built" drawings and/or operating and maintenance manuals by the date required is one hundred percent (100%) of the final billing.

## *Section VI. Specifications*



## PROJECT HIGHLIGHTS

### PH 1.0 GENERAL

The project is funded by NPC Mindanao Generation. This project aims to preserve the assets of NPC by rehabilitating and bringing back to its original state and for the convenience of employees.

The Contractor shall furnish all labor, materials, equipment, tools and other incidental matters necessary to complete the works in accordance with the contracts and approved detailed engineering activities; and other existing laws, rules and regulations relative thereto.

### PH 2.0 PROJECT LOCATION

1. Agus 4 Housing Quarter No. 6, NPC Housing Compound, Maria Cristina, Iligan City;
2. Housing Quarter No. 17, NPC Housing Compound, Ditucalan, Iligan City;
3. Housing Quarter No. 60A, NPC Housing Compound, Ditucalan, Iligan City;
4. MRSQ House No. 7, NPC Housing Compound, Maria Cristina, Iligan City.

### PH 3.0 SCOPE OF WORK

The works and services to be performed by the Contractor for this undertaking shall essentially consist of, but not limited with the following scope of works:

#### A. AGUS 4 HOUSING QUARTER NO. 6, MARIA CRISTINA, ILIGAN CITY

1. MOBILIZATION
2. MATERIAL TESTING
3. CONSTRUCTION SAFETY AND HEALTH PROGRAM
4. DEMOLITION & DISPOSAL WORKS (REMOVAL OF EXISTING ROOFING, TRUSSES, DOORS, WINDOWS, CEILING, FLOORING & PORTION OF PARTITION WALL)
5. EARTHWORKS
  - 3.1. Excavation
6. MASONRY & PLASTERING WORKS (Including Reinforcing Steel & Cement Plaster Finish and Septic Vault), 100mm
  - 4.1. CHB Laying
  - 4.2. Plaster Finish
7. REINFORCING STEEL (DEFORMED, GRADE 40)
8. STRUCTURAL CONCRETE, Class A
9. TILE & CONCRETE PAVERS
  - 7.1. Tiles

7.2. Concrete Pavers

10. FRAMING & ROOFING WORKS
11. CEILING, FIBER CEMENT BOARD ON METAL FRAME
12. WINDOWS AND DOORS
13. PLUMBING WORKS
14. ELECTRICAL WORKS
15. PAINTING WORKS (CEILING, INNER & OUTER WALLING)
16. DEMOBILIZATION

B. HOUSING QUARTER NO. 17, NPC COMPOUND, DITUCALAN, ILIGAN CITY

1. MOBILIZATION
2. MATERIAL TESTING
3. CONSTRUCTION SAFETY AND HEALTH PROGRAM
4. SITE PREPARATION INCLUDING DEMOLITION AND DISPOSAL
5. EARTHWORKS
  - 3.1. Excavation
  - 3.2. Backfilling
6. REINFORCED CONCRETE WORKS INCLUDING G.I. POST
7. MASONRY, PLASTERING & TILES WORKS
  - 5.1. CHB Laying
  - 5.2. Plaster Finish, 2 faces, 16mm thick
  - 5.3. Tile Works (New Bedroom)
8. ROOF & ROOF FRAMING WORKS
9. CEILING, DOOR & WINDOWS
10. ELECTRICAL & PLUMBING WORKS
11. PAINTING WORKS (NEW BEDROOM, STORAGE ROOM, EXISTING ROOFING & OUTDOOR WALLING)
12. DEMOBILIZATION

C. AGUS 4' HOUSING QUARTER NO. 60A, MARIA CRISTINA, ILIGAN CITY

1. MOBILIZATION
2. MATERIAL TESTING
3. CONSTRUCTION SAFETY AND HEALTH PROGRAM
4. DEMOLITION/ REMOVAL OF EXISTING WALL, FLOOR, CABINETS, CEILING, DOORS & DISPOSAL WORKS
5. WALLING WORKS
6. FLOORING AND INSTALLATION OF VINYL TILES
7. CEILING WORKS
8. DOORS & ACU GRILL
9. ELECTRICAL WORKS
10. PAINTING WORKS (EXTERIOR AND INTERIOR WALLING & CEILING)
11. DEMOBILIZATION

- D. MRSQ HOUSE NO. 07, NPC COMPOUND, MARIA CRISTINA, ILIGAN CITY
1. STAINLESS STEEL WATER TANK WITH PRE-FABRICATED PEDESTAL STAND

#### PH 4.0 CONTRACT PERIOD

The contractor shall complete the works as specified in Clause 3 within **One Hundred Twenty (120) calendar days**. The total contract duration is inclusive of six (6) unworkable days considered unfavorable for the execution of work at site. The contract period shall be reckoned from the date of contract effective as specified in the Notice to Proceed.

#### PH-5.0 CONTRACTOR'S CLASSIFICATION

The contractor must have a valid Philippine Contractor's Accreditation Board (PCAB) license of at least **Category C or D – General Building** with inter-agency registration of at least **Small B – Building and Industrial Plant**

The contractor must have undertaken similar contracts that involves electrical system and lightning protection system provided that the contract cost shall be at least equivalent to 50% of ABC

## TECHNICAL SPECIFICATIONS

### I. MOBILIZATION

The contractor shall secure clearance from the Security office to start of work and for the issuance of worker's Identification Card (I.D). Upon approval, the Contractor shall bring to the site all necessary tools, equipment and other incidentals necessary for the proper execution of all the activities. He shall construct bunkhouse for the workmen and for the storage of all the construction materials on designated approved location.

### GENERAL CONSTRUCTION FACILITIES

#### Scope

This section covers the construction and/or maintenance of access roads, drainage systems and other appurtenant structures, moving-in of the Contractor's construction equipment, setting up the Contractor's camp facilities and the disposition of the Contractor's various facilities at the end of the Contract.

#### Moving-in

The Contractor shall bring to the site all his necessary construction equipment and plant and install all stationary construction equipment and plant at location and in the manner approved by NPC. The Contractor shall submit sufficient detailed plans showing the proposed location of such stationary equipment and plant and other pertinent data. No installation of such stationary equipment shall be undertaken unless the corresponding plans have been approved by NPC.



### **Contractor's Camp Facilities**

The Contractor shall construct and maintain the service roads, and related work that may be necessary, to the various work area, and other areas such as access to the camps, stores, plants, disposal areas and other facilities related to the work.

The Contractor shall provide and grade his camp site, construct his camp, employee housing, warehouse, machines and repair shops, fuel storage tanks and provide such related facilities and sanitary conveniences that the Contractor deems necessary for maintaining health, peace and order in the camp and work areas. The areas that may be used by the Contractor within the plant site shall be designated by NPC.

The Contractor shall provide, maintain, and operate, under competent direction, such camps and facilities as are necessary for the housing, feeding and accommodation of his employees.

### **Water Supply**

The Contractor shall, at his own expense, be responsible for the supply, installation, operation and maintenance of a safe and adequate supply of drinking and domestic water. Whenever there is a possibility of contamination of the water supply for drinking and domestic purposes, chlorination or some other approved methods of sterilization shall be carried out. The installation and maintenance of these services shall be subject to the approval NPC.

### **Sewerage Disposal and Sanitation**

The Contractor shall, at his own expense, be responsible for the installation, operation and maintenance of an adequate sewerage disposal and sanitation system and shall provide adequate toilet and wash-up facilities for his employees at his camp and in the areas where work is being carried out. The Contractor shall execute the work with due regard to adequate sanitary provisions and applicable codes and shall take all necessary steps to prevent the pollution of water in any spring, river, or other sources of water supply. All toilets or wash-up facilities shall be subject to the prior and continuing approval of NPC.

### **Fire Protection**

The Contractor shall observe all necessary precautions against fire shall provide and maintain at his own expense, portable firefighting equipment he may deem necessary, and shall comply with all applicable laws of the Philippines relating thereto.

In the event of an uncontrollable fire occurring in the area of the Contractor's operation, the Contractor shall have to extinguish the fire immediately at his own expense, to the full extent of the manpower and equipment employed under the contract at the time of the fire.

The Contractor shall indemnify NPC against all liabilities, claims, damages and/or lawsuits arising thereto.

### **Construction Power**

The Contractor shall be responsible for providing his own electric power supply required for construction and erection/installation. If power is available from NPC and should the contractor elect to utilize the NPC's power supply, he shall make an arrangement with NPC concerned group as to the billing rates and other requirements needed for direct connection to NPC.

### **Camp Security**

The Contractor shall provide his own security force to the extent that he deems necessary for maintaining peace and order in the camp and work areas and to safeguard materials and equipment. Nothing under the provisions of this paragraph shall relieve the Contractor from full responsibility for the maintenance of peace and order and protection of life and property in all areas where he operates.

### **Construction Material Storage**

The Contractor is required to put up cement warehouse (s) with capacities sufficient to store construction materials required in the work. The warehouse (s) shall be specifically for this contract notwithstanding his other facilities in the site that may serve the purpose.

#### **Removal of Camp and Construction Facilities**

After the completion of the work covered by the contract and prior to acceptance of the completed work, the entire camp facilities of the Contractor, including its water supply systems, electric distribution system, quarters, warehouses, shops, dining halls, commissaries, temporary shed and other facilities therein shall be removed by the Contractor. The site shall be cleared and cleaned as directed by NPC.

#### **Measurement and Payment**

No separate measurement and payment will be made for the Contractor's Construction Facilities. The entire cost thereof shall be included in the various pay items in the Bill of Quantities.

#### **CARE OF WATER DURING CONSTRUCTION**

##### **Scope**

In accordance with the specifications contained in this section or otherwise directed, the Contractor shall construct and maintain all necessary temporary drainage ditches and other temporary protective works and he shall also furnish, install, maintain and operate necessary pumping equipment and other devices to protect construction operations free from water coming from any source, including rain.

##### **Drainage and Dewatering**

The Contractor shall be responsible for dewatering foundations areas so that work can be carried out on a suitably dry condition. The Contractor shall construct drainage ditches, holes, culverts, furnish, maintain and operate at his own expense all necessary pumps and other dewatering devices to keep all work areas free from water.

After the work is completed and before it is accepted by the NPC, the Contractor shall remove all pumping equipment and shall remove, fill or plug all temporary drainage structures as directed, all at his expense.

##### **Measurement and Payment**

No separate measurement and payment will be made for the Care of Water during Construction operations. The cost of furnishing, constructing, maintaining, operating and removing of temporary drainage structures, pumping systems and other dewatering devices necessary to keep construction operations free from water, shall be included in the various pay items in the Bill of Quantities for structures where such care of water is required.

#### **CONSTRUCTION SAFETY AND HEALTH PROGRAM**

##### **Scope**

This section pertains to the environment and safety provisions, requirements and conditions that shall govern during the execution of all civil works under this project.

##### **General Conditions**

The Contractor shall ensure compliance with the applicable environmental and safety regulations, as well as ECC conditions, during installation/construction of this project through the implementation of measures that include, but not limited to the following:

- a. Designate a Safety Officer and a Pollution Control Officer who shall respectively handle all safety and environmental concerns of the project.
- b. Prepare and submit Construction Safety Health Plan (CSHP)
- c. Properly manage debris and various waste generated during installation/construction, such as the following:
  - Dispose of demolition and construction debris in a designated or NPC approved disposal area(s);
  - Stockpile (and cover if possible) or haul to the designated and/or pre developed dump sites that shall be provided with suitable drainage-equipped with sediments traps, stripped top soil, spoils from quarry/borrow sites and excavated materials
  - Segregate solid wastes, such as empty cement sacks, scraps of tin or wood, used wires and other domestic garbage for recycling or storage in NPC-approved temporary storage areas and further disposal to LGU-designated disposal sites.
  - Properly handle, store and dispose off, through DENR-accredited transporter/treater, hazardous waste i.e. used oils, paints, thinner and etc.
- d. Limit construction activities that generate excessive, grading and excavation during dry weather.
- e. As far as practicable, undertake site stripping, grading and excavation during dry weather.
- f. Construction/Installation shall be carried out in a manner where landslides and erosions are minimized.
- g. Avoid unnecessary opening/clearing of areas outside construction sites or destruction of vegetable cover especially cutting of existing trees; and to re-vegetate disturbed areas.
- h. Spray water, whenever and wherever necessary, to minimize dust generation.
- i. Provide PPE's and other safety provisions required by DOLE, for its project/site works.

#### **Measurement and Payment**

Measurement and payment shall be made at the contract unit price or lot price as specified in the Bid Price Schedule. Payment shall include all cost in furnishing labor, materials, tools equipment and other incidentals necessary for the satisfactory completion of project.

#### **DEMOLITION/REMOVAL & DISPOSAL WORKS**

##### **General Scope**

The work to be executed under this section shall include the furnishing of all labor, tools and ladders, scaffolding and other facilities necessary for the satisfactory performance of all work necessary to complete all demolition and disposal works.

##### **Workmanship**

All work shall be done by skilled workers in a workmanlike manner. All dilapidated materials/ replacement specified in the approved plans and specifications shall be completely removed.

All dilapidated materials that has been removed shall be disposed at the disposal area designated by NPC inspector or end-user. Other materials that could be re-use as identified by NPC inspector shall be turn-over to NPC Central Warehouse for safekeeping.

#### **MEASUREMENT AND PAYMENT**

Measurement and payment shall be made at the contract unit price or lot price as specified in the Bid Price Schedule. Payment shall include all cost in furnishing labor, materials, tools equipment and other incidentals necessary for the satisfactory completion of project.

#### **EARTHWORKS**

##### **General**

The work to be executed under this section shall include the furnishing of all labor, tools and other facilities necessary for the satisfactory performance of all work necessary to complete the works specified in this specifications.

It shall also include the furnishing and placing of approved foundation fill material to replace unsuitable material encountered below the foundation elevation of structures.

The contractor shall rest stake out batter accurately established the elevation shown on the plan before any excavation is done. The basic batter board and reference mark shall be erected to such places where they will not disturb during excavation and construction of all foundation.

#### **Construction Requirements**

The Contractor shall notify the Engineer sufficiently in advance of the beginning of any excavation so that cross-sectional elevations and measurements may be taken on the undisturbed ground. The natural ground adjacent to the structure not be disturbed without permission of the Engineer.

Boulders, logs, and other objectionable materials encountered in excavation shall be removed.

After each excavation is completed, the Contractor shall notify the Engineer to that effect and no footing, bedding material or pipe culvert shall be placed until the Engineer has approved the depth of excavation and the character of the foundation materials.

After rock or other hard foundation materials shall be cleaned all loose materials, and cut to a firm surface, either level, stepped, or serrated as directed by the Engineer. All seams or crevices shall be removed.

When the footing is to rest on material other than rock, excavation to final grade shall not be made until just before the footing is to be placed. When the foundation material is soft or mucky or otherwise unsuitable, as determined by the Engineer, the Contractor shall remove the unsuitable material and backfill with approved granular material. This foundation fill shall be placed and compacted in 150 mm (6 inches) layers up to the foundation elevation.

#### **Utilization of Excavated Materials**

All excavated materials, so far as suitable, shall be utilized as backfill or embankment. The surplus materials shall be disposed off in such manner as not to obstruct the stream or otherwise impair the efficiency or appearance of the structure. No excavated materials shall be deposited at any time so as to endanger the partly finished structure.

#### **Measurement and Payment**

Measurement and payment shall be made at the contract unit price or lot price as specified in the Bid Price Schedule. Payment shall include all cost in furnishing labor, materials, tool equipment and other incidentals necessary for the satisfactory completion of the project.

### **BACKFILLING WORKS**

#### **General**

The work to be executed under this section shall include the furnishing of all, labor, tools, equipment and other facilities necessary for the satisfactory performance of all work necessary to complete the works specified in this specifications.

#### **Material Requirements**

Embankment shall be constructed of suitable materials, in consonance with the following definitions:

**Suitable Materials** – Material which is acceptable in accordance with the Contract and which can be compacted in the manner specified in this item. It can be common material or rock.

**Selected Borrow, for topping** – soil of such gradation that all particles will pass a sieve with 75 mm (3 inches) square pass the 0.075 mm (No. 200) sieve, as determined by AASHTO T 11. The material shall have a plasticity index of not more than 6 as determined by ASSHTO T 90 and a liquid limit of not more than 30 as determined by ASSHTO T 89.

**Unsuitable Material** – Material other than suitable materials such as:

- a) Materials containing detrimental quantities of organic materials, such as grass, roots and sewerage.
- b) Organic soils such as peat and muck.
- c) Soils with liquid limit exceeding 80 and/or plasticity index exceeding 55.
- d) Soils with a natural water content exceeding 100%
- e) Soils with very low natural density, 800 kg/m<sup>3</sup> or lower.
- f) Soils that cannot be properly compacted as determined by the Engineer.

### **Construction Requirements**

#### **General**

Prior to backfilling works, all necessary clearing and grubbing in that area shall have been performed.

Backfills shall contain no muck, peat, sod roots or other deleterious matter. Rocks, broken concrete or other solid, bulky materials shall not be placed in embankment areas where piling is to be placed or driven.

Where shown on the Plans or directed by the Engineer, the surface of the existing ground shall be compacted to a depth of 150 mm (6 inches) and to the specified requirements of this Item.

#### **Methods of Construction**

Backfill of earth material shall be placed in horizontal layers not exceeding 600 mm (24 inches), loose measurement, and shall be compacted as specified before the next layer is placed. However, thicker layer maybe placed if vibratory roller with high compactive effort is used provided that density requirement is attained and as approved by the Engineer. Trial section to this effect must be conducted and approved by the Engineer. Effective spreading equipment shall be used on each lift to obtain uniform thickness as determined in the trial section prior to compaction. As the compaction of each layer progresses, continuous leveling and manipulating will be required to assure uniform density. Removal of water shall be accomplished through aeration by plowing, blading, discing, or other methods satisfactory to the Engineer.

#### **Compaction**

The Contractor shall compact the material placed in all embankment layers and the material scarified to the designated depth until a uniform density of not less than 95 mass percent of the maximum dry density determined by AASHTO T

#### **Measurement and Payment**

Measurement and payment shall be made at the contract unit price or lot price as specified in the Bid Price Schedule. Payment shall include all cost in furnishing labor, materials, tools equipment and other incidentals necessary for the satisfactory completion of the project.

### **FALSEWORK AND FORMWORK**

#### **Scope**

The work covers the supply, construction, erection and removal of falsework and formwork. Falsework shall provide the necessary rigidity, support the loads imposed and produced finished

structure alignment, dimensions and grades indicated on the Drawings or as ordered by NPC. Formwork shall be of sufficient strength with all necessary bracing, fastener, etc. and in conformity with the specified requirements of applicable building code requirements for concrete formwork, and National Structural Code of the Philippines.

#### **Material Requirement**

Timber, lumber and Marine Plywood Board to be used for falsework and formwork shall be sound and shall comply with the requirements of these specifications. Use forms where a smooth form finish is required. Lumber shall be squared-edged or tongue-and-groove boards, free of raised grain, knotholes and the other surface defects. Steel when used shall conform to the requirements of the ASTM A36. Steel form surfaces shall not contain irregularities, dents, or sags.

Forms shall be wood, Marine Plywood Board. Wood forms for surfaces exposed to view in the finished structure and requiring a smooth form finish, shall be Marine Plywood Board. For unexposed surfaces, undressed square-edged lumber may be used. Forms for surfaces requiring special finishes shall be Marine Plywood Board, or shall be lined with plywood, a non-absorptive, hard-pressed fiberboard, absorptive-type lining or other suitable material. Plywood, other than for lining, shall be concrete-form Marine Plywood Board free of raised grain, torn surfaces, worn edges, patches, or other surface defects, which would impair the texture of the concrete surface. Surfaces of steel forms shall be free from irregularities, dents, and sags.

#### **Construction Requirements**

##### **Falsework and Formwork Construction**

The materials used in the falsework shall be of the quantity and quality necessary to withstand the stress imposed. The workmanship used in the falsework shall be of such quality that the falsework will support the loads imposed on it without excessive settlement.

Suitable jacks or wedges shall be used in connection with the falsework to set the forms to their required grade and to take up any excessive settlement in the falsework either before or during the placement of the concrete.

Should unanticipated event occurs, including settlement that deviate more than  $\pm 20\text{mm}$ , which in the opinion of the contractor would cause non-conformity to the requirements of the specification, the placement of the concrete shall be discontinued until corrective measures satisfactory to the NPC are provided. In the event that corrective measures are not undertaken prior to initial set of the concrete in the affected area, the placing of concrete shall be discontinued at a location determined by NPC and all concrete already poured and placed shall be removed.

Forms shall be mortar and watertight, true to the dimensions, lines and grades of the structure and with the sufficient strength, rigidity, shape and surfacesmoothness as to leave the finished works true the dimensions shown on the drawings or required by NPC and with the surface finish as specified.

The inside surfaces of forms shall be cleaned of all dirt, mortar and foreign material. Forms, which will subsequently be removed, shall be thoroughly coated with a release agent or coating prior to its use. The release agent shall be commercial quality form oil or other approved coating which will permit the ready release of the forms and will not discolor the concrete.

The work to be executed under this section shall include the furnishing of all labor, tools, and ladders, scaffolding and other facilities necessary for the satisfactory performance of all work necessary to complete the works specified in this specifications.

##### **Removal of Falsework and Formwork**

Unless otherwise shown on the drawings, permitted by NPC, falsework supporting any span of structures shall not be released before fourteen (14) days after the last concrete has been placed on the span and adjacent portions of each adjoining span for the length equal to at least half the length of the span where falsework is to release.

Falsework supporting deck overhangs and deck slabs between girder shall not be released until seven (7) days after the deck concrete has been placed.

In addition to the above requirements, no falsework shall be released until the supported concrete has attained a compressive strength of at least eighty (80%) percent of the required 28-days strength.

Falsework and formwork shall not be removed without the permission of NPC, and such permission shall not relieve the Contractor of the responsibility for the safety of the work. Blocks and bracing shall be removed at the time the forms are removed and in no case shall any portion of the wood forms be left in the concrete.

Falsework removal for continuous structures shall be as directly by NPC or shall be temporarily supported such that the structure is gradually subjected to its working stresses. False work shall not be released in any span until the strength specified herein.

When concrete strength test are used for removal of forms and supports, such removal shall be used as a minimum.

	Min. Time	Min. % Strength
Centering under girder and beams	14 days	80%
Sides of beams and all vertical surfaces	1 day	70%
Floor Slabs	14 days	80%

All debris and refuse resulting from work shall be removed and the site left in a neat and presentable condition.

#### Measurement and Payment

No separate measurement for payment will be made for this item. The entire cost thereof shall be included in the Concrete Works pay items in the Bill of Quantities.

#### REINFORCING STEEL (DEFORMED)

##### Description

This work shall consist of furnishing, fabricating, and placing of steel reinforcement of the type, size, shape and grade required in accordance with these specifications and in conformity with requirements shown on the Drawings or as directed by the NPC.

##### Material Requirement

All material shall conform to the requirement hereinafter given. Certified test reports (mill test or other) shall be submitted to the NPC for all reinforcement steel used. These tests shall show the results of all chemical and physical test made.

##### Bar Reinforcement

Reinforcement bars for concrete shall be hot-rolled, weld able, deformed billet steel bars conforming to the requirements specified in ASTM A615 and PNS 49 unless shown on the Drawings or as required by the NPC. The use of the cold twisted bars is not permitted. If not otherwise shown on the drawings, the deformed reinforcement steel shall be Grade 60 (minimum yield strength of 410 MPa) for 16 mm  $\phi$  and bigger bars and Grade 40 (minimum yield strength of 275 MPa) for 12 mm  $\phi$  and smaller bars. Bar Reinforcement shall be shipped in standard bundles, tagged and marked in accordance with the Code of Standard Practice of the Concrete Reinforcement Steel Institute.

##### Sampling

The NPC's Representative will sample reinforcement bars at the source of supply or at the point of distribution, and the Contractor shall notify the NPC in sufficient time advance to permit sampling and testing before shipment is made. Three (3) samples from each size shall be taken at random representing five (5) tons or fraction thereof of each size.

#### Construction Requirements

##### Order List for Bent Bars

Before materials are ordered, the Contractor shall furnish all order lists and bending diagrams for the approval of the NPC. The approval of order lists and bending diagrams by the NPC shall in no way relieve the contractor of responsibility for the correctness of such lists and such list and diagrams. Any expenses incident to the revisions of materials furnished in accordance with such lists and diagrams to make them comply with the drawings shall be borne by the Contractor.

Shop Drawings for Reinforcing Steel (ACI 315): Indicate bending diagrams, assembly diagrams, splicing and laps of bars, shapes, dimensions and details of bar Reinforcing, accessories and concrete cover. Do not scale dimensions from structural drawings to determine length of Reinforcing steel.

##### Fabrication

Bent bar Reinforcement shall be cold bent as shown on the drawings or as required by the NPC. Bars shall be bent round circular pin having the following diameters (D) in relation to the diameter of the bar (d):

Bars 6mm $\phi$  inclusive. D=6d

Bars 25mm $\phi$  and 28mm $\phi$ . D=8d

Bars 32mm $\phi$  and greater. D=10d

##### Protection of Material

Steel Reinforcement shall be protected at all times from injury. When placed in the work, it shall be free from dirt, detrimental scale, paint, oil or other foreign matter. However, when steel has on its surface easily removable and detrimental rust, loose scale or dust, it shall be cleaned by a satisfactory method, approved by the NPC.

Store reinforcement of the different sizes in racks raised above the ground with accurate identification. Protect reinforcing steel from contaminants such as grease, oil and dirt.

##### Placing and Fastening Reinforcement & Miscellaneous Material (ACI 310)

All Reinforcement bars, stirrups, hanger bars, wire fabric, spirals and other reinforcing materials shall be there provided as indicated in the drawing or required by the specification, together with all necessary wire tie, chairs, screws, supports, and other devices necessary to install and secure the reinforcement properly. All reinforcement, when placed, shall be free from rust, scale, oil, grease, clay, and other coatings, and foreign substances to that would reduce or destroy the bond. Rusting of Reinforcement shall not reduce the effective cross sectional area of the Reinforcement to the extent that the strength is reduced beyond specified values. Heavy, thick rust or loose, flashy rust burlap or other approved method, prior to placing. Reinforcement that has bends not shown on the project drawings or on approved shop drawings, or is reduced in section by rusting such that its weight is not within permissible ASTM tolerances shall not be used. All reinforcement shall be supported and wired together to prevent displacement by construction loads or by the placing of concrete. Unless directed otherwise by the NPC, reinforcement shall not be bent after being partially embedded in hardened concrete. Detailing if reinforcing shall conform to ACI 315. Where cover over reinforcing steel is not specified or indicated, it shall be in accordance with ACI 318.

All steel reinforcement shall be accurately placed in position shown on the drawings or as required by the NPC and firmly held there during the placing and setting of the concrete. Bars shall be tied at all intersections except where spacing is less than 30 mm in each direction, when alternate intersections shall be tied. Ties shall fasten on the inside.



Distance from the forms shall be maintained by means of stays, blocks, hangers or other approved supports. Blocks for holding reinforcement from contact with the forms shall be pre-cast mortar blocks of approved and dimensions or approved chairs. Layers of bars shall be separated by pre-cast mortar blocks or by other equally suitable devices. The use of pebbles, pieces of broken stone or brick, metal pipe and wooden blocks or metal chairs shall not be permitted. Unless otherwise shown on the Drawings or required by the NPC, the minimum distance between bars shall be 40mm. Reinforcement in any member shall be placed and then inspected and approved by the NPC before the placing of concrete commences. Bundled bars shall be tied together at not more than 1.80 meters intervals.

Reinforcement shall be paced accurately and secured. It shall be supported by suitable chairs and spaces or by metal hangers. On the ground, and where otherwise subject to corrosion, concrete or other suitable non-corrodible material shall be used for supporting reinforcement. Where the concrete surface will be exposed to the weather in the finished structure or where rust would impair the appearance or finish of the structure, all reinforcement supports, within specified concrete cover, shall be galvanized or made of a suitable non-corrodible material.

All placement or movement of reinforcing steel after placement, to position other than indicated or specified, shall be subject to the approval of the NPC.

Concrete protection for reinforcement shall be as indicated, or if not indicated, in accordance with ACI 318.

The minimum concrete cover for reinforcement specified in the bid documents shall take precedence over all permissible reinforcement placement variations; nothing in the variations listed below is to be constructed as permitting violation or compromise thereof:

Height of bottom bars	±6mm above form
Lengthwise positioning	±50mm of bars
Spacing bars in walls & solid slabs	±25mm
Spacing bars in beams and footings	±6mm
Height of top bars	±6mm
Stirrup spacing	
For any one stirrup	±25mm
For over-all group	±25mm of stirrup

Anchors and bolts; including but not limited to those for the machine and equipment bases; frames or edging, hangers and inserts, door bucks, pipe supports, pipe sleeves, pipe passing through walls, metal ties, conduits, flashing reflects, drains and all other materials in connection with the concrete construction shall, where practicable be placed and secured in position when the concrete is placed. Anchor bolts for machines shall be set to templates, shall be plumbed carefully and checked for location and elevation with an instrument, and shall be held in position rigidly to prevent displacement while concrete is being placed.

**Splicing**

Splicing or reinforcement shall be in accordance with ACI 318, except as indicated otherwise or modified herein. Where splices in addition to those indicated on the drawings are necessary, they shall be approved by the NPC prior to their use. Splices shall not be made in beams, girders, and slabs, at points of maximum stress. Butt Splicing shall be preferably be used over lapping for bar sizes larger than 32 mm $\Phi$ . Splices to be welded shall conform to AWS D1.4; certification of weld ability of the reinforcement by the manufacturer shall be submitted to the NPC. If the Contractor elects to use butt splicing of reinforcing, he shall submit complete details of the process to be used by the NPC. If the butt splices are used the Contractor shall ensure that the splice meets the requirements specified herein by performing at least three splices which shall be submitted for tests to a testing laboratory that has been approved for such testing by the NPC. The cost of these shall be borne by the Contractor.

All reinforcement shall be furnished in the full lengths indicated on the Drawings Splicing of bars, except where shown on the Drawings will not be permitted without the written approval of the NPC. Splices shall be staggered as far as possible and with a minimum separation of not less than 40 bar diameters. Not more than one-third of the bars may be spliced in the same cross section, except where shown on the Drawings.

Unless otherwise shown on the Drawings, bar shall be lapped a minimum distance of:

Splice Type	Grade 40 Min. Lap	But Not Less Than
Tension	24d	300mm
Compression	20d	300mm

Where d is the diameter of the bar. In lapped splices, the bars shall be placed in contact and wired together. Lapped splices will not be permitted at locations where the concrete section is insufficient to provide a minimum clear distance of one and one-third the maximum size of coarse aggregate between the splice and the nearest adjacent bar. Welding of reinforcing steel shall only be done if detailed on the Drawings or if authorize by the NPC in writing. Spiral reinforcement shall be spliced by lapping at least one and half (1 1/2) turns or by butt-welding unless otherwise shown on the drawings.

#### Measurement And Payment

The quantity to be paid for shall be calculated theoretical number of kilograms of reinforcement steel bars as determined from the net length of the steel shown on the drawings, incorporated in the concrete and accepted.

The weight of deformed bars will be computed from the theoretical weight of the same nominal size as shown in the following tabulation:

Designation	Size (mm)	Weight (kg/m)
#2	6	0.222
#3	10	0.616
#4	12	0.888
#5	16	1.579
#6	20	2.468
#8	25	3.854

#9	25	4.833
#10	32	6.313
#11	36	7.991

Clips, ties, separators and other and related materials used for positioning and fastening the reinforcement in places as required by the NPC shall not be included in the weight-calculated payment under this item. If bars are substituted upon the Contractor's request and as result, more steel is used than specified; only the amount specified shall be included.

When laps are made for splices, other than those shown on the drawings or required by the NPC and for the convenience of the Contractor, the extra steel shall not be measured nor paid for.

The accepted quantity shall be paid at the corresponding unit price for the item, Reinforcing Steel as shown in the Bill of Quantities which price and payment shall be made in full compensation for furnishing materials, labor, equipment and incidentals necessary to complete this item.

#### STRUCTURAL CONCRETE

##### Scope

In accordance with the specifications contained in this section, the Contractor shall furnish all materials, labor, equipment and tools and perform all concreting works in accordance with the drawings, or as otherwise directed.

##### Class of Concrete

Class of concrete or strength shall be as indicated on the drawings. Unless specified, the comprehensive strength of concrete shall conform to the requirement indicated on the provision of NSCP for Concrete and/or shall be less than 20.7 MPa.

##### Materials

##### Cement

Cement for concrete works shall be furnished by the Contractor and shall conform to the requirement of the latest edition of the Standard Specifications for Portland Cement (ASTM C150).

Unless otherwise specified, concrete shall be ordinary Portland Cement. Type I for general construction which concrete is not in contact with soils or ground water and Type II for concrete in contact with soil or ground water.

Changing of brand or type of cement within the same structure will not be permitted unless with prior permission and approval obtained from the NPC.

**Water**

Water for use in concrete shall be subject to the approval of the NPC. It shall not be salty and shall be reasonably clear and free from oil, acid, injurious alkali or vegetable matter.

**Fine Aggregates**

Fine aggregates shall conform to the requirements of the latest edition of ASTM C33 and shall consist of hard, tough, durable and uncoated particles. Fine aggregates shall generally be rounded or cubical and reasonably free from flat or elongated particles. A thin, flat and elongated particle is defined as a particle having a maximum dimension greater than 5 times its maximum dimension.

Fine aggregate shall be well graded from coarse to fine, and gradation shall conform to the following requirements:

Sieve Designation U.S	Percentage by (Standard Square Mesh) Weight Passing
9.5 mm (3/8")	100
4.76 mm (No. 4)	95-100
1.19 mm (No. 16)	50-85
0.297 (No. 50)	10-30
0.149 mm (No. 100)	2-10

**Coarse Aggregates**

Coarse aggregates shall conform to the requirements of the latest edition of ASTM C33 and shall consist of hard, tough, durable and clean, uncoated particles. All foreign materials and dust shall be removed by processing. Coarse aggregates shall generally be rounded and reasonably free from thin, flat and elongated particles (as Defined in CW-4.3.4 above) in all sizes.

Coarse aggregates shall be well graded from coarse to fine and gradation shall conform to the following requirements:

Size Group Sieve Designation	Percentage by Weight Passing		
	19.1 mm (3/4") max.	38.1 mm (1-1/2") max.	76.2 mm (3") max.
88.9 mm (3-1/2")	-	-	100
76.2 mm (3")	-	-	90-100
50.8 mm (2")	-	100	20-55
38.1 mm (1-1/2")	-	90-100	0-15
25.4 mm (1")	100	20-55	0-5
19.1 mm (3/4")	90-100	0-15	-
9.5 mm (3/8")	20-55	0-5	-

4.76 mm (No. 4)	0-15	-	-
2.38 mm (No. 8)	0-5	-	-

**General Use Minimum General Aggregate Diameter**

Massive Concrete	76.2 mm (3")
Heavy walls and slabs (0.75 m thick or more)	76.2 mm (3")
Walls, slabs, beams (0.30 m to 0.75 m thick)	38.1 mm (1 ½")
Thin walls, slabs, beam (Less than 0.30 m thickness)	19.1 mm (¾")

**Mixing Concrete**

Mixing of concrete shall conform to the requirements of ACI Code for Concrete Construction.

**Placing Concrete**

Concrete shall be conveyed from mixers to the forms or to the place of deposit as rapidly as possible and by methods that will prevent segregation or loss of ingredients. These shall be no vertical drop greater than 1.5 meters except where suitable equipment like metal pipe or tremie is used. The pipe or tremie shall be kept full of concrete and its end shall be kept buried in the newly placed concrete. Chutes through which concrete is delivered to the structure in a thin, continuously exposed flow will not be permitted except for every limited or isolated sections of the work.

Earth surface, upon which concrete shall be placed, shall be cleaned, dry and thoroughly compacted before placing the concrete.

Rock surfaces, upon which concrete shall be placed, shall be thoroughly cleaned of loose or semi-detached or unsound rock particles. Before placing concrete, all surfaces shall be wetted thoroughly to keep them in a completely moist condition, after which leveling mortar of the same cement ratio as the concrete mix complete contact between concrete and the leveled surface.

**Finishing Concrete**

After the concrete has been deposited, distributed and vibrated, the concrete shall be struck off and screened by mechanical means approved by the NPC. The finishing machine shall be of the screening and troweling type designed and operated both to strike off and to consolidate. Hand finishing may be employed when suitable finishing machines are not available. Finishing of concrete shall be done, as directed, to the satisfaction of the NPC.

All finished surfaces shall be tested with 3 meters straight edge and any variation of the surface from the desired crown or cross section shall be properly corrected.

**Removal of Forms**

Forms shall be removed as soon as practicable in order to avoid delay in curing and to make possible earliest practicable repair of surface imperfections, but in no case shall they be removed without approval. Any needed repair or treatment shall be performed at once and shall be followed immediately by the specified curing. Forms shall be removed with care so as to avoid injury to the concrete and any concrete so damaged shall be repaired as directed.

**Curing and Protection**

Concrete shall be cured for a period of not less than fourteen (14) consecutive days by keeping the surfaces of concrete continuously (not periodically) wet. Where tongue and groove forms were used and left in place of curing, they shall be kept wet at all times prevent opening at the joints and drying out of the concrete.

### **Sampling and Testing of Concrete**

No concrete work on the project will be permitted to be done until NPC signifies in writing that, following the performance of the necessary tests, he gives his approval to the use of all materials involve in making the concrete.

As work progresses, test cylinder shall be fabricated from the concrete samples and tested in accordance with ASTM C31 and ASTM C39. At least one set of four (4) cylinders shall be made from each 75 cu.m of the concrete placed of each class. Also at least one set shall be made per day for each class of concrete placed each day.

Two (2) cylinders shall be tested at 28 days for specification compliance and one shall be tested at 7 and 14 days respectively for information. The acceptance test result shall be the average of the strength of the two cylinders tested at 28 days.

The compressive strength of the concrete shall be deemed acceptable if the averages of the three consecutive strength test results is equal to or exceeds the specified strength and no individual test falls below the specified strength by more than 3.50 MPa.

Concrete deemed to be not acceptable using the above criteria maybe rejected unless the Contractor can provide evidence, by means of core tests, that the quality of concrete represented by the failed test result is acceptable in place. Three (3) cores shall be taken in accordance with ASTM C42 and soaked for 24 hours prior to testing. Concrete in the area represented by the cores will be deemed acceptable if the average strength of the cores is equal to at least 85% of and no single core is less than 75% of the specified strength.

### **Tolerances and Repair for Concrete Construction**

Concrete structure shall be constructed to the lines shown on the drawings or where so required to suit actual field requirements. Any structure that does not conform to such lines shall be repaired or removed and made a new by the Contractor at no additional cost to NPC.

Repairs shall be made at surface imperfection due to faulty placing of concrete and cuts on the structures due to the removal of excess concrete on the lines shown on the drawings. Such repairs shall be made immediately after early stripping of the forms, after the imperfections have been identified and the methods of repair appropriately established.

### **Measurement And Payment**

Measurement for payment for Concrete (except concrete which shall not be measurement for separate payment) will be based on the volume of concrete placed and accepted within the neat lines of the manner of measurement set forth in the various sections of the Technical Provisions.

## **MASONRY/ PLASTER WORKS**

### **General**

The work included under this section shall include the furnishing of all labor, material, and equipment, and performing all operations necessary to execute all concrete masonry and plastering works, as specified.

Contractor shall make all preparations and do all work necessary to receive and adjoin other work.

Contractor shall specify the position of all dowels required for masonry on other construction, including foundations.

### **Materials:**

#### **Concrete Hollow Blocks**

All property wall shall be 100mm thick x 200mm x 40mm non-bearing concrete hollow blocks.

#### **Mortar/Grout**

Cement mortar proportions for laying the Concrete Hollow Blocks shall consist of one (1) part Portland cement (Portland cement of approved brand conforming to ASTM specifications C150, Type I), and three (3) parts fine sand. Only sufficient water to make a workable mix will be permitted.

