NGORONGORO CONSERVATION AREA AUTHORITY

CONTRACT No. AE/055/2021-22/HQ/TCRP/W/01

FOR

REHABILITATION OF MAIN ROAD FROM GOLINI TO SENETO JUCTION (50KM) AND ACCESS ROAD TO OLDUVAI MUSEUM (5KM)

Ngorongoro Conservation Area Authority
P.o.Box 1,
Ngorongoro Crater

DECEMBER, 2021

FORM OF AGREEMENT

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This Agreement, made the 24th day of DECEMBER, 2021 between **NGORONGORO CONSERVATION AREA AUTHORITY (NCAA), P.O BOX 1, NGORONGORO CRATER, ARUSHA** (hereinafter called "the Employer") and **M/S JP TRADERS LIMITED, UBUNGO EXTERNAL, P.O BOX 76007, DAR ES SALAAM** (hereinafter called "the Contractor") of the other part.

Whereas the Employer is desirous that the Contractor execute **rehabilitation of the main road from Golini to Seneto junction (50km) and access road to Olduvai Museums (5km)**, contract no. **AE/055/2021-22/HQ/TCRP/W/01** (hereinafter called "the Works") and the Employer has accepted the Tender by the Contractor for the execution and completion of such works and the remedying of any defects therein in the sum of **One Billion Five Hundred Eighty Million Two Hundred Eighty Five Thousand Five Hundred Only (TZS 1,580,285,500)** VAT inclusive (hereinafter called "Contract Price") for the contract duration of Four (4) months commencing within fourteen (14) days after signing the Contract and site Possession.

Now this Agreement witnesses as follows:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to, and they shall be deemed to form and be read and construed as part of this Agreement.

2. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.

3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects wherein the Contract Price of **One Billion Five Hundred Eighty Million Two Hundred Eighty Five Thousand Five Hundred Only (TZS 1,580,285,500)** VAT inclusive or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

In Witness whereof the parties thereto have caused this Agreement to be executed the day and year first before written.

Signed by, for and on behalf of the PE (NGORONGORO **CONSERVATION AREA AUTHORITY)**

SEALED with COMMON SEAL of the said
NGORONGORO CONSERVATION AREA AUTHORITY,
P.O.BOX 1
NGORONGORO CRATER

Name: Dr. Freddy S. Manongi
Qualification: Conservation Commissioner
Signature: .....
P. O BOX 1, NGORONGORO CRATER.

2. Name: Jumanne Dede
Qualification: AG-SACC-Legal Services
Signature: .....
P. O BOX 1, NGORONGORO CRATER

SEAL

Signed by, for and on behalf of the Contractor **(M/S JP TRADERS LIMITED)**
SEALED with COMMON SEAL of the said
M/S JP TRADERS LIMITED,
P. O. BOX 76007, DAR ES SALAAM

1. Name: BAHIYUMU MATHIAS LUGITE
Qualification: DIRECTOR
Signature: .....
P. O. BOX 76007, DAR ES SALAAM

2. Name: PITER H. PANGA
Qualification: FOREMAN
Signature: .....
P. O. BOX 76007, DAR ES SALAAM

J.P. TRADERS LIMITED
P. O. Box 76007
DAR ES SALAAM

SEAL

SPECIAL CONDITIONS OF CONTRACT

Special Conditions of Contract (SCC)

Instructions for completing the Special Conditions of Contract
The following Special Conditions of Contract shall supplement the General Condition of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of Contract.

SCC Clause	GCC Clause	Description
1.	1.1	Defect Liability Period will: 90 days for gravel and 365 days for structures. The Employer is: Conservation Commissioner, Ngorongoro Conservation Area Authority, P.O Box 1, Ngorongoro Crater, Arusha TEL: +255 27 255 253 7006/19 +255 27 255 253 7046 FAX: +255 27 255 253 7007 Phone: +255 754 474 804 Email: cc@ncaa.go.tz. pmu@ncaa.go.tz The Project Manager is: *Eng. Daniel M. Chegere* Ngorongoro Conservation Area Authority, P.O Box 1, Ngorongoro Crater, Arusha cc@ncaa.go.tz. pmu@ncaa.go.tz The Works consist of rehabilitation of main road from Golini to Seneto junction (50km) and access road to Olduvai Museums (5km), which includes gravel excavation, haul, spread, compact and drainage works The Commencement Date shall be within Twenty-One (21) days after signing the Contract and site Possession. The Intended Completion Date for the whole of the Works shall be: Four (4) Months after commencement, possession date and mobilization. The works is expected to commence within 14 days after date of contract signing. Mobilization shall be 21 days after commencement date. The Site is located within Ngorongoro Conservation Area

		The Site is located within Ngorongoro Conservation Area and is defined in drawings.
2.	2.2	Indicate whether sectional completion is specified: Not specified.
3.	2.3	List other documents that form part of the contract if any: a) Negotiation minutes b) Insurance cover; c) Performance Bond; d) Certified Power of Attorney; e) Environmental, Health and Safety Policy; and f) Work Program g) Integrity Form
4.	4.1	The language of the Contract documents is: English. The law that applies to the Contract is the Laws of Tanzania
5.	7.1	Address for communication **Employer's:** Conservation Commissioner, Ngorongoro Conservation Area Authority, P.O Box 1, Ngorongoro Crater, TEL: +255 27 255 253 7006/19 +255 27 255 253 7046 FAX: +255 27 255 253 7007 Email: cc@ncaa.go.tz. pmu@ncaa.go.tz **Contractor's:** M/S J. P Traders Limited, Ubungo External, P.O Box 76007, Dar Es Salaam Email: jptraderslimited@yahoo.com Mob. +255 713 400 791
6.	11.1	Include the Schedule of Other Contractors if any: None
7.	12.1	Include the Schedule of Key Personnel a) One Registered Professional Civil Engineer b) One Civil Technician and c) One Mechanical technician
8.	16.1	The minimum insurance covers shall be: (a) loss of or damage to the Works, Plant, and Materials *5,000,000/=* (b) Loss of or damage to Equipment, *3,000,000;*

		(c) loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract 3,000,000/=; and (d) Personal injury or death *5,000,000/=*
9.	17.1	Site Investigation Reports available to the Tenderer are: None
10	24.1	Unless otherwise state tax payment status: N/A
11.	25.4	The other measures include: a) Minimising the number of migrant workers employed on the project and household in the site camp b) Providing access to voluntary counselling and testing (VCT) c) Providing psychological support and health care including prevention and treatment of opportunistic infections for workers infected and affected, as well as their families d) Providing condoms (male and female) to workers
12.	27.1	The Site Possession Date shall be within Fourteen (14) days after the date of contract signing
13	30.4	Arbitration will take place at Arusha in accordance with rules and regulations published by National Construction Council (NCC).
14.	31.1	Hourly rate of Fees payable to the Adjudicator is: TZS 150,000 /= such fees will be payable in accordance with the Rules and Regulation published by the National Construction Council (NCC) Types of reimbursable expenses to be paid to the Adjudicator include: a) Printing and Photocopies; and b) Transport
15.	32.1	Appointing Authority for the Adjudicator: National Construction Council (NCC).
16.	33.1	Otherwise, state: None
		B. Time Control
17.	34.1	The Contractor shall Submit a revised Program for the Works within fourteen (14) days of delivery of the Letter of Acceptance.
18.	34.2	The period between Programme updates is 28 days.

		The amount to be withheld Project Manager in the case the contractor does not submit an updated programme is: TZS 800,000.00 for each month.
		C. Quality Control
19.	42.1	The Defects Liability Period is 90 days for gravel and 365 days for structures.
		D. Cost Control
20.	50.7	Minimum amount of Interim Payment Certificate will be 20 percent of contract price.
21.	53.1	Site Possession date shall be within fourteen (14) days after the date of contract signing
22.	52.1	The currency is: Tanzania Shillings
23.	55.1	The contract is not subject to price adjustment in accordance with GCC 55.
24.	56.1	The amount of retention is 10 percent of value of works of Interim Payment Certificate'. Limit of retention: 5 percent of contract price.
25.	57.1	(i) The amount of liquidated damages per day is 0.12 percent of contract price per day (ii) The maximum amount of liquidated damages is 10% of contract price.
26.	58.1	The Bonus for early completion is: N/A
27.	59.1	The amount of advance payment shall be 15 percent of the contract sum payable within 30 days upon submission of acceptable Unconditional advance bank guarantee. Monthly Recovery of Advance Payments: 20 percent of the amount of monthly Interim Payment Certificate and shall be fully recovered when the work reaches 80%.
28.	60.1	The Performance Security shall be the minimum amounts equivalent to 10 percentage of the contract price in the form of: (a) Bank Guarantee: *10% or* (b) Performance Bond: *10%* The standard form of Performance Security acceptable to the Employer shall be *"an Unconditional Bank Guarantee" or "a Performance Bond"* of the type presented in Section IX of the Tendering Documents
29.	64.1	Site handover date: Seven (7) days after issuance of Certificate of Completion

E. Discharge of the Contract		
30.	66.2	The amount to be withheld for failing to produce "as built" drawings by the date required is: N/A The amount to be withheld for failing to produce operating and maintenance manuals by the date required is. N/A
31.	68.1	The percentage to apply to the value of the work not completed, representing the Employer's additional cost for completing the Works, is 5 percent.

GENERAL CONDITIONS OF CONTRACT

A. General

1. Definitions	1.1	The following words and expressions shall have the meanings hereby assigned to them: The **Adjudicator** is the person appointed by the Appointing Authority specified in the **SCC** to resolve contractual disputes in the first instance, and as provided for in GCC 30 [Disputes Resolution] hereunder. The **Arbitrator** is the person appointed by the Appointing Authority specified in the **SCC** to resolve contractual disputes, and as provided for in GCC 30 [Disputes Resolution] hereunder. **Bill of Quantities** -means the priced and completed Bill of Quantities forming part of the Tender. **Compensation Events** are those events provided for in GCC 53 [Compensation Events] The **Completion Date** is the date of completion of the Works as certified by the Project Manager, in accordance with GCC 63.1 [Completion Certificate]. The **Contract** is the agreement entered between the Employer and the Contractor to execute, complete, and maintain the Works. It consists of the documents listed in GCC 2.3 [Interpretation] below. The **Contractor** is the person, whether natural or legal whose tender to carry out the Works has been accepted by the Employer. The **Contractor's Tender** is the completed Tender document submitted by the Contractor to the Employer. The **Contract Price** is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract. **Days** are calendar days. **Day-works** are varied work inputs subject to payment on a time basis for the Contractor's employees and Equipment, in addition to payments for associated Materials and Plant.

		A **Defect** is any part of the Works not completed in accordance with the Contract. The **Defects Liability Certificate** is the certificate issued by Project Manager upon correction of defects by the Contractor at the end of defect liability period. The **Defects Liability Period** is the period stated in the **Special Conditions of Contract** and calculated from the Completion Date. **Drawings** means the drawings of the works, as included in the contract and any additional or modified drawings issued by (or on behalf of) the employer in accordance with the contract **Effective Contract date** is the date shown in the Certificate of Contract Commencement issued by the Employer upon fulfilment of the condition's precedent stipulated in GCC 3 [Conditions Precedent]. The **Employer** means the person named as employer in the SCC and the legal successors in title to this person. **Equipment** is the Contractor's machinery and vehicles brought to the Site to execute the Works. The **Commencement Date** is the date when the Contractor shall commence execution of the Works as specified in the **Certificate of Contract Commencement.** The Commencement Date may be revised by the Project Manager in consultation with the employer by issuing an extension of time. The **Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works as specified in the **Special Conditions of Contract.** **Materials** are all supplies, including consumables, used by the Contractor for execution of the Works. **Months** mean calendar months. **Plant** is any integral part of the Works that shall have a mechanical electrical, chemical, or biological function.

		The **Project Manager** is the person named in the **Special Conditions of Contract** (or any other competent person appointed by the Employer and notified to the Contractor, to act in replacement of the Project Manager) who is responsible for supervising the execution of the Works and administering the Contract. The **Site** is the area where works are to be executed as specified in the SCC. **Site Investigation Reports** are factual and interpretative reports about the surface and subsurface conditions at the Site that were included in the Tendering documents as indicated in the SCC. **Specification** means the Specification of the Works included in the Contract and any modification or addition made or approved by the Project Manager. A **Subcontractor** is a person, whether natural or legal, who has a Contract with the Contractor to carry out a part of the work in the Contract, which includes work on the Site. **Temporary Works** are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works. A **Variation** is an instruction given by the Project Manager in consultation with the Employer, which varies the Works. **Force Majeure** means an unforeseeable event which is beyond reasonable control of either Party and which makes a Party's performance of its obligations under the Contract impossible or so impractical as to be considered impossible under the circumstances. For the purposes of this Contract, "Force Majeure" means an event which is beyond the reasonable control of a Party, is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of a Party, and which makes a Party's performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible in the circumstances and includes, but is not limited to, war, riots, civil disorder, earthquake,

		fire, explosion, storm, flood, epidemics, or other adverse weather conditions, strikes, lockouts or other industrial action (except where such strikes, lockouts or other industrial action are within the power of the Party invoking Force Majeure to prevent), confiscation. The **Works** are what the Contract requires the Contractor to construct, install, and turn over to the Employer, as defined in the SCC.
2. Interpretation	2.1	In interpreting these Conditions of Contract headings and marginal notes are used for convenience only and shall not affect their interpretations unless specifically stated; references to singular include the plural and vice versa; and masculine include the feminine. Words have their ordinary meaning under the language of the Contract unless specifically defined.
	2.2	If sectional completion is specified in the **Special Conditions of Contract**, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).
	2.3	The documents forming the Contract shall be interpreted in the following order of priority: (1) Form of Agreement, (2) Special Conditions of Contract, (3) General Conditions of Contract, (4) Letter of Acceptance, (5) Certificate of Contract Commencement, (6) Specifications, (7) Drawings, (8) Bill of Quantities, (9) Contractor's Tender, and (10) Any other document listed in the Special Conditions of Contract as forming part of the Contract.

3. Conditions Precedent	3.1	Having signed the Contract, it shall come into effect on the date on which the following conditions have been satisfied: - a) Submission of performance Security in the form specified in the SCC; and b) Furnishing of Advance Payment (if any) Unconditional Guarantee.
	3.2	If the Employer is satisfied that each of the conditions precedent in this contract has been satisfied (except to the extent waved by him, but subject to such conditions as he shall impose in respect of such waiver)he shall promptly issue to the contractor a certificate of Contract commencement, which shall confirm the start date.
	3.3	If the Conditions precedent stipulated on GCC 3.2 is not met by the date specified in the SCC this contract shall not come into effect;
4. Language and Law	4.1	The language of the Contract and the law governing the Contract are stated in the SCC.
5. Project Manager's Role	5.1	Except where otherwise specifically stated, the Project Manager will supervise execution of the contract between the Employer and the Contractor. The Project Manager shall have no authority to amend the contract.
6. Delegation	6.1	The Project Manager may, upon prior written consent of the employer and after notifying the contractor, delegate any of his duties and responsibilities to other people except to the Adjudicator, and may cancel any delegation after notifying the Contractor.
7. Communications	7.1	Communications between the Parties to the Contract shall be effective only when in writing whether in hard or electronic form that provides record of the content of the communication. A notice shall be effective when in writing only when it is delivered at the address specified in the SCC.
8. Sub-contracting	8.1	The Contractor may subcontract with the approval of the Project Manager, subject to consultation with the Employer. Subcontracting shall not alter the Contractor's obligations

9. Assignment	9.1	The Contractor shall not assign, transfer, pledge or make other disposition of this Contract or any part thereof or any of the contractor's rights, claim or obligation under this Contract without the prior written approval of the Employer.
10. Liability of Joint Venture	10.1	If the Contractor constitutes a joint venture, consortium or other unincorporated grouping of two or more persons: (a) These persons shall be jointly and severally liable to the Employer for the performance of the Contract; (b) This person shall notify the Employer of their leader who shall have the authority to bind the Contractor and each of these persons; and (c) The Contractor shall not alter its composition or legal status without the prior consent of the Employer.
11. Other Contractors	11.1	The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Employer between the dates given in the Schedule of Other Contractors, as referred to in the **SCC**. The Contractor shall also provide facilities and services for them as described in the Schedule. The Employer may modify the Schedule of Other Contractors, and shall notify the Contractor of any such modification.
12. Personnel	12.1	The Contractor shall employ the key personnel named in the Schedule of Key Personnel, as referred to in the **SCC**, to carry out the functions stated in the Schedule or other personnel approved by the Project Manager. The Project Manager will approve any proposed replacement of key personnel only if their relevant qualifications and abilities are substantially equal to or better than those of the personnel listed in the Schedule.
	12.2	If the Project Manager asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons for, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.

13. Employers and Contractor's Risks	13.1	The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.
14. Employers Risks	14.1	From the Commencement Date until the Defects Correction Certificate has been issued, the following are Employer's risks: (a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to: (i) use or occupation of the Site for the purpose of the Works, which is the unavoidable result of the Works or (ii) Negligence, breach of statutory duty, or interference with any legal right by the Employer or by any person employed by or contracted to him except the Contractor. (b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Employer or in the Employer's design.
	14.2	From the Completion Date until the Defects Correction Certificate has been issued, the risk of loss or damage to the Works, Plant, and Materials is an Employer's risk except loss or damage due to: (a) a Defect which existed on the Completion Date, (b) an event occurring before the Completion Date, which was not itself an Employer's risk, or (c) The activities of the Contractor on the Site after the Completion Date.

15. Contractor's Risks	15.1	From the Commencement Date until the Defects Correction Certificate has been issued, the risks of personal injury, death, and loss of or damage to property (including, without limitation, the Works, Plant, Materials, and Equipment) which are not Employer's risks are Contractor's risks.
16. Insurance	16.1	The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Commencement Date to the end of the Defects Liability Period, in the amounts and deductibles stated in the **SCC** for the following events which are due to the Contractor's risks: (a) loss of or damage to the Works, Plant, and Materials; (b) loss of or damage to Equipment; (c) loss of or damage to property (except the Works, plant, Materials, and Equipment) in connection with the Contract; and (d) Personal injury or death.
	16.2	Policies and certificates for insurance shall be delivered by the Contractor to the Project Manager for the Project Manager's approval before the Commencement Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.
	16.3	If the Contractor does not provide any of the policies and certificates required, the Employer may effect the insurance which the Contractor should have provided and recover the premiums the Employer has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.
	16.4	Alterations to the terms of an insurance shall not be made without the written approval of the Project Manager.
	16.5	Both parties shall comply with any conditions of the insurance policies.

17. Site Investigation Reports	17.1	The Contractor shall, in executing the contract, rely on Site Investigation Reports referred to in the SCC and any supplemented information available to the Contractor.
18. Queries about Implementation of the Contract	18.1	The Project Manager will clarify queries on all Contractual matters.
19. Contractor to Execute the Works	19.1	The Contractor shall execute and install the Works in accordance with the terms and conditions of the Contract.
20. Commencement and Completion of Works	20.1	The Contractor may commence execution of the Works by the Commencement Date and shall carry out the Works in accordance with the Works Program submitted by the Contractor, as updated with the approval of the Project Manager, and complete them by the Intended Completion Date.
21. Approval by the Project Manager	21.1	The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Project Manager, who is to approve them if they comply with the Specifications and Drawings.
	21.2	The Contractor shall be responsible for design of Temporary Works.
	21.3	The Project Manager's approval shall not alter the Contractor's responsibility for design of the Temporary Works.
	21.4	The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.
	21.5	All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Project Manager.
22. Protection of the environment	22.1	The Contractor shall take all reasonable steps to protect the environment and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.
	22.2	The Contractor shall ensure that emissions, surface discharges and effluent from his activities shall not exceed limits prescribed in relevant environmental laws.

