

REPUBLIC OF THE PHILIPPINES
NATIONAL POWER CORPORATION
(Pambansang Korporasyon sa Elektrisidad)

BIDDOCUMENTS

NAME OF PROJECT : REPLACEMENT OF FIRE DETECTION AND
ALARM SYSTEM ; AND INSTALLATION OF
FIRE SUPPRESSION, SPRINKLER AND
PAGING SYSTEMS FOR ILIJAN NATURAL
GAS RECEIVING FACILITY (INGRF)

PR NO. : HO-GRF21-001 (PB2)

Contents:

- | | |
|---------------------|--|
| Section I | - Invitation to Bid |
| Section II | - Instructions to Bidders |
| Section III | - Bid Data Sheet |
| Section IV | - General Conditions of Contract |
| Section V | - Special Conditions of Contract |
| Section VI | - Part I: Technical Specifications
Part II: Technical Data Sheets |
| Section VII | - Schedule of Requirements
(Bid Price Schedule) |
| Section VIII | - Bidding Forms |
| Section IX | - Bid/Reference Drawings |

Design and Development Department



SECTION I

INVITATION TO BID



National Power Corporation

INVITATION TO BID

PUBLIC BIDDING – BCS 2022-0233

1. The NATIONAL POWER CORPORATION (NPC), through its approved Corporate Budget of CY 2022 intends to apply the sum of **(Please see schedule below)** being the Approved Budget for the Contract (ABC) to payments under the contract. Bids received in excess of the ABC shall be automatically rejected at Bid opening.

PR Nos./PB Ref No. & Description	Similar Contracts	Pre-bid Conference	Bid Submission / Opening	ABC/ Amt. of Bid Docs
HO-PMD22-004 / PB220407-JD (PB2) Supply, Delivery, Erection/Installation, Testing and Commissioning of 7.97/13.8 kV Distribution Line System (Extension) at San Pascual DPP to Nazareno and San Pascual to Sitio Bucal, San Pascual, Burias Is, Masbate under the Barangay Line Extension Program (BLEP) • PCAB License: License Category of at least "Category B – Electrical Works" and registration classification of at least "Medium A – Electrical Works"	Supply of transmission line materials (Steel/Concrete, Poles/Steel Towers, line conductors, insulators, etc.) as well as the erection and installation of Distribution / Transmission Line with nominal voltage of at least 7.97KV	04 May 2022 9:30 A.M	16 May 2022 9:30 A.M	₱ 47,130,883.00 / ₱ 25,000.00
HO-GRF21-001 / PB220408-JD (PB2) Replacement of Fire Detection and Alarm System, and Installation of Fire Suppression, Sprinkler and Paging Systems for Ilijan Natural Gas Receiving Facility (INGRF)	Design, supply, installation, test and commissioning of fire suppression fire protection system including fire detection and alarm	04 May 2022 9:30 A.M	16 May 2022 9:30 A.M	₱ 5,616,000.00 / ₱ 10,000.00

Venue: Kañao Function Room, NPC Bldg. Diliman, Quezon City

2. The NPC now invites bids for Items listed above. Delivery of the Goods is required (**see table below**) specified in the Technical Specifications. Bidders should have completed, within (**see table below**) from the date of submission and receipt of bids, a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II. (Instruction to Bidders).

PR No/s. / PB Ref No/s.	Delivery Period / Contract Duration	Relevant Period of SLCC reckoned from the date of submission & receipt of bids
HO-PMD22-004	Two Hundred (200) Calendar Days	-
HO-GRF21-001	Ninety (90) Calendar Days	Ten (10) Years

3. Bidding will be conducted through open competitive bidding procedures using a non-discretionary "pass/fail" criterion as specified in the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.

Bidding is restricted to Filipino citizens/sole proprietorships, partnerships, or organizations with at least sixty percent (60%) interest or outstanding capital stock belonging to citizens of the Philippines, and to citizens or organizations of a country the laws or regulations of which grant similar rights or privileges to Filipino citizens, pursuant to RA 5183.

4. Prospective Bidders may obtain further information from National Power Corporation, Bids and Contracts Services Division and inspect the Bidding Documents at the address given below during office hours (8:00AM to 5:00PM), Monday to Friday.
5. A complete set of Bidding Documents may be acquired by interested Bidders from the given address and website(s) and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB. Bidding fee may be refunded in accordance with the guidelines based on the grounds provided under Section 41 of R.A. 9184 and its Revised IRR.
6. The National Power Corporation will hold Pre-Bid Conference (see table above) and/or through video conferencing or webcasting which shall be open to prospective bidders.

Only registered bidder/s shall be allowed to participate for the conduct of virtual pre-bid conference. **Unregistered bidders** may attend the Pre-Bid Conference at the Kañao Room, NPC subject to the following:

- Only a maximum of two (2) representatives from each bidder / company shall be allowed to participate during the virtual pre-bid conference.
 - A "No Face mask / No Full Face Shield / No Entry" policy shall be implemented in the NPC premises. Face mask shall be 3-ply surgical or KN95 mask type.
 - The requirements herein stated including the medium of submission shall be subject to GPPB Resolution No. 09-2020 dated 07 May 2020
 - The Guidelines on the Implementation of Early Procurement Activities (EPA) shall be subject to GPPB Circular No. 06-2019 dated 17 July 2019
7. Bids must be duly received by the BAC Secretariat through (i) manual submission at the office address indicated below; (ii) online or electronic submission before the specified time stated in the table above for opening of bids. Late bids shall not be accepted.
8. All Bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in ITB Clause 14.
9. Bid opening shall be on Kañao Function Room, NPC Head Office, Diliman, Quezon City and/or via online platform to be announced by NPC. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.
10. The National Power Corporation 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 IRR of R.A. No. 9184, without thereby incurring any liability to the affected bidder or bidders.

11. For further information, please refer to:

**Bids and Contracts Services Division,
Logistics Department**

BIR Road cor. Quezon Avenue

Diliman, Quezon City

Tel Nos.: 8924-5211 and 8921-3541 local 5611

Fax No.: 8922-1622

Email: bcsd@napocor.gov.ph / bcsd_napocor@yahoo.com

12. You may visit the following websites:

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



ATTY. ROGEL T. TEVES

Vice President, Power Engineering Services and
Chairman, Bids and Awards Committee

SECTION II

INSTRUCTIONS TO

BIDDERS

SECTION II – INSTRUCTIONS TO BIDDERS**TABLE OF CONTENTS**

<u>CLAUSE NO.</u>	<u>TITLE</u>	<u>PAGE NO.</u>
1.	SCOPE OF BID	1
2.	FUNDING INFORMATION.....	1
3.	BIDDING REQUIREMENTS	1
4.	CORRUPT, FRAUDULENT, COLLUSIVE, AND COERCIVE PRACTICES.....	1
5.	ELIGIBLE BIDDERS	2
6.	ORIGIN OF GOODS	2
7.	SUBCONTRACTS.....	2
8.	PRE-BID CONFERENCE	3
9.	CLARIFICATION AND AMENDMENT OF BIDDING DOCUMENTS	3
10.	DOCUMENTS COMPRISING THE BID: ELIGIBILITY AND TECHNICAL COMPONENTS	3
11.	DOCUMENTS COMPRISING THE BID: FINANCIAL COMPONENT	3
12.	BID PRICES	4
13.	BID AND PAYMENT CURRENCIES	4
14.	BID SECURITY.....	4
15.	SEALING AND MARKING OF BIDS	5
16.	DEADLINE FOR SUBMISSION OF BIDS	5
17.	OPENING AND PRELIMINARY EXAMINATION OF BIDS	5
18.	DOMESTIC PREFERENCE.....	5
19.	DETAILED EVALUATION AND COMPARISON OF BIDS.....	5
20.	POST-QUALIFICATION	6
21.	SIGNING OF THE CONTRACT	6

SECTION II – INSTRUCTIONS TO BIDDERS

1. Scope of Bid

The National Power Corporation (NPC or NAPOCOR) wishes to receive Bids for the **REPLACEMENT OF FIRE DETECTION AND ALARM SYSTEM ; AND INSTALLATION OF FIRE SUPPRESSION, SPRINKLER AND PAGING SYSTEMS FOR ILIJAN NATURAL GAS RECEIVING FACILITY**, with identification number **HO-GRF21-001**.

The Procurement Project (referred to herein as "Project") is composed of one (1) lot and will be awarded to one (1) Bidder in one complete contract, the details of which are described in Section VI (Technical Specifications).

2. Funding Information

- 2.1. The GOP through the source of funding as indicated below for CY 2022 in the amount of specified in the Invitation to Bid.
- 2.2. The source of funding is the Corporate Operating Budget of the National Power Corporation.

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 Manuals 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 IB by the BAC through the issuance of a supplemental or bid bulletin.

The Bidder, by the act of submitting its Bid, shall be deemed to have verified and accepted the general requirements of this Project, including other factors that may affect the cost, duration and execution or implementation of the contract, project, or work and examine all instructions, forms, terms, and project requirements in the Bidding Documents.

4. Corrupt, Fraudulent, Collusive, and Coercive Practices

The Procuring Entity, as well as the Bidders and Suppliers, 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. Foreign ownership exceeding those allowed under the rules may participate when citizens, corporations, or associations of a country, included in the list issued by the GPPB, the laws or regulations of which grant reciprocal rights or privileges to citizens, corporations, or associations of the Philippines.

The foreign bidder claiming eligibility by reason of their country's extension of reciprocal rights to Filipinos shall submit a certification from the relevant government office of their country stating that Filipinos are allowed to participate in their government procurement activities for the same item/product. The said certification shall be validated during the post-qualification of bidders.

- 5.3. Pursuant to Section 23.4.1.3 of the 2016 revised IRR of RA No.9184, the Bidder shall have an SLCC that is at least one (1) contract similar to the Project the value of which, adjusted to current prices using the PSA's CPI, must be at least equivalent to at least fifty percent (50%) of the ABC.
- 5.4. The Bidders shall comply with the eligibility criteria under Section 23.4.1 of the 2016 IRR of RA No. 9184.

6. Origin of 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, subject to Domestic Preference requirements under **ITB** Clause 18.

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 twenty percent (20%) of the Project.

The portions of Project and the maximum percentage allowed to be subcontracted are indicated in the **BDS**, which shall not exceed twenty percent (20%) of the contracted Goods.

- 7.2. The Supplier may identify its subcontractor during the contract implementation stage. Subcontractors identified during the bidding may be changed during the implementation of this Contract. Subcontractors must submit the documentary requirements under Section 23.1 of the 2016 revised IRR of RA No. 9184 and comply with the eligibility criteria specified in **ITB** Clause 5 to the implementing or end-user unit.
- 7.3. Subcontracting of any portion of the Project does not relieve the Supplier of any liability or obligation under the Contract. The Supplier will be responsible for the acts, defaults, and negligence of any subcontractor, its agents, servants, or workmen as fully as if these were the Supplier's own acts, defaults, or negligence, or those of its agents, servants, or workmen.

8. Pre-Bid Conference

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time 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 VIII (NPCSF-GOODS-01 - Checklist of Technical and Financial Documents).
- 10.2. The Bidder's SLCC as indicated in **ITB** Clause 5.3 should have been completed within Ten (10) Years prior to the deadline for the submission and receipt of bids.
- 10.3. 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. Similar to the required authentication above, 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.
- 10.4. The Statement of the bidder's Single Largest Completed Contract (SLCC) (NPCSF-GOODS-03) and List of all Ongoing Government & Private Contracts Including Contracts Awarded but not yet Started (NPCSF-GOODS-02) shall comply with the documentary requirements specified 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 VIII (NPCSF-GOODS-01 - Checklist of Technical and Financial Documents).
- 11.2. If the Bidder claims preference as a Domestic Bidder or Domestic Entity, a certification issued by DTI shall be provided by the Bidder in accordance with Section 43.1.3 of the 2016 revised IRR of RA No. 9184.
- 11.3. Any bid exceeding the ABC indicated in paragraph 1 of the **IB** shall not be accepted.
- 11.4. 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. Bid Prices

12.1. Prices indicated on the Price Schedule shall be entered separately in the following manner:

- a. For Goods offered from within the Procuring Entity's country:
 - i. The price of the Goods quoted EXW (ex-works, ex-factory, ex-warehouse, ex-showroom, or off-the-shelf, as applicable);
 - ii. The cost of all customs duties and sales and other taxes already paid or payable;
 - iii. The cost of transportation, insurance, and other costs incidental to delivery of the Goods to their final destination; and
 - iv. The price of other (incidental) services, if any, listed in the **BDS**.
- b. For Goods offered from abroad:
 - i. Unless otherwise stated in the **BDS**, the price of the Goods shall be quoted delivered duty paid (DDP) with the place of destination in the Philippines as specified in the **BDS**. In quoting the price, the Bidder shall be free to use transportation through carriers registered in any eligible country. Similarly, the Bidder may obtain insurance services from any eligible source country.
 - ii. The price of other (incidental) services, if any, as listed in the **BDS**.

13. Bid and Payment Currencies

13.1. For Goods that the Bidder will supply from outside the Philippines, the bid prices may be quoted in the local currency or tradeable currency accepted by the BSP at the discretion of the Bidder. However, for purposes of bid evaluation, Bids denominated in foreign currencies, shall be converted to Philippine currency based on the exchange rate as published in the BSP reference rate bulletin on the day of the bid opening.

13.2. Payment of the contract price shall be made in Philippine Pesos.

14. Bid Security

14.1. 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**.

14.2. The Bid and bid security shall be valid for **One Hundred Twenty (120) calendar** days from the date of opening of bids. Any Bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

15. 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 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.

16. Deadline for Submission of Bids

16.1. 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.

17. Opening and Preliminary Examination of Bids

17.1. 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.

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

18. Domestic Preference

18.1. The Procuring Entity will grant a margin of preference for the purpose of comparison of Bids in accordance with Section 43.1.2 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 the 2016 revised IRR of RA No. 9184.

19.2. If the Project allows partial bids, bidders may submit a proposal on any of the lots or items, and evaluation will be undertaken on a per lot or item basis, as the case maybe. In this case, the Bid Security as required by ITB Clause 14 shall be submitted for each lot or item separately.

- 19.3. The descriptions of the lots or items shall be indicated in **Section VI (Technical Specifications)**, although the ABCs of these lots or items are indicated in the **BDS** for purposes of the NFCC computation pursuant to Section 23.4.2.6 of the 2016 revised IRR of RA No. 9184. The NFCC must be sufficient for the total of the ABCs for all the lots or items participated in by the prospective Bidder.
- 19.4. The Project shall be awarded to one (1) Bidder in one complete contract.
- 19.5. Except for bidders submitting a committed Line of Credit from a Universal or Commercial Bank in lieu of its NFCC computation, all Bids must include the NFCC computation pursuant to Section 23.4.1.4 of the 2016 revised IRR of RA No. 9184, which must be sufficient for the total of the ABCs for all the lots or items participated in by the prospective Bidder. For bidders submitting the committed Line of Credit, it must be at least equal to ten percent (10%) of the ABCs for all the lots or items participated in by the prospective Bidder.

20. Post-Qualification

- 20.1. 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

- 21.1. 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

SECTION III - BID DATA SHEET

ITB Clause	
5.3	<p>For this purpose, similar contracts shall refer to design, supply, installation, test and commissioning of fire suppression/fire protection system including fire detection and alarm.</p> <p>The Single Largest Completed Contract (SLCC) as declared by the bidder shall be verified and validated to ascertain such completed contract. Hence, bidders must ensure access to sites of such projects/equipment to NPC representatives for verification and validation purposes during post-qualification process.</p> <p>It shall be a ground for disqualification, if verification and validation cannot be conducted for reasons attributable to the Bidder.</p>
7.1	<p>Subcontracting may be allowed on transport, local/non-skilled labor under the supervision of the Bidder. The Bidder shall not be relieved from any liability or obligation that may arise from the performance of the Subcontractor.</p>
10.4	<p>The list of on-going contracts (Form No. NPCSF-GOODS-02) shall be supported by the following documents for each on-going contract to be submitted during Post-Qualification:</p> <ol style="list-style-type: none"> 1. Contract/Purchase Order and/or Notice of Award 2. Certification coming from the project owner/client that the performance is satisfactory as of the bidding date <p>The bidder shall declare in this form all his on-going government and private contracts including contracts where the bidder (either as individual or as a Joint Venture) is a partner in a Joint Venture agreement other than his current joint venture where he is a partner. Non declaration will be a ground for disqualification of bid.</p> <p>The Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid (Form No. NPCSF-GOODS-03) shall be supported by the following documents to be submitted during Bid Opening:</p> <ol style="list-style-type: none"> 1. Contract/Purchase Order 2. Certificate of Acceptance; or Certificate of Completion; or Official Receipt (O.R); or Sales Invoice <p>The prospective bidders shall declare its Joint Venture partner during the purchase of bid/tender documents. Any single bidder/s who already procured/secured the bidding documents but want to avail the Joint Venture Agreement (JVA) shall inform the BAC in writing prior to the bid opening for records and documentation purposes. Failure to do so shall be a ground for disqualification/non-acceptance of its bid.</p>

10.5	<p>Bidders shall also submit the following requirements in their first envelope, Eligibility and Technical Component of their bid:</p> <ol style="list-style-type: none"> 1. Data and Information to be submitted with the Bid/Proposal as specified in Clause TS-10.0(a) of Section VI - Technical Specifications; <p>Manufacturer's brochures, manuals and other supporting documents of equipment, materials, hardware and tools proposed by the bidders must comply with the technical specifications of such equipment, materials, hardware and tools. It shall be a ground for disqualification if the submitted brochures, manuals and other supporting documents are determined not complying with the specifications during technical evaluation and post-qualification process.</p> <p>Equipment, materials, hardware and tools proposed by the winning bidder to be supplied, which were evaluated to be complying with the technical specifications, shall not be replaced and must be the same items to be delivered/installed/used during the contract implementation. Any proposed changes/replacement of said items may be allowed on meritorious reasons subject to validation and prior approval by NPC.</p> <ol style="list-style-type: none"> 2. Complete eligibility documents of the proposed sub-contractor, if any
12	<p>The price of the Goods shall be quoted DDP Project Site or the applicable International Commercial Terms (INCOTERMS) for this Project.</p>
14.1	<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"> a) The amount of not less two percent (2%) of ABC, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; or b) The amount of not less than five percent (5%) of ABC, if bid security is in Surety Bond.
19.3	<p>The Goods are grouped together in one (1) lot and will be awarded to one (1) Bidder in one complete contract.</p> <p>Partial bid is not allowed. The Goods are grouped in a single lot and the lot shall not be divided into sub-lots for the purpose of bidding, evaluation, and contract award.</p> <p>The Bidders bid offer must be within the ABC of the lot.</p> <p>Bid offers that exceed the ABC of the lot or with incomplete price, shall be rejected.</p>
19.5	<p>If the Bidder opted to submit a Committed Line of Credit (CLC), the bidder must submit a granted credit line valid/effective at the date of bidding.</p>

20.1	<p>Additional documents to be submitted during Post-Qualification:</p> <ul style="list-style-type: none">a. Contract/Purchase Order and/or Notice of Award for the contracts stated in the List of all Ongoing Government & Private Contracts Including Contracts Awarded but not yet Started (NPCSF-GOODS-02);b. Certification coming from the project owner/client that the performance is satisfactory as of the bidding date for all ongoing contracts stated in Form NPCSF-GOODS-02;c. Drawings and documents to be submitted during post-qualification process as specified of Section VI-Technical Specifications, if any;
20.2	The licenses and permits relevant to the Project and the corresponding law requiring it as specified in the Technical Specifications, if any.
21.2	Notice to Proceed.

SECTION IV

GENERAL CONDITIONS OF CONTRACT

SECTION IV – GENERAL CONDITIONS OF CONTRACT**TABLE OF CONTENTS**

<u>CLAUSE NO.</u>	<u>TITLE</u>	<u>PAGE NO.</u>
1.	SCOPE OF CONTRACT.....	1
2.	ADVANCE PAYMENT AND TERMS OF PAYMENT.....	1
3.	PERFORMANCE SECURITY	1
4.	INSPECTION AND TESTS	1
5.	WARRANTY	2
6.	LIABILITY OF THE SUPPLIER	2

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.

Additional requirements for the completion of this Contract shall be provided in the **Special Conditions of Contract (SCC)**.

2. Advance Payment and Terms of Payment

- 2.1. Advance payment of the contract amount is provided under Annex "D" of the revised 2016 IRR of RA No. 9184.
- 2.2. The Procuring Entity is allowed to determine the terms of payment on the partial or staggered delivery of the Goods procured, provided such partial payment shall correspond to the value of the goods delivered and accepted in accordance with prevailing accounting and auditing rules and regulations. The terms of payment are indicated in the **SCC**.

3. Performance Security

- 3.1. Within ten (10) calendar days from receipt of the Notice of Award by the Bidder 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 of RA No. 9184.
- 3.2. The performance bond to be posted by the Contractor must also comply with additional requirements specified in the **SCC**.