#### **Reinforcing Steel**

Reinforcing steel shall be 10mm diameter, Grade 40, spaced at 600mm on-center along horizontal and vertical of the walls. Reinforcement shall be secure with a Ga. 16 tie wire.

#### **Masonry Construction**

Blocks shall be cut accurately to fit all plumbing ducts, openings, electrical work, and all voids slushed full. Where walls are to receive plaster, the joints should be struck flush. Where certain joints are to be concealed underpaint, these joints shall be filled flush and then sacked to produce a dense surface without sheen.

Vertical head joints shall be buttered well for a thickness equal to the face shell of the block and these joints shall be shoved tightly so that the mortar bonds well to both blocks. Joints shall be solidly filled from the face of the block to the depth of the face shell.

#### **Grouting**

Reinforcing steel shall be in place and inspected before grouting starts. Vertical cells to be filled with mortar shall have vertical alignment to maintain a continuous unobstructed cell area. Cells containing reinforcement shall be solidly filled with grout.

### **PLASTERING**

#### **Mixture**

Mortar mixture for first coat shall be freshly prepared and uniformly mixed in the proportion by volume of one part Portland cement, three (3) parts sand. Finish coat shall be pure Portland cement properly graded. Hydraulic Cement and mixed with water to approved consistency and plasticity.

#### **Surface Preparation**

- a) After removals of formworks, reinforce concrete surfaces shall be roughened to improve adhesion of cement plaster.
- 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 moist condition.

#### **Application**

- a) First coat mortar mix shall be applied with sufficient pressure starting from the lower portion of the surface to fill the grooved and to prevent air pockets in the reinforced concrete/masonry work and avoid mortar mix drooping. The coat shall be lightly broom/scratch before surface had properly set and allowed to cure.
- b) Finish coat shall not be applied until after first 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 first coat surface shall be evenly moistened with potable water. Finish coat shall be floated first to to the even surface, then troweled in a manner that will force the mixture to penetrate into the first coat. Surfaces applied with finish coat shall then be smooth with paper in a circular motion to remove trowel marks, checks and blemishes. All cement plaster finish shall be 10mm thick minimum on vertical concrete and/or masonry walls.

### 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 NPC or as shown on the Plans vertical and horizontal groove joints shall be 25mm wide and 10mm deep.

### Measurement and Payment

Measurement and payment shall be made at the contract unit price or lot price as specified in the Bill of Quantities. Payment shall include all cost in furnishing labor, materials, tools, equipment and other incidentals necessary for the satisfactory completion of the project.

## RAILINGS, FRAMING & ROOFING WORKS

### General

The work included under this section shall include the furnishing, fabrication, erection and/or installation of all railings, steel roof framing, steel girts, installation of roofing and other work indicated in the Plans and specifications.

### Materials

Refer to approved plans and specifications.

### Connections

Shop connections shall be welded unless otherwise indicated in the Plans. All connections shall develop full strength of members.

### Workmanship and Fabrication

Workmanship and fabrication shall be in accordance with AISC "Specification for Fabrication and Erection of Structural Steel for Buildings" and with the following outline:

- Bearing surfaces shall be planed to true beds. Abutting surfaces shall be closely fitted.
- All columns and bearing stiffeners shall be milled to give full bearing over the cross section. It shall not be necessary to plane bottom surfaces of plate on grout beds.
- Assembled parts shall be brought into close contact, and drift pin shall be used only for bringing members into position, not to enlarge or distort holes.

### Welding

- a) Welding in shop and field shall be done by qualified welders. Equipment shall be of type, which produce current so that operator may produce satisfactory welds. The welding machine shall be of 300 amperes, 200-240 volts capacity.
- b) Unless otherwise shown on Plans, the following low hydrogen electrodes shall be used and shall be suitable for positions and other conditions of intended use in accordance with the instruction with each container.

Welding	Electrode	Submerged Arc Process
A-7 to A-7	E- 60 Series	Grade SAW-2
A-7 to A-36	E- 60 Series	Grade SAW-2



A-36 to A-36	E- 60 Series	Grade SAW-2
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- c) The appearance and quality of welds made, and the methods of correcting defective work shall conform to the American Welding Society code for Arc Welding. Surfaces to be welded shall be free from loose scale, rust, grease, paint and other foreign material except that mill scale, which withstands vigorous wire brushing, may remain.
- d) Finish members shall be true to line and free from twists, bends and open joints.

**Measurement and Payment**

Measurement and payment shall be made at the contract unit price or lot price as specified in the Bill of Quantities. Payment shall include all cost in furnishing labor, materials, tools, equipment and other incidentals necessary for the satisfactory completion of the project.

**ROOFING SHEETS**

**Description**

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

**Material Requirements**

All pre-painted metal sheet and roofing accessories shall be oven baked painted true to profiles indicated on the Plans as per approval of the NPC Engineer.

**Pre-painted Roofing**

Pre-painted roofing sheets shall be fabricated from cold rolled galvanized iron sheets specially tempered steel for extra strength and durability. It shall conform to the material requirements defined in *PNS 67:2014 Hot-dip Metallic-Coated Steel Sheets for Roofing Specification*. Profile section in identifying the architectural moulded rib to be used is as follows: Regular corrugated, Quad-rib, Tri-wave, Rib-wide, Twin-rib, and others. Desired color shall be subject to the approval of the NPC Engineer.

Gutters, Valleys, Flashings Hip and Ridge roll shall be fabricated from Gauge 26(0.50mm)-rolled plain galvanized iron sheets specially tempered steel. Profile section shall be as indicated on the Plans. Fastening hardware shall be of galvanized iron straps, rivets or J-bolts. G.I. Straps are of 0.500 mm thick x 16 mm wide x 267 mm long (gauge 26 x 5/8" x 10-1/2") and standard rivets.

Base metal thickness shall correspond to the following gauge designation available locally as follows:

1. Base Metal Thickness	Designated Gauge
0.40 mm thick	Gauge 28
0.50 mm thick	Gauge 26
0.60 mm thick	Gauge 24
0.80 mm thick	Gauge 22
2. Protective Coatings	Thickness

Zinc (minimum)	14 microns (100 gm/m <sup>2</sup> )
Paint coatings:	
Top Coat	15.20 microns
Bottom Coat	6.8 microns
3. Base Metal Thickness	Overall thickness with protective coats
0.40mm	0.427-0.451 mm
0.50mm	0.532-0.551 mm
0.60mm	0.638-0.651mm
4. Length of roofing sheets- available in cut to length long span length up to 18.29 meters	

**Construction Requirements**

Before any installation work is commenced, the top face of the purlins should be checked for proper alignment. Correct the alignment as necessary in order to have the top faces of the purlins on an even plane.

**Processing of Prepainted Metal Sheets**

Fabricated metal sheets is cleaned and pretreated in preparation for painting. Surface contaminants are removed using a suitable alkaline cleaner. The sheet is then pretreated with a chromate pretreatment. The pretreatment is a uniform, continuous deposit applied in a manner to provide excellent paint adhesion and corrosion resistance. A minimum of two coats of paint are applied to both the face side and back side of the sheet. A corrosion inhibitive primer and a top coat shall be used on the sheet. The primer is a uniform continuous film, compatible with the subsequently applied top coat. It is applied to each surface at a thickness specified by the paint manufacturer with a minimum of 0.2 mm thick. Top coat thickness varies depending on paint type and end use. The face side top coat has excellent long-term outdoor weathering characteristics.

**Handling/Lifting/Positioning of Sheets**

Sheets shall be handled carefully to prevent damage to the paint coating. Lift all sheets or sheet packson to the roof frame with the overlapping down-turned edgescaping towards the side of the roof where installation will commence, otherwise sheets will have to be turned end-to-end during installation.

**Installation Procedure**

The laying of the roofing panels should begin on the end of the building away from the prevailing wind so that the side-lap seamsface away from the prevailing wind-driven rain thus providing additional

security against water penetration. Start roofing installation by placing the first sheet in position with the downturned edge in line with other building elements and fastened to supports as recommended. Fasteners should have corrosion resistance at least equivalent to the expected life of the base material. Place the downturned edge of the next sheet over the edge of the first sheet, to provide side lap and hold the side lap firmly in place. Continue the same procedure for subsequent sheets until the whole roofing area is covered and/or (Adopt installation procedure provided in the instruction manual for each type of Architectural molded rib profile section). Pre-painted metal sheet should not come in direct contact with wet concrete. Concrete's high alkalinity attacks the aluminum, causing the coating to peel. It shall also not be placed in contact with copper, lead, or the water run-off. Electrochemical reaction between these elements and the aluminum-zinc alloy coating will lead to premature corrosion of the coating. For walling applications follow the procedure for roofing and allow a minimum end lap of 100 mm for vertical walling. For panel lapping, requirements depend on the product installation guide of a specific type of pre-painted metal sheet as per approval of the Engineer. Provide sealant, butyl tape or caulking along the lap edge to prevent any leaking. Specifications of the sealant and butyl tape shall be as per manufacturer's recommendation per NPC Engineers approval.

#### **Cutting of Sheets**

In cutting prepainted steel roofing sheets and accessories, place the exposed color side down. Cutting shall be carried out on the ground and not over the top of other painted roofing product. Power cutting or drilling to be done or carried out on prepainted products already installed or laid in position, the area around holes or cuts shall be masked to shield the paint from hot fillings.

#### **Storage and Protection**

Prepainted steel roofing, walling products and accessories should be delivered to the jobsite in strapped bundles. Sheets and/or bundles shall be neatly stacked in the ground dry and if left in the open it shall be protected by covering the stack materials with loose tarpauline. Bundles should be stored above ground at a slight angle, to prevent water or condensation build up between adjacent sheets. Removing installation debris and metal fines due to drilling and cutting from the sheet surface and avoiding exposure of insulation to the weather shall be practice at all times.

#### **Payment and Measurement**

Measurement and payment shall be made at the contract unit price or lot price as specified in the Bill of Quantities. Payment shall include all cost in furnishing labor, materials, tools, equipment and other incidentals necessary for the satisfactory completion of the project.

### **CEILING WORKS**

#### **General Scope**

This specification covers the furnishing of materials and labor including equipment necessary to complete the installation of fiber cement board panels/ceiling as shown on the drawings and as specified herein.

#### **Materials**

##### **1. FIBER CEMENT BOARD**

Shall be Fiber Cement Sheets, Auto-cleaved, single faced sheets containing Portland cement, ground sand, cellulose fiber and water. Fiber Cement sheets shall be manufactured from asbestos-free materials.

a. 3.5 mm thick for ceiling

b. Composition: Fiber cement board shall be asbestos free, fiber-reinforced cement sheets.

c. Density: 1380 kg/m<sup>3</sup> minimum

##### **2. STEEL FRAMING**

Metal Furring: Ga. 25 minimum thickness of uncoated metal galvanized C-shaped or as otherwise indicated.

### 3. FASTENERS

- a. Provide fasteners of type, material size, corrosion resistance, holding power and other properties required for fastening furring and framing members to substrates indicated.
- b. Trim Accessories: Provide metal trims accessories of profile and materials as shown on the drawings, or as otherwise required by the NPC Engineer.

### 4. MISCELLANEOUS FRAMING AND SUPPORTS

- a. General: Provide steel framing and supports for applications indicated.
- b. Fabricate units to sizes, shapes, and profiles indicated and required to receive adjacent other construction retained by framing and supports. Fabricate from structural steel shapes, plates and steel bars of welded construction using mitered joints for field connection. Cut, drill, and tap units to receive hardware, hangers, and similar items.
  - (1) Equip units with integrally welded anchors for casting into concrete or building into masonry. Furnish Insert, if units must be installed after concrete is placed.
  - (2) Except as otherwise indicated, space anchors at 600 mm O.C. and provides minimum anchor units in the form of steel straps 32 mm wide by 6 mm by 200 mm long.

### 5. MISCELLANEOUS MATERIALS

- a. General: Provide auxiliary materials for fiber cement board construction, which comply with reference standards and the recommendations of the manufacturer of the fiber cement board.
- b. Fastening Adhesive for Metal: Special adhesive recommended by manufacturer. c. Screws: As per recommendation by manufacturer.
- d. Bedding and Topping Cement: As per recommendation by manufacturer.
- e. Perforated Paper Reinforcing Tape: As per recommendation by manufacturer.
- f. Trim Accessories: Provide galvanized steel edge corner and joint trims as shown or otherwise required by the NPC Engineer as standard details.

### EXECUTION

#### EXAMINATION

- a. Examine substrates to which fiber cement panel construction attaches or abuts, preset hollow metal frames, cast-in anchors, and structural framing, with installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of fiber cement panel construction. Do not proceed with installation until unsatisfactory conditions have been corrected.

#### PREPARATION

- a. General: Follow specifications of manufacturer.

#### INSTALLATION OF STEEL FRAMING GENERAL

- a. General: Follow specification by manufacturer.
- b. Install supplementary framing, blocking and bracing at terminations in the work and for support of fixture, equipment services, heavy trim, furnishings, and similar construction to comply with details indicated and with recommendations of fiber cement board manufacturer.
- c. Isolate steel framing from building structure to prevent transfer of loading imposed by structural movement, at locations indicated below to comply with details shown on drawings.
- d. Do not bridge building expansion and control joints with steel framing or furring members; independently frame both sides of joints with framing or furring members or as indicated.

#### INSTALLATION OF STEEL FRAMING

- a. Installation Tolerances: Install each steel furring members so that fastening surface do not vary more than 3 mm from plane of faces of adjacent framing.
- b. Extend steel furring full height to structural supports or substrates above suspended ceilings, except where partitions are indicated to terminate at suspended ceilings. Continue framing over frames for doors and openings and frame around ducts penetrating partitions above ceiling to provide support for fiber cement board.

#### APPLICATION AND FINISHING OF FIBER CEMENT PANELS GENERAL

- a) Apply and finish fiber cement panels as per specifications by manufacturer for flush-jointed applications.
- b) Install fiber cement panels in manner which minimizes the number of end-bult joints or avoids them entirely where possible.
- c) Install exposed fiber cement panel with face side out. Do not install imperfect, damages or damp boards. Bat boards together for slight contact at edges and ends with not more than 1.5 mm open space between boards. Do not force into place.
- d) Locate either edge or end joints over supports, except in horizontal applications where intermediate support is provided behind end joints. Position boards so that like edges abut, tapered edges against tapered ends. Do no place tapered edges against cut edges or ends. Stagger vertical joints over different studs on opposite sides of partitions.
- e) Attach fiber cement panel for supplementary framing and blocking provided for additional support at openings and cutouts.
- f) Space fasteners in fiber cement boards in accordance with referenced application and finishing standard and manufacturer specifications.

#### METHODS OF FIBER CEMENT PANEL APPLICATION

- a. General: Follow specifications by manufacturer.
- b. Single-layer Application: Install fiber cement panel as follows, and as indicated on the drawings.
- c. Single-layer fastening Methods: Apply fiber cement panels to supports as follows: (1) Fasten to steel framing with adhesive and supplementary screws as per recommendation by manufacturer.

#### INSTALLATION OF TRIM ACCESSORIES

- a. General: Where feasible, use the same fasteners to anchor trim accessory flanges as required to fasten fiber cement board to the supports. Otherwise, fasten flanges to comply with specification by the manufacturer.
- b. Install corner boards at external corners.
- c. Install metal edge trim whenever edge of fiber cement board would otherwise be exposed or semi-exposed.  
(1) Install U-type trim where edge is exposed, revealed, gasketed, or sealantfilled. 3.8

#### FINISHING OF FIBER CEMENT BOARDS

- a. General: Apply to joint treatment at fiber cement panels joints (both directions); penetrations; fasteners head, surface defects and elsewhere as required to prepare works for decoration.
- b. Finish fiber cement panels as per recommendation by manufacturer.

#### PROTECTION

Provide final protection and maintain conditions, in a manner suitable to installer that ensures, fiber cement panel construction being without damage or deterioration at time of substantial completion.

#### METHOD OF MEASUREMENT

Fiber cement board shall be measured by actual area in square meters installed and accepted to the satisfaction of the NPC Engineer/End-user.

The quantity measured as provided in Method of Measurement shall be paid for at the contract unit price per square meter of Fiber Cement Board which price and payment shall constitute full

compensation for furnishing and placing all materials and for all labor, equipment, tools and incidentals to complete the work prescribed in this Section. Payment will be made in accordance with the Bill of Quantities.

## **DOORS & WINDOWS**

### **General Scope**

This item shall consist of furnishing of materials, labor, tools and equipment required for the door & window screen & its accessories as shown on the Plans and undertaking the proper installation in Accordance With This Specification.

### **Materials**

Refer to the Schedule of Doors & Windows in every housing quarter approved plans.

### **Workmanship**

The contractor shall take special care in the manufacturing and assembly process of joint work. All joint works shall be done in accordance with accepted practices and shall be accurate and clean so as the joined elements fit perfectly together.

### **Installation:**

- Each door and window shall be accurately cut, trimmed and fitted to its frame and hardware.
- Allowance shall be given for painter's finish and possible swelling of shrinkage.
- Clearance shall not exceed 3.2mm (1/8") at lock and hanging stiles and at top; and 6.3mm (1/4") at bottom.
- All corners shall be rounded to 0.07mm (1/26") radius. Lock and rail edges shall be slightly beveled.
- The screws for hardware shall not be driven, but merely started by driving and then screwed home.
- All doors and ventanilla shall operate freely and with all hardware properly adjusted and functioning.

### **Measurement And Payment**

Measurement and payment shall be made at the contract unit price or lot price as specified in the Bid Price Schedule. Payment shall include all cost in furnishing labor, materials, tools equipment and other incidentals necessary for the satisfactory completion of project.

## **TILE WORKS**

### **General**

The work to be executed under this section shall include the furnishing of all labor, tools, and ladders, scaffolding and other facilities necessary for the satisfactory performance of all work necessary to complete the works specified in this specifications.

### **Material Requirements**

Refer to the approved plans and specifications.

### **Workmanship**

### **EXECUTION**

All existing and old tiles shall be thoroughly removed before the new tiles will be installed.

All surfaces to receive tiles shall be structurally sound, plumb level and true, free from dust, grease, calcimine water and other foreign matter.

Wall and floor surfaces with minor variations (1/8" or less) shall be true and smooth with a skim coat of adhesive applied with flat trowel. Allow to dry before spreading more adhesive for setting the tile.

#### TILE PREPARATION

**Tiles-** may be set dry pre-soaked depending on grouting methods to be used. Wall tile may be prepared by soaking in clear water for not less than 15 minutes. If pre-soaked method is used, drain excess water on tile before setting.

**Grouting-** After floor on tile have been in place for not less than four hours, all joints shall be grouted and cleaned. Tile which becomes dry after setting shall be soaked at the joints with wet sponge, or sprayed with water before grouting to prevent cracking of the grouting compound, grout used with floor tile must be kept moist properly cured.

**Caulking-** At completion of tile work, clean out joints between tile and other built-in fixtures and apply this bead of caulking compound tooled slightly below tile surface.

**Clearing-** Upon completion, clean out joints between tile and other built-in fixtures and apply this bead of caulking compound tooled slightly below tile surface.

**Protection-** Before traffic is permitted over finished floor, cover floors with building paper. Lay board walkways on floor that are to be continuously used as passageway by workmen and CDD employees. Tile floor areas to be trucked over have suitably constructed continuous plank runaways of required width installed over building paper. Remove cracked, broken or damage tile and replace with new one.

#### Measurement and Payment

Measurement and payment shall be made at the contract unit price or lot price as specified in the Bid Price Schedule. Payment shall include all cost in furnishing labor, materials, tools equipment and other incidentals necessary for the satisfactory completion of project.

#### INSTALLATION OF PAVERS

##### General Scope

This item shall consist of installation/placing the pavers, as designated in the Bid Schedule, constructed in accordance with this Specification and in conformity with the lines and grades shown on the Plans or established by the NPC.

#### MATERIALS REQUIREMENTS

4"x8"x60mm Concrete Pavers 90deg Herringbone Pattern

#### WORKMANSHIP

1. On site, brick pavers shall be stored off the ground. Base and bedding course materials shall be stored separately and covered with weighted plastic to maintain dryness and wind protection.
2. Installation shall not occur during rain.
3. Work may start from an exact edge or from the centerline of the pavement. The pavers shall not be forced together. The pavers shall be laid in the desired bond pattern. For pavers without lugs, joint width shall be between 1/16 in. and 1/8 in. on all sides for heavy load applications and between 1/16 in. and 3/16 in. for pedestrian and other light loading applications, unless otherwise indicated in the Contract Documents or Special Provisions.
4. The pavers shall be laid straight with true bond lines to provide a uniform distribution of horizontal loads. Alignment shall be checked from time to time during the process, so that simple adjustments can be made to assure a clean, consistent bond pattern throughout. Joint widths and lines (bond lines) shall be straightened and aligned to specifications with rubber hammers and pry bars as paving proceeds.
5. All pavers shall be cut with a masonry saw to produce an accurate, clean cut. The minimum face dimension of the cut piece shall not be less than the paver thickness.
6. Back cut all pavers as required to accommodate work of other trades located in the setting beds.
7. All pavers shall be laid hand tight.

8. Lay pavers in pattern(s) shown in the Contract Documents. Place units hand tight without using hammers. Make horizontal adjustments to placement of laid pavers with rubber hammers and pry bars as required.
9. Fill gaps at the edges of the paved area with cut pavers or edge units.
10. Tamp pavers to setting bed compacted thickness indicated, assuring solid bedding so pavers do not rock after laying.
11. Lay pavers true to grade allowing for positive drainage throughout. Under no circumstances shall the top of the curb exceed or extend beyond the top surface of the pavers.
12. Adjust bond pattern at pavement edges such that cutting of edge pavers is minimized. All cut pavers exposed to vehicular tires shall be no smaller than one-third of a whole paver.
13. Protection Prior to Completion
  - a. Cover the laying face or any incomplete areas with plastic sheets overnight if not closed with cut and compacted pavers with joint sand to prevent exposed bedding sand from becoming saturated from rainfall.
  - b. When using compact dry joint sand: Allow excess joint sand to remain on surface to protect pavers from damage from other trades. Remove excess sand when installation is complete.
  - c. Protection when using compact dry joint sand/cement mixture: Apply dry joint sand to surface to protect pavers from damage from other trades. Remove excess sand when installation is complete.
14. Surface shall be broom clean after removal of excess joint sand.

#### Pavers on Sand Setting Bed

1. After the pavers have been placed on the sand setting bed, the brick pavement shall be vibrated by a mechanical plate vibrator/compactor. The compactor shall have a rubber pad to avoid damage to the pavers. The first pass shall be performed without jointing sand spread on the surface. Prior to subsequent passes of the compactor, jointing sand shall be spread across the surface before compaction. The jointing sand shall be dry and spread on the pavement until the joints appear full. Obviously the initial vibration and placement of the jointing sand shall be accomplished as soon after placing the pavers as possible and before any traffic is permitted on the paving.
2. Compaction shall not occur within 6 feet of any unrestrained edge.

#### MEASUREMENT FOR PAYMENT

Measurement and payment shall be made at the contract unit price or lot price as specified in the Bid Price Schedule. Payment shall include all cost in furnishing labor, materials, tools equipment and other incidentals necessary for the satisfactory completion of project.

Payment per square meter for pavers shall include payment in full for all labor, materials, and equipment necessary to furnish, install, and maintain the pavers and base and subgrade courses.

#### ELECTRICAL WORKS

##### General

The work to be done under this section consist of furnishing and installation of complete wiring, lighting, switches & outlet system of the military bunkhouse indicated in the plans and specified herein.

##### STANDARD OF MATERIALS

All materials to be used in the work shall be new, of high quality, free from all defects and of proven acceptability for the purpose of intended. Unless otherwise specified, materials shall conform to the latest applicable standard issued by the following authorities:



1. American National Standard Institute (ANSI)
2. Institute of Electrical and Electronic Engineers (IEEE)
3. Underwriter's Laboratory (UL)
4. National Electrical Manufacturer's Association (NEMA)
5. National Electrical Code (NEC)
6. Philippine Electrical Code( PEC)

#### **Lighting System**

The lighting system covered by this specification includes lighting and power outlets (convenience and power), switches, associated conduits conductors, lighting fixtures, fittings, etc.

The device/materials furnished shall be in accordance with the latest issues of the Applicable Codes and Standards, including all addenda, in effect at time of purchase order unless otherwise stated in this specification.

All materials and parts which are not specifically mentioned herein but are necessary for the proper installation and safe operation of the lighting system shall be identified by the Contractor and shall be furnished at no additional cost to NPC.

#### **Cables/Wires**

Cable shall be stranded annealed copper conductor suitable for continuous temperature of 90 deg. C when used in wet or dry location and 90 degrees when exposed to oil or coolant. The minimum size of conductor to be used shall be 5.5mm<sup>2</sup>.

The cables shall be designed for trouble free service for the highest system voltage. All cables and their accessories to be supplied shall have insulation levels able to withstand any voltage surges which are normally expected to occur in the power system in which are normally expected to occur in the power system in which the cable is to be employed, due to switching operations, sudden load variation, faults, etc.

The cables and accessories shall be constructed to fulfil the requirements when operating with full load factor and is suitable for use in ducts, trays and/or direct burial in ground.

#### **Lighting Fixtures, Luminaires and Accessories**

##### Lighting Fixtures

All lighting fixtures when installed shall be free of leaks, warps, dents and other irregularities.

The hangers, power conductors, supports, channels, frames and brackets of all kinds for safety and proper installation of lighting fixtures shall be furnished and installed by the contractor at his own expense.

Lighting fixtures shall be wired with approved fixture wire, 90°C insulation. Each fixture shall be wired to a single point with an adequate slack for proper connection. All lighting fixtures shall be protected from damage during installation. Any broken lighting fixtures, gloves, receptacles, stems and the like shall be replaced with parts, at no cost to NPC.

##### Lighting Luminaires

###### **Low-bay Luminaires**

Low-bay LED Capsule Lamp shall be of rugged cast aluminum housing, high specular aluminum reflector and with impact resistance lens suitable for the type of lamp shown in the bid drawings complete with the required control gears and other accessories.

#### **Conductors**

Power conductors shall be stranded annealed copper, suitable for continuous temperature of 90°C. The minimum size of ungrounded conductor to be used shall be 3.5mm<sup>2</sup>.

Insulation shall be suitable for wet and dry locations, fungi resistant and ultraviolet stable. All conductors shall be moisture and heat resistant thermoplastic or cross-linked synthetic polymer unless otherwise specified by NPC.

#### **Conductor Installation**

Power conductors pulled through conduits shall be supported in an approved manner so as to avoid damaged to the insulation. Grease or oily substances shall not be used to facilitate the passage of the conductor in conduits

The pull shall be applied to conductors only by means of approved grips and the end portion of the conductor, which has been marked or deformed by the grip, shall be cut-off by the Contractor.

All conductor runs shall be continuous and all termination shall be at terminal boards, equipment, etc. No splices are allowed in conduit or cable tray.

Prior to installation of conductors, conduits and cable tray shall be thoroughly cleaned to prevent damage to conductor during installation. After conductors have been installed, conductors shall be tested for continuity and insulation resistance and shall be tagged with respective conductor number.

The contractor shall submit catalogues and/or brochures showing details of conductor insulation and capacity ratings of all types of conductors to be supplied for approval of NPC.

#### **Conduit System**

All embedded and combined in ceiling conduits, boxes and fitting required for the power and control conductors including all necessary hardware and accessories such as screws, bolts, concrete inserts, clamps, locknuts, couplings shall be furnished by the Contractor. The required quantities of various items of conduits and associated materials shall be furnished in accordance with the installation requirements.

During installation, due precaution shall be taken to protect the conduit and threads from mechanical injury. The ends of the conduit shall be sealed in an approved manner. Conduit runs shall be sealed by the use of caps and discs or plugs. The seals shall be maintained, except during inspection and tests, until the conductor is pulled in. Conduit shall be checked to be free from obstructions by pulling a wooden mandrel of appropriate size through the conduit.

Conduits running in floors and terminating at equipment mounted on concrete bases shall be brought up to the equipment within the concrete bases wherever possible.

All joints between lengths of conduits and threaded connection to boxes, fittings and equipment enclosures shall be made watertight.

Conduits installed outdoors running underground shall be buried to a minimum of 0.60m.

#### **Non-Metallic Conduits**

Non-metallic conduit shall be made of un-plasticized polyvinyl chloride (uPVC) smooth walled inside and outside, colored red-orange, schedule 40.

The uPVC conduits shall be non-corrosive and weatherproof, resistant to the attacks of acids and alkalis and must have a self-extinguishing property hence shall not support combustion. It shall resist corrosion, rust and scale.

#### **Junction/Utility Box**

##### **Junction/ Utility Boxes**

All junction/utility boxes for concealed work shall be of hot dip galvanized steel or un-plasticized polyvinyl Chloride. All walls boxes on exposed work shall be of aluminum blasted cast iron.

Utility boxes shall be firmly anchored in place and where required provided with fixture supports. The Contractor shall provide special supports for recessed lighting fixtures, etc. Suitable expansion

screws shall be used for securing boxes to solid masonry and approved type toggles for securing to hollow masonry units.

#### Pull Boxes

Pull boxes shall be installed at all necessary points, to prevent damage to the insulation or other damage that might result from pulling resistance or for other reasons related to improper installation. All pull boxes shall be made of galvanized sheet steel not less than 2mm or un-plasticized polyvinyl chloride. Where pull boxes are used in connection with exposed conduits, plain covers attached to the pull box with a suitable number of countersunk flathead machine screws may be used.

#### **Measurement and Payment**

Measurement and payment shall be made at the contract unit price or lot price as specified in the Bill of Quantities. Payment shall include all cost in furnishing labor, materials, tools, equipment and other incidentals necessary for the satisfactory completion of the project.

### **PLUMBING WORKS**

#### **General**

The work to be done under this Specification consists of the fabrication, furnishing, delivery and installation, complete in all details, testing and commissioning of this contract, at the subject premises and all work materials incidental to the proper completion of the installation, except those portions of the work which are expressly stated to be done by others. All works shall be in accordance with the governing Codes and Regulations and with this Specification, except those where same shall conflict with such Codes, etc., which the later shall then governs. The requirements with regards to materials and workmanship specify the required standards for the furnishing of all labor, materials, and appliances necessary for complete installation of the work specified herein and indicated on the Drawings. The specification is intended to provide a broad outline of the required equipment, but is not intended to include all details of design and construction.

This also include construction of septic tank. For the specifications of concrete, reinforcement, and masonry works shall be repair on Items No. 8 & 9.

#### **Scope of Works**

Under this section of the specification, provide all labor, materials and equipment and perform all the work necessary for the complete execution of all the Work as shown on Drawings and specified in this specification. Scope of works shall include but does not be limited to the following major items of work:

1. a) Furnish and install complete water distribution system for the building and ground including incoming supply pipes and connections, pipes, valves, back-flow preventers, hose bibbs, pressure regulators, insulations, accessories, etc.  
b) Storage, delivery, protection before installation and connection of plumbing fixtures (e.g. water closets, shower, sinks, lavatories, faucets in toilets and baths), puttings, trims and accessories.
2. Furnish and install storm drainage system for the building and ground including pipes, valves, drains, cleanouts, storm basins and interceptors.
3. Furnish and install soil, waste and vent systems for the building and ground including pipes, valves, drains, cleanouts, sewer basins and interceptors.
4. Connections to existing water, storm and sewer drainage mains of the building water distribution, storm and sewer collection systems.
5. Complete testing of storm and sewer drainage systems and equipment.
6. Pressure testing of the installed water distribution system.

7. Leakage testing of soil, waste, vent, and storm drainage systems.
8. Testing, balancing and commissioning of all equipment.
9. Furnish and install all required consumable materials and materials tube installed.
10. If anything has been omitted on any item of works such as materials usually furnished which are necessary for the completion of the sanitary and plumbing works as outlined herein-before, then such items must be and hereby included in this division of work.

**OTHER APPLICABLE STANDARDS OR CODES FOR THIS SUBCONTRACT:**

**A. CODES:**

1. National Building Code of the Philippines
2. Revised National Plumbing Code of the Philippines, Latest Edition
3. Philippine Code on Sanitation, PD 856
4. Uniform Plumbing Code, Latest Edition by International Association of Plumbing and Mechanical Officials
5. Applicable regulations and local ordinances.

**B. STANDARDS:**

1. Underwriters' Laboratories (UL)
2. American Society for Testing and Materials (ASTM)
3. American National Standards Institute (ANSI) 4. National Electrical Manufacturers' Association (NEMA) 5. American Society of Mechanical Engineers (ASME) 6. Factory Mutual (FM) 7. National Fire Protection Association (NFPA)

**Potable Water System**

**General**

Provide Potable Water System complete in all respects including submittals, shop drawings, piping, valves, back-flow preventers, bibs, pressure regulators, insulations, filters, testing and all accessories required. Potable water system includes flushing and drinking water supply.

**Qualifications:**

All work shall comply with the following:

1. National Building Code of the Philippines
2. Revised National Plumbing Code of the Philippines, Latest Edition
3. Philippine Code on Sanitation, PD 856
4. Uniform Plumbing Code, Latest Edition by International Association of Plumbing and Mechanical Officials

**Cross-Connections:**

No plumbing fixtures, special equipment, device, or piping, shall be installed which will provide cross connection between a distributing supply for drinking water or domestic water and a polluted supply or waste, such as a drainage system or a soil or waste pipe, so as to make possible the backflow or back siphonage of sewage or polluted water into the potable water supply system. Where the

possibility of back siphonage exists, water supplied to the fixture shall be introduced through a suitable backflow prevention device.

#### STANDARD SPECIFICATIONS AND CODES:

In addition to the requirements shown or specified in the Contract Documents, comply with the following Standard Specifications and Codes:

1. ASME B31.9; Building Services Piping
2. ASHRAE 90-A; Section 7, Energy Conservation
3. AWWA C-600; Installation of Iron Water Mains
4. WH-201; Plumbing and Drainage Institute Standard
5. OSHA; Occupational Safety and Health Administration

Materials meeting authoritative standards of other rating agencies and organizations which will ensure an equal or higher quality than standards herein specified will also be accepted. Unless otherwise specified in drawings, materials for potable water line shall with the following specifications:

1. All pipes and fittings to be used shall be made of Polypropylene Random Co-polymer (PPR-C)
2. Polypropylene component shall be manufactured using Hostalen PPH5416, a random polypropylene with high molecular weight and shall have a sigma 80 value for allowable stress, in kgf / sqcentimetres.
3. All PPR Pipes and Fittings shall be in color blue to conform with International standards for potable water
4. All PPR Pipes and Fittings shall conform with DIN 8077 / 8078
5. All Pipes shall be rated PN 20 and fittings rated PN 25
6. All metal parts for fittings shall be made with Stress Free Brass
7. All metal parts for fittings shall be dove tailed and sidings knurled to ensure high adhesiveness of metal part to plastic components

#### Pipe, Fittings and Valves:

##### WATER LINES:

All underground piping, risers and distribution lines shall be Polypropylene (PPR-Random Type 3) and fittings, and rated at PN 20. Basis of design is Vesbo. Joint between PPR and metallic materials shall be made with an approved jointing coupling or flanged connection. Flange gasket and O-ring shall be of EDPM (EthylenePropylene-Rubber) quality. Adaptors to threaded connectors for 63 mm diameter and below; and adaptors to fanged for 75 mm diameter and above.

- a) Cement Mortar Lining: AWWA C-104
- b) Iron Fittings, 80 thru 1200 mm: AWWA C-110
- c) Flanged Pipe: ANSI B16.1 and AWWA C-115
- d) Coal Tar Coatings: AWWA C-203
- e) Gate Valves, 80 thru 1200 mm: AWWA C-500
- f) Check Valves, 50 thru 600 mm: AWWA C-508
- g) Globe Valve: 50 mm thru 150 mm: ASTM B584 200 mm thru 300 mm: ASTM A48; Class 40 350 mm thru 400mm: ASTM A536

##### VALVES:

Provide all valves specified or shown on the drawings. Water working pressure rating for any valve shall not be less than the hydrostatic test pressure for the system in which it is installed.

1. Bronze Gate Valves: MSS SP-70
2. Bronze Check Valves: MSS SP-71, Non-Slam type
3. Bronze Valves: MSS SP-80

4. Cast Iron Globe Valves: MSS SP-85
5. Cast Iron Backwater Valve: ASTM A-48
6. Butterfly Valves: Flangeless Wafer Body of 500 mm. diameter, suitable for dead end service. Cast iron body, corrosion resistant disc mounted to shaft by two (2) stainless steel screws, field replaceable set with a dovetail or retention groove, complete with gear operator, with two (2) meters extension assembly and floors stands for remote control of valve operator. Connecting flange should be of galvanized steel body.
7. Float Valve: ASTM A-48 Shall be hydraulically operated, pilot controlled, diaphragm actuated, single seated, with resilient disc. Valve shall open wide when float is at low water level and close drip tight when float is at high level. Class 125 and cast iron body with stainless steel trim. Basis of design is Bermad Model 750-60 Series.
8. Pressure Reducing and Pressure Sustaining Valve; Main valve body and cover; conforming to ASTM A-48. The valve shall be a single seated, hydraulically-operated, pilot controlled, diaphragm type globe valve. The valve shall withstand a temperature up to 180oF Maximum. The trim shall be 304 Stainless Steel. Basis of design is Bermad Model 723 Series, Class 250.
9. Anticipating Surge/Pressure Relief Valve Provide an anticipating surge/relief at the main pump discharge riser. Basis of design is Bermad Model 735 Series, Class 250.

**JOINTING MATERIALS:**

- A. FLANGE JOINTS: Gaskets shall be 1.5 mm thick neoprene/natural red rubber. Bolts shall be square-head, ASTM A-307, with heavy stainless steel hex nuts.
- B. SCREW THREAD JOINTS: Lubricant shall be non-hardening and non-poisonous. Pipe threads tape to be PTFE of an approved propriety brand.
- C. SOLDERED JOINTS: Solder metal shall be 95-5 Tin-Antimony. All metal shall conform to ASTM B32.

**BELLOWS TYPE AIR CUSHIONS:**

Provide water hammer arresters where specified and shown on the drawings. Assemblies shall be of all stainless steel construction and include welded, nested bellows precharged with non-combustible gas and an external shell designed to withstand burst pressures of up to 27.5 MPA (4000 psi) and shall comply with the following standards. Basis of design is Wade.

1. Plumbing and Drainage Standard PDI-WH-201 2
2. American Society of Sanitary Engineering Standard ASSE-1010

**PRESSURE GAUGES:**

Pressure gauges shall have range such that normal operating pressure is centered in range and be accurate within one percent of the Bourdon tube; spring with 100 mm dials, black finished case, white dial with black figures and graduations, and with recalibrating screws. Each gauge shall be furnished with a shut-off cock and a pressure snubber. Except for pressure gauges on pump discharge riser which shall have a minimum 150 psi rating, all other pressure gauges shall be rated 100 psi.

**HOSE BIBBS:**

- A. Provide brass sill faucet assemblies complete with tee handles, vacuum breakers, 20 - 2.2 mm National Hose Thread on spout. Basis of design is Chicago Faucet.
- B. Rough chromium plated outside sill faucet, with 20 mm female inlet. Chicago Faucet, #998.

**STRAINERS:**

- A. Strainers shall be of the same size as the piping in which they are installed. Each strainer shall be equipped with an easily removable cover and stainless steel screen, suitable for the service intended, with a net free area at least that of the entering pipe. Basis of design is Bermad 70F Series, Class 150.

- B. Strainer bodies shall be screwed bronze for 80 mm and smaller; and flanged cast iron, or grooved end ductile iron for sizes 100 mm and larger. Maximum screen perforation size shall be as follows:
1. Upstream of automatic valves: 1 mm
  2. Suction side of pumps: 3 mm.

#### **INSTALLATION OF PLUMBING FIXTURES GENERAL SCOPE**

This item shall consist of furnishing of materials, labor, tools and equipment required for installation of plumbing fixtures as shown on the Plans and undertaking the proper installation in accordance with this specification.

