TERMS OF REFERENCE

Consulting services for the elaboration of design for the Construction of a new Headquarter Building for ME, including Central Dispatch Center

TABLE OF CONTENT

ANNEX LIST (click here to access the external file storage):

1. THE ORGANIZATION CHART;
2. STAFF STRUCTURE;
3. THE REFERENCE CONCEPT.

A. BACKGROUND

The Moldova's Energy Strategy 2030, approved by Government Decision no. 102/2013, aims to increase the capacity and improve the reliability of the electricity transmission system of the Republic of Moldova.
In this regard, on September 26, 2019 the Financing Agreements no. 6380-MD and no. 6381-MD/SUF for the implementation of Power System Development Project (PSDP) were signed between International Development Association (the World Bank, "the Bank", "WB") and Government of Republic of Moldova. The final Beneficiary is the State Enterprise Moldelectrica.

The state-owned enterprise Moldelectrica is a company specialized in centralization of transport services and operative dispatching in the power system of the Republic of Moldova.
In the course of its activity, the Transmission System Operator (TSO) is responsible for two main groups of tasks:

- power transmission;
- implementation of a sole operational-technological management of the power transmission system of the Republic of Moldova.

The transmission of electricity is carried out in strict accordance with the conditions of the relevant licenses, applicable legal provisions, power market rules and technical standards of power transmission networks.

For this, the State Enterprise "Moldelectrica" carries out:

- maintenance, modernization, rehabilitation and expansion of transport networks;
- reliable operation of the power system of the Republic of Moldova, in accordance with the established parameters, ensuring necessary quality characteristics;
- monitoring the actual technical condition of electricity installations, including investigations of breacks affecting system reliability;
- management of flows in electricity transmission networks;
- operation in parallel with the Power Systems of Ukraine and Romania.

Currently, S.E. Moldelectrica operates a central dispatch center located in the administrative building in Chisinau and 4 regional dispatch centers located in cities Vatra (Centre Region), Balti (North Region), Donduseni (North-West Region), Comrat (South Region) and 14 local dispatch centers.

The company's activity is administrated by the management aparatus, located on 78, Vasile Alecsandri street, mun. Chisinau. S.E. Moldelectrica adiministration uses a total area of 4398.8 m^2, of which approximately 3500.8 m^2 are leased, and 898 m^2 are own areas. The lessor of leased areas is an institution subordinated to the Public Property Agency.

For the capacity development of the company's personnel, the Enterprise owns a Training Center located on 18, Vasile Lupu Street, mun. Chisinau, with training rooms, testing laboratories, practical auditoriums for training in occupational safety and health. The total area used in the Training Center is 2728.4 m². The building of the Center is owned by the State Chancellery (Government). The relocation of these services to the new headquarter will eliminate costs for the existing building maintenance, improve the working environment and centralize all activities of the Enterprise.

The Consolidated Unit for the Implementation and Monitoring of Energy Projects (MEPIU, hereinafter Client), acting on behalf of the Final Beneficiary S.E. Moldelectrica (hereinafter Beneficiary) intends to hire a consulting firm for developing the detailed design/execution documentation for the construction of the administrative building/headquarter (HQ) of S.E. Moldelectrica on 8 Ciocana Street in mun. Chisinau, and assistance in preparation of procurement documentation in this regard. The services shall also include, in accordance with the Applicable Law, the Design Authorship supervision of the construction works, to be included in the envisaged or in a separate contract.

In these Terms of Reference, the term "Consultant" shall refer to the firm that will provide the above-mentioned services to the Client.

B. OBJECTIVES OF THE ASSIGNMENT

The objective of the consultancy services is to develop the tender specifications for the execution of the object, the design documentation, and to carry out design authorship supervision throughout the execution of construction works. The services will be provided in two phases:

- Phase I. Elaboration of detailed design documentation and tender specifications for the execution of construction works for the HQ, and
- Phase II. Conducting design authorship supervision of works throughout their execution.

C. SCOPE OF SERVICES

The main tasks for the services are as follows:

PHASE I:

- Preparation of the design outline according to the concept previously developed by the Beneficiary for the office building and multi-storey park.
- Elaboration of design documentation according to the applicable legislation and norms for the execution of the administrative buildings with almost zero energy consumption (office building and multi-storey park for cars), based on the technical requirements for design described in chapter D below, the urbanism certificate for design, connection permits, technical requirements, etc.
- Elaboration of the land development plan.

- Coordination with the Client and the Beneficiary of possible solutions and identification of optimal solutions to achieve the objectives according to the procedure described in Chapter E below.
- Coordination and obtaining of connection approvals from competent institutions and engineering network managers.
- Providing support in obtaining schemes for the location of engineering networks (topographic site plan), permissive acts, etc.
- Providing support for the preparation of tender documentation for the execution of construction works.
- Develop at the design stage an optimal Works Performance Schedule so that the designed works can be completed within 2 years (best scenario).

