



NATIONAL POWER CORPORATION

MinGen

**PHILIPPINE BIDDING DOCUMENTS
(Procurement of INFRASTRUCTURE
PROJECTS)**

FOR

**CONSTRUCTION OF ISD DATA/PABX
CENTER & STORAGE BUILDING (PHASE II)**

P.R. No.: MG-ISD25-002

**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(j))

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.

BID DOCUMENTS

SECTION I- INVITATION TO BID

NAME OF PROJECT: CONSTRUCTION OF ISD DATA/PBX CENTER &
STORAGE BUILDING (PHASE II)
PR NO. MG-ISD23-002/REF. NO. INFRA2023-ISD-030

Section I. Invitation to Bid



NATIONAL POWER CORPORATION

MinGen**Invitation to Bid for Construction of ISTD DATA/PABX Center & Storage Building (Phase II)**

The NATIONAL POWER CORPORATION-MINDANAO GENERATION, through the approved Corporate Budget of NPC for CY 2025 intends to apply the sum of **Seven Million Four Hundred Thousand Pesos (PHP7,400,000.00)** being the Approved Budget for the Contract (ABC) to payments under the contract for **Construction of ISTD DATA/PABX Center & Storage Building (Phase II)** at NPC MinGen Headquarters, Brgy. Marla Cristina, Iligan City (PR No. MG-ISO25-002/ Ref. No. INFRA2025-ADM-016). Bids received in excess of the ABC shall be automatically rejected at bid opening.

1. The NATIONAL POWER CORPORATION-MINDANAO GENERATION now Invites bids for the above Procurement Project. Completion of the Works is required **One Hundred (100) 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).
2. 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.
3. 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**.
4. A complete set of Bidding Documents may be acquired by interested Bidders on **July 21 to August 11, 2025** 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 **Ten Thousand Pesos (PHP10,000.00)**. 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.

5. The **NATIONAL POWER CORPORATION-MINDANAO GENERATION** will hold a Pre-Bid Conference on July 29, 2025 at 9:00 AM 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)-223-4604 or email cmo_logistics_afd_mingen@napocor.gov.ph.
6. Bids must be duly received by the BAC Secretariat through manual submission at the office address as indicated below, on or before **August 11, 2025 at 9:30 AM**. Late bids shall not be accepted.
7. All bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in ITB Clause 15.
8. Bid opening shall be on **August 11, 2025 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.
9. *This project requires submission of at least:*

• **Certificate of Site Inspection**

Note: Submission of bids shall be done manually

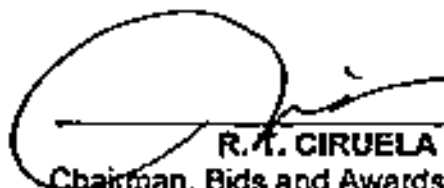
10. The **NATIONAL POWER CORPORATION- MINDANAO GENERATION** reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 revised Implementing Rules and Regulations (IRR) of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.

11. For further information, please refer to:

BAC Secretariat
Contracts Management Office
Logistics Division
Mindanao Generation Headquarters
National Power Corporation
Marina Cristina, Iligan City
cmo_logistics_afd_mingen@napocor.gov.ph
Fax No.: (063)223-4604
www.napocor.gov.ph

12. 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>



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

Date of PhilGEPS Publication: 21 July 2025

Section II. Instructions to Bidders

1. Scope of Bid

The Procuring Entity, **NATIONAL POWER CORPORATION-MINDANAO GENERATION** invites Bids for the **Construction of ISTD DATA/PABX Center & Storage Building (Phase II) at NPC MinGen Headquarters, Brgy. Maria Cristina, Iligan City, with Project Identification Number PR No. MG-ISD25-002/Ref. No. INFRA2025-ISD-030.**

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 2025 in the amount of **Seven Million Four Hundred Thousand Pesos (PHP7,400,000.00)**

2.2. The source of funding is:

a. GOCC and GFIs, the approved 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/webcasting as indicated in paragraph 6 of the IB.

9. Clarification and Amendment of Bidding Documents

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

SECTION II- INSTRUCTION TO BIDDERS

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. Sealing and Marking of Bids

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

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

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

17. Deadline for Submission of Bids

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

18. Opening and Preliminary Examination of Bids

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

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

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

19. Detailed Evaluation and Comparison of Bids

- 19.1. The Procuring Entity's BAC shall immediately conduct a detailed evaluation of all Bids rated "passed" using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of 2016 revised IRR of RA No. 9184.
- 19.2. If the Project allows partial bids, all Bids and combinations of Bids as indicated in the BDS shall be received by the same deadline and opened and evaluated simultaneously so as to determine the Bid or combination of Bids offering the lowest calculated cost to the Procuring Entity. Bid Security as required by ITB Clause 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: Construction or Rehabilitation of Vertical Structure		
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>Key Personnel</u>	<u>General Expertise</u>	<u>Relevant Experience</u>
	1 – Project Engineer	Licensed Civil Engineer	At least five (5) years' experience in related works
	1 - Construction Foreman	B.S. Civil Engineering Graduate Civil Engineering Technology Graduate Non-graduate	At least three (3) years' experience in similar works At least five (5) years' experience in similar works 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). At least three

	<table><tr><td>2 – Welders</td><td>NC II</td><td>(3) years experience as Safety Officer. At least three (3) years' experience in plumbing works</td></tr><tr><td>2 – Plumber</td><td>NC II / RMP</td><td>At least three (3) years' experience in plumbing works</td></tr><tr><td>2- Electrician</td><td>NC II / RME</td><td>At least three (3) years' experience in electrical works</td></tr><tr><td>4-Skilled Painter</td><td></td><td>At least three (3) years' experience in painting works</td></tr></table> <p><i>The following key personnel information indicated above must be included in Standard Form NPCMGNSF-INFR-05: List of Key personnel proposed to be assigned to the Contract. Filled up Standard Form NPCMGNSF-INFR-05 must be included in the technical component envelope.</i></p> <p>Project Engineer or Foreman and Construction Safety & 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>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>	2 – Welders	NC II	(3) years experience as Safety Officer. At least three (3) years' experience in plumbing works	2 – Plumber	NC II / RMP	At least three (3) years' experience in plumbing works	2- Electrician	NC II / RME	At least three (3) years' experience in electrical works	4-Skilled Painter		At least three (3) years' experience in painting works																				
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10.5	<p>The minimum equipment requirements are the following:</p> <table><tr><td><u>Equipment</u></td><td><u>Capacity</u></td><td><u>Number of Units</u></td></tr><tr><td>Concrete Mixer</td><td>1-Bagger</td><td>Two (2)</td></tr><tr><td>Concrete Vibrator, Pen Type</td><td>4 HP</td><td>Two (2)</td></tr><tr><td>Welding Machine</td><td>200 Amperes</td><td>Two (2)</td></tr><tr><td>Mini Dump Truck</td><td>3 cu.m</td><td>Two (2)</td></tr><tr><td>Plate Compactor</td><td>5 HP</td><td>Two (2)</td></tr><tr><td>Grinding Machine</td><td>5 HP</td><td>Two (2)</td></tr><tr><td>Bar Cutter</td><td>5 HP</td><td>Two (2)</td></tr><tr><td>Bar Bender</td><td>5 HP</td><td>Two (2)</td></tr><tr><td>Cutting Outfit</td><td></td><td>Two (2)</td></tr></table>			<u>Equipment</u>	<u>Capacity</u>	<u>Number of Units</u>	Concrete Mixer	1-Bagger	Two (2)	Concrete Vibrator, Pen Type	4 HP	Two (2)	Welding Machine	200 Amperes	Two (2)	Mini Dump Truck	3 cu.m	Two (2)	Plate Compactor	5 HP	Two (2)	Grinding Machine	5 HP	Two (2)	Bar Cutter	5 HP	Two (2)	Bar Bender	5 HP	Two (2)	Cutting Outfit		Two (2)
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Cutting Outfit		Two (2)																															
12	N/A																																

SECTION III- BID DATA SHEET

15.1	<p>The bid security shall be in the form of a Bid Securing Declaration or any of the following forms and amounts:</p> <ol style="list-style-type: none"> The amount of not less than One Hundred Forty-Eight Thousand Pesos (PHP 148,000.00), 2% of ABC, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; The amount of not less than Three Hundred Seventy Thousand Pesos (PHP370,000.00), 5% of ABC, if bid security is in Surety Bond.
19.2	Partial bids are not allowed.
20	<p>Additional documents to be submitted during Post- Qualification:</p> <ol style="list-style-type: none"> Other appropriate licenses and permits required by law and stated in the Bidding documents. <ol style="list-style-type: none"> Original Bank Statement year ending prior to bid opening; Valid and updated PhilGEPS Registration (Platinum Membership) (all pages); 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; 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; 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); 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; Philippine Contractors Accreditation Board (PCAB) License; Board of Accountancy (BOA) Certificate; Contract and/or Notice of Award as supporting documents for NPC MinGen Form No. NPCMGNSF-INFR-01, if applicable; (a) Valid Professional Regulation Commission (PRC) license for professional personnel; (b) Certificate of Training with accreditation from DOLE for the Construction Safety & Health Officer and (c) Diploma and/or Service Record/Certificate of Employment of previous and/or current employer for Construction

	<p><i>Foreman; National Certificate II and Certificate of Employment of previous and/or current employer for other skilled workers required in the project - as supporting documents for NPC MinGen Form No. NPCMGNSF-INFR-05, if applicable.</i></p> <p><i>4. Certificate of good performance and/or Statement of Work Accomplishment showing Target and Actual Accomplishments issued by the End-user/Implementing Agency of the ongoing projects listed in NPC MinGen Form No. NPCMGNSF-INFR-0, if applicable</i></p> <p><i>5. Certificate of Site Inspection issued by Department Manager or his authorized representative.</i></p> <p><i>6. Unamended product brochure/literature of the following materials:</i></p>
21	<p>Additional contract documents relevant to the Project that may be required by existing laws and/or the Procuring Entity, <u>prior to contract signing</u>, such as:</p> <ul style="list-style-type: none"> a) Approved construction schedule and S-curve b) Approved manpower schedule c) Construction methods d) Approved equipment utilization schedule e) Construction safety and health program approved by the DOLE f) Approved Project Evaluation Review Technique/Critical Path Method (PERT/CPM)

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. Day works

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 Day works 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.

- If required, the Contractor will provide "as built" Drawings and/or operating and maintenance manuals as specified in the SCC.
- 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 on the start date.
6	The site investigation reports are: NONE
7.2	Fifteen (15) years
10	Day works 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)</u> days of delivery of the Notice of Award.
11.2	The amount to be withheld for late submission of an updated Program of Work is 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 instructions
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.

BID DOCUMENTS

SECTION VI-SPECIFICATIONS

NAME OF PROJECT: CONSTRUCTION OF 1ST DATA/PABX
CENTER & STORAGE BUILDING (PHASE II)
PR NO. MG-1SD25-002/REP. NO. 1NPR2025-1SD-030

Section VI. Specifications

PROJECT HIGHLIGHTS

PH 1.0 GENERAL

The project is funded by NPC Mindanao Generation. This project aims to optimize the equipment that powers the information systems, delivering greater performance, faster speeds, and smoother operations while providing physical and network security and the integrity of data.

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.

The Contractor shall accept full responsibility for its work in the performance qualifications, specifications, documentation, reports, fabrication, corrosion protection, cleaning, shop testing, preparation for shipment, field testing, warranty provisions and compliance with the applicable codes and standards and the requirements of this specification.

PH 2.0 PROJECT LOCATION

The project is located at NPC MinGen Headquarter, Maria Cristina, Iligan City.

PH 3.0 SCOPE OF WORK

The works and services to be performed under this Contract shall essentially consist of, but not limited to the following:

1.0 MOBILIZATION

2.0 MATERIALS AND STRENGTH TESTING

3.0 CONSTRUCTION SAFETY & HEALTH PROGRAM

4.0 SITE PREPARATION (Removal of Obstruction, Grading Fill and Disposal)

5.0 EARTHWORKS

5.1 Excavation (Common Soil)

5.2 Structure Backfill

5.3 Gravel Bed

6.0 REINFORCED STRUCTURAL CONCRETE (20.7 MPa at 28 days)

6.1 Steel Reinforcement Bar

6.2 Structural Concrete

7.0 WALL SYSTEM & FINISHES

7.1 Laying of CHB

7.2 Plain Cement Plaster Wall Finish

8.0 ELECTRICAL WORKS

9.0 CEILING SYSTEM

10.0 PAINTING WORKS (Interior and Exterior)

11.0 TILING WORKS (Including Carpet)

12.0 FENESTRATIONS

13.0 STEEL WORKS INCLUDING RAILINGS & ROOFING SYSTEM

14.0 WALL ACCENT

15.0 PLUMBING WORKS

16.0 LANDSCAPING

17.0 CLEAN-UP WORKS & DEMOBILIZATION

PH 4.0 CONTRACT PERIOD

The contractor shall complete the works as specified in Clause 3 within One Hundred (100) 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 Contractors Accreditation Board (PCAB) license of at least Category C or D- General Building with Inter-agency registration and classification of Small B-Building or Industrial Plant.

The Contractor must have undertaken similar contracts that involves construction/rehabilitation/expansion of commercial, industrial or office building provided that the contract cost shall be at least equivalent to 50% of ABC.

TECHNICAL SPECIFICATIONS**CW- CIVIL WORKS****CW-1.0 GENERAL CONSTRUCTION FACILITIES****CW-1.1 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.

CW-1.2 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.

CW-1.3 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.

CW-1.4 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.

CW-1.5 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.

CW-1.6 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.

CW-1.7 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.

CW-1.8 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.

CW-1.9 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.

CW-1.10 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 clear and cleaned as directed by NPC.

CW-1.11 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.

CW-2.0 CARE OF WATER DURING CONSTRUCTION

CW-2.1 Scope

In accordance with the specifications contained in his 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.

CW-2.2 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.

CW-2.3 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.

CW-3.0 CONSTRUCTION SAFETY, HEALTH AND ENVIRONMENTAL PROGRAM

CW-3.1 Scope

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

CW-3.2 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 and 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 (spoil disposal areas) that shall be provided with suitable drainage — equipped with sediment 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 wastes i.e. used oils, paints, thinner, etc.
- d) Limit construction activities that generate excessive noise to daytime works only to prevent nuisance to nearby residents during rest hours.
- e) As far as practicable, undertake site stripping, grading and excavations during dry weather.
- f) Construction/Installation shall be carried-out in a manner where landslides and erosions are minimized.

SECTION VI- SPECIFICATIONS

- g) Avoid unnecessary opening/clearing of areas outside construction sites or destruction of vegetative cover, especially cutting of existing trees; and to re-vegetate disturbed areas.
- h) Implement biological control measures such as maintenance of vegetation buffers (i.e. sodding of grass, planting of creeping vines, herbs, shrubs and trees) to shield streams/rivers from sedimentation; planting of vegetative cover over erodible surfaces; and planting of exposed sloping areas with shallow-rooted species like grasses, herbs or creepers.
- i) Locate fill slopes and spoil heaps away from drainage routes and properly remove/dispose the same as soon as practicable.
- j) Preserve or replace, if practicable, natural drainage patterns (when disturbed by civil works) with appropriate drainage channels.
- k) Convey oil-contaminated wastewater from workshops, garages, or gas filling stations through an oil trap (i.e. improvised oil-water separator) prior to discharge.
- l) Spray water, wherever and whenever necessary, to minimize dust generation.
- m) Provide PPEs and other safety provisions required by DOLE, for its project/site works.
- n) Take all necessary steps to prevent the pollution of groundwater and/or water bodies in the vicinity of the project site.

CW-3.3

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.

CW-4.0

MATERIALS AND STRENGTH TESTING

CW-4.1

Sampling and Testing of Concrete

The Contractor shall furnish all materials, either separately or mixed, as required by NPC. Selection of materials and the making of test specimens shall be made under the supervision of NPC and delivered to NPC laboratory or any NPC accredited testing center at the Contractor's expense.

The expense of making and curing all concrete specimens including the materials, comprising the concrete specimens shall be borne by the Contractor. The cost of shipping and testing the concrete shall likewise be at the expense of the Contractor.

No concreting 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.

Test cylinders shall be prepared from the concrete samples and tested. At least one set of (4) four cylinder samples shall be made for each major structural member. 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 for 28 days.

The compressive strength of the concrete shall be deemed acceptable if the average 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.

PHILIPPINE NATIONAL STANDARD (PNS) AND IMPORT COMMODITY
CLEARANCE FOR CONSTRUCTION MATERIALS

CW-4.2

CW-4.2.1

All construction materials to be used in the project that are purchased locally shall pass the following PNS and/or ICC standard:

1. Cement

- **PNS 07:2017 – Portland Cement**
 - Includes types: Type I (general use), Type II (moderate sulfate resistance), etc.

2. Reinforcing Steel Bars (Rebars)

- **PNS 49:2020 – Steel bars for concrete reinforcement**
 - Grades: 275, 415, and 500 MPa.

3. Concrete Hollow Blocks (CHB)

- **PNS 26:2019 – Concrete masonry units – Load-bearing concrete hollow blocks – Specification**
 - Class A: 800 psi
 - Class B: 700 psi

➤ Class C; 350 psi

4. Aggregates (Sand and Gravel)

- **PNS ASTM C33 / C33M – Standard Specification for Concrete Aggregates**

5. Ready-Mixed Concrete

- **PNS ASTM C94 / C94M – Standard Specification for Ready-Mixed Concrete**

6. Structural Steel

- **PNS 657:2020 – Hot-rolled structural steel sections**
 - Includes I-beams, H-beams, angles, channels.

7. Lumber and Wood Products

- **PNS 193:2020**

8. Fire-Resistant Construction Materials

- **PNS ISO 834 – Fire-resistance tests**

9. Galvanized Iron Pipe

- **PNS 26:1992**

10. Electrical Wires

- **PNS 260:2002 – Annealed Copper Wires**
- **PNS 35:2013 – PVC Insulated Copper Wires and Cables (Rated Voltage 600V)**
- **PNS UL Standards for Wire and Cable**

Notable Standards:

- **PNS UL 66:2023 – Fixture Wire.**
- **PNS UL 83A:2023 – Fluoropolymer Insulated Wire.**
- **PNS UL 854:2023 – Service-Entrance Cables.**
- **PNS UL 1650:2023 – Portable Power Cable.**

➤ **PNS UL 444:2023 – Communications Cables****11. Sanitary Pipes and Fixtures**

- **PNS 1950:2003 – PVC-U Sanitary Pipes**
- **PNS 156:2010 – Sanitary Wares**

12. Lighting Fixtures

- **PNS IEC 1328:1992 – Luminaires: Part 1 – General Requirements and Tests**
- **PNS IEC 62560:2012 – Self-Ballasted LED Lamps for General Lighting Services**
- **PNS 2050-5:2006 – Lamps and Related Equipment: Energy Labeling Requirements – Part 5: Luminaires**

B. All construction materials to be used in the project that are purchased abroad shall pass the ICC standard. All materials shall have an ICC mark to guarantee that the product has undergone inspection and testing to verify its compliance with the relevant PNS. This certification helps protect NPC as consumer from substandard and potentially hazardous construction materials

- 1. Cement and Blended Hydraulic Cement: Must comply with PNS ASTM C150:2019 and PNS ASTM C595:2019 standards.**
- 2. Steel Products: Including deformed and non-deformed bars, which must adhere to PNS ASTM A615:2019 and PNS ASTM A706:2019 standards.**
- 3. Ceramic Tiles: Must meet PNS ISO 13006:2018 standards.**
- 4. Galvanized Iron Sheets: Should comply with PNS ASTM A653/A653M:2019 standards.**
- 5. PVC Pipes and Fittings: Must conform to PNS ISO 4422:2018 standards.**
- 6. Sanitary Wares: Including water closets, lavatories, and bidets, which should meet PNS 156:2010 standards**

All other construction materials that are not listed and are purchased abroad shall have ICC certification to ensure that imported construction

materials meet the required safety, quality, and performance standards set by the DTI-BPS. This protects consumers and ensures the integrity of construction projects.

CW-4.3 Measurement and Payment.

No separate measurement and payment will be made for the Materials and Strength and Testing. The entire cost thereof shall be included in the related pay items in the Bill of Quantities.

CW-5.0 SITE GRADING

CW-5.1 Scope

In accordance with the specifications contained herein and in conformance with the lines, slopes, grades, and extent shown on the plans or otherwise directed by the NPC, the Contractor shall furnish all equipment, labor and materials and shall perform the required grading work.

CW-5.2 Site Preparation

CW-5.2.1 Clearing and Grubbing

The Contractor shall perform clearing and grubbing on the project site. The site shall be cleared and grubbed of all trees and brush except particular trees, which may be retained by the NPC for preservation. Particular trees to be left in place shall be protected from scarring and/or other injuries during clearing and grubbing work and other construction operations.

All stumps, roots and brush shall be removed to a depth of thirty (30) cm below original ground surface and disposed of in a place designated by the NPC. Downed timber, which may be ordered saved by the NPC for future use, shall be cut into logs as directed and neatly piled in a place designated by the NPC, otherwise they shall be disposed of same as above.

CW-5.2.2 Demolition of existing concrete

Where shown on the drawings or if not shown but directed by the NPC, the Contractor shall perform miscellaneous work like demolition, removal, chipping, replacement or transfer of existing structures and other miscellaneous work. All demolished structures shall be disposed of as directed by NPC.

CW-5.3 Grading

CW-5.3.1 General

SECTION VI- SPECIFICATIONS

The word "grading" as defined herein means bringing to required grades all areas in accordance with the lines, slopes, elevations and grades shown on the drawings or as directed by the NPC.

CW-5.3.2 Classification of Materials

All materials in grading work shall be unclassified regardless of the nature of materials encountered during grading excavation and of materials used in grading fill. It is on the basis of unclassified material that Contractor shall determine his unit bid price for grading excavation and grading fill.

CW-5.3.3 Excavation and Fill

Areas required to be brought to grade shall be excavated or filled as the case may be. Grading work shall be carried out in such a manner that the free drainage is maintained at all times and nowhere shall pondage be found in any part of the work.

The NPC may require the modification of slopes and grades according to the conditions actually encountered during excavation, but such change or modification shall not be construed to mean by the Contractor as a basis for additional compensation over and above the contract unit prices.

Any over-excavation performed by the Contractor for any purpose or reason, except as may be ordered by the NPC, shall be at the Contractor's expense and any excess of excavation shall be refilled, where required, with approved materials that shall be furnished, placed and properly compacted at the expense of the Contractor.

Unsuitable materials, as determined by the NPC, which may be encountered below established grade, shall be removed to a depth as directed and accordingly replaced with suitable materials approved by the NPC. The removal and proper disposal of such unsuitable materials shall be paid for at the contract unit price for the item, Grading Excavation, and payment for placing and compacting suitable material be made at the contract unit price for the item, Grading Fill, in the bill of quantity.

Fill work shall not be started until the area has been inspected and approved by the NPC after stripping. Grading fill shall be spread and compacted in layers of 15 cm. loose volume and compacted with approved roller weighing not less than 10 tons. Each layer shall be moistened or dried as directed for maximum compaction. No succeeding layer shall be placed thereon unless the preceding layer has been tested for compaction and approved by the NPC.

In the event that construction of concrete footing or other concrete foundations is on fill, the fill shall be compacted efficiently and thoroughly so that when the fill is tested for compaction at the required foundation elevation for the structure, the required bearing capacity is attained but in no case less than 200 KPa. In no case shall filling and compaction work to be done without the

presence of NPC's inspectors. The Contractor shall be held liable for any structural instability or damage that might result in consequence to noncompliance of this requirement. The Contractor shall institute corrective measures to bring the foundation base to a condition or state that will conform to the required bearing capacity; and also, to repair and make good any damage on the structure to the satisfaction and at no cost to NPC.

CW-5.3.4 Slides

In the event that slides occur along excavated slopes during grading operations or after completion of grading but prior to acceptance of the work, the Contractor shall remove and dispose the slide materials and also to trim the slopes as directed to leave the slopes in a safe and neat condition all at no additional cost to NPC, unless occurrence of such slides is occasioned by causes beyond control of the Contractor. In such event, payment for the satisfactory removal and proper disposal of slide material and finishing and rounding of slopes will be paid for at the equivalent of thirty percent (30%) of the contract unit price per cubic meter for the item Grading Excavation.

CW-5.3.5 Slip-Outs

In the event of slip-outs in any part of the grading fill prior to final acceptance of the work, the Contractor shall rebuild such portion of the fill. In the case it is determined that the slip-outs was caused through the fault of the Contractor, the rebuilding of the fill shall be performed by the Contractor at no extra cost to NPC; otherwise, the reconstruction of the fill will be paid for thirty percent (30%) of the contract unit for the item, Grading Fill.

CW-5.4 Disposal

All excess materials from grading work (including excess materials in structural excavation and miscellaneous work) shall be disposed of by the Contractor. The acquisition of the right-of-way for the area of disposal including the access thereto, permits, and other requirements, shall be the responsibility of Contractor at no cost to NPC. The Contractor shall be held solely liable for any claim by third parties that may arise from improper transport and disposal of excess materials. The cost of acquisition of the above-mentioned right-of-way shall be included in the unit bid price for excavation.

CW-5.5 Sources of Fill Materials

When suitable materials from grading excavation are deficient to meet the quantity required for grading fill, additional fill materials shall be obtained from other sources proposed by the Contractor and approved by the NPC. Cost of excavating, hauling, placing and compacting additional materials from borrow sources shall be included in the unit price bid for the item, Grading Fill. Acquisition of right-of-way to these sources shall be the responsibility and account of the Contractor.

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CW-5.7 Measurement and Payment

Measurement and payment shall be made at the contract unit price per square meter 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.

CW-6.0 STRUCTURAL EXCAVATION, FILL AND BACKFILL**CW-6.1 Scope**

In accordance with the specifications contained herein and as shown on the drawings and otherwise directed, the Contractor shall perform all the required structural excavation, fill and backfill for the entire project, including the proper disposal of excess excavated materials.

CW-6.2 Materials**CW-6.2.1 Structure Excavation**

No classification will be made on the materials excavated. The Contractor shall determine his/her unit bid price for structural excavation based on unclassified material regardless of the nature of the materials actually encountered and excavated.

CW-6.2.2 Structural Fill**a) Sand and Gravel Fill**

The material shall be of the same classification as the sand and gravel base consisting of river sand and gravel as approved by the NPC. The composite material shall be free from vegetable matter and lumps or balls of clay, and shall be uniformly graded from coarse to fine in accordance with the grading requirements shown below:

Sieve Designation (Square Mesh Sieves)	Percentage by Weight Passing
50.0 mm (2")	100
25.4 mm (1")	55-85
9.5 mm (3/8")	35-60
4.75 mm (No. 4)	25-50
2.08 mm (No. 10)	20-40
0.42 mm (No. 40)	8-20
0.075 mm (No. 200)	2-8

b) Structural earth fill shall consist of filling with suitable materials obtained from grading excavation or from borrow areas approved by the NPC.