#### **MATERIALS**

Refer to the plumbing works of the approved plans of every housing quarter.

#### **INSTALLATION**

Surfaces of fastening devices exposed after installation shall have the same finish as the attached fixtures. Exposed screw heads shall be oval. Install fixtures at the location and height as shown in the drawings. Protect exposed surfaces of accessories with strippable plastic or by other means until the installation is accepted. Coordinate fixture manufacturer's mounting details with other trades as their work progresses. After installation, thoroughly clean exposed surfaces and restore damaged work to its original condition or replace with new work.

#### **Surface Mounted Accessories**

Mounting on concealed back-plates shall have concealed fasteners. Unless indicated or specified otherwise, install fixtures with sheet metal screws or wood screws in lead-lined braided jute, teflon or neoprene sleeves, or lead expansion shield, or other approved fasteners as required by the construction. Install back-plates in the same manner, or provide with lugs or anchors set in mortar, as required by the construction.

#### **Measurement and Payment**

Measurement and payment shall be made at the contract unit price or lot price as specified in the Bid Price Schedule. Payment shall include all cost in furnishing labor, materials, tools equipment and other incidentals necessary for the satisfactory completion of project.

#### **PAINTING WORKS**

##### **GENERAL SCOPE**

This specification covers the furnishing of materials, equipment and labor necessary to complete all field painting works on buildings as shown and indicated on the drawings and schedule of finishes as well as specified herein.

##### **DELIVERY AND STORAGE**

Deliver coatings and coating materials in unopened original container bearing the manufacturer's name and brand designation, specification number, batch number, color, date of manufacture, and manufacturer's instruction for application. Restrict storage of coatings and coating materials and the mixing of coatings to the locations directed.

##### **SELECTION OF COLORS**

Colors of finish coats shall be as approved by the Architect / Engineer. Manufacturer's name and color designation, if indicated, are used for the purpose of color designations only and are acceptable for use on this project only if they conform to all specified requirements. Products of other manufacturers are acceptable if the color closely approximate the colors indicated and the product conforms to all specified requirements.

##### **DESCRIPTION OF WORK**

Surfaces concealed by portable objects and by surface mounted articles readily detachable by removal of fasteners such as screws and bolts are included in the work. Surfaces concealed and made inaccessible by panel boards, fixed ductwork, machinery, and equipment fixed in place are not included. Remove articles obstructing access to those surfaces specified to be included in the work and restore to their original position on completion. Do not coat surfaces in concealed spaces unless specifically so stated. Do not coat surfaces of steel to be embedded in concrete. Do not coat copper, stainless steel, and aluminum except where specifically so stated and except where surfaces have existing coatings. Do not coat new factory finished material except those that require identification or color coding and those factory-finished surfaces which are damaged during installation. Restore damaged factory-finished surfaces to their original condition. Do not paint zinc-coated ducts, zinc-coated pipe, or copper pipe in concealed spaces.

#### Exterior Painting

Includes new surfaces, including items on or a part of the roof which are not factory-finished.

#### Interior Painting

Includes new surfaces, and appurtenances of the types listed. Where a space or surface, supports, hangers, and miscellaneous metalwork, except as specified otherwise herein.

#### Mechanical and Electrical Painting

Includes the field coating as required of interior and exterior piping, conduit, ductwork, supports, hangers, air grilles, registers, miscellaneous, and coverings where required, except as specified otherwise herein.

#### MATERIALS

Paints enamels, coating, primers and stains shall be "best-in-line" product.

Lead Content Do not use coatings having a lead content of over 0.06 percent by weight of nonvolatile content.

#### EXECUTION

##### PROTECTION OF AREAS AND SPACES

Remove, mask, or otherwise protect prior to surface preparation and painting operations such items as hardware, hardware accessories, machined surfaces, radiator covers, plates, lighting fixture, and similar items in contact with coated surfaces. Following completion of painting, reinstall removed items utilizing workmen skilled in the trades involved for such removal and reinstallation. Protect from contamination by coating materials all surfaces not to be coated. Restore surfaces that are contaminated by painting materials to original condition.

##### PREPARATION OF SURFACES

Remove all dirt, rust, scale, splinters, loose particles, grease, oil and other deleterious substance from all surfaces which are to be coated or otherwise finished. Allow putty to set one week before coating. Caulking and glazing compounds shall be allowed to cure for times stated in manufacturer's literature prior to being coated. Sandpaper entire surface of existing enamel and other glossy surfaces before application of any coatings. Inspect surfaces after preparation and receive approval before application of any coatings. On surface to be coated with water thinned coatings, spot prime with a brush all exposed nails and other ferrous metal with zinc chromate primer.

##### Wood Surfaces

Surfaces shall be free from dust and in an approved condition to receive the paint or other finish. Do not use water on uncoated wood. Prior to application of paint, treat knots and resinous wood with an application of knot sealer. Putty cracks and nail-holes after the priming coat has been applied and has dried properly. Prime coat wood doors, frames and trim immediately following delivery to the job site. Sandpaper the entire area previously painted interior wood surfaces; scrape as necessary to remove loose coatings. Set and putty stop all nail heads. Where checking of the wood is present, sand the surface down smooth, wipe and apply a coat of pigmented orange shellac and allow to dry before additional paint is applied. Fill open joints and all other openings with putty.



#### Concrete and Masonry

Remove dirt, fungus, grease, and oil prior to application of coatings. Wash new surfaces with a solution composed of from 14 to 56 grams of tri-sodium phosphate per 1 liter of hot water and rinse thoroughly with fresh water. Wash previously coated surfaces with a suitable detergent and rinse thoroughly. Remove glaze, all loose particles, and scale by wire brushing. Remove efflorescence by scraping, wire brushing, and washing with 5 to 10 percent by weight aqueous solution of hydrochloric (muriatic) acid and then wash thoroughly with fresh water, removing all traces of the acid. Give all new surfaces to be painted with other than cement-water paint a neutralizing treatment consisting of 0.23 kg. of zinc sulphate in 1 liter of warm water. Apply the neutralizer liberally and allow to dry, then rinse the surfaces thoroughly with clean water and allow to dry for not less than 48 hours before paint is applied.

#### Plaster

Prior to painting, repair all joints, cracks, holes, and other surface defects with patching plaster or spackling compound and sand out smooth. New plaster to be coated shall have an instrument-measured moisture content of not more than 8 percent. In addition to moisture content requirements, allow new plaster to age a minimum of 30 days before application of coating.

#### New Unprimed Metal Surfaces

Solvent clean zinc-coated surfaces with mineral spirits and wipe dry with clean, dry cloths. Immediately after cleaning and treating, apply pretreatment wash primer, to a dry film thickness of 0.2 to 0.5 mil on zinc-coated, and ferrous surfaces. Apply primer as soon as practicable after pretreatment has dried. Surface preparation shall be in strict compliance with Steel Structure Painting Council, SSPC SP-10, Near White Blast Cleaning also known as through blast cleaning using dry abrasive.

#### New Hot Metal Surfaces

Clean new surfaces down to clean bare metal free of mill scale, rust, oil, oxides, dust, coatings and contaminates. Apply new coatings before any new oxidation or contamination begins. Surface preparation shall be in strict compliance with steel structures. Painting SSPC-SP-10 near white metal blast cleaning also known as thorough blast cleaning using dry abrasive.

#### APPLICATION

Provide finished surfaces free from bumps, drops, ridges, waves, laps, brush marks, and variations in colors. Avoid contamination of other surfaces and repair all damage thereto. Allow sufficient time between coats to permit thorough drying and provide each coat in proper condition to receive the next coat. Each coat shall cover the surface of the preceding coat or surface completely; there shall be an easily perceptible difference in shades of successive coats. Thoroughly clean dust-free before and during the application of coating material. Prior to erection, used two coats of the designated primer to treat and prime wood and metal surfaces, which will be inaccessible after erection. Thoroughly work painting materials into all joints, crevices, and open spaces. Finished surfaces shall be smooth, even and free of defects. Retouch damaged painting before applying succeeding coats of paint. Spray painting operations shall comply with the best procedural trade practice. Procure and utilize the engineering controls and/or personal protective equipment necessary for safe and effective application of specified paint systems. Apply strains in accordance with the manufacturer's printed instruction. Storing, thinning, mixing, handling and applications of painting materials shall be in strict compliance with the manufacturer's recommendation and instruction. Unless otherwise recommended by the paint manufacturer, painting shall be done when:

- a. Metal surface temperature is at least 3°C more than dew point temperature
- b. Ambient temperature is above 10°C
- c. Relative humidity is less than 85%
- d. Application of paints shall be done by Airless Spray Equipment. Pigmented and catalyzed materials shall be thoroughly mixed and strained before applying. Materials that have not been applied within the pot life period specified by manufacturer shall be discarded and properly disposed of.

#### Equipment

Apply coatings carefully with good, clean brushes or approved spray equipment, except as specified otherwise. Spray areas made inaccessible to brushing by ducts and other equipment. Use airless type spray equipment. Use approved rollers for the application of flat latex coatings to interior walls and ceilings.

#### *Thinning of Paints*

Reduce to proper brushing consistency by adding fresh paint, except that when thinning is not mandatory for the type of paint being used.

#### *Environmental Conditions*

Do not apply exterior coatings in rainy weather or when the temperature of the air at the surface is over 35 degrees C. Apply interior coatings when the surfaces to be painted are dry and the temperature can be kept below 95 degrees F during the applications of ordinary paints, between 65 degrees F and 95 degrees F during the application of enamels and varnishes.

#### *Special Requirements for Coating Concrete Masonry Surfaces with Acrylic Emulsion*

Paint Requires containers be marked for the formulation and mixing of fill coat. The fill coat shall conform to these markings except as specified herein.

##### a. Mixing of Fill Coat

The formula given in Acrylic Emulsion Paint for the content of the fill coat requires a definite amount of water to be added in preparation of the mixture. This requirement shall not apply. Deliver the sand, cement, and mixing liquids pre-proportioned and packaged so that field proportioning will not be required. Field mix the mixing liquid with the sand and cement; after this mixture is thoroughly blended, add water as necessary to produce a rich, creamy mixture of proper brushing consistency. Mix the fill coat materials by hand but do not vigorously agitate. After mixing, allow to set for 10 minutes to permit air to escape before applying. The fill coat mixture will gradually thicken with time; add small amounts of water, when necessary, to keep the mixture a rich brushing consistency. Do not begin mixing more than one hour before application.

##### b. Wetting of Surface

Before applying filler coat, thoroughly wet the masonry and concrete to control surface suction and provide a reserve of moisture to aid in curing the paint. A garden hose nozzle adjusted to a fine spray is adequate for the purpose. Do not dampen with a brush dipped in water. Dampen the masonry and concrete in one operation not more than one hour nor less than 30 minutes before painting. Apply the spray in such manner that each part is sprayed three or four times for about 10 seconds. Allow time between applications for the water to soak into the surface. If the surface tends to dry rapidly, as in hot weather, re-dampen slightly just in advance of painting. The surface shall be moist but without free water when paint is applied.

##### c. Application

Do not paint when the paint may be exposed to temperatures below 40 degrees F within 48 hours after application or when the temperature is over 95 degrees F. Rub the filler coat into the surface in such a manner as to fill all depressions, holes, voids, joints, and hollows. Apply the filler coat with stiff fiber bristle brushes with bristles not longer than 2-1/2 inches, using a circular motion. Give the surface a final stroke parallel to the course of block. Provide uniform coverage and laps well brushed out. Apply the first finish coat at a rate of not less than one gallon per 250 square feet; apply the second finish coat at the rate of not less than one gallon per 300 square feet. Brush apply finish coats, except that behind large ducts and similar locations inaccessible to a brush they may be applied by rollers. Spray application will not be permitted. Deliver all paint to the job site prior to application. Compute the amount of finish coat paint required and submit calculations for approval. Do not begin painting until this amount has been approved and delivered to the job site. Apply all delivered paint. Keep paint in tightly covered containers when not in use; keep stirred to maintain uniform color and consistency during application. At least 24 hours shall lapse between coats; do not start another coat until the preceding coat has become so hard that it cannot be marked with the brushes used. In hot

weather, slightly moisten the prior coat before applying the succeeding coat. Covering is not necessary.

#### Paint Systems

New surfaces made by cleaning operations, shall receive the following coatings. Apply paints, primers, varnishes, enamels, undercoats, and other coatings to a dry film thickness of not less than 1.0 mil. each coat except as specified otherwise. Where coating thickness is specified, it is the minimum dry film thickness.

#### a. Exterior and Interior Surfaces

##### 1. Exterior Concrete / Masonry and Plaster Surfaces

Primer: Acrylic solvent base coating primer

Putty: Acrylic solvent base putty

Two coats of 100% acrylic latex paint

##### 2. Metal Surfaces

1st Coat: Red Oxide Primer

2nd and Third Coat: Quick Dry Enamel

##### 3. Interior Concrete / Masonry and Plaster Surfaces

First Coat: Flat Latex

Putty: Masonry Putty

2nd and Third Coat: Odorless Water Base Interior Paint

##### 4. Interior/ Exterior Masonry

1st Coat: 100% Acrylic Water Based

Putty: Acrylic Solvent Water Based Putty for Interior

Masonry Water Base Putty for Exterior

2nd and Third Coat: 100% Acrylic Latex Paint

#### b. Interior Surfaces Not Specified Otherwise

Wood Surfaces

1st Coat: Flat Alkyd Type Paint

Putty: Alkyd Type Putty

2nd and Third Coat: Alky Type Enamel Paint

#### c. Oil Wood Stain Lacquer Varnish Products that highlights wood grains, adds freshness and color and protect interior paneling, furniture, doors, cabinets and other woodworks.

1st Coat: Oil Wood Stain (any desired color)

2nd and Third Coat: Lacquer Sanding Sealer (Commercial Grade Nitrocellulose based sealer)

4th and 5th Coat: Clear glass Lacquer (nitro cellulose solvent based high gloss lacquer varnish finished)

#### d. Coat other surfaces for which the type of coating has not been specified herein as specified for surfaces having similar conditions of exposure.

#### e. Mechanical, Electrical and Miscellaneous Metal Items, Except Hot metal Surfaces and New Pre-finished Equipment Pre-finishing of new mechanical and electrical equipment is specified in the section covering the particular item.

#### Method of Measurement

Painting of concrete, wood and metal surfaces shall be measured by the number of square meters applied and accepted.

#### Basis Of Payment

The quantity measured as provided in Method of Measurement shall be paid for at the contract unit price, respectively for each of the Pay Items listed below and shown in the Bill of Quantities, which price and payment shall constitute full compensation for furnishing and placing all materials and for all labor, equipment, tools and incidentals to complete the work prescribed in this Section. Payment will be made in accordance with the Bill of Quantities.

#### **CLEARING AND DEMOBILIZATION**

##### **General Scope**

This item shall consist of the disposition of entire Contractor's camp facilities, clearing and cleaning at the work site.

##### **Workmanship**

Before moving out, the contractor shall restore the orderly state of worksite by clearing all temporary structures. Remove all excess/waste materials and store in designated areas.

Before the Contractor will demobilize its construction equipment/ tools, materials and crew, he shall secure approval from NPC and a joint inspection with the NPC inspector and Contractor will be conducted to make sure that all his accomplishment/ work that needs remedial attention or correction shall be done prior to the issuance of the Certificate of Completion.

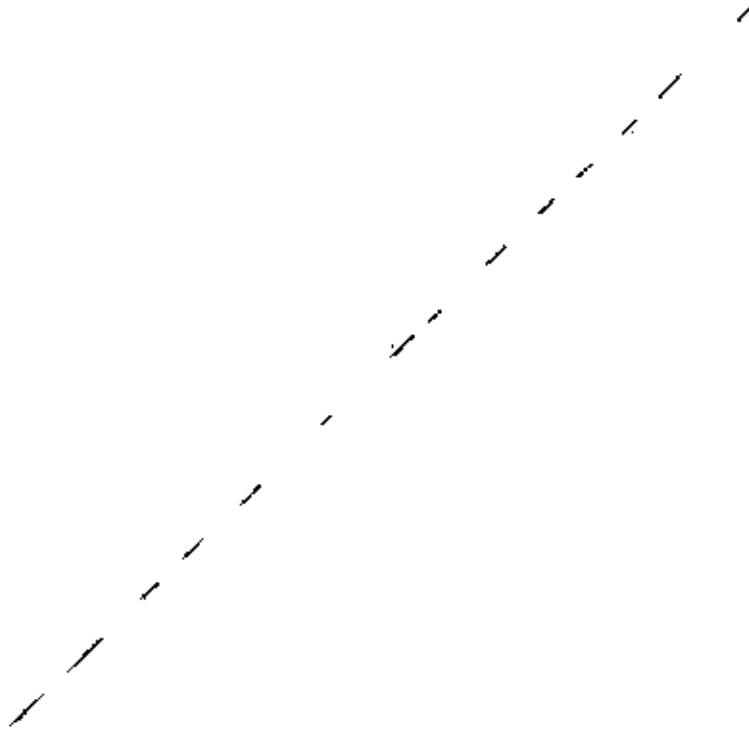
##### **Measurement and Payment**

Work prescribed herein shall not be measured and paid separately; same shall be deemed to be included in pay items for other items for work.

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

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	<b>MRSQ HOUSE NO. 7</b>
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Breakfast Nook (See Detail)

2x4 LED Drop Light

Orange Flame Color Finished (SEMI-GLOSS)

White Paint Enamelled (Semi - Gloss)

Chocco Brown Paint, Finished (Semi-Gloss)

20x 100cm Wood Plank Ceramic Tiles (Light Wood Colored Textured; Maple or Birch)

20mm THK. Engineered Quarts Stone (Black Granite Color)

Agus 4 Housing Quarter no. 6

Agus 4 Housing Quarter no. 6

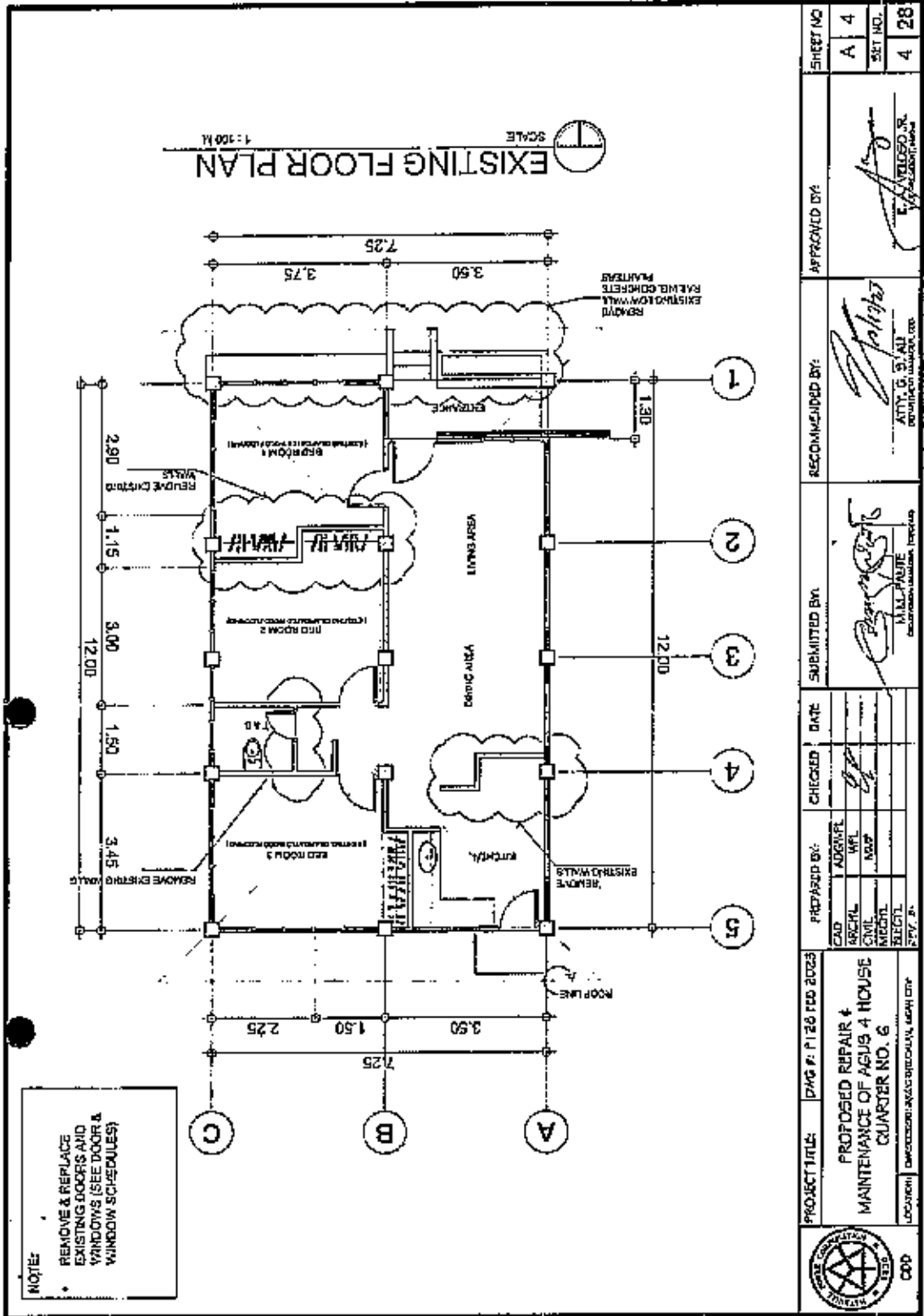
NATIONAL POWER CORPORATION

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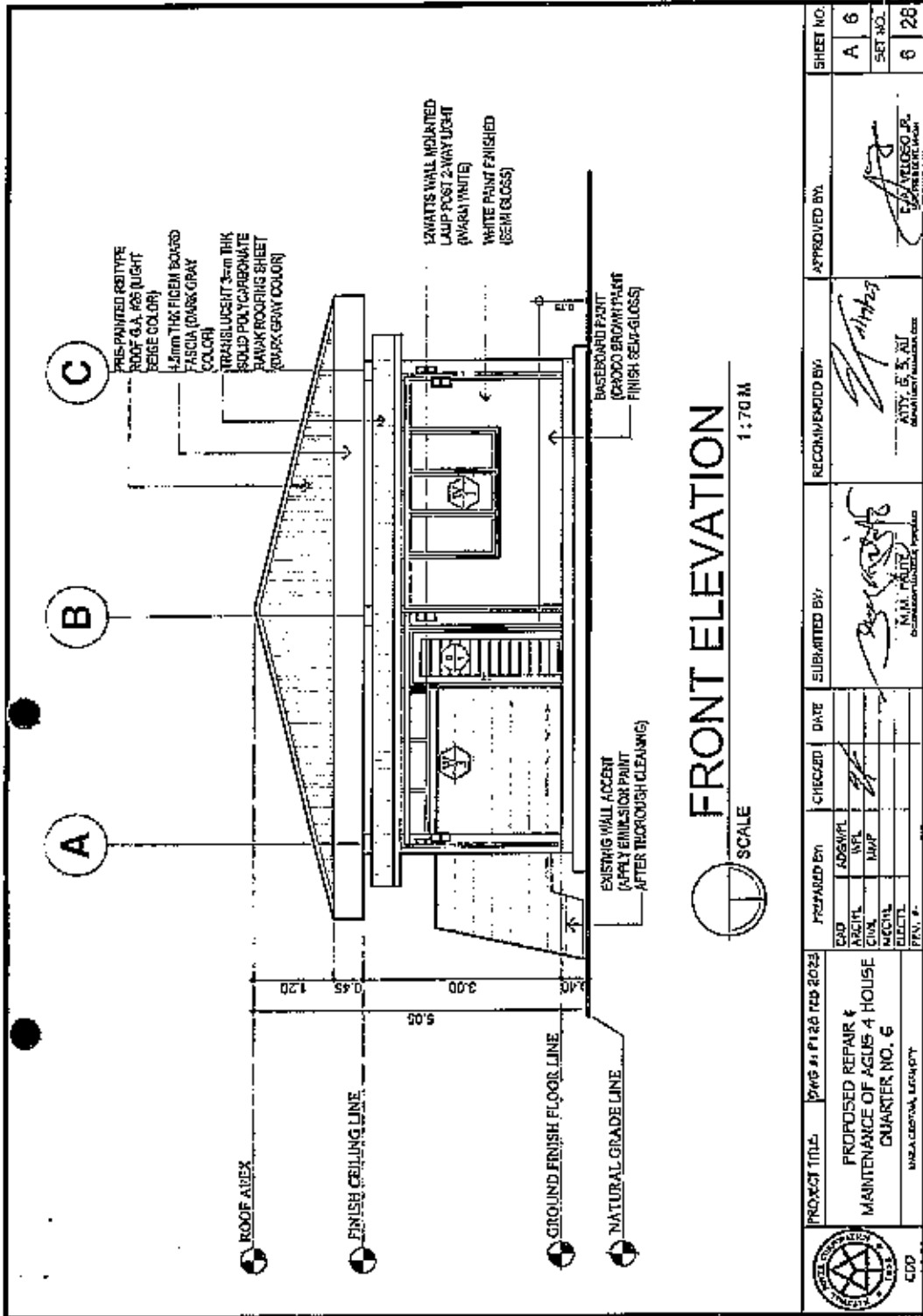
Agus 4 Housing Quarter no. 6

Agus 4 Housing Quarter no. 6

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	PROPOSED REPAIR & MAINTENANCE OF AGUS 4 HOUSE QUARTER NO. 5 (AGUS 4 HOUSING QUARTER NO. 5) (AGUS 4 HOUSING QUARTER NO. 5)	DIV 7: F1 20 FEB 2023	WPL MNP	WPL MNP	DATE: 10/16/23 NAME: [Signature] POSITION: [Title]	DATE: 10/16/23 NAME: [Signature] POSITION: [Title]	DATE: 10/16/23 NAME: [Signature] POSITION: [Title]	DATE: 10/16/23 NAME: [Signature] POSITION: [Title]	DATE: 10/16/23 NAME: [Signature] POSITION: [Title]

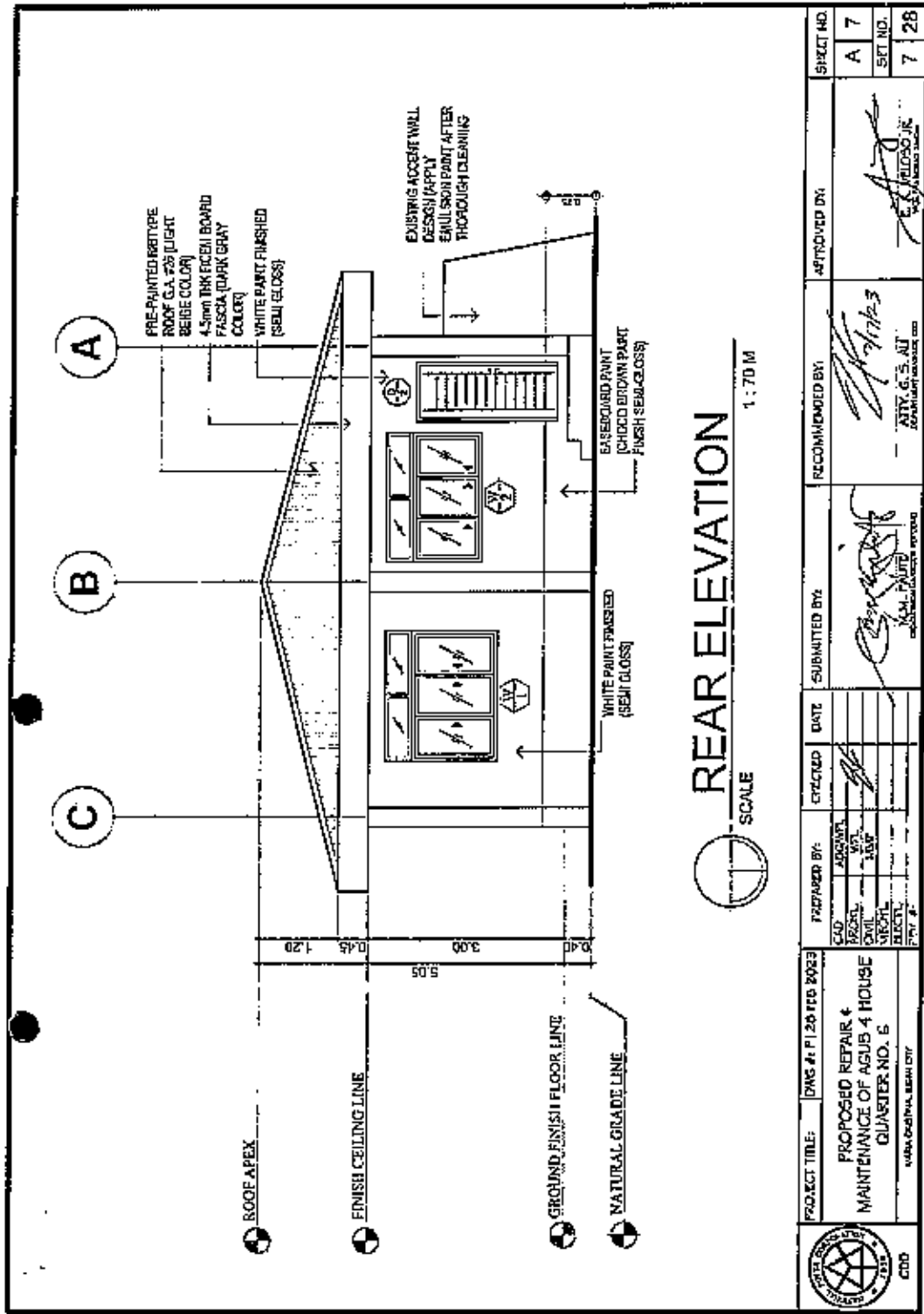




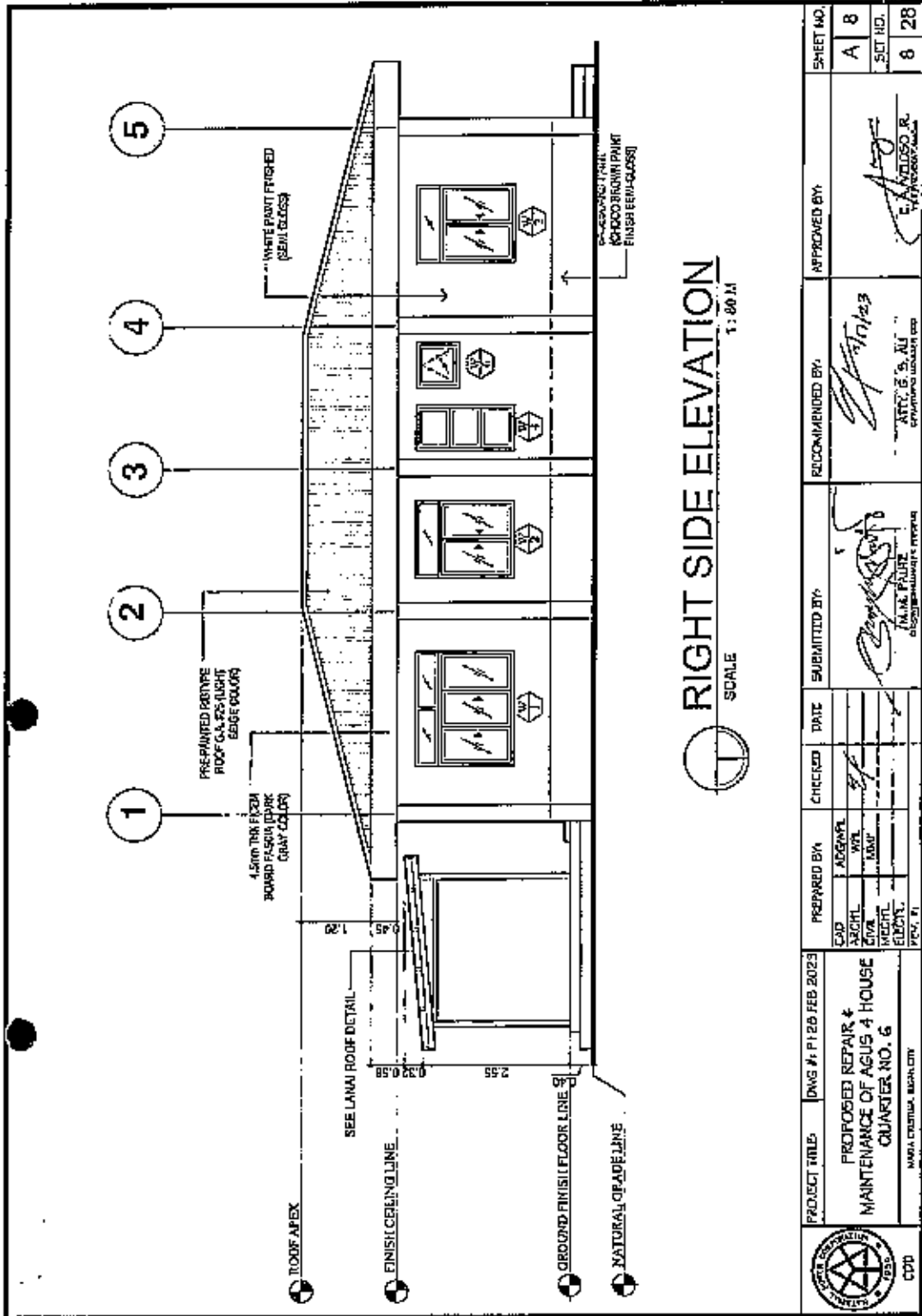


**FRONT ELEVATION**  
SCALE 1:70 M

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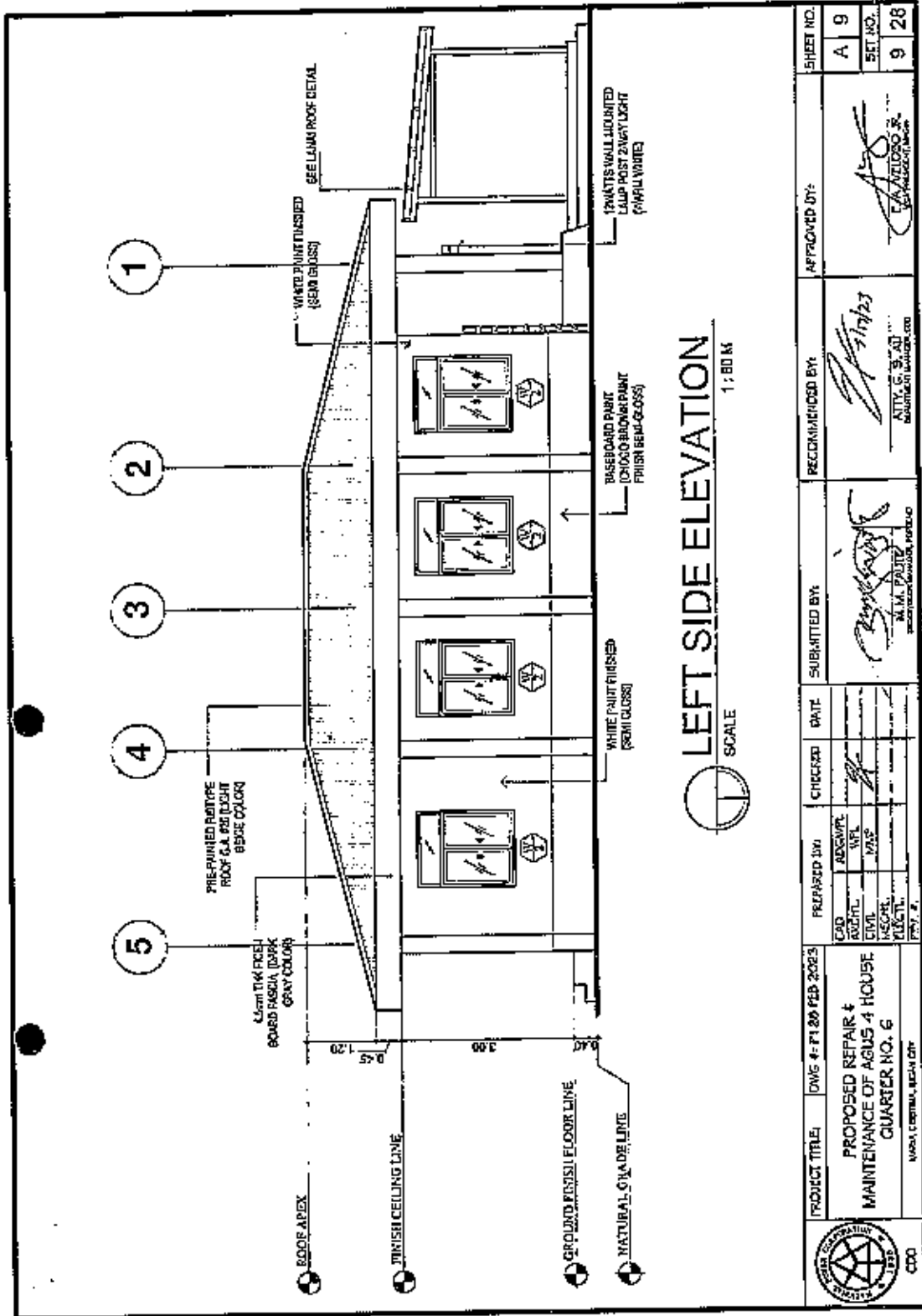


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**RIGHT SIDE ELEVATION**  
SCALE 1:80 M

