

GOVERNMENT OF PAKISTAN

HQ NATIONAL LOGISTICS CORPORATION

INVITATION TO TENDER FOR SUPPLY FIRE FIGHTING SYSTEM

WORDS OF CAUTION

1. **Participation of Tender**

- a. NLC invites sealed bids for supply, installation and commissioning of Fire Fighting System at following NLC Log Parks on FOR basis, in the light of PPRA rule 36(b) i.e Single Stage Two Envelope procedure.

- (1) Package A – NLC Log Park, Rawalpindi
- (2) Package B – NLC Log Park, Lahore
- (3) Package C – NLC Log Park, Karachi

- b. The tender can be participated by following: -

- (1) OEMs (Original Equipment Manufacturers)
- (2) Authorized Dealers of OEM, having Backup Support Services in Pakistan with sustained financial capability.

2. **Eligibility / Bid Qualification Criteria.** The bidder must prove his eligibility by completing the Bid Qualification Criteria as per **Annex 'A'**.

3. **Scope of Work.** Delivery, installation and commissioning of Firefighting equipment for each Package in NLC log Parks as per specifications/drawings attached at Annex 'B'.

4. **Special Conditions**

- a. The offer must include following as responsibility of the contractors: -

- (1) Commissioning of the equipment.
- (2) Warranty as per requirement of NLC / OEM provided up to international standards.
- (3) Technical Brochure (English).
- (4) Software (English Version).
- (5) After sales support in terms of spares and maintenance.

- b. The offer should also accompany complete technical data of the stores. Any change in technical offer and final contract specification sheet would render the

supplier liable to forfeit use of earnest money and cancellation of order unless permitted by the purchaser during technical evaluation.

- c. Prices should be quoted on **FOR basis for each package**.
- d. Offer must accompany the schedule to this tender (NL-2) duly completed.
- e. Warranty of 2 x years of complete equipment.
- f. Collaboration of License/Certificates by OEM.
- g. Location of major equipment's manufacturer / Supplier / Manufacturing facility be attached.
- h. Quoted item/equipment should be Branded and Brand new.
- i. NLC reserves the right to reject all bids at any time prior to the acceptance or to increase / decrease the quantity during or before finalization of contract.
- j. For local supplier/manufacturer only those firms can participate who are on the Active tax Payer List of FBR.
- k. Certificate from the OEM that all major assemblies / components (including tyres) fitted with quoted equipment are from same origin/region
- l. OEM to also certify that no Indian made assembly/part has been fitted in the equipment.
- m. Bidders shall submit **Single Technical and Three separate Financial** Proposals for all three (03) Packages.
- n. Financial quotes (duly sealed) for each of the equipment be submitted in a separate envelope. **(Itemized Financial quotes as per the BOQs as per Annex 'B', should be in separate envelope).**
- o. Maintenance schedule requiring change of consumable parts be also submitted with each equipment/technical offer with price list of those consumable parts.
- p. Firm will carry out inspection and maintenance of the equipment after every 3 months free of cost and will sign a certificate to the serviceability effect of the equipment during the warranty period.
- q. Offer through fax/ email will not be accepted.
- r. Status of the firm (Sole Proprietorship, Partnership, Public Limited, or Private Limited), supported by documentary evidence.

- s. Details of permanent staff, including PEC-registered engineers with valid PEC registration numbers (at least 03 with relevant experience of minimum 5 years) along with documentary proof of employment/appointment.
- t. Annual turnover for the last five (05) years, supported by documentary evidence (Bank Statements) as per the requirement and criteria of Client (NLC).
- u. Income Tax Returns or Audit Reports indicating the amount of tax paid during the last five (05) years.
- v. Details of similar level projects completed during the last five (05) years.
- w. Offer not received as per NLC requirement is liable to be rejected at any stage of the tender.
- x. **Stamp duties** as applicable through Government of Pakistan rules i.e, @ 0.25% of value of contract will be paid by winning firm at the time of signing of contract.
- y. In case of any firm fail to supply the tendered store as per the Letter of Acceptance / Contract Agreement, The NLC has the right to take punitive action against defaulter firm that include confiscation of its Bid Security, Performance Bank Guarantee and ban to participate in the tender etc.
- z. **Partial Bidding**. Firms can quote in one or more packages.

5. **Technical and Financial Proposal**. A **Single Technical for all three packages and Separate Financial Proposal for each package** shall be submitted along with **single Tender Fee and Bid Security for all 3 x Packages**, in accordance with the applicable PPRA guidelines. Each Package/Site shall be evaluated independently as a separate project, and **a separate contract shall be executed for each Package**.

6. **Rejection of Bid**. A bid can be rejected under following circumstances: -

- a. Bids not qualifying the bid evaluation criteria as mention above.
- b. Offers not accompanied with complete technical specifications of items being offered and not supported with detailed technical brochures.
- c. Non responsive bid to any required criteria / specification
- d. Non submission of Tender Fee & Bid Security
- e. Late submission of tender from given date & time
- f. Offers not complying with the special conditions (para 3) in addition to other conditions

7. **Particulars and Specifications.** Standard particulars, and specifications is attached as **Annex 'B'**. The bidder must conform to the asked specification and acceptance criteria for each category/item.
8. **Delivery of Tender.** The original copy of the tender is to be enclosed in double cover. (i) Technical Offer (ii) Commercial Offer, separately. The covers should be sealed and bear tender Enquiry Number and date of opening, while the outer cover should bear only address of this office without any indications.
9. **Date and Time for Submission of Tender**
- a. Tender must reach HQ NLC Harding Road, RA Bazar, Rawalpindi by the date and time specified in tender notice by hand or by post.
 - b. Tender must be dropped in the tender box before given time.
 - c. NLC will not be responsible for delay occurred in post.
10. **Price**
- a. The prices quoted must be as per accounting unit as shown in the schedule to tender, inclusive all Taxes/duties, packing and delivery charges as and when required.
 - b. Firms to quote separate price for accessories/allied components being manufactured/supplied locally in PKR.
 - c. The prices must be quoted in figure and words at the appropriate space of the schedule to tender on **FOR Basis** against each Package. Additional information, if any, must be linked with entries on the schedule of tender.
 - d. The firms must quote prices inclusive of all taxes, packing, delivery charges or installation etc as per format attached at **Annex "B"**.
 - e. Quoted price must be supported by original Proforma invoice of the OEM/Manufacturer/Principle giving following details/breakdown: -
 - (1) Cost of the equipment in FOR Basis.
 - (2) Cost of Locally supplied item (if any) – OEM to specify the details of locally supplied parts/items (in Pak Rs).
 - (3) Cost of optional items (if any).
 - f. Prices must be firm and final.
 - g. Tax exemption (if any) may be provided with the tender documents.

11. **Validity of Offers.** The validity period of quoted rates must be indicated and should be at **least 90 days** from the date of opening the tender without any condition, extendable for further processing of the case, if required.
12. **Delivery Period.** The delivery/installation of the stores is required as stated in the schedule to, tender i.e. within **120 x days after issuance of LOA or Award of Contract (whichever is earlier)** at prescribed location, beyond which Late Delivery Charges will apply.
13. **Packing.** Equipment packing will be of international standard and seaworthy so as to withstand rough handling during loading, unloading and transportation. Marking in suitable size bold letter provided that the parts thereof shall be appropriately packed according to the manufacturer's standard.

Consignee: _____

Manufacturer's Name and Address: _____

14. **Inspection**

a. **Pre-Delivery Inspection (If Required)**

- (1) Pre-delivery inspection may be carried out at firm's premises before supply, by team of HQ NLC (If Required).
- (2) Inspection will include Quantity, Quality, Conformation to the agreed specification as per LOA / Contract agreement.
- (3) Firm will dispatch the items / equipment to prescribed location as mentioned in schedule of tender.
- (4) Inspection out of Rawalpindi / Islamabad will be carried out on the expenses of firm including travelling, boarding / lodging etc.

b. **Stage Inspection.** Team of NLC may conduct stage inspections during the installation of the equipment (If deemed necessary).

c. **Final Inspection.** Final inspection of the equipment will be carried out after delivery, installation and commissioning at site, by the team of NLC.

15. **Arbitration.** Any bidder feeling aggrieved by any act of procuring agency after submission of his bid and prior to award of the contract may lodge a written complaint to procurement agency under Rule - 48 PPRA.

16. **Publication** The supplier will provide the following publication pertaining to equipment under purchase in English language free of cost in hard and soft copies: -

- a. Operator Manual

- b. Maintenance Manual
- c. Part Catalogue
- d. Workshop Manual
- e. Software backup
- f. One set per piece in addition three extra sets will be supplied with the equipment. CDs of the same will also be provided
- g. CDs/ Online Part Catalogue Book be provided for demanding spare parts/ tool items.
- h. Diagnostic Equipment (**Free of cost if any**)

17. **Tools and Accessories.** The supplier will provide the standard tools (**OEM**) of the Fire Fighting System separately free of cost in steel boxes along with locking arrangements.

18. **Risk and Expense.** Failure to supply the goods quoted or failure to meet the commitment made regarding delivery schedule, specifications, short supplies etc, will authorize HQ NLC to purchase the items at firm's risk and cost.

19. **Training.** Supplier will provide OEM certified operational training and maintenance training to NLC Staff at delivery site free of cost.

20. **After Sales Services Support**

- a. The firm's principals will guarantee availability of stores, spare parts, accessories, software updates and technical/ repair/ maintenances including Technicians for the next 10 years and that the cost will not be increased more than **2% every year**.

- b. **1st service after installation will be the responsibility of the bidder free of cost.**

21. **Clientele List and Population of Equipment.** The quote must be supported by the client age / customers list with quantities / units of each category provided in Pakistan and outside Pakistan in Last 5 years

22. **Force Majeure.** The supplier will not be held responsible for any delay occurring the supply of contracted stores due to event of force majeure such as Act of God, War, Riots, Civil Commotion's Strikes, lock out or disturbance directly affecting the supply over which the supplier has no control. In such an event the contractor shall inform the Purchaser within 15 days of the happening in writing. Non-availability of raw material for the manufacture of stores or the export permit for the export of the contracted stores from the country of its origin shall not constitute Force Majeure.

23. **Late Delivery.** Late Delivery charges will be imposed @2% per month on total cost of contract with effect from original delivery date and will be calculable accordingly in days also.
24. **Terms of Payment**
- 30% advance** payment against advance Bank Guarantee from 'AAA' rating scheduled bank of Pakistan
 - 30% on delivery** of complete Equipment at site as per Annex 'B'.
 - 40% payment will be made after delivery**, Final Inspection after installation and issuance of CRV (Certified Receipt Voucher) by the consignee.
 - Partial payment against partial delivery is allowed.
25. **Tender Fee and Bid Security.** Both will be prepared in the shape of bank draft in favour of **NATIONAL LOGISTICS CORPORATION HQ MAIN ACCOUNT** and submitted as following: -
- Tender Fee.** Rs. 2,000 must be attached with Technical offer
 - Bid Security.** Rs. 1,000,000/- in sealed envelope (**mentioning Name of Bank and Draft Number & Date**) must be attached with Technical offer.
26. **Bank Guarantee**
- Performance Bank guarantee valuing 5% of the contract value must be provided / deposited by the successful firm for award of contract, within 15 days from the signing of the contract / issuance of Letter of Intent (whichever is earlier).
 - The Guarantee should be from a schedule bank of "AA" rating and valid till one month after warranty period.
27. **Warranty Period.** Firm will provide comprehensive warranty of complete equipment of **2 x years** or for duration specified by OEM (whichever is more).
28. **Comparison Chart.** Firms will also attach comparison chart and response to all queries/ requirement in **Annex 'B'** as part of their technical offer: -

NLC Specification	Firms Specification	Complied with or Not	Ref of OEM Brochure/Technical Manual

29. **Evaluation.** Technical offer of bidders found eligible and qualified as per “**Bid Qualification criteria**” will be evaluated as per specifications (Annex “B”). Financial offers of technically approved bidders will be opened and bidder with the lowest financial proposal will be considered most advantageous bid.
30. **Site Visit.** Firms can contact following individuals for site visits as per schedule attached:-

Ser	Log Park	Mobile Number	Remarks
a.	Harraka, Rawalpindi	AM Faizan +92 315 5090663	
b.	Nathay Khalsa, Lahore	Lt Col (r) Raja Rashid +92 300 7312443 +92 333 5372289	
c.	Northern Bypass, Karachi	DPM Noman Sheikh +92 333 3310893	



General Manager Procurement
HQ NLC



HEADQUARTERS NATIONAL LOGISTICS CORPORATION

GENERAL CONDITIONS GOVERNING CONTRACT

1. Tender will be opened at HQ NLC Harding Road RA Bazar Near AFIRM Rawalpindi at Date and Time mentioned in the newspaper ad.
2. Tender will be submitted in accordance with PPRA Rule 36 (b) i.e. Single Stage – Two Envelope Procedure
3. Details of Plant/equipment required to be procured are attached at **Annex 'B'**



NL-3

Address_____

Telephone_____

Code Used_____

From: _____

To: **THE DIRECTOR GENERAL**
NATIONAL LOGISTICS CORPORATION QMG's BRANCH
R.A. BAZAAR GHQ RAWALPINDI

Dear Sir,

1. I/We hereby offer to supply to the Director General NLC, stores as per detail in the Scheduled hereto or such portion thereof as you may specify in the contract at the prices given in the said schedule and agree to hold this offer open till _____. I/We shall be bound by a communication of acceptance dispatched within the prescribed time.
2. I/We hereby certify own eligibility as per Annex 'A' to NL-1.
3. I/We have understood the instructions to Tenders and Conditions of Contract as laid down in form NL-2 to "General Conditions Governing Contracts" and have thoroughly examined the specificity/drawing and or pattern quoted in the schedule hereto and am/are fully aware to the nature of the stores required and my/our offer is to supply stores strictly in accordance with the requirements.
4. Recommended technical manual/ data are also enclosed with the offer.
5. The following pages have been added to and form part of this tender.

Your faithfully

(Signature of Tendered)

Address_____

Dated _____

Signature of witness_____

Address_____

Anx 'A'

Ser	Check List	Yes/No	Remark
a.	Tender Fee		
b.	Earnest Money		
c.	Valid and up-to-date PEC Registration Certificate in the relevant categories & relevant Codes (ME-02 (Fire Detection and Suppression System)).		
d.	Copy of NTN / STRN and Active Tax Filler Certificate		
e.	Authorization Letter from OEM (for dealers)		
f.	Complete Tech Data of Equipment and OEM Brochure/technical manual (Annex 'B')		
g.	90 x Days Offer Validity		
h.	Confirmation to 120 x days Delivery Period for each package.		
i.	Comparison Chart with user proposed specification (Annex 'B') response to all queries/requirements in full (Annex 'B').		
j.	Not Blacklisting Affidavit (Stamp Paper)		
k.	Compliance to warranty		
l.	Certificate to accept all conditions of tender without exception.		
m.	List of Major Clients and equipment provide (Annex 'B').		
n.	Proof of 3 x projects of same level completed in last 5 x years		
o.	Hierarchy of the firm along with portfolio of owner & top management be attached		
p.	Firms with sound Financial Capability having annual turnover of Rs 500 Mn dully supported by Annual Audit Reports which should be signed by Quality Control Review (QCR) Rated CA firms.		

Note. No row of remarks column to be left blank. Blank row will be considered non-compliant

Note. The technical proposal must be submitted strictly in accordance with the sequence prescribed in the above checklist (PPRA Rule 18).

1. **Package A** - **Appendix ‘I’**
2. **Package B** - **Appendix ‘II’**
3. **Package C** - **Appendix ‘III’**

PACKAGE 'A'

**NATIONAL LOGISTICS CORPORATION
WAREHOUSES
HARRAKA, RAWALPINDI**

NATIONAL LOGISTICS CORPORATION HARRAKA LOGISTICS PARK RAWALPINDI



Fire Detection & Fire Fighting (Zone-2)

- BOQ Preamble
- List of Approved Manufacturers
- Bill of Quantities (BOQ)
 - Fire Detection System
 - Fire Fighting System

BOQ PREAMBLE

A. INSTRUCTIONS TO TENDERERS FOR FILLING OF BILL OF QUANTITIES:

1. The tenderers shall fill in all the sections of the Bill of Quantities, (BOQ) otherwise Tenders may be considered liable to rejection.
2. All items mentioned in the Bill of Quantities (BOQ) consist of supply of all equipment, installation, material labour, plant, appliances, and consumables required for completing in all respects the items/works, in strict accordance with relevant specifications Contract Documents and Drawings
3. The quantities mentioned in the BOQ are the estimated quantities of the work and they are not to be taken as the actual and correct quantities of the work to be executed by the Contractor in fulfillment of the Contract. These quantities can vary in actual.
4. In all cases where the Bill of Quantities items are not fully specific in respect of description or in respect of recommended manufacturers or suppliers, the tenderers attention is drawn to all the other tender documents including Specifications and Drawings and Conditions of the Contract.
5. All equipment proposed to be supplied shall be supported by suitable manufacturer's catalogue/literature etc., with the model selected with make, origin and performance data clearly marked.
6. This Bill of Quantities is to be read in conjunction with the Drawings and Specifications, as being mutually explanatory.
7. All tenderers are advised to quote strictly as per specifications. Any alternative or deviations from specifications proposed shall be highlighted. Any tender not quoting as per specifications may be considered liable to rejection.
8. Except as otherwise specifically provided for, all items in the Bill of Quantities are measured net, as fixed in place in accordance with the Drawings, and any allowance made for waste shall be included in the price rate for that item. No separate payment shall be made for any wastage etc.,
9. Generally, the following shall be deemed to be included in the prices submitted with all items herein:
 - Labour and all cost in connection therewith, materials, goods and all costs in connection therewith including but not limited to, transportation to site, delivery, unloading, unpacking, returning packing, handling, hoisting to any height, lowering, octroi charges etc.
 - Erection, dismantling and removal on completion contractor's site offices, stores, accommodation.
 - General and other requirements of Specifications.
 - Installing, fitting and fixing goods and materials in positions.
 - Use of tools, plant and equipment.
 - Waste of materials.
 - All necessary cutting and repairing

- All overheads and profits including Income Tax, Sales Tax and all other taxes and duties
- Testing of any material equipment from any certified laboratories & Pre-shipment Inspection and other miscellaneous Charges

10. Any discrepancies noticed by the tenderers between the Bill of Quantities, the intent of the Drawings and Specifications and the scope work, shall be brought to the attention of the NLC prior to submitting the tenders who shall notify their clarifications/decision to all the tenderers. No claims of whatsoever nature shall be admissible during or after the contract period for any misunderstandings, ambiguities due to above, which have not been notified to the NLC prior to submission of his priced tenders.
11. The Contract shall be on item rate contract for the accepted tendered price within which the contractor is required to supply & install, operate & maintain the system as specified.
12. The Employer has right to entirely delete or make changes in quantities for any item specified in BOQs, and no payment shall be made to the Contractor for deleted items. Payments against change in quantities shall be made only against executed and accepted items.
13. If the Contractor does not perform any work in conformance to specification or contract documents. The Employer may deduct or stop the payment against substandard work.
14. If Contractor fails to perform any work within specified time, the Employer has right to execute the same work on the Contractor's risk and cost.

APPROVED MANUFACTURERS

National Logistics Corporation Harraka Logistics Park Rawalpindi

List of Approved Manufacturers

Fire Fighting & Fire Detection System

SR. No	Item Brief Description	Approved Manufacturers
01	Fire Fighting Pumping Set (UL Listed)	Naffco (UAE), Sffeco (UAE) or Equivalent
02	Fire Extinguishers (All Types)	Naffco (UAE), Sffeco (UAE) or Equivalent
03	Pendent/Upright/Wall Sprinklers	Tyco (USA), Viking (USA), Reliable (USA) or Equivalent
04	Fire Hoses, Cabinets & Accessories	Naffco (UAE), Sffeco (UAE) or Equivalent
05	Pillar Fire Hydrants	Naffco (UAE), Sffeco (UAE) or Equivalent
06	M.S schedule 40 Piping (Seamless)	Protek UK, Nippon Japan, Lontrin or Equivalent
07	Water Flow Devices & Accessories	Kitz (Japan), Lifeco (UK), Weflo (USA) or Equivalent
08	Fire Rated Doors	Naffco (UAE), Sffeco (UAE), Hormann (UAE) or Equivalent
09	Breeching Inlets/Siamese Connections	Naffco (UAE), Sffeco (UAE) or Equivalent
10	Zone Control Valve Assembly (ZCVA) UL Listed	Naffco (UAE), Weflo (USA), Lifeco (UK) or Equivalent
11	Fire suppression system (Clean Agent)	Naffco (UAE), Sffeco (UAE), Lifeco (UAE) or Equivalent
12	Fire Detection System Complete (Addressable)	Eaton (UK), Gent by Honeywell, Bosch (Germany) or Equivalent
13	Fire Rated Cable	Belden (US), Prysmian (UK), Cavicel (Italy) or Equivalent
14	Emergency Lights & Illuminated Exit Signage	Marshall, Eaton, Philips or Equivalent

Bill of Quantities (BOQ)

SUMMARY OF FIRE DETECTION SYSTEM

Item no.	Item Description	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.		
	<u>DESCRIPTION</u>		
1	Warehouse-1		
2	Warehouse-2		
3	Warehouse-3 (Cold Storage)		
4	Warehouse-8		
Total (PKR)			-

FIRE DETECTION SYSTEM WAREHOUSE-1

Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
1.1	<u>ADDRESSABLE FIRE ALARM CONTROL PANEL (FACP)</u>				
1.1.1	Supply, Installation, Testing and commissioning of microprocessor-based addressable Fire Alarm Control Panel. System shall be fully addressable, intelligent and modular. 2 loops expandable up to required capacity. Capable of integration with Fire Detection Devices, Fire Suppression Systems and BMS if required. The Fire Alarm Control Panel shall be provided with a sealed maintenance-free battery backup system with sufficient capacity to operate the system under normal supervisory conditions, followed by alarm condition operation, in accordance with NFPA 72 requirements. Complete in all respects or as approved by the Consultant.	Nos	1		-
1.2	<u>ADDRESSABLE BEAM DETECTORS</u>				
1.2.1	Supply, Installation, Testing and commissioning of reflective type projected beam detectors EN-54-12 compliant complete with reflective plates, mounting accessories, and all required interfaces complete in all respects or as approved by the Consultant.	Nos	10		-
1.3	<u>ADDRESSABLE SMOKE DETECTORS</u>				
1.3.1	Supply, Installation, Testing and Commissioning of addressable smoke detectors EN-54-7 compliant compatible with the proposed Fire Alarm Control Panel. Detector shall be supplied with Standard mounting base, locking mechanism to prevent unauthorized removal, and compatible with standard junction boxes, complete in all respects or as approved by the Consultant.	Nos	14		-
1.4	<u>ZONE CONTROL INTERFACE</u>				

1.4.1	Supply, Installation, Testing and Commissioning of Zone Control Assembly Interface module complete with all accessories, wiring, containment and integration with the Fire Alarm System (As per FireFighting drawings).Complete in all respects or as Approved by the Consultant.	Nos	2		
1.5	<u>ADDRESSABLE ALARM SOUNDERS</u>				
1.5.1	Supply, Installation, Testing and commissioning of addressable wall mount electronic sounder. Loop powered, with selectable tones and minimum 90 dB output, complete with all accessories, complying with NFPA 72 / EN 54-3. Complete in all respects or as approved by the Consultant.	Nos.	4		-
1.6	<u>ADDRESSABLE FLASHERS</u>				
1.6.1	Supply, installation, testing and commissioning of wall mount addressable visual alarm device (strobe), high-intensity LED type, compliant with EN 54-23, complete with all accessories. Complete in all respects or as approved by the Consultant.	Nos.	4		-
1.7	<u>MANUAL CALL POINTS</u>				
1.7.1	Supply, installation, testing, and commissioning of wall mount manual call point (MCP), break glass or resettable type, red colored, loop powered, compatible with fire alarm control panel, complete with back box, LED indicator, key reset facility, and all necessary accessories including interconnection with fire alarm loop wiring and testing as per EN 54 / NFPA standards. Complete in all respects or as approved by the Consultant.	Nos.	4		
1.8	<u>FIRE ALARM LOOP CABLE</u>				
1.8.1	Supply, installation, testing and commissioning of 2-core x 1.5mm ² + ECC shielded LPCB approved Fire resistant, 2-hour rated cable for fire alarm loop wiring, fire alarm critical circuits, complete with conduit, accessories, terminations, and identification wiring shall be in accordance with NFPA 72, EN-50200, IEC 60331 and BS 6387 Note: Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of cables are shown herewith. Payments shall be made as per actual length installed.	RM	1100		-
1.9	<u>EMERGENCY LIGHTS CABLE</u>				

1.9.1	Supply, installation, testing and commissioning of 3 x 2.5 mm ² shielded LPCB approved Fire resistant, 2-hour rated cable for fire alarm loop wiring, fire alarm critical circuits, complete with conduit, accessories, terminations, and identification. All wiring shall be in accordance with NFPA 72, EN-50200, IEC 60331 and BS 6387. Note: Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of cables are shown herewith. Payments shall be made as per actual length installed.	RM	700		
1.10	<u>CONDUITS</u>				
1.10.1	Supply and installation of Hot dipped Galvanized Electrical Metal Tube (EMT) conduits in compliance with IEC 61386 standard and other applicable standards of minimum 45 microns with all kind of fittings like elbows, coupling, saddles, connectors, conduit hangers, supports and all other required fittings & accessories complete in all respects or as approved by the Consultant. Note: Actual length of conduits to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of conduits are shown herewith. Payments shall be made as per actual length installed.	RM	1800		
1.11	<u>EMERGENCY LIGHTS</u>				
1.11.1	Supply, installation, testing and commissioning of self-contained LED emergency light fitting, complete with backup (minimum 120 minutes), automatic operation, and all accessories, complete in all respects complying with NFPA 101 / EN 1838 / IEC standards.	Nos	38		-
1.12	<u>FIRE EXIT SIGN</u>				
1.12.1	Supply, installation, testing and commissioning of LED illuminated fire exit sign (running man type), double sided, complete with backup (minimum 120 minutes), maintained operation, and all accessories, complete in all respects complying with NFPA 101 / EN 1838 / ISO 7010 standards.	Nos	6		-
Total (PKR)					-

FIRE DETECTION SYSTEM WAREHOUSE-2

Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
1.1	<u>ADDRESSABLE FIRE ALARM CONTROL PANEL (FACP)</u>				
1.1.1	Supply, Installation, Testing and commissioning of microprocessor-based addressable Fire Alarm Control Panel. System shall be fully addressable, intelligent and modular. 2 loops expandable up to required capacity. Capable of integration with Fire Detection Devices, Fire Suppression Systems and BMS if required. The Fire Alarm Control Panel shall be provided with a sealed maintenance-free battery backup system with sufficient capacity to operate the system under normal supervisory conditions, followed by alarm condition operation, in accordance with NFPA 72 requirements. Complete in all respects or as approved by the Consultant.	Nos	1		-
1.2	<u>ADDRESSABLE BEAM DETECTORS</u>				
1.2.1	Supply, Installation, Testing and commissioning of reflective type projected beam detectors EN-54-12 compliant complete with reflective plates, mounting accessories, and all required interfaces complete in all respects or as approved by the Consultant.	Nos	10		-
1.3	<u>ADDRESSABLE SMOKE DETECTORS</u>				
1.3.1	Supply, Installation, Testing and Commissioning of addressable smoke detectors EN-54-7 compliant compatible with the proposed Fire Alarm Control Panel. Detector shall be supplied with Standard mounting base, locking mechanism to prevent unauthorized removal, and compatible with standard junction boxes, complete in all respects or as approved by the Consultant.	Nos	14		-
1.4	<u>ZONE CONTROL INTERFACE</u>				

1.4.1	Supply, Installation, Testing and Commissioning of Zone Control Assembly Interface module complete with all accessories, wiring, containment and integration with the Fire Alarm System (As per Fire Fighting drawings).Complete in all respects or as Approved by the Consultant.	Nos	2		
1.5	<u>ADDRESSABLE ALARM SOUNDERS</u>				
1.5.1	Supply, Installation, Testing and commissioning of addressable wall mount electronic sander. Loop powered, with selectable tones and minimum 90 dB output, complete with all accessories, complying with NFPA 72 / EN 54-3. Complete in all respects or as approved by the Consultant.	Nos.	4		-
1.6	<u>ADDRESSABLE FLASHERS</u>				
1.6.1	Supply, installation, testing and commissioning of wall mount addressable visual alarm device (strobe), high-intensity LED type, compliant with EN 54-23, complete with all accessories. Complete in all respects or as approved by the Consultant.	Nos.	4		-
1.7	<u>MANUAL CALL POINTS</u>				
1.7.1	Supply, installation, testing, and commissioning of wall mount manual call point (MCP), break glass or resettable type, red colored, loop powered, compatible with fire alarm control panel, complete with back box, LED indicator, key reset facility, and all necessary accessories including interconnection with fire alarm loop wiring and testing as per EN 54 / NFPA standards. Complete in all respects or as approved by the Consultant.	Nos.	4		
1.8	<u>FIRE ALARM LOOP CABLE</u>				
1.8.1	Supply, installation, testing and commissioning of 2-core x 1.5mm ² + ECC shielded LPCB approved Fire resistant, 2-hour rated cable for fire alarm loop wiring, fire alarm critical circuits, complete with conduit, accessories, terminations, and identification. Il wiring shall be in accordance with NFPA 72, EN-50200, IEC 60331 and BS 6387 Note: Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of cables are shown herewith. Payments shall be made as per actual length installed.	RM	1100		-
1.9	<u>EMERGENCY LIGHTS CABLE</u>				

1.9.1	Supply, installation, testing and commissioning of 3 x 2.5 mm ² shielded LPCB approved Fire resistant, 2-hour rated cable for fire alarm loop wiring, fire alarm critical circuits, complete with conduit, accessories, terminations, and identification. All wiring shall be in accordance with NFPA 72, EN-50200, IEC 60331 and BS 6387. Note: Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of cables are shown herewith. Payments shall be made as per actual length installed.	RM	700		
1.10	<u>CONDUITS</u>				
1.10.1	Supply and installation of Hot dipped Galvanized Electrical Metal Tube (EMT) conduits in compliance with IEC 61386 standard and other applicable standards of minimum 45 microns with all kind of fittings like elbows, coupling, saddles, connectors, conduit hangers, supports and all other required fittings & accessories complete in all respects or as approved by the Consultant. Note: Actual length of conduits to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of conduits are shown herewith. Payments shall be made as per actual length installed.	RM	1800		
1.11	<u>EMERGENCY LIGHTS</u>				
1.11.1	Supply, installation, testing and commissioning of self-contained LED emergency light fitting, complete with backup (minimum 120 minutes), automatic operation, and all accessories, complete in all respects complying with NFPA 101 / EN 1838 / IEC standards.	Nos	38		-
1.12	<u>FIRE EXIT SIGN</u>				
1.12.1	Supply, installation, testing and commissioning of LED illuminated fire exit sign (running man type), double sided, complete with backup (minimum 120 minutes), maintained operation, and all accessories, complete in all respects complying with NFPA 101 / EN 1838 / ISO 7010 standards.	Nos	6		-
Total (PKR)					-

FIRE DETECTION SYSTEM WAREHOUSE-3 (COLD STORAGE)

Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
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	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
1.1	<u>ADDRESSABLE FIRE ALARM CONTROL PANEL (FACP)</u>				
1.1.1	Supply, Installation, Testing and commissioning of microprocessor-based addressable Fire Alarm Control Panel. System shall be fully addressable, intelligent and modular. 10 loops expandable up to required capacity. Capable of integration with Fire Detection Devices, Fire Suppression Systems and BMS if required. The Fire Alarm Control Panel shall be provided with a sealed maintenance-free battery backup system with sufficient capacity to operate the system under normal supervisory conditions, followed by alarm condition operation, in accordance with NFPA 72 requirements. Complete in all respects or as approved by the Consultant.	Nos	1		-
1.2	<u>ADDRESSABLE BEAM DETECTORS</u>				
1.2.1	Supply, installation, testing and commissioning of reflective type projected beam smoke detectors complying with EN 54-12 and specifically suitable for operation in cold storage environments within an ambient temperature range of -20°C to +25°C, where applicable. The scope shall include complete installation compatible with sandwich panels of cold storage and shall not affect the cold storage in any aspect after fire detection installation, this shall also includes compatible reflector plates, standard mounting bases, locking mechanisms to prevent unauthorized removal, compatibility with standard junction boxes, and all necessary accessories, interfaces and ancillary components required for a complete, reliable and fully functional installation, complete in all respects or as approved by the Consultant.	Nos	18		-
1.3	<u>ADDRESSABLE SMOKE DETECTORS</u>				

