

**The Hashemite Kingdom of Jordan**  
**Jordan Oil Terminals Company**

**Request for Proposal**

**for**

**Supply, Install, Test and Commissioning of spare parts for  
CCTV system at ASTPP**

**No. 05/2025**

**Pursuing to Government Purchasing Regulation  
No. 08/ 2022**

**June 2025**

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## 1. Definitions:

JOTC	:	Jordan Oil Terminals Company
ASTPP	:	Amman Strategic Terminal for Petroleum Products
AOT	:	Aqaba Oil Terminal
HQ	:	JOTC Head Quarter
RFP	:	Request for Proposals

## 2. Introduction

Jordan Oil Terminals Company (JOTC) is the first independent, open-access storage provider in Jordan offering world-class storage, handling, transportation, aviation fueling and bunkering services for local and regional clients in the petroleum industry. JOTC offers an integrated set of oil storage and logistics services across Jordan. Additionally, JOTC designs, builds, operates, and maintains its storage terminals to meet and exceed regulatory and international standards.

JOTC's establishment came as part of the Government of Jordan's plan for restructuring and liberalizing the downstream petroleum sector. The plan followed the expiry of Jordan Petroleum Refinery's (JPRC) concession agreement in 2008, which had granted JPRC exclusive rights to refine crude oil, trade, and market petroleum products in Jordan.

Founded in 2015, JOTC is a private shareholding company, wholly owned by the Government of the Hashemite Kingdom of Jordan. JOTC serves two goals in Jordan's energy sector: to guarantee the security of oil supply of Jordan, and to promote competition in the downstream petroleum market through providing its services to customers according to the open-access principles on non-discriminatory basis.

To ensure our services are provided on a fair, reasonable, and non-discriminatory basis, we abstain from purchasing, selling, or trading petroleum products in the local market; hence, guaranteeing our status as an independent storage provider.

JOTC, which has its Headquarters (HQ) at Al Abdali-Boulevard, 36 Sulaiman Al Nabulsi St. "2nd " Floor, Amman, Jordan currently owns and operates three facilities/assets. These facilities are:

### a) Aqaba Oil Terminal (AOT):

AOT Terminal has been especially designed and built to become Jordan's gateway of petroleum products imports. This dynamic, automated terminal has been designed to make the storage and handling of Gasoline and LPG a smooth, hassle-free process. With its current capacity combined with Aqaba's South Terminal, Aqaba Oil & LPG Terminal will be able to meet the current and future demand of petroleum products imports to Jordan, the terminal has been built in accordance with the highest standards of quality and the best international practices. It has (6) floating roof tanks with size of 20,000 m<sup>3</sup> each, (3) LPG spheres with size of 3,760 m<sup>3</sup> each, and (15) loading bays.

[https://www.jotc.com.jo/DetailsPage/JOTIC\\_En/OurTerminalsEn.aspx?ID=33](https://www.jotc.com.jo/DetailsPage/JOTIC_En/OurTerminalsEn.aspx?ID=33)

### b) Amman Strategic Terminal for Petroleum Products (ASTPP):

ASTPP terminal is the biggest reservoir of petroleum products in the Kingdom. Covering Jordan's demand for (34) days, this terminal is Jordan's most strategic asset and will be primarily used for the storage of the country's strategic stock of petroleum products. The Amman Strategic Terminal has state-of-the-art infrastructure installed to meet world-class standards, making it one of the region's most-advanced terminals, this mega terminal total

storage capacity is 439,000 m3. It has (14) tanks for petroleum products ranging in size from 18,000 to 34,000 m3, (8) LPG spheres with size of 3,760 m3 each, and (18) loading bays.

[https://www.jotc.com.jo/DetailsPage/JOTIC\\_En/OurTerminalsEn.aspx?ID=32](https://www.jotc.com.jo/DetailsPage/JOTIC_En/OurTerminalsEn.aspx?ID=32)

**c) Heavy Fuel Oil Tanks in Aqaba Power Thermal Plant:**

JOTC owns five Heavy fuel oil tanks at Aqaba thermal power plant premises with a total capacity 210 thousand tons of HFO.