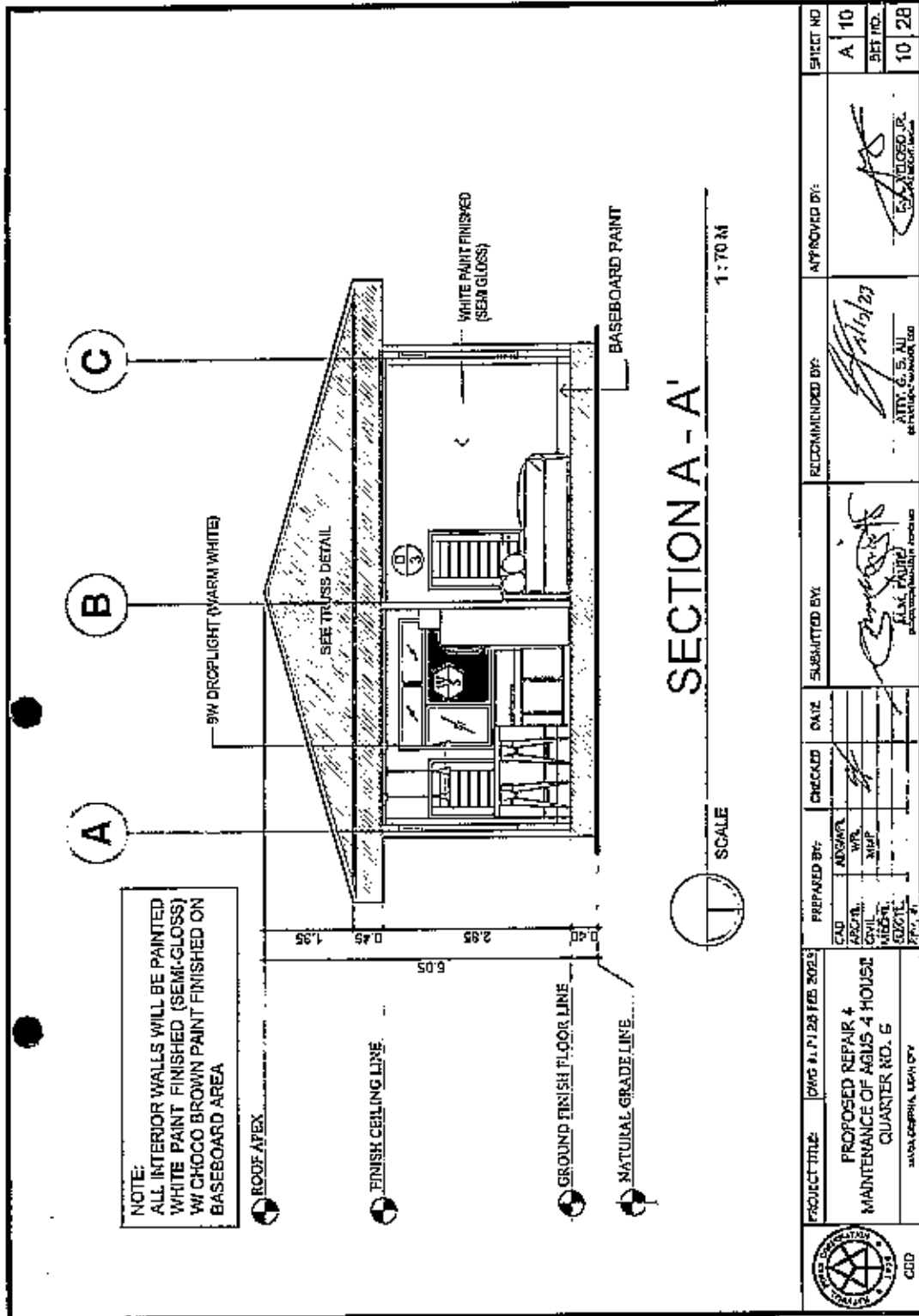
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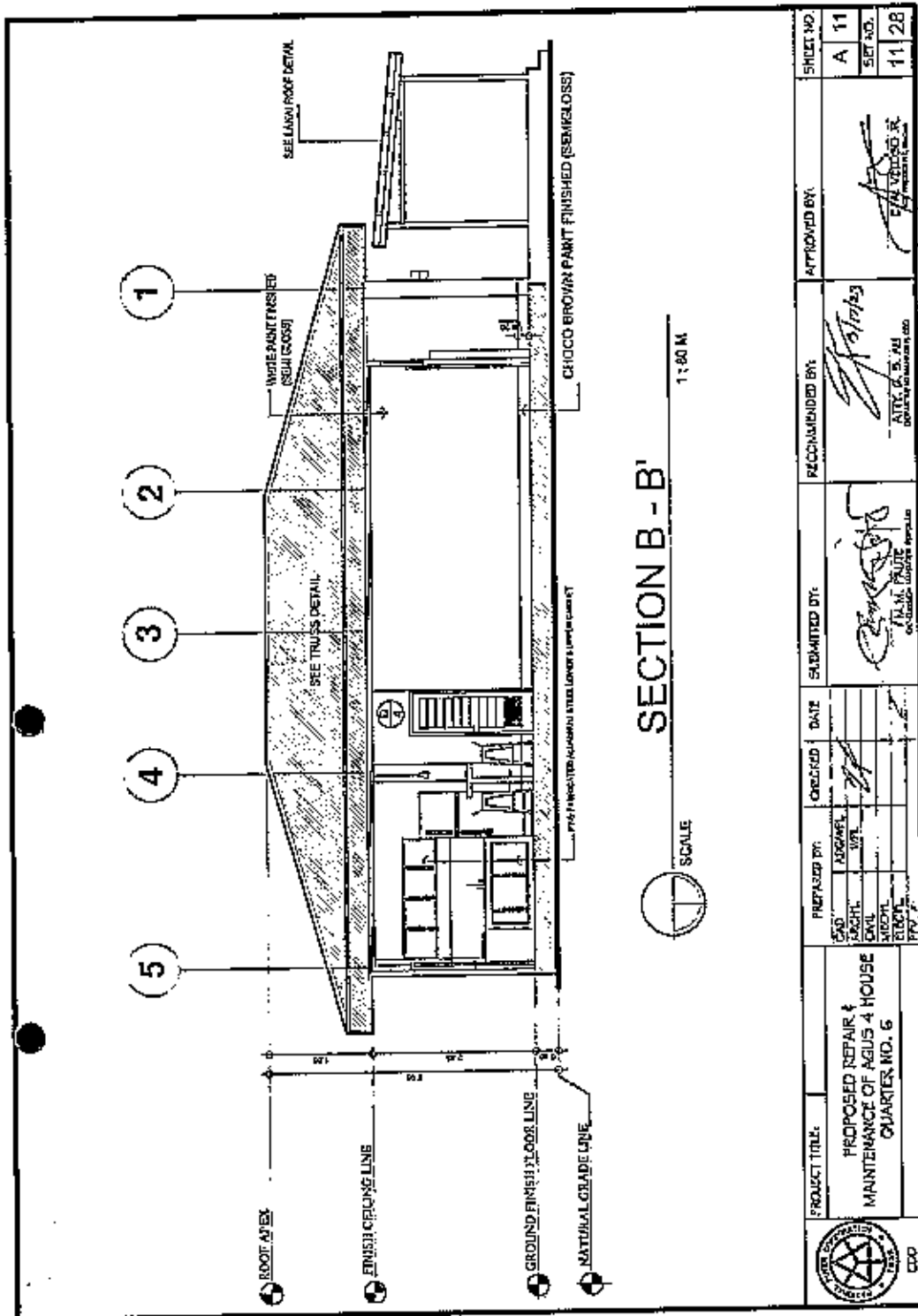
**LEFT SIDE ELEVATION**  
SCALE 1:80 M


	PROJECT TITLE	DWG #	DATE	PREPARED BY	CHECKED	DATE	SUBMITTED BY	RECOMMENDED BY	APPROVED BY	SHEET NO.
	PROPOSED REPAIR & MAINTENANCE OF AGUS 4 HOUSE QUARTER NO. 6	DWG # P1 80	FEB 2023	ARCHT. WFL CIVIL MAF MECH. MAF ELECT. MAF	MAF	MAF	M. M. PALTE REGISTERED ARCHITECT, PRC-000	ATY. S. S. AJ REGISTERED ARCHITECT, PRC-000	[Signature]	A 9
										SET NO.
										9 28

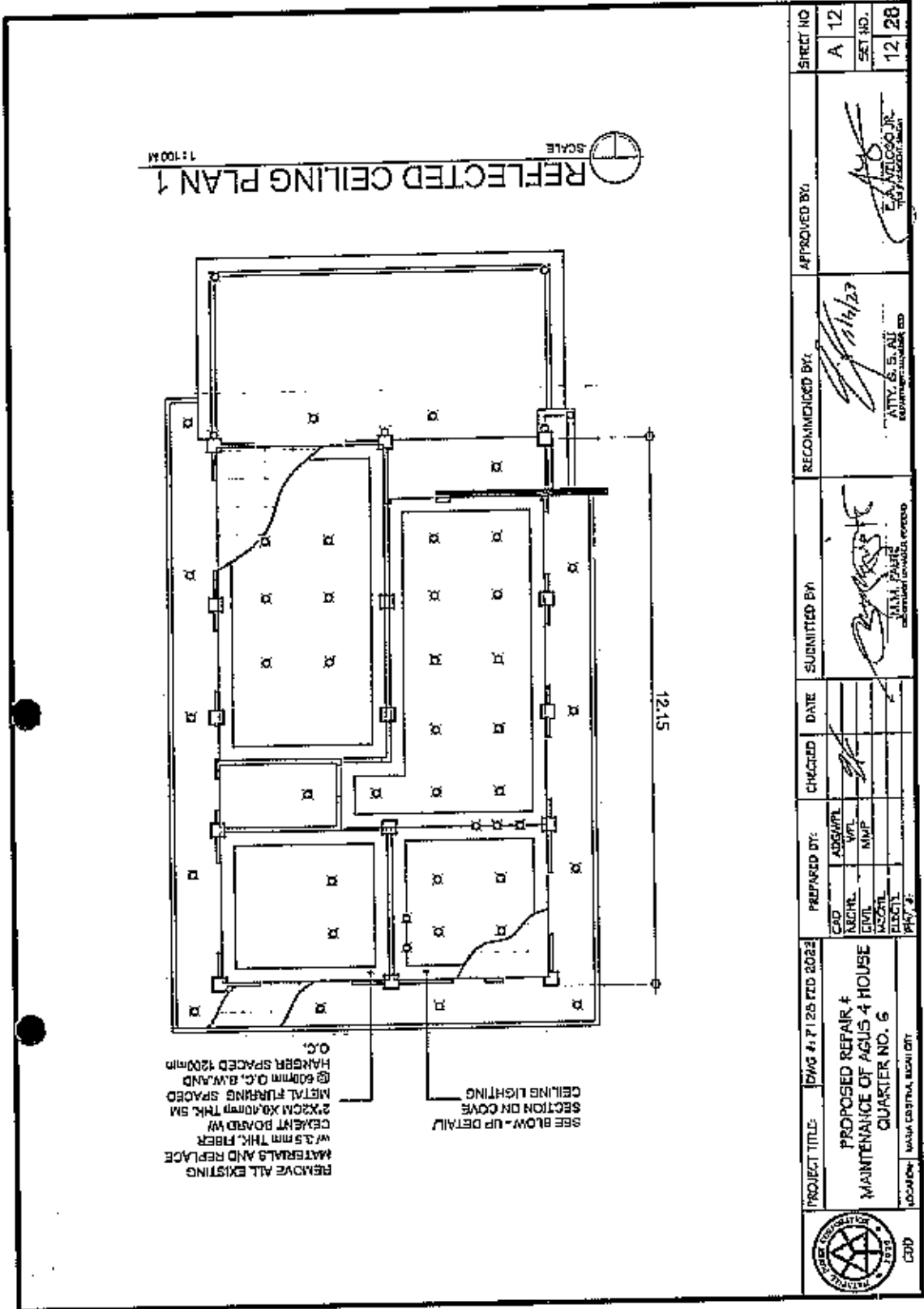





	PROJECT TITLE:	DATE:	PREPARED BY:	CHECKED:	DATE:	SUBMITTED BY:	RECOMMENDED BY:	APPROVED BY:	SHEET NO.
	PROPOSED REPAIR & MAINTENANCE OF AGHS 4 HOUSE QUARTER NO. 6 WASH DC BRN, LECH DTY	04G A. P. 28 FEB 2023	CAD: [ ] ARCH: [ ] CIVIL: [ ] MECH: [ ] SECT: [ ] PLAN: [ ]	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]

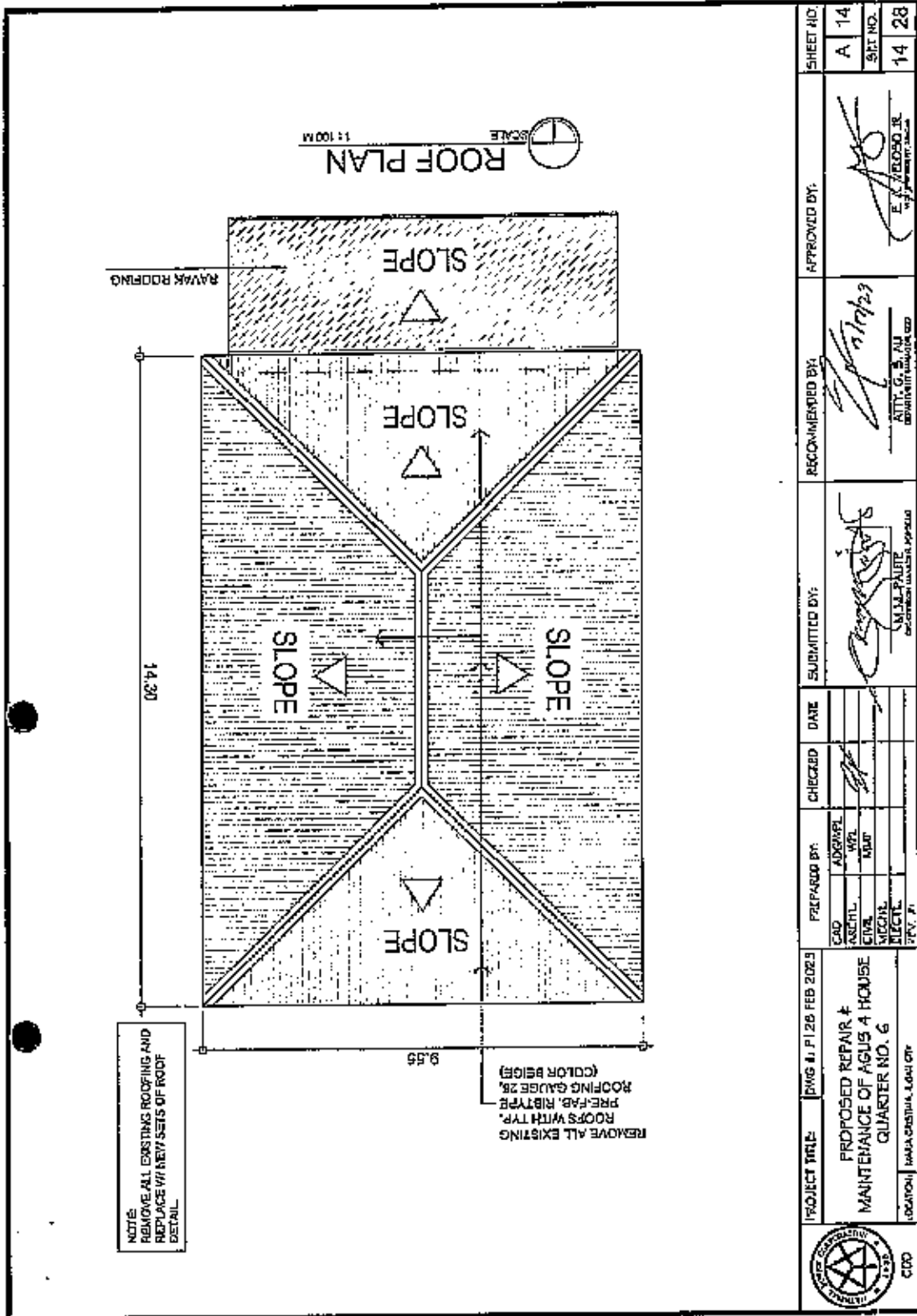


 DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS OFFICE OF THE CHIEF ENGINEER CDD	PROJECT TITLE: PROPOSED REPAIR & MAINTENANCE OF AGUS 4 HOUSE QUARTER NO. 6		PREPARED BY: ARCHT. _____ ENGR. _____ CIVIL _____ ELECTR. _____ MECH. _____ P.P. _____		CHECKED: _____ DATE: _____	SUBMITTED BY: _____ DATE: _____	RECOMMENDED BY: _____ DATE: 5/14/23 OFFICE OF THE CHIEF ENGINEER	APPROVED BY: _____ DATE: 5/14/23 OFFICE OF THE CHIEF ENGINEER	SHEET NO. A 11 SHEET NO. 11 28
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 MOU KINGDOM OF SAUDI ARABIA	PROJECT TITLE: DWG #17/26/23-024	PREPARED BY: CAD ARCHT. CIVIL ELECTR. MECH. PLUMB.	CHECKED BY:	DATE:	SUBMITTED BY:	RECOMMENDED BY:	APPROVED BY:	STREET NO. A 12 SET NO. 12 28
	PROPOSED REPAIR & MAINTENANCE OF AGUS 4 HOUSE QUARTER NO. 6	LOCATION: WAKA CENTRAL, BISHI DIST.	NAME: [Signature] TITLE: [Title]	NAME: [Signature] TITLE: [Title]	NAME: [Signature] TITLE: [Title]	NAME: [Signature] TITLE: [Title]	NAME: [Signature] TITLE: [Title]	NAME: [Signature] TITLE: [Title]



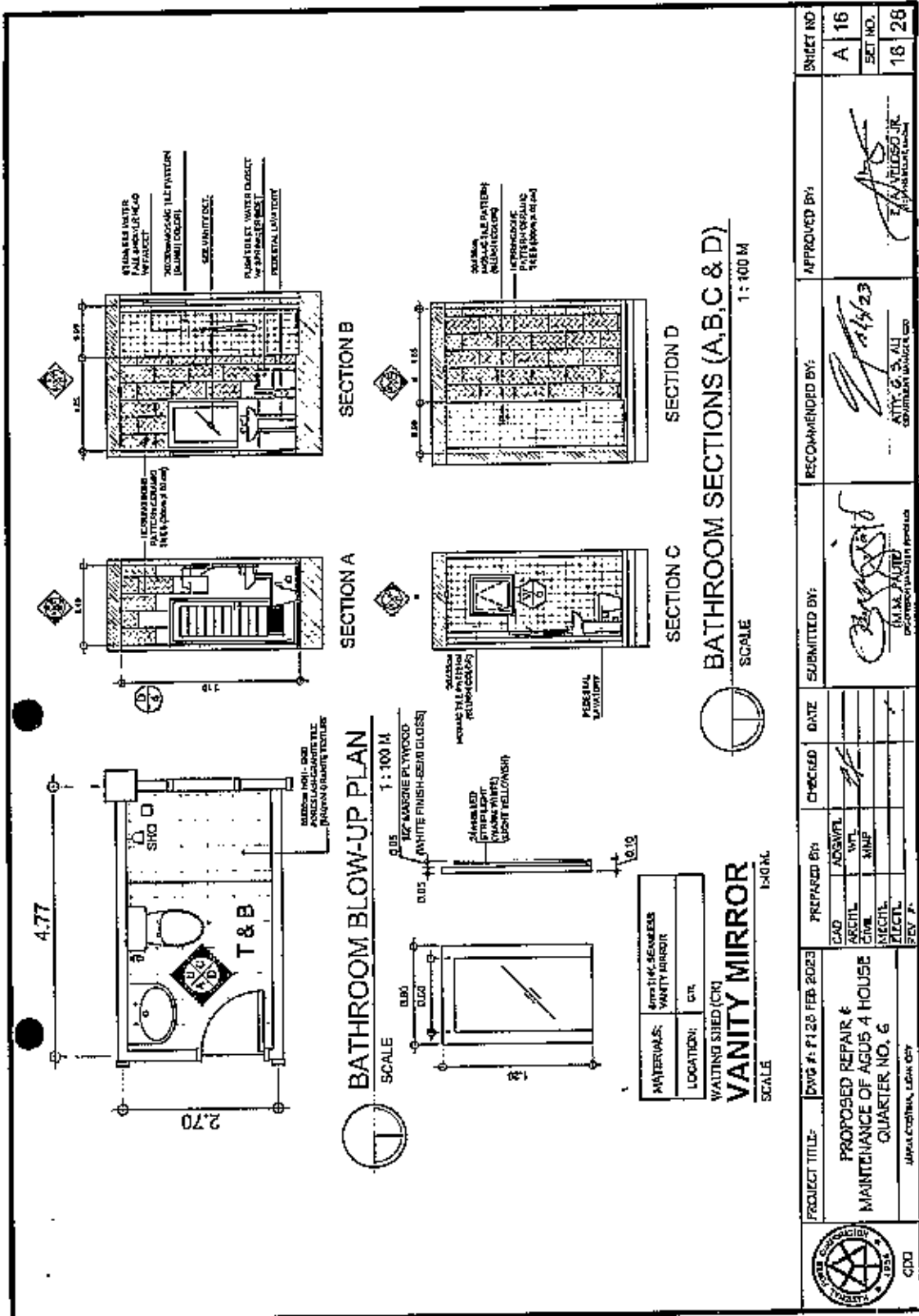


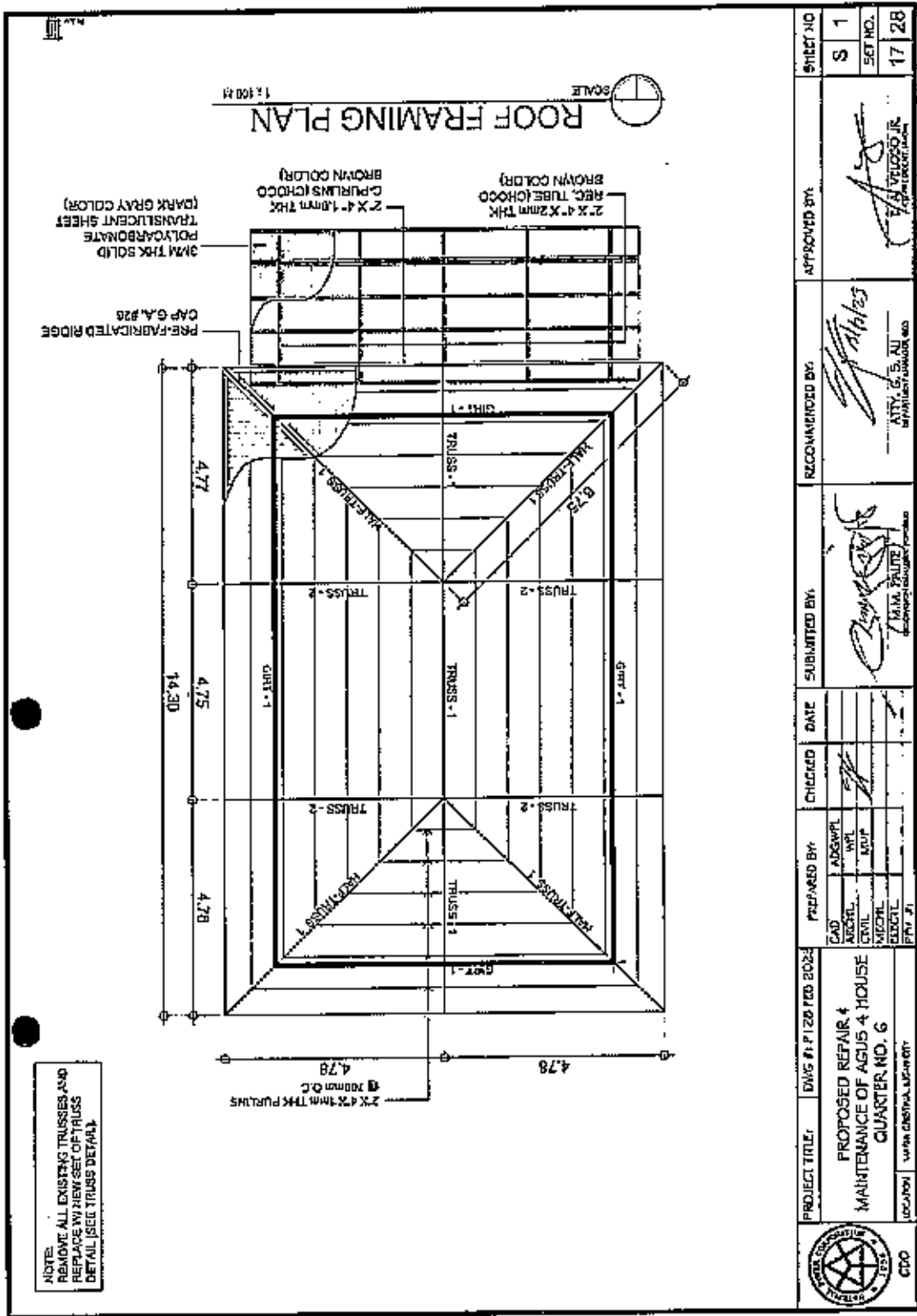
**WINDOW SCHEDULES**

**DOOR SCHEDULES**

NO.	DESCRIPTION	REMARKS
1	1/2" ALUMINUM WINDOW WITH 1/4" CLEAR GLASS	1 SET
2	1/2" ALUMINUM WINDOW WITH 1/4" CLEAR GLASS	1 SET
3	1/2" ALUMINUM WINDOW WITH 1/4" CLEAR GLASS	1 SET
4	1/2" ALUMINUM WINDOW WITH 1/4" CLEAR GLASS	1 SET
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100	1/2" ALUMINUM WINDOW WITH 1/4" CLEAR GLASS	1 SET

	PROJECT TITLE	DWG #	DATE	PREPARED BY	CHECKED	DATE	SUBMITTED BY	RECOMMENDED BY	APPROVED BY	SHEET NO
	PROPOSED REPAIR & MAINTENANCE OF AGUS 4 HOUSE QUARTER NO. 6	DWG # 1123-118 2023		ADARL WIL MAP ELECT REV			<i>[Signature]</i> (SALVA PAUTE) DESIGNER (ARCHITECT, INTERIOR)	<i>[Signature]</i> ANNY G. S. AU DESIGNER (ARCHITECT)	<i>[Signature]</i> E. VELAZO JR. DESIGNER (ARCHITECT)	A 15 SET NO. 15 28
LOCATION	MARIKINA, CALABARZON									
CD0										

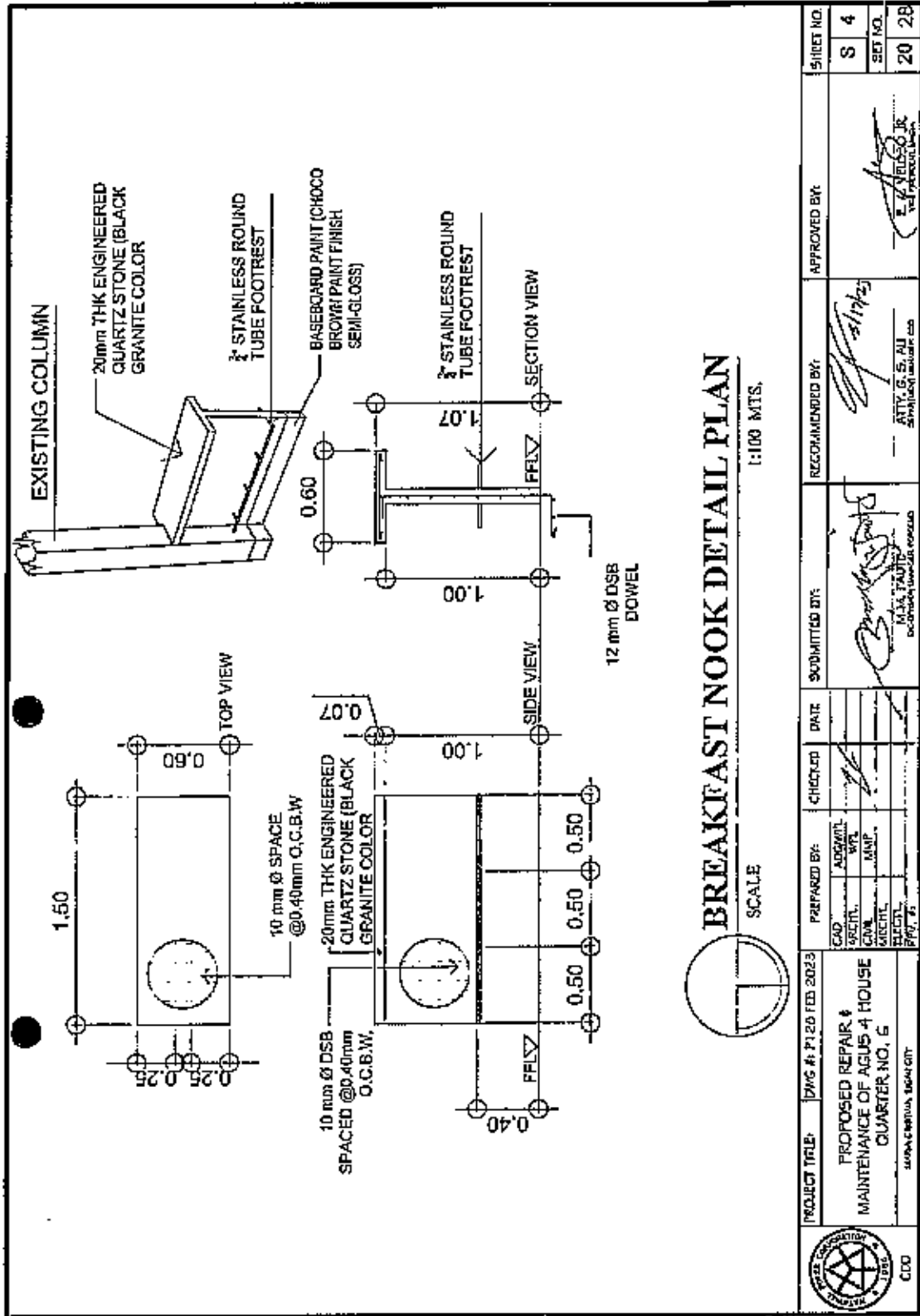






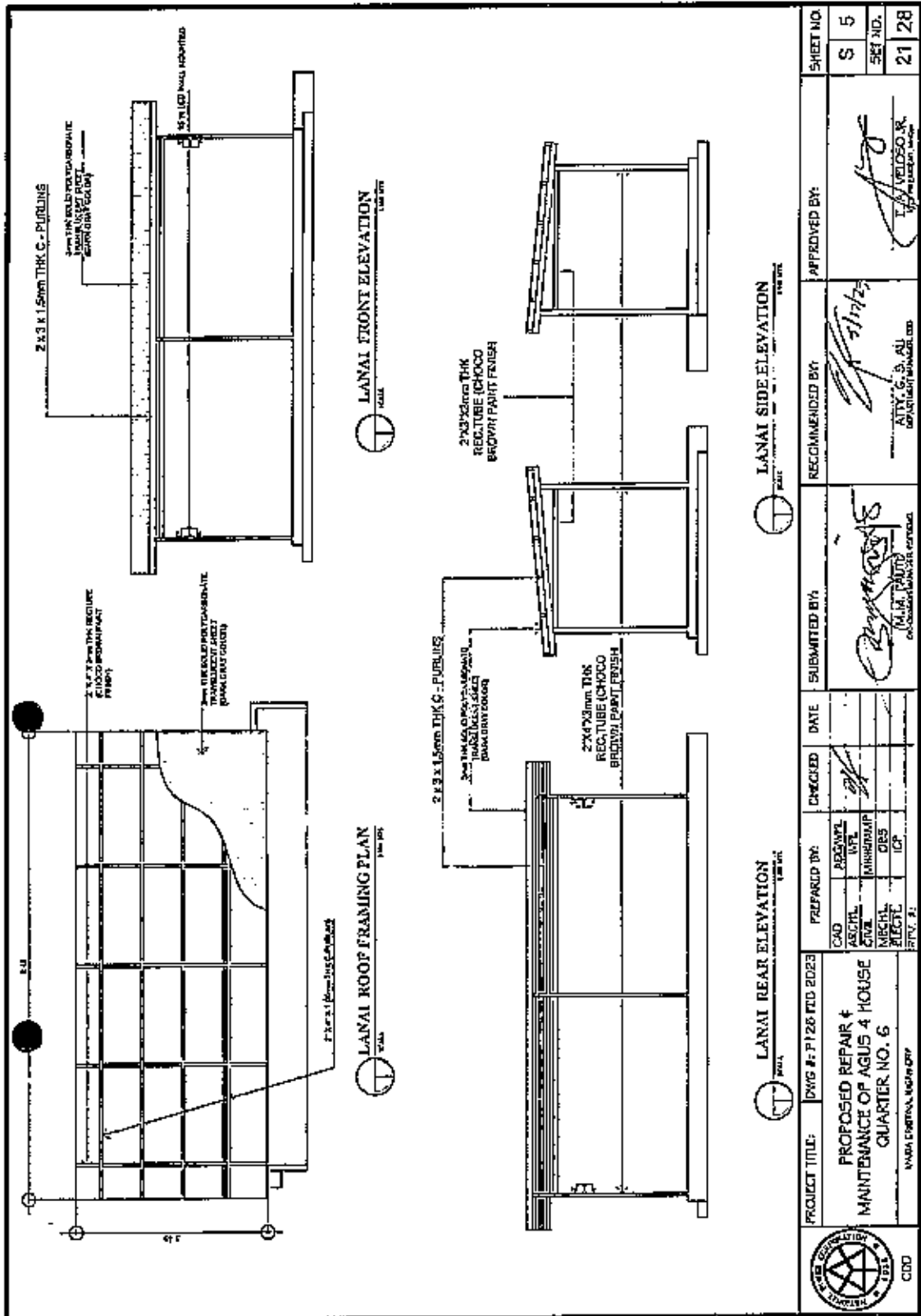






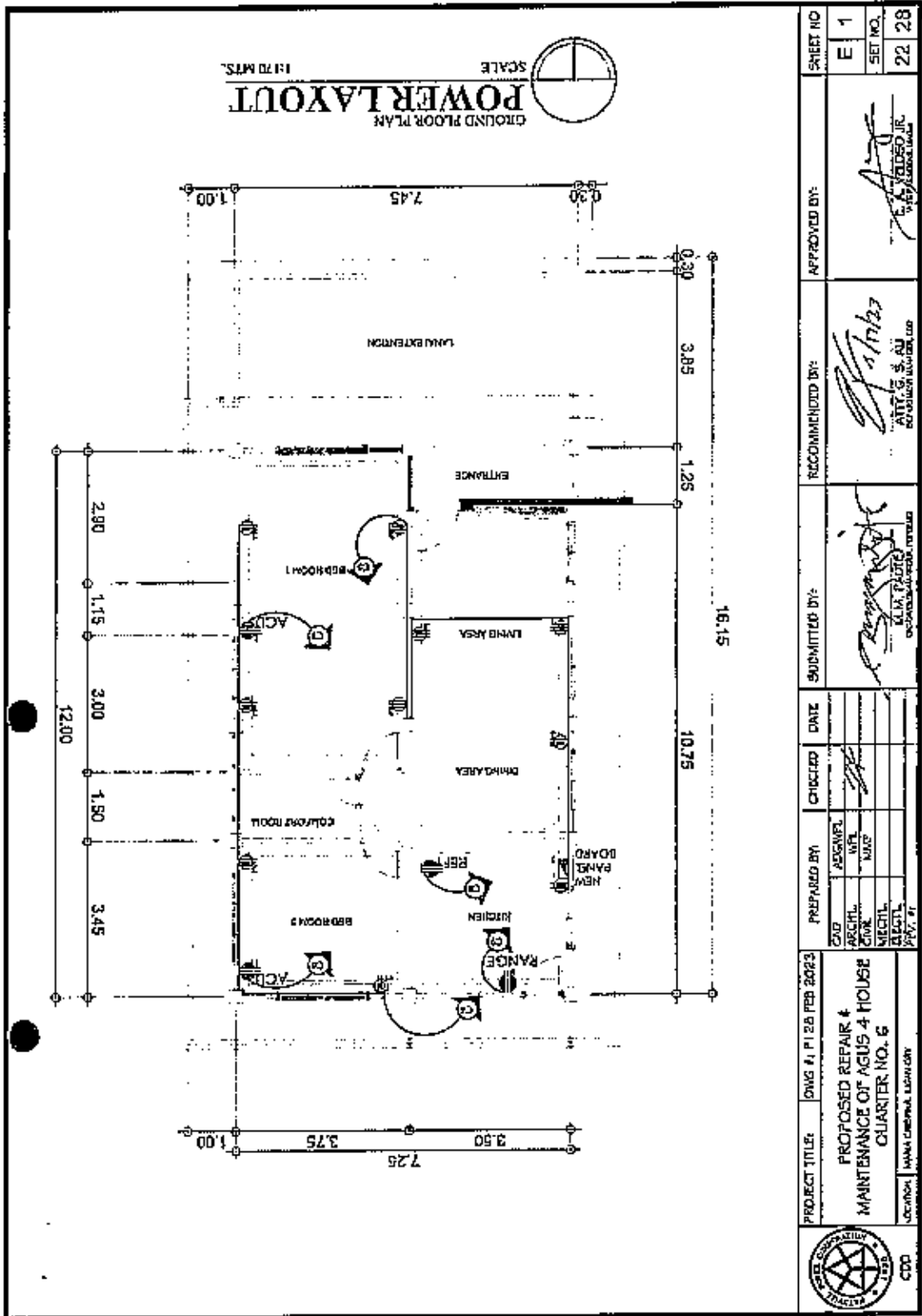
**BREAKFAST NOOK DETAIL PLAN**  
SCALE 1:100 MTS.

