SECTION 2

GENERAL PROVISIONS

CONTENTS

1. Introduction – Project outline

1.1 General

1.1.1 This document specifies the minimum requirements for a turn-key project (TKP) for the design, construction, installation of the Customs vehicle radiography system, and maintenance of the conveyor type high-energy radiographic inspection system for cars at customs site at Jorden River site, including supply of various electromechanical systems, equipment and facilities, furniture, handling and lifting devices, infrastructures as specified hereinafter.

1.1.2 The guidelines specified in the SOW, the attached drawings, lists of equipment items, etc., form only the minimum requirement. The Contractor should take into consideration that he should design, coordinate, deliver and implement the complex which is composed of site development, infrastructure, building, their facilities, equipment, furniture, etc., so as to allow full functioning of the system as required in the other chapters of the SOW.

1.1.3 The Contractor shall prepare a detailed layout of the proposed site containing the locations of main building, infrastructure, facilities and construction elements in order to enable an overall view of the deployed systems in the selected site, i.e. 1:50 and 1:200 plans of the proposed site. And 3D visual aid of the proposed plans.

1.1.4 The Contractor should consider all of the functional and operational design requirements, without deviation from the dimensions allocated to the site area, as shown in the site drawings No. 143-07-01-01,

1.1.5 The Contractor has no flexibility in planning, subject to the functionality of each building, access roads, its equipment and systems as specified according to the client’s demands.

1.1.6 The final planning and implementation will be carried out within a firm fixed price quotation, which will include the detailed of the planning construction of the radiography building and its contents, as specified in the Annex, as well as connecting the building to the various utility systems (water, sewage, electricity, communication, etc.), planning and implementation of the earthworks, etc. as defined in the contract, see drawings No. 143-07-01-01,

1.1.7 The Contractor undertakes to provide supply of spare parts, maintenance services and repairs for 10 years from the end of the warranty period, as defined in contract's Service and Maintenance Annex.

1.2 Project Outline

The project will be implemented in eight (8) main phases.

1.2.1 Phase 1 – Proposal Filtering

The technical and management proposals submitted by the companies in response to this tender will be evaluated, and those fulfilling all of the minimal requirements will be selected for the next phase.

1.2.2 Phase 2 – Tender Evaluation and Performance Verification

This phase consists of two parts:

a. Proposal Evaluation

Each proposal will be evaluated by the Evaluating Committee (EC) and scores given according to the technical evaluation table.

b. Radiography system Verification tests

- The objective of system verification tests is to verify the proposed system's performance compliance with Bidder's declarations.
- These verification tests will be conducted on Bidder's premises or in a site of Bidder's implementation (depends on the location which is convenient to the client) the client decides whether to perform the verification tests. Bidder's

staff shall operate the system, to obtain the best possible screening images.

- Client's Evaluation Committee (EC) will evaluate the system performances.

1.2.3 Phase 3 – Design, Systems Manufacturing and Implementation in the site

This phase comprises of the following parts:

1) Design Reviews (Kick-Off meeting, PDR, DDR, CDR) – Client's approval of Contractor's site plans and systems design.

2) Factory Acceptance Tests of the Radiography System and SDMS systems

3) Implementation: Site construction (Civil Works) and equipment manufacture and installations.

1.2.4 Phase 4 – Preliminary Acceptance Tests

On completion of the construction and installation of all equipment, the contractor shall:

1) Obtain the required permits for operation from all the relevant Israeli Authorities.

2) Perform comprehensive Preliminary Acceptance Tests. The tests will be conducted by the Contractor for each of the implemented systems (Radiography, Control, Traffic Control, Security, etc.) for the site, building, and all sub-systems (electrical system, communication, fire detection, etc.).

3) Obtain Client's approval.

4) Obtain population permit of the building.

1.2.5 Phase 5 – Site Pilot (trial run)

This phase comprises of the following parts:

1) Upon successfully passing the Preliminary Acceptance Tests the site will be run for one month by and under the responsibility of the Contractor. During that period the customer's staff will undergo the training courses.

2) Training Sessions – Customer's staff will undergo the training courses (operators, image analyzer, supervisors, instructors and first level maintenance), at least one of the three training periods available. The training will be conducted in Israel. The training periods will be decided by the client

3) Operational Pilot - The site will be run, for three additional months, by customer's employees, under the supervision of the Contractor after one training period.

1.2.6 Phase 6 – Final Acceptance Tests

At the end of the pilot period a Final Acceptance Test will take place.

1.2.7 Phase 7 – Warranty

On the successful completion of Final Acceptance Tests a warranty period of at least one year will commence.

1.2.8 Phase 8 - Service and Maintenance, for 10 years - Contractor's responsibility

All tasks, including preventive maintenance as well as routine service, maintenance and repair of the systems are solely Contractor’s responsibility and will be executed by the Contractor's staff only. These tasks include all works required: main and peripheral systems repairs and maintenance for all systems and duration, as defined in contract’s Service and Maintenance Annex.

1.3 Description of the Work

1.3.1 General scope of the work

1.3.1.1 This statement of work (SOW) relates to the planning and implementation of a TKP including a conveyor type light vehicle radiographic (X-Ray) as specified in this document and Annex.

1.3.1.2 It should be noted, that during the implementation of this project the Jorden River site will be operational and it is Contractor's responsibility to provide that all ongoing routine activities shall be possible.

1.3.2 The nature of the work

1.3.2.1 The Contractor’s work includes:

Detailed planning, planning coordination, production, supply, erection and implementation of the site, including radiographic inspection system building with its contents, the infrastructures, all the systems, facilities and all the equipment, according to the turnkey method and to the guidelines, planning, directing drawings, the special specifications and the other documents attached to this document such drawings No. 143-07-01-01

1.3.2.2 The erection of the building complex includes, but is not limited to:

Preparation and dismantling work, digging and sub grading, foundations, floors, framework (envelope) of the building, all the finishing work as specified in the contract documents, walls, and partitions, opening (doors and gates, windows, etc.), sanitary piping systems, electricity, air-conditioning, material handling systems, fire detection and extinguishing systems, equipment, furniture and underground storage items, connection of electromechanical systems to existing networks. The work also includes signs, feeding systems and their connection to the site from points outside the said sites at distances specified in this SOW and drawings No. 143-07-01-01

1.3.2.3 Responsibility for acquiring all licenses required by the various Authorities, for example; building permits from local Municipality, Radiation safety from GOI Department of Labor/Economics, etc. is solely Contractor's task and responsibility.

1.3.2.4 All the requirements of the specifications are minimal and should serve only as guidelines for the Contractor concerning the form, nature, content and functioning of the building/systems/facilities/ etc., which are ordered within this SOW complete, with all their parts, ready for operation, at a firm fixed price to be submitted by the Contractor in the proposal.

1.3.2.5 The product (building/system/facility) must meet all the requirements specified in the specifications, drawings, bills of material, jointly and separately, where the documents complement each other.

1.3.2.6 The product must meet all Bidder declarations as presented in his proposal.

1.3.2.7 It is emphasized that Client orders within this SOW include building / systems / facility / etc., complete, finished and ready for operation, with all their parts, even though these parts are not specifically mentioned and required in the specifications

1.3.3 Description of project works

1.3.3.1 Building and sites

The Contractor shall carry out the works as specified in the building specifications, including the following building and works (detailed in Section 4):

a. Temporary perimeter fences and gates (for the duration of the works and safety reasons).
b. Radiographic installation building (including the radiation structure, conveyor, control, operation and maintenance rooms and offices).

1.3.3.2 General work for the site

a. Conveyor type Radiography (X-Ray) Screening system
b. Radiography structure and radiation-shielding doors
c. Earthworks.
d. Building
e. Air-conditioning systems.
f. Sanitation systems and additional electro-mechanical systems.
g. Electrical and UPS systems
h. Communication systems.
i. Security, control and safety systems.
j. Safety system for locating a person in the Radiography tunnel.
k. Furniture and equipment.

l. Additional miscellaneous auxiliary building needed by the Contractor, such as: Tent for the temporary period, electrical shop, generator room, metalwork shop, etc.

m. Roads and sidewalks.

n. Signposts.

o. Parking lots.

2. Project Phases Description

2.1 Phase 1 - Proposal Filtering

Tasks comprising project phase 1 are specified including the corresponding responsibilities as follows:

2.1.1 SOW Publishing – Client's responsibility

The first phase of the project starts with the publishing of this SOW.

2.1.2 Contractors Site Visit – Client's and Customer's responsibility

Contractor's site visit will be coordinated not later than one (1) month after publishing of this SOW.

Minutes of the visit, including clarifications regarding the tender will be published 2 weeks after the visit.

2.1.3 Proposals submition – Bidder's responsibility

As response to the Tender, the Bidder/Contractor will submit its proposal to be evaluated.

a. The proposal must include all the information requested in the following sections, including Appendix A, and detailed in the contract:

- Contractor's company profile, experience
- Project Management plan
- Contractor compliance with mandatory requirements
- Systems description, including previous deployment experience (where operating and for how long, POC)
- Test-Device description
- Detailed technical proposal, including details specified in this document including 3D imaging of the site's plans for visual aid.
- Technical specifications
- Operator manuals

- Maintenance plan and manuals (including preventative maintenance)
- Additional information as requested in this SOW.

b. The proposals will be submitted in three (3) hard copies and five (5) San Disk in English.

2.1.4 Proposals filtering – EC's responsibility

2.2 Phase 2 – Performance Verification and Proposal Evaluation

Tasks comprising project's phase 2 are specified including the corresponding responsibilities as follows:

2.2.1 Proposal Evaluation - EC's responsibility

2.2.2 Verification tests – Bidder's and Client's responsibility. The client doesn't have to have preliminary verification tests at the time of the proposals evaluation. It is the client's privilege to pass over the preliminary verification tests.

2.2.2.1 Objective: To verify that the proposed systems withstand all Bidder's declarations regarding system performance.

2.2.2.2 Verification tests shall be conducted only for the Bidder with highest scores after technical evaluation

2.2.2.3 Verification Tests shall be conducted on the Bidder's premises or at a site built and equipped by the Bidder. The procedure consists of the Bidder's staff operating the system and obtaining the best possible screening images to be evaluated by the Client's representatives (Evaluating Committee).

2.2.2.4 Aspects to be tested

System performance will be tested regarding mandatory requirements and Bidder's declarations in the following parameters:

- Screening process
- Scanned range and object size: For the screening process, light vehicle, in order to confirm system's ability to image the whole span of the objects.

- System performance, in the defined 9 locations (detailed in Section 5):
  - Penetration,
  - Resolution,
  - Contrast.
- Vehicles per hour screening rate
- Material Discrimination.
- Automatic image analysis based on video
- Material Discrimination capabilities proposed by the Bidder

2.2.2.5 The EC may decide to conduct only parts of these tests

2.2.2.6 After completing the required Verification Tests, the Bidder may demonstrate additional system capabilities. The demonstration of these features, additional to those required for this project, will be performed in coordination with the Client and within schedule constraints.

