

VOLUME 3

TECHNICAL SPECIFICATIONS

Execution of works to achieve the investment objective
"Construction of road L401(from R10 to Varzaresti Monastery),
NISPORENI DISTRICT)"

CPV: 45233142-6 - Road repair works

1. Aquisition context

The purpose of the acquisition is the execution of construction works in order to achieve the objective: "Construction of road L401(from R10 to Varzaresti Monastery), NISPORENI DISTRICT", in full accordance with the Technical Project - provided by the Contracting Authority.

Technical indicators:

Road length: 3,115km

Road category: V

Number of lanes: two

Road width sect I: 5.5 m

Road width sect II: 6.00 m

Road width sect III: 4,5 m

Banquet width: 1 m

Equipping the branches: 19 buc/m2

Installation of kerbs: 2400 linear meters

Construction of sidewalks: 502/m2

Installation of metal poles with photovoltaic panels - 23 pcs

Construction of container platforms -7 pcs

Installation of a telephone point with Wi-Fi connectivity

Note: Economic operators will take into account the fact that in accordance with the provisions of art. 3 para. 1 lit. yy of Law 98/2016: "any economic operator that is not part of a public procurement contract and that executes and / or supplies certain parts or elements of works or construction, or performs activities that are part of the object of the public procurement contract, being responsible to the contractor for organizing and carrying out all the necessary steps for this purpose "is defined as a subcontractor.

The duration of the contract is 12 months. The minimum warranty period for the works (notification of defects) is at least 36 months. The works will be executed according to the funds allocated / obtained for the financing of the investment by the Contracting Authority.

The activities and initiatives included in the table below are planned at the level of the Contracting Authority in order to achieve de investment objective **Construction of Road L401 with the length of 3,115 km (from R10 to Varzaresti Monastery, NISPORENI DISTRICT)** and its commissioning:

	Activity	Time frame for carrying out the activity	Expected results
1	Technical assistance from the architect during the execution of the works	execution period of the works	Executting the technical documentation
2	Issuing the order to start the execution of works	maximum 5 days from handing over the site	Executting the technical documentation
3	Execution of works	the obligation to start execution of the contract (mobilization period) within a maximum of 3 days from the date of receipt of the order to start the execution of works maximum 12 months from signing contract	Executting the technical documentation
4	Warranty period (defect notification period)	Minimum 36 months from reception of completed works	Executting the technical documentation

All activities must be carried out in compliance with the legislation and technical regulations in force. The executor shall present, at the request of the Contracting Authority, after signing the contract, the updated detailed execution schedule, drawn up in the technological order of execution. If, in the opinion of the Contracting Authority, the performance of the works is not in line with the general schedule of execution of the works, at the request of the Contracting Authority, the Executor will present a revised schedule, in order to complete the works on the date provided in the contract. The revised schedule will not relieve the Executor of any of the duties assumed by the contract.

The moment in the performance of the Contract when the services are considered completed is the moment when all the requirements included in the chapter *Completion of the services* within the Contract are fulfilled.

2. Information on the activities required by this Tender Dossier for the execution activities

The object of the contract resulting from this procedure is the execution of all works identified in the technical project (written part and drawn part) of the objective **Construction of Road L401 with the length of 3,115 km (from R10 to Varzaresti Monastery, NISPORENI DISTRICT)** and includes the following:

- i. purchase of all necessary materials and products, all machinery, means and equipment (including any lifting or handling equipment) necessary for the execution of the works;
- ii. any activity or temporary work required for the preparation of the site, or any authorization required of the Contractor from the competent authorities for the execution of the works and the performance of the temporary activities and works;
- iii. the transport to the site of any materials, machinery, components and work equipment, any normal or extraordinary means necessary for the execution of the works;
- iv. any relevant tests and trials, such as those tests and trials required by the legislation and regulations in the field of the quality assurance system in construction;
- v. any consumables necessary for the execution of the works and the performance of the tests;
- vi. normal and extraordinary maintenance of the works until they are handed over to the Contracting Authority;
- vii. activities and consumables necessary to keep the site clean and functional, dismantling and removing any temporary works or activities;
- viii. the preparation of any documentation required of the Contractor for the execution of the works, in accordance with VOLUME 1 SECTION 1: INSTRUCTIONS TO TENDERERS and applicable national and European legislation.
- ix. Documentation of the information required for the Technical Building Book, including documentation operating instructions. The terms and conditions of the contract also include a guarantee for the execution of the works of at least 36 months. (.....)

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The final results of the Contract include:

- i. all work on disciplines carried out fully in accordance with the Specifications of the current Tender Dossier;
- ii. Waste will be properly sorted and the waste management procedures fully complied with;
- iii. All necessary documentation that has been used for planning, execution, control of the execution and completion of the works, as indicated in the paragraph below;
- iv. The work site cleaned and cleared of any equipment, machinery or material used by the Contractor during the execution of the works.

The specific requirements of the works are set out in the documents annexed to this procedure. The terms and conditions of the contract also include a guarantee for the execution of the works of at least 36 months.

3. Input data used by the Contractor in the execution of the works

The input data for the execution of the works are the elements specified in the written and drawn part of the Technical Project and the attached quantity lists.

4. Contractor's staff

For the activities included in the contract, the Contractor will appoint (Appointment Decision) the following personnel according to the legislation in force:

Responsabil contract/Manager contract care va comunica direct cu persoana nominalizată de Autoritatea Contractantă (Supervizor/Diriginte de șantier) și cu Echipa de Implementare a Proiectului (EIP) la nivel de contract ca și responsabil cu monitorizarea și implementarea contractului. Reprezentantul Antreprenorului organizează și supraveghează derularea efectivă a Contractului. Sarcinile sale sunt:

Contract Manager who will communicate directly with the person nominated by the Contracting Authority (Supervisor / Site Manager) and with the Project Implementation Team (PIT) at contract level, as responsible for monitoring and implementing the contract. The Contractor's Representative organizes and supervises the effective performance of the Contract. Its tasks are:

- ✓ to be the only interface with the Contracting Authority regarding the implementation of the contract and the development of the activities within it;
- ✓ manages, coordinates and schedules all the activities of the Contractor at contract level, ensuring the fulfillment of the Contract in time and at the required quality standards;
- ✓ ensures all the necessary resources for the application of the quality assurance system according to the relevant regulations;
- ✓ manages the relationship between the Beneficiary and its subcontractors;
- ✓ manages and reports if the execution of the works is carried out in compliance with the contractual clauses and the specifications of the Tender Dossier.

Site manager (construction engineer specializing in CFDP) who will relate directly to the staff of the Contracting Authority responsible for the execution of the Contract (Supervisor and PIT).

He is responsible for organizing and supervising all activities performed by the Contractor on site. The site manager must be permanently present on site when activities are carried out and must be able to inform the representative of the Contracting Authority at any time about the situation on site. If the site manager cannot be present, he will be replaced with the prior notification of the Contracting Authority.

The main tasks and responsibilities of the Site Manager under the Contract are:

- ✓ to be the only interface with the Contracting Authority regarding the activities on site;
- ✓ is responsible for the technical and operational management of the activities on site, including organizational aspects;
- ✓ to contribute with its technical experience by presenting appropriate proposals whenever necessary for the proper execution of the works;
- ✓ to manage and supervise all the activities carried out on the site;
- ✓ to be present during all the activities carried out on the site;
- ✓ to update all the documentation necessary for the execution of the works, including the Technical Construction Book;
- ✓ to update the calendar of activities and the site log;
- ✓ to manage the implementation of quality control plans for all works on site;
- ✓ is responsible for all aspects of the health and safety of the Contractor's staff on site;
- ✓ is responsible for the environmental aspects of the works in accordance with the contractual requirements.

During the execution of the works, the Site Manager must submit to the Contracting Authority (Supervisor and PIT) a monthly "Report" which:

- ✓ describes the progress made;
- ✓ identifies the intermediate results obtained (stage of works and associated documentation);
- ✓ presents the problems encountered and the corrective actions taken;
- ✓ present the short-term planning and highlights the changes in relation to the previous planning for the activity on site.

Technical Supervisors responsible with the Execution according to the legislation in force

The authorized Execution Technical Supervisors are responsible, according to their attributions, for:

- realizarea nivelului de calitate corespunzător cerințelor fundamentale aplicabile lucrărilor de construcții pentru care sunt angajați, precum și în cazul neasigurării din culpa lor a realizării nivelului calitativ al lucrărilor prevăzut în proiecte, caiete de sarcini și în reglementările tehnice în construcții în vigoare la momentul execuției lucrărilor;

- achieving/ or failing to achieve the quality level corresponding to the fundamental requirements applicable to the construction works for which they are employed, requirements enclosed in the technical project, tender dossier specifications and other technical regulations in force at the time of execution;

- hidden defects of the construction, arising within 10 years from the receipt of the work, as well as after the fulfillment of this term, during the entire existence of the construction, in case of defects related to the resistance structure resulting from non-compliance with the design and execution norms in force on the date of its execution.