	PROJECT TITLE:	DMG # 2120 FEB 2023	PREPARED BY:	CHECKED:	DATE:	SUBMITTED BY:	RECOMMENDED BY:	APPROVED BY:	SHEET NO.
	PROPOSED REPAIR & MAINTENANCE OF AGUS 4 HOUSE QUARTER NO. 6		CAD: _____ SPEC: _____ CIVIL: _____ M/E: _____ ELECT: _____ PLUM: _____						S 4
									SET NO.
									20 2B

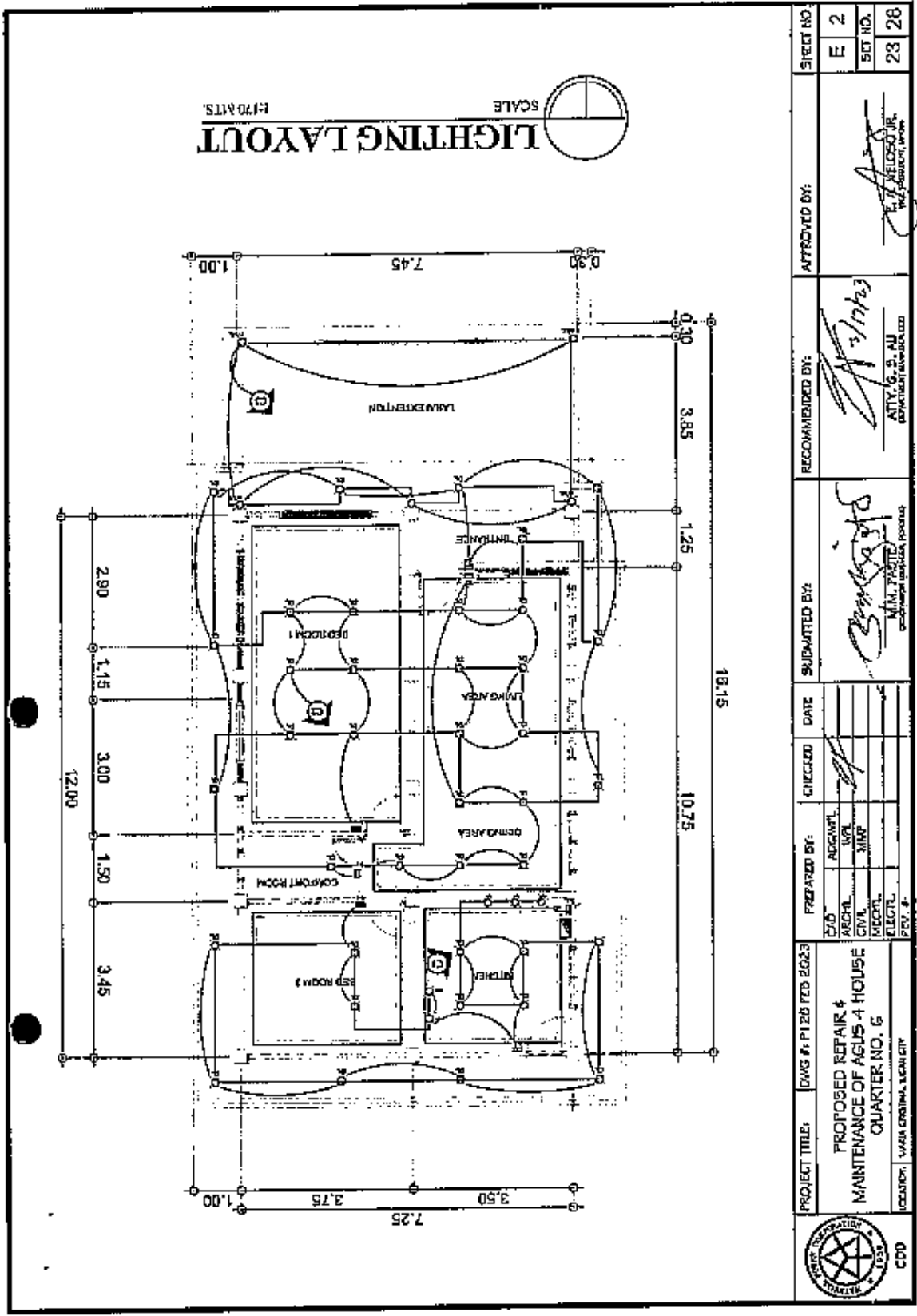


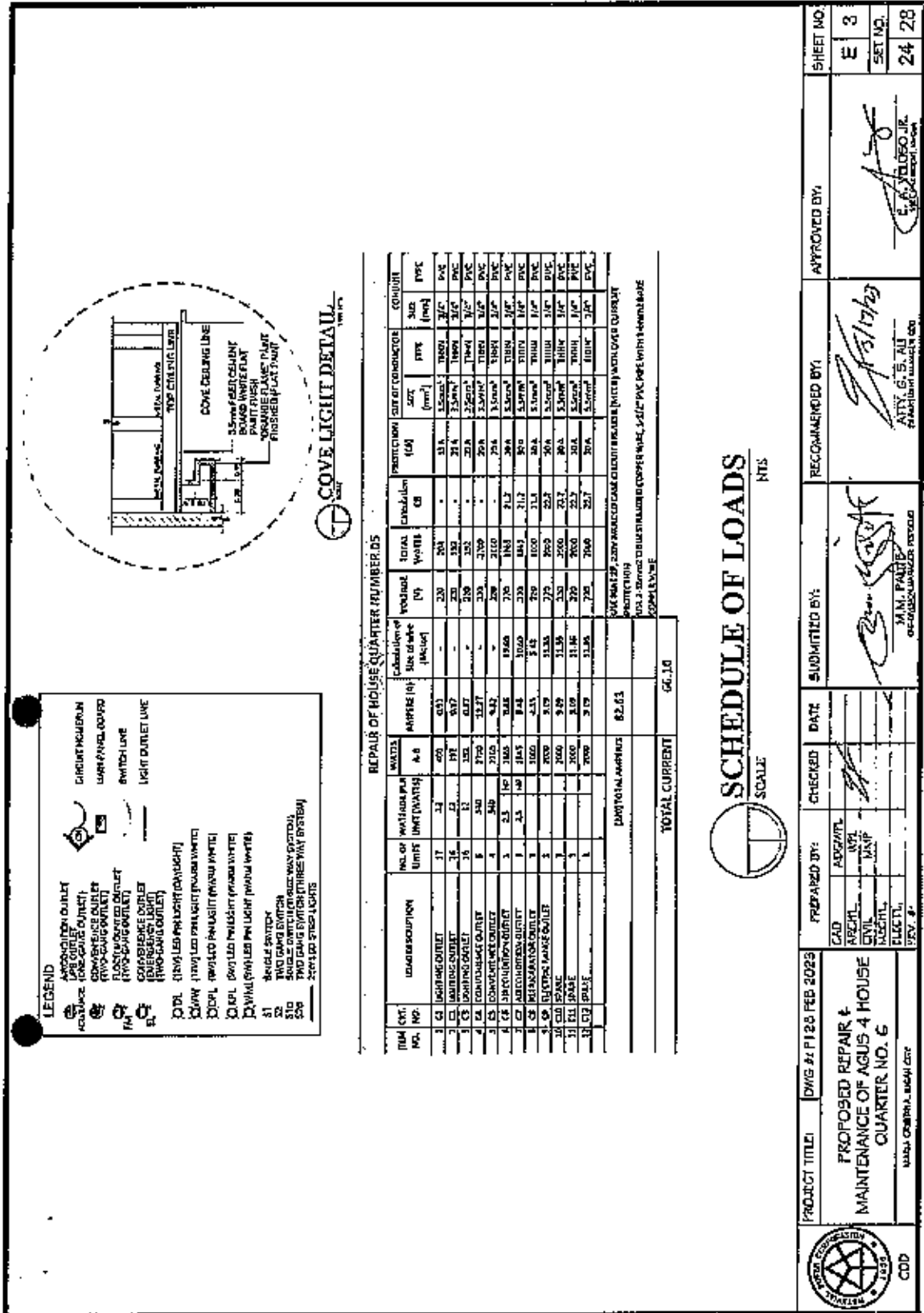
	PROJECT TITLE: <b>PROPOSED REPAIR &amp; MAINTENANCE OF AGUS 4 HOUSE QUARTER NO. 6</b> <small>NADA CORONA, NEGOSYOS</small>	PROJECT NO: <b>DWG # P126 FTD 2023</b>	PREPARED BY: <table border="1"> <tr> <td>CAD</td> <td>APRNL</td> </tr> <tr> <td>ASGNL</td> <td>WFL</td> </tr> <tr> <td>CHAL</td> <td>MRHRDMP</td> </tr> <tr> <td>MECH</td> <td>DES</td> </tr> <tr> <td>ELECT</td> <td>ICP</td> </tr> </table>	CAD	APRNL	ASGNL	WFL	CHAL	MRHRDMP	MECH	DES	ELECT	ICP	CHECKED: <i>[Signature]</i>	DATE:	SUBMITTED BY: <i>[Signature]</i> <small>M. A. P. R. T. O. S. O. C. O. N. S. U. L. T. I. N. G. I. N. C. O. R. P. O. R. A. T. I. O. N.</small>	RECOMMENDED BY: <i>[Signature]</i> <small>ATTY. C. S. ALI DEPARTMENT MANAGER</small>	APPROVED BY: <i>[Signature]</i> <small>T. A. WELDSOAK SUPERVISOR</small>	SHEET NO: <b>S 5</b>
		CAD	APRNL																
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CHAL	MRHRDMP																		
MECH	DES																		
ELECT	ICP																		
DIVISION: <b>CDD</b>	REV. 1:	DATE:	CHECKED:	DATE:	SUBMITTED BY:	RECOMMENDED BY:	APPROVED BY:	SHEET NO: <b>21</b>											



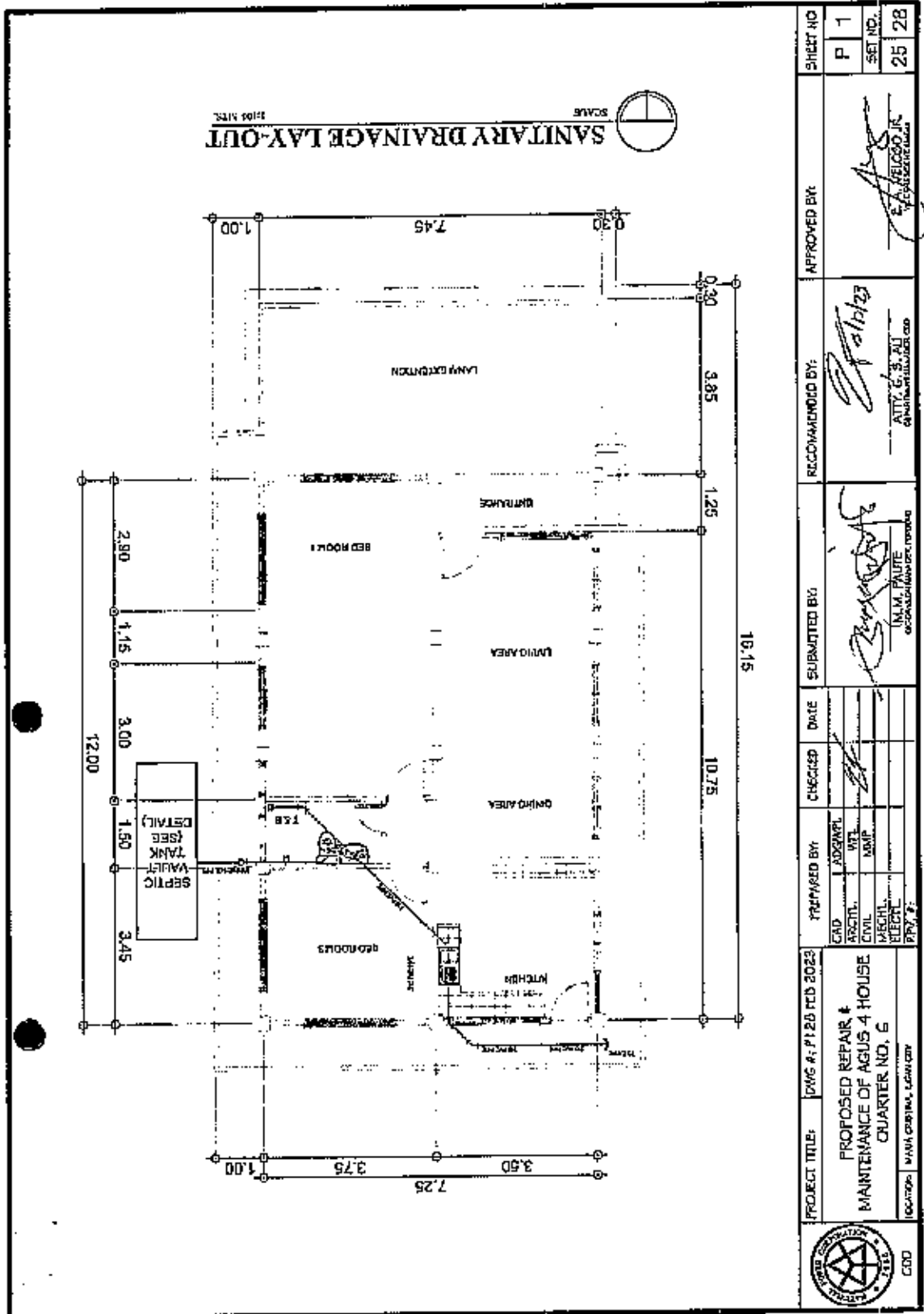


	PROJECT TITLE	DATE	PREPARED BY	CHECKED	DATE	SUBMITTED BY:	RECOMMENDED BY:	APPROVED BY:	SHEET NO
	PROPOSED REPAIR & MAINTENANCE OF AGUS 4 HOUSE QUARTER NO. 6 Location: MAIN ENTRANCE LIGHTING	DWG 1, 1A, 2A, 2B, 2023	17 FEB 2023	CIVIL MECH. ELECTR. PLY.	CIVIL MECH. ELECTR. PLY.	17 FEB 2023	KIM TAYLOR ARCHITECTURAL PARTNERS	CITY OF HOUSTON CIVIL ENGINEER	E. Y. YODSO JR. ARCHITECT

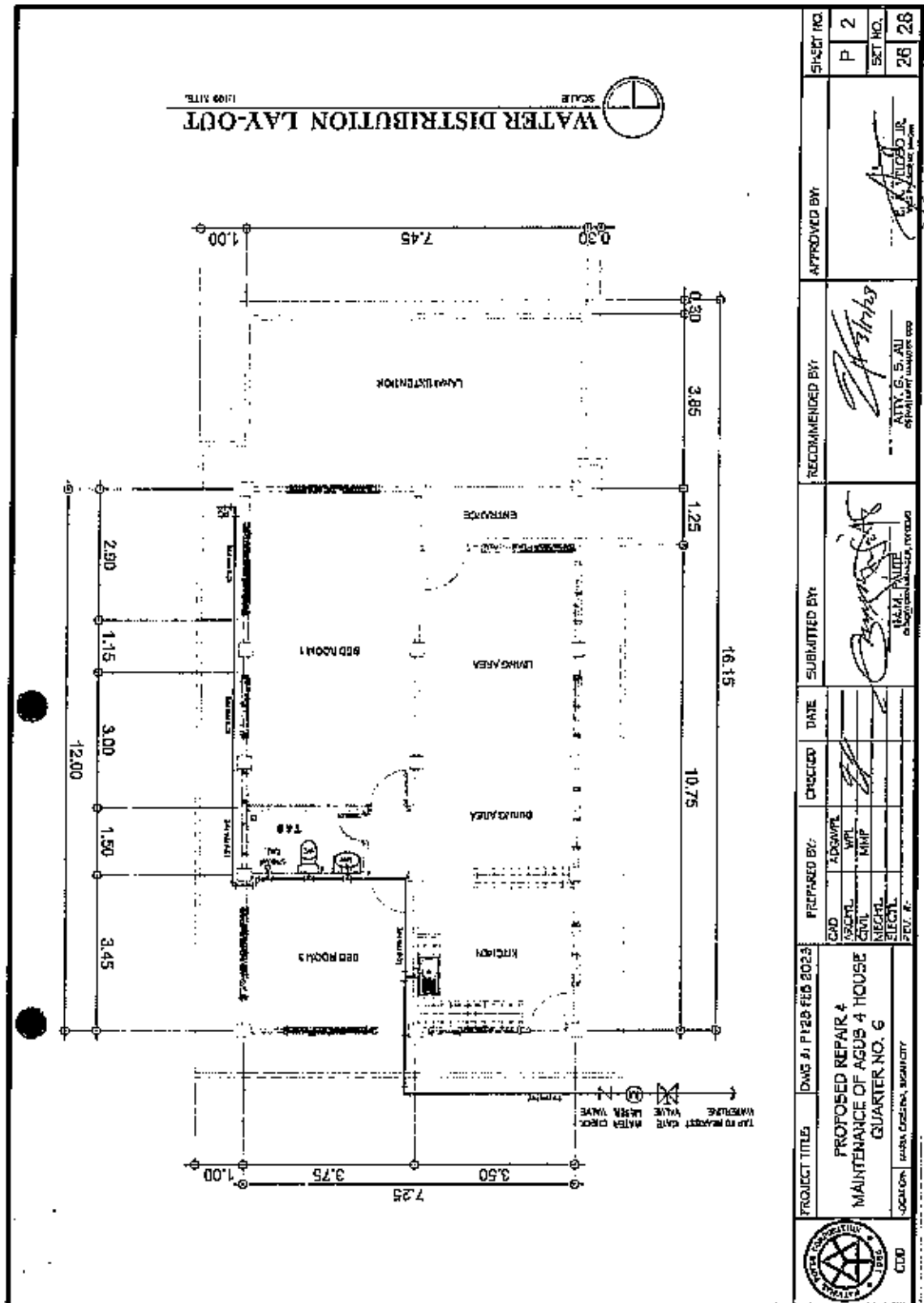




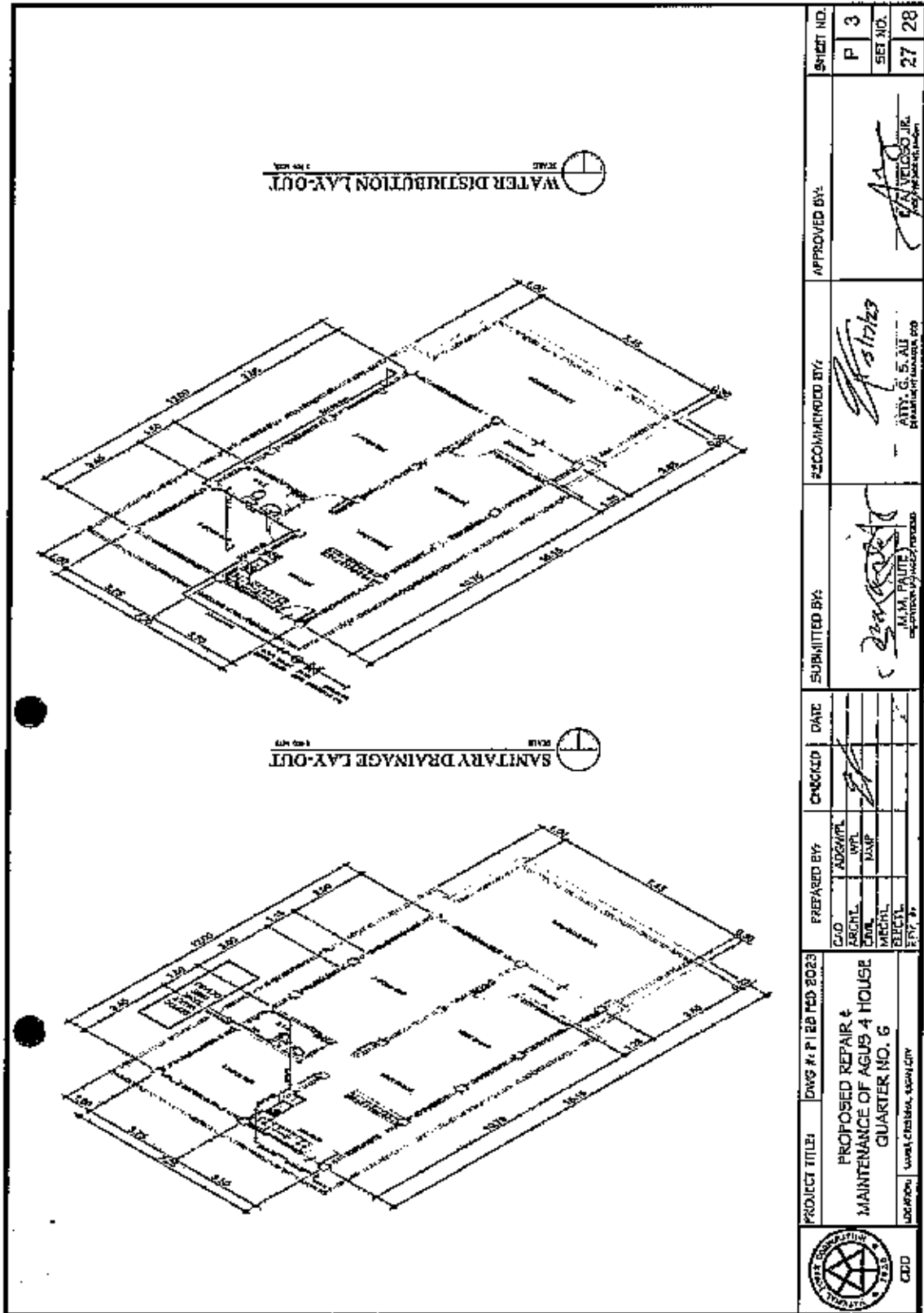


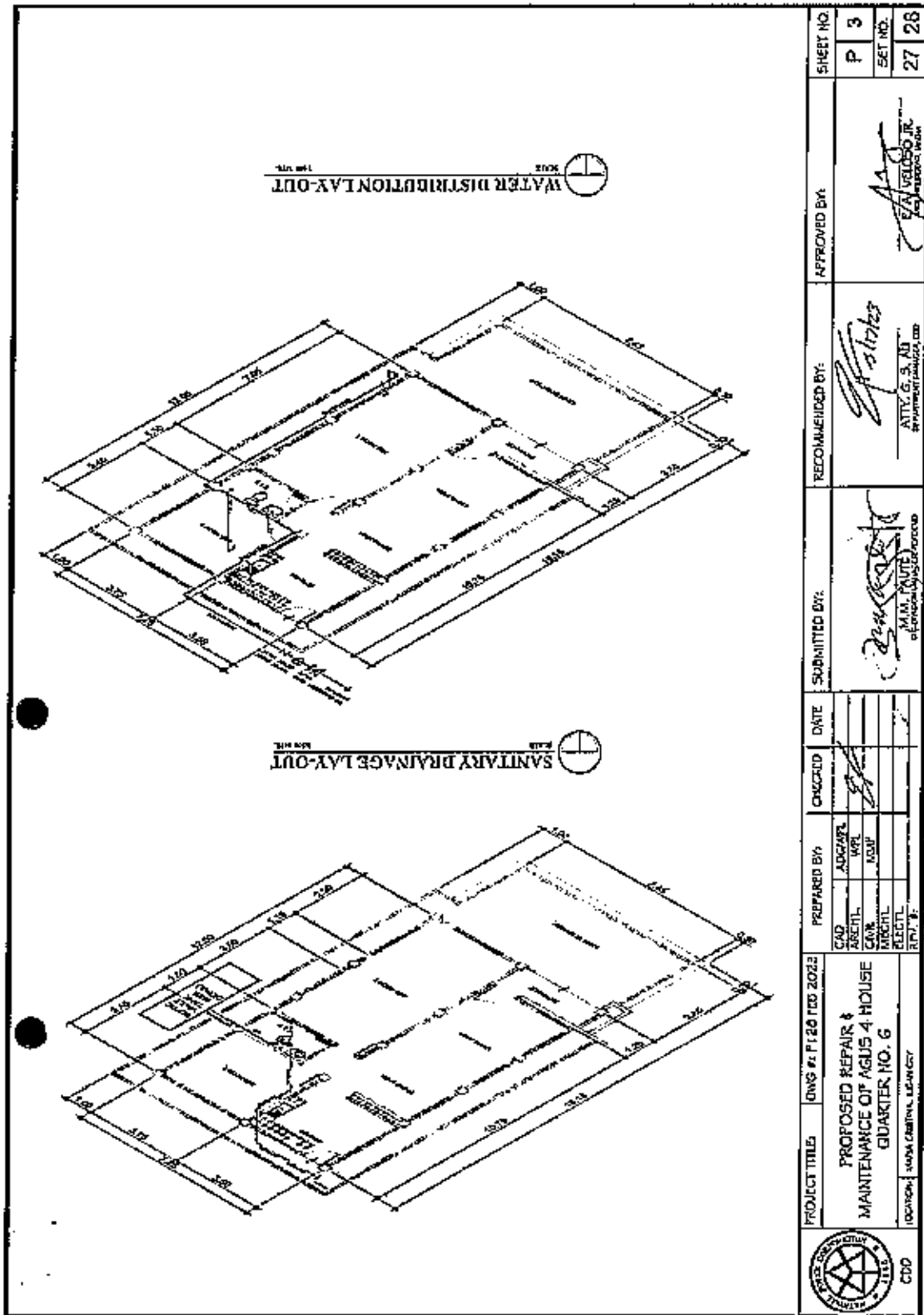


	PROJECT TITLE:	DMG # 1128 FEB 2023	PREPARED BY:	CHECKED	DATE	SUBMITTED BY:	RECOMMENDED BY:	APPROVED BY:	SHEET NO.
	PROPOSED REPAIR & MAINTENANCE OF AGUS 4 HOUSE QUARTER NO. 6		GRD. ARCHT. CIVIL MECH. ELECT.			M.M. PALITE CONSULTANT	ATT. G. S. ALI CONSULTANT	E.A. FELICIANO, JR. ENGINEER	P 1
	LOCATION: MANILA CAPITAL CITY								SET NO. 25
									28



	PROJECT TITLE	DWS #1 P 128 FEB 2023	DATE	CHECKED	PREPARED BY:	DATE	SUBMITTED BY:	APPROVED BY:	SHEET NO.
	PROPOSED REPAIR & MAINTENANCE OF AGUS 4 HOUSE QUARTER NO. 6 LOCAL OFF: 16000 Gretna, HOUSTON, TX				GAD WFL MHP MECH ELEC P.C.		(Signature) (Name) (Title)	(Signature) (Name) (Title)	P 2 28 28





### GENERAL PLUMBING NOTES

1. ALL PLUMBING WORKS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL PLUMBING CODE OF THE PHILIPPINES, NATIONAL FIRE PROTECTION ASSOCIATION, THE PHILIPPINE STANDARDS INSTITUTION, NATIONAL BUREAU OF FIRE PROTECTION AND LOCAL REGULATION AND ORDINANCES.
2. THE PLUMBING CONTRACTOR SHALL LOCATE AND IDENTIFY THE ACTUAL LOCATIONS OF EXISTING SANITARY FACILITIES TO CONFORM WITH THE PROPOSED DESIGN.
3. ALL PIPES SHALL BE INSTALLED AS SHOWN IN THE WORKING DRAWINGS. ANY RELOCATIONS REQUIRED FOR PROPER OPERATION OF OTHER TRADES SHALL BE UPON THE APPROVAL OF THE SANITARY ENGINEER.
4. ALL PIPES PASSING THROUGH WALLS SHALL BE PROVIDED WITH SLEEVES ANGULAR SHAPED OUTSIDE PIPE AND SLEEVES SHALL BE FILLED WITH QUALITY ASPHALT COMPOUND OR ANY OTHER MATERIALS FOUND EXTERNALLY APPROVED.
5. VENTROM LOCATIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS.
6. PROVIDE CONTROL VALVE FOR EACH GROUP OF FIXTURES.
7. UNLESS OTHERWISE SPECIFIED, ALL PLUMBING FIXTURES SHALL BE INSTALLED WITH THE MINIMUM DISTANCE OF VENTILATION FROM FIXTURES SHALL BE 1.5m MEASURED ALONG THE LENGTH OF PIPE.
8. THE CONTRACTOR SHALL COORDINATE WITH OTHER RELATED TRADES PRIOR TO INSTALLATION.
9. ALL BLEEPPERS FOR BRANCH LINES WITH APPROPRIATE NUMBERS SHALL BE HYDROSTATICALLY TESTED AT 1.50 MPa FOR A DURATION OF TWO (2) HOURS, AND SHOULD BE WITNESSED AND CERTIFIED BY ENGINEERING INSURANCE COMPANY.
10. PIPE MATERIALS AND SIZES SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND SIZES TO THE EXISTING BRAND AND REQUIREMENTS.
11. ALL SPRINKLER HEADS SHALL BE RATED AT 1/2" EXCEPT FOR KITCHEN AT 2 1/2".
12. ALL SPRINKLER WORKS SHALL BE DONE ONLY BY A CONTRACTOR WITH TECHNICAL EXPERTISE IN SPRINKLER SYSTEM INSTALLATION.
13. INSTALL ISOLATION VALVES (BALL VALVE) IN BRANCH BRANCH LINES WHERE ISOLATION VALVES COULD NOT BE COMPLETED WITHIN A 24-HOUR PERIOD.
14. SHUT-OFF OF FLOW CONTROL VALVE OF CERTAIN LOOP W/CG SUPPLIES THE SPRINKLER SYSTEM OF THE AREA, COORDINATE WITH THE IN-HOUSE ENGINEER.
15. ANY RELOCATION, MODIFICATION, DISMANTLING AND ADDITIONAL SPRINKLER HEADS AND LINES OF THE EXISTING SHALL BE PROPERLY COORDINATED TO EXISTING PROJECT CONTRACTOR ON THE PROJECT TECHNICAL.

KITCHEN

BATH

SPECIFIC JANK DETAILS

16. ALL HORIZONTAL WASTE PIPING THAN 6 AND SMALLER SHALL BE 1/2" WITHIN A MINIMUM SLOPE OF TWO (2%) REGARDING THE 10mm TO AND LARGER PIPES SHALL HAVE ONE (1%) PERCENT SLOPE.

17. ALL CHANGES IN DIRECTION SHALL BE MADE BY THE APPROPRIATE USE OF 90° ELBOWS (90° WELDING ELBOW) QUARTER BEND, ONE EIGHT (8) BEND WHEN THE CHANGE OF FLOW IS FROM HORIZONTAL TO VERTICAL. A BRACKET ONE EIGHT (8) BEND COORDINATION MAY BE USED ONLY ON VENT PIPE NO. EXCEPT FOR 100mm TO 150mm. THIS SHALL BE USED ON HORIZONTAL BOLLOR WASTE LINES.

18. PROVIDE PIPE SLEEVES AT WALLS OR SLAB ON GROUND BORDER, THAN THE ACTUAL LINES PASSING THROUGH WALLS OR SLAB TO PRETECT FROM BREAKAGE.

19. CLEANOUT ARE REQUIRED UNDER THE FOLLOWING CONDITIONS:  
 A. EVERY CHANGE IN HORIZONTAL DIRECTION  
 B. EVERY 100m IN HORIZONTAL LINE OF PIPE  
 C. AT THE END OF ANY HORIZONTAL PIPE LINE.

20. CONTRACTOR TO VERIFY ACTUAL LOCATION AND DEVIATION OF EXISTING SANITARY SYSTEMS AND DETERMINE WATER MAINS FOR CONNECTION BEFORE CONSTRUCTION.

FLUSH-TYPE CLEANOUT DETAIL

STANDARD CONNECTION CLEANOUT DETAIL

VERTICAL TO HORIZONTAL SOIL PIPE CONNECTION

FLOOR DRAIN DETAIL

**STANDARD SOIL PIPE CONNECTIONS**

SEE 101

APPROVED BY:

RECOMMENDED BY:

DATE: 2/17/23

PROJECT NO.: 28

SET NO.: 4

SHEET NO.: 28

APPROVED BY:

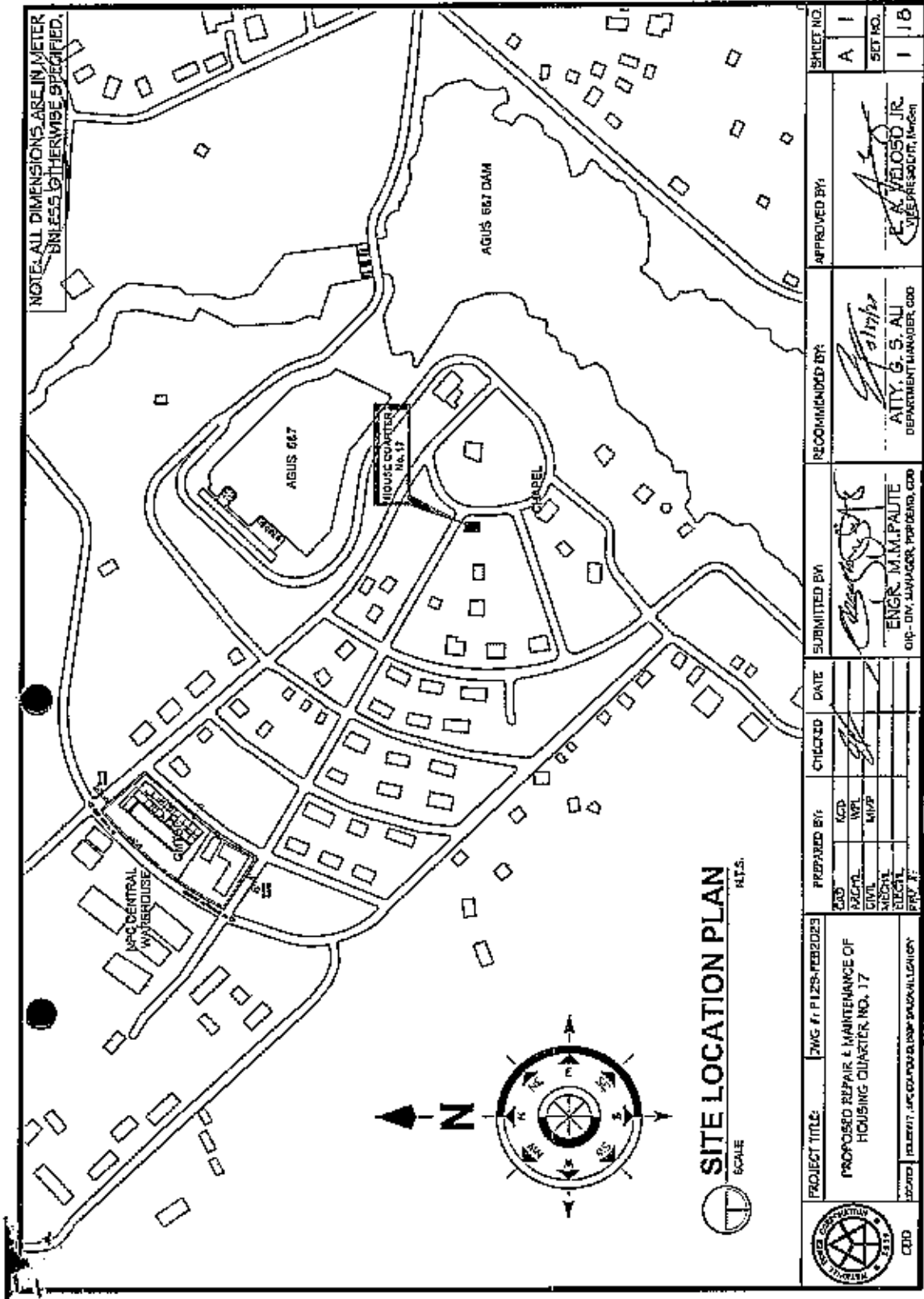
RECOMMENDED BY:

DATE: 2/17/23

PROJECT NO.: 28

SET NO.: 4

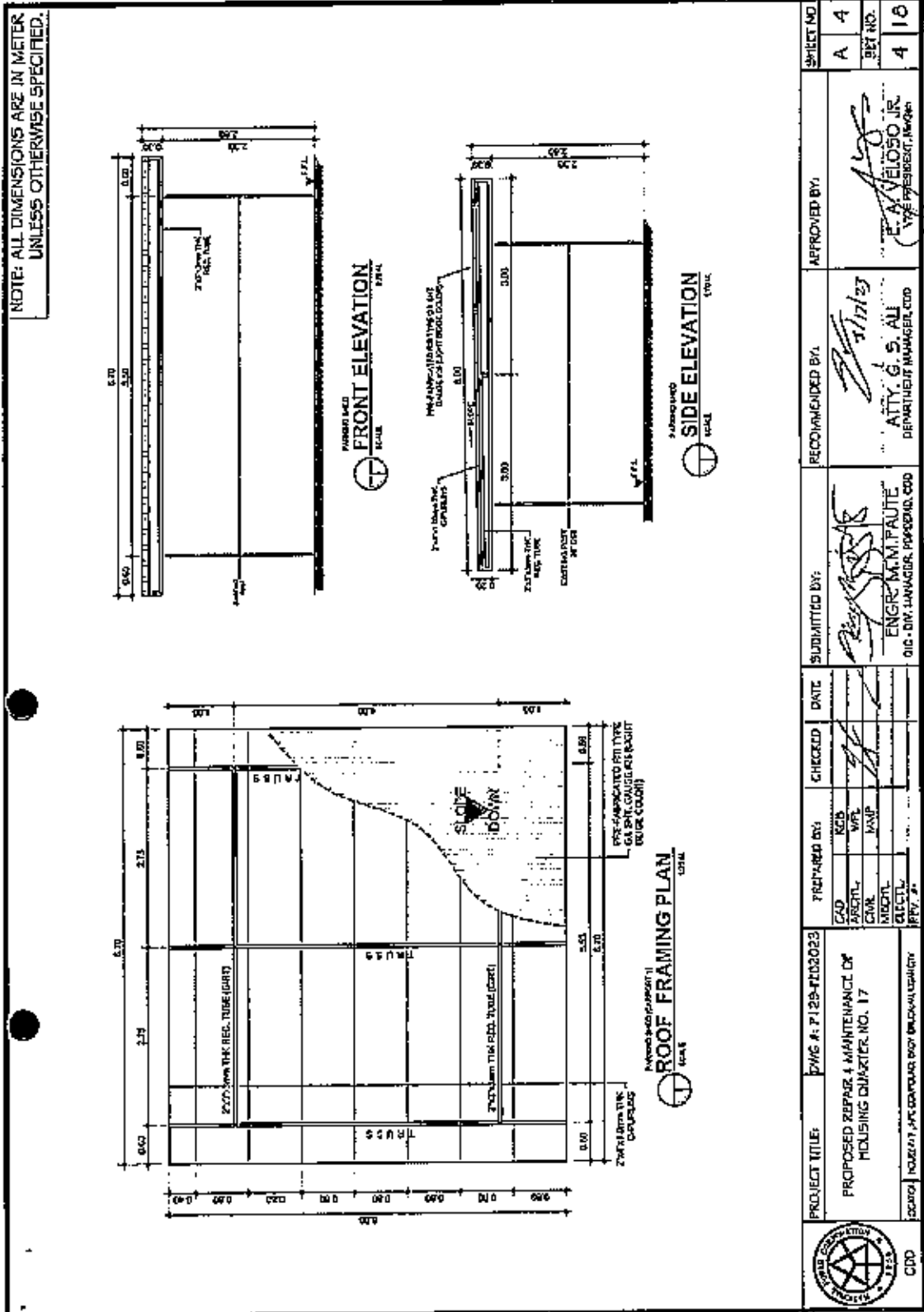
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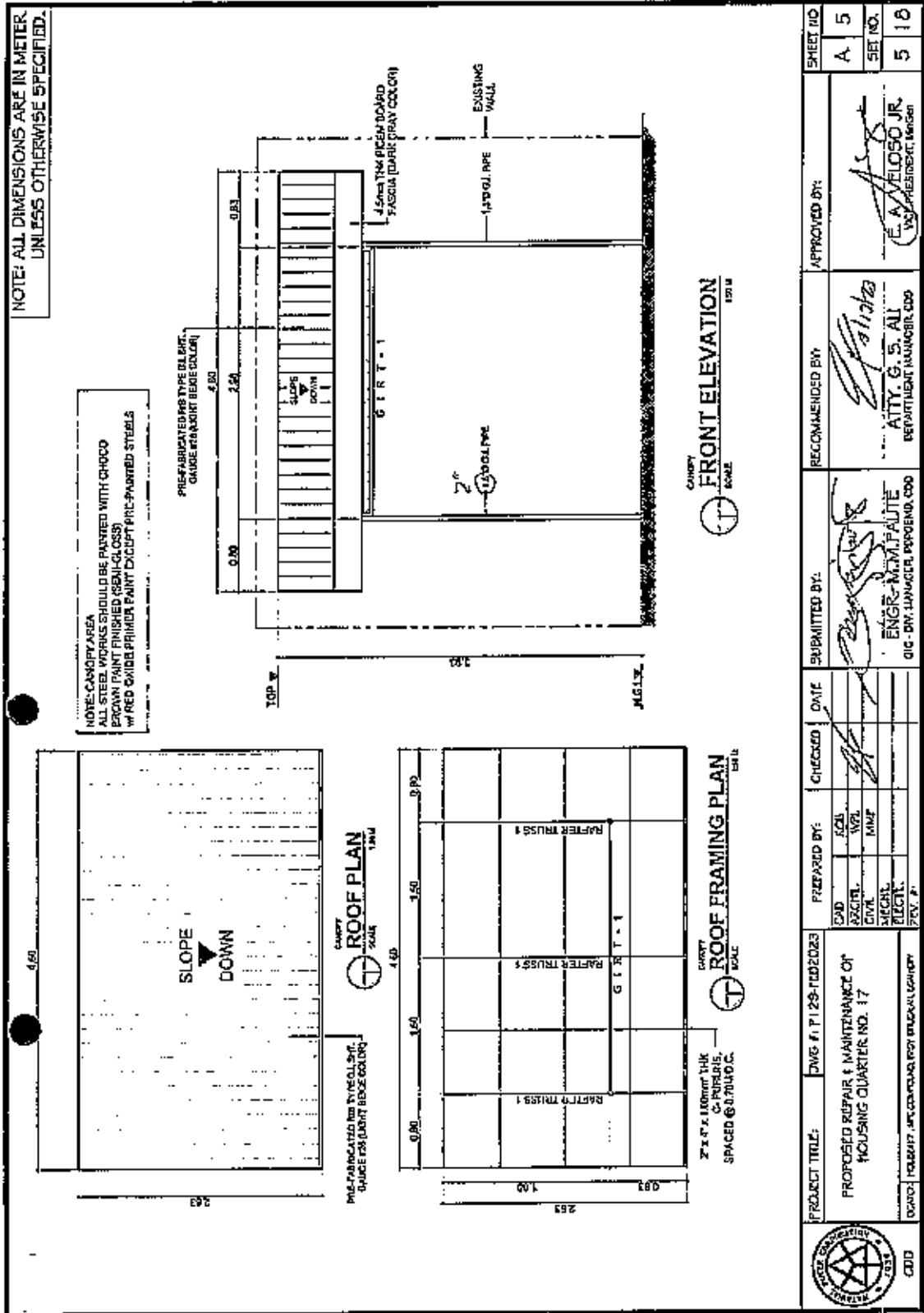