4. Inspection and Tests

The Procuring Entity or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Project specifications at no extra cost to the Procuring Entity in accordance with the Generic Procurement Manual. In addition to tests in the **SCC, Section VI (Technical Specifications)** shall specify what inspections and/or tests the Procuring Entity requires, and where they are to be

conducted. The Procuring Entity shall notify the Supplier in writing, in a timely manner, of the identity of any representatives retained for these purposes.

All reasonable facilities and assistance for the inspection and testing of Goods, including access to drawings and production data, shall be provided by the Supplier to the authorized inspectors at no charge to the Procuring Entity.

5. Warranty

5.1 In order to assure that manufacturing defects shall be corrected by the Supplier, a warranty shall be required from the Supplier as provided under Section 62.1 of the 2016 revised IRR of RA No. 9184.

5.2 The Procuring Entity shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall, repair or replace the defective Goods or parts thereof without cost to the Procuring Entity, pursuant to the Generic Procurement Manual.

6. Liability of the Supplier

The Supplier's liability under this Contract shall be as provided by the laws of the Republic of the Philippines.

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

SECTION V

SPECIAL CONDITIONS OF CONTRACT

SECTION V – SPECIAL CONDITIONS OF CONTRACT

GCC Clause	
1	<p>Delivery and Documents –</p> <p>The delivery terms applicable to the Contract is DDP delivered to the project site specified in the technical specifications, in accordance with INCOTERMS. Risk and title will pass from the Supplier to the Procuring Entity upon receipt and final acceptance of the Goods at their final destination.</p> <p>Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in Section VI – Technical Specifications. The details of shipping and/or other documents to be furnished by the Supplier are as follows:</p> <p><i>For Goods supplied from within the Philippines</i></p> <p>Upon delivery of the Goods to the Project Site, the Supplier shall notify the Procuring Entity and present the following documents to the Procuring Entity:</p> <ul style="list-style-type: none"> (i) Original and four copies of the Supplier's invoice showing Goods' description, quantity, unit price, and total amount; (ii) Original and four copies of Supplier's factory test/inspection report; (iii) Original and four copies of the certificate of origin (for imported Goods); (iv) Delivery receipt detailing number and description of items received signed by the Procuring Entity's representative at the Project Site; (v) Certificate of Completion/Inspection Report signed by the Procuring Entity's representative at the Project Site; (vi) Original and four copies of the Inspection Receiving Report signed by the Procuring Entity's representative at the Project Site; (vii) Original and four copies of the Manufacturer's and/or Supplier's warranty certificate; and (viii) Documents specified in the Technical Specifications, if any. <p><i>For Goods supplied from abroad:</i></p> <p>Upon shipment, the Supplier shall notify the Procuring Entity and the insurance company by e-mail the full details of the shipment, including Contract Number, description of the Goods, quantity, vessel, bill of lading number and date, port of loading, date of shipment, port of discharge etc. Upon delivery to the Project Site, the Supplier shall notify the Procuring Entity and present the following documents as applicable with the documentary requirements of any letter of credit issued taking precedence:</p>

- (i) Original and four copies of the Supplier's invoice showing Goods' description, quantity, unit price, and total amount;
- (ii) Original and four copies of the negotiable, clean shipped on board bill of lading marked "freight pre-paid" and five copies of the non-negotiable bill of lading ;
- (iii) Original and four copies of Supplier's factory test/inspection report;
- (iv) Delivery receipt detailing number and description of items received signed by the Procuring Entity's representative at the Project Site;
- (v) Certificate of Completion/Inspection Report signed by the Procuring Entity's representative at the Project Site;
- (vi) Original and four copies of the Inspection Receiving Report signed by the Procuring Entity's representative at the Project Site;
- (vii) Original and four copies of the certificate of origin (for imported Goods); and
- (viii) Original and four copies of the Manufacturer's and/or Supplier's warranty certificate including all other documents specified in the Technical Specifications, if any.

For purposes of this Clause the Procuring Entity's Representative at the Project Site is Sr. Department Manager - Resource Management Services.

Incidental Services –

The Supplier is required to provide all of the following services, including additional services, if any, specified in Section VI. Schedule of Requirements:

- a. performance or supervision of on-site assembly and/or start-up of the supplied Goods;
- b. furnishing of tools required for assembly and/or maintenance of the supplied Goods;
- c. furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods;
- d. performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and
- e. training of the Procuring Entity's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods.

- f. Additional requirements specified in Section VI – Technical Specifications, if any.

The Contract price for the Goods shall include the prices charged by the Supplier for incidental services and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

Spare Parts –

The Supplier is required to provide all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:

1. such spare parts as the Procuring Entity may elect to purchase from the Supplier, provided that this election shall not relieve the Supplier of any warranty obligations under this Contract; and
2. in the event of termination of production of the spare parts:
 - i. advance notification to the Procuring Entity of the pending termination, in sufficient time to permit the Procuring Entity to procure needed requirements; and
 - ii. following such termination, furnishing at no cost to the Procuring Entity, the blueprints, drawings, and specifications of the spare parts, if requested

The spare parts and other components required are listed in **Section VI (Technical Specifications)** and **Section VII (Schedule of Requirements/Bid Price Schedule)** and the costs thereof are included in the contract price.

The Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spare parts or components for the Goods for the period specified in the Technical Specifications.

Spare parts or components shall be supplied as promptly as possible, but in any case, within three (3) months of placing the order.

Packaging –

The Supplier shall provide such packaging of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in this Contract. The packaging shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packaging case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.

	<p>The packaging, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified below, and in any subsequent instructions ordered by the Procuring Entity.</p> <p>The outer packaging must be clearly marked on at least four (4) sides as follows:</p> <p>Name of the Procuring Entity Name of the Supplier Contract Description Final Destination Gross weight Any special lifting instructions Any special handling instructions Any relevant HAZCHEM classifications</p> <p>A packaging list identifying the contents and quantities of the package is to be placed on an accessible point of the outer packaging if practical. If not practical the packaging list is to be placed inside the outer packaging but outside the secondary packaging.</p> <p>Transportation –</p> <p>Where the Supplier is required under Contract to deliver the Goods CIF, CIP, or DDP, transport of the Goods to the port of destination or such other named place of destination in the Philippines, as shall be specified in this Contract, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract Price.</p> <p>Where the Supplier is required under this Contract to transport the Goods to a specified place of destination within the Philippines, defined as the Project Site, transport to such place of destination in the Philippines, including insurance and storage, as shall be specified in this Contract, shall be arranged by the Supplier, and related costs shall be included in the contract price.</p> <p>Where the Supplier is required under Contract to deliver the Goods CIF, CIP or DDP, Goods are to be transported on carriers of Philippine registry. In the event that no carrier of Philippine registry is available, Goods may be shipped by a carrier which is not of Philippine registry provided that the Supplier obtains and presents to the Procuring Entity certification to this effect from the nearest Philippine consulate to the port of dispatch. In the event that carriers of Philippine registry are available but their schedule delays the Supplier in its performance of this Contract the period from when the Goods were first ready for shipment and the actual date of shipment the period of delay will be considered force majeure.</p> <p>The Procuring Entity accepts no liability for the damage of Goods during transit other than those prescribed by INCOTERMS for DDP deliveries. In the case of Goods supplied from within the Philippines or supplied by domestic Suppliers risk and title will not be deemed to have passed to the Procuring Entity until their receipt and final acceptance at the final destination.</p>
--	--

	<p>Intellectual Property Rights –</p> <p>The Supplier shall indemnify the Procuring Entity against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof.</p>
2.2	<p>Advance payment not to exceed fifteen percent (15%) of the contract amount shall be allowed and paid within sixty (60) calendar days from effectivity of the contract and upon the submission to and acceptance by the Procuring Entity of an irrevocable letter of credit or bank guarantee issued by a Universal or Commercial Bank. The irrevocable letter of credit or bank guarantee must be for an equivalent amount, shall remain valid until the goods are delivered, and accompanied by a claim for advance payment.</p> <p>All progress payments shall first be charged against the advance payment until the latter has been fully exhausted.</p> <p>The terms of payment shall be as follows:</p> <p>1) For Supply and Delivery Contracts:</p> <p>(a) On Contract Effectivity: Advance payment of Fifteen percent (15%) of the total Contract Price shall be paid within sixty (60) days from effectivity of the Contract and upon submission of a claim and an irrevocable letter of credit or bank guarantee issued by a Universal or Commercial Bank for the equivalent amount valid until the Goods are delivered and in the form provided in Section VIII- Bidding Forms.</p> <p>(b) On Delivery: Eighty percent (80%) of the Contract Price of the delivered Goods shall be considered for payment, less the total amount of advance payment, if any and other deductions. If the amount is sufficient to fully recoup the advance payment, the remainder after deductions shall be paid to the Supplier within sixty (60) days after the date of receipt of the Goods and upon submission of the documents (i) through (vi) specified in the <u>SCC</u> provision on Delivery and Documents. Otherwise, the total delivery payment shall be charged against the advance payment and the remaining advance payment will be fully recouped from the succeeding claims.</p> <p>(c) On Acceptance: The remaining twenty percent (20%) of the Contract Price of the delivered Goods shall be paid to the Supplier within sixty (60) days after the date of submission of the acceptance and inspection certificate for the respective delivery issued by the Procuring Entity's authorized representative. In the event that no acceptance certificate is issued by the Procuring Entity's authorized representative within forty five (45) days after successful test and commissioning, if required, the Supplier shall have the right to claim payment of the remaining twenty percent (20%) subject to the Procuring Entity's own verification of the reason(s) for the failure to issue documents (vii) and (viii) as described in the <u>SCC</u> provision on Delivery and Documents.</p>

2) For Supply, Delivery, Installation, Test and Commissioning Contracts:

- (a) On Contract Effectivity: Advance payment of Fifteen percent (15%) of the total Contract Price shall be paid within sixty (60) days from effectivity of the Contract and upon submission of a claim and an irrevocable letter of credit or bank guarantee issued by a Universal or Commercial Bank for the equivalent amount valid until the Goods are delivered and in the form provided in Section VIII- Bidding Forms.
- (b) On Delivery: Eighty percent (80%) of the price of the **delivered Goods**, excluding price for installation, test and commissioning shall be considered for payment, less the total amount of advance payment, if any and other deductions. If the amount is sufficient to fully recoup the advance payment, the remainder after deductions shall be paid to the Supplier within sixty (60) days after the date of receipt of the Goods and upon submission of the documents (i) through (vi) specified in the SCC provision on Delivery and Documents. Otherwise, the total delivery payment shall be charged against the advance payment and the remaining advance payment will be fully recouped from the succeeding claims.
- (c) On Acceptance: The remaining twenty percent (20%) of the price of the **delivered Goods** plus price for installation, test and commissioning shall be paid to the Supplier within sixty (60) days after the date of submission of the acceptance and inspection certificate for the respective delivery issued by the Procuring Entity's authorized representative. In the event that no acceptance certificate is issued by the Procuring Entity's authorized representative within forty five (45) days after successful test and commissioning, the Supplier shall have the right to claim payment subject to the Procuring Entity's own verification of the reason(s) for the failure to issue documents (vii) and (viii) as described in the SCC provision on Delivery and Documents.

3) For Supply, Delivery, Installation, Test and Commissioning Contracts where Installation, Test and Commissioning prices are included in the supply price:

- (a) On Contract Effectivity: Advance payment of Fifteen percent (15%) of the total Contract Price shall be paid within sixty (60) days from effectivity of the Contract and upon submission of a claim and an irrevocable letter of credit or bank guarantee issued by a Universal or Commercial Bank for the equivalent amount valid until the Goods are delivered and in the form provided in Section VIII- Bidding Forms.
- (b) On Delivery: Sixty percent (60%) of the price of the **delivered Goods** shall be considered for payment, less the total amount of advance payment, if any and other deductions. If the amount is sufficient to fully recoup the advance payment, the remainder after deductions shall be paid to the Supplier within sixty (60) days after the date of receipt of the Goods and upon submission of the documents (i) through (vi) specified in the SCC provision on Delivery and Documents. Otherwise, the total delivery payment shall be charged against the advance

	<p>payment and the remaining advance payment will be fully recouped from the succeeding claims.</p> <p>(c) On Acceptance: The remaining forty percent (40%) of the price of the delivered Goods shall be paid to the Supplier within sixty (60) days after the date of submission of the acceptance and inspection certificate for the respective delivery issued by the Procuring Entity's authorized representative. In the event that no acceptance certificate is issued by the Procuring Entity's authorized representative within forty five (45) days after successful test and commissioning, the Supplier shall have the right to claim payment subject to the Procuring Entity's own verification of the reason(s) for the failure to issue documents (vii) and (viii) as described in the <u>SCC</u> provision on Delivery and Documents</p>
3.2	<ol style="list-style-type: none"> 1. The following must be indicated in the performance bond to be posted by the Contractor: <ol style="list-style-type: none"> i. Company Name ii. Correct amount of the Bond iii. Contract/Purchase Order Reference Number iv. Purpose of the Bond: <p>"To guarantee the faithful performance of the Principal's obligation to undertake <u>(Contract/Purchase Order Description)</u> in accordance with the terms and conditions of <u>(Contract No. & Schedule/Purchase Order No.)</u> entered into by the parties."</p> 2. The bond shall remain valid and effective until the duration of the contract <u>(should be specific date reckoned from the contract effectivity)</u> plus sixty (60) days after NPC's acceptance of the last delivery/final acceptance of the project. 3. In case of surety bond, any extension of the contract duration or delivery period granted to the CONTRACTOR shall be considered as given, and any modification of the contract shall be considered as authorized, as if with the expressed consent of the surety, provided that such extension or modifications falls within the effective period of the said surety bond. However, in the event that the extension of the contract duration or delivery schedule would be beyond the effective period of the surety bond first posted, it shall be the sole obligation of the CONTRACTOR to post an acceptable Performance Security within ten (10) calendar days after the contract duration/delivery period extension has been granted by NPC. 4. Other required conditions in addition to the standard policy terms issued by the Bonding Company: <ol style="list-style-type: none"> i. The bond is a penal bond, callable on demand and the entire amount thereof shall be forfeited in favor of the Obligee upon default of the Principal without the need to prove or to show grounds or reasons for demand for the sum specified therein;

	<ul style="list-style-type: none">ii. The amount claimed by the Obligee under this bond shall be paid in full and shall never be subject to any adjustment by the Surety;iii. In case of claim, the Surety shall pay such claim within sixty (60) days from receipt by the Surety of the Obligee's notice of claim/demand letter notwithstanding any objection thereto by the Principal.
4	The inspections and tests that will be conducted are specified in the Technical Specifications.

SECTION VI

TECHNICAL

SPECIFICATIONS

SECTION VI – TECHNICAL SPECIFICATIONS**PART I – TECHNICAL SPECIFICATIONS****TABLE OF CONTENTS**

<u>CLAUSE NO.</u>	<u>TITLE</u>	<u>PAGE NO.</u>
TS-1.0	GENERAL.....	1
TS-2.0	SCOPE OF WORKS	2
TS-3.0	CONTRACT PERIOD AND LOCATION.....	3
TS-4.0	APPLICABLE CODES AND STANDARDS	3
TS-5.0	TECHNICAL REQUIREMENTS	5
	TS-5.1 General.....	5
	TS-5.2 New Fire Detection and Alarm System (NAFDAS).....	6
	TS-5.3 Addressable Fire Suppression System (AFSS).....	11
	TS-5.4 Paging (PS)	14
	TS-5.5 Water Sprinkler System (WSS).....	15
	TS-5.6 Installation	19
TS-6.0	CONTRACTOR EXPERIENCE/QUALIFICATIONS	21
TS-7.0	TESTING AND ACCEPTANCE CRITERIA.....	22
	TS-7.1 General.....	22
	TS-7.2 Testing.....	24
	TS-7.3 Test Failures	26
TS-8.0	ANTI-CORROSION AND PAINTING WORKS.....	26
TS-9.0	TRAINING OF NPC PERSONNEL.....	26
TS-10.0	DRAWINGS AND DOCUMENTS TO BE SUBMITTED.....	27
TS-11.0	GUARANTEE.....	28
TS-12.0	MEASUREMENT OF PAYMENT	29

Section VI – Technical Specifications

Part I – Technical Specifications

TS-1.0 GENERAL

This specification covers the technical and associated requirements for furnishing of all engineering, labor, materials, tools and equipment for the **Fire Fighting Systems** of Ilijan Natural Gas Receiving Facility (INGRF) located in Brgy. Arenas Point, Ilijan, Batangas, as follows:

- a. Replacement of INGRF's existing Fire Detection and Alarm System (FDAS) with New Addressable FDAS (NAFDAS);
- b. Installation of Addressable Fire Suppression System (AFSS);
- c. Installation of Water Sprinkler System (WSS); and
- d. Installation of Paging System (PS)

All equipment and materials to be used and incorporated into the Fire Fighting System shall be new and unused. They shall be suitable for the intended purpose and shall comply with all applicable regulations, quality, and standards.

The design of the Fire Fighting System as described in this specification and shown on the accompanying drawings is intended to indicate the basic type or minimum requirements. The Supplier/Contractor shall design in detail and carry out all the engineering necessary to produce a complete, safe, economical and reliable operation of the system to be provided and as required under this Specification.

Other parts and accessories which are not specifically mentioned herein but are necessary for the proper assembly, safe and reliable operation of the Fire Fighting System shall be furnished.

Utmost care shall be strictly observed by the Supplier/Contractor during delivery and conduct of work to avoid damage of any kind to the supplied materials and the existing equipment & structure at site.

In the event that any such damage should occur due to the carelessness, negligence or fault of the Supplier/Contractor, he shall repair or replace all damaged items at his own expense and to the satisfaction of NPC.

All works shall be closely coordinated with NPC project implementation group and/or INGRF management group prior to the project implementation regarding the NPC Occupational Safety and Environmental Policy.

TS-2.0 SCOPE OF WORKS

It is not the intent of this specification to specify all technical requirements or to set forth those requirements covered by applicable codes and standards. The Supplier/Contractor shall furnish high quality work, materials and equipment meeting the requirements of this specification and industry standards.

The Supplier/Contractor shall also be responsible to assess and determine all and every work and service although not specifically detailed but are deemed required to fully complete the work and smooth execution of the project. Relative costs of any additional works or materials which the Supplier/Contractor deemed required or necessary to complete the works shall be included in the bid proposal.

The scope of works under this project shall generally consist of the following:

- a. Engineering, design, supply, delivery, installation, Test and Commissioning of Fire Fighting System (NAFDAS, WSS, AFSS and PS) complete with associated components/devices, electro-mechanical pipes, fittings wiring, electrical conduit; boxes; hanger; anchors, frames, brackets and necessary accessories to complete the works;
- b. Submission of NAFDAS, WSS, AFSS and PS design drawings/layout (per applicable NFPA Codes) including Clean Agent and hydraulic calculations;
- c. Interconnection of the WSS to the existing water system; and NAFDAS, PS and AFSS to the existing INGRF's power source (220V AC);
- d. Penetrations through walls and floors for piping and conduit, as required, and sealing the penetrations of approved materials; and dismantling of old/existing FDAS and its associated equipment, piping/conduit, instrumentation and accessories;
- e. Painting of installed piping and equipment and/or touch-up coating for shop-painted surfaces;
- f. Conduct Training of at least four (4) NPC personnel on the operation and maintenance of the Fire Fighting System's equipment/components;
- g. Submission of five (5) sets of drawings, catalogues/brochures, calculations for NPC review and approval prior to procurement and installation. Submittal shall include as-built drawings (5 prints and 1 set electronic copy), three (3) sets of hard-bound instruction/O & M manuals;
- h. Conduct of actual site inspection to assess the existing conditions and configuration of the site prior to submission of bids and implementation of works;
- i. Provision of highly qualified and experienced technical personnel during installation, testing and commissioning of equipment/system at site;

SECTION VI – TECHNICAL SPECIFICATIONS

- j. Provide two inspections during the first year of service or warranty period. Inspections shall be made at 6-month intervals commencing when the system is first placed into normal service.
- k. Securing and payment of all necessary permits and licenses to implement the project;
- l. Securing/protection of NPC equipment/properties during the conduct of works;
- m. Restoration of all existing facility or structure that will be affected by the works to its original condition and to the satisfaction of NPC;
- n. Observance of safety measures at all times and provision of Personal Protection Equipment (PPEs), safety signs, barricades, etc. to be used during installation period;
- o. Clean-up after the completion of works; and
- p. All other works and services including those are not specifically detailed herein but are required to fully complete the project.

TS-3.0 CONTRACT PERIOD AND LOCATION

The contract period shall be **NINETY (90) CALENDAR DAYS** reckoned from receipt of Notice to Proceed.

The Fire Fighting System's equipment and components/parts shall be supplied, delivered, installed, tested and commissioned in Buildings 1, 2, 3 and Guardhouse at INGRF located in Brgy. Arenas Point, Ilijan, Batangas.