CW-6.2.3 Special Foundation, if any

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The NPC shall have the option to use one or both of the following materials for special foundations, whether or not shown on the drawings:

a) **Lean Concrete**

The strength of lean concrete shall be 13.79MPa or as designated by the NPC.

b) **Selected Materials**

Selected materials shall consist of compactable material which, when compacted, shall attain the required bearing capacity. The material could be a combination of earth and rock particles not greater than 8 cm including sandy clay, gravelly clay, or shale, all approved by the NPC.

Bed materials for water pipes and/or drainage culverts shall use sand fills.

CW-6.2.4 Structural Backfill

Backfill for Structures Other Than Pipes — Material for backfill shall consist of compactable and approved material taken from grading and structural excavations. Any additional material needed shall be obtained from borrow areas proposed by the Contractor and approved by the NPC.

Backfill for Sewerage and Drainage Pipes — The layer of backfill materials immediately above, up to 60 cm. from the top of pipe, and on the sides of the pipe shall consist of selected material consisting of clay soil and/or other fine materials that are free from stone particles, roots, debris. The upper layer shall consist of compactable materials taken from pipe trench and other structural excavation.

Backfill for Water Supply Pipes — Backfill for water supply pipes shall consist of compactable materials taken from trench excavation and approved by the NPC.

CW-6.3 Construction

CW-6.3.1 Excavation

a) **General**

The Contractor shall notify the NPC sufficiently in advance before the beginning of any excavation so that a joint survey for baseline data and cross-sectional measurements can be undertaken on the undisturbed/natural ground surface. All excavation shall be carried out according to the lines, slopes and grades shown on the drawings. In case an increase or decrease in quantities occur as a result of changes made by the NPC to such lines, slopes, and grades, the provisions on Variation Orders under the General Conditions of Contract (GCC) shall apply.

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After each excavation is completed or where replacement of unsuitable material below required foundation grade has been undertaken, the Contractor shall notify the NPC so that proper inspection and confirmatory test on the bearing capacity of the foundation material can be made. In no case that concrete, sewer, drainage or water supply pipe can be placed unless a written approval has been issued by the NPC.

Over-excavation performed by the Contractor due to his carelessness shall be filled and properly compacted with the suitable material approved by NPC, at no additional cost to NPC.

b) Structural Excavation, Structure Other Than Pipes

The Contractor shall excavate the foundations to the specified side slopes and depths shown on the drawings, after which the NPC will conduct tests on the underlying material below foundation grade to determine the actual bearing capacity at such depth. If the required bearing capacity is not attained, the NPC shall instruct the Contractor to excavate further down until, in the opinion of the NPC, the bearing capacity is adequate to sustain the applied load on the foundation.

Compliance to such instruction shall not entitle the Contractor for additional compensation over and above the unit prices for excavation regardless of the nature of material excavated. For purposes of measurement, the applicable paylines for the excavation under this condition or situation shall be as shown on the drawings that show the paylines for excavation and special foundation materials.

c) Drainage and Sewerage Pipes and Cable Trench

The width of trench excavation for drainage and sewerage pipes and cable trench shall be as indicated on the drawings. All trench bottoms shall be excavated to the foundation grade indicated, regardless of the foundation material classification.

d) Water Supply Pipes

Trenches for main or feeder lines shall be excavated to the depth of no less than 0.25 meter on open ground and 0.60 meter under roadways and parking areas, both depths measured from the finished grade surface.

Service pipes shall be buried to a depth of at least 0.15 meter below grade.

CW-8.3.2 Structural Foundation Fill

No fill materials shall be placed in any part of the fill foundation unless the foundations have been inspected and approved by the NPC. Fill materials shall be placed and spread in layer covering the entire length and breadth of the section under construction, each layer not to exceed 15 cm. in loose volume thickness and compacted thoroughly to the desired compaction as

determined by the NPC. No succeeding layer shall be placed until the previous layer has been tested and approved, as to compaction, by the NPC.

CW-6.3.3 Special Foundations

If unsuitable material is encountered or if the foundation material is unsuitable such that the required bearing capacity of the foundation cannot be attained at the required elevation, further excavation shall be performed by the Contractor as stated in CW-5.3.1 b.

Excavated materials below foundation grade shall be replaced at the direction of the NPC, either by lean concrete or by selected materials as mentioned in CW-5.2.3.

Selected materials shall be placed in 15-cm layers and compacted until the required bearing capacity is attained.

CW-6.3.4 Backfill

1. Structures, Other Than Pipes

Excavated areas around structures for backfilling shall be backfilled with approved materials in horizontal layers, each not exceeding 15cm. (6") in loose volume thickness. Each layer shall either be moistened or dried as directed and thoroughly tamped with tampers having no less than 160 cm² of tamping area and weighing not less than 20 kg. The last layer shall be neatly brought up to the level of the adjoining finished grade surface.

In no case shall backfill be placed around concrete structures until after fourteen (14) days from placement of the concrete.

2. Drainage and Sewerage Pipes

After the pipes have been installed and grouted joints sufficiently cured, but in no case less than seven (7) days allowed for curing as specified in NSCP and the whole pipeline inspected, backfill materials specified herein shall be placed in layers as directed, each layer either dried or moistened as directed and thoroughly tamped. The backfill shall be brought up evenly on both sides of the pipe up to the top of the pipe and finally up to the finished grade surface.

3. Water Supply Pipes

After the pipeline has been installed and tested it shall be backfilled in layers as directed and compacted to the satisfaction of the NPC.

CW-6.4 Measurement and Payment

CW-6.4.1 Structural Excavation

Measurement for payment for structural excavation performed by the Contractor for structures (except drainage, sewerage and water supply pipes, and appurtenances of which cost of excavation and backfill is included in the

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cost of installed pipe and constructed appurtenances) will be based on the number of cubic meters of materials excavated.

For purpose of payment! all authorized excavation below foundation grade (like in the case of unsuitable materials encountered) shall be included in the measurement.

Payment will be made at the contract unit price for Structural Excavation in the bill of quantity, which payment shall constitute full compensation for furnishing all labor and equipment necessary for excavation work and proper disposal of excess material excavated.

CW-6.4.2 Structural Foundation Fill

Measurement for payment for Structural Foundation Fill will be based on the number of cubic meters of fill materials placed within the neat lines as shown on the drawings.

Payment will be made at the contract unit price for the item, Sand and Gravel Fill/Base, in the bill of quantity, which payment shall constitute full compensation for furnishing, placing and compacting fill materials; labor which include spreading, compacting, etc., equipment and other incidentals necessary to complete the item.

CW-6.4.3 Special Foundations

Measurement for payment for lean concrete and/or selected materials placed within the pay lines for excavation will be based on the number of cubic meters in-place and accepted.

Payment will be made at the contract unit price for the corresponding item shown in the bill of quantity, which payment shall cover all costs for furnishing all labor, materials, equipment and tools necessary to complete the item.

CW-6.4.4 Structural Backfill

Measurement for payment for Structural Backfill (except backfill for drainage and sewerage pipes, appurtenances and other structures of which cost of backfill is included in the cost of installed pipes and appurtenances) will be based on the number of cubic meters of approved materials, backfilled, satisfactorily compacted and accepted. Any backfill material placed outside the pay lines for excavation to replace slides or over-excavation will not be paid.

Payment will be made at the contract unit price for the item, Structural Backfill, in the bill of quantity, which payment shall constitute full compensation for furnishing all labor, materials and equipment necessary for backfilling work.

CW-6.4.5 Trench Excavation and Backfill for Sewerage, Drainage and Water Supply Pipes and Cable Trench

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No separate measurement and payment will be made for trench excavation and backfill for all sewerage, drainage and water supply pipes. Payment for trench excavation and backfill for pipes shall be included in the payment pertaining to pipes as shown in the bill of quantity.

- CW-7.0 CONCRETE**CW-7.1 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.

CW-7.2 Class of Concrete

Class of concrete or strength shall be as indicated on the drawings, which shall conform to the minimum requirement for compressive strength indicated on the provision of NSCP for Concrete.

CW-7.3 Materials**CW-7.3.1 Cement**

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

Unless otherwise specified, cement 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.

For the 2nd floor slab and beams, use Ready Mix Concrete, Class A at 28.

CW-7.3.2 Reinforcing Steel

The Contractor shall furnish all reinforcing steel of the sizes shown on the drawings and in accordance with the herein specifications for reinforcing steel.

CW-7.3.3 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.

CW-7.3.4 Aggregates

All coarse and fine aggregates shall consist of hard, tough, durable and clean, uncoated particles. All foreign materials and dust shall be removed by processing. Aggregates shall generally be rounded and reasonably free from

thin, flat and elongated particles in all sizes and well graded from coarse to fine.

CW-7.3.5 Formwork

Timber, lumber and plywood to be used for falsework and formwork shall be sound and shall comply with the requirements of this specifications. Use forms where a smooth form finish is required. Lumber shall be square-edged or tongue-and-groove boards, free of raised grain, knotholes and the other surfaces 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, plywood, or steel. Wood forms for surfaces exposed to view in the finished structure and requiring a smooth form finish, shall be plywood. For unexposed surfaces, undressed square-edge lumber may be used. Forms for surfaces requiring special finishes shall be plywood, 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 plywood 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.

CW-7.4 Storage of Materials

CW-7.4.1 Cement and Aggregates

All cement shall be stored, immediately upon delivery at the Site, in weatherproof building that will protect the cement from dampness. The floor shall be adequately raised from the ground and in buildings placed in the locations approved by NPC. Provisions for storage shall be ample, and the shipments of cement as received shall be separately stored in such a manner that allows the earliest deliveries to be used first and to provide easy access for identification and inspection of each shipment. Storage buildings shall have capacity for storage of sufficient quantity of cement to allow sampling at least twelve (12) days before the cement is to be used. Bulk cement, if used, shall be transferred to elevated air tight and weatherproof bins. Stored cement shall meet the test requirements at any time after storage when NPC orders retest. At the time of use, all cement shall be free flowing and free of lumps.

Handling and storing of concrete aggregates shall be such that segregation or inclusion of foreign materials is sufficiently prevented. NPC may require that aggregates be stored on separate platforms at satisfactory locations.

In order to secure greater uniformity of concrete mix, NPC may require that the coarse aggregate be separated into two or more sizes. Different sizes of aggregates shall be stored in separate bins or in separate stockpiles and relatively away from each other to prevent the material at the edges of the piles from intermixing.

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CW-7.4.2 Reinforcing Steel

Reinforcing steel shall be stored in accordance with the specifications for reinforcing steel.

CW-7.5 Concreting**CW-7.5.1 General**

The written approval of the NPC shall be secured prior to any concreting work. All concrete shall be poured on dry and cleaned surfaces.

CW-7.5.2 Formwork Construction

Forms shall be installed mortar and watertight, true to the dimensions, lines and grades of the structure and with the sufficient strength, rigidity, shape and surface smoothness as to leave the finished works true to 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.

Formwork for concrete placed underwater shall be watertight.

Forms shall be constructed so that the form surface of the concrete does not undulate excessively in any direction. Undulations exceeding either 2 mm or 1/270 of the center distance between studs, joints, form stiffeners, form fasteners, or wales will be considered to be excessive. Should any form of the forming system, even though previously approved for the use, produce a concrete surface with excessive undulations, its use shall be discontinued until modifications, satisfactory to NPC's Representative, have been made.

Portions of concrete structures with surface undulations in excess of the limits herein stated may be rejected by the NPC.

Form fasteners consisting of bolts, clamps or other devices shall be used as necessary to prevent spreading of the forms during concrete placement. The use of ties consisting of twisted wire loops to hold the forms in position will not be permitted.

All formworks shall be provided with adequate clean-out openings to permit inspection and easy cleaning after all reinforcement has been placed. Where forms for continuous surfaces are placed in successive units, the forms shall be fitted over the completed surface to obtain accurate alignment of the surface and to prevent leakage of mortar. Panel forms shall be constructed so that they can be removed without damaging the concrete. All exposed joints, edges, and external corners shall be chamfered a minimum of 20 mm unless

specified otherwise herein. Forms for heavy girders and similar members shall be constructed with a proper camber.

Coating: Before placing the concrete, the contact surface of forms shall be coated with a non-staining mineral oil or suitable non-staining form coating compound or shall be given two coats of nitrocellulose lacquer, except as specified otherwise. Mineral oil shall not be used on forms for surfaces, which are to be painted. For surfaces not exposed to view in the finished structure, sheathing may be wetted thoroughly with clean water. All excess coating shall be removed by wiping with cloths. Reused forms shall have the contact surfaces cleaned thoroughly. Those that have been coated shall be given an additional application of the coating. Plaster waste molds shall be layered with two coats of the thin shellac or lacquer and coated with soft or thinned non staining grease.

Tolerance and Variations: The Contractor shall set and maintain concrete forms to ensure that, after removal of the forms and prior to patching and finishing, no portion of the concrete work will exceed any of the tolerances specified. Variations in floor levels shall be measured before removal of supporting shores. The Contractor shall make the necessary corrective measures for the variations resulting from deflection, or when the latter affects concrete quality or curing. The tolerances specified shall not exceed by any portion of the concrete surfaces; the specified variation for one element of the structure shall be considered unacceptable when it permits another element of the structure to exceed its allowable variations. Except as otherwise specified herein, tolerances shall conform to ACI 347.

CW-7.5.3 Placing Reinforcement

Reinforcing steel and embedded items shall be properly and securely installed prior to the placing of concrete.

In no case shall concreting start without prior inspection and approval by the NPC of the placed reinforcement and other embedded items.

CW-7.5.4 Mixing Concrete

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

CW-7.5.5 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. There 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 very limited or isolated sections of the work.

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

Rock surface, 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.

CW-7.5.6 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.

CW-7.5.7 Removal of Forms

Formwork shall not be removed without the permission of NPC; where such permission, however, shall not relieve the Contractor of its 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 directed by NPC but in which case 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 hereunder is attained.

When concrete strength tests are to be used as basis for the removal of forms and supports, the compressive strength of concrete must meet the following minimum requirements:

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

The site shall be cleared of all debris and refuse resulting from work.

CW-7.5.8 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.

CW-7.5.9 Sampling and Testing of Concrete

The Contractor shall furnish all materials, either separately or mixed, as required by NPC. Selection of materials and the making of test specimens shall be made under the supervision of NPC and delivered to NPC laboratory or any NPC-accredited testing agency at the Contractor's expense.

The expense of making and curing all concrete specimens including the materials comprising the concrete specimens shall be borne by the Contractor. The cost of shipping and testing the concrete shall likewise be at the expense of the Contractor.

No concreting 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 cylinders 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 10 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 average of the two 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.

CW-7.5.10 Tolerances and Repair for Concrete Construction

Concrete structures shall be constructed to the lines shown on the drawings or where so required to suit actual field requirements. Any structure that does not the Contractor at no additional cost to the Corporation.

Repairs shall be made at surface imperfections 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.

CW-7.5.11 Second Stage Concrete

The second stage of concrete finishing shall be done only after the final installation of all pertinent equipment, anchorages, pipings, conduits and other embedded items as may be required for all electromechanical works.

CW-7.6 Measurement and Payment

Measurement for payment for Concrete, except concreting works that are associated to various construction and/or installation/erection works (i.e. equipment foundation and pedestals, perimeter wall footing and posts, etc.) included in the bill of quantity under separate pay item, will be based on the volume of concrete placed and accepted within the neat lines of the structure as shown on the drawings or in accordance with the manner of measurement set forth in the various sections of the Technical Provisions. No deduction will be made for rounded or beveled edges or space occupied by the metal items 10 sq. cm. or less in cross section, embedded in concrete.

Payment will be made at the corresponding contract unit price for the various items of concrete shown in the bill of quantity. Payment shall cover all costs for furnishing all labor, materials, including equipment and tools required for concreting work. Payment shall also include non-shrink cementitious grout and epoxy grout inside foundation block out and above engine base plate and care of water.

No separate measurement for payment will be made for formworks of which the cost shall be included in concreting works.

CW-8.0 REINFORCING STEEL

CW-8.1 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 the requirements shown on the Drawings or as directed by the NPC.

CW-8.2 Material Requirement

All material shall conform to the requirements 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 tests made.

CW-8.2.1 Bar Reinforcement

Reinforcement bars for concrete shall be hot-rolled, weld able, deformed billet-steel bars conforming to the latest 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. 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.

CW-8.2.2 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 in 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.

CW-8.3 Construction Requirement

CW-8.3.1 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 lists 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 lengths of reinforcing steel.

CW-8.3.2 Fabrication

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

Bars 6mm@ to 20mm<) inclusive	D=6d
Bars 25mm@ and 28mm@	D=8d
Bars 32mmØ and greater	D=10d

Bends and hooks in stirrups and lateral ties may be bent to the diameter of the principal bar enclosed therein.

CW-8.3.4 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

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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.

CW-8.3.4 Placing and Fastening Reinforcement & Miscellaneous Material (ACI-301)

All reinforcement bars, stirrups, hanger bars, wire fabric, spirals and other reinforcing materials shall be provided as indicated in the drawing or required by the specification, together with all necessary wire ties, 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 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, flaky rust shall be removed by rubbing with 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 of 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 shape 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 placed 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 positions 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:

- a. Height of bottom bars $\pm 6\text{mm}$ above form
- b. Lengthwise positioning $\pm 50\text{mm}$ of bars
- c. Spacing bars in walls and solid slabs $\pm 25\text{mm}$
- d. Spacing bars in beams and footings $\pm 6\text{mm}$
- e. Height of top bars $\pm 6\text{mm}$
- f. Stirrup spacing:
 - 1) For any one stirrup $\pm 25\text{mm}$
 - 2) For over-all group $\pm 25\text{mm}$ of stirrup

Anchors and bolts; including but not limited to those for the machine and equipment bases: frames or edgings, 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.

CW-8.3.5 Splicing

Splicing of 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 preferably be used over lapping for bar sizes larger than 32 mm ϕ . 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. When allowed, 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, bars shall be lapped a minimum distance of:

Splice Type	Grade 40 Min. Lap	But No 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 authorized 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.

CW-B.4 Measurement and Payment

The quantity to be paid for shall be the 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)
No. 2	6	0.222
No. 3	10	0.616
No. 4	12	0.888
No. 5	16	1.579

No. 6	20	2.468
No. 8	25	3.854
No. 9	28	4.833
No. 10	32	6.313
No. 11	36	7.991

Clips, ties, separators and other and related materials used for positioning and fastening the reinforcement in-place 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 a 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 quantity which price and payment shall be made in full compensation for furnishing materials, labor, equipment and incidentals necessary to complete this item.

CW-9.0 STRUCTURAL STEEL

CW-9.1 General

This section covers the fabrication, erection, and shop painting of structural steel in accordance with the AISC "Manual of Steel Construction" referred to herein. In the AISC "Manual of Steel Construction" referred to herein, the Specification for Design, Fabrication, and Erection of Structural Steel for Buildings," and "Structural Joints using A325 or A490 Bolts" shall be considered a part thereto.

CW-9.1.1 Submittals

Shop Drawings of all structural steel (including all connection details) in five (5) copies for approval prior to fabrication of structural steel with complete information necessary for the fabrication and erection of the component parts, of the structure including the location, type and size of all bolts, welds, member sizes and lengths, camber & connector details, blocks, copes, and cuts. Include all welds by standard welding symbols.

Erection Plan consists of descriptive data to illustrate the structure steel erection procedure including the sequence of erection and temporary shoring and bracing, and written description of the detailed sequence of all welding, including each welding procedure to be performed.

Certificates of Conformance for the following:

- Bolts, Nuts and Washers
- Welding Electrodes and Rods
- Paint
- Steel
- Certified Test Reports, .

Chemical Analysis and Tensile Strength Test of structural steel in accordance to ASTM A53.

For bolts and nuts, the Contractor shall also submit chemical- analysis, including tensile strength and hardness tests as required by ASTM A325.

CW-9.1.2 Delivery and Storage

All materials shall be handled, shipped and stored in a manner that will prevent distortion or other damages. Materials shall be stored in a clean and properly drained location and out of contact with the ground. Damaged materials shall be replaced or, when permitted by NPC, may be repaired in an approved manner at no additional cost to NPC.

CW-9.2 Materials

All the materials shall be of the best quality of their kind, well graded and within the allowable distortions. They shall be free from flakes, corrosion, scale or fragments that could reduce the resistance and durability or injure the external appearance.

Except as modified herein, blast clean surfaces in accordance with SSPC SP6. Wash clean surfaces that become contaminated with rust, dirt, oil, grease or other contaminants with solvents until thoroughly clean. Ensure that steel to be embedded in concrete and surfaces when assembled, are free from rust, grease, dirt and other foreign matter.

CW-9.2.1 Steel

Materials shall conform to the respective specifications specified herein. Materials not otherwise specified herein shall conform to the AISC "Manual of Steel Construction".

Structural Steel	ASTM A992 or ASTM A36
Structural Pipe	ASTM A53, Type E or S, Grade B, ASTM A501
Structural W-Shape Piles (Soldier Piles)	ASTM A328

CW-9.2.2 Bolts, Nuts and Washers

All bolts, nuts and washers shall be of hot-dip galvanized steel, in accordance with the following:

Bolts: ASTM A325

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Nuts: ASTM A563, Grade A, heavy hex style, except nuts less than 38mm may be provided in hex style

Washers: ANSI 818.22.1, Type B

CW-9.2.3 Accessories

Welding electrodes and steel structural members shall use:

Rods: E70XX electrodes

Non-shrink Grout: ASTM C827, non-metallic

CW-9.3 Execution**CW-9.3.1 Fabrication**

Structural steel fabrication shall be in accordance with the applicable provisions of the Specification for the Design, Fabrication, and Erection of Structural Steel for Buildings as set forth in the AISC "Manual of Steel Construction".

CW-9.3.2 Welding of Structural Steel Work

All welding works shall be as indicated in the drawings and shall conform to AWS D1.1-77 "Structural Welding Code". Unless specified on the drawings, fillet welds shall be a minimum of 5mm (3/16") and welding electrodes shall be with a tensile strength of 485 MPa.

All welding works shall be executed by the AWS D1.1 qualified welders, welding operators and trackers, whose workmanship shall be subject to the approval of NPC.

CW-9.3.3 Shop Painting/ Field Painting

Except as otherwise specified, shop prime surfaces of all structural steel, except steel to be embedded in concrete or mortar. Surfaces to be welded shall not be coated within 12 mm from the specified top of the weld prior to welding. Ensure that the surfaces are thoroughly dry and clean when the paint is applied. Do not paint on wet weather except under cover. Do not apply paint to steel, which is at a temperature that will cause blistering or porosity, or will otherwise be detrimental to the life of the paint. Apply paint in a workmanlike manner, and coat all joints and crevices thoroughly. Prior to assembly, paint all surfaces that will be concealed or inaccessible after assembly.

Shop prime coat surfaces as soon as possible after cleaning. Apply one coat of inorganic zinc to a minimum dry film thickness of 100 microns.

- **Field painting:** When the erection work is complete, the heads of field bolts, all welds and any surface from which the shop coat of paint has become worn off or has otherwise become defective, shall be cleaned and thoroughly covered with one coat of shop coat paint. When the paint

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applied for touching up bolt heads and abraded surfaces has become thoroughly dry, apply two field coats of marine epoxy paint subject to the approval of NPC.

- **Marking:** Prior to erection, members shall be provided with a painted erection mark. In addition, connecting parts assembled in the shop for remaining holes in field connections shall be matched marked with scratch and notch marks. Do not locate erection markings on areas to be welded. Do not locate erection markings in areas that will decrease member strength or cause stress concentrations.

CW-9.3.4 Erection

Except as modified herein, erect steel in accordance with the AISC "Manual of Steel Construction". Where parts cannot be assembled or fitted properly as a result of errors in fabrication or of deformation due to handling or transportation, report such condition immediately to the NPC's Representative and obtain approval there from for the methods of correction for straightening.

Drain Steel work properly; fill pockets in structures exposed to the weather with an approved waterproof material.

Provide safety belts and lines for workmen aloft on high structures unless safe working platforms or safety nets are provided.

When calibrated wrenches are used for tightening bolts, calibrate them at least one each working day using not less than three typical bolts of each diameter. Do not use impact torque wrenches to tighten anchor bolts set in concrete.

Connections: Connections shall be executed as shown on drawing. In case, connections are not detailed, it shall be designed in accordance with AISC "Manual of Steel Construction". Build connections into the existing work. Punch, sub-punch and ream, or drill bolt holes.

Tolerances: Structural steel shall be furnished and installed to the lines and levels as shown on the drawings.

Any structure that does not conform shall be repaired, removed and/or erected anew by the Contractor at no additional cost to NPC.

CW-9.3.5 Tests and Inspections

Visual Inspection of Welding: After the welding is completed, hand or power wires brush welds, thoroughly clean them before the Inspector makes the check inspection. Inspect welds with magnifiers under strong, adequate light for surface cracking, porosity, and slag inclusions; excessive roughness; unfilled craters; gas pockets; undercuts; overlaps; size and insufficient throat and concavity. Inspect the preparation of groove welds for adequate throat opening and for snug positioning of backup bars.

Non-Destructive Testing: In accordance with AWS D1.1 Twenty-five percent (25%) of the total number of joints, as selected by the NPC, shall be tested. If more than 20 percent of welds contain defects identified by testing, then all welds shall be tested by radiographic or ultrasonic testing, and to be approved by the NPC. When all welds made are required to be tested, magnetic particle testing shall be used only in areas inaccessible to either radiographic or ultrasonic testing. Retest defective areas after repair.

CW-9.4 Measurement and Payment

Measurement for payment for structural steel shall be based on the total kilogram of structural steel placed and accepted.

Payment will be made at the contract unit price for the item Structural Steel in the bill of quantity, which payment shall constitute full compensation for furnishing all labor, materials and equipment necessary to complete the item.

AW – ARCHITECTURAL WORKS

- AW-1.0 GENERAL ARCHITECTURAL REQUIREMENTS

AW-1.1 General

The work to be done under this section shall include the furnishing of all labor, materials, equipment, tools, storage and stockyards of the pertinent materials and structural components and other incidentals for all architectural works enumerated hereunder, as shown on the accompanying drawings or as otherwise directed.

The work shall be performed and completed with high quality workmanship, in accordance with generally accepted modern practice in carpentry, fenestrations, tinsmithing, plumbing, painting, landscaping and masonry work, etc. notwithstanding any omission from these Specifications or drawings.

Materials and structural parts that the Contractor shall supply and install and which will be incorporated in the structure shall be new and unused. They shall be suitable for their intended purpose and appropriately matched to each other complying with all applicable regulations, quality and dimensions standards. Defective work is not acceptable.

AW-1.2 Submission of Samples

At least one (1) month before the start of any installation or application of materials, the Contractor shall submit samples of materials for all sections for evaluation and approval. No work shall be done until after samples are approved by the NPC Representative in writing. All work must strictly conform to approved samples as to quality, texture, color and finish.

Failure of the Contractor to comply with the preceding stipulation shall not entitle them of any extension of time nor any claim whatsoever for any delay in the work after rectification due to disapproval of work.

To avoid unnecessary delay, it is suggested that the orders and/or purchase of imported or local materials shall be made within sufficient period in order that adequate supply is available at any time when needed.