2.3 Phase 3 – Systems Reviews, Design and Implementation

This phase comprises of one main part, Contractor's responsibility and Client's approval:

- Part 1-Design Reviews (PDR,DDR,CDR)
- Part 2 - Implementation

2.3.1 General

2.3.1.1 The Contractor shall present systems design reviews to the Client. Technical and management (timetable) issues shall be presented, showing in detail the schedule and implementation to be achieved in all aspects of the SOW.

2.3.1.2 All reviews shall be carried out in Israel, on the Contractors offices and/or at the site in coordination with the Client / CTA.

2.3.1.3 The carrying out of Reviews and their precise date will be coordinated with the Client. The reviews will not be held on Israeli Holidays and non working days.

2.3.1.4 The Reviews shall include all the components of the building, systems and

equipment installed at the site.

2.3.1.5 The Contractor shall submit the Client a list of all personnel he intends to employ on site (including designers and sub-Contractors), for approval of IAA. Unapproved personnel will not be an excuse for the Contractor for any time delay.

2.3.1.6 The relevant documents for the reviews should be submitted to the Client not later than 10 working days before the date set for each review.

2.3.1.7 Full participation of all the designers and sub-Contractors is required

2.3.1.8 Not later than two (2) weeks after completion of each Review, the Contractor shall submit the minutes of the meeting.

2.3.1.9 Design Approval

The approval, which will be given to the design by the Client/CTA, will not release the Contractor from the responsibility for his design, neither shall such approval release the Contractor from any liability placed upon him by provisioned in Form of Contract.

2.3.1.10 Quality Assurances System

The Contractor shall submit detailed Quality Assurance plan of the entire program detailing how the Quality Assurance system of the Contractor is applied to the specific tasks.

2.3.1.11 Work Plan and Time Schedule

At each Review the Contractor will present an Updated program work-plan, including: revised management plan, detailed Work Breakdown System, detailed schedule, milestones and status reports organization - in comparison to project's Gantt.

2.3.1.12 Client’s final approval of the Contractor's personal i.e. designers and subcontractors, will be given in the PDR.

2.3.1.13 Implementation Procedures

Full coordination between Contractor designers, IAA and Client's representatives is required throughout the design and implementation stages.

This coordination shall be achieved by the following procedures:

1) Official discussion meetings shall be conducted between Contractor's representative, IAA and Client's representative.
2) These meetings shall be conducted every week at the work site / Contractor's representative location in Israel.
3) Updated progress of the site, building, systems design and detailed plans shall be presented.
4) At these meetings Contractor shall present his detailed schedule for the completion of the remaining design.

2.3.2 **Project Kick-off Meeting** – Contractor’s responsibility

2.3.2.1 The main objective of the meeting is:

- For the Client - to convey his comments regarding Contractor's basic design as described in Bidder's proposal
- To explain Client's needs / requirements
- Contractor: to present project's management and POC, Table-time, work safety plans, etc.

2.3.2.2 The meeting will be held no later than 3 weeks AEDC.

2.3.3 **Preliminary Design Review (PDR)** - Contractor’s responsibility

2.3.3.1 The main objective of the PDR is:

a. To present the proposed design
b. To discuss changes / options / solutions.

The Contractor shall present a preliminary site & system design review to the Client. Technical and management issues shall be presented, showing in detail the schedule and implementation to be achieved in all aspects of the SOW.

2.3.3.2 The Preliminary Design Review will be composed of four (4) parts referring to the following topics:

a. Formal presentation of the key people regarding the entire operation, contractors and clients (PDR-a),

b. Infrastructure and Building Construction (PDR-b),

c. Radiography System (PDR-c),

d. Command, Control and Computer systems (PDR-d)

The various PDR meetings, relating to the various subjects, may be conducted successively.

2.3.3.3 General

a. PDR meetings for a & b formal and infrastructure building construction and for c & d radiography and other systems will be conducted no later than 8 weeks AEDC.

b. The Contractor shall submit all documents (via Email + 3 SD) required at the proposal stage, revised and updated, as detailed in the following paragraphs no later than 1 week before the meeting.

c. Not later than two (2) weeks after completion of each PDR, the Contractor shall submit the minutes of the PDR meeting.

2.3.3.4 **PDR – Formal Presentation of Key People (PDR - a)** - Contractor's responsibility

2.3.3.4.1 In this formal meeting the entire key people shall be presented; contractors, sub contractors, key service people and client's representatives.

2.3.3.5 **Site Construction (PDR - b)** - Contractor's responsibility

2.3.3.5.1 The following Documents and Data shall be submitted for the PDR - a (Infrastructure and Building Construction):

1) General and basic plans (including elevations and cross sections) scaled to 1:250 minimum.
These plans shall specify dimensions, equipment and materials to be used and full description of the solutions.

2) All drawings shall be prepared in the metric system of measurement (MKS).

3) Drawings should be of A1 standard size.

4) Technical descriptions, explaining and specifying construction methods of the X-Ray inspection system, structural stability principles, structural materials to be used, and the quality of such materials;

5) Details of main elements to a 1:20 scale

6) Basic plans and descriptions of the building construction and roofing, details of roof element connections and sealing to main elements, and the solution for the draining of rain water of the building and site area including 1:50 and 1:200 site plans with 3D imaging of the site and building for visual aid with all cross-sections and fronts.

7) Basic plans for Site gates and the Cabins

8) Basic solutions for the incorporation and installation of electrical power supply system, UPS, fire detection, air conditioning system etc;

9) Details of the design principles for the electrical equipment, such as semiautomatic switches, cables, measurement devices, etc;

10) Updated and detailed time line for the design, supply and implementation of the Inspection site.

11) The time schedules shall include milestones for progress of the work and shall show in detail how the Contractor intends to adhere to the time schedule for timely completion of the works.

12) The list of personnel the Contractor intends to employ on site (including designers and sub Contractors), for Client's and IAA approval.

    Unapproved personnel will not be an excuse for the Contractor for any time delay.

2.3.3.5.2 Approved PDR plans, regarding civil works, are required for the process of licenses as well as IAA approval.

2.3.3.5.3 Technical Documents Content

1) Soil investigation;
2) Site development design, including reinforced soil retaining walls if any;
3) Power system design;
4) Air conditioning system design;
5) Communication system design;
6) Fire detection and extinguishing system;
7) Sanitary systems;

2.3.3.5.4 Time Schedules

Updated and detailed project time schedules including design, supply, and systems implementation stages. (Gantt)

2.3.3.5.5 Quality Control System

The Contractor shall submit the QC System plan for implementation of the inspection system as he intends to perform, according to the requirements.

2.3.3.6 **Preliminary Design Review for Radiography System (PDR – c)** Contractor's responsibility

2.3.3.6.1 The Preliminary Design Review for the X-Ray System will be conducted no later than 1.5 months AEDC.

2.3.3.6.2 The following subjects will be included in Review related to the screening inspection system:

a. X-Ray inspection system: Technical descriptions of the design, including geometrical and operational considerations, stability solutions, etc.
b. Imaging system: detector's parameter specification

c. System Performance

d. Material Discrimination full description of the proposed technology presentation of the capabilities of the technology in any form possible.

e. Scanning system: Description and relevant parameters: structure, velocity, stability, flexibility, operation, control and maintenance

f. Operational procedures: detailed description, workstations

g. Radiation Safety: requirements, design and implementation and documents required for licensing. The document must be prepared by Bidder's advisor: an Israeli professional, qualified and licensed according to the applicable Israeli laws, regulations and standards.

h. Workstations

- Operation: system operator,
- Image workstations: operation, image evaluation, image enhancement, etc.
- Data Base Workstation: details of data extraction, retrieval, processing' statistics

i. Maintenance: Contractor's preparation to provide the required maintenance (technician on site, critical parts to system operation, etc).

j. Computer: architecture, Central Data base, Archive module.

k. Description of all auxiliary systems and subsystems

2.3.3.7 **Systems PDR (Command and Control, SDMS) – (PDR – d) -** Contractor's responsibility

2.3.3.7.1 PDR for the systems will be conducted no later than 2.5 months AEDC.

2.3.3.7.2 At this stage the contractor shall present basic design principles for the following systems:

Security and CCTV systems.

Traffic control system (SDMS).

Communication systems.

PA.

LPR

Traffic lights, signposts, etc.

2.3.3.7.3 Technical descriptions and basic solutions for the incorporation and installation of the various systems will be presented

2.3.3.7.4 The Contractor shall present, for customer approval, detailed system acceptance test protocol for each system

2.3.4 **Detailed/Critical Design Review (DDR/CDR)**

2.3.4.1 General

2.3.4.1.1 The Contractor shall present a Detailed Design Review (DDR). The review shall cover all issues presented in the PDR together with all changes anticipated in the planning. A paragraph-by-paragraph specification and contract review shall be presented with all technical or schedule problems identified. The Review shall describe the specific equipment design, which the Contractor intends to implement.

2.3.4.1.2 DDR meetings will be conducted not later than:

a. DDR – a, site and Building construction – two (2) months AEDC.

b. DDR – b, Radiography System – three (3) months AEDC

c. DDR – c, Control and Security Systems – three (3) months AEDC

2.3.4.1.3 No later than two (2) weeks after Review completion, the Contractor shall submit, for final written approval, a Final documents, updated, according to the Client's remarks and comments at the Review meeting.

No further design changes shall be authorized after the final Review (CDR) without a written change order or approval issued by the Client.

2.3.4.1.4 Each document shall be submitted in for (4) copies.

2.3.4.1.5 Full participation of all the designers and sub Contractors is required.

2.3.4.2 **Detailed Design Review (DDR – a)**

2.3.4.2.1 For this stage, Contractor’s designers shall prepare a detailed planning following the guidelines of the professional bodies of the Client based on the preliminary design as submitted by the Contractor.

2.3.4.2.2 For that meeting, the Contractor shall prepare equipment lists (including data sheets), calculations, etc., of all equipment items to be supplied within the terms of the contract for the purposes of clarification and completion of the detailed planning.

2.3.4.2.3 The schedule for the detailed planning work is defined in the following table:

- Times - in calendar weeks,
- All times in each column are concurrent.

2.3.4.2.4 Planning schedule delays

It is hereby clarified that in case the Contractor does not meet the schedule and/or any stage of the schedule, the delay time shall not be deducted from the schedule of the project implementation.