PHASE II:

- Carrying out control through authorship's supervision during works execution, including participation in technical commissions, site meetings, etc.

D. TECHNICAL DESIGN REQUIREMENTS

The detailed design will include the solutions that correspond to the technical requirements established by the Client and/or Beneficiary and drawn up in accordance with the requirements of the applicable local normative documents. In order to satisfy the construction quality system established in accordance with applicable Law 721/1996, the designed object will meet the essential requirements corresponding to the construction quality system and the local legislation. The detailed design will be developed to allow for the construction of two buildings, forming the Moldelectrica Headquarter, as separate sub-objects (SO):

SO 1 – construction of the office building with nuclear shelter.
SO 2 – construction of the multi-storey car park.

The Consultant shall carry out all the investigations and studies necessary for the proper elaboration of the design documentation, namely: topography, geodesy, geology, etc.

i) General Plan

The land subject to construction is under the economic management of SE Moldelectrica registered with cadastral number 0100306.007, and has a total area of 3.0674 ha, of which a portion of land up to 1.66 ha will be subject to design.
The land is located in the North-Eastern part of the city of Chisinau, located at Str. Ciocana 8, being bordered by Maria Dragan str. and Ciocana str. on 2 sides, and on the other 2 sides it is bordered by private lands.
The land in question was used for purposes related to the production process, which mostly involves the storage of materials.

Figure 1 Moldelectrica's land with cadastral number 0100306.007

On this land they are located 8 buildings as warehouses, production blocks and car garages.
The Consultant is to identify and adapt a design solution that will include the construction of an office building for the SE Moldelectrica staff, a multi-storey car park, parking for bicycles, scooters, access roads for cars, pedestrian access roads and the development of green spaces taking into account the requirements for people with disabilities according to NCM C.01.06.2014 and Law 60/2012.

ii) The architectural solutions of the office building and nuclear shelter

The architectural solutions will represent the field and the specific activity of Moldelectrica. The building envelope shall consist mainly of glass surfaces with a shading system in combination with ventilated facade walls and perforated aluminum panels for decorative purposes. The facade of the building will contain distinctive elements and the Beneficiary's commercial logo.
The Consultant shall also develop the design solution for fencing the plot land on which the administrative building will be located. The fence bordering the outer sides of the respective part of the land will contain decorative elements with the symbols or colors of the Beneficiary's logo. For the entrance to the territory, a security and control point will be designed.

The designed area will be divided from the production area by setting up a green area with sports fields (volleyball, football).
The relief features in the construction area will be used to the maximum efficiency.
The Consultant shall develop an architectural solutions for the office building based on the concept of a building with the height regime of S+D+P+8E (2 basement's levels, 1 ground level, 8 storeys), shaped similar to a regular quadrilateral prism with the level surface approximately equal to 600 m², the ground surface approximately 600 m², the total area approximately 6600 m², and the height of the levels being approximately 3.5m. The presented values will be finalized by the Consultant according to the solutions addressed in the design.
The vertical access of the employees will be ensured both by using 2 elevators with a capacity of at least 1000 kg each, the exact nominal load being determined by the Consultant, and with an internal ladder. In addition, the escape solution through the exterior fire escape will also be designed.
The basement of the building will be divided and used for technical rooms, utility rooms, server rooms, batteries, archives, etc.
The central entrance area will be organized on the ground floor of the building, which will necessarily include the security and control area, the reception area, the waiting area, meeting rooms for guests, restrooms/lavatories.
The building floors will be divided into functional areas separated by partition walls, which will include protocol room, library/archive, spaces for recreation, common dining room with kitchen, smoking area and restrooms/lavatories. Approximately 260 workplaces will be places in the building for different categories of employees - management, specialists and building maintenance staff.
The Consultant shall identify the solution for the location of the control rooms for the Central Dispatch Center of the Power System and for the Telecommunications Dispatch Center. The height of the control room for the Central Dispatch Center of the Power System will allow the arrangement of a matrix VideoWall with the approximately dimensions length x height equal to 6x2.5 m.
The Consultant shall provide for the location of shower rooms for the employed staff. Separate showers and restrooms shall be provided in the rooms of the management staff and in the dispatch rooms.
The consultant shall provide the location of the housekeeping staff's rooms, the storage rooms for the cleaning inventory and the maintenance of the rooms. A laundry room will be provided as well.
In the basement, there will be a nuclear shelter with a capacity of 30 people with controlled access from the stairs of the office building, being provided with utilities, equipped with a reserve workplace for dispatchers, restroom, independent supply of electricity and water, independent solution for wastewater, special ventilation and a tunnel with exit to the multi-storey car park and one additional separate exit away from the buildings.