**JOTC** hereby request for proposals from specialized companies with proven documented experience in conducting similar assignments, to provide the following services (hereinafter called “**Services**”): (Supply, Install, Test and Commissioning of spare parts for CCTV system at ASTPP). More details on the **Services** are provided in the Terms of Reference (**Annex 1**).

This RFP is published in accordance with the **Government Purchasing Regulation No. 08/2022** in addition to the instructions, terms and conditions described herein. Participating Companies should have in-depth knowledge and experience, understanding of the key issues and best practices in relevance. Proposals should be comprehensive and detailed. JOTC is seeking capabilities which will ensure that the objectives of the assignment are achieved effectively.

### 3. Instructions to Bidders

#### **RFP NO. (No. 05/2025).**

- 1) The Client: - Jordan Oil Terminals Company (JOTC).
- 2) Applicable law: - the law of the Hashemite Kingdom of Jordan, all aspects of this RFP through and including any contracts that may result shall be governed by the laws of the Hashemite Kingdom of Jordan (HKJ).
- 3) Bidders must adhere strictly to all requirements of this RFP and Government purchasing Regulation No. 08/2022 and its instructions. No changes, substitutions, or other alterations to tender requirements stipulated in this Request for Proposal document will be accepted unless approved in writing by The Client.
- 4) The Bidder shall not submit an alternative proposal(s). Alternative proposals will be returned unread.
- 5) The Client reserves the right to cancel/withdraw this RFP without providing reasons and with no legal or financial implications to The Client
- 6) The Client takes no responsibility for the costs of preparing any proposals and will not reimburse any Bidder for the cost of preparing their proposal whether successful or otherwise.
- 7) Bidders are responsible for the accuracy of information submitted in their proposals. The Client reserves the right to request additional original copies of any relevant documents submitted for review and authentication prior to awarding the contract.
- 8) The Bidder may modify or withdraw its proposal after submission, provided that written notice of the modification or withdrawal is received by The Client prior to the deadline prescribed for proposal submission. A withdrawal notice may also be sent by email; the notice of withdrawal shall be addressed to The Client at the address in this RFP and bear the contract reference.
- 9) Bidders are not allowed to contact The Client or their employees on any matter relating to this proposal after the official closing date and till the contract is awarded. Any effort by any Bidders to influence The Client and its employees, in the proposal evaluation, proposal comparison, or contract award decision will result in rejection of the bidder's proposal.
- 10) The Client will reject a proposal for award if it determines that the bidder has engaged in corrupt or fraudulent practices in competing for the contract in question.
- 11) This Request for Proposals shall be considered as an integral part of the signed contract.

- 12) The Bidder is obliged to submit the tender bid bond (bank guarantee or certified bank cheque) with an amount 3% of Services total amount, (with the technical and financial proposals).
- 13) Upon the contract signature and the award notification, the selected Bidder is requested to submit a bank performance guarantee with an amount (10% of the contract amount) valid until the completion date of the assignment.
- 14) After completion of the assignment the Awarded bidder shall submit a bankable defect liability guarantee/Certified check with an amount (5% of the Contract amount) valid for 3 years after completion and the Client receiving.
- 15) This RFP does not obligate The Client to award a contract for the assignment; The Client reserves the right to change the RFP schedule without notice.

#### **4. Preparation of proposals**

In preparing the Proposal, the Bidder is expected to examine the RFP in detail. Material deficiencies in providing the information requested in the RFP may result in rejection of the Proposal.

The Proposal, as well as all correspondence and documents relating to the Proposal exchanged between the bidder and the Client, shall be in English language.

The proposals shall remain valid for a period of at least (120) calendar days after the proposal submission deadline, it must be stated in the submitted proposal that it will remain valid for this period. Once a proposal is accepted during this period, the price quoted in the proposal must remain unchanged for the entire period of the resulting contract unless otherwise agreed during negotiations.

Any information additional to the primary requirements of this RFP and considered necessary shall be provided in a SEPARATE section of the proposal with appropriate reference.

The Client will make its best effort to complete the negotiations within the proposal's validity period. However, should the need arise, The Client may request, in writing, all Bidders who submitted Proposals prior to the submission deadline to extend the Proposals' validity period.