2.3.4.2.5 List of drawings and documents

The drawings and documents that the Contractor shall submit include, but are not limited to, are presented in the following table:

Drawing description	Contractor	Client	Contractor	Client
	Time to submit from "AEDC" (weeks)	Drawings checking and approval	Updating drawing	Checks and final approval
Earthworks drawings	9	2 + 3	1	1 + 3
Framework plans, scale 1:50 + sections and front views (for building) *	9	4 + 3	2	2 + 3
Architectural drawings, scale 1:50 + sections and front views (for building)	9	3 + 3	1	1 + 3
Architectural details + furniture for building	16	3 + 3	2	2 + 3
Outdoor and indoor systems + equipment for building	16	3 + 3	2	2 + 3
Development work, scale 1:250 + details in proper scale	10	3 + 3	2	2 + 3
Data sheets, catalogs, manuals	16	3 + 3	2	2 + 3

* This stage includes the drawings and descriptions of all systems including radiography, mechanical system, control, communication, etc.

Total schedule for approval of planning and drawings: 23 weeks.

Notes:

1. Foundation drawings, foundation beams and floors, including sections and details, scale 1:50.

2. Work drawings, front elevations and sections, architecture and construction, scale 1:50.
3. Detailed drawings, scale 1:25, 1:10, 1:5, as applicable.
4. Carpentry, ironwork and aluminum work details and samples of connections and metal items.
5. Details of connections of iron works, aluminum works, carpentry, scale 1:1, scale 1:5 for plasterboard partitions, acoustic ceilings, etc.
6. Static calculations for all structures on the site. The Contractor is solely responsible for the correctness of the calculations. The signature of the Client on the drawings does not absolve the Contractor of this, which is solely his responsibility. Any damage to a structure resulting from faulty design shall be the Contractor's responsibility and the latter shall repair it at his own expense.
7. Complete specifications and warranty certificates for all products, materials and equipment used for building, including a list of Standards with which the various products comply.
8. Detailed drawings of all electromechanical systems, piping, electricity, air-conditioning, machinery, material handling systems, etc.
9. A list of all items of equipment used by the Contractor in construction systems (electricity, communication, air-conditioning, material handling, fire extinguishing, sanitation, etc.). For each item the following data shall be provided: Manufacturer's name, catalog number, name and address of the agent authorized to service this item in Israel.
10. Detailed drawings of the connection of the building to the various systems (electricity, water) and any other system required by the contract documents.
11. Detailed drawings for all earthworks, development work.
12. Any other documents, drawings, detail or brochure requested by the Client to clarify and complete the detailed design for its approval by the Client prior to implementation.

13. 3D imaging of the proposed design with cross-sections and fronts.

2.3.4.3 **Detailed Design Review for the Radiography System (DDR – b)**

2.3.4.3.1 General

Radiography system DDR will be conducted no later than two (2) months AEDC.

The DDR presentation shall include detailed description, revised and updated according to Client's comments, of all subjects presented at the PDR.

2.3.4.3.2 Documents and data

Presentation of the Radiography system shall include the following items:

a. X-Ray inspection system.

b. Imaging systems.

c. Scanning system.

d. Operation procedure

e. Radiation Safety.

f. Workstations screens: detailed presentation of the final operational screens (in Hebrew) incorporated for the workstations:

- Check-in /out operator
- Image operator
- Radiation system operator
- conveyor operator
- Vehicle pit operator
- System Data Base, system Archive, Central Data Base

g. Computer

h. FAT Protocol: A detailed description of the Factory Acceptance Tests planned for the inspection system

i. Time Table

2.3.4.4 **Detailed Design Review for the Systems** (DDR-c**)**

2.3.4.4.1 DDR regarding the Command and Control, SDMS, traffic control systems will be conducted no later than 7.5 months AEDC.

2.3.4.4.2 The DDR presentation shall include detailed design, revised and updated according to Client's comments, of all subjects presented at the PDR - c.

2.3.4.4.3 The contractor shall submit equipment specifications, data sheets, invoices and supplier names regarding each system planned to be incorporated in the facility.

2.3.5 **Critical Design Review (CDR)**

2.3.5.1 Critical Design Review for the X-Ray System (CDR –b)

2.3.5.1.1 CDR for the radiography system consists of Factory Acceptance Tests (FAT)

2.3.5.1.2 The objective of the FAT is to confirm contractor's declarations at the DDR regarding system performance (specifically the system designated to Begin-Terminal) any faults found in the FAT shall be amended before shipping the system to the clients location.

2.3.5.1.3 The CDR – b will be carried out at the client' site. The FAT will be carried out at the Contractor's factory or installation.

2.3.5.1.4 The tests will be performed for the final radiography system, manufactured by the bidder, prior to its installation on the site.

2.3.5.1.5 The tests shall be carried out according to the test protocol submitted by Contractor at the DDR and approved by the Client.

2.3.5.1.6 FAT of the Radiography system shall be performed not later than four (4) months AEDC.

2.3.5.2 Systems CDR, (CDR –c)

2.3.5.2.1 CDR for the databases, security systems, traffic control and archive systems will be conducted and tested not later than one (1) month after DDR.

2.3.5.2.2 At this stage the contractor shall submit detailed design of control, safety and security systems planned to be incorporated in the facility, operational procedures, interfaces and data flow.

2.3.5.2.3 The contractor shall submit equipment specifications, data sheets, invoices and supplier names regarding each system.

2.3.5.2.4 CDR for the TCS (Traffic control), database and archive systems will be conducted.

2.3.5.2.5 Upon successful completion of Factory Acceptance Tests, Client/CTA approval regarding the system will be given.

2.3.6 Documents approval

2.3.6.1 The Contractor's attention is called to the fact that the Client reserves the right not to approve documents and drawings mentioned above if they do not meet all the requirements of this SOW. In such a case, the Contractor shall be required to make all the corrections and modifications required by the Client and re-submit the documents for his approval.

2.3.6.2 All the documents, drawings, etc., after being approved by the Client shall be attached to the contract and form an integral part thereof.

2.3.6.3 The implementation of the work shall start only upon the completion of the detailed design process and drawings approval as stated above.

2.4 **Phase 3, Part 2 - Implementation** -Contractor’s and Client's responsibility

This phase comprises of the following:

2.4.1 Monthly Progress Report

The Contractor shall provide a monthly progress report describing the technical, schedule and management issues, the stator of major subcontractors’ operations and significant future milestones.

Every third month, the Contractor shall include the following additional information in the monthly report:

1) Program summary narrative to date.
2) Configuration status report.
3) Significant technical, implementation and design data, including internal test reports of components and system.
4) Subcontractors progress and delivery states.
5) Update milestone schedule.

The monthly program report will include **Gantt** chart reports produced by a common computerized project - managing program, describing planed program and actual status.

2.4.2 Work Meetings

2.4.2.1 During the Implementation Phase, at the site, weekly meetings on a regular basis shall be coordinated with the presence of Contractor's project manager / representative and Client's representatives.

2.4.2.2 The objective of these meetings is to closely supervise the works performed on site, to exchange updates regarding project progress and to work out difficulties.

2.4.2.3 It's Contractor responsibility to ensure the presence of the Project Manager or his representative with the relevant authorization.

2.4.3 Permits and Certification – Contractor responsibility

2.4.3.1 It is emphasized that obtaining all permits (building permit, etc.) as well as all certifications and licenses required for operation of the inspection implementation and operation of the inspection site is solely contractor's responsibility and shall be performed by the Contractor, at his expense.

2.4.3.2 Upon completion of the construction works and equipment installation the Contractor shall complete all the procedures and certifications required for site operation.

2.5 Phase 4 – Preliminary Acceptance tests

2.5.1 The Preliminary acceptance test shall be conducted not later than 4.5 months AEDC.

2.5.2 The Preliminary acceptance test shall be performed only when the Contractor shall submit to the Client a complete plan and procedures for carrying out a full test of the inspection facility and the equipment installed in the site after receiving all permits from the relevant authorities.

2.5.3 The test plan, for each discipline, system and subsystem, shall be submitted at least two weeks before they are due to be performed.

2.5.4 Test plan and procedures should be approved by the Client/Client Technical Advisor (CTA).

2.5.5 The Contractor shall inform the Client when the work has been completed and the corresponding system is ready for inspection.

2.5.6 Test date shall be coordinated with the Client / CTA (no later than ten (10) working days from receipt of Contractor notification) and examination shall be performed in the presence of Contractors authorized representatives.

2.5.7 A list of defects (if any) will be recorded in the Minutes and Reports of the Tests. The Contractor undertakes to repair these defects within a reasonable time from the time the list is delivered.

2.5.8 Upon completion of the repairs, another examination will be made by the Contractor and upon Client approval and after at least one training course period done, the Pilot Phase shall begin.

2.6 Phase 5 – Site Operational Pilot

Upon successfully passing the Preliminary Acceptance tests and receiving all permits from the authorities, the site will be run for one month by and under the responsibility of the Contractor. During that period Client's staff will undergo a training course.

2.6.1 Training

The Contractor shall perform training courses for all systems' operators, including: conveyor type radiography system operator, image analyzers, basic (first level) maintenance, radiography system instructors, etc.

2.6.1.1 The Contractor shall conduct the training in Israel at his expense. The training shall consist of orderly theoretical and practical courses for the customer’s operators.

2.6.1.2 The object of the courses is to train the operators to perform operations of each system / subsystem installed at the site and to provide basic knowledge of Level A maintenance activities.

2.6.1.3 The Contractor shall specify each course content and aids. The Contractor will submit course materials, for approval by the Client/CTA, at least six weeks before each course beginning.

2.6.1.4 The Contractor shall submit a list of personnel and the functions they perform who will require instruction in the operation and maintenance of the various systems on the site.

2.6.1.5 The training program shall include theoretical and practical instruction, presenting the site facility overview "top down", and shall train the personnel of all information about the system and its operation (operational concept, maintenance, etc).

2.6.1.6 Training programs shall be prepared for:

- Radiographic system operators
- Image analyzers
- Traffic (SDMS) operators
- Check-in/out operator
- Supervisors
- Instructors
- Radiation safety

2.6.1.7 The training material shall be supplied to the Client in three (3) hard copies and on digital media (MS office)

2.6.1.8 The supplied technical literature for the training shall include all instructor frontal presentations, trainee literature, certifications tests, practical exercises and Operators Manual, English and Hebrew Versions.

2.6.1.9 Four (4) Operators (all functions) Training sessions, each session of 16 operators, will be conducted. The Client will set the date for the last (4-th) session – up to one year following the date of first session.

2.6.1.10 The radiography courses will end with a final certification test.

2.6.1.11 Operators that passed the training course and tests successfully will be certified by the Contractor to operate the systems.

2.6.1.12 The Contractor shall perform any other activities required in order to conduct supplementary training**.**

2.6.1.13 All the training activities shall be conducted in Hebrew, at the inspection site in Israel.

2.6.1.14 Instructor Training session

One (1) instructor training course (covering all training) designated to prepare Israeli instructors to instruct and train additional Israeli operators and instructors will be conducted.

2.6.2 Operational Pilot – 3 months period

The facility will be run, for three additional months, by the customer's employees, under the supervision of the Contractor.