The Consultant shall identify architectural solutions to improve the visual aspects of the warehouse with cadastral number 0100306.007.09, fitting it in with the architectural concept of the entire administrative complex.

iii) The architectural solutions for the multi-storey car park

The architectural solution of the multi-storey car park will be similar to the architecture of the office building by masking the open spaces with decorative grids; the Consultant shall develop an architectural solution for the multi-story parking lot based on the concept of the parking lot with the height regime S+P+2E (1 basement level, 1 ground level, 2 storeys), or 2S+P+E (2 basement levels, 1 ground level, 1 storey), the height of the level being approximately 3.5m. The multi-storey car park will contain parking lots for 100 cars, 10 lots for VAN vehicles, 20 parking lots equipped with sockets/station for charging hybrid and electric cars will be provided. The roof of the building will be flat and equipped with photovoltaic panels.

iv)Interior design for office building and multi-storey car park

The Consultant shall develop the interior design and the technological compartment. The solution for furnishing the rooms with the necessary furniture and accessories is to be presented. The Consultant shall describe the technical details that will include the technical specifications for the selected furniture. Perspectives and renderings, representing the realistic view of how the final interior design will look. Budget estimate for the project and a deadline for the implementation of the proposed measures. The Consultant shall develop the chapter on the organization of the Beneficiary's technological processes, will identify solutions for the location of machinery and equipment that require special location conditions.

v) The constructive solution of the building

The building will be designed with reinforced concrete skeleton strength structure.
The Consultant shall perform all the necessary calculations to identify the resistance parameters with the subsequent dimensioning of the constructive elements.
The minimum design seismicity considered is 8 degrees MSK-64.
The Consultant shall apply anti-seismic measures in the design that ensure the strength and stability of the building.

vi)The constructive solution of the multi-storey car park

The multi-storey car park will be designed with a reinforced concrete construction system. The roof of the building will be flat with the internal rainwater drainage pipe, waterproofed with bituminous materials, with the possibility of being occupied with parking spaces or the placement of photovoltaic panels.
The Consultant shall perform all the necessary calculations to identify the resistance parameters with the subsequent dimensioning of the constructive elements. The Consultant shall apply anti-seismic measures in the design that ensure the strength and stability of the building.
The minimum design seismicity considered is 8 degrees MSK-64.

vii) Utility networks

a) Water, wastewater and stormwater networks of office building

The design solution of the water supply and wastewater utilities should be developed in accordance with the sanitary and technological needs/requirements of the Beneficiary.
The design of fresh water supply system from external utility networks will be developed in accordance with the technical requirements that will be obtained subsequently from JSC Apa Canal (the local water supplier) for which the calculation of water consumption will be drawn up based on the own needs of the Beneficiary. The Consultant shall design the option of installation of a water treatment and filtration station for fresh water supply.
The design solution for a fire prevention and extinguishing system will be developed.
The design solution for hot water supply will be developed.
A wastewater (inclusive fecal sewage) system will be developed according to the technical requirements that will be obtained subsequently from JSC Apa Canal (operator of the local wastewater system) based on the water consumption norms and the calculation of flows according to the actual norms.
The design of a rainwater drainage system for all the designed plot of land will be developed based on a hydrological calculation carried out by the Consultant. The rainwater drainage system will take over the water flow of both - the roofs of the buildings and on all the access ways, with the subsequent evacuation organized at the connection point according to the technical prescriptions subsequently issued by Municipal Enterprise Exdrupo, the operator of municipal road networks. The rainwater drainage system will be designed for local unique site conditions with an anti-freeze/defrost system for preventing the drainage system from freezing when the temperatures drop. The Consultant shall present solutions for collecting and transporting water effectively so that it doesn't freeze and block or damage the drainage system during the coldest months of the year.
In case that the existing municipal (local) sewage and/or stormwater systems networks do not allow for the accumulation of additional flow caused by the Beneficiary's needs; the Consultant shall also provide for the elaboration of the reconstruction of the municipal external networks.
A rainwater collection system necessary for the maintenance of green spaces will be designed as well.