The Execution Technical Supervisor will work / will be hired strictly for this objective, in this sense, the bidder will present a self-declaration.

The Execution Technical Supervisors have, mainly, the following obligations and responsibilities:

- a) to allow the execution of construction works only on the basis of projects and execution details verified by certified project verifying specialists;
- b) to verify and approve the technological files and projects, the procedures for carrying out the works, the execution verification plans, the projects for organizing the execution of the works, as well as the programs for carrying out the key construction works;
- c) to make available to the regulatory and / or control authorities in constructions, at their request, the documents drawn up in the exercise of their obligations;
- d) to draw up and keep up to date the electronic register of activity records for the construction works that he technically coordinates and for which he is responsible;
- e) to submit to the procedure of Supervision of the activity of the authorized persons;

✓ *During the construction preparation period:*

- participates, together with the architect and the site manager, in the general tracing of the construction and in the establishment of the landmarks;

✓ *During the execution of construction works:*

- allows the execution of construction works only on the basis of projects and execution details verified by certified project verification specialists, meaning that:
 - verifies the existence of the project and the execution details;
 - studies the project, specifications, technologies and procedures provided for the construction;
 - verifies the existence of all written and drawn parts of the project, including the existence of the studies required by the urbanism certificate or by approvals and the concordance between their provisions and DTAC - technical documentation for obtaining the building permit and PTe - technical execution project
 - verifies the existence of the technical expertise in the case of intervention works on constructions;
 - verifies the observance of the regulations regarding the verification of projects by certified project verifiers and their acquisition by the certified technical expert, where applicable;
 - verifies if the importance category of the construction is specified in the project;
 - verifies the existence of the quality control plan, verifications and tests;
 - verifies the existence of the "Quality system in constructions", taking into account the category of importance of the construction or the complexity and importance of the construction works and of the procedures / technical instructions for the respective work and their correspondence with the specifications;
 - verifies, if applicable, the existence of the technical expertise and the monitoring program for all constructions and utilities located in the area of influence of the deep excavation, regarding the resistance, stability and safety at exploitation;
- supervises the execution of the construction in accordance with the provisions of the building permit, of the projects, of the specifications from Tender Dossier and other technical regulations in force, as applicable;
- verifies the existence of the quality certification documents for construction products, respectively the correspondence of their quality with the provisions included in the projects;
- prohibits the use of construction products without a certificate of performance / conformity, declaration of performance / conformity or technical approval in constructions, as the case may be, documents elaborated in accordance with the law;

- verifies the observance of the execution technologies, their correct application in order to ensure the quality level provided in the technical documentation and in the technical regulations;
 - verifies the observance of the "quality system in constructions", of the procedures and technical instructions for the respective work;
 - verifies and approves the technological execution sheets and projects, the procedures for carrying out the works, the execution verification plans, the projects for organizing the execution of the works, as well as the programs for carrying out the constructions;
 - participates in the verification of the works in key execution stages;
 - verifies, signs and stamps the documents drawn up as a result of the verifications, respectively minutes in key phases, minutes of qualitative reception of the works that become hidden, etc.;
 - assists in the sampling process at the place of installation and signs the sampling report;
 - sends it in writing to the architect, through the site manager, his own notifications or those of the participants in the construction regarding the non-conformities found during the execution;
 - makes available to the control bodies all the required documents, necessary for the verification of the specific activity;
 - stops the execution of construction works in case of serious quality defects, or deviations from the provisions of the execution project and allows the resumption of works only after their remediation;
 - it follows the observance by the Contractor of the dispositions and / or of the measures ordered by the architect / by the competent bodies;
 - supervises the carrying out the monitoring program for all constructions and utilities located in the area of influence of the deep excavation, regarding the resistance, stability and safety at exploitation, where applicable;
 - verifies, as a representative of the Contractor, compliance with legal provisions in case of change of technical solutions during the execution of works and ensures that they are made on the basis of site disposition verified by certified project verifiers and experts and are accepted by the investor;
 - verifies the safety of the construction before commissioning, according to the project;
 - draws up and maintains an electronic register of the construction works activity records that he coordinates technically and for which he is responsible;
 - draws up a presentation report on the way in which he fulfilled his obligations as Execution Technical Supervisor, as well as any event that occurred during the execution of the work;
 - înștiințează în scris I.S.C. în maximum 10 zile de la data încetării activității de responsabil tehnic cu execuția la o investiție ca angajat al Antreprenorului, înainte de recepția la terminarea lucrărilor la o investiție, cu precizarea stadiului fizic al lucrării și data până la care a activat;
 - notifies I.S.C. in writing within a maximum of 10 days from the date of cessation of the activity as Execution Technical Supervisor of an investment as an employee of the Contractor, before the commissioning of the works, specifying the physical stage of the work and the date until which he worked.
- ✓ *At works commissioning phase:* together with the site manager and the architect, contributes to the elaboration of the up-to-date technical book and its delivery to the beneficiary.

Quality control supervisor (QC Supervisor)

The main tasks of the QC Supervisor:

- ✓ Follows the exact application of the execution project and the correct elaboration of the quality records;
- ✓ Observes the preparation of the documents regarding the quality of the works;
- ✓ Performs / supervises the performance of quality controls, verifications and tests on the works executed, in accordance with the provisions of the specific PCCVI and of the approved own control plan;
- ✓ Controls the qualitative reception process with regards to raw materials, prefabricated, construction elements received from suppliers;
- ✓ Verifies the existence of quality certificates on materials;
- ✓ Prepares Non-Compliance Reports (NCRs) and establishes corrective actions, monitors the effectiveness of corrective actions;

- ✓ Keeps the documents that make up the Technical Book of the construction that he hands over to the Contracting Authority (Supervisor) at the completion of the works.

ANCPI authorized surveyor category B

The main tasks of the Authorized Surveyor:

- ✓ *During the construction preparation period:*
 - Coordinates the execution of the general construction layout in accordance with the technical documentation and the technical standards and norms in force;
 - Coordinates the execution of the tracing for each object of the project;
- ✓ *During the execution of construction works:*
 - Executes the measurements necessary for the preparation of the "Attachment Sheets" and the monthly work situations;
 - Executes the measurements necessary for the preparation of quality documents (PVRC-Minutes of qualitative reception, PVLA-Minutes of hidden works, PVFD-Key Phase Report).

Health and Safety Supervisor

- ✓ Elaborates, implements, monitors and updates the prevention and protection plan composed of technical, sanitary, organizational and other measures, based on risk assessment;
- ✓ Elaborates own instructions for completing and / or applying occupational health and safety regulations, taking into account the particularities of the activities and of the unit / enterprise, as well as of the positions / workstations, and disseminates these instructions within the enterprise and / or unit only after they have been approved by the employer;
- ✓ Verifies the acquisition and application by all workers of the measures provided in the prevention and protection plan, and of his own instructions, as well as of the attributions and responsibilities incumbent on them in the field of health and safety established by the job description,
- ✓ Elaborates topics for all phases of training, establishes, in writing, the periodicity of appropriate training for each position, ensures information and training of workers in the field of occupational safety and health and verifies the acquisition and application by workers of information received;
- ✓ Prepares the annual Health&Safety program, organizes and arranges the first aid points within the entire company;
- ✓ Ensures the control and observance of the legislative regulations in force regarding Health&Safety, Fire Prevention and Extinguishing and Environmental Protection by all employees;
- ✓ The Contractor's personnel carrying out activities on site must apply all general and specific regulations, as well as any other pertinent rules, regulations, guidelines and practices communicated by the Contracting Authority;
- ✓ Ensures the identification of hazards and assesses risks related to the safety and health of workers, including the choice of work equipment, chemicals used and the workplace organisation, taking into account the nature of the company's activities;
- ✓ Ensures the preparation of the action plan in case of serious and imminent danger and the training of all workers for its application;
- ✓ Keeps track of high and specific risk areas;
- ✓ Establishes the areas that require Health&Safety signaling, as well as the type and location of signaling required, according to the legal provisions;
- ✓ Keeps records of the trades and professions which require special authorizations to be exercised, according to the specific legislation;
- ✓ Keeps track of jobs that require additional medical examinations;
- ✓ Keeps records of jobs that, on the recommendation of the occupational medicine doctor, require skills testing and / or regular psychological control;
- ✓ Checks the functionality of the alarm, warning, emergency signaling and safety systems;
- ✓ Carries out internal controls at workplaces, informing the employer in writing of the deficiencies found and of the measures proposed to remedy them;
- ✓ Takes appropriate measures to ensure that, in high and specific risk areas, access is only allowed to workers who have received and acquired the appropriate instructions;
- ✓ Ensures conditions for each worker to receive sufficient and adequate training in the field of H&S, especially in the form of information and work instructions specific to his job and position;
- ✓ Prepares the necessary documentation for technical information and training of workers in the field of H&S;
- ✓ Elaborates the training-testing program at the unit level;