2.6.2.1 The objectives of this phase are:

- To train customer's employees, under Contractor's coaching, how to operate the facility
- To check system's functioning during full facility operation

2.6.2.2 Modifications or alternations required as result of deficiencies or malfunctions diagnosed during the operational pilot period shall be implemented by the Contractor and tested to be approved by the Client.

2.6.2.3 The Contractor shall submit the required documentation (as detailed in the next paragraph), including As Made drawing, systems manuals, operation and maintenance data for Client's approval.

2.7 Phase 6 – Final Acceptance Tests

2.7.1 Final Acceptance tests will be performed according to the procedures detailed in this SOW.

2.7.2 At least the following will be tested:

2.7.2.1 Site infrastructure (water, sewage, communication, electricity)

2.7.2.2 Site development (roads, pave walks, etc)

2.7.2.3 Building's construction (Offices, Subsystems, furniture)

2.7.2.4 Site operation

2.7.2.5 Radiography system performance

2.7.2.6 SDMS system

2.7.2.7 Control and Security systems

2.7.2.8 Safety

2.7.3 The Final Acceptance Test shall begin no later than 5 working days from receipt of the Contractor's notification stating the systems are ready for tests. The examination shall be performed in the presence of the Contractor's authorized representative.

2.7.4 Upon completion of the tests and should the results of the examination be in accordance with the defined requirements of this SOW and the Test Plan, the final tests shall be completed and the warranty period shall commence.

2.8 Phase 7 – Warranty year

2.8.1 The Contractor is responsible that, after the final acceptance, all the facilities, systems and equipment supplied within the contract, have all their parts functioning and that their performance is in accordance with all the specifications detailed in this SOW and/or in the contract proposal and undertakes that the equipment shall be free of any damage and that it is supplied according to all specifications and standards.

2.8.2 The Contractor is responsible and will repair and/or replace any equipment in which a defect is detected within warranty period from the final acceptance of the facility or according to an optional additional longer warranty period as specified in the contract.

2.9 Phase 8 – Service and Maintenance (Annex Hebrew version) – 10 years

3. Project Management – Guidelines

3.1 Project Manager

3.1.1 Project manager and his alternate shall be designated by the Contractor.
The Contractor shall appoint a project manager to coordinate and check, on his behalf, all the work carried out by the Contractor. The project manager shall follow up all the planning stages, the approvals, implementation and overall supervision as the Contractor's representative.

3.1.2 The Contractor, at all times during performance of the contract and until the work is completed and accepted by the Client, shall directly superintend the work, or assign a superintendent, who shall have authority to act for the Contractor.

3.1.3 Communication between the Customer and the Contractor and vice versa shall be conducted via the Project Manager or his substitute and them alone.

3.1.4 The Project Manager or his alternate must sign all the documentation submitted to the Client/CTA.

3.2 Safety Officer

The Contractor shall appoint, in addition to the manager, a safety officer with a comprehensive knowledge and understanding of all local regulatory requirements relating to safety, health, environment and occupational safety. The safety officer responsibilities shall include creating, maintaining and ensuring a safe working environment for all personnel in the site during the implementation of the project. The role also includes preparing a survey and formulating operational procedures that recognize hazards following the Israeli regulations (formulated by Work Supervision Organization).

3.3 Quality Assurance Officer (QA)

The Contractor shall appoint, in addition to the manager, a quality assurance officer with a comprehensive knowledge and understanding of all local regulatory requirements relating to quality of work and procedures. The role also includes preparing a survey and formulating operational procedures that will make sure that all operations, materials and procedures are done with the upmost quality care.

3.4 Supervision by the Client's Representative (CTA)

3.4.1 Client Technical Advisor (CTA) is Client's Representative. At each project Phase the CTA will perform project supervision.

CTA approval at each stage of the work shall be required. All work materials, manufacturing and implementation processes, and methods of construction shall be supervised and approved by the CTA.

3.4.2 Client's representative may approve acceptance of any material or workmanship or reject it if he finds either or both to be unsatisfactory.

Unless approved by the Client or the CTA no material or part shall be shipped from its factory without prior inspection and approval.

3.5 Correspondence regulations

3.5.1 Unless otherwise specified, all documents mentioned in this document shall be submitted to the Client / CTA.

3.6 Work meetings

3.6.1 The Customer may summon meetings with the Contractor within Client's facilities.

3.6.2 The Contractor is obligated to summon all relevant representatives needed (after approval by the Client), in addition to Client's representatives.

3.7 Management Plan

The Contractor shall submit a detailed management plan for the design, supply and the implementation of the Inspection Facilities. The plan shall be in the form of a “Gantt” chart.

The detailed implementation plan shall be integrated in the program’s master schedule and presented for customer approval before Contract award.

3.8 Designers, Manufacturers and Subcontractor List

3.8.1 The Contractor shall submit a list of well-experienced designers, which he intends to employ in the different work stages, for Customer approval. The same shall apply to Sub-Contractors and manufacturers. Particularly, the Architectural designer shall be an Israeli based firm. All local participating firms shall be registered and approved suppliers.

3.8.2 Special terms

a. The Contractor must employ designers/consultants meeting applicable requirements of the Israeli laws, regulations and standards applicable to the project. Only those designers/ consultants will sign any plan submitted to the Client and Israeli Authorities.

b. The Contractor is responsible for the coordination of the overall planning (the erection of the building, systems and infrastructures) and that he and his consultants and designers meet the schedules specified for the design.

c. The design and implementation details shall be approved by the Client before their implementation.

d. The Contractor shall carry out the planning stages in full coordination with the Client.

e. At the completion of each planning stage, Client/CTA will approve the applicable drawings. This approval does not detract from the responsibility of the Contractor and his designers to meet all applicable requirements and specifications.

f. Documents, drawings and data sheets shall be submitted in three hard copies for comments.

3.8.3 Designers employed by the Contractor (in Israel)

3.8.3.1 All the planning inspection and work to be carried out by the Contractor according to this SOW shall be carried out by architects, civil engineers, electrical engineers, etc., whether they are self employed or Contractor's employees, this designers shall be qualified and licensed according to the applicable Israeli laws, regulations and standards having a professional experience of at least 5 years.

3.8.3.2 The planning manager and the designers will be subjected to a security clearance and approval by the Client.

3.8.3.3 The agreement of the Contractor with the designers shall include, among others, a clear obligation of the designer towards the planning manager and the Contractor to carry out the planning work at proper professional standards, according to the professional rules and the guidelines included in this SOW.

3.8.3.4 In addition, the agreement shall include visits of the designers to plants manufacturing items like steel structures, metal work, carpentry, aluminum parts, etc., for the project. General supervisory visits shall be coordinated with the supervisor. The designer shall submit his comments on the visit to the supervisor in writing. Copies of periodic general supervisory report shall be kept in the site foreman's office at the plant for supervisor's inspection.

3.8.3.5 Collecting and keeping the reports and comments of the designers shall be the responsibility of the planning manager.

3.8.3.6 Official documents, required for submission to various authorities, shall be prepared in Hebrew.

4. SOW provisions

4.1 Visiting the site and studying the work conditions

4.1.1 The site is located at the Jorden River site. The Contractor confirms that he is aware of the site conditions and accepts it as is.

4.1.2 The work shall be carried out in full coordination and approval of the Client supervisor (CTA) and Israel Airports Authority (IAA) as well as of local Authorities. No work should begin without prior approval and coordination with them.

4.2 Access to / in the site area

4.2.1 The Contractor's work within the site shall be limited to work sites only.

4.2.2 The access routes to and from the work site shall be coordinated with the relevant authorities (IAA and relevant Local Municipality) and the Client.

4.2.3 Any damage caused to existing roads and/or platforms shall be repaired immediately by the Contractor to the full satisfaction of the IAA and the Client.

4.2.4 If required (and if possible), a temporary road to the site will be constructed by the Contractor, in cooperation with the Client, and on his own expense.

4.3 Site Cleanliness

4.3.1 Site cleanliness and garbage removal

The Contractor shall clean the work site immediately at all times during the day and at Client/CTA's demand and remove the garbage from the site, to a garbage disposal site approved by the proper local authority (no matter how distant) at his expense.

4.3.2 Removing digging, dismantling materials, debris and garbage

The Contractor shall remove digging material, dismantling materials, debris and garbage of any kind, at his expense, out of the site, to a garbage disposal site approved by the proper local authority (no matter how distant).

This instruction does not refer to dismantled materials that may be reused.

4.4 Work Safety

4.4.1 Works on site shall be implemented following all requirements as defined by the Client and IAA.

4.4.2 Contractor shall furnish and construct all guardrails, fences trestles, tags, signs, shaft ways, false work and other temporary structures as required by the regulation in order to ensure the safety of all personnel on site at all times during the works.

4.4.3 A temporary 2-meter high metallic safety fence and gate shall be erected around the work areas with proper signs, and the entrance to each work site should be closed, according to the various work stages.

Upon the completion of the work, these fences shall be removed.

4.4.4 All expenses incurred for meeting the safety regulation shall be on the Contractor.

4.4.5 Contractor shall be responsible for all injuries to persons or property of any kind whatsoever occurring due to these constructions.

4.5 Contractor's Organization in the site

4.5.1 The organization areas of the Contractor shall be in a location indicated by the Client/supervisor. The Contractor shall receive, in advance, Client's/IAA approval regarding the location of the storage areas, equipment and materials warehouses, as well as workers' lavatories and services.

4.5.2 Site's built facilities are prohibited for use by the Contractor and his teams, (workers or subcontractors) in any way or form. Rather, the Contractor should provide his own facilities: offices, restrooms, storage areas, etc. to be used by the working teams as needed: eating, sleeping etc.

4.6 Avoiding interference

4.6.1 The Contractor's attention is called to the fact that during the implementation of his work in the site, the ongoing activities of the terminal in this area will continue, including possible new facilities near the work site. The Contractor shall not interfere with these activities and shall carry out his work with maximum consideration, cooperation and coordination.

4.6.2 The Contractor undertakes not to place materials and equipment on the public access road to the site and to conduct his work without obstruction of any sort to vehicular and pedestrian traffic.

4.6.3 Entrance of Contractor's workers to the area will be coordinated with Site's Owner / Israel Airports Authorities. It should be clear that due to possible restrictions, the Contractor will adjust his work during the restriction hours and Terminal limitations.

4.6.4 The Contractor shall take all possible steps and at his own expense to give warning to prevent any disturbance including signal lamps, flags, etc. as required by law.

4.7 Contractor's Responsibility

4.7.1 The Contractor shall ascertain in advance the presence of various facilities and systems in the various work parts.

4.7.2 The responsibility to avoid damage to terminal facilities shall be the Contractor's solely. In case of damage, the Contractor shall repair them at his expense, even when locations were indicated on the drawings.