## 5. Submission of Proposals

- 1) The proposal's submission date is 23/07/2025 at 3:00 PM, online submission only will be accepted.
- 2) Any **questions** pertaining to this RFP should be submitted via email to **(the procurement department, procurement@jotc.com.jo)**.
- 3) Answers to all questions raised by all shortlisted Bidders will be shared with all Bidders to ensure that all relevant parties are operating with the same information.

### RFP timeline:

Activity	Activity Date
RFP Released	15/06/2025
Last date for purchasing RFP	25/06/2025
ASTPP Site Survey	29-30/06/2025
Written Questions Submitted	03/07/2025
Answers to Submitted Questions	13/07/2025
Proposals Submission date	23/07/2025
Expected awarding Date	TBA

### 5.1. Format of Technical Proposal

The Technical Proposal shall not include any financial information. Technical Proposal containing material financial information shall be declared non-responsive and his proposal will be rejected.

#### a. Table of Contents

There must be a table of contents outlining the sections and sub-sections in the proposal including supporting documents.

#### b. Cover Letter

The cover letter must include the following:

- Company name, address, telephone number, fax number and e-mail address.
- Name of person(s) who will be the principal contact authorized to make commitments for the **Services** Provider.



- Statement declaring the accuracy and completeness of ALL information provided in the RFP including commitments and compliance of conditions and terms by the Services Provider.

**c. Executive Summary**

A summary of the proposal with emphasis on the following:

- Summary of company profile (and consortium partner(s) if any).
- Summary of proposed services and approaches.

**d. Technical Approach and Methodology**

The Bidder is required to explain their understanding of the assignment objectives, approach to conduct the services, methodology for carrying out the activities and obtaining the expected outputs, and the degree of detail of such outputs, to meet the schedule as well as the quality requirements of the assignment. The Bidder should also highlight the problems/issues being addressed and their importance and explain the technical approach that would adopt to address them. Furthermore, the Bidder should explain the methodologies proposed and highlight their compatibility with the proposed approach.

Other proposed services and recommendations should be made and illustrated in this section too, as appropriate, as well as highlighting other tasks the Bidder deems necessary to guarantee successful implementation of the assignment.

The assignment management methodology shall include but not limited to a chart of the team structure of the proposed team highlighting the name of each member, the general role of each member, resumes (representing the specializations and experiences and period of experience is mandatory) of each member of the project team, including subcontractors.

**e. Assignment work Plan**

The Bidder must prepare a Plan describing the methods and human and material resources that the Bidder proposes to employ in the design, management, coordination, and execution of all its responsibilities as well as the estimated duration and completion date for each major activity starting from the start date, up to the final project completion. The assignment plan must also address the project milestones and the type of documentation/reports.

**f. Compliance table.**

Bidders shall carefully read each item in the following Tender's Compliance Sheet and confirm whether they are **Comply** or **not comply** with each listed item. Reference in Bidder's proposal column shall be filled wherever applicable.

**Note: Failure to fully comply with this compliance sheet will be cause of disqualifying the bidder's proposal.**

No.	Description	Bidder's response		JOTC Procurement Committee Evaluation (Comply/ Not comply)
		Comply / Not comply	Reference/documents in Bidder's proposal	
1.	Bidder is a company or foundation registered not less than (5) years before the date of proposal submission.		Valid company registration certificate.	
2.	The bidder must have a minimum experience in conducting services with minimum two project conducted.		proven experience, List of projects, reference letter.	
3.	The bidder bid bond is submitted as required in this RFP.			
4.	Bidder shall comply with Technical Scope of Work (Annex 1), The technical information and requirements provided in this RFP represents JOTC's minimum requirements, Bidder is aware that he is responsible for the completeness of his technical and financial proposals.			
5.	Bidder has attended the site visit in ASTPP terminal on the visit dates specified in this RFP.			

No.	Description	Bidder's response		JOTC Procurement Committee Evaluation (Comply/ Not comply)
		Comply / Not comply	Reference/documents in Bidder's proposal	
	Bidder is confirming that JOTC QHSSE requirement (Annex 2) will be adhered, any cost associated to conduct assignment related to safety requirements will be borne by bidder.			
6.	Bidder confirms his acceptance to all terms and conditions mentioned or referred to in this RFP.			