1.3.1	Supply, installation, testing and commissioning of addressable smoke detectors complying with EN 54-7 and compatible with the proposed Fire Alarm Control Panel and associated addressable fire alarm system. Detectors shall be specifically suitable and manufacturer-rated for the environmental conditions and operating temperature range of the installation, including cold storage areas operating between -20°C and +25°C, where applicable. The scope shall include complete installation compatible with sandwich panel of cold storage and shall not affect the cold storage in any aspect after fire detection system installation, this shall also includes compatible reflector plates, standard mounting bases, locking mechanisms to prevent unauthorized removal, compatibility with standard junction boxes, and all necessary accessories, interfaces and ancillary components required for a complete, reliable and fully functional installation, complete in all respects or as approved by the Consultant.	Nos	34		-
1.4	<u>ADDRESSABLE MULTI DETECTORS</u>				
1.4.1	Supply, Installation, Testing and Commissioning of addressable Multi detectors EN-54-7 compliant compatible with the proposed Fire Alarm Control Panel. Detector shall be supplied with Standard mounting base, locking mechanism to prevent unauthorized removal, and compatible with standard junction boxes, complete in all respects or as approved by the Consultant.	Nos	1		-
1.5	<u>ZONE CONTROL INTERFACE</u>				
1.5.1	Supply, Installation, Testing and Commissioning of Zone Control Assembly Interface module complete with all accessories, wiring, containment and integration with the Fire Alarm System (As per FireFighting drawings). Complete in all respects or as Approved by the Consultant.	Nos			
1.6	<u>ADDRESSABLE ALARM SOUNDERS</u>				
1.6.1	Supply, Installation, Testing and commissioning of addressable wall mount electronic sounder. Loop powered, with selectable tones and minimum 90 dB output, complete with all accessories, complying with NFPA 72 / EN 54-3. Complete in all respects or as approved by the Consultant.	Nos.	11		-
1.7	<u>ADDRESSABLE FLASHERS</u>				
1.7.1	Supply, installation, testing and commissioning of wall mount addressable visual alarm device (strobe), high-intensity LED type, compliant with EN 54-23, complete with all accessories. Complete in all respects or as approved by the Consultant.	Nos.	11		-
1.8	<u>MANUAL CALL POINTS</u>				

1.8.1	Supply, installation, testing, and commissioning of wall mount manual call point (MCP), break glass or resettable type, red colored, loop powered, compatible with fire alarm control panel, complete with back box, LED indicator, key reset facility, and all necessary accessories including interconnection with fire alarm loop wiring and testing as per EN 54 / NFPA standards. Complete in all respects or as approved by the Consultant.	Nos.	11		
1.9	<u>FIRE ALARM LOOP CABLE</u>				
1.9.1	Supply, installation, testing and commissioning of 2-core x 1.5mm ² + ECC shielded LPCB approved Fire resistant, 2-hour rated cable for fire alarm loop wiring, fire alarm critical circuits, complete with conduit, accessories, terminations, and identification wiring shall be in accordance with NFPA 72, EN-50200, IEC 60331 and BS 6387. Note: Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of cables are shown herewith. Payments shall be made as per actual length installed.	RM	3000		
1.10	<u>EMERGENCY LIGHTS CABLE</u>				
1.10.1	Supply, installation, testing and commissioning of 3 x 2.5 mm ² shielded LPCB approved Fire resistant, 2-hour rated cable for fire alarm loop wiring, fire alarm critical circuits, complete with conduit, accessories, terminations, and identification. All wiring shall be in accordance with NFPA 72, EN-50200, IEC 60331 and BS 6387. Note: Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of cables are shown herewith. Payments shall be made as per actual length installed.	RM	1100		
1.11	<u>CONDUITS</u>				
1.11.1	Supply and installation of Hot dipped Galvanized Electrical Metal Tube (EMT) conduits in compliance with IEC 61386 standard and other applicable standards of minimum 45 microns with all kind of fittings like elbows, coupling, saddles, connectors, conduit hangers, supports and all other required fittings & accessories complete in all respects or as approved by the Consultant. Note: Actual length of conduits to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of conduits are shown herewith. Payments shall be made as per actual length installed.	RM	4100		

1.12	<u>EMERGENCY LIGHTS</u>				
1.12.1	Supply, installation, testing and commissioning of self-contained LED emergency light fitting, complete with backup (minimum 120 minutes), automatic operation, and all accessories, complete in all respects complying with NFPA 101 / EN 1838 / IEC standards.	Nos	50		-
1.13	<u>FIRE EXIT SIGN</u>				
1.13.1	Supply, installation, testing and commissioning of LED illuminated fire exit sign (running man type), double sided, complete with backup (minimum 120 minutes), maintained operation, and all accessories, complete in all respects complying with NFPA 101 / EN 1838 / ISO 7010 standards.	Nos	15		-
Total (PKR)					-

FIRE DETECTION SYSTEM WAREHOUSE-8					
Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
1.1	<u>ADDRESSABLE FIRE ALARM CONTROL PANEL (FACP)</u>				
1.1.1	Supply, Installation, Testing and commissioning of microprocessor-based addressable Fire Alarm Control Panel. System shall be fully addressable, intelligent and modular. 2 loops expandable upto required capacity. Capable of integration with Fire Detection Devices, Fire Suppression Systems and BMS if required. The Fire Alarm Control Panel shall be provided with a sealed maintenance-free battery backup system with sufficient capacity to operate the system under normal supervisory conditions, followed by alarm condition operation, in accordance with NFPA 72 requirements. Complete in all respects or as approved by the Consultant.	Nos	1		-
1.2	<u>ADDRESSABLE BEAM DETECTORS</u>				

1.2.1	Supply, Installation, Testing and commissioning of reflective type projected beam detectors EN-54-12 compliant complete with reflective plates, mounting accessories, and all required interfaces complete in all respects or as approved by the Consultant.	Nos	12		-
1.3	<u>ADDRESSABLE SMOKE DETECTORS</u>				
1.3.1	Supply, Installation, Testing and Commissioning of addressable smoke detectors EN-54-7 compliant compatible with the proposed Fire Alarm Control Panel. Detector shall be supplied with Standard mounting base, locking mechanism to prevent unauthorized removal, and compatible with standard junction boxes, complete in all respects or as approved by the Consultant.	Nos	14		-
1.4	<u>ZONE CONTROL INTERFACE</u>				
1.4.1	Supply, Installation, Testing and Commissioning of Zone Control Assembly Interface module complete with all accessories, wiring, containment and integration with the Fire Alarm System (As per FireFighting drawings).Complete in all respects or as Approved by the Consultant.	Nos	2		
1.5	<u>ADDRESSABLE ALARM SOUNDERS</u>				
1.5.1	Supply, Installation, Testing and commissioning of addressable wall mount electronic sounder. Loop powered, with selectable tones and minimum 90 dB output, complete with all accessories, complying with NFPA 72 / EN 54-3. Complete in all respects or as approved by the Consultant.	Nos.	6		-
1.6	<u>ADDRESSABLE FLASHERS</u>				
1.6.1	Supply, installation, testing and commissioning of wall mount addressable visual alarm device (strobe), high-intensity LED type, compliant with EN 54-23, complete with all accessories. Complete in all respects or as approved by the Consultant.	Nos.	6		-
1.7	<u>MANUAL CALL POINTS</u>				
1.7.1	Supply, installation, testing, and commissioning of wall mount manual call point (MCP), break glass or resettable type, red colored, loop powered, compatible with fire alarm control panel, complete with back box, LED indicator, key reset facility, and all necessary accessories including interconnection with fire alarm loop wiring and testing as per EN 54 / NFPA standards. Complete in all respects or as approved by the Consultant.	Nos.	6		
1.8	<u>FIRE ALARM LOOP CABLE</u>				

1.8.1	Supply, installation, testing and commissioning of 2-core x 1.5mm² + ECC shielded LPCB approved Fire resistant, 2-hour rated cable for fire alarm loop wiring, fire alarm critical circuits, complete with conduit, accessories, terminations, and identification wiring shall be in accordance with NFPA 72, EN-50200, IEC 60331 and BS 6387 Note: Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of cables are shown herewith. Payments shall be made as per actual length installed.	RM	1300	-
1.9	<u>EMERGENCY LIGHTS CABLE</u>			
1.9.1	Supply, installation, testing and commissioning of 3 x 2.5 mm² shielded LPCB approved Fire resistant, 2-hour rated cable for fire alarm loop wiring, fire alarm critical circuits, complete with conduit, accessories, terminations, and identification. All wiring shall be in accordance with NFPA 72, EN-50200, IEC 60331 and BS 6387. Note: Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of cables are shown herewith. Payments shall be made as per actual length installed.	RM	860	
1.10	<u>CONDUITS</u>			
1.10.1	Supply and installation of Hot dipped Galvanized Electrical Metal Tube (EMT) conduits in compliance with IEC 61386 standard and other applicable standards of minimum 45 microns with all kind of fittings like elbows, coupling, saddles, connectors, conduit hangers, supports and all other required fittings & accessories complete in all respects or as approved by the Consultant. Note: Actual length of conduits to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of conduits are shown herewith. Payments shall be made as per actual length installed.	RM	2160	
1.11	<u>EMERGENCY LIGHTS</u>			
1.11.1	Supply, installation, testing and commissioning of self-contained LED emergency light fitting, complete with backup (minimum 120 minutes), automatic operation, and all accessories, complete in all respects complying with NFPA 101 / EN 1838 / IEC standards.	Nos	46	-
1.12	<u>FIRE EXIT SIGN</u>			

1.12.1	Supply, installation, testing and commissioning of LED illuminated fire exit sign (running man type), double sided, complete with backup (minimum 120 minutes), maintained operation, and all accessories, complete in all respects complying with NFPA 101 / EN 1838 / ISO 7010 standards.	Nos	6		-
Total (PKR)					-

SUMMARY OF FIRE FIGHTING SYSTEM

Item no.	Item Description	Excluding Sprinklers	Sprinklers	External
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.			
	<u>DESCRIPTION</u>			
1	Warehouse-1			
2	Warehouse-2			
3	Warehouse-3			
4	Warehouse-8			
5	Office Building Near Reception			
6	Reception			
7	Fire Fighting External Works			
Total (PKR)		-	-	-

Grand Total (PKR)				-
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Warehouse-01 (Internal Fire Fighting Works Excluding Sprinklers & Associated Piping)

Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
-	Fire Fighting:				
1	Supply and Installation of Fire Extinguishers of specified type and capacities with wall mounting brackets etc. as indicated in drawings. the fire extinguishers shall be installed as specified in NFPA-10 complete in all respects as per specifications drawings and as approved by the Consultant.				
1.1	03 Liters Wet Chemical Fire Extinguisher	No.	1		
1.2	5kg CO2 Fire Extinguisher	No.	20		
1.3	6kg DCP Fire Extinguisher	No.	20		
1.4	6kg Ceiling Mounted Automatic Fire Extinguisher (Halotron)	No.	2		
2	Supply, Installation, testing and commissioning of wall mounted Dual Fire Hose Cabinet with double vertical cabinet as per NFPA-14, Upper compartment consisting of 1" diameter swinging arm type 100 feet long fire hose reel with Pressure Reducing Valve and lower compartment consisting of 2.5" x 100 ft polyester collapsible fire hose and with 2.5" diameter landing valve with quick coupling, the cabinet shall be made with mild steel 16 gauge sheet with approved colour and polyester powder coating finish, and with valve and nozzle and accessories, complete in all respects as per specifications, drawings and as approved by the Consultant.				
2.1	Dual Compartment Fire Hose Cabinets	Nos.	4		

3	Supply, Installation, testing and commissioning of wall mounted Fire Hose Reel with Cabinet (Class-II) as per NFPA-14, Fire Hose Reel shall be of 1" diameter swinging arm type 100 feet long fire hose reel with Pressure Reducing Valve, the cabinet shall be made with mild steel 16 gauge sheet with approved colour and polyester powder coating finish with valve and nozzle and accessories, complete in all respects as per specifications, drawings and as approved by the Consultant.				
3.1	Fire Hose Reel with Cabinet	Nos.	1		
4	Supply, Installation, testing and commissioning of Black seamless M.S schedule 40 Piping with all type fittings and specials such as tees, sockets, elbows, bends, unions, reducers etc, and painting with primer and final finish coats, and fixing with approved quality pipe hanging and support system hot dipped galvanized and specially designed for firefighting installations, complete in all respects as per drawings, specifications and as approved by the Consultant.				
4.1	1-1/2" diameter	Rft	155		
4.2	2-1/2" diameter	Rft	65		
5	Supply and installation of Water Flow Devices of PN-20 pressure rating, these shall be complete with flanges, nut bolts, gaskets, union etc. complete in all respects as approved by the consultant.				
5.1	Pressure Reducing Valve with Fire Hose Cabinets	No.	5		
6	Supply and Installation of 50 KG DCP Trolley Mounted Fire Extinguisher with portable trolley of specified type and capacities, the fire extinguishers shall be installed as specified in NFPA-10 complete in all respects as per specifications drawings and as approved by the Consultant.				
6.1	50 KG DCP Trolley Mounted Fire Extinguishers	Nos.	6		
7	Providing and installation of Fire Blankets conforming ASTM F 1989-05 standard as indicated in drawings with a protective cover with clear indication that how to extract and use it, complete in all respects as per specification and drawings and as approved by the Consultant.				
7.1	Fire Blankets	Each	1		

8	Providing and installation of Personal Protective Equipment (PPE) , this includes safety cabinet, front Glass door with locking arrangements, fire blanket, safety helmets (minimum two), safety leather gloves (minimum two), Safety goggles Dark/Clear x2, Safety Shoes x2 pair, Fire Fighting gum shoes x1, Safety west reflecting jacket (minimum two), Fireman Hammer x1, Fireman Axe x1, Half face mask x1, Portable rechargeable search light x1, fire escape mask x1 complete in all respects as per specifications, drawings and as approved by the Consultant.				
8.1	Personal Protective Equipment (PPE)	Each	6		
-	Miscellaneous:	-	-	-	-
9	Supply, installation, inspection and completion of Passive Fire Protection works at locations indicated on drawings and in accordance with NFPA-101, NFPA-5000, other applicable standards and local authority requirements including but not limited to Anti Slip walk tape, Anti Shatter sheet on glass, Fire Cement, Duct fire rated, protection, sealing of any openings with fire resistant material with approved sealants, shall be completed in all respects and as approved by the consultant.				
9.1	Passive Fire Protection works	Lot	1		
10	Providing and installation of Pipe Sleeves in masonry works , all the sleeves shall be of approved quality and make and shall be installed as recommended by the manufacturer, the sleeves shall be of adequate size and material with proper sealant and shall be placed where advised for required for Fire Fighting pipes complete in all respects as per specification and drawings and as approved by the Consultant.				
10.1	Sleeves	Lot	1		
11	Providing and installation of Escutcheon Plates where all pipes passing through wall floor or slab, the construction of Escutcheon plates shall be as per specifications and shall be installed as recommended by the manufacturer, the Escutcheon plates shall be of adequate size and material with proper installation and shall be placed where advised for required for Fire Fighting complete in all respects as per specification and drawings and as approved by the Consultant.				
11.1	Escutcheon Plates	Lot	1		
12	One Year Maintenance	Job	1		
13	Supplementary works				
13.1	Shop Drawings & As Built Drawings	Lot	1		
13.2	Operation & Maintenance Manuals	Lot	1		
Total					-

Warehouse-01 (Internal Fire Fighting Works Sprinklers & Associated Piping)

Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
-	<u>Fire Fighting:</u>				
1	Providing, fixing, testing and commissioning of recessed Pendent Sprinklers or as required with slip on style escutcheons plates (where required) of color and design, the sprinkler shall be ESFR (Early Suppression Fast Response) type having 3/4 inch NPT threads with approved K factor (16.8) and temperature rating with chrome finish & UL/ULC Listed for approved manufacturer, complete in all respects as per drawings, specifications and as approved by the Consultant.				
1.1	Fire Sprinklers Providing, fixing, testing and commissioning of recessed Pendent/Upright Sprinklers or as required with slip on style escutcheons plates (where required) of color and design, the sprinkler shall be quick response type having 1/2 inch NPT threads with approved K factor (5.6) and temperature rating with chrome finish & UL/ULC Listed for approved manufacturer, complete in all respects as per drawings, specifications and as approved by the Consultant.	Each	557		
2					
2.1	Fire Sprinklers (Inside Office Space)	Each	27		
3	Supply, Installation, testing and commissioning of Black seamless M.S schedule 40 Piping with all type fittings and specials such as tees, sockets, elbows, bends, unions, reducers etc, and painting with primer and final finish coats, and fixing with approved quality pipe hanging and support system hot dipped galvanized and specially designed for fire fighting installations, complete in all respects as per drawings, specifications and as approved by the Consultant.				
3.1	1" diameter	Rft	234		
3.2	1-1/4" diameter	Rft	1,662		
3.3	1-1/2" diameter	Rft	2,041		

3.4	2" diameter	Rft	3,330		
3.5	2-1/2" diameter	Rft	169		
3.6	3" diameter	Rft	154		
3.7	4" diameter	Rft	35		
3.8	6" diameter	Rft	1,095		
4	Supply and installation of Water Flow Devices of PN-20 pressure rating, these shall be complete with flanges, nut bolts, gaskets, union etc complete in all respects as approved by the consultant.				
4.1	Gate Valve Rising Stem				
4.1.1	2" diameter	No.	4		
4.1.2	6" diameter	No.	2		
4.2	Non Return Valve				
4.2.1	6" diameter	No.	2		
4.3	Pressure Reducing Valve				
4.3.1	6" diameter	No.	2		
4.4	Flow Switch	Each	2		
4.5	Pressure Gauge	Each	2		
4.6	Sight Glass	Each	2		
-	<u>Miscellaneous:</u>	-	-	-	-
5	Providing and installation of Pipe Sleeves in masonry works , all the sleeves shall be of approved quality and make and shall be installed as recommended by the manufacturer, the sleeves shall be of adequate size and material with proper sealant and shall be placed where advised for required for Fire Fighting pipes complete in all respects as per specification and drawings and as approved by the Consultant.				
5.1	Sleeves	Lot	1		

6	Providing and installation of Escutcheon Plates where all pipes passing through wall floor or slab, the construction of Escutcheon plates shall be as per specifications and shall be installed as recommended by the manufacturer, the Escutcheon plates shall be of adequate size and material with proper installation and shall be placed where advised for required for Fire Fighting complete in all respects as per specification and drawings and as approved by the Consultant.				
6.1	Escutcheon Plates	Lot	1		
7	One Year Maintenance	Job	1		
Total		-			

Warehouse-02 (Internal Fire Fighting Works Excluding Sprinklers & Associated Piping)

Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
-	-				
1	Supply and Installation of Fire Extinguishers of specified type and capacities with wall mounting brackets etc as indicated in drawings. the fire extinguishers shall be installed as specified in NFPA-10 complete in all respects as per specifications drawings and as approved by the Consultant.				
1.1	03 Liters Wet Chemical Fire Extinguisher	No.	1		
1.2	5kg CO2 Fire Extinguisher	No.	20		
1.3	6kg DCP Fire Extinguisher	No.	20		
1.4	6kg Ceiling Mounted Automatic Fire Extinguisher (Halotron)	No.	2		
2	Supply, Installation, testing and commissioning of wall mounted Dual Fire Hose Cabinet with double vertical cabinet as per NFPA-14, Upper compartment consisting of 1" diameter swinging arm type 100 feet long fire hose reel with Pressure Reducing Valve and lower compartment consisting of 2.5" x 100 ft polyester collapsible fire hose and with 2.5" diameter landing valve with quick coupling, the cabinet shall be made with mild steel 16 gauge sheet with approved colour and polyester powder coating finish, and with valve and nozzle and accessories, complete in all respects as per specifications, drawings and as approved by the Consultant.				
2.1	Dual Compartment Fire Hose Cabinets	Nos.	4		

3	Supply, Installation, testing and commissioning of wall mounted Fire Hose Reel with Cabinet (Class-II) as per NFPA-14, Fire Hose Reel shall be of 1" diameter swinging arm type 100 feet long fire hose reel with Pressure Reducing Valve, the cabinet shall be made with mild steel 16 gauge sheet with approved colour and polyester powder coating finish with valve and nozzle and accessories, complete in all respects as per specifications, drawings and as approved by the Consultant.				
3.1	Fire Hose Reel with Cabinet	Nos.	1		
4	Supply, Installation, testing and commissioning of Black seamless M.S schedule 40 Piping with all type fittings and specials such as tees, sockets, elbows, bends, unions, reducers etc, and painting with primer and final finish coats, and fixing with approved quality pipe hanging and support system hot dipped galvanized and specially designed for fire fighting installations, complete in all respects as per drawings, specifications and as approved by the Consultant.				
4.1	1-1/2" diameter	Rft	155		
4.2	2-1/2" diameter	Rft	65		
5	Supply and installation of Water Flow Devices of PN-20 pressure rating, these shall be complete with flanges, nut bolts, gaskets, union etc complete in all respects as approved by the consultant.				
5.1	Pressure Reducing Valve with Fire Hose Cabinets	No.	5		
6	Supply and Installation of 50 KG DCP Trolley Mounted Fire Extinguisher with portable trolley of specified type and capacities, the fire extinguishers shall be installed as specified in NFPA-10 complete in all respects as per specifications drawings and as approved by the Consultant.				
6.1	50 KG DCP Trolley Mounted Fire Extinguishers	Nos.	6		
7	Providing and installation of Fire Blankets conforming ASTM F 1989-05 standard as indicated in drawings with a protective cover with clear indication that how to extract and use it, complete in all respects as per specification and drawings and as approved by the Consultant.				
7.1	Fire Blankets	Each	1		

8	Providing and installation of Personal Protective Equipment (PPE) , this includes safety cabinet, front Glass door with locking arrangements, fire blanket, safety helmets (minimum two), safety leather gloves (minimum two), Safety goggles Dark/Clear x2, Safety Shoes x2 pair, Fire Fighting gum shoes x1, Safety vest reflecting jacket (minimum two), Fireman Hammer x1, Fireman Axe x1, Half face mask x1, Portable rechargeable search light x1, fire escape mask x1 complete in all respects as per specifications, drawings and as approved by the Consultant.				
8.1	Personal Protective Equipment (PPE)	Each	6		
-	<u>Miscellaneous:</u>	-	-	-	-
9	Supply, installation, inspection and completion of Passive Fire Protection works at locations indicated on drawings and in accordance with NFPA-101, NFPA-5000, other applicable standards and local authority requirements including but not limited to Anti Slip walk tape, Anti Shatter sheet on glass, Fire Cement, Duct fire rated, protection, sealing of any openings with fire resistant material with approved sealants, shall be completed in all respects and as approved by the consultant.				
9.1	Passive Fire Protection works	Lot	1		
10	Providing and installation of Pipe Sleeves in masonry works , all the sleeves shall be of approved quality and make and shall be installed as recommended by the manufacturer, the sleeves shall be of adequate size and material with proper sealant and shall be placed where advised for required for Fire Fighting pipes complete in all respects as per specification and drawings and as approved by the Consultant.				
10.1	Sleeves	Lot	1		
11	Providing and installation of Escutcheon Plates where all pipes passing through wall floor or slab, the construction of Escutcheon plates shall be as per specifications and shall be installed as recommended by the manufacturer, the Escutcheon plates shall be of adequate size and material with proper installation and shall be placed where advised for required for Fire Fighting complete in all respects as per specification and drawings and as approved by the Consultant.				
11.1	Escutcheon Plates	Lot	1		
12	One Year Maintenance	Job	1		

13	Supplementary works				
13.1	Shop Drawings & As Built Drawings	Lot	1		
13.2	Operation & Maintenance Manuals	Lot	1		
Total					-

Warehouse-02 (Internal Fire Fighting Works Sprinklers & Associated Piping)

Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
-	-				
1	Providing, fixing, testing and commissioning of recessed Pendent Sprinklers or as required with slip on style escutcheons plates (where required) of color and design, the sprinkler shall be ESFR (Early Suppression Fast Response) type having 3/4 inch NPT threads with approved K factor (16.8) and temperature rating with chrome finish & UL/ULC Listed for approved manufacturer, complete in all respects as per drawings, specifications and as approved by the Consultant.				
1.1	Fire Sprinklers	Each	557		
2	Providing, fixing, testing and commissioning of recessed Pendent/Upright Sprinklers or as required with slip on style escutcheons plates (where required) of color and design, the sprinkler shall be quick response type having 1/2 inch NPT threads with approved K factor (5.6) and temperature rating with chrome finish & UL/ULC Listed for approved manufacturer, complete in all respects as per drawings, specifications and as approved by the Consultant.				
2.1	Fire Sprinklers (Inside Office Space)	Each	27		
3	Supply, Installation, testing and commissioning of Black seamless M.S schedule 40 Piping with all type fittings and specials such as tees, sockets, elbows, bends, unions, reducers etc, and painting with primer and final finish coats, and fixing with approved quality pipe hanging and support system hot dipped galvanized and specially designed for fire fighting installations, complete in all respects as per drawings, specifications and as approved by the Consultant.				
3.1	1" diameter	Rft	234		

3.2	1-1/4" diameter	Rft	1,662		
3.3	1-1/2" diameter	Rft	2,041		
3.4	2" diameter	Rft	3,330		
3.5	2-1/2" diameter	Rft	169		
3.6	3" diameter	Rft	154		
3.7	4" diameter	Rft	35		
3.8	6" diameter	Rft	1,095		
4	Supply and installation of Water Flow Devices of PN-20 pressure rating, these shall be complete with flanges, nut bolts, gaskets, union etc complete in all respects as approved by the consultant.				
4.1	Gate Valve Rising Stem				
4.1.1	2" diameter	No.	4		
4.1.2	6" diameter	No.	2		
4.2	Non Return Valve				
4.2.1	6" diameter	No.	2		
4.3	Pressure Reducing Valve				
4.3.1	6" diameter	No.	2		
4.4	Flow Switch	Each	2		
4.5	Pressure Gauge	Each	2		
4.6	Sight Glass	Each	2		
-	<u>Miscellaneous:</u>	-	-	-	-
5	Providing and installation of Pipe Sleeves in masonry works , all the sleeves shall be of approved quality and make and shall be installed as recommended by the manufacturer, the sleeves shall be of adequate size and material with proper sealant and shall be placed where advised for required for Fire Fighting pipes complete in all respects as per specification and drawings and as approved by the Consultant.				
5.1	Sleeves	Lot	1		

6	Providing and installation of Escutcheon Plates where all pipes passing through wall floor or slab, the construction of Escutcheon plates shall be as per specifications and shall be installed as recommended by the manufacturer, the Escutcheon plates shall be of adequate size and material with proper installation and shall be placed where advised for required for Fire Fighting complete in all respects as per specification and drawings and as approved by the Consultant.				
6.1	Escutcheon Plates	Lot	1		
7	One Year Maintenance	Job	1		
Total					-

Warehouse-03 (Internal Fire Fighting Works Excluding Sprinklers & Associated Piping)					
Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
-	-				
1	Supply and Installation of Fire Extinguishers of specified type and capacities with wall mounting brackets etc as indicated in drawings. the fire extinguishers shall be installed as specified in NFPA-10 complete in all respects as per specifications drawings and as approved by the Consultant.				

1.1	03 Liters Wet Chemical Fire Extinguisher	No.	1		
1.2	5kg CO2 Fire Extinguisher	No.	15		
1.3	6kg DCP Fire Extinguisher	No.	15		
1.4	6kg Ceiling Mounted Automatic Fire Extinguisher (Halotron)	No.	1		
2	Supply, Installation, testing and commissioning of wall mounted Dual Fire Hose Cabinet with double vertical cabinet as per NFPA-14, Upper compartment consisting of 1" diameter swinging arm type 100 feet long fire hose reel with Pressure Reducing Valve and lower compartment consisting of 2.5" x 100 ft polyester collapsable fire hose and with 2.5" diameter landing valve with quick coupling, the cabinet shall be made with mild steel 16 gauge sheet with approved colour and polyester powder coating finish, and with valve and nozzle and accessories, complete in all respects as per specifications, drawings and as approved by the Consultant.				
2.1	Dual Compartment Fire Hose Cabinets	Nos.	8		
3	Supply, Installation, testing and commissioning of wall mounted Fire Hose Reel with Cabinet (Class-II) as per NFPA-14, Fire Hose Reel shall be of 1" diameter swinging arm type 100 feet long fire hose reel with Pressure Reducing Valve, the cabinet shall be made with mild steel 16 gauge sheet with approved colour and polyester powder coating finish with valve and nozzle and accessories, complete in all respects as per specifications, drawings and as approved by the Consultant.				
3.1	Fire Hose Reel with Cabinet	Nos.	1		
4	Supply, Installation, testing and commissioning of Black seamless M.S schedule 40 Piping with all type fittings and specials such as tees, sockets, elbows, bends, unions, reducers etc, and painting with primer and final finish coats, and fixing with approved quality pipe hanging and support system hot dipped galvanized and specially designed for fire fighting installations, complete in all respects as per drawings, specifications and as approved by the Consultant.				
4.1	2-1/2" diameter	Rft	90		
5	Supply and installation of Water Flow Devices of PN-20 pressure rating, these shall be complete with flanges, nut bolts, gaskets, union etc complete in all respects as approved by the consultant.				
5.1	Pressure Reducing Valve with Fire Hose Cabinets	Nos.	9		

6	Supply and Installation of 50 KG DCP Trolley Mounted Fire Extinguisher with portable trolley of specified type and capacities, the fire extinguishers shall be installed as specified in NFPA-10 complete in all respects as per specifications drawings and as approved by the Consultant.				
6.1	50 KG DCP Trolley Mounted Fire Extinguishers	Nos.	6		
7	Providing and installation of Fire Blankets conforming ASTM F 1989-05 standard as indicated in drawings with a protective cover with clear indication that how to extract and use it, complete in all respects as per specification and drawings and as approved by the Consultant.				
7.1	Fire Blankets	Each	1		
8	Providing and installation of Personal Protective Equipment (PPE) , this includes safety cabinet, front Glass door with locking arrangements, fire blanket, safety helmets (minimum two), safety leather gloves (minimum two), Safety goggles Dark/Clear x2, Safety Shoes x2 pair, Fire Fighting gum shoes x1, Safety west reflecting jacket (minimum two), Fireman Hammer x1, Fireman Axe x1, Half face mask x1, Portable rechargeable search light x1, fire escape mask x1 complete in all respects as per specifications, drawings and as approved by the Consultant.				
8.1	Personal Protective Equipment (PPE)	Each	8		
-	Miscellaneous:	-	-	-	-
9	Supply, installation, inspection and completion of Passive Fire Protection works at locations indicated on drawings and in accordance with NFPA-101, NFPA-5000, other applicable standards and local authority requirements including but not limited to Anti Slip walk tape, Anti Shatter sheet on glass, Fire Cement, Duct fire rated, protection, sealing of any openings with fire resistant material with approved sealants, shall be completed in all respects and as approved by the consultant.				
9.1	Passive Fire Protection works	Lot	1		
10	Providing and installation of Pipe Sleeves in masonry works , all the sleeves shall be of approved quality and make and shall be installed as recommended by the manufacturer, the sleeves shall be of adequate size and material with proper sealant and shall be placed where advised for required for Fire Fighting pipes complete in all				

	respects as per specification and drawings and as approved by the Consultant.				
10.1	Sleeves	Lot	1		
11	Providing and installation of Escutcheon Plates where all pipes passing through wall floor or slab, the construction of Escutcheon plates shall be as per specifications and shall be installed as recommended by the manufacturer, the Escutcheon plates shall be of adequate size and material with proper installation and shall be placed where advised for required for Fire Fighting complete in all respects as per specification and drawings and as approved by the Consultant.				
11.1	Escutcheon Plates	Lot	1		
12	One Year Maintenance	Job	1		
13	Supplementary works				
13.1	Shop Drawings & As Built Drawings	Lot	1		
13.2	Operation & Maintenance Manuals	Lot	1		
Total					-

Warehouse-03 (Internal Fire Fighting Works Sprinklers & Associated Piping)					
Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
-	-				

1	Providing, fixing, testing and commissioning of recessed Pendent Sprinklers or as required with slip on style escutcheons plates (where required) of color and design, the sprinkler shall be ESFR (Early Suppression Fast Response) type having 3/4 inch NPT threads with approved K factor (16.8) and temperature rating with chrome finish & UL/ULC Listed for approved manufacturer, complete in all respects as per drawings, specifications and as approved by the Consultant.				
1.1	Fire Sprinklers	Each	832		
2	Providing, fixing, testing and commissioning of recessed Pendent/Upright Sprinklers or as required with slip on style escutcheons plates (where required) of color and design, the sprinkler shall be quick response type having 1/2 inch NPT threads with approved K factor (5.6) and temperature rating with chrome finish & UL/ULC Listed for approved manufacturer, complete in all respects as per drawings, specifications and as approved by the Consultant.				
2.1	Fire Sprinklers (Inside Office Space)	Each	22		
3	Supply, Installation, testing and commissioning of Black seamless M.S schedule 40 Piping with all type fittings and specials such as tees, sockets, elbows, bends, unions, reducers etc, and painting with primer and final finish coats, and fixing with approved quality pipe hanging and support system hot dipped galvanized and specially designed for fire fighting installations, complete in all respects as per drawings, specifications and as approved by the Consultant.				
3.1	1" diameter	Rft	216		
3.2	1-1/4" diameter	Rft	2,205		
3.3	1-1/2" diameter	Rft	1,653		
3.4	2" diameter	Rft	2,688		
3.5	2-1/2" diameter	Rft	2,361		
3.6	3" diameter	Rft	1,130		
3.7	4" diameter	Rft	48		
3.8	6" diameter	Rft	1,452		
4	Supply and installation of Water Flow Devices of PN-20 pressure rating, these shall be complete with flanges, nut bolts, gaskets, union etc complete in all respects as approved by the consultant.				