4.7.3 The contractor will be held responsible for any damage to the facility and the equipment installed and/or stored in it, until successful completion of the final acceptance test and handing over the complete facility. Any damage resulting from the above will be repaired by the contractor and solely at his expense.

4.7.4 The contractor will be held responsible for and damage to any person working or visiting the facility, until successful completion of the final acceptance test and handing over the facility to the Client. The contractor will have valid insurance policy covering employs as well as third party.

4.8 Project Documents

4.8.1 Contractor's responsibility for planning documents

4.8.1.1 The approval of the drawings by CTA on behalf of Client at any stage will not absolve the Contractor of his full responsibility for the contents of the documents, the design quality, static calculations and other documents submitted for Client's approval. Client's approval will not absolve the Contractor in respect of mistakes, inaccuracies and errors in the calculations,

if such mistakes, inaccuracies and errors are detected.

4.8.1.2 Any damage resulting from the above will be corrected by the Contractor, and solely at his expense.

4.8.2 Delay in submitting documents

4.8.2.1 Contractor's delay in submitting documents for Client's approval beyond schedule shall not constitute a cause for a claim by the Contractor to extend the time allocated for the project implementation.

4.8.2.2 In addition, if the drawings are submitted in time but are rejected by the Client, returned to the Contractor and re-submitted for approval, no claim to extend the planning and implementation period of the project will be accepted and this delay will not constitute a cause for canceling delay liquidated damages.

4.8.3 Conflicting documents

4.8.3.1 In any case of conflict between the text of the specification and the text of a drawing, whether Client's or Contractor's, and in any case of conflict between any document of this SOW and another document referred to in the contract, the Contractor shall notify Client in writing and report on such a conflict within 7 days from its detection.

4.8.3.2 Client will instruct the Contractor in writing with respect to the conflict and/or clarify the uncertainties, regarding the prevailing interpretation.

4.8.3.3 Should the Contractor fail to do so and carry out the work which is the subject matter of said conflict, without Client's approval, all the modification and/or demolition work costs of the said part of the work and/or costs of any other action instructed by the Client will be paid solely by the Contractor and no claim on the Contractor's side, due to said conflict and/or vagueness, etc., will be accepted.

4.8.3.4 Any drawing or list intended for implementation by the Contractor should be signed by the Client and bear the date of approval.

4.8.4 Documents used in project planning

a. Project specifications.

b. Guideline drawings attached to the SOW.

c. Israeli laws, regulations and Standards or applicable foreign standards, if there are no Israeli Standards.

d. Specifications from IDF Building Center guidance manuals.

e. Contractor's drawings which received Client's approval for implementation shall replace the guideline drawings noted in subparagraph b. above.

4.9 Construction and Implementation works

4.9.1 Priority of Works

The work, the subject matter of this SOW, shall be executed simultaneously in the building. However, the Client /Client's representative is entitled to set the work implementation order according to his priorities. The Contractor shall not be entitled to any extra payments for setting the order of priorities for implementation by the Client.

4.9.2 Responsibility for existing buildings and infrastructures

4.9.2.1 The Contractor shall be responsible for the integrity of existing roads and infrastructures inside and adjacent to the site and shall repair, at his expense, any damage that may have been caused to them as a result of his work.

4.9.2.2 Upon detecting any underground facility during the work, the Contractor must at once notify the Client and receive his instructions as to how to proceed.

4.9.2.3 Before digging, either manually or with a machine, the manager and supervisor should have all the relevant information. The Contractor should investigate and ensure there are no conduits or cables in the digging lines as follows:

a. Telephone cables.

b. Electrical cables.

c. Water and sewer pipes.

d. Fuel and gas lines.

4.9.2.4 The Contractor is responsible for any damage caused to those buildings and facilities mentioned above.

4.9.2.5 He undertakes to repair them at his expense to the full satisfaction of the supervisor, even when not indicated on the drawings. The repair should be made as soon as the damage is detected, at a time specified by the supervisor to avoid any obstruction of the ongoing activities at the site.

4.9.3 Disagreements during Implementation of the Work

In case of disagreement during construction regarding interpretation of drawings, the final binding decision will be made solely by the Client.

4.9.4 Supervision of Implementation of the Work

In addition to Contractor's daily work Supervisor on the site, the CTA will conduct global supervision on behalf of Client. The CTA will monitor implementation during the entire work period in full coordination with the contractor's implementation representative and contractor's supervisor (the implementation engineer).

4.9.5 Water and Electricity

4.9.5.1 The connection to water and electricity sources and their conduction to the work site and current outlays shall be at the Contractor's expense, with prior coordination with the Israel Electric Company, IAA and local Municipality (for water and sewage). The connection of electricity and water meters will be under the Contractor's responsibility and at his expense.

4.9.5.2 The water and electricity connection points and the current for the constructor (in amperes) shall be determined during the Contractor's tour of the site.

4.9.5.3 The water supplied to the Contractor shall be for work purposes only.

4.9.5.4 Client shall not be liable for interruptions in electricity and water supply, and the Contractor is responsible for making proper advance preparations to overcome such water and electricity interruptions (water reservoirs, generators, etc.).

4.9.5.5 Client shall supply the utilities (electricity, water & sewage) up to the site boundary.

4.9.6 Radio and Telephone

4.9.6.1 Ordering a telephone line will be done on the Contractor’s responsibility and at his expense.

4.9.6.2 The telephone/fax on the site shall be made available to the Client without limitation and free of charge.

4.10 Office on the site

4.10.1 The Contractor shall establish an office on the site, with the IAA approval, having the dimensions of at least 3.0 x 6.0 meters. The air conditioned office shall include (at least): a desk, conference table for at least 8 people, 8 chairs, Telephone and Fax machine, metal cabinet with a lock for storing files and drawings, lighting, heating and arrangements for hanging drawings on the wall.

4.10.2 The office will include kitchenette and restroom facilities.

4.10.3 The office may be a building or a pre-cast unit but in any case it shall be protected against weather conditions. Any documents mentioned in the contract should be kept there at all times. The Contractor shall keep the office clean during the entire work period. When not used by Contractor's supervisor, the office shall be locked. Contractor's supervisor shall have a key to the office for his exclusive use during all hours of the day.

4.10.4 Upon completion of the work the Contractor shall remove the office structure from the site and return the area to the designated condition. The location of the office shall be coordinated, agreed upon and approved by the Client.

4.11 Warehouses

4.11.1 The Contractor shall build various warehouses and structures on the site for storage purposes and/or for his offices, according to a detailed plan including locations to be submitted to the supervisor.

4.11.2 All the warehouses shall be temporary and upon completion of the work the Contractor shall remove them from the site, the place shall be cleaned and the site returned to its previous condition.

4.11.3 The Contractor will not be allowed to use any of the facilities buildings or rooms for storage.

4.12 Selection of Equipment

4.12.1 The equipment to be installed will be of a heavy duty, from a manufacturer having a duly authorized agent in Israel who can provide maintenance services and spare parts in Israel. The Contractor shall submit to Client a list of the equipment to be installed in the building and receive approval with respect to the type of equipment.

4.12.2 All materials and equipment shall withstand harsh sea-shore conditions. All surfaces shall be plated, galvanized and painted with special epoxy paint.

4.12.3 The Contractor shall submit to the supervisor a sample of the equipment and materials intended for installation in the building, and receive his approval before installation.

4.13 Substitution of Materials or Products

4.13.1 Should the Contractor request to substitute a material or product (specified or approved), details of the material or product shall be submitted to the Client / CTA.

4.13.2 Client's representative (CTA) will consider approval, if the following conditions are fulfilled:

a. The new material or product is equivalent or superior in quality to the original.

b. The substitution of the material or product shall not constitute grounds for a claim by Contractor for additional payment, even if the new material or product is of superior quality.

SOW terms

4.13.3 Ownership of the drawings

The parties agree that all the drawings provided by the Contractor shall be owned by the Client, which shall be allowed to use all or part of them for any purpose.

4.13.4 Ownership of Systems software

4.13.4.1 The parties agree that all the software provided by the contractor shall be used by Client on a royalty free license basic, which shall be allowed to use all or part of them free of any limitations.

4.13.4.2 After the completion of the installation and successful operation of all the software systems, the contractor shall hand over a full package of original licensed copies of all software implemented in the project and full package of updated backup for all the software used in the project.

4.13.4.3 Systems' Software updates will be part of the service and maintenance contract and will be provided free of charge during the 10 years maintenance.

4.13.5 Site "As Made" plans

4.13.5.1 After the completion of his work, the Contractor shall hand over the original drawing sheets to Client.

4.13.5.2 All the drawings, according to which "the work" with all details and systems for all the building and the other works shall be executed, shall be the Contractor's drawings, signed by him, in addition to the signature of the applicable consultants.

4.13.5.3 If the drawings are proprietary or protected by copyrights or patents, the Client will use these drawings with the Contractor's approval.

5. Contractor's Quality Control System (CQCS)

5.1 General

5.1.1 The contractor shall establish a Quality Control System for the implementation of adequate inspection and tests of all items of work, including that of his subcontractors, to ensure conformance to applicable specifications and drawings in respect of the materials, workmanship, construction, finish, functional performance, and identification for facilities.

5.1.2 The contractor is responsible for the coordination and payment for all tests required to be performed during the quality control process or prior to final acceptance or any usable phase thereof.

5.2 CQCS Specific Requirements

5.2.1 The contractor's Quality Control System (CQCS) is the means by which the contractor assures himself that his construction complies with the requirements of the contract plans and specifications.

5.2.2 The contractor shall implement the CQCS immediately after commencement of work.

5.2.3 The controls shall be sufficient to cover all construction operations, including both on-site and off-site manufacture and shall be keyed to the proposed construction sequence.

5.2.4 The controls shall include as a minimum three phases of inspection for all definable phases of construction as follows:

5.2.4.1 Pre-inspection.

5.2.4.1.1 This inspection shall be performed prior to beginning of any work on any definable phases of construction as shown in contractor's schedule.

5.2.4.1.2 It shall include a review of contract requirements, a check to assure that all materials and/or equipment have been tested and approved, a check to assure that provisions have been made to provide required control testing; examination of the work area to ascertain that all preliminary work has been completed; and a physical examination of materials and equipment to assure that they conform to approved shop drawings or submitted data and that all materials and/or equipment are on hand.

5.2.4.1.3 The Client representative shall be notified at 45 days in advance of the preparatory inspections and such inspection shall be made a matter of record.

5.2.4.2 Initial inspection

5.2.4.2.1 This inspection shall be performed as shown in the contractor's schedule and as soon as a representative portion of the particular phase of construction has been accomplished and shall establish the acceptable standard of workmanship, including a review of control testing for compliance with contract requirements, use of defective or damaged materials, omissions, and dimensional requirements.

5.2.4.2.2 This initial element of the work will be considered as an on-site sample, to be reviewed and approved by the Client's representative prior to continuation of construction. The Client's representative shall be notified at least 45 days in advance of the initial inspection.