## 5.2. Format of Financial Proposal

- The Financial Proposal should clearly state all bidders' costs for **Services**.
- The Prices currency shall be in Jordanian Dinar (JOD).
- The price quotes shall be free of sales tax (such as VAT), duty and any other governmental taxes. Such taxes should be itemized separately.
- The Bidders are required to state whether its terms and conditions are in accordance with those stated in this RFP and **the Government purchasing Regulation No. 08/2022** and its instructions, which have financial implications. Should deviations arise, the Bidders should state the differences and provide explanations. The Bidders are also encouraged to provide any additional information that may make its Financial Proposal more favorable.

**Payment terms to be agreed mutually.**

## 6. Proposals Evaluation

### 6.1. Technical Qualification Criteria:

1. submission of Required Documents: The bidder must attach a classification certificate, a valid commercial registration, and a professional license. Additionally, the bidder must provide the names of partners (if any) along with detailed contact information, including: (P.O. Box number, Postal code, Fax number, Telephone number, Mobile number, Email address (to be used for communication regarding the procurement process), Any other relevant information regarding the bidder's identity.
2. Interested parties are required to conduct a site visit to the company's logistics facilities in Al-Madonnah before submitting their technical proposals. The visit must be conducted on the date specified in Table 1-1 of this Invitation to Tender, to review the intended work site and scope.
3. The bidder must submit a comprehensive technical proposal covering all the required work.
4. The bidder must be locally experienced and legally licensed.
5. The bidder's line of business and objectives must be relevant to the subject of the tender.
6. The bidder is required to attach a list of relevant past experience within the technical proposal.
7. The bidder must provide a qualified team capable of executing the required work. A list of the proposed technical personnel must be attached.

### 6.2. Financial Evaluation:

Pursuant to Article (29) of the Instructions for Regulating Government Procurement Procedures for the year 2022, issued in accordance with the provisions of Article (95) of the Government Procurement Regulation No. (8) of 2022, the financial offers submitted by bidders shall be evaluated based on the price criterion and the extent to which the requirements specified in the tender documents are met.

## 7. Terms and Conditions

### 7.1. General Terms & Conditions

The following terms and conditions are not negotiable, and all Bidders shall comply to all of these. Each proposal response should clearly note the bidder's acceptance of the terms and conditions listed below.

- 7.1.1 Bidders are required to comply with all the instructions, procedures, terms, and conditions described in this document. Failure to do so may cause the proposal to be disqualified and rejected.
- 7.1.2 Bidders must provide all requisite information under this RFP and clearly and concisely respond to all points set out in this RFP. Answers shall be provided to specific questions in a clear and precise manner and must refer, where appropriate, to the page or paragraph number in supporting manuals, documentation, or brochures. Any proposal, which does not fully and comprehensively address this RFP, may be rejected. However, unnecessary elaborate brochures or other presentations beyond that deemed sufficient to present complete and effective Proposals are not encouraged.
- 7.1.3 Where the Bidders are unwilling to accept certain conditions of the RFP Specifications, this non-acceptance must be clearly stated in the proposal.
- 7.1.4 This is an RFP document only, and in no way, obligates JOTC to award any contract. This solicitation is subject to the detailed Terms of Contract and the resultant award will be governed by these specific Terms of Contract detailed hereto.
- 7.1.5 JOTC reserves the right to amend or delete any part of this RFP or any document forming part of this RFP at any time without prior notice in order to give effect to any change in policy or to correct any error, omission, ambiguity, or inconsistency that may arise after the issuance of this RFP. In the event of any amendments to this RFP document, all tenderers will be notified accordingly.
- 7.1.6 JOTC reserves the right to approve each member of the assignment team and the right to approve the replacement of any assignment team member (including subcontractors).
- 7.1.7 Following submission of the proposals and their final evaluation, JOTC reserves the right to retain unsuccessful proposals and all related attachments. It is the responsibility of the tenderers to identify any information of a confidential or proprietary nature contained in its proposal so that it may be handled accordingly.
- 7.1.8 Bidders must adhere strictly to all requirements of this RFP and Government purchasing Regulation No. 28/2019 and its instructions, no changes, substitutions, or other alterations to the technical specifications of requirement stipulated in this Request for proposals document will be accepted unless approved in writing by the JOTC.