AW-1.3 Substitution of Materials

The Contractor shall submit a written request for substitution of materials in lieu of those specified when deemed very necessary and urgent. Such request shall indicate the reasons for substitution. No substitute material shall be used without written authorization from the NPC Representative.

The Contractor shall submit written request for substitution at least one (1) month before such materials are actually needed. Such request shall be accompanied by samples to be substituted and corresponding certification.

No price increase will be allowed for a better kind of material

AW-1.4 Certification of Materials

The Contractor shall submit to the NPC Representative signed certificates from manufacturer or sole distributor of equipment and materials to be furnished and installed by the Contractor, certifying as to the kind, quality, rated capacity, quantity, performance and other descriptions of the equipment and materials delivered under a receipt number and date. No equipment or materials shall be erected, installed or applied such as electrical fixtures and accessories, concrete reinforcing steel, cement, G.I. and C.I. pipes, valves and fittings, plumbing and sanitary fixtures, building materials and finishes, paint and waterproofing, etc., without the required certificates.

AW-1.5 Other works which even if not specifically mentioned in the Section and Bill of Quantities shall be included:

- The measurements for the execution and payment of the Works, including provisions of the measuring equipment and the engagement of labor
- Connecting up of water, gas and electricity from the mains of the site indicated by the NPC Representative to the points of use
- Provision of small equipment and tools
- Safeguarding the Works against surface water, which shall normally be reckoned with, and its possible necessary removal Protecting the Works from heat, wind and rain
- Protection and safety measures required
- Protecting the executed works and the items handed over the execution of same from damage and theft up to the time of acceptance

- Supplying of the operational materials
- Supplying of consumable stores
- Supplying of fitting dowels
- Supplying of simple type pipe covering, e.g., in the shape of pipe sheathings with corrugated cardboard and the like
- Supplying and fitting of pipe fastening elements, e.g., pipe clips, hangers, etc.
- Installing and dismantling as well as providing all framework and scaffolds
- Making blackouts on concrete
- Chemical preservation of timber
- Instructing the operating and maintenance personnel

NOTE: The above provisions are general for all types of buildings. The Contractor shall be guided accordingly by the applicable provisions in the specifications and what is shown in the drawings for each type.

AW-1.6 Measurement and Payment

Measurement for payment for different items in Architectural Works will be based on the areas, lengths, volumes and quantity placed and accepted by the NPC Representative.

Payments for each architectural item will be made at the corresponding contract unit price per square meter, linear meter, cubic meter and number of pieces/sets, for the pertinent items under Architectural Works in the Bill of Quantities.

Payment shall constitute full compensation for all labor, materials, equipment, tools and incidentals necessary for the completion of each work.

AW-2.0 WALL SYSTEM AND FINISHES

AW-2.1 General

The work to be done under this section shall include the furnishing of all labor, materials, equipment, tools and other incidentals to complete the work.

Concrete masonry units of the type and thickness indicated shall be provided, and shall be properly coordinated with the work of other trades. The source of supply for material which will affect the appearance of the finished work shall not be changed after the work has started.

Masonry units shall be handled with care to prevent chipping and breakage. Storage piles shall be so located as to avoid being damaged by construction

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operations and traffic. Cement and lime shall be stored off the ground under watertight cover until ready for use. Damaged materials shall be rejected.

AW-2.2

Materials

Concrete Hollow Blocks shall be of standard manufacture, machine-vibrated, fine and even textured and well-defined edges.

Unless otherwise shown on the drawings, concrete hollow blocks to be used shall conform to the requirements of ASTM Specification C-129-39 Minimum Compressive Strength of not less than 4.48MPa average of the five specimens.

Mortar Proportions

- a) Cement mortar for laying concrete hollow blocks shall consist of one (1) part Portland cement, one-fourth (1/4) part lime and three (3) parts sand. Only sufficient water to make a workable mix will be permitted.

- 1) Masonry grout for filling cells of concrete blocks shall consist of one (1) Portland cement, one-fourth (1/4) part lime, three (3) parts sand to which three (3) parts gravel is added by volume.

Mortar materials shall be accurately measured by volume and thoroughly mixed until evenly distributed throughout the batch mechanical mix. The actual mixing time shall not be less than two minutes.

- 2) Intersecting hollow blocks walls and partitions shall be bonded by overlapping units on alternative course or by the use of 6.3mm (1/4") diameter ties at 61 mm (24") O. C. every second course (maximum) anchored in filled cells.

- b) Concrete lintel beams shall extend 305mm (12") beyond both sides of the opening and reinforced with four 12.7mm (1/2") bars placed over and below window openings.

- 1) Concrete studs, reinforced with one 12.7mm (1/2") diameter bar, shall be placed at both sides of all window and door openings.

- 2) All horizontal reinforcement shall be tied to vertical reinforcement.

- 3) Reinforcement shall be as specified in Section "Structural Steel".

Cement shall be Portland cement of approved brand conforming to ASTM Specifications C150, Type I.

Lime shall be made with pulverized and quicklime or with hydrated lime.

Sand shall be clean, washed and free from deleterious substances.

Water for mixing shall be clean and potable.

AW-2.3

Installation

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Laying of all masonry units shall be plumbed, leveled and accurately spaced. All units shall be wetted before laying. The block should be laid on full mortar bedding and in such a way that no cracks are formed between the blocks and the mortar at the time the blocks are placed. All joints should be filled with mortar at the time it is laid. Any horizontal and vertical CHB wall reinforcements shall, be anchored to concrete works by means of 10mm (3/8") by 609mm (24") long dowels. Embedding of anchor bolts, expansion shields, conduits, etc. shall be done as the erection progresses.

Cutting and patching of masonry required to accommodate the work of other trades shall be performed by masonry mechanics.

Finishing of all hollow block wall surfaces to be applied with cement plaster will be cleaned and evenly wet slashed with a wash of neat cement and sand followed by 1:2 cement mortar mix 10mm (3/8") thick which shall be applied with a wooden float.

AW-2.4 Concrete Lintel

Unless otherwise indicated, provide concrete lintels over all openings in concrete unit masonry walls. Lintels shall be cast-in-place and reinforced with longitudinal bars at the bottom, and of sizes as indicated on the plans. Concrete works shall conform to Concrete Works of these Specifications.

AW-2.5 Testing of CHB

Test samples from every 500 units shall be taken at random from the CHB to be used before installation. The testing shall be performed by a laboratory approved by the NPC Representative and the cost thereof shall be charged to the account of the Contractor. Concrete hollow blocks represented by such samples, failing to meet the requirements under the latest edition ASTM 612970 shall be rejected.

AW-2.6 Measurement and Payment

Measurement and payment for Concrete Hollow Blocks including its reinforcing bars will be based on the area in place and accepted by the NPC Representative.

Payment will be made at the corresponding contract unit price per square meter for the pertinent items under Architectural Works in the Bill of Quantities.

Payment shall constitute full compensation for all labor, materials, equipment, tools and incidentals necessary for the completion of this work.

AW-3.0 PLASTERED PLAIN CEMENT FINISH**AW-3.1 General**

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The work to be done under this section includes furnishing of all labor, materials, equipment and other facilities and the satisfactory performance of all work necessary to complete all cement plaster finish.

Plaster mixture is applied in layers to masonry and reinforced concrete, surface to interior or exterior walls and ceilings.

AW-3.2 Materials

- a) Portland cement conforming to the latest edition of ASTM Standards c-150
- b) Lime - Slaked quicklime or hydrated lime to make lime putty
- c) Sand - Natural sand, white or light grey, washed and cleaned, strong and free from injurious amount of dust and flaky particles.
- d) Water - Clean and fresh contains no salt, potable and free from sulfur oil and other impurities that may cause discoloration of the finish.

Accessories for plaster work, includes nails, picture, moulds, casings, window stools, bases, etc.

AW-3.3 Application

The total thickness of masonry and plaster shall be 15mm (5/8"). For a three-coat plastering, the scratch coat and brown coat shall be at least 6.3mm (1/4") thick and the hard finish 3.2mm (1/8") thick with a minimum thickness of 1.6mm (1/16") at any point. For a two-coat work the base shall be 12.7mm (1/2") thick and the hard finish the same as for a three-coat work.

The lath for plastering shall be leveled, plumb and well secured to the backing material. The leveling elements installed would include grounds and screeds. For walls, a screed shall be installed at the base of the wall with its top about 102mm (4") above finish floor. The screed is run horizontally, leveled and set at the exact thickness of finished plaster. Around all openings and the intersection with the ceiling grounds are installed.

All anchorage for cabinets, furniture, stair, handrails, electrical outlets, etc., should be installed before plastering is started.

All internal corners should be reinforced by lapping wire lath.

Mixture for various coats should be checked to see that proportions are correct.

Installation. For hollow wood doors and frame, uniform application regardless of function completely reversible for R.H. or L.H. doors.

NOTE: All cement plaster finish shall be painted.

AW-3.4 Measurement and Payment

The measurement for payment for all Plaster Plain Cement Finish will be based on the area applied and accepted by the NPC Representative.

Payment will be made at the corresponding contract unit price per square meter for the pertinent item in the Bill of Quantities.

Payment shall constitute full compensation for all labor, material including metal lath, equipment, tools and incidentals necessary for the completion of this work.

AW-4.0 WALL ACCENT

AW-4.1 General

The work to be done under this section includes furnishing of all labor, materials, equipment and other facilities and the satisfactory performance of all work necessary to complete the installation of wall accent as specified in the plans and these specifications.

AW-4.2 Materials

- a. 4mx20cmx6mm WPC Wall Fluted Panels
- b. Metal Clip
- c. Cap Molding
- d. Construction Adhesive

AW-4.3 Samples

Sample of Wall Fluted Panels shall be submitted to the NPC Representative.

AW-4.4 Shop Drawings

Contractor shall submit shop drawings of works to be done. Details shall show sizes, section joints and other required details for the approval of the NPC Representative.

AW-4.5 Installation

- a. Prior to installing the Fluted Wall Panel ensure that the wall is flat and solid.
- b. Cut the fluted wall panel to your desired length and apply construction adhesive to the back of the panel.
- c. Apply the fluted wall to the wall and fasten with a nail gun. Use two nails, one each at the top and bottom of the panels. In between the top and bottom you will need one nail approximately every 1-1/4".
- d. Use the Wall Clips to attach the fluted wall panels to each other. A typical installation will use 7-8 clips per panel.
- e. Cap molding can be used to give a finished appearance when you reach the edge of the wall or to transition between walls. Use the construction adhesive and nails to secure it to the wall.

AW-4.6 Measurement and Payment ;

The measurement for payment for Wall Accent will be based on the area applied and accepted by the NPC Representative.

Payment will be made at the corresponding contract unit price per square meter for the pertinent item in the Bill of Quantities.

Payment shall constitute full compensation for all labor, material including metal lath, equipment, tools and incidentals necessary for the completion of this work.

AW-5.0 CEILING SYSTEM

AW-5.1 General

Acoustic units shall be provided in rooms and spaces were indicated or specified. On areas where suspended ceiling is to be provided, all piping, ducts, electrical and other works that is to be concealed by the ceiling shall be completed, tested, inspected and the proper height and level established, before acoustical work is started. The units shall be applied in any room or space before completion of all wet works and building humidity is reduced to minimum. Ceiling shall be symmetrically installed as indicated.

Acoustical units shall be delivered to the site in the manufacturer's original unopened containers with the brand name, type, sound reduction and wire absorption grades clearly marked thereon.

AW-4.5.1.2 Materials

Materials to be used shall be the following but not limited to:

- Gypsum Board, 3/8" thk. (Orange Texture)
- Wall Angle, 10'
- Main Tee, 12'
- Cross Tee Runner, 4'
- Full threaded rod, 1/4"
- 3.5mm thk. Flocem Board
- 2"x2" Metal Furring, 5m
- Blind Rivets

AW-4.5.1.3 Sample

Samples must be submitted to the Contracting Officer for approval as to quality.

AW-4.5.1.4 Installation

Acoustical (Gypsum) board shall be installed true to line and in even plane according to ceiling pattern shown on the drawings.

Installation of acoustic board shall be done by the manufacturer or his authorized installer in strict accordance with the specification of the manufacturer.

AW-4.5.1.5 Measurement and Payment

The measurement for payment for the Interior Ceiling will be based on the area applied and accepted by the NPC Representative.

Payment will be made at the corresponding contract unit price per square meter for the pertinent item in the Bill of Quantities.

Payment shall constitute full compensation for all labor, material including metal lath, equipment, tools and incidentals necessary for the completion of this work.

AW-5.0 ROOFING SYSTEM AND BUILDING BLANKETS**AW-5.1 General**

The Contractor shall furnish all labor, materials, and operations including tools, other implements and accessories for the complete installation of roofing system and its building blankets wherever indicated in the drawings.

Installation shall be performed by skilled workmen in accordance with the construction and shop drawings and the manufacturer's standard.

Shop drawings and manufacturer's catalogue showing product standards and technical data will be provided by the Contractor to the NPC Representative for approval.

AW-5.2 Materials

Materials to be used shall be the following but not limited to:

- 2x4x1.2mm thk. C-Purlins
- Pre-painted Long Span Rib-Type Roof Sheet Ga. 26
- Steel Square Mesh, 2"x2"
- Thermal Insulation, 10mm thk Polyethelene with aluminum foil on both faces above purlins
- Prefabricated Pre-painted Gutter with Flashing, Ga. 24x2.44m
- Other consumable items

AW-5.3 Workmanship

Installation of the roofing shall be done by the manufacturer or his authorized installer in strict accordance with the specification of the manufacturer.

AW-5.4 Measurement and Payment

Measurement and payment for Roofing System and Building Blankets will be based on the projected area inspected and accepted by the NPC Representative. No measurement & payment will be made on hidden areas covered by side- & end overlaps; the cost for these being included in the projected area.

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Payment will be made at the corresponding unit price per square meter for pertinent items under Architectural Works in the Bill of Quantities.

AW-6.0 TILING WORKS**AW-6.1 General**

The work to be done under this section shall consist of furnishing all labor, materials and other facilities to complete all tile works shown on the drawings and specified herein.

AW-6.1 Materials

- 20x120cm Light Gray Wood Plank Ceramic tile (Matte Finish)
- 60x60cm Light Gray Seamless Porcelain Granite Tiles
- 20x120cm Wood Plank Ceramic Tile (smooth Finish)
- Gray Matte Floor Tile (Non-skid)
- 60x60cm Porcelain Granite Tiles (Non-skid)
- 60x120cm PU Light Stone Wall Panel (Dark Gray)
- Navy Blue Carpet
- Premium Carpet Wood Nail Grippers Tack Strip, 4ft
- Floor Lining Paper
- Tile Adhesive
- Tile Grout
- Portland Cement
- Washed Sand

AW-6.2 Samples

Sample of various types/kinds of tiles shall be submitted to the NPC Representative.

AW-6.3 Shop Drawings

Contractor shall submit shop drawings of works to be done. Details shall show sizes, section joints and other required details for the approval of the NPC Representative.

AW-6.4 Execution

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 of trowel. Allow to dry before spreading more adhesive for setting the tile.

AW-6.5 Tile Preparation

Tiles - may be set dry or pre-soaked depending on grouting methods to be used. Wall tile may be prepared by soaking in clear water for not less than 15

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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 a wet sponge, or sprayed with water before grouting to prevent cracking of the grouting compound, grout used with floor tile must be kept moist until 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 all tile surfaces with warm water and a good washing compound and stiff brushes as recommended by tile manufacturer.

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

AW-6.6 Measurement and Payment

Measurement for payment will be based on the square meters of the installed tiles/carpet.

AW-7.0 PAINTING & VARNISHING

AW-7.1 General

The work to be executed under this section shall include the furnishing of all materials, labor, tools and ladders, scaffolding and other facilities necessary for the satisfactory performance of all work necessary to complete all painting and finishing of all surfaces throughout the interior and exterior of the building, except as otherwise specified.

The Contractors, providing the labor, materials or hath for this project are specifically referred to the General Contract plans, to the General Conditions of the specifications, to all the Sections of the Specifications and to the various other sub-contract documents which may affect the completion of any sub-contract work. In the absence of a complete agreement between sub-contractors, supply dealers or others affected by the construction of this project, the General Contractor shall be held responsible for the coordination of all the work.

The Contractor shall examine all sections of this specification and perform all paintings called for therein.

All wood work in ceiling, partitions, handrails, cabinet work, grill work, mouldings and others as specified by the NPC Representative shall be painted/varnished.

AW-8.2 Inspection of Surfaces

Before starting the work, the Contractor shall inspect all surfaces to be painted. If the surfaces cannot be put in proper condition to receive paint by customary cleaning methods or sanding or sparkling, the Contractor shall notify the NPC Representative in writing. The NPC Representative will cause these defects to be remedied. The commencing of the work by the Contractor indicates his acceptance of the surfaces to be painted and assumes responsibility for the rectification of any unsatisfactory finishing, resulting from his negligence.

AW-8.3 Materials

All paint materials shall meet the requirements of the Philippine National Standard Specifications for Paintings.

Paints shall be brought to the Site in tightly closable, convenient, original containers, if nothing to the contrary is stipulated in the Specifications. The containers shall be marked in a durable manner with the following particulars:

- Maker
- Paint and relevant thinner
- Gross and net weights
- Date of supply by the maker's factory

The openings of the containers shall leave enough room for a stirring appliance.

All containers shall be kept tightly closed until the contents are to be used. Immediately prior to use of the contents and before pouring into smaller containers for working purposes, any skin shall be removed and the contents stirred thoroughly, if necessary, with a stirring appliance.

Paints, thinners and filling cements which are not required for immediate use shall be protected against the action of frost and heat.

Only thinners supplied by the makers of the paint or those described by them as suitable shall be use for adjusting paints to working consistency. The instructions of the maker shall be followed in this respect.

Paint and filling cements shall be used in accordance with the maker's instructions.

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The Contractor shall obtain from the manufacturer and shall submit to the NPC Representative a paint manufacturer's guarantee for the quality of each painting material and that each coat of paint is compatible with previous and subsequent coats.

Paints which do not have to be prepared by mixing several constituents just prior to use shall be brought to the Site in such a state of readiness that they need only be adjusted to brushing or spraying consistency to meet the relevant working conditions (e.g., temperature), by adding the particular thinners in accordance with the maker's instructions.

With the exceptions of ready-mixed materials in original containers, all mixing shall be done at the job site. No materials are to be reduced or changed except as specified by the Manufacturer of said materials.

The quality of the paints shall be such that they form no solid sediment and at most a slight skin in unopened original containers within 6 months - calculated from the maker's delivery date. A paint which has formed a solid sediment or more than just a slight skin in the unopened original containers by the time of use or which cannot be processed satisfactorily shall not be used. A sediment shall be regarded as solid if it cannot be dispelled quickly and completely by stirring.

The use of white zinc (lithophones) will not be allowed.

A place will be designated by the NPC Representative for the storage of paint materials and tools. Whenever it may be necessary to change the location of this storage place, the Contractor shall promptly move to the newly designated place. The storage space floor shall be adequately protected from damage and from paint. Paint shall be covered at all times, safeguards taken to prevent fire.

AW-8.4 Color and Samples

All colors shall be subjected to the approval of the NPC Representative. Tinting of matching colors shall be done under the supervision of the NPC Representative. In all cases, a sample shall be applied on the job and the NPC Representative must give his approval before work is commenced. If required, three panels, 200 mm x 250 mm (8" x 10") of each color and finish shall be prepared in advance, with the NPC Representative. "Of color selected" shall be understood as all coats specified herein.

AW-8.5 Workmanship

All work shall be done by skilled mechanics with high quality workmanship. All paints shall be evenly applied so as to be free from sags, runs, crawls or other defects. All painting materials shall meet the requirements of stress and shall be in accordance with the relevant standards. All coatings shall be of proper consistency and well brushed out so as to show the minimum of brush marks, except varnish and enamel which shall be uniformly flowed on. All

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brushes shall be clean and in good condition, with heavy brushes preferred. Light brushes shall not be permitted.

Paint shall be thoroughly stirred so as to keep the pigment evenly in suspension when paint is being applied.

No painting shall be done under conditions that are unsuitable for the production of good results. No oil painting shall be done in damp weather.

Application of succeeding coats shall strictly follow the over-coating times specified by the paint manufacturer. If no specific data are available, all coats shall be thoroughly dry before painting shall be applied. At least twenty-four (24) hours shall be allowed between coats. Exterior painting under damp/wet conditions is not allowed.

Painting coat as specified are intended to cover the surfaces perfectly, if surfaces are not fully covered, further coat shall be applied to attain the desired evenness of the paint application.

All parts of moldings and ornament shall be left clean and true to details.

All finish shall be uniform as to sheen, color and texture, except when glazing is required.

AW-8.5.1 Protection

The Contractor shall protect the work of all other trades against damage or injury by his employees, or by his materials, tools or utensils used in connection with this contract. Any damage done by him shall be repaired at his own expense, without additional compensation beyond the contract price.

The Contractor shall note that some damage to paint-work during shipment, storage, and building-in and particularly during grouting of the steel lining is unavoidable and the application of all protective treatment shall be programmed accordingly. Care shall be taken to remove salt crystal liable to become deposited during the sea transport and/or storage at seaport by thorough washing with clean fresh water. Before any coat of paint is applied, the surface shall be prepared as hereunder described, so that it is clean and free from all deleterious matter and completely dry.

The Contractor shall be responsible for the complete shop and field coats. Shop coats shall be checked for good quality and where necessary, before proceeding with the painting or coating operations at Site, the Contractor shall clean and repair, including smooth trowel, all shop coats which are defective or damaged.

Protect all parts of the building from paint drops by using clean drop cloths and remove all paint inadvertently placed or dropped on exposed surfaces without damage to same. Close various spaces while painting and exclude dust until finish is dry.

Plumbing systems shall not be used to wash paint brushes or containers.

Temporary or permanent welding shall not be permitted on areas where the welding will damage paint or other protective coatings, unless the areas of coatings which would be damaged thereby are accessible for repairing and inspection. Materials which have been painted shall be handled with care and protected as necessary to preserve the coating in good conditions.

AW-8.5.2 Paint application

Materials, which are subject to working instructions, shall be treated according to these instructions, unless stipulated differently by the relevant paint manufacturer.

Paint, gloss and coating may be worked manually or by machines, unless a particular execution has been stipulated in the Specifications.

Paint, gloss and coat shall be bond firmly and be of even surface without scars and strips.

The surface shall be smooth, if not otherwise stipulated in the Specifications, such as finely or coarsely granulated.

Any paint, gloss or coating shall be applied without filling to create a uniform surface or, when gloss is being applied, a flowing surface with the required materials according to instruction manuals, of white or light shade; unless otherwise stated in the Specifications.

Top finish shall be high-gloss, unless otherwise stated in the Specifications.

If flat levels are to be formed, the prime coated surfaces shall be completely being covered with suitable undercoat filler ribbed and smoothed.

Primer protective coating shall be applied on woodwork according to manufacturer's instruction. If several coats are requested, the preceding coat shall need to be dried before applying the subsequent one. This does not apply for wet-on-wet techniques.

Drying periods prescribed by the manufacturer shall be observed, for open surfaces, as well as for edges or irregular surfaces. All edges at doors, windows, skirting, sockets, etc., shall be of sharp and straight line.

New concrete and masonry surfaces must be thoroughly naturalized either by brush or spray with a solution of 2 kg. of zinc sulfate to each gallon of water.

Surfaces so treated shall be tested to ascertain that alkalinity is removed; otherwise, a second treatment with the same solution shall be applied. Within 24 hours after drying, all crystals on the surface must be brushed off applying the prime coat.

Metal works shall be kept clean and free from corrosion following installation. Abraded surfaces shall be retouched prior to finish painting, using the same

type of paint as prime coat. Galvanized metals shall be weathered or pickled with the approved metal primer in accordance with printed instruction of the manufacturer.

Where components parts of steel or aluminum alloys meet, joints shall be sealed so that no moisture can penetrate between the contact surfaces.

Rivet and bolt heads, protruding corners, sharp section edges and places of difficult access shall be pre-treated.

The paint shall be applied in coats which are as uniform as possible.

The first priming coat shall be applied by brush. Further coats shall be applied by brush if nothing to the contrary is stipulated in the Specifications.

Smaller and specialty shaped brushes shall be used for rivet and bolt heads, protruding corners, sharp section edges and places of difficult access.

When applying paints by spray-gun, the object to be sprayed shall not be contaminated by water or oil in the compressed air.

In paint systems involving coats, the various coats of paints shall be distinguishable from each other by their shade.

All coats of paint shall be applied only to clean, dry and non-greasy surfaces. In multi-coat paint systems, the coat last applied shall always be sufficient dry, free from any superficial moisture and from dust and dirt before applying the next text coat; only when using the moist oil type of paints may it be necessary for the previous coat to be hard dry.

The Contractor shall inform the NPC Representative in good time before starting to apply the next coat so that the NPC Representative shall have the opportunity of approving the previous coat.

Painting work shall not be carried out at a temperature below +5 °C and above 50 °C. In addition, painting work shall not be carried out on surface affected by the action of rain, fog and moisture or water of condensation; work started on such surfaces may not be continued until the surfaces to be painted are completely dry.

AW-B.5.3 Painting Systems

All surfaces which are required by the Finish Schedules or specifications to be painted, or otherwise finished, shall be given coats of paints or varnish as specified herein. Individual directions printed on the label of the approved paint and varnish shall be strictly followed. Paint thinner or linseed oil of the same brand as the paint to be thinned shall be used.

All materials, supplies and articles furnished shall be the standard products of superior quality. All constituent materials shall conform to the applicable provisions of the latest edition of ASTM Specifications.

The following list indicates painting materials of special compositions considered suitable for various parts of the works.

Concrete and Plastered Surface

Any concrete, cement plaster exposed to high humidity 3 coats of a highly weather-resistant synthetic resin-based paint. The first coat shall contain from 5% to 20% thinner as the surface requires.

All concrete (walls, foundations, etc.) backfilled with soil or submerged.

- 1 coat of coal-tar epoxy.
- 2 coats of a mineral-filled water-resistant coal-tar epoxy.

Concrete, cement plaster, etc. exposed to oil, surface shall be dry, if possible sandblasted, clean and slightly roughened.

- 1 coat with a plastic-modified hydraulic mortar.
- 2 coats of an oil-resistant synthetic resin-based paint.

Concrete exposed to Mechanical and Chemical attack.

- 1 coat of colorless 2-pack epoxy-based paint; this shall contain from 10% to 20% thinner as the surface requires.
- 2 coats of 2-pack epoxy-based paint.

Concrete flooring exposed to mechanical wear and oil.

- 3 coats of chlorinated rubber-based paint. The first coat shall contain 15% thinner.

Internal concrete, plastered walls exposed to abrasion.

- 3 coats of an oil-free, synthetic resin-based, dust-binding paint.

Concrete flooring subject to minor mechanical wear.

- 2 coats of an oil-free, synthetic resin-based, dust-binding paint.

Internal plastered ceilings and walls.

- 2 coats of a polyvinyl-acetate dispersion type, non-chalking paint. First coat shall contain up to 30% thinner of clean, fresh water as the surface requires.