5.2.4.3 Follow up Inspection

This inspection shall be implemented daily to assure the continued compliance with the contractor's requirements, including control testing, until completion of the particular phase of construction.

5.3 CQCS Plan

The contractor shall prepare the CQCS plan which shall include the personnel, procedure, instructions, and records to be used. This document shall include as minimum:

a. The quality control organization (chart).

b. Qualifications of personnel.

c. Authority and area of responsibilities of quality control personnel.

d. Plan for accomplishing quality control inspections including that for his subcontractor.

e. Detailed listing and designation of all tests to be performed.

f. Method of documenting quality control operations, inspections and testing.

g. An explanation as to how the quality control organization relates to other staff elements as regards shop drawing submissions, as built drawings, revisions to the contract and safety.

5.4 CQCS Organization

The contractor's quality control organization shall be adequately staffed to perform the following tasks:

a. Conduct all phased inspection (preparatory, initial, and follow-up in accordance with paragraph above.)

b. Perform all testing required under the technical specifications and provisions of this attachment.

c. Prepare weekly QC reports in accordance with required hereinafter.

d. Review and approve all shop drawings.

e. Inspect materials as they are delivered on site to insure compliance with approved shop drawings and specifications.

f. Conduct off-site inspections of supplies and services to be incorporated into the work.

5.5 CQCS Report

The contractor shall submit a monthly QC report. The report shall contain a record of inspections and tests for all work accomplished since the previous

report and shall include the following information for each activity in-progress:

a. Progress schedule activity identification and description.

Dates of the commencement and completion of each operation;

b. Phases of construction underway during the time frame of the report (i.e. earthwork, concrete work, etc.)

c. Phase inspection (preparatory, initial, or follow-up) phase of construction and location of inspection and/or tests that were made.

d. Results of Inspections, including nature of deficiencies observed and corrective actions taken or to be taken.

e. Report of tests performed, including those specified, with the results including failures and remedial action to be taken.

f. Results of inspection of materials and equipment upon arrival at the site and prior to incorporation into the work for compliance with submission approvals, damage and proper storage.

g. Off-site QC activities.

h. Instructions received from the Client's representative.

i. In all cases, the report must be verified and signed by the Quality Inspector appointed by the contractor.

j. Safety Instruction.

5.6 Certified Laboratories

5.6.1 All tests are to be performed by approved laboratory technicians employed by an approved laboratory (e.g. Technion or Standards Institute of Israel).

The Client's representative reserves the right to utilize the above mentioned control testing laboratory to make spot tests and to check contractor’s testing procedure, techniques, and test results at no additional cost to the Client.

6. Acceptance Tests and Documentation

6.1 Preliminary Acceptance Test (performed at suppliers facility/site) (as defined in Section 5)

6.1.1 The contractor shall submit to the Client a full acceptance test procedures to be implemented in respect of all items and equipment defined by the SOW specification and/or contract, signed by the contractor's internal quality manager.

6.1.2 The Client/CTA may alter the proposed test procedures submitted for his approval by the Contractor as well as add additional tests to those proposed, with the aim of ensuring full testing and compliance with specifications at the levels of both individual components and the entire system.

6.1.3 The test procedures supplied shall include a full set of technical testing tools, if required for the testing.

6.1.4 Technical specifications for testing each of the systems will be provided. These specifications will be approved by Client and serve as technical specifications during the final acceptance tests of each of the facilities/systems. The specifications shall include operation and testing instructions written by the manufacturer of the system/equipment for each facility. These specifications should be submitted not later than one month prior to the completion of the work (i.e., implementation of the acceptance test) according to the schedule submitted by the Contractor.

6.1.5 The client has the privilege to skip the Preliminary Acceptance test.

6.2 Factory Acceptance Test of the radiography system (CDR - b)

6.2.1 The main objective of these tests is to measure radiography system performance in order to confirm contractor's declaration in the proposal before shipping the system to Israel.

6.2.2 The tests are an integral and mandatory part of system implementation process, will be conducted according to Contractor's proposal at the PDR/DDR-b meeting, including FAT protocol, time table and tests location and Client's approval prior to shipment of the system to Israel.

6.2.3 These tests will be conducted, using the designated Test Device, according to the definitions given in this document in Section 5 regarding radiography system performance, features and operation.

6.2.3.1 Radiographic performance

The following parameters will be measured at the 9 defined positions:

- Penetration.
- Wire-type IQI.
- Hole-type IQI.

6.2.3.2 Material Discrimination

6.3 Preliminary site Acceptance Tests

6.3.1 The main objective of these tests is to measure radiography system performance in order to confirm contractor's declaration in the proposal after shipping the system to Israel and after FAT has been obtained.

6.3.2 A comparison between the FAT and the preliminary site acceptance test shall be performed to make sure that the system performs as tested in the FAT.

6.3.3 These tests will be conducted, using the designated Test Device, according to the definitions given in this document in Section 5 regarding radiography system performance, features and operation.

6.4 Final Acceptance Tests

6.4.1 General

6.4.1.1 The contractor shall submit the Client a complete Plan and procedures for carrying out a comprehensive test of the installation, site's infrastructures, the systems and equipment parts installed in it at least two months before they are due to be implemented.

6.4.1.2 The Test Plan and procedures, following the guidelines and requirements of this SOW regarding each subsystem, should be approved and signed by the Client.

6.4.1.3 The contractor shall inform the Client when all the work has been completed and the installation is ready for inspection. This notification shall include a declaration on the part of the contractor that the installation is complete, that

the system has been calibrated and that it is ready for operation and is of a quality and performance as required by this SOW.

6.4.1.4 The Acceptance Test of the Client shall begin no later than 14 working days from receipt of the contractor's notification. The examination shall be performed in the presence of the Contractor's authorized representative (Project Manager).

6.4.1.5 A list of defects (if any) will be recorded in the Minutes and Reports of the Tests. The contractor undertakes to repair these defects within a reasonable time from the time the list is delivered to him. Upon completion of the repairs, another examination will be made by the contractor, and should the results of the examination be in accordance with the defined requirements of this SOW and the Test Plan, the final tests shall be completed by the client and client's technical advisor. Final approval shall be given by the client and client's technical advisor after which the warranty period shall commence.

6.4.2 Electric System Inspection

6.4.2.1 The electrical system shall be inspected in accordance with the Israeli Electrical Law and Regulations. The inspection will be completed upon the completion of the electric system installation, prior to the connection of the electric system to the electrical grid and before operating the electric system or any of its components.

6.4.2.2 Inspection of the electric installations shall be made by a licensed "checking electrician" who shall be invited by Client representative (CTA).

6.4.2.3 The inspection fee shall be paid by the Contractor. The Contractor shall provide all means and instruments necessary for the inspection.

6.4.2.4 The electrical installations shall be operated only after the inspector approves their good order and authorizes their connection to the electrical grid.

6.4.3 Fire detection and extinguishing system inspection

6.4.3.1 These systems shall be inspected and approved by the Standard Institute of Israel (SII) and shall be inspected and approved by the municipal fire and rescue services.

6.4.3.2 Upon the completion of the systems, the contractor shall invite the SII

representative to conduct the check up.

6.4.3.3 The contractor shall submit the report to the customer and repair all the remarks, until final approval.

6.4.3.4 The SII and Firefighting Authorities Inspections shall be on the contractor expenses.

6.4.3.5 The official Firefighting Authorities' Approval: confirming that the facility passed all tests and may start operation - shall be submitted to the Client by the Contractor.

6.4.4 X-Ray radiation safety inspection

6.4.4.1 The X-Ray systems shall be inspected for safety, and approved by representatives of the GOI Department of Labor and GOI Department of Environment and any other approved laboratory or authority as defined in the Israeli Regulations.

6.4.4.2 The contractor shall submit to the Client the Official Safety Approval.

6.4.4.3 The contractor shall carry all the inspections and approvals expenses.

6.5 Factual (As Made) drawings / plans

6.5.1 The Contractor shall provide the following documents prior to Client's final acceptance of the work:

6.5.1.1 The plans, depicting the actual status of each facility/ building build, both structural and architectural, as well as drawings for the following systems:

Screening system,

Conveyor system,

Computer systems,

Security Systems,

Control systems,

Sanitation facilities,

Electricity and communication facilities,

Air conditioning facilities,

Heating installations,

Water lines, sewer pipes and ditches,

Signs system,

Fire detection and extinguishing,

Site and surrounding area.

6.5.2 The factual drawings (depicting the actual status) referring to underground installations shall be prepared based on measurements of a licensed surveyor. The supervisor shall approve the factual drawings depicting the actual status.

6.5.3 These documents, depicting the actual status of the facility will be submitted in five copies and one set of originals and digital media. The originals will be those approved by the Client, signed by him and bearing the approval date

6.5.4 Technical specifications for testing each of the facilities and their acceptance by the Client will be provided. These specifications will be approved by the Client and serve as technical specifications during the final acceptance tests of each of the facilities. The specifications shall include operation and testing instructions written by the manufacturer of the equipment for each facility. These specifications should be submitted not later than two months prior to the completion of the work (i.e., implementation of the acceptance test) according to the schedule submitted by the Contractor.

6.6 Facility manuals

6.6.1 The facility manuals shall be in Hebrew and English and shall include, at least, the following data:

6.6.1.1 Schematic diagrams describing each building with all internal and external systems, including a schematic diagram of the electrical board.

6.6.1.2 Operation and maintenance instructions for each system in the building, based on the manufacturer's instructions.

6.6.1.3 Troubleshooting procedures for all systems.

6.6.1.4 Catalogs of all equipment items supplied within the building, including mechanical and electrical systems.

6.6.1.5 A priced list of recommended spare parts for the systems, including catalog numbers, manufacturer's name, address of the manufacturer or his agent in Israel, and details that will enable the purchase of spare parts.

6.6.1.6 Operation and maintenance instructions at level A – Operator: detailed instructions and flowcharts accompanied by explanations by means of drawings to show commands, etc., including color photographs of all components of the equipment in their final location, prepared in coordination with the customer.

6.6.1.7 Training course Syllabus.

6.6.1.8 Detailed preventive and periodic maintenance instructions, location and repair of breakdowns for each sub-system, including priced list of recommended spare parts.

6.6.1.9 Warranty certificates of the manufacturers of all systems installed in the building.

6.6.1.10 List of drawings for the whole project.

6.6.2 The manuals (English and Hebrew versions) will be submitted to the Client in five (5) copies and on digital media. The hard copies will be bound in binders and/or standard files that will include a suitable folder for drawings.

6.6.3 Upon completing the preparation of the literature, prepared in full coordination with the customer, the Contractor shall deliver the draft for Client approval at least 2 months before the acceptance tests.

6.6.4 The submission of the above mentioned documents will be a precondition for the acceptance of the project (including construction) by the Client. No financial claims will be accepted with respect to the preparation of said documents.