4.1	Gate Valve Rising Stem				
4.1.1	2" diameter	No.	2		
4.1.2	2-1/2" diameter	No.	1		
4.1.3	6" diameter	No.	5		
4.2	Non Return Valve				
4.2.1	2-1/2" diameter	No.	1		
4.3	Pressure Reducing Valve				
4.3.1	2-1/2" diameter	No.	1		
4.4	Flow Switch	Each	1		
4.5	Pressure Gauge	Each	1		
4.6	Sight Glass	Each	1		
5	Supply, Installation, Testing, Commissioning, Adjusting and Balancing of Dry Pipe Sprinkler system for Cold Storages, shall be operated with "Double Interlock Pre-Action Valve system". This system shall work on 02 inputs, one from sprinklers (Pressure Drop due to rupturing of bulb) and second from Fire Alarm Control Panel (Digital Signal) to operate the "Deluge Valve Assembly". This "Deluge Valve Assembly" system shall complete with 02 sources as Air and Nitrogen Gas Source, the size of air compressor and number of nitrogen cylinder and their size shall be according to the number of sprinklers and as approved by NFPA The System shall be complete in all respects having following but not limited to it Compete compressed air system with air compressor and all ancillaries and accessories Nitrogen Cylinders battery with pressure control system Deluge Valve Assembly with all necessary fittings ancillaries and accessories This entire system shall be factory manufactured with all necessary approval of UL and FM approvals The Contractor shall completely responsible for compatibility of system, supply, installation, testing, commissioning and balancing with all parts and components, this also includes all related electric and controls works and wiring, piping etc. etc. to the entire satisfaction of Consultant. The contractor shall take the formal approval of complete system in black and white by submitting the technical submittals, approvals and certification of entire system prior to give the purchase order				

	The sizing of system shall be according to NFPA guidelines, this job also includes supply and installation of all associated works, Compressed air piping electrification connection with FACP and other components complete in all respects to the entire satisfaction of consultant. This also includes the supply and installation of all ancillary works suppliers and materials termination connecting to make job complete 100% jobs as indicated in the drawing. It is to be noted that no extra payment shall be made to the contractor for any ancillary or associated works to make system 100% functional as recommended by NFPA.				
5.1	Double Interlock Preaction Valve system	Lot	2		
-	<u>Miscellaneous:</u>	-	-	-	-
6	Providing and installation of Pipe Sleeves in masonry works, all the sleeves shall be of approved quality and make and shall be installed as recommended by the manufacturer, the sleeves shall be of adequate size and material with proper sealant and shall be placed where advised for required for Fire Fighting pipes complete in all respects as per specification and drawings and as approved by the Consultant.				
6.1	Sleeves	Lot	1		
7	Providing and installation of Escutcheon Plates where all pipes passing through wall floor or slab, the construction of Escutcheon plates shall be as per specifications and shall be installed as recommended by the manufacturer, the Escutcheon plates shall be of adequate size and material with proper installation and shall be placed where advised for required for Fire Fighting complete in all respects as per specification and drawings and as approved by the Consultant.				
7.1	Escutcheon Plates	Lot	1		
8	One Year Maintenance	Job	1		
Total					-

Warehouse-08 (Internal Fire Fighting Works Excluding Sprinklers & Associated Piping)

Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
-	-				
1	Supply and Installation of Fire Extinguishers of specified type and capacities with wall mounting brackets etc as indicated in drawings. the fire extinguishers shall be installed as specified in NFPA-10 complete in all respects as per specifications drawings and as approved by the Consultant.				
1.1	03 Liters Wet Chemical Fire Extinguisher	No.	1		
1.2	5kg CO2 Fire Extinguisher	No.	21		
1.3	6kg DCP Fire Extinguisher	No.	21		
1.4	6kg Ceiling Mounted Automatic Fire Extinguisher (Halotron)	No.	2		
2	Supply, Installation, testing and commissioning of wall mounted Dual Fire Hose Cabinet with double vertical cabinet as per NFPA-14, Upper compartment consisting of 1" diameter swinging arm type 100 feet long fire hose reel with Pressure Reducing Valve and lower compartment consisting of 2.5" x 100 ft polyester collapsible fire hose and with 2.5" diameter landing valve with quick coupling, the cabinet shall be made with mild steel 16 gauge sheet with approved colour and polyester powder coating finish, and with valve and nozzle and accessories, complete in all respects as per specifications, drawings and as approved by the Consultant.				
2.1	Dual Compartment Fire Hose Cabinets	Nos.	4		

3	Supply, Installation, testing and commissioning of wall mounted Fire Hose Reel with Cabinet (Class-II) as per NFPA-14, Fire Hose Reel shall be of 1" diameter swinging arm type 100 feet long fire hose reel with Pressure Reducing Valve, the cabinet shall be made with mild steel 16 gauge sheet with approved colour and polyester powder coating finish with valve and nozzle and accessories, complete in all respects as per specifications, drawings and as approved by the Consultant.				
3.1	Fire Hose Reel with Cabinet	Nos.	1		
4	Supply, Installation, testing and commissioning of Black seamless M.S schedule 40 Piping with all type fittings and specials such as tees, sockets, elbows, bends, unions, reducers etc, and painting with primer and final finish coats, and fixing with approved quality pipe hanging and support system hot dipped galvanized and specially designed for fire fighting installations, complete in all respects as per drawings, specifications and as approved by the Consultant.				
4.1	1-1/2" diameter	Rft	174		
4.2	2-1/2" diameter	Rft	75		
5	Supply and installation of Water Flow Devices of PN-20 pressure rating, these shall be complete with flanges, nut bolts, gaskets, union etc. complete in all respects as approved by the consultant.				
5.1	Pressure Reducing Valve with Fire Hose Cabinet	No.	5		
6	Supply and Installation of 50 KG DCP Trolley Mounted Fire Extinguisher with portable trolley of specified type and capacities, the fire extinguishers shall be installed as specified in NFPA-10 complete in all respects as per specifications drawings and as approved by the Consultant.				
6.1	50 KG DCP Trolley Mounted Fire Extinguishers	Nos.	6		
7	Providing and installation of Fire Blankets conforming ASTM F 1989-05 standard as indicated in drawings with a protective cover with clear indication that how to extract and use it, complete in all respects as per specification and drawings and as approved by the Consultant.				
7.1	Fire Blankets	Each	1		

8	Providing and installation of Personal Protective Equipment (PPE) , this includes safety cabinet, front Glass door with locking arrangements, fire blanket, safety helmets (minimum two), safety leather gloves (minimum two), Safety goggles Dark/Clear x2, Safety Shoes x2 pair, Fire Fighting gum shoes x1, Safety west reflecting jacket (minimum two), Fireman Hammer x1, Fireman Axe x1, Half face mask x1, Portable rechargeable search light x1, fire escape mask x1 complete in all respects as per specifications, drawings and as approved by the Consultant.				
8.1	Personal Protective Equipment (PPE)	Each	6		
-	<u>Miscellaneous:</u>	-	-	-	-
9	Supply, installation, inspection and completion of Passive Fire Protection works at locations indicated on drawings and in accordance with NFPA-101, NFPA-5000, other applicable standards and local authority requirements including but not limited to Anti Slip walk tape, Anti Shatter sheet on glass, Fire Cement, Duct fire rated, protection, sealing of any openings with fire resistant material with approved sealants, shall be completed in all respects and as approved by the consultant.				
9.1	Passive Fire Protection works	Lot	1		
10	Providing and installation of Pipe Sleeves in masonry works , all the sleeves shall be of approved quality and make and shall be installed as recommended by the manufacturer, the sleeves shall be of adequate size and material with proper sealant and shall be placed where advised for required for Fire Fighting pipes complete in all respects as per specification and drawings and as approved by the Consultant.				
10.1	Sleeves	Lot	1		
11	Providing and installation of Escutcheon Plates where all pipes passing through wall floor or slab, the construction of Escutcheon plates shall be as per specifications and shall be installed as recommended by the manufacturer, the Escutcheon plates shall be of adequate size and material with proper installation and shall be placed where advised for required for Fire Fighting complete in all respects as per specification and drawings and as approved by the Consultant.				

11.1	Escutcheon Plates	Lot	1		
12	One Year Maintenance	Job	1		
13	Supplementary works				
13.1	Shop Drawings & As Built Drawings	Lot	1		
13.2	Operation & Maintenance Manuals	Lot	1		
Total					-

Warehouse-08 (Internal Fire Fighting Works Sprinklers & Associated Piping)					
Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
-	-				
1	Providing, fixing, testing and commissioning of recessed Pendent Sprinklers or as required with slip on style escutcheons plates (where required) of color and design, the sprinkler shall be ESFR (Early Suppression Fast Response) type having 3/4 inch NPT threads with approved K factor (16.8) and temperature rating with chrome finish & UL/ULC Listed for approved manufacturer, complete in all respects as per drawings, specifications and as approved by the Consultant.				

1.1	Fire Sprinklers	Each	677		
2	Providing, fixing, testing and commissioning of recessed Pendent/Upright Sprinklers or as required with slip on style escutcheons plates (where required) of color and design, the sprinkler shall be quick response type having 1/2 inch NPT threads with approved K factor (5.6) and temperature rating with chrome finish & UL/ULC Listed for approved manufacturer, complete in all respects as per drawings, specifications and as approved by the Consultant.				
2.1	Fire Sprinklers (Inside Office Space)	Each	27		
3	Supply, Installation, testing and commissioning of Black seamless M.S schedule 40 Piping with all type fittings and specials such as tees, sockets, elbows, bends, unions, reducers etc, and painting with primer and final finish coats, and fixing with approved quality pipe hanging and support system hot dipped galvanized and specially designed for fire fighting installations, complete in all respects as per drawings, specifications and as approved by the Consultant.				
3.1	1" diameter	Rft	234		
3.2	1-1/4" diameter	Rft	2,524		
3.3	1-1/2" diameter	Rft	2,306		
3.4	2" diameter	Rft	3,704		
3.5	2-1/2" diameter	Rft	135		
3.6	3" diameter	Rft	145		
3.7	4" diameter	Rft	25		
3.8	6" diameter	Rft	1,244		
4	Supply and installation of Water Flow Devices of PN-20 pressure rating, these shall be complete with flanges, nut bolts, gaskets, union etc complete in all respects as approved by the consultant.				
4.1	Gate Valve Rising Stem				
4.1.1	2" diameter	No.	4		
4.1.2	6" diameter	No.	2		
4.2	Non Return Valve				
4.2.1	6" diameter	No.	2		
4.3	Pressure Reducing Valve				
4.3.1	6" diameter	No.	2		

4.4	Flow Switch	Each	2		
4.5	Pressure Gauge	Each	2		
4.6	Sight Glass	Each	2		
-	<u>Miscellaneous:</u>	-	-	-	-
5	Providing and installation of Pipe Sleeves in masonry works , all the sleeves shall be of approved quality and make and shall be installed as recommended by the manufacturer, the sleeves shall be of adequate size and material with proper sealant and shall be placed where advised for required for Fire Fighting pipes complete in all respects as per specification and drawings and as approved by the Consultant.				
5.1	Sleeves	Lot	1		
6	Providing and installation of Escutcheon Plates where all pipes passing through wall floor or slab, the construction of Escutcheon plates shall be as per specifications and shall be installed as recommended by the manufacturer, the Escutcheon plates shall be of adequate size and material with proper installation and shall be placed where advised for required for Fire Fighting complete in all respects as per specification and drawings and as approved by the Consultant.				
6.1	Escutcheon Plates	Lot	1		
7	One Year Maintenance	Job	1		
Total					-

Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantites given in this BOQ are not the exact quantites. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
-	-				
1	Supply and Installation of Fire Extinguishers of specified type and capacities with wall mounting brackets etc as indicated in drawings. the fire extinguishers shall be installed as specified in NFPA-10 complete in all respects as per specifications drawings and as approved by the Consultant.				
1.1	03 Liters Wet Chemical Fire Extinguisher	No.	2		
1.2	5kg CO2 Fire Extinguisher	No.	8		
1.3	6kg DCP Fire Extinguisher	No.	8		
1.4	6kg Ceiling Mounted Automatic Fire Extinguisher (Halotron)	No.	2		
2	Supply, Installation, testing and commissioning of wall mounted Fire Hose Reel with Cabinet (Class-II) as per NFPA-14, Fire Hose Reel shall be of 1" diameter swinging arm type 100 feet long fire hose reel with Pressure Reducing Valve, the cabinet shall be made with mild steel 16 gauge sheet with approved colour and polyester powder coating finish with valve and nozzle and accessories, complete in all respects as per specifications, drawings and as approved by the Consultant.				
2.1	Fire Hose Reel with Cabinet	Nos.	2		

3	Providing, fixing, testing and commissioning of recessed Pendent/Upright Sprinklers or as required with slip on style escutcheons plates (where required) of color and design, the sprinkler shall be quick response type having 1/2 inch NPT threads with approved K factor (5.6) and temperature rating with chrome finish & UL/ULC Listed for approved manufacturer, complete in all respects as per drawings, specifications and as approved by the Consultant.				
3.1	Fire Sprinklers	Each	103		
4	Supply, Installation, testing and commissioning of Black seamless M.S schedule 40 Piping with all type fittings and specials such as tees, sockets, elbows, bends, unions, reducers etc, and painting with primer and final finish coats, and fixing with approved quality pipe hanging and support system hot dipped galvanized and specially designed for fire fighting installations, complete in all respects as per drawings, specifications and as approved by the Consultant.				
4.1	1" diameter	Rft	907		
4.2	1-1/4" diameter	Rft	55		
4.3	1-1/2" diameter	Rft	138		
4.4	2" diameter	Rft	201		
4.5	2-1/2" diameter	Rft	127		
4.6	3" diameter	Rft	26		
4.7	4" diameter	Rft	65		
5	Supply and installation of Water Flow Devices of PN-20 pressure rating, these shall be complete with flanges, nut bolts, gaskets, union etc complete in all respects as approved by the consultant.				
5.1	Gate Valve Rising Stem				
5.1.1	2" diameter	No.	4		
5.1.2	3" diameter	No.	2		
5.2	Non Return Valve				
5.2.1	3" diameter	No.	2		
5.3	Pressure Reducing Valve				
5.3.1	3" diameter	No.	2		
5.4	Flow Switch	Each	2		
5.5	Pressure Gauge	Each	2		

5.6	Sight Glass	Each	2		
5.7	Pressure Reducing Valve with Fire Hose Reel Cabinet	No.	2		
6	Providing and installation of Fire Blankets conforming ASTM F 1989-05 standard as indicated in drawings with a protective cover with clear indication that how to extract and use it, complete in all respects as per specification and drawings and as approved by the Consultant.				
6.1	Fire Blankets	Each	2		
7	Providing and installation of Personal Protective Equipment (PPE) , this includes safety cabinet, front Glass door with locking arrangements, fire blanket, safety helmets (minimum two), safety leather gloves (minimum two), Safety goggles Dark/Clear x2, Safety Shoes x2 pair, Fire Fighting gum shoes x1, Safety vest reflecting jacket (minimum two), Fireman Hammer x1, Fireman Axe x1, Half face mask x1, Portable rechargeable search light x1, fire escape mask x1 complete in all respects as per specifications, drawings and as approved by the Consultant.				
7.1	Personal Protective Equipment (PPE)	Each	2		
-	<u>Miscellaneous:</u>	-	-	-	-
8	Supply, installation, inspection and completion of Passive Fire Protection works at locations indicated on drawings and in accordance with NFPA-101, NFPA-5000, other applicable standards and local authority requirements including but not limited to Anti Slip walk tape, Anti Shatter sheet on glass, Fire Cement, Duct fire rated, protection, sealing of any openings with fire resistant material with approved sealants, shall be completed in all respects and as approved by the consultant.				
8.1	Passive Fire Protection works	Lot	1		
9	Providing and installation of Pipe Sleeves in masonry works , all the sleeves shall be of approved quality and make and shall be installed as recommended by the manufacturer, the sleeves shall be of adequate size and material with proper sealant and shall be placed where advised for required for Fire Fighting pipes complete in all respects as per specification and drawings and as approved by the Consultant.				

9.1	Sleeves	Lot	1		
10	Providing and installation of Escutcheon Plates where all pipes passing through wall floor or slab, the construction of Escutcheon plates shall be as per specifications and shall be installed as recommended by the manufacturer, the Escutcheon plates shall be of adequate size and material with proper installation and shall be placed where advised for required for Fire Fighting complete in all respects as per specification and drawings and as approved by the Consultant.				
10.1	Escutcheon Plates	Lot	1		
11	One Year Maintenance	Job	1		
12	Supplementary works				
12.1	Shop Drawings & As Built Drawings	Lot	1		
12.2	Operation & Maintenance Manuals	Lot	1		
Total					-

Reception

Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
-	-				
1	Supply and Installation of Fire Extinguishers of specified type and capacities with wall mounting brackets etc as indicated in drawings. the fire extinguishers shall be installed as specified in NFPA-10 complete in all respects as per specifications drawings and as approved by the Consultant.				
1.1	5kg CO2 Fire Extinguisher	No.	1		
1.2	6kg DCP Fire Extinguisher	No.	1		
2	Supply, Installation, testing and commissioning of wall mounted Fire Hose Reel with Cabinet (Class-II) as per NFPA-14, Fire Hose Reel shall be of 1" diameter swinging arm type 100 feet long fire hose reel with Pressure Reducing Valve, the cabinet shall be made with mild steel 16 gauge sheet with approved colour and polyester powder coating finish with valve and nozzle and accessories, complete in all respects as per specifications, drawings and as approved by the Consultant.				
2.1	Fire Hose Reel with Cabinet	Nos.	1		

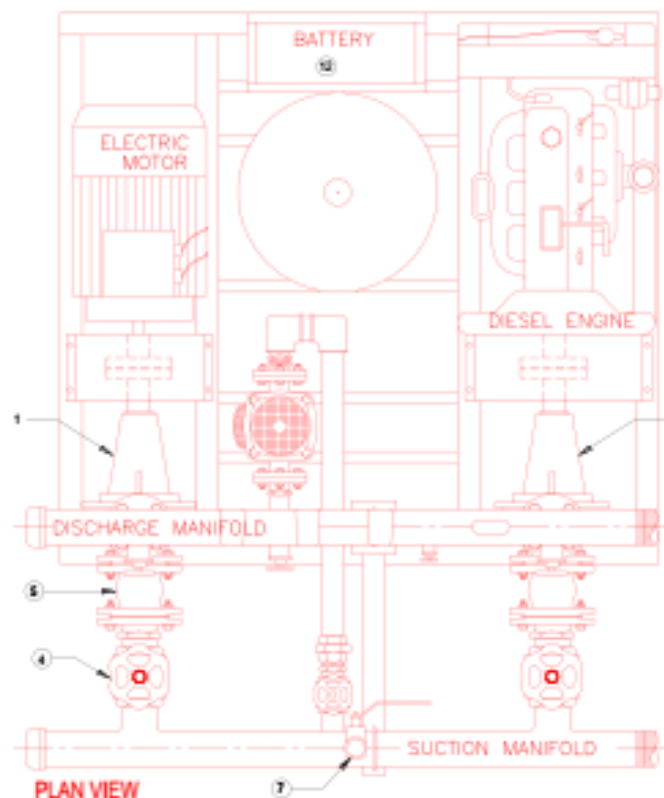
3	Supply, Installation, testing and commissioning of Black seamless M.S schedule 40 Piping with all type fittings and specials such as tees, sockets, elbows, bends, unions, reducers etc, and painting with primer and final finish coats, and fixing with approved quality pipe hanging and support system hot dipped galvanized and specially designed for fire fighting installations, complete in all respects as per drawings, specifications and as approved by the Consultant.				
3.1	1-1/2" diameter	Rft	25		
4	Supply and installation of Water Flow Devices of PN-20 pressure rating, these shall be complete with flanges, nut bolts, gaskets, union etc complete in all respects as approved by the consultant.				
4.1	Pressure Reducing Valve with Fire Hose Reel Cabinet	No.	1		
Total					-

Fire Fighting External Works					
Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
-	Fire Fighting:				
1	Supply, Installation, testing, commissioning, adjusting and balancing of Fire Fighting Pumping set (UL Listed), fire pump set shall be including one main electric motor driven pump, one diesel engine driven pump and one jockey pump in accordance with NFPA-20, and shall deliver 2000 US Gallons capacity at 12 bar discharge pressure, the complete pumping set shall be skid mounted with operating panel, fuel tank all controls as described in NFPA-20, this also includes the fire rated electric power supply, earthing etc to the pumping set from main panel as recommended by NFPA, preparation of foundation, electric and water supply connections, the pumping set shall be installed as recommended by NFPA, UL Listed and shall be complete in all respects as per specifications, drawings and as approved by the Consultant.				
1.1	Fire Pump Set (UL Listed) 2000 US GPM, 12 bar Pressure	Each	1		
2	Supply, Installation, testing and commissioning of wall mounted 2-way Breeching Inlet with cabinet & built in non return valve, the cabinet shall have 02 number water connection for 2-1/2 coupling with cover and 4 inch diameter outlet flange, the cabinet shall be made of mild steel with cover having glass and stainless steel connections, complete in all respects as per specifications, drawings and as approved by the Consultant.				

2.1	2-way Breeching Inlet and Cabinet	Each	4		
3	Supply, Installation, testing and commissioning of Black seamless M.S schedule 40 Piping with all type fittings and specials such as tees, sockets, elbows, bends, unions, reducers etc, and painting with primer and final finish coats, and fixing with approved quality pipe hanging and support system hot dipped galvanized and specially designed for fire fighting installations, complete in all respects as per drawings, specifications and as approved by the Consultant.				
3.1	1-1/2" diameter	Rft	222		
3.2	2-1/2" diameter	Rft	1,245		
3.3	3" diameter	Rft	88		
3.4	4" diameter	Rft	1,975		
3.5	6" diameter	Rft	3,103		
3.6	8" diameter	Rft	3,089		
3.7	10" diameter	Rft	721		
4	Supply and installation of Water Flow Devices PN-20 for fire protection systems, complete in all respects in strict compliance with NFPA 13 and manufacturers UL/FM listing requirements. Each unit shall be provided with flanged connections complete with mating flanges, nuts, bolts, washers, gaskets, and required pipe fittings/adapters, ensuring leak free installation complete in all respects as approved by the consultant.				
4.1	Gate Valve Rising Stem				
4.1.1	10" diameter OS & Y	No.	1		
4.1.2	10" diameter Pressure Relief Valve with test Cone (Pump Discharge Line)	No.	1		
4.1.3	Flow Meter (Pump Discharge Line)	No.	1		
4.2	Anti-Vortex Plate (complete in all respects as approved by the Consultant)	Each	1		
5	Supply and Installation of 50 KG DCP Trolley Mounted Fire Extinguisher with portable trolley of specified type and capacities, the fire extinguishers shall be installed as specified in NFPA-10 complete in all respects as per specifications drawings and as approved by the Consultant.				
5.1	50 KG DCP Trolley Mounted Fire Extinguishers	Nos.	1		

6	Supply, Installation, testing and commissioning of Two Way Wet type (Wet Barrel) Pillar Fire Hydrants in accordance with NFPA-24, NFPA-291 & requirements of local authority having jurisdiction (AHJ), Pillar Hydrant must withstand system designed pressure & test pressure 50 psi (3.5 Bar) above maximum working pressure and deliver required fire flow at minimum 20 psi residual pressure as per NFPA 291, Hydrant bodies shall be factory tested at pressures not less than 300 psi. The Pillar hydrant shall be made of cast iron to BS 1561 and 2 × 65 mm (2½") hose outlet connections shall be of copper alloy BS 1982, Flanges shall be ANSI/AWWA compliant and shall be capable of working pressure as per NFPA and shall be provided with Control Valves with female outlet, pillar hydrant shall be red in colour (Class-C as per NFPA-291 having a rated capacity of less than 500 gpm (1900 L/min) and shall be installed with galvanized flange on reinforced concrete padestal of adequate size complete in all respects as per drawings, specifications and as approved by the Consultant. Note. All related civil works shall be done by the fire fighting Contractor for the proper installation of Pillar Hydrant.				
6.1	Two Way Wet Type Pillar Fire Hydrants	Nos.	18		
7	Supply, Installation, testing and commissioning of Hydrant Cabinet (Fire Hoses, Nozzles and Cabinet) all these items shall be from same manufacturer, there shall be two fire hoses in hydrant cabinet, each fire hose shall be of 2-1/2" x 100 feet capable to operate at system maximum pressure, shall be rubber lined woven jacket hose and shall be provided with aluminum coupling connections at both ends, and 2 x hose nozzles shall be made of copper alloy according to BS 1982 with 12-19 mm outlet diameter and 2-1/2" male couple, both shall be placed in a cabinet. the cabinet shall be made of minimum 1.2 mm thick mild steel and shall be polyester powder coated in red colour and shall be mounted on stand or as per site conditions all inclusive, pin lug spanner wrench, 2 x 2.5" rubber gasket and all other accessories are included, complete in all respects as per specifications, drawings and as approved by the Consultant.				
7.1	Hydrant Cabinet (Fire Hoses, Nozzles and Cabinet)	Nos.	18		
8	Supply, Installation, Testing and Commissioning of Alarm Check Valve Assembly in compliance with NFPA and size as per discharge header of fire pump set of selected manufacturer recommendation, The assembly shall include UL Listed wet alarm check valve (flanged end connections) suitable for vertical installation and				

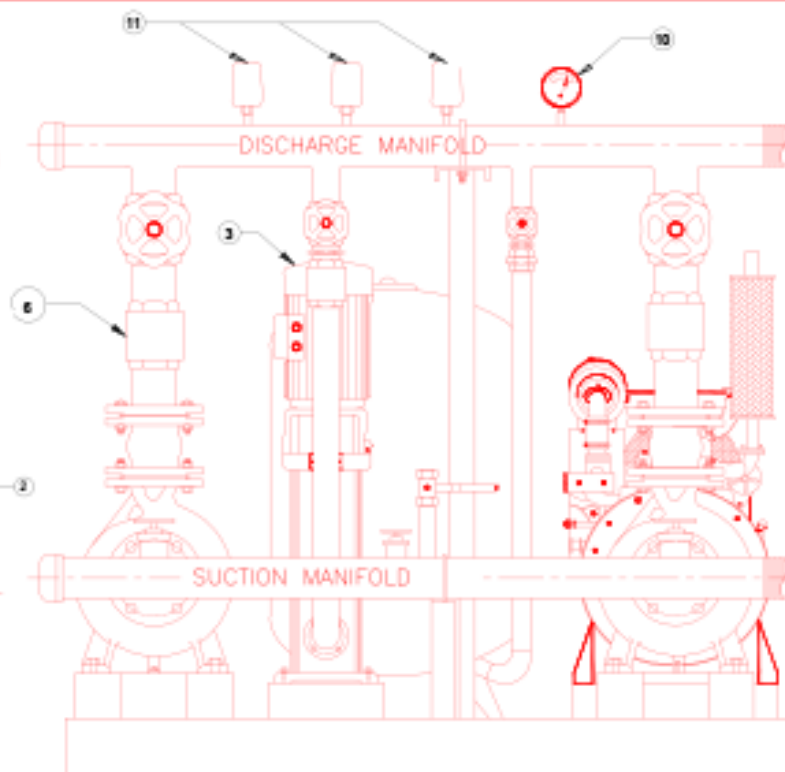
	rated for the system working pressure, complete with factory fabricated trim set for constant/variable pressure service including all necessary piping, fittings, drains, test connections, and supervisory provisions. The assembly shall be provided with water motor alarm (hydraulic gong) complete with piping and accessories, chamber inlet and outlet connections, and all required drain/test arrangements for functional testing of the system in accordance with NFPA requirements. This also includes 2 X pressure gauges one installed upstream and one downstream of the alarm valve along with a main system isolation gate valve (flanged) for maintenance isolation. All internal and external trim piping shall be corrosion resistant, properly supported and installed as per manufacturers configuration without deviation. The contractor shall ensure provision of all auxiliary components including check valve internals, alarm line strainers, test and drain valves, pressure switches and all fittings necessary to ensure complete operational functionality, all equipment shall be painted red securely mounted in vertical orientation on a stable support structure complete in all aspects and all accessories and as approved by consultant.				
8.1	Alarm Check Valve Assembly 10 Inch Diameter	Each	1		
Total					-



PLAN VIEW

NOTES:

1. FIRE FIGHTING PUMP ROOM SHALL BE IN ACCORDANCE WITH NFPA-20.
2. FIRE FIGHTING PUMP ROOM EQUIPMENT SHALL BE INSTALLED ACCORDING TO APPROVED SUBMITTAL BY THE DESIGN CONSULTANT.
3. GENERATOR EXHAUST PIPE MUST BE DISCHARGED PROPERLY.
4. PUMP ROOM TEMPERATURE SHALL NOT BE LESS THEN 40°F AND NOT GREATER THEN 70°F.
PUMP ROOM DRAINAGE PIT WILL BE PROVIDED WITH SUBMERSIBLE PUMP (IF REQUIRED).
5. FIRE PUMP ROOM SHALL BE PROTECTED WITH AUTOMATIC FIRE EXTINGUISHER AND PROVIDE ADEQUATE LIGHT IN PUMP ROOM.



FRONT VIEW

S.NO	DESCRIPTION	S.NO	DESCRIPTION
1.	ELECTRIC PUMP SET	7.	BALL VALVE
2.	DIESEL PUMP SET	8.	SUCTION MANIFOLD
3.	JOCKEY PUMP SET	9.	DELIVERY MANIFOLD
4.	GATE VALVE	10.	PRESSURE GAUGE
5.	FLEXIBLE COUPLING	11.	PRESSURE SWITCH
6.	NON RETURN VALVE	12.	BATTERY

**FIRE FIGHTING PUMP SET
UL LISTED
1 X ELECTRIC MAIN PUMP
1 X DIESEL ENGINE
1 X JOCKEY PUMP
2000 US GPM
12 BAR**

SYMBOL	DESCRIPTION
1	ELECTRIC PUMP SET
2	DIESEL PUMP SET
3	JOCKEY PUMP SET
4	GATE VALVE
5	FLEXIBLE COUPLING
6	NON RETURN VALVE
7	BALL VALVE
8	SUCTION MANIFOLD
9	DELIVERY MANIFOLD
10	PRESSURE GAUGE
11	PRESSURE SWITCH
12	BATTERY

REVISIONS

1. REVISED DRAWING TO SHOW THE PUMP SET AND MANIFOLD AS PER THE REQUIREMENTS OF THE DESIGN CONSULTANT.
2. REVISED DRAWING TO SHOW THE PUMP SET AND MANIFOLD AS PER THE REQUIREMENTS OF THE DESIGN CONSULTANT.
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12. REVISED DRAWING TO SHOW THE PUMP SET AND MANIFOLD AS PER THE REQUIREMENTS OF THE DESIGN CONSULTANT.

DATE: 01/01/2023

BY: 01/01/2023

FOR: 01/01/2023

REVISION: 01/01/2023

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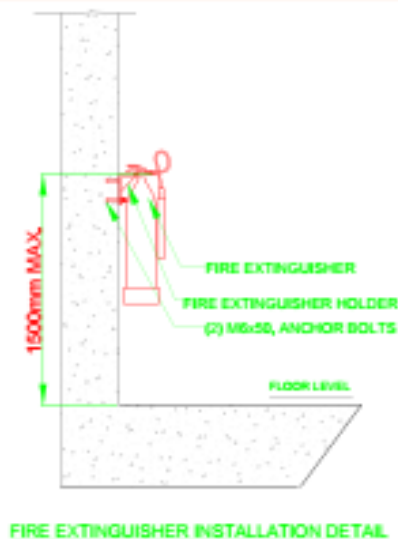
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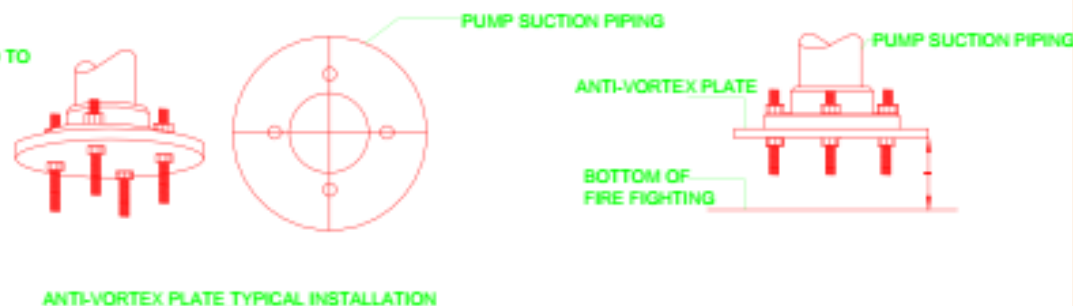
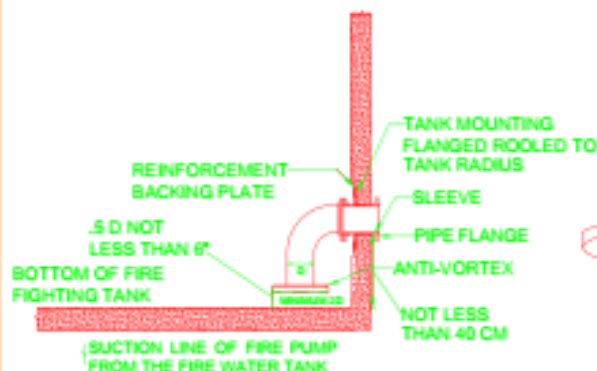
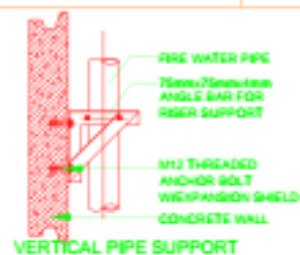
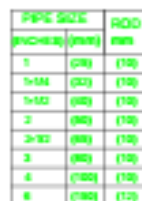
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FROM PRACTISING PHYSICAL EDUCATION

Abstract

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with 100% accuracy.