b) Water, wastewater and stormwater networks for multi-storeys car park

The design solution for the water supply and wastewater utilities should be developed in accordance with the sanitary and technological needs/requirements of the Beneficiary.
The design of fresh water supply system from external utility networks will be developed in accordance with the technical requirements that will be obtained subsequently from JSC Apa Canal (the local water supplier) for which the calculation of water consumption will be drawn up based on the own needs of the beneficiary. The Consultant shall design the option of installation of a water treatment and filtration station for fresh water. The design solution of a fire prevention and extinguishing system will be developed.
The design solution of a fire prevention and extinguishing system will be developed.
A wastewater (inclusive fecal sewage) system will be developed according to the technical requirements that will be obtained subsequently from JSC Apa Canal (operator of the local

wastewater system) based on the water consumption norms and the calculation of flows according to the actual norms.
The design of a rainwater drainage system for all the designed plot of land will be developed based on a hydrological calculation carried out by Consultant. The rainwater drainage system will take over the water flow of both the roofs of the buildings and on all the access ways, with the subsequent evacuation organized at the connection point according to the technical prescriptions to be subsequently issued by Municipal Enterprise Exdrupo, the operator of municipal road networks. The rainwater drainage system will be designed for local unique site conditions with an anti-freeze/defrost system for preventing the drainage system from freezing when the temperatures drop. The Consultant shall present solutions for collecting and transporting water effectively so it doesn't freeze and block or damage the drainage system during the coldest months of the year. In case that the existing municipal (local) sewage and/or stormwater systems networks do not allow the accumulation of additional flow caused by the Beneficiary's needs; the Consultant shall also include the elaboration of the reconstruction of the municipal external networks.
The Consultant shall identify and design the solution of a rainwater filtration/degreasing station.

c) Power supply and lighting networks facilities of the office building

The design solution regarding the electricity supply and lighting should be developed in accordance with the Beneficiary's architectural-constructive and technological needs, based on the regulations in force.
The office building of Moldelectrica is assigned to category II reliability in power supply and partially, for some groups of receivers – category I (emergency lighting, server rooms, dispatch rooms, elevators, shelter, etc.).
The Consultant shall identify the design solution for power supply by providing to installation of an own transformer station connected to medium voltage source.
The Consultant shall develop the technical solution for connection of the medium voltage network to the existing cells or shall design the new cells to be installed in the indicated connection place according to the technical requirement subsequently obtained from the electricity distributor based on the power consumption calculations.
The Consultant shall develop the technical solution for interior, exterior, decorative and emergency lighting. The interior lighting is to be designed based on a photometric calculation in combination with natural lighting. The interior lighting for the hallways and the stairwell shall be automated and equipped with motion sensors. The lighting level in the protocol and dispatch rooms are to be multifunctional with the option of remote control. Exterior and decorative lighting are to be programmable or automated with ambient light transducers.
The Consultant shall develop the lightning protection and atmospheric overvoltage shocks solutions.
The Consultant shall develop the protection and earthing solutions compartment for electrical equipment.
The Consultant shall develop the power supply design for category I electrical receivers, shall design the installation of electrical generators for supplying category I receivers by identifying the solution for connecting the UPC and automatic reserve switching (automatic transfer switches).

d) Power supply and lighting networks facilities of the multi-storey car park

The design solution regarding the electricity supply and lighting should be developed in accordance with the Beneficiary's architectural-constructive and technological needs, based on the regulations in force.
The multi-storey car park is assigned to category III reliability in power supply and partially, for some groups of receivers – category I (emergency lighting and alarm systems).
The Consultant shall identify the design solution for power supply by installing an own transformer station connected to medium voltage source (the same transformer station as for the office building).
The Consultant shall develop the technical solution for interior, exterior, decorative and emergency lighting. The interior lighting is to be designed based on a photometric calculation in combination with natural lighting. The interior lighting for the entire floor shall be automated and equipped with motion sensors. Exterior and decorative lighting are to be programmable or automated with ambient light transducers.
The Consultant shall develop the lightning protection and atmospheric overvoltage shocks solutions.
The Consultant shall develop the protection and earthing solutions compartment for electrical equipment.
The Consultant shall develop the power supply design for category I electrical receivers.

e) Office building heating, ventilation and air conditioning networks

The Consultant shall identify the optimal solution for heating the premises, also considering the requirement for connection to the centralized heating power supply system of JSC Termoelectrica (thermal energy supplier) by installing an individual thermal point (one or more) in combination with electric air conditioners or fan-coils and heat pumps. The Consultant shall design the individual thermal point based on the estimated calculations of thermal energy consumption of office building. The heat pump is to be used for pre-heating and pre-cooling of the thermal agent.
The Consultant shall design the connection of the individual thermal point to the external centralized thermal energy supply system.
The cooling system is to be centralized and designed with the ventilation system. The central cooling system has to ensure both cooling during the hot season and heating during the cold season when the district heating system has not been connected.
The ventilation system shall be designed with heat recovery.
Fan coils in combination with heat pumps are to be installed in all the protocol rooms.
The Consultant shall design applicative measures to reduce noise, vibration and energy losses caused by the heating, ventilation and air-conditioning networks.
The ventilation system is to be designed for operating during the fire outbreaks. The Consultant shall design the fire ventilation system that actively and in a controlled way changes the conditions in a burning building with the intention of releasing heat or fire gases out of the building.