6.6.5 All manuals and data shall be submitted in hard copies and digital media.

7. Operation, Service & Maintenance

7.1 Licenses and Permits

7.1.1 Safety

7.1.1.1 The Contractor is responsible for all safety aspects of the systems.

7.1.1.2 The Contractor shall tutor Customer operators, as needed, in all safety aspects required for systems operation.

7.1.2 The Contractor's representative in Israel shall be certified to work with high energy X-Ray accelerators, according to the Israeli law and regulations. The Contractor's representative in Israel shall have the licenses and permits to operate the system in their facilities and the ability to fully inspect, calibrate and service the system.

7.1.3 It is the Contractor's responsibility (schedules, payment etc.) to obtain all of the required radiation permits, to invite the authorized laboratories to certify the safety of all and any specific system, before any operation by Client can be performed during the whole process.

7.2 Training

7.2.1 The Contractor shall conduct the training at his expense.

7.2.2 The training shall consist of orderly theoretical and practical ("hands-on") courses of three (3) sessions each of 12 customer's operators and one instructors' session.

7.2.3 The object of the courses is to train the operators to perform operation and Level A maintenance activities for each system installed at the site. Operator training shall be performed upon delivery of the specific system to the customer.

It is emphasized training the operators in maintenance topics is intended for general information only and site maintenance is solely Contractor's responsibility.

7.2.4 Operators training shall be performed after preliminary acceptance tests.

7.2.5 The Contractor shall submit a list of personnel and the functions they perform who will require instruction in the operation and maintenance of the various systems on the site.

7.2.6 The Contractor shall perform any other activities required in order to conduct supplementary training**.**

7.2.7 The training program shall include theoretical and practical instruction, and shall inform the personnel of all information about the system and its operation.

7.2.8 The contractor shall submit the training programs for Client/CTA approval, at least one (1) month before the training course.

7.2.9 Training programs shall be prepared for all systems operators:

a. Image analyzers,

b. Radiographic system operators,

c. Traffic Control

d. Supervisor

e. Instructors

7.2.10 Training program will include software package - training simulation.

7.2.10.1 This simulator, installed as part of a stand-alone workstation, will be designated for ongoing, offline training of image operators.

7.2.10.2 The training simulator will be based on a large archive of radiography images and image analysis software identical to the operational one.

7.2.11 The training activities shall be conducted in English at the inspection site in Israel.

7.2.12 Training material as well as systems manuals shall be supplied in Hebrew, in hard copy and in digital media.

7.3 Documentation

7.3.1 The requirements contained herein are in addition to all shop drawing submission requirements stated in other sections of the specifications. The contractor shall include the provisions for all items required under this clause in all purchase orders and sub-contract agreements. Submissions required hereinafter will not absolve the contractor of any responsibility under the Warranty of Construction provisions of this SOW or under the various Guarantee clauses of the Technical Provisions.

7.3.2 Operation and maintenance (O&M) data

7.3.2.1 The contractor shall furnish O&M manuals for facilities constructed under this SOW, including grounds, buildings, mechanical, electrical, etc. The manuals shall be loose-leaf, indexed and shall consist of manufacturer's data sheets, manufacturer's operation and maintenance manuals, service and repair manuals, a schedule of parts replacement, catalogs, service bulletins, instruction charts, diagrams, manufacturer's recommendations for spare parts to be stored in the facility, detailed troubleshooting recommendations, a list of cleaning materials and other information, as necessary to support the operation, maintenance and repair of the end items of equipment, assemblies and systems.

7.3.2.2 Each type of facility shall be covered by a separate manual (or manuals) consisting of all data pertaining to the equipment and/or systems within the facility.

7.3.2.3 The contractor shall furnish five (5) hard copies of all O&M manuals to the Client, one CD and 1 set via Email, not less than two (2) calendar months prior to contract completion.

7.3.2.4 Failure of the contractor to submit complete O&M manuals within the aforementioned time period may result in a delay to the acceptance of the work for the full 2 mounts period after complete submissions have been accomplished.

7.3.2.5 O&M data shall be in both English and Hebrew.

7.3.3 Supplementary data submissions

7.3.3.1 After the initial submission of O&M manuals and until final acceptance of all equipment, the contractor shall prepare and deliver to the Client supplementary technical data as previously described for all changes, modifications, revisions and substitutions to equipment and components.

7.3.3.2 For equipment or systems introduced into the contract under change order or modified by change order supplementary data shall be furnished within forty-five (45) calendar days after issuance of Notice to Proceed for the change order. The supplementary data furnished shall be properly prepared and identified for insertion into O&M manuals.

7.3.4 Framed instructions for systems

7.3.4.1 Approved wiring and control diagrams showing the complete layout of the entire system including equipment, piping, valves and control sequence, framed under glass or in approved laminated plastic, shall be posted, where applicable, in all mechanical equipment rooms.

7.3.4.2 In addition, detailed operating instructions explaining safe start and stop procedures for all systems shall be prepared in typed form along the inspections required to ensure normal safe operation.

7.3.4.3 Radiography Safety framed instructions will be provided according to the detailed specifications and approvals of the Client and the relevant Israeli authorities.

7.3.4.4 The instructions shall be framed as specified above for the wiring and control diagrams and posted beside the diagram. Proposed diagrams, instructions and other sheets shall be submitted for approval prior to posting.

7.3.4.5 All framed instructions (operational, safety, etc.) shall be both in Hebrew and English. Operating instructions shall be submitted at least 30 days before acceptance tests of the systems and verified during the acceptance tests.

7.3.5 Each measuring instrument (ammeter, voltmeter, pressure gauge, etc.) shall be suitably marked to indicate the position of the indicator during normal operation.

7.3.6 The Client / CTA reserves the right to determine that the above specified information, as furnished by the contractor, is adequate and complete and to require additional submissions by the contractor as necessary to ensure that adequate information has been furnished to provide for the satisfactory operation and maintenance of the various items of equipment and to fulfill the intent of the specifications.

7.3.7 Additional submissions or re-submissions supplementing incorrect or incomplete data shall be made within thirty (30) calendar days after receiving Client's notice. All costs arising from these resubmissions shall be borne by the contractor.

7.3.8 All technical data contained in the manufacturer's catalogs and/or from the operating systems on site, shall be recorded on the Standard Technical Report forms, which shall be supplied by the contractor to the approval of the Client.

7.3.9 The contractor shall furnish, for every system and item of equipment and installation, technical material of the highest standard issued by the manufacturer including plans, catalogs and manuals for repair, operation and maintenance, alterations and a full list of parts and replacements that the manufacturer recommends should be kept in his local warehouse or in the project store.

7.3.10 The contractor shall furnish full technical data for each system and item of equipment together with the design data for the start-up and operation. These shall be recorded so as to detail in full the capabilities of the equipment and systems.

7.3.11 Instruction and training

The contractor shall be responsible for the instruction and training regarding the operational and maintenance tasks.

7.4 Warranty period

7.4.1 The Contractor is responsible to Client, after successful completion of the final acceptance, that all the facilities, systems and equipment supplied by him within the contract, have all their parts functioning and that their performance is in accordance with all the specifications detailed in this SOW and/or in the contract proposal and undertakes that the equipment shall be free of any damage and that it is supplied according to all specifications and standards.

7.4.2 The Contractor will repair and/or replace any equipment in which a defect is detected within warranty period from the final acceptance of the building or according to an optional additional longer warranty period specified in the contract.

7.4.3 The Contractor shall undertake that during a warranty period of the systems will continue to function in accordance with the data, the performance and the capabilities declared by the Contractor in his answers to this RFP.

7.4.4 In each case of malfunction, incompatibility and/or non-compliance with the provisions detailed above, the Contractor shall take immediate action upon receiving notice from the Client to remedy the malfunction and to bring the system to a working and operational capability in accordance with the data declared by the Contractor in his proposal.

7.4.5 Without prejudice to the aforesaid the Contractor shall supply service and maintenance to the Client, during the warranty period without any additional payment to the purchase price. The service and maintenance will include labor, parts, and any other costs related to such a service and maintenance commitment.

7.4.6 The Contractor shall provide a full-time contractor’s employee to perform the maintenance works, available on the site during the warranty period at all working hours (sites standard operational hours. Services of the aforesaid maintenance employee will be given in the framework of the system maintenance at no additional cost.

7.4.7 The aforesaid service and maintenance shall be supplied in the framework detailed in the “Service and Maintenance” of the Contract’s Annex in Hebrew.

7.4.8 Despite the aforesaid provisions the Contractor will not be held responsible for damage to any parts of the systems and/or defects caused by use maintenance or operation of the system not according to the written instructions provided to the Client by the Contractor.

7.4.9 In addition to the aforesaid the Contractor will not be responsible for parts including software that were modified, altered, repaired or replaced by anyone other than the Contractor's representative.

7.4.10 The warranty period shall include an unlimited working hours warranty for all buildings and systems installed on the site.

7.4.11 Response times required during the warranty period are identical to those defined in this document hereafter.

7.5 Service and Maintenance – as defined in the Service and Maintenance Annex

8. Design Guidelines and Data

8.1 General

8.1.1 The significance of the guidelines

The general guidelines and data appearing below form, together with the terms, various drawings and appendices for planning and implementation of the buildings and other works specified in this document are the scope of Work.

All the documents, including the appendices, are mandatory even though some instructions may appear to be a recommendation.

8.1.2 These guidelines refer to:

a. Detailed architectural planning of the buildings.

b. Complete structure planning, including detailed static calculations and drawings.

c. Complete and detailed planning of piping installations (water and sewage), conveyor radiography system, electrical installations, air-conditioning, fire detection and extinguishing systems, test devices etc., as specified, based on a specification including full engineering coordination between all the electromechanical systems.

d. Complete and detailed planning of the infrastructure and development works according to the attached drawings and this specification.

e. Complete and detailed planning of items of equipment that the contractor shall supply and their installation in the various buildings according to the specifications and drawings.

f. Any planning work and/or installation work required for the acceptance of all the buildings and all the other works required according to this document for their complete and full acceptance according to the turnkey method.

8.1.3 The scope of the guidelines

As stated above, the guidelines and data in this part are general and are intended to define the general requirements for the planning and performance of all buildings/facilities/systems and works within the Scope of Work. The detailed guidelines, data and requirements for the planning and implementation which are reflected in the special specifications of the various work chapters, drawings and other documents of the SOW complement each other together form the complete design requirement for the acceptance of all the buildings, their systems and other works described in a complete manner and ready for operation.

8.2 Mandatory applicable standards, specifications and data

8.2.1 The work shall be designed and carried out according to Israeli laws, regulations and standards. In the event that such standards do not exist, applicable American, or EU standards may be used. All the standards used shall be in the latest edition, updated to the date of submitting the proposal.

8.2.2 The applicable mandatory standards and specification for the design and implementation of this work are according to the following order of priorities:

a. Israeli laws, regulations and standards.

b. American standards and specifications.

c. European standards and specifications.

8.2.3 The Israeli laws, regulations and standards are as follows:

a. Planning and Construction Regulations.

b. Electrical Codes and Israel Electricity Law (IEL).

c. Safety Regulations.

d. Work Safety Regulations (Industrial medicine and health of ionizing radiation workers).

e. Safety Health and Welfare at work (Construction) regulation 2013

f. The Inter-ministerial General Specification for construction work (Issued by the Ministry of Defense, latest edition).

g. Israeli standards issued by the Standards Institution of Israel.

h. Fire Fighting Authority Regulations.

i. IDF Regulations for shelters and Civil defense.

j. Sanitary installation instructions (HALAT).

k. Work Inspectors' Organization Regulations (environmental and biological monitoring of personnel working with dangerous materials).

l. Communication Standards Regulations

m. Environmental Hazard Prevention Regulations.

n. Earthquake resistance planning should be according to standard

8.3 ISO Standards

8.3.1 The required systems shall comply with international recommendations and standards such as ISO standards or equivalent and with the conditions envisaged in this specification. Instruments manufactured to standards other than international ones will not be considered.

8.3.2 The contractor shall submit all the necessary certifications confirming compliance with ISO quality control standards or equivalent.

8.3.3 The above certifications are required for the component level, production and assembly, and for the system level.

8.3.4 The above certifications are required for the maintenance firm as well

8.4 General Guidelines

8.4.1 Guidelines for site development

8.4.1.1 General

The earthworks, site development works and paving works will be based on the planning data, soil reports and the planning implications of the equipment and vehicles provided by the contractor, and additional

specific vehicles allocated for this project by the Client for fulfilling occasional tasks.

a. The planning serves as basic guidelines for the detailed design that the contractor shall submit. The quantity of parking spaces and sidewalks is a minimal requirement.

b. The widths of roads, sidewalks and concrete platforms are predefined. The contractor design will be based on the plans in the Annex.

c. Turning radii will be determined according to accepted design criteria and, in any case, will enable standard vehicles, as long as five (5) [m] in length, to make the turns.

8.4.2 Buildings Construction method

The construction method for the building is included in the building descriptions as specified in this Section and as specified below in Section 6 - "Construction Principles and Design Instructions".

8.4.2.1 Building foundations

a. The foundations will be designed and implemented by the contractor and under his sole responsibility according to the drilling results. The foundations shall be inserted according to the soil consultant report, and/or they may be based on piles.

c. If the contractor sees fit, he may carry out additional tests on the site at his expense in coordination with the supervisor and with his prior approval. The contractor should note that these tests shall not entitle him to any extension of the work implementation period.

8.4.2.2 Fire resistance

The contractor must has to perform all the necessary works according to all Israeli laws and regulations regarding fire resistance elements - definitions and tests

8.4.3 Electrical & electromechanical systems

The electrical & electromechanical systems shall meet the Israeli laws, regulations and standards.

8.4.4 Communication systems

8.4.4.1 Infrastructures for the communication system shall be implemented at the site according to communication standards and specifications of:

a. Bezeq Ltd - Israeli Telephone Company.

b. The Standards Institution of Israel

c. ISO/IEC - International Electro-technical Commission.

8.4.5 Air-conditioning system

The planning requirements are described in Section 6 (Air-Conditioning)

The buildings shall use local air-conditioning units. Manual inspection area shall be air-conditioned.

a. The contractor shall prepare thermal calculations for each room/area according to the calculation method of ASHRAE Guide.

b. The weather calculations are based on the following outdoor conditions:

	Summer	Winter
Dry bulb temperature	38°C	5°C
Wet bulb temperature	24°C	3°C

c. The heat loads of the indoor equipment depend on the equipment supplied.

d. Indoor conditions

Office building

Air-conditioned offices: 22±1°C.

Air-conditioned X-Ray

Equipment and control rooms: 22±1°C, 50% RH (±5%).

Air-conditioned UPS room: 22°±2°C.

Manual inspection area: 22±1°C

8.4.6 Sanitation system design guidelines

8.4.6.1 The sanitation systems shall be designed according to the following Standards and Specifications:

a. Sanitary Systems Instructions, (HALAT) 1980

b. Inter-ministerial General Specification, Chapter 07 & 57, 1990

c. Israeli Standards 1205 & 1285 & 884

8.4.6.2 The system planning shall include, among others, the following elements:

a. Water supply, sewer and draining of sanitary facilities inside the buildings.

b. Water supply to air-conditioning systems at the required locations and draining condensate from the air conditioning systems.

c. Installing hydrants and fire fighting stations, in and outside the buildings and water supply to all hydrants and hose rollers.

d. Automatic water extinguishing systems.

e. Supply of water to water cooling facilities.

f. Outdoor sewer lines and city water lines and connections to existing systems.

g. Draining rainwater from building roofs.

h. Water supply and piping system for irrigation.

8.4.7 Safety systems guidelines

Fire detection and fire-fighting systems shall be designed as required in this document.

8.5 Acoustic requirements

8.5.1 The contractor shall plan and implement the building according to the Israeli standards following all laws and regulations.

8.5.2 All buildings, openings, human engineering, presentation systems and equipment installed at the site shall be planned, built and installed according to Israeli human engineering instructions as defined in the Israeli standards (MIL-STD-1472 of the latest edition).

8.6 Electro Magnetic Compatibility (EMC)

8.6.1 All buildings, systems and equipment installed at the site shall be planned, built and installed so that they shall not affect or be affected by other systems which have EMI and RFI effects.

8.6.2 Transformation system shall not be installed inside office buildings.

8.7 Environmental Data for Planning

8.7.1 In designing the installation, the following environmental conditions should be taken into account.

Temperature	The range of temperatures: -5^0 C – $+55^0$ C
Humidity	
Rain	
Hail	
Solar radiation	
Sand and dust	The area in which the installation is located
Saline Atmosphere	
Wind	The area of the installation is exposed
Fungi	
Lightning	
Water Sprinkling	Washing the equipment and cleaning the site
Immersion	Of equipment, especially the mechanical system

8.7.2 The installation will function in the defined environmental conditions without any reduction in the performance of systems or equipment as defined in this SOW. Industrial installations located close to the site and their emissions.

8.7.3 The contractor will be obliged to supply a declaration confirming compliance of the system with Israeli law, regulations and requirements as set down by the Israeli Ministry of Environmental Protection.

8.8 Requirements of the Governmental Housing Unit

8.8.1 The requirements of the governmental housing unit are mandatory. Attached is a delivery form in accordance to the governmental housing unit specifications

מצאי אישורים
מבנה דיור ממשלתי

Appendix A: Guidelines for technical proposal

1 General

1.1 The Contractor shall submit his Proposal in 5 copies (two hardcopy and three digital media), in English.

1.2 The Contractor shall list the designer and consultant teams that the Contractor intends to employ for planning and overall supervision. All the designers must be duly registered and licensed according to their field of expertise.

1.3 The Contractor shall specify how the project will be managed and executed in Israel, including the details of the executing engineer to be employed by the Contractor and the major subcontractors chosen.

1.4 The Contractor shall indicate in his proposal how he plans to meet the schedule for concluding the work on time, and prepare detailed monthly schedule (Gantt diagrams) containing project milestones.

2 Technical Documentation

2.1 The Contractor will attach the following documents about the systems:

- Systems description (Radiography, Traffic control, Safety, Security, etc.)
- Operator manuals (draft/similar projects)
- Safety Plan
- Maintenance plan and documentation for each level required, including:

a. Periodical (daily, weekly, monthly, yearly) maintenance, performing body, required time, schedule and detailed content of the works

b. System maintenance manuals, preventive maintenance

c. Detailed plan for the periodical (3 years) upgrade.

2.2 The Contractor will specify the current compliance level for each of the above, in terms of complying with the requirements detailed in this document.

Rate as follows:

- Fully ready – All documents are as specified.
- Partially ready – We can complete the requirements by the RFP specified schedule.
- Not ready – We do not have the documentation for the required level, and it should take X months to finish it.

3 System description

3.1 Detailed description of the proposed systems will be submitted by the Contractor, including:

1) General description of each system
2) Operational description of the whole process on the Site
3) List of all sub-systems/data sheet of equipments and furniture, including details regarding:
   - Manufacture/supplier
   - Type/Model
4) Technical specifications of all subsystems, including conveyor Radiography system, Scanning system, Image workstations, Computer and control systems, Command and Control systems, etc.
5) Tests tools, required to test the radiography system - detailed description.
6) Radiography Systems performance, in the defined 9 positions, in reference to all parameters, as defined in section 5, including:
   - Throughput
   - Ultimate Penetration
   - Wire IQI

- Hole IQI
- aterial discrimination
- Shielding required to reduce radiation zone
- Radiation Dose Rate and Maximal Radiation Level, for the following:
  - Absorbed per Inspection
  - In operator rooms
  - Offices
  - Pit inspection
  - Environment

7) Required Personnel operating the systems:
   - Minimal – to achieve the required throughput
   - Recommended
8) Quality Assurance

4 Relevant Infrastructure & Building Architectural plans

1) Architectural drawings for the radiography building scale 1:100.
2) Site development drawings, scale 1:500
3) Infrastructure systems drawings scale 1:500.

Note: The architectural drawings shall include layout drawings with inside dimensions, location and size of openings, location and size of partitions, nature and type of construction for each building, finishes for each building as well as any other information pertaining to the construction of each of these buildings.

The drawings shall include typical sections, including reference to elevations.

5 Compliance table

5.1 Requirements Fulfillment Statement

5.1.1 The Contractor shall declare, in writing, that the proposed system (as a whole and as individual components) will fulfill all of the specified requirements listed in this SOW document.

5.1.2 In addition to the declaration above, the Contractor must specify and refer to each of the applicable documentation paragraphs its specific solution. Meaning, for each paragraph of this document, the Contractor must specify if it complies with the specification and how the solution fits to the specification detailed in the paragraph.

This must be built as a compliance table such as the following example:

Paragraph No.	The specification details	Fulfillment level	Notes
X.Y.Z	Penetration	Fully	The system was designed to reply to this specification while using advanced detectors as shown in section xx.yy.zz in the Proposal.
…	…	…	…

The Contractor should refer to each of the proposed buildings, facilities, and operational systems, etc.

Section	**Chapter & Paragraph**	**Description of Paragraph**	**Bidder compliance**	**Equipment**
6G	4.7.1	CCTV cameras	+	+++ Model 111

List of Drawings:

The Site:

143-05-001-140818.pdf

143-05-002-140818.pdf

143-05-004-140818.pdf

143-05-005-140818.pdf

The Building:

143-05-003-SH#1.pdf

143-05-003-SH#2.pdf

143-05-003-SH#3.pdf