23. Labour Laws	23.1	The Contractor shall comply with all the relevant labour laws applicable in the United Republic of Tanzania, including laws relating to workers employment, social security, working hours, health, safety, welfare and immigration.
	23.2	The Contractor shall require his employees to obey all applicable laws, including those concerning safety at work.
24. Taxes and Duties	24.1	The Contractor, Sub-contractors and Personnel shall pay such taxes, duties, fees and other impositions as may be levied under the Laws of Tanzania unless otherwise stated in the SCC.
25. Health and Safety	25.1	The Contractor shall at all times take all reasonable precautions to maintain the health and safety of his personnel and the public as per the governing occupational, health and safety laws
	25.2	The Contractor shall ensure that first aid facilities are available at all times at the site and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics
	25.3	The Contractor shall notify the Employer details of any accident as soon as practicable after its occurrence. The Contractor shall maintain records and make reports concerning health, safety, and welfare of persons, and damage to the property, as the Employer may reasonably require.
	25.4	The Contractor shall conduct an HIV-AIDS awareness programme, and shall take other such measures as specified in the SCC to reduce the risk of transfer of HIV virus between and among Contractor's personnel, the Employers Staff and the surrounding community.

26. Discoveries	26.1	Anything of historical or other interest or of significant value unexpectedly discovered on, in, or under the land at the Site shall be the property of the Employer.
	26.2	The Contractor shall notify the Project Manager of such discoveries and carry out the Project Manager's instructions for dealing with them.
	26.3	The Contractor shall take reasonable precautions to prevent his workers or any other persons from damaging such discoveries and shall immediately upon discovery thereof and before removal acquaint the Project Manager of such discovery and carry out at the expense of the Employer the instructions of the Project Manager.
27. Possession of the Site	27.1	The Employer may give possession of whole or parts of the Site to the Contractor as stated in the SCC. If possession is not given by the date stated in the SCC, the Employer will be deemed to have delayed the start of the relevant activities, and this will be a Compensation Event.
28. Access to the Site	28.1	The Contractor shall allow the Project Manager and any person authorized by the Project Manager access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.
29. Instructions, inspections and audits	29.1	The contractor shall comply with instructions given by the Project Manager in writing on any matter related to the contract
	29.2	The Contractor shall permit the Government, of the United Republic of Tanzania to inspect the Contractor's accounts and records relating to the performance of the Contract and to have them audited by auditors appointed by the Government of the United Republic of Tanzania if so required.
30. Disputes Resolution	30.1	In the event of any dispute arising out of this contract, either party shall issue a notice of dispute to settle the dispute amicably. The parties hereto shall, within twenty-eight (28) days from the notice date, use their best efforts to settle the dispute amicably through mutual consultations and negotiation. Any unsolved dispute may be referred by either party to an adjudicator nominated by the appointing Authority specified in the SCC.

	30.2	After the dispute has been referred to the adjudicator, within 30 days, or within such other period as may be proposed by the Parties, the Adjudicator shall give its decision. The rendered decision shall be binding to the Parties.
	30.3	If either Party is dissatisfied with the Adjudicator's decision may, within days specified in the SCC refer the dispute for arbitration. If either party within the period mentioned in the SCC has not referred the matter for arbitration the decision shall become final and binding to the Parties.
	30.4	The arbitration shall be conducted in accordance with the arbitration procedure published by the Institution named and, in the place, shown in the SCC.
31. Fees and Costs of Adjudicator	31.1	The rate of the Adjudicator's fee and administrative costs of adjudication shall be borne equally by the Parties. The rates and costs shall be in accordance with the rules of the Appointing Authority. In conducting adjudication to its finality each party shall bear its incurred costs and expenses.
32. Replacement of Adjudicator	32.1	Should the Adjudicator resign or die, or should the Employer and the Contractor agree that the Adjudicator is not functioning in accordance with the provisions of the Contract; a new Adjudicator will be appointed by the Appointing Authority.
33. Security of the Site	33.1	Unless otherwise stated in the SCC, (a) the Contractor shall be responsible for keeping unauthorised persons off the site, and (b) Authorised persons shall be limited to the Contractor's and Employer's personnel, and to any other personnel and other Contractor notified to the Contractor by the Project Manager or Employer.
		B. Time Control
34. Program	34.1	Within the time stated in the SCC, the Contractor shall submit to the Project Manager for approval of the Work Program showing the method(s), arrangements, order and timing for all the activities of the Works.
	34.2	The Contractor shall submit to the Project Manager for approval an updated Works Program at intervals not longer than the period stated in the SCC. If the Contractor

		does not submit an updated Works Program within this period, the Project Manager may withhold the amount stated in the SCC from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted.
	34.3	An update of the Works Program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.
	34.4	The Project Manager's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Project Manager again at any time. A revised Program shall show the effect of Variations and Compensation Events if any.
35. Extension of the Intended Completion Date	35.1	The Employer may extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work, which would cause the Contractor to incur additional cost.
	35.2	The Employer shall, within twenty-one (21) days of receipt of application for extension of the Intended Completion Date by the Contractor, decide whether or not to grant the extension. The application by the Contractor shall be granted only when supported by full information of a compensations event(s) or variation.
	35.3	In the event the Contractor has not issued an early warning notice of a delay or has failed to cooperate in dealing with a delay, such a delay or failure may be a ground for not granting the extension of the Intended Completion Date.
36. Acceleration	36.1	When the Employer wants the Contractor to finish the Works before the Intended Completion Date, the Project Manager will obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Employer accepts the said proposals, the Intended Completion Date will be adjusted accordingly and confirmed by both the Employer and the Contractor.
	36.2	In the event the Contractor's priced proposals for acceleration of the Works are accepted by the Employer, they shall be incorporated in the Contract Price and treated as a Variation.

37. Delays Ordered by the Project Manager	37.1	The Project Manager may instruct the Contractor to delay the start or progress of any activity within the Works.
38. Management Meetings	38.1	Either the Project Manager or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.
	38.2	The Project Manager shall record the business of management meetings and provide copies of the record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken shall be decided by the Project Manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.
39. Early Warning Notice	39.1	The Contractor shall give an early warning notice to the Project Manager at the earliest opportunity of specific likely future event(s) or circumstance(s) that may adversely affect the quality of the Works, increase the Contract Price or delay the execution of the Works. Upon receipt of the said Notice, the Project Manager may require the Contractor to provide an estimate of the expected effect of the future event(s) or circumstance(s) on the Contract Price and Intended Completion Date or Completion Date as the case may be. The estimate shall be provided by the Contractor as soon as reasonably possible.
	39.2	The Contractor shall cooperate with the Project Manager in making and considering proposals on how the effect of such an event(s) or circumstance(s) could be avoided or reduced by anyone involved in the Works and in carrying out any resulting Instruction of the Project Manager.
		C. Quality Control
40. Identifying Defects	40.1	The Project Manager shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities.
	40.2	The Project Manager may instruct the Contractor to search for a Defect and to uncover and test any work that the Project Manager considers may have a Defect.

41. Tests	41.1	The Project Manager may instruct the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and in the event the test shows that it does, the Contractor shall pay for the test and any samples thereof. If there is no Defect, the test shall be a Compensation Event.
42. Correction of Defects	42.1	The Project Manager shall give notice to the Contractor of any Defects before the end of the Defects Liability Period stated in the SCC, which begins from the Completion Date.
43. Extension of Defect Liability Period	43.1	Every time notice of a Defect is given; the Contractor shall correct the notified Defect(s) within the period of time specified in the Project Manager's notice.
	43.2	The Defects Liability Period may be extended by the Project Manager for as long as Defects remain to be corrected.
44. Uncorrected Defects	44.1	In the event the Contractor has not corrected a Defect(s) within the time specified in the Project Manager's notice, the Project Manager will assess the cost of having the Defect corrected, including any other related cost(s) and the Contractor will pay the said cost.
		D. Cost Control
45. Bill of Quantities	45.1	The Bill of Quantities shall contain items for the construction, installation, testing, and commissioning work to be done by the Contractor.
	45.2	The Bill of Quantities is used to calculate the Contract Price. The Contractor shall be paid for the quantity of the work done at the rate in the Bill of Quantities for each item.
46. Changes in the Quantities	46.1	If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25 percent, provided the change exceeds 1 percent of the Initial Contract Price, the Project Manager shall adjust the rate to allow for the change.
	46.2	The Project Manager shall not adjust rates from changes in quantities if thereby the Initial Contract Price is exceeded by more than 15 percent, except with the prior approval of the Employer.
	46.3	If requested by the Project Manager, the Contractor shall provide the Project Manager with a detailed cost breakdown of any rate in the Bill of Quantities.

47. Variations	47.1	All Variations shall be included in updated Work Programs produced by the Contractor.
48. Payments for Variations	48.1	The Contractor shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Project Manager shall assess the quotation, which shall be given within seven days of the request or within any longer period stated by the Project Manager and before the Variation is ordered.
	48.2	If the work in the Variation corresponds with an item description in the Bill of Quantities and if, in the opinion of the Project Manager, the quantity of work is not above the limit stated in GCC 44.1 [Uncorrected Defects] or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of Work.
	48.3	If the Contractor's quotation is unreasonable, the Project Manager may order the Variation and make a change to the Contract Price, which shall be based on the Project Manager's own forecast of the effects of the Variation on the Contractor's costs.
	48.4	If the Project Manager decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.
	48.5	The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning notice.
49. Cash Flow Forecasts	49.1	When the Works Program is updated, the Contractor shall provide the Project Manager with an updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the Contract, converted as necessary using the Contract exchange rates.
50. Payment Certificates	50.1	The Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed less the cumulative amount certified previously.
	50.2	The Project Manager shall check the Contractor's monthly statement and certify the amount to be paid to the

		Contractor within twenty-eight (28) days from the receipt of the statement.
	50.3	The value of work executed shall be determined by the Project Manager.
	50.4	The value of work executed shall comprise the value of the quantities of the items in the Bill of Quantities completed.
	50.5	The value of work executed shall include the valuation of Variations, Compensation Events and Variation of Price.
	50.6	The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.
	50.7	The Project Manager shall not be bound to certify any payment, if the net amount, after all retentions and deductions would be less than minimum amount of Interim Payment Certificate stated in the SCC.
51. Payments	51.1	Payments shall be adjusted for deductions for advance payments and retention. The Employer shall pay the Contractor the amounts certified by the Project Manager within 28 days of the date of each certificate. If the Employer makes a late payment the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment should have been made up to the date when the late payment is made at the prevailing rate of interest issued by the Bank of Tanzania on the date of Contract signature for each of the currencies in which payments are made.
	51.2	If an amount certified is increased in a later certificate or as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.
	51.3	Unless otherwise stated, all payments and deductions will be paid or charged in the proportions of currencies comprising the Contract Price.
	51.4	Items of the Works for which no rate or price has been entered in will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.

52. Currencies	52.1	The currency of payment shall be stated in the SCC. Where payments are to be made in currencies other than the Tanzania Shillings, the exchange rates to be used for calculating such amounts shall be the Bank of Tanzania exchange rate prevailing on the date of contract signature.

53. Compensation Events	53.1	The following shall be Compensation Events: (a) The Employer does not give access to a part of the Site by the Site Possession Date stated in the **Special Conditions of Contract.** (b) The Employer modifies the Schedule of Other Contractors in a way that affects the work of the Contractor under the Contract. (c) The Project Manager orders a delay or does not issue Drawings, Specifications, or instructions required for execution of the Works on time. (d) The Project Manager instructs the Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects. (e) The Project Manager unreasonably does not approve a subcontract to be let. (f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Letter of Acceptance from the information issued to Tenderers (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site. (g) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety or other reasons. (h) Other contractors, public authorities, utilities, or the Employer does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor. (i) The advance payment is delayed. (j) The effects on the Contractor of any of the Employer's Risks. (k) The Project Manager unreasonably delays issuing a Certificate of Completion.

		(l) Other Compensation Events described in the Contract or determined by the Project Manager shall apply.
	53.2	If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Project Manager shall, upon consultation with Employer, decide whether and by, how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.
	53.3	As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it shall be assessed by the Project Manager, if agreed by the Employer, the Contract Price may be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Project Manager in consultation with Employer shall adjust the Contract Price based on the Project Manager's own forecast.
	53.4	The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor's not having given early warning notice or not having cooperated with the Project Manager.
54. Effect of Changes in Tax Laws	54.1	The Project Manager shall adjust the Contract Price if taxes, duties, and other levies are changed between the date 28 days before the submission of Tenders for the Contract and the date of the last Completion certificate.
	54.2	The adjustment shall be the change in the amount of tax payable by the Contractor, provided such changes are not already reflected in the Contract Price or are a result of GCC 55 [Price Adjustment].
	54.3	In the event that the Laws Governing Taxes, Duties and other levies have changed between the signature date and the last completion certificate thereby affecting the Contract Price, the Employer and the Contractor, shall mutually adjust the contract price accordingly.
55. Price Adjustment	55.1	The amounts payable to the Contractor, pursuant to GCC 50.1 [Payment Certificate], may be adjusted in respect of the rise or fall in the cost of labour, Contractor's Equipment, Plant, materials, and other inputs to the Works, by applying to such amounts the formulae prescribed in this clause.
	55.2	To the extent that full compensation for any rise in costs to the Contractor is not covered by the provisions of this or

		other clauses in the Contract, the unit rates and prices included in the Contract shall be deemed to include amounts to cover the contingency of such other rise of costs.
	55.3	The adjustment to be applied to amount payable to the Contractor as certified in Payment Certificates shall be determined by a formulae for each of the currencies in which the Contract Price is payable. No adjustment is to be applied to work valued on the basis of Cost or current prices. The formulae shall be as follows; $$Pn = a + b\frac{Ln - Lo}{Lo} + c\frac{Mn - Mo}{Mo} + d\frac{En - Eo}{Eo} + etc.$$ where; Pn is a price adjustment factor to be applied to the amount in each specific currency for the payment of the work carried out in the subject month, where such variations and daywork are not otherwise subject to adjustment; a is a constant, specified in the **Appendix to Tender**, representing the nonadjustable portion in contractual payments; b, c, d, etc., are weightings or coefficients representing the estimated proportion of each cost element (labor, materials, equipment usage, etc.) in the Works or sections thereof, net of Provisional Sums, as specified in the **Appendix to Tender**; the sum of a, b, c, d, etc., shall be one; Ln, Mn, En, etc., are the current cost indices or reference prices of the cost elements in the specific currency of origin for month "n," determined pursuant to CGC 55.5, applicable to each cost element; and Lo, Mo, Eo, etc., are the base cost indices or reference prices corresponding to the above cost elements at the date specified in GCC 55.5

		The value of net work done, certified by the Project Manager, in any monthly Interim or Final Certificate as payable by the Employer to the Contractor before deduction of any retention money shall be increased or decreased by an amount of **'F'**. $F = PnxPc$ where; The effective value **Pc** of work done which is to be subjected to increase or decrease shall be the difference between: (i) the amount which, in the opinion of the Project Manager, is due to the Contractor under GCC 44 [Uncorrected Defects] (before deduction of retention money and before deducting sums previously paid on account) less: • any amount for payment or repayment of any advance payment; • any amount for materials on site (if any); • any amounts for nominated sub-contractors (if any) • any amounts for any other items based on actual cost or current prices; or • any sums for increase or decreases in the Contract Price paid under GCC 55.3 and (ii) The amount calculated in accordance with (i) above of GCC 55.3 and included in the last preceding statement.
	55.4	The sources of indices shall be those listed in the **Appendix to Tender**, as approved by the Project Manager. Indices shall be appropriate for their purpose and shall relate to the Contractor's proposed source of supply of inputs on the basis of which his Contract Price and expected foreign currency requirements shall have been computed. As the proposed basis for price adjustment, the Contractor shall have submitted with his Tender the tabulation of Weightings and Source of Indices in the **Appendix to Tender**, which shall be subject to approval by the Project Manager.
	55.5	The base cost indices or prices shall be those prevailing on the day 28 days prior to the latest date for submission of

		Tenders. Current indices or prices shall be those prevailing on the day 28 days prior to the last day of the period to which a particular Interim Payment Certificate is related. If at any time the current indices are not available, provisional indices as determined by the Project Manager will be used, subject to subsequent correction of the amounts paid to the Contractor when the current indices become available
	55.6	If the Contractor fails to complete the Works within the time for completion prescribed under GCC 20 [Commencement and Completion of Works] adjustment of prices thereafter until the date of completion of the Works shall be made using either the indices or prices relating to the prescribed time for completion, or the current indices or prices, whichever is more favourable to the Employer, provided that if an extension of time is granted pursuant to GCC 35 [Extension of the Intended Completion Date], the above provision shall apply only to adjustments made after the expiry of such extension of time.
	55.7	The weightings for each of the factors of cost given in the **Appendix to Tender** shall be adjusted if, in the opinion of the Project Manager, they have been rendered unreasonable, unbalanced, or inapplicable as a result of varied or additional work already executed or instructed under GCC 48 [Payment for Variations] or for any other reason.
56. Retention	56.1	The Employer shall retain from each payment due to the Contractor the proportion stated in the **Special Conditions of Contract.** The total amount of retention shall not exceed the amount specified in the **Special Conditions of Contract**
	56.2	On completion of the whole of the Works, half the total amount retained shall be repaid to the Contractor and the other half when the Defects Liability Period has passed and the Project Manager has certified that all Defects notified by the Project Manager to the Contractor before the end of this period have been corrected.
	56.3	On completion of the whole Works, the Contractor may substitute retention money with an 'on demand" or unconditional Bank guarantee.

57. Liquidated Damages	57.1	The Contractor shall pay liquidated damages to the Employer at the rate per day stated in the SCC for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the maximum amount of performance security stated in the SCC. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's liabilities.
	57.2	Where the Project Manager, after assessment of work progress, upon satisfaction that the Contractor will not complete the works within the contract period, may issue a notice to the Contractor requiring the payment of liquidated damages pursuant to GCC 57.1
	57.3	If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in GCC 51.1 [Payments]
58.	58.1	If stated in the **Special Conditions of Contract** the Contractor shall be paid a Bonus calculated at the rate per calendar day for each day (less any days for which the Contractor is paid for acceleration) that the Completion is earlier than the Intended Completion Date. The Project Manager shall certify that the Works are complete, although they may not be due to be complete.
59. Advance Payment	59.1	If stated in the SCC the Employer shall make advance payment to the Contractor of the amounts stated in the SCC by the date stated in the SCC, against provision by the Contractor of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Employer in amounts and currencies equal to the advance payment. The Guarantee shall remain effective until the advance payment has been repaid, but the amount of the Guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest will not be charged on the advance payment.
	59.2	The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance

		payment has been used in this way by supplying copies of invoices or other documents to the Project Manager.
	59.3	The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, as specified in the SCC following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages.
60. Performance Securities	60.1	The Performance Security shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount and form and by a bank or surety acceptable to the Employer, and denominated in the types and proportions of the currencies in which the Contract Price is payable as specified in the TDS and SCC and in accordance with the conditions of contract.
	60.2	The Performance Security shall be valid until a date 28 days from the date of issue of the Certificate of Completion in the case of a Bank Guarantee, and until one year from the date of issue of the Completion Certificate in the case of a Performance Bond
	60.3	Where circumstances necessitate the amendment of the contract after signature, and such amendment is effected, the Employer shall require the Contractor to provide additional Performance Security to cover any cumulative increase of more than ten percent of the Initial Contract Price.
61. Day-works	61.1	If applicable, the Day-works rates in the Contractor's Tender shall be used for small additional amounts of work only when the Project Manager has given written instructions in advance for additional work to be paid for in that way.
	61.2	All work to be paid for as Day-works shall be recorded by the Contractor on forms approved by the Project Manager. Each completed form shall be verified and signed by the Project Manager within two days of the work being done.
	61.3	The Contractor shall be paid for Day-works subject to obtaining signed Day-works forms.

62. Cost of Repairs	62.1	Loss or damage to the Works or Materials to be incorporated in the Works between the Commencement Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.
		E. Discharge of the Contract
63. Completion Certificate	63.1	The Contractor shall request the Project Manager to issue a certificate of Completion of the Works, and the Project Manager will so issue upon satisfaction that the work is completed.
64. Site Hand Over	64.1	When the Certificate of Completion is issued by the Project Manager, the Contractor shall handover the site and the works to the Employer within time specified in the SCC
65. Final Account	65.1	Upon the expiry of the defect liability period, the Contractor shall supply the Project Manager with a detailed account of the total amount that the Contractor considers payable under the Contract. The Project Manager shall, within fifty-six (56) days, verify the account and, upon satisfaction, certify any final payment due to the Contractor and thereafter issue a defect liability certificate.
	65.2	In the event the Project Manager is not satisfied with the Account submitted by the Contractor pursuant to sub-GCC 65.1, shall within 56 days issue a schedule of correction. If the final account remains unsatisfactory after it has been re-submitted, the Project Manager shall, upon consultation with the Employer, decide on the amount payable to the Contractor and issue a payment certificate.
66. Operating and Maintenance Manuals	66.1	The Contractor shall supply to the Employer the "as built" Drawings and/or operating and maintenance manuals and any other related documents by the handover period stipulated pursuant to GCC 64.1 [Site Hand Over].
	66.2	If the Contractor does not supply the Drawings and/or manuals stated in GCC 66.1 by the dates specified pursuant to GCC 64.1 [Site Hand Over] or they do not receive the Project Manager's approval, the Project Manager shall withhold the amount stated in the **Special Conditions of Contract** from payments due to the Contractor.