f) Telecommunication system network

The Consultant shall design the solution for the telecommunications system network. The telecommunications network shall be composed of the local Internet network and IP telephony. The Consultant shall identify the installation solutions for the equipment and the active apparatus/devices like switches, wireless routers, transceivers, firewalls, premises equipment, amplifiers, HFC equipment, networking hardware and so on.
At each workplace shall be installed 2-port telecommunication sockets for computers and telephones.
The Consultant shall develop the constructive and safety requirements for the arrangement of the server rooms.
The Consultant shall design the solution that allows connecting to the Wi-Fi from any place in the building, including identifying the solution to connect visitors in the building to a separate and secure local Wi-Fi network exclusively for visitors accessed based on credentials linked to their personal data.
The Consultant shall develop the design documentation for the execution of external telecommunications networks based on the subsequently issued technical requirements by the service provider.
The cable routing of the telecommunications and electricity supply networks shall be designed to be laid in the floor (removable boards) for raised floor, or as underfloor trunking systems or through the ceiling with suspended cable ducts.
The Consultant shall provide a design for separate cable channels or other cable placement solutions for Beneficiary's future SCADA system which will be designed separately. Cable channels will be designed from the internal receivers connected to the SCADA to an external connection point.
Electromagnetic compatibility and exclusion of interference/disturbances in telecommunications networks are to be ensured.

g) Security alarming system, video system and access control for office building and multi-storey car park

The Consultant shall prepare the design documentation for the installation of the video surveillance system on the perimeter of the building, both external and internal.
The video surveillance system will ensure coverage of entire area. The video surveillance will be monitored centrally from the security services with access for persons appointed by the administration.
The Consultant shall develop the access control solution for the staff employed only in the specific and selective areas of the building based on job titles, functions and specific activities of the employees or visitors. The elevators will also operate with limited access based on access permissions to different areas/floors of the building.
At the entrance to the building, checkpoints equipped with control turnstiles will be installed. The access control system will allow the recording of entry and exit times with the calculation of the actual time spent by the employee and visitors in the building.
The Consultant shall develop the design for the installation of motion and intrusion detectors in certain rooms of the building with immediate warning of security personnel.

h) Fire extinguishing system for office buildings and multi-storey park

The Consultant shall develop design documentation for an automatic fire extinguishing system, emergency and fire alarming systems with automation of signal transmission to emergency institutions and fire brigades.
The Consultant shall develop the plan of measures for fire prevention and risk mitigation with the identification of the places of installation of collective protection means, medical kits, fire extinguishers, external and internal fire hydrants.

viii)Renewable energy sources for office building and multi-storey car park

The design will involve large-scale solutions for the use of renewable energy sources to ensure almost zero energy consumption.
Thus, the following will be considered and included:

- ✓ The use of construction materials with high energy efficiency performance parameters;
- ✓ Designing the photovoltaic system by making maximum use of the spaces for the panels;
- ✓ Design of the ventilation system with heat recovery;
- ✓ Designing the heating system in combination with heat pumps;
- ✓ Implementation of energy monitoring and control solutions;
- ✓ Implementation of solutions for the placement of photovoltaic panels (building/car park envelope surface) etc.

ix)Site organization of construction works compartment

The Consultant shall draw up the site organization design/methodology and/or the organization of construction works in which the technological processes for carrying out the civil construction work, the organization and management of the execution process shall be described. The Consultant shall identify the optimal solutions for the location of mechanisms, machinery, material storage, access road, temporary constructions related to the construction works and ways to dispose of construction waste.
The Consultant shall prepare the designing documentation so that the term of construction under an optimal scenario does not exceed 2 years from the moment of signing the eventual construction contract, including the execution of ground arrangements and landscaping works, finishing works and furnishing with the necessary furniture and equipment.

x) Office furniture

The Consultant will carry out the design for all the furniture in the office building, including the designed equipment, devices and electrical appliances.
The designed furniture includes the workplaces of the employees (chairs, desks, storage, double door cupboards, lockers, shelves, etc.), the furniture for the restrooms (bathroom cabinets, bathroom vanities, storage, toilet bowl, mirrors, sinks etc.), the furniture for dining room (modular kitchen systems, dining table, chairs, refrigerators, microwaves, ovens, dishwashers, coffee machines, kettles, etc.) the furniture for the laundry room (washing machines, clothes dryer machines, irons, ironing boards, storage furniture and wardrobes), furniture for conference