Wooden Surfaces

a) Exterior Parts –

- b) Surface shall be smoothed down with adhesive; if machine sanding is involved, a sanding is involved, a sanding sealer to bind the fibres shall be applied; the surface shall also be dry and free from dust.

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- 1 coat of fungicide and bactericide Ingredients after first coat.
 - 2 coats of synthetic resin-based lacquer with white active pigments.
- c) Interior Parts - Application of varnish on wooden interior walls, partitions, T&G ceiling paneling and closets/cabinets.

All materials, supplies and articles furnished shall be the standard products of a known manufacturer approved by the NPC Representative.

- 1) First Coat. Fill open grained wood with natural wood paste fillers, as is, or mixed with oil-wood stain to obtain desired shade. Apply along the grain within 30 minutes. Let dry overnight and sand lightly.
- 2) Second Coat. Apply any one (1) of the colors of oil-wood stain: oak, walnut, marble, and mahogany. Dry overnight and sand lightly.
- 3) Third Coat. Spray required coats of lacquer sanding sealer. Let dry for 30 minutes and sand to smooth.
- 4) Choice of any of the following topcoats:
 - CLEAR FLAT LACQUER - FOR STANDARD FLAT EFFECT.
 - CLEAR DEAD FLAT LACQUER - FOR COMPLETE FLAT LACQUER.
 - SUPER DEAD FLAT LACQUER - FOR COMPLETE FLAT LACQUER.
 - CLEAR GLOSS LACQUER - FOR STANDARD GLOSS EFFECT
 - WATER WHITE GLOSS LACQUER - FOR BRILLIANT CRYSTAL-CLEAR EFFECT.
 - VERSATILE SPAR VARNISH - FOR GLOSSY THICK COATING ALSO APPLICABLE FOR EXTERIOR WOOD SURFACES

When spraying under high humid conditions, add up to ten percent (10%) by volume of lacquer thinner retarder to prevent blushing of lacquer products.

Steel Surfaces

Details are given in General Technical Requirements.

AW-8.5.6 STUCCO INDUSTRIAL PAINT

- Surface Preparation

All surfaces must be clean, dry, free from dust, dirt, chalk, laitance, efflorescence, rust, grease, oil, and all other foreign materials.

Allow new concrete to cure and dry completely for at least 28 days with a moisture content of less than 15% and a Ph level below 10. To neutralize and remove efflorescence, treat surfaces with DAVIES 100-X (or equivalent) Concrete Neutralizer diluted with 16 parts water to 1 part DV

100-X. Apply by brush or mop to wet surface thoroughly and dry overnight. Rinse with water and dry.

When applying Rendering Paste or Skimcoat for rough surfaces, concrete may be cured for only 7-14 days. Use MONDO SK-1 Skimcoat Superfine White Powder or MONDO SK-2 Rendering Paste (or equivalent).

- **Product Preparation (or equivalent)**

Step 1- Mix Part A of Wall Art Industria to Part B using an electric drill mixer. Adjust ratios as needed to achieve desired consistency.

Step 2- Blend until the mixture is lump free and homogenous. Use a big container for bigger volumes of mixtures. Do not add water while mixing, or after desired consistency is achieved.

- **Application Direction:**

Step 1- Lightly mist concrete surface with water, or dampen with the wet cloth before application.

Step 2- Apply Wall Art Industria (or equivalent) mixture thinly on the surface with a stainless-steel trowel. For the first coat, apply evenly at around 1mm thick. Allow six (6) – eight (8) hours drying before applying the second coat.

Step 3- Once fully dry, lightly sand uneven areas of the surface.

Step 4- Apply second coat of Wall Art Industria mixture (or equivalent) to level and create desired design effect. Polish the surface using a stainless-steel trowel.

Step 5- Allow the surface to dry for 2-3 days before sanding rough edges. Apply Wall Art Industria Clear Topcoat (or equivalent) for maximum protection

AW-8.6 Measurement and Payment

Measurement shall be based the actual areas painted and accepted by the project implementor. Payment shall be based on what is called for in the Bidding Form.

AW-9.0 JOINERY AND CARPENTRY WORKS

AW-9.1 General

These regulations shall apply to all parts of work in which joinery (carpentry for permanent features, i.e. excluding formwork or shuttering, wood scaffolding, etc.) will be used.

All services shall comprise labor, equipment and the supply of the appurtenant materials and structural components including off-loading and storage at the site unless otherwise specified.

All materials and structural components to be supplied, erected or installed by the Contractor, and therefore, ultimately incorporated in the structure shall be new and unused unless otherwise specified. They shall be suitable for their intended purpose and appropriately matched to each other.

All materials and structural components covered by standards shall meet the quality and dimensional requirements thereof.

Early enough before the beginning of fabrication, the dimension of non-standardized structural components shall be checked by Contractor on the structure unless it is established, for instance, in the Specifications or by mutual agreement, that such checking can be dispensed with or will be replaced by the statement of specific dimensions, e.g., in drawings explicitly mentioned.

In particular, the Contractor shall verify that such conditions as the following do not exist:

- undue humidity of the structure
- inadequate painting of the structural components intended to be installed.
- Lack of possibilities for fixing the structural components and sealing them against the respective part of the structure.

Other works which even if not specifically mentioned in the Bill of Quantities or Schedule of Price shall be included in the Contractual Works.

- Protecting the executed Works and the items handed over execution of same from damage and theft up to the time of acceptance.
- Providing small tackle and tools.
- Supplying consumable stores
- Transporting all materials and structural components, from the storing places at the Site to the points of destinations, and return transport if necessary.
- Removal of all contamination (refuse, building, rubbish and the like) arising from or in connection with the Contractor's work.
- Installing and dismantling as well as providing all false work and scaffolds.
- Making holes in masonry and light weight concrete.
- Supplying and fitting dowels.
- Chemical preservation of timber.

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Prior to the start of his operations under this item, the Contractor shall verify that all conditions are suitable for the timely and effective carrying out of his work. Where unsuitable conditions are found, they shall be reported in writing to the NPC Representative and under the NPC Representative's direction immediately corrected.

AW-9.2 Quality of Lumber

Lumber indicated and required for various parts of the work shall be of the best grade available. It must be straight, sound, bright, of nature growth, well-seasoned and conditioned to suit the particular purpose for which it is to be used. The material shall be cleanly sawn, square edged, and free from injurious shakes, splits, warps, waness and knots, soft spots and rot, incipient decay and all other defects or imperfections impairing its strength, durability or appearance. All structural components shall be made so that when properly treated and used they will not warp or crack under any circumstances including stresses due to temperature humidity that will have to be expected. Their general conditions on lumber when not mentioned in the succeeding particulars are carried and shall apply.

AW-9.3 Fastening

Joints for cabinet work shall be glued aside from nails or other fastening if vice required. The type and strength of gluing shall suit the site of installation and intended application (of glues) must not cause any discoloration or other damage. Sealing compounds shall be resistant to atmospheric influences, shall not harden, and shall not be aggressive.

All nails on surfaces exposed to view shall have flush heads. They shall be countersunk. The use of nails with notched heads anchor screw nails in lieu of wood screws shall not be allowed.

All door frames shall be rabbeted and molded. Frames which are in contact with concrete shall be anchored by means of 102 mm (4") common wire nails spaced not more than 204 mm (8") apart the contact surfaces.

Anchors, connectors, fastenings, and any rough hardware necessary for the completion of the work but is not shown or indicated on the drawings and/or specified shall be provided. Such rough hardware shall be of the size and type to suit the conditions encountered. Bolts, nuts, washers, hangers, straps and other rough hardware is embedded in or in contact with exterior wall of concrete masonry or slab or exposed to weather shall be zinc coated unless otherwise specified. Bolts head and nut bearing on wood shall be provided with standard steel washers.

AW-9.4 Wood Preservatives

All lumbars ultimately in contact with the outside air or permanently with particular humid air or connecting to masonry or concrete e.g. windows and doors, including lining and casing, shall before being inserted be treated on

all sides with a suitable wood preservative, in the case of lumber sensitive to blue stain, also with a blue stain preventive agent, unless adequately protected in manufacture already, e.g. wood work items.

The Contractor shall in the choice and use of the wood preservative exercise the care required in the handling of poisonous substances. The wood preservative shall also be compatible with the paint and in interior applications the wood preservative shall be colorless.

If the NPC Representative has not specified the wood preservative to be used, the Contractor may make his own choice of a suitable preservative, subject to the NPC Representative's approval. Before leaving the workshop, the lumber components shall receive a coat of paint.

Lumber surfaces in contact with masonry shall be given two (2) brush coats of bituminous paint before installation.

AW-9.5**Materials**

Materials for carpentry works shall conform to the following specifications and shall be used whenever indicated in the plans or noted in the Bill of Quantities:

a) Kinds of Lumber**1) S4S Yacal, Malave Guijo or approved equal**

- I. Door and window jambs, sills and mullions
- ii. Any lumber in contact with concrete or masonry, such lumber mentioned above shall be treated with wood preservative treating solution.

2) Apitong or approved equal

- I. Ceiling frames and hangers
- ii. Wooden frames and shelves, cabinets and closet

3) Tanguile, Red Lauan or approved equal

- I. Cabinet and closet framing, kiln-dried with moisture content not more than 10% when tested
- ii. All mouldings, base boards and wood slats.
- iii. Vertical and horizontal studs for interior partitions
- iv. All T & G board, fascia boards, louvers shall be kiln-dried with moisture content not more than 10% when tested.
- v. Door and window sash frames

4) Kiln-dried Narra

- I. Mouldings and lattice works and base boards.

- II. Wood handrails, door panels and frames with moisture content not more than 10% when treated.
- III. All structural lumber to be used for truss members, purlins, cleats, wood plates, girder and rafters shall be as indicated in the Civil Design drawings.

AW-9.6 Shop Drawings

Shop drawings with essential dimensions and details for construction may be required by the NPC Representative in connection with carpentry and joinery work which will be submitted for approval before proceeding with the work.

AW-9-10 Measurement and Payment

Refer to Bill of Quantities for the pertinent items where required.

AW-10.0 MILLWORK AND CABINET WORK**AW-10.1 General**

The work to be done under this section shall consist of furnishing all labor and materials, and performing all operations temporary and permanent woodworks, finished treatment and building-in of all cabinet type items, complete in every respect, and incidental associated woodwork appurtenances, the application of all finish hardware in connection with finished woodwork in strict accordance with requirements of drawing and is specified herein subject to the terms and conditions of the Contract Documents.

All woodwork required to be furnished and installed in connection with finish treatment of exposed interior surfaces or spaces, that is cut, fitted, built-in and finished structure is hereby subject to the terms and conditions of the Contract Documents.

All finished millwork that is constructed, assembled and provided with surface finish treatments in a shop outside building structure is hereby classified as "Cabinet Work". Reference to "surface finish treatment" including the filling, staining, shellacking or waxing of all cabinet type woodwork unless noted to contrary.

AW-10.2 Work not Included

Woodwork and equipment items specifically indicated on drawing as being furnished by the Contractor

AW-10.3 Materials and Workmanship

- a) Lumber and Wood (Rough Carpentry Work) shall, unless approved otherwise, be new lumber, well-seasoned, air-dried, first quality or other specie conforming to requirements thereof of equivalent kind -- and quality. Wood for blocking, grounds nailing strips, and/or other woodwork

incident to carpentry and joinery and/or for use of other trades unless specified otherwise, shall be second quality Apitong or approved equal perfectly sound and free from loose knots, cluster knots to surface knots that would interfere with or preclude the sound attachment thereof and/or securement to other work.

- b) Wood for shelves and shelving in coat closets, supply closets, etc., shall be of K.D. Tanguile suitable for painting and varnishing, as approved by the NPC Representative.
- c) Mill and Cabinet Work

Species of wood shall be K.D. Tanguile for all items of finished wood and cabinet work required to have a natural wood finish, unless otherwise specified.

Quality and Workmanship. All wood for interior finished mill and cabinet work shall be thoroughly air-cured, kiln-dried stock, satisfactory to NPC Representative. All materials specified herein shall be product of one mill in so far as practicable. Contractor shall submit for approval the name of subcontractor for mill and cabinet work called for on scale drawings. Only first-class cabinet type workmanship will be admissible an execution of this work, performed by artisans skilled in this trade so as to provide cabinet work of the highest trade, finish and installation as specified and required.

Care shall be exercised by careful screening to avoid strong contrast in color and graining of finished woods for all wood surfaces or trim, panelling, wall facing, etc., so that any one room or wall surface will present a reasonably uniform appearance. All cutting, framing and fitting shall be done as required for accommodation of work of other trades. Use of wood chips, shims or other shrinkable materials for leveling of plumbing will not be permitted in any form. Mortise and tendon joints set in an approved type of water and moisture proof glue with wedges and/or pinned. Shop mitres, 102mm (4") or more to be glued and doweled and/or locked with a metal ring. Mitres less than 102mm (4") shall have concealed spline.

No woodwork shall be installed until such time as plastering is entirely dry.

In so far as practicable, all millwork, panelling etc, assembled in shop shall be back-painted and finished throughout before delivery to building.

Running trim (chair rail), etc. of wood shall have minimum number of splices and in each instance bevelled and jointed over a solid bearing ground.

In addition to machine sanding, all interior trim, panelling and woodwork shall be smoothed by hand using "00" sandpaper to give all woodwork

the required smooth surface for e-xposed finished treatment and free from machine and tool marks, abrasion, raised grain and other undesirable defects. All woodwork shall be fitted to plaster or other finished work in careful manner so as not to injure these surfaces in any way. Where plaster or other work is damaged or disturbed, it shall be restored to its original state and/or make good without cost to the NPC at the Contractor's expense.

- d) **Laminated Plastic Plywood or Particle Board.** All horizontal surfaces where laminated plastic covered wood are indicated on drawings shall be cigarette-proof grade. Seconds of the laminate shall be used as a "backing veneer" where concealed.
- e) **Centring Blocking, Grounds and Furring.** Furnished and installed for all above items of woodwork as specified.
- f) **Wood Finish Materials.** In general, conform to minimum standard requirements for kind, quality, functions and characteristics of local standards specifications as approved for use and specified herein.
 - 1. **Stains,** if required, shall be those approved by NPC Representative for various types of finishes.
 - 2. **Linseed Oil** shall be pure, thoroughly settled and either raw or boiled as required.
 - 3. **White Lead** shall be white carbonate of lead ground in pure linseed oil.
 - 4. **Beeswax** shall be pure, unadulterated and of the highest quality product of approved manufacturers.

AW-10.4 General Construction, Workmanship, etc.

General. Provide all rough carpentry required and/or necessary for any construction works, ladders, staging, scaffolds, and the like. Provide the temporary protection for all masonry and other related items during period of construction, including temporary centres, stairs treads, etc.

Grounds, blocking, cants, nailing strips and other rough woodwork shall be provided for sheet metal work, fabric flashing, and interior woodworks required by drawings.

- a) **Cutting, Patching and Fitting.** Perform all cutting and fitting or work of other trades as required to secure work herein specified including that for any plumbing, heating and electrical work and do all required patching after other trades.
- b) **Grounds and Blocking.** All wood grounds, blocking, centres nailing strips, cants, all wood grids for framing, etc., provided as required to secure carpentry, millwork, acoustical and insulation work and of sizes required.

Grounds shall be sized and dressed to proper dimensions. Ground against masonry units shall be secured in place with expansion bolts. Grounds that are not satisfactory shall be taken down and approved grounds reset at Contractor's expense. Grounds shall be provided behind all wood trim in every instance.

- c) **Rough Hardware.** All nails, bolts, screws and any other rough builder's hardware or securement devices required to securely fasten all work in place shall be furnished and installed for any work herein.
- d) **Miscellaneous Millwork**

The foregoing items are only intended to represent the principal items under this section. The Contractor shall include and furnish all items of Carpentry and Millwork. These are generally indicated on the drawings and shop drawings of all items and shall be prepared and submitted for the NPC Representative's approval as previously specified.

1. **Shelving.** Generally, 19mm (3/4") plywood with solid stock tongued front edges, all edges, and supported on cleats, of some material secured to walls with expansion bolts in lead sleeves. Where hook strips are required, they shall be of similar materials and as detailed on drawings, with double pronged hooks secured in place by the Contractor.
2. **Countertops.** Except where metal countertops are required, 19mm (3/4") laminated plywood with 3.32mm (1/8") standard grade linoleum of approved color, cemented down with approved type of linoleum adhesive. Where metal edging is required, furnished smooth roll edge white metal alloy edging strips secured with oval header non-ferrous screws.
3. **Drawers.** Shall have metal slides with roller bearings, particle board or plywood bottoms, solid hard wood boxing, dove-tailed and glued. Drawer fronts of solid stock, of selected birch and/or as detailed otherwise on drawings and dove-tailed to slides and bottoms.
4. **Cases and cabinet doors.** Unless scheduled otherwise, or detailed on drawings, hinged doors for cases and cabinets required under work of this section included and provided with suitable and/or appropriate hardware supplied by the Contractor. Sliding door hardware shall be furnished and installed by the Contractor.
5. **Miscellaneous interior cabinet work** (cases, counters, equipment fixtures, and the like. The work included herein comprises all items of interior wood cabinet works indicated or required by drawings, including all miscellaneous metal supports, located throughout all public spaces where interior woodwork shall be supplied and built. These shall include all the equipment accessories, supports, draw

slides, glass and glazing, shelves, counters, drawers, etc. complete in every respect, provided with beeswax finish and ready to operate.

General construction and quality of workmanship and materials is as specified herein. Office racks, interior cases and/or fixtures, supplied by NPC to be fitted into or between "built-in" case works shall be delivered to Cabinet Carpenter Contractor for in NPC and assembled with his work. In all instances, over-all length of such cabinets, cases, fixtures, shall be verified so as to fit in an approved manner when installed and/or assembled without disfigurement or cutting at job site.

Contractor shall thoroughly examine drawings and Schedules of Work and Finishes and shall be responsible for furnishing, installing and the surface treatment/finishing of all wood items.

AW-10.5 Wood Finish Treatment.

The wood finish treatment for all exposed wood surfaces shall conform to the following, except where or when approved otherwise by NPC Representative. Finish treatment in general applies to the finishing of Narra or Tanguila plywood panels. The intent of the surface finish requirements specified hereinafter are to simulate the best grade quality of workmanship and materials in local use, applied by skilled and experienced wood finishers and painters.

All exposed interior woodwork throughout building structure except laminated plastic covered plywood and woodwork specified to be painted shall be carefully prepared to receive the following finish treatments.

Preparation of wood surfaces

Prior to application of any finish treatment, all wood surfaces shall be thoroughly cleaned of all foreign matter, dirt, oil, grease, cement plaster stains, finger marks, and the like. Should badly disfigured or damaged surfaces be encountered that are unsuitable to receive finish treatment, attention shall be called to NPC Representative before proceeding and await his conclusion.

All exposed surfaces of any woodwork, either mill or cabinet shall be entirely smooth and unblemished when erected.

Smooth thoroughly using a fine grade of waterproof sandpaper. Sand a second time with sandpaper moistened with best quality refined linseed oil.

Where crevices, deep open wood pores and any other defects are present, that are "re faceable", they shall be filled with "stopping wax", prepared as follows:

- i. In an iron pot, put one cupful of common shellac, one teaspoonful of powder resin, one piece of base wax the size of half and

average size walnut and a teaspoonful of powdered lemon chrome or other coloring matter to match color of wood.

- II. Heat and stir thoroughly until prepared compound is fully melted and mixed so as to be uniform in texture. Turn portions of melted compound out between two flat boards and roll to form cylindrical sticks while still plastic.
- III. As previously specified, thoroughly and tightly fill all holes, crevices, open pores in wood and minor defective areas in wood surface by first melting sticks on a hot iron or small benzene lamp; as if it were solder.
- IV. Defective surfaces, where certain type of natural defects occur in wood that do not provide good seats to receive "stopping wax" shall be enlarged and slightly under-cut around edges so as to assure the forming of a solid key when crevice is filled.
- V. To finish surface after stopping, strike off protruding stopping and smooth with glass paper, so as to leave all surface clean, perfectly smooth and ready for final finish treatment.

AW-9-8**Finish Hardware and Show Case Lighting**

These items as they relate to all cabinet work, furnished and installed complete by this Contractor. Finish hardware for cabinet work and show case lighting fixtures shall be of the highest quality product as selected by NPC Representative. Contractor shall examine same, determining before application that items will perform the function and purpose for which they are intended and apply them in an acceptable manner.

When cabinet work shop drawings are submitted for approval by the Contractor, a detailed cabinet hardware schedule will be prepared by the NPC Representative.

Prime Painting and/or Finishing

Contractor shall have option of finishing any portion of this work either on site and/or on a shop. All priming and back-painting shall be completed by the Contractor

Refitting and Checking

Immediately before building is occupied, the Contractor shall examine all doors and other movable part of all case and cabinet work to see that all are in perfect operating condition. Before and after refitting, all edges of doors shall be sealed with approved water resistant materials.

Protection of Finish Products / Interior Woodwork, etc.

The Contractor shall be held responsible and accountable for the explicit protection of all finish cabinet work, interior trim and decorative treatment until

Final Inspection and Acceptance, NPC Representative reserves the right to order replacement at no additional cost to contract sum, for any and all work so injured, and/or damaged as to be unsightly after repairing and/or refinishing. Authorization to repair and/or refinish shall not constitute a waiver of NPC Representative's right to require replacement of any item or work if unsatisfactory to him after such repairing and/or refinishing.

Measurement and Payment ,

Refer to Bill of Quantities for the pertinent items where required.

AW-10.0 FENESTRATIONS

AW-6.1 GLASS

AW-6.1.1 General

The work includes the furnishing of all labor and materials required to complete all glass and glazing as shown on the drawings and/or herein specified.

The Contractor is responsible for the correct sizes and grades of glass to be used. Improperly set glass or glasses which does not meet the requirements of its grade and size will not be accepted. Such glass must be replaced to the satisfaction of the NPC Representative.

The size of glass indicated is approximate only and the actual size shall be determined by measuring the frame to receive the glass. Glazing rabbets shall be rigid true, plumb, square, properly primed, clean, dry and dust free, before glazing work is started.

Each piece of glass shall have the manufacturer's label showing the type, thickness and quality of the glass. Putty and glazing compound shall be delivered to the site in unopened containers, plainly labeled with the manufacturer's name and brand.

AW-6.1.2 Materials

- a) Glass of all windows, doors, transoms shall be of the best quality of its respective kind and free from internal or surface defects. Thickness of glass shall be as mentioned in the plans. For other qualities and thickness refer to recognized standards.
- b) Kind FT, Fully Tempered Glass shall have minimum surface compression of 69MPa (10000 psi) or an edge compression of not less than 67Mpa (9700 psi)
- c) Thickness = 10mm. (windows and doors)
- d) Break Test Requirement for Kind FT Glass
- e) Test and Interpret in accordance with ANSI Z97.1

AW-6.1.3 Sample

The contractor shall submit for approval duplicates sample (150mm. x 250mm.) of each type of glass bearing manufacturer's label and a can of each type of putty.

AW-6.1.4 Installation

- a) Safety precaution and procedure shall be taken in determining the sizes and providing the required clearances by measuring the actual opening to receive the glass. Movable items shall be kept in closed and locked position until glazing has thoroughly set.
- b) The glass shall be prevented from all contact with metal or any hard or sharp metals by using resilient shims placed at quarter points.
- c) Resilient sealant shall be used.
- d) Use stops in size permitting a "good grip" on the glass.
- e) Glass shall be installed only in openings that are rigid, plumb and square.
- f) Allow sufficient clearance at edges of glass to compensate for some settlement of the building. Clearance shall be 6.3mm (1/4") from edge to frame and 3.2mm (1/8") for face.
- g) Marking, banners, posters and other decor shall not be applied directly to glass surface as these could cause thermal stress.
- h) Glass breakage caused in executing the work or by faulty installation shall be replaced by the contractor without extra cost.
- i) Improperly set glass which does not fully meet the requirements of its grade shall not be accepted and shall be replaced without extra cost.
- j) Putty shall be neatly run in straight lines parallel with inside of glazing rebate; corners shall be carefully made; all excess putty shall be removed and surfaces left clean.
- k) Clean all glass on both sides after putty has been applied completely. Do not disturb edge of putty with scraper. At completion of work leave glass and glazing works free from cracks and rattles and clean on both sides.

AW-6.2 Glazing Sealant

AW-6.2.1 General

The work to be done shall consist of furnishing all labor, materials and other facilities for the satisfactory performance of all work necessary to complete all glazing sealant work as shown on the drawings and specified herein.

AW-6.2.2 Materials

- a) Silicone Rubber should comply with Federal Specifications for silicone building sealant and Federal Specifications for one (1) component building sealant. Packaging shall be supplied at least in fl. oz. (325 ml) cartridges

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and two (2) gallons (7.5 liters), bulk pails, net weight. The joint width shall not be less than 3.2mm. (1/8"). The joint depth shall allow a sealant depth of 3.2mm (1/8") to a maximum of 12.7mm. (1/2"). The silicone sealant bead depth shall be less than the joint width which is about 2.1mm.

- b) Masking Tape. Areas adjacent to joint shall be masked to a sure line. Do not allow masking tape to attach clean surface to which the silicone sealant is to be adhere. Tooling shall be completed in one (1) continuous stroke immediately after sealant application and before a skin forms. Masking shall be removed immediately after tooling.

AW-6.2.3 Method of Application

Sealant shall be applied in a continuous operation. A positive pressure adequate to properly fill and seal the joints width shall be employed. Tool or strike the building sealant with light pressure to spread the material against the back-up material and the joint surfaces such as aluminum (sealant shall be applied above 40 O F). A tool with a concave profile is recommended to keep the building sealant with the joint. The sealant can be applied at outdoor temperature as low as 35 O F provided that surface is clean and dry. Excess sealant shall be cleaned from non-porous surfaces, before curing, before using a commercial solvent. On porous surfaces, excess sealant shall be allowed to cure and then be removed by abrasion or other mechanical means. The sealant shall not be disturbed for at least 48 hours.

AW-6.2.4 Guarantee

The Contractor shall guarantee the caulking work to be free from defects of materials and workmanship for a period of ten (10 years).

AW-6.3 Aluminum Doors and Windows**AW-6.3.1 General**

The contractor shall furnish and install all aluminum doors and windows in accordance with the applicable drawing's specification and manufacture's standards. Samples of aluminum sections shall be submitted by the Contractor to the Contracting Offices for approval before fabrication commences.

AW-6.3.2 Materials**Aluminum Glass Door**

Aluminum glass doors shall be double swing, full glass and floor hinge type complete with transom; hardware and accessories as indicated in the drawings.

Aluminum Glass Windows

Aluminum glass windows shall be a combination of mixed and slide type or as indicated in the drawings.

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Color for both doors and windows frames and accessories shall be anodized olive brown, preferably "Analog", "Kalcolor" or approved equal.

Members, sizes, extrusion processes and other characteristics of aluminum shall be referred to "ALUMINUM WORKS" and/or Drawings.

Glass Panels shall be (8mm) thick tinted bronze or as indicated on the drawing.