67. Termination	67.1	The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.
	67.2	Fundamental breaches of Contract shall include, but shall not be limited to, the following: a) the Contractor stops work for 28 days when no stoppage of work is shown on the current Works Program and the stoppage has not been authorized by the Project Manager; b) the Project Manager instructs the Contractor in writing to delay the Works progress, and the instruction is not withdrawn in writing within 28 days; c) contractor's failure to submit performance security within the time stipulated in the SCC; d) the Employer or the Contractor is declared bankrupt or goes into liquidation other than for a reconstruction or amalgamation; e) a payment certified by the Project Manager is not paid by the Employer to the Contractor after 84 days from the date of the Project Manager's certificate; f) Failure of the Contractor to correct the defect after lapse of time specified in the notice to correct defects issued by the Project Manager; g) where the Contractor fails to furnish and maintain the required Site Security pursuant to GCC 33.1 {Security of the Site}; h) The Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in the SCC; and i) If the Employer determines, based on the reasonable evidence that the Contractor has engaged in corrupt, coercive, collusive, obstructive or fraudulent practices, in competing for or in executing the Contract. For the purpose of this paragraph:

		"corrupt practice means the offering, giving receiving or soliciting of anything of value to influence the action of a public officer in the procurement process or contract execution; "coercive practice" means impairing or harming, or threatening to impair or harm directly or indirectly, any party or the property of the party for the purpose of influencing improperly the action or that party in connection with public procurement or in furtherance of corrupt practice or fraudulent practice; collusive practices" mean impairing or harming, or threatening to impair or harm directly or indirectly, any part or the property of the Party for the purpose of influencing improperly the action or a part or in connection with public procurement or government contracting or in furtherance of a corrupt practice or a Fraudulent Practice "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Employer and includes collusive practices among tenderers, prior to or after submission designed to establish tender prices at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition; "obstructive practice" means acts intended to materially impede access to required information in exercising a duty under this contract;
	67.3	When either party to the Contract gives notice of a fundamental breach of Contract to the other party for a cause other than those listed under GCC 67.2 above, the Project Manager shall decide whether the said breach is fundamental or not.
	67.4	Notwithstanding the above, the Employer may terminate the Contract for convenience.
	67.5	If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

69. Property	69.1	All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Employer if the contract is terminated for fundamental breach by the Contractor,
70. Suspension of Financing	70.1	In the event that the source of financing is suspended to the Employer, from which part of the payments to the Contractor are being made: (a) The Employer shall notify the Contractor of such suspension within Seven (7) days of having received the financing agency's suspension notice. (b) After the Notice has been issued and within fourteen (14) days, the Parties shall mutually agree on the future events of the Contract
71. Force Majeure	71.1	Neither Party shall have any liability or be deemed to be in breach of the Contract for any delay or other failure in performance of its obligations under the Contract, if such delay or failure is a result of an event of Force Majeure.
	71.2	For purpose of this clause, "Force Majeure" means an event which is beyond the reasonable control of a Party, is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of a Party, and which makes a Party's performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible in the circumstances, and includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood, epidemics, or other adverse weather conditions, strikes, lockouts or other industrial action (except where such strikes, lockouts or other industrial action are within the power of the Party invoking Force Majeure to prevent.
	71.3	If a Party (hereinafter referred to as "the Affected Party") is or will be prevented from performing its substantial obligation under the contract by Force Majeure, it shall give a Notice to the other Party giving full particulars of the event and circumstance of Force Majeure and the reasons for the event of Force Majeure preventing the Affected Party from, or delay the Affected Party from performing its obligations under the Contract. The Notice shall be given within fourteen days after the Affected Party becomes aware, or should have become aware, of the relevant event or circumstances constituting Force Majeure.

	71.4	The Affected Party shall use reasonable efforts to mitigate the effects of the event of Force Majeure and shall endeavour to minimise any delay in the performance of the contract as a result of Force Majeure.
	71.5	The Affected Party shall give Notice to the other Party when it ceases to be affected by the Force Majeure.
	71.6	Upon completion of the event of Force Majeure and issuance Notice pursuant to GCC 71.4, the Affected Party must, as soon as reasonably practicable recommends the performance of its obligations under the contract. Where the Affected Party is the Contractor, the Contractor must provide a revised Work Program rescheduling the Works to minimise the effect of the prevention or delay caused by the event of Force Majeure.
72. Release from Performance	72.1	In the event the Affected Party have used all reasonable efforts to mitigate the effect of the event of force Majeure and minimize any delay in the performance of the contract as result of force Majeure, but the effect of force Majeure still subsists, the Project Manager shall certify that the Contract has been frustrated.
	72.2	Upon certification by the Project Manager pursuant to GCC 72.1 the Contractor shall make the site safe and stop work as quickly as possible after receiving the certificate and shall be paid for all Works carried out.

LETTER OF ACCEPTANCE

THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF NATURAL RESOURCES AND TOURISM

NGORONGORO CONSERVATION AREA AUTHORITY

In reply please quote:

Ref. No. AF.158/570/01-C/71 **Date:** 17th December, 2021

M/S J.P Traders Ltd,
Ubungo External,
P.O. Box 76007,
Dar es Salaam-Tanzania.
Email: jptraderslimited@yahoo.com
Phone: +255 713 400 791

RE: **LETTER OF ACCEPTANCE FOR TENDER NO. AE/055/2021-22/HQ/TCRP/W/01 REHABILITATION OF MAIN ROAD FROM GOLINI TO SENETO JUNCTION (50KM) AND ACCESS ROAD TO OLDUVAI MUSEUM (5KM)**

Please refer to the above subject matter,

2. This is to inform you that, following a successful negotiation conducted on 16th December, 2021 between the parties, NCAA Tender Board in its extra ordinary meeting held on 16th December, 2021 approved your bid which you submitted online through TANePS and opened on Friday 10th December, 2021 in regard to above mentioned tender for a contract price of **Tanzania Shillings One Billion Five Hundred Eighty Million Two Hundred Eighty Five Thousand Five Hundred Only (TZS. 1,580,285,500.00) VAT inclusive for a contract period of Four (4) months** commencing within fourteen (14) days after signing the contract and site possession.

3. The terms and conditions of the contract are as per invitation for tender and negotiation conducted between parties.

Dr. Christopher D. Timbuka
Acting **CONSERVATION COMMISSIONER**

Headquarters: P. O. Box1, NgorongoroCrater.Tel: +255-27-2537006/19
Conservation Commissioner Office: Tel:+255-27-2537046
E-Mail: cc@ncaa.go.tz Website: www.ncaa.go.tz
Liaison Office: P.O. Box776ArushaTel:+255-27-2503339
Information Office: Tel:+255-27-2544625

All official correspondence should be addressed to The Conservation Commissioner

c.c. The Chief Executive Officer,
Public Procurement Regulatory Authority,
Kambarage Tower, 9th Floor PSPF Road,
P.O. Box 2865,
DODOMA, TANZANIA.
Email: ceo@ppra.go.tz

: The Controller and Auditor General,
P.O. Box 9080,
DAR ES SALAAM.
Email: ocag@nao.go.tz

: Attorney General
P.O. Box 9050,
DAR ES SALAAM.
Email: info@agctz.go.tz

: Internal Auditor General
P.O. Box 911
DAR ES SALAAM.
Fax: +25522211032

: Permanent Secretary , Ministry of Finance and Planning,
(Att. Directorate of Government Asset Management Division)
18 Jakaya Kikwete Road
P.O. Box 2802
40468 DODOMA.
Email: assets.management@mof.go.tz

: Tanzania Revenue Authority
P.O. Box 11491
DAR ES SALAAM.
Email: services@tra.go.tz

JPT

J. P TRADERS LIMITED

(Civil Engineering Contractors & Bld. Material Supplies)
Mandela Road, Ubungo External Near, Police Post, P.O. Box 76007, Dar es Salaam,
Phone/Fax (255) 022 – 2450732, Cell 0713 – 448900, 0787 – 889944
E-mail:jptraderslimited@yahoo.com

Date: 17th December 2021

OUR REF: JPT/NCAA/2021/05

To,
Conservation Commissioner,
Ngorongoro Conservation Area Authority
P.O Box 01
Ngorongoro Crater

Dear Sir,

REF**: REHABILITATION OF MAIN ROAD FROM GOLINI TO SENETO JUNCTION (50KM) AND ACCESS ROAD TO OLDUVAI MUSEUMS (5KM)**

AE/055/2021-2022/HQ/TCRP/W/01

Sub: LETTER OF ACCEPTANCE
Reference is made to your latter with reference No.AF.158/570/01-C/71 dated on 17th December 2021,

We hereby accept your offer to execute the above mentioned tender at a contract price of **Tanzania Shillimgs One billion Five Hundred Eighty Million Two hundred Eighty Five Thousand Five Hundred only (TZS 1,580,285,500.00) VAT inclusive for a contract period of Four (4) Months** We humbly submit for your review and Approval.

We highly appreciate your offer;

Yours Sincerely,
J.P TRADERS LIMITED

.....
Eng. Balivumu Mathias Lugiye.
Technical Director

CERTIFICATE OF CONTRACT COMMENCEMENT

To be issued to the Contractor after contract signing

SPECIFICATIONS

TECHNICAL SPECIFICATIONS

PART I - PRELIMINARY AND GENERAL

1.01 Reference to General Conditions of Contract

The specifications are to be read in conjunction with the General Conditions of contract to which the Contractor is referred for the full meaning of each clause and allowance must be made in the tender prices, for compliance therewith.

1.02 Specifications and Drawings

The Tender Drawings, together with such other drawings as may be issued by the engineer, form part of the Specifications. The specification and workmanship shall be governed by the following in order of preference:

(i) Specifications as detailed on the Contract Drawings

ii) Specifications and workmanship as detailed in this document.

Where the Specifications and Drawings describe portions of the works in general terms, but not in complete detail, it is understood that only the best general practice is to prevail and that only materials and workmanship of the first quality are to be used. Unless otherwise specified, the Contractor shall furnish all labour, material, tools, equipment and incidentals, and do all the work involved in executing the Contract in satisfactory and workman like manner.

1.03 Scope of Works

The Works comprised in the contract include all operations, labour, materials and works, both temporary and permanent, which may be necessary for the construction and maintenance of the works, together with modifications and substitutions, all in accordance with the Contract Documents.

1.04 Sureties

The Bond of Surety, in conformity with *Clause 13* of the General Conditions of contract, shall be submitted to the Engineer by the Contractor at the time of signing the Contract or at such time as stated in the Tender Documents. The sum tendered in ***Pay Item No. 1.3*** for the provision of the bond of surety will be paid in full in the first interim certificate.

1.05 Insurance

A certificate from an approved Insurance Company to the effect that the Contractor has taken out all the insurances required in terms of Clause 13, of the

General Conditions of Contract within 14 days of the award of the tender, or such period as stated in the Tender Document.

The sum tendered in Pay *Item No. 1.4* for the provision of the insurance will be paid in full in the first interim certificate.

1.06 Establishment on site

The Pay ***Item No. 1.5*** included in the Bill of Quantities is presided to reimburse the Contractor for the cost of all operations necessary for and directly related to the establishment on site. The item includes full compensation for:

(a) Erection of adequate and suitable accommodation for the Contractor's labor force on site;

(b) Supply of drinking water and provision of sanitary facilities to the satisfaction of the Ministry of Health and Social Welfare;

(c) Erection of works office for the Contract, adequately furnished and of appropriate size;

(d) Erection of an equipment workshop *(if deemed necessary in this case)* adequately furnished and equipped and of appropriate size.

(e) Office accommodation and facilities for the Engineer. The Contractor is to allow in his rates for attendance on the Engineer including provision of labor, materials and instruments necessary to enable him to carry out checks on the setting out and control of the Works. The Engineer will not require a separate office but the Contractor shall make available facilities in his own offices for the Engineer s use. Among the facilities to be provided to the Engineer shall be at least two rooms, each at least 15 square metres in area. The rooms shall have an external entrance/exit separate to that of the Contractor's quarters. The following minimum furniture shall also be supplied for the use of the Engineer:
   - 2 desks 1.5 x 1.0 with drawers
   - 6 chairs
   - 1 steel filing cabinet with 4 drawers
   - 1drawing table

(f) Any other operation necessary for establishment on site and to enable work to commence on the project.

The sum of bid for establishment on site will be paid 70% upon completion of erection of the Contractor's Works office and camp, but not before work has commenced on the project, to the satisfaction of the Engineer; and 30% to be paid in monthly instalments for operation and maintenance of the camp.

1.07 Mobilization/ Demobilization of Plant and Equipment

The Contractor shall mobilize all plant and equipment agreed in the Contract Agreement not later than 21 - *30 days* following the commencement date of the Contract. The Contractor shall demobilize all plant and equipment prior to issuing the certificate of final completion.

Pay item 1.2 included in the Bills of Quantities is provided to reimburse the Contractor for the cost of transporting his plant and equipment to the work site at the commencement of work and for demobilizing the plant and equipment after the works are completed.

The Sums of bid for mobilization of plant and equipment will be paid *80%* upon completion of mobilization of the plant and equipment and *20%* upon demobilization.

1.08 Accommodation of Public Traffic During Construction

(i) Safety and Convenience of Existing Traffic

Any measures necessary for the safety and convenience of the public will be the responsibility of the Contractor who shall treat them as of prime importance.

The Contractor shall provide flagmen, signs, fences, barriers and lights for the proper direction of traffic, as directed by the Engineer and shall comply with all regulations governing such matters.

(ii) Construction of Detours

Where it is necessary to divert traffic from an existing road, detours shall be constructed on the alignment indicated by the Engineer.

The Contractor will be given possession of the site in sections, sufficiently ahead of road construction works to enable detours to be built in good time and to the Engineer's satisfaction, before the need for them occurs.

The standard of construction and the vertical and horizontal alignment shall be specified by the Engineer.

(iii) Barricades and Signs

Barricades shall be substantially made and painted in alternate bands of yellow and black and shall extend across the road. Gaps shall not be left in the barricades for the entrance of construction traffic.

(iv) Maintenance of Detours

The maintenance of detours will be the responsibility of the Contractor and shall adequately provide for the comfort, convenience and safety of the public.

(v) Signs

All signs shall be in a form prescribed in the Traffic Signs Manual issued by Ministry of Infrastructure

(vi) Payment

The sum tendered in *Pay Item No. 1.6* for Accommodation of Traffic shall include for all plant, labour and materials necessary to carry out the work including placing and removal of barricades and signs to different locations as the work proceeds and for all other work incidental and necessary thereto. The sum tendered for this item will be paid in equal monthly instalments over the contract period.

1.09 Exploratory Excavations

The Contractor shall upon the Engineer's request carry out exploratory excavations and take samples for testing at the Regional Manager's Office Laboratory, TANROADS, or any other laboratory acceptable to the Engineer.

Such exploratory excavations will be paid for by the Day Work rates and a provisional sum in respect of such anticipated work have been included in the Bills of Quantities as part of *Pay Item 1.1*

1.10 Possession of Site

The operations of the Contractor shall be confined to the area of and immediately adjoining the works included in this Contract, Clearance shall be kept to the satisfaction of the Engineer to permit the statutory authorities or other Contractors to enter the site to carry out other works and to maintain the free flow of traffic so far as is practical with safety on the existing carriageway.

The Contractor shall obtain the approval of the Engineer for the setting of all camps, offices, workshops, sheds, temporary roads, deviations, paths etc., necessary for the execution of the Contract.

The Contractor must allow for safe crossing by construction traffic of existing roads and tracks.

Where it is necessary to work outside the road reserve and to enter either private or occupied land during the course of road construction or

maintenance for the purpose of making temporary road diversions, sinning road construction or maintenance materials or for any other reason, the land owner or occupier shall first be consulted by the Contractor and his written permission obtained.

In the event of the owner or occupier withholding their permission, the full circumstances of the case shall be referred to the Engineer and no further action shall be taken until his instructions are received.

When the Contractor intends to move his camp to a new location during the construction period, advance notice of at least one month must be given to the Engineer. The Contractor must allow in his rates for such intended moves.

1.11 Water and Power Supply

The supply of water for construction purposes and water and power supply for the Contractor's office and camp will be the Contractor's responsibility.

If an approved independent source for water supply is used the Contractor will be responsible for all costs, and be called upon to provide analysis of the water to prove its suitable.

1.12 Instruments

The Contractor shall provide all survey and measuring instruments of every kind necessary for his use in the execution of the works. The survey instruments shall include level instrument, Abney levels, staffs, ranging poles, tapes, camber boards and other basis survey equipment, while theodolite shall not be required. The cost of providing these survey and measuring instruments must be included in the tender rates. The ownership of the instruments will remain with the Contractor at the end of the Contract period.

1.13 Watching and Lighting

The Contractor provide and maintain all light, watchmen and protective fences or barricades as may be necessary in connection with the works.

No separate payment will be made for watching and lighting and the cost of providing this must be included in the tender rates.

1.14 Protection of Existing Services and Structures

Before commencing any section of the works, the Contractor shall obtain at his own cost full information with regard to the position of all existing services and structures and shall exercise the utmost care when working in their vicinity. He must serve notice of his intention to work near the services or structure to the responsible authority, and obtain their written approval

before commencing work, which must be carried out in accordance with the responsible authority's requirements. The Contractor's tendered rates shall include for all costs arising out of the protection of existing services and structures.

The Contractor shall also bear the full cost of remedial work to existing services which are damaged by the Contractor during construction.

PART 2 - ROAD WORKS

2.01 Form-up Road Formation

- **Light reshaping** < 2m³ per lm - Raising road profile level by up to **20cm.**
- **Heavy reshaping** < 5m³ per lm - Raising of road profile level by up to **40cm.**

(i) Description of Work

In general the road will be constructed longitudinally to the ruling natural grade, and transversely in accordance with the typical cross sections by balancing the Earthworks within the cross section. The earthwork involved in forming up the road prism will therefore in general be guide limited and uniform along the road except on certain sections of the roads where cut and fill operations with longitudinal haulage of material are required. These section of road defined as "cut sections" and "fill sections' on the drawings - occur for instance where improvement of sight distance over crests is required, in hilly and mountainous terrain where extensive earthworks are needed to establish the typical cross section or at waterway crossings where fill may be required to suit knew drainage structure levels or where the road needs to be raised due to low bearing capacity of the natural soil or in areas liable to flooding.

Only for these "cut sections" and "fill sections" as defined on the drawings will the Earthworks be carried out and paid for on a cubic metre basis, while the term "form-up road formation" will apply for the remaining sections of the road and paid for by the linear metre for the different types of typical cross sections specified on the Drawings.

The forming up of road formation is essentially a side haul or grading operation and virtually no longitudinal haulage of any kind is envisaged. The formation preparation shall include the following:

(a) Removal of grass roots and humus topsoil present in the full construction width between the outside edges of the side drains detailed. No material should be left in the formation construction, which if incorporated in the formation construction would adversely affect the stability of the compacted Earthworks. Removal topsoil, humus, grass etc. Shall be placed

on side drain slopes in a manner such that drainage into the side drains is not impeded; or it may be disposed of as waste as directed by the Engineer.

(b) Carry out the Earthworks necessary to produce the completed profiles of side drains and formation to the specified standards, lines, level, grades and dimensions detailed or directed. This will include the excavation of material from side drains, existing formation, borrow or elsewhere as directed and the transverse or longitudinal movement up to 500 metre of this material to fill or waste as instructed on site. This operation will provide the complete side drains and formation as detailed and specified.

The full width of the subgrade shall be compacted as specified in Section 2.08.

The term "form-up road formation" may in general be said to apply to those lengths of the road where the finished sub grade level at the carriageway centre line is within +/-250 mm of existing ground level. The "cut sections" and "fill sections" are then defined as occurring where the finished subgrade level is, for fill, more than 250mm above and for cut more than 250mm below existing ground level, measured on the carriageway centre line before clearance.