rooms (boardroom table, meeting chairs, media walls), furniture for management staff rooms (TV sets, chairs, desks, storage, double door cupboards, lockers, shelves, boardroom table, sofa, armchairs and coffee table), furniture in the guest room/waiting room (sofas, coffee tables, bean bag chairs etc).
The Consultant shall design the installation of new electrical equipment and devices (PC with accessories, TV sets, printers, shredders, wall projectors, interactive boards).
The Consultant will analyze and evaluate together with the assigned Working Group of the Client and Beneficiary all the furniture that is currently used for subsequently installation of this in the new building. The results of the evaluation of the furniture and devices that can be placed in the new building will be presented in the Inception report.
The Consultant will develop the technological placement scheme for the location of the equipment in the chemical analysis laboratories depending on the specifics of the equipment provided.

xi)Bill of Quantities

The Consultant shall develop the cost estimation documentation (Bill of Quantities) necessary for the tender documents envisaging procurement of Works and to carry out the subject construction works, estimating as precisely as possible the cost of implementing the design during the entire construction period according to construction chart to be developed within the task.
The Bill of Quantities shall be prepared in Romanian and English languages, in accordance with NCM L.01.01-2012 "Rules for determining the value of construction objectives" and CP L.01.01.2012 "Instructions regarding the preparation of estimates for construction-assembly works by the resource method". The Bill of Quantities shall be presented in forms no. 1,3,5,7 and 9 according to above mentioned normative documents.

xii) Miscellaneous

a) Inclusive solutions:
   The Consultant shall prepare the design documentation taking into account the needs of people with disabilities and will implement them in the design decisions for access ramps, access elevators, railings, anti-slip solutions, properly equipped restrooms, parking lots etc.

b) Consumption monitoring system
   The Consultant shall develop the monitoring and control solution for water, heat and electricity consumption. The system will allow monitoring of current consumption, preparation/generation of monthly consumption reports and consumption statistics, archiving of collected information, etc.

xiii)Environmental Protection Compartment

The Consultant shall develop the environmental protection compartment in order to determine the possible impact on the environment as a result of the implementation of the design. The Consultant shall apply all necessary methods and perform the necessary calculations to determine the influence of the designed object on the atmosphere, water and land resources. The

Consultant shall identify and use design solutions for the purpose of the protection and rational use of land resources, flora and fauna, will identify protection measures against soil contamination with solid waste.
The Consultant shall perform the acoustic calculation and identify noise reduction measures.
The Consultant shall develop the solid waste management and disposal plan.

xiv) Verification of design documentation

The Consultant is responsible for design verification. The verification of design documentation is an important aspect of the construction quality assurance system according to Law 721/1996, and will be carried out in accordance with the requirements set out in Government Decision 361/1996.
The design documentation shall be signed and stamped by properly licensed persons in accordance with applicable law.
The design documentation will be drawn up in sufficient scope and adequate quality o to correspond to its verification procedures according to the normative acts applicable in the Republic of Moldova.

E. PROCEDURE FOR COORDINATING DOCUMENTATION WITH THE CLIENT/BENEFICIARY

The Consultant shall conduct weekly meetings with the Working Group designated by the Client and the Beneficiary in physical or online regime. Sessions with physical presence will take place no less than once every two weeks.
The Consultant shall present any information reasonably requested by the Working Group during the preparation of design documentation.
The Consultant shall coordinate all solutions, requiring the choice of options at the discretion of the Client or Beneficiary, with the Working Group.
The Consultant shall incorporate/address in the design documentation the solutions proposedby the Working Group, if found reasonable by all stakeholders.
The Consultant shall obtain the Client's preliminary approval before design being submitted for verification under Chapter D, p. xiii).
The Consultant shall prepare Minutes for each meeting with the Working Group within 1 working day from the date of organizing the meetings.

F. DELIVERABLES AND TIME FRAME

In accordance with the scope of the consultancy services, the following deliverables will be developed by the Consultant for both the office building and the multi-storey car park (time in the right column of the table below shows the cumulative period, starting from the contract effectiveness date):

PHASE I **12 months**

I Part: The inception report which includes **2 months**

1. A more detailed analysis of the requirements of the Client and presentation of the Consultant's view with the updated concept.
2. Investigation reports on topographical, geodetic, geological studies/surveys.

II Part: Detailed design documentation **12 months**

3. Explanatory notes
4. General layouts and plans
5. Architectural solutions, facade coloring, etc.
6. Structural resistance compartment.
7. Heating, ventilation and air conditioning compartment. Automation of the heating system, ventilation, air conditioning, anti-smoke protection, etc.
8. Compartments of internal water and wastewater networks, fresh water network, filter and degrease systems, external water networks, external wastewater/sewage system, storm sewer network, etc.
9. Compartments of power electrical equipment system, electrical lighting network, electrical energy supply network, external electrical networks, transformer stations, electrical system automation, etc.
10. Compartment of internal, external telecommunication networks, etc.
11. Compartment of automatic fire extinguishing, fire alarming, automatic security alarming, video surveillance systems, access control systems, etc.
12. Compartment of the design of renewable sources of energy. Automation/monitoring of energy consumption, etc.
13. Compartment of technological solutions.
14. Environment protection.
15. Site organization of construction works.
16. Interior design album (technical drawings, positioning of electrical fittings, sanitary equipment and its fittings, 3D models, perspective and rendering).
17. Bill of Quantities. Cost estimations (standard forms F1, F3, F5, F7, F9 and the form adapted to the tender procedure).
18. Common/ compiled detailed design verification report.

PHASE II **during construction**

1. Authorship supervision throughout the entire construction works of the office building.
2. Authorship supervision throughout the entire construction works of the multi-storey car park.

The complete detailed design documentation with all the compartments and included the Bill of Quantities shall be drawn up in both languages on separate copies or combined in the same copy: Romanian and English.

All deliverables shall be sent by hand-over receipt in 4 hard copies in original and on 2 hard disk drive.
All deliverables shall be presented in electronic format (pdf, word, dwg or, if applicable, kos formats, depending on the means of document preparation).
All drawing are to be issued in both pdf and dwg formats.

G. Authorship supervision

The authorship supervision provides:

- control of the compliance of the construction works, throughout the execution of the construction, carried out by the Consultant (author of the design documentation), in order to ensure the compliance with the solutions provided in the design documentation and the essential requirements established by Law no. 721/1996 regarding quality in construction;
- control of the quality and compliance with the technology of construction works' execution;
- the operative resolution of issues, which require the operation of changes in the detailed design and control of execution of modifier works;
- taking part in the reception of hidden works on the quality of which depends the safety, resistance, stability and durability of the built objects;
- taking part at receptions during the execution of construction works;
- miscellaneous.

H. Profile of the Consultant and Qualification Requirements

Profile of the company (considered at the stage of REOIs evaluation):
The Consultant must be a registered firm having experience, technical and organisational capabilities and qualified personnel to complete the assignment. The following criteria will be applied to evaluate experience of the Consultants at the REoI stage:

Core business and years in business:

- at least 7 years of experience in design services. As a proof of compliance, the Consultant shall provide the following documents:
  - copy of valid business license (where applicable) and copy of the registration certificate;
  - copy of articles of incorporation.

Qualifications in the field of the assignment:

- at least 1 assignment in elaboration of detailed technical design for construction of buildings with a value equivalent to at least 160,000 euro completed either alone or as a lead member of a JV with a minimum participation of 50% during the last 7 years starting 1st of January 2017;
- at least 2 assignments in design of multi-storey (at least 4 storeys) buildings for offices with increased energy efficiency including same related compartments as listed in expected deliverables - successfully (100% except for author's supervision, if applicable) completed either alone or as a lead member of a JV with a minimum participation of 50% during the

last 7 years starting 1st of January 2017 and the deadline for submission of Expressions of Interest;

As a proof of compliance with the above requirements, the Consultant shall provide a signed and stamped list of related contracts, incl. amounts, brief description of the assignment, contacts for reference check, pictures (photos with date and place), copy of the main contract pages and letter of acceptance or reference letter from the client.

Professional strength:

The number of permanent staff of the Consultant must be at least 10 for each of the last 7 years starting 1st of January 2017 and the deadline for submission of Expression of Interest. As a proof of compliance with this requirement the Consultant shall provide a signed and stamped staffing table.

Team composition and experts' qualification (to be considered at the Request for Proposals/contract negotitions stage):

The Consultant shall retain personnel, with the required qualifications, for the tasks described above, covering the relevant disciplines. The required qualifications for the Consultant's core team are presented below. The list is not exhaustive. The Consultant may include additional experts, as considered necessary, of the similar level of qualification.

The Consultant should comply with the local legislation requirements, and should cover the relevant domains of attestation (either with key or non-key staff) for technical design as per Article 13 of the Government Decision no. 329 /2009. The evidence of relevant certification should be submitted as attachments to the respective CVs of proposed staff.

Key Experts (one or more experts can be listed under position)

Pos.	Description
KE-1	**Team leader** Qualifications and skills - Degree in civil engineering, architecture, engineering, project management or similar specialties; - Advanced English and Romanian/Russian. General professional experience - at least 7 years of professional experience in design elaborations; Specific professional experience - at least 5 years of experience as Team Leader/Deputy Team Leader (out of which at least 3 years as Team Leader) in similar contracts; - Participation in at least 2 successfully implemented contracts for the design of office buildings within the last 7 years.

KE-2	**Chief Architect Engineer** Qualifications and skills - Degree in the field of architecture; - Excellent Romanian, knowledge of English would be an advantage; - Certified according to the local regulations, GD no. 329/2009; General professional experience - at least 7 years of professional experience in design elaboration; Specific professional experience - at least 5 years of professional experience as Chief Architect; - Participation in at least 2 successfully completed projects for the design of office buildings.
KE-3	**Senior Structural/Civil Engineer** Qualifications and skills - Bachelor's degree in the field of civil engineering; - Excellent Romanian, knowledge of English would be an advantage; - Certified according to the local regulations, GD no. 329/2009; General professional experience - at least 7 years of professional experience in a field relevant to the assignment; Specific professional experience - At least 5 years of experience as structural engineer in design of office buildings; - Participation in at least 2 successfully implemented projects for the design of office buildings within the last 7 years.
KE-4	**Senior Electrical Engineer** Qualifications and skills - Bachelor's degree in electrical engineering; - Excellent Romanian, knowledge of English would be an advantage; - Certified according to the local regulations, GD no. 329/2009; General professional experience - At least 7 years of professional experience in a field relevant to this assignment; Specific professional experience - At least 5 years of experience as electrical engineer in design of office buildings; - Participation in at least 2 successfully implemented projects for the design of office buildings within the last 7 years.
KE-5	**Senior Automation Engineer** Qualifications and skills - At least a Bachelor's degree automation engineering or similar; - Excellent Romanian, knowledge of English would be an advantage; - Certified according to the local regulations, GD no. 329/2009;

	General professional experience - At least 7 years of professional experience in a field relevant to this assignment; Specific professional experience - At least 5 years of experience as electrical engineer in design of office buildings; - Participation in at least 2 successfully implemented projects for the design of office buildings within the last 7 years.
KE-6	**Senior HVAC installations Engineer** Qualifications and skills - At least a Bachelor's degree in HVAC engineering or similar; - Excellent Romanian, knowledge of English would be an advantage; - Certified according to the local regulations, GD no. 329/2009. General professional experience - At least 7 years of professional experience in a field relevant to this assignment; Specific professional experience - At least 5 years of experience as HVAC engineer in design of office buildings; - Participation in at least 2 successfully implemented projects for the design of office buildings within the last 7 years.
KE-7	**Senior Water and Wastewater Engineer** Qualifications and skills - At least a Bachelor's degree in Water and Wastewater engineering or similar; - Excellent Romanian, knowledge of English would be an advantage; - Certified according to the local regulations, GD no. 329/2009; General professional experience - At least 7 years of professional experience in a field relevant to this assignment; Specific professional experience - At least 5 years of experience as Water and Wastewater engineer in design of office buildings; - Participation in at least 2 successfully implemented projects for the design of office buildings within the last 7 years.
KE-8	**Senior Telecommunications Engineer** Qualifications and skills - At least a Bachelor's degree in Telecommunications engineering or similar; - Excellent Romanian, knowledge of English would be an advantage; - Certified according to the local regulations, GD no. 329/2009; General professional experience - At least 7 years of professional experience in a field relevant to this assignment;

	Specific professional experience - At least 5 years of experience as Telecommunications engineer in design of office buildings; - Participation in at least 2 successfully implemented projects for the design of office buildings within the last 7 years.
KE-9	**Senior Fire protection Engineer** Qualifications and skills - At least a Bachelor's degree in Fire protection and civil protection engineering or similar; - Excellent Romanian, knowledge of English would be an advantage; - Certified according to the local regulations, GD no. 329/2009; General professional experience - At least 7 years of professional experience in a field relevant to this assignment; Specific professional experience - At least 5 years of experience as Telecommunications engineer in design of office buildings; - Participation in at least 2 successfully implemented projects for the design of office buildings within the last 7 years.

The Consultant will notify of any intended changes in the Team composition during contract implementation subject to Client's approval.

I. TIME FRAME

Phase I: The elaboration of the design and the elaboration of the Tender Specifications for the construction works will be executed in no more than 12 months (including final approvals and payment upon last deliverables), the terms being established from the effective date of the Contract.
For Phase II, conducting authorship surveillance throughout works execution, will cover the duration of construction and commissioning of the object, as well as the taking-over of the completed Works, in accordance with the legislation in force.

ANNEXES

In separate files, can be accessed on the following link to external storage:

https://drive.google.com/drive/folders/1hXNCsCHNajLOaUtcg_Frla4MhCcPjAV-?usp=sharing

Or click here (Ctrl+click).

1. THE ORGANIZATION CHART;
2. STAFF STRUCTURE;
3. THE REFERENCE CONCEPT.