Aluminum glass doors and windows shall be products of reputable, national known manufacturers approved by the Contracting Officer preferably manufactured by "Hooven Philippines", "Permaline" or approved equal.

AW-6.3.3 Installation

Doors and windows shall be installed in strict accordance with the accepted manufacturer.

AW-6.5 FINISHING HARDWARE**AW-6.5.1 General**

This section includes furnishing and installing all finishing hardware, complete. The schedules in this section are intended to indicate the various hardware's but are not guaranteed as to quantity. The Contractor shall check the schedule and drawings for count and any item similar location elsewhere in the building.

In order to identify and establish each kind of hardware, genuine American, Japanese & European products shall be used.

AW-6.5.2 Packaging & Marking

Each item of finishing hardware shall be individually packed and delivered in the manufacturer's original container. Each package or box shall be clearly marked with the manufacturer's name, catalogue number and other markings required for easy identification of the hardware.

A packaging list should be furnished to clearly identify the quantity and type of hardware in every box numbered in accordance with this list.

All hardware shall have the required screws, bolts and fastening necessary for installation packed in the same package with hardware. All packages shall be legibly and adequately labeled indicating the part of the work for which it is intended.

AW-6.5.3 Qualified Supervision

Materials shall be procured from a source of supply approved by the NPC Representative as competent to correctly evaluate the plans, details, and specifications and be prepared at all times to promptly and satisfactorily service the hardware on the job. This supplier must be an established Contractor for builder's hardware who meets all above requirements and who operates an office in this field.

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AW-6.5.4 Material Specification

- a) Butt Hinges shall conform to U.S. Federal Specifications unless otherwise specified.
- 1) For doors up to 914mm (3' - 0") wide or less, 90mm x 90mm (3-1/2" x 3-1/2") hinges shall be used.
 - 2) For closet doors, use long span hinges.
 - 3) Where the jamb trim projects to such an extent that the width of the leaf of butt hinges will not allow the door (in normal opening) to clear such trim, butt hinges with leaves of sufficient width shall be provided.
 - 4) Finish and Material
 - i. Hinges used for doors to receive paint shall be Bonderized and prime coating for painting.
 - ii. Hinges used for doors to receive natural finish shall be wrought steel highly finished, polished and plated.
 - iii. Use only non-ferrous material butt hinges for doors exposed to the weather.
- b) Lock-sets shall conform to U.S. Federal Specifications.
- c) Hardware Selection and Door Control. To obtain satisfaction and maximum services, consideration should be given to all of the following basic factors:
- i. Proper lock selection. Depends on expected usage (lock, series, function), climatic conditions.
 - ii. Proper installation. The use of right installation tools is recommended.
 - iii. Proper door control. To protect locks and other hardware items, the use of door closers and other control devices is vital under certain conditions.
- d) Keying and Key. Locks shall be keyed in sets and sub-sets to provide maximum expansion. All sets shall be grand master keyed, and all entrance locks shall be great-master keyed. Designation shall be by the NPC Representative.

Permanent cylinders with construction inserts are to be assembled with all locksets. Change keys are to be packed in cartons marked packing list". On completion of the job, the NPC Representative will collect all construction keys, remove the construction inserts from the lock cylinders and distribute the lock change keys as directed. Retain Contractor and construction keys for future key system control.

Construction

SECTION VI- SPECIFICATIONS

a) Mechanism. Wrought steel zinc plated and dischromated with coil compression springs.

b) Exposed trim and parts. Wrought brass, bronze, aluminium or stainless.

Installation. For hollow wood doors and frame, uniform application regardless of function completely reversible for R.H. or L.H. doors.

Warranty. Locksets are engineered to meet or exceed applicable government and industry standards for strength, durability and performance. They are fully guaranteed against defects in materials for workmanship.

- Door Closers
- Push/Pull Handles
- Door Stops
- Door Catches

AW-6.5.5 Installation and Hardware

All hardware shall be installed in a neat, crafts manlike manner following the manufacturer's instruction. Fasteners supplied together with the hardware, shall be used to secure the hardware in place. Wood screws set in expansion shields, shall be used for securing hardware to concrete or masonry surfaces. Through-bolts shall be used where specified or necessary for satisfactory installation. After installation, hardware shall be protected from paint, stains, blemishes and damage until acceptance of the work. All hardware shall be properly adjusted and checked out in the presence of the NPC Representative to see that the hinges, locks, bolts and closers operate properly. Any error in cutting or fitting, or any damage to the adjoining work shall be replaced as directed.

AW-6.6 Measurement and Payment (Fenestrations)

The measurement for payment for the Fenestrations will be based on the installed and accepted by the NPC Representative.

Payment will be made at the corresponding contract unit price per square meter for the pertinent item no. 8.0: Fenestrations of the Bill of Quantities.

Payment shall constitute full compensation for all labor, material including metal lath, equipment, tools and incidentals necessary for the completion of this work.

AW-7.0 PLUMBING FIXTURES AND FITTINGS**AW-7.1 General**

The work covered by this section of the Specifications consists in furnishing all plant, labor, equipment and tools, articles, appliances and materials and in

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performing all operations in connections with the installation of all plumbing fixtures, fittings and accessories, complete, in strict accord with this section of the Specifications or indicated on the drawings, are included in this work.

AW-7.2**Make**

The model numbers herein given are intended to illustrate the quality and design of fixtures that will be required. American standard fixtures specified herein and any substitution made to any item of fixtures specified must first be approved by the NPC Representative.

AW-7.3**Trade Marks**

All plumbing fixtures and fittings must bear the trademarks of the manufacturer.

Maintenance Manual shall be submitted including complete instructions for replacing valve washers and strainers and give manufacturers recommendations as to cleaning finish fixture surfaces.

Submit samples of valves, faucets, trims and others for approval of the NPC Representative.

AW-7.4**Materials****Fixtures**

- a) Shower Head with Faucet, Stainless
- b) Kitchen Sink (Onyx Finish)
- c) Pull-out Spray Kitchen Faucet (Matte finish)
- d) $\frac{3}{4}$ " Potable Water Pipe, 3m

AW-7.5**Installation**

Plumbing fixtures shall be installed free and open in a manner to afford access for cleaning. All brackets, cleat, plates and anchors required to support the fixtures shall be furnished in a rigidly manner. Water closets shall be sat on Bolt-Wax.

Installed plumbing fixtures shall be kept clean and in working order for adequate protection so as not be used by anybody until issuance of Certificate of Completion.

All fixtures shall be provided with individual control stop so that each fixture may be separately controlled without affecting any other fixture.

All flush valves shall be equipped with vacuum breaking devices.

AW-7.6**Measurement and Payment**

Measurement and payment for Plumbing Fixtures will be based on the number of sets/pieces installed and accepted by the NPC Representative.

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Payment will be made at the corresponding contract unit price per set/piece for the pertinent item under Item 9.1: Plumbing Fixtures and Fittings in the Bill of Quantities.

Payment shall constitute full compensation for all labor, materials, equipment, tools and incidentals necessary for the completion of this work.

EW- ELECTRICAL WORKS**EW-1.0 GENERAL**

This section covers the technical and associated requirements for the Construction of Offsite Data Center and Equipment Storage for MinGen and Agus Plants

All electrical equipment shall be installed in accordance with the relevant sections of this specification. The Contractor shall submit all related drawings and document deemed necessary, prior to the execution of the work, subject to the approval of NPC.

The works shall be performed and completed in a satisfactory manner in accordance with generally accepted modern engineering practice.

EW-2.0 SCOPE OF WORKS

The scope of electrical work covers the furnishing of all labor, materials, equipment, tools and other necessary incidentals required which shall essentially consist of all electrical equipment and materials enumerated herein:

1. Supply, Installation and Test of Complete Lighting and Power System; and
2. All other works and services including those not specifically detailed herein but are required to fully complete the project.

EW-3.0 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 Standards 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)**7. Philippine Electronics Code (PEC)**

Other recognized national standards may be accepted if, in the opinion of NPC representatives, such will guarantee a quality not inferior to that guaranteed by the above standards.

In case of conflicting requirements between authorities cited above and those specified, such disagreement shall be resolved by representative of which his decision shall be final.

EW-4.0 LIGHTING & POWER SYSTEMS

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

The devices/materials furnished shall be in accordance with, but not limited to, 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.

EW-4.1 Technical Requirements and Characteristics

Circuits shall be wired separately for lighting and outlets. Lighting fixtures shall be controlled and switched locally approximately as shown on the drawings.

Replacement of fixture bulbs or tubes shall be possible without disconnecting any part of the power supply and risk of touching live parts of the installation.

EW-4.2 Lighting and Power Panelboard

The lighting and power panelboard shall be flush mounted rated at 240V, 60Hz, operating on a three-phase system.

Circuit breaker to be installed for the lighting and power panelboard shall be molded case type with instantaneous magnetic trip and thermal overcurrent trip.

Panelboard Nameplate shall be black plastic with engraved white letter. All branch circuits, especially for ACUs, motors, heaters, etc., shall be labeled to easily identify and locate the connected loads during maintenance.

EW-4.3 Lighting Fixtures, Luminaires and Accessories**Lighting Fixtures**

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

SECTION VI- SPECIFICATIONS

The hangers 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.

The housing of lighting fixture shall be fabricated of steel sheet, corrosion resistant, good ventilation and easy installation.

All lighting fixtures, samples and catalogues shall be submitted for NPC's review and approval prior to the order. No lighting fixtures shall be installed without approval of NPC.

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, receptacles, stems and the like, shall be replaced with new parts, at no cost to NPC.

Lighting Luminaires**a. LED Tube Type Lighting Fixture with Louvres**

IP20 Recessed Mounted Lighting Fixture with mirror finish aluminum reflector and satin finish aluminum louvres, 1200mm x 600mm zinc phosphate steel sheet housing with white powder coat paint finish, and high output, 2x18W G13 base LED tube lamp.

b. Recessed Vertical Profile Downlight

IP44 Recessed Mounted Vertical Profile Downlight with Aluminum Reflector and Powder Coated Rim Fitted with Vertically Placed E27 Base 1 x 12 Watts, Compact LED Lamp.

c. Surface Vertical Profile Downlight

IP20 Surface Mounted Vertical Profile Downlight with Aluminum Reflector and Powder Coated Rim Fitted with Vertically Placed E27 Base 1 x 9 Watts, Compact LED Lamp.

d. Emergency Lighting Fixture

The Contractor shall supply and install the automatic stand-alone emergency lamp with self-contained battery unit as specified herein.

When the AC main supply is interrupted, the lamps shall be automatically switched ON with a time delay of 1 second to the battery powered operation. Lamps shall be switched OFF when the batteries are discharged at the low-level voltage (below 7.5V). The charging system of both maximum-constant voltage and constant current shall be able to recharge the completely discharged batteries to their full capacity within 20 hours or

less. The charging system shall cut-off automatically and instantaneously upon reaching fully charged state.

Under normal supply, the charging system shall ensure and maintain the batteries in a fully charged state ready to supply power and shall be equipped with a reliable protective device to protect the batteries against overload and short circuit.

Batteries shall be of long life, maintenance free, sealed lead acid type. The batteries shall have sufficient capacity to operate the lamps at full luminous efficiency for up to 3 hours after failure of the main supply.

Rated input voltage of the automatic stand-alone emergency lamps shall be 230 VAC, 1-phase, 60 Hz.

e. Exit Lights

IP30 LED Emergency Exit Sign Light shall be Non-Maintained, Low Heat, Low Maintenance and Low Volt Cut-off preventing battery over discharge. It shall be complete with High Temperature Nickel Cadmium Battery, IC Controlled Dual-Rate Charger, Fire Retardant Molded Acrylic Diffuser and Electro Galvanized Steel with Epoxy Powder Coated Fittings.

EW-4.4

Conductors

Conductors shall be stranded annealed copper conductor suitable for continuous temperature of 90 °C when used in wet or dry location and 75 °C when exposed to oil or coolant. The minimum size of conductor to be used shall be 3.5mm².

Insulation shall be suitable for wet and dry location, fungi resistant and ultraviolet stable.

All conductors shall be moisture and heat resistant, flame-retardant polyvinyl chloride insulation, chemical and abrasion resistant nylon sheath.

The conductor specification shall meet ASTM specification, PNS 35, UL standard 83 and requirements of PEC.

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

EW-4.4.1

Conductor Installation

Conductors pulled through conduits shall be supported in an approved manner to avoid damage to the insulation. Grease or oily substances shall not be used to facilitate the passage of the conductor in conduits.

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

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

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

EW-4.5

Conduit

All embedded and concealed 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 using 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 0.6 m.

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.

Metallic Conduits

Metallic conduit shall be made of Electrical Metallic Tubing (EMT), galvanized on the outside for corrosion protection and shall have an approved corrosion-

SECTION VI- SPECIFICATIONS

resistant organic coating on the inside. EMT shall be installed using setscrew or compression-type couplings and connectors.

EW-4.6

Junction/Utility and Pull Boxes**Junction / Utility Boxes**

All junction/utility boxes for concealed work shall be of hot dip galvanized steel or unplasticized polyvinyl Chloride. All wall 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 unplasticized 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.

EW-4.7

Grounding System

All equipment to be used shall be properly grounded in accordance with the latest electrical and electronics industry standards.

EW-5.0

Measurement of Payment

Measurement of payment for all electrical works shall be based on the bid price of each item as shown in the Bill of Quantities — Electrical Works, Section VII of the Bid Document. The cost of each item shall cover all works required and described in the pertinent provisions of the specifications.

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.

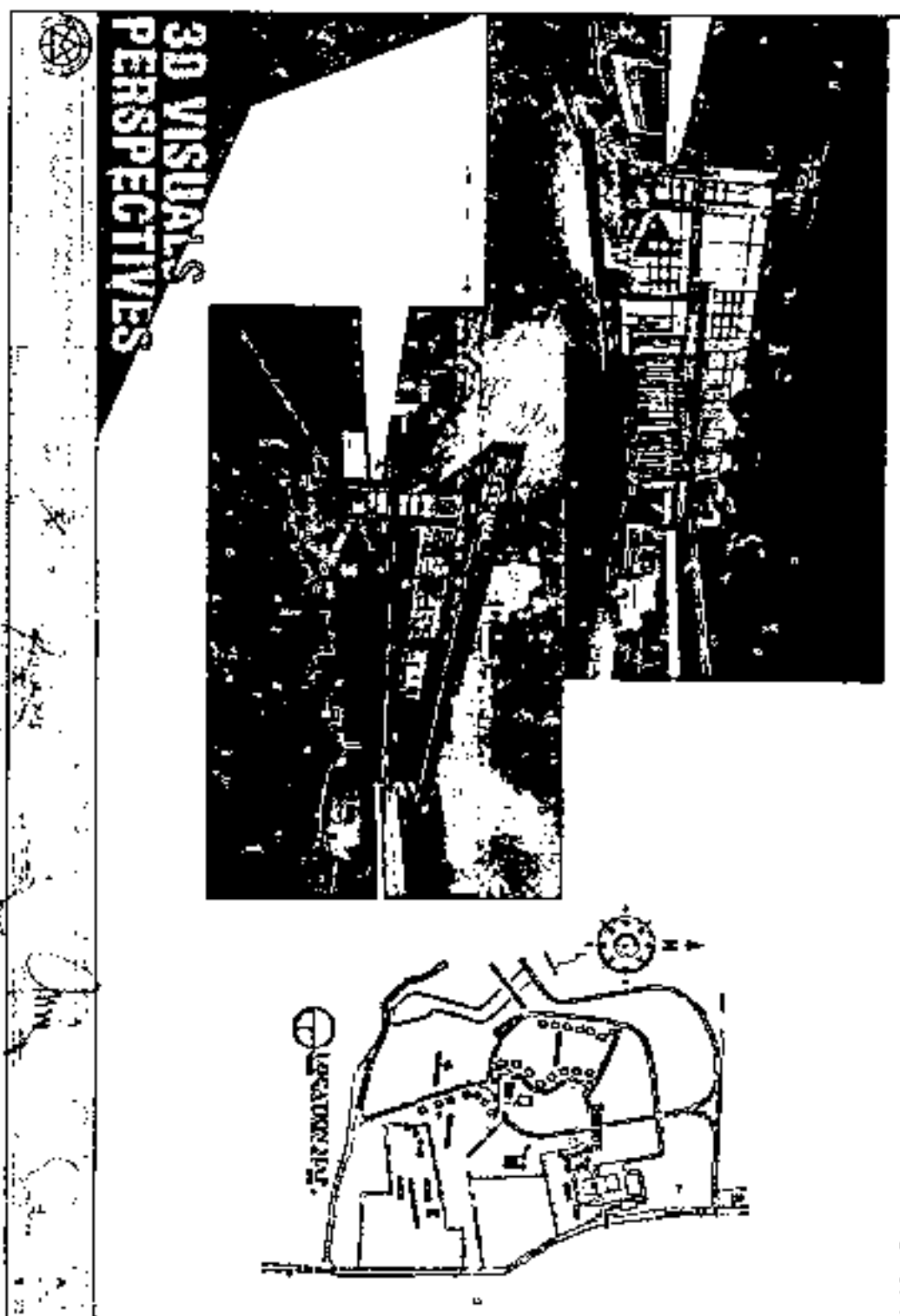
Before the Contractor will demobilize its construction equipment/tools, materials and crew, he shall secure approval from NPC and a joint inspection with the NPC Inspector and Contractor will be conducted to make sure that all his accomplishment/ work that needs remedial attention or correction shall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

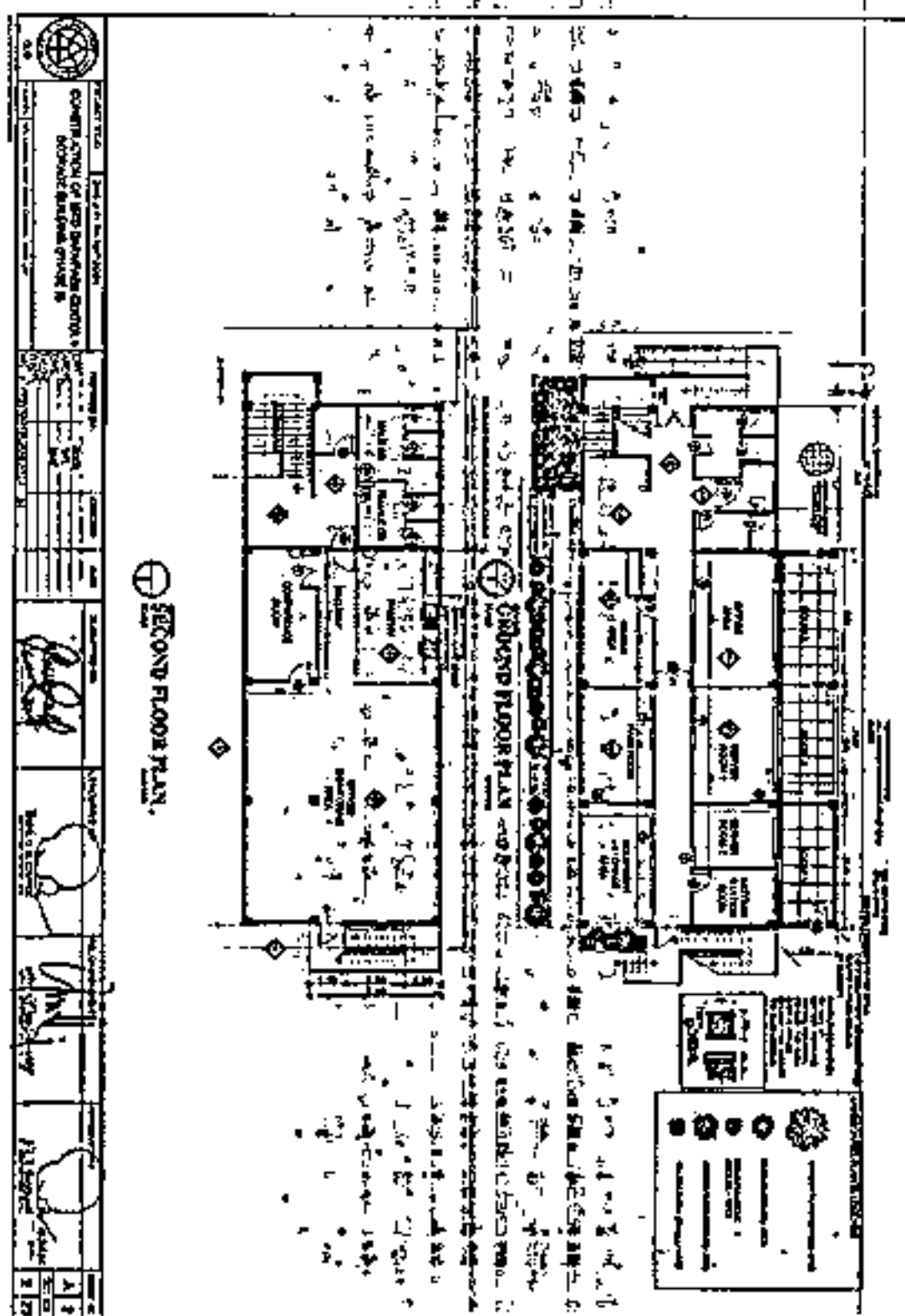
Measurement and Payment

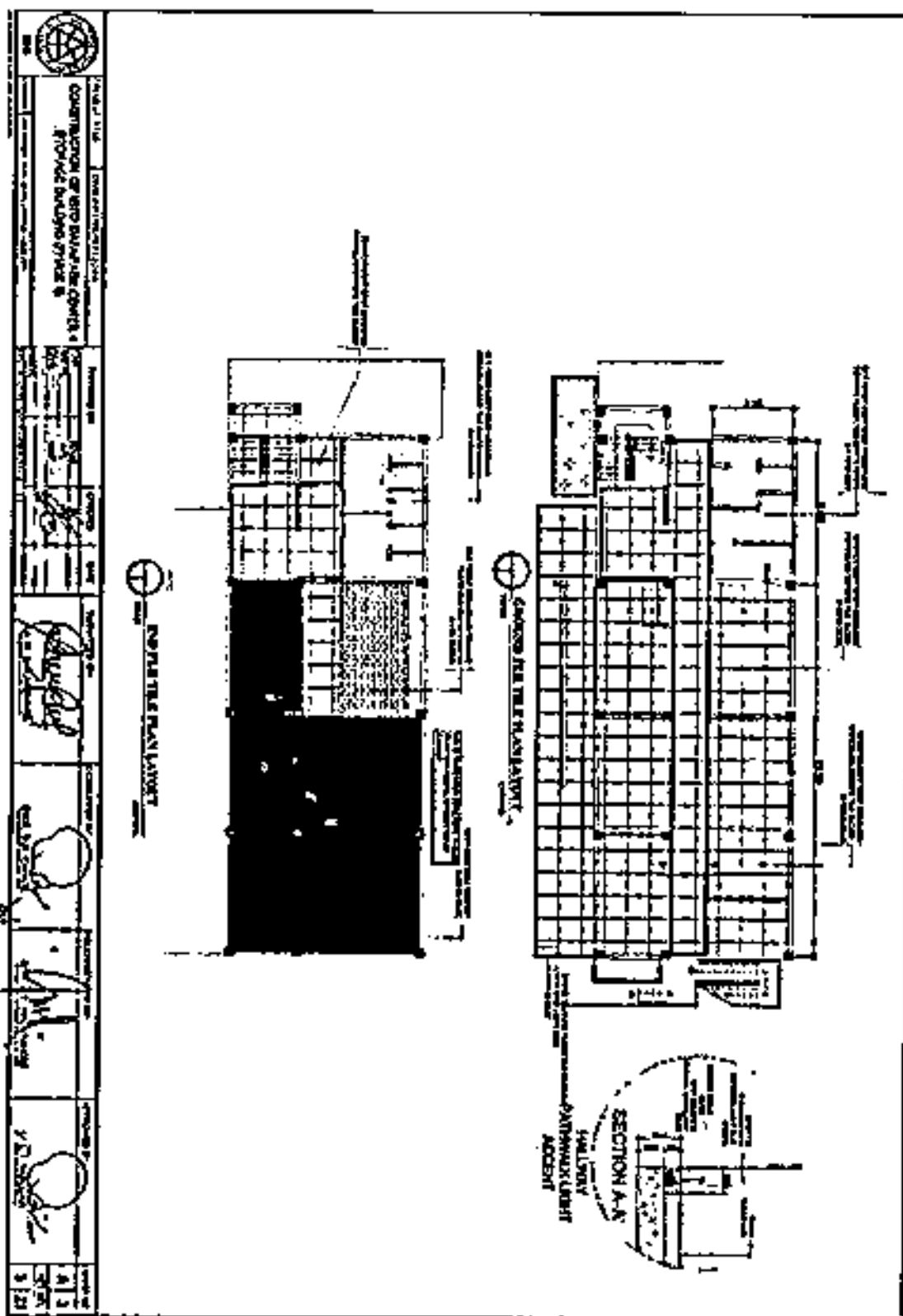
Work prescribed herein shall not be measured and paid separately; same shall be deemed to be included in pay items for other items for work

Section VII. Drawings

Sheet No.1/23	: LOCATION MAP / DRAWING PERSPECTIVES
Sheet No.2/23	: FLOOR PLANS
Sheet No.3/23	: TILE PLAN LAYOUTS
Sheet No.4/3	: FOUNDATION PLAN / REFLECTED CEILING PLAN / STRUCTURAL AND MASONRY WORKS DETAILS
Sheet No.5/23	: ELECTRICAL LAYOUT PLANS
Sheet No.6/23	: ELEVATIONS
Sheet No.7/23	: DOOR SCHEDULES
Sheet No.8/23	: SUN BUFFER DETAILS
Sheet No.9/23	: PLANTER BOX DETAILS
Sheet No. 10/23	: EXTENSION ROOF PLAN, CONDENSER BOX DETAIL AND PERSPECTIVE, PIPE ACCENT BOX LOCATION AND DETAIL, FASCIA FRAME AND GIRT DETAILS
Sheet No. 11/23	: REAR BUILDING EXTENSION ELEVATION AND DETAILS, PIPE BOX DETAIL
Sheet No. 12/23	: INTERIOR SECTIONS AND DETAILS/PERSPECTIVES
Sheet No. 13/23	: INTERIOR SECTIONS AND DETAILS/PERSPECTIVES
Sheet No. 14/23	: INTERIOR SECTIONS AND DETAILS/PERSPECTIVES
Sheet No. 15/23	: INTERIOR SECTIONS AND DETAILS/PERSPECTIVES
Sheet No. 16/23	: INTERIOR SECTIONS AND DETAILS/PERSPECTIVES
Sheet No. 17/23	: INTERIOR SECTIONS AND DETAILS/PERSPECTIVES
Sheet No. 18/23	: INTERIOR SECTIONS AND DETAILS/PERSPECTIVES
Sheet No. 19/23	: INTERIOR SECTIONS AND DETAILS/PERSPECTIVES
Sheet No. 20/23	: COMFORT ROOM 1 PLAN/DETAILS/SECTIONS
Sheet No. 21/23	: COMFORT ROOM 2 PLAN/DETAILS/SECTIONS
Sheet No. 22/23	: RAMP DETAILS/COMMEMORATIVE BRONZE PLATE DETAILS
Sheet No. 23/23	: SIGNAGE DETAILS





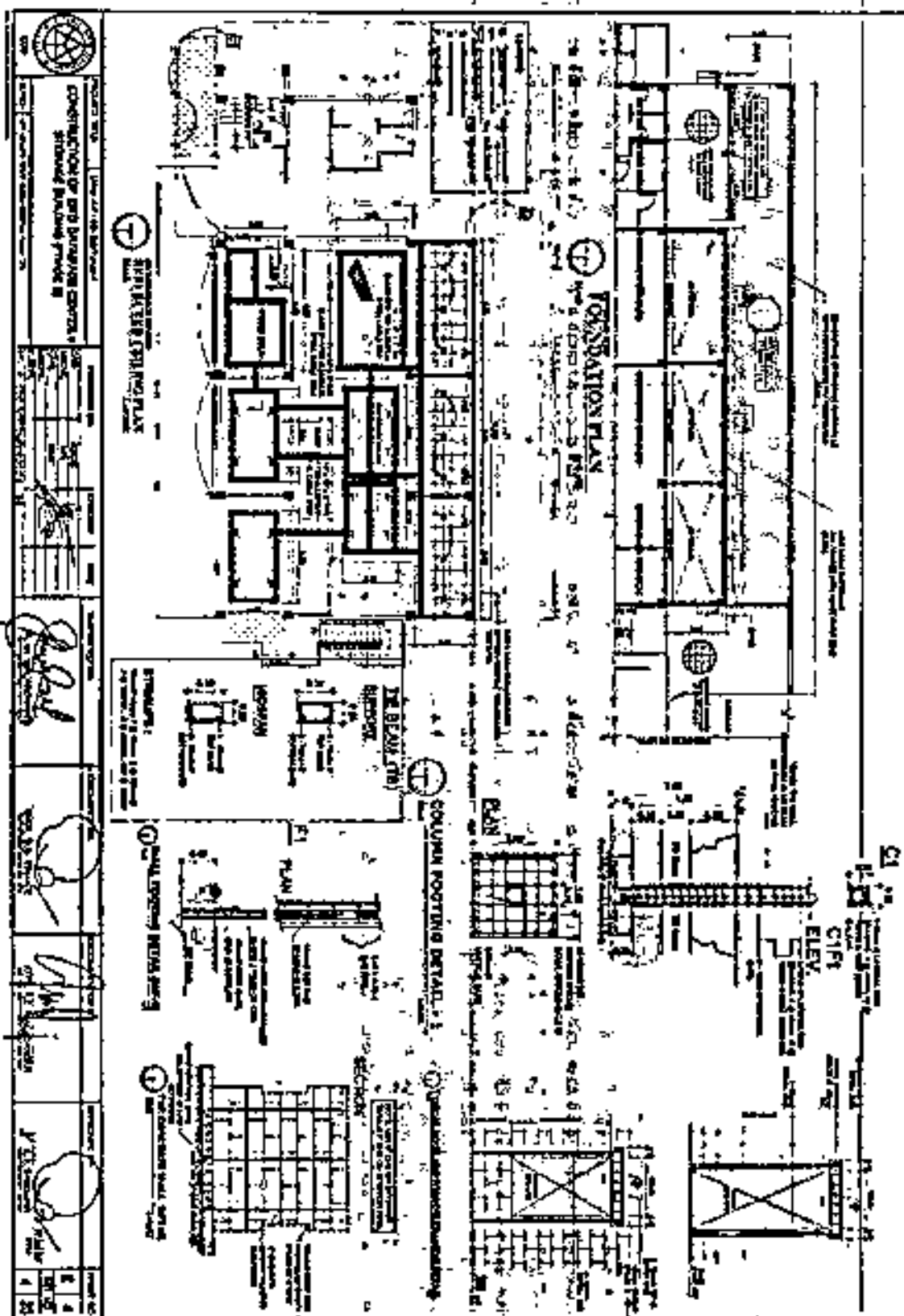


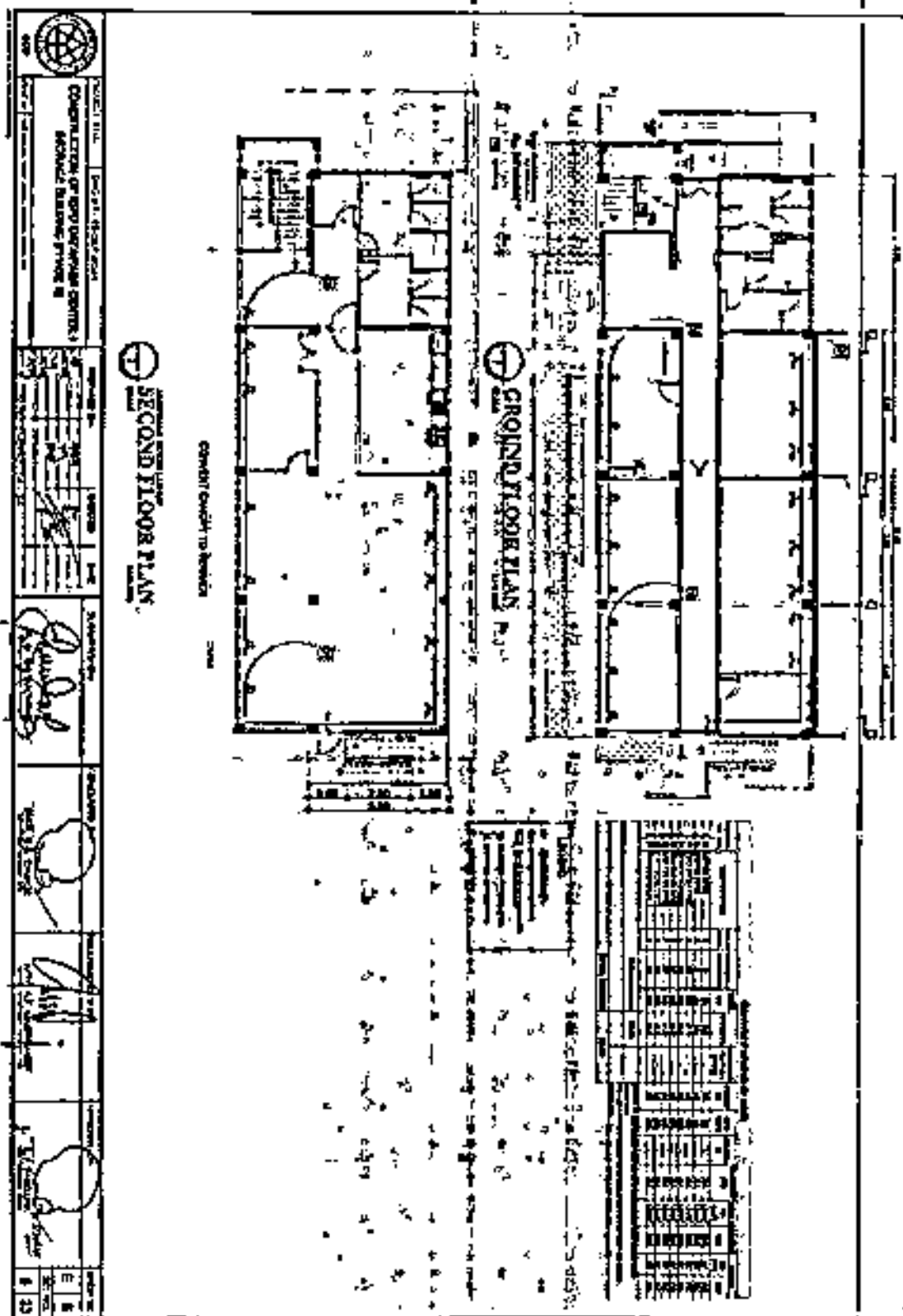
BID DOCUMENTS

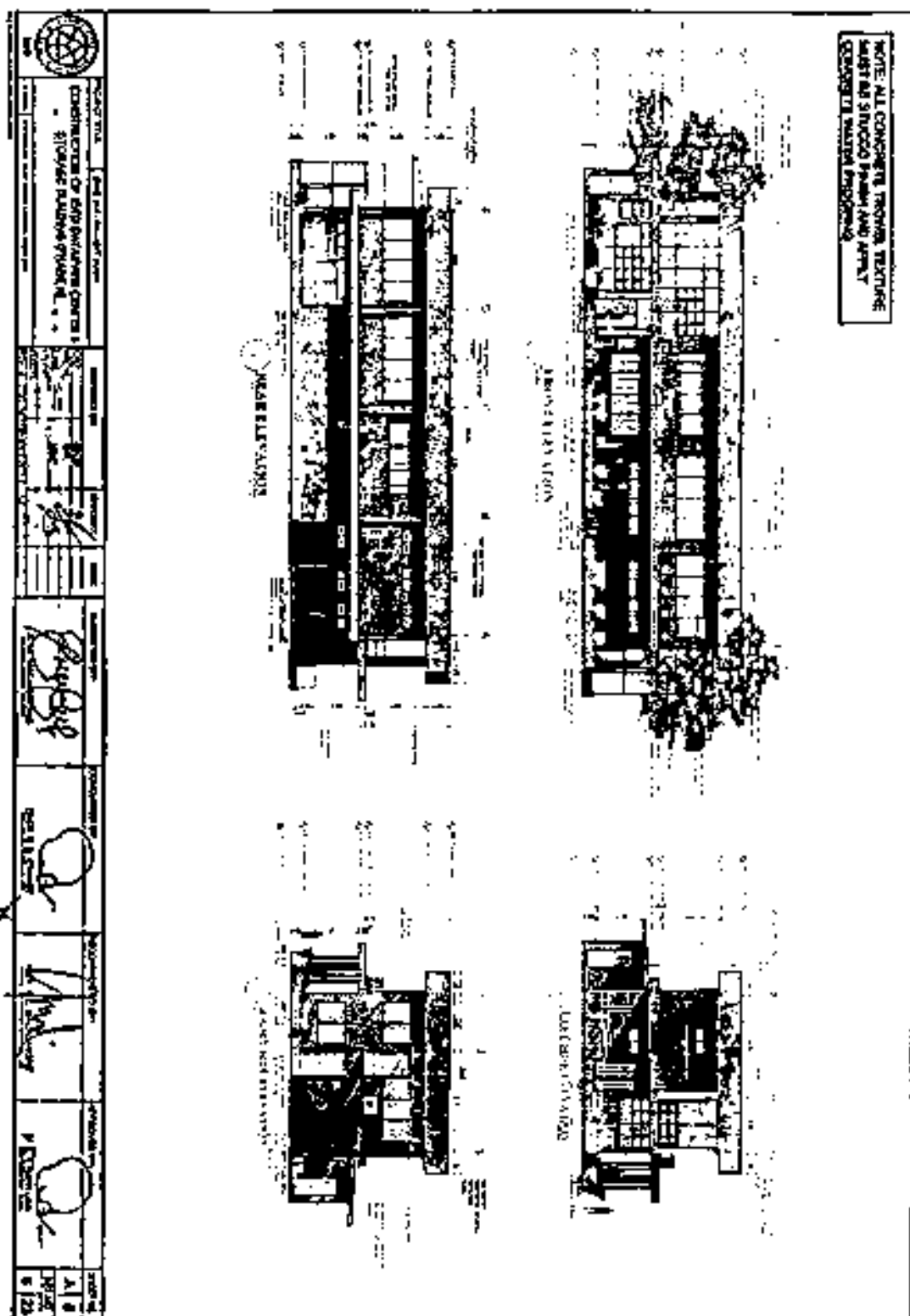
SECTION VII- DRAWINGS

NAME OF PROJECT: CONSTRUCTION OF ISTD DATA/PBX
CENTER & STORAGE BUILDING (PHASE II)

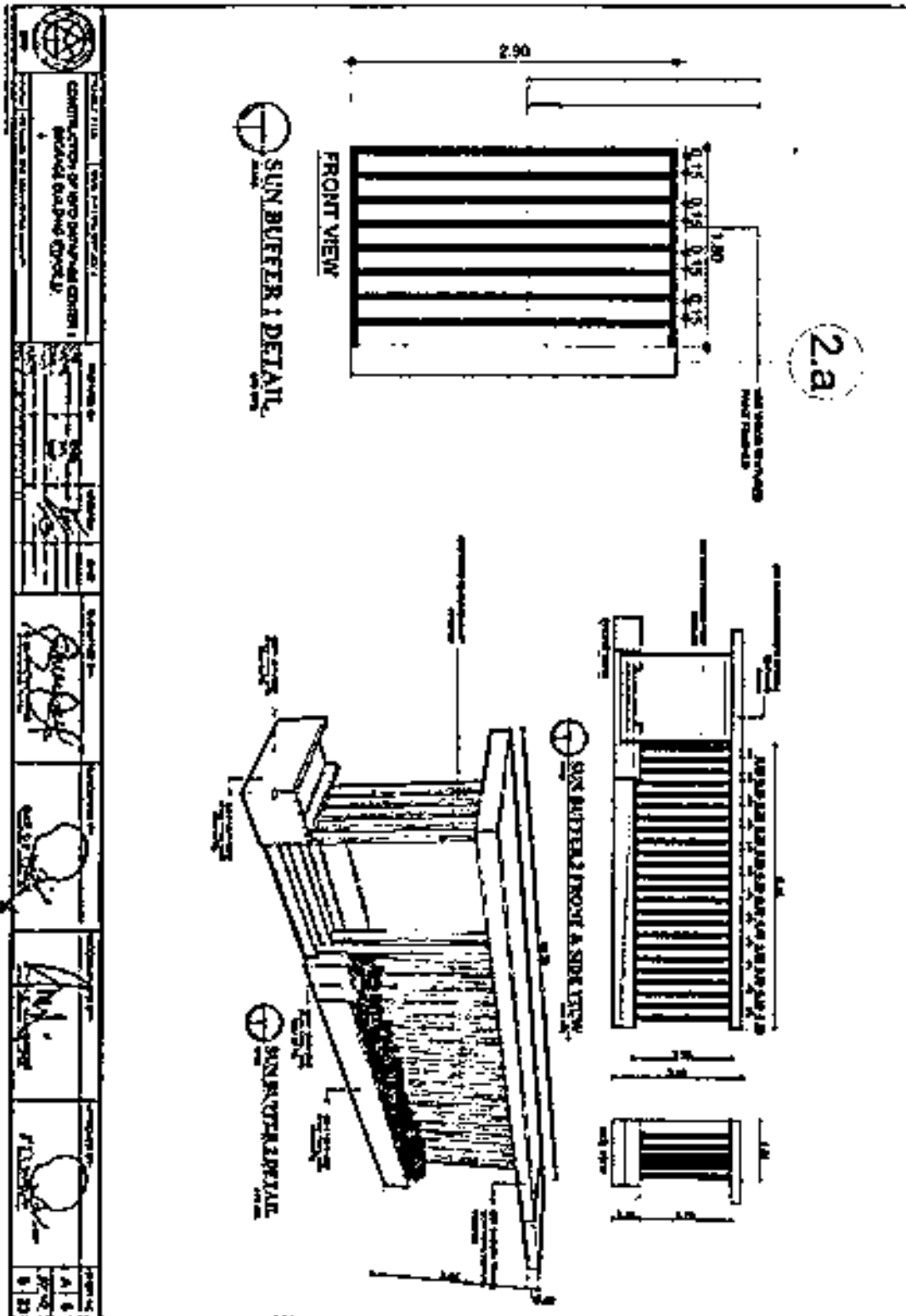
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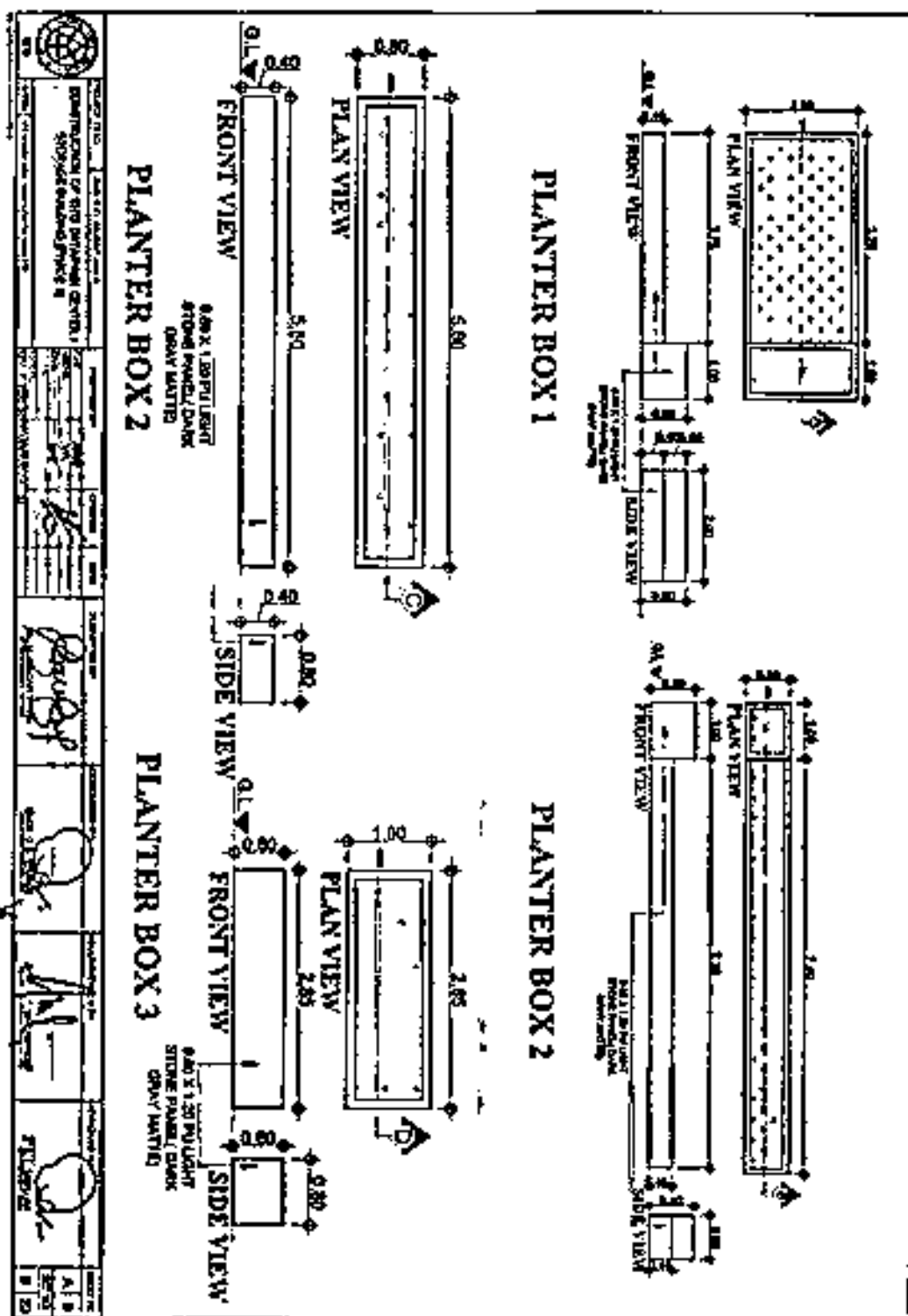


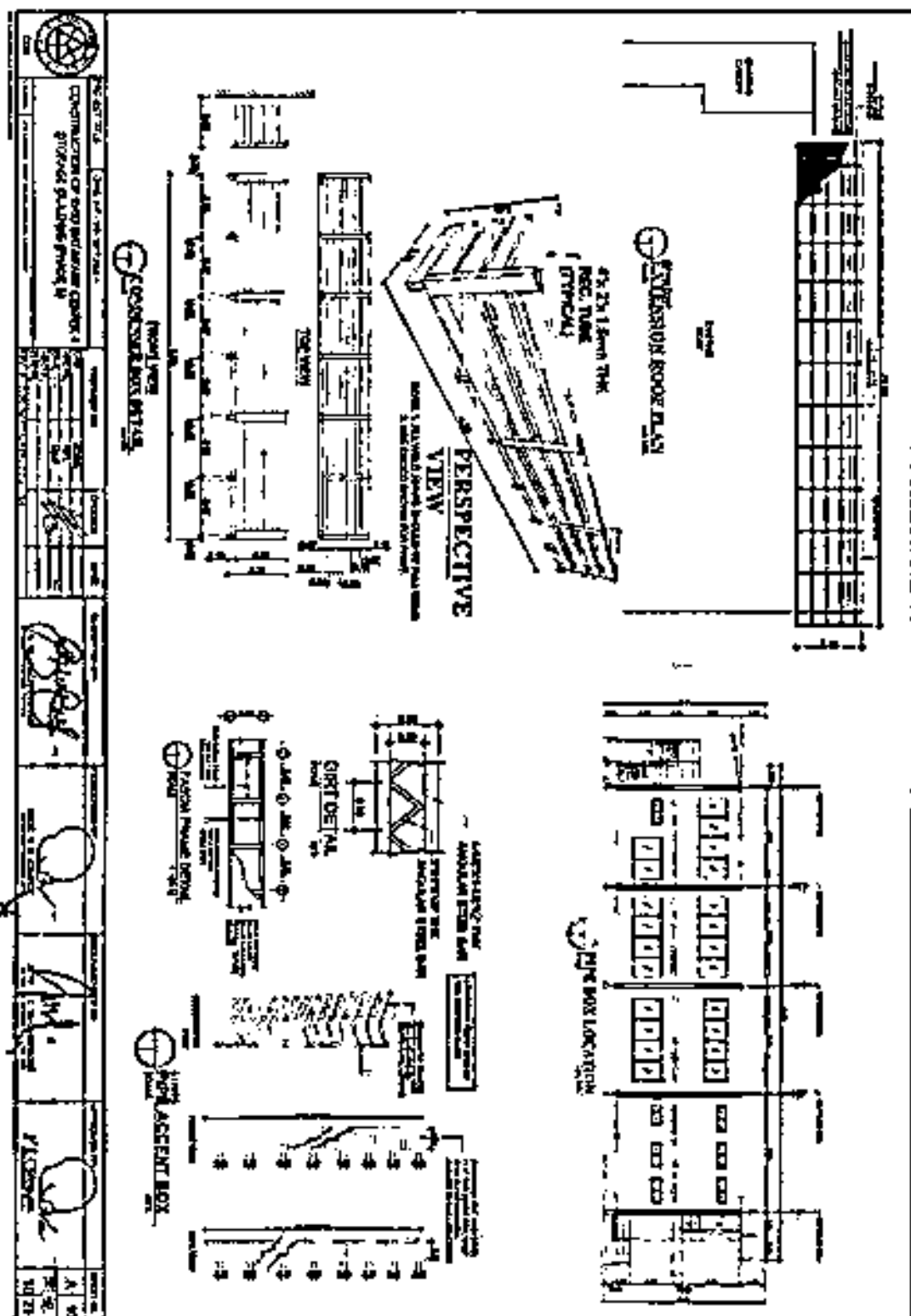
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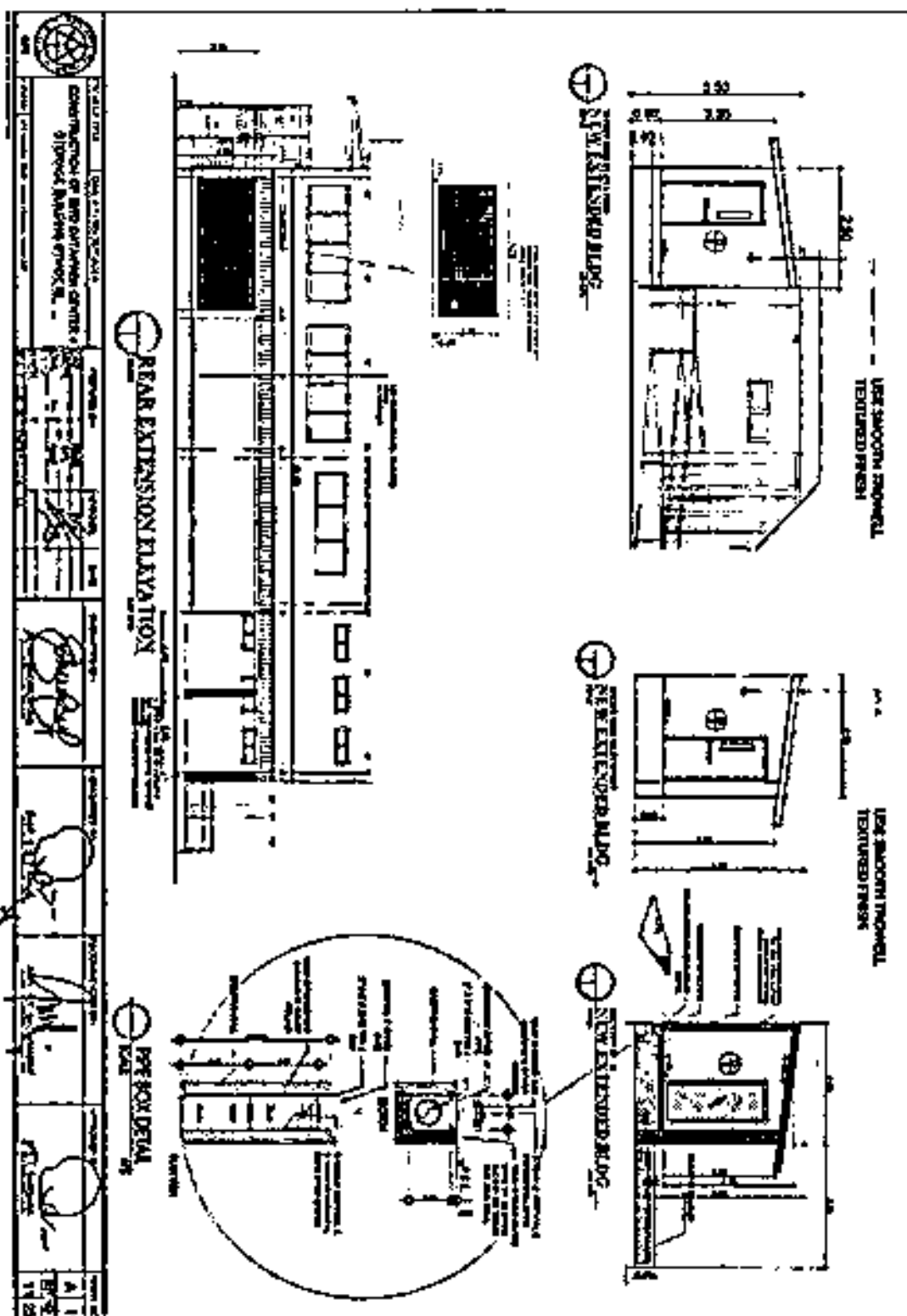
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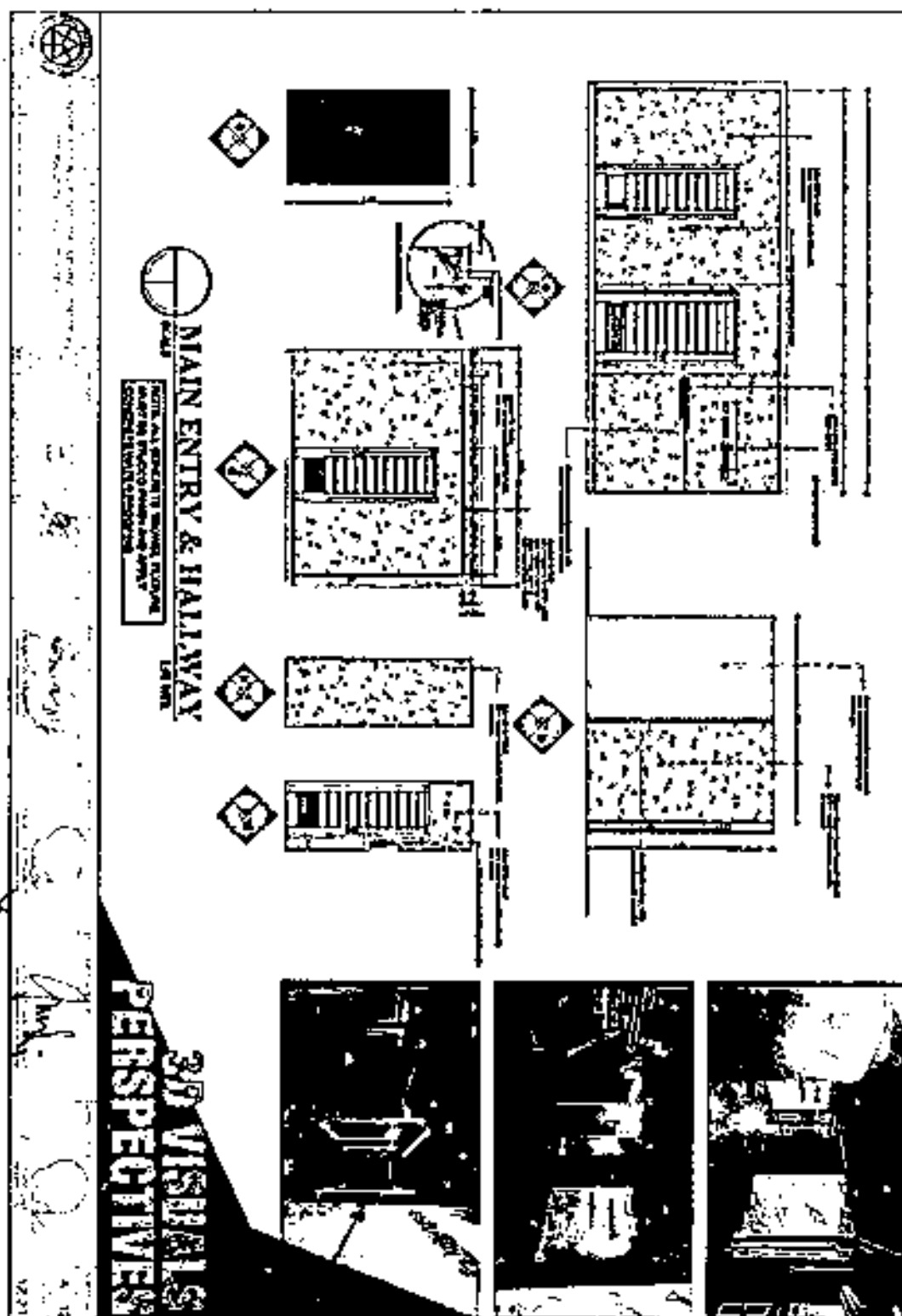
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CENTER & STORAGE BUILDING (PHASE II)

PR. NO. MG-USD25-002/REF. NO. INFRA2025-USD-039







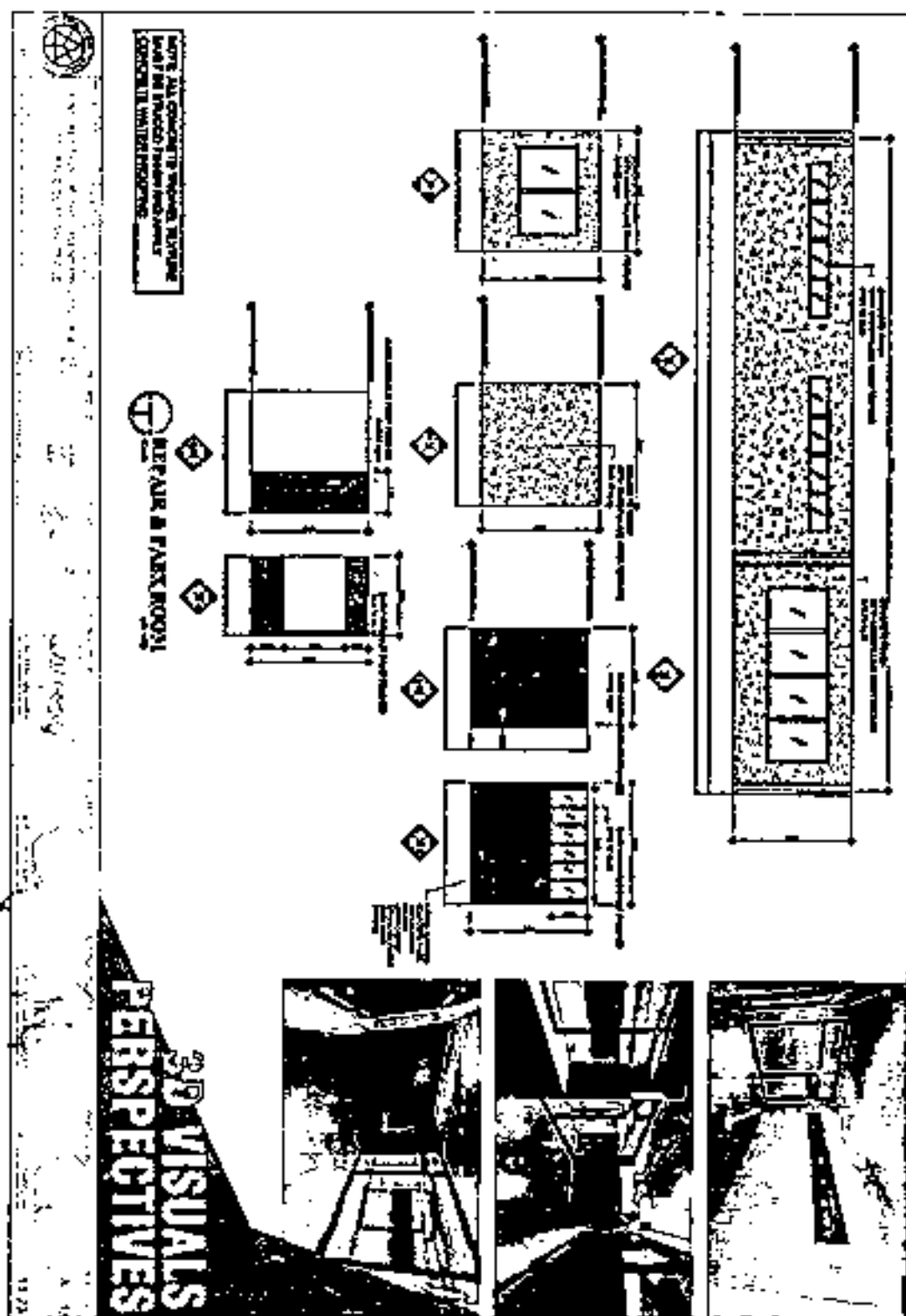


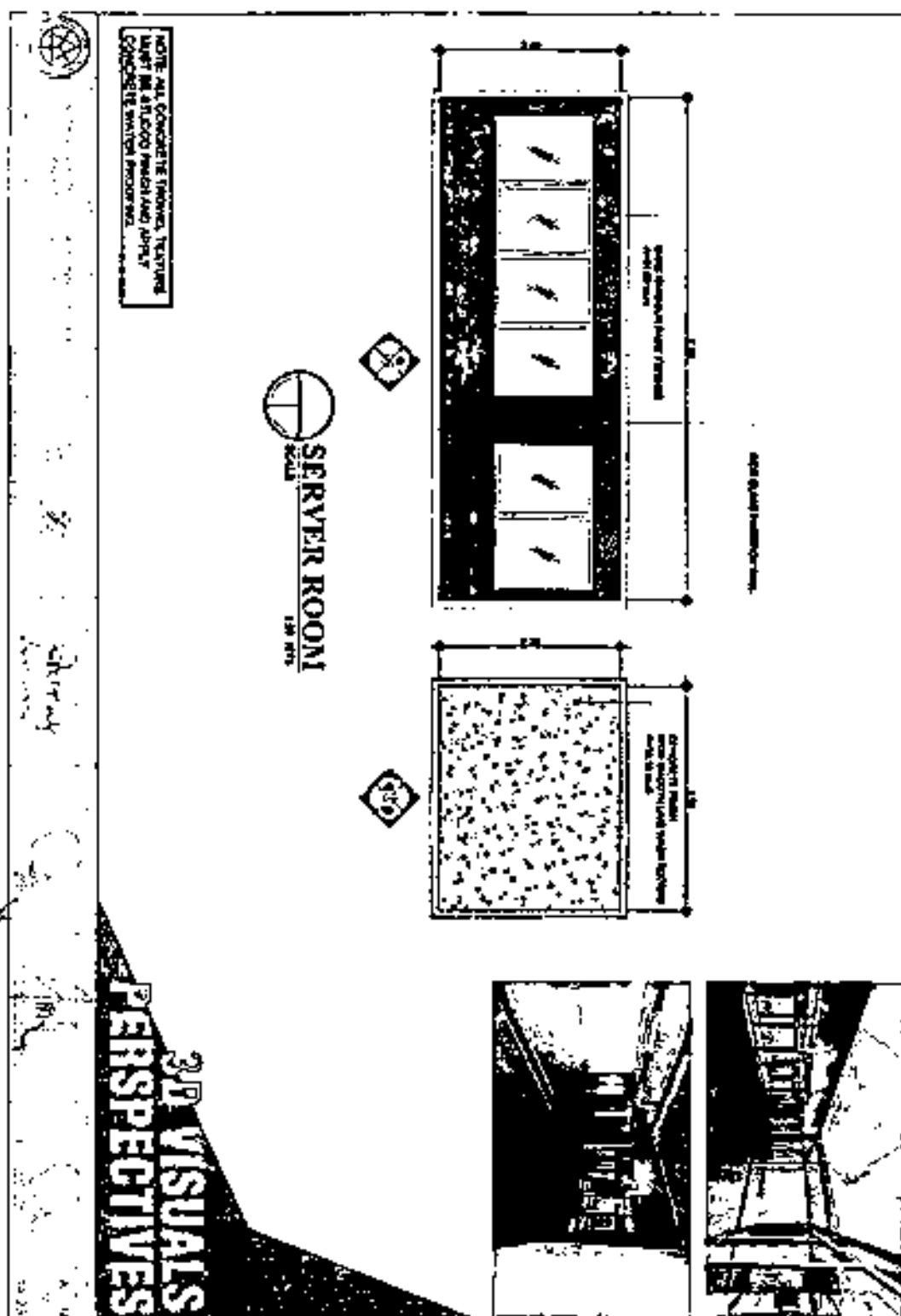
BID DOCUMENTS

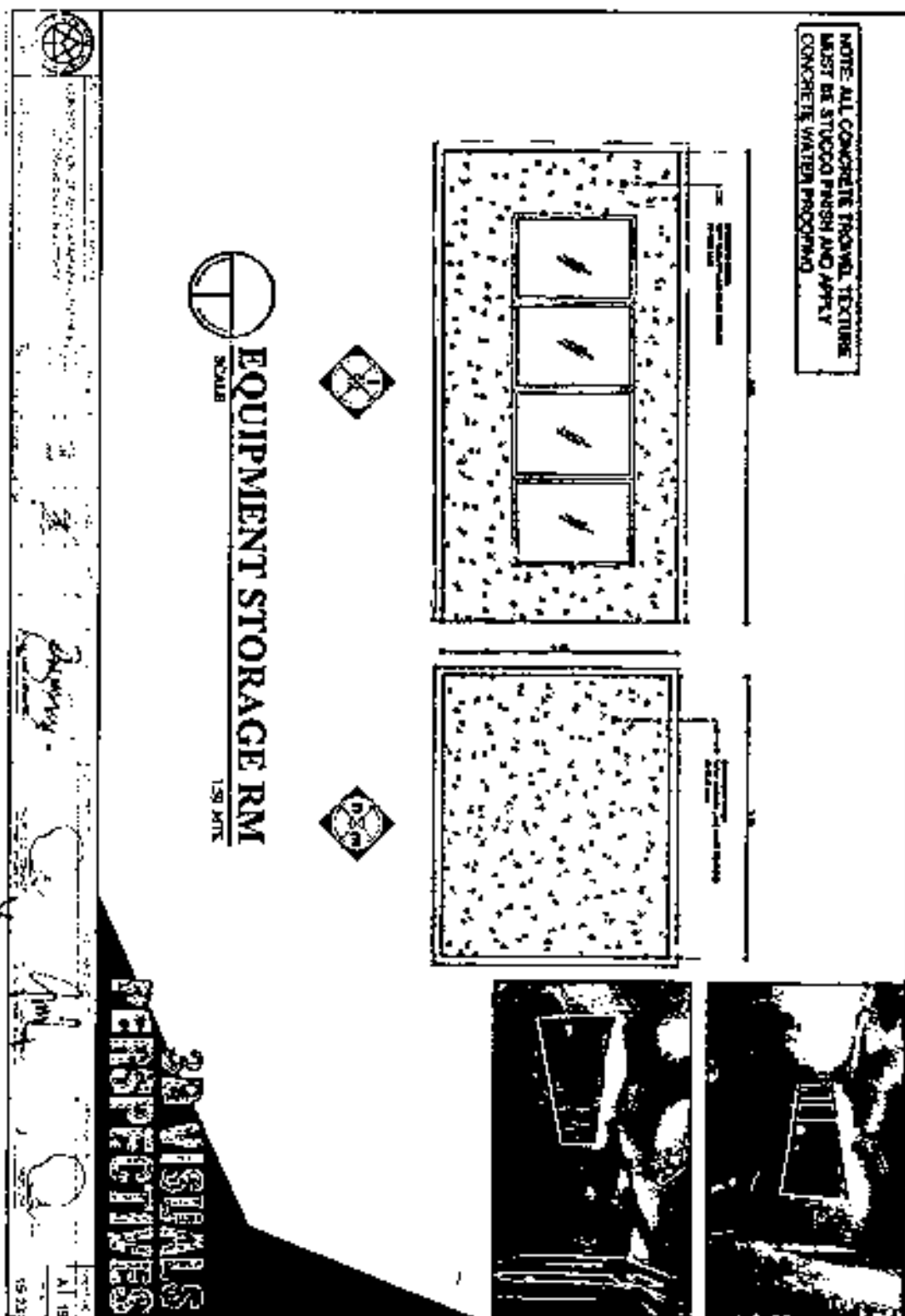
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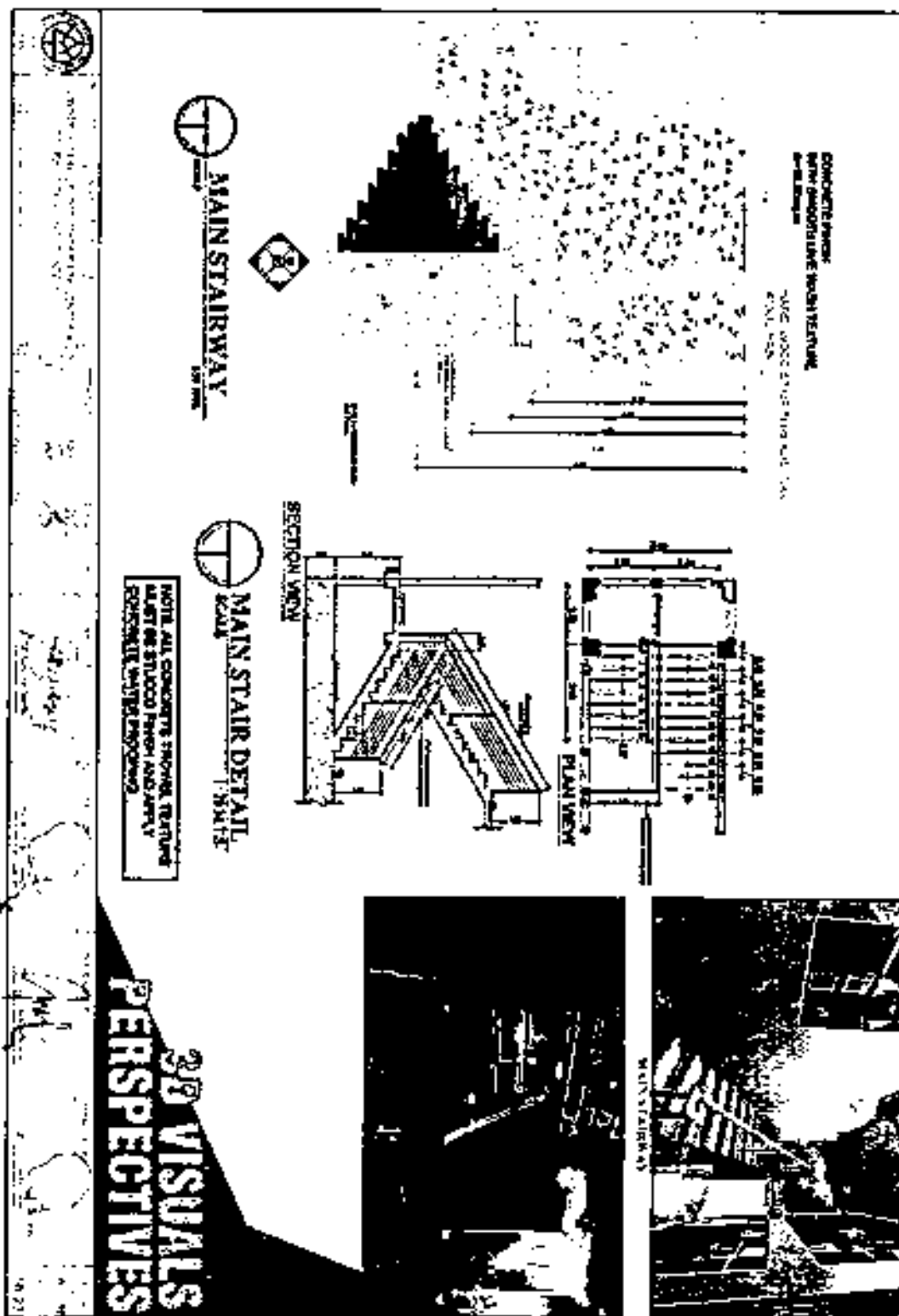
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CENTER & STORAGE BUILDING (PHASE II)

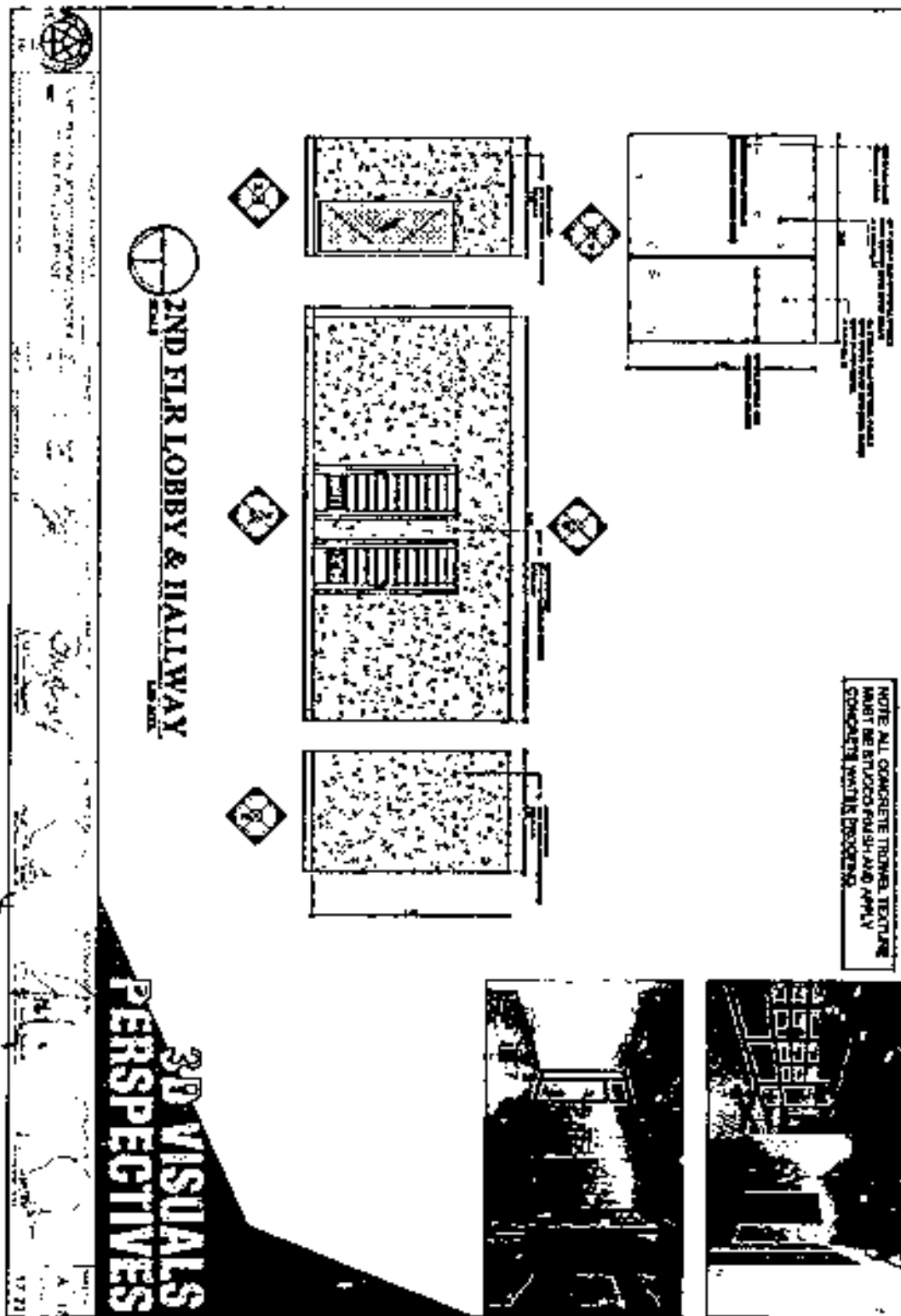
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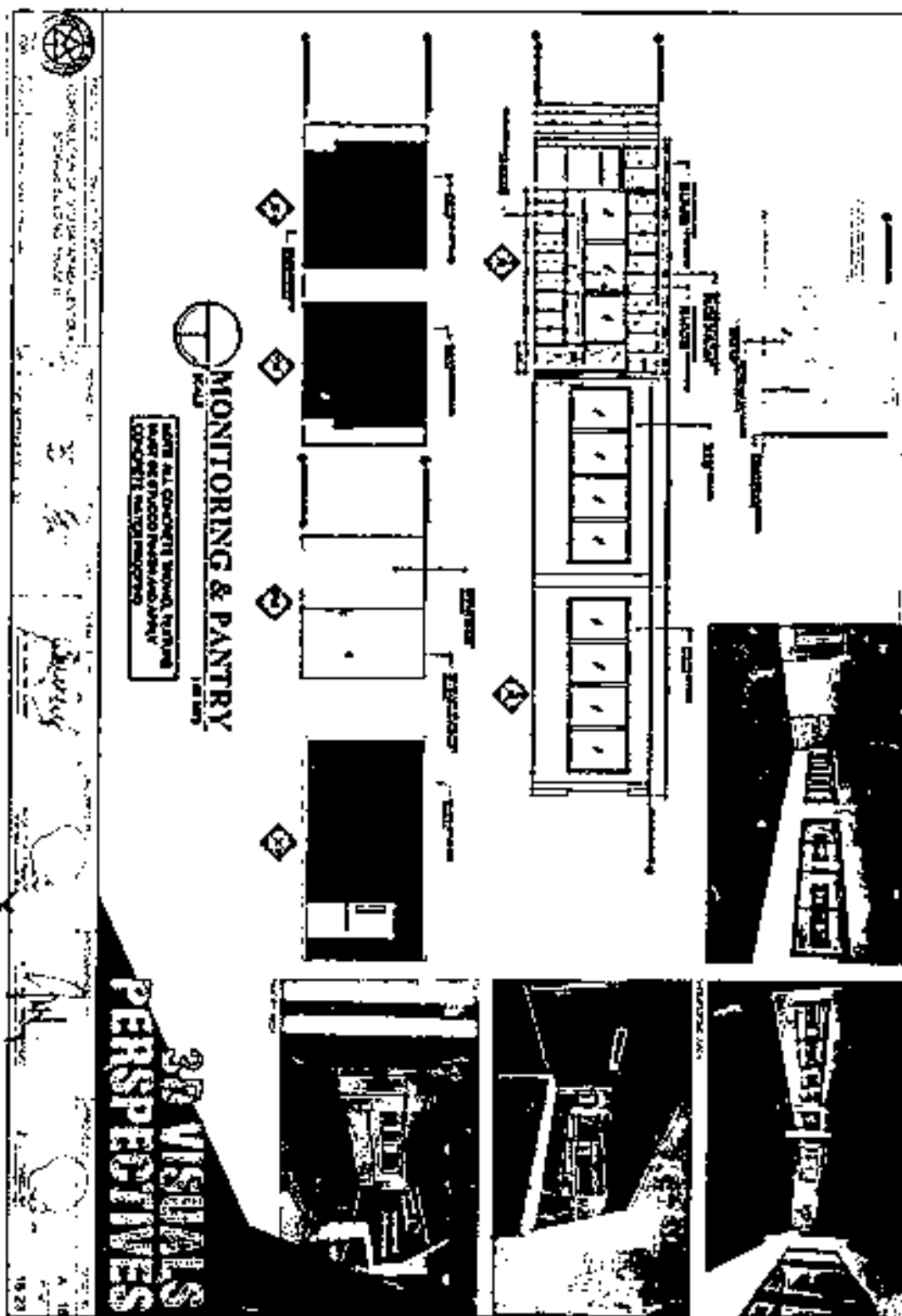


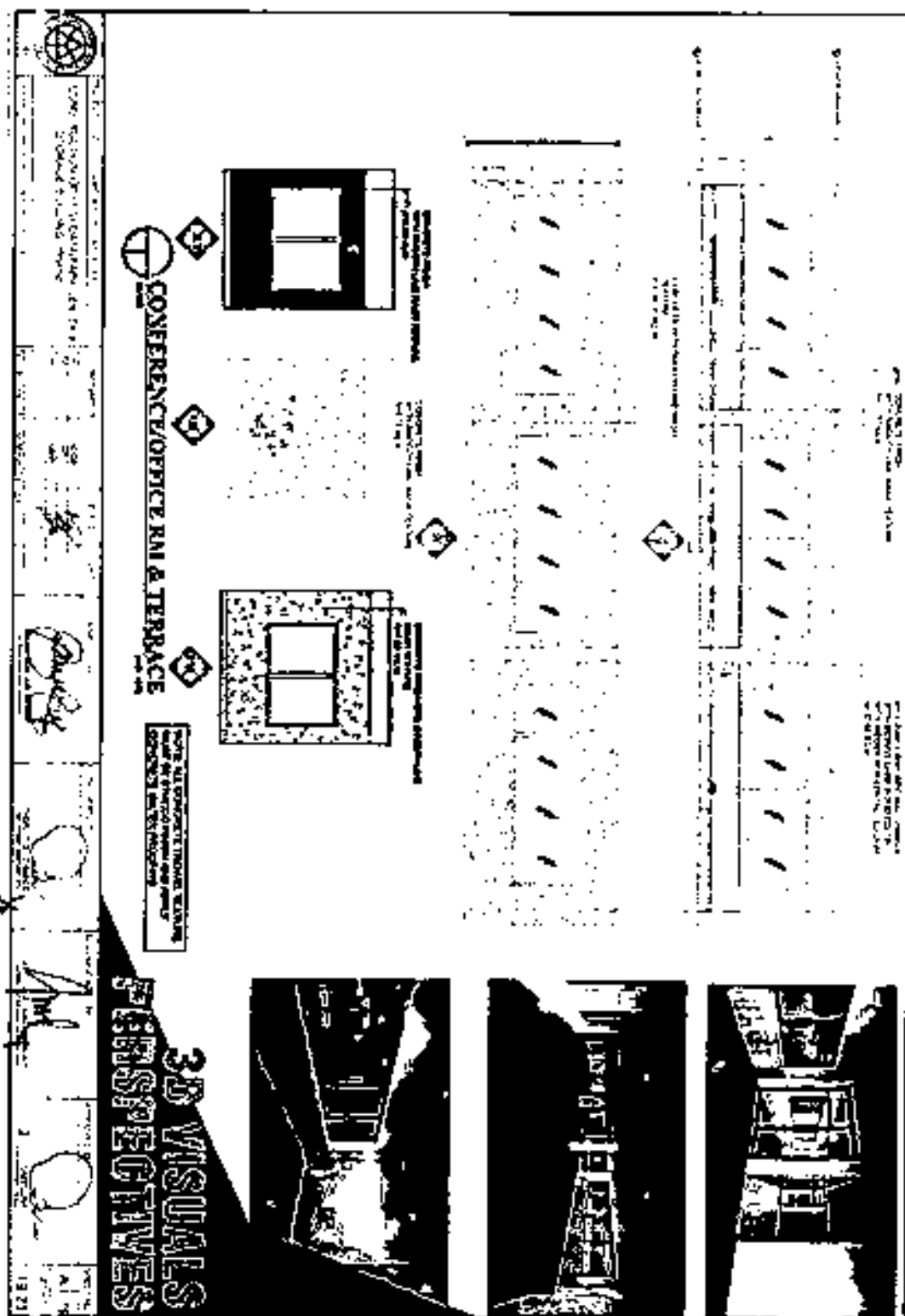


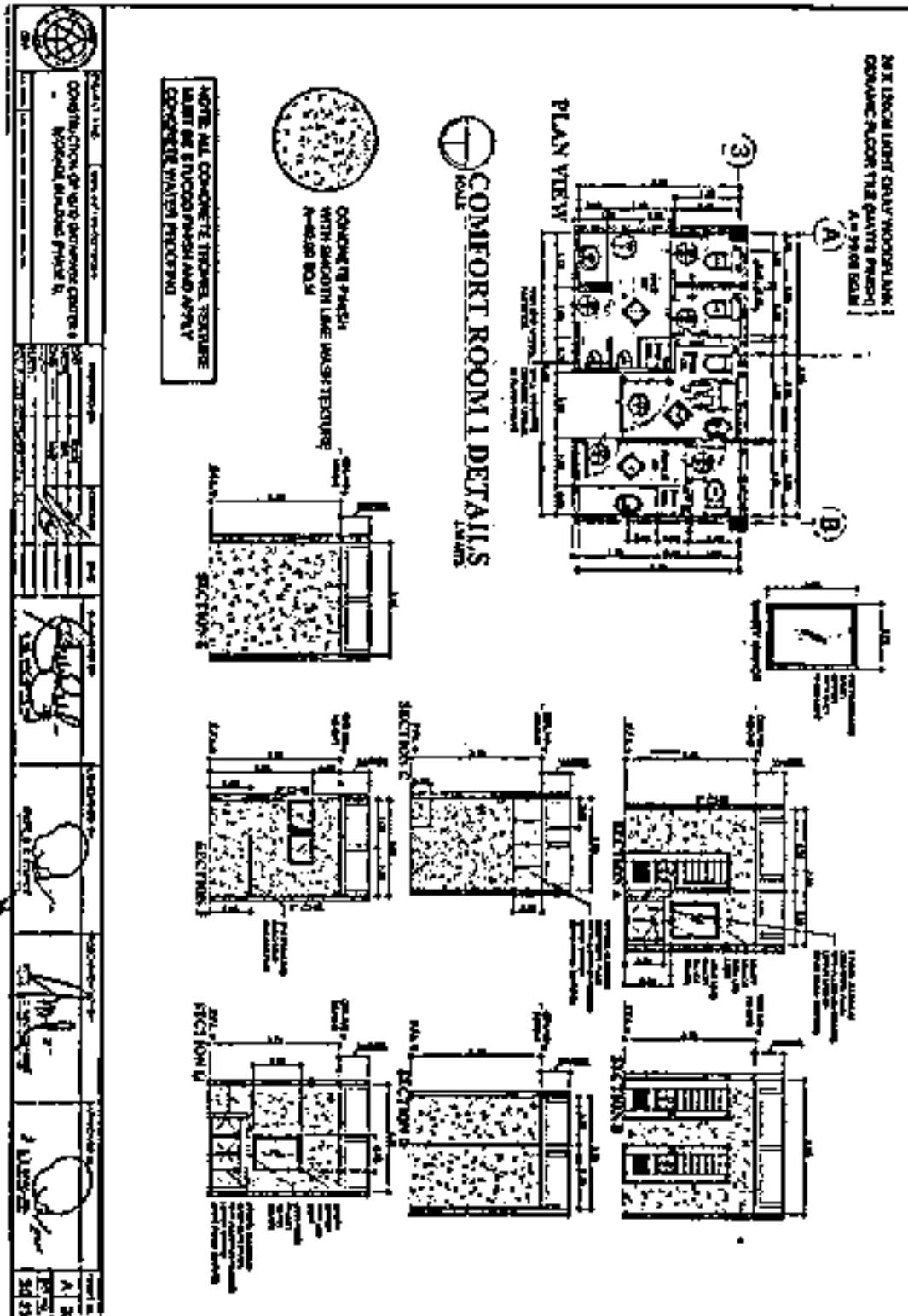


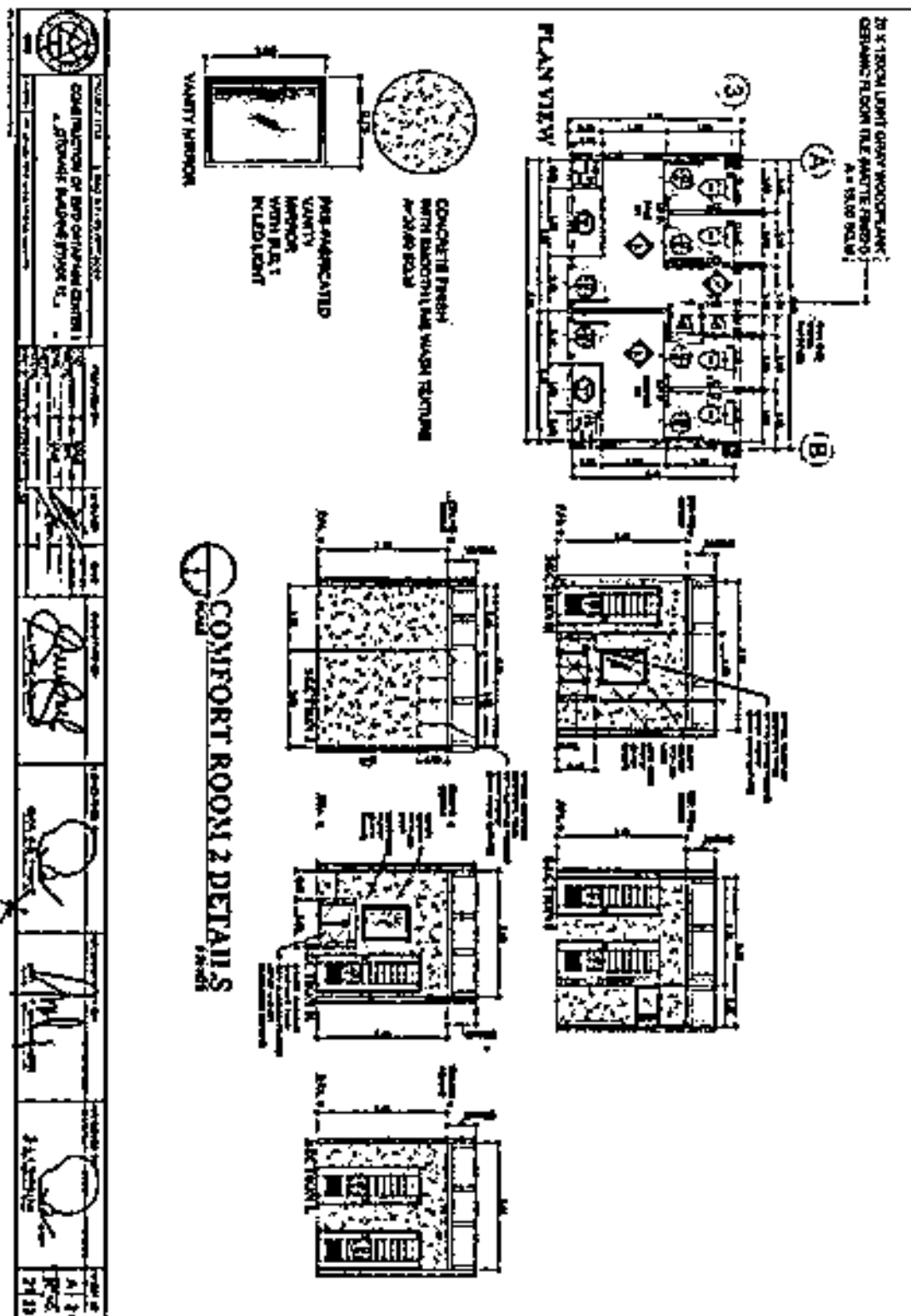


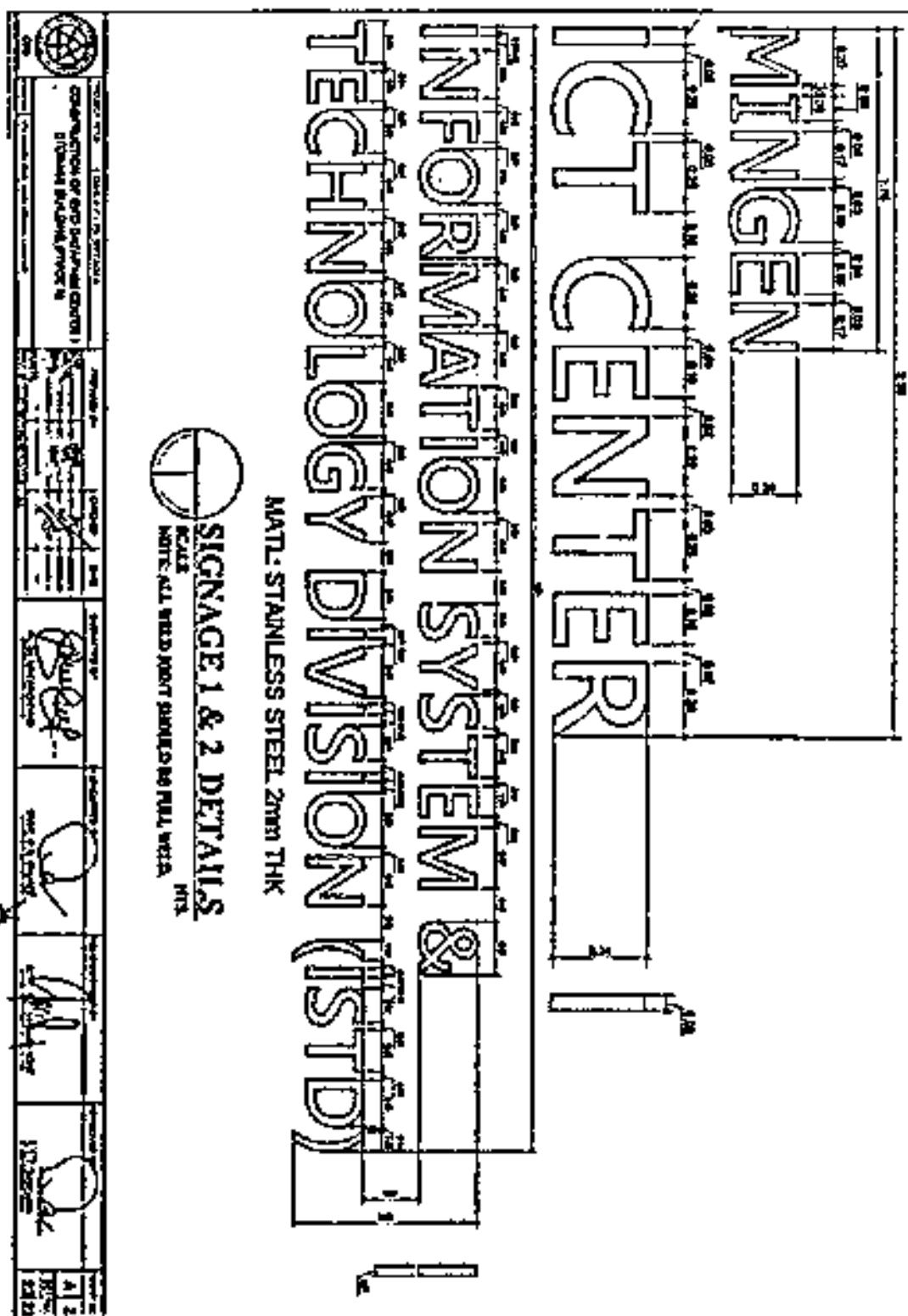












Section VIII- Bill Of Quantities

SECTION VIII - BIDDING
FORMS

(Name of Project) :

CONSTRUCTION OF ISTD
DATA/PABX CENTER &
STORAGE BUILDING (PHASE II)

(PR #) :

BILL OF QUANTITIES

Item No.	Description of Work or Materials	Estimated Quantity	Unit	Unit Price in Pesos (Words and Figures)	Total Amount
1	CONSTRUCTION SAFETY AND HEALTH PROGRAM	1.00	LOT		
2	SITE PREPARATION (Removal of Obstruction, Grading Fill & Disposal)	39.50	SQ.M.		
3	EARTHWORKS				
	A. Excavation	14.00	CUM.		

) PHP

) PHP

) HP

BID DOCUMENTS

NAME OF PROJECT: CONSTRUCTION OF ISTD DATA/PABX
CENTER & STORAGE BUILDING (PHASE II)
PR NO. MQ-ISO25-002/REF. NO. NFRAC013-ISO-006

SECTION VIII- BILL OF QUANTITIES

B. Structural Backfill

5.00 CU.M.

(PHP)) PHP

C. Gravel Bed

7.00 CU.M.

(PHP)) PHP

4 REINFORCED STRUCTURAL
CONCRETE (At Least 20.7 MPa at 28
days)

A. Structural Concrete

18.45 CU.M.

(PHP)) PHP

B. Steel Reinforcement Bar

1,616.13 KGS.

(PHP)) PHP

5 WALL SYSTEM AND FINISHES

A. CHB Laying

85.72 SQ.M.

(PHP)

) PHP

B. Plain Cement Plaster Wall Finish

148.16 SQ.M.

(PHP)

PHP

6 ELECTRICAL WORKS

1.00 LOT

(PHP)

) PHP

7 CEILING SYSTEM

39.50 SQ.M.

BID DOCUMENTS

NAME OF PROJECT: CONSTRUCTION OF ISTD DATA#ABX

CENTER & STORAGE BUILDING (PHASE II)

PR NO. MQ-HSD25-002/REF. NO. IN/RA/2025-SD-030

SECTION VII- BILL OF QUANTITIES

8	PAINTING WORKS (Interior and Exterior)	3,161.20 SQ.M.	(PHP) PHP
9	TILING WORKS (Including Carpet)	251.82 SQ.M.	(PHP) PHP
10	FENESTRATIONS	1.00 LOT	(PHP) PHP
11	STEEL WORKS (Including Railings and Roofing System)	1.00 LOT	(PHP) PHP
12	WALL ACCENT	37.07 SQ.M.	(PHP) PHP
13	PLUMBING WORKS	1.00 LOT	(PHP) PHP
14	LANDSCAPING	16.22 SQ.M.	(PHP) PHP

Name of Firm

Name and Signature of Authorized Representative

Designation

BID DOCUMENTS

NAME OF PROJECT: CONSTRUCTION OF ISTD DATAPARK
CENTER & STORAGE BUILDING (PHASE II)

SECTION IX- CHECKLIST OF TECHNICAL & FINANCIAL
DOCUMENTS

PR. NO. MG-ISO25-002/REF. NO. INFRA/2024-SD-030

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 less than one year from the scheduled date of bid opening, submit Certificate of Completion;
- For project completed at least one year from the scheduled date of bid opening, 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

SECTION IX- CHECKLIST OF TECHNICAL &
FINANCIAL DOCUMENTS

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;
- ☒ 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-06 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-07a – for Sole Proprietorship;
or
NPCMGNSF-INFR-07b – 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-08.

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-09;
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.

SECTION IX- CHECKLIST OF TECHNICAL &
FINANCIAL DOCUMENTS**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-10; 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-11a, including NPC-MinGen Standard Form No. NPCMGNSF-INFR-11b Detailed Unit Price Analysis (DUPA) and Summary Sheet indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the Bid using NPC form NPCMGNSF-INFR-12; and
- ☒ (m) Duly signed each and every page Cash Flow by Quarter or Month, as applicable

**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-06 - List of Equipment, Owned or Leased and/or under Purchase Agreement, Pledged to the Proposed Project**
- NPCMGNSF-INFR-07a - Omnibus Sworn Statement (Sole Proprietorship)**
- NPCMGNSF-INFR-07b - Omnibus Sworn Statement (Partnership/ Cooperative/Corporation//Joint Venture)**
- NPCMGNSF-INFR-08 - Computation of Net Financial Contracting Capacity (NFCC)**
- NPCMGNSF-INFR-09 - Joint Venture Agreement**
- NPCMGNSF-INFR-10 - Bid Form**
- NPCMGNSF-INFR-11a - Detailed Cost Estimate Form**
- NPCMGNSF-INFR-11b - Detailed Unit Price Analysis (DUPA)**
- NPCMGNSF-INFR-12 - Summary Sheets of Materials Prices, Labor Rates and Equipment Rental Rates**

NAME OF PROJECT: CONSTRUCTION OF ISTD DATABASE

CENTER & STORAGE BUILDING (PHASE II)
PR NO. MGS023-002/REF. NO. INTRA-2013-PSD-038

Number : NPCMGNISF-INFRA-01

List of All Ongoing Government and Private Construction Contracts Including Contract Awarded But Not Yet Started

Business Name _____
Business Address _____

[illegible]

The bidder shall declare in this form all his on-going government and private contracts including contracts where the bidder (or his partner in a joint venture or agreement other than his current joint venture) has a partner. Non declaration will be a ground for disqualification of bid.

Note: This statement shall be supported with Contract and/or Notice of Award (to be presented by the winning bidder during postqualification).

Submitted by _____

 (Print & Sign)

Designation	Date

BID DOCUMENTS

NAME OF PROJECT: CONSTRUCTION OF ISFD DATA/PABX

CENTER & STORAGE BUILDING (PHASE II)

PR NO. MAG-ISO23-002/REF, NO. INFRAN3033-ISO-000

SECTION IX- CHECKLIST OF TECHNICAL &
FINANCIAL DOCUMENTS

Standard Form Number : NPC/MGN5F-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	Owner's Name a. Address b. 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 with an amount equivalent to at least fifty percent (50%) of the ABC. This Statement shall be supported with:

1. Contract and/or 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) issued by the project owner other than the contractor, or a final rating of at least Satisfactory in the Contractor's Performance Evaluation System (CPES).
In case of the contracts with 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 Obligor, 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 than the difference between the amount of the said Principal's Bid and the amount of the Bid that is accepted by the Employer.

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 only during post-qualification.*

BID DOCUMENTS

NAME OF PROJECT: CONSTRUCTION OF ISTO DATA/PABX

CENTER & STORAGE BUILDING (PHASE II)

PR NO. MQ-150215-002/REF. NO. NTRAD3013-15D-030

SECTION D-C CHECKLIST OF TECHNICAL &
FINANCIAL DOCUMENTS

Standard Form Number : NPCMGNSE-INF-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 (No. of Years)					
6. Previous Employment					
7. Education					
8. PRC License/NC II/COSH/Other required certificate					

Required documents to be presented during Post-qualification:

1. Certificate of Employment and valid PRC License of the (professional) personnel
2. Certificate of Employment and Certificate of Training with accreditation from DOLE of the Construction Safety and Health Officer
3. Diploma and/or Service Record/Certificate of Employment of previous and/or current employer of Foreman, Welder, Painter or Electrician, whichever is applicable
4. TESDA Certificate (NC II) of Welder, Painter or Electrician, whichever is applicable. Valid PRC License for Registered Master Plumber and Registered Master Electrician.

Submitted by: _____

(Printed name & Signature)

Designation: _____

Date: _____

933334

BID DOCUMENTS

SECTION IX - CHECKLIST OF TECHNICAL &
FINANCIAL DOCUMENTS

NAME OF PROJECT: CONSTRUCTION OF ISTD DATA/ABX
CENTER & STORAGE BUILDING (PHASE II)
PR NO. LG-ASD25-002/REF. NO. E57RA2025-ASD-034

Standard Form Number: NPCMGNSE-INFR-06

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
A. Owned							
i.							
ii.							
iii.							
iv.							
B. Leased							
i.							
ii.							
iii.							
iv.							
C. Under Purchased Agreements							
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 doc., 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.

Standard Form No: NPCMGNSF-INF-07a

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

SECTION IX- CHECKLIST OF TECHNICAL &
FINANCIAL DOCUMENTS

8. [Name of Bidder] is aware of and has undertaken the responsibilities as a Bidder in compliance with the Philippine Bidding Documents, which includes:
- Carefully examining all of the Bidding Documents;
 - Acknowledging all conditions, local or otherwise, affecting the Implementation of the Contract;
 - Making an estimate of the facilities available and needed for the contract to be bid, if any; and
 - 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]
[Formal shall be based on the latest Rules on Notarial Practice]

Standard Form No: NPCMGNSF-INFR-07b

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;

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-08

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-09

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	PHP
2	PHP

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.

BID DOCUMENTS

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

NAME OF PROJECT: CONSTRUCTION OF ISTD DATA/PABX
CENTER & STORAGE BUILDING (PHASE II)
PR NO. MG4SD25-002/REF. NO. INFRA2025-USD-030

Name & Signature of Authorized
Representative

Official Designation

Name of Firm

Name & Signature of
Authorized Representative

Official Designation

Name of Firm

Witnesses

*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-09

Page 2 of 2

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 _____

PTR No. _____

Issued at: _____

Issued on: _____

TIN No. _____

Doc. No. _____

Page _____

Book _____

Series _____

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-10

Bid Form for the Procurement of Infrastructure ProjectsBID FOR Date : _____
Project Identification No. : _____

To: **The Vice President**
National Power Corporation
Mindanao Generation
Maria 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 guidelines¹ for this purpose;

¹ currently based on GPPB Resolution No. 09-2020

BID DOCUMENTS

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

NAME OF PROJECT: CONSTRUCTION OF ISD DATA/PABX
CENTER & STORAGE BUILDING (PHASE II)
PR NO: MG-USD25-002/REF. NO. INFRA2025-USD-030

Standard Form No: NPCMGNSF-INFR-10

Page 2 of 2

- h. We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Documents;
- i. We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed; and
- j. We understand that you are not bound to accept the Lowest Calculated Bid or any other Bid that you may receive.
- k. We likewise certify/confirm that the undersigned, is the duly authorized representative of the bidder, and granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for the [Name of Project] of the 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: _____

NAME OF PROJECT: CONSTRUCTION OF 157D DATA/FAX
CENTER & STORAGE BUILDING (PHASE II)
PR NO. MG-SD25-002/REF. NO. INT/KA2013-1SD-Q30

NAME OF PROJECT: CONSTRUCTION OF 157D DATA/FABX
CENTER & STORAGE BUILDING (PHASE II)
PR NO. MG-SD25-002/REF. NO. INT/KA2023-15D-Q30

Standard Form Number : NDCeGNSF-JMF8-J18

DETAILED COST ESTIMATE FORM

Name of bidder:

[illegible]

Note: Buyers shall support this form with Detailed Unit Price Analysis (DUPA) using NACMAGNSF INCR-170

Name, Signature of Authorized Representative

Designation

SECTION IX- CHECKLIST OF TECHNICAL & FINANCIAL DOCUMENTS

NAME OF PROJECT: CONSTRUCTION OF ISTD DATA/PBX
CENTER & STORAGE BUILDING (PHASE II)
PR NO. MG-4SD23-002/REF. NO. INFRA2025-15D-030

Standard Form Number: AFCELAGRSC-ENR-71b

PAY ITEM	PAY ITEM DESCRIPTION	QTY	UNIT			
ITEM	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL COST	REMARKS
1	MATERIALS					
1						
2						
3						
4						
5						
				TOTAL MATERIAL COST		
6	LABOR					
1						
2						
3						
4						
				TOTAL LABOR COST		
7	EQUIPMENT RENTAL					
1						
2						
3						
				TOTAL EQUIPMENT COST		
				TOTAL ESTIMATED DIRECT COST, EDC		
	OVERHEAD, CONTINGENCY & MISCELLANEOUS			%		
	VALUE ADDED TAX			12%		
	(PROFIT)			%		
				TOTAL INDIRECT COST, IDC		
				TOTAL COST OF PAY ITEM		
				UNIT COST OF PAY ITEM		

● 2014 年 12 月 31 日

Standard Form No: NPCMGNSF-INFR-12

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

Name of Bidder: _____

I. Unit Prices of Materials

Materials Description	Unit	Unit Price
-----------------------	------	------------

II. Manpower Hourly Rates

Designation	Rate/Hr.
-------------	----------

III. Equipment Hourly Rental Rates

Equipment Description	Rental Rate/Hr.
-----------------------	-----------------

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].

BID DOCUMENTS

SECTION IX- CHECKLIST OF TECHNICAL &
FINANCIAL DOCUMENTS

NAME OF PROJECT: CONSTRUCTION OF 1STD DATA/PABX
CENTER & STORAGE BUILDING (PHASE II)
PR NO. MG-1SD25-002/REF. NO. INFRA2025-4SD-430

**[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]

Republic of the Philippines



Government Procurement Policy Board