The Drawings may sub divide the forming operation into (a) "**light reshaping**" being sections with Earthworks of less than approximately 2 m^3 per linear metre of road; and (b) "**heavy reshaping**" being sections with Earthworks between approximately 2 m^3 and 5m^3 per linear metre of road.

This division into light and heavy reshaping is based entirely on a visual estimate by the Engineer and should only be considered as guidance for the Contractor's estimate of labour and plant input required carrying out the forming up operation.

(ii) Measurement

Measurement shall be by the linear metre of road formation prepared to the horizontal and vertical alignments, cross falls, cambers, super elevations, etc., for the Typical Cross Section types as detailed on the drawings and shall include for side drain construction.

(iii) Payment

The rate offered shall allow for all items of work detailed or implied in the cleared construction width between the outer extremities of the side drains and shall include removal of grass roots and humus topsoil, forming up to final cross section, including cut to fill, except for cuts and fills outside the limits detailed herein and excluding rock excavation but including sub

grade compaction, and all other ancillary items to provide a completed formation as detailed or directed.

Excavation of rocks or boulders occurring within the carriageway and measuring not less than 0.20 cubic metre in volume will if ordered to be removed by the Engineer be paid for as extra over the rate for form-up road formation.

2.02 Cut and Borrow to Fill

(i) Description of Work

As description in section 2.04 earthworks will be carried out and paid for on a cubic metre basis only for those sections of the roads defined as "cut section" or "fill sections" on the drawings. The Contractors shall, for these sections of road, carry out a longitudinal profile and cross section survey at intervals as directed by the Engineer and using local datum. Two level pegs shall be set out at each cross-section point, one in each side of the carriageway and clear of construction.

These shall be used for each stage of construction and shall remain in position until the road construction is complete. Any pegs destroyed during construction shall be immediately replaced.

No work shall commence upon such portion of the construction unit such time as ground levels have been taken by the Contractor in an approved manner, and checked and accepted by the Engineer to ensure that a firm basis has been established for measurement and setting out purposes. Should the Contractor fail to comply with this requirement the Engineer reserves the right to base the final measurement on other survey data.

In general terms excavation shall be measured under two items. The first is a cut or borrow to fill item which will be measured as compacted fill and the second is a cut to spoil item which will be measured as an in-situ volume before excavation.

Fills shall be constructed to the lines, grades, cross section, and dimensions etc. Shown on the drawings and as directed by the Engineer. The material used for fill construction shall be selected approved soil and shall be free from all deleterious matter.

Fills shall be constructed in layers of materials in loose thickness not exceeding 200 mm and each layer shall be compacted as specified in Section 2.07. Where possible the quality of material used in fill construction shall improve with each successive layer upwards.

The Engineer reserves the right to control excavation and to direct where materials arising from cut shall be deposited and how and where it shall be used, and also to direct where borrow materials which may be essential for fill shall be obtained.

Before commencing work on any section of the road, the Contractor shall ensure that he has adequate instructions concerning the use of soil from cut. No claims for double handling will be considered. Excess excavation beyond the net outline detailed or directed shall be made good at the Contractor's expense in a manner acceptable to the Engineer.

Where there is a shortage of excavated materials to achieve the required formation levels, the side drains may be widened as instructed on site or additional material may be obtained from local borrow as the Engineer may direct and provided always that side drains shall be maintained clean and true in line and capable of continuous discharge of storm water without pending.

Where embankments exceed 1.5 metre in height in sidelong ground the Engineer may direct the excavation of horizontal benches in bank foundation. Side drains emptying from cuts to embankments and all other drains shall be so constructed as to avoid damage to embankment by erosion.

The Contractor shall take all risks from water, clean or foul, stream, river, surface, storm or ground water, whatever the source or sources may be. Water shall not be allowed to accumulate at any point in the earthworks. The Contractor shall, at his own expense, effectively drain and keep dry all the works during the period of construction and shall take particular care to prevent surface water accumulating, soaking in, and softening the formation during construction.

Any loss of shape or compaction resulting from water affecting the earthworks shall be rectified by the Contractor at his own expense. All side drains, sumps or temporary excavations for dewatering shall be formed, maintained and used outside and clear of the main works and shall be properly filled in if so directed by the Engineer when their use ceases. The rates tendered must allow for all risks from dewatering of the earthworks during construction.

Excavation of material due to slips and falls in cuttings and banks attributable to carelessness of the Contractor shall be made good at the Contractor's expenses in a manner acceptable to the Engineer.

(ii) Measurement

The unit for measurement of fill from cut or borrow shall be the cubic meter of material measured in place after compaction.

The volume measured shall be the compacted volume between the ground profile including the volume of excavation of benches and shall be computed by the method of average end areas from levelled cross sections. The Contractor must

allow in his rates for any additional work, working space and the like, that he may require.

(iii) Payment

The rate offered for material in fill must include for removal of grass roots-and other deleterious material from the surface and for excavation to level (including side drains where necessary) in cut or borrow, side casting and loading, hauling not exceeding 200 metres, unloading, spreading, shaping, watering and maintaining to camber, grades and levels, mixing and compacting all as described and control of level in both cut and fill.

Haulage in excess of 200 mitres will be paid for according to the tendered rate in **Pay Item No. 2.6** and specified in **Section 2.10**

2.03 Cut to Spoil

(i) Description of Work

Where anthill or other inferior material (this may include topsoil) is encountered in the construction of the formation, or where there is an excess of excavation over fill, the material concerned shall where directed be cut to spoil in positions directed by the Engineer. Anthill material shall be excavated to a depth of 0.5 m below subgrade level over the full subgrade width and replaced with selected fill which shall be measured and paid for as cut or borrow to fill.

No spoiling shall take place on private land without the authority of the Engineer and the consent of the owner or occupier. Spoiling shall be carried out in such a way that natural drainage is not impeded or impaired.

(ii) Measurement

The unit of measurement for cut to spoil shall be the cubic meter of material measured in place before excavation, and computed by the method of average end areas from levelled cross sections taken both before clearance and after excavation.

(iii) Payment

The rate for each cubic metre of cut material spoiled shall include for excavation to grade and level (including side drains where necessary), loading, haulage not exceeding 200 metres, unloading, spreading and trimming as directed.

Excavation of rocks or boulders occurring in the cut and measuring not less than 0.20m^3 in volume will be paid for as extra over to cut to spoil under Item 2.3.

2.04 Compaction

(i) Description of Works

(a) Fill and Subgrade

Each layer of fill and subgrade shall be moistened or dried to uniform moisture and then thoroughly compacted to 95% of the maximum dry density as determined by AASHTO T99 (Standard Proctor Compaction). Other types of field density tests may be used for control purposes after density values corresponding to those obtained by AASHTO T147 have been established. All subgrade and fill material shall as soon as practicable after deposition be compacted uniformly over the full width to the required compaction degree.

(b) Gravel Wearing Course

Compaction of wearing course material shall be in accordance with the requirements for fill and subgrade except that the required compaction degree shall be 100% of the maximum dry density as determined by AASHTO T99 (Standard compaction).

The natural moisture content of the material varies, depending on soil type, location, season, evaporation and precipitation. Usually, the natural moisture content is lower than the optimum moisture content for compaction as determined by the standard Proctor compaction test (AASHTO T99) and moistening is therefore, normally a pre-requisite to achieve satisfactory compaction. A soil, which is too dry, cannot be expected to achieve satisfactory compaction. A soil, which is too dry, cannot be expected to achieve the required compaction degree, whereas a soil, which is too wet normally, will require only a short period of exposure to sun and wind until it is dried sufficiently.

Necessary application of water shall be included in the tendered rates covering the compaction operations required.

Compaction may be carried out by use of various types of plant. Table 1 and Table 2 show the minimum number of passes required to obtain the specified compaction densities for fill and gravel course respectively using different type of compaction plant and depending on the type of material and thickness of the compacted layer.

If the Contractor complies with the requirements of Table 1 and Table 2 he can normally expect approval of the compaction by the Engineer. Note: Compliance with the 'Guide-lines" of Table 1 and Table 2 does not relieve the Contractor of the responsibility for achieving the Maximum Dry Densities indicated in Clause 2.08 (a) and (b) above. The use of plant not

included in the tables will be permitted only if the Contractor demonstrates at site trials that a state of compaction is achieved by; the alternative method equivalent to that obtained using the equipment listed in Table 1 and Table 2. The procedure to be adopted for these site trials shall be agreed with and approved by the Engineer.

The Engineer shall carry out field density tests on all sections and layers of formation fill and gravel wearing course prior to approving the works for payment. The frequency of the density tests is at the discretion of the Engineer, but will occur in minimum intervals of 100m.

The Contractor shall if the test results shown insufficient compaction carry out such further work as the Engineer may decide, in order to comply with the specified compaction requirements.

TABLE 1: COMPACTION REQUIREMENTS FOR FILL

[D = Maximum depth of compacted later (mm) N = Minimum number of passes]

TYPE OF COMPACTION PLANT	SIZE OF COMPACTION PLANT	COHESIVE SOILS		WELL GRADED GRANULAR AND DRY COHESIVE SOILS		UNIFOMLY GRADED MATERIALS	
		D	N	D	N	D	N
SMOOTH WHEELED ROLLER	(Mass per metre width of roll)						
		125	8	126	8	125	10*
	Over 2100kg up to 2700kg	125	6	126	6	125	8*
	Over 5400kg up to 5400kg	150	4	150	4	Unsuitable	
	Over 5400kg						
GRID ROLLER	Over 2700kg up to 5400kg	150	10	Unsuitable		150	10
	Over 5400kg up to 8000kg	150	8	125	12	Unsuitable	
	Over 8000kg	150	4	150	12	Unsuitable	
TAMPING ROLLER	Over 4000kg	225	4	150	12	250	4
PNEUMATIC TYRED ROLLER	(Mass per wheel)						
	Over 1000kg up to 1500kg	125	6	Unsuitable		150	10*
	Over 1500kg up to 2500kg	150	5	Unsuitable		Unsuitable	
	Over 2000kg up to 2500kg	175	4	125	12	Unsuitable	
	Over 2500kg up to 4000kg	225	4	125	10	Unsuitable	
	Over 4000kg up to 6000kg	300	4	125	10	Unsuitable	
	Over 6000kg up to 8000kg	350	4	150	8	Unsuitable	
	Over 8000kg up to 12000kg	400	4	150	8	Unsuitable	

	Over 12000kg	450 4	175 6	Unsuitable
VIBRATING ROLLER	(Mass per metre width of vibrating roll)			
	Over 270kg up to 450kg	Unsuitable	75 16	150 16
	Over 450kg up to 700kg	Unsuitable	75 12	150 12
	Over 700kg up to 1300kg	100 12	125 12	150 6
	Over 1300kg up to 1800kg	125 8	150 8	200 10*
	Over 1800kg up to 2300kg	150 4	150 4	225 12*
	Over 2300kg up to 2900kg	175 4	175 4	250 10*
	Over 2900kg up to 36000kg	200 4	200 4	175 8*
	Over 3600kg up to 43000kg	225 4	225 4	300 8*
	Over 4300kg	275 4	275 4	300 4*

* The roller shall be towed by track-laying tractors. Self-propelled rollers are unsuitable.

TABLE 2: COMPACTION REQUIREMENTS FOR GRAVEL WEARING COURSE

TYPE OF COMPACTION PLANT	SIZE OF COMPACTION PLANT	NUMBER OF PASSES FOR LAYERS NOT GREATER THAN:		
		100 MM	150MM	225 MM
SMOOTH WHEELED ROLLER	(Mass per metre width of roll)			
	Over 2700 kg up to 5400 kg	16	Unsuitable	
	Over 5400 kg	8	Unsuitable	
PNEUMATIC TYPE	(Mass per wheel)			
	Over 4000 kg up to 6000 kg	12	Unsuitable	Unsuitable
	Over 6000 kg up to 8000 kg	12	Unsuitable	Unsuitable
	Over 8000 kg up to 12000 kg	10	16	Unsuitable
	Over 12000 kg	8	12	Unsuitable
VIBRATING ROLLER	(Mass per metre width of vibrating roll			
	Over 700 kg up to 1300 kg	16	Unsuitable	Unsuitable
	Over 1300 kg up to 1800 kg	6	16	Unsuitable
	Over 1800 kg up to 2300 kg	4	6	10
	Over 2300 kg up to 2900 kg	3	5	9
	Over 2900 kg up to 3600 kg	3	5	8
	Over 3600 kg up to 4300 kg	2	4	7
	Over 4300 kg up to 5000 kg	2	4	6
	Over 5000 kg	2	3	5
VIBRATING PLATE COMPACTOR	(Mass per unit area of base plate)			
	Over 1400 kg/m2 to 1800 kg/m2	8	Unsuitable	Unsuitable
		5	8	Unsuitable

	Over18900 kg/m2 to 2100 kg/m2 Over 2100 kg/m2	3	6	10
VIBRO-TAMPER	(Mass) Over 50 kg up to 65 kg Over 65 kg up to 75 kg Over 75 kg	 4 3 2	 Unsuitable 6 4	 Unsuitable 10 8
POWER RAMMER	(Mass) Over 100 kg up to 500 kg Over 500 kg	 5 5	 8 8	 Unsuitable 12

Definition and Requirements Associated with **Table 1 and 2**

(a) The depth of compacted layer is the height by which the embankment is raised by each successive compacted layer.

(b) The number of passes is the number of times that each point on surface of the layer being compacted has been traversed by the item of compaction plant.

(c) The compactive effort of each COMPACTOR is a function of the mass of the machine and the compaction plant in the table listed in terms of their masses. The mass per metre of roll is the total mass on the roll divided by the total roll width. Where a smooth-wheeled roller has more than one axle the one giving the highest value of mass per metre width will be considered.

(d) A tamping roller, for the purpose of this specification, is a machine with rolls from which "feet" project. The projected end area of each "foot" shall exceed 0.01 m2 and the sum of areas of the feet shall exceed 15 percent of the area of the cylinder swept by the ends of the feet. The requirements for tamping rollers apply to machines that have 2 rolls in tandem. If only one tamping roll traverses each point on the surface of the layer on any one pass of the machine, the minimum number of passes shall be twice the number given in Table 1.

(e) For pneumatic tyred rollers mass per wheel is the total mass of the roller divided by the number of wheels. In assessing the number of passes of pneumatic tyred rollers the effective width shall be the sum of the widths of the individual wheel tracks together with the sum of the spacing between the wheel tracks provided that each spacing does not exceed 230 mm. Where the spacing exceeds 230 mm the effective width shall be the sum of the widths of the individual wheel tracks only.

(f) Vibrating rollers are self-propelled or towed smooth-wheeled rollers having means of applying mechanical vibration to one or more rolls.

- The requirements for vibrating rollers are based on the use of the lowest gear on a self-propelled machine with mechanical transmission and a speed of 1.5-2.5 km/h for a towed machine, or a self-propelled machine with hydrostatic transmission. If higher gears or speeds are used an increased number of passes shall be provided in proportion to the increase in speed of travel.
- Where the mechanical vibration is applied to two rolls in tandem, the minimum number of passes shall be half the number given on the tables for the appropriate mass per metre width of one vibrating roll. If one roll differs in mass per metre width from the other the number of passes shall be calculated as for the roll with the smallest value.
  Alternatively the machine may be treated as having a single vibrating roll with a mass per metre width equal to that of the roll with the higher value.
- Vibrating type rollers operating without vibration will be classified as smooth-wheeled rollers.

- Vibrating rollers shall be operated with their vibratory mechanism operating only at the frequency of vibration recommended by the manufacturers. All such rollers shall be equipped or provided with a device automatically indicating the frequently at which the mechanism is operating.

(g) Vibrating-plate compactors are machines having a base-plate to which is attached a source of vibration consisting of one or two eccentrically weighted shafts.

- The mass per unit area of base-plate of a vibrating plate COMPACTOR is calculated by dividing the total mass of the machine in its working condition by its area in contact with compacted soil.

- Vibrating-plate compactors shall be operated at the frequency of vibration recommended by the manufactures. They shall normally be operated at travelling speeds of less than 1 km/h but if higher speeds are necessary the number of passes shall be increased in proportion to the crease in speed of travel.

(h) Vibro-tampers are machines in which an engine-driven reciprocating mechanism acts on a spring through which oscillation are set up in a base-place

(i) Power rammers are machines which are actuated by explosions in an internal combustion cylinder, each explosion being controlled manually by the operator.

(j) In the case of power rammers and dropping-weight compactors one pass will be considered as made when the compacting shoe has made one strike on the area in question.

(k) For items marked * the rollers shall be towed by track-laying tractors. Self- propelled rollers are unsuitable.

(l) Where combinations of different types of categories of plant are used, the compaction requirements shall be:

- the depth of layer shall be that for the type of plant requiring the least depth of layer and

- the number of passes for each type shall be such proportion of the appropriate number in the table as will together produce the same total compaction effort as any type operated sighly in accordance with the tables.

(ii) Measurement

There will be no measurement for compaction of fill, subgrade and wearing course. The work shall be covered under the operations Form-Up Road Formation, Cut or Borrow to fill and Gravel/Wearing Course.

(iii) Payment

There will be no separate payment for compaction of fill, subgrade and wearing course, which shall be included in the tendered rates for **Pay Items No. 2.4, 2.5 and 2.6.**

2.05 Establishment and Reinstatement of Borrow Areas

(i) Description of Work

All borrow materials required for the work under this Contract shall be obtained from source approved by the Engineer and by clearing the borrow area, stripping excess or unsuitable overburden, excavating selected material which is required for specific use in the construction of the works, stockpiling if required, disposing of excess or unsuitable overburden, trimming of borrow area on completion of operations all in accordance with this specification and as directed by the Engineer.

No borrow area shall be opened up without the approval of the Engineer.

Existing and potential borrow areas have been identified for the project areas. The contractor shall however carry out his independent exploration for searching for possible materials within economic haulage distance at his own cost.

The Contractor shall, upon the Engineer's request carry out exploratory excavations and take samples for testing at the Regional Engineer's Materials Laboratory, Iringa or other laboratory approved by the Engineer. Exploratory excavation will be paid for by the day work rates and a provisional sum in respect of such anticipated work has been included in the Bill of Quantities.

(ii) Materials

(a) Overburden

Overburden is topsoil or other material, which is unsuitable or not required for any construction purposes.

(b) Borrow Materials

Borrow materials shall include soils and natural gravel used as fill and wearing course material. Borrow material shall not include sand, rock and/or crushed stone used in the construction of stone paving or pitching, retaining walls or concrete work unless otherwise allowed and provided for by the Engineer.

Borrow material shall be material approved by the Engineer and meeting requirements for particular fills, wearing courses or other use for which the material is intended. Unsuitable material brought on-to the works shall be removed and disposed of as directed by the Engineer at the Contractor's expense.

The Contractor shall conduct his operations in any approved pit or borrow area or portion thereof which may include mixing of various types of material available in the pit so as to produce acceptable material.

(iii) Control

(a) Opening Borrow Pit

The decision as to which source of supply the Contractor shall operate from at any time shall rest with the Engineer, and Contractor shall at any stage of the work operate from that approved source of supply which in the opinion of the Engineer is most suitable, having regard to the quality and quantities of the various types of materials available and the ultimate cost of the work to the Employer. No allowance will be made for moving the

Contractor's plant etc. From one to another of the designated sources, or from one location to another at any of the individual sources named or subsequently approved by the Engineer.

(b) Clearing

The site of the borrow area shall be cleared of all trees, bush, stumps, grass, debris etc. Before excavation is commenced. Any trees felled on the site shall remain the property of the landowner/occupiers or the Employer, in the case of acquired land.

Grass and topsoil, where present, shall be stripped and stockpiled adjacent to the borrow area in such a manner that on rehabilitation of the borrow pit, this material may be spread as final cover to the affected area.

(c) Overburden

Removal of overburden shall be carried out to the depths ordered by the Engineer and shall be placed outside the perimeter of the borrow area in an approved manner.

The Contractor shall advise the Engineer in good time of his intention to operate from any source of supply before any clearance or excavation at such source is commenced and shall, on receipt of the Engineer's authority to proceed, excavate trial pits for measurement purposes to a depth sufficient to assess the thickness of the gravel seam. Such trial pits shall be located on a 10m x 10m grid over the area concerned. Overburden removal beyond the limits of selected borrow excavation will not be paid for.