7.1.9 This RFP contains no contractual proposal of any kind; any proposal submitted will be regarded as a proposal by the Bidders, and not as an acceptance by the tenderers of any proposal by JOTC. No contractual relationship will exist except pursuant to a written contract document signed by the authorised official of the JOTC and by the successful tenderer chosen by the JOTC.

## **7.2. Financial Terms**

The Bidders should take into consideration the following general financial terms when submitting their proposals:

- 7.2.1 All prices should be quoted in Jordanian Dinars.
- 7.2.2 The price quotes shall be free of sales tax (such as VAT), duty and any other governmental taxes. Such taxes should be itemized separately.
- 7.2.3 In no case may the selected tenderer invoke a hiatus or an oversight in the description of the work components in the tender documents or claim inadequate explanations for seeking any price increase or any release from contractual liabilities.
- 7.2.4 The tenderer shall clearly specify in the financial proposal its limitation of liability under this engagement.
- 7.2.5 Prices shall be final and not subject to revision from the time of entering into force of the contract until the end of contractual obligations.
- 7.2.6 Price quotes shall include any necessary service to be provided by the selected Bidders (even if such services are not expressly enumerated) in order to ensure a satisfactory fulfilment of the contract, as well as any other expenses incurred by the selected Bidders, e.g., travel, accommodation, daily subsistence, telecommunication, postal charges.
- 7.2.7 The proposal shall be signed by the Bidder (a person or persons) duly authorized to bind the Bidder to the contract. The latter authorization shall be indicated by duly legalized power of attorney.

## Annex (1) Scope of Work and Technical Specification

### 1. Introduction:

Jordan Oil Terminals Company (JOTC), the owner of the Amman Strategic Terminal for Petroleum Products (ASTPP), is requesting a Techno-commercial proposal from bidders for Supply, install, test and commissioning of spare parts required for the CCTV systems installed at (ASTPP terminal) in loading bay and pump shelter area.

The required spare parts are essential to upgrade the resolution and enhance the reliability of the CCTV systems in the loading bay and pump shelter areas, ensuring they remain fully functional and meet updated performance standards

**The services will cover the following:**

- 1-supply the upgrade spare parts
- 2-install, test and configuration the spare parts

**Site visit is required to ensure gathering all information to supply compatible upgrade spare parts with full integration and operation with the existing system.**

**As the following specifications:**

#### 1. For loading bay area:

The required is (18) camera's complete with compatible lens.

**Minimum required Camera's specifications:**

1. **Camera Resolutions:** minimum 8 MP **fixed box camera with CS-mount lens.**
2. shall be compatible with Pelco E1-CMG-SVR-US VideoXpert Enterprise Core and Media Gateway Server.
3. **Mounting:** camera will be installed in a Videotech HOV32K2A200 enclosure, which is IP66-rated and equipped with forced cooling. If the proposed camera is not compatible with this enclosure, you may provide a complete camera and enclosure kit that meets or exceeds the specifications of the HOV32K2A200 including an IP66 and Type 4X rating, 24 VAC-powered wiper, heater, and blower.
4. **Power Input:** PoE (IEEE 802.3af, Class 3) 24 VAC nominal, 18 to 32 VAC range
5. **Network Ports:** RJ-45 connector for 100Base-TX
6. **focus:** Auto back focus  
**Lens Mount:** CS mount; adjustable

7. **Supported Protocols:** TCP/IP, UDP, ICMP, IPv4, SNMP v2c/v3, HTTP, HTTPS, SSL, SSH, SMTP, FTP, RTSP, UPnP, DNS, NTP, RTP, RTCP, LDAP, and Support Secure Boot, TPM, FIPS 140-2 Level 3
8. shall be compatible with the outdoor enclosure Model: videotech HOV32K2A200 with the datasheet and drawing attached.
9. Shall be compatible with the Wash tank & pump model: videotech WAS0V5L5M00.
10. **Sensor:** 1/1.8" CMOS or better.
11. **Auto-Iris:** DC Drive (support P-Iris)
12. **Support Frame Rate (50 Hz): 25 fps at least.**
13. **The camera shall support a streaming resolution as follows or better:**
  - (a) 16:9: 3840x2160, 3328x1872, 3200x1800, 3072x1728.
  - (b) 4:3: 2880x2160, 2560x1920.
14. shall support a Dynamic Range up to 144 dB using triple exposure technology, with optimal performance at frame rates of 20 fps or less.
15. **Alarm: Input :**1, **Output:** relay (30 V, 1 A), **Triggers:** Unsupervised mode that detects switch closures (N.O. and N.C.)
16. Shall camera have a lens with features (1/1.8" or larger sensor format, supporting 4K, 3.9-10mm Varifocal, P-Iris, Precise Focus Adjustment, IR Corrected Optics & Corner Brightness
17. support Gigabit Ethernet with a 10/100/1000 Mbps Ethernet port (Connector RJ-45).
18. **internal usable area** (for both camera & lens): 100X70 mm (WXH)

GENERAL	1	Tag Number	
	2	PEF Number	
	3	Location	
	4	Brand/Model	Videotec - Italy / HOV32K2A147
	5	Type	Quantity
DEVICE DATA	6	Material	Aluminium construction
	7	Color	Epoxypolyester powder painting, RAL9002 colour
	8	Certifications	CE EN61000-6-3, EN60950-1, EN50130-4 IP66/IP67 EN60529 with cable glands IP66/IP67 EN60529 with special gaskets and bracket with internal cable channel IP55 EN60529 with bracket with internal cable channel IP44 EN60529 for models with cooling blower and double filter
ELECTRICAL	9	Heater Ton 15°C±3°C (59°F ±37°F) Toff 22°C±3°C (71°F ±37°F)	IN 12Vdc/24Vac, consumption 20W max
	10	Blower with thermostat Ton 35°C±3°C (95°F±37°F) Toff 20°C±3°C (71°F±37°F) for version with double filter	IN 24Vac, consumption 4W max
	11	Integrated Wiper	IN 24Vac, consumption 7W max
ENVIRONMENTAL	12	Operating temperature with heater / (Indoor - Outdoor)	-20°C / +80°C (-4°F / +140°F) H21
	13	Resistant to salty fog / (Indoor - Outdoor)	until 1000 hours (according to ISO9227)
MECHANICAL	14	Cable glands	3xM16
	15	Glass window (WxH)	118x75mm (4.6x2.7in)
	16	Internal usable area (WxH)	100x70mm (3.9x2.7in)
	17	Internal usable length with and without accessories	250mm (9.8in)



**MECHANICAL**

3 removable cable glands: 2xPG9 and 1xPG11

Glass window (BxH): 118x75mm (4.6x2.7in)

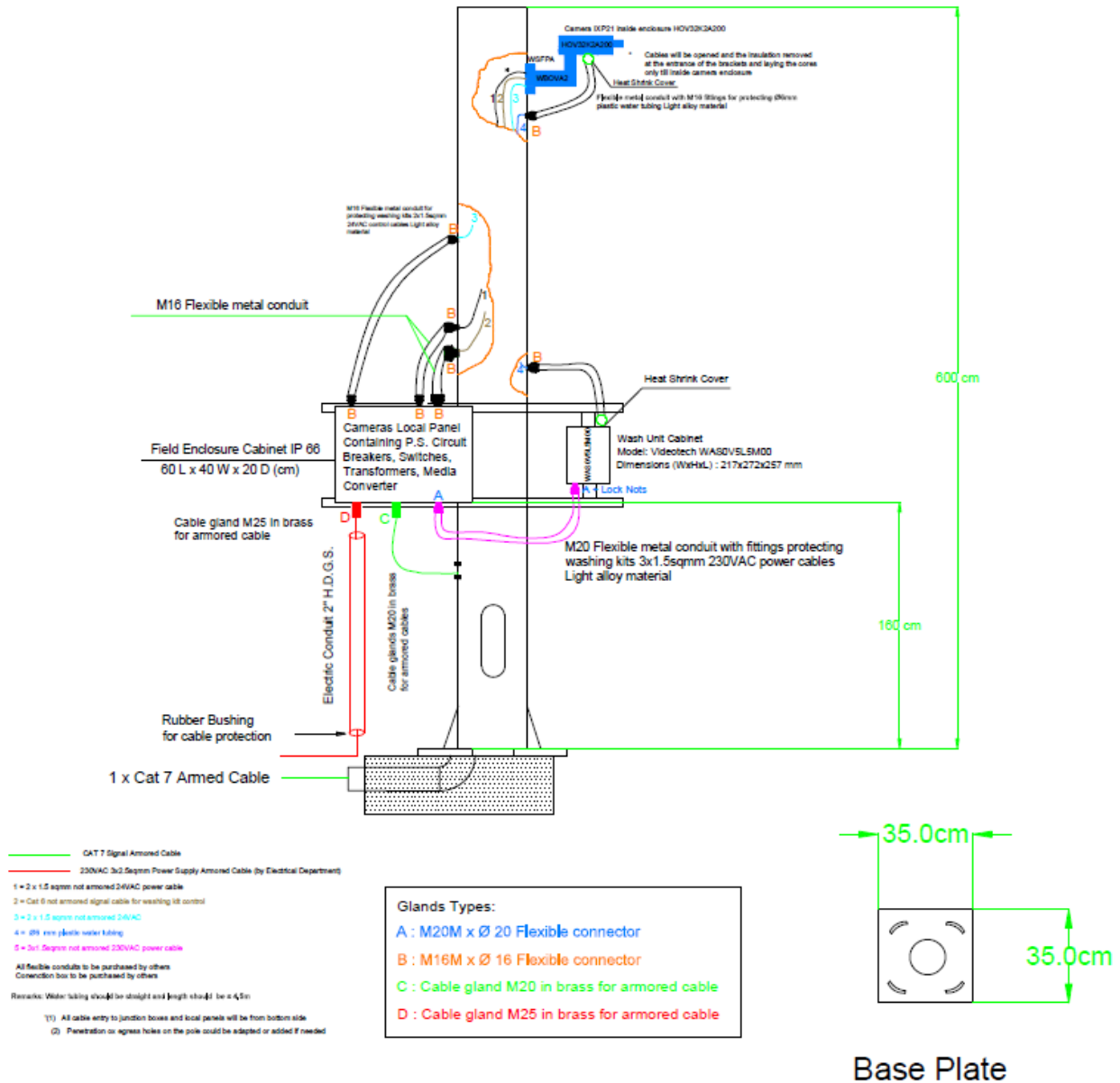
Internal usable area (BxH): 100x70mm (3.9x2.7in)

Internal usable length with and without accessories: 250mm (9.8in)

**Note:** you can supply complete kit with enclosure IP 66

**A. Minimum required Lens specifications:**

- Mount Type: CS
- Minimum Focal Length: 15.0 ~ 50.0 mm (must cover all required areas)
- Minimum Object Distance: 0.8 m or best
- Iris: Auto
- Minimum Supports Resolution: Minimum 8 Megapixel
- Operating Temperature: 14° to 122°F (–10° to 50°C)
- Relative Humidity: 35% to 90%
- Iris Drive Coil Resistance:  $190\Omega \pm 10\%$
- Iris Damping Coil Resistance:  $500\Omega \pm 10\%$
- Maximum Iris Operating Current: 23 mA at 4 VDC
- Certifications: CE, C-Tick
- DAIMINTION: COMPATABLE WITH CAMERA AND ENCLOSURE



## 2. for pump shelter area:

The required is three (3) explosion proof enclosures complete with compatible 8 MP cameras and lens:

### A. spec. of camera:

Same Minimum required Camera's specifications in loading area (8 MP camera)



**3. for overall system****A. Industrial Switch:**

1. The switch shall be a direct functional and physical replacement for the Advantech EKI-7656C model.
2. The switch shall be fully compatible with the Advantech EKI-7710E-2CP-AE and Avaya VSP-8404 switches in terms of network integration and communication protocols.
3. The switch shall provide a minimum of 16 × Gigabit Ethernet RJ-45 ports (10/100/1000 Mbps)
4. The switch shall provide a minimum of 4 × SFP Fiber ports for uplink or long-distance communication
5. The switch shall support Power over Ethernet (PoE) with Min. total PoE power budget provides 360-watt compatibles with supply cameras, compliant with IEEE 802.3af/at standards on applicable ports. Shall compatible with supply camera.
6. Support protocols: HTTP, HTTPS, SSH, Telnet, VLAN (IEEE 802.1Q), SSL, QoS, SNMP, Web-based Management, Ring Redundancy (X-Ring Pro, ERPS, RSTP, STP).
7. Mounting: The switch shall support DIN rail mounting for industrial installation.

**B. Power Supply:**

1. The power supply shall be designed for industrial DIN rail mounting.
2. Power input shall be 230 V AC with full voltage range compatibility.
3. shall provide an output of 48 VDC compatible with proposed industry switch
4. The power supply shall be UL508 certified for industrial control equipment  
It shall comply with industrial immunity level standards, ensuring reliable operation in harsh environments with electromagnetic interference (EMI).

**C. Small form-factor pluggable SFP:**

- a. The SFP module shall support single-mode Fiber.
- b. The SFP module shall support a minimum data rate of 1 Gbps.
- c. The SFP module shall use an LC Duplex optical connector.
- d. The SFP module shall be compatible with Avaya/Nortel equipment, as well as industrial and LAN switches.

#### LAN data Switch:

1. The switch shall be fully compatible with Avaya's VSP-8404 core switch and other ERS series access/distribution switches.
2. The switch shall provide a minimum of 48 auto-sensing 10/100/1000 Mbps RJ-45 ports supporting IEEE 802.3at Power over Ethernet Plus (PoE+)
3. shall include a minimum of 2 SFP+ uplink ports supporting 10 Gbps connectivity, Uplink ports must be compatible with multi-mode and single-mode fiber transceivers
4. The switch shall support IEEE 802.3at standard to deliver up to 30W per port.
5. The switch shall support an optional Redundant Power Supply (RPS) to ensure high availability and minimize downtime
6. Support protocols: HTTP, HTTPS, SSH, SSL, TELNET, VLAN (IEEE 802.1Q), Link Aggregation (LACP), QoS (802.1p), STP, RSTP, MAC Filtering.
7. The switch shall offer a minimum switching capacity of 128 Gbps.
8. The switch shall support a forwarding rate of at least 102 million packets per second (Mpps).
9. Must comply with CE, FCC Class A, RoHS, and EN standards.

#### Hard Disk:

1. The hard disk shall be compatible with the Pelco E1-VXS-48-EUK VXS Enterprise Storage Server.
2. The hard disk shall support configuration into a new RAID array without compromising existing video data stored on the server.
3. The hard disk shall have a minimum storage capacity of 6 TB.
4. The hard disk shall be designed for 24/7 operation in surveillance or enterprise environments.

#### • Bill of quantity:

Item	Quantity
Cameras for Loading Bay	18
Lense for Loading Bay	18
explosion-proof enclosure for Pump Shelter	3
lens for Pump Shelter	3
Camera for Pump Shelter	3
Industrial switch	2
Power Supply	2
small form-factor pluggable (SFP)	4
Hard Disk (6 TB)	8
LAN data switch 48-port	1

- **Site Acceptance Test (SAT):**

- During the Site Acceptance Test the service provider shall demonstrate that the installed Configuration & Test CCTV System provides the required functionality and performance in the real environment.
- Prior to SAT the service provider shall provide a test procedure that is subject to approval by the Client or his nominated representative.

- **General Technical Approach and Methodology**

- Site visit is required to ensure gathering all information to supply compatible upgrade spare parts with full integration and operation with the existing system.
- It is expected the winning Company undertaking this assignment to follow a general approach incorporating the minimum following elements: Conducting meetings with JOTC Team and Reviewing and analyzing all requirements and functionality needed and give the best practice for all the services needed.
- Safety Requirements:
  1. Valid truck crane third party certificate + the man basket third party certificate.
  2. Manlift -valid third party certificate.
  3. Operator third party certificate valid.
  4. Full PPE as (Anti static coverall ,helmet, glasses, Gloves, Safety shoes).
  5. Full body harness once working at heights.
- The service provider shall break down his commercial proposal for each item and service, and JOTC has the right for partial awarding.