- ✓ Provides consultancy to the coordinators of different departments within the organization regarding the legislative regulations in force and the norms regarding Health & Safety and Environmental Protection;
- ✓ Ensures the training and briefing of the staff in matters of Health & Safety, Fire Prevention and Extinguishing and Environmental Protection;
- ✓ Participates in the communication and investigations related to specific incidents and events, evidencing and recording of work accidents and hazardous incidents, in evidencing and reporting occupational diseases;
- ✓ Prepares the unique Register of evidence of accidents at work; Unique register of dangerous incidents; Unique register of minor accidents; Unique register of work-related injuries resulting in incapacity for work for more than 3 working days;
- ✓ Continuously monitors the observing / applying of the norms of health and safety at work;
- ✓ Proposes sanctions and incentives for workers, based on the fulfillment of obligations and responsibilities in the field of health and safety at work;
- ✓ Identifies the necessary personal protective equipment and draws up the lists of necessary personal protective equipment for workers;
- ✓ Keeps records of work equipment and ensure that periodic checks and, if necessary, periodic tests of work equipment are performed by competent persons;
- ✓ Prepares the intervention plan for Prevention and Extinguishing of Fires for all work points in the company;
- ✓ Coordinates the intervention and evacuation activities in situations of imminent danger, disasters, accident situations and carries out the first investigations regarding the causes and circumstances of their occurrence;
- ✓ Alerts the emergency services if required, providing the necessary information in a clear, precise and objective way;
- ✓ Ensures keeping evidence of all equipment, its appropriate zoning, the periodic verifications and / or testing of the work equipment on a timely manner and by the competent persons;

NOTE: The attributions of the Technical Staff are not limited to those mentioned above, the bidders having to demonstrate in the technical proposal how they ensure access to the necessary and mandatory specialist resources in order to ensure/ verify the adequate quality level as per the fundamental requirements applicable to the works included in the contract.

The contractor must ensure that the personnel carrying out activities on site have all the abilities and competencies for the execution of the planned works;

Contractor personnel operating on site must be easily recognizable and are required to wear work clothes / equipment with the Contractor's logo;

The Contractor's personnel entering the site must be authorized in advance. Entry and exit from the site are allowed only during working days and hours,

For the necessary/ mandatory specialists requested by the specifications at the execution phase, the Contractors have to present in the Technical Proposal the way of ensuring access to specialists, respectively the way of ensuring access to equipment / machinery in order to verify the quality level meeting the fundamental requirements applicable to the works included in the contract;

The Contractor shall not make changes to the established key personnel without the prior written approval of the Contracting Authority;

The contractor must propose on his own initiative a replacement of staff in the following cases:

- in case of death, illness or accident of a team member;
- if it becomes necessary to replace a member of the team for any other reason beyond the control of the Contractor.

When a key staff member is to be replaced, the replacement must possess at least the equivalent of the qualifications and experience of the person replaced.

5. Technical changes

The Contractor shall carry out the work described in full compliance with the requirements of the specifications from the Tender Dossier. As a rule and in principle, no technical modification (alteration or addition) of the design documentation is allowed during the execution of the works.

Any changes that may occur / appear during the execution of the contract / works contracts will be approved by an Administrative Order or by an Addendum to the Contract. Any Modification of the Contractual Conditions will be approved only by an Addendum to the Contract. Only non-substantial changes within the meaning of the Law in the field of public procurement can be approved by an Administrative Order.

The Contractor shall not make any changes to the Permanent Works or Interim Works planned by the Beneficiary, until the related Modification has been approved.

At any time before the approval of the Reception at the Completion of Works, the Supervisor may approve by Administrative Order a Modification for any part of the Works, provided that **this Modification is insubstantial within the meaning of the Public Procurement Law and is approved in advance by the Beneficiary**. Such Modification may include additional work necessary, or beneficial for the proper execution and completion of the Works, or for the operation of the Works, omissions, substitutions, changes in quality, quantity, shape, character, type, position, size, dimensions or route, changes in the sequence of works, working method, technical specifications or Work Execution Program.

6. Quality management and document management

The Contractor shall perform all activities under the Contract in accordance with the standard SR EN ISO 9001: 2015 or equivalent and in compliance with the instructions of the standard SR ISO 10005: 2007 "Guidelines for quality plans" and in accordance with the regulations on quality management system in constructions (including, but not limited to the content of Annex 2 of GD 766/1997, with subsequent amendments and completions).

All the requirements for the execution of the works described in the Specifications of this Tender Dossier must be observed. Accordingly, FORM 4.6.7 QUALITY ASSURANCE SYSTEM (S) should not be generic, but specific to this Agreement. The quality management plan must (at the minimum):

- i. describe how the Contractor will apply in the Contract the quality management system in construction in such a way as to meet the technical and contractual requirements as well as the applicable regulations, standards and norms;
- ii. demonstrate to the Contracting Authority how the Contractor will meet the quality requirements included in the Specifications of the Tender Dossier and in the regulations governing quality in the execution of construction works;
- iii. describe how the activities under the Contract will be organized and managed to meet the requirements;
- iv. be in accordance with all input data provided by the Contracting Authority through this Award Documentation.
- v. Include the organizational structure of the Contractor and identify the functions and responsibilities of the personnel directly involved in the execution of the contract;
- vi. Describe the management of the input data and the management of the documents within the Contract;
- vii. Present the resources available for the execution of the contract, respectively: labour, materials and infrastructure;
- viii. Present the method of communication with the Contracting Authority;
- ix. Present the manner of control and management of non-conformities that may occur during the execution of works.

During the performance of the Contract, the Quality Plan shall be updated whenever deemed necessary and / or at the request of the Contracting Authority.

The quality control plan shall contain at least the following:

- i. Description of the planned tasks and list of execution stages for carrying out the activity;

- ii. Responsibilities for the execution, management and control of the activity;
- iii. References to technical specifications, drawings, procedures relating to the execution, control and acceptance of the activity;
- iv. Integration of certification documentation (minutes / minutes, inspections or test reports, certificates, etc.) provided for the activity;
- v. The final documentation of the activity followed by the closure of the Quality Control Plan.

De asemenea se va prezenta Planul de control, calitate, verificare și încercări a lucrărilor executate pentru obiectivul de investiție pe fiecare categorie de lucrări în parte. Acesta trebuie să conțină PCCVI aplicabile tuturor lucrărilor descrise în cadrul Caietului de sarcini / Documentația tehnică. Acesta va conține minim următoarele informații:

The Plan for control, quality, verification and testing of the works executed for the investment objective on each category of works will also be presented. It must contain the PCCVI applicable to all works described in the Specifications of the Tender Dossier / Technical Documentation. It shall contain at least the following information:

- the categories of works controlled and verified according to the specifications and technical norms;
- verification and control methods used (standards, norms);
- frequency / phase;
- accepted tolerance limits;
- who performs the control / verification;
- quality records.

The Contractor must give the Contracting Authority the opportunity to participate in the execution of any activity / stage at each stage of the related Quality Control Plan and to verify the compliance of the execution and controls with the Quality Control Plan.

In this regard the Contracting Authority shall indicate:

- i. the activities in which it intends to participate in particular;
- ii. the activities which must not be started without the presence of the representative of the Contracting Authority.

The contractor will communicate the calendar of these activities at least 5 working days before carrying them out.

7. The meeting for starting the activities in the Contract

The commencement of the execution of the works will be made after receiving approval / issuance of the Order for the beginning of the execution of the works, conditioned by the obtaining of the construction authorization.

The execution of the works will be carried out in compliance with the provisions of the technical documentation.

During the commencement meeting of the Contract, the Contractor shall provide the Contracting Authority with up-to-date documents of the forms required in VOLUME 1 SECTION 1: INSTRUCTIONS TO TENDERERS, respectively:

- a work plan with brief descriptions of the main tasks (Form 4.6.3);
- a critical milestone bar chart showing times and duties allocated for employees for this contract (Form 4.6.3);
- an outline of the quality assurance system(s) to be used (Form 4.6.7);
- a plan for managing the traffic in the area.

8. Start of activities on site

Once the Contractor has provided the Contracting Authority with all the documents specified above and the Contracting Authority has approved them without comments, the site organization may be carried out. This meeting will take place at the location reserved for the organization of the site, before the start of any activity on the site and will include the handing over of the location reserved for the organization of the site and its facilities to the Contractor.

The Minutes of this meeting constitute the Minutes of handing-over and beginning of the activities on the site, they are issued immediately after the end of the meeting and are signed by both parties.

Work can actually start only after:

- i. The health and safety plan is approved by the designated Health and Safety Supervisor;
- ii. Quality assurance system(s) and the procedures for the execution of the works are provided and approved without comments by the Contracting Authority;
- iii. All necessary authorisations have been obtained.

9. Technical testing of works

The works subject to this Contract and the materials used are subject to technical testing during and upon completion of the works by a third party named the Person performing the technical testing.

The Contractor shall provide, at its own expense, full support (personnel, machinery, equipment and materials) for the activities requested by the Person performing the technical testing.