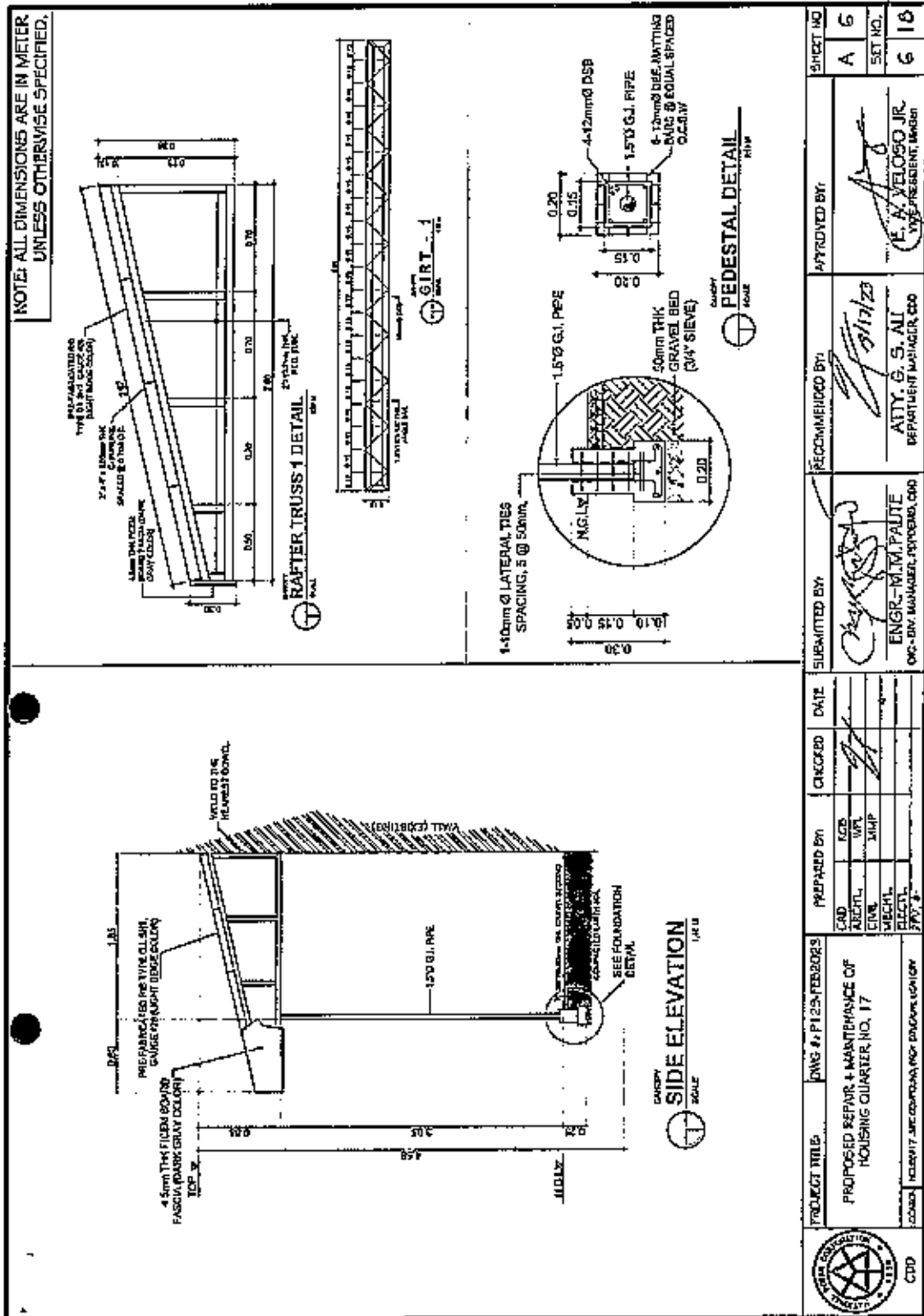




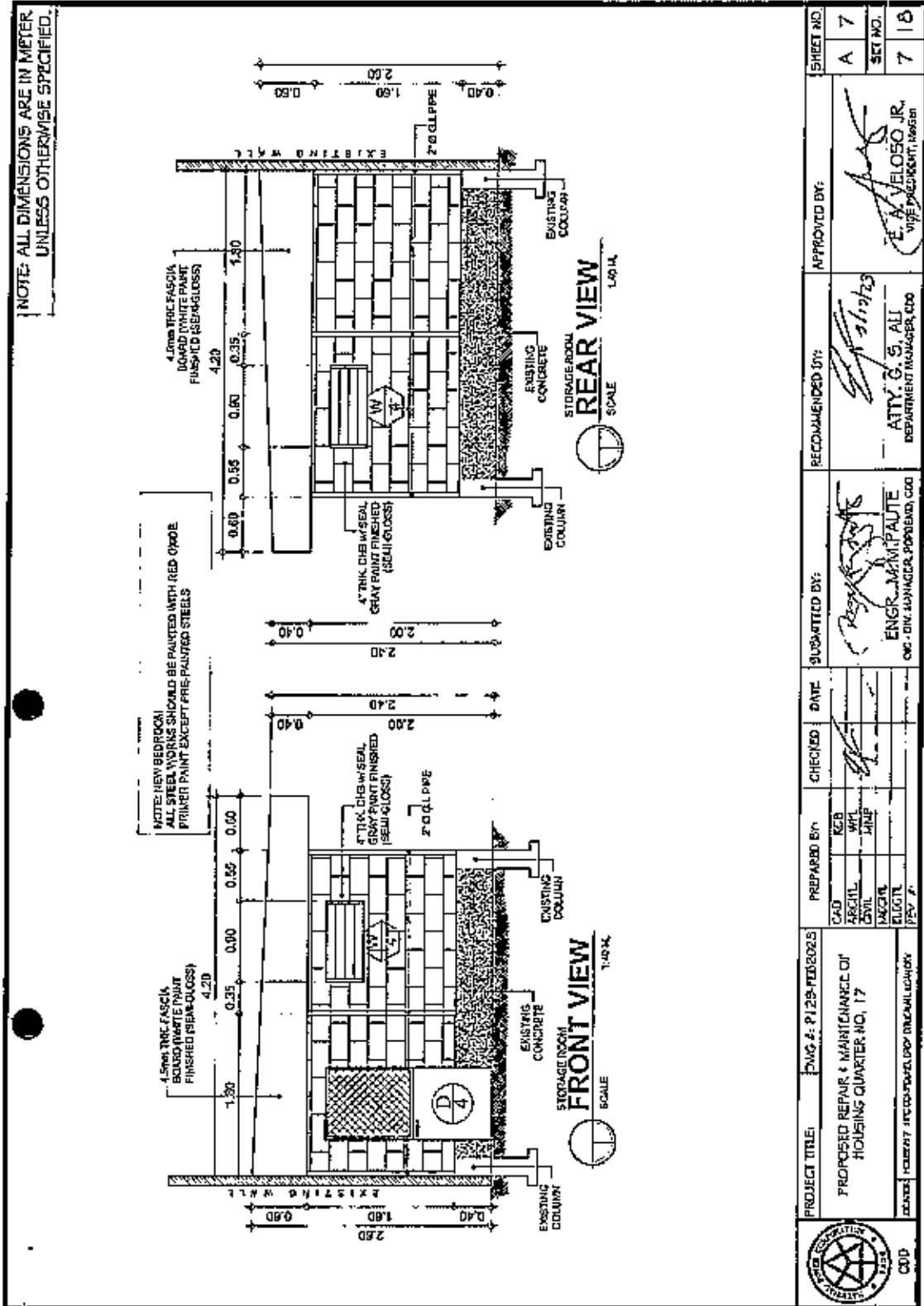




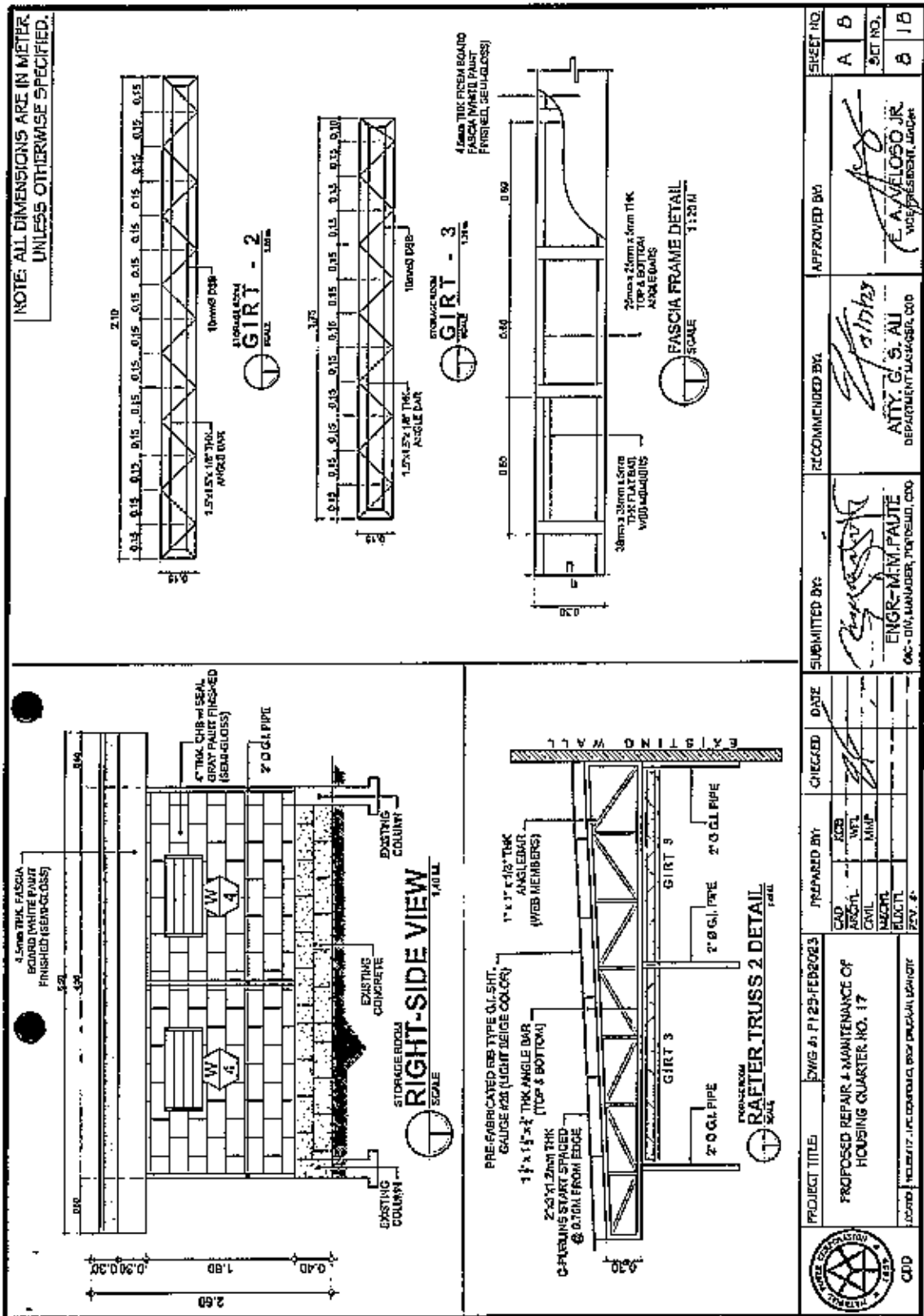




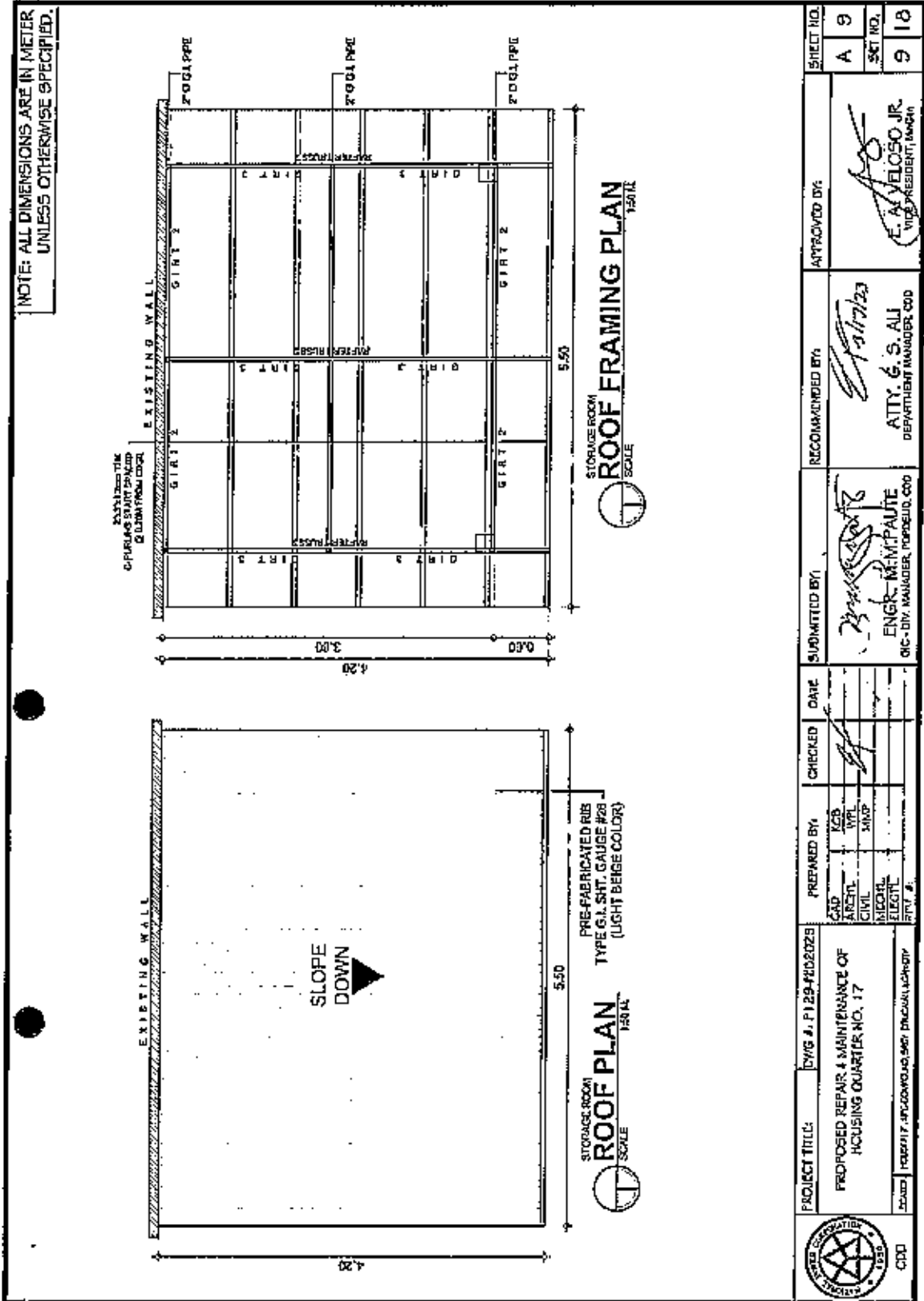
	PROJECT TITLE	DWG #:	P1 25-FEB/2023	PREPARED BY	DATE	CHECKED	DATE	APPROVED BY	DATE	SHEET NO.	6	OF	16
	PROPOSED REPAIR & MAINTENANCE OF HOUSING QUARTER, NO. 17 (CONTRACT NO. 104/2017/JRC/CONTRACTS FOR ENDOURMENT)												
SUBMITTED BY		RECOMMENDED BY		APPROVED BY									
ENGR. M.M. PAULTE QC - DIV. MANAGER, PROJECTS, QDD		ARTY. G. S. ALI DEPARTMENT MANAGER, QDD		E. K. VELOSO JR. VICE PRESIDENT, MRCBT									

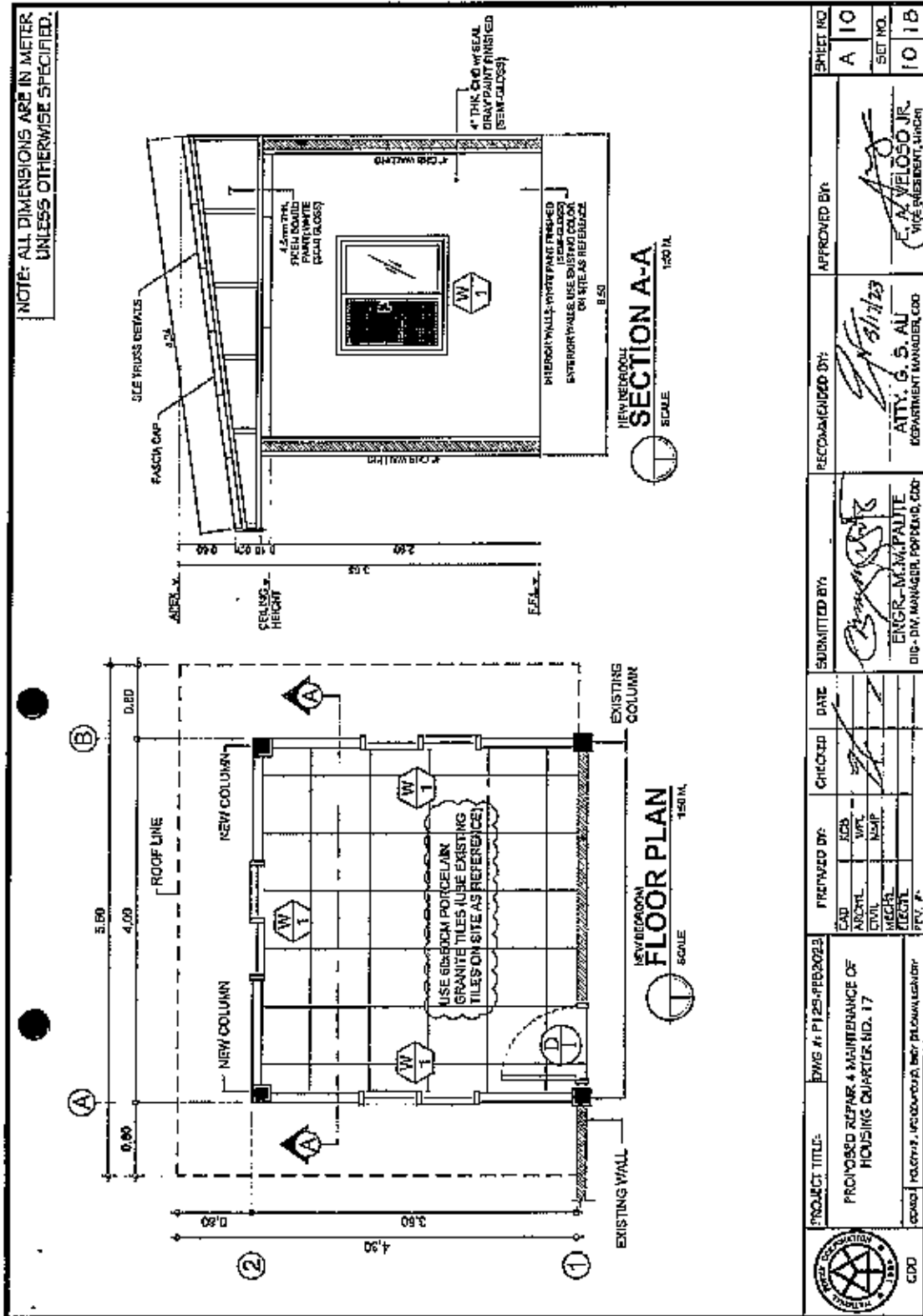


PROJECT TITLE: DWG #: P129-REV2023 PROPOSED REPAIR & MAINTENANCE OF HOUSING QUARTER NO. 17	PREPARED BY:	CHECKED:	DATE:	SUBMITTED BY:	RECOMMENDED BY:	APPROVED BY:	SHEET NO.
	CAD: RCB ARCHT.: WPL CIVIL: HNF MECH: JACOB ELECT: PSV				ENGR. M. M. PALJTE ENR. DIV. ANNACER, PORTLAND, COO	ATTY. G. S. ALI DEPARTMENT MANAGER, COO	E. A. VELOSO JR. VICE PRESIDENT, MGBEN
DATE: 10/27/2023	DESIGNER: M. M. PALJTE	SCALE: 1:40X	PROJECT NO.: 17	PROJECT NO.: 17	PROJECT NO.: 17	PROJECT NO.: 17	SET NO.: 7
000							7 18




 PROJECT TITLE: SWIG #1 P129-FEB2023 PROPOSED REPAIR & MAINTENANCE OF HOUSING QUARTER NO. 17 DRAWN: VOLUNTEER, INC. (CONTRACTOR), BOSS CONSULTING (ENGINEER) CDD	SUBMITTED BY:  ENGR. M.M. FAUTE GC - CIV. MANAGER, THORNSIDE, COO	RECOMMENDED BY:  ATTY. G. S. AU DEPARTMENT MANAGER, CDD	APPROVED BY:  E.A. MELOSO JR. VICE PRESIDENT, MICHIGAN	SHEET NO. A B SET NO. B 1 B
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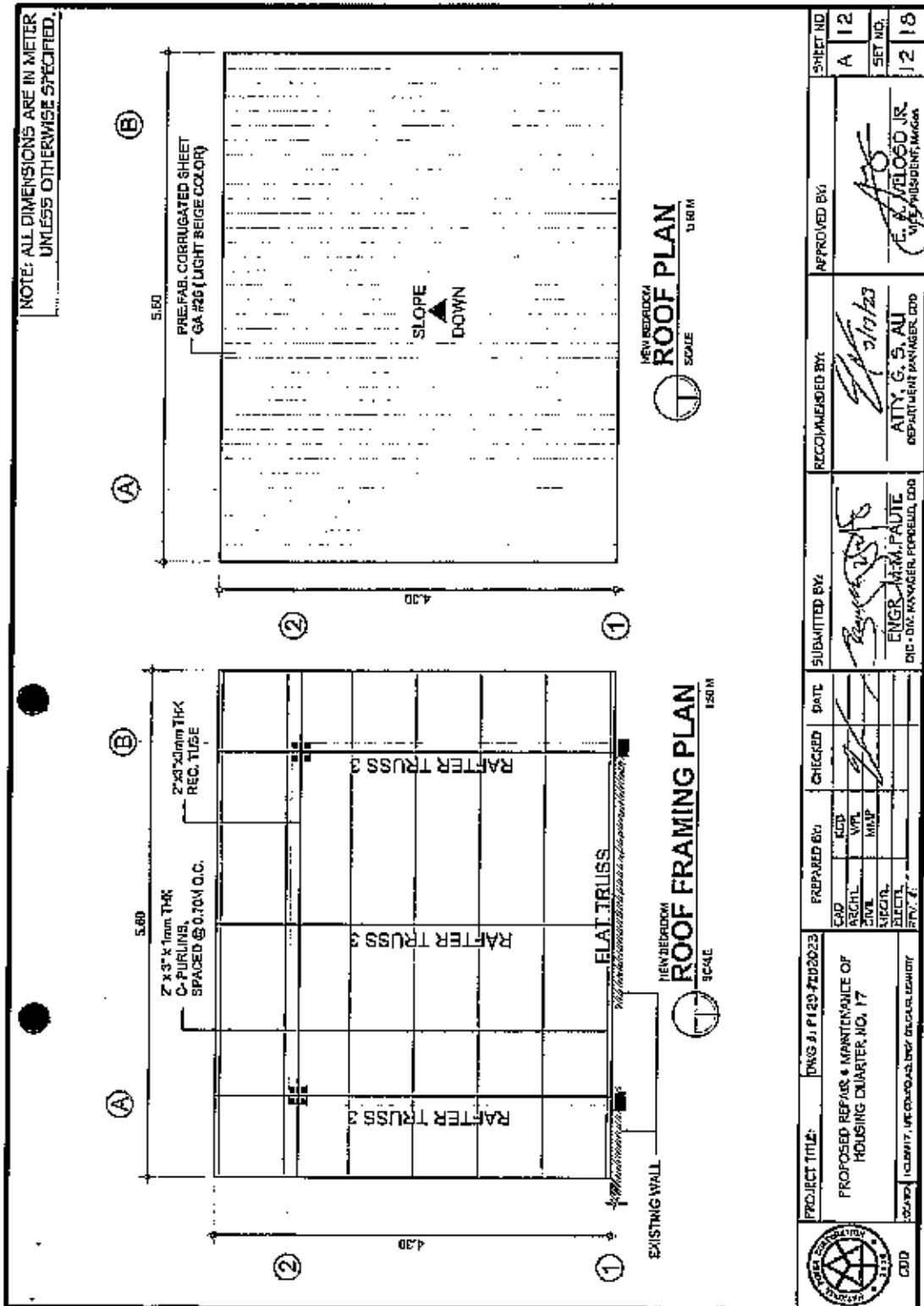


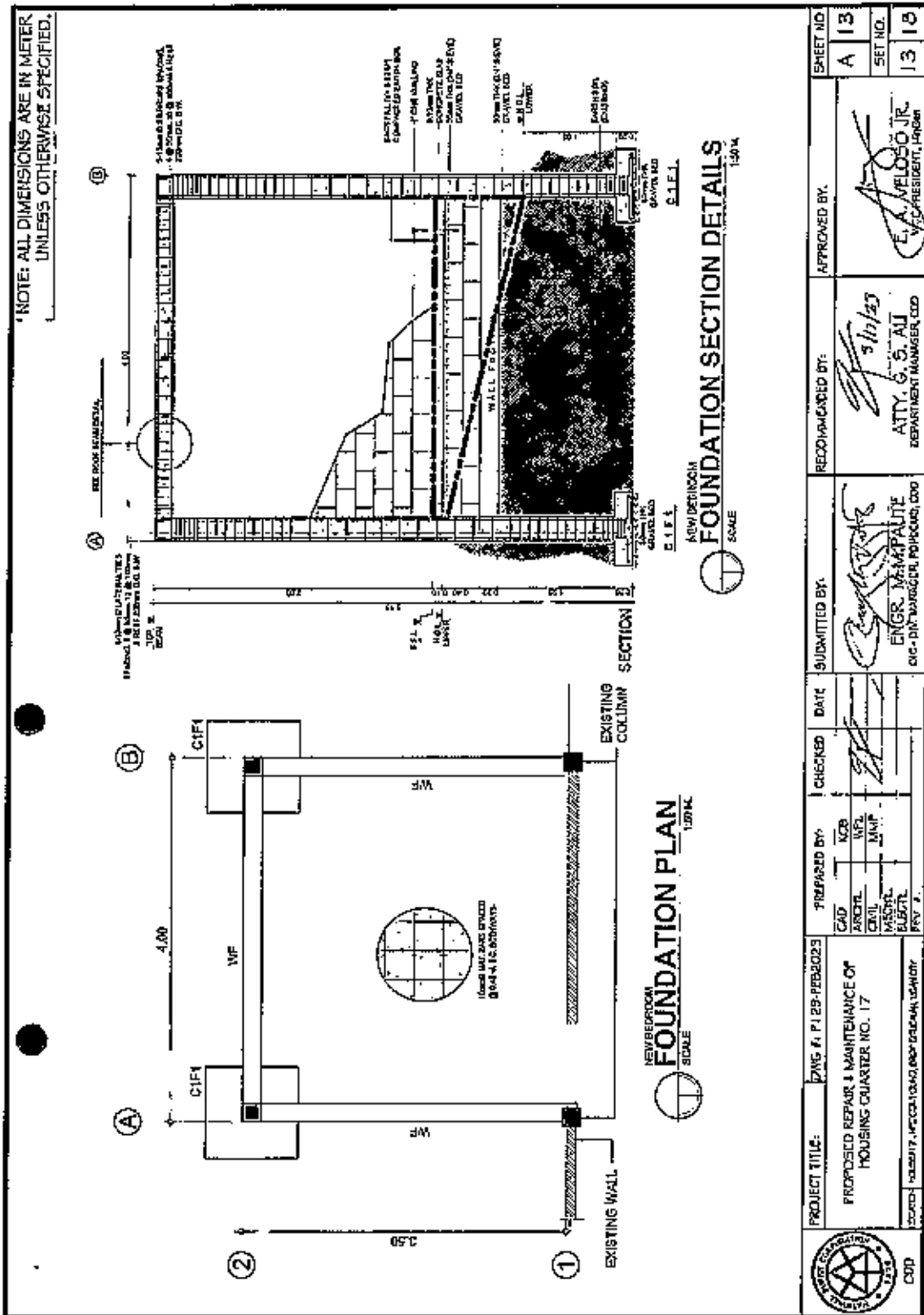
NOTE: ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.

	PROJECT TITLE:	ENGINEERING NO.:	DATE:	CHECKED BY:	DATE:	SUBMITTED BY:	RECOMMENDED BY:	APPROVED BY:	SHEET NO.
	PROPOSED REPAIR & MAINTENANCE OF HOUSING QUARTER NO. 17	EWS # P125-PP02023	17/01/2023	[Signature]	17/01/23	[Signature]	ATTY. G. S. AU DEPARTMENT MANAGER, CDD	[Signature]	A 10
CDD	PROJECT: HOUSING FOR OVP PERSONNEL	PROJECT NO.:	DATE:	PREPARED BY:	DATE:				SET NO.
				CAD: [ ] ARCHT: [ ] CIVIL: [ ] MECH: [ ] ELEC: [ ]					10 1 B



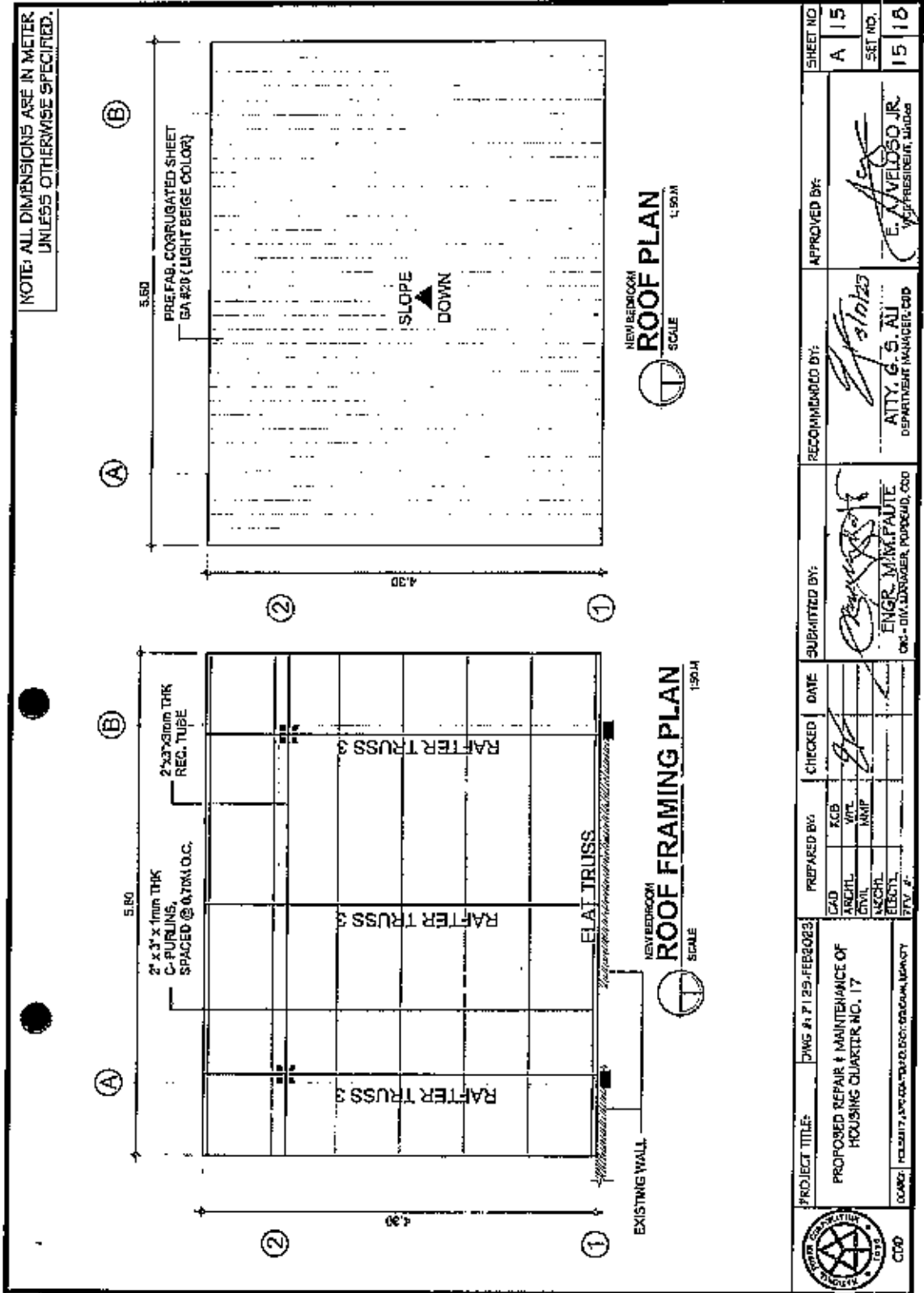







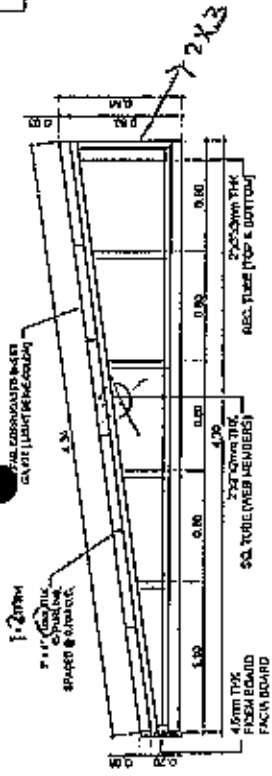
	PROJECT TITLE:	DWS #. P. 1 29- FEB 2023	PREPARED BY:	CHECKED	DATE	SUBMITTED BY:	RECOMMENDED BY:	APPROVED BY:	SHEET NO.
	PROPOSED REPAIR & MAINTENANCE OF HOUSING QUARTER NO. 17		CAD: [ ] ARCHT: [ ] CIVIL: [ ] MECHAN: [ ] ELECTR: [ ] PRV: [ ]	[ ]	[ ]	ENGR. MARFALITE CIV. - DIST. MANAGER, POLICOD, COG	ATTY. G. S. AU DEPARTMENT MANAGER, COD	E. A. VELOSO JR. P.E. - PRESIDENT, BERBECOM	A 13
	SEARCH: HOUSING #. 4070210340, ONLY ORIGINAL QUALITY								SET NO.
									13 18





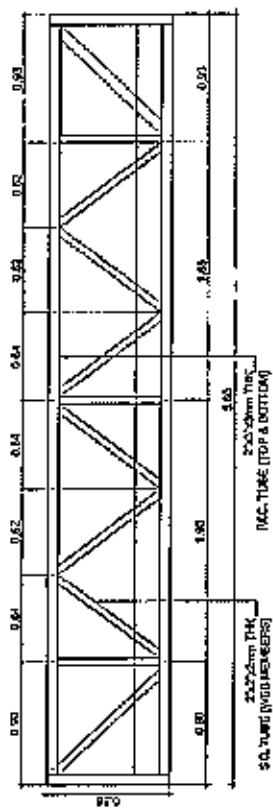
	PROJECT TITLE:	DWG. # P125/FEB2023	CHECKED	DATE	SUBMITTED BY:	APPROVED BY:	SHEET NO.
	PROPOSED REPAIR & MAINTENANCE OF HOUSING QUARTER NO. 17				ENGR. MANFRAITE ENR - CIV. ENGINEER, POPPOND, COO	E. VELOSO JR. VICE PRESIDENT, AIA/ASA	A 15
CAD: [ ] ARCHT: [ ] CIVIL: [ ] MECH: [ ] ELECTR: [ ] PVP: [ ]	PREPARED BY:				ATY, G.S. ALI DEPARTMENT MANAGER, COO		SET NO.
							15 16

NOTE: ALL DIMENSIONS ARE IN METER  
UNLESS OTHERWISE SPECIFIED.



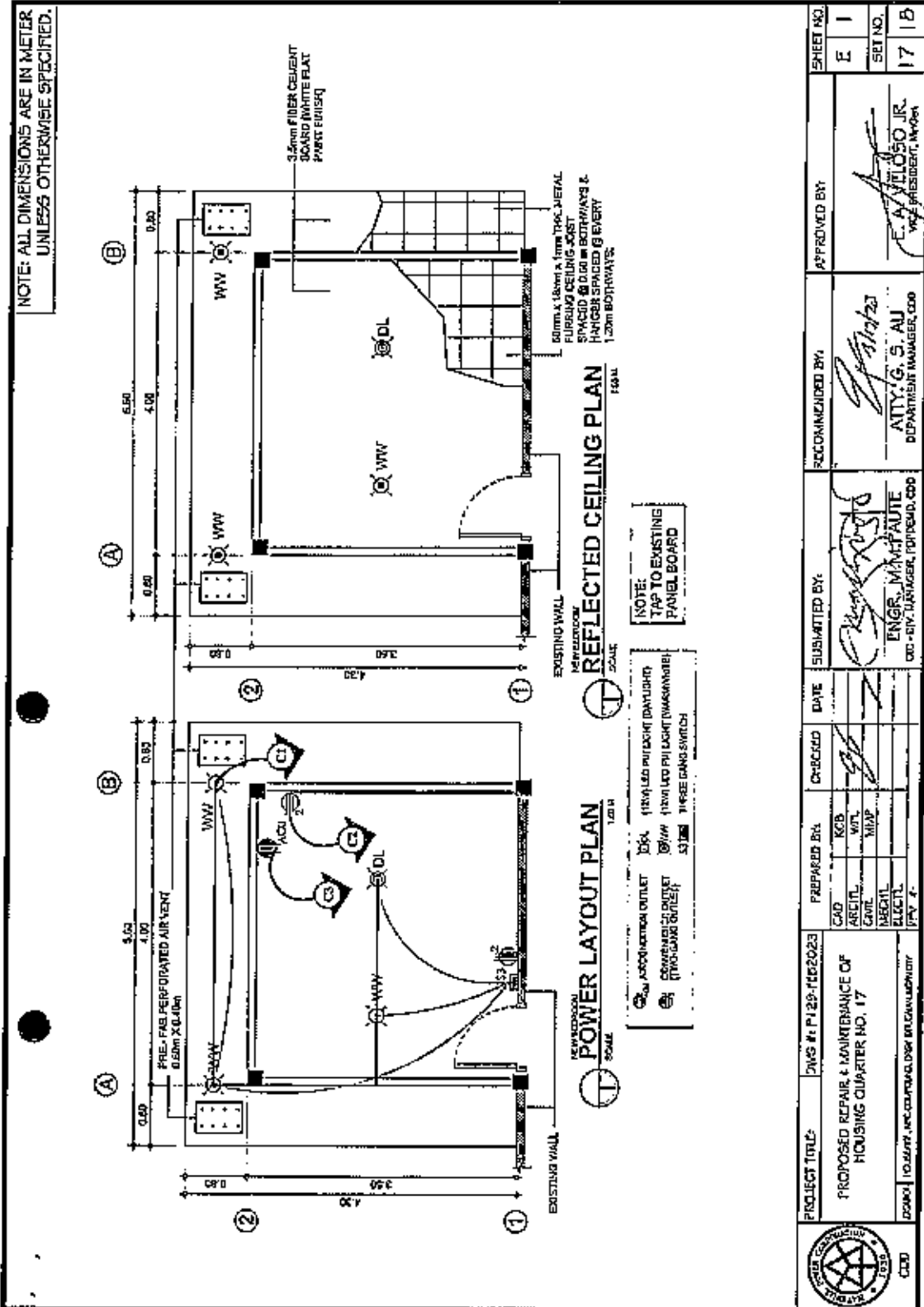
NEW BEDROOM  
**RAFTER TRUSS 3 DETAIL**  
SCALE 1:40 N

NOTE: NEW BEDROOM  
ALL STEEL WORKS SHOULD BE PAINTED WITH RED OXIDE  
PRIMER PAINT EXCEPT PRE-PAINTED STEELS



NEW BEDROOM  
**FLAT TRUSS DETAIL**  
SCALE 1:40 N

	PROJECT TITLE:	DWG #1 P125-FEB2023	DATE	CHECKED	SUBMITTED BY:	RECOMMENDED BY:	APPROVED BY:	SHEET NO.
	PROPOSED REPAIR & MAINTENANCE OF HOUSING QUARTER NO. 17					ENGR. M. M. BAUTE 010-4072 LABORER, FORDHAM, COO	ATT: G. S. ALI DEPARTMENT MANAGER COO	C. P. VELOSO, JR. VICE PRESIDENT, MICHIGAN
	SCALE:							SET NO.
								16 18





NOTE: ALL DIMENSIONS ARE IN METER  
UNLESS OTHERWISE SPECIFIED.