(d) Excavation of Borrow Material

After removal of the overburden, borrow materials required for fill may be removed without stock piling but the Contractor must ensure that all material removed is approved for use by the Engineer.

The Engineer shall take samples of borrow material for laboratory testing to determine its suitability; at the minimum rate of 1 test for every 500m3 excavated. Laboratory testing shall consist of sieve analysis, Atterberg Limits and Standard Proctor Density.

(e) Reinstatement of Borrow Pits.

On completion of operations at the borrow pits, all piles of waste material or overburden which have accumulated on the natural ground surface by reason of the Contractor's operations shall be replaced in the pit, and excavations shaped off to slopes not exceeding one (1) vertical in two (2)

horizontal and the borrow pit drained to the satisfaction of the Engineer. Where borrow pits shall remain in use, the Engineer may direct that excavations shall not be or only partly shaped off. Borrow pits shall as far as possible be excavated in such a manner that no water will collect or stand in them.

Topsoil, where present in the original excavation shall be spread to a uniform depth and finished off in a clean presentable condition to a standard normally associated with trimming operations.

Fencing displaced by the Contractor's shall be replaced and made good to the satisfaction of the landowner/occupier and the Engineer.

(f) Haul Roads

Haul roads to borrow areas shall be constructed in approved positions and shall be the shortest route possible. After completion of operation haul roads shall if not instructed otherwise by the Engineer be shaped up and remain for future use.

(iii) Measurement

Clear Borrow Areas, Removal of Overburden and Rehabilitation of Borrow Areas Measurement shall be per cubic metre of overburden measured in place before clearing and shall be based on the depth of overburden revealed after the completed and accepted removal of overburden over the whole area concerned.

(iv) Payment

Clear Borrow Areas, Removal of Overburden and Rehabilitation of Borrow areas. The rate quoted in Pay Item No. 2.5 shall include for clearing the site of the borrow area and removing the overburden prior to the excavation of borrow material, for replacing the overburden and waste material in the borrow pit after completion of borrowing operations and for levelling-off the overburden so replaced and as described.

No separate payment shall be made for removal of overburden and Rehabilitation of Borrow Areas.

2.06 Gravel Wearing Course

(i) Description of Work

Wearing course construction shall include the supply and compaction of suitable material laid on the compacted and approved subgrade in the final thickness detailed and in conformity with the lines, grades and typical cross sections shown on the drawings. Generally, gravel wearing course material shall be applied on all

sections to a minimum depth of 150mm. Section where the subgrade has a low bearing capacity or steep gradients may require thicker layers of wearing course material.

The wearing course shall be constructed in the following manner:

(a) Excavate, load and haul suitable gravel of approved quality from nearest source and dump in either a continuous windrow at one side of the carriageway or in separate heaps properly spaced and controlled by a competent person.

(b) Spread the material over the carriageway width and break up large pieces to give a material of uniform quality and tilth, to the satisfaction of the Engineer. Oversized pieces of more that 50-mm in diameter shall be hand-picked or knapped. Work must be programmed so that lengths of 0.5 km are constructed at any one time and so that the Engineer may inspect the windrowed or dumped material before it is spread. Care must be taken that the subgrade is not damaged. Mixture of wearing course material with the subgrade material is not allowed unless directed by the Engineer in order to achieve a satisfactory composition of the entire in-situ and supplied material.

(c) Spread and level wearing course material to sufficient loose depth to give a final compacted thickness as shown on the drawings or as may be directed. Maximum thickness of un-compacted material in one layer shall not exceed 200mm. Where a greater compacted thickness than 150 mm is required, the wearing course shall be constructed in separate layers not less than 75mm in compacted thickness. Each layer shall be shaped to the specified camber and super-elevation and compacted before the succeeding layer is placed.

(d) During the spreading and levelling, water shall be added as necessary to provide uniform moisture content within +/-2% of the optimum moisture content to secure that the material can be compacted to the specified density.

(e) Immediately following the spreading and levelling, each layer shall be compacted to the full width as specified in Section 2.08 and to the satisfaction of the Engineer. The compaction shall progress gradually from the sides to the center parallel with the centerline of the road. Any irregularities or depressions that develop shall be corrected by loosening the material at their places and adding or removing material until the surface is smooth and uniform.

The thickness of the completed wearing course shall not be more than 10 mm less than the thickness shown on the drawings. After the final compaction, the thickness shall be measured at one or more points at random locations within each 100-metre section. Whenever a measurement

indicates a variation from the thickness shown on the drawings of more that the allowable tolerance, additional measurements shall be taken at intervals of approximately 10 metres until the measurements indicate the thickness is within the allowable tolerance shall be corrected by adding material as necessary and shaping and compacting as specified. The cutting of test holes and refilling with materials properly compacted shall be done by the Contractor under the supervision of the Engineer.

It is desirable to compact the material while it is damp. The content should not be so high as to cause instability or excessive movement under the compaction plant employed.

The construction traffic should be routed carefully over the wearing course so that the maximum possible compaction is achieved in this way. If adequate care is taken with this operation the use of conventional compaction equipment will be limited.

(ii) Materials

Wearing course material shall be obtained from sources approved by the Engineer. Existing and potential borrow areas have been identified for the project area and their location is shown on the drawings, but the Engineer may request the Contractor to carry out exploratory excavations for locating additional suitable sources in accordance with Section 1.09.

Experience has shown that a great variety of natural gravel perform well in practice as wearing course and therefore no rigid standards can be stipulated as essential for good performance.

The performance of the wearing course material is mainly influenced by the properties of the material passing the 2.00 mm sieve although it is general desirable for the natural gravel to be well graded and not to exceed a maximum of 50mm, but 37.5mm is preferred (after compaction). Where possible, wearing course gravel shall comply with the following grading envelopes:

	Percentage Passing by Mass Maximum size of particle (mm)			
Sieve Size (mm)	37.5	26.5	19.0	13.2
37.5	100	100	100	100
26.5	85 - 100	100	100	100
19.0	70 - 100	80 - 100	100	100
13.2	60 - 85	60 - 85	75 - 100	100
4.75	40 - 60	45 - 65	50 - 75	60 – 100
2.00*	25 - 45	30 - 50	35 - 55	45 – 70
0.425	15 - 40	15 - 40	18 - 45	25 – 50

0.075	7 - 30	7 - 30	7 - 30	7 – 30

* These sieves are the most important.

The optimum value of the plasticity index (PI), determined on material passing the 0.425-mm sieve, is predominantly dependent on the climate in which the material is to be used and on the grading of the material. The following range is suggested:

PI = 8-20

In a dry area, a PI in the upper half of the range is desirable, particularly where the gravel has a coarse grading. In this type of climate, a high PI reduces the tendency of raveling and corrugation. In a very dry area, the upper limit of PI may be exceeded.

In a wet area, a PI in the lower half is desirable particularly when fine-grained gravel, such a sand-clay mixture is used. In such an environment, a low PI reduces the tendency of the gravel to pothole or to become slippery in rain.

(iii) Measurement

Measurement for wearing course gravel shall be the cubic metre of compacted material in place on the road calculated as the length or road acceptably graveled multiplied with the specified thickness of gravel times the average of the subgrade width and the carriageway width as shown on the drawings.

(iv) Payment

The rate quoted for wearing course gravel shall be full compensation for excavation, stockpiling and placing all materials including the labor, equipment, tools and incidentals necessary for loading, hauling up to a distance of one 10 kilometers and delivering the material to the site of the work, placing, applications of water if required, mixing, spreading and compacting all as specified.

Haulage in excess of the free haul distance of ten (10) kilometers will be paid for according to the tendered rate in Pay Item No. 2.6 and specified in Section 2.10

2.07 Overhaul

(i) Description of Work

This work shall consist of hauling of fill or wearing course material in excess of the free haul distance.

The haul distance shall be measured along the shortest practical route determined by the Engineer as feasible and satisfactory. Free haul is the distance which the

material must be transported on any trip before qualifying for overhaul payment, which is 10 km for fill and wearing course gravel.

The rate tendered and paid for material hauled will include allowance for free haul as well as for loading time, waiting and unloading time etc. Which are common to trips of all lengths. Overhaul distance is the length of haul less free haul.

(ii) Measurement

Overhaul shall be measured and paid for at a rate per cubic metre - km in excess of the free haul distance, computed as follows:

- Overhaul shall be the product of the number of cubic metres of overhaul material measured in its final compacted position and the overhaul distance in kilometers or fractions thereof.
- The overhaul distance shall be the distance between the centers of volume of the overhauled material in its original position and its authorized position of placing less the free haul distance.
- The haul route for measurement purposes shall be the shortest practical route determined by the Engineer, irrespective of the actual route selected by the Contractor.

(ii) Payment

The rate for each cubic metre-kilometer of overhaul will include full compensation for all supervision, labor, equipment, tools, fuel, and necessary incidentals.

2.08 Rock Excavation

(i) Description of Work

In the course of construction large quantities of rock are not likely to be encountered; but in the event of rock having to be removed for drainage or formation construction measurement and payment of rock will be defined as follows:

Rock shall be that material which, in the Engineer's opinion, cannot be broken up or removed by means of crowbars and wedges and which is measuring not less than 0.20 cubic metres in volume. The Engineer's decision of what constitutes rock in terms of the specification is final. All other excavation shall be classified as Common Excavation.

Rock occurring within the formation width shall be excavated to 150 mm below subgrade level and refilled with approved material and compacted as specified in Section 2.08.

Removal of rocks by use of explosives shall be carried out in strict accordance with current explosives regulations and at all times be under the supervision of a fully qualified person in terms of these regulations. If, in any situation blasting is considered dangerous, the same shall not be resorted to. The Engineer's decision in this respect shall be final.

Should any damage of any kind occur, the Contractor shall, at his own expense, carry out such work of repair or restoration as the Engineer may direct and shall be full and solely responsible for such damage or any claims that may arise thereof.

Care shall be taken that no undischarged cartridges are left in the excavation. Careless or indiscrimmate use of explosives will result in the Engineer withdrawing permission for their use and under such circumstances the Contractor shall resort to other methods of excavation. Safe and secure storage shall be provided for explosive on the site of the works.

The Contractor shall seek the consent of the Engineer before using explosives and shall take adequate precautions to warn road users and others that blasting is in progress.

(ii) Measurement

Measurement for Rock Excavation shall be the cubic metre of material removed measured before excavation

(iii) Payment

The rate of rock excavation will be paid as extra over the rates for Pay Item Nos. 2.4,2.5, 3.1 and 3.2 and will include full compensation for breaking up of a rock to suitable size and for removal from the road section to spoil areas for a distance not exceeding 100m including provision of all labor, materials, equipment, tools and incidentals necessary to complete the work.

2.09: DESILT EXISTING DRAINS

- Side Drains
- Mitre/Catch water Drains
- Culvert Inlets/Outlet
- Desilting/Clearing of Structures

(a) Side Drains

(i) Description

Deposited material such as silt and other obstructions shall be removed from the side drains as directed by the Engineer. Material is to be removed to a place where

it can no longer cause silting and obstruct the free flow water such as the downhill

20 linear metres up and down stream. As directed by the Engineer material is to

Inlet and outfall drains shall be considered as channels leading into or discharging from culverts. They shall be excavated with shape and at locations as shown on the drawings or as directed by the Engineer.

(ii) Measurement

Measurement for mitre drains and catch water drains shall be by the metre of existing drains reshaped and the metre of new drains excavated to the typical cross sections shown on the drawings or as directed. Measurement will be made of the total length of drains from its highest point to final point of outfall. Measurement of inlet and outfall drains shall be by the cubic metre of material excavated measured in its original position.

(iii) Payment

The rate per metre for reshaping of existing drains and excavation of new mitre drains and catch water drains shall be full compensation for excavation, shaping and trimming inverts and slopes as required and for disposal of all excavated material. The rates for mitre drains shall include for the construction of mitre banks. Payment for inlet and outfall drains shall be made under Pay Item No. 3.2 at the rate tendered for excavation for drainage structures.

3.03 Excavation and Backfilling for Drainage Structures Other Than Culverts

(i) Description of Work

(a) Culverts

Unless otherwise specified or directed by the Engineer in writing, trenches shall be excavated in any material to a total base width of not less that the external diameter of the culvert pipe plus 300mm. The Contractor must allow in his rates for any additional working space required, for the making of joints and for trimming of trenches to correct levels and grades and for provision of adequate bedding depths, all to the satisfaction of the Engineer.

(b) Vented Drifts

Excavation for foundations and structures for vented drifts shall be to the required dimensions and depths as detailed on the drawings, together with any further excavation necessary for working space.

Material arising from the excavation which is surplus to backfill requirements may be approved for use as fill or side fill, or neatly banked along the lower side of the drains, or if required and approved, shall be used in the construction of mitre banks.

(c) Backfilling

All spaces excavated and not occupied by pipes or other permanent work shall be refilled with selected material.

All material used for backfill shall be of a quality acceptable to the Engineer, and shall be free from large lumps, wood or other extraneous matter. Backfilling shall be carried out as soon as possible after the pipe work or concrete work has been inspected and approved by the Engineer. Specially selected material without stones and conforming in stability to cover requirements specified or shown on the drawings, shall be placed alongside the pipe or concrete in layers not exceeding 150mm in loose thickness and the material shall be thoroughly and evenly compacted to give pipe work maximum support from the trench sides and shall be carried out in such a manner that a pipe work is not disturbed. Refilling of the trench shall be continued in 150mm loose layers.

Each layer (as well as all disturbed material adjacent to the pipe) shall be thoroughly compacted by means of hand tampers or mechanical rammers to the satisfaction of the Engineer. The top 150mm shall be of approved wearing course material.

Where necessary the backfill material shall be uniformly moistened before being compacted to ensure that compaction is to the Engineer's satisfaction.

(ii) Measurement

(a) Excavation

Excavation for that inlet and outfall drains as specified in Section 3.02(b) shall be measured in cubic metres to the dimensions shown on the drawings or directed by the Engineer.

Excavation in rock will be measured and paid for in cubic metres as Extra Over in Pay Item No. 2.10

(b) Backfilling

Measurement for Backfilling shall be the cubic metres, in place, as determined from the theoretical limits as shown on the drawings.

(iii) Payment

The rates per cubic metre for excavation shall include full compensation for supervision, labour, plant, equipment and materials for the work including all

timbering and protection of excavations, dewatering and disposal of surplus excavated.

3.04 Concrete Pipe Culvert

(i) Description of Work

The work consists of the excavation, construction and backfilling of culvert which may consists of any of the following:

(a) Plain concrete pipes with concrete surround;
(b) Reinforced concrete pipes with concrete bed and haunch;
(c) Cast in-situ internally formed pipes; and
(d) Box culverts with concrete floor, stone masonry walls and a reinforced concrete deck;
(e) If the Contractor wishes to use an alternative design concrete of pipe culvert he shall submit details of the design and method of construction at the time of tendering.

Pipe culverts and box culverts shall be constructed in accordance with details shown on the drawings. The Engineer may in addition order the construction of concrete bedding, haunching, concrete surrounds, drop inlets, aprons and headwalls.

Culverts shall be placed as directed by the Engineer. The Engineer shall specify the invert elevations if these are different from the existing channel elevation.

(ii) Materials

(a) Concrete

The concrete shall comply with the requirements specified in Section 3.07 and the class of concrete shall be as recommended on the drawings or as directed by the Engineer.

(b) Reinforced Concrete Pipes.

Reinforced concrete pipes shall conform to the requirements of AASHTO M170 for the size and class shown in the Bill of Quantities or on the drawings. Unless a specific type is called for, the pipe may be either the bell and spigot type or the tongue and groove type.

(c) Plain Concrete Pipes

Plain concrete pipes shall be manufactured with class 20 concrete. Concrete pipes shall be smooth, straight, circular, free from cracks, honeycombing or other defects.

Plain pipes shall have the minimum shell thickness given in the table below.

Internal Diameter	Minimum Shell Thickness
mm	mm
300	40
600	50
750	55
900	75

The use of plain concrete pipes of nominal internal diameter greater than 900mm is not permitted.

(d) Internally Formed Pipe Culverts

Forms used in the construction of pipe culverts may be inflatable tubing or collapsible metal sheeting.

The concrete shall consist of Class 20 concrete of minimum 200mm thickness.

(e) The stone masonry shall comply with the requirements specified in Section 3.08.

(iii) Construction

(a) Trenches

Culverts shall be constructed in trenched conditions, except where the Engineer has approved an alternative method. Excavation shall be carried out in accordance with Section 3.03.

(b) Placing of Concrete Pipes

All concrete pipes shall be laid on a concrete bed. Pipes shall be uniformly supported throughout their length and laid true to line and minimum grade of 1%. Pipe shall be hunched as shown on the drawings. Pipes which deform or crack or are damaged before or during the maintenance period shall be removed and replaced by the Contractor at his own expense.

(c) Internally Formed Concrete Culverts

Steel formers and inflatable tubing shall be laid on a concrete invert slab cast 150mm thick. The formers shall be correctly aligned and securely anchored to prevent movement during placing of concrete.

Formers shall not be deflated or removed from the concrete surround for at least 12 hours after placing concrete.

(d) Backfilling

All backfilling work where required will normally be carried out as described in Section 3.03.

(e) End Treatment

Where required, headwalls and aprons at the inlets and outlets to concrete pipe culverts shall be constructed in Class 20 concrete in accordance with the drawings or as directed by the Engineer. Where required grouted stone pitching shall be provided at the inlets and outlets to pipe culverts in accordance with the drawings or as directed by the Engineer. Other forms of end treatment such as drop inlets, silt traps, etc. Shall be constructed in accordance with the drawings or as directed by the Engineer.

(f) Minimum Cover to Culverts

Minimum cover to culverts shall be 0.3 m in respect of all pipe culverts.

The unit of measurement will be the cubic metre and the method of measurement shall be given in Section 3.08.

(v) Payment

(a) Excavation and Backfilling

There will be no separate payment for the excavation and backfilling of culvert pipes. If the amount of excavation and fill greatly exceed the dimensions noted in the standard drawings, the Engineer may permit the Contractor to claim for excess excavation and backfilling. In such cases, the unit of payment will be the cubic metre and the method of payment will be given in Section 3.03.

(b) Concrete Pipes

The rate for each linear metre of pipe in place will include full compensation for all excavation, backfilling, labor and equipment for the supply, loading, transport, and offloading of pipes and materials, and laying the pipes.

(c) Concrete

The rate for each cubic metre of the various classes of concrete in headwalls, aprons, drop inlets, concrete, bedding, haunching and surrounds to precast pipe culverts and culverts constructed with internal formers will include full compensation including all labor, equipment, and tools required for the execution of the following operations and for all work incidental and necessary thereto:

- Supply of all materials, excluding steel reinforcement
- Provision, construction and removal of formwork
- Mixing, transporting, placing and vibrating the concrete
- forming construction joints and shrinkage joints
- The provision of unformed surfaces
- Curing and protection of completed concrete work.

(d) Stone Masonry

The unit of measurement will be the cubic metre and the method of measurement shall be given in Section 3.08

3.05 <u>Corrugated Metal Pipe Culverts</u>

(i) Description of Work

This work consists of the construction of galvanized corrugated sheet metal pipe culverts of the sizes shown on the drawings, furnished and installed in accordance with these specifications and in conformity with the lines and grades given on the drawings or by the Engineer.

(ii) Materials

(a) Pipes

The galvanized corrugation metal pipes shall conform to the requirements of AASHTO M36. The gauge for the designated sizes of pipes shall be as shown on the drawings or specified in the Bill of Quantities.

(b) Concrete

Concrete for inlet and outlet structures shall comply with the requirements specified in Section 3.07 and the class of concrete shall be as recommended on the drawings or as directed by the Engineer.

(iii) Construction

(a) Excavation and Backfilling

Excavation and backfilling shall be performed in accordance with the requirements of Section 3.03

(b) Placing of Pipes

The pipes shall be bedded on a material consisting of sand or a sandy soil in which all of the material passes a 9.5 mm sieve and not more than 10 percent passes a 0.075mm sieve.

The separate sections of pipe shall be joined firmly together and with outside laps of circumferential joints pointing upstream and with longitudinal laps on the sides. The pipes shall be laid carefully and true to lines and grade as directed. Any pipe which shows any undue settlement after being laid, or is damaged, shall be taken up and re-laid or replaced without extra compensation.