The Supervisor and other members of the Beneficiary's Staff (if applicable) shall have the right to inspect, examine, evaluate, measure, request for Equipment, Materials and Execution of works to be tested and to verify the preparation, assembling or production of any item prepared, assembled or produced for the Works under the Contract in order to determine whether such Equipment, Materials, Elements and Execution are of the intended quality and quantity. These activities can be carried out at the places of production, assembling, preparation, storage or on site.

To perform tests and inspections, the Contractor:

(a) Will provide the Supervisor and Beneficiary Personnel (where applicable), temporarily and free of charge, with assistance, samples or test parts, machinery, equipment, tools, skilled labor, materials, graphics and commonly requested production data; and / or according to the provisions of the Specifications for inspection and testing, including protective equipment;

(b) Will coordinate with the Supervisor the date, time and location for the testing;

(c) Will ensure the access of the Supervisor and the Beneficiary's Staff (if applicable) to all locations of inspections and tests.

Each time a work or part of the work reaches the decisive phase, in accordance with the control program established by the designer of that work, the Contractor shall convene, in accordance with the provisions of the Law and within the term provided by Law, the factors responsible for verifying the works that reached the decisive phase and the approval for continuation of the execution of the Works. In accordance with the provisions of the Law, in verifying works that reached decisive phases, the afferent quality documents, as well as the measures ordered by the previously concluded control reports will be verified.

Each time a work or part of the work is completed and before it becomes covered or hidden, the Contractor will notify the Supervisor. The Supervisor, without undue delay, will perform the necessary inspection, testing and / or measurement or will notify the Contractor that these activities are not necessary. If the Contractor does not notify the Supervisor, the Contractor, at the Supervisor's instruction, shall uncover the work for inspection, testing and / or measurement at his own risk and expense.

The works will not be commissioned until the verifications and Completion Tests provided in the Contract are performed.

10. Completion of works and final reception upon completion

When the Contractor considers that he has completed all the construction work provided for in the Contract, he shall notify the Contracting Authority which shall verify the fulfillment of all contractual obligations.

The documentation prepared for the final reception of the works will be presented in an appropriate form and will contain at least: execution plans, modified plans signed, verified, adopted according to the legislation in force; hidden work reports, minutes, verifications and tests according to the quality verification program by execution phases, quality certificates and declarations of conformity for the main materials put in place, site provisions, documents annexed to the site provisions (lists of quantities, economic documentation, etc.), respectively any document relevant for the Technical Construction Book, without charging additional costs.

După terminarea verificărilor menționate anterior, Autoritatea Contractantă și Contractantul vor semna Procesul verbal de recepție la terminarea lucrărilor.

Upon completion of the above checks, the Contracting Authority and the Contractor shall sign the Minutes of acceptance upon completion of the works.

The reception of the works will take place in two stages:

- i. In the first stage, the Contracting Authority receives the works upon their completion, after verifying that all the results of the Contract have been obtained by the Contractor and approved by

Добавлено примечание ([u2]): Același cu The Execution Technical Supervisor de mai sus, sau un alt expert?
Acelasi

the Contracting Authority and after the Person performing the technical tests issues the final certificate of conformity without comments.

- ii. In the second stage, the Contracting Authority performs the final acceptance of the works, after fulfilling the conditions and ending the warranty period provided in the Contract.

The signing of the Minutes of acceptance upon completion of the works and of the Minutes of final acceptance of the works by the Contracting Authority does not release the Contractor from any contractual or legal obligation regarding the warranty of products, works and materials or any defect of products, works or materials.

11. Evaluation of the manner in which the Contract was implemented by the Contractor

The following indicators will be monitored during the activities under the Contract:

- Implementation indicator: progress made vs. planned (by investment object and in total by Contract);
- Result indicators:
 - a. Execution quality:
 - Resolving all non-conformities found during the performance of the Contract, during the period of time agreed with the Contracting Authority;
 - Meeting all the check / decision points on time and with the participation of all those requested;
 - Acceptance of the results of all tests, trials and verifications, according to the Contract and to the requests of the Contracting Authority.
 - b. Reporting quality:
 - Reports sent in due time to the Contracting Authority;
 - Quality of the reports submitted, including the level of detail required;
 - Handing over the complete Technical Book of the Construction on time.

The Contractor shall report monthly to the representative of the Contracting Authority the situation regarding the monitoring and performance indicators (including those pertaining to potential subcontractors).

The monitoring and performance indicators will be monitored by the Project Director of the Contracting Authority.

In case of non-fulfillment or defective / inadequate fulfillment of the obligations assumed by the Contract, under the conditions of the applicable legislation, the Contracting Authority will issue a negative finding document.

During the performance of the Contract, the Contractor is responsible for carrying out the activities in accordance with the technical documentation and the implementation of best practices, in accordance with the existing rules and regulations at national and European Union level.

In carrying out its activities under the Contract, the Contractor must take into account:

- the information applicable to the performance of the works in general (as described in this Specifications of this Tender Dossier), as well as in the applicable legislation;
- the rules specifically applicable to carrying out the works subject of the Contract resulting from this award procedure.

By submitting a Tender in response to the requirements of the Specifications from the present Tender Dossier, it is presumed that the Contractor is aware of and considers any and all applicable regulations and that he has taken them into account when submitting his Tender for the award of the Contract.

If, during the performance of the Contract, there are legislative changes likely to influence the Contractor's activity in relation to the requirements set out by these Specifications, the Contractor has the obligation to inform the Contracting Authority and the Site Manager of the consequences these changes incur upon its activities which are subject of the Contract and to adapt their activity, from the date and under the conditions in which they are applicable.

If any of the general or specific rules are no longer in force, or have been amended by law on the date of submission of the Tender, it is considered that the rule is automatically replaced by the new provisions in force by law and that the Tenderer / Contractor is aware of these changes and took them into account when submitting its Tender on the basis of the Specifications from this Tender Dossier.

Contractantul va fi deplin responsabil pentru realizarea tuturor lucrărilor în condiții de maximă securitate și în deplină conformitate cu legislația aplicabilă, precum și cu respectarea prevederilor referitoare la securitate și sănătate în muncă și controlul calității cuprinse în standarde/instrucțiuni/proceduri/ghiduri, aplicabile în speță.

Contractantul va fi deplin responsabil pentru subcontractanții acestuia, chiar și în situația în care au fost în prealabil agreeți cu Autoritatea Contractantă, urmând să răspundă față de Autoritatea Contractantă pentru orice nerespectare sau omisiune a respectării oricăror prevederi legale și normative aplicabile.

Autoritatea Contractantă nu va fi ținută responsabilă pentru nerespectarea sau omisiunea respectării de către Contractant sau de către subcontractanții acestuia a oricărei prevederi legale sau normative aplicabile.

The Contractor is fully responsible for carrying out all work in conditions of maximum safety and in full compliance with applicable law, as well as in compliance with the provisions on health and safety at work and quality control contained in standards / instructions / procedures / guidelines, applicable in this case.

The Contractor is fully responsible for its subcontractors, even if they have been previously agreed with the Contracting Authority, and is liable to the Contracting Authority for any non-compliance or failure to comply with any applicable legal and regulatory provisions.

The Contracting Authority is not liable for the Contractor or its subcontractor's non-compliance with any applicable legal or regulatory provisions.

11. Annexes

Annex 1: - Existing technical-economic documentation at the level of Contracting Authority - Technical project - Romanian version; a Romanian version is available on request.

Annex 2: Quantities list

**Construction of Road L401 with
the length of 3,115 km (from R10
to Varzaresti Monastery) Object
no.1-17-89**
(objective name)

WinCmeta2000
Form No.1

Works quantities list № 2-1-1
Estimate offer № 2-1-1

Sector I. Repair works
(works type)

Crt. no.	Symbol, resource code	Name of works	U.M.	Quantity	Unitary price, lei (including salary)	Total, lei (col.5 x col.6)
1	2	3	4	5	6	7
		Chapter 1. Preparatory works				
		Chapter 1.1. Pickling of existing road cover (PC16+30-PC18+25)				
1	TsC03G1	(Pickling of the crushed limestone road layer Hmed=20cm) Mechanical excavation with the excavator 0,40-0,70 m ³ , with internal combustion engine and hydraulic control, in ground with natural humidity, unloading in vehicles, terrain catg. III	100 m3	2,460		
2	TsI51A1	Transportation of excavated material with 10 t dump truck at a distance of: 1 km (in dump site)	t	319,800		
3	TsC51C	Excavated material unloading works in the dump site, terrain category III	100 m3	2,460		
4	TsC50C	Repair and maintenance of natural roads used for material transport, for every 0.5 * 2 = 1.0 km, terrain category III	100 m3	2,460		
		Chapter 2. Earthworks				
5	TsC03F1	(excavation ; Y=1.8t/m ³) Mechanical digging with the 0.4 m ³ excavator, with internal combustion engine and hydraulic control, in ground with natural humidity, unloading in vehicles, terrain catg. II	100 m3	4,600		
6	TsI51A1	Transportation of land with 10 t dump truck at a distance of: 1 km (at the shoulder)	t	828,000		
7	TsC03F1	(quarry ; Y=1.8t/m ³) Mechanical excavation with the 0.65 m ³ excavator, with internal combustion engine and hydraulic control, in ground with natural humidity, unloading in vehicles, terrain catg. II	100 m3	10,680		
8	TsI51A1	Transportation of land with 10 t dump truck at a distance of: 1 km (at the shoulder)	t	1 922,400		
9	TsC03F1	(ditches ; Y=1.8t/m ³) Mechanical digging with the 0.4 m ³ excavator, with internal combustion engine and hydraulic control, in ground with natural humidity, unloading in vehicles, terrain catg. II	100 m3	7,550		
10	TsI51A1	Transportation of land with 10 t dump truck	t	1 359,000		