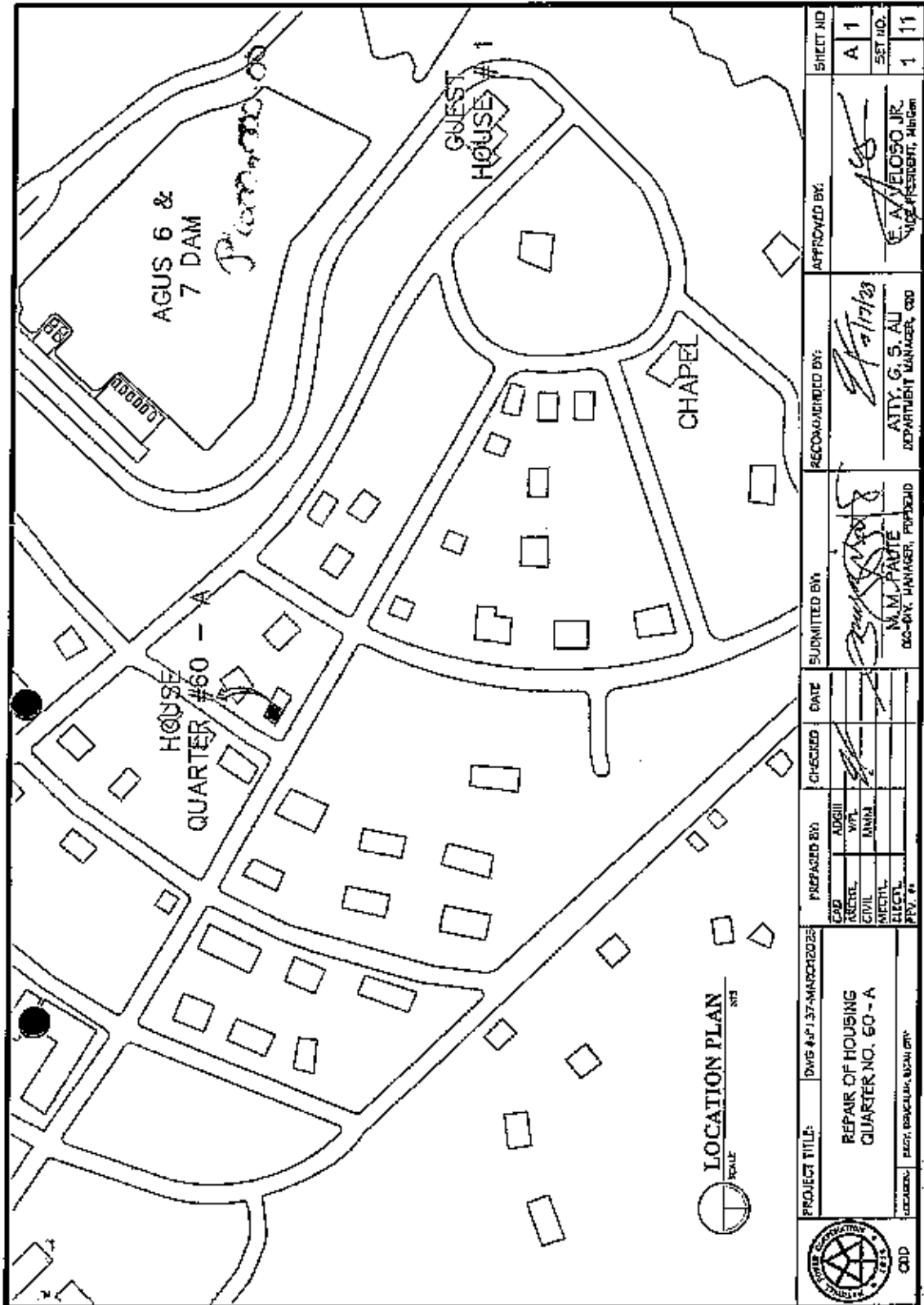
NEW BEDROOM OF HOUSE NUMBER 17

ITEM NO.	CRT. NO.	LOAD DESCRIPTION	NO. OF UNITS	WATTAGE PER UNIT (WATTS)	WATTS		AMPERE (A)	Calculation of Size of wire (Motor)	VOLTAGE (V)	TOTAL WATTS	Calculation CB	PROTECTION (CB)	SIZE OF CONDUCTOR		CONDUIT TYPE	
					A-B	48							SIZE (mm <sup>2</sup> )	TYPE		SIZE (mm)
1	C1	LIGHTING OUTLET	4	32	48	0.22	-	-	220	48	-	15 A	3.5mm <sup>2</sup>	THHN	3/4"	PVC R/P
2	C2	CONVENIENCE OUTLET	2	360	720	3.27	-	-	220	720	-	20 A	3.5mm <sup>2</sup>	THHN	3/4"	PVC R/P
3	C3	AIRCONDITION OUTLET	1	2.5 HP	1865	8.48	30.60	30.60	220	1865	21.2	30 A	5.5mm <sup>2</sup>	THHN	3/4"	PVC R/P
								(200) TOTAL AMPERES			11.97					
								TOTAL CURRENT			9.57					

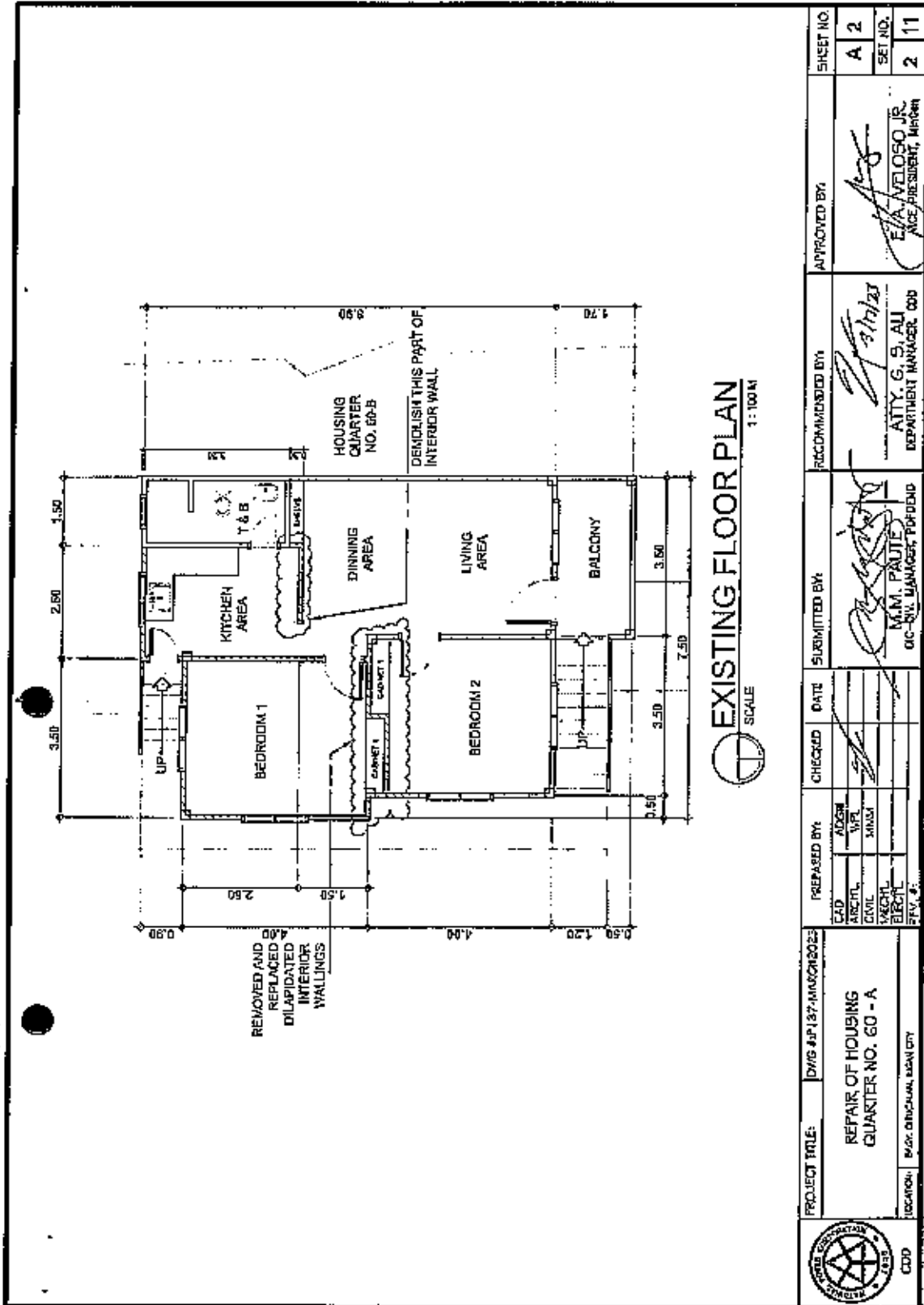
USE 20A 2P, 220V MOLDED CASE CIRCUIT BREAKER (MCCB) WITH OVER CURRENT PROTECTION  
USE 2-50mm<sup>2</sup> THHN STRANDED COPPER WIRE, 3-1/2" PVC PIPE WITH 1-6mm<sup>2</sup> BARE COPPER WIRE

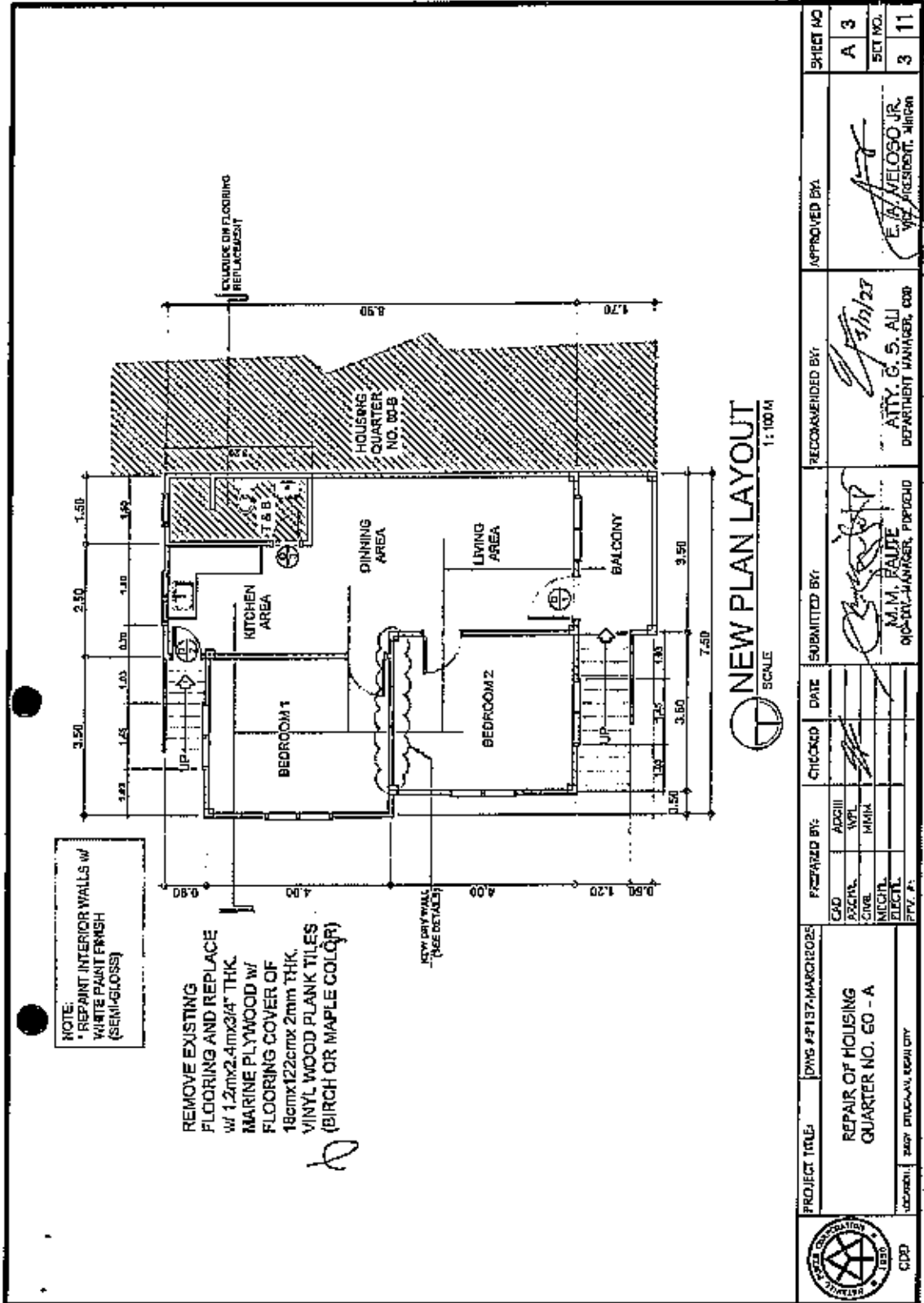
SCHEDULE OF LOADS

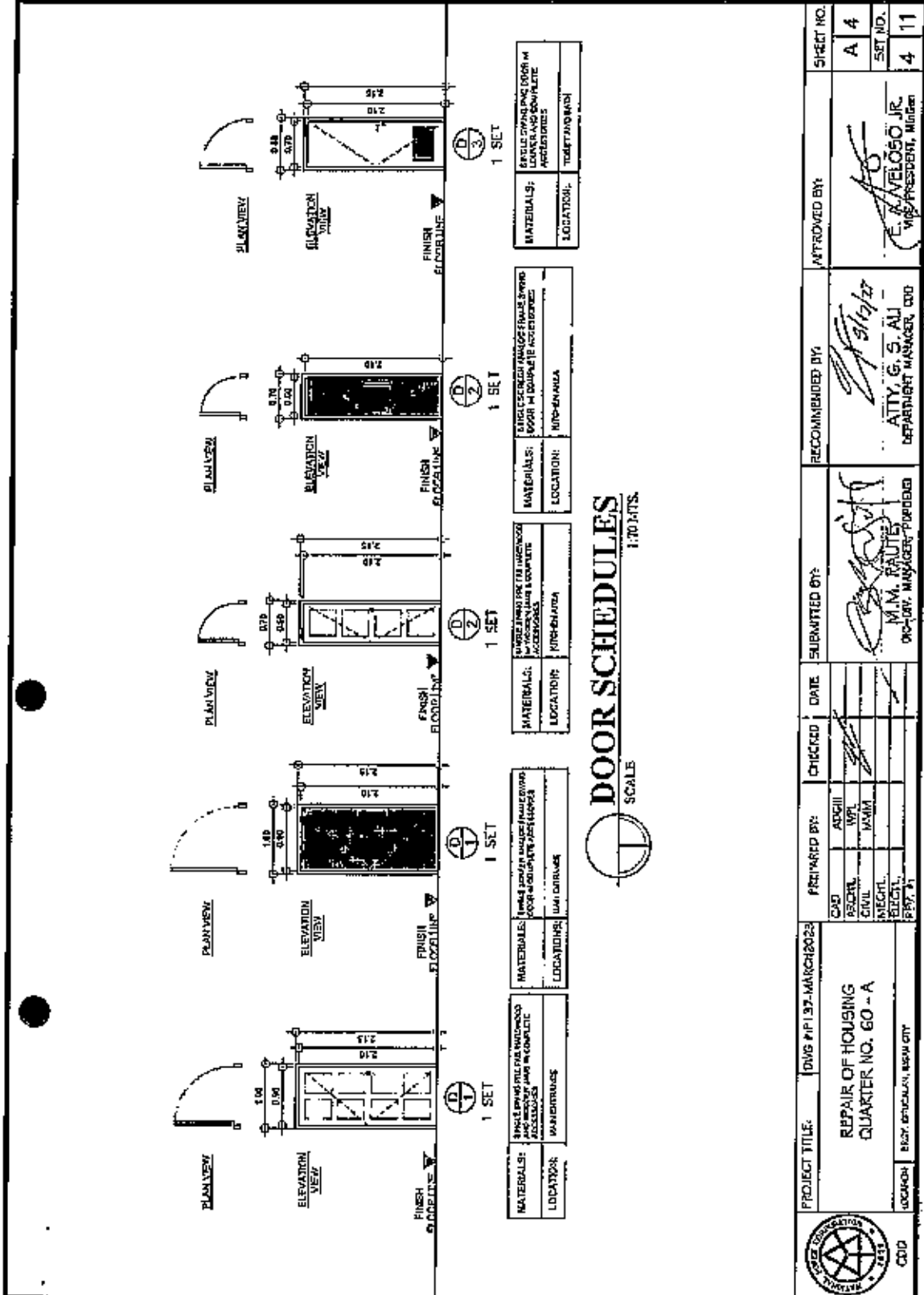
	PROJECT TITLE:	DWG #:	DWG DATE:	ISSUED BY:	CHECKED:	DATE:	SUBMITTED BY:	RECOMMENDED BY:	APPROVED BY:	SHEET NO.
	PROPOSED REPAIR & MAINTENANCE OF HOUSING QUARTER NO. 17	1129-FEB2023	1129-FEB2023	KEB	WPL	MMT	ENG. M. M. PAUTE ENR. M. M. PAUTE ENR. M. M. PAUTE ENR. M. M. PAUTE ENR. M. M. PAUTE	ENR. M. M. PAUTE ENR. M. M. PAUTE ENR. M. M. PAUTE ENR. M. M. PAUTE ENR. M. M. PAUTE	ATTY. G. S. ALI DEPARTMENT MANAGER, CDD	 E. W. VELOSO JR. VICE MANAGER, DESIGN
CDD	PROJECT NO.:	PROJECT NO.:	PROJECT NO.:	PROJECT NO.:	PROJECT NO.:	PROJECT NO.:	PROJECT NO.:	PROJECT NO.:	PROJECT NO.:	SHEET NO.
										18 18

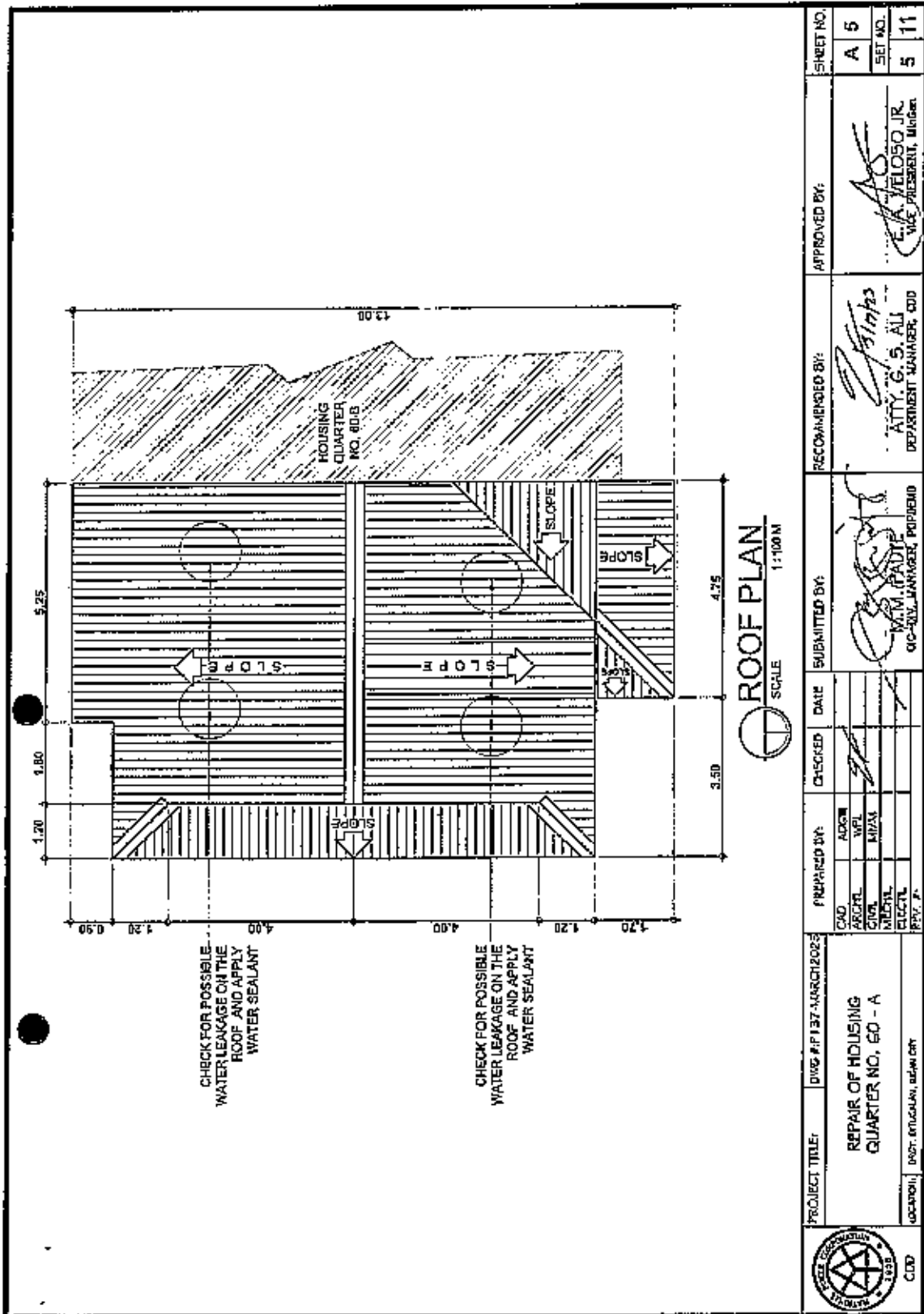




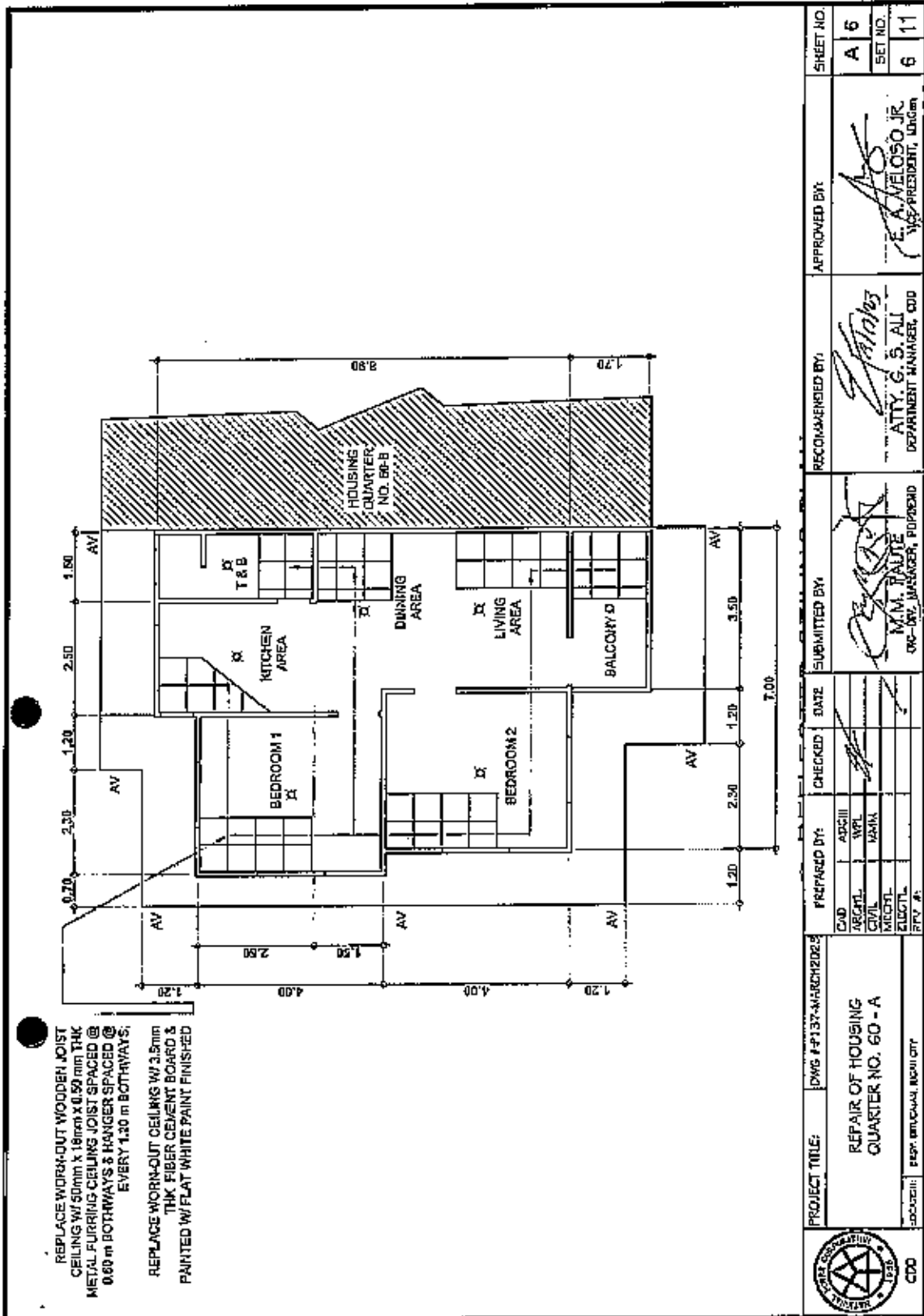


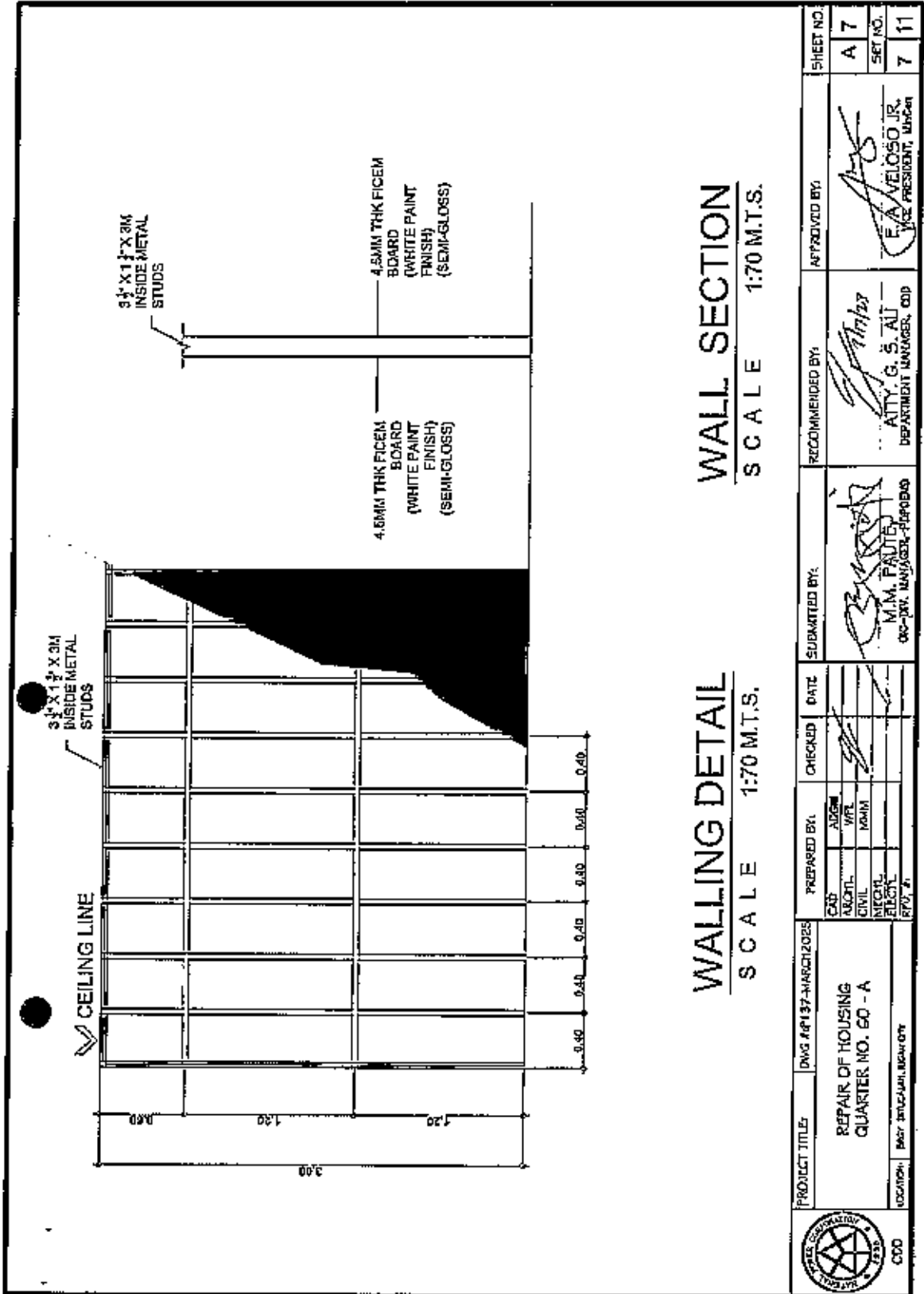






PROJECT TITLE: DIVG #137-MARCH2023 REPAIR OF HOUSING QUARTER NO. 60 - A	PREPARED BY: CAD ARCHT CIVIL MECHL ELECTL PHY. P.	CHECKED /	DATE	SUBMITTED BY: /	RECOMMENDED BY: /	APPROVED BY: /	SHEET NO.
							A 5
LOCATION: DIVG: ENTUGLAN, NEW CRY							SET NO. 5 11

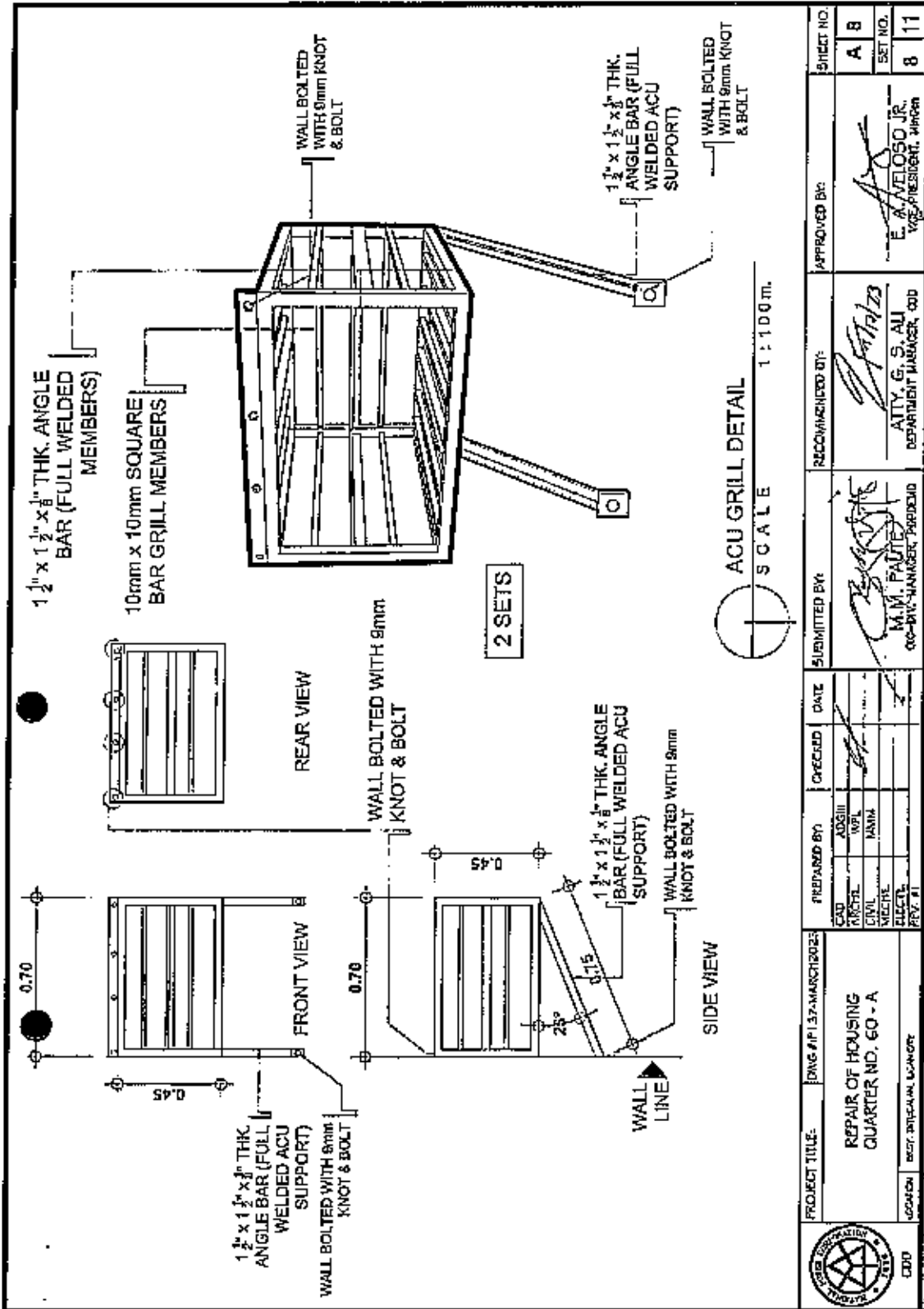




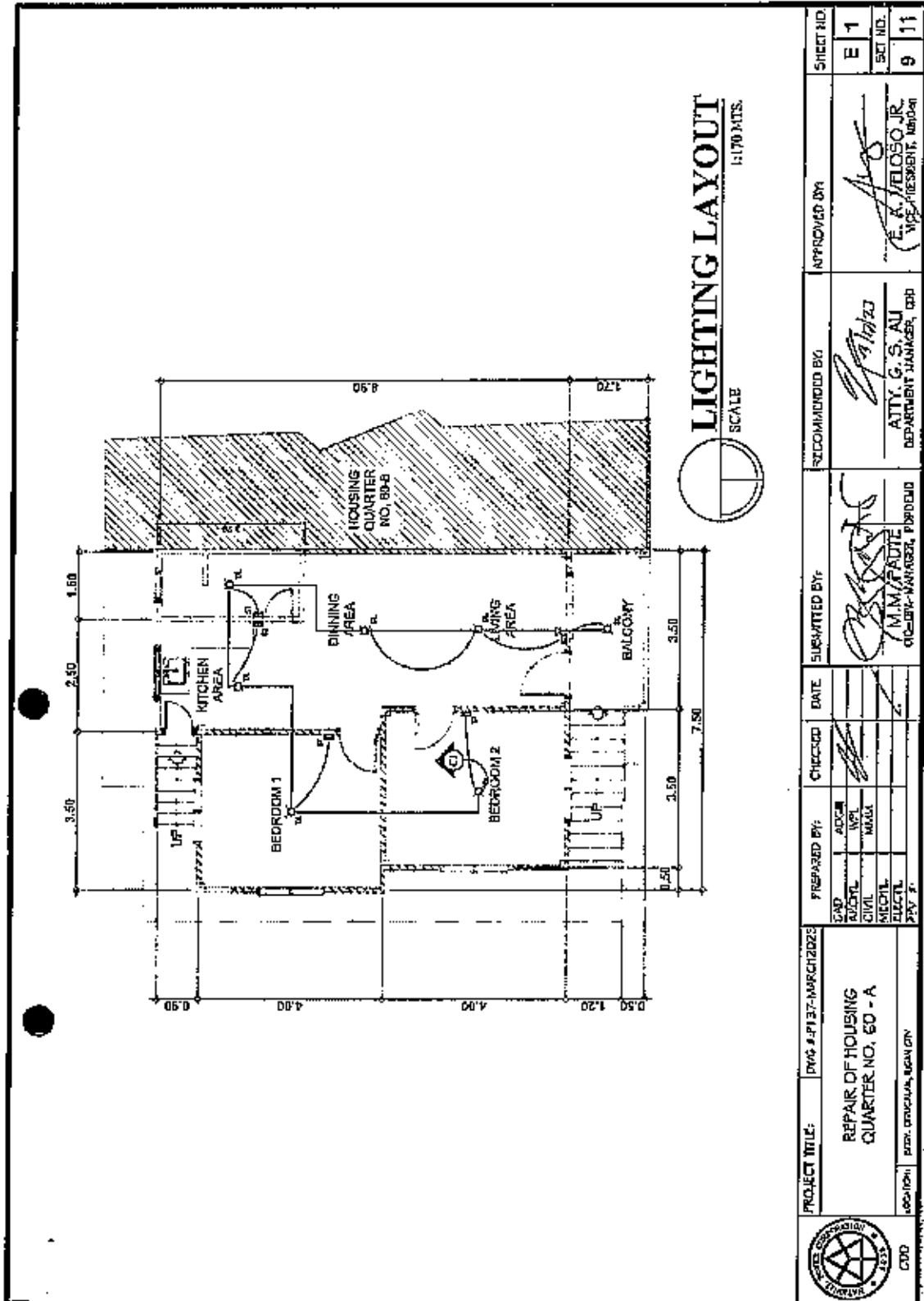
**WALLING DETAIL**  
SCALE 1:70 M.T.S.





**WALL SECTION**  
SCALE 1:70 M.T.S.

	PROJECT TITLE	DWG. NO. 137-MAR-2023	DATE	CHECKED	SUBMITTED BY:	RECOMMENDED BY:	APPROVED BY:	SHEET NO.
	REPAIR OF HOUSING QUARTER NO. 60 - A				M.M. PAITEJ SEC-DEPT. MANAGER-PURCHAS	ATTY. G. S. AJ DEPARTMENT MANAGER, OVP	E. A. VELOSO JR. VICE PRESIDENT, NHC	A 7
LOCATION: EAST INTACHAH, BANGKOK								SET NO.
								7 11

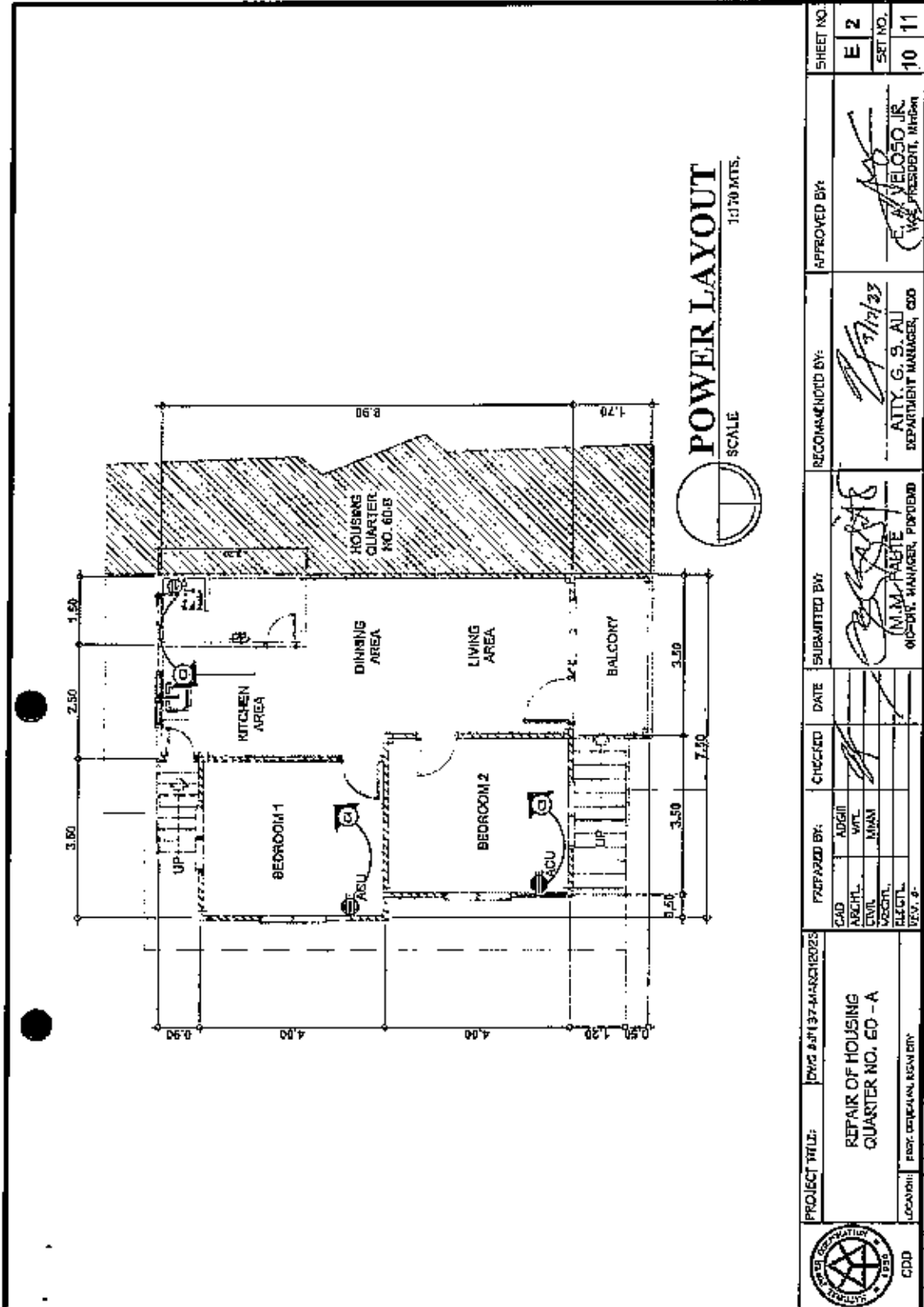


	PROJECT TITLE:	DWG.#/137-MARCH2023	PREPARED BY:	CHECKED:	DATE:	SUBMITTED BY:	RECOMMENDED BY:	APPROVED BY:	SHEET NO.
	REPAIR OF HOUSING QUARTER NO. 60 - A		CAD: _____ ARCHT: _____ CIVIL: _____ MECH: _____ ELECTR: _____ PLY: #1	ADJ: _____ UPL: _____ MAM: _____ _____ _____		M.M. FAUTER COO-BK-MANAGER-PARDEID	G. S. ALI DEPARTMENT MANAGER, OGD	E. A. VELOSO JR. VICE-PRESIDENT, MIPRON	A B SET NO. 8 11
GOVERNOR DEPT. INTEGRAL MANAGE									

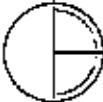


	PROJECT TITLE:	DWG # P127-MARCH2023	PREPARED BY:	CHECKED	DATE	SUBMITTED BY:	RECOMMENDED BY:	APPROVED BY:	SHEET NO.
	REPAIR OF HOUSING QUARTER NO. 80 - A		ARCH MECH CIVIL MECH/ELECT PLY			 M.M. FADDE CIVIL-MANAGER, PWD/CDD	 ATTY. G. S. AU DEPARTMENT MANAGER, CDD	 E. A. VELOSO JR. VICE-PRESIDENT, INFR-CDD	E 1 9 11
	LOCATION:	PRD. ANACAPA, BANGON							























**SCHEDULE OF LOADS**

SCALE  NTS

**REPAIR OF HOUSE NUMBER 60 - A**

**LEGEND**

<p> CONVENIENCE OUTLET (120V-240V)</p> <p> CONVENIENCE OUTLET (120V-240V) WITH GFI</p> <p> CONVENIENCE OUTLET (120V-240V) WITH GFI AND AFCI</p> <p> CONVENIENCE OUTLET (120V-240V) WITH GFI, AFCI, AND ARC FAULT PROTECTION</p> <p> LED PIN LIGHT (DAYLIGHT)</p> <p> LED PIN LIGHT (WARM WHITE)</p> <p> LED PIN LIGHT (NEUTRAL WHITE)</p> <p> LED PIN LIGHT (WARM WHITE)</p> <p> LED PIN LIGHT (WARM WHITE)</p> <p> SINGLE SWITCH</p> <p> TWO GANG SWITCH</p> <p> SINGLE SWITCH (THREE WAY SYSTEM)</p> <p> TWO GANG SWITCH (THREE WAY SYSTEM)</p> <p> 250W LED STRIP LIGHTS</p>	<p> CIRCUIT IDENTIFICATION</p> <p> MARK PANEL BOARD</p> <p> SWITCH LINE</p> <p> LIGHT OUTLET LINE</p>
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ITEM NO.	CIRCUIT NO.	LOAD DESCRIPTION	NO. OF UNITS	WATTS		AMPERE (A)	Calculation of Size of wire (Meter)	VOLTAGE (V)	TOTAL WATTS	Calculation CD	PROTECTION (CD)	SIZE OF CONDUCTOR		CONDUIT TYPE	
				A-B	WATTAGE PER UNIT (WATTS)							(mm <sup>2</sup> )	TYPE		
1	C1	LIGHTING OUTLET	7	32	400	0.33	-	220	84	-	15 A	3.5mm <sup>2</sup>	THSR	3/4"	PVC
2	C2	CONVENIENCE OUTLET	1	360	360	1.64	-	220	360	-	20 A	2.5mm <sup>2</sup>	THSR	3/4"	PVC
3	C3	AIRCONDITION OUTLET	1	25	4P 1865	8.48	10.60	220	1865	21.2	30 A	5.5mm <sup>2</sup>	THSR	3/4"	PVC
3	C4	AIRCONDITION OUTLET	1	25	3P 1865	8.48	10.60	220	1865	21.2	30 A	5.5mm <sup>2</sup>	THSR	3/4"	PVC
							<b>(220V) TOTAL AMPERES</b>		<b>18.59</b>						
							<b>TOTAL CURRENT</b>		<b>14.87</b>						

NOTE: ATTACHED TO EXISTING PANEL BOARD AND EXISTING CIRCUIT LINE

PROJECT TITLE	REPAIR OF HOUSING QUARTER NO. 60 - A	CHECKED BY:	DATE:	APPROVED BY:	SHEET NO.
LOCATION	ENJOY INTERNATIONAL LOCAL CITY	PREPARED BY:			E 3
		DESIGNER:			SET NO.
		DRAWN:			11
		ELECTRICAL:			11
		VECT. BY:			
		REVISIONS:			
		RECOMMENDED BY:			
		SUBMITTED BY:			
		ATTY. G. S. ALI			
		DEPARTMENT MANAGER, CDD			
		M.M. PAUL			
		CR. DIV. MANAGER, POP/END			
		E. A. VELOSO JR.			
		VICE PRESIDENT, JALISCO			





BID DOCUMENTS

SECTION VIII- BILL OF QUANTITIES

NAME OF PROJECT: Construction Of CDD Office Extension (Phase 2

PR NO./REF. NO.: MG-PDD23-002/INFR2023-CDD-005

## *Section VIII. Bill of Quantities*

REHAB OF EXISTING HOUSING FOR OVP  
 PERSONNEL  
 (Name of Project)

SECTION VIII - BILL OF QUANTITIES (PR #) \_\_\_\_\_

BILL OF QUANTITIES

Item No.	Description of Work or Materials	Unit	Estimated Quantity	Unit Price in Pesos (Words and Figures)	Total Amount
A	AGUS 4 HOUSING QUARTER NO. 6, MARIA CRISTINA, ILIGAN CITY				
1.0	CONSTRUCTION SAFETY AND HEALTH PROGRAM	LOT	1.00	(PHP )	PHP
2.0	DEMOLITION & DISPOSAL WORKS (REMOVAL OF EXISTING ROOFING, TRUSSES, DOORS, WINDOWS, CEILING, FLOORING & PORTION OF PARTITION WALL)	LOT	1.00	(PHP )	PHP
3.0	EARTHWORKS				

BID DOCUMENTS  
 SECTION VIII- BILL OF QUANTITIES  
 NAME OF PROJECT: Construction Of CDD Office Extension (Phase 2)  
 PR NO./REF. NO.: MG-PDD23-002/INFR2023-CDD-005

	3.1 Excavation	C.U.M.	9.13	(PHP )	PHP
4.0	MASONRY & PLASTERING WORKS (including Reinforcing Steel & Cement Plaster Finish and Sopic Vault), 100mm			(PHP )	PHP
	4.1 CHB Laying	SQ.M.	46.88	(PHP )	PHP
	4.2 Plaster Finish	SQ.M.	50.27		
5.0	REINFORCING STEEL (DEFORMED, GRADE 40)	KGS.	429.32	(PHP )	PHP
6.0	STRUCTURAL CONCRETE, Class A	C.U.M.	6.47	(PHP )	PHP
7.0	TILE & CONCRETE PAVERS				
	7.1 Tiles	SQ.M.	148.22	(PHP )	PHP
	7.2 Concrete Pavers	SQ.M.	28.68	(PHP )	PHP
8.0	FRAMING & ROOFING WORKS	KGS.	2,970.91	(PHP )	PHP
9.0	CEILING, FIBER CEMENT BOARD ON METAL FRAME	SQ.M.	248.55	(PHP )	PHP
10.0	WINDOWS AND DOORS	LOT	1.00	(PHP )	PHP
11.0	PLUMBING WORKS	LOT	1.00	(PHP )	PHP

BID DOCUMENTS  
 SECTION VIII- BILL OF QUANTITIES

NAME OF PROJECT: Construction Of CDD Office Extension (Phase 2)  
 PR NO./REF. NO.: MG-PDD23-002/INFR2023-CDD-005

12.0	ELECTRICAL WORKS	LOT	1.00	(PHP	)	PHP
13.0	PAINTING WORKS (CEILING, INNER & OUTER WALLING)	SQ.M.	447.41	(PHP	)	PHP
<b>B</b>	<b>HOUSING QUARTERING NO. 17, NPC COMPOUND, DITUGALAN, ILAGAN CITY</b>					
1.0	CONSTRUCTION SAFETY AND HEALTH PROGRAM	LOT	1.00	(PHP	)	PHP
2.0	SITE PREPARATION INCLUDING DEMOLITION AND DISPOSAL	LOT	1.00	(PHP	)	PHP
3.0	EARTHWORKS					
	3.1 Excavation	CUM.	10.54	(PHP	)	PHP
	3.2 Backfilling	CUM.	7.82	(PHP	)	PHP
4.0	REINFORCED CONCRETE WORKS INCLUDING G.I. POST	CUM.	11.66	(PHP	)	PHP
5.0	MASONRY, PLASTERING & TILES WORKS					
	5.1 CHB Laying	SQ.M.	50.63	(PHP	)	PHP
	5.2 Plaster Finish, 2 faces, 16mm thick	SQ.M.	90.72	(PHP	)	PHP
	5.3 Tile Works (New Bedroom)	SQ.M.	14.00	(PHP	)	PHP



BID DOCUMENTS  
 SECTION VIII- BILL OF QUANTITIES  
 NAME OF PROJECT: Construction Of CDD Office Extension (Phase 2)  
 PR NO./REF. NO.: MG-PDD23-002/INFR2023-CDD-005

6.0	ROOF & ROOF FRAMING WORKS	LOT	1.00	(PHP )	PHP
7.0	CEILING, DOOR & WINDOWS	LOT	1.00	(PHP )	PHP
8.0	ELECTRICAL & PLUMBING WORKS	LOT	1.00	(PHP )	PHP
9.0	PAINTING WORKS (NEW BEDROOM & STORAGE ROOM)	SQ.M.	87.61	(PHP )	PHP
©	HOUSING QUARTER NO. 60-A, DITUCALAN, ILIGAN CITY				
1.0	CONSTRUCTION SAFETY AND HEALTH PROGRAM	LOT	1.00	(PHP )	PHP
2.0	DEMOLITION /REMOVAL OF EXISTING WALL, FLOORING, CABINETS, CEILING, DOORS & DISPOSAL WORKS	LOT	1.00	(PHP )	PHP
3.0	WALLING WORKS	SQ.M.	21.00	(PHP )	PHP
4.0	FLOORING AND INSTALLATION OF VINYL TILES	SQ.M.	62.75	(PHP )	PHP
5.0	CEILING WORKS	SQ.M.	67.55		
6.0	DOORS AND ACU GRILL	LOT	1.0		
7.0	ELECTRICAL WORKS	LOT	1.0		
8.0	PAINTING WORKS (EXTERIOR AND INTERIOR WALLING & CEILING)	SQ.M.	263.00		

**BID DOCUMENTS**

**NAME OF PROJECT: Construction Of CDD Office Extension (Phase 2**

**SECTION VIII- BILL OF QUANTITIES**

**PR NO./REF. NO.: MG-PDD23-002/INFR2023-CDD-005**

D	MRS. HOUSENO. 07, NPG COMPOUND, MARIA CRISTINA, ILIGAN CITY				
1.0	STAINLESS STEEL WATER TANK WITH PRE- FABRICATED PEDESTAL STAND	UNIT	1.00	(PHP )	PHP
					PHP

Name of Firm

Name and Signature of Authorized Representative

Designation

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

## Checklist of Technical and Financial Documents

- I. **TECHNICAL COMPONENT ENVELOPE** *[Submit in three (3) copies- one (1) marked Original with the understanding that the Pass/Fail evaluation will be based only on the copy marked "Original"]*

### Class "A" Documents

#### Legal Documents

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

#### 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, using NPC-MinGen Standard Form No. NPCMGNSF-INFR-01; 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, using NPC-MinGen Standard Form No. NPCMGNSF-INFR-02 supported with the following documents:
- Contract and/or Notice to Proceed;
  - For project completed within the year, submit Certificate of Completion;
  - For project completed after the lapse of one year, submit Owner's Certificate of Final Acceptance issued by the project owner other than the contractor, or a final rating of at least Satisfactory in the Constructor's Performance Evaluation System (CPES);
  - In case of contracts with the private sector, an equivalent document (Ex. Official receipt) shall be submitted.
- 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, using NPC-MinGen Standard Form No. NPCMGNSF-INFR-03a, submit also a certification issued by the Insurance Commission; or Original copy of Notarized Bid Securing Declaration using NPC-MinGen Standard Form No. NPCMGNSF-INFR-03b; and
- (f) Project Requirements, which shall include the following:
- a. Organizational chart for the contract to be bid using NPC-MinGen Standard Form No. NPCMGNSF-INFR-04;
  - 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, using NPC-MinGen Standard Form No. NPCMGNSF-INFR-05, 6a, 6b & 07;
- 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, using NPC-MinGen Standard Form No. NPCMGNSF-INFR-08 and its supporting documents; and
- (g) Original duly signed Omnibus Sworn Statement (OSS), using any of the following NPC-MinGen Standard Forms No.:  
NPCMGNSF-INFR-09a -- for Sole Proprietorship;  
or  
NPCMGNSF-INFR-09b -- for Partnership/Cooperative/Corporation/  
Joint Venture with the following supporting documents:
- 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) using NPC-MinGen Standard Form No. NPCMGNSF-INFR-10.

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, using NPC-MinGen Standard Form No. NPCMGNSF-INFR-11;  
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/Submit in three (3) copies- one (1) marked Original with the understanding that the Pass/Fail evaluation will be based only on the copy marked "Original"]**

- (j) Original of duly signed (each and every page) and accomplished Financial Bid Form, using NPC-MinGen Standard Form No. NPCMGNSF-INFR-12;  
and  
Other documentary requirements under RA No. 9184
- (k) Original of duly signed (each and every page) Bid Prices in the Bill of Quantities, using given form in Section VIII; and
- (l) Duly signed (each and every page) and accomplished Detailed Estimates Form using NPC-MinGen Standard Form No. NPCMGNSF-INFR-13, including a summary sheet indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the

- (m) *Bidusing NPC form NPCMGNSF-INFR-14; and*  
Cash Flow by Quarter or Month, as applicable (duly signed each and every page)

## **STANDARD BIDDING FORMS**

### **NPC-MINDANAO GENERATION**

- NPCMGNSF-INFR-01 - List of all Ongoing Government & Private Construction Contracts Including Contracts Awarded but not yet Started
- NPCMGNSF-INFR-02 - Statement of the Bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid
- NPCMGNSF-INFR-03a - Form of Bid Security : Surety Bond
- NPCMGNSF-INFR-03b - Bid Securing Declaration Form
- NPCMGNSF-INFR-04 - Contractor's Organizational Chart for the Project
- NPCMGNSF-INFR-05 - List of Key Personnel Proposed to be Assigned to the Project
- NPCMGNSF-INFR-6a - Key Personnel's Certificate of Employment (Professional Personnel)
- NPCMGNSF-INFR-6b - Key Personnel's Certificate of Employment (Construction Safety and Health Practitioner)
- NPCMGNSF-INFR-07 - Key Personnel's Bio-Data
- NPCMGNSF-INFR-08 - List of Equipment, Owned or Leased and/or under Purchase Agreement, Pledged to the Proposed Project
- NPCMGNSF-INFR-09a - Omnibus Sworn Statement (Sole Proprietorship)
- NPCMGNSF-INFR-09b - Omnibus Sworn Statement (Partnership/ Cooperative/Corporation//Joint Venture)
- NPCMGNSF-INFR-10 - Computation of Net Financial Contracting Capacity (NFCC)
- NPCMGNSF-INFR-11 - Joint Venture Agreement
- NPCMGNSF-INFR-12 - Bid Form
- NPCMGNSF-INFR-13 - Detailed Cost Estimate Form
- NPCMGNSF-INFR-14 - Summary Sheets of Materials Prices, Labor Rates and Equipment Rental Rates





Standard Form Number: NPCMGNSE-INFR-02

**The Statement of the Bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid**

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

Name of Contract	a. Owner's Name b. Address c. Telephone Nos.	Nature of Work	Contractor's Role		a. Amount at Award b. Amount at Completion c. Duration	a. Date Awarded b. Contract Effectivity c. Date Completed
			Description	%		

Note: The bidder must state only one (1) Single Largest Completed Contract (SLCC) similar to the contract to be bid. Stating two (2) or more will disqualify his bid. This Sta shall be supported with:

1. Contract and Notice to Proceed
2. Certificate of Completion (for project completed within the year), or Owner's Certificate of Final Acceptance (for project completed after the lapse of one year) Issu the project owner other than the contractor, or a final rating of at least Satisfactory in the Constructor's Performance Evaluation System (CPES). In case of contracts the private sector, an equivalent document (Ex. Official Receipt) shall be accepted.

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

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

Standard Form No: NPCMGNSF-INFR-03a

### FORM OF BID SECURITY (SURETY BOND)

BOND NO.: \_\_\_\_\_ DATE BOND EXECUTED: \_\_\_\_\_

By this bond, We (Name of Bidder) (hereinafter called "the Principal") and (Name of Surety) of (Name of Country of Surety), authorized to transact business in the Philippines (hereinafter called "the Employer") as Obligee, in the sum of [amount in words & figures as prescribed in the bidding documents], callable on demand, for the payment of which sum, well and truly to be made, we, the said Principal and Surety bind ourselves, our successors and assigns, jointly and severally, firmly by these presents.

SEALED with our seals and dated this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_

WHEREAS, the Principal has submitted a written Bid to the Employer dated the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_, for the \_\_\_\_\_ (hereinafter called "the Bid").

NOW THEREFORE, the conditions of this obligation are:

- 1) If the Bidder withdraws his Bid during the period of bid validity specified in the Bidding Documents; or
- 2) If the Bidder does not accept the correction of arithmetical errors of his bid price in accordance with the Instructions to Bidder; or
- 3) If the Bidder, having determined as the LCB, fails or refuses to submit the required tax clearance, latest income and business tax returns and PhilGEPS registration certificate within the prescribed period; or
- 4) If the bidder having been notified of the acceptance of his bid and award of contract to him by the Entity during the period of bid validity:
  - a) Fails or refuses to execute the Contract; or
  - b) Fails or refuses to submit the required valid JVA, if applicable; or
  - c) Fails or refuses to furnish the Performance Security in accordance with the Instruction to Bidders;

Then this obligation shall remain in full force and effect, otherwise it shall be null and void.

PROVIDED HOWEVER, that the Surety shall not be:

- a) Liable for a grater sum than the specified penalty of this bond, nor
- b) Liable for a greater sum that the difference between the amount of the said Principal's Bid and the amount of the Bid that is accepted by the Employer.

Standard Form No: NPCMGNSF-INFR-03a

Page 2 of 2

This Surety executing this instrument hereby agrees that its obligation shall be valid for 120 calendar days after the deadline for submission of Bids as such deadline is stated in the Instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Surety is hereby waived.

PRINCIPAL \_\_\_\_\_  
SIGNATURE(S) \_\_\_\_\_  
NAME(S) AND TITLE (S) \_\_\_\_\_  
SEAL \_\_\_\_\_

SURETY \_\_\_\_\_  
SIGNATURE(S) \_\_\_\_\_  
NAME(S) \_\_\_\_\_  
SEAL \_\_\_\_\_

Standard Form No: NPCMGNSF-INFR-03b

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

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

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

I/We, the undersigned, declare that:

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

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

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

**Jurat**

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

Standard Form No: NPCMGNSF-INFR-04

### CONTRACTOR'S ORGANIZATIONAL CHART FOR THE CONTRACT

Submit Copy of the Organizational Chart that the Contractor intends to use to execute the Contract if awarded to him. Indicate in the chart the names of the Project Manager, Project Engineer, Foreman and other Key Engineering Personnel.

Attach the required Proposed Organizational Chart for the Contract as stated above

#### NOTES:

1. *This organization chart should represent the "Contractor's Organization" required for the Project, and not the organizational chart of the entire firm.*
2. *Each such nominated engineer/key personnel shall comply with and submit their complete qualification and experience data.*
3. *All these are required to be in the Technical Envelope of the Bidder.*

**BID DOCUMENTS**

**NAME OF PROJECT: Construction Of CDD Office Extension (Phase 2)**

**SECTION IX - CHECKLIST OF TECHNICAL & FINANCIAL DOCUMENTS**

**PR NO./REF. NO.: MG-PDD22-012/INFR2022-CDD-005**

*Standard Form Number: NPCMGNSF-INFR-05*

**LIST OF KEY PERSONNEL PROPOSED TO BE ASSIGNED TO THE CONTRACT  
(Based on the Minimum Key Personnel Required in the Bidding Documents)**

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

		DESIGNATION			
1. Name	_____	_____	_____	_____	_____
2. Address	_____	_____	_____	_____	_____
3. Date of Birth	_____	_____	_____	_____	_____
4. Employed Since	_____	_____	_____	_____	_____
5. Experience	_____	_____	_____	_____	_____
6. Previous Employment	_____	_____	_____	_____	_____
7. Education	_____	_____	_____	_____	_____
8. PRC License	_____	_____	_____	_____	_____

**Required Attachments during Postqualification:**

1. Valid PRC License of the (professional) personnel)
2. Certificate of Training with accreditation from DOLE of the Construction Safety and Health Officer
3. TESDA Training Certificate (NC II) of Welder or Electrician, whichever is applicable
4. Copy of Diploma and/or Service Record/Certificate of Employment of previous and/or current employer of Foreman, Welder, Plumber or Electrician, whichever is applicable shall be submitted during post qualification by the winning bidder.

Submitted by: \_\_\_\_\_  
(Printed name & 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 (based on the minimum key personnel required in the bidding documents) to be assigned to the contract to be bid, with their complete qualification and experience data (including the key personnel's signed written commitment to work for the project once awarded the contract).

Standard Form No: NPCMGNSF-INFR-06a

**KEY PERSONNEL'S CERTIFICATE OF EMPLOYMENT  
(PROFESSIONAL PERSONNEL)**

\_\_\_\_\_  
Issuance Date

**THE VICE PRESIDENT**  
National Power Corporation  
Mindanao Generation  
Marla Cristina, Iligan City

Dear Sir:

I am (Name of Nominee) a Licensed \_\_\_\_\_ Engineer with  
Professional License No. \_\_\_\_\_ Issued on \_\_\_\_\_ at \_\_\_\_\_  
(date of issuance) (place  
of issuance)

I hereby certify that (Name of Bidder) Has engaged my services as  
(Designation) \_\_\_\_\_ for the (Name of Project) \_\_\_\_\_, 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 National Power Corporation at least twenty one (21) days before the effective date of 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.

*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 Engineer, Safety & Health Practitioner, Foremen, etc.), to be assigned to the contract to be bid, with their complete qualification and experience data (including the key personnel's signed written commitment to work for the project once awarded the contract).*

Standard Form No: NPCMGNSF-INFR-06a

Page 2 of 2

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) therefore, 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 National Power Corporation bidding or employment with any Contractor doing business with the National Power Corporation.

\_\_\_\_\_  
(Name and Signature)  
AFFIANT

REPUBLIC OF THE PHILIPPINES )  
City/Municipality of \_\_\_\_\_ )S.S.

SUBSCRIBED AND SWORN TO before me this \_\_\_\_\_, day of \_\_\_\_\_ 20\_\_\_\_,  
affiant exhibiting to me his/her Community Tax Certificate No. \_\_\_\_\_ issued on  
\_\_\_\_\_ at \_\_\_\_\_, Philippines.

Notary Public  
Until 31 December 20 \_\_\_\_\_  
PTR No. \_\_\_\_\_  
Issued at: \_\_\_\_\_  
Issued on: \_\_\_\_\_  
TIN No. \_\_\_\_\_

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 Engineer, Safety & Health Practitioner, Foremen, etc.), to be assigned to the contract to be bid, with their complete qualification and experience data (including the key personnel's signed written commitment to work for the project once awarded the contract).*

Standard Form No: NPCMGNSF-INFR-06b

**KEY PERSONNEL'S CERTIFICATE OF EMPLOYMENT  
(CONSTRUCTION SAFETY AND HEALTH PRACTITIONER)**



\_\_\_\_\_  
Issuance Date

**THE VICE PRESIDENT**  
National Power Corporation  
Mindanao Generation  
Marja Cristina, Iligan City

Dear Sir:

I am (Name of Nominee) a Licensed \_\_\_\_\_ Engineer with  
Professional License No. \_\_\_\_\_ Issued on \_\_\_\_\_ at \_\_\_\_\_  
(date of issuance) (place  
of issuance)

I hereby certify that (Name of Bidder) Has engaged my services as  
(Designation) for the (Name of Project), 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 National Power Corporation at least twenty one (21) days before the effective date of separation.

As Safety and Health Practitioner, I know I will have to stay in the job site all the time and aware that I am authorized to handle only one (1) contract at a time.

*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 Engineer, Safety & Health Practitioner, Foremen, etc.), to be assigned to the contract to be bid, with their complete qualification and experience data (including the key personnel's signed written commitment to work for the project once awarded the contract).*

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 Safety and Health Practitioner, if the contract is awarded to him since I understand that to do so will be a sufficient ground for my disqualification as Safety and Health Practitioner in any future National Power Corporation bidding or employment with any Contractor doing business with the National Power Corporation.

\_\_\_\_\_  
(Name and Signature)  
AFFIANT

REPUBLIC OF THE PHILIPPINES )  
City/Municipality of \_\_\_\_\_ )S.S.

SUBSCRIBED AND SWORN TO before me this \_\_\_\_\_, day of \_\_\_\_\_ 20\_\_\_\_,  
affiant exhibiting to me his/her Community Tax Certificate No. \_\_\_\_\_ issued on  
\_\_\_\_\_ at \_\_\_\_\_, Philippines.

Notary Public  
Until 31 December 20 \_\_\_\_\_  
PTR No. \_\_\_\_\_  
Issued at: \_\_\_\_\_  
Issued on: \_\_\_\_\_  
TIN No. \_\_\_\_\_

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 Engineer, Safety & Health Practitioner, Foremen, etc.), to be assigned to the contract to be bld, with their complete qualification and experience data (including the key personnel's signed written commitment to work for the project once awarded the contract).*

Standard Form No: NPCMGNSF-INFR-07

**KEY PERSONNEL  
(FORMAT OF BIO-DATA)**

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

1. Name : \_\_\_\_\_
2. Date of Birth : \_\_\_\_\_
3. Nationality : \_\_\_\_\_
4. Education and Degrees : \_\_\_\_\_
5. Specialty : \_\_\_\_\_
6. Registration : \_\_\_\_\_
7. Length of Service with the Firm : \_\_\_\_\_  
Year from \_\_\_\_\_ (months) \_\_\_\_\_ (year)  
To \_\_\_\_\_ (months) \_\_\_\_\_ (year)
8. Years of Experience : \_\_\_\_\_

9. If item 7 is less than the required number of years stated in BDS Section III- ITB Clause 10.4, give name and length of service with previous employers to satisfy the required number of years of experience within the last ten (10) years (attached 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. (Attached 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 Engineer, Safety & Health Practitioner, Foremen, etc.), to be assigned to the contract to be bid, with their complete qualification and experience data (including the key personnel's signed written commitment to work for the project once awarded the contract).*

1. Name : \_\_\_\_\_
2. Name and Address of Owner : \_\_\_\_\_
3. Name and Address of the Owner's Engineer (Consultant) : \_\_\_\_\_
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) \_\_\_\_\_ (years)  
to \_\_\_\_\_ (months) \_\_\_\_\_ (years)

\_\_\_\_\_  
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 Engineer, Safety & Health Practitioner, Foremen, etc.), to be assigned to the contract to be bid, with their complete qualification and experience data (including the key personnel's signed written commitment to work for the project once awarded the contract).*

Standard Form Number : NPCMGN5F-INFR - 08

**LIST OF EQUIPMENT, OWNED OR LEASED AND/OR UNDER PURCHASE AGREEMENTS**  
*(Based on the Minimum Equipment Required in the Bidding Documents)*

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

Description	Model/Year	Capacity/ Performance / Size	Plate No.	Motor No. / Body No.	Location	Condition	Proof of Ownership / Lessor or Vendor
<b>A. Owned</b>							
i.							
ii.							
iii.							
iv.							
<b>B. Leased</b>							
i.							
ii.							
iii.							
iv.							
<b>C. Under Purchased Agreements</b>							
i.							
ii.							
iii.							
iv.							

Submitted by: \_\_\_\_\_ (Printed name & Signature)  
 Designation: \_\_\_\_\_  
 Date: \_\_\_\_\_

*One of the requirements from the bidder to be included in its Technical Envelope is the list of its equipment units pledged for the contract to be bid, based on minimum equipment required in the bidding docs, which are owned (supported by proofs of ownership), leased, and/or under purchase agreements (with corresponding engine numbers, chassis numbers and/or serial numbers), supported by certification of availability of equipment from the equipment lessor/vendor for the duration of the project.*

**Omnibus Sworn Statement (Revised)**  
**(SOLE PROPRIETORSHIP)**

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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. I am the sole proprietor or authorized representative of [Name of Bidder] with office address at [address of Bidder];
2. 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 National Power Corporation-Mindanao Generation, as shown in the attached duly notarized Special Power of Attorney;
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. 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;
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;

Standard Form No: NPCMGNSF-INFR-09a

Page 2 of 2

- 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

**[Juraf]**

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

Standard Form No: NPCMGNSF-INFR-09b

**Omnibus Sworn Statement (Revised)**  
PARTNERSHIP/COOP/CORP/JOINT VENTURE

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. I am the duly authorized and designated representative of [Name of Bidder] with office address at [address of Bidder];
2. 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 National Power Corporation-Mindanao Generation, 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. *[If a partnership or cooperative:]* None of the officers and members of [Name of Bidder] is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

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

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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]*

Standard Form No: NPCMGNSF-INFR-10

### NET FINANCIAL CONTRACTING CAPACITY (NFCC)

- A. Summary of the Bidder's/Contractor's assets and liabilities on the basis of the income tax return and audited financial statement for the immediately preceding calendar year are:

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

- B. The Net Financial Contracting Capacity (NFCC) based on the above data is computed as follows:

NFCC = [(Current assets minus current liabilities) x 15] minus the value of all outstanding or uncompleted portions of the projects under ongoing contracts, including awarded contracts yet to be started coinciding with the contract for this Project.

NFCC – P \_\_\_\_\_

Herewith attached is certified true copy of the audited financial statement, stamped "RECEIVED" by the BIR or BIR authorized collecting agent for the immediately preceding calendar year.

Submitted by:

\_\_\_\_\_  
Name of Bidder/Contractor

\_\_\_\_\_  
Signature of Authorized Representative

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

Standard Form No: NPCMGNSF-INFR-11

### JOINT VENTURE AGREEMENT

#### KNOW ALL MEN BY THESE PRESENTS:

That this JOINT VENTURE AGREEMENT is entered in to by and between:  
\_\_\_\_\_, of legal age, (civil status) \_\_\_\_\_, authorized representative of  
\_\_\_\_\_ and a resident of \_\_\_\_\_.

- and -

\_\_\_\_\_, of legal age, (civil status) \_\_\_\_\_, authorized representative of  
\_\_\_\_\_ and a resident of \_\_\_\_\_.

That both parties agree to join together their capital, manpower, equipment, and other resources and efforts to enable the Joint Venture to participate in the Bidding and Undertaking of the hereunder stated Contract of the National Power Corporation.

#### NAME OF FIRM

#### CAPITAL CONTRIBUTION

That the capital contribution of each member firm:

#### NAME OF FIRM

#### CAPITAL CONTRIBUTION

1

DHD

2

DHD

That both parties agree to be jointly and severally liable for their participation in the Bidding and Undertaking of the said contract.

That both parties agree that \_\_\_\_\_ and/or \_\_\_\_\_ shall be the Official Representative/s of the Joint Venture, and are granted full power and authority to do, execute and perform any and all acts necessary and/or to represent the Joint Venture in the Bidding and Undertaking of the said contract, as fully and effectively and the Joint Venture may do and if personally present with full power of substitution and revocation.

That this Joint Venture Agreement shall remain in effect only for the above stated Contract until terminated by both parties.

\_\_\_\_\_  
Name & Signature of Authorized  
Representative

\_\_\_\_\_  
Name & Signature of  
Authorized Representative

\_\_\_\_\_  
Official Designation

\_\_\_\_\_  
Official Designation

\_\_\_\_\_  
Name of Firm

\_\_\_\_\_  
Name of Firm

\_\_\_\_\_  
Witnesses

\_\_\_\_\_  
*If the bidder is a joint venture, one of the requirements is the submission of a valid joint venture agreement.*

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**ACKNOWLEDGEMENT**

BEFORE ME, a Notary Public for and in \_\_\_\_\_, Philippines, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, personally appeared \_\_\_\_\_, authorized representative, of \_\_\_\_\_ with Community Tax Certificate No. \_\_\_\_\_, issued at \_\_\_\_\_, on \_\_\_\_\_, AND \_\_\_\_\_ authorized representative, of \_\_\_\_\_ with Community Tax Certificate No. \_\_\_\_\_, issued at \_\_\_\_\_, on \_\_\_\_\_ known to me to be the same person who executed the foregoing instrument consisting of two (2) pages, including the page whereon the acknowledgements are written, all pages signed by both parties and their instrumental witnesses and they acknowledged before me that the same are their free and voluntary acts and deeds and that of the Corporations they represents.

WITNESS MY HAND AND NOTARIAL SEAL, at the place and on the date first above written.

Notary Public  
Until 31 December 20 \_\_\_\_\_  
PTR No. \_\_\_\_\_  
Issued at: \_\_\_\_\_  
Issued on: \_\_\_\_\_  
TIN No. \_\_\_\_\_

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

*If the bidder is a joint venture, one of the requirements is the submission of a valid joint venture agreement.*  
Standard Form No: NPCMGNSF-INFR-12

## Bid Form for the Procurement of Infrastructure Projects

### BID FORM

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

Project Identification No. : \_\_\_\_\_

To: **The Vice President**  
*National Power Corporation*  
*Mindanao Generation*  
*Marie Cristina, Iligan City*

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

- a. We have no reservation to the PBDs, including the Supplemental or Bid Bulletins, for the Procurement Project: [insert name of contract];
- b. We offer to execute the Works for this Contract in accordance with the PBDs;
- c. The total price of our Bid in words and figures, excluding any discounts offered below is: [insert information];
- d. The discounts offered and the methodology for their application are: [insert information];
- e. The total bid price includes the cost of all taxes, such as, but not limited to: [specify the applicable taxes, e.g. (i) value added tax (VAT), (ii) income tax, (iii) local taxes, and (iv) other fiscal levies and duties], which are itemized herein and reflected in the detailed estimates,
- f. Our Bid shall be valid within the a period stated in the PBDs, and it shall remain binding upon us at any time before the expiration of that period;
- g. If our Bid is accepted, we commit to obtain a Performance Security in the amount of [insert percentage amount] percent of the Contract Price for the due performance of the Contract, or a Performance Securing Declaration in lieu of the the allowable forms of Performance Security, subject to the terms and conditions of issued GPPB guidelines<sup>1</sup> for this purpose;
- h. We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Documents;
- i. We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed; and

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<sup>1</sup> currently based on GPPB Resolution No. 09-2020

FINANCIAL DOCUMENTS

- 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 National Power Corporation-Mindanao Generation.
  
- 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: \_\_\_\_\_



Standard Form No: NPCMGNSF-INFR-14

**SUMMARY SHEETS OF MATERIALS PRICES, LABOR RATES AND  
EQUIPMENT RENTAL RATES**

Name of Bidder: \_\_\_\_\_

**I. Unit Prices of Materials**

Materials Description	Unit	Unit Price
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**II. Manpower Hourly Rates**

Designation	Rate/Hr.
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**III. Equipment Hourly Rental Rates**

Equipment Description	Rental Rate/Hr.
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\_\_\_\_\_  
Name, Signature of Authorized Representative

\_\_\_\_\_  
Designation



### Performance Securing Declaration (Revised)

*[if used as an alternative performance security but it is not required to be submitted with the Bid, as it shall be submitted within ten (10) days after receiving the Notice of Award]*

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

#### PERFORMANCE SECURING DECLARATION

Invitation to Bid: [Insert Reference Number indicated in the Bidding Documents]

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

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, to guarantee the faithful performance by the supplier/distributor/manufacturer/contractor/consultant of its obligations under the Contract, I/we shall submit a Performance Securing Declaration within a maximum period of ten (10) calendar days from the receipt of the Notice of Award prior to the signing of the Contract.
2. I/We accept that: I/we will be automatically disqualified from bidding for any procurement contract with any procuring entity for a period of one (1) year for the first offense, or two (2) years **for the second offense**, upon receipt of your Blacklisting Order if I/We have violated my/our obligations under the Contract;
3. I/We understand that this Performance Securing Declaration shall cease to be valid upon:
  - a. issuance by the Procuring Entity of the Certificate of Final Acceptance, subject to the following conditions:
    - i. Procuring Entity has no claims filed against the contract awardee;
    - ii. It has no claims for labor and materials filed against the contractor; and
    - iii. Other terms of the contract; or
  - b. replacement by the winning bidder of the submitted PSD with a performance security in any of the prescribed forms under Section 39.2 of the 2016 revised IRR of RA No. 9184 as required by the end-user.

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]*

## Contract Agreement Form for the Procurement of Infrastructure Projects (Revised)

*[not required to be submitted with the Bid, but it shall be submitted within ten (10) days after receiving the Notice of Award]*

### CONTRACT AGREEMENT

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

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

#### NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents as required by the 2016 revised Implementing Rules and Regulations of Republic Act No. 9184 shall be deemed to form and be read and construed as part of this Agreement, viz.:
  - a. Philippine Bidding Documents (PBDs);
    - i. Drawings/Plans;
    - ii. Specifications;
    - iii. Bill of Quantities;
    - iv. General and Special Conditions of Contract;
    - v. Supplemental or Bid Bulletins, if any;
  - b. Winning bidder's bid, including the Eligibility requirements, Technical and Financial Proposals, and all other documents or statements submitted;

Bid form, including all the documents/statements contained in the Bidder's bidding envelopes, as annexes, and all other documents submitted (e.g., Bidder's response to request for clarifications on the bid), including corrections to the bid, if any, resulting from the Procuring Entity's bid evaluation;

- c. Performance Security;
- d. Notice of Award of Contract and the Bidder's conforme thereto; and
- e. Other contract documents that may be required by existing laws and/or the Procuring Entity concerned in the PBDs. Winning bidder agrees that additional contract documents or information prescribed by the GPPB that are subsequently required for submission after the contract execution, such as the Notice to Proceed, Variation Orders, and Warranty Security, shall likewise form part of the Contract.

3. In consideration for the sum of *[total contract price in words and figures]* or such other sums as may be ascertained, *[Named of the bidder]* agrees to *[state the object of the contract]* in accordance with his/her/its Bid.
4. The *[Name of the procuring entity]* agrees to pay the above-mentioned sum in accordance with the terms of the Bidding.

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

*[Insert Name and Signature]*

*[Insert Name and Signature]*

*[Insert Signatory's Legal Capacity]*

*[Insert Signatory's Legal Capacity]*

for:

for:

*[Insert Procuring Entity]*

*[Insert Name of Supplier]*

**Acknowledgment**

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