The Supplier/Contractor shall be responsible for visiting the INGRF and take particular reference to its accessibility, means of communication and transportation, and all other factors that could hamper the smooth execution of the contract.

Any and/or all expenses arising through the lack of knowledge or understanding regarding the existing conditions of the site shall be the responsibility of the Supplier/Contractor and no additional payment thereof shall be made by NPC.

TS-4.0 APPLICABLE CODES AND STANDARDS

The Manufacturer shall be ISO 9001 Certified in the design, installation of the Fire Fighting System.

Where such standards are specified, the latest revision or edition shall apply. Also, in addition to the above codes and standards, the Supplier/Contractor shall

comply with all applicable national and local laws, codes, regulations, statutes, and ordinances.

The Fire Fighting System shall be designed, installed, and tested by the Supplier/Contractor in accordance with the requirements of the following applicable codes and standards and regulatory bodies:

a) National Fire Protection Association (NFPA) Standards

- NFPA 2001 : Standard on Clean Agent Fire Extinguishing System
- NFPA 70 : National Electrical Code (NEC)
- NFPA 72 : National Fire Alarm and Signaling Code
- NFPA 75 : Standard for the Fire Protection of Information Technology Equipment

- NFPA 15 : Standard for Water Spray Fixed System
- NFPA 13 : Installation of Sprinkler System
- NFPA 11 :

b) Underwriters laboratories, Inc. (UL) Publication

- UL 217 : Standard for Smoke Alarms
- UL 268 : Standard for Smoke Detectors for Open Areas
- UL 464 : Standard for Audible Signal Appliances for General Signaling Use
- UL 521 : Standard for Heat Detectors for Fire Protective Signaling system
- UL 864 : Standard for Control Units and Accessories for Fire Alarm Systems
- UL 1638 : Standard for Visual Signaling Appliances-Private Mode Emergency and General Utility Signaling
- ULC-S524M : Installation of Fire Alarm Systems
- ULC-S529-02 : Smoke Detectors for Fire Alarm Signaling Systems
- ULC-S528-M91 : Manually Actuated Signaling Boxes for Fire Alarm

c) American National Standards Institute (ANSI)

- B1.20.1 : Pipe Threads General Purpose
- B16.3 : Malleable Iron Threaded Fittings
- B16.5 : Steel Pipe Flanges and Flange Fittings

- d) Factory Mutual Engineering (FM)
- e) Fire Code of the Philippines and Regulations
- f) National Electrical Manufacturers Association (NEMA) Publication on Enclosures for Industrial Controls and Systems
- g) Manufacturer's Design, Installation, Operation and Maintenance Manual
- h) The complete system shall have the applicable listings and approvals of the following:
 - Underwriters Laboratories, Inc. (UL)
 - Factory Manual (FM)

- Factory Manual (FM)
- National Fire Protection Association (NFPA)
- National Electrical Code (NEC)
- Fire Code of the Philippines

TS-5.0 TECHNICAL REQUIREMENTS**TS-5.1 General**

This section provides the essential information for the design, manufacture, fabrication, supply, delivery, installation, test and commissioning of the complete Fire Fighting System for INGRF.

All equipment and materials necessary for the complete installation shall be completely furnished, even though not specifically mentioned in this specification and shown on the drawings but are necessary for the safe and reliable operation of the Fire Fighting System.

The Fire Fighting System shall be supplied by the Supplier/Contractor complete with their corresponding technical brochures written in English that would aid in the installation, operation and maintenance of the equipment.

The Fire Fighting System shall be designed, installed and tested in accordance with the requirements of National Fire Protection Association (NFPA) Standards. The Supplier/Contractor shall be responsible for the preparation of detailed design and drawings subject to NPC's review and approval.

The schedule of requirement shall be as follows:

Location	Schedule of Requirements
Building 1	▪ Addressable Fire Suppression System (AFSS)
Building 1	▪ New Addressable Fire Detection and Alarm System (NAFDAS) ▪ Water Sprinkler System (WSS) ▪ Paging System (PS)
Building 2	
Building 3	
Guardhouse	▪ Paging System (PS)
Outdoor	

Drawings contained in this tender document show the general layout, equipment arrangement which indicate limiting or mandatory dimensions and elevations, including system diagrams which indicate the minimum requirements of various components and devices/instruments that comprise the respective systems. However, if such indicated dimensions and equipment/components are found deemed inadequate during the implementation stage, changes or adjustments may be made subject to NPC's review and approval and at no cost NPC.

TS-5.2 New Addressable Fire Detection and Alarm System (NAFDAS)**TS-5.2.1 General**

This section covers the design, supply, deliver, installation, test and commissioning of NAFDAS (fire detection, alarm, actuation, signaling, monitoring and control) complete in every respect and suitable for reliable and satisfactory operation in accordance with NFPA 70 and NFPA 72, latest edition.

The equipment 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 material and parts which are not specifically mentioned herein but are necessary for the proper installation and operation of the fire detection and alarm system shall be furnished at no additional cost to NPC.

NAFDAS shall guarantee a reliable and fault-free system and provide the means for early detection of fire, provide audible alarm, visual annunciation and actuate fire extinguishing systems. Plug-in units using electronic modules must be used.

The alarm signal receiving units must be so designed such that by the use of a standardized alarm unit socket, any of the following types of detectors maybe used with equal facility of any of the fire alarm circuits:

- Smoke detector for the detection of smoke and burning gas
- Thermo-differential indicator for detecting a rise in maximum temperature

The Power supply for NAFDAS should be 240 V AC to be sourced in the INGRF. Transfer from normal to emergency power or restoration to normal power shall be fully automatic and shall not cause transmission of false alarm.

TS-5.2.2 Scope of Work

The Scope of Work shall comprise a complete functioning system including the following:

- a. One (1) unit of Common Main Addressable Fire Suppression Control Panel (CMAFSCP) complete with modules (control, relays, display and etc), card cage, battery and chargers, trouble/fault audible alarm with flashing light and other appurtenances/accessories;
- b. One (1) lot of Addressable Fixed Temperature Heat Detectors;
- c. One (1) lot of Addressable Smoke Detectors;
- d. One (1) lot of Standard Base for DS Series Detectors;
- e. One (1) lot of Addressable Dual Action Pull Station;
- f. One (1) lot of Alarm Signal Module;

- g. One (1) lot of Multi Tone-Multi Strobe, 24 VDC
- h. One (1) lot of Vibrating Bell:
- i. One (1) lot of Wiring, Raceways and Accessories; and
- j. One (1) lot of materials/devices/accessories: electrical conduits, wiring, raceways, instrumentation, steel supports, fittings, bolts and nuts, and other accessories/incidentals to complete the works including wall penetration, removal of old/existing lines/system and interconnection works.

TS-5.2.3 Common Main Addressable Fire Suppression Control Panel (CMAFSCP)

The CMAFSCP shall be provided to simultaneously supervise, monitor and detect the status of the Fire Fighting System (AFSS, NAFDAS, PS and WSS) including signaling and operating addressable and non-addressable initiating devices. The panel shall be located inside the Control Room inside Building 1.

The CMAFSCP shall be of UL listed and/or FM approved, suitable for wall mounting and have NEMA 4 enclosure designed to operate on 220 VAC, 60 hertz, 1-phase.

The detection system shall remain 100% operational and capable of responding to an alarm condition while in the routine maintenance mode. Addressable detection devices shall be individually identified by the system, and any quantity of addressable detection devices shall be in alarm at any time up to the total number connected to the system.

Supervision of system hardware and software, wiring and detection devices shall be provided in the control system. Failure of system hardware or wiring shall be indicated by type and location of the alpha-numeric annunciator. The system shall provide fail-safe operation, i.e., incoming alarms shall automatically override all other modes of operation, and the panel shall automatically return to normal operating mode for any operator initiated mode.

Ground fault detection shall be provided for all initiating and audible circuits. Lamp test capability shall be provided to test all visual panel indicators and associated hardware. The CMAFSCP shall be equipped with a silencer before reset feature, designed to prevent accidental system reset during an alarm condition.

The system alarm lamp shall flash upon receipt of any alarm condition. Acknowledgment of the alarm by operation of the silence switch shall silence the audible alarm and cause the trouble lamp to light steadily. Receipt of subsequent alarm shall cause the audible devices to resound and the alarm lamp to flash.

The system trouble lamp shall flash and trouble audible alarm shall sound upon the occurrence of any trouble condition. Acknowledgment of the trouble condition by operation of the silence switch shall silence the audible alarm and

cause the trouble lamp to light steadily. Receipt of subsequent troubles shall cause the trouble horn to resound and the trouble lamp to flash.

Individual input and output device addressability shall be performed on the same pair of wires with no special wiring sequence be required on addressable device circuits, and unlimited number of wiring branches shall be permitted with no loss of supervision. The system shall be capable of having all addressable devices in alarm simultaneously.

Light emitting diodes (LED's) shall be included to indicate (green) system power, (yellow) trouble, and (red) alarm; trouble and alarm shall also be annunciated on an alpha numeric display which will give zone number, device number and location plus diagnosis of trouble. An audible device shall sound within the control for alarm or trouble. This device shall have two (2) distinct sounds, and shall be silenceable by the acknowledge/silence switch. Alarms shall override any trouble condition.

The control power supply shall be capable of powering detectors and audible/visual signal circuits. All system expansion modules shall interconnect through a card edge connector and shall require no inter-module wiring.

The control shall allow for expansion and shall also be configurable without system interwiring.

New unacknowledged alarms and troubles shall be distinctively displayed on both the visual display and the printer and differentiated from previous alarm and troubles.

No alarm or trouble indication shall be resettable until it has been acknowledged. It shall not be possible to reset the system until all alarms have been acknowledged.

A fire alarm bell or horn of audible rating shall be furnished and installed by the Contractor on the CMAFSCP and shall be of NEMA 4 operating on 24 V DC.

The following color coding shall be used for indicating lamps on the CMAFSCP:

- a. Green : System Normal
- b. Red : Fire
- c. Amber : Trouble
- d. Red : Pump Running

The following visual "fire" alarms shall be provided for the Automatic Wet Pipe Sprinkler fire protection system:

- a. System Normal
- b. "Fire" Alarm
- c. System Activated

A continuous supervisory system shall be provided for each detection, actuation, alarm and signaling circuit. The supervisory system shall be designed to actuate an audible trouble alarm distinct from the fire alarm and an amber light to appear on the occurrence of any of the following:

- a. Loss of electrical integrity in any detection unit
- b. Loss of electrical integrity in any actuation unit
- c. Loss of electrical integrity in any alarm and signaling circuit
- d. Loss of AC power or power supply
- e. Short circuits, open circuits
- f. Ground Faults

The system shall be capable of:

- a. Counting the number of addressable detectors within a "Zone" or "System" which are in alarm.
- b. Differentiating among types of addressable detectors such as smoke detectors, manual stations, heat detectors and interfacing modules.

The fire and trouble alarms shall be displayed on the CMAFSCP in the event of any fire suppression or detection system actuation stated above.

It shall be provided with back-up battery and battery charger of adequate ampere rating complete with charge/float-charge monitoring, protection and metering devices. The battery system must be capable of powering the system for not less than 24 hours in the "powerless condition." Transfer to the secondary power supply shall be done automatically.

TS-5.2.4 Fixed Temperature Heat Detectors

The Fixed Temperature Heat Detectors to be supplied shall be addressable, UL listed and/or FM approved designed to provide high quality and reliability. It shall be designed to meet the performance requirement of an industrial alarm system. It shall contain a unique dual transistor sensing circuit to provide both maximum performance and solid state reliability.

Fixed Temperature Heat Detectors (Addressable) shall be twist/lock design and shall be directly interchangeable with smoke detectors and other compatible plug-in detectors. Detectors shall continuously be supervised from CMAFSCP.

TS-5.2.5 Photoelectric Smoke Detectors

The Photoelectric Smoke Detectors to be supplied shall be addressable or conventional type as indicated on the drawings. The smoke detectors shall operate using a light source, a light beam collimating system and a photoelectric sensor. They shall be directly interchangeable with other comparable plug-in detectors. Both types of smoke detectors shall be UL listed and/or FM approved and shall operate from a nominal 24V dc source from CMAFSCP and shall be continuously supervised from the CMAFSCP.

The smoke detectors shall be designed to sense both visible and invisible products of combustion. They shall incorporate advanced solid-state, low-voltage circuitry featuring a Surface Mount Technology. The 360 degree smoke entry characteristic permits maximum smoke response from any direction. To assure that the detector is functioning, a pulsing LED allows for visual supervision of the detector. Under alarm condition, the LED lights continuously at full brilliance.

TS-5.2.6 Dual Action Manual Pull Stations (MPS)

The MPS shall be addressable and shall be operated by pulling down on the lever. When operated, the lever shall remain down with the alarm contacts closed until the station is reset. The MPS shall be reset by opening the front and resetting the switch. The station shall close only after the switch is reset. It shall not be possible to open the station without special tools or keys. The MPS shall be tested by opening the station and operating the toggle switch. Stations shall flush or surface mounted and shall be UL listed and/or FM Approved. Stations shall be red with the word "FIRE" in raised lettering. The MPS shall be electrically supervised from the CMAFSCP. MPS installed outdoor shall be weatherproof type.

TS-5.2.7 Vibrating Bell/Alarm Bells-Strobe

Alarm Bells shall be of the vibrating type suitable for use in an electrically supervised circuit and in combination with strobe/flashing light. The gongs shall be made of selected alloy steel to give loud, resonant tones necessary in fire alarm system. Alarm bells shall be 6 inches in diameter and of the underdome type with heavy-duty mechanism and equipped with NEMA-4 housing. Bells shall have an internal loudness adjustment and produce a sound output rating of at least ninety decibels (90 db) at 3 meters from the device. The alarm bells shall be UL listed and/or FM approved and shall be electrically supervised by the CMAFSCP and capable of parallel operation.

Alarm Bell with strobe/flashing Light shall be placed outside and above each exit door from the protected space. Advisory sign at each light location shall be provided.

TS-5.2.8 Multi Tone –Multi Strobe

Multi Tone –Multi Strobe shall be modular type suitable for surface mountings in combination with flashing light. All Multi Tone –Multi Strobe installed outdoor shall also be equipped with a weatherproof housing. The Multi Tone –Multi Strobe circuit is required to be electrically supervised by the CMAFSCP. Alarm horns shall be UL listed and/or FM approved and shall be capable of parallel operation. The horns shall have an internal loudness adjustment and shall be painted red.

Multi Tone –Multi Strobe shall be modular type suitable for surface mountings in combination with flashing light. The alarm horn circuit is required to be

electrically supervised by the CMAFSCP. Alarm horns shall be UL listed and/or FM approved and shall have a selectable sound output of at least 90 db at high mode.

TS-5.3 Addressable Fire Suppression System (AFSS)

TS-5.3.1 General

This section covers the technical and associated requirements for all engineering, labor, materials, tools and equipment for the supply, installation, and test for the installation of the AFSS.

The AFSS shall provide a minimum design concentration of 4.5% by volume for all protected areas and/or spaces at the minimum anticipated temperature within the protection area. The clean agent shall be waterless fire suppression and shall leave no residue. It shall be electrically non-conductive in both liquid and gaseous state. It shall be zero ozone depletion potential and an atmospheric lifetime of 5 days.

Detection, monitoring and signaling systems are provided by automatic or manual actuation from CMAFSCP through the following:

- Addressable CMAFSCP Panel Assembly
- Addressable Photoelectric Smoke Detector
- Addressable Dual Action Manual Pull Station
- Remote Releasing Module
- Suppression Abort Station
- Fire Alarm Bell
- Multi Tone Horn with Flashing Strobe

The manufacturer of the AFSS hardware/components shall be ISO 9001 registered. The brand name of the manufacturer, part numbers and serial numbers shall appear on all major components.

The design of AFSS as described in this specification and shown on the accompanying drawings is intended to indicate the basic type or minimum requirements. The Contractor shall design in detail and carry out all the engineering necessary to produce a complete, safe, economical and reliable operation of the system to be provided and as required under this Specification.

TS-5.3.2 System Description

The system shall be actuated by a combination of photoelectric and/or ionization detectors installed at a maximum spacing of 23 m² per detector in all spaces in accordance with the requirements of the latest edition of NFPA 72.

The detectors shall be wired in standard Cross-Zoned detection requiring two detectors to be in alarm before release. Automatic operation of each protected area/space shall be as follows:

- a) Actuation of one detector within the system shall:
 - a.1 Illuminate the "ALARM" lamp on the control panel face.
 - a.2 Energize an alarm bell.
 - a.3 Transfer auxiliary contacts, which can perform auxiliary system functions such as: Transmit a signal to a fire alarm system; Shutdown HVAC equipment.
 - a.4 Light an individual lamp on the annunciator.
- b) Actuation of the 2nd detector within the system shall:
 - b.1 Illuminate the "PRE-DISCHARGE" lamp on the control panel face.
 - b.2 Energize a pre-discharge horn/strobe device.
 - b.3 Start time-delay sequence (not to exceed 60 seconds).
 - b.4 System abort sequence is enabled at this time.
 - b.5 Light an individual lamp on an annunciator.
- c) After completion of the time-delay sequence, the Clean Agent System shall discharge and the following shall occur:
 - c.1 Illuminate a "SYSTEM FIRED" lamp on the control panel face.
 - c.2 Shutdown of all power to high-voltage equipment, as applicable.
 - c.3 Energize a visual indicator(s) outside the hazard in which the discharge occurred.
 - c.4 Energize a "System Fired" audible device.

The AAFSS shall be capable of being actuated by manual discharge devices located at each hazard exit. Operation of a manual device shall duplicate the sequence description above except that the time delay and abort functions shall be bypassed. The manual discharge station shall be of the electrical actuation type and shall be supervised at the CMAFSCP.

TS-5.3.3 Scope of Work

The AFSS shall be provided with the following devices in sufficient numbers but not necessarily be limited to the following:

- a. Two (2) units of Clean Agent Cylinders filled with 122 lbs. and 34 lbs. clean agent fluids;
- b. One (1) lot of Electric Control Heads complete with accessories;
- c. One (1) lot of Gas Discharge Nozzles;
- d. One (1) lot of Suppression Abort Station;
- e. One (1) lot of Door Warning Sign;
- f. One (1) lot of Wiring, Raceways and Accessories;
- g. One (1) lot of Evacuation, Gas Discharge and Warning Signs;

- h. Submission of clean agent calculation and design drawings (per applicable NFPA Codes) including detailed installation and layout drawings; and
- i. One (1) lot of materials/devices/accessories: piping, valves, gauges, electrical conduits, wiring, raceways, instrumentation, steel supports, fittings, bolts and nuts, and other accessories/incidentals to complete the works including all the required wall penetration, removal of old/existing lines/system including interconnection works.

TS-5.3.4 Clean Agent Cylinders Storage and Distribution

The Control and Power Rooms shall have its own AFSS and supply of clean agent. The clean agent fire extinguishing system shall consist preferably of one agent cylinder but if required to have more agent cylinders it may either be connected to a discharge pipe arrangement separately or connected to a common manifold and discharge pipe arrangement. The agent cylinder shall be filled with clean agent fluid, and super pressurized with dry nitrogen to a working pressure of 360 Psig at 70 F (24.8 bar gauge at 21 C);

The AFSS shall be designed to discharge within 10 seconds into a room/area with structural integrity to retain the agent. The system shall ensure that the fluid shall uniformly mixes throughout the protected area achieving a minimum concentration level in accordance with NFPA 2001 and/or agency listings.

The clean agent within each of the hazard area shall be stored preferably in a single storage cylinder container. Each container shall be pressurized with dry Nitrogen to an operating pressure of not less than 360 psi (24.8 bar) @ 70°F (21°C). An identification label is affixed to the cylinder body indicating the fill quantity of the fluid, charging pressure, date of fill and fill station.

Containers shall be of cylinder assembly made of high-strength alloy steel construction conforming to NFPA 2001 and/or applicable standards/approving agencies. The assembly is composed of a cylinder, dip tube, cylinder valve, rupture disc, liquid level indicator and cylinder brackets which hold the cylinder assembly securely in place. The cylinder shall be designed for mounting in a vertical position.

Each container shall have a pressure gauge and low pressure switch to provide visual and electrical supervision of the container pressure. The low pressure switch shall be wired to the control panel to provide an audible and visual "Trouble" alarm in the event the container pressure drops below the required minimum pressure, e. g. 20% less than the operating pressure of 360 psi. The pressure gauge shall be color coded to provide an easy, visual indication of container pressure.

Each container shall have a pressure relief provision that automatically operates when the internal nominal pressure exceeds the maximum pressure setting per Manufacturer's standard practice/recommendation.

Distribution piping and fittings including 360° discharge nozzles shall be provided and installed in accordance with the manufacturer's requirements, NFPA 2001 and approved piping standards and guidelines. All piping works shall be installed by qualified individuals in accordance with acceptable practices and quality procedures. All piping shall be adequately supported and anchored at all direction changes and nozzle locations. Piping shall conform to ASTM A53, Grade B, seamless, schedule 40 minimum.

TS-5.3.5 Suppression Abort Stations

The abort station shall be the "Dead Man" type and shall be located adjacent to each manual release station.

The abort station shall be supervised and shall indicate a trouble condition at the CMAFSCP if depressed and no alarm condition exists.

"Locking" or "Keyed" abort stations shall not be permitted.

Abort Station may be furnished in combination with a Manual Release Switch and Digital Countdown Timer.

TS-5.3.6 Warning and Advisory Signs

Signs as required, to comply with NFPA 2001 and the equipment manufacturer shall be provided, but not limited to the following:

- a. Warning sign at each entrance of the protected space
- b. Evacuation signage
- c. Gas Discharge signage

TS-5.4 Paging (PS)

The PS shall includes Top of Atmosphere (TOA) Ceiling Speakers and Horns Speakers shall be designed, installed, and tested by the Supplier in accordance with the requirements of the following codes and standards and regulatory bodies:

- a. NFPA 72
- b. Underwriter's Laboratories, Inc. (UL) and/or FM listed
- c. National Electrical Code (NEC)
- d. Local Authority Having Jurisdiction (AHJ)

The PS alarm circuit must be electrically supervised by the CMAFSCP.

Where such standards are specified, the latest revision or edition shall apply. Also, in addition to the above codes and standards, the Supplier shall comply with all applicable national and local laws, codes, regulations, statutes, and ordinances.

TS-5.4.1 Scope of Work

The PS shall be provided with the following devices in sufficient numbers but not necessarily be limited to the following:

- a. One (1) lot of TOA Ceiling Speakers
- b. One (1) lot of TOA Horn Speakers;
- c. One (1) lot of TOA Remote Microphone
- d. One (1) lot of Wiring, Raceways and Accessories;
- e. One (1) lot of materials/devices/accessories: system management amplifier, mixer amplifier, CD player tuner electrical conduits, wiring, raceways, instrumentation, steel supports, fittings, bolts and nuts, and other accessories/incidentals to complete the works including all the required wall penetration including interconnection works.

TS-5.4.2 TOA Ceiling Speakers

TOA Ceiling Speakers shall be installed inside Buildings 1, 2, 3 and guardhouse at appropriate heights and distance. It shall feature spring clamp mechanism for easy mounting to the ceiling. The speakers shall disperse sound effectively at controlled volume.

TS-5.4.3 TOA Horn Speakers

Horns Speaker shall be heavy-duty type/mechanism and equipped with NEMA-4 housing; and shall be installed outside building or within the vicinity of the INGRF.

Horn Speaker shall be pole mounted or off the ground, spaced properly; and should never directly oppose each other. It shall have loudness adjustment and produce a sound output rating of at least ninety decibels (90 db) at 3 meters from the device. The alarm bells shall be UL listed and/or FM approved.

All exposed components shall be of metal construction, power coated for a durable finish and stainless steel bracket and screws ensure the unit's weatherproof capability.

TS-5.5 Water Sprinkler System (WSS)**TS-5.5.1 General**

This system shall be installed to Buildings 1, 2 and 3 of INGRF against fire. It shall be hydraulically designed, installed and tested in accordance with the requirements of NFPA 15.

The WSS shall be interconnected to the existing INGRF water line. It shall be designed to give complete surface wetting (total flooding) of the equipment or area taking into consideration the nozzle types, sizes, spacing and the water supply pressure. The design criteria shall be established on the basis of the size

(rate of discharge) of nozzles used, angle of the nozzle discharge core and the water pressure needed to cover the area to be protected by the spray nozzle.

The scope of works shall consist of but not limited to the following:

- a. One (1) lot of Glass Bulb or Fusible Link Sprinkler Heads, brass material, 1/2" NPT connection including spare units;
- b. One (1) lot of Escutcheon Plate;
- c. One (1) lot of Sight Glass;
- d. One (1) lot of Water Flow Switch;
- e. One (1) lot of Sprinkler wrench including cabinet to contain the spares and tools; and
- f. One (1) lot of Water Sprinkler System Pipe, ASTM A 53, Gr B, Seamless, schedule 40, hot dip galvanized, pipe supports, fittings associated pipe supports, fittings and associated valves and other necessary accessories.

Detection and signaling of the system shall be provided by automatic or manual actuation from common CMAFSCP located in the Control Room.

Each building shall be installed with at least one (1) heat detector or as required to provide alarm to the CMAFSCP.

The Contractor shall submit the layout and hydraulic calculation based on the desired surface wetting, type of nozzles and heat detectors, appropriate pipe sizes and water supply requires for approval of the NPC.

Drawings contained in this tender document show the general layout, equipment arrangement which indicate limiting or mandatory dimensions and elevations, including system diagrams which indicate the minimum requirements of various components and devices/instruments that comprise the respective systems.

The Supplier/Contractor shall be responsible for the preparation of detailed design and drawings subject to NPC's review and approval complete with all the equipment and accessories though not shown on the bid drawings or specifically stated in this specification but are necessary or required for the safe and reliable operation of the fire water sprinkler system.

TS-5.5.2 Sprinkler Heads

Sprinkler heads to be used in the system shall be ½ in. dia., standard orifice, with k-factor of 5.6.

Sprinkler heads shall be UL/FM approved and shall be of the upright, pendent, and horizontal sidewall type with a temperature rating of 680C (1550F).

Sprinklers shall be chrome with chrome plated escutcheons.

A steel box containing at least twelve (12) spare heads of the same type and rating complete with sprinkler wrench to be used in the removal and installation of sprinklers shall also be provided.

The Building 1, 2 and 3 of INGRF shall be provided with a minimum of glass bulb type sprinkler heads and shall be side wall or pendent type as required. A cabinet shall be provided at any appropriate place, containing a complete set of sprinkler heads of the same type, quantity and rating as installed and one sprinkler wrench per NFPA 13.

Required spray angle of spray nozzles and its corresponding number of spray nozzles shall be finally determined by the Contractor subject to NPC approval. Spray nozzles shall be of bronze or brass material, UL listed and/or FM approved.

TS-5.5.3 Pipe and Fittings

Unless otherwise specified, all pipes to be used shall generally conform to ASTM A 53, Grade B, seamless with a minimum wall thickness equivalent to schedule 40. Only specified pipes shall be used for interconnection piping between the existing water line.

All steel piping, 65 mm and above, shall be butt-welded or flanged. All piping, 50 mm and under shall be joined by socket welded or screwed where specified.

Steel pipe fittings for 65 mm pipes and above shall be seamless, butt weld, minimum of schedule 40 conforming to ASTM A 234 Gr. WPB with dimensions to ANSI B16.9. Fittings for 50 mm pipe and below shall be forged, socket weld or threaded (minimum of 3000 lb and 2000 lb rating, respectively) and conforming to ASTM 105 with dimensions to ANSI B16.11.

Flanges for steel piping shall be forged, weld neck for 65mm and larger or socket weld for 50mm and smaller, 150 lb raised face and conforming to ASTM A181 Class 60. Galvanized flanges shall be used for fire protection.

Gaskets shall be selected based on the nature of the fluid or its temperature to be handled. Gasket materials shall not contain asbestos in any form.

Flanged bolts shall be hexagonal head machine bolts conforming to ASTM A 307 Gr. B with dimensions in accordance with ANSI B18.2.1 and complete with heavy semi-finished head nuts conforming to ASTM A 194, Gr. 2H and ANSI B18.2.2.

Equipment and auxiliaries shall be furnished with all required bolts, screws, anchor bolts with sleeves, nuts, washers, locking devices, washers, gaskets, and other accessories to complete the piping system.

Generally, all gaskets, bolts, nuts and washers to be used in the various piping systems shall be new and free from defects and imperfections. Materials to be used shall be suitable for the liquid to be handled.

Threads shall be metric. Where required they shall be adequately treated against corrosion before dispatch from the works. All threads shall be greased

carefully during installation except where otherwise specified. Split pins or other approved locking devices generally shall be provided for nuts which may become loose due to vibration, etc.

Any such rivets, bolts, screws, gaskets, etc., which are considered surplus, but not more than 10% of the permanent installation, after the installation of the equipment has been completed shall become spare parts and shall be wrapped, marked and handed over to NPC.

TS-5.5.4 Valves and Accessories

All gate and globe valves, 65mm and over shall be of OS & Y with rising stem, solid wedge type disc for gate valves and plug type disc for globe valves, bolted, bonnet, bolted gland and have flanged ends with the following materials of components:

- | | | |
|---------------------|---|------------------------|
| a. Body & bonnet | - | Cast iron |
| b. Stem | - | Bronze or brass |
| c. Seat ring & seat | - | Bronze or bronze faced |
| d. Wedge or disc | - | Bronze or bronze faced |

Gate and globe valves, 50mm and smaller shall be made of bronze material, rising stem, union bonnet, inside screw, solid wedge or plug type disc, and screwed ends. Valves installed in valve boxes shall have flanged ends for easy replacement or if valves with screwed ends are used, appropriate unions shall be installed.

Valves of all sizes shall have a rating of not less than Class 150.

TS-5.5.5 Bolts, Screws, Nuts and Etc.

All bolts, screws, anchor bolts, with sleeves, nuts, washers, locking devices, etc., required for all equipment and accessories to be supplied under this Contract shall be furnished.

Threads shall be metric. Where required they shall be adequately treated against corrosion before dispatch from the works. All threads shall be greased carefully during installation except where otherwise specified. Split pins or other approved locking devices generally shall be provided for nuts which may become loose due to vibration, etc.

All bolts, nuts, screws and other devices used to fix, clamp or adjust any parts which are exposed to water or high humidity, or subjected to frequent adjustment or frequent removal shall be of corrosion resistant steel or bronze or hot-dipped galvanized. All other bolts and pins shall be of carbon steel.

When in position, all bolts or screwed rods shall project through the corresponding nuts, but this projection shall not exceed three threads, unless more length is required for adjustment.

TS-5.6 Installation**TS-5.6.1 General**

All components, materials, and devices to be furnished shall be assembled and installed in accordance with the installation drawings and written instructions of the manufacturer and applicable codes, standards and specifications. Prior to commencement of installation, the Contractor shall closely inspect the site and other structures on which components and materials supplied under this Contract will be installed.

All labor, tools, supplies, bracing, supports, fixing bolts and all other items or materials necessary to assemble, erect, install, test, and make the system ready for operation shall be furnished.

All installation works, testing, boring through walls, excavation and field adjustments shall be done by the Contractor. The Supplier/Contractor shall restore all affected works on the existing facilities to its original appearance and condition and to the satisfaction of NPC.

The Supplier/Contractor shall comply with all applicable and approved safety regulations while carrying out the works on site and with all reasonable requirements of NPC. This stipulation shall in no way release the Contractor from any obligation concerning his liability for accidents and damages. He shall be responsible for adequate protection of persons, property, equipment and materials against injuries and damages resulting from his operations.

Utmost care shall be strictly observed by the Supplier/Contractor during the conduct of works to avoid damage of any kind to existing structure, equipment and installations.

During the conduct of works, the Supplier/Contractor shall provide all necessary materials to protect all affected NPC properties from damage and dirt. Suitable materials such as tarpaulins or plastic covers shall be used for this purpose.

The Supplier/Contractor shall also be responsible for any damage to NPC property arising from poor or improper installation or testing of the supplied materials and equipment.

Should any damage, breakage or losses occur due to the carelessness, negligence or fault of the Supplier/Contractor, the Supplier/Contractor shall repair, replace, or otherwise make good all damaged items at his own expense and to the satisfaction of NPC.

The contractor shall submit the Program/Software (including password) of the system upon completion of the project. Supplier/Contractor shall also conduct at least two (2) training sessions for the technology transfer.

TS-5.6.2 Piping System

The Supplier/Contractor shall install the piping system in a thorough manner and with good workmanship in accordance with this specification or as directed by NPC. No installation work shall commence unless piping layout has been approved by NPC. All pipes, fittings, valves and appurtenances shall be free from dirt or other foreign matters prior to install. During installation of the pipes, care shall be taken to prevent the pipes from becoming clogged as the works progress. Should any pipe become either partially or wholly clogged before final completion of the work, it shall be cleaned out by the Contractor in a manner satisfactory to NPC or shall be replaced by and at the expense of the Supplier/Contractor. Open ends shall be temporarily plugged, otherwise suitably closed when necessary.

Special care shall be taken in carrying out the installation of joints, branches, valves, and other fittings.

All piping works shall be coordinated with any other work at site and with existing installation so that interference between piping and other structural features will be avoided. In case interferences occur, NPC will decide which work is to be relocated.

TS-5.6.3 Equipment Marking and Labeling

All equipment and devices to be supplied by the Supplier/Contractor under this contract shall be provided with a corrosion-resistant nameplate with clearly legible writing of approved size and pattern and shall be permanently attached at an easily visible place. It shall provide all necessary information or brief technical description under which the equipment has been designed to operate and shall include the following: manufacturer's name; type of equipment; serial number; year of manufacture; weight and other relevant information in compliance with applicable standards.

Each equipment wherever necessary, shall be provided with cautionary and warning plates and signs.

Nameplates, labels, and warning plates shall be in English.

The nameplates and labels shall be protected during erection especially during painting. Damaged or illegible labels or nameplates shall be replaced by new ones.

No separate payment shall be made by NPC for nameplates and labels. Corresponding costs thereof shall be included by the Supplier/Contractor in the bid price for each equipment to be furnished under the Contract.

TS-5.6.4 System Wiring and Grounding

The scope of work shall include the supply and installation of all interconnecting raceways and wiring, including supports for interfacing all his supplied equipment and devices.

Electrical installation of the Fire Fighting System shall be in accordance with NFPA 70 and 72 and all applicable local codes and regulations.

All wiring shall be fully segregated from other wiring system and run in dedicated raceways. Indoor cables shall run in Electrical Metallic Tubing (EMT) conduits and outdoors in Rigid Galvanized Conduits (RGC). Cables shall be XLPE insulated with Thermo set Jacket. PVC insulation shall not be used.

Wire for 220volts circuit shall be 3.5mm² minimum. All voltage wiring shall be color coded in conduit or electrical metallic tubing. All circuit conductors shall be identified within each enclosure where a top, splice or termination is made. Conductor identification shall be by plastic coated self-sticking printed markers or by heat-shrink type sleeves. The markers shall be attached in a manner that will not permit accidental detachment. Control circuit terminations shall be properly identified. No "T" wiring or pigtail connectors shall be permitted.

All terminals requiring grounding connection shall be grounded to the grounding system or as per manufacturer's recommended standard.

Final terminations between the control panel and the system field wiring shall be made under the direct supervision of a manufacturer-trained representative.

All terminals requiring grounding connection shall be grounded to the grounding system of the building in accordance with the National Electrical Code.

All system components shall be securely supported independent of the wiring. Runs of conduit and wiring shall be straight, neatly arranged, properly supported, and installed parallel and perpendicular to walls and partitions.

All wiring shall be installed by qualified individuals, to conform to the National Electrical Code (NFPA 70), Article 725 and Article 760, except as otherwise permitted for limited energy circuits, as described in NFPA 72 (National Fire Alarm and Signaling Code). Wiring installation shall meet all local codes and regulations.

TS-6.0 CONTRACTOR EXPERIENCE/QUALIFICATIONS

The relative experience of the Supplier/Contractor shall comply with the following:

- a. The Supplier/Contractor should have been in the business of designing, installing, test and commissioning of the Fire Fighting System including fire detection and alarm for not less than three (3) years;

- b. The Fire Fighting System being offered should be similar to the requirement of this specification and should have been performed satisfactorily in the actual service for not less than three (3) years;
- c. The Supplier/Contractor shall be trained by the Manufacturer to calculate/design, install, test and maintain the clean agent fire extinguishing system and shall be able to produce a certificate stating such on request;
- d. The Supplier/Contractor shall have a door fan test equipment and to conduct room integrity test before final testing & commissioning;
- e. The Supplier/Contractor shall employ a person who can show proficiency at least equal to a National Institute for Certification in Engineering Technologies (NICET) level III certification in special hazards design;
- f. The Supplier/Contractor shall confirm in writing that he stocks a full complement of spare parts and offers 24-hour emergency service for all equipment being furnished;
- g. The Supplier/Contractor shall have their own Clean Agent refilling station and shall be 24/7 in service;
- h. The Supplier/Contractor shall have a certificate of Department of Labor and Employment (DOLE); and
- i. A list of previous projects on Fire Fighting/Protection System should be submitted.

TS-7.0 TESTING AND ACCEPTANCE CRITERIA

TS-7.1 General

The Supplier/Contractor shall perform at his own expense all inspection required to ensure adequacy of design, material, workmanship and conformance of the supplied system/component to the requirements of the specifications and standards.

The Fire Fighting System's equipment, components, devices, and materials shall be subjected to the manufacturer's standard factory tests prior to delivery.

Certified test reports/results of all tests, inspections and measurements conducted shall be submitted to NPC for evaluation and acceptance.

Necessary inspections at the place of delivery shall also be conducted with the presence of NPC representative/s.

Upon arrival of equipment and materials at delivery site, NPC and the Supplier/Contractor or their authorized representatives, shall jointly verify them following the steps below:

- a. Inspection and verification of the packing list;
- b. Visual inspection of the condition of the packing and its surfaces; and
- c. Partial opening of the crates and plastic sheet protection of equipment/component to verify the content and its physical condition and to check pilferage or damage during shipment and storage.

A record shall be prepared carefully noting all eventual shortages, defects or damages, signed by the Supplier/Contractor and concurred by NPC. All shortages and damages noted shall be immediately replaced by the Supplier/Contractor at his own cost and shall ensure the timely delivery of replacement without affecting the agreed overall contract implementation schedule.

After the installation of the system/equipment, the Supplier/Contractor shall carry out functional and operational test to confirm that the system/equipment will operate and perform satisfactorily in accordance with the requirements of the specifications and to the satisfaction of NPC representative/s.

Acceptance tests shall be carried out according to manufacturer's instructions, latest edition of relevant NFPA standards (72 & 2001), other Codes, Standards and Compliance as specified in Clause TS-4.1

The Supplier/Contractor shall submit five (5) copies of test procedures for NPC review and approval at least thirty (30) calendar days prior to the conduct of test at site. The test procedure shall include a step-by-step description of all tests to be performed and shall indicate the type and location of test apparatus to be employed. All tests shall be conducted in the presence of NPC. Tests shall not be conducted unless the test procedure has been approved by NPC.

All consumables required during testing shall also be borne by the Supplier/Contractor.

If the supplied system/equipment/component fails to PSs any test, NPC may, at his own judgment, direct the Supplier/Contractor to make necessary corrections or alterations for defects or order the replacement of same as may be deemed appropriate. Any expenses due to additional tests or retests made necessary by failure of the Supplier/Contractor's supplied system/equipment, i.e. failure to meet the guarantees and other requirements of the specifications, shall be borne by the Supplier/Contractor.

Acceptance certificate shall be issued only upon completion of the following:

- a. The visual, functional and operational tests of the entire system are satisfactorily conducted and results are acceptable to NPC; and
- b. Submission of documents as specified in Clause TS-10.0 items (b) & (c).

TS-7.2 Testing**TS-7.2.1 General**

Fire Fighting System's components shall be given requisite factory tests as necessary to determine that the materials and equipment are free from defects and ensure that system design, construction, installation and test shall meet the requirements of this specification.

Sprinkler system shall be tested for acceptance in accordance with requirements of NFPA 13, NFPA 15, and NFPA 11 respectively.

The Fire Alarm and Detection System shall be tested for acceptance in accordance with requirements of NFPA 14, NFPA 15, and NFPA 20 respectively.

Test procedure for testing and commissioning of the Fire Fighting System shall be prepared by the Contractor/Manufacturer in accordance with NFPA 72 which shall be submitted to NPC for review and approval. The Contractor/Manufacturer shall be responsible for the performance of the test, demonstrating the function of the system and verifying the correct operation of all systems components, circuits, and programming.

TS-7.2.2 Fire Detection, Alarm and Control System

The fire detection and alarm system shall be tested in accordance with NFPA 72 and the test procedure submitted by the Supplier/Contractor and approved by NPC.

The Supplier/Contractor shall demonstrate all input and output functions of the system and verify the correct operation of all systems components, circuits and programming which shall include but not limited to the following:

- a. System wiring to demonstrate correct system response and subsequent operation;
- b. System audible and visible alarms including system indications; and
- c. System power capabilities including back-up battery and charger.

Testing shall include verification that the releasing circuits and components energized or actuated by the fire alarm system are electrically supervised and operate as intended on alarm.

Suppression systems and releasing components shall be returned to their functional operating condition upon completion of system testing.

TS-7.2.3 Fire Suppression System

After the system installation has been complete, the entire system shall be checked out, inspected and functionally tested by qualified and trained personnel

in accordance with the manufacturer's recommended procedures duly approved by NPC and NFPA standards.

All containers and distribution piping shall be checked for proper mounting and installation.

All electrical wiring shall be tested for proper connection, continuity and resistance to earth.

All system and equipment interlocks such as dehumidifier's shutoff, audible and visual devices, local and remote alarms, automatic actuation, solenoid and manual actuation, power shutdown, manual override of abort functions. etc. shall function as intended and designed.

Supervision of all panel circuits, including AC power and battery power supplies, shall be tested and qualified.

Each Control Panel circuit shall be tested for trouble by inducing a trouble condition into the system.

TS-7.2.4 Water Sprinkler System

Piping systems shall be examined visually to determine that they have been properly installed in conformity with the approved drawings. Equipment and devices shall be checked for proper identification and operating instructions.

Flushing to remove foreign materials shall be made after installation and prior to hydrostatic testing. Disposal of flushing water must be suitably arranged and coordinated with the plant management. For foam system, flushing shall be done after foam actual discharge testing.

Piping system shall be hydrostatically tested at a pressure of 1.5 times the design pressure for a period of not less than two (2) hours. Test may be applied to sections of the entire system in accordance with approved procedure. There shall be no leakage or whatsoever from the pipes, fittings and connections for each section tested while the system is under test pressure.

Any leakage or any defect disclosed by the test prior to the acceptance shall be corrected and repaired by the Contractor at his own expense and to the satisfaction of NPC.

Before any test is made, the Contractor shall notify NPC so that such test may be witnessed by him or his duly authorized representative. All expenses incurred during the test shall be borne by the Contractor.

Test shall also include the following:

- a. Visual equipment check to insure compliance with approved design and shop drawings; and

- b. All additional inspection and test necessary to insure that the entire fire protection system is correct and ready for operation.

TS-7.2.5 Paging System

The system shall be tested in accordance and the test procedure submitted by the Supplier/Contractor and approved by NPC.

The Supplier/Contractor shall demonstrate all input and output functions of the system and verify the correct operation of all systems components and circuits which shall include but not limited to the following:

- a. Measurement of sound in decibels (dB); and
- b. System audible broadcast sound/oscillation.

TS-7.3 Test Failures

If any equipment or component fails to PSs any test, NPC may, at his own judgment, direct the Supplier/Contractor to make any necessary corrections or alterations for defects or order equipment/component replacement, as maybe deemed appropriate. Any and all expenses due to additional tests or retests made necessary by failure of Supplier/Contractor's supplied equipment/component and other requirements of the specifications shall be borne by the Supplier/Contractor.

TS-8.0 ANTI-CORROSION AND PAINTING WORKS

Prior to application of paint, all external surfaces of pipes shall be power brushed and wiped with clean rags to remove rust, dirt, and scales.

All pipes, fittings, supports, and hangers shall be applied with suitable protective coating and the Contractor shall see to it that all surfaces are clean before application of the protective coating.

Painted surfaces of all equipment which are damaged during transport and installation shall be repaired or touched-up as necessary to prevent rusting, corrosion, etc. until the final finish painting application is made.

Final color to be used for all firefighting equipment and piping shall conform to Munsell No. 7.5 R 4/14.

TS-9.0 TRAINING OF NPC PERSONNEL

The Supplier/Contractor/Manufacturer shall extend all possible assistance and cooperation to NPC regarding the transfer of technology and developing expertise in the area of system design, operation and maintenance of the Fire Suppression System and associated Fire Detection, Alarm, Actuation and Signaling Systems.

The training program shall be conducted by expert/s who are knowledgeable and well trained by the manufacturer or his authorized representative.

Said training program shall be submitted to NPC for approval. The program shall contain the schedule of activities summarizing the time and duration (not less than one day) and the corresponding topics/content of the program.

The timing of the training should be such that the participants will be equipped with sufficient know-how to participate in test and commissioning of the complete Fire Suppression System.

The training program shall be conducted at Site of not less than four (4) NPC personnel who will be assigned to operate and maintain the system.

The cost of training shall be borne by the Supplier/Contractor and shall be included in the bid price.

TS-10.0 DRAWINGS AND DOCUMENTS TO BE SUBMITTED

a) To be submitted with the bid

- a.1 Letter of Confirmation that local agent or representative is available to provide "After Sales Services" and parts and stating his full support. Name, address and contact no./person shall be provided;
- a.2 Manufacturer's Brochures/Catalogues which contain information/data to adequately support the Technical Data Sheets;
- a.3 Original copy of Manufacturer's Authorization to bid directly addressed to the BAC-NPC indicating therein the PR/Reference Number with:

a.3.1 Certificate from a customer (end user) duly addressed to the Bidder that the supplied and installed equipment/system which is similar to the item/s subject for bidding has/have performed satisfactorily in service.

Note: Authorization to bid shall be current and valid for at least six (6) months from the date of bid opening as advertised.

- a.4 Completely filled-out Technical Data Sheets;
- a.5 Work Plan/Bar Chart Schedule;
- a.6 Certificate of Competency (COC) issued by the Bureau of Fire Protection (BFP) to the Supplier/Contractor's Supervising Technical Engineer;
- a.7 Certificate of Training issued by the Manufacturer to the Supplier/Contractor for the training of design calculation, installation, testing and maintenance of the clean agent fire extinguishing system; and

- b) To be submitted before/during delivery, installation and test of equipment/component
 - b.1 "Certificate of Origin" from the Manufacturer;
 - b.2 Factory Test Reports/Certificates;
 - b.3 Manpower Schedule;
 - b.4 Three (3) copies of Installation, Operation, and Maintenance Manual (Hardbound);
 - b.5 Hydraulic and Clean Agent calculation and design drawings (as per applicable NFPA Codes);
 - b.6 Installation and detailed drawings, equipment/device layout drawings, including wiring diagram showing the termination points for all field-wiring circuits;
 - b.7 Confirmation Letter that the Supplier/Contractor stocks a full complement of spare parts and offers 24-hour emergency service for all equipment being furnished; and
 - b.8 Test Procedures and Test Reports.
- c) To be submitted after completion of works
 - c.1 "As-Built" Installation and Layout Drawings; and
 - c.2 "Warranty" Certificate for one (1) year against factory defects/workmanship

All drawings and documents in Clause TS-10.0 item (b) and (c), including other drawings/documents specified in Clause TS-6.0 and TS-7.0 shall be submitted to the Manager-Resource Management Services (RMS) for evaluation and/or approval prior to issuance of acceptance certificate.

TS-11.0 GUARANTEE

The Supplier/Contractor shall guarantee the repair, and/or replacement of the supplied equipment, components or devices at his own expense against defect in design, workmanship and materials for a period of twelve (12) months after the system/equipment has been installed and commissioned. The Supplier/Contractor guarantees that the system/equipment will perform in the manner as set forth in the equipment's manual and the Contract.

The Supplier/Contractor shall submit a Warranty Certificate for at least one (1) year effective from the date of acceptance by NPC.

During the one-year warranty period, the Supplier/Contractor shall provide the services of the equipment Manufacturer or his authorized local representative who has complete knowledge of the installed fire suppression system, two (2) inspections of the completed systems covered under this contract at no cost to

NPC. The first inspection shall be at the 6-month interval and the second inspection at the 12-month interval. Inspections shall be conducted in accordance with the manufacturer's guidelines and the recommendations of NFPA 2001 but not limited to the following:

- a) Checking/inspection of installed system equipment and components;
- b) Conduct evaluation and assessment of operating parameters;
- c) Make necessary adjustment on instruments and controls;
- d) Perform/supervise necessary repair, trouble shooting, parts replacement; and
- e) Provide further informative instructions to NPC Personnel as required.

After the lapse of the warranty period, provided that there are no defects found and/or pending repair works or services, NPC shall release the warranty certificate.

The Supplier/Contractor guarantees that when the equipment and/or material are placed in operation and/or use, it will perform in the manner as set forth in the Contract.

TS-12.0 MEASUREMENT OF PAYMENT

Payment shall be within sixty (60) days upon Supplier/Contractor's completion of project, submission of invoice, service reports, issuance of Certificate of Acceptance or Completion from the Manager-Resource Management Services (RMS) and submission of other supporting documents required by NPC.

Failure of the Supplier/Contractor to submit the approved "As-Built" or "Final" Drawings and "Operation and Maintenance" Manuals to NPC on the respective dates specified in Clauses TS-10.0, NPC shall withhold Five percent (5%) of contract amount from payments due to the Supplier/Contractor.

SECTION VI

TECHNICAL DATA

SHEETS

SECTION VI – TECHNICAL SPECIFICATIONS**PART II – TECHNICAL DATA SHEETS****TABLE OF CONTENTS**

ITEMS	DESCRIPTION	PAGE
I.	FIRE DETECTION AND ALARM SYSTEM	VI-TDS-1
II.	FIRE SUPPRESSION SYSTEM	VI-TDS-2
III.	PAGING SYSTEM	VI-TDS-3
IV.	WATER SPRINKLER SYSTEM	VI-TDS-3

PART II – TECHNICAL DATA SHEETS**REPLACEMENT OF FIRE DETECTION AND ALARM SYSTEM ; AND
INSTALLATION OF FIRE SUPPRESSION, SPRINKLER AND PAGING
SYSTEMS FOR ILIJAN NATURAL GAS RECEIVING FACILITY**

1. The Bidder shall complete this technical data sheet and submit the filled-up form with the technical proposal. The Bidder shall use continuation sheets as necessary for any other additional information keeping to the format shown herein or by reproducing the same.
2. NPC reserves the right to reject Bids without proper and/or specific data and information as required herein.
3. The data required are minimum technical features and characteristics of the Equipment/Component/Parts to be provided by the bidder. Bidder's proposal shall at least be equal or superior to the requirements specified by NPC.

I. FIRE DETECTION AND ALARM SYSTEM

Item	Description	NPC Requirement	Supplier/ Contractor Data
1.	Common Main Addressable Fire Suppression Control Panel (CMAFSCP)		
a.	Manufacturer	By Supplier/Contractor	
b.	Place of Manufacture	By Supplier/Contractor	
c.	No. of Unit	One (1)	
d.	Parts/Components	<p>Complete with control modules (detection, relays, display and etc), card cage, trouble/fault, audible alarm with flashing light and other accessories but not limited to the following:</p> <ul style="list-style-type: none"> ▪ Addressable Heat Detector, Fixed Temperature (7 pcs.) ▪ Addressable Photoelectric Smoke Detector (16 pcs) ▪ Manual Pull Station, addressable, dual action, outdoor type (5 sets) ▪ Alarm Signal Module (9 pcs). ▪ Addressable Input (AI) Monitor Module (4 pcs) ▪ Addressable Output (AO) Control Module (4 pcs.) ▪ Vibrating Bell, 6 inches Ø Vibrating Flashing Light, outdoor type (5 pcs.) ▪ Fire Horn, Multi Tone-Multi Strobe, 24 VDC (2 pcs.) ▪ Standard Base for DS Series Detectors - 37 pcs. ▪ Battery: 12 VDC, 7 AH (1 pc.) ▪ Materials/devices/accessories shall include but not limited to: associated components/devices, electro-mechanical pipes, wiring, conduit clamps; electrical boxes and fittings; hanger; anchors, frames, brackets & other incidentals to complete the works. - (1 lot) 	
2.	Approval	UL listed and/or FM approved	

Name of Firm

Name & Signature of Representative

Designation

II. FIRE SUPPRESSION SYSTEM

Item	Description	NPC Requirement	Supplier/ Contractor Data
1.	Devices and Accessories		
a.	Manufacturer	By Supplier/Contractor	
b.	Place of Manufacture	By Supplier/Contractor	
c.	Parts/Components	Consisting of but not limited to the following: <ul style="list-style-type: none"> ▪ Electric Control Heads (2 pcs.) ▪ Brass Discharges Nozzles, 360°, NPT (2 pcs.) ▪ Evacuation Signage, led, 24 VDC (1 set) ▪ Gas Discharge Signage, LED, 24 VDC (1 set) ▪ Door Warning Sign (2 sets) ▪ Materials/devices shall include but not limited to: electro-mechanical pipes, fittings wiring, electrical conduit; hanger; anchor, bolts, nuts, brackets, electrical box, locknut and other incidentals to complete the works - (1 lot) 	
2.	Clean Agent		
a.	Manufacturer	By Supplier/Contractor	
b.	Place of Manufacture	By Supplier/Contractor	
c.	Type	By Supplier/Contractor	
d.	No. of Unit	Two (2) Cylinders	
e.	Discharge Time	≤10 seconds	
f.	Atmospheric lifetime	5 Days	
g.	Weight of Clean Agent	<ul style="list-style-type: none"> ▪ Control Room : 122.0 lb. (min) ▪ Power Room : 34.0 lb. (min) 	
h.	Cylinder Construction	Alloy Steel	
i.	Working Pressure	360 psig (24.8 bar)	
j.	Parts/Components	Materials/devices/accessories shall include but not limited to: discharge hoses, electro-mechanical pipes, fittings, hanger; cylinder frame, brackets/hangers and other incidentals to complete the works - (1 lot)	
3.	Approval	UL listed and/or FM approved	

Name of Firm

Name & Signature of Representative

Designation

III. PAGING SYSTEM

Item	Description	NPC Requirement	Supplier/ Contractor Data
1.	Manufacturer	By Supplier/Contractor	
2.	Place of Manufacture	By Supplier/Contractor	
3.	Parts/Components	Consisting of but not limited to the following: <ul style="list-style-type: none"> ▪ TOA Ceiling Speakers (10 pcs.) ▪ TOA Remote Microphone (6 pcs.) ▪ TOA System Mgt. Amplifier-(2 pcs.) ▪ TOA Mixer Amplifier (3 pcs.) ▪ TOA Horn Speakers (OutdoorType) (4 pcs.) ▪ Materials/devices/accessories shall include but not limited to: PVC pipes, flexible conduits, audio cables, speakers cables, wiring, brackets, metal rack with wheels, junction boxes, connectors and other incidentals to complete the works - (1 lot) 	
4.	Approval	UL listed and/or FM approved	
5.	Owned Clean Agent Refilling Station	7 days available (including Holidays)	

IV. WATER SPRINKLER SYSTEM

Item	Description	NPC Requirement	Contractor/ Supplier Data
1.	Sprinkler Heads		
a.	Manufacturer	By Supplier/Contractor	
b.	Place of Manufacture	By Supplier/Contractor	
c.	Type	Glass Bulb or Fusible Link Sprinkler Heads, brass material, 1/2" NPT connection	
d.	No. of units	55 pcs. (includes 12 pcs. spares)	
e.	Parts/Components	Consisting of but not limited to the following: <ul style="list-style-type: none"> ▪ Escutcheon Plate (43 pcs.) ▪ Sprinkler head wrench and a cabinet to contain the spares and tools (1 lot) ▪ Sight Glass (6 pcs.) ▪ Water Flow Switch, 65 mm (3 pcs.) ▪ UL listed and/or FM approved 	
2.	Pipes, fittings and accessories	Pipe, ASTM A 53, Gr B, Seamless, Sched. 40, complete with associated valves, fittings, supports and incidentals to complete the works as described in the technical specifications and shown on the drawings - (1 lot)	

Name of Firm

Name & Signature of Representative

Designation

SECTION VII

SCHEDULE OF REQUIREMENTS

SECTION VII - SCHEDULE OF REQUIREMENTS (BID PRICE SCHEDULE)

REPLACEMENT OF FIRE DETECTION AND ALARM SYSTEM ; AND INSTALLATION OF FIRE SUPPRESSION, SPRINKLER AND PAGING SYSTEMS FOR ILIJAN NATURAL GAS RECEIVING FACILITY

ITEM NO.	DESCRIPTION	QTY.- UNIT	C O D E	UNIT PRICE FOR GOODS AND RELATED SERVICES TO BE SUPPLIED AND DELIVERED				TOTAL PRICE
				Unit Price of Goods & Services Delivered up to Philippine Port (Phil. Peso)+	Import Duties & other Levies Imposed by Phil. Govt. (Phil. Peso)	Value Added Tax and other Taxes Imposed by Phil. Govt. (Phil. Peso)	Local Transport from Port to Delivery Site (Phil. Peso)>	Local Currency (Phil. Peso) ((E+F+G+H) x C)
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
I.	FURNISHING OF ALL ENGINEERING, LABOR, MATERIALS, TOOLS AND EQUIPMENT FOR THE FOLLOWING FIRE FIGHTING SYSTEMS FOR ILIJAN NATURAL GAS RECEIVING FACILITY:							
1.0	New Addressable Fire Detection and Alarm System for Buildings 1, 2 and 3 (For monitoring, detection, alarm and signaling of AFSS, WSS and PS. Consisting of but not limited to the following: a. Common Main Addressable Fire System Control Panel (CMAFSCP), UL listed and/or FM approved capable of operating addressable and non-addressable devices - 1 set b. Heat Detector, fixed temperature, UL listed and/or FM approved, addressable type - 7 pcs. c. Smoke Detector, photoelectric type, UL listed and/or FM approved, addressable type -16 pcs. d. Base for DS Series Detectors - 37 pcs. e. Manual Pull Station, addressable, dual action, outdoor type, UL listed and/or FM approved, addressable - 5 sets f. Alarm Signal Module - 9 pcs. g. Addressable Input (AI) Monitor Module - 4 pcs. h. Addressable Output (AO) Control Module - 4 pcs. i. Fire Horn Multi Tone-Multi Strobe, 24 VDC - 2 pcs. j. Vibrating Bell, 6 inches Ø Vibrating flashing light, outdoor type, both are UL listed and/or FM approved - 5 pcs. k. 12 VDC Battery, UL/FM approved - 1 pc. l. Materials/Devices/Accessories, electro-mechanical pipes, wiring, conduit clamps; electrical boxes; fittings; hanger; anchors and associated supports. - 1 lot k. Miscellaneous - 1 Lot - Tagging/labeling for equipment, valves, piping, instruments & accessories; - Painting for electro-mechanical pipes, fittings, electrical conduits; boxes, hanger, frame; brackets and associated supports and accessories; - Conduct of training at site to be conducted by expert/s who are knowledgeable and trained by the Fire Fighting System manufacturer or his authorized distributor; - Installation Testing & Commissioning including programming and product presentation	1 Lot						

NOTES:

- + Bidders shall enter a code representing the Country of Origin of all imported equipment materials and accessories.
- > Cost of equipment, freight, insurance, etc. up to Phil. port of entry Unit Price for Local Transportation, Insurance and other local costs incidental to delivery of the goods from the Phil port of entry to final delivery site #.
- * Final delivery & installation of all materials & equipment shall be at Ilijan Natural Gas Receiving Facility located in Brgy. Arenas Point, Ilijan, Btangas.

Code	Country of Origin

Name of Bidder

Name and Signature of Authorized Representative

Designation

**SECTION VII - SCHEDULE OF REQUIREMENTS
(BID PRICE SCHEDULE)**

REPLACEMENT OF FIRE DETECTION AND ALARM SYSTEM ; AND INSTALLATION OF FIRE SUPPRESSION, SPRINKLER AND PAGING SYSTEMS FOR ILIJAN NATURAL GAS RECEIVING FACILITY

ITEM NO.	DESCRIPTION	QTY.- UNIT	• C O D E	UNIT PRICE FOR GOODS AND RELATED SERVICES TO BE SUPPLIED AND DELIVERED				TOTAL PRICE
				Unit Price of Goods & Services Delivered up to Philippine Port (Phil. Peso)+	Import Duties & other Levies Imposed by Phil. Govt. (Phil. Peso)	Value Added Tax and other Taxes Imposed by Phil. Govt. (Phil. Peso)	Local Transport from Port to Delivery Site (Phil. Peso)+	Local Currency (Phil. Peso) ((E+F+G+H) x C)
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
2.0	<p>Addressable Fire Suppression System for Building 1 (Total Flooding)- Complete with devices/accessories consisting of but not limited to the following:</p> <p>a. Cylinder Assembly, 360 psig (24.8 bar gauge) working pressure, filled with 125 lbs. (minimum) Clean Agent Fluid - 1 set</p> <p>b. Cylinder Assembly, 360 psig (24.8 bar gauge) working pressure, filled with 34.5 lbs. (minimum) Clean Agent Fluid - 1 set</p> <p>c. Electric Control Heads - 2 pcs.</p> <p>d. Brass Discharges Nozzles, 360", NPT - 2 pcs.</p> <p>e. Discharge Hose -2 pcs.</p> <p>f. Abort Station - 2 pcs</p> <p>g. Evacuation Signage, led, 24 VDC (2 pc) - 1 set</p> <p>h. Gas Discharge Signage, LED, 24 VDC - 1 set</p> <p>i. Door Warning Sign- 2 sets</p> <p>j. Materials consisting of electro-mechanical pipes, fittings wiring, electrical conduit; boxes; hanger; cylinder frame, anchor , bolts, nuts, brackets/ hangers and and other necessary materials for installation of electrical conduit layout, electrical box, locknut, etc. - 1 Lot</p> <p>k. Miscellaneous - 1 Lot</p> <ul style="list-style-type: none"> - Tagging/labeling for equipment, valves, piping, instruments and accessories; - Painting for electro-mechanical pipes, fittings, electrical conduits; boxes, hanger, frame; brackets and associated supports and accessories; - Conduct of training at site to be conducted by expert/s who are knowledgeable and trained by the Fire Fighting System manufacturer or his authorized distributor; and - Installation Testing and Commissioning including programming and product presentation 	1 Lot						

Notes:

- * Bidders shall enter a code representing the Country of Origin of all imported equipment materials and accessories.
- > Cost of equipment, freight, insurance, etc. up to Phil. port of entry Unit Price for Local Transportation, insurance and other local costs incidental to delivery of the goods from the Phil port of entry to final delivery site #.
- * Final delivery & installation of all materials & equipment shall be at Ilijan Natural Gas Receiving Facility located in Brgy. Arenas Point, Ilijan, Batangas.

Code	Country of Origin

Name of Bidder

Name and Signature of Authorized Representative

Designation

**SECTION VII - SCHEDULE OF REQUIREMENTS
(BID PRICE SCHEDULE)**

REPLACEMENT OF FIRE DETECTION AND ALARM SYSTEM ; AND INSTALLATION OF FIRE SUPPRESSION, SPRINKLER AND PAGING SYSTEMS FOR ILIJAN NATURAL GAS RECEIVING FACILITY

ITEM NO.	DESCRIPTION	QTY.- UNIT	• C O D E	UNIT PRICE FOR GOODS AND RELATED SERVICES TO BE SUPPLIED AND DELIVERED				TOTAL PRICE
				Unit Price of Goods & Services Delivered up to Philippine Port (Phil. Peso)+	Import Duties & other Levies Imposed by Phil. Govt. (Phil. Peso)	Value Added Tax and other Taxes Imposed by Phil. Govt. (Phil. Peso)	Local Transport from Port to Delivery Site (Phil. Peso)>	Local Currency (Phil. Peso) ((E+F+G+H) x C)
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
3.0	Water Sprinkler System (Bldgs 1, 2 and 3): Consisting of but not limited to the following: a. Glass Bulb or Fusible Link Sprinkler Heads, brass material, 1/2" NPT connection including spare units - 55 pcs. b. Escutcheon Plate - 43 pcs. c. Sprinkler wrench and a cabinet to contain the spares and tools - 1 lot d. Sight Glass - 6 pcs. e. Water Flow Switch, 65 mm - 3 pcs f. Water Sprinkler System Pipe, ASTM A 53, Gr B, Seamless, schedule 40, hot dip galvanized, pipe supports, fittings associated pipe supports, fittings, and other necessary accessories - 75 mm Ø - 84 meters - 40 mm Ø - 18 meters - 65 mm Ø - 36 meters - 32 mm Ø - 60 meters - 50 mm Ø - 24 meters - 25 mm Ø - 252 meters g. Associated valves and other accessories as described in the technical specifications and shown on the drawings consisting of but not limited to the following: - 65 mm Ø Gate Valve - 3 pcs. - 50 mm Ø Gate Valve - 1 pcs. - 25 mm Ø Gate Valve - 6 pcs. Installation Testing and Commissioning	1 Lot						
4.0	Paging System for Buildings 1, 2, 3 and Guardhouse: Consisting of but not limited to the following: a. TOA Ceiling Speakers - 10 pcs. b. TOA Remote Microphone - 6 pcs. c. TOA System Management amplifier - 2 pcs. d. TOA Mixer Amplifier - 3 pcs. e. TOA CD Player Tuner - 1 pc. f. TOA Horn Speakers (outdoor g. Materials consisting of pvc pipes, flexible conduits, audio cables, speakers cables, wiring, brackets, metal rack with wheels, junction boxes, connectors and other incidentals to complete the works - 1 Lot h. Miscellaneous - 1 Lot - Tagging/labeling for equipment/instruments and accessories - Painting for electro-mechanical pipes, fittings, electrical conduits, boxes, hanger, frame; brackets and associated supports and accessories - Installation Testing and Commissioning	1 Lot						
TOTAL								
								(Amount in Words)

Notes:

- + Bidders shall enter a code representing the Country of Origin of all imported equipment materials and accessories.
- > Cost of equipment, freight, insurance, etc. up to Phil. port of entry Unit Price for Local Transportation, insurance and other local costs incidental to delivery of the goods from the Phil port of entry to final delivery site #.
- Final delivery & installation of all materials & equipment shall be at Ilijan Natural Gas Receiving Facility located in Brgy. Arenas Point, Ilijan, Batangas.

Code	Country of Origin

Name of Bidder

Name and Signature of Authorized Representative

Designation

SECTION VIII

BIDDING FORMS

SECTION VIII – BIDDING FORMS

TABLE OF CONTENTS

NPCSF-GOODS-01	- Checklist of Technical and Financial Envelope Requirements for Bidders
NPCSF-GOODS-02	- List of all Ongoing Government & Private Contracts Including Contracts Awarded but not yet Started
NPCSF-GOODS-03	- Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid
NPCSF-GOODS-04	- Computation of Net Financial Contracting Capacity (NFCC)
NPCSF-GOODS-05	- Joint Venture Agreement
NPCSF-GOODS-06a	- Form of Bid Security : Bank Guarantee
NPCSF-GOODS-06b	- Form of Bid Security : Surety Bond
NPCSF-GOODS-06c	- Bid Securing Declaration Form
NPCSF-GOODS-07	- Omnibus Sworn Statement (Revised)
NPCSF-GOODS-08	- Bid Letter
Sample Form	- Bank Guarantee Form for Advance Payment
Sample Form	- Certification from DTI as Domestic Bidder

SECTION VIII – BIDDING FORMS

Standard Form No: NPCSF-GOODS-01

Checklist of Technical & Financial Envelope Requirements for Bidders**A. THE 1ST ENVELOPE (TECHNICAL COMPONENT) SHALL CONTAIN THE FOLLOWING:****1. ELIGIBILITY DOCUMENTS****a. (CLASS A)****➤ Any of the following:**

- PhilGEPS Certificate of Registration and Membership under Platinum Category in accordance with Section 8.5.2 of the IRR;

OR:

- The following updated and valid Class "A" eligibility documents enumerated under "Annex A" of the Platinum Membership:
 - Registration Certificate from the Securities and Exchange Commission (SEC) for corporations, Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives;
 - Mayor's/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.
In cases of recently expired Mayor's/Business permits, it shall be accepted together with the official receipt as proof that the bidder has applied for renewal within the period prescribed by the concerned local government unit, provided that the renewed permit shall be submitted as a post qualification requirement in accordance with Section 34.2 of the Revised IRR of RA 9184.
 - 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.
 - Tax clearance per Executive Order 398, Series of 2005, as finally reviewed and approved by the BIR or as stated under GPPB NPM-039-2014, for Non-Resident Foreign Corporation (NRFC) and Non-Resident Alien Not Engaged in Trade or Business (NRANETB), a Delinquency Verification Certificate may be submitted as a form of Tax Clearance;

OR:

- A combination thereof
- Statement of all its ongoing government and private contracts if any, whether similar or not similar in nature and complexity to the contract to be bid (NPCSF-GOODS-02)
- The Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid, and whose value, adjusted to current prices using the Philippine Statistics Authority (PSA) consumer price index, must be at least 50% of the ABC (NPCSF-GOODS-03) complete with the following supporting documents:

1. Contract/Purchase Order
2. Certificate of Acceptance; or Certificate of Completion; or Official Receipt (O.R); or Sales Invoice

(The Single Largest Completed Contract (SLCC) as declared by the bidder shall be verified and validated to ascertain such completed contract. Hence, bidders must ensure access to sites of such projects/equipment to NPC representatives for verification and validation purposes during post-qualification process.

It shall be a ground for disqualification, if verification and validation cannot be conducted for reasons attributable to the Bidder.)

SECTION VIII – BIDDING FORMS

Standard Form No: NPCSF-GOODS-01

- Duly signed computation of its Net Financial Contracting Capacity (NFCC) at least equal to the ABC (NPCSF-GOODS-04) or a Committed Line of Credit (CLC) at least equal to ten percent (10%) of the ABC, issued by a Universal or Commercial Bank; If the Bidder opted to submit a Committed Line of Credit (CLC), the bidder must submit a granted credit line valid/effective at the date of bidding.
- b. (CLASS B)**
- For Joint Venture (if applicable), any of the following:
 - Valid Joint Venture Agreement (NPCSF-GOODS-05)
OR
 - Notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA, if awarded the contract
- Certification from the relevant government office of their country stating that Filipinos are allowed to participate in their government procurement activities for the same item/product *(For foreign bidders claiming eligibility by reason of their country's extension of reciprocal rights to Filipinos)*

2. Technical Documents

- Bid Security, any one of the following:
 - Bid Securing Declaration (NPCSF-GOODS-06c)
OR
 - Cash or Cashier's/Manager's check issued by a Universal or Commercial Bank – 2% of ABC;
OR
 - Bank draft/guarantee or irrevocable letter of credit issued by a Universal or Commercial Bank: (NPCSF-GOODS-06a) - 2% of ABC;
OR
 - Surety Bond callable upon demand issued by a reputable surety or insurance company (NPCSF-GOODS-06b) - 5% of ABC, with
 - Certification from the Insurance Commission as authorized company to issue surety
- Duly signed, completely filled-out and notarized Omnibus Sworn statement (Revised) (NPCSF-GOODS-07), complete with the following attachments:
 - For Sole Proprietorship:
 - Special Power of Attorney
 - For Partnership/Corporation/Cooperative/Joint Venture:
 - Document showing proof of authorization (e.g., duly notarized Secretary's Certificate, Board/Partnership Resolution, or Special Power of Attorney, whichever is applicable)
- Data and Information to be submitted with the Bid/Proposal as specified in Clause TS-10.0(a) of Section VI - Technical Specifications;
- Complete eligibility documents of the proposed subcontractor, if any

Standard Form No: NPCSF-GOODS-01

B. THE 2ND ENVELOPE (FINANCIAL COMPONENT) SHALL CONTAIN THE FOLLOWING:

- Duly signed Bid Letter indicating the total bid amount in accordance with the prescribed form (NPCSF-GOODS-08)
- Duly signed and completely filled-out Schedule of Requirement (Section VII) indicating the unit and total prices per item and the total amount in the prescribed Price Schedule form.
- For Domestic Bidder claiming for domestic preference:
 - Letter address to the BAC claiming for preference
 - Certification from DTI as Domestic Bidder in accordance with the prescribed forms provided

CONDITIONS:

1. *Each Bidder shall submit one copy of the first and second components of its Bid. NPC 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.*
2. *In the case of foreign bidders, the eligibility requirements under Class "A" Documents (except for Tax Clearance) may be substituted by the appropriate equivalent documents, if any, issued by the country of the foreign bidder concerned. The eligibility requirements or statements, the bids, and all other documents to be submitted to the BAC must be in English. If the eligibility requirements or statements, the bids, and all other documents submitted to the BAC are in foreign language other than English, it must be accompanied by a translation of the documents in English. The documents shall be translated by the relevant foreign government agency, the foreign government agency authorized to translate documents, or a registered translator in the foreign bidder's country; and 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.*

These documents shall be accompanied by a Sworn Statement in a form prescribed by the GPPB stating that the documents submitted are complete and authentic copies of the original, and all statements and information provided therein are true and correct. Upon receipt of the said documents, the PhilGEPS shall process the same in accordance with the guidelines on the Government of the Philippines – Official Merchants Registry (GoP-OMR).
3. *A Bidder not submitting bid for reason that his cost estimate is higher than the ABC, is required to submit his letter of non-participation/regret supported by corresponding detailed estimates. Failure to submit the two (2) documents shall be understood as acts that tend to defeat the purpose of public bidding without valid reason as stated under Section 69.1.(i) of the revised IRR of R.A. 9184.*

Standard Form Number: NPCSF-GOODS-02

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

Business Name : _____

Business Address : _____

Name of Contract/ Project Cost	a. Owner's Name b. Address c. Telephone Nos.	Nature of Work	Bidder's Role		a. Date Awarded b. Date Started c. Date of Completion or Contract Duration/ Date of Delivery	Value of Outstanding Works / Undelivered Portion
			Description	%		
Government						
Private						
Total Cost						

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

Note : This statement shall be supported with the following documents for all the contract(s) stated above which shall be submitted during Post-qualification:

1. Contract/Purchase Order and/or Notice of Award
2. Certification coming from the project owner/client that the performance is satisfactory as of the bidding date.

Submitted by : _____
(Printed Name & Signature)

Designation : _____

Date : _____

Standard Form Number: NPCSF-GOODS-03

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

Business Name : _____

Business Address : _____

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

- Notes: 1. The bidder must state only one (1) Single Largest Completed Contract (SLCC) similar to the contract to be bid.
 2. Supporting documents such as Contract/Purchase Order and any of the following: Certificate of Acceptance; or Certificate of Completion; or Official Receipt (O.R); or Sales Invoice for the contract stated above shall be submitted during Bid Opening.

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

Standard Form Number: NPCSF-GOODS-04

NET FINANCIAL CONTRACTING CAPACITY (NFCC)

- A. Summary of the Supplier's/Distributor's/Manufacturer'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 Supplier / Distributor / Manufacturer

Signature of Authorized Representative

Date : _____

SECTION VIII – BIDDING FORMS

Standard Form Number: NPCSF-GOODS-05

JOINT VENTURE AGREEMENT**KNOW ALL MEN BY THESE PRESENTS:**

That this JOINT VENTURE AGREEMENT is entered into by and between:
_____, of legal age, *(civil status)* _____, authorized representative of
_____ and a resident of _____.

- and -

_____, of legal age, *(civil status)* _____, authorized representative of
_____ 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 PROJECT**CONTRACT AMOUNT**

That the capital contribution of each member firm:

NAME OF FIRM	CAPITAL CONTRIBUTION
1. _____	P _____
2. _____	P _____

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

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

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

Name & Signature of Authorized Representative

Official Designation

Name of Firm

Name & Signature of Authorized Representative

Official Designation

Name of Firm

Witnesses

1. _____ 2. _____

[Jurat]

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

SECTION VIII – BIDDING FORMS

Standard Form Number: NPCSF-GOODS-06a

FORM OF BID SECURITY (BANK GUARANTEE)

WHEREAS, (Name of Bidder) (hereinafter called "the Bidder") has submitted his bid dated (Date) for the [name of project] (hereinafter called "the Bid").

KNOW ALL MEN by these presents that We (Name of Bank) of (Name of Country) having our registered office at _____ (hereinafter called "the Bank" are bound unto National Power Corporation (hereinafter called "the Entity") in the sum of [amount in words & figures as prescribed in the bidding documents] for which payment well and truly to be made to the said Entity the Bank binds himself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this _____ day of _____ 20____.

THE CONDITIONS of this obligation are that:

- 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 Instructions to Bidders;

we undertake to pay to the Entity up to the above amount upon receipt of his first written demand, without the Entity having to substantiate its demand, provided that in his demand the Entity will note that the amount claimed by it is due to the occurrence of any one or combination of the four (4) conditions stated above.

The Guarantee will remain in force up to 120 days after the opening of bids or as it may be extended by the Entity, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this Guarantee should reach the Bank not later than the above date.

DATE _____ SIGNATURE OF THE BANK _____

WITNESS _____ SEAL _____

(Signature, Name and Address)

Standard Form Number: NPCSF-GOODS-06b

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 Surety") are held and firmly bound unto National Power Corporation (hereinafter called "the Employer") as Obligee, in the sum of (amount in words & figures as prescribed in the bidding documents), callable on demand, for the payment of which sum, well and truly to be made, we, the said Principal and Surety bind ourselves, our successors and assigns, jointly and severally, firmly by these presents.

SEALED with our seals and dated this _____ day of _____ 20 _____

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

NOW, THEREFORE, the conditions of this obligation are:

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

SECTION VIII – BIDDING FORMS

Standard Form Number: NPCSF-GOODS-06b
Page 2 of 2

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

PRINCIPAL _____ SURETY _____

SIGNATURE(S) _____ SIGNATURES(S) _____

NAME(S) AND TITLE(S) _____ NAME(S) _____

SEAL _____ SEAL _____

SECTION VIII – BIDDING FORMS

Standard Form No: NPCSF-GOODS-06c

REPUBLIC OF THE PHILIPPINES)
CITY OF _____) S.S.**BID-SECURING DECLARATION****REPLACEMENT OF FIRE DETECTION AND ALARM SYSTEM ; AND INSTALLATION OF
FIRE SUPPRESSION, SPRINKLER AND PAGING SYSTEMS FOR ILIJAN NATURAL
GAS RECEIVING FACILITY, (PR NO. HO-GRF21-001)**To: **National Power Corporation**
BIR Road cor. Quezon Ave.
Diliman, Quezon CityI/We¹, 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 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 R.A. 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;
 - (c) I am/we are declared as the bidder with the Lowest Calculated and Responsive Bid, and I/we have furnished the performance security and signed the Contract.

IN WITNESS WHEREOF, I/we have hereunto set my hand this ____ day of ____
20____ at _____, Philippines._____
[Name and Signature of Bidder's Representative/
Authorized Signatory] [Signatory's legal capacity]
Affiant**[Jurat]***[Format shall be based on the latest Rules on Notarial Practice]*¹ Select one and delete the other. Adopt same instruction for similar terms throughout the document.

Standard Form No: NPCSF-GOODS-07

Omnibus Sworn Statement (Revised)

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

AFFIDAVIT

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

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

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

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

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

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

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

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

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

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

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

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

SECTION VIII – BIDDING FORMS

[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]

SECTION VIII – BIDDING FORMS

Standard Form No: NPCSF-GOODS-08

BID LETTER

Date: _____

To: **THE PRESIDENT**
National Power Corporation
BIR Road cor. Quezon Ave.
Diliman, Quezon City

Gentlemen:

Having examined the Bidding Documents including Bid Bulletin Numbers *[insert numbers]*_____, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to perform **REPLACEMENT OF FIRE DETECTION AND ALARM SYSTEM ; AND INSTALLATION OF FIRE SUPPRESSION, SPRINKLER AND PAGING SYSTEMS FOR ILIJAN NATURAL GAS RECEIVING FACILITY (PR NO. HO-GRF21-001)** in conformity with the said Bidding Documents for the sum of *[total Bid amount in words and figures]*_____ or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this Bid.

We undertake, if our Bid is accepted, to supply and deliver the goods and perform other services, if required within the contract duration and in accordance with the scope of the contract specified in the Schedule of Requirements and Technical Specifications.

If our Bid is accepted, we undertake to provide a performance security in the form, amounts, and within the times specified in the Bidding Documents.

We agree to abide by this Bid for the Bid Validity Period specified in Bid Documents and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your Notice of Award, shall be binding upon us.

We understand that you are not bound to accept the Lowest Calculated Bid or any Bid you may receive.

We certify/confirm that we comply with the eligibility requirements pursuant to the Bidding Documents.

We likewise certify/confirm that the undersigned, *[for sole proprietorships, insert: as the owner and sole proprietor or authorized representative of [Name of Bidder]*_____ has the full power and authority to participate, submit the bid, and to sign and execute the ensuing contract, on the latter's behalf for the *[Name of Project]*_____ of the National Power Corporation *[for partnerships, corporations, cooperatives, or joint ventures, insert: is granted full power and authority by the [Name of Bidder]*_____ to participate, submit the bid, and to sign and execute the ensuing contract on the latter's behalf for *[Name of Project]*_____ of the National Power Corporation.

We acknowledge that failure to sign each and every page of this Bid Letter, including the attached Schedule of Requirements (Bid Price Schedule), shall be a ground for the rejection of our bid.

*[name and signature of authorized signatory]*_____
[in the capacity of]

Duly authorized to sign Bid for and on behalf of _____
[name of bidder]

SECTION VIII – BIDDING FORMS

Bank Guarantee Form for Advance Payment

To: **THE PRESIDENT**
National Power Corporation
BIR Road cor. Quezon Ave.
Diliman, Quezon City

[name of Contract]

Gentlemen and/or Ladies:

In accordance with the Advance Payment Provision, of the General Conditions of Contract, *[name and address of Supplier]* (hereinafter called the "Supplier") shall deposit with the PROCURING ENTITY a bank guarantee to guarantee its proper and faithful performance under the said Clause of the Contract in an amount of *[amount of guarantee in figures and words]*.

We, the *[name of the universal/commercial bank]*, as instructed by the Supplier, agree unconditionally and irrevocably to guarantee as primary obligator and not as surety merely, the payment to the PROCURING ENTITY on its first demand without whatsoever right of objection on our part and without its first claim to the Supplier, in the amount not exceeding *[amount of guarantee in figures and words]*.

We further agree that no change or addition to or other modification of the terms of the Contract to be performed thereunder or of any of the Contract documents which may be made between the PROCURING ENTITY and the Supplier, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition, or modification.

This guarantee shall remain valid and in full effect from the date the advance payment is received by the Supplier under the Contract and until the Goods are accepted by the PROCURING ENTITY.

Yours truly,

Signature and seal of the Guarantors

[name of bank or financial institution]

[address]

[date]

SECTION VIII – BIDDING FORMS

CERTIFICATION AS A DOMESTIC BIDDER

This is to certify that based on the records of this office, (Name of Bidder) is
duly registered with the DTI on _____.

This further certifies that the articles forming part of the product of (Name of Bidder)
which are/is (Specify) _____, are substantially composed of
articles, materials, or supplies grown, produced or manufactured in the Philippines. (Please
encircle the applicable description/s).

This certification is issued upon the request of (Name of Person/Entity) in
connection with his intention to participate in the bidding for the (Name of Project)
of the National Power Corporation (NPC).

Given this ___ day of _____ 20__ at _____, Philippines

Name

Position

Department of Trade & Industry

SECTION IX

BID DRAWINGS

SECTION IX BID/REFERENCE DRAWINGS

SECTION IX - BID/REFERENCE DRAWINGS

TABLE OF CONTENTS

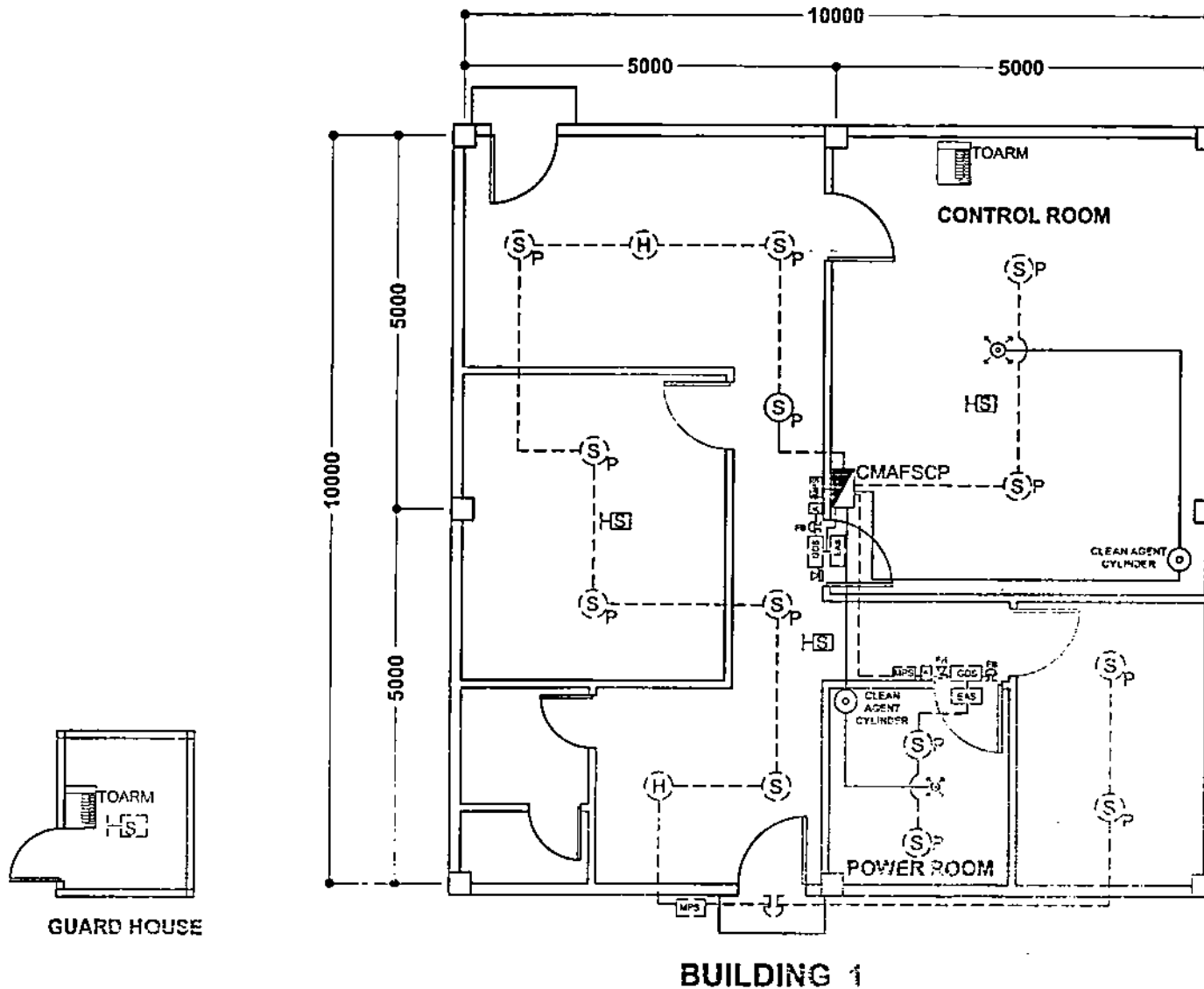
DRAWINGS	TITLE
IIIFF-BDM-17-.401	Building 1 1. Fire Detection and Alarm System 2. Fire Suppression System 3. Paging System
IIIFF-BDM-17-.402	Building 2 1. Fire Detection and Alarm System 2. Paging System
IIIFF-BDM-17-.403	Building 3 1. Fire Detection and Alarm System 2. Paging System
IIIFF-BDM-17-.404	Buildings 1 and 2 Water Sprinkler System Layout
IIIFF-BDM-17-.405	Building 3 Water Sprinkler System Layout
IIIFF-BDM-17-.406	Horn Outdoor Paging System Layout
IIIFF-BDM-17-.407	Devices Installation Details

NOTES:

1. ALL WORKS SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TECHNICAL SPECIFICATIONS.
2. THE SUPPLIER/CONTRACTOR SHALL SUBMIT DETAILED DRAWINGS/TECHNICAL DATA FOR THE NAFDAS, FSS AND PS INCLUDING THE LOCATION OF THE DETECTORS, SPEAKERS, REMOTE MICROPHONE, WIRING DIAGRAM, ETC, FOR NPC'S REVIEW/APPROVAL.
3. DETECTORS SHALL BE LOCATED NOT LESS THAN 300MM AWAY FROM ANY PART OF ANY LIGHTING FIXTURES.
4. FSCP SHALL BE WALL MOUNTED AND LOCATED IN THE CONTROL AS SHOWN IN THE DRAWING OR AS DIRECTED BY NPC PERSONNEL.
5. ALL MATERIALS AND PARTS WHICH ARE NOT SPECIFICALLY MENTIONED HEREIN BUT ARE NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF NAFDAS, FSS AND PS SHALL BE FURNISHED AT NO ADDITIONAL COST TO NPC.
6. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
7. ALL EQUIPMENT SHOWN IN THIS DRAWING SHALL BE SUPPLIED, CONSTRUCTED/INSTALLED AND TESTED BY THE SUPPLIER/CONTRACTOR.
8. THIS DRAWING IS FOR BIDDING PURPOSES ONLY.
9. ALL DETECTORS, MANUAL PULL STATIONS, FIRE HORN, PANELS AND OTHER FIRE ALARM DEVICES SHALL BE OF ADDRESSABLE TYPE.

LEGEND:

- (H) - ADDRESSABLE FIXED TEMPERATURE HEAT DETECTOR
- (S_P) - ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR
- CMASFSCP - COMMON MAIN ADDRESSABLE FIRE SYSTEM CONTROL PANEL
- MPS - MANUAL PULL STATION (ADDRESSABLE, DUAL ACTION)
- - FIRE HORN WITH STROBE LIGHT
- HD_{FAS} - VIBRATING BELL, 24VDC
- [A] - SUPPRESSION ABORT STATION
- GDS - GAS DISCHARGE AREA SIGNAGE
- EAS - EVACUATE AREA SIGNAGE
- ⊙ - 360 DEGREE DISCHARGE NOZZLE
- HS - TOA CEILING SPEAKER
- TOARM - TOA REMOTE MICROPHONE



OWNER		NATIONAL POWER CORPORATION AGHAM ROAD, DILIMAN, QUEZON CITY	
PROJECT: REPLACEMENT OF FIRE DETECTION AND ALARM SYSTEM AND INSTALLATION OF FIRE SUPPRESSION, SPRINKLER AND PAGING SYSTEM FOR ILLUMIN NATURAL GAS RECEIVING FACILITIES			
LOCATION: ILLUM NATURAL GAS			
TITLE		BUILDING 1	
1. FIRE DETECTION AND ALARM SYSTEM			
2. FIRE SUPPRESSION SYSTEM			
3. PAGING SYSTEM			
DESIGNED	BY	CHKD	DATE
DRAWN			
REVIEWED	REVIEWED	REVIEWED	REVIEWED
QUANTITY			
EST.			
APP'D			
PROJECT: ILLUM-NAT-17-001		PAGE: 1 OF 1	
REV. 01		BIG DRAWING	

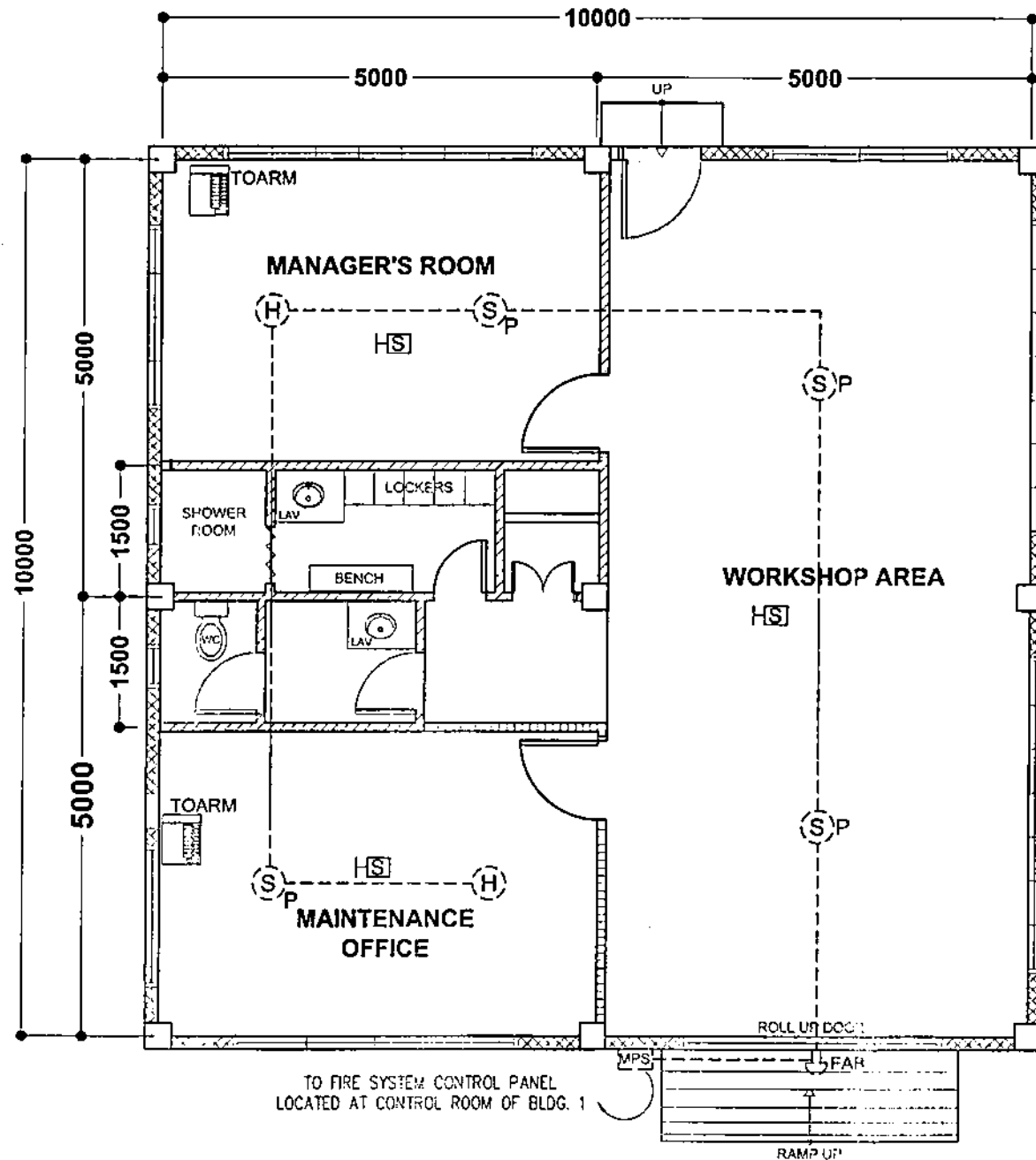
NOTES:

1. ALL WORKS SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TECHNICAL SPECIFICATIONS.
2. THE SUPPLIER/CONTRACTOR SHALL SUBMIT DETAILED DRAWINGS/TECHNICAL DATA FOR THE NAFDAS AND PS INCLUDING THE LOCATION OF THE DETECTORS, SPEAKERS, REMOTE MICROPHONE, WIRING DIAGRAM, ETC, FOR NPC'S REVIEW/APPROVAL.
3. DETECTORS SHALL BE LOCATED NOT LESS THAN 300MM AWAY FROM ANY PART OF ANY LIGHTING FIXTURES.
4. ALL MATERIALS AND PARTS WHICH ARE NOT SPECIFICALLY MENTIONED HEREIN BUT ARE NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE NAFDAS AND PS SHALL BE FURNISHED AT NO ADDITIONAL COST TO NPC.
5. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
6. ALL EQUIPMENT SHOWN IN THIS DRAWING SHALL BE SUPPLIED, CONSTRUCTED/INSTALLED AND TESTED BY THE SUPPLIER/CONTRACTOR.
7. THIS DRAWING IS FOR BIDDING PURPOSES ONLY.
8. ALL DETECTORS, MANUAL PULL STATIONS, FIRE HORN, PANELS AND OTHER FIRE ALARM DEVICES SHALL BE OF ADDRESSABLE TYPE.

LEGEND:

- (H) - ADDRESSABLE FIXED TEMPERATURE HEAT DETECTOR
- (S_P) - ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR
- CMAS/SCP - COMMON MAIN ADDRESSABLE FIRE SYSTEM CONTROL PANEL
- MPS - MANUAL PULL STATION (ADDRESSABLE, DUAL ACTION)
- ☐ - FIRE HORN WITH STROBE LIGHT
- VB - VIBRATING BELL, 24VDC
- A - SUPPRESSION ABORT STATION
- GDS - GAS DISCHARGE AREA SIGNAGE
- EAS - EVACUATE AREA SIGNAGE
- ☼ - 360 DEGREE DISCHARGE NOZZLE
- HS - TOA CEILING SPEAKER
- TOARM - TOA REMOTE MICROPHONE

BUILDING 2



OWNER:		NATIONAL POWER CORPORATION AGHAM ROAD, DILIMAN, QUEZON CITY	
PROJECT: REPLACEMENT OF FIRE DETECTION AND ALARM SYSTEM AND INSTALLATION OF FIRE SUPPRESSION, SPRINKLER AND PAGING SYSTEM FOR ILUAN NATURAL GAS RECEIVING FACILITIES			
LOCATION: ILUAN BATANGAS			
TITLE:		BUILDING 2	
		1. FIRE DETECTION AND ALARM SYSTEM 2. PAGING SYSTEMS	
DESIGNED	BY	CHKD	DATE
DRAWN			
REVIEWED	PRINCIPAL ENGR./ARCHT		
CHECKED			
ELEC.			
MECH.			
DWG. NO. IIIFF-BDM-17.402		PRJ. NO. GR71-101	
SCALE: NTS		SIO DRAWING	

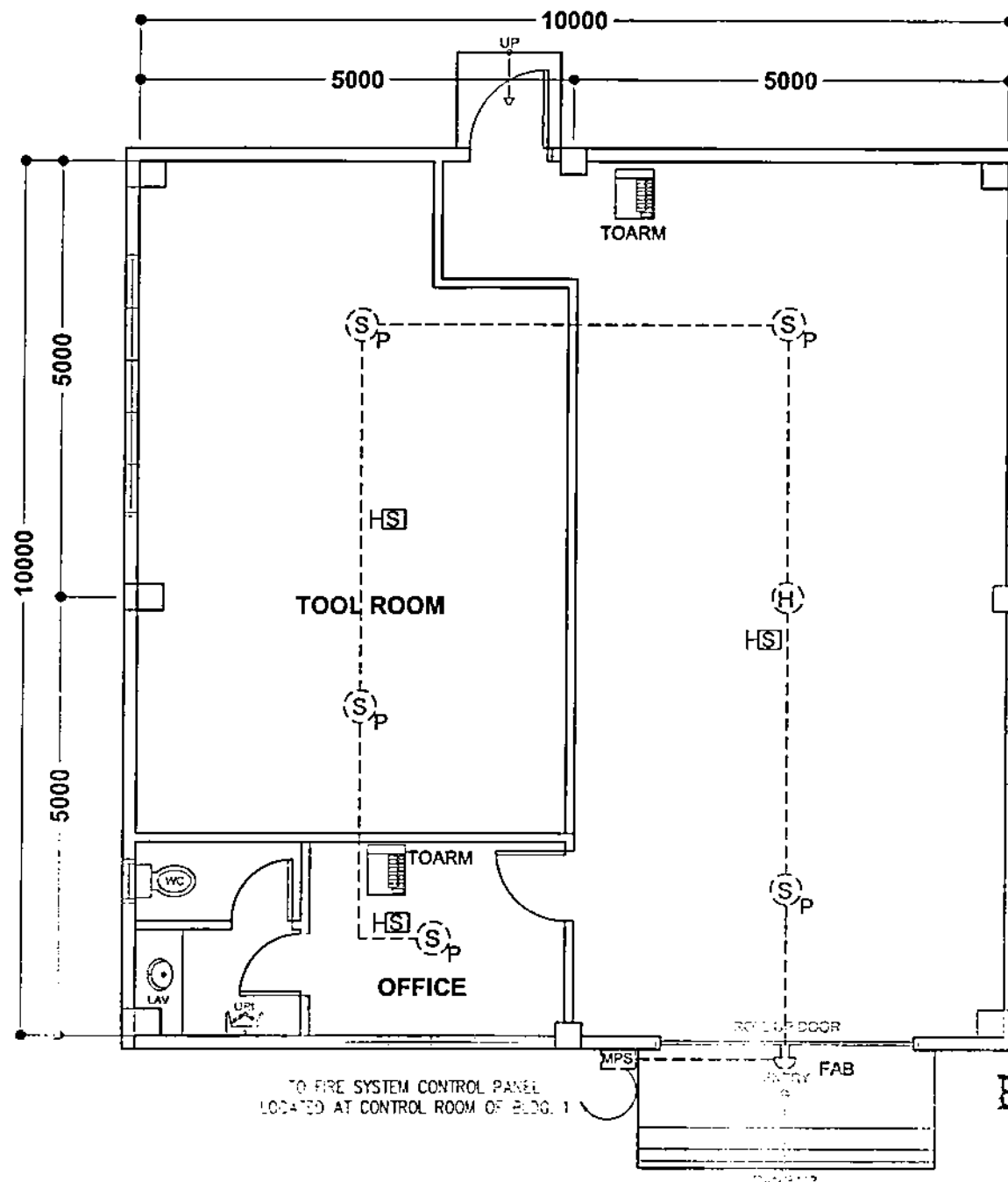
REV	DATE	NATURE OF REVISION	BY	CHKD

NOTES:

1. ALL WORKS SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TECHNICAL SPECIFICATIONS.
2. THE SUPPLIER/CONTRACTOR SHALL SUBMIT DETAILED DRAWINGS/TECHNICAL DATA FOR THE NAFDAS, FSS AND PS INCLUDING THE LOCATION OF THE DETECTORS, SPEAKERS, WIRING DIAGRAM, ETC, FOR NPC'S REVIEW/APPROVAL.
3. DETECTORS SHALL BE LOCATED NOT LESS THAN 300MM AWAY FROM ANY PART OF ANY LIGHTING FIXTURES.
4. ALL MATERIALS AND PARTS WHICH ARE NOT SPECIFICALLY MENTIONED HEREIN BUT ARE NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE NAFDAS AND PS SHALL BE FURNISHED AT NO ADDITIONAL COST TO NPC.
5. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
6. ALL EQUIPMENT SHOWN IN THIS DRAWING SHALL BE SUPPLIED, CONSTRUCTED/INSTALLED AND TESTED BY THE SUPPLIER/CONTRACTOR.
7. THIS DRAWING IS FOR BIDDING PURPOSES ONLY.
8. ALL DETECTORS, MANUAL PULL STATIONS, FIRE HORN, PANELS AND OTHER FIRE ALARM DEVICES SHALL BE OF ADDRESSABLE TYPE.

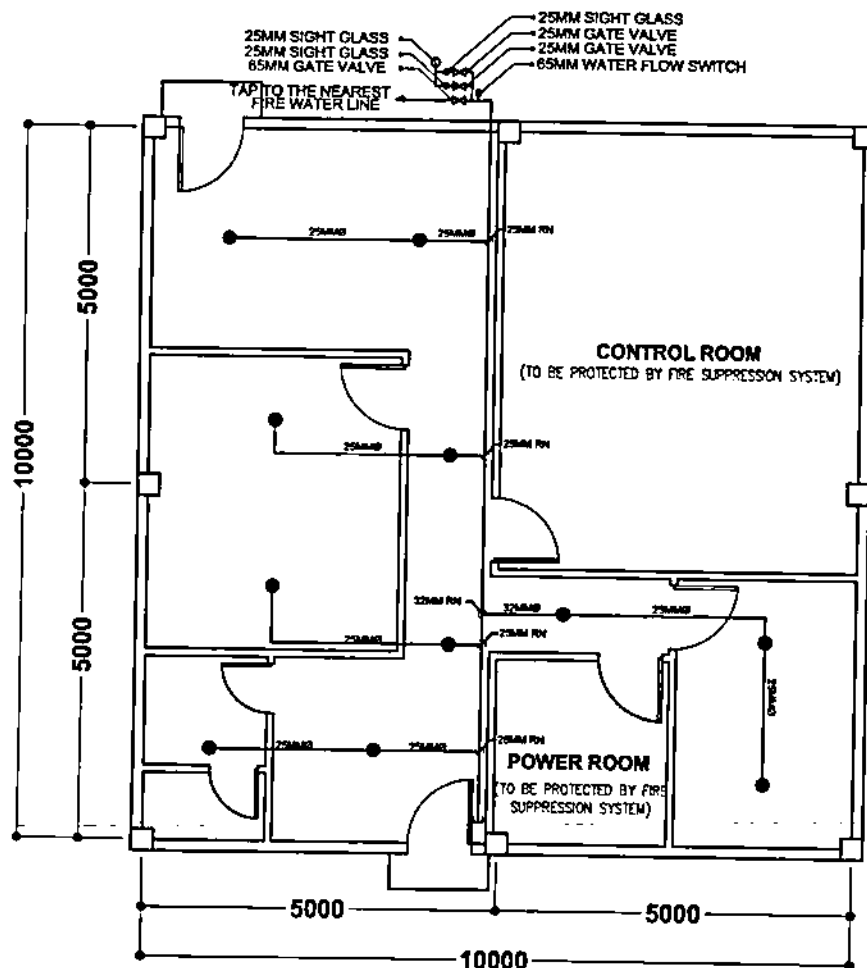
LEGEND:

- (H) - ADDRESSABLE FIXED TEMPERATURE HEAT DETECTOR
- (S_P) - ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR
- MPS - MANUAL PULL STATION (ADDRESSABLE, DUAL ACTION)
- [F] - FIRE HORN WITH STROBE LIGHT
- H_{FAB} - VIBRATING BELL, 24VDC
- HS - TOA CEILING SPEAKER
- TOARM - TOA REMOTE MICROPHONE



BUILDING 3

OWNER		NATIONAL POWER CORPORATION AGHAM ROAD, DILIMAN, QUEZON CITY	
PROJECT: REPLACEMENT OF FIRE DETECTION AND ALARM SYSTEM AND INSTALLATION OF FIRE SUPPRESSION, SMOKE DETECTOR AND PAGING SYSTEM FOR LUAN NATURAL GAS RECEIVING FACILITIES			
LOCATION: LUAN, BATANGAS			
TITLE		BUILDING 3 1. FIRE DETECTION AND ALARM SYSTEM 2. PAGING SYSTEMS	
DESIGNED	BY	CHKD	DATE
DRAWN			
REVIEWED	INTERIOR ENGR / ARCHT.	REVISION	
ENGINEER			
ELEC			
MECH			
DWS NO: 11-FF-BDM-17.403		SUBMITTED BY: <i>[Signature]</i> APPROVED BY: <i>[Signature]</i>	
REV.	DATE	NATURE OF REVISION	BY
1			
LOCAL SETS		BID DRAWING REV. 0	



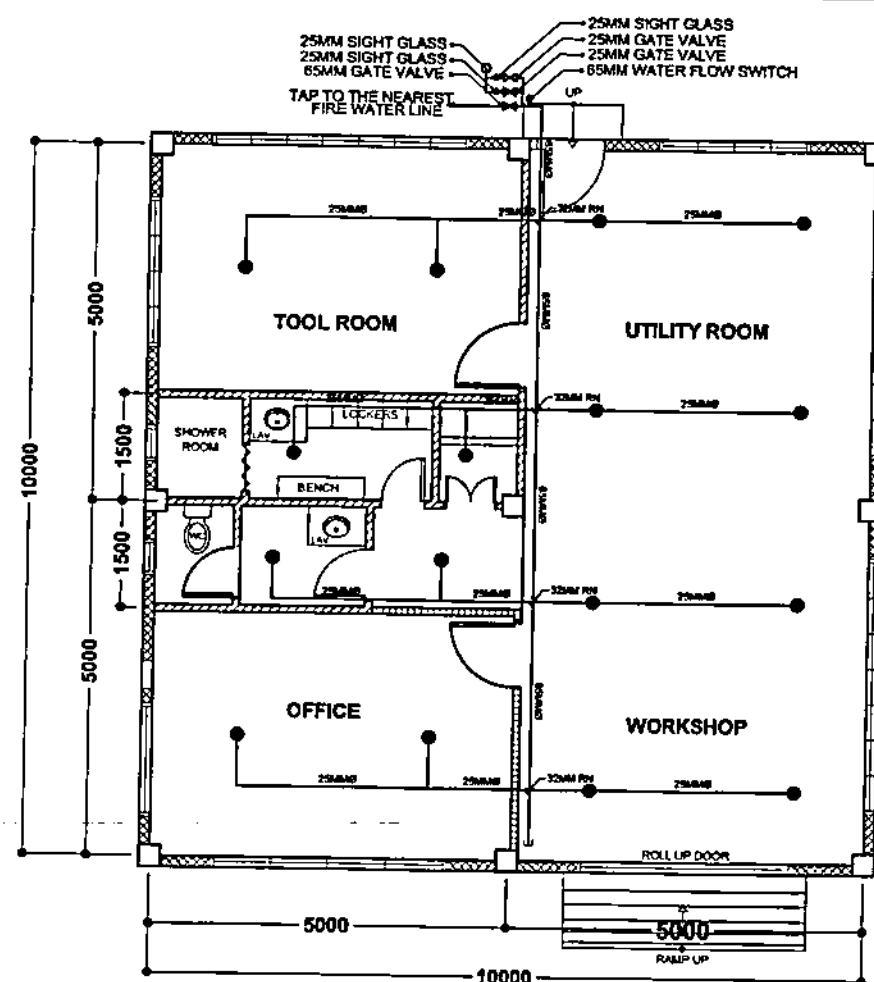
BLDG. 1

NOTES:


1. ALL WORKS SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TECHNICAL SPECIFICATIONS.
2. THE SUPPLIER/CONTRACTOR SHALL SUBMIT DETAILED DRAWINGS/TECHNICAL DATA FOR THE FIRE SPRINKLER SYSTEM INCLUDING LOCATION OF NOZZLES; WIRING DIAGRAM, ETC. FOR NPC'S REVIEW/APPROVAL.
3. MAIN FIRE ALARM CONTROL PANEL SHALL BE WALL MOUNTED AND LOCATED IN THE CONTROL AS SHOWN IN THE DRAWING OR AS DIRECTED BY NPC PERSONNEL.
4. ALL MATERIALS AND PARTS WHICH ARE NOT SPECIFICALLY MENTIONED HEREIN BUT ARE NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE FIRE SPRINKLER SYSTEM SHALL BE FURNISHED AT NO ADDITIONAL COST TO NPC.
5. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
6. THIS DRAWING IS FOR BIDDING PURPOSES ONLY.

LEGEND:

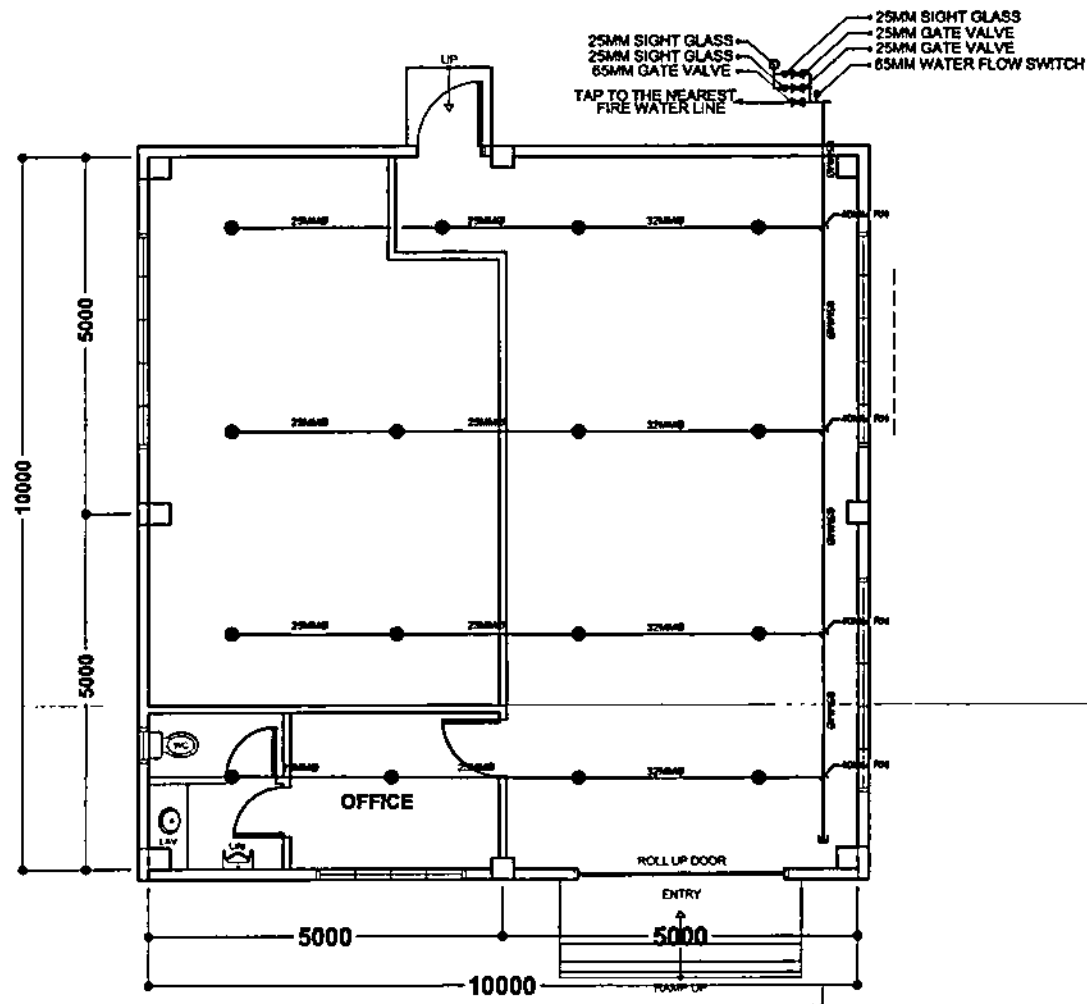
- — RECESSED PENDANT, METALLIC CHROME PLATED ESCUTCHEON
- — FIRE LINE



BLDG. 2

OWNER:		 NATIONAL POWER CORPORATION AGHAM ROAD, DILIMAN, QUEZON CITY	
PROJECT: REPLACEMENT OF FIRE DETECTION AND ALARM SYSTEM AND INSTALLATION OF FIRE SUPPRESSION, SPRINKLER AND PAGING SYSTEM FOR ILIJAN NATURAL GAS RECEIVING FACILITIES			
LOCATION: ELIJE, BATANGAS			
TITLE: BUILDINGS 1 AND 2 WATER SPRINKLER SYSTEM LAYOUT			
DESIGNED	BY	CHKD	DATE
DRAWN	PRINCIPAL ENGINEER		SUBMITTED: R. M. CATAWAN
REVIEWED	PRINCIPAL ENGINEER		RECOMMENDED: J. A. YAP
CHECKED	PRINCIPAL ENGINEER		APPROVED: A. G. SANCHEZ
ELEC.			Manager, E&C
MECH.			
DWG. NO. IIFF-BDM-17.404		PR. NO. HD - 02721 - 001	
SCALE: NTS		BID DRAWING	
REV. 0		REV. 0	

REV.	DATE	NATURE OF REVISION	BY	CHKD	RECD	APPD.




NOTES:

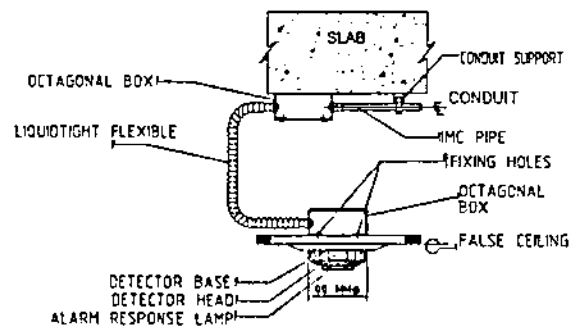
1. ALL WORKS SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TECHNICAL SPECIFICATIONS.
2. THE SUPPLIER/CONTRACTOR SHALL SUBMIT DETAILED DRAWINGS/TECHNICAL DATA FOR THE FIRE SPRINKLER SYSTEM INCLUDING LOCATION OF NOZZLES; WIRING DIAGRAM, ETC, FOR NPC'S REVIEW/APPROVAL.
3. MAIN FIRE ALARM CONTROL PANEL SHALL BE WALL MOUNTED AND LOCATED IN THE CONTROL AS SHOWN IN THE DRAWING OR AS DIRECTED BY NPC PERSONNEL.
4. ALL MATERIALS AND PARTS WHICH ARE NOT SPECIFICALLY MENTIONED HEREIN BUT ARE NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE FIRE SPRINKLER SYSTEM SHALL BE FURNISHED AT NO ADDITIONAL COST TO NPC.
5. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
6. THIS DRAWING IS FOR BIDDING PURPOSES ONLY.

LEGEND:

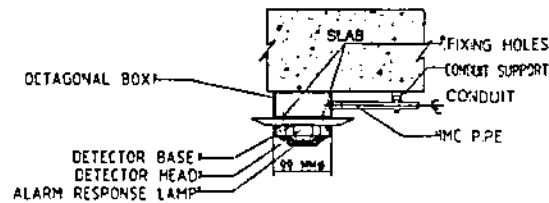
- — RECESSED PENDANT, METALLIC CHROME PLATED ESCUTCHEON
- — FIRE LINE

OWNER		 NATIONAL POWER CORPORATION AGHAM ROAD, DILMAN, QUEZON CITY	
PROJECT: REPLACEMENT OF FIRE DETECTION AND ALARM SYSTEM AND INSTALLATION OF FIRE SUPPRESSION, SPRINKLER AND PAGING SYSTEM FOR ILJAN NATURAL GAS RECEIVING FACILITIES			
LOCATION: ILJAN BAYBAY			
TITLE: BUILDING 3 WATER SPRINKLER SYSTEM LAYOUT			
DESIGNED	BY	CHKD	DATE
DRAWN			
REVIEWED	PRINCIPAL ENGR./ARCHT.	RECOMMENDED	
CHL/ARCHT			
ELEC		APPROVED	
MECH			
DESIGNED BY: R. M. CEBASAWAN Project Engineer I		RECOMMENDED BY: J. A. TAYLOR Manager, E&C	
APPROVED BY: N. G. BONGORREIRA Manager, E&C			
DWG. NO. IIFF-BDM-17.405		PR. NO. NO - GPP21 - 001	
SCALE: NTS		BID DRAWING	
REV. 0			

REV.	DATE	NATURE OF REVISION	BY	CHKD	RECD	APPL

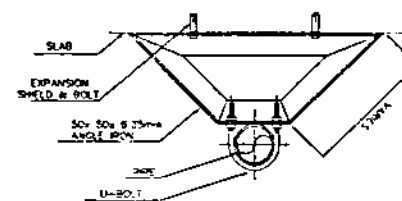
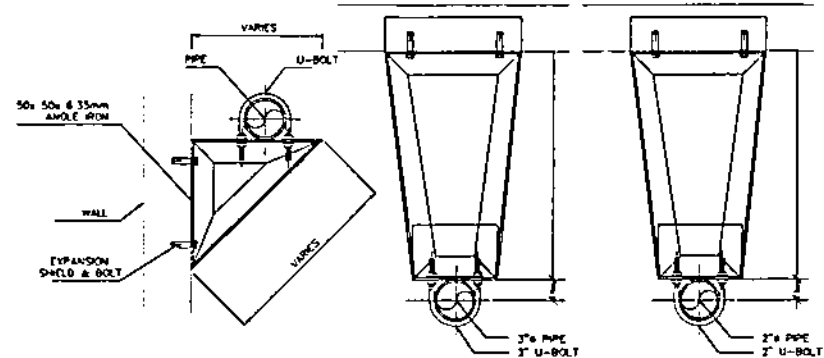


@ ROOM SPACE W/ CEILING

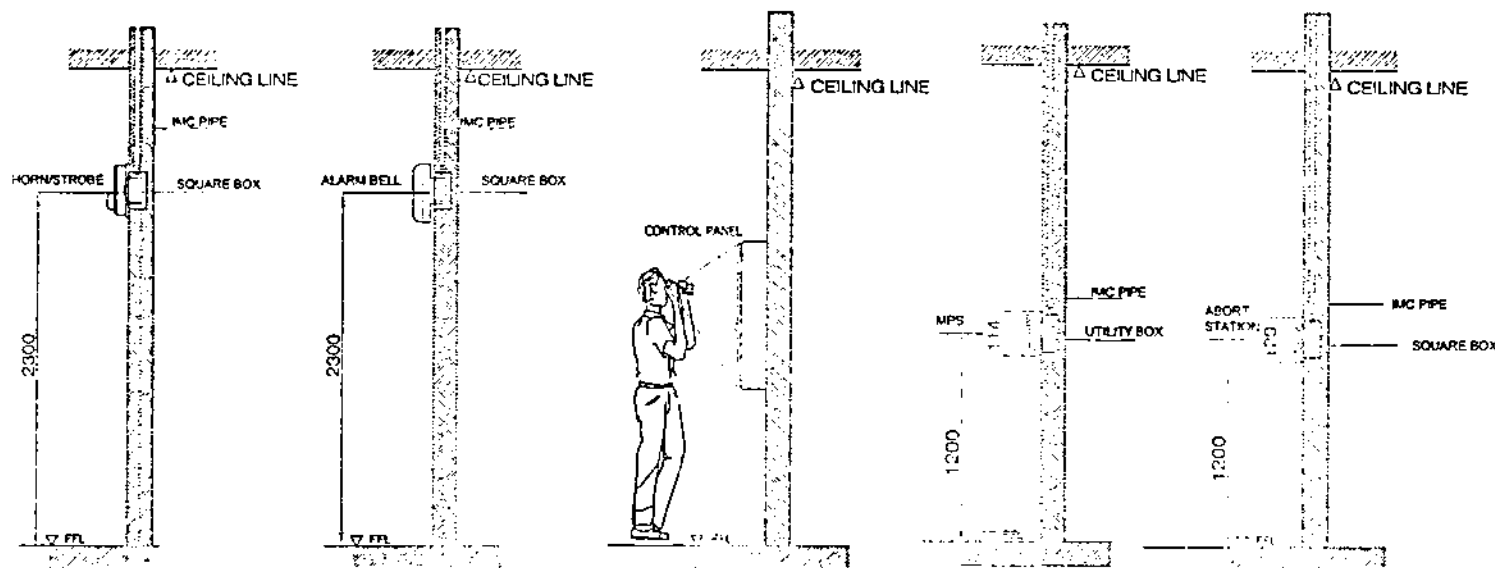


@ ROOM SPACE W/O CEILING

SMOKE DETECTOR INSTALLATION DETAILS



PIPING SUPPORT



OWNER		NATIONAL POWER CORPORATION ACHAM ROAD, DILIMAN, QUEZON CITY	
PROJECT: REPLACEMENT OF FIRE DETECTION AND ALARM SYSTEM AND INSTALLATION OF FIRE SUPPRESSION, SPRINKLER AND FLOODING SYSTEM FOR LIJAN NATURAL GAS RECEIVING FACILITIES			
LOCATION: LIJAN, BATANGAS			
TITLE: DEVICES INSTALLATION DETAILS			
DESIGNED	BY	CHKD	DATE
DRAWN			
REVIEWED	PREPARED	APPROVED	
CIVIL/ARCHT			
ELEC			
MECH			
DWG NO. NPP-30-147-107		PROJECT NO. 30-147-107	
SCALE: NTS		BID DRAWING	

REV.	DATE	DESCRIPTION	BY	CHKD	APPD