1	2	3	4	5	6	7
		at a distance of: 1 km (at the shoulder)				
11	TsC03B1	(twinning levels) Mechanical excavation with the excavator of 0.40-0.70 m3, with internal combustion engine and hydraulic control, in ground with natural humidity, unloading in dump site catg. II	100 m3	0,200		
12	TsC51B	Excavated material unloading works in the dump site, terrain category II	100 m3	22,830		
13	TsC50B	Repair and maintenance of natural roads used for materials transport, for every 0.5 * 2 = 1.0 km, category II terrain	100 m3	22,830		
14	DI96	(25 t Compactor ONLY) Compaction of the embankment in cat.II terrain, with 25 t wheel compactor, 8 runs per track	100 m3	23,030		
15	TsD14A01	Mechanical watering of ground layers with 5-8 t tanker truck, provided with a spraying device, to complete the humidity necessary for mechanical compaction, as well as for watering surfaces for other purposes	m3	230,300		
		Chapter 3. Finishing and planning works				
16	TsE05B	(shoulders) Leveling (with a grader up to 175 HP) of the surface of the terrain and of the embankment platforms, by cutting the embankments and moving the earth dug in the holes, terrain catg. II	100m2	46,930		
17	TsC03B1	(slope planning) Mechanical excavation with the excavator of 0.40-0.70 m3, with internal combustion engine and hydraulic control, in ground with natural humidity, unloading in dump site catg. II	100 m3	4,013		
18	TsE05B	(embankment) Leveling (with a grader up to 175 HP) of the surface of the terrain and of the embankment platforms, by cutting the embankments and moving the earth dug in the holes, terrain catg. II	100m2	35,760		
		Chapter 4. Consolidation works				
		Chapter 4.1. Curbs mounting				
		BR100.30.15				
19	TsC54B	Crushed stone foundation layer (M400 fr.20-40 h=10cm)	m3	29,286		
20	DE10A	Prefabricated concrete curbs, for sidewalks 20x25 cm, on concrete foundation 30x15 cm (BR100.30.15)	m	837,000		
		Chapter 4.2. Execution of monolithic concrete ditch				
21	TsC03B1	Mechanical excavation with the excavator of 0.40-0.70 m3, with internal combustion engine and hydraulic control, in ground with natural humidity, unloading in dump site catg. II	100 m3	4,680		
22	TsC54B	Crushed stone foundation layer (M400 fr.20-40 h=10cm)	m3	165,873		
23	DII 19	(gutter) B20 concrete monolithic foundations for artificial buildings (B20 F200 W6)	m3	201,170		
24	DII 19	(Spur no.2) B20 concrete monolithic	m3	72,000		

1	2	3	4	5	6	7
		foundations for artificial buildings (B20 F200 W6)				
25	D1119	(Spur no.3) B20 concrete monolithic foundations for artificial buildings (B20 F200 W6)	m3	16,500		
26	D1119	(support) B20 concrete monolithic foundations for artificial buildings (B20 F200 W6)	m3	6,650		
27	ANONS	Execution of the heatsink at PC20+14 (right)	m	0,000		
28	TsC54B	Crushed stone foundation layer (M400 fr.20-40)	m3	1,587		
29	D1119	(support) B20 concrete monolithic foundations for artificial buildings (B20 F200 W6)	m3	1,330		
30	D1119	B20 concrete monolithic foundations for artificial buildings (B20 F200 W6)	m3	2,850		
31	IzF20Df	Sealing of expansion and compaction joints to floors, walls and reinforced concrete skeleton, by partially filling the gaps, to the outside or inside with ordinary cellular polystyrene boards 24 mm thick, fixed with plaster putty (hardwood 50 * 50 * 30mm with bitumen by boiling = 6.62m3)	m	662,000		
32	IzF04J1	(Ruberoid) Waterproofing layer executed hot on terraces, roofs or foundations and erasures, in ground without groundwater, including scaffolding and mourning in the current waterproofing: separation layer for waterproofing works, executed with bituminous cardboard, simple, placed with non-stick overlays	m2	324,000		
33	IzF20Af	Sealing the expansion and compaction joints to the floors, walls and reinforced concrete skeleton, by partially filling the gaps, to the outside or inside with bituminous onions glued with bitumen mastic (bituminous rubber sealing mastic = 0.385tn)	m	662,000		
		Chapter 4.3. Construction of monolithic concrete water dischargers				
34	ANONS	On shoulders	m	0,000		
35	TsA01B1	Manual ground excavation in large spaces, in ditches, in open channels, in loan pits, in the removal of the vegetal layer of 10-30 cm thickness, in ground with natural humidity, throwing in dump site or vehicle at H < 0.60 m medium ground	m3	12,000		
36	TsC54B	Crushed stone foundation layer (M400 fr.20-40)	m3	1,905		
37	D1119	B20 concrete monolithic foundations for artificial buildings (B20 F200 W6)	m3	2,000		
38	DE10A	Prefabricated concrete curbs, for sidewalks 20x25 cm, on concrete foundation 30x15 cm (BR100.30.15)	m	24,000		

1	2	3	4	5	6	7
39	ANONS	Monolithic concrete gutter 0.44*0.2m	m	0,000		
40	TsC54B	Crushed stone foundation layer (M400 fr.20-40)	m3	0,556		
41	DI119	B20 concrete monolithic foundations for artificial buildings (B20 F200 W6)	m3	0,630		
42	ANONS	The gutter on the slope of the terrace	m	0,000		
43	TsA01B1	Manual excavation of ground in large spaces, in ditches, in open channels, in loan pits, in the removal of the vegetal layer of 10-30 cm thickness in ground with natural humidity, throwing in dump site or vehicle at H < 0.60 m medium ground	m3	7,600		
44	TsC54B	Crushed stone foundation layer (M400 fr.20-40)	m3	2,060		
45	DE16A	(Gutter block B-6) Installation in ditches, gutters, etc., of prefabricated reinforced concrete elements up to 0.02 m3 / piece (inclusively)	buc	50,000		
46	TsC54B	Crushed stone foundation layer (M400 fr.20-40)	m3	0,476		
47	DI119	B20 concrete monolithic foundations for artificial buildings (B15 F200 W6)	m3	1,140		
48	DE16B	(Gutter block B-9) Installation in ditches, gutters, etc., of prefabricated reinforced concrete elements up to 0.02 m3 / pcs and 0,100 m3/pcs inclusively	buc	6,000		
Chapter 5. The road system						
49	ANONS	PC0+10-PC0+50(supralagrice)	m2	0,000		
50	DA12C	(crushed stone mix C-4 M400 - h=13cm) Foundation or reprofiling layer of crushed stone, for roads, with mechanical paving, executed without bredding, without mudding	m3	9,100		
51	DA12C	(crushed stone mix C-4 M400 - h=22cm) Foundation or reprofiling layer of crushed stone, for roads, with mechanical paving, executed without bredding, without mudding	m3	15,400		
52	ANONS	PC16+30-PC18+25	m2	0,000		
53	TsC03E1	(LOADING) Mechanical excavation with the excavator of 0.40-0.70 m3, with internal combustion engine and hydraulic control, in ground with natural humidity, unloading in vehicles, terrain catg. I	100 m3	2,330		
54	TsI51A1	Transportation of the land with a 10 t dump truck at a distance of: 1 km	t	302,900		
55	DA12C	(the material from the unloading of the road structure (crushed stone) PC16 + 30-PC18 + 25) Foundation or reprofiling layer of crushed stone, for roads, with mechanical laying, executed without bredding, without mudding	m3	185,120		

Добавлено примечание ([u3]): ? nu găsesc supralagrice

Mai este ceva similar la 52, 56, 59
Dar oricum este 0,00
De aceea consider ca trebuie exclusa
Ceea ce este in paranteze

1	2	3	4	5	6	7
56	ANONS	PC0+50-PC23+57	m2	0,000		
57	DI89B	(except PC16+30-PC18+25) Repair of paved roads: with the addition of material	100m2	140,360		
58	DA12C	(crushed stone mix C-4 M400 - h=22cm)) Foundation or reprofiling layer of crushed stone, for roads, with mechanical paving, executed without breasting, without mudding	m3	3 207,600		
59	ANONS	PC0+00-PC23+57	m2	0,000		
60	DI107	Priming the surfaces of the base layers in order to apply a layer of asphalt concrete (0,8l/m2)	t	10,624		
61	DB19G	(SKPg-I/SM STB 1033:2008; H=6cm)) Asphalt concrete pavement with large aggregate, hot made, 6.0 cm thick, with mechanical bedding	m2	13 280,000		
62	DI107	Priming the surfaces of the base layers in order to apply a layer of asphalt concrete (0,3l/m2)	t	4,042		
63	DB16H	(SMBg-II/2,3 SM STB 1033:2008; H=4cm)) Asphalt concrete pavement with small aggregates, hot made, 4.0 cm thick, with mechanical bedding	m2	13 472,000		
64	DI128	(PC12+25-PC18+00;PC20+70-PC23+57)) Bituminous, double surface treatment of asphalt pavement	100m2	50,050		
		Chapter 6. Road development Chapter 6.1. Development of side roads				
65	TsE05B	(platform) Leveling with a grader up to 175 HP of the surface of the natural ground and of the embankment platforms, by cutting the embankments and moving the earth dug in the holes , terrain catg. II	100m2	19,503		
66	TsC21B1	(Type I) Mechanical digging with a grader up to 175 HP, including spreading the soil at 10 m, in terrain catg. II	100 m3	0,885		
67	TsC21B1	(Tip II) Mechanical digging with a grader up to 175 HP, including spreading the soil at 10 m, in terrain catg. II	100 m3	2,412		
68	TsC51B	Works of unloading the excavated materials in dump site, terrain categ. II	100 m3	329,750		
69	TsD08B1	Mechanical compaction of fillers with static self-propelled wheel compactor of 10.1-16 t, in successive layers of 15-25 cm thickness after compaction, excluding watering of each layer, the fillings being made with cohesive soil	100 m3	3,297		
70	TsD14A01	Mechanical watering of soil layers with 5-8 t tanker truck, provided with a spraying device, to complete the humidity necessary for mechanical compaction, as well as for watering surfaces for other purposes	m3	32,970		
71	NOTA	Type I	m2	0,000		

1	2	3	4	5	6	7
72	DA12C	(Crushed stone mix C-4 M400 - h=25cm)) Foundation or reprofiling layer of crushed stone, for roads, with mechanical paving, executed without breadding, without mudding	m3	88,550		
73	DI107	Priming the surfaces of the base layers in order to apply a layer of asphalt concrete (0.8 l / m2)	t	0,280		
74	DB19G	(SKPg-I/SM STB 1033:2008; H=6cm)) Asphalt concrete pavement with large aggregate, hot made, 6.0 cm thick, with mechanical bedding	m2	354,200		
75	DI107	Priming the surfaces of the base layers in order to apply an asphalt concrete layer (0.3 l / m2)	t	0,110		
76	DB16H	(SMBg-II/2,3 SM STB 1033:2008; H=4cm)) Asphalt concrete pavement with small aggregates, hot made, 4.0 cm thick, with mechanical bedding	m2	354,200		
77	NOTA	Type II	m2	0,000		
78	DI134	Mechanized arrangement of crushed stone road pavement by the method of breadding in a layer with H = 15 cm	100m2	12,060		
79	DI134A1	Correction: for every 1 * 10 = 10.0 cm of thickness the following is added or subtracted from the DI 134 norm	100m2	12,060		
80	NOTA	Footbridge TS 80-25-3	buc	0,000		
81	TsC54A	Sand foundation layer (h=30cm)	m3	1,545		
82	DI122	Installation of tubular bridges with a diameter of 1.0 m, the height of the embankment up to 3 m for artificial buildings on roads	m3	0,900		
83	DI123	(Portal wall block no.31) Installation of gutter sections, 0.5x1.0 m for artificial buildings on roads	m3	2,600		
		Chapter 6.2. Installation of signal poles				
84	DF11A	Plastic poles for directing road traffic, containing a complete pole	buc	199,000		
		Chapter 6.3. Installation of road signs				
85	DF18A	Planting industrially made poles for metal road traffic signs	buc	78,000		
86	DF20A	Installation of steel or aluminum sheet traffic indicators on preexisting special poles, in localities	buc	78,000		
		Chapter 6.4. Execution of the road marking				
87	DF17A	Longitudinal, transversal and various markings, executed mechanically, with paint, on road surfaces	m2	416,500		
		Chapter 6.5. Installation of the road metal parapet				

1	2	3	4	5	6	7
88	D1135	Execution of the metal parapet 11DO U2/4,0-190	m	216,000		

Total:

Total	lei
Social and medical insurance	
Total direct expenses	
Directing expenses	
Total	
Estimate benefit	

Estimate total:

Drafted by _____ ()
(position, signature)

Verified by _____ ()
(position, signature)

**Construction of Road L401 with
the length of 3,115 km (from R10
to Varzaresti Monastery) Object
no.1-17-89**
(objective name)

WinCmeta2000
Form No.1

Works quantities list № 2-2-1

Estimate offer № 2-2-1

Sector II. Repair works

(type of works)

Crt. no.	Symbol, resource code	Name of works	U.M.	Quantity	Unitary price, lei (including salary)	Total, lei (col.5 x col.6)
1	2	3	4	5	6	7
		Chapter 1. Preparatory works Chapter 1.1. Dismantling of the existing rainwater collection and evacuation construction at PC0+74- PC5+50				
1	TsC02B1	Mechanical excavation with wheel excavator of 0.21-0.39 m3, with hydraulic control, in ground with natural humidity unloading in dump site, terrain catg. II	100 m3	1,150		
2	TsA20B	Manual excavation of the ground, in slopes, at excavations dug with excavator or scraper, to complete the excavation at the slope profile, in the middle ground	m3	115,000		
3	DI123k=0.8	(Disassembly and loading with crane of reinforced concrete elements. Prefabricated gutters L = 3m / piece; = 143pcs; = 128.7t) Installation of gutter sections, 0.5x1.0 m for artificial buildings on roads	m3	53,000		
4	TsI51A1	Transportation of the materials with a 10 t dump truck at a distance of: 1 km	t	128,700		
5	RpCB18A	(Dismantling of monolithic concrete elements) Manual demolition of old concrete, foundations and elevations with cement dosages up to 150 kg / m3	m3	22,000		
6	TRI1AA04C 1	Loading materials from group A - light and small by throwing - from the ramp or field, in category 1 vehicle	t	52,800		
7	TsI51A1	Transportation of the materials with a 10 t dump truck at a distance of: 1 km	t	52,800		
8	RpAcA49F	Disassembly of steel pipes, assembled by welding, with a diameter of 800 mm	m	35,000		
9	TsI51A1	Transportation of the materials with a 10 t dump truck at a distance of: 1 km	t	10,160		

1	2	3	4	5	6	7
10	TsC51C	Material unloading works in the warehouse, category III terrain	100 m3	0,750		
11	TsC50C	Repair and maintenance of natural roads used for material transport, for every 0.5 * 2 = 1.0 km, terrain category III	100 m3	0,750		
12	TsD02B1	Scattering of fine-grained soil from category I or II land, executed with a bulldozer on a tractor with tracks of 65-80 HP, in layers with a thickness of 21-30 cm	100 m3	2,300		
13	DI105	Ground cat. II compaction with pneumatic equipment	100 m3	2,300		
		Chapter2. Earthworks				
14	TsC03F1	(quarry ; Y=1.8t/m3) Mechanical excavation with the 0.65 m3 excavator, with internal combustion engine and hydraulic control, in ground with natural humidity, unloading in vehicles, terrain catg. II	100 m3	8,970		
15	TsI51A1	Transportation of excavated materials with a 10 t dump truck at a distance of: 1 km (on the verge)	t	1 614,600		
16	TsC51B	Material unloading works in the dump site, category II terrain	100 m3	8,970		
17	TsC50B	Repair and maintenance of natural roads used for materials transport, for every 0.5 * 2 = 1.0 km, category II terrain	100 m3	8,970		
18	DI96	(25 t Compactor ONLY) Compaction of the embankment in cat.II terrain, with 25 t wheel compactor, 8 runs per track	100 m3	8,970		
19	TsD14A01	Mechanical watering of soil layers with 5-8 t tanker truck, provided with a spraying device, to complete the humidity necessary for mechanical compaction, as well as for watering surfaces for other purposes	m3	89,700		
		Chapter 3. Finishing and planning works				
20	TsE05B	(verges) Leveling with a grader up to 175 HP of the surface of the natural land and of the embankment platforms, by cutting the embankments and moving the earth dug in the holes, terrain catg. II	100m2	12,380		
21	TsC03B1	(slope planning) Mechanical excavation with the excavator of 0.40-0.70 m3, with internal combustion engine and hydraulic control, in ground with natural humidity, unloading in land depot catg. II	100 m3	1,000		
22	TsE05B	(Enbankment) Leveling with a grader up to 175 HP of the surface of the natural land and of the embankment platforms, by cutting the embankments and moving the earth dug in the holes, terrain catg. II	100m2	11,200		
		Chapter 4. Consolidation works				
		Chapter 4.1 Installation of the gutter				

1	2	3	4	5	6	7
23	TsC02D1	Mechanical excavation with excavator on wheels of 0.21-0.39 m3, with hydraulic control, in ground with natural humidity unloading in car terrain catg. II	100 m3	0,940		
24	TsI51A1	Transportation of the excavated material with a 10 t dump truck at a distance of: 1 km	t	169,200		
25	TsC51B	Excavated materials unloading works in the dump site, category II terrain	100 m3	0,940		
26	TsC50B	Repair and maintenance of natural roads used for materials transport, for every 0.5 * 2 = 1.0 km, category II terrain	100 m3	0,940		
27	TsC54B	Crushed stone foundation layer (M400 fr.20-40 h=10cm)	m3	16,111		
28	D1119	B20 concrete monolithic foundations for artificial buildings (B20 F200 W6)	m3	4,050		
29	TsC54B	Crushed stone foundation layer (M400 fr.20-40 h=10cm)	m3	1,349		
30	D1123k=0.2	(Crane loading of reinforced concrete elements (dismantled) prefabricated gutters L = 3m / piece; = 61pcs; = 54.9t) Installation of gutter sections, 0.5x1.0 m for artificial buildings on roads	m3	22,610		
31	TsI51A1	Transportation of the material with a 10 t dump truck at a distance of: 1 km	t	54,900		
32	D1123	(Crane installation of reinforced concrete elements (dismantled) prefabricated gutters L = 3m / piece; = 61pcs; = 54.9t) Installation of gutter sections, 0.5x1.0 m for artificial buildings on roads	m3	22,610		
33	D1122	(Installation of portal bridges "Block no.34" = 2pcs) Tubular installation with a diameter of 1.0 m, the height of the embankment up to 3 m for artificial buildings on roads	m3	2,020		
34	IzF20Df	Sealing of expansion and compaction joints to floors, walls and reinforced concrete skeleton, by partially filling the gaps, to the outside or inside with ordinary cellular polystyrene boards 24 mm thick, fixed with plaster putty (hardwood 50 * 50 * 30mm with bitumen by boiling = 1.14m3)	m	114,000		
35	IzF04J1	(Ruberoïd) Waterproofing layer executed hot on terraces, roofs or foundations and erasures, in ground without groundwater, including scaffolding and mourning in the current waterproofing: separation layer for waterproofing works, executed with bituminous cardboard, simple, placed with non-stick overlays	m2	21,000		
36	IzF20Af	Sealing the expansion and compaction joints to the floors, walls and reinforced concrete skeleton, by partially filling the gaps, to the outside or inside with bituminous onions glued with bitumen	m	114,000		

1	2	3	4	5	6	7
		mastic (bituminous rubber sealing mastic = 0.0663tn)				
		Chapter 4.2. Curbs mounting BR100.30.15				
37	TsC54B	Crushed stone foundation layer (M400 fr.20-40 h=10cm)	m3	29,286		
38	DE10A	Prefabricated concrete curbs, for sidewalks 20x25 cm, on concrete foundation 30x15 cm (BR100.30.15)	m	837,000		
		Chapter 4.3. Construction of monolithic concrete water dischargers at PC3+59				
39	TsA01B1	Manual excavation of soil in large spaces, in ditches, in open channels, in loan pits, in the removal of the vegetal layer of 10-30 cm thickness in ground with natural humidity, throwing in storage or vehicle at H < 0.60 m medium ground	m3	1,500		
40	TsC54B	Crushed stone foundation layer (M400 fr.20-40)	m3	0,238		
41	DI119	B20 concrete monolithic foundations for artificial buildings (B20 F200 W6)	m3	0,250		
42	DE10A	Prefabricated concrete curbs, for sidewalks 20x25 cm, on concrete foundation 30x15 cm (BR100.30.15)	m	2,000		
		Chapter 4.4. Execution of the retaining wall				
43	TsC03F1	(foundation pit; Y=1.8t/m3) Mechanical digging with the 0.4 m3 excavator, with internal combustion engine and hydraulic control, in ground with natural humidity, unloading in vehicles, terrain categ. II	100 m3	0,646		
44	TsI51A1	Transportation of excavated material with a 10 t dump truck at a distance of: 1 km (on road verge)	t	116,280		
45	TsC51B	Unloading excavated material works in the dump site, category II terrain	100 m3	0,646		
46	TsC50B	Repair and maintenance of natural roads used for material transport, for every 0.5 * 2 = 1.0 km, category II terrain	100 m3	0,646		
47	TsC54B	Crushed stone foundation layer (M400 fr.20-40 h=10cm)	m3	1,508		
48	AcF03E	Fillings in ditches for water supply or sewerage pipes, as substrate, protection layer, insulation layer or filter layer for drainage pipes, made with ballast	m3	36,500		
49	AcF03C	Fillings in ditches for water supply or sewerage pipes, as a substrate, protection layer, insulation layer or filter layer for drainage pipes, made of crushed stone	m3	10,000		
50	AcF03D	Fillings in ditches for water supply or sewerage pipes, as substrate, protection layer, insulation layer or filter layer for	m3	2,000		

1	2	3	4	5	6	7
		drainage pipes, made of clay				
51	AcA08A	Installation in the ground, outside the buildings, of PVC pipes, 9 m long, sealed with rubber gaskets, having a diameter of 150 mm	m	6,000		
52	DI119	B20 concrete monolithic foundations for artificial buildings (B25 F200 W6)	m3	26,200		
53	DI126	Installation of monolithic concrete reinforcement for artificial buildings on roads	t	1,057		
54	DI121	Execution of waterproofing by lubrication in 2 layers for artificial buildings on roads	m2	96,800		
55	IzF20A	Sealing the expansion and compaction joints to the floors, walls and reinforced concrete skeleton, by partially filling the gaps, to the outside or inside with bituminous hemp tow glued with bitumen mastic (= 49.7kg)	m	82,833		
56	CP21B	(Cement mortar M300 h=3cm Installation of M 100-T mortar for connection or monolithization at heights up to 35 m: connection or monolithization between prefabricated concrete elements	m3	0,500		
		Chapter 5. The road system				
57	ANONS	PC0'+00-PC5'+60; PC0'+00-PC1''+98	m2	0,000		
58	DI89B	Repair of paved roads: with the addition of material	100m2	33,810		
59	DA12C	(crushed stone mixture C-4 M400 - h=22cm) Foundation or reprofiling layer of crushed stone, for roads, with mechanical laying, executed without breaching, without mudding	m3	743,820		
60	DI107	Priming the surfaces of the base layers in order to apply a layer of asphalt concrete (0,8l/m2)	t	2,705		
61	DB19G	(SKPg-I/SM STB 1033:2008; H=6cm) Asphalt concrete pavement with large aggregate, hot made, 6.0 cm thick, with mechanical bedding	m2	3 381,000		
62	DI107	Priming the surfaces of the base layers in order to apply a layer of asphalt concrete (0,3l/m2)	t	1,014		
63	DB16H	(SMBg-II/2,3 SM STB 1033:2008; H=4cm) Asphalt concrete pavement with small aggregates, hot made, 4.0 cm thick, with mechanical bedding	m2	3 381,000		
64	DI128	(PC0'+75-PC5'+00) Bituminous, double surface treatment of asphalt pavement	100m2	25,500		
		Chapter 6. Road development				
		Chapter 6.1. Side roads development				
65	TsE05B	(platform) Leveling with a grader up to 175 HP of the surface of the natural land	100m2	5,969		

1	2	3	4	5	6	7
		and of the embankment platforms, by cutting the embankments and moving the earth dug in the holes, terrain catg. II				
66	TsC21B1	(Type I) Mechanical digging with a grader up to 175 HP, including spreading the soil at 10 m, in terrain catg. II	100 m3	0,630		
67	TsC51B	Earth unloading works in the dump site, category II terrain	100 m3	0,630		
68	TsD08B1	Mechanical compaction of fillers with static self-propelled wheel compactor of 10.1-16 t, in successive layers of 15-25 cm thickness after compaction, excluding watering of each layer, the fillings being made with cohesive soil	100 m3	0,630		
69	TsD14A01	Mechanical watering of soil layers with 5-8 t tanker truck, provided with a spraying device, to complete the humidity necessary for mechanical compaction, as well as for watering surfaces for other purposes	m3	6,300		
70	NOTA	Type I	m2	0,000		
71	DA12C	(crushed stone mixture C-4 M400 - h=25cm) Foundation or repaving layer of broken stone, for roads, with mechanical paving, executed without breasting, without mudding	m3	45,000		
72	DI107	Priming the surfaces of the base layers in order to apply a layer of asphalt concrete (0,8l/m2)	t	0,140		
73	DB19G	(SKPg-I/SM STB 1033:2008; H=6cm) Asphalt concrete pavement with large aggregate, hot made, 6.0 cm thick, with mechanical bedding	m2	180,000		
74	DI107	Priming the surfaces of the base layers in order to apply a layer of asphalt concrete (0,3l/m2)	t	0,050		
75	DB16H	(SMBg-II/2,3 SM STB 1033:2008; H=4cm) Asphalt concrete pavement with small aggregates, hot made, 4.0 cm thick, with mechanical bedding	m2	180,000		
76	NOTA	Type II	m2	0,000		
77	DI134	Mechanized arrangement of broken stone road pavement by the method of breasting in a layer with H = 15 cm	100m2	2,975		
78	DI134A1	Correction: for every 1 * 5 = 5.0 cm next thickness is added or subtracted to the norm DI 134	100m2	2,975		
		Chapter 6.2. Execution of sidewalks				
79	DE10A	(Small curbs, BR100.20.8, concrete base) Prefabricated concrete curbs, for sidewalks 20x25 cm, on concrete foundation 30x15 cm	m	505,000		

1	2	3	4	5	6	7
80	DI111	Mechanized execution of foundation layers with h = 12 cm of crushed stone on sidewalks	m2	502,000		
81	DI112	For each 1 * 2 = 2.0 cm change in the thickness of the crushed stone layer is reduced to the norm DI111	m2	-502,000		
82	DE18A	(20*10*6cm (grey)) Pavements made of prefabricated concrete paving slabs placed on a layer of dry cement and sand mixture, in a ratio of 1: 6, jointed with dry cement and sand mixture, layer thickness of 5 cm	m2	502,000		
		Chapter 6.3. Installation of signal poles				
83	DF11A	Plastic poles for directing road traffic, containing a complete pole	buc	12,000		
		Chapter 6.4. Installation of road signs				
84	DF18A	Planting industrially made poles for metal traffic indicators	buc	23,000		
85	DF20A	Installation of steel or aluminum sheet traffic indicators on preexisting special poles, in localities	buc	23,000		
		Chapter 6.5. Execution of the road marking				
86	DF17A	Longitudinal, transversal and various markings, executed mechanically, with paint, on road surfaces	m2	146,900		

Total:

Total	lei
Social and medical insurance	
Total direct expenses	
Directing expenses	
Total	
Estimate benefit	

Estimate total:

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Verified by _____ ()
(position, signature)

**Construction of Road L401 with
the length of 3,115 km (from R10
to Varzaresti Monastery) Object
no.1-17-89**

(objective name)

WinCmeta2000
Form No.1

Works quantities list № 2-3-1

Estimate offer № 2-3-1

Sector III. Repair works

(works type)

Crt. no.	Symbol, resource code	Name of works	U.M.	Quantity	Unitary price, lei (including salary)	Total, lei (col.5 x col.6)
1	2	3	4	5	6	7
		Chapter 1. Earthworks				
1	TsC03F1	(excavation ; Y=1.8t/m ³) Mechanical digging with the 0.4 m ³ excavator, with internal combustion engine and hydraulic control, in ground with natural humidity, unloading in vehicles, terrain catg. II	100 m ³	0,320		
2	TsI51A1	Transportation of the excavated material with 10 t dump truck at a distance of: 1 km (on the road verge)	t	57,600		
3	TsC03F1	(quarry ; Y=1.8t/m ³) Mechanical excavation with the 0.65 m ³ excavator, with internal combustion engine and hydraulic control, in ground with natural humidity, unloading in vehicles, terrain catg. II	100 m ³	0,990		
4	TsI51A1	Transportation of the excavated material with 10 t dump truck at a distance of: 1 km (on the road verge)	t	178,200		
5	TsC51B	Unloading excavated materials works in the dump site, category II terrain	100 m ³	1,310		
6	TsC50B	Repair and maintenance of natural roads used for materials transport, for every 0.5 * 2 = 1.0 km, category II terrain	100 m ³	1,310		
7	DI96	(25 t Compactor ONLY) Compaction of the embankment in terrain of cat.II, with compactor on wheels of 25 t, 8 paths on a track	100 m ³	1,310		
8	TsD14A01	Mechanical watering of soil layers with 5-8 t tanker truck, provided with a spraying device, to complete the humidity necessary for mechanical compaction, as well as for watering surfaces for other purposes	m ³	13,100		
		Chapter 2. Finishing and planning works				
9	TsE05B	(road verges) Leveling with a grader up to	100m ²	4,000		

1	2	3	4	5	6	7
		175 HP of the surface of the natural land and of the embankment platforms, by cutting the embankments and moving the earth dug in the holes, terrain catg. II				
10	TsC03B1	(slope planning) Mechanical excavation with the excavator of 0.40-0.70 m3, with internal combustion engine and hydraulic control, in ground with natural humidity, unloading in land depot catg. II	100 m3	0,160		
11	TsE05B	(embankment) Leveling with a grader up to 175 HP of the surface of the natural land and of the embankment platforms, by cutting the embankments and moving the earth dug in the holes, terrain catg. II	100m2	4,000		
		Chapter 3. Consolidation works Chapter 3.1. Curbs mounting BR100.30.15				
12	TsC54B	Crushed stone foundation layer (M400 fr.20-40 h=10cm)	m3	6,825		
13	DE10A	Prefabricated concrete curbs, for sidewalks 20x25 cm, on concrete foundation 30x15 cm (BR100.30.15)	m	195,000		
		Chapter 4. Road system				
14	ANONS	PC0'+00-PC5'+60; PC0'+00-PC1'+98	m2	0,000		
15	DI89B	Repair of paved roads: with the addition of material	100m2	9,920		
16	DA12C	(crushed stone mixture C-4 M400 - h=15cm) Foundation or reprofiling layer of crushed stone, for roads, with mechanical paving, executed without breasting, without mudding	m3	146,550		
17	DI107	Priming the surfaces of the base layers in order to apply a layer of asphalt concrete (0,8l/m2)	t	0,722		
18	DB19G	(SKPg-I/SM STB 1033:2008; H=6cm) Asphalt concrete pavement with large aggregate, hot made, 6.0 cm thick, with mechanical bedding	m2	903,000		
19	DI107	Priming the surfaces of the base layers in order to apply a layer of asphalt concrete (0,3l/m2)	t	0,271		
20	DB16H	(SMBg-II/2,3 SM STB 1033:2008; H=4cm) Asphalt concrete pavement with small aggregates, hot made, 4.0 cm thick, with mechanical bedding	m2	903,000		

Total:

Total	lei
Social and medical insurance	
Total direct expenses	
Directing expenses	

Total
Estimate benefit

Estimate total:

Drafted by _____ ()
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Verified by _____ ()
(position, signature)

**Construction of Road L401 with
the length of 3,115 km (from R10
to Varzaresti Monastery) (Obj.
no.1-17-89-IEE)**
(objective name)

Form No.1
WinCmeta

Works quantities list №
Exterior electric lighting (IEE brand)

Crt. no.	Symbol, resource code	Name of works	U.M.	Quantity
1	2	3	4	5
		Chapter 1. Construction works		
1	33-01-016-1	Installation of 35-500 kV OHL support steel poles, self-supporting, with one leg, weight up to 2 t (70kg x23 = 1610kg)	t	1,610
2	11111016-20	8m long metal pillar with 160mm diameter at the bottom and 60mm at the top KO / 8/1	pcs	23,000
3	TsC02B1	Mechanical excavation with wheel excavator of 0.21-0.39 m3, with hydraulic control, in ground with natural humidity unloading in land depot catg. II. Mechanized	100 m3	0,460
4	TsD02D1	Scattering of fine-grained soil from category I or II, executed with bulldozer on a tractor with tracks of 65-80 HP, in layers with a thickness of 51-100 cm.	100 m3	0,460
5	CA03D	Concrete poured into foundations, below zero level, prepared with concrete plant and pouring with classical means reinforced concrete class B 15	m3	28,000
6	111102334	Foundation anchor bolt 11 M20x650 with nut and washer	set	92,000
7	CC01A	Concrete steel reinforcements OB 37 shaped in construction workshops with bar diameters up to and including 8 mm.	kg	92,000
8	CC01D	Concrete steel reinforcements OB 37 shaped in site workshops and mounted with bars diameter over 10 mm including insulated foundations.	kg	322,000
9	CB02A	Formwork made of reusable panels, with asterial made of short and subshort softwood planks for pouring concrete into bearings, glass foundations and machine foundations, including supports	m2	125,000
		Chapter 2. Assembly work		
10	08-02-369-3	Lighting installed outside the buildings, with mercury bulbs	pcs	23,000
11	08-01-087-3	Metal constructions	t	0,050
		Capitolul 3. Utilaj		
12	33411242-48	60W IP66 LED luminaire with solar panel and storage battery for VS335 pole installation	pcs	23,000

Добавлено примечание ([u4]): Ce e cu galben e traducere la comentarii in rusă pe textul în română. Nu știu dacă sunt explicații suplimentare care nu trebuie adăugate, care ar trebui adăugate pe lângă textul inițial, sau ca în cazul de mai jos dacă aceste comentarii ar trebui să modifice textul inițial (de trecut bare de 6mm în text în loc de 8 mm la crt 7, sau bare de 10mm în loc de 8 mm la crt 8.

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