— *Journal of the American Medical Association*, 1997

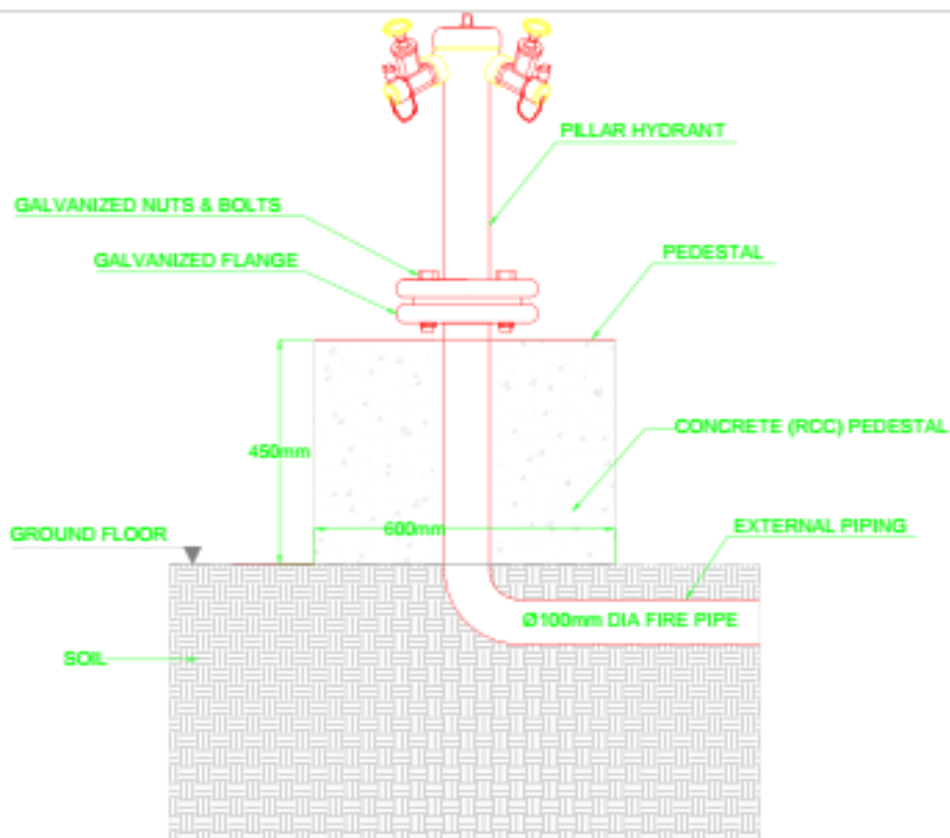
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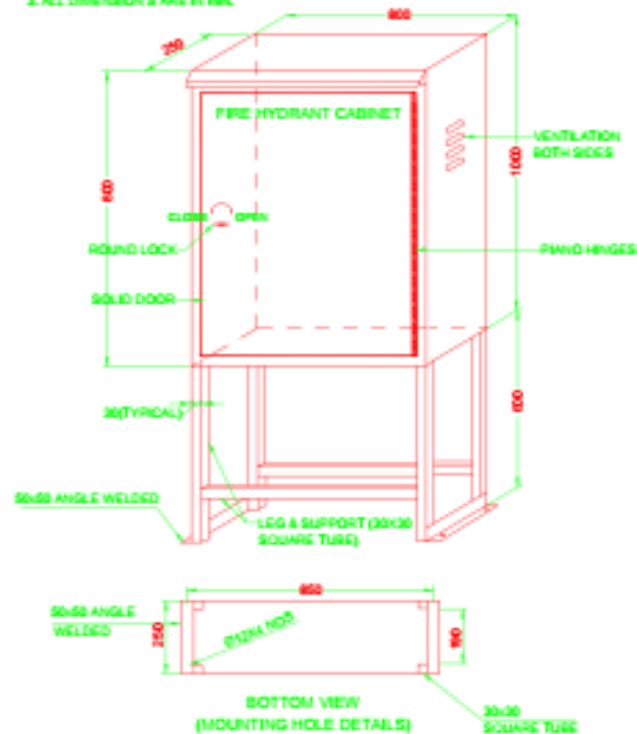
FOOTNOTES



(2-WAY PILLAR HYDRANT)

SPECIFICATION:

1. MATERIAL : 1.2mm MILD STEEL, RED POWDER COATED
2. DOOR : SOLID DOOR
3. ALL DIMENSION S ARE IN mm.



FIRE HYDRANT CABINET SELF STANDING TYPE

FIRE FIGHTING LEGEND

SYMBOL	DESCRIPTION
1.2mm MILD STEEL, RED POWDER COATED	1.2mm MILD STEEL, RED POWDER COATED
SOLID DOOR	SOLID DOOR
Ø100mm DIA FIRE PIPE	Ø100mm DIA FIRE PIPE
CONCRETE (RCC) PEDESTAL	CONCRETE (RCC) PEDESTAL
EXTERNAL PIPING	EXTERNAL PIPING
GROUND FLOOR	GROUND FLOOR
SOIL	SOIL
VENTILATION BOTH SIDES	VENTILATION BOTH SIDES
PIVOT HINGES	PIVOT HINGES
LEG & SUPPORT (30x30 SQUARE TUBE)	LEG & SUPPORT (30x30 SQUARE TUBE)
30(TYPICAL)	30(TYPICAL)
50x55 ANGLE WELDED	50x55 ANGLE WELDED
50x55 ANGLE WELDED	50x55 ANGLE WELDED
Ø125mm DIA	Ø125mm DIA
30x30 SQUARE TUBE	30x30 SQUARE TUBE

REVISIONS

1. Initial design and construction details.
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CAD No. DESIGNED BY

SCALE: 1:100 DATE: 10/10/2023

DRAWING TITLE: FIRE HYDRANT CABINET SELF STANDING TYPE

PROJECT: NATIONAL LOGISTICS CORPORATION

LOCATION: NATIONAL LOGISTICS PARK, ANAND, PUNJAB

CLIENT: NATIONAL LOGISTICS CORPORATION

ARCHITECTURAL CONSULTANT:

MECHANICAL CONSULTANT:

ELECTRICAL CONSULTANT:

STRUCTURAL CONSULTANT:

ENVIRONMENTAL CONSULTANT:

SAFETY CONSULTANT:

WATER SUPPLY CONSULTANT:

SEWERAGE CONSULTANT:

LANDSCAPE ARCHITECT:

TRAFFIC CONSULTANT:

ACoustics CONSULTANT:

ARCHITECTURAL CONSULTANT:

MECHANICAL CONSULTANT:

ELECTRICAL CONSULTANT:

STRUCTURAL CONSULTANT:

ENVIRONMENTAL CONSULTANT:

SAFETY CONSULTANT:

WATER SUPPLY CONSULTANT:

SEWERAGE CONSULTANT:

LANDSCAPE ARCHITECT:

TRAFFIC CONSULTANT:

ACoustics CONSULTANT:

PACKAGE 'B'

**NATIONAL LOGISTICS CORPORATION
WAREHOUSES
NATHE KHALSA, LAHORE**

Bill of Quantities (BOQ)

BOQ Preamble

Bill of Quantities (BOQ)

Fire Detection System

Fire Fighting System

BOQ PREAMBLE

PRICING PREAMBLES & INSTRUCTIONS

- a) The tenderers are required to fill in all sections of the BOQ, columns including all appendices. Tenders not containing the above may be considered liable to rejection.
- b) All tenderers are advised to quote strictly as per specifications. Any tender not quoting as per specifications may be considered liable to rejection.
- c) The quantities set out in the BOQ are the estimated quantities of the work and they are not to be taken as the actual and correct quantities of the work to be executed by the Contractor in fulfilment of the Contract. The Contractor shall be required to supply and install everything necessary to provide a complete operational system as specified and shown on the drawings.
- d) All items mentioned in the Bill of Quantities (BOQ) consist of furnishing all plant, labour, equipment, appliances and materials required for completing the items/ works in strict accordance with relevant specifications as described in the Contract Documents and Drawings.
- e) A price is to be entered against each item in the Bill of Quantities whether quantities are entered or not. Items against which no price is entered will be considered as covered by the other items in the Bill of Quantities.
- f) Except as otherwise specifically provided for, all items in the Bill of Quantities are measured net, as fixed in place in accordance with the Drawings, and any allowance made for waste shall be included in the price rate for that item.
- g) General direction and descriptions of works and materials given in the details, Drawings and Specifications are not necessarily repeated in the Bill of Quantities. Reference is to be made by the tenderer to the details, Specifications and Drawings for their information and the same should be allowed for in their rates.
- h) In all cases where the Bill of Quantities items are not fully specific in respect of description or in respect of recommended manufacturers or suppliers, the tenderers attention are drawn to all the other tender documents including Specifications and Drawings.
- i) Generally the following shall be deemed to be included in the prices submitted with all items herein:
 - 1. Labour and all cost in connection therewith, materials, goods and all costs in connection therewith including but not limited to, cartage, delivery, unloading, unpacking, returning packing, handling, hoisting to any height, lowering, octroi charges etc.
 - 2. Erection, dismantling and removal on completion contractor's site offices, stores, accommodation.
 - 3. General and other requirements of Specifications.
 - 4. Installing, fitting and fixing goods and materials in positions.
 - 5. Use of tools, plant and equipment.
 - 6. Waste of materials.
 - 7. All necessary cutting.
 - 8. All overheads and profits including Income Tax.

9. Maintenance of work; supply of a set of “As-Built Drawings”.

- j) All references to design details within item's description shall be interpreted to mean that such items shall include all work necessary for completion of the items regardless of trade except where specifically described otherwise.
- k) This Bill of Quantities is to be read in conjunction with the Conditions of the Contract, Drawings and Specifications prepared by the Consultants, as being mutually explanatory.
- l) The attention of the tenderers is drawn to the fact that this Bill of Quantities is for use as a basis upon which the tenderers will calculate their tender costs. The tenderers should ensure for themselves the adequacy of the items; quantities and descriptions contained therein completely defining the scope of the work as shown in the Drawings and Specifications.
- m) Any discrepancies noticed by the tenderers between the Bill of Quantities, the intent of the Drawings and Specifications and the scope work, shall be brought to the attention of the Consultant/Engineer prior to submitting the tenders who shall notify their clarifications/decision to all the tenderers. No claims of whatsoever nature shall be admissible during or after the contract period for any misunderstandings, ambiguities due to above, which have not been notified to the Consultant/Engineer prior to submission of his priced tenders.
- n) Where special risks, liabilities and obligations cannot be dealt with as above, then the additional moneys required by the Tenderer to cover such special risks, liabilities and obligations are to be separately stated in a letter accompanying the Tender. Tenderer shall list each and every clause number from the Conditions of Contract and the Specification that they wish to price in this way, together with the price in the Tender. Any risk, obligation or liability arising from any clause of the Conditions of the Contract or the Specifications or from the works detailed on the Drawings which has not been specifically priced in the said letter of the Tenderer shall be deemed to be included in the billed prices.
- o) The tender documents include a CD with the BOQ formatted in MS Excel. Due care should be exercised in filling out. Tenders are required to submit their bid on the CD duly filled along with a hardcopy duly sealed & signed. The bidder shall also print the BOQ & paste it on the BOQ pages of the tender document & duly seal & sign every page. Handwritten BOQ shall not be accepted. No additions or deletion shall be made in the Excel sheet.

**LIST OF APPROVED VENDORS
(FIRE SUPPRESSION & ALARM SYSTEM)**

S.NO.	DESCRIPTION	MAKES & MANUFACTURERS	REMARKS
1	FIRE HOSE CABINET WITH ACCESSORIES	SFFECO UAE	
		NAFFCO UAE	
		LIFECO UAE	
		SRI MALAYSIA	
		OR EQUIVALENT	
2	FIRE EXTINGUISHERS	SFFECO UAE	
		NAFFCO UAE	
		LIFECO UAE	
		SRI MALAYSIA	
		OR EQUIVALENT	
3	FIRE HYDERANT, OS&Y VALVES, APPLIANCES & FITTINGS	SFFECO UAE OR EQUIVALENT	
		NAFFCO UAE	
		LIFECO UAE	
		SRI MALAYSIA	
		OR EQUIVALENT	
4	M.S SCH-40 SEAMLESS PIPES	BAOLAI, CHINA	
		KSPM, CHINA	
		PROTEK, CHINA	
		OR EQUIVALENT	
5	M.S FITTINGS (AS PER APPROVED SAMPLE AFTER LAB. TEST)	MUELLER, CHINA (Threaded) / JINTAI, CHINA (Welded)	
		NEFFT / BIS (Threaded) / NEFFT, NETHERLANDS (Welded)	
		OR EQUIVALENT	
6	FIRE PUMPS SET (AS PER NFPA-20, UL/FM)	WATERFALL UAE,	
		SFFECO UAE	
		NAFFCO UAE	
		LIFECO UAE	
		OR EQUIVALENT	
7	SUPERVISORY PANEL (UL-LISTED)	SFFECO UAE	
		NAFFCO UAE	
		LIFECO UAE	
		SRI MALAYSIA	
		OR EQUIVALENT	
8	SPRINKLERS	RELIABLE USA	
		VIKING USA	
		TYCO USA	
		OR EQUIVALENT	
9	ZONE CONTROL VALVE ASSEMBLY	SFFECO UAE	
		NAFFCO UAE	
		LIFECO UAE	
		SRI MALAYSIA	
		RELIABLE USA	
		OR EQUIVALENT	
10	ALARM CHECK VALVE ASSEMBLY	SFFECO UAE	
		NAFFCO UAE	
		LIFECO UAE	
		SRI MALAYSIA	
		RELIABLE USA	

		OR EQUIVALENT	
11	BALL VALVES	RUB / ITALY	
		OR EQUIVALENT	
12	OTHER VALVES	WATTS, CHINA	
		RUB / ITALY	
		GALA, CHINA	
		OR EQUIVALENT	
13	FIRE STOPPING MATERIAL AND SYSTEM	FISHCER, GERMANY	
		HILTI, GERMANY	
		FIRESTOP(STI), USA	
		CHARCOAT, CANADA	
		OR EQUIVALENT	
14	HANGERS, SUPPORTS, CLAMPS, FASTNERS AND FIXING HARDWARE	INDEX, SPAIN	
		HILTI, GERMANY	
		INDEX, TURKEY	
		INKA, TURKEY	
		OR EQUIVALENT	
15	PVC CONDUIT	GALCO PIPE, PAKISTAN	
		BETA PIPE , PAKISTAN	
		CIVIC PIPE, PAKISTAN	
		OR EQUIVALENT	
16	MCC & DBs	A TO Z ELECTRONICS	
		HUSSAIN & COMPANY	
		BILAL SWITCH GEARS	
		SOUTH ASIAN ELECTRIC CONCERN	
		OR EQUIVALENT	
17	FM-200, NOVEC-1230 & VESDA SYSTEM	SFFECO UAE	
		NAFFCO UAE	
		LIFECO UAE	
		SRI MALAYSIA	
		OR EQUIVALENT	
18	CABLES & WIRES (FIRE RESISTANT)	FAST CABLE, PAKSTAN	
		CAVICEL CABLES, ITALY	
		BELDEN CABLES, USA	
		OR EQUIVALENT	
19	WELDING ROD	BOC, PAKISTAN	
		ZODIAN, PAKISTAN	
		OR EQUIVALENT	
21	PAINTS	ICI, PAKISTAN	
		JUTON, MALAYSIA	
		OR EQUIVALENT	
22	Fire Alarm System	Gent by Honeywell	
		Eaton	
		Bosch	
		OR EQUIVALENT	

FIRE FIGHTING – BOQ

NLC LOGISTIC PARK AT NATHE KHALSA LAHORE				
FIRE DETECTION, ALARM & FIRE SUPPRESSION SYSTEM WORKS				
SUMMARY OF BILL OF QUANTITIES				
ITEM NO.	DESCRIPTION	MATERIAL AMOUNT (RS.)	INSTALLATION AMOUNT (RS.)	TOTAL AMOUNT (RS.)
1.0	Site Works	0	0	0
2.0	Warehouse-01	0	0	0
3.0	Warehouse-02	0	0	0
4.0	Warehouse-03	0	0	0
5.0	Warehouse-04	0	0	0
6.0	Warehouse-05	0	0	0
	COST OF GST (ON MATERIAL) AND PRA (ON INSTALLATION) =			
	GRAND TOTAL =	0	0	0

NLC LOGISTIC PARK AT NATHE KHALSA LAHORE									
FIRE DETECTION, ALARM & FIRE SUPPRESSION SYSTEM WORKS									DATED: 07 SEP 2026
BILL OF QUANTITIES									
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	MATERIAL		INSTALLATION		TOTAL	
				RATE	AMOUNT	RATE	AMOUNT	RATE	AMOUNT
				(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)
					(3) x (5)		(3) x (7)	(5) + (7)	(6) + (8)
1.0	FIRE PUMP SETS								
1.1	Supply, installation, testing and commissioning of a complete UL Listed and FM Approved fire pump set in accordance with NFPA 20, project specifications and local Authority requirements, comprising one electric motor-driven main fire pump and one diesel engine-driven standby fire pump, each rated at 2,000 US GPM at 12 bar net pressure, together with one electric motor-driven jockey pump of approved capacity and head. The scope shall include all piping and valve works within the pump room, including suction and discharge headers, ERW black steel Schedule 40 pipes, fittings, flanges, reducers, isolation valves, OS&Y gate valves, check valves, pressure-relief and circulation-relief valves, test and drain valves, air-release valves, pressure gauges, sensing lines, flexible connections where approved, supports, anchors, sleeves, anti-corrosive primer, fire-red finishing paint, flushing, hydrostatic testing and all accessories required for a complete operational system.	1	Lot						
1.2	50% of each pump foundation is existing, and the Contractor shall construct the remaining 50% foundation extension, of the existing reinforced-concrete foundations for the diesel engine-driven fire pump, electric motor-driven fire pump and jockey pump.	1	Lot						
1.3	Demolish, dismantle and remove the existing staircase located inside the fire pump room, including all associated steps, landings, supports, foundations, anchor bolts and connected components, as applicable and Filling and repairing all openings, recesses, holes and damaged areas resulting from demolition in final finishing shape.	1	Lot						
1.4	Carefully enlarge the existing access opening at the top/roof slab of the fire pump room by approximately 50% of its existing size, to provide adequate access for installation, removal, replacement and maintenance of the fire pumps, motors, diesel engine and associated equipment.	1	Lot						
1.5	Supply and Installation of wiring between Diesel Fire Pump Set and Controller	1	Lot						
1.6	Supply and Installation of wiring between Electric Driven Fire Pump Set & Controller	1	Lot						
1.7	Supply and Installation of wiring between Jockey Pump Set and Controller	1	Lot						
1.8	Fuel Piping Connection to Diesel Engine & Fuel Sensing Line	1	Lot						
1.9	Supply and Installation of Pressure Relief Valve Ø6"	1	Lot						
1.10	Supply & Installation of Fire Engine Exhaust Pipe (MS) - Ø6" with 4" thick Rockwool Insulation & Cladding	10	Rm						
2.0	FANS								
2.1	Supply and Installation of Inline Cabinet Type Supply Air Fan with G3 Filter (450 cfm) Including testing & commissioning	1	No.						
3.0	DUCT WORK								
3.1	Sheet Metal Duct Work - Machine Made (Fresh Air)	30	m²						
3.2	Quadrant Volume Dampers	1	m²						
3.3	Wire Mesh	1	m²						
3.4	Duct Supports as per Hilti, Fischer Support System	1	Lot						
3.5	G.I Frame as Duct Sleeve	1	Lot						
4.0	AIR DEVICES								
4.1	Square/Rectangular Grill (Supply Air)								
4.1.1	16" X 16"	2	Nos.						

5.0	CLEANING, BALANCING & TESTING								
5.1	Testing & Cleaning of Fan	1	Lot						
6.0	ELECTRICAL WORKS								
6.1	Supply, installation, testing and commissioning of pump-room MCC, complete with incomer, outgoing feeders, breakers, contactors, protection devices, metering, indication lamps, internal wiring, busbars, enclosure, labels, earthing and all accessories as per approved load schedule and drawings.	1	Lot						
6.2	Supply, installation, termination, testing and commissioning of power and control cables for pump-room ventilation/cabinet fans and auxiliary equipment, including isolators, glands, lugs, flexible conduits, identification and complete earthing. Complete in all Respect								
6.3	Supply and installation of hot-dip galvanized cable trays, conduits, trunking, supports, brackets and fixing accessories for power, control and earthing cables, complete in all respects.								
6.4	Testing and commissioning of the complete pump-room electrical installation, including insulation-resistance, continuity, earthing, phase-sequence, protection and functional tests, complete with test reports and authority/Consultant approval.								
7.0	HIGH DENSITY POLYETHYLENE PIPE (HDPE) - SDR 11 FOR BURRIED APPLICATIONS								
7.1	Supply, laying, jointing, testing and commissioning of buried HDPE fire-fighting pipework, SDR 11, of specified internal diameter, suitable for the required working pressure, complete with electrofusion/butt-fusion fittings, bends, tees, reducers, flanged adaptors, transition fittings, thrust restraint where required, tracer wire, warning tape, excavation, selected bedding, backfilling, compaction, road/floor reinstatement, identification markers, flushing, hydrostatic pressure testing, disinfection where applicable, and all accessories necessary for a complete installation, in accordance with approved drawings, manufacturer's recommendations and authority requirements.Ø 10 INCH. (Internal dia)	750	Rm						
7.2	Ø 4 INCH.	200	Rm						
7.3	Ø 2.5 INCH.	150	Rm						
7.4	Supply, install, test and commission transition connections between HDPE PE100 SDR 11 pipes and black steel Schedule 40 pipes, complete with flange adaptors, backing rings, matching flanges, gaskets, bolts and all required fittings and accessories.	1	Lot						
8.0	Supply, installation, jointing, testing and commissioning of ERW black steel Schedule 40 fire-fighting pipework of specified diameter, complete with fittings, flanges, supports, hangers, welding/grooved joints and all accessories, including surface preparation, one coat anti-corrosive primer and two finishing coats of approved fire-red paint.								
8.1	Ø 6 INCH.	2400	Rm						
8.2	Ø 2.5 INCH.	175	Rm						
9.0	CIVIL WORK								
9.1	Core drilling of 6-inch diameter opening in the existing RCC water tank wall/slab for fire-fighting pipe connection, controlled diamond coring, sleeve, non-shrink grouting, waterproof sealing, making good and all required accessories, complete without damaging the existing structure.	6	Nos.						
	Ø 10 INCH.	3	Nos.						
9.2	Supply and installation of vertical mild-steel access ladder for entry into the pump room, fabricated from round steel bars with side rails, non-slip rungs, safety cage/hand grips where required, brackets, anchor bolts and supports, including anti-corrosive primer and two coats of approved paint, complete in all respects.	1	Lot						

9.3	Construction, testing and commissioning of a new reinforced-concrete fire-water storage tank with minimum internal dimensions of 38 ft long × 18 ft wide × 10 ft effective water depth, providing approximately 51,170 US gallons gross capacity, including excavation, PCC, RCC base slab, walls and roof slab, reinforcement, formwork, waterproofing, access manhole and ladder, ventilation, inlet, overflow, drain, fire-pump suction connections, puddle flanges, sleeves, level indicators, water-tightness testing, backfilling and all associated civil and plumbing works. The Contractor shall submit complete structural design calculations, coordinated shop drawings, reinforcement details, waterproofing details and method statement for Consultant/Engineer approval before commencement of work.	1	Lot						
9.4	Construction of RCC sump pit, 3 ft × 3 ft × 3 ft, inside the fire pump room, including excavation, reinforcement, concrete, waterproofing, plastering and finishing, complete with automatic submersible dewatering pump 1.5 HP, float switch, non-return and isolation valves, PPRC PN-20 discharge piping of approved size, fittings and supports, and 4 m long drainage channel with heavy-duty removable grating, including all civil, electrical and installation accessories	1	Lot						
9.5	Pump Room Roof Access Opening Modification: Extend the existing pump room roof/ceiling opening by 50% to provide adequate access for pump loading and unloading, including modification of the existing opening and provision, fabrication, and installation of a removable 14-gauge steel cover, complete with supporting frame, stiffeners, lifting arrangement, fixing accessories, finishing, and all associated civil/structural works required for a complete installation.	1	Lot						
10.0	DIESEL TANK								
10.1	Supply, installation, testing and commissioning of horizontal cylindrical diesel fuel tank for the diesel fire pump, minimum capacity 330 US gallons (approx. 1,325 litres), complete with steel supports, containment bund, filling connection, vent, overflow, drain, level gauge, high/low-level switches, isolation valves, flexible fuel connections, painting and all required accessories. Final tank size and capacity shall be confirmed against the approved diesel-engine rating	1	Nos.						
11.0	FIRE DEPARTMENT CONNECTION								
11.1	Supply, installation, testing and commissioning of 10-inch fire department connection header, complete with 4 Nos. two-way FDCs, each having 2 × 2½-inch inlets, including UL/FM-approved check valve, isolation valve, OS & Y valve, drain valve, caps and chains, fittings, flanges, supports, identification signage and fire-red painting, complete as per approved drawings.	1	Nos.						
12	LANDING VALVE CLASS-1 WITH FIRE HOSE RACK								
12.1	Supply, installation, testing and commissioning of complete fire hose station comprising approved 2½-inch landing valve, hose rack, fire hose of approved length and diameter, adjustable branch pipe/nozzle, pressure-reducing device where required, cabinet, isolation accessories, fittings, signage and all necessary supports, complete as per approved drawings and authority requirements.	68	Nos.						
12.2	Supply, installation, testing and commissioning of complete fire hose cabinet (FHC) Class 3 comprising approved 2½-inch landing valve/angle valve, synthetic hose reel/rack with approved 2½-inch diameter hose pipe of specified length, adjustable fog/spray branch pipe nozzle, pressure-reducing valve where required, heavy-duty steel cabinet, isolation accessories, fittings, identification signage, and all necessary supports, complete in all respects as per approved drawings, NFPA standards, and local AHJ (Authority Having Jurisdiction) requirements.	50	Nos.						
13.0	OS&Y GATE VALVE FOR BURIES HDPE PIPES WITH CHAMBER								
13.1	Ø10 inch(250mm)	8	Nos.						
13.2	Ø4 inch(100mm)	1	Nos.						
13.3	Supply, installation, testing and commissioning of UL Listed and FM Approved quick response sprinklers, K-factor 6.5, minimum operating pressure 15 psi, with approved temperature rating and finish, complete with	4	Nos.						

	branch connections, fittings, where required inside pump room								
14.0	Supply and installation of fire extinguisher, complete with hose/nozzle, pressure gauge, safety pin, wall bracket, identification sign, initial charge and all accessories, in accordance with NFPA 10 and authority requirements.								
14.1	Supply & Installation of 6kg Dry Powder Extinguisher (ABC)	77	Nos.						
14.2	Supply & Installation of 9-litre AFFF 9 fire extinguisher	13	Nos.						
14.3	Supply & Installation of 6kg CO2 Extinguisher	18	Nos.						
Total Summary									

NLC LOGISTIC PARK AT NATHE KHALSA LAHORE									
FIRE DETECTION, ALARM & FIRE SUPPRESSION SYSTEM WORKS									DATED: SEP 07, 2026
BILL OF QUANTITIES									
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	MATERIAL		INSTALLATION		TOTAL	
				RATE	AMOUNT	RATE	AMOUNT	RATE	AMOUNT
				(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)
					(3) x (5)		(3) x (7)	(5) + (7)	(6) + (8)
WAREHOUSE 01									
1.0	FIRE SPRINKLERS								
1.1	Supply, installation, testing and commissioning of UL Listed and FM Approved pendent ESFR sprinkler heads, K-factor 25.2, minimum operating pressure 40 psi, with approved temperature rating and finish, complete with branch connections, fittings, where required,	565	Nos.						
1.2	Cabinet complete with 12 Spare Sprinklers (Pendent ESFR Sprinkler k-25.2)	1	No.						
2.0	DRY VALVE ASSEMBLY WITH COMPRESSED AIR SYSTEM								
2.1	Supply, installation, testing and commissioning of complete UL Listed/FM Approved dry-pipe sprinkler valve and compressed-air supply system, including dry-pipe valve with full trim, tank-mounted air compressor, air-maintenance device with bypass trim, dehydrator, air-pressure supervisory/control switches, soft-seat check valves, shut-off valves, air-relief valve, line drain, air inlet and relief piping, retard chamber with drain line, pressure gauges/sensors, alarm bell, strainer, check valve, fittings, supports, control wiring and all accessories required for a complete operational system, in accordance with approved	2	Nos.						

	drawings, manufacturer's requirements and NFPA 13.								
3.0	ZONE CONTROL VALVE UL/FM								
3.1	Supply, installation, testing and commissioning of Ø 6 inch (150MM) complete UL Listed/FM Approved zone control valve assembly of specified size, comprising supervised isolation valve with tamper switch, check valve, water-flow switch, pressure gauge, test-and-drain valve with sight glass/orifice, main drain, inspector's test connection, alarm test connection, fittings, unions, flanges/grooved couplings, supports, identification signage, wiring terminals and all required accessories, complete as per approved drawings, NFPA 13 and authority requirements.	2	Nos.						
3.2	Supply, installation, testing and commissioning of 50 mm diameter drain pipe, complete with fittings, bends, unions, supports, drain valve, connection to the approved discharge point, identification and all required accessories, including anti-corrosive primer and finishing paint where steel pipe is used.	30	Rm						
4.0	Supply, installation, jointing, testing and commissioning of ERW black steel Schedule 40 fire-fighting pipework of specified diameter, complete with fittings, flanges, supports, hangers, welding/grooved joints and all accessories, including surface preparation, one coat anti-corrosive primer and two finishing coats of approved fire-red paint.								
4.1	Ø 150 mm	450	Rm						
4.2	Ø 65 mm	1,650	Rm						
5.0	FIRE HOSE CABINET								
5.1	Supply, installation, testing and commissioning of complete Class II single-compartment fire hose cabinet, comprising 1½-inch landing/hose valve, approved fire hose of specified length, hose rack or reel, adjustable nozzle, cabinet with glazed door, pressure-reducing device where required, fittings, supports, signage and all necessary accessories, complete in accordance with approved drawings, NFPA requirements and local authority approval.	6							
6.0	FIRE SPRINKLER SYSTEM ACCEPTANCE TEST								
6.1	Fire Sprinkler System Acceptance Test	1	Lot						
7.0	SIGNAGE								
7.1	Signage as per NFPA (For Example: Signage of Fire Hose CABINET, Landing Valve etc.)	1	Lot						
8.0	MISCELLANEOUS								
	Supply, installation, testing and commissioning of 50 mm diameter black sttel sch.40 drain pipe, complete with fittings, bends, unions, supports, drain valve, connection to the approved discharge point,								

	identification and all required accessories, including anti-corrosive primer and finishing paint where steel pipe is used.								
8.1	Shop Drawings	1	Lot						
8.2	As Built Drawings	1	Lot						
8.3	Fire Stopping of Walls & Structure Openings (For Small Openings) - UL based Solution	1	Lot						
8.4	Structural Openings & Core Cuts	1	Lot						
WAREHOUSE 02									
1.0	FIRE SPRINKLERS								
1.1	Supply, installation, testing and commissioning of UL Listed and FM Approved pendent ESFR sprinkler heads, K-factor 25.2, minimum operating pressure 40 psi, with approved temperature rating and finish, complete with branch connections, fittings, where required,	750	Nos.						
1.2	Cabinet complete with 12 Spare Sprinklers (Pendent ESFR Sprinkler k-25.2)	1	No.						
2.0	ZONE CONTROL VALVE UL/FM								
2.1	Supply, installation, testing and commissioning of Ø 6 inch (150MM) complete UL Listed/FM Approved zone control valve assembly of specified size, comprising supervised isolation valve with tamper switch, check valve, water-flow switch, pressure gauge, test-and-drain valve with sight glass/orifice, main drain, inspector's test connection, alarm test connection, fittings, unions, flanges/grooved couplings, supports, identification signage, wiring terminals and all required accessories, complete as per approved drawings, NFPA 13 and authority requirements.	2	Nos.						
2.2	Supply, installation, testing and commissioning of 50 mm diameter drain pipe, complete with fittings, bends, unions, supports, drain valve, connection to the approved discharge point, identification and all required accessories, including anti-corrosive primer and finishing paint where steel pipe is used.	30	Rm						
3.0	Supply, installation, jointing, testing and commissioning of ERW black steel Schedule 40 fire-fighting pipework of specified diameter, complete with fittings, flanges, supports, hangers, welding/grooved joints and all accessories, including surface preparation, one coat anti-corrosive primer and two finishing coats of approved fire-red paint.								
	Welded Piping System								
3.1	Ø 150 mm	650	Rm						
3.2	Ø 65 mm	2,300	Rm						
4.0	FIRE SPRINKLER SYSTEM ACCEPTANCE TEST								
4.1	Fire Sprinkler System Acceptance Test	1	Lot						
5.0	MISCELLANEOUS								

	Supply, installation, testing and commissioning of 50 mm diameter black steel sch.40 drain pipe, complete with fittings, bends, unions, supports, drain valve, connection to the approved discharge point, identification and all required accessories, including anti-corrosive primer and finishing paint where steel pipe is used.								
5.1	Shop Drawings	1	Lot						
5.2	As Built Drawings	1	Lot						
5.3	Fire Stopping of Walls & Structure Openings (For Small Openings) - UL based Solution	1	Lot						
5.4	Structural Openings & Core Cuts	1	Lot						
WAREHOUSE 03									
1.0	FIRE SPRINKLERS								
1.1	Supply, installation, testing and commissioning of UL Listed and FM Approved pendent ESFR sprinkler heads, K-factor 25.2, minimum operating pressure 40 psi, with approved temperature rating and finish, complete with branch connections, fittings, where required,	441	Nos.						
1.2	Cabinet complete with 12 Spare Sprinklers (Pendent ESFR Sprinkler k-25.2)	1	No.						
2.0	ZONE CONTROL VALVE								
2.1	Supply, installation, testing and commissioning of Ø 6 inch complete UL Listed/FM Approved zone control valve assembly of specified size, comprising supervised isolation valve with tamper switch, check valve, water-flow switch, pressure gauge, test-and-drain valve with sight glass/orifice, main drain, inspector's test connection, alarm test connection, fittings, unions, flanges/grooved couplings, supports, identification signage, wiring terminals and all required accessories, complete as per approved drawings, NFPA 13 and authority requirements.	2	Nos.						
2.2	Supply, installation, testing and commissioning of 50 mm diameter drain pipe, complete with fittings, bends, unions, supports, drain valve, connection to the approved discharge point, identification and all required accessories, including anti-corrosive primer and finishing paint where steel pipe is used.	30	Rm						
3.0	Supply, installation, jointing, testing and commissioning of ERW black steel Schedule 40 fire-fighting pipework of specified diameter, complete with fittings, flanges, supports, hangers, welding/grooved joints and all accessories, including surface preparation, one coat anti-corrosive primer and two finishing coats of approved fire-red paint.								
	Welded Piping System								
3.1	Ø 150 mm	950	Rm						
3.2	Ø 65 mm	1,200	Rm						
4.0	FIRE SPRINKLER SYSTEM ACCEPTANCE TEST								
4.1	Fire Sprinkler System Acceptance Test	1	Lot						
5.0	MISCELLANEOUS								

5.1	Shop Drawings	1	Lot						
5.2	As Built Drawings	1	Lot						
5.3	Fire Stopping of Walls & Structure Openings (For Small Openings) - UL based Solution	1	Lot						
5.4	Structural Openings & Core Cuts	1	Lot						
WAREHOUSE 04									
1.0	FIRE SPRINKLERS								
1.1	Supply, installation, testing and commissioning of UL Listed and FM Approved pendent ESFR sprinkler heads, K-factor 25.2, minimum operating pressure 40 psi, with approved temperature rating and finish, complete with branch connections, fittings, where required,	1548	Nos.						
1.2	Cabinet complete with 24 Spare Sprinklers (Pendent ESFR Sprinkler k-25.2)	1	No.						
2.0	ZONE CONTROL VALVE								
2.1	Supply, installation, testing and commissioning of Ø 6 inch complete UL Listed/FM Approved zone control valve assembly of specified size, comprising supervised isolation valve with tamper switch, check valve, water-flow switch, pressure gauge, test-and-drain valve with sight glass/orifice, main drain, inspector's test connection, alarm test connection, fittings, unions, flanges/grooved couplings, supports, identification signage, wiring terminals and all required accessories, complete as per approved drawings, NFPA 13 and authority requirements.	4	Nos.						
2.2	Supply, installation, testing and commissioning of 50 mm diameter drain pipe, complete with fittings, bends, unions, supports, drain valve, connection to the approved discharge point, identification and all required accessories, including anti-corrosive primer and finishing paint where steel pipe is used.	60	Rm						
3.0	Supply, installation, jointing, testing and commissioning of ERW black steel Schedule 40 fire-fighting pipework of specified diameter, complete with fittings, flanges, supports, hangers, welding/grooved joints and all accessories, including surface preparation, one coat anti-corrosive primer and two finishing coats of approved fire-red paint.								
	Welded Piping System								
3.1	Ø 150 mm	1,100	Rm						
3.2	Ø 65 mm	4,700	Rm						
4.0	FIRE SPRINKLER SYSTEM ACCEPTANCE TEST								
4.1	Fire Sprinkler System Acceptance Test	1	Lot						
5.0	MISCELLANEOUS								
5.1	Shop Drawings	1	Lot						
5.2	As Built Drawings	1	Lot						
5.3	Fire Stopping of Walls & Structure Openings (For Small Openings) - UL based Solution	1	Lot						
5.4	Structural Openings & Core Cuts	1	Lot						
WAREHOUSE 05									
1.0	FIRE SPRINKLERS								

1.1	Supply, installation, testing and commissioning of UL Listed and FM Approved pendent ESFR sprinkler heads, K-factor 25.2, minimum operating pressure 40 psi, with approved temperature rating and finish, complete with branch connections, fittings, where required,	1220	Nos.						
1.2	Cabinet complete with 24 Spare Sprinklers (Pendent ESFR Sprinkler k-25.2)	1	No.						
2.0 ZONE CONTROL VALVE									
2.1	Supply, installation, testing and commissioning of complete Ø 6 inch UL Listed/FM Approved zone control valve assembly of specified size, comprising supervised isolation valve with tamper switch, check valve, water-flow switch, pressure gauge, test-and-drain valve with sight glass/orifice, main drain, inspector's test connection, alarm test connection, fittings, unions, flanges/grooved couplings, supports, identification signage, wiring terminals and all required accessories, complete as per approved drawings, NFPA 13 and authority requirements.	3	Nos.						
2.2	Supply, installation, testing and commissioning of 50 mm diameter drain pipe, complete with fittings, bends, unions, supports, drain valve, connection to the approved discharge point, identification and all required accessories, including anti-corrosive primer and finishing paint where steel pipe is used.	45	Rm						
3.0	Supply, installation, jointing, testing and commissioning of ERW black steel Schedule 40 fire-fighting pipework of specified diameter, complete with fittings, flanges, supports, hangers, welding/grooved joints and all accessories, including surface preparation, one coat anti-corrosive primer and two finishing coats of approved fire-red paint.								
3.1	Welded Piping System								
3.2	Ø 150 mm	850	Rm						
3.3	Ø 65 mm	3,700	Rm						
4.0 FIRE SPRINKLER SYSTEM ACCEPTANCE TEST									
4.1	Fire Sprinkler System Acceptance Test	1	Lot						
5.0 MISCELLANEOUS									
5.1	Shop Drawings	1	Lot						
5.2	As Built Drawings	1	Lot						
5.3	Fire Stopping of Walls & Structure Openings (For Small Openings) - UL based Solution	1	Lot						
5.4	Structural Openings & Core Cuts	1	Lot						
Total Summary									

FIRE ALARM – BOQ

NLC LOGISTIC PARK AT NATHE KHALSA LAHORE FIRE DETECTION, ALARM & FIRE SUPPRESSION SYSTEM WORKS				DATED: 07 SEP, 2026
SUMMARY OF BILL OF QUANTITIES				
ITEM NO.	DESCRIPTION	MATERIAL AMOUNT (RS.)	INSTALLATION AMOUNT (RS.)	TOTAL AMOUNT (RS.)
1	Warehouse-01			
2	Warehouse-02			
3	Warehouse-03			
4	Warehouse-04			
5	Warehouse-05			
6	Commercial Building			
7	Residential Building			
	COST OF GST (ON MATERIAL) AND PRA (ON INSTALLATION) =			
	GRAND TOTAL =			

BILL No. 1						
DIVISION 28						
<u>FIRE ALARM SYSTEM</u>						
Item	Description	Qty	Unit	Unit Rate	Installation Rate	Amount Rs
1	<u>FIRE ALARM SYSTEM</u>					
	-					
	Supply, install, testing, commissioning and put into operation as per specification and drawing including the following :					
	-					
A	Fire alarm control panel (FACP 2 loops) Addressable type , autodialer , fire fighting interfaces with built in SLA battery and battery charger	1	No			
B	Projector Beam detector with reflector mirror	7	No			
C	Addressable monitor module	28	No			
D	Weather proof fire alarm siren with strobe	16	No			
E	Network including cabling, conduit, junction box and all necessary accessories to finish work as per drawings	1	L/S			
2	For Office Area					
A	Supply, installation and connecting of addressable manual call stations press glass type with test dey, suitable for surface or flush mounting complete in all respects and conforming to general specifications.	2	Nos.			
B	Supply, installation and connecting of electronic alarm sounders , complete in all respects and conforming to general specifications.	2	Nos.			
C	Supply, installation and connecting of addressable optical smoke detectors , complete in all respects and conforming to general specifications.	18	Nos.			
D	Fire alarm control panel (FACP 1 loops) Addressable type , autodialer , firefighting interfaces with built in SLA battery and battery charger	1	No			
E	<u>Fire Alarm System Wiring & Conduiting</u>	22	Points			
	Supply and wiring of Smoke / Heat detector/ Sounder and manual call point 120 min Fire Rated Fire Alarm (FA) 1 x 2 core (1.5mm2) cable in and including cost of 1" dia PVC conduit with all installing accessories, complete in all respect as per drawings and specification.					
			Total Amount			
	-					

BILL No. 1**DIVISION 28****FIRE ALARM SYSTEM**

Item	Description	Qty	Unit	Unit Rate	Installation Rate	Amount Rs
1	<u>FIRE ALARM SYSTEM</u>					
	-					
	Supply, install , testing ,commissioning and put into operation as per specification and drawing including the following :					
	-					
A	Fire alarm control panel (FACP 2 loops) Addressable type , autodialer , fire fighting interfaces with built in SLA battery and battery charger	1	No			
B	Projector Beam detector with reflector mirror	10	No			
C	Addressable monitor module	24	No			
D	Fire alarm siren with strobe	19	No			
E	Addressable fire alarm manual pull station	4	No			
F	Network including cabling ,conduit, junction box and all necessary accessories to finish work as per drawings	1	L/S			
2	For Office Area					
A	Supply, installation and connecting of addressable manual call stations press glass type with test dey, suitable for surface or flush mounting complete in all respects and conforming to general specifications.	2	Nos.			
B	Supply, installation and connecting of electronic alarm sounders , complete in all respects and conforming to general specifications.	2	Nos.			
C	Supply, installation and connecting of addressable optical smoke detectors , complete in all respects and conforming to general specifications.	18	Nos.			
D	Fire alarm control panel (FACP 1 loops) Addressable type , autodialer , fire fighting interfaces with built in SLA battery and battery charger	1	No			
	<u>Fire Alarm System Wiring & Conduiting</u>					
E	Supply and wiring of Smoke / Heat detector/ Sounder and manual call point 120 min Fire Rated Fire Alarm (FA) 1 x 2 core (1.5mm2) cable in and including cost of 1" dia PVC conduit with all installing accessories, complete in all respect as per drawings and specification.	22	Points			
			Total Amount			
	-					

<u>BILL No. 1</u>						
<u>DIVISION 28</u>						
<u>FIRE ALARM SYSTEM</u>						
Item	Description	Qty	Unit	Unit Rate	Installation Rate	Amount Rs
1	<u>FIRE ALARM SYSTEM</u>					
	-					
	Supply, install , testing ,commissioning and put into operation as per specification and drawing including the following :					
	-					
A	Fire alarm control panel (FACP 2 loops) Addressable type , autodialer , fire fighting interfaces with built in SLA battery and battery charger	1	No			
B	Projector Beam detector with reflector mirror	4	No			
C	Addressable monitor module	10	No			
D	Fire alarm siren with strobe	12	No			
E	Network including cabling ,conduit, junction box and all necessary accessories to finish work as per drawings	1	L/S			
2	<u>For Office Area</u>					
A	Supply, installation and connecting of addressable manual call stations press glass type with test dey, suitable for surface or flush mounting complete in all respects and conforming to general specifications.	2	Nos.			
B	Supply, installation and connecting of electronic alarm sounders , complete in all respects and conforming to general specifications.	2	Nos.			
C	Supply, installation and connecting of addressable optical smoke detectors , complete in all respects and conforming to general specifications.	20	Nos.			
D	Fire alarm control panel (FACP 1 loops) Addressable type , autodialer , fire fighting interfaces with built in SLA battery and battery charger	1	No			
E	Supply, installation and connecting of addressable heat detector rate of temperature rise type, complete in all respects .	1	Nos.			
	<u>Fire Alarm System Wiring & Conduiting</u>					
F	Supply and wiring of Smoke / Heat detector/ Sounder and manual call point 120 min Fire Rated Fire Alarm (FA) 1 x 2 core (1.5mm2) cable in and including cost of 1" dia PVC conduit with all installing accessories, complete in all respect as per drawings and specification.	25	Points			
			Total Amount			
	-					

BILL No. 1						
DIVISION 28						
FIRE ALARM SYSTEM						
-						
Item	Description	Qty	Unit	Unit Rate	Installation Rate	Amount Rs
1	<u>FIRE ALARM SYSTEM</u>					
	-					
	Supply, install, testing, commissioning and put into operation as per specification and drawing including the following :					
	-					
A	Fire alarm control panel (FACP 2 loops) Addressable type , autodialer , fire fighting interfaces with built in SLA battery and battery charger	1	No			
B	Projector Beam detector with reflector mirror	13	No			
C	Addressable monitor module	34	No			
D	Fire alarm siren with strobe	21	No			
E	Network including cabling ,conduit, junction box and all necessary accessories to finish work as per drawings	1	L/S			
2	<u>For Office Area</u>					
A	Supply, installation and connecting of addressable manual call stations press glass type with test dey, suitable for surface or flush mounting complete in all respects and conforming to general specifications.	2	Nos.			
B	Supply, installation and connecting of electronic alarm sounders , complete in all respects and conforming to general specifications.	2	Nos.			
C	Supply, installation and connecting of addressable optical smoke detectors , complete in all respects and conforming to general specifications.	25	Nos.			
D	Fire alarm control panel (FACP 1 loops) Addressable type , autodialer , fire fighting interfaces with built in SLA battery and battery charger	1	No			
E	Supply, installation and connecting of addressable heat detector rate of temperature rise type, complete in all respects .	1	Nos.			
	<u>Fire Alarm System Wiring & Conduiting</u>					
F	Supply and wiring of Smoke / Heat detector/ Sounder and manual call point 120 min Fire Rated Fire Alarm (FA) 1 x 2 core (1.5mm2) cable in and including cost of 1" dia PVC conduit with all installing accessories, complete in all respect as per drawings and specification.	30	Points			
			Total Amount			
	-					

BILL No. 1						
DIVISION 28						
FIRE ALARM SYSTEM						
Item	Description	Qty	Unit	Unit Rate	Installation Rate	Amount Rs
1	<u>FIRE ALARM SYSTEM</u>					
	-					
	Supply, install , testing ,commissioning and put into operation as per specification and drawing including the following :					
	-					
A	Fire alarm control panel (FACP 2 loops) Addressable type , autodialer , fire fighting interfaces with built in SLA battery and battery charger	1	No			
B	Projector Beam detector with reflector mirror	10	No			
C	Addressable monitor module	26	No			
D	Fire alarm siren with strobe	26	No			
E	Addressable fire alarm manual pull station	3	No			
F	Network including cabling ,conduit, junction box and all necessary accessories to finish work as per drawings	1	L/S			
2	<u>For Office Area</u>					
A	Supply, installation and connecting of addressable manual call stations press glass type with test dey, suitable for surface or flush mounting complete in all respects and conforming to general specifications.	2	Nos.			
B	Supply, installation and connecting of electronic alarm sounders , complete in all respects and conforming to general specifications.	2	Nos.			
C	Supply, installation and connecting of addressable optical smoke detectors , complete in all respects and conforming to general specifications.	18	Nos.			
D	Fire alarm control panel (FACP 1 loops) Addressable type , autodialer , fire fighting interfaces with built in SLA battery and battery charger	1	No			
E	<u>Fire Alarm System Wiring & Conduiting</u>					
	Supply and wiring of Smoke / Heat detector/ Sounder and manual call point 120 min Fire Rated Fire Alarm (FA) 1 x 2 core (1.5mm2) cable in and including cost of 1" dia PVC conduit with all installing accessories, complete in all respect as per drawings and specification.	22	Points			
			Total Amount			
	-					

COMMERCIAL BUILDING BOQ

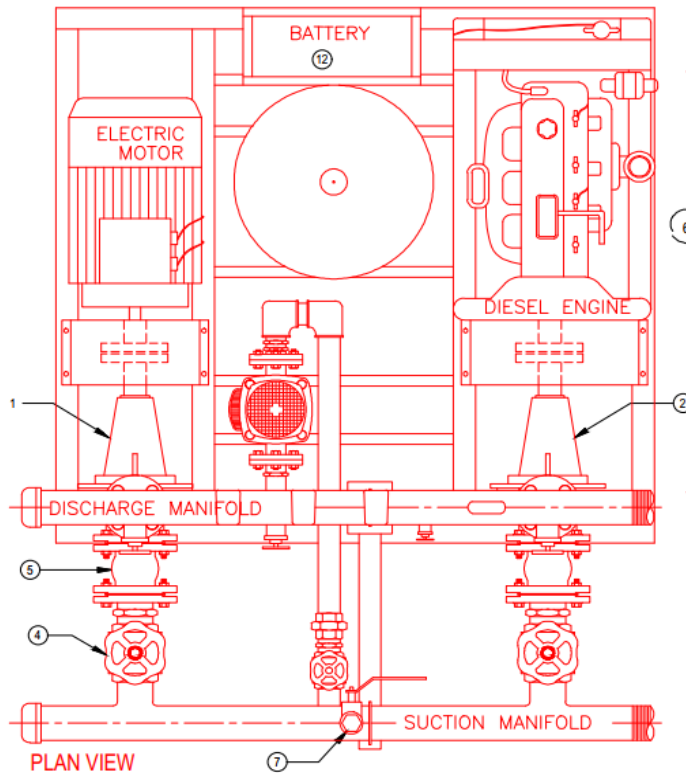
FIRE ALARM & DETECTION SYSTEM

Sr. #	Description	Qty.	Unit	Unit Rate (Rs.)	Installation Rate	Amount (Rs.)
	Note:- Supply & Installation of fire Alarm and detection system conforming to EN-54 & NFPA-72 comprising of following components / equipment					
	-					
1	<u>Fire Alarm Panel & Devices</u>					
a)	Supply at site, installation, testing and commissioning of 1 loops Intelligent Addressable Fire Alarm Control Panel (FACP) can be expandable, complete with built-in power supply unit, NICAD battery backup, Addressable power supply, supervisory buzzer, alarm cancelling device, loop control module, loop expander module, mounting chassis, complete in all respects, as per the specifications and drawings.	1	Nos.			
b)	Supply, installation and connecting of addressable manual call stations press glass type with test dey, suitable for surface or flush mounting complete in all respects and conforming to general specifications.	4	Nos.			
c)	Supply, installation and connecting of electronic alarm sounders , complete in all respects and conforming to general specifications.	4	Nos.			
d)	Supply, installation and connecting of addressable optical smoke detectors , complete in all respects and conforming to general specifications.	35	Nos.			
e)	Supply, installation and connecting of addressable heat detector rate of temperature rise type, complete in all respects .	2	Nos.			
f)	Supply, installation and connecting of Gas detector , complete in all respects .	2	Nos.			
2	<u>Fire Alarm System Wiring & Conduiting</u>					
a)	Supply and wiring of Smoke / Heat detector/ Sounder and manual call point 120 min Fire Rated Fire Alarm (FA) 1 x 2 core (1.5mm2) cable in and including cost of 1" dia PVC conduit with all installing accessories, complete in all respect as per drawings and specification.	47	Points			
	Note:					
	It should be clearly understood by the contractor / bidder / supplier that the above mentioned items shall be complete in all respects, including cost of necessary materials / accessories whether mentioned or not but are required for proper functioning of the system shall be deemed to be included in the cost of each above mentioned items, no extra charge shall be paid or claimed by the contractor / bidder / supplier.					
	Total Amount					-

FIRE ALARM & DETECTION SYSTEM

Sr. #	Description	Qty.	Unit	Unit Rate (Rs.)	Installation Rate	Amount (Rs.)
	Note:- Supply & Installation of fire Alarm and detection system conforming to EN-54 & NFPA-72 comprising of following components / equipment					
	-					
1	<u>Fire Alarm Panel & Devices</u>					
a)	Supply at site, installation, testing and commissioning of 1 loops Intelligent Addressable Fire Alarm Control Panel (FACP) can be expandable, complete with built-in power supply unit, NICAD battery backup, Addressable power supply, supervisory buzzer, alarm cancelling device, loop control module, loop expander module, mounting chassis, complete in all respects, as per the specifications and drawings.	1	Nos.			
b)	Supply, installation and connecting of addressable manual call stations press glass type with test key, suitable for surface or flush mounting complete in all respects and conforming to general specifications.	4	Nos.			
c)	Supply, installation and connecting of electronic alarm sounders , complete in all respects and conforming to general specifications.	4	Nos.			
d)	Supply, installation and connecting of addressable optical smoke detectors , complete in all respects and conforming to general specifications.	51	Nos.			
e)	Supply, installation and connecting of addressable heat detector rate of temperature rise type, complete in all respects .	2	Nos.			
f)	Supply, installation and connecting of Gas detector , complete in all respects .	2	Nos.			
g)	Supply, installation and connecting of Multi- detector , complete in all respects .	1	Nos.			
2	<u>Fire Alarm System Wiring & Conduiting</u>					
a)	Supply and wiring of Smoke / Heat detector/ Sounder and manual call point 120 min Fire Rated Fire Alarm (FA) 1 x 2 core (1.5mm ²) cable in and including cost of 1" dia PVC conduit with all installing accessories, complete in all respect as per drawings and specification.	64	Points			
	Note:					
	It should be clearly understood by the contractor / bidder / supplier that the above mentioned items shall be complete in all respects, including cost of necessary materials / accessories whether mentioned or not but are required for proper functioning of the system shall be deemed to be included in the cost of each above mentioned items, no extra charge shall be paid or claimed by the contractor / bidder / supplier.					
SUB TOTAL SECTION (1)						-

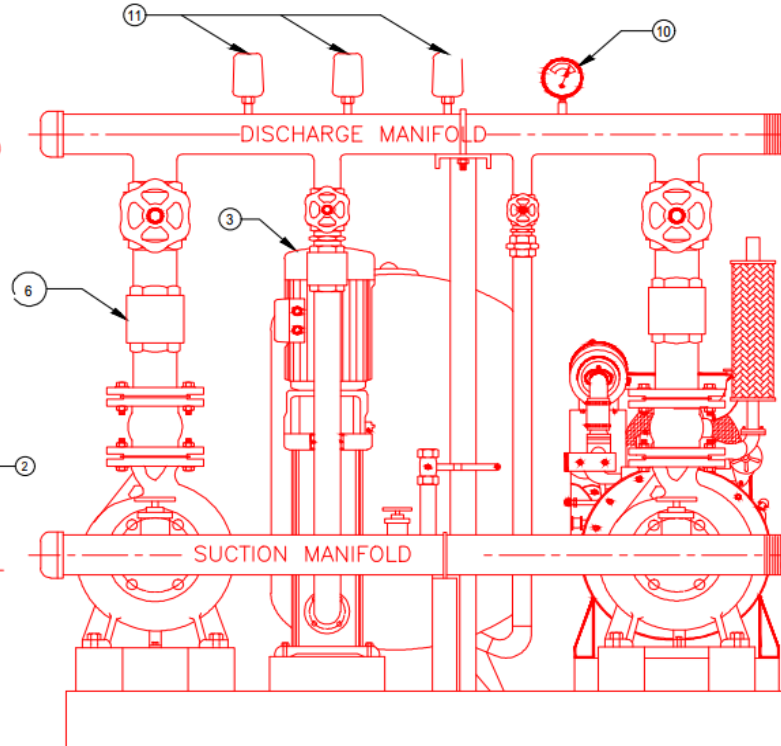
DIAGRAMS



PLAN VIEW

NOTES:

1. FIRE FIGHTING PUMP ROOM SHALL BE IN ACCORDANCE WITH NFPA-20.
2. FIRE FIGHTING PUMP ROOM EQUIPMENT SHALL BE INSTALLED ACCORDING TO APPROVED SUBMITTAL BY THE DESIGN CONSULTANT.
3. GENERATOR EXHAUST PIPE MUST BE DISCHARGED PROPERLY.
4. PUMP ROOM TEMPERATURE SHALL NOT BE LESS THEN 40°F AND NOT GREATER THEN 70°F.
PUMP ROOM DRAINAGE PIT WILL BE PROVIDED WITH SUBMERSIBLE PUMP (IF REQUIRED).
5. FIRE PUMP ROOM SHALL BE PROTECTED WITH AUTOMATIC FIRE EXTINGUISHER AND PROVIDE ADEQUATE LIGHT IN PUMP ROOM.

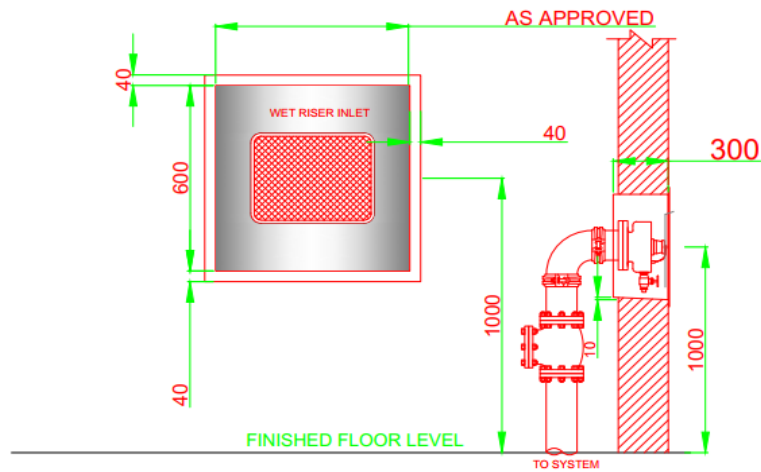


FRONT VIEW

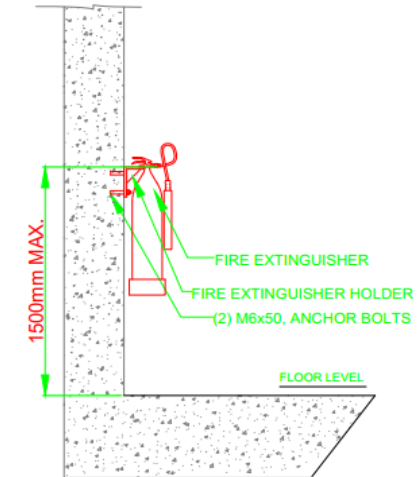
S.NO	DESCRIPTION	S.NO	DESCRIPTION
1.	ELECTRIC PUMP SET	7.	BALL VALVE
2.	DIESEL PUMP SET	8.	SUCTION MANIFOLD
3.	JOCKEY PUMP SET	9.	DELIVERY MANIFOLD
4.	GATE VALVE	10.	PRESSURE GAUGE
5.	FLEXIBLE COUPLING	11.	PRESSURE SWITCH
6.	NON RETURN VALVE	12.	BATTERY

**FIRE FIGHTING PUMP SET
UL LISTED**
 1 X ELECTRIC MAIN PUMP
 1 X DIESEL ENGINE
 1 X JOCKEY PUMP
 2000 US GPM
 12 BAR

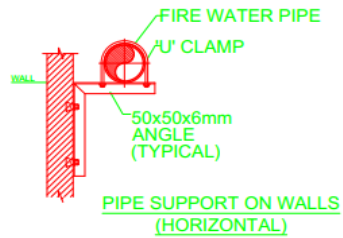
CAD BY:	DESIGNED BY:
RILAL TALIB	ENGR. RIZWAN AHMED
SCALE:	DATE:
1/8" = 1'-0"	15-SEP-2023
DRAWING TITLE:	
FIRE FIGHTING PUMP SET DETAIL	
PROJECT:	
NATIONAL LOGISTICS CORPORATION KNB LOGISTICS PARK PROJECT, KARACHI	
CLIENT:	
NATIONAL LOGISTICS CORPORATION	
ARCHITECTURAL CONSULTANT:	
MEP CONSULTANT:	
ENGR SIGN :	STAMP :
DRAWING NO:	
RCE/MEP/NL/CFF-Q2	



2 WAY BREECHING INLET

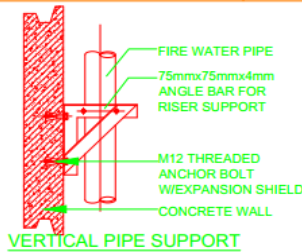


FIRE EXTINGUISHER INSTALLATION DETAIL

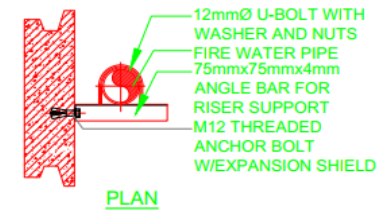


PIPE SUPPORT ON WALLS (HORIZONTAL)

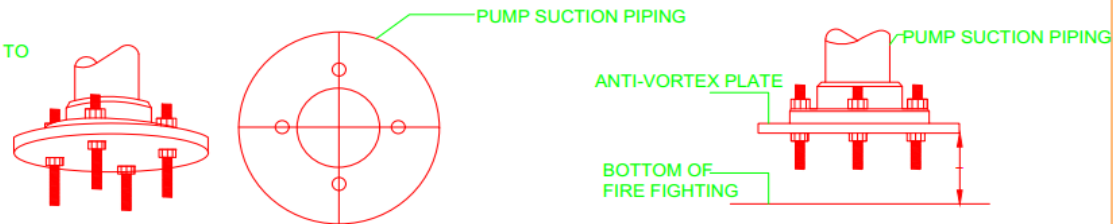
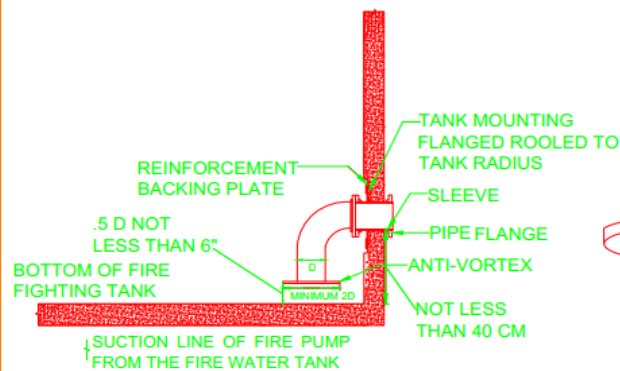
PIPE SIZE (INCHES)	(mm)	ROD mm
1	(25)	(10)
1-1/4	(32)	(10)
1-1/2	(40)	(10)
2	(50)	(10)
2-1/2	(65)	(10)
3	(80)	(10)
4	(100)	(10)
6	(150)	(12)



VERTICAL PIPE SUPPORT

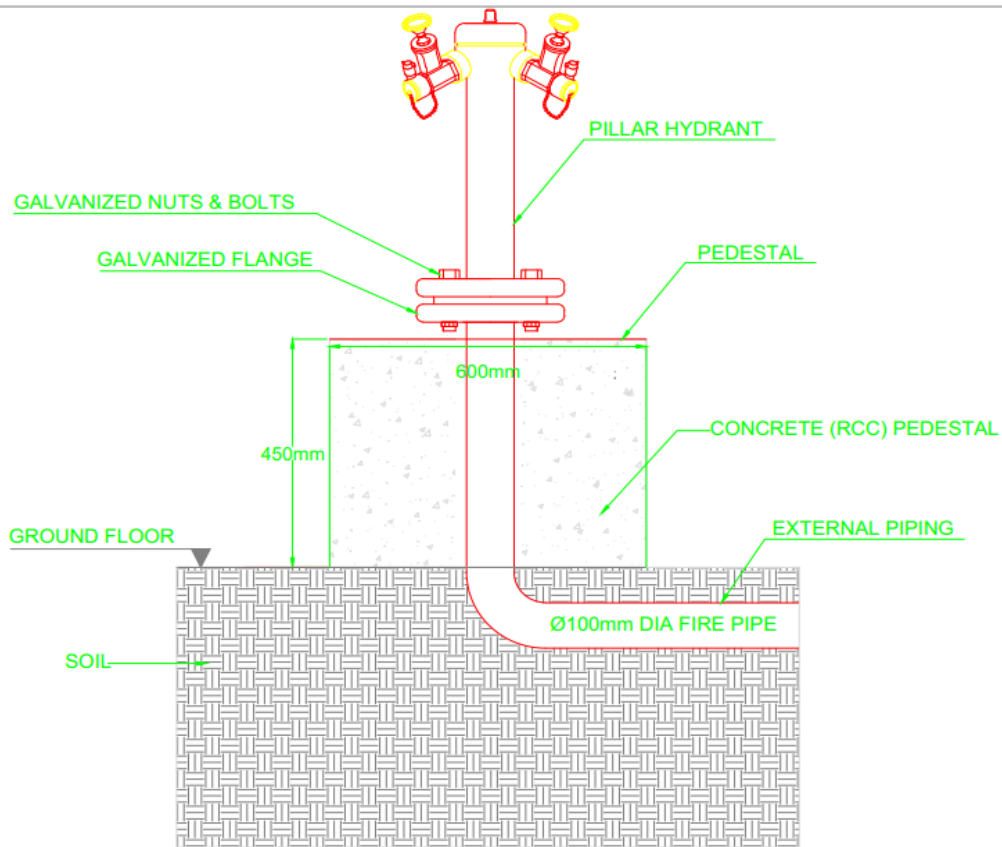


PLAN



ANTI-VORTEX PLATE TYPICAL INSTALLATION

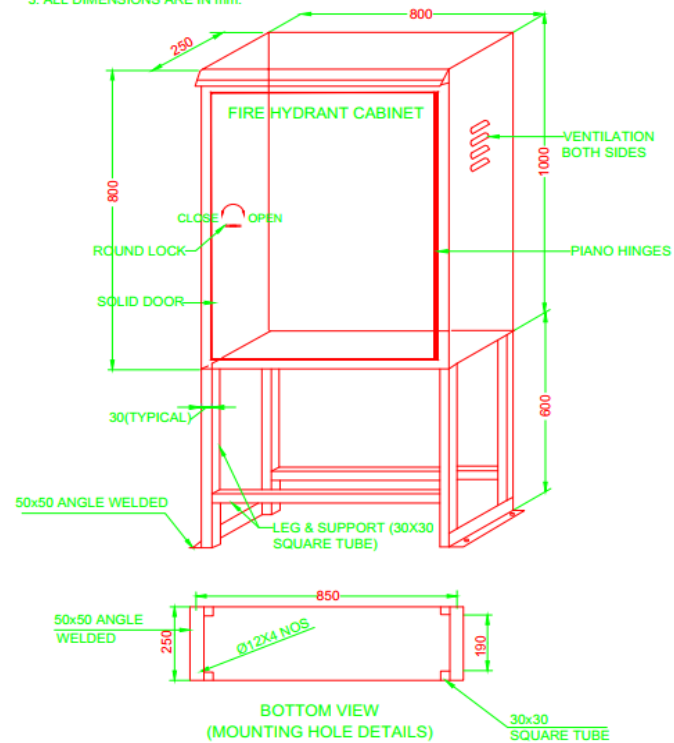
CAD BY:	DESIGNED BY:
SCALE:	DATE:
DRAWING TITLE:	1/8" = 1'-0" 15 SEP. 2024
FIRE FIGHTING TYPICAL DETAILS	
PROJECT:	
NATIONAL LOGISTICS CORPORATION KNB LOGISTICS PARK PROJECT, KARACHI	
CLIENT:	
NATIONAL LOGISTICS CORPORATION	
ARCHITECTURAL CONSULTANT:	
MEP CONSULTANT:	
ENGR SIGN :	STAMP :
DRAWING NO:	
RCE/MEP/NL/CFF-03	



(2-WAY PILLAR HYDRANT)

SPECIFICATION:

1. MATERIAL : 1.2mm MILD STEEL, RED POWDER COATED
2. DOOR : SOLID DOOR
3. ALL DIMENSIONS ARE IN mm.



FIRE HYDRANT CABINET SELF STANDING TYPE

CAD BY:	DESIGNED BY:
BILAL TALIB	ENGR. RIZWAN AHMED
SCALE:	DATE:
1/8" = 1'-0"	15 SEP-2024
DRAWING TITLE:	PILLAR HYDRANT & PILLAR CABINET DETAIL
PROJECT:	NATIONAL LOGISTICS CORPORATION KNB LOGISTICS PARK PROJECT, KARACHI
CLIENT:	NATIONAL LOGISTICS CORPORATION
ARCHITECTURAL CONSULTANT:	
MEP CONSULTANT:	
ENGR SIGN :	STAMP :
DRAWING NO.:	RCE/MEP/NLC/FF-04

PACKAGE 'C'

**NATIONAL LOGISTIC CORPORATION
WAREHOUSES
KNB, KARACHI**

National Logistics Corporation Logistics Park, KNB Karachi, Pakistan



Fire Detection & Fire Fighting Tender Documents

- **BOQ Preamble**
- **List of Approved Manufacturers**
- **Bill of Quantities (BOQ)**
 - **Fire Detection System**
 - **Fire Fighting System**

BOQ PREAMBLE

A. INSTRUCTIONS TO TENDERERS FOR FILLING OF BILL OF QUANTITIES:

1. The tenderers shall fill in all the sections of the Bill of Quantities, (BOQ) otherwise Tenders may be considered liable to rejection.
2. All items mentioned in the Bill of Quantities (BOQ) consist of supply of all equipment, installation, material labour, plant, appliances, and consumables required for completing in all respects the items/works, in strict accordance with relevant specifications Contract Documents and Drawings
3. The quantities mentioned in the BOQ are the estimated quantities of the work and they are not to be taken as the actual and correct quantities of the work to be executed by the Contractor in fulfillment of the Contract. These quantities can vary in actual.
4. In all cases where the Bill of Quantities items are not fully specific in respect of description or in respect of recommended manufacturers or suppliers, the tenderers attention is drawn to all the other tender documents including Specifications and Drawings and Conditions of the Contract.
5. All equipment proposed to be supplied shall be supported by suitable manufacturer's catalogue/literature etc., with the model selected with make, origin and performance data clearly marked.
6. This Bill of Quantities is to be read in conjunction with the Drawings and Specifications prepared by the Consultants, as being mutually explanatory.
7. All tenderers are advised to quote strictly as per specifications. Any alternative or deviations from specifications proposed shall be provided in the form of a separate quotation. Any tender not quoting as per specifications may be considered liable to rejection.
8. Except as otherwise specifically provided for, all items in the Bill of Quantities are measured net, as fixed in place in accordance with the Drawings, and any allowance made for waste shall be included in the price rate for that item. No separate payment shall be made for any wastage etc.,
9. Generally, the following shall be deemed to be included in the prices submitted with all items herein:
 - Labour and all cost in connection therewith, materials, goods and all costs in connection therewith including but not limited

to, transportation to site, delivery, unloading, unpacking, returning packing, handling, hoisting to any height, lowering, octroi charges etc.

- Erection, dismantling and removal on completion contractor's site offices, stores, accommodation.
- General and other requirements of Specifications.
- Installing, fitting and fixing goods and materials in positions.
- Use of tools, plant and equipment.
- Waste of materials.
- All necessary cutting and repairing
- All overheads and profits including Income Tax, Sales Tax and all other taxes and duties
- Testing of any material equipment from any certified laboratories & Pre-shipment Inspection and other miscellaneous Charges

10. Any discrepancies noticed by the tenderers between the Bill of Quantities, the intent of the Drawings and Specifications and the scope work, shall be brought to the attention of the Consultant/Engineer prior to submitting the tenders who shall notify their clarifications/decision to all the tenderers. No claims of whatsoever nature shall be admissible during or after the contract period for any misunderstandings, ambiguities due to above, which have not been notified to the Consultant/Engineer prior to submission of his priced tenders.
11. The Contract shall be on item rate contract for the accepted tendered price within which the contractor is required to supply & install, operate & maintain the system as specified.
12. The Employer has right to entirely delete or make changes in quantities for any item specified in BOQs, and no payment shall be made to the Contractor for deleted items. Payments against change in quantities shall be made only against executed and accepted items.
13. If the Contractor does not perform any work in conformance to specification or contract documents. The Employer may deduct or stop the payment against substandard work.

14. If Contractor fails to perform any work within specified time, the Employer has right to execute the same work on the Contractor's risk and cost.

END OF SECTION

LIST OF APPROVED MANUFACTURERS

National Logistics Corporation

List of Approved Manufacturers

Fire Fighting & Fire Detection System		
SR. No	Item Brief Description	Approved Manufacturers
01	Fire Fighting Pumping Set (UL Listed)	Naffco (UAE), Sffeco (UAE) or equivalent
02	Fire Extinguishers (All Types)	Naffco (UAE), Sffeco (UAE) or equivalent
03	Pendent/Upright/Wall Sprinklers	Tyco (USA), Viking (USA), Reliable (USA) or equivalent
04	Fire Hoses, Cabinets & Accessories	Naffco (UAE), Sffeco (UAE) or equivalent
05	Pillar Fire Hydrants	Naffco (UAE), Sffeco (UAE) or equivalent
06	M.S schedule 40 Piping (Seamless)	Protek UK, Nippon Japan, Lontrin or equivalent
07	Water Flow Devices & Accessories	Kitz (Japan), Lifeco (UK), Weflo (USA) or equivalent
08	Fire Rated Doors	Naffco (UAE), Sffeco (UAE), Hormann (UAE) or equivalent
09	Breeching Inlets/Siamese Connections	Naffco (UAE), Sffeco (UAE) or equivalent
10	Zone Control Valve Assembly (ZCVA) UL Listed	Naffco (UAE), Weflo (USA), Lifeco (UK) or equivalent
11	Fire suppression system (Clean Agent)	Naffco (UAE), Sffeco (UAE), Lifeco (UAE) or equivalent
12	Fire Detection System Complete (Addressable)	Eaton (UK), Gent by Honeywell, Bosch (Germany) or equivalent
13	Fire Rated Cable	Belden (US), Prysmian (UK), Cavicel (Italy) or equivalent
14	Emergency Lights & Illuminated Exit Signage	Marshall, Eaton, Philips or equivalent

Bill of Quantities (BOQ)

SUMMARY OF FIRE DETECTION SYSTEM			
Item no.	Item Description	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.		
	<u>DESCRIPTION</u>		
1	Warehouse-A		
2	Warehouse-B (Cold Storage & Ambient)		
3	Warehouse-C		
4	Residence Block		
Total (PKR)			

FIRE DETECTION SYSTEM WAREHOUSE-A					
Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
1.1	EMERGENCY LIGHTS CABLE				
1.1.1	Supply, installation, testing and commissioning of 3 x 2.5 mm ² shielded LPCB approved Fire resistant, 2-hour rated cable for fire alarm loop wiring, fire alarm critical circuits, complete with conduit, accessories, terminations, and identification. All wiring shall be in accordance with NFPA 72, EN-50200, IEC 60331 and BS 6387. Note: Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of cables are shown herewith. Payments shall be made as per actual length installed.	RM	650		

1.2	<u>CONDUITS</u>				
1.2.1	Supply and installation of Hot dipped Galvanized Electrical Metal Tube (EMT) conduits in compliance with IEC 61386 standard and other applicable standards of minimum 45 microns with all kind of fittings like elbows, coupling, saddles, connectors, conduit hangers, supports and all other required fittings & accessories complete in all respects or as approved by the Consultant. Note: Actual length of conduits to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of conduits are shown herewith. Payments shall be made as per actual length installed.	RM	650		
1.3	<u>EMERGENCY LIGHTS</u>				
1.3.1	Supply, installation, testing and commissioning of self-contained LED emergency light fitting, complete with backup (minimum 120 minutes), automatic operation, and all accessories, complete in all respects complying with NFPA 101 / EN 1838 / IEC standards.	Nos	96		
1.4	<u>FIRE EXIT SIGN</u>				
1.4.1	Supply, installation, testing and commissioning of LED illuminated fire exit sign (running man type), double sided, complete with backup (minimum 120 minutes), maintained operation, and all accessories, complete in all respects complying with NFPA 101 / EN 1838 / ISO 7010 standards.	Nos	12		
Total (PKR)					-

FIRE DETECTION SYSTEM WAREHOUSE-B (AMBIENT)					
Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
1.1	<u>ADDRESSABLE FIRE ALARM CONTROL PANEL (FACP) FOR COLD STORAGE AREA & AMBIENT AREA BOTH</u>				
1.1.1	Supply, Installation, Testing and commissioning of microprocessor-based addressable Fire Alarm Control Panel. System shall be fully addressable, intelligent and modular. 10 loops expandable up to required capacity, Capable of integration with Fire Detection Devices, Fire Suppression Systems and BMS if required. The Fire Alarm Control Panel shall be provided with a sealed maintenance-free battery backup system with sufficient capacity to operate the system under normal supervisory conditions, followed by alarm condition operation, in accordance with NFPA 72 requirements. Complete in all respects or as approved by the Consultant.	Nos	1		
1.2	<u>ADDRESSABLE BEAM DETECTORS (AMBIENT)</u>				
1.2.1	Supply, Installation, Testing and commissioning of reflective type projected beam detectors EN-54-12 compliant complete with reflective plates, mounting accessories, and all required interfaces complete in all respects or as approved by the Consultant.	Nos	16		

1.3	<u>ADDRESSABLE SMOKE DETECTORS (AMBIENT)</u>				
1.3.1	Supply, Installation, Testing and Commissioning of addressable smoke detectors EN-54-7 compliant compatible with the proposed Fire Alarm Control Panel. Detector shall be supplied with Standard mounting base, locking mechanism to prevent unauthorized removal, and compatible with standard junction boxes, complete in all respects or as approved by the Consultant.	Nos	17		
1.4	<u>ZONE CONTROL INTERFACE (AMBIENT)</u>				
1.4.1	Supply, Installation, Testing and Commissioning of Zone Control Assembly Interface module complete with all accessories, wiring, containment and integration with the Fire Alarm System (As per Firefighting drawings).Complete in all respects or as Approved by the Consultant.	Nos	3		
1.5	<u>ADDRESSABLE ALARM SOUNDERS (AMBIENT)</u>				
1.5.1	Supply, Installation, Testing and commissioning of addressable wall mount electronic sounder. Loop powered, with selectable tones and minimum 90 dB output, complete with all accessories, complying with NFPA 72 / EN 54-3. Complete in all respects or as approved by the Consultant.	Nos.	7		
1.6	<u>ADDRESSABLE FLASHERS (AMBIENT)</u>				
1.6.1	Supply, installation, testing and commissioning of wall mount addressable visual alarm device (strobe), high-intensity LED type, compliant with EN 54-23, complete with all accessories. Complete in all respects or as approved by the Consultant.	Nos.	7		
1.7	<u>MANUAL CALL POINTS (AMBIENT)</u>				
1.7.1	Supply, installation, testing, and commissioning of wall mount manual call point (MCP), break glass or resettable type, red colored, loop powered, compatible with fire alarm control panel, complete with back box, LED indicator, key reset facility, and all necessary accessories including interconnection with fire alarm loop wiring and testing as per EN 54 / NFPA standards. Complete in all respects or as approved by the Consultant.	Nos.	7		

1.8	<u>FIRE ALARM LOOP CABLE (AMBIENT)</u>				
1.8.1	Supply, installation, testing and commissioning of 2-core x 1.5mm² + ECC shielded LPCB approved Fire resistant, 2-hour rated cable for fire alarm loop wiring, fire alarm critical circuits, complete with conduit, accessories, terminations, and identification wiring shall be in accordance with NFPA 72, EN-50200, IEC 60331 and BS 6387 Note: Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of cables are shown herewith. Payments shall be made as per actual length installed.	RM	700		
1.9	<u>EMERGENCY LIGHTS CABLE (AMBIENT)</u>				
1.9.1	Supply, installation, testing and commissioning of 3 x 2.5 mm² shielded LPCB approved Fire resistant, 2-hour rated cable for fire alarm loop wiring, fire alarm critical circuits, complete with conduit, accessories, terminations, and identification. All wiring shall be in accordance with NFPA 72, EN-50200, IEC 60331 and BS 6387. Note: Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of cables are shown herewith. Payments shall be made as per actual length installed.	RM	450		

1.10	<u>CONDUITS (AMBIENT)</u>				
1.10. 1	Supply and installation of Hot dipped Galvanized Electrical Metal Tube (EMT) conduits in compliance with IEC 61386 standard and other applicable standards of minimum 45 microns with all kind of fittings like elbows, coupling, saddles, connectors, conduit hangers, supports and all other required fittings & accessories complete in all respects or as approved by the Consultant. Note: Actual length of conduits to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of conduits are shown herewith. Payments shall be made as per actual length installed.	RM	1150		
1.11	<u>EMERGENCY LIGHTS (AMBIENT)</u>				
1.11. 1	Supply, installation, testing and commissioning of self-contained LED emergency light fitting, complete with backup (minimum 120 minutes), automatic operation, and all accessories, complete in all respects complying with NFPA 101 / EN 1838 / IEC standards.	Nos	66		
1.12	<u>FIRE EXIT SIGN (AMBIENT)</u>				
1.12. 1	Supply, installation, testing and commissioning of LED illuminated fire exit sign (running man type), double sided, complete with backup (minimum 120 minutes), maintained operation, and all accessories, complete in all respects complying with NFPA 101 / EN 1838 / ISO 7010 standards.	Nos	8		

FIRE DETECTION SYSTEM WAREHOUSE-B (COLD STORAGE)

1.1	<u>ADDRESSABLE BEAM DETECTORS (COLD STORAGE)</u>				
1.1.1	Supply, installation, testing and commissioning of reflective type projected beam smoke detectors complying with EN 54-12 and specifically suitable for operation in cold storage environments within an ambient temperature range of -20°C to +25°C, where applicable. The scope shall include complete installation compatible with sandwich panels of cold storage and shall not affect the cold storage in any aspect after fire detection installation, this shall also includes compatible reflector plates, standard mounting bases, locking mechanisms to prevent unauthorized removal, compatibility with standard junction boxes, and all necessary accessories, interfaces and ancillary components required for a complete, reliable and fully functional installation, complete in all respects or as approved by the Consultant.	Nos	10		
1.2	<u>ADDRESSABLE SMOKE DETECTORS (COLD STORAGE)</u>				
1.2.1	Supply, installation, testing and commissioning of addressable smoke detectors complying with EN 54-7 and compatible with the proposed Fire Alarm Control Panel and associated addressable fire alarm system. Detectors shall be specifically suitable and manufacturer-rated for the environmental conditions and operating temperature range of the installation, including cold storage areas operating between -20°C and +25°C, where applicable. The scope shall include complete installation compatible with sandwich panel of cold storage and shall not affect the cold storage in any aspect after fire detection system installation, this shall also includes compatible reflector plates, standard mounting bases, locking mechanisms to prevent unauthorized removal, compatibility with standard junction boxes, and all necessary accessories, interfaces and ancillary components required for a complete, reliable and fully functional installation, complete in all respects or as approved by the Consultant.	Nos	11		

1.3	<u>ADDRESSABLE ALARM SOUNDERS (COLD STORAGE)</u>				
1.3.1	Supply, Installation, Testing and commissioning of addressable wall mount electronic sounder. Loop powered, with selectable tones and minimum 90 dB output, complete with all accessories, complying with NFPA 72 / EN 54-3. Complete in all respects or as approved by the Consultant.	Nos	4		
1.4	<u>ADDRESSABLE FLASHERS (COLD STORAGE)</u>				
1.4.1	Supply, installation, testing and commissioning of wall mount addressable visual alarm device (strobe), high-intensity LED type, compliant with EN 54-23, complete with all accessories. Complete in all respects or as approved by the Consultant.	Nos	4		
1.5	<u>MANUAL CALL POINTS (COLD STORAGE)</u>				
1.5.1	Supply, installation, testing, and commissioning of wall mount manual call point (MCP), break glass or resettable type, red colored, loop powered, compatible with fire alarm control panel, complete with back box, LED indicator, key reset facility, and all necessary accessories including interconnection with fire alarm loop wiring and testing as per EN 54 / NFPA standards. Complete in all respects or as approved by the Consultant.	Nos	4		
1.6	<u>FIRE ALARM LOOP CABLE (COLD STORAGE)</u>				
1.6.1	Supply, installation, testing and commissioning of 2-core x 1.5mm ² + ECC shielded LPCB approved Fire resistant, 2-hour rated cable for fire alarm loop wiring, fire alarm critical circuits, complete with conduit, accessories, terminations, and identification wiring shall be in accordance with NFPA 72, EN-50200, IEC 60331 and BS 6387 Note: Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of cables are shown herewith. Payments shall be made as per actual length installed.	RM	520		

1.7	<u>EMERGENCY LIGHTS CABLE (COLD STORAGE)</u>				
1.7.1	Supply, installation, testing and commissioning of 3 x 2.5 mm² shielded LPCB approved Fire resistant, 2-hour rated cable for fire alarm loop wiring, fire alarm critical circuits, complete with conduit, accessories, terminations, and identification. All wiring shall be in accordance with NFPA 72, EN-50200, IEC 60331 and BS 6387. Note: Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of cables are shown herewith. Payments shall be made as per actual length installed.	RM	350		
1.80	<u>CONDUITS (COLD STORAGE)</u>				
1.8.1	Supply and installation of Hot dipped Galvanized Electrical Metal Tube (EMT) conduits in compliance with IEC 61386 standard and other applicable standards of minimum 45 microns with all kind of fittings like elbows, coupling, saddles, connectors, conduit hangers, supports and all other required fittings & accessories complete in all respects or as approved by the Consultant. Note: Actual length of conduits to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of conduits are shown herewith. Payments shall be made as per actual length installed.	RM	870		
1.9	<u>EMERGENCY LIGHTS (COLD STORAGE)</u>				
1.9.1	Supply, installation, testing and commissioning of self-contained LED emergency light fitting, complete with backup (minimum 120 minutes), automatic operation, and all accessories, complete in all respects complying with NFPA 101 / EN 1838 / IEC standards.	Nos	30		

1.10	<u>FIRE EXIT SIGN (COLD STORAGE)</u>				
1.10. 1	Supply, installation, testing and commissioning of LED illuminated fire exit sign (running man type), double sided, complete with backup (minimum 120 minutes), maintained operation, and all accessories, complete in all respects complying with NFPA 101 / EN 1838 / ISO 7010 standards.	Nos	6		
Total (PKR)					-

FIRE DETECTION SYSTEM WAREHOUSE-C					
Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
1.1	<u>EMERGENCY LIGHTS CABLE</u>				
1.1.1	Supply, installation, testing and commissioning of 3 x 2.5 mm ² shielded LPCB approved Fire resistant, 2-hour rated cable for fire alarm loop wiring, fire alarm critical circuits, complete with conduit, accessories, terminations, and identification. All wiring shall be in accordance with NFPA 72, EN-50200, IEC 60331 and BS 6387. Note: Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of cables are shown herewith. Payments shall be made as per actual length installed.	RM	650		

1.20	<u>CONDUITS</u>				
1.2.1	Supply and installation of Hot dipped Galvanized Electrical Metal Tube (EMT) conduits in compliance with IEC 61386 standard and other applicable standards of minimum 45 microns with all kind of fittings like elbows, coupling, saddles, connectors, conduit hangers, supports and all other required fittings & accessories complete in all respects or as approved by the Consultant. Note: Actual length of conduits to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of conduits are shown herewith. Payments shall be made as per actual length installed.	RM	650		
1.3	<u>EMERGENCY LIGHTS</u>				
1.3.1	Supply, installation, testing and commissioning of self-contained LED emergency light fitting, complete with backup (minimum 120 minutes), automatic operation, and all accessories, complete in all respects complying with NFPA 101 / EN 1838 / IEC standards.	Nos	94		
1.4	<u>FIRE EXIT SIGN</u>				
1.4.1	Supply, installation, testing and commissioning of LED illuminated fire exit sign (running man type), double sided, complete with backup (minimum 120 minutes), maintained operation, and all accessories, complete in all respects complying with NFPA 101 / EN 1838 / ISO 7010 standards.	Nos	12		
Total (PKR)					-

FIRE DETECTION SYSTEM RESIDENCE BLOCK					
Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
1.1	<u>CONVENTIONAL FIRE ALARM CONTROL PANEL (FACP)</u>				
1.1.1	Supply, installation, testing and commissioning of a microprocessor-based conventional fire alarm control panel, complete with metal enclosure, power supply unit, standby batteries, LED/LCD indications, zone-wise fire/fault indication, audible alarm output, silence/reset/evacuate/test controls, battery charger, supervisory and fault monitoring, and potential-free relay contacts for interfacing with other building services. Panel shall be complete with all necessary accessories, termination facilities, labels, glands, connectors and mounting hardware, and shall comply with NFPA 72 and relevant EN 54 / BS standards. The system shall be fully compatible with the proposed conventional fire detection devices and shall be tested and commissioned as a complete operational system.	Nos	1		
1.2	<u>SMOKE DETECTORS</u>				
1.2.1	Supply, Installation, Testing and Commissioning of smoke detectors EN-54-7 compliant compatible with the proposed Fire Alarm Control Panel. Detector shall be supplied with Standard mounting base, locking mechanism to prevent unauthorized removal, and compatible with standard junction boxes, complete in all respects or as approved by the Consultant.	Nos	23		

1.3	<u>HEAT DETECTORS</u>				
1.3.1	Supply, Installation, Testing and Commissioning of heat detectors EN-54-7 compliant compatible with the proposed Fire Alarm Control Panel. Detector shall be supplied with Standard mounting base, locking mechanism to prevent unauthorized removal, and compatible with standard junction boxes, complete in all respects or as approved by the Consultant.	Nos	2		
1.4	<u>MULTI DETECTORS</u>				
1.4.1	Supply, Installation, Testing and Commissioning of multi detectors EN-54-7 compliant compatible with the proposed Fire Alarm Control Panel. Detector shall be supplied with Standard mounting base, locking mechanism to prevent unauthorized removal, and compatible with standard junction boxes, complete in all respects or as approved by the Consultant.	Nos	1		
1.5	<u>SOUNDERS</u>				
1.5.1	Supply, Installation, Testing and commissioning of wall mount electronic sounder. Loop powered, with selectable tones and minimum 90 dB output, complete with all accessories, complying with NFPA 72 / EN 54-3. Complete in all respects or as approved by the Consultant.	Nos.	2		
1.6	<u>FLASHERS</u>				
1.6.1	Supply, installation, testing and commissioning of wall mount visual alarm device (strobe), high-intensity LED type, compliant with EN 54-23, complete with all accessories. Complete in all respects or as approved by the Consultant.	Nos.	2		
1.7	<u>MANUAL CALL POINTS</u>				
1.7.1	Supply, installation, testing, and commissioning of wall mount manual call point (MCP), break glass or resettable type, red colored, loop powered, compatible with fire alarm control panel, complete with back box, LED indicator, key reset facility, and all necessary accessories including interconnection with fire alarm loop wiring and testing as per EN 54 / NFPA standards. Complete in all respects or as approved by the Consultant.	Nos.	2		

1.8	<u>FIRE ALARM LOOP CABLE</u>				
1.8.1	Supply, installation, testing and commissioning of 2-core x 1.5mm² + ECC shielded LPCB approved Fire resistant, 2-hour rated cable for fire alarm loop wiring, fire alarm critical circuits, complete with conduit, accessories, terminations, and identification wiring shall be in accordance with NFPA 72, EN-50200, IEC 60331 and BS 6387 Note: Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of cables are shown herewith. Payments shall be made as per actual length installed.	RM	220		
1.9	<u>EMERGENCY LIGHTS CABLE</u>				
1.9.1	Supply, installation, testing and commissioning of 3 x 2.5 mm² shielded LPCB approved Fire resistant, 2-hour rated cable for fire alarm loop wiring, fire alarm critical circuits, complete with conduit, accessories, terminations, and identification. All wiring shall be in accordance with NFPA 72, EN-50200, IEC 60331 and BS 6387. Note: Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length of cables are shown herewith. Payments shall be made as per actual length installed.	RM	120		
1.10	<u>CONDUITS</u>				
1.10.1	Supply and installation of Hot dipped Galvanized Electrical Metal Tube (EMT) conduits in compliance with IEC 61386 standard and other applicable standards of minimum 45 microns with all kind of fittings like elbows, coupling, saddles, connectors, conduit hangers, supports and all other required fittings & accessories complete in all respects or as approved by the Consultant. Note: Actual length of conduits to be installed shall be practically measured at site by the Contractor, duly authenticated by the design consultant before placing the order with the manufacturer, however, approximate length	RM	340		

	of conduits are shown herewith. Payments shall be made as per actual length installed.				
1.11	<u>EMERGENCY LIGHTS</u>				
1.11.1	Supply, installation, testing and commissioning of self-contained LED emergency light fitting, complete with backup (minimum 120 minutes), automatic operation, and all accessories, complete in all respects complying with NFPA 101 / EN 1838 / IEC standards.	Nos	9		
1.12	<u>FIRE EXIT SIGN</u>				
1.12.1	Supply, installation, testing and commissioning of self-contained LED illuminated fire exit sign (running man type), double sided, complete with backup (minimum 120 minutes), maintained operation, and all accessories, complete in all respects complying with NFPA 101 / EN 1838 / ISO 7010 standards.	Nos	3		
Total (PKR)					

SUMMARY OF FIRE FIGHTING SYSTEM			
Item no.	Item Description	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.		
	<u>DESCRIPTION</u>		
1	Warehouse-A		
2	Warehouse-B (Cold Storage & Ambient)		
3	Warehouse-C		
4	Residence Block		
5	External Works		
Total (PKR)			

WAREHOUSE-A (Internal Fire Fighting Works Excluding Sprinklers & Associated Piping)					
Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
1	Supply and Installation of Fire Extinguishers of specified type and capacities with wall mounting brackets etc as indicated in drawings. the fire extinguishers shall be installed as specified in NFPA-10 complete in all respects as per specifications drawings and as approved by the Consultant.				
1.1	03 Liters Wet Chemical Fire Extinguisher	No.	2		
1.2	5kg CO2 Fire Extinguisher	No.	37		
1.3	6kg DCP Fire Extinguisher	No.	37		
1.4	6kg Ceiling Mounted Automatic Fire Extinguisher (Halotron)	No.	4		
2	Supply, Installation, testing and commissioning of wall mounted Dual Fire Hose Cabinet with double vertical cabinet as per NFPA-14, Upper compartment consisting of 1" diameter swinging arm type 100 feet long fire hose reel with Pressure Reducing Valve and lower compartment consisting of 2.5" x 100 ft polyester collapsable fire hose and with 2.5" diameter landing valve with quick coupling, the cabinet shall be made with mild steel 16 gauge sheet with approved colour and polyester powder coating finish, and with valve and nozzle and accessories, complete in all respects as per specifications, drawings and as approved by the Consultant.				
2.1	Dual Compartment Fire Hose Cabinets	Nos.	8		

3	Supply, Installation, testing and commissioning of wall mounted Fire Hose Reel with Cabinet (Class-II) as per NFPA-14, Fire Hose Reel shall be of 1" diameter swinging arm type 100 feet long fire hose reel with Pressure Reducing Valve, the cabinet shall be made with mild steel 16 gauge sheet with approved colour and polyester powder coating finish with valve and nozzle and accessories, complete in all respects as per specifications, drawings and as approved by the Consultant.				
3.1	Fire Hose Reel with Cabinet	Nos.	1		
4	Supply, Installation, testing and commissioning of Black seamless M.S schedule 40 Piping with all type fittings and specials such as tees, sockets, elbows, bends, unions, reducers etc, and painting with primer and final finish coats, and fixing with approved quality pipe hanging and support system hot dipped galvanized and specially designed for fire fighting installations, complete in all respects as per drawings, specifications and as approved by the Consultant.				
4.1	1-1/2" diameter	Rft	198		
4.2	2-1/2" diameter	Rft	105		
5	Supply and installation of Water Flow Devices of PN-20 pressure rating, these shall be complete with flanges, nut bolts, gaskets, union etc. complete in all respects as approved by the consultant.				
5.1	Pressure Reducing Valve with Fire Hose Cabinets	No.	8		
6	Supply and Installation of 50 KG DCP Trolley Mounted Fire Extinguisher with portable trolley of specified type and capacities, the fire extinguishers shall be installed as specified in NFPA-10 complete in all respects as per specifications drawings and as approved by the Consultant.				
6.1	50 KG DCP Trolley Mounted Fire Extinguishers	Nos.	10		

7	Providing and installation of Fire Blankets conforming ASTM F 1989-05 standard as indicated in drawings with a protective cover with clear indication that how to extract and use it, complete in all respects as per specification and drawings and as approved by the Consultant.				
7.1	Fire Blankets	Each	2		
8	Providing and installation of Personal Protective Equipment (PPE) , this includes safety cabinet, front Glass door with locking arrangements, fire blanket, safety helmets (minimum two), safety leather gloves (minimum two), Safety goggles Dark/Clear x2, Safety Shoes x2 pair, Fire Fighting gum shoes x1, Safety vest reflecting jacket (minimum two), Fireman Hammer x1, Fireman Axe x1, Half face mask x1, Portable rechargeable search light x1, fire escape mask x1 complete in all respects as per specifications, drawings and as approved by the Consultant.				
8.1	Personal Protective Equipment (PPE)	Each	10		
<u>Miscellaneous:</u>					
9	Supply, installation, inspection and completion of Passive Fire Protection works at locations indicated on drawings and in accordance with NFPA-101, NFPA-5000, other applicable standards and local authority requirements including but not limited to Anti Slip walk tape, Anti Shatter sheet on glass, Fire Cement, Duct fire rated, protection, sealing of any openings with fire resistant material with approved sealants, shall be completed in all respects and as approved by the consultant.				
9.1	Passive Fire Protection works	Lot	1		
10	Providing and installation of Pipe Sleeves in masonry works , all the sleeves shall be of approved quality and make and shall be installed as recommended by the manufacturer, the sleeves shall be of adequate size and material with proper sealant and shall be placed where advised for required for Fire Fighting pipes complete in all respects as per specification and drawings and as approved by the Consultant.				
10.1	Sleeves	Lot	1		

11	Providing and installation of Escutcheon Plates where all pipes passing through wall floor or slab, the construction of Escutcheon plates shall be as per specifications and shall be installed as recommended by the manufacturer, the Escutcheon plates shall be of adequate size and material with proper installation and shall be placed where advised for required for Fire Fighting complete in all respects as per specification and drawings and as approved by the Consultant.				
11.1	Escutcheon Plates	Lot	1		
12	One Year Maintenance	Job	1		
13	Supplementary works				
13.1	Shop Drawings & As Built Drawings	Lot	1		
13.2	Operation & Maintenance Manuals	Lot	1		
Total					-

WAREHOUSE-A (Internal Fire Fighting Works Sprinklers & Associated Piping)					
Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
1	Providing, fixing, testing and commissioning of recessed Pendent Sprinklers or as required with slip on style escutcheons plates (where required) of color and design, the sprinkler shall be ESFR (Early Suppression Fast Response) type having 3/4 inch NPT threads with approved K factor (16.8) and temperature rating with chrome finish & UL/ULC Listed for approved manufacturer, complete in all respects as per drawings, specifications and as approved by the Consultant.				
1.1	Fire Sprinklers	Each	1,047		
2	Providing, fixing, testing and commissioning of recessed Pendent/Upright Sprinklers or as required with slip on style escutcheons plates (where required) of color and design, the sprinkler shall be quick response type having 1/2 inch NPT threads with approved K factor (5.6) and temperature rating with chrome finish & UL/ULC Listed for approved manufacturer, complete in all respects as per drawings, specifications and as approved by the Consultant.				
2.1	Fire Sprinklers (Inside Office Space)	Each	35		

3	Supply, Installation, testing and commissioning of Black seamless M.S schedule 40 Piping with all type fittings and specials such as tees, sockets, elbows, bends, unions, reducers etc, and painting with primer and final finish coats, and fixing with approved quality pipe hanging and support system hot dipped galvanized and specially designed for fire fighting installations, complete in all respects as per drawings, specifications and as approved by the Consultant.				
3.1	1" diameter	Rft	272		
3.2	1-1/4" diameter	Rft	4,255		
3.3	1-1/2" diameter	Rft	4,680		
3.4	2" diameter	Rft	4,496		
3.5	2-1/2" diameter	Rft	120		
3.6	3" diameter	Rft	92		
3.7	4" diameter	Rft	45		
3.8	6" diameter	Rft	2,279		
4	Supply and installation of Water Flow Devices of PN-20 pressure rating, these shall be complete with flanges, nut bolts, gaskets, union etc complete in all respects as approved by the consultant.				
4.1	Gate Valve Rising Stem				
4.1.1	2" diameter	No.	6		
4.1.2	6" diameter	No.	3		
4.2	Non Return Valve				
4.2.1	6" diameter	No.	3		
4.3	Pressure Reducing Valve				
4.3.1	6" diameter	No.	3		
4.4	Flow Switch	Each	3		
4.5	Pressure Gauge	Each	3		
4.6	Sight Glass	Each	3		

<u>Miscellaneous:</u>					
5	Providing and installation of Pipe Sleeves in masonry works, all the sleeves shall be of approved quality and make and shall be installed as recommended by the manufacturer, the sleeves shall be of adequate size and material with proper sealant and shall be placed where advised for required for Fire Fighting pipes complete in all respects as per specification and drawings and as approved by the Consultant.				
5.1	Sleeves	Lot	1		
6	Providing and installation of Escutcheon Plates where all pipes passing through wall floor or slab, the construction of Escutcheon plates shall be as per specifications and shall be installed as recommended by the manufacturer, the Escutcheon plates shall be of adequate size and material with proper installation and shall be placed where advised for required for Fire Fighting complete in all respects as per specification and drawings and as approved by the Consultant.				
6.1	Escutcheon Plates	Lot	1		
7	One Year Maintenance	Job	1		
Total					-

WAREHOUSE-B AMBIENT (Internal Fire Fighting Works Excluding Sprinklers & Associated Piping)					
Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
1	Supply and Installation of Fire Extinguishers of specified type and capacities with wall mounting brackets etc as indicated in drawings. the fire extinguishers shall be installed as specified in NFPA-10 complete in all respects as per specifications drawings and as approved by the Consultant.				
1.1	03 Liters Wet Chemical Fire Extinguisher	No.	2		
1.2	5kg CO2 Fire Extinguisher	No.	30		
1.3	6kg DCP Fire Extinguisher	No.	30		
1.4	6kg Ceiling Mounted Automatic Fire Extinguisher (Halotron)	No.	2		
2	Supply, Installation, testing and commissioning of wall mounted Dual Fire Hose Cabinet with double vertical cabinet as per NFPA-14, Upper compartment consisting of 1" diameter swinging arm type 100 feet long fire hose reel with Pressure Reducing Valve and lower compartment consisting of 2.5" x 100 ft polyester collapsible fire hose and with 2.5" diameter landing valve with quick coupling, the cabinet shall be made with mild steel 16 gauge sheet with approved colour and polyester powder coating finish, and with valve and nozzle and accessories, complete in all respects as per specifications, drawings and as approved by the Consultant.				

2.1	Dual Compartment Fire Hose Cabinets	Nos.	6		
3	Supply, Installation, testing and commissioning of wall mounted Fire Hose Reel with Cabinet (Class-II) as per NFPA-14, Fire Hose Reel shall be of 1" diameter swinging arm type 100 feet long fire hose reel with Pressure Reducing Valve, the cabinet shall be made with mild steel 16 gauge sheet with approved colour and polyester powder coating finish with valve and nozzle and accessories, complete in all respects as per specifications, drawings and as approved by the Consultant.				
3.1	Fire Hose Reel with Cabinet	Nos.	1		
4	Supply, Installation, testing and commissioning of Black seamless M.S schedule 40 Piping with all type fittings and specials such as tees, sockets, elbows, bends, unions, reducers etc, and painting with primer and final finish coats, and fixing with approved quality pipe hanging and support system hot dipped galvanized and specially designed for fire fighting installations, complete in all respects as per drawings, specifications and as approved by the Consultant.				
4.1	1-1/2" diameter	Rft	65		
4.2	2-1/2" diameter	Rft	85		
5	Supply and installation of Water Flow Devices of PN-20 pressure rating, these shall be complete with flanges, nut bolts, gaskets, union etc complete in all respects as approved by the consultant.				
5.1	Pressure Reducing Valve with Fire Hose Reel	No.	1		
5.2	Pressure Reducing Valve with Fire Hose Cabinets	No.	6		
6	Supply and Installation of 50 KG DCP Trolley Mounted Fire Extinguisher with portable trolley of specified type and capacities, the fire extinguishers shall be installed as specified in NFPA-10 complete in all respects as per specifications drawings and as approved by the Consultant.				
6.1	50 KG DCP Trolley Mounted Fire Extinguishers	Nos.	8		

7	Providing and installation of Fire Blankets conforming ASTM F 1989-05 standard as indicated in drawings with a protective cover with clear indication that how to extract and use it, complete in all respects as per specification and drawings and as approved by the Consultant.				
7.1	Fire Blankets	Each	2		
8	Providing and installation of Personal Protective Equipment (PPE) , this includes safety cabinet, front Glass door with locking arrangements, fire blanket, safety helmets (minimum two), safety leather gloves (minimum two), Safety goggles Dark/Clear x2, Safety Shoes x2 pair, Fire Fighting gum shoes x1, Safety vest reflecting jacket (minimum two), Fireman Hammer x1, Fireman Axe x1, Half face mask x1, Portable rechargeable search light x1, fire escape mask x1 complete in all respects as per specifications, drawings and as approved by the Consultant.				
8.1	Personal Protective Equipment (PPE)	Each	8		
<u>Miscellaneous:</u>					
9	Supply, installation, inspection and completion of Passive Fire Protection works at locations indicated on drawings and in accordance with NFPA-101, NFPA-5000, other applicable standards and local authority requirements including but not limited to Anti Slip walk tape, Anti Shatter sheet on glass, Fire Cement, Duct fire rated, protection, sealing of any openings with fire resistant material with approved sealants, shall be completed in all respects and as approved by the consultant.				
9.1	Passive Fire Protection works	Lot	1		
10	Providing and installation of Pipe Sleeves in masonry works , all the sleeves shall be of approved quality and make and shall be installed as recommended by the manufacturer, the sleeves shall be of adequate size and material with proper sealant and shall be placed where advised for required for Fire Fighting pipes complete in all respects as per specification and drawings and as approved by the Consultant.				

10.1	Sleeves	Lot	1		
11	Providing and installation of Escutcheon Plates where all pipes passing through wall floor or slab, the construction of Escutcheon plates shall be as per specifications and shall be installed as recommended by the manufacturer, the Escutcheon plates shall be of adequate size and material with proper installation and shall be placed where advised for required for Fire Fighting complete in all respects as per specification and drawings and as approved by the Consultant.				
11.1	Escutcheon Plates	Lot	1		
12	One Year Maintenance	Job	1		
13	Supplementary works				
13.1	Shop Drawings & As Built Drawings	Lot	1		
13.2	Operation & Maintenance Manuals	Lot	1		
				Total	

WAREHOUSE-B AMBIENT (Internal Fire Fighting Works Sprinklers & Associated Piping)					
Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
1	Providing, fixing, testing and commissioning of recessed Pendent Sprinklers or as required with slip on style escutcheons plates (where required) of color and design, the sprinkler shall be ESFR (Early Suppression Fast Response) type having 3/4 inch NPT threads with approved K factor (16.8) and temperature rating with chrome finish & UL/ULC Listed for approved manufacturer, complete in all respects as per drawings, specifications and as approved by the Consultant.				
1.1	Fire Sprinklers	Each	747		
2	Providing, fixing, testing and commissioning of recessed Pendent/Upright Sprinklers or as required with slip on style escutcheons plates (where required) of color and design, the sprinkler shall be quick response type having 1/2 inch NPT threads with approved K factor (5.6) and temperature rating with chrome finish & UL/ULC Listed for approved manufacturer, complete in all respects as per drawings, specifications and as approved by the Consultant.				
2.1	Fire Sprinklers (Inside Office Space)	Each	33		

3	Supply, Installation, testing and commissioning of Black seamless M.S schedule 40 Piping with all type fittings and specials such as tees, sockets, elbows, bends, unions, reducers etc, and painting with primer and final finish coats, and fixing with approved quality pipe hanging and support system hot dipped galvanized and specially designed for fire fighting installations, complete in all respects as per drawings, specifications and as approved by the Consultant.				
3.1	1" diameter	Rft	245		
3.2	1-1/4" diameter	Rft	2,670		
3.3	1-1/2" diameter	Rft	3,116		
3.4	2" diameter	Rft	3,266		
3.5	2-1/2" diameter	Rft	52		
3.6	3" diameter	Rft	363		
3.7	4" diameter	Rft	35		
3.8	6" diameter	Rft	1,463		
4	Supply and installation of Water Flow Devices of PN-20 pressure rating, these shall be complete with flanges, nut bolts, gaskets, union etc complete in all respects as approved by the consultant.				
4.1	Gate Valve Rising Stem				
4.1.1	2" diameter	No.	4		
4.1.2	6" diameter	No.	2		
4.2	Non Return Valve				
4.2.1	6" diameter	No.	2		
4.3	Pressure Reducing Valve				
4.3.1	6" diameter	No.	2		
4.4	Flow Switch	Each	2		
4.5	Pressure Gauge	Each	2		
4.6	Sight Glass	Each	2		
	<u>Miscellaneous:</u>				

5	Providing and installation of Pipe Sleeves in masonry works , all the sleeves shall be of approved quality and make and shall be installed as recommended by the manufacturer, the sleeves shall be of adequate size and material with proper sealant and shall be placed where advised for required for Fire Fighting pipes complete in all respects as per specification and drawings and as approved by the Consultant.				
5.1	Sleeves	Lot	1		
6	Providing and installation of Escutcheon Plates where all pipes passing through wall floor or slab, the construction of Escutcheon plates shall be as per specifications and shall be installed as recommended by the manufacturer, the Escutcheon plates shall be of adequate size and material with proper installation and shall be placed where advised for required for Fire Fighting complete in all respects as per specification and drawings and as approved by the Consultant.				
6.1	Escutcheon Plates	Lot	1		
7	One Year Maintenance	Job	1		
Total					-

WAREHOUSE-B COLD STORAGE (Internal Fire Fighting Works Excluding Sprinklers & Associated Piping)

Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
1	Supply and Installation of Fire Extinguishers of specified type and capacities with wall mounting brackets etc as indicated in drawings. the fire extinguishers shall be installed as specified in NFPA-10 complete in all respects as per specifications drawings and as approved by the Consultant.				
1.1	5kg CO2 Fire Extinguisher	No.	4		
1.2	6kg DCP Fire Extinguisher	No.	4		
2	Supply, Installation, testing and commissioning of wall mounted Dual Fire Hose Cabinet with double vertical cabinet as per NFPA-14, Upper compartment consisting of 1" diameter swinging arm type 100 feet long fire hose reel with Pressure Reducing Valve and lower compartment consisting of 2.5" x 100 ft polyester collapsible fire hose and with 2.5" diameter landing valve with quick coupling, the cabinet shall be made with mild steel 16 gauge sheet with approved colour and polyester powder coating finish, and with valve and nozzle and accessories, complete in all respects as per specifications, drawings and as approved by the Consultant.				
2.1	Dual Compartment Fire Hose Cabinets	Nos.	4		

4	Supply, Installation, testing and commissioning of Black seamless M.S schedule 40 Piping with all type fittings and specials such as tees, sockets, elbows, bends, unions, reducers etc, and painting with primer and final finish coats, and fixing with approved quality pipe hanging and support system hot dipped galvanized and specially designed for fire fighting installations, complete in all respects as per drawings, specifications and as approved by the Consultant.				
4.1	2-1/2" diameter	Rft	65		
5	Supply and installation of Water Flow Devices of PN-20 pressure rating, these shall be complete with flanges, nut bolts, gaskets, union etc complete in all respects as approved by the consultant.				
5.1	Pressure Reducing Valve with Fire Hose Cabinets	Nos.	4		
6	Supply and Installation of 50 KG DCP Trolley Mounted Fire Extinguisher with portable trolley of specified type and capacities, the fire extinguishers shall be installed as specified in NFPA-10 complete in all respects as per specifications drawings and as approved by the Consultant.				
6.1	50 KG DCP Trolley Mounted Fire Extinguishers	Nos.	3		
7	Providing and installation of Personal Protective Equipment (PPE) , this includes safety cabinet, front Glass door with locking arrangements, fire blanket, safety helmets (minimum two), safety leather gloves (minimum two), Safety goggles Dark/Clear x2, Safety Shoes x2 pair, Fire Fighting gum shoes x1, Safety vest reflecting jacket (minimum two), Fireman Hammer x1, Fireman Axe x1, Half face mask x1, Portable rechargeable search light x1, fire escape mask x1 complete in all respects as per specifications, drawings and as approved by the Consultant.				
7.1	Personal Protective Equipment (PPE)	Each	2		
<u>Miscellaneous:</u>					

8	Supply, installation, inspection and completion of Passive Fire Protection works at locations indicated on drawings and in accordance with NFPA-101, NFPA-5000, other applicable standards and local authority requirements including but not limited to Anti Slip walk tape, Anti Shatter sheet on glass, Fire Cement, Duct fire rated, protection, sealing of any openings with fire resistant material with approved sealants, shall be completed in all respects and as approved by the consultant.				
8.1	Passive Fire Protection works	Lot	1		
9	Providing and installation of Pipe Sleeves in masonry works , all the sleeves shall be of approved quality and make and shall be installed as recommended by the manufacturer, the sleeves shall be of adequate size and material with proper sealant and shall be placed where advised for required for Fire Fighting pipes complete in all respects as per specification and drawings and as approved by the Consultant.				
9.1	Sleeves	Lot	1		
10	Providing and installation of Escutcheon Plates where all pipes passing through wall floor or slab, the construction of Escutcheon plates shall be as per specifications and shall be installed as recommended by the manufacturer, the Escutcheon plates shall be of adequate size and material with proper installation and shall be placed where advised for required for Fire Fighting complete in all respects as per specification and drawings and as approved by the Consultant.				
10.1	Escutcheon Plates	Lot	1		
11	One Year Maintenance	Job	1		
12	Supplementary works				
12.1	Shop Drawings & As Built Drawings	Lot	1		
12.2	Operation & Maintenance Manuals	Lot	1		
Total					-

WAREHOUSE-B COLD STORAGE (Internal Fire Fighting Works Sprinklers & Associated Piping)					
Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
1	Providing, fixing, testing and commissioning of recessed Pendent Sprinklers or as required with slip on style escutcheons plates (where required) of color and design, the sprinkler shall be ESFR (Early Suppression Fast Response) type having 3/4 inch NPT threads with approved K factor (16.8) and temperature rating with chrome finish & UL/ULC Listed for approved manufacturer, complete in all respects as per drawings, specifications and as approved by the Consultant.				
1.1	Fire Sprinklers	Each	326		
3	Supply, Installation, testing and commissioning of Black seamless M.S schedule 40 Piping with all type fittings and specials such as tees, sockets, elbows, bends, unions, reducers etc, and painting with primer and final finish coats, and fixing with approved quality pipe hanging and support system hot dipped galvanized and specially designed for fire fighting installations, complete in all respects as per drawings, specifications and as approved by the Consultant.				
3.1	1-1/4" diameter	Rft	1,320		
3.2	1-1/2" diameter	Rft	725		
3.3	2" diameter	Rft	1,380		
3.4	2-1/2" diameter	Rft	540		

3.5	3" diameter	Rft	28		
3.6	4" diameter	Rft	72		
3.7	6" diameter	Rft	835		
4	Supply and installation of Water Flow Devices of PN-20 pressure rating, these shall be complete with flanges, nut bolts, gaskets, union etc complete in all respects as approved by the consultant.				
4.1	Gate Valve Rising Stem				
4.1.3	6" diameter	No.	3		
5	Supply, Installation, Testing, Commissioning, Adjusting and Balancing of Dry Pipe Sprinkler system for Cold Storages, shall be operated with "Double Interlock Pre-Action Valve system". This system shall work on 02 inputs, one from sprinklers (Pressure Drop due to rupturing of bulb) and second from Fire Alarm Control Panel (Digital Signal) to operate the "Deluge Valve Assembly". This "Deluge Valve Assembly" system shall complete with 02 sources as Air and Nitrogen Gas Source, the size of air compressor and number of nitrogen cylinder and their size shall be according to the number of sprinklers and as approved by NFPA The System shall be complete in all respects having following but not limited to it Compete compressed air system with air compressor and all ancillaries and accessories Nitrogen Cylinders battery with pressure control system Deluge Valve Assembly with all necessary fittings ancillaries and accessories This entire system shall be factory manufactured with all necessary approval of UL and FM approvals The Contractor shall completely responsible for compatibility of system, supply, installation, testing, commissioning and balancing with all parts and components, this also includes all related electric and controls works and wiring, piping etc etc. to the entire satisfaction of Consultant. The contractor shall take the formal approval of complete system in black and white by submitting the technical submittals, approvals and certification of entire system prior to give the purchase order The sizing of system shall be according to NFPA guidelines, this job also includes supply and installation of all associated works, Compressed air piping electrification connection with FACP				

	and other components complete in all respects to the entire satisfaction of consultant. This also includes the supply and installation of all ancillary works suppliers and materials termination connecting to make job complete 100% jobs as indicated in the drawing. It is to be noted that no extra payment shall be made to the contractor for any ancillary or associated works to make system 100% functional as recommended by NFPA.				
5.1	Double Interlock Pre-action Valve system	Lot	1		
<u>Miscellaneous:</u>					
6	Providing and installation of Pipe Sleeves in masonry works , all the sleeves shall be of approved quality and make and shall be installed as recommended by the manufacturer, the sleeves shall be of adequate size and material with proper sealant and shall be placed where advised for required for Fire Fighting pipes complete in all respects as per specification and drawings and as approved by the Consultant.				
6.1	Sleeves	Lot	1		
7	Providing and installation of Escutcheon Plates where all pipes passing through wall floor or slab, the construction of Escutcheon plates shall be as per specifications and shall be installed as recommended by the manufacturer, the Escutcheon plates shall be of adequate size and material with proper installation and shall be placed where advised for required for Fire Fighting complete in all respects as per specification and drawings and as approved by the Consultant.				
7.1	Escutcheon Plates	Lot	1		
8	One Year Maintenance	Job	1		
Total					-

WAREHOUSE-C (Internal Fire Fighting Works Excluding Sprinklers & Associated Piping)					
Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
1	Supply and Installation of Fire Extinguishers of specified type and capacities with wall mounting brackets etc as indicated in drawings. the fire extinguishers shall be installed as specified in NFPA-10 complete in all respects as per specifications drawings and as approved by the Consultant.				
1.1	03 Liters Wet Chemical Fire Extinguisher	No.	2		
1.2	5kg CO2 Fire Extinguisher	No.	37		
1.3	6kg DCP Fire Extinguisher	No.	37		
1.4	6kg Ceiling Mounted Automatic Fire Extinguisher (Halotron)	No.	4		
2	Supply, Installation, testing and commissioning of wall mounted Dual Fire Hose Cabinet with double vertical cabinet as per NFPA-14, Upper compartment consisting of 1" diameter swinging arm type 100 feet long fire hose reel with Pressure Reducing Valve and lower compartment consisting of 2.5" x 100 ft polyester collapsible fire hose and with 2.5" diameter landing valve with quick coupling, the cabinet shall be made with mild steel 16 gauge sheet with approved colour and polyester powder coating finish, and with valve and nozzle and accessories, complete in all respects as per specifications, drawings and as approved by the Consultant.				

2.1	Dual Compartment Fire Hose Cabinets	Nos.	8		
3	Supply, Installation, testing and commissioning of wall mounted Fire Hose Reel with Cabinet (Class-II) as per NFPA-14, Fire Hose Reel shall be of 1" diameter swinging arm type 100 feet long fire hose reel with Pressure Reducing Valve, the cabinet shall be made with mild steel 16 gauge sheet with approved colour and polyester powder coating finish with valve and nozzle and accessories, complete in all respects as per specifications, drawings and as approved by the Consultant.				
3.1	Fire Hose Reel with Cabinet	Nos.	1		
4	Supply, Installation, testing and commissioning of Black seamless M.S schedule 40 Piping with all type fittings and specials such as tees, sockets, elbows, bends, unions, reducers etc, and painting with primer and final finish coats, and fixing with approved quality pipe hanging and support system hot dipped galvanized and specially designed for fire fighting installations, complete in all respects as per drawings, specifications and as approved by the Consultant.				
4.1	1-1/2" diameter	Rft	195		
4.2	2-1/2" diameter	Rft	105		
5	Supply and installation of Water Flow Devices of PN-20 pressure rating, these shall be complete with flanges, nut bolts, gaskets, union etc complete in all respects as approved by the consultant.				
5.1	Pressure Reducing Valve with Fire Hose Cabinets	No.	8		
6	Supply and Installation of 50 KG DCP Trolley Mounted Fire Extinguisher with portable trolley of specified type and capacities, the fire extinguishers shall be installed as specified in NFPA-10 complete in all respects as per specifications drawings and as approved by the Consultant.				
6.1	50 KG DCP Trolley Mounted Fire Extinguishers	Nos.	10		

7	Providing and installation of Fire Blankets conforming ASTM F 1989-05 standard as indicated in drawings with a protective cover with clear indication that how to extract and use it, complete in all respects as per specification and drawings and as approved by the Consultant.				
7.1	Fire Blankets	Each	2		
8	Providing and installation of Personal Protective Equipment (PPE) , this includes safety cabinet, front Glass door with locking arrangements, fire blanket, safety helmets (minimum two), safety leather gloves (minimum two), Safety goggles Dark/Clear x2, Safety Shoes x2 pair, Fire Fighting gum shoes x1, Safety vest reflecting jacket (minimum two), Fireman Hammer x1, Fireman Axe x1, Half face mask x1, Portable rechargeable search light x1, fire escape mask x1 complete in all respects as per specifications, drawings and as approved by the Consultant.				
8.1	Personal Protective Equipment (PPE)	Each	10		
<u>Miscellaneous:</u>					
9	Supply, installation, inspection and completion of Passive Fire Protection works at locations indicated on drawings and in accordance with NFPA-101, NFPA-5000, other applicable standards and local authority requirements including but not limited to Anti Slip walk tape, Anti Shatter sheet on glass, Fire Cement, Duct fire rated, protection, sealing of any openings with fire resistant material with approved sealants, shall be completed in all respects and as approved by the consultant.				
9.1	Passive Fire Protection works	Lot	1		
10	Providing and installation of Pipe Sleeves in masonry works , all the sleeves shall be of approved quality and make and shall be installed as recommended by the manufacturer, the sleeves shall be of adequate size and material with proper sealant and shall be placed where advised for required for Fire Fighting pipes complete in all respects as per specification and drawings and as approved by the Consultant.				

10.1	Sleeves	Lot	1		
11	Providing and installation of Escutcheon Plates where all pipes passing through wall floor or slab, the construction of Escutcheon plates shall be as per specifications and shall be installed as recommended by the manufacturer, the Escutcheon plates shall be of adequate size and material with proper installation and shall be placed where advised for required for Fire Fighting complete in all respects as per specification and drawings and as approved by the Consultant.				
11.1	Escutcheon Plates	Lot	1		
12	One Year Maintenance	Job	1		
13	Supplementary works				
13.1	Shop Drawings & As Built Drawings	Lot	1		
13.2	Operation & Maintenance Manuals	Lot	1		
Total					-

WAREHOUSE-C (Internal Fire Fighting Works Sprinklers & Associated Piping)					
Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
1	Providing, fixing, testing and commissioning of recessed Pendent Sprinklers or as required with slip on style escutcheons plates (where required) of color and design, the sprinkler shall be ESFR (Early Suppression Fast Response) type having 3/4 inch NPT threads with approved K factor (16.8) and temperature rating with chrome finish & UL/ULC Listed for approved manufacturer, complete in all respects as per drawings, specifications and as approved by the Consultant.				
1.1	Fire Sprinklers	Each	1,114		
2	Providing, fixing, testing and commissioning of recessed Pendent/Upright Sprinklers or as required with slip on style escutcheons plates (where required) of color and design, the sprinkler shall be quick response type having 1/2 inch NPT threads with approved K factor (5.6) and temperature rating with chrome finish & UL/ULC Listed for approved manufacturer, complete in all respects as per drawings, specifications and as approved by the Consultant.				
2.1	Fire Sprinklers (Inside Office Space)	Each	35		

3	Supply, Installation, testing and commissioning of Black seamless M.S schedule 40 Piping with all type fittings and specials such as tees, sockets, elbows, bends, unions, reducers etc, and painting with primer and final finish coats, and fixing with approved quality pipe hanging and support system hot dipped galvanized and specially designed for fire fighting installations, complete in all respects as per drawings, specifications and as approved by the Consultant.				
3.1	1" diameter	Rft	265		
3.2	1-1/4" diameter	Rft	4,657		
3.3	1-1/2" diameter	Rft	4,220		
3.4	2" diameter	Rft	5,129		
3.5	2-1/2" diameter	Rft	125		
3.6	3" diameter	Rft	104		
3.7	4" diameter	Rft	51		
3.8	6" diameter	Rft	2,258		
4	Supply and installation of Water Flow Devices of PN-20 pressure rating, these shall be complete with flanges, nut bolts, gaskets, union etc complete in all respects as approved by the consultant.				
4.1	Gate Valve Rising Stem				
4.1.1	2" diameter	No.	6		
4.1.2	6" diameter	No.	3		
4.2	Non Return Valve				
4.2.1	6" diameter	No.	3		
4.3	Pressure Reducing Valve				
4.3.1	6" diameter	No.	3		
4.4	Flow Switch	Each	3		
4.5	Pressure Gauge	Each	3		
4.6	Sight Glass	Each	3		
	<u>Miscellaneous:</u>				

5	Providing and installation of Pipe Sleeves in masonry works , all the sleeves shall be of approved quality and make and shall be installed as recommended by the manufacturer, the sleeves shall be of adequate size and material with proper sealant and shall be placed where advised for required for Fire Fighting pipes complete in all respects as per specification and drawings and as approved by the Consultant.				
5.1	Sleeves	Lot	1		
6	Providing and installation of Escutcheon Plates where all pipes passing through wall floor or slab, the construction of Escutcheon plates shall be as per specifications and shall be installed as recommended by the manufacturer, the Escutcheon plates shall be of adequate size and material with proper installation and shall be placed where advised for required for Fire Fighting complete in all respects as per specification and drawings and as approved by the Consultant.				
6.1	Escutcheon Plates	Lot	1		
7	One Year Maintenance	Job	1		
Total					-

Residence Block					
Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
1	Supply and Installation of Fire Extinguishers of specified type and capacities with wall mounting brackets etc as indicated in drawings. the fire extinguishers shall be installed as specified in NFPA-10 complete in all respects as per specifications drawings and as approved by the Consultant.				
1.1	03 Liters Wet Chemical Fire Extinguisher	No.	2		
1.2	5kg CO2 Fire Extinguisher	No.	14		
1.3	6kg DCP Fire Extinguisher	No.	14		
2	Supply, Installation, testing and commissioning of wall mounted Fire Hose Reel with Cabinet (Class-II) as per NFPA-14, Fire Hose Reel shall be of 1" diameter swinging arm type 100 feet long fire hose reel with Pressure Reducing Valve, the cabinet shall be made with mild steel 16 gauge sheet with approved colour and polyester powder coating finish with valve and nozzle and accessories, complete in all respects as per specifications, drawings and as approved by the Consultant.				
2.1	Fire Hose Reel with Cabinet	Nos.	2		

3	Providing, fixing, testing and commissioning of recessed Pendent/Upright Sprinklers or as required with slip on style escutcheons plates (where required) of color and design, the sprinkler shall be quick response type having 1/2 inch NPT threads with approved K factor (5.6) and temperature rating with chrome finish & UL/ULC Listed for approved manufacturer, complete in all respects as per drawings, specifications and as approved by the Consultant.				
3.1	Fire Sprinklers	Each	78		
4	Supply, Installation, testing and commissioning of Black seamless M.S schedule 40 Piping with all type fittings and specials such as tees, sockets, elbows, bends, unions, reducers etc, and painting with primer and final finish coats, and fixing with approved quality pipe hanging and support system hot dipped galvanized and specially designed for fire fighting installations, complete in all respects as per drawings, specifications and as approved by the Consultant.				
4.1	1" diameter	Rft	395		
4.2	1-1/4" diameter	Rft	95		
4.3	1-1/2" diameter	Rft	260		
4.4	2" diameter	Rft	85		
4.5	2-1/2" diameter	Rft	105		
4.6	3" diameter	Rft	52		
4.7	4" diameter	Rft	25		
5	Supply and installation of Water Flow Devices of PN-20 pressure rating, these shall be complete with flanges, nut bolts, gaskets, union etc complete in all respects as approved by the consultant.				
5.1	Gate Valve Rising Stem				
5.1.1	2" diameter	No.	2		
5.1.2	4" diameter	No.	1		
5.2	Non Return Valve				
5.2.1	4" diameter	No.	1		
5.3	Pressure Reducing Valve				

5.3.1	4" diameter	No.	1		
5.4	Flow Switch	Each	1		
5.5	Pressure Gauge	Each	1		
5.6	Sight Glass	Each	1		
5.7	Pressure Reducing Valve with Fire Hose Reel Cabinet	No.	1		
6	Providing and installation of Fire Blankets conforming ASTM F 1989-05 standard as indicated in drawings with a protective cover with clear indication that how to extract and use it, complete in all respects as per specification and drawings and as approved by the Consultant.				
6.1	Fire Blankets	Each	1		
7	Providing and installation of Personal Protective Equipment (PPE) , this includes safety cabinet, front Glass door with locking arrangements, fire blanket, safety helmets (minimum two), safety leather gloves (minimum two), Safety goggles Dark/Clear x2, Safety Shoes x2 pair, Fire Fighting gum shoes x1, Safety west reflecting jacket (minimum two), Fireman Hammer x1, Fireman Axe x1, Half face mask x1, Portable rechargeable search light x1, fire escape mask x1 complete in all respects as per specifications, drawings and as approved by the Consultant.				
7.1	Personal Protective Equipment (PPE)	Each	2		
<u>Miscellaneous:</u>					
8	Supply, installation, inspection and completion of Passive Fire Protection works at locations indicated on drawings and in accordance with NFPA-101, NFPA-5000, other applicable standards and local authority requirements including but not limited to Anti Slip walk tape, Anti Shatter sheet on glass, Fire Cement, Duct fire rated, protection, sealing of any openings with fire resistant material with approved sealants, shall be completed in all respects and as approved by the consultant.				

8.1	Passive Fire Protection works	Lot	1		
9	Providing and installation of Pipe Sleeves in masonry works , all the sleeves shall be of approved quality and make and shall be installed as recommended by the manufacturer, the sleeves shall be of adequate size and material with proper sealant and shall be placed where advised for required for Fire Fighting pipes complete in all respects as per specification and drawings and as approved by the Consultant.				
9.1	Sleeves	Lot	1		
10	Providing and installation of Escutcheon Plates where all pipes passing through wall floor or slab, the construction of Escutcheon plates shall be as per specifications and shall be installed as recommended by the manufacturer, the Escutcheon plates shall be of adequate size and material with proper installation and shall be placed where advised for required for Fire Fighting complete in all respects as per specification and drawings and as approved by the Consultant.				
10.1	Escutcheon Plates	Lot	1		
11	One Year Maintenance	Job	1		
12	Supplementary works				
12.1	Shop Drawings & As Built Drawings	Lot	1		
12.2	Operation & Maintenance Manuals	Lot	1		
Total					-

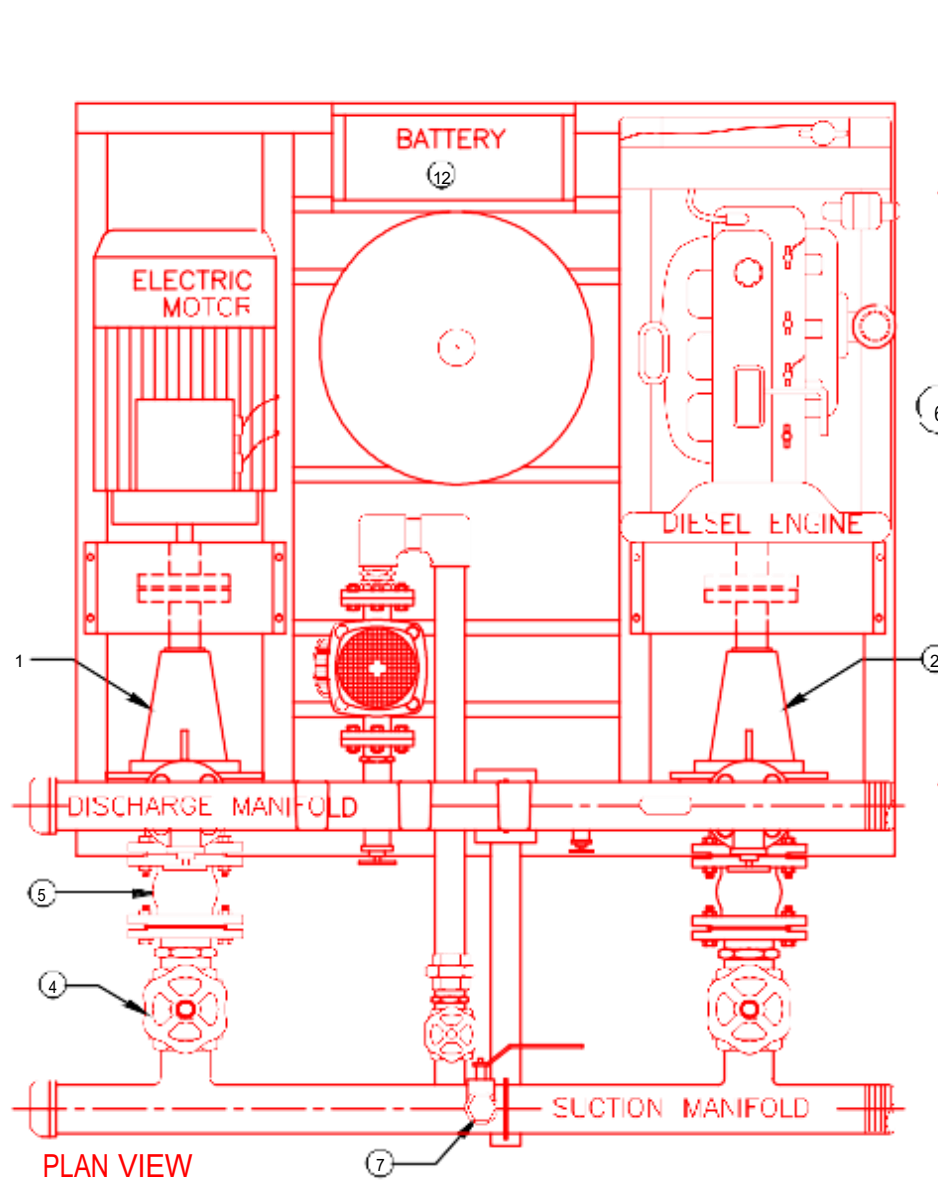
Fire Fighting External Works					
Item no.	Item Description	Unit	Quantity	Unit Rate (PKR)	Amount (PKR)
	This BOQ shall be read in conjunction with Drawings, Technical Specifications and Conditions of the Contract and all under mentioned works shall be completed, tested and commissioned in all respects as per Tender Documents and as per instructions of the Consultant. The quantities given in this BOQ are not the exact quantities. If there any discrepancies found in tender documents, it must be brought to Consultant's knowledge before quoting the prices. Supply, installation, Testing and commissioning of the following items /Equipment of work, including all material and for proper completion of each item as per specifications shall be as per instructions and as directed by the Engineer.				
	Fire Fighting:				
1	Supply, Installation, testing, commissioning, adjusting and balancing of Fire Fighting Pumping set (UL Listed) , fire pump set shall be including one main electric motor driven pump, one diesel engine driven pump and one jockey pump in accordance with NFPA-20, and shall deliver 2000 US Gallons capacity at 12 bar discharge pressure, the complete pumping set shall be skid mounted with operating panel, fuel tank all controls as described in NFPA-20, this also includes the fire rated electric power supply, earthing etc to the pumping set from main panel as recommended by NFPA, preparation of foundation, electric and water supply connections, the pumping set shall be installed as recommended by NFPA, UL Listed and shall be complete in all respects as per specifications, drawings and as approved by the Consultant.				
1.1	Fire Pump Set (UL Listed) 2000 US GPM, 12 bar Pressure	Each	1		

	Supply, Installation, testing and commissioning of wall mounted 2-way Breeching Inlet with cabinet & built in non return valve, the cabinet shall have 02 number water connection for 2-				
2	1/2 coupling with cover and 4 inch diameter outlet flange, the cabinet shall be made of mild steel with cover having glass and stainless steel connections, complete in all respects as per specifications, drawings and as approved by the Consultant.				
2.1	2-way Breeching Inlet and Cabinet	Each	3		
3	Supply, Installation, testing and commissioning of Black seamless M.S schedule 40 Piping with all type fittings and specials such as tees, sockets, elbows, bends, unions, reducers etc, and painting with primer and final finish coats, and fixing with approved quality pipe hanging and support system hot dipped galvanized and specially designed for fire fighting installations, complete in all respects as per drawings, specifications and as approved by the Consultant.				
3.1	1-1/2" diameter	Rft	105		
3.2	2-1/2" diameter	Rft	846		
3.4	4" diameter	Rft	1,962		
3.5	6" diameter	Rft	4,066		
3.6	8" diameter	Rft	983		
3.7	10" diameter	Rft	1,554		
4	Supply and installation of Water Flow Devices PN-20 for fire protection systems, complete in all respects in strict compliance with NFPA 13 and manufacturers UL/FM listing requirements. Each unit shall be provided with flanged connections complete with mating flanges, nuts, bolts, washers, gaskets, and required pipe fittings/adapters, ensuring leak free installation complete in all respects as approved by the consultant.				
4.1	Gate Valve Rising Stem				
4.1.1	10" diameter OS & Y	No.	1		
4.1.2	10" diameter Pressure Relief Valve with test Cone (Pump Discharge Line)	No.	1		
4.1.3	Flow Meter (Pump Discharge Line)	No.	1		

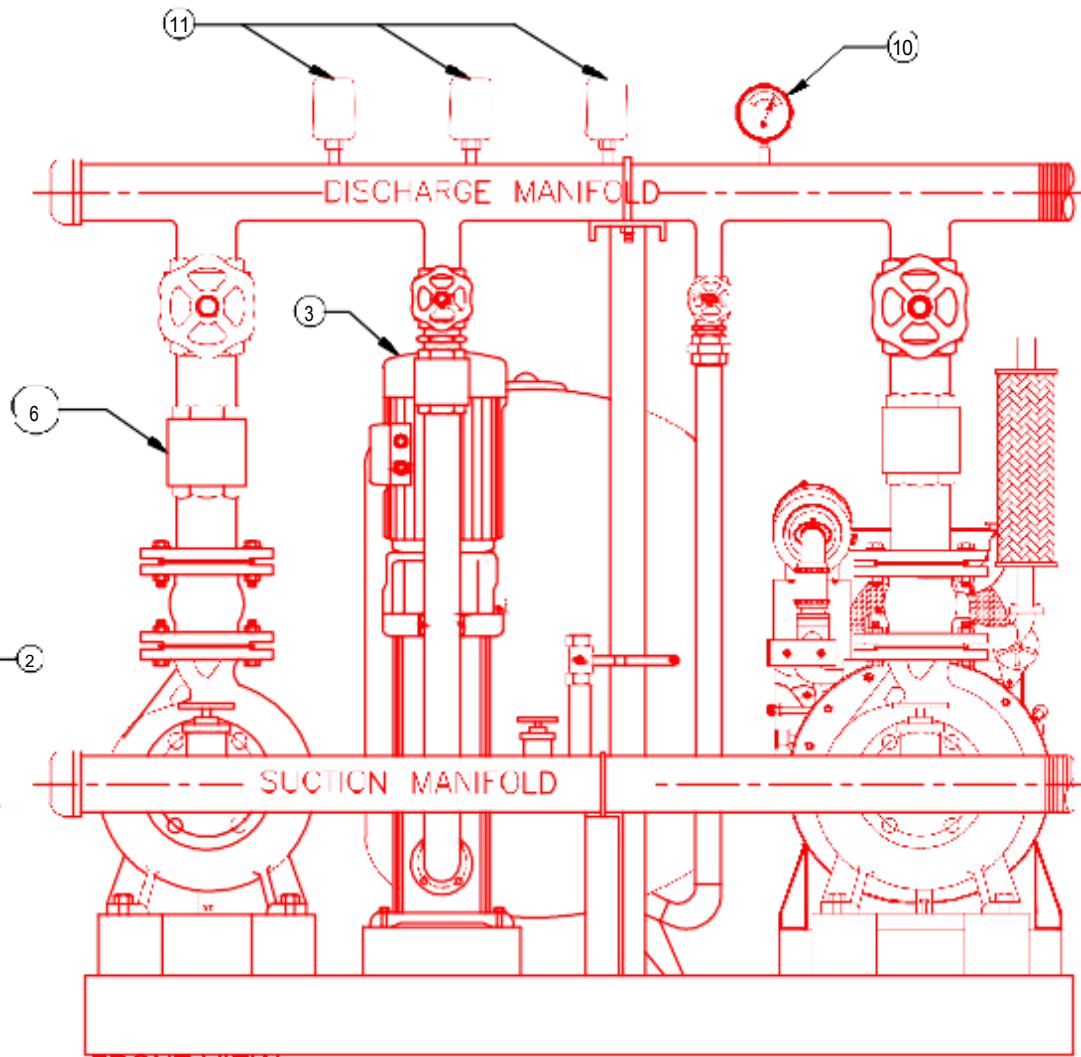
4.2	Anti-Vortex Plate (complete in all respects as approved by the Consultant)	Each	1		
5	Supply and Installation of 50 KG DCP Trolley Mounted Fire Extinguisher with portable trolley of specified type and capacities, the fire extinguishers shall be installed as specified in NFPA-10 complete in all respects as per specifications drawings and as approved by the Consultant.				
5.1	50 KG DCP Trolley Mounted Fire Extinguishers	Nos.	1		
6	Supply, Installation, testing and commissioning of Two Way Wet type (Wet Barrel) Pillar Fire Hydrants in accordance with NFPA-24, NFPA-291 & requirements of local authority having jurisdiction (AHJ), Pillar Hydrant must withstand system designed pressure & test pressure 50 psi (3.5 Bar) above maximum working pressure and deliver required fire flow at minimum 20 psi residual pressure as per NFPA 291, Hydrant bodies shall be factory tested at pressures not less than 300 psi. The Pillar hydrant shall be made of cast iron to BS 1561 and 2 × 65 mm (2½") hose outlet connections shall be of copper alloy BS 1982, Flanges shall be ANSI/AWWA compliant and shall be capable of working pressure as per NFPA and shall be provided with Control Valves with female outlet, pillar hydrant shall be red in colour (Class-C as per NFPA-291 having a rated capacity of less than 500 GPM (1900 L/min) and shall be installed with galvanized flange on reinforced concrete pedestal of adequate size complete in all respects as per drawings, specifications and as approved by the Consultant. Note. All related civil works shall be done by the fire fighting Contractor for the proper installation of Pillar Hydrant.				
6.1	Two Way Wet Type Pillar Fire Hydrants	Nos.	20		

7	Supply, Installation, testing and commissioning of Hydrant Cabinet (Fire Hoses, Nozzles and Cabinet) all these items shall be from same manufacturer, there shall be two fire hoses in hydrant cabinet, each fire hose shall be of 2- 1/2" x 100 feet capable to operate at system maximum pressure, shall be rubber lined woven jacket hose and shall be provided with aluminum coupling connections at both ends, and 2 x hose nozzles shall be made of copper alloy according to BS 1982 with 12-19 mm outlet diameter and 2- 1/2" male couple, both shall be placed in a cabinet. the cabinet shall be made of minimum 1.2 mm thick mild steel and shall be polyester powder coated in red colour and shall be mounted on stand or as per site conditions all inclusive, pin lug spanner wrench, 2 x 2.5" rubber gasket and all other accessories are included, complete in all respects as per specifications, drawings and as approved by the Consultant.				
7.1	Hydrant Cabinet (Fire Hoses, Nozzles and Cabinet)	Nos.	20		
8	Supply, Installation, Testing and Commissioning of Alarm Check Valve Assembly in compliance with NFPA and size as per discharge header of fire pump set of selected manufacturer recommendation, The assembly shall include UL Listed wet alarm check valve (flanged end connections) suitable for vertical installation and rated for the system working pressure, complete with factory fabricated trim set for constant/variable pressure service including all necessary piping, fittings, drains, test connections, and supervisory provisions. The assembly shall be provided with water motor alarm (hydraulic gong) complete with piping and accessories, chamber inlet and outlet connections, and all required drain/test arrangements for functional testing of the system in accordance with NFPA requirements. This also includes 2 X pressure gauges one installed upstream and one downstream of the alarm valve along with a main system isolation gate valve (flanged) for maintenance isolation. All internal and external trim piping shall be corrosion resistant, properly supported and installed as per manufacturers configuration without deviation. The contractor shall ensure provision of all auxiliary components including check valve internals, alarm line strainers, test and drain valves, pressure switches and all fittings necessary to ensure complete operational functionality, all equipment shall be painted red securely mounted in vertical				

	orientation on a stable support structure complete in all aspects and all accessories and as approved by consultant.				
8.1	Alarm Check Valve Assembly 10 Inch Diameter	Each	1		
Total					-



PLAN VIEW



FRONT VIEW

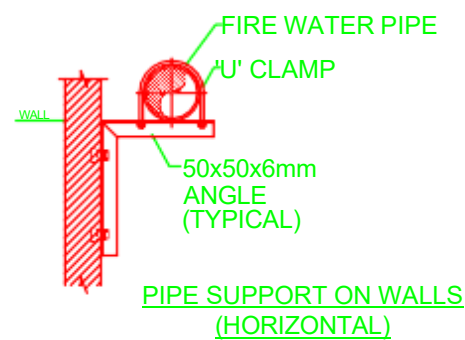
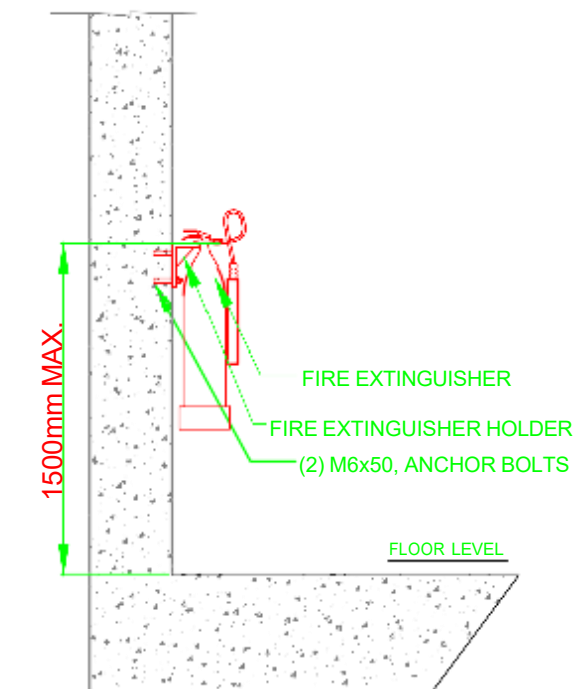
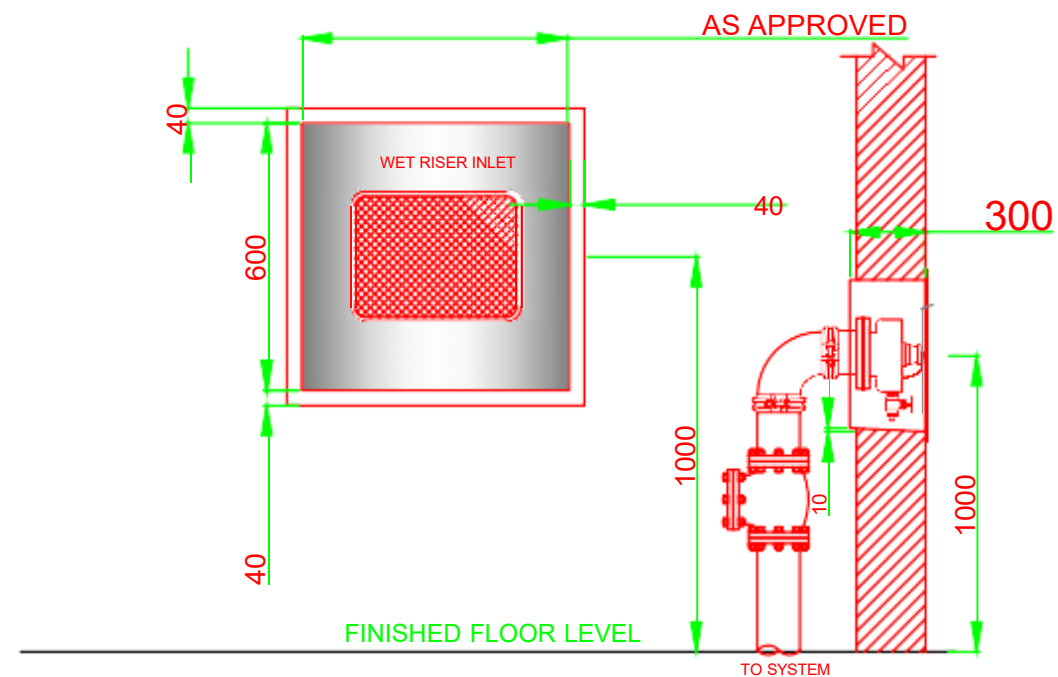
NOTES:

1. FIRE FIGHTING PUMP ROOM SHALL BE IN ACCORDANCE WITH NFPA-20.
2. FIRE FIGHTING PUMP ROOM EQUIPMENT SHALL BE INSTALLED ACCORDING TO APPROVED SUBMITTAL BY THE DESIGN CONSULTANT.
3. GENERATOR EXHAUST PIPE MUST BE DISCHARGED PROPERLY.
4. PUMP ROOM TEMPERATURE SHALL NOT BE LESS THEN 40°F AND NOT GREATER THEN 70°F.
PUMP ROOM DRAINAGE PIT WILL BE PROVIDED WITH SUBMERSIBLE PUMP (IF REQUIRED).
5. FIRE PUMP ROOM SHALL BE PROTECTED WITH AUTOMATIC FIRE EXTINGUISHER AND PROVIDE ADEQUATE LIGHT IN PUMP ROOM.

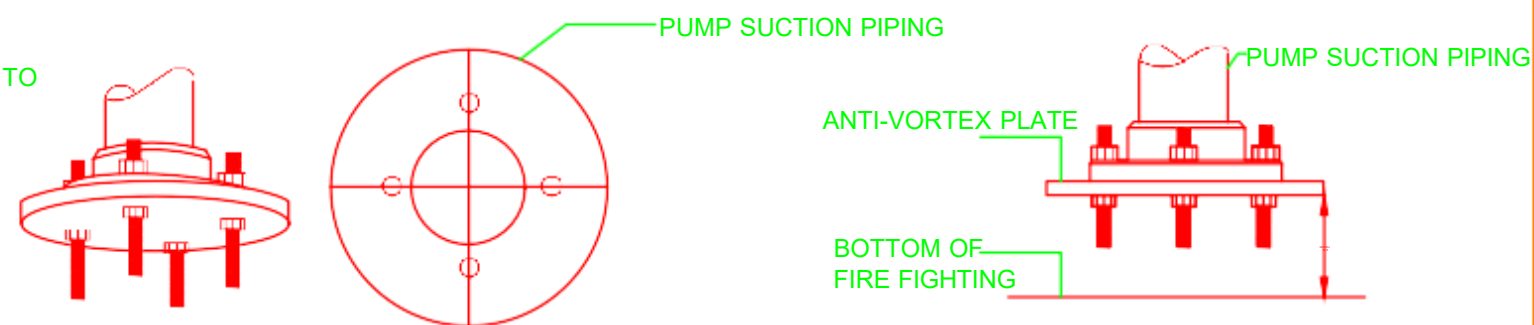
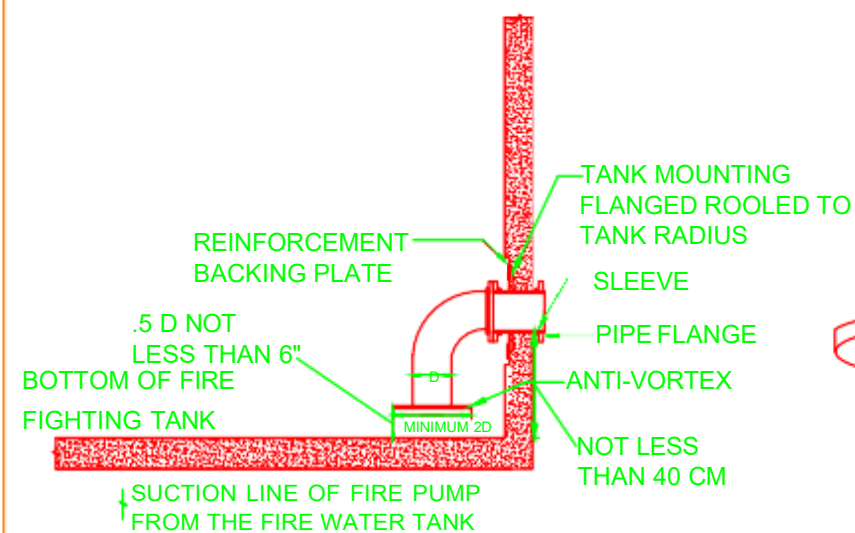
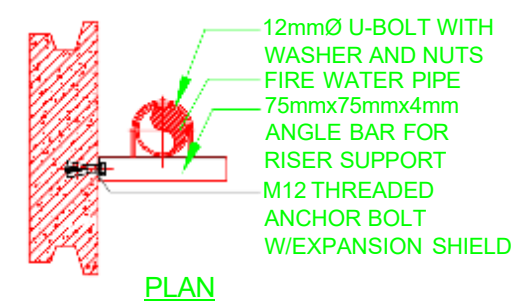
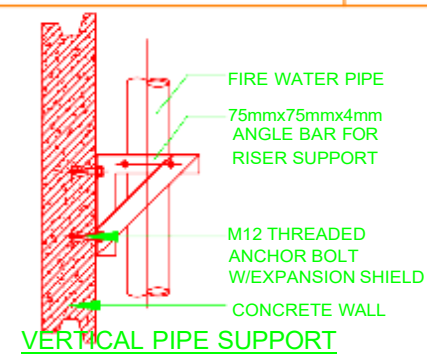
S.NL	DESCRIPTION	S.NL	DESCRIPTION
1.	ELECTRIC PUMP SET	7.	BALL VALVE
2.	DIESEL PUMP SET	8.	SUCTION MANIFOLD
3.	JOCKEY PUMP SET	9.	DELIVERY MANIFOLD
4.	GATE VALVE	10.	PRESSURE GAUGE
5.	FLEXIBLE COUPLING	11.	PRESSURE SWITCH
6.	NON RETURN VALVE	12.	BATTERY

FIRE FIGHTING PUMP SET
UL LISTED
1 X ELECTRIC MAIN PUMP
1 X DIESEL ENGINE
1 X JOCKEY PUMP
2000 US GPM
12 BAR

CAD BY:	DESIGNED BY:
SCALE: <u>BILAL TALIB</u>	DATE: <u>ENGR. RIZWAN AHMED</u>
DRAWING TITLE: <u>1/8" = 1'-0"</u> <u>15-SEP-2026</u>	
FIRE FIGHTING PUMP SET DETAIL	
PROJECT: NATIONAL LOGISTICS CORPORATION KNB LOGISTICS PARK PROJECT, KARACHI	
CLIENT: NATIONAL LOGISTICS CORPORATION	
ARCHITECTURAL CONSULTANT:	
MEP CONSULTANT:	
ENGR SIGN :	STAMP :
DRAWING NO.: <u>RCE/MEP/NLC/FF-02</u>	



PIPE SIZE		ROD mm
(INCHES)	(mm)	
1	(25)	(10)
1-1/4	(32)	(10)
1-1/2	(40)	(10)
2	(50)	(10)
2-1/2	(65)	(10)
3	(80)	(10)
4	(100)	(10)
6	(150)	(12)



CAD BY:	DESIGNED BY:
BILAL TALIB	ENGR. RIZWAN AHMED
SCALE:	DATE:
1/8" = 1'-0"	15-SEP-2026

PROJECT:

NATIONAL LOGISTICS CORPORATION
KNB LOGISTICS PARK PROJECT, KARACHI

CLIENT: NATIONAL LOGISTICS CORPORATION

ARCHITECTURAL CONSULTANT:

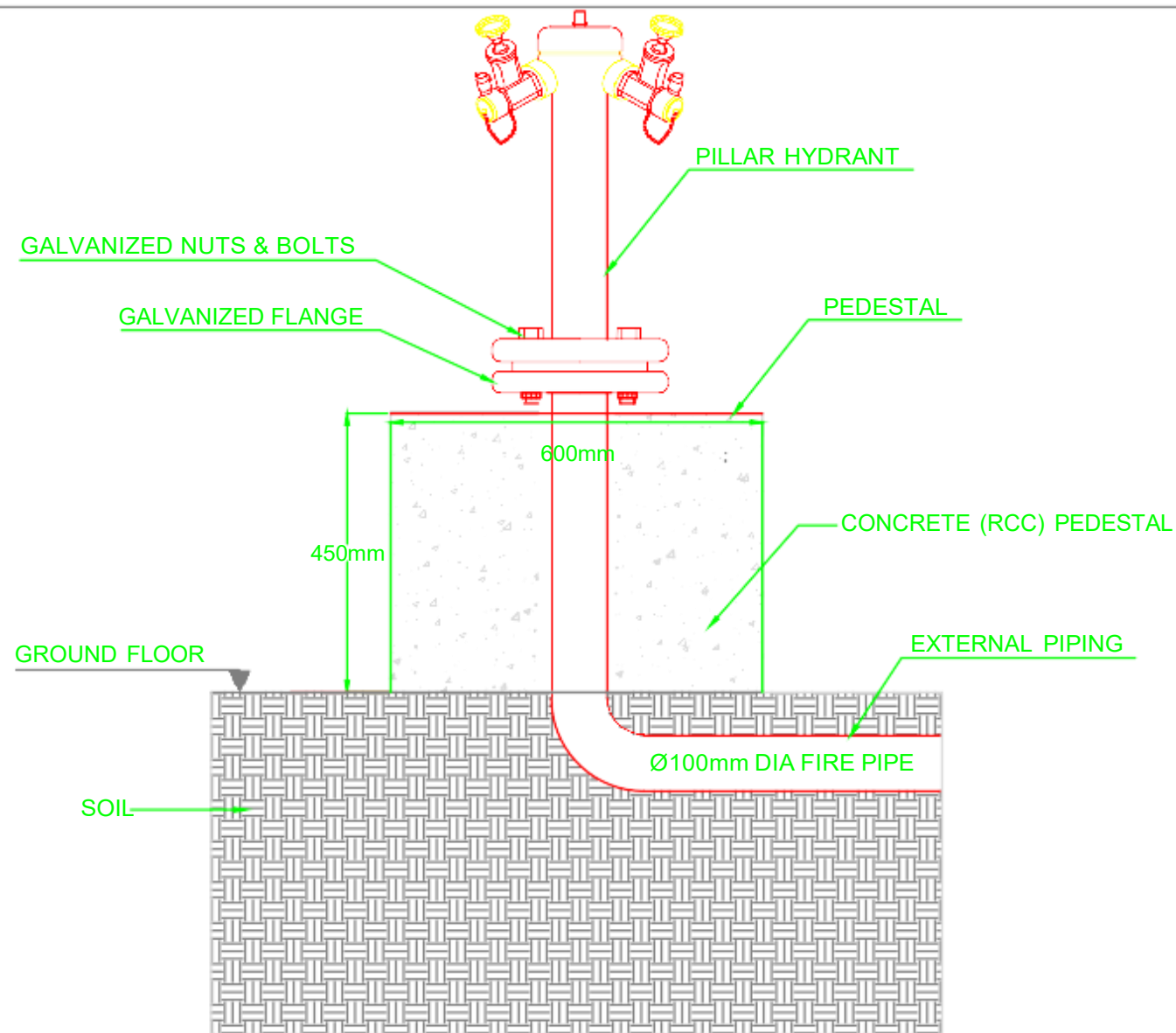
MEP CONSULTANT:

ENGR SIGN :

STAMP :

DRAWING NO.:

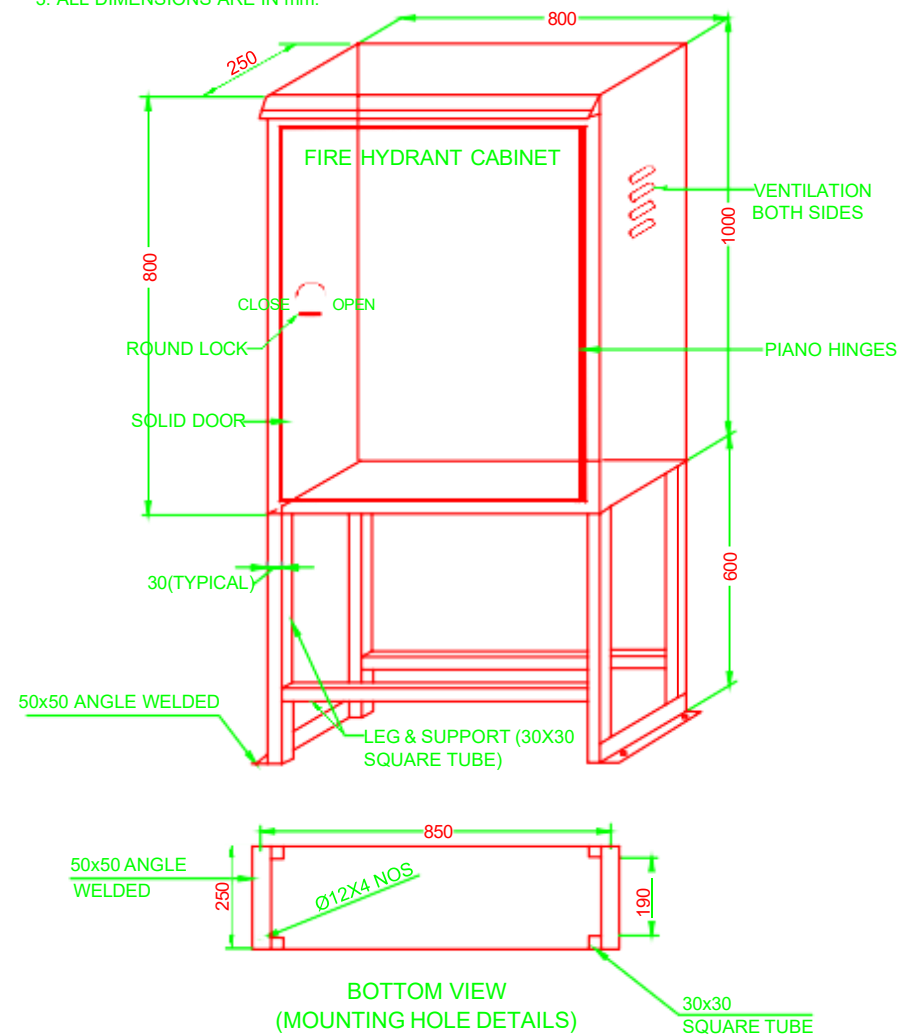
RCE/MEP/NLC/FF-03



(2-WAY PILLAR HYDRANT)

SPECIFICATION:

1. MATERIAL : 1.2mm MILD STEEL, RED POWDER COATED
2. DOOR : SOLID DOOR
3. ALL DIMENSIONS ARE IN mm.



FIRE HYDRANT CABINET SELF STANDING TYPE

CAD BY:	DESIGNED BY:
SCALE:	DATE:
DRAWING TITLE:	
PROJECT:	
CLIENT:	
ARCHITECTURAL CONSULTANT:	
MEP CONSULTANT:	
ENGR SIGN :	STAMP :