|  |
| --- |
| **List of Technical Requirements and Specifications ITB 18-00000** |

**1. Introduction and objectives**

The major objective of the SARD Programme is to promote confidence in the ATU Gagauzia and Taraclia rayon via opportunities of increasing local development. One of the opportunities and/or components for supporting local development is the implementation of projects for improving/developing small-scale infrastructure in the rural localities of the region. This intervention also intends to eliminate the gaps and drawbacks identified in the Republic of Moldova documents for strategic development of the regions, such as the National Rural Development Strategy, the Agriculture and Rural Development Strategy Moldova 2020, etc. Thus, 41 communities from ATU Gagauzia and Taraclia rayon will be involved in a participatory process of capacity development. This action will facilitate the establishment of local partnerships with the participation of community groups, rayon and local public administrations, NGOs and other local development stakeholders.

Technical assistance will be provided in the areas related to the competences of the Local Public Administration (LPA) bodies, such as: utility services, health, education, social protection, and other. Moreover, about 20 mayoralties from ATU Gagauzia and Taraclia rayon will receive technical and financial support for improving the quality of local services and rehabilitate local-level infrastructure by implementing capital investment projects in communities.

**2. Content of works to be performed and beneficiary communities**

2.1 Usually, the content of works to be performed will include the following types: construction works, works for installing equipment for drinking water pumping and filtering, for purifying used water, automation, etc.; electrical works, works for assembling water and sewerage networks, land development works, works for testing and operating the systems of drinking water filtering and used water purification, works for testing the outdoor lighting system; and launching into operation activities. All these types of works and activities will contribute, by the end of the day, to improving the life conditions for the population in the communities from ATU Gagauzia and Taraclia rayon – beneficiaries of the EU ***„SARD” Programme.***

2.2 The construction works for which this call of proposals is launched are grouped in 2 (two) lots, as it is noted in the table below:

|  |  |  |
| --- | --- | --- |
| **Lot** | **Locality** | **Name of project proposal** |
| ***Lot 1*** | Cazaclia village, ATUG | *Rehabilitation of a segment of road on Pushkin Street* |
| ***Lot 2*** | Cismichioi village, ATUG | *Capital repairing works for the Culture Hall building* |

2.3 In particular, the projects envisaged in these localities include the following types of construction works:

**Cazaclia village**

The project envisages the rehabilitation and modernization of a segment of central road in the village – 1100m, Pushkin Street. The following works will be performed for this purpose:

* cutting the trees and shrubs;
* demolishing some existing constructions;
* scrapping of ground of cat. II y=1.85t/m3 for executing the tray of the roadway;
* mechanical levelling and profiling, finishing and compacting the areas of the road platform using the heavy compactors 10-15t;
* executing the sand-made support layer, h=0.15m;
* foundation layer of crushed stone, h=0.28m,;
* development of green zones, construction and development of sidewalks;
* development and construction of side road; repairing the footbridge;
* development and consolidation of the pluvial water discharge ditch with crushed stone;
* placing and organizing the road safety elements (road signs, marking);

**Cismichioi**

* partial re-planning of premises;
* repairing the ceilings, internal walls, flooring;
* building the suspended ceilings;
* changing doors and windows;
* thermal insulation of external walls and painting the facades;
* thermal insulation of the center building’s ceiling;
* re-establishing the existing entries and building the new entry in the heating unit;
* building the ramp for the persons with reduced mobility;
* building the new system of water and sewerage supply;
* building the heating system and the new biomass-based heating unit;
* new system for building lighting and fire-warning;

2.4 The Contractor should ensure all the necessary things for performing successfully the contract: work, engineering, materials, equipment, support materials, transport, vehicles, tools and necessary trips for executing all the works included in the contract.

*As a rule, the Contract will include the following activities:*

* ***procuring and delivering*** of materials, equipment, and services necessary for performing successfully the works;
* ***preparing the site*** for storing the materials, equipment and performing the works
* ***construction works and installing the equipment*** in buildings, sewerage networks, water treatment unit, electrical networks, water networks, development works, etc., as mentioned above;
* ***launch into operation*** of the installed systems, equipment, materials, and construction works, including the carrying out of performance tests and launch into operation (as appropriate);
* ***transmission of detailed documentation for operating and maintaining*** the installed objects and systems (as appropriate);
* ***organization of training and sending of training materials*** developed for the authorized operators responsible for beneficiaries;

2.5 All the materials and equipment suggested by contractors (as appropriate) should be manufactured in line with the guidelines, technical requirements and specifications set below; to have European Certificates (CE) and/or Moldovan Certificates, confirming the data in the technical passports. The contractor should also insure that all materials, equipment and activities related to construction and mounting works under the contract, will be coordinated, before being executed, with the representatives of the Beneficiary and UNDP Moldova, hence being accountable: for daily supervision and periodical monitoring of works on the site.

***Note for bidders:***

|  |
| --- |
| ***Any time when the technical specifications request for a specific product, specific brand, name/model, the bidders may come up with proposals to coordinate any other product, which is equal in all aspects to the specified product, meeting all the requirements related to origin, all the physical, functional, and performance parameters.*** |

**3. Construction works site**

The works announced in this tender shall be carried out in the localities according to the above-mentioned lots.

# 4. Organizational arrangements

The implementation of each of the projects and the execution of works on the site will be monitored by the Engineer – Consultant, appointed by UNDP Moldova, who will perform systematic site monitoring visits. Additionally, the Engineer – Technical Responsible, authorized by the Local Public Authorities, and project beneficiaries, will ensure the daily supervision of construction activities envisaged in the contract.

# Expected results

For each of the projects, the following *results* shall be expected from the Contractor:

***Result 1****:* Finishing all the construction works, delivery and installation of equipment, connection to electricity, water, and sewerage supply networks, territory development, etc., as provided in the contract documents, within a period not exceeding ***120 calendar days – for all the lots,*** since the date the Contract was signed***.***

***Result 2:*** Launching into final operation of the site within a period of: ***up to 3 months***, *depending on the type of contracted works*, since the date the date the site was delivered upon the finished works, incl. delivery and installation of equipment, testing it, launching into operation, transmission to and training of operators (as appropriate).

# Main Technical Requirements and Specifications

***6.1 Capital repairing of a road segment on the Pushkin Street in Cazaclia village***

The project provides for rehabilitation of the segment of 1100 m of the village road. The road should be rehabilitated according to the Project Documentation No. DA-PE-007/2018, dated 10.04.2018, developed by “Astral-Proiect” SRL Company in line with: “Recommendations for streets’ and roads’ design in urban and rural localities”- CP D.02.11-2014; NCM D.02.01:2015; SniP 2.05.03-84; CP D.02.08-2014 and other normative documents.

*Earthworks:* According to the design, after scrapping the ground for executing the road tray, the mechanical levelling and profiling of the road platform areas will be performed, observing the designed longitudinal and transversal gradient according to the procedures indicated in p. 4.13-4.25 of SNiP 3.06.03-85. The compacting the road platform will be performed using the heavy compactors 10-25t;

*Foundation of the road:* The road support layer of 15cm will be made of sand on the area of the roadway, within one layer, with compacting performed with heavy compacting rolls, according to GOST 8736-93. The materials are delivered with the compacting coefficient 1,25-1,3; the road foundation layer of 28cm, will be built with crushed stone, M400, fr. 70-40, 40-20, 20-10,10-5, using the wedging method, according to GOST 8267-93. When executing the road foundation, it is necessary to observe the requirements p.7.4 - p7.8 of SNiP 3.06.03-85; The mixture of crushed stone M400 for the foundation after unloading it shall be laid down and levelled with the automated grader in two layers. Every layer shall be compacted at the beginning with light compactors, afterwards with medium and heavy compactors with 12 passing (in average) on one impress (according to p. 7.5 SNiP 3.06.03-85), and correcting the places with defects and executing the wedging. The compactors shall move from the sides of road way towards the center, and afterwards from the center towards the edges, covering each impress with 20-30cm. At the beginning of compacting exercise, the speed of the compactor is 1.5-2.0km/hour, and after 5-6 passing on the impress, shall be increased up to 2.0-3.5km/hour.

|  |
| --- |
| ***Important!*** *All the construction-mounting works will continue to be performed after trying the launch into operation of a test segment of 20-25m* |

To reduce the friction between the aggregates and to achieve the wedging in a quicker manner, the compacting should be carried out only by splashing the stone compacted through wedging, with water (about 15-25 l/m2 – depending on the optimal humidity of the crushed stone).

*Existing pavement:* is made of reinforced concrete slabs with thickness 0.1m and width 1.00-1.40m. On several segments where it is inadequately placed, the slabs will be removed and replaced (PC-04+25,00 - PC 06+02,00 – will be removed from the left side; PC04+25,00 – PC 05+50,00 – will be mounted on the right side; PC 06+42,00 – PC 06+10,00 – will be mounted on the right side).

*New pavement*: with width of 1.5 m, and be paved with vibro-pressed pavement stone with thickness of δ=60mm, on a layer of mixture of cement/clean sand with a proportion of 1:6, thickness δ=50mm, and edges PB-100x20x8 or PB-50x20x8 on concrete foundation B15, V=0.019 m3/ml, GOST 6665-91; the slope of the pavement should be equal in the limits 1.5-2.0%.

*Ditches:* At the pickets PC 02+19,40; PC 04+20,50; PC 06+06=13,40; PC 11+12,00, it is envisaged to develop and build ditches *– road spillways,* from butto-concrete, h=18cm, on foundation of crushed stone M400, fr. 70-40, 40-20, 20-10, 10-5, using the wedging method, and the support layer made of sand h=15cm, with a total area of - 758m2.

*Footbridge:* At the picket PC 05+26,50 a new footbridge will be built from reinforced concrete B30, rings TC120.50-1 (existing), Ø=1,20m, L=10m. Reinforced concrete portal - B30 Series 3.501.1-144, type CT 12, (2pc), pre-cast wings -B30, Series 3.501,1-144, type CT5Л(П) (4 pc).

***6.2 Rehabilitation of the Cultural Hall building in Cișmichioi village***

In general, the project provides for the capital rehabilitation of the internal part of the Cultural Hall building in the village. The works will be carried out according to the project documentation No. 0013/17 - SA of 28.06.17, developed by S.C. „Lecris Com” S.R.L., license No. 034900 series A MMII of 26.06.15, The technical requirements announced in this tender, as well as the local normative documents: SNiP3.03.01-87, “Lifting and protection constructions”; SNiP III-4-80, “Security measures in constructions”, SNiP 3.04.01-87, “Insulation and finishing works”.

*Roof, external windows and doors, thermal insulation and finishing of facades, ceiling* in the events’ hall were recently renovated within another contract.

*Flooring*: will be in line with the normative - SNIP 3.04.01-87 „Insulation and finishing works”.

The existing wooden flooring in the events’ hall and on the stage will be cleaned, flattened and painted with cu nitro-email painting in 2 layers. In the auxiliary premises: halls, museum, daily activity premises, heating unit, sanitary blocks, etc., the floor will be made of ceramic tiles δ ≥7.0mm. See on page PE 35

*Finishing works:* the slip with finishing works for the internal walls and ceilings are described in the table on page 36, album 0013/17-SA. The internal walls, especially, will be painted with paints based on vinyl copolymers, in 2 layers, on the „Eurofin” putty, plastering made from mixture of dried gypsum, with thickness δ≥5mm on synthetic mesh. The suspended ceilings will be of 2 types: AMF „Heradesign”, superfine, 35mm; and „Armstrong” of grid system. The volume of work according to the technical requirements.

*Water supply and sewerage networks*: internal networks for water supply – from polyethylene pipes PE100, PN20, Ø=25mm; water meter – type R 100, Ø =15mm, in set with the valve and filter. External sewerage networks from pipes of type PVC SN8, Ø=110mm; Internal sewerage networks from pipes PVCSN 4, SDR 41, diam. Ø =110mm, 50mm and sanitary equipment – according to the technical specifications in the design: 0013/17-RAC, page RAC-1.S -1.2.

*Hot water network:* from the local boiler from the heating unit, of polypropylene pipes, PP, PN16, diam. Ø = 32x5.4 -20x2.8mm;

*Heating system*: horizontal, two-pipes, of metallic-plastic pipes, PE-Xc/Al/-Xc, insulated and assembled in floors; radiators of metal panels 11K H=500, P=10bar; 22K H=500, P=10bar, „CORADO” (Czech Republic); the adjustment devices of “Maievschii” tap type are recommended. Metallic pipes according to GOST 10704-91 Bcm3 cp5 GOST380-94.

*Heating unit:* annexed to the building at the first floor, with two boilers with natural gas burning, type ThermTrio 90T, P=3,0bar, T max 80°, Qnom=90kW, output - 85% *or something equivalent*. The boilers should be produced in set with the safety valve and the automation and control system; pumps of type “DAB” Italy, of different capacities, Page 0013/17-SM p.3; device for preparing water G=1.0m3/hour N=100Wt of type „Nobel” Italy, ACSV 60; filter „Danfos”, Denmark, Dn65 Y333, 149B 3282, Dn25 Y222, 149B 1770, G=1.0m3/hour; expansion vessel Varem, Italy, R2 250 471.

*Ventilation*: GOST 14918-80, axial extraction ventilator MF100/4, V=50m3/h, P=30PA, N=15W;

*Internal lighting:* should be in line with the design no. 0113/17, album EEF/IEI and the normative requirements: NCM G.10.02.2015, NCM C.04.02-2005, ПУЭ. The daily activity premises of the center will use the daylight lighting fittings, of type: AOT OPL 236, ARCTIC 236, OWR/R 418, BAT 136, IP60,45,40. The conductors will be of type PB-1-0.66 1x1.5 mm2; 1x2.5mm2; 1x4.0mm2;

**Marking the equipment**

All the equipment should be marked with original plates from the manufacturer, which should include at least the year of production, main technical parameters and type/ID of the equipment. The assembled cables will be marked at the beginning and end of the networks. All the textual marks necessary for the operation of the system should be in Romanian and Russian languages

**Reception when the works are finished**

When the construction works are finished, the equipment envisaged in the contract was installed and tested in the appropriate way, the training of the personnel was performed, and the execution documents were sent, a procedure would be organized for launching into operation the site by the end of the construction works. All the costs related to organizing the testing of the installed systems and the training of the personnel will be incurred by the contractor.

**Guarantee period**

The guarantee period for the works and installed equipment shall start on the day when the site is delivered and the works are finished, and shall last for 12months for the equipment and 36 months for works.