(c) End Treatment

Where require, headwalls and aprons at the inlets and outlets to the corrugated metal pipe culverts shall be constructed in Class 20 concrete in accordance with the drawings or as directed by the Engineer. Wing walls shall be constructed in masonry or concrete Class 20. Where required grouted stone pitching shall be provided at the inlets and outlets to the

pipe culverts in accordance with the drawings or as directed by the Engineer. Other forms of end treatment such as drop inlets, silt traps, etc shall be constructed in accordance with the drawings or as directed by Engineer.

(d) Minimum cover to culverts shall be 0.3m in respect of all pipe culverts.

(iv) Measurement

(a) Excavation and Backfilling

Excavation for drainage structures including inlet and outfall drains as specified in Section 3.02 (b) shall be measured in cubic metres to the dim ensions shown on the drawings or as directed by the Engineer. The depth of excavation shall be measured from the level at which excavation commences or other dimensions as shown on the drawings.

Excavation in rock will be measured and paid for in cubic metre as an Extra Over in Pay Item No. 2.08.

There will be no separate measurement for the excavation and backfilling of culvert pipes. If the amount of excavation and fill greatly exceed the dimensions noted in the standard drawings, the Engineer may permit the Contractor to claim for the excess excavation and backfilling.

Measurement for backfilling shall be the cubic metres, in place, as determined from the theoretical limits as shown on the drawings.

(b) Corrugated Metal Pipes

Corrugated metal pipes will be measured by the liner metre of pipe in position along the centre line.

(c) Concrete

The concrete in headwalls, aprons, and drop inlets will be measured by the cubic metre of concrete of the actual class complete in place and accepted. There will be no separate measurement for formwork to concrete for pipe culverts.

(iii) Payment

(a) Excavation and Backfilling

The rates per cu

the work including all timbering and protection of excavations, dewatering and disposal of surplus excavated.

(b) Corrugated Metal Pipe

Where such portions of existing structures lie wholly or in part within the limits for a new structure, these shall be removed as necessary to accommodate the construction of the proposed structure.

In the case of extensions to existing culverts the extension pipes may be laid prior to the completion of the formation where such pipes have adequate cover but the Contractor shall be entirely responsible for protecting such newly laid pipes against damage of any kind and shall replace the damaged pipes at his own expense.

Where any existing headwall requires special treatment to conform with the requirements for headwalls as specified, it shall be repaired or replaced by a new structure as specified or directed.

If existing headwalls constructed in stone masonry are removed, the stone may be cleaned and re-used in grouted pitching or new masonry work, if suitable.

(ii) Measurement

(a) Concrete

The unit of measurement for removal of concrete or masonry etc. in culverts and drainage structures shall be the cubic metre of material measured in place before removal.

(b) Pipes

The unit of measurement for pipes removed and stacked for re-use shall be the linear metre of pipes removed.

(iii) Payments

(a) Concrete

The rate per cubic metre for removal of concrete, masonry etc. will include full compensation for the execution of the work as specified, including demolition and disposal of waste material and for all incidental and necessary thereto.

(b) Pipes

The rate per metre for removal of pipes, irrespective of diameter, and stacking for re-use will include full compensation for the execution of the work as specified including required excavation and for all work incidental and necessary thereto. Pipes which are damaged on removal will not be paid for.

3.07 Vented/Unvented Drifts

(i) Description of Work

Vented drifts shall be constructed in accordance with the details shown on the drawings and as directed by the Engineer. The work comprises excavation, reinforced concrete work for the provision of invert slabs, deck slabs and approach slabs, laying of 600mm, 750mm and 900mm pipes for the vents (in vented drifts only) and construction of masonry cut-of and return walls.

(ii) Materials

(a) Concrete

The concrete shall comply with the requirements specified in Section 3.07 and the classes of concrete shall be as recommended on the drawings or as directed

(b) Pipes

Pipes shall be either concrete pipes or corrugated metal pipes in accordance with the requirements laid down in Section 3.04 and 3.05 respectively.

(iii) Construction

Construction shall be carried out in accordance with the notes and details shown on the drawings and the other relevant sections of the specification dealing with excavation, backfilling, pipe laying and concreting.

Approach and invert slabs for vented drifts shall be constructed on 200mm thick compacted layer of wearing course or similar approved gravel to the dimensions shown on the drawings or as directed by the Engineer.

Masonry in toe walls, cut off walls and return walls shall be constructed as follows:

A trench shall be excavated to the dimensions shown on the drawings and shall be backfilled with natural rock of average size of not less than 200mm in any two dimensions placed in layers with interstices filled with grout shall consist of one part cement and four parts of sand.

(iv) Measurement

(a) Excavation

The unit of measurement for the excavation for vented drifts will be the cubic metre and the method of measurement of excavations as given in Section 3.03.

(b) Gravel Bed to Slabs

The unit of measurement for the gravel bed shall be the cubic metre of material compacted in place to the dimensions shown on the drawings or as directed.

(c) Concrete Pipes

Concrete pipes will be measured by the linear metre of pipe in position along the center line.

(d) Concrete

The concrete in approach slabs, deck slabs, invert slabs and surrounds to pipes will be measured by the cubic metres in accordance with the dimensions given in the drawings.

(e) Reinforcement

The unit of measurement for bar reinforcement is the kilogram. The total mass of bar reinforcement will be calculated from the total length indicated on the drawings multiplied by the effective cross sectional area and the nominal density.

The unit of measurement for mesh reinforcement is the square metre. The total area of mesh will be calculated from the net plan area of reinforcement.

(f) Masonry

The unit of measurement for masonry is the cubic metre, measured in accordance with the dimensions on the drawings.

(iv) Payment

(a) Excavation

Payment for excavation will be as given in Section 3.03

(b) Gravel Bed to Slabs

Payment for the gravel bed to slabs will be by the tendered rate in Pay Item No. 2.7 for wearing course gravel and shall include for furnishing, placing, spreading and compacting all materials to the Engineer's

satisfaction including preparation of underlying surface to receive the gravel layer after necessary excavation has taken place.

(c) Pipes

The rate for each linear metre of pipe in place will include full compensation for all labour and equipment, for the supply, loading, transport, and off-loading of pipes and materials, and laying the pipes.

(d) Concrete

The rate for each cubic metre of concrete in approach slabs, deck slabs, invert slabs and surrounds to precast pipes and pipes constructed with internal formers will be as follows:

The rate for each cubic metre of concrete will include full compensation for the execution of the following operations and for all work incidental and necessary thereto:

- Supply of all materials, excluding steel reinforcement;
- Provision, placing and removal of all formwork;
- mixing, transporting, placing and vibrating the concrete;
- forming construction joints and shrinkage joints;

as to avoid re-handling or flowing. In no case is concrete to be dropped from a height of more than 1.5 metres except when prior approval has been obtained from the Engineer.

Care shall be taken to ensure that the reinforcement is not displaced from its correct posi[redacted]

The results of the test shall be within the following limits: 25mm - 75mm slump.

(b) Test Cubes

The Contractor shall at his own expense cast concrete cubes 150mm x 150mm x 150mm from concrete, as deposited in the work, as often as directed by the Engineer.

Such cubes must be casted in the presence of the Engineer and in the form and manner described in B.S. 1881

The cubes are to be casted in groups of two, three or four and are to be tested as directed. They shall normally be taken from each 20 cubic metre of concrete or from each continuous pour of less than 20 cubic metres. They shall be marked with a distinguishing sign which shall be entered in Concrete Cubes Log Book with origin of each cube and date of casting also entered.

(c) Acceptance Criteria

Compliance with the following characteristic strength shall be assumed if when tested at 28 days.

- the average crushing strength determined from the first 2, or the first 3 consecutive test results, or from consecutive but non-overlapping, groups of 4 test results complied with the appropriate limits in column A of the table below,

- any individual test result complies with the appropriate Limits in column B of the table below:

COMPREHENSIVE STRENGTH COMPLIANCE REQUIREMENTS

Concrete Class	Test Results	Average of Test results exceeds the specified characteri-stic strength by at least	Any individual test result is not less than the specified characteristic strength minus
7.5 to 15	First 2 First 3	0 N/mm2 1N/mm2	2 N/mm2 2 N/mm2

	Consecutive 4	2N/mm2	2 N/mm2
20 and above	First 2 First 3 Consecutive 4	1 N/mm2 2 N/mm2 3 N/mm2	3 N/mm2 3 N/mm2 3 N/mm2

Sampling, compacting and curing of test specimens shall conform to B.S.1881. Cubes must be dispatched packed in damp sand in good time to arrive for testing. Storage, packing and dispatching to the laboratory shall be at the expenses of the Contractor.

f) Formwork

Forms shall conform to the shapes, lines, levels and dimensions of the concrete as shown on the drawings. The centering, shuttering and casting of the concrete work shall be true, rigid and properly braced and sufficiently strong to resist without bulging or distorting, loads and shock. All joints shall be sufficiently tight to prevent leakage.

If in the opinion of the Engineer, the formwork is at any time insufficiently rigid or in any way defective, then the Contractor shall strengthen and improve such formwork in such manner as the Engineer shall direct.

No formwork shall be removed without the permission of the Engine, and unless otherwise instructed by the Engineer, it shall be left in position before easing and removal for three days.

The Contractor shall be responsible for any injury to the work and any consequent damage caused by or arising from the removal or striking of molds, centering and supports, and any advice, permission or approval given by the Engineer relative to the removal and striking of molds, centering and supports shall not relieve the Contractor from the responsibility herein defined.

g) Reinforcement

Bends in bars shall be cold formed on an approved manually motor operated machine in which the power is applied smoothly and evenly and at such a speed so as to cause no fracture or damage in the reinforcement. Reinforcement damaged in any way shall be removed from the site. Before being placed in position, the rods shall be thoroughly cleaned of all grease, dirt, bituminous material, scale and loose rust.

Masonry fancework shall be built up by stones free from depressions and projections. The facework must not be built to a height exceeding 400mm above the backing which shall then be brought up level with the fancework. At no time shall the backing be built up higher than the fancywork. The fancywork shall not be displaced by the placing of the backing.

Newly laid masonry shall be protected against the harmful effects of weather. Weep holes shall be provided in walls with exposed face as shown on the drawing or directed by the Engineer.

(ii) Measurement

The unit of measurement for masonry shall be the cubic metre measured in accordance with the dimensions on the drawings.

(iii) Payment

The rate per cubic metre of masonry works shall be full compensation for furnishing and placing all materials including mortar, for provision of weep holes and for all labor, tools, equipment and incidentals necessary to complete the work as specified.

3.10 Loose Stone Pitching

(i) Description of Work

This work shall consist of placing loose stones for protection of embankment slopes and the inlets and outlets to drainage structures at locations shown on the drawings or directed by the Engineer. Stones shall be dumped into place so as to be reasonably uniform, free from humps or depressions and with no excessively large cavities below or individual stones projecting above the general surface.

The stones shall be hard and durable of such quality that they will not disintegrate on exposure to water or severe weather conditions. Stone shall vary in weight from 10 to 100 kilograms each and not less than 25 percent shall weigh over 50 kilograms.

(ii) Measurement

The unit of measurement for loose stone pitching shall be the number of cubic metres measured in place.

(iii) Payment

The rate for each cubic metre of loose stone pitching will include full compensation for supply and placing of materials including all labor, equipment, tools and incidentals necessary to complete the work.

3.11 Grouted Stone Pitching

(i) Description of Work

This work shall consist of placing a stone and concrete grout protection on embankment slopes, in drain inverts and at the inlets and outlets to drainage structures.

The area to be covered with stone pitching shall be trimmed to the line, level and slope indicated on the drawings or as directed. The prepared surface shall be firm and well compacted and must be approved by the Engineer before placing of rock commences.

Stones shall then be placed in contract with each other and firmly bedded into the slope. The thickness of rock normal to the slope shall be not less than 150 mm. Interstices between the large stones shall be filled with grout.

The grout shall consist of one part of cement to four parts of sand unless otherwise directed. Before final set of grout, the surface shall be swept with a stiff broom. The grouted surface shall be kept moist for at least four days. Weepholes must be provided in the surface at a frequency of one per square metre unless otherwise directed.

(ii) Measurement

The unit of measurement for grouted stone pitching shall be the square metre of completed surface.

(iii) Payment

The rate for each square metre of pitching will include full compensation for all slope preparation, supply of materials, construction of the surface as specified and all work incidental and necessary thereto.

3.12 Wire Mesh Gabions

(i) Description of Work

This work shall consist of furnishing and placing wire mesh gabions in accordance with all requirements of the drawings and these specifications and as directed by the Engineer.

Subgrades for gabions shall be firm and well compacted and must be approved by the Engineer before placing of wire mesh baskets commences. Prior to placing of rock fill, gabions shall be tensioned in such manner as will permit perfect shape, alignment and compaction of fill. Fill for gabions shall consist of hard, durable rock pieces that will not deteriorate when submerged in water or exposed to severe weather conditions. Rock pieces shall be generally uniform in size and shall be of proper dimensions to be retained by the specified mesh size.

(ii) Materials

Gabions shall be made of galvanized steel wire and shall be supplied to site folded flat to facilitate handling and transportation.

Body wire shall be of metric gauge 17 (3.05mm). Selvage perimeter wire shall be metric gauge 19 (3.75mm). Tying and connecting wire shall be metric gauge 15 (2.5mm).

(iii) Measurement

The measurement of wire mesh gabions shall be the cubic metres comprising the volume of the gabion baskets furnished, placed, filled and accepted.

(iv) Payment

The rate for each cubic metre of wire mesh gabions shall include full compensation for all labour, materials equipment and incidentals necessary for furnishing and placing gabions including rock fill, tying and connection, levelling and compaction of subgrade and all other related work.

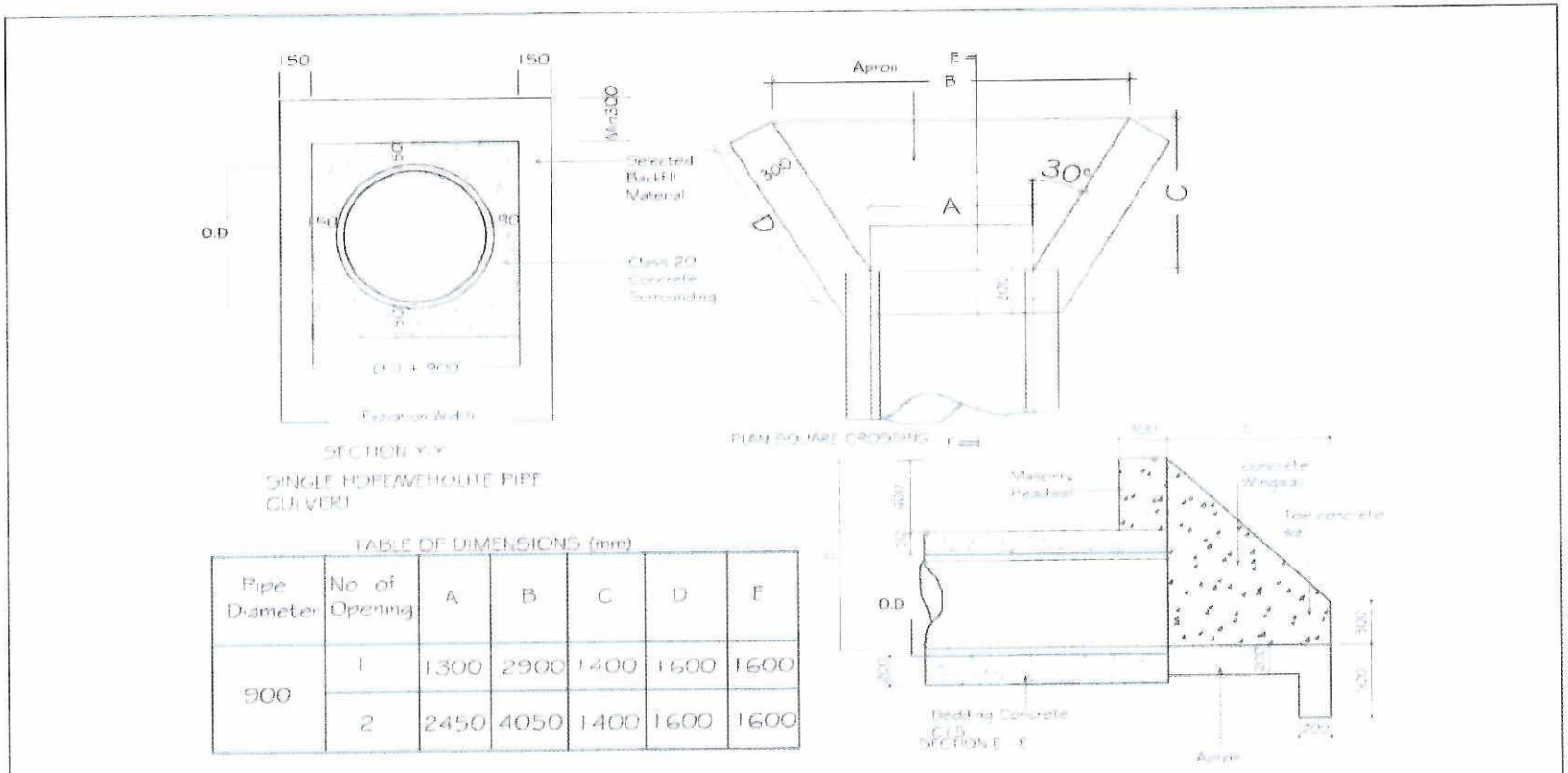
DRAWINGS



ROAD CROSS-SECTION

All dimensions are in mm

NGORONGORO CONSERVATION AREA AUTHORITY (NCAA) P.O. BOX 1.. Ngomaoro Crater ARUSHA	PROJECT: REHABILITATION OF GOLINI TO MALANJA ROAD SECTION: 40 kms		"ROAD CROSS SECTION"	
	DATE	SCALE		
	October 2021	AS SHOWN		



SINGLE HOPE/MANHOLITE PIPE CULVERT

TABLE OF DIMENSIONS (mm)

Pipe Diameter	No of Opening	A	B	C	D	E
900	1	1300	2900	1400	1600	1600
	2	2450	4050	1400	1600	1600

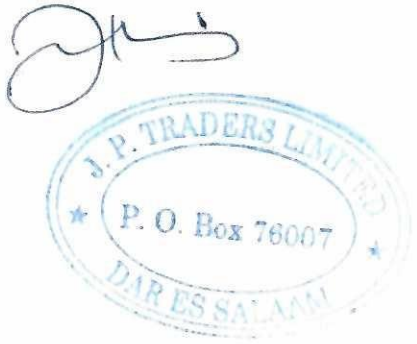
NGORONGORO CONSERVATION AREA AUTHORITY (NCAA)
P.O. BOX 1..
Ngorongoro Crater
ARUSHA

PROJECT: REHABILITATION OF GOL N TO LOONGUEU ROAD SECTION; 40mm "PIPE CULVERT 900MM DIAM."

DATE	SCALE
March 2017	AS SHOWN

REHABILITATION OF MAIN ROAD FROM GOLINI TO SENETO JUCTION (50KM) AND ACCESS ROAD TO OLDUVAI MUSEUMS (5KM).					
BILL OF QUANTITIES:					
ITEM	DESCRIPTION	UNIT	QTY	RATE	Amount (TShs)
PART 1: PRELIMINARIES					
1.1	Allow for establishment on site including removal on completion of Works	LS	1	5,000,000	5,000,000
1.2	Mobilization/Demobilization of Equipment	LS	1	15,000,000	15,000,000
1.3	Allow for accommodation of traffic, road diversion and maintenance during the construction period.	LS	1	3,000,000	3,000,000
1.4	Allow for sampling, transportation and testing of samples as directed by the Engineer.	PS	1	6,000,000	6,000,000
1.5	Provision of Project progress report and photos	LS	1	3,000,000	3,000,000
1.6	Provide and erect standard road sign as per Engineer or supervisor instruction and approval	No	1	1,200,000	1,200,000
	TOTAL PRELIMINARIES AND GENERAL ITEMS				33,200,000

PART 3: DRAINAGE WORKS					
3.1	Open Drains				
a.	Excavation of catch water drains	Lm	5000	1,200	6,000,000
b.	Excavation of mitre drains	Lm	6000	1,000	6,000,000
	TOTAL DRAINAGE WORKS				12,000,000



Rehabilitation of main road from Golini to Seneto junction (50km) and access road to Olduvai Museums (5km)		
	GENERAL SUMMARY:	
ITEM	**DESCRIPTION**	**AMOUNT (TZS)**
1	BILL No. 1: PRELIMINARIES	33,200,000
2	BILL No. 2: ROAD WORKS	1,598,625,000
2	BILL No. 2: DRAINAGE WORKS	12,000,000
	SUB TOTAL 1	1,643,825,000
4	ALLOW FOR: (a) Insurance Cover as per GCC Clause 16.1 and SCC Clause 8	6,000,000
	(b) Provide Surety bond as per GCC Clause 60.1 and SCC Clause 28	3,000,000
	SUB TOTAL 2	1,652,825,000
5	ADD 18% VAT	297,508,500
	TOTAL COST CARRIED TO FORM OF TENDER (VAT INCLUSIVE)	**1,950,333,500**

J. P. TRADERS LIMITED
P. O. Box 76007
DAR ES SALAAM

FORMS OF TENDER

2. Form of Tender

***Date*: 09th December, 2021**

TO: Conservation Commissioner,
Ngorongoro Conservation Area Authority,
P.O Box 1,
NGORONGORO CRATER

We **J. P. TRADERS LTD** offer to execute the **Rehabilitation of main road from Golini to Seneto junction (50km) and access road to Olduvai Museums (5km) Tender number: AE/055/2021-22/HQ/TCRP/W/01** in accordance with the Conditions of Contract accompanying this tender for the Contract Price of TShs. (amount in numbers): 1,950 333 500 (amount in words): One billion nine hundred fifty million three hundred thirty three thousand, five hundred only. Tanzanian Shillings.

With reference to ITT 3.11 [Eligibility of Tenderers], it is our intention to subcontract approximately [*insert the percent*] percentage of the Tender /Contract Price, details of which are provided herein.

Our firm, its affiliates or subsidiaries, including any subcontractors or suppliers for any part of the contract has not been declared ineligible by the Government of the United Republic of Tanzania under Tanzania's laws or official regulations or by an act of compliance with a decision of the United Nations Security Council.

The following commissions or gratuities of fees have been paid or are to be paid by us to agents relating to this tender, and to contract execution if we are awarded the contract: -

Name and address of agent or recipient	Amount and currency	Purpose of commission or gratuity
None	None	None

(If none has been paid or is to be paid, state "none")

This tender and your written acceptance of it shall constitute a binding Contract between us.

We understand that you are not bound to accept the lowest or any Tender you receive.

We hereby confirm that this tender complies with the tender validity and Tender Security required by the tendering documents and specified in the Tender Data Sheet.

Authorized Signature: _____

Name and Title of Signatory: **Balivumu Mathias Lugiye (Technical Director)**

Name of Tenderer: **I.P. TRADERS LIMITED**

Address: **P.O.Box 76007 Dar es Salaam**

I.P. TRADERS LIMITED
P. O. Box 76007
DAR ES SALAAM

NEGOTIATION MINUTES

NGORONGORO CONSERVATION AREA AUTHORITY

MINUTES OF THE NEGOTIATION MEETING FOR TENDER NO. AE/055/2021-22/HQ/TCRP/W/01 FOR REHABILITATION OF MAIN ROAD FROM GOLINI TO SENETO JUNCTION (50KM) AND ACCESS ROAD TO OLDUVAI MUSEUM (5KM) HELD ON THURSDAY 16TH DECEMBER, 2021 – NCAA HQ KAMYN ESTATE, NJIAPANDA-KARATU

ATTENDANCE

(a) Employer/Client's Team (Ngorongoro Conservation Area Authority-NCAA)

1. QS. Melissa Kahana - Chairperson
2. CPA. Thadeus Madawe - Secretary
3. Ms. Lilian Magoma - Member

(b) Bidder's M/s JP Traders Limited-Arusha

1. Mr. Balivumu M. Lugiye - Project Manager

AGENDA OF THE MEETING

1. Opening of the Meeting
2. Notice of the Meeting and Quorum
3. Adoption of the Agenda
4. Consideration of the tender submitted by the Tenderer
5. Closing of the Meeting

AGENDA NO.1 **OPENING OF THE MEETING**

The Chairperson welcomed the team members and opened the meeting at 10:30 a.m.

AGENDA NO. 2 **NOTICE OF THE MEETING AND QUORUM**

MINUTE 2.1 Adequate notice had been given to all members and both parties were represented.

AGENDA NO. 3 **ADOPTION OF THE AGENDA**

MINUTE 3.1 The agenda items were adopted as proposed.

AGENDA NO. 4 **CONSIDERATION OF THE TENDER SUBMITTED BY THE TENDERER**

MINUTE 4.1 **NCAA Representative presented.**

MINUTE 4.1.1 During evaluation of the bid, NCAA observed that your tender price was higher compared to the budget set for the *Rehabilitation of Main Road from Golini to Seneto Junction (50km) and Access Road to Olduvai Museum (5km).* Therefore, NCAA invited your company for negotiation meeting, Pursuant to section 76(1) (3) of the Public Procurement Act (PPA) 2011 and its Regulation 308(1) of 2013 as amended through section 26 of the Public Procurement (Amendment) Act, 2016 which allows negotiation on price to be conducted before awarding the tender if deemed necessary including other issues.

MINUTE 4.1.2 **Requested:**

NCAA representative requested the bidder on the following issues:-

(a) NCAA team [illegible]

to meet the budget set for execution of this project.

MINUTE 4.2 **Bidders Response**

The bidder responded on the issues raised by NCAA negotiation team as follows: -

(a) The bidder's representative agreed to submit another two (2) excavator equipment to make a total of three (3) with registration number: (T 402 DQH, T 197 DCK and T 365 DPV as attached upon this minutes)

(b) During Negotiation the bidder submitted compliance statement on the specification provided in the bidding document as attached upon this minute.

(c) The Bidder's representative agreed to execute this project within a period of four (4) months.

(d) Finally, the bidder agreed to reduce price by TZS.370,048,000 from the original price, thus price changed from TZS; 1,950,333,500 to TZS 1,580,285,500 (VAT inclusive) as detailed below:-

BOQ BEFORE NEGOTIATION

REHABILITATION OF MAIN ROAD FROM GOLINI TO SENETO JUCTION (50KM) AND ACCESS ROAD TO OLDUVAI MUSEUMS (5KM).					
BILL OF QUANTITIES:					
ITEM	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**Amount (TShs)**
PART 1: PRELIMINARIES					
1.1	Allow for establishment on site including removal on completion of Works	LS	1	5,000,000.00	5,000,000.00
1.2	Mobilization/Demobilization of Equipment	LS	1	15,000,000.00	15,000,000.00
1.3	Allow for accommodation of traffic, road diversion and maintenance during the construction	LS	1	3,000,000.00	3,000,000.00

	period.				
1.4	Allow for sampling, transportation and testing of samples as directed by the Engineer.	PS	1	6,000,000.00	6,000,000.00
1.5	Provision of Project progress report and photos	LS	1	3,000,000.00	3,000,000.00
1.6	Provide and erect standard road sign as per Engineer or supervisor instruction and approval	No	1	1,200,000.00	1,200,000.00
	TOTAL PRELIMINARIES AND GENERAL ITEMS				**33,200,000.00**
PART 2: ROAD WORKS					
2.1	Excavate, Load, haul up to 30km, spread, water, and compact gravel wearing course materials	m^3	49,500	30,000.00	1,485,000,000.00
2.2	Carry out gravel filling at locations as instructed by the site Engineer.	m^3	5,400	20,000.00	108,000,000.00
2.3	Overhaul fill and gravel	m^3.km	11,250	500.00	5,625,000.00
	TOTAL ROAD WORKS				**1,598,625,000.00**
PART 3: DRAINAGE WORKS					

3.1	**Open Drains**				
a.	Excavation of catch water drains	Lm	5,000	1,200.00	6,000,000.00
b.	Excavation of mitre drains	Lm	6,000	1,000.00	6,000,000.00
	TOTAL DRAINAGE WORKS				**12,000,000.00**

Rehabilitation of main road from Golini to Seneto junction (50km) and access road to Olduvai Museums (5km)

GENERAL SUMMARY:

ITEM	DESCRIPTION	AMOUNT (TZS)
1	BILL No. 1: PRELIMINARIES	33,200,000.00
2	BILL No. 2: ROAD WORKS	1,598,625,000.00
2	BILL No. 2: DRAINAGE WORKS	12,000,000.00
	SUB TOTAL 1	**1,643,825,000.00**
4	ALLOW FOR:	
	(a) Insurance Cover as per GCC Clause 16.1 and SCC Clause 8	6,000,000.00
	(b) Provide Surety bond as per GCC Clause 60.1 and SCC Clause 28	3,000,000.00
	SUB TOTAL 2	9,000,000.00
	ADD SUB TOTAL 1&2	1,652,825,000.00
5	**ADD:** 18% VAT	297,508,500.00
	TOTAL COST CARRIED TO FORM OF TENDER (VAT INCLUSIVE)	**1,950,333,500.00**

BOQ AFTER NEGOTIATION

REHABILITATION OF MAIN ROAD FROM GOLINI TO SENETO JUCTION (50KM) AND ACCESS ROAD TO OLDUVAI MUSEUMS (5KM).					
BILL OF QUANTITIES:					
ITEM	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**Amount (TShs)**
PART 1: PRELIMINARIES					
1.1	Allow for establishment on site including removal on completion of Works	LS	1	3,000,000.00	3,000,000.00
1.2	Mobilization/Demobilization of Equipment	LS	1	15,000,000.00	15,000,000.00
1.3	Allow for accommodation of traffic, road diversion and maintenance during the construction period.	LS	1	3,000,000.00	3,000,000.00
1.4	Allow for sampling, transportation and testing of samples as directed by the Engineer.	PS	1	6,000,000.00	6,000,000.00
1.5	Provision of Project progress report and photos	LS	1	2,000,000.00	2,000,000.00
1.6	Provide and erect standard road sign as per Engineer or supervisor instruction and approval	No	1	1,000,000.00	1,000,000.00
	TOTAL PRELIMINARIES AND GENERAL ITEMS				**30,000,000.00**
PART 2: ROAD WORKS					

2.1	Excavate, Load, haul up to 30km, spread, water, and compact gravel wearing course materials	m^3	49,500	25,000.00	1,237,500,000.00
2.2	Carry out gravel filling at locations as instructed by the site Engineer.	m^3	5,400	10,000.00	54,000,000.00
2.3	Overhaul fill and gravel	$m^3.km$	11,250	100.00	1,125,000.00
	TOTAL ROAD WORKS				**1,292,625,000.00**

	(b) Provide Surety bond as per GCC Clause 60.1 and SCC Clause 28	3,000,000.00
	SUB TOTAL 2	9,000,000.00
		1,339,225,000.00
5	**ADD:** 18% VAT	
		241,060,500.00
	TOTAL COST CARRIED TO FORM OF TENDER (VAT INCLUSIVE)	**1,580,285,500.00**

MINUTE 4.3.1 **Discussed**

It was discussed and agreed that the *Rehabilitation of Main Road from Golini to Seneto Junction (50km) and Access Road to Olduvai Museum (5km)* to be executed without compromising its quality.

MINUTE 4.4.1 **Agreed**

The parties resolved that,

- Tender price is **TZS. 1,580,285,500 VAT inclusive work to be executed within Four (4) months from the date of commencement after the Signing of the contract.**

AGENDA NO. 5 **CLOSURE OF THE MEETING**

MINUTE 5.1 The Chairperson thanked member and closed the meeting at 12.00 p.m

J.P. TRADERS LIMITED P. O. Box 16007 DAR ES SALAAM

QS. Melissa Kahana	Mr. Balivumu M. Lugiye	CPA. Thadeus Madawe
NCAA CHAIRPERSON	**M/s JP TRADERS LIMITED**	**NCAA (SECRETARY**

RECORD OF NEGOTIATIONS

Name of the Procuring Entity: *NGORONGORO CONSERVATION AREA AUTHORITY*

Tender No: *AE/055/2021-22/HQ/TCRP/W/01*

Subject of Procurement: *REHABILITATION OF MAIN ROAD FROM GOLINI TO SENETO JUCTION (50KM) AND ACCESS ROAD TO OLDUVAI MUSEUM (5KM)*

Method of Procurement: *SINGLE SOURCE TENDERING*

Date of Negotiation: *16TH DECEMBER, 2021*

PART 2: RECORD OF ATTENDANCE AT NEGOTIATIONS

SN	Name	Position	Name of Tenderer /Firm	Signature
1.	QS. Melissa Kahara	Chairperson	NCAA	Nkahara.
2.	CPA. Thadeus Madaw	Secretary	NCAA	Madaw.
3.	Lilian Magoma	Member	NCAA	Lmagoma.
4.	BASHUMU M KUSITE	DIRECTOR	JP TRADERS LTD	

Nkahara.

RECORD OF NEGOTIATIONS

Name of the Procuring Entity: NGORONGORO CONSERVATION AREA AUTHORITY

Tender ID No.: AE/055/2021-22/HQ/TCRP/W/01

Subject of Procurement: REHABILITATION OF MAIN ROAD FROM GOLINI TO SENETO JUNCTION (50KM) AND ACCESS ROAD TO OLDUVAI MUSEUM (5KM)

Method of Procurement: SINGLE SOURCE TENDERING

Date of Negotiation: 16TH DECEMBER, 2021

PART 1: RECORD OF NEGOTIATIONS	
ISSUE	**AGREEMENT (WITH FULL DETAILS)**
Construction Equipment	The bidder's representative agreed to submit another two (2) excavator equipment to make a total of three (3) with registration number: (T 402 DQH, T 197 DCK and T 365 DPV as attached upon this minutes)
Specifications Compliance Statement	The bidder submitted compliance statement on the specification provided in the bidding document as attached upon this minute.
Completion period	The Bidder's representative agreed to execute this project within a period of four (4) months.
Bid Price	The bidder agreed to reduce price by TZS.370,048,000 from the original price, thus price changed from TZS; 1,950,333,500 to TZS 1,580,285,500 (VAT inclusive) as detailed below:-

We hereby certify that the above is a true and accurate record of the negotiations:

For the Procuring Entity	For the Tenderer/Consultant
Signature:	Signature:
Name: MELISSA KAHANA	Name: BALIUMAU S. LUBIFE
Position: CHAIRPERSON	Position: DIRECTOR
Date: 16/12/2021	Date: 16/12/2021

Document attached:
Minutes of the Negotiation meeting

JPT

J. P. TRADERS LIMITED

(Civil Engineering Contractors & Bld. Material Supplies)
Mandela Road, Ubungo External Near, Police Post, P.O. Box 76007, Dar es Salaam,
Phone/Fax (255) 022 – 2450732, Cell 0713 – 448900, 0787 – 889944
E-mail:jptraderslimited@yahoo.com.

***Date*: 09th December, 2021**

TO: Conservation Commissioner,
Ngorongoro Conservation Area Authority,
P.O Box 1,
NGORONGORO CRATER

Dear Sir,

REF:**Rehabilitation of main road from Golini to Seneto junction (50km) and access road to Olduvai Museums (5km) Tender number: AE/055/2021-22/HQ/TCRP/W/01**

SUB: **STATEMENT OF COMPLIANCE.**

We, J.P**. TRADERS LIMITED** of Ubungo external, near police post, P.O BOX 76007 Dar es Salaam, Tanzania, we confirm that we execute the project according to specifications as it has been provided in the bid documents.

You're truly,

J. P. TRADERS LIMITED

J. P. TRADERS LIMITED P. O. Box 76007 DAR ES SALAAM

.....
Balivumu Mathias Lugiye
Technical Director

11368124-0

TANZANIA REVENUE AUTHORITY

11368124-0

MOTOR VEHICLE REGISTRATION CARD

NO: 7974025

First Registered: 31/12/2018

Vehicle Control Number: 2536008

Registration Number: T365DPV

Owner Details:

ID Number: 101126765

Vehicle Details:

11207557-6

TANZANIA REVENUE AUTHORITY

11207557-6

MOTOR VEHICLE REGISTRATION CARD

NO: 8031453

First Registered: 28/03/2019

Vehicle Control Number: 2576511

Registration Number: T402DQH

Owner Details:

ID Number: 101126765
Category: Company
Name: J.P. TRADERS LTD
Postal Address: 76007 DAR ES SALAAM

Title Holder Details:

ID Number: 101126765
Category: Company
Name: J.P. TRADERS LTD
Postal Address: 76007 DAR ES SALAAM

Number of Previous Owner(s): 0

Vehicle Usage: Commercial

Previous Registration Number:

Vehicle Details:

Make:	Caterpillar
Model:	HYD EXCAVATOR*
Model Number:	320
Body Type:	Excavator
Colour:	Yellow
Class:	Construction Equipment
Year of Manufacture:	2018
Chassis No:	CAT00320KZBN02720
Engine No:	E7A20476
Engine Capacity:	6370
Fuel Used:	Diesel
Number of Axles:	2
Axle Distance:	
Seating Capacity:	1
Tare Weight:	21250
Gross Weight:	21251
Imported From:	China

Dec. Year: 19 Office: TZDL Agent Tin: 101126765 Dec Ref. No: 1103562 Item: 1

☐ **NOTIFICATION OF CHANGE OF OWNERSHIP OR TITLE HOLDER**
{Tick here, fill in owner particulars and sign declaration below
NB Current owner must declare his/her stamp Duty Status}

☐ **NOTIFICATION OF TRANSFER OF TITLE TO CURRENT OWNER**
{Tick here and sign declaration below}

New Owner Category

- ☐ Citizen of Tanzania
- ☐ Parastatal
- ☐ Company
- ☐ Expatriate
- ☐ Other Agencies/Associations/Clubs
- ☐ Partnership
- ☐ Solo Proprietor
- ☐ Financial Institution
- ☐ Local Government
- ☐ Other Government Organisation
- ☐ Diplomat/Foreign Mission
- ☐ International Organisation
- ☐ Cooperative Society
- ☐ Religious Organisation

TIN No or other No :

Current Owner's Stamp Duty Status

VAT or Stamp Duty Composition Number: .....

Stamp Duty Receipt Number: .....

☐ Not Applicable

Reason for Change of Ownership : ☐ Sold ☐ Repossessed ☐ Deceased Estate ☐ Within company or family ☐ Other

USE BLOCK LETTERS :

New Owner's Name: .....

New Owner's Postal Address: ..... Age: .....

Town/Place: .....

REASON FOR CHANGE OF PARTICULARS & USE: ☐ Roadworthiness ☐ Stolen ☐ Scrapped ☐ Repossessed ☐ Reconstructed

New:
- ☐ Body Type:
- ☐ Propelled by:
- ☐ Gross Weight:
- ☐ Engine No:
- ☐ Fuel Type:
- ☐ Colour:
- ☐ Engine Capacity:
- ☐ Tare Weight:
- ☐ Seating Capacity:

Please Enclose Police Inspection Report

New use: ☐ Private ☐ Taxi ☐ Commercial ☐ Emergency ☐ Donar Funded

DECLARATION

☐ I, the Title Holder, sign and declare that the Title has been transferred to the Owner or to a new Title Holder .....

☐ I, the owner, sign and declare that the changes reported by me are true and correct: .....

☐ We, the owner and the new owner, sign and declare that the vehicle was disposed to the new owner on the ..... day of ..... 20 .....

at the Sales Price Tsh: ..... Owner ..... New Owner .....

RECEIPT
TANZANIA REVENUE AUTHORITY

Received From: J.P. TRADERS LTD

Particulars:	Amount:	
Registration Tax	TZS	250,000
Annual Licence Fee 2501cc-above	TZS	300,000
Total Amount:	TZS	550,000

Reason : New Registration

Registration No: T402DQH
Mode of Payment: Asy Bank

Receipt No: 6546562 Date: 03/04/19
Issuing Officer ID: 20000423
Issuing Office: SAMORA

11207557-6

11207557-6

12213323-4

TANZANIA REVENUE AUTHORITY

12213323-4

MOTOR VEHICLE REGISTRATION CARD

First Registered: 03/09/2014 | Vehicle Control Number: 1645720 | NO: 6467764

Owner Details:

ID Number: 101126765
Category: Company
Name: J.P. TRADERS LTD
Postal Address: 76007 DAR ES SALAAM

Title Holder Details:

ID Number: 101126765
Category: Company
Name: J.P. TRADERS LTD
Postal Address: 76007 DAR ES SALAAM

Number of Previous Owner(s): 0

Vehicle Usage: Private or Normal

Previous Registration Number:

Registration Number: T197DCK

Vehicle Details:

Make:	Caterpillar
Model:	EXCAVATOR
Model Number:	320DL
Body Type:	Excavator
Colour:	Yellow
Class:	Construction Equipment
Year of Manufacture:	2014
Chassis No:	ZCS01030
Engine No:	D7A06297
Engine Capacity:	44
Fuel Used:	Diesel
Number of Axles:	2
Axle Distance:	
Seating Capacity:	1
Tare Weight:	20360
Gross Weight:	20362
Imported From:	China

Dec. Year: 14 | Office: TZDL | Agent Tin: 100146193 | Dec Ref. No: 1069754 | Item: 1

☐ **NOTIFICATION OF CHANGE OF OWNERSHIP OR TITLE HOLDER**
{Tick here, fill in owner particulars and sign declaration below
NB Current owner must declare his/her stamp Duty Status}

☐ **NOTIFICATION OF TRANSFER OF TITLE TO CURRENT OWNER**
{Tick here and sign declaration below}

New Owner Category

- ☐ Citizen of Tanzania
- ☐ Parastatal
- ☐ Company
- ☐ Expatriate
- ☐ Other Agencies/Associations/Clubs
- ☐ Partnership
- ☐ Solo Proprietor
- ☐ Financial Institution
- ☐ Local Government
- ☐ Other Government Organisation
- ☐ Diplomat/Foreign Mission
- ☐ International Organisation
- ☐ Cooperative Society
- ☐ Religious Organisation

TIN No or other No :

Current Owner's Stamp Duty Status

VAT or Stamp Duty Composition Number: .....

Stamp Duty Receipt Number: .....

☐ Not Applicable

Reason for Change of Ownership : ☐ Sold ☐ Repossessed ☐ Deceased Estate ☐ Within company or family ☐ Other

USE BLOCK LETTERS :

New Owner's Name: .....

New Owner's Postal Address: ..... Age: ..

Town/Place: .....

REASON FOR CHANGE OF PARTICULARS & USE: ☐ Roadworthiness ☐ Stolen ☐ Scrapped ☐ Repossessed ☐ Reconstructed

New: ☐ Body Type: ☐ Engine No: ☐ Engine Capacity:
☐ Propelled by: ☐ Fuel Type: ☐ Tare Weight:
☐ Gross Weight: ☐ Colour: ☐ Seating Capacity:

Please Enclose Police Inspection Report

New use: ☐ Private ☐ Taxi ☐ Commercial ☐ Emergency ☐ Donar Funded

DECLARATION

☐ I, the Title Holder, sign and declare that the Title has been transferred to the Owner or to a new Title Holder .....

☐ I, the owner, sign and declare that the changes reported by me are true and correct: .....

☐ We, the owner and the new owner, sign and declare that the vehicle was disposed to the new owner on the ... day of ... 20 ...

at the Sales Price Tsh: ..... Owner ..... New Owner .....

RECEIPT
TANZANIA REVENUE AUTHORITY

Received From: J.P. TRADERS LTD

Particulars:	Amount:	
Registration Card Fee	TZS	10,000
Total Amount:	TZS	10,000

12213323-4

Reason : Amend Title Holder

Registration No: T197DCK
Mode of Payment: Mobile 17420705
Receipt No: 6042371 Date: 29/01/18
Issuing Officer ID: 20000190
Issuing Office: SAMORA

12213323-4

INSURANCE COVER;

To be submitted by the contractor after contract signing and before commencement of the works

PERFORMANCE BOND;

To be submitted by the contractor after contract signing and before commencement of the works

3. STANDARD POWER OF ATTORNEY

To; Conservation Commissioner,
Ngorongoro Conservation Area Authority,
P.O Box 1,
NGORONGORO CRATER

THAT BY THIS POWER OF ATTORNEY given on the **09th** Day of **December, 2021** We, the undersigned, **J.P. TRADERS LIMITED** a company duly incorporated in the United Republic of Tanzania whose office is located at Mandela Road, Ubungo External near Police Post, P. o Box 76007, Dar-es-salaam by virtue of authority conferred to us by the Board Resolution No. 052 of **09th** Day of **December, 2021** do hereby ordain nominate and appoint **Mr. Balivumu Mathias Lugiye** with ID No. 19880628-11101-00005-29 of P. o Box 76007, Dar-es-salaam to be our true lawful Attorney and Agent, with full power and Authority, for us and in our names, and for our accounts and benefits, to do any or all of the following acts, in the execution of tender No. **AE/055/2021-22/HQ/TCRP/W/01** that to say;

To act for the company and do any other thing or things incidental for **AE/055/2021-22/HQ/TCRP/W/01** of **Rehabilitation of main road from Golini to Seneto junction (50km) and access road to Olduvai Museums (5km)** for the NGOROGORO CONSERVATION AREA AUTHORITY

AND provided always that this Power of Attorney shall not revoke or in any manner affect any future power of attorney given to any other person or persons for such other power or powers shall remain and be of the same force and affect as if this deed has not been executed.

AND we hereby undertake to ratify everything, which our Attorney or any substitute or substitutes or agent or argents appointed by him under this power on this behalf herein before contained shall do or purport to do in virtue of this Power of Attorney.

SEALED with the common seal of the said **J. P. TRADERS LTD** and delivered in the presence of us this **09th** Day of **December, 2021**

IN WITNESS

ACKNOWLEDGEMENT

I BALIVUMU M. LUGIYE ..... Do hereby acknowledge and accept to be Attorney of the said **J. P. TRADERS LTD** under the terms and conditions contained in this POWER OF ATTORNEY and I promise to perform and discharge my duties as the lawfully appointed Attorney faithfully and honestly.

SEALD and **DELIVERED** by the

BALIVUMU MATHIAS LUGIYE Identified to me
By J. P. TRADERS LTD
The latter known to me personally
This 09th day of December 2021

.....
DONEE

BEFORE ME

.....
Commissioner for Oaths

ARMANDO SWEA
ADVOCATE,
NOTARY PUBLIC
&
COMMISSIONER
FOR OATHS
14751, DAR ES SALAAM

J. P. TRADERS LIMITED
P. O. Box 76007
DAR ES SALAAM

JPT

J. P. TRADERS LIMITED

(Civil Engineering Contractors & Bld. Material Supplies)
Mandela Road, Ubungo External Near, Police Post, P.O. Box 76007, Dar es Salaam,
Phone/Fax (255) 022 - 2450732, Cell 0713 - 448900, 0787 - 889944
E-mail:jptraderslimited@yahoo.com

BOARD RESOLUTION FOR AUTHORIZATION OF CONTRACT SIGNING

Date: 09th December, 2021

Attendance;

1. MR. MALAKI MATHIAS MBANYA ..... Chair person
2. MR. BALIVUMU MATHIAS LUGIYE ..... Member
3. MR. JOSEPH MICHAEL BAHAGA ..... Member
4. MR. DIONIS EDWARD NZIGILWA..... Member

The board of directors of **J.P. Traders Limited** met urgently after purchase Tender document on 09th December, 2021 from the office of the J.P. Traders Limited Dar es Salaam requesting to sign the contract for tender No **AE/055/2021-22/HQ/TCRP/W/01** for the following Project: **Rehabilitation of main road from Golini to Seneto junction (50km) and access road to Olduvai Museums (5km)** on 09th December, 2021 at the J.P. Traders Ltd office Dar es Salaam

After that information from the chairman, the board discussed the matter and there after agreed together and appointed **Mr. Balivumu Mathias Lugiye** to be given the power of attorney and be the company's representative during contract signing.

This board of resolution is authorized by authorized officers of the company as;

Authorized officer of the company

Name DIONIS EDWARD NZIGILWA

Designation DIRECROR

Signature.....

Authorized officer of the company

Name JOSEPH MICHAEL BAHAGA

Designation DIRECROR

Signature.....

J.P. TRADERS LIMITED
P. O Box 76007
DAR ES SALAAM

ENVIRONMENTAL, HEALTH AND SAFETY POLICY;

J.P. TRADERS LIMITED

CONSERVATION COMMISSIONER, NGORONGORO CONSERVATION AREA AUTHORITY,

Rehabilitation of main road from Golini to Seneto junction (50km) and access road to Olduvai Museums (5km).

Tender number: AE/055/2021-22/HQ/TCRP/W/01

FOR

ENVIRONMENTAL, SOCIAL, HEALTH AND SAFETY MANAGEMENT PLANS (ESHS)

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1. INTRODUCTION

The J.P. Traders Limited Environment, Social, Health and Safety (ESHS) Management System (MS) is a comprehensive system of policies, procedures, and company standards that has been developed and implemented to manage ESHS hazards and risks related to the development of the Project. Therefore, the ESHS MS covers all activities related to the management of the operation phase of the project.

2. PROJECT DESCRIPTION

The Government of the United Republic of Tanzania has received funds (grant) from the towards the cost of program and its intends to apply portion of these funds (grant) to cover eligible payments under the works contract for **Rehabilitation of main road from Golini to Seneto junction (50km) and access road to Olduvai Museums (5km). Tender number: AE/055/2021-22/HQ/TCRP/W/01**

3. ENVIRONMENT, SOCIAL AND HEALTH AND SAFETY POLICIES FOR THE J.P. TRADERS LIMITED

3.1 ENVIRONMENTAL POLICY

At the J.P. Traders Limited we are committed to protecting the environment in which we operate and take pride in conducting our business in a safe and responsible manner. We recognize and accept our responsibility to develop our resources with awareness of the environmental, economic and social needs and expectations of stakeholders. Our commitment is embodied in the following statement of the company environmental policy.

3.1.1 Environmental Management

We will:

- Integrate environmental integrity, social equity and economic viability into our business processes.
- Provide staff with the resources to make environmentally sound decisions.
- Improve energy efficiency
- Assess the potential environmental impacts of our activities and propose mitigation, where appropriate.
- Conduct our operations in a manner intended to prevent pollution, conserve resources and deal responsibly with all environmental issues.
- Protect the soils and surface waters by minimizing erosion and run-off in the Park property.
- Ensure preparedness with an effective emergency response program.

3.1.2 Continuous Improvement

We will:

- Promote innovative thinking in the development and implementation of new ideas relating to the environmental integrity.
- Measure our performance using comprehensive audits.

- Establish environmental targets and objectives to improve our performance.

3.1.3 Communication

We will:

- Respond to the concerns and views of stakeholders in a timely and open fashion.
- Engage interested parties, when necessary, to discuss our business operations and their relationship to affected communities and the environment.
- Provide clear and candid environmental information about the products, services and
- Operations provided by the Park to customers, employees, government agencies and the public, as appropriate.

3.2 COMMUNITY RELATIONS POLICY

J.P. Traders Limited is committed to undertake the project in highest social performance standards in a manner that respects the environment, culture and customs of the communities within the area of direct influence of the project.

The J.P. Traders Limited builds a legacy of trust by carrying out their activities with environmental and social responsibility and by implementing development that are sustainable and that consider a balance between the economic viability of the project and the needs of the communities in the direct area of influence.

The commitments are based on the following community relations principles:

- Conduct operations with high standards for personal integrity and ethical behavior
- Respect the laws and regulations of the government with whom we work and the beliefs and

3.3.1 *[illegible]*

- The **Operations Phase**: These mitigation measures are applicable during the long-term operation.
- The **Decommissioning Phase**: These recommendations are applicable to the decommissioning and rehabilitation of the area at the end of the operational lifespan

4. EMPLOYMENT

4.1 General targets regarding employment

According to the requirements of manpower needed to fulfil the positions involved in construction, two main categories of workforce have to be considered:

- Skilled and Semi-Skilled positions
- Unskilled positions

The numbers of personnel required to perform specific tasks on site will vary since specific requirements will differ based upon the work to be completed. As estimation, the project will require a total of 250 to 300 staff.

The HR will meet with individuals and groups in their communities to explain the main features of J.P. Traders Limited work scope and their requirements for construction positions.

Job opportunity briefings will include:

- Descriptions of job duties and responsibilities,
- Labour schedule showing when the jobs will be required,
- Number of people required for each position,
- Qualifications required for each job, and
- Appropriate training to be provided for the different positions.

During the presentations information will be given regarding:

- Conditions of payment,
- Number of construction jobs,
- Duration of the construction project and
- Number of operation / maintenance positions.

The key job positions include:

- Foreman

- Lab technician
- Secretary
- Surveyors
- Heavy equipment operators
    - Loader and excavator, Dozer, Grader, Scraper, Compactor, Trucks, Low Bed Trailer, Crane operator and Other.
- Masons, carpenter, steel fixer,
- Other skilled staff (welder…)
- Labourers
- Drivers
- Clerks
- Mechanics
- Storekeepers
- Watchmen.

Medical care and assistance will be available as per the Health and Safety plan and Job Specifications.

The key J.P. Traders Limited staff members involved in the selection and recruitment process of personnel is the following:

- HR Officer
- Site Construction Manager and works supervisors

4.2 Maximizing hiring of locals

J.P. Traders Limited expects to meet all unskilled labour positions locally. J.P. Traders Limited also hopes to source some of the skilled positions locally.

J.P. Traders Limited will equitably allocate unskilled positions between the impacted villages across tribal/cultural and civil boundaries.

Notification of job opportunities will be distributed during village meetings or village market days.

Generally the hire of employees shall be for short work contracts as the work progresses through the different project areas.

4.3 Survey of labour availability

J.P. Traders Limited will use both, the Consultant's employment database, its own internal updated data bases and other gathered information regarding labour availability as follows.

J.P. Traders Limited will ensure access to jobs to women, disabled persons and elders in accordance with Tanzanian laws.

- National / Regional

- J.P. Traders Limited maintains data bases or files of qualified people having already worked with the company and are therefore seen as potential applicants. This information is stored in the existing Tanzanian branch office under the responsibility of the J.P. Traders Limited Human Resources Department.
- The Consultant data base and files of potential applicants will be reviewed.
- Respective area Labour Administration offices.

The Environment department will inform labour administration offices to receive all applications for employment with the Project. These applications will be collected once a week.

These two data bases include the following information on potential Tanzanian applicants:

- name
- specialty
- age
- number of years of experience
- diploma or qualification
- address

- Local

- Unscreened lists collected by the Consultant representatives during communication campaigns through local authorities will be provided to J.P. Traders Limited
- Further villages meetings will be held in order to identify labour availability of the local population.

In the villages, meetings will be organized by the HR with the help of translation if necessary and with local authorities. Items to discuss will include:

- Introduction by the HR
- Presentation of J.P. Traders Limited activities
- Explanation of job opportunities
- Question/Answers sessions
- Registration of potential job candidates
- Indication of the designated hiring place

These information sessions will give equal opportunity to all interested candidates.

Additionally, J.P. Traders Limited will review all lists of potential candidates received from the Consultant, broken down by Districts and villages. These lists are expected to include:

- name of candidate,
- age and residence,
- language spoken,
- Any skill that could be helpful in the project: technical skills, previous work experience.

The HR will compile the existing data on Tanzania's national workforce available in relation to the Project and provide a new and single data base which will include information on:

- trade or specialty
- number in each specialty
- locations

4.4 Labour relations management plan

J.P. Traders Limited will comply with the current National Labour Laws and Regulations and will apply for the current collective bargain agreement in force in the building, public works and civil engineering industry in Tanzania.

J.P. Traders Limited will implement company policies and procedures as regards labour relations that comply with labour codes and regulations and are crucial to the smooth execution of construction activities. These policies and procedures will address the following items:

- Employee responsibilities (attendance and punctuality - overtime availability – performance – safety and health – personal conduct, etc…)
- Work schedule
- Pay schedules and compensation practice
- Housing and meals
- Employee discipline (warnings – oral and written reprimands – suspension without pay – termination of contract, etc…)
- Grievances and appeals (guidelines for grievances hearing…. answers to complaints)
- Safety, health and environment (violations of safety or health or environment regulations)
- Sick leave
- Annual leave
- Termination of contract

5. ENVIRONMENTAL, HEALTH, SAFETY AND SOCIAL PROCEDURES

5.1 Method Statements

Each Method Statement will address environmental, health, safety and social aspects relevant to the activity and will typically provide detailed descriptions of items including, but not necessarily limited to:

- Nature, timing and location of activities;
- Procedural requirements and steps;
- Management responsibilities
- Material and equipment requirements;
- Transportation of equipment to and from site;
- Method for moving equipment/material while on site;
- How and where material will be stored;
- Emergency response approaches, particularly related to spill containment and clean-up;
- Response to compliance/non-conformance with the requirements of the management plans; and
- Any other information deemed necessary by the HSEQ Department.

Since many of the main physical construction impacts will occur during site preparation (much of which has been already completed), only a relatively limited number of Method Statements is required. Method Statements are required for, but not limited to:

- Storm water control, including construction and maintenance of sediment traps.

- Handling and storage of hazardous materials, including hazardous wastes.
- Delivery of abnormal loads by road

5.2 Implementation of the management plans

The management plans will be implemented and used to guide activities during the construction and operations phases. During both the construction and operations phases the following principal items will be monitored:

- The management plans shared with all relevant managers and contractors
- Correct and full implementation of management plan procedures;
- Compliance with contract commitments and approved Method Statements; and
- Compliance with project standards/guidelines.

6. TRAFFIC CONTROL

This plan shows the method of protection of the public and gives details about the location and types of warning signs, barricades and other traffic safety devices. For safety issues in general, traffic control will be managed by the Health and Safety department, assisted by the Works department.

Each Works department (earthworks and pavement, drainage and structures) under the supervision of the engineers in charge will plan the need for traffic control with the Health and Safety Officer.

Referring to the Traffic Management Plan and according to the program of requirements, the Health and Safety department will install the traffic safety devices on the site. This installation will be done with the help of the work team involved with the traffic control measures. After installation, responsibility for maintenance of the traffic safety devices will be transferred to the work team, under the supervision of foremen. When the work is completed, Health and Safety team will sanction removal.

Monitoring will be carried out by the Health and Safety team assisted by the Works department team (supervisor, foremen) Health and Safety department will provide training to those involved in the daily implementation of this plan. The usual working hours of the site will be from 8:00 to 17:00 Monday to Saturday with a lunch break of one hour. Traffic control will be regulated during these working hours to prevent any possible risk to the public passing through the works. Outside of these hours, traffic control will be ensured by use of traffic signs and speed bumps.

Traffic will be controlled by use of "passive" means (traffic devices), and by "active" means (flagmen). To prevent risks resulting from bad visibility, dust control will be done by watering along the working areas and where particular traffic control is ongoing.

Where the demolition of existing structures, construction of new drainage structures and bridges do not permit to keep traffic passing on the existing road, a temporary diversion will be provided

to accommodate traffic. Road signs will be installed in accordance with the sketch "Typical Diversion Detail design for drainage structure" for traffic control. Diversions will be regularly checked by the Work team interested with the diversion and the Health and Safety team. List of traffic signboard is given in appendix 1.

7. WATER RESOURCE PROTECTION PLAN

This Water Management Plan has been prepared to describe how J.P. Traders Limited Company intends to manage, control and coordinate the protection of water resources during works. The plan will apply to J.P. Traders Limited Company and Sub-Contractor's activities for the mobilization, the construction, and the demobilization phase, of the project.

Main goal of this plan is to provide effective treatment methods for the management, using and emission of water used and rejected by the Project (works, workshop, quarry…).

The water resources can be impacted by:

- Risk of water flow modification
- Risk of water pollution

7.1 Responsibilities

Legal references: Water Utilization and Control Act, 1974.

Writing, evaluation, updating and distribution: Health, Safety and Environment (HSE) plan Implemented by everybody in J.P. Traders Limited Company and Sub-Contractors)

7.2 Existing Water environment

7.2.1 Hydrology/ Water resource

Water will be collected from stream and River found at project area after acquire water use permit from particular zone water board office

7.3 Risk of water flow disturbance

The water flow can be disturbed by water abstraction or modification of water table.
During the project, water will be abstracted for:

- Consumption in the camp
- Washing vehicles and machines
- Concrete works and cement
- Water pumping for sprinkling water

7.3.1 Mitigation measures:

The aim is to restrict at the maximum the water abstraction from the natural environment, in order to reduce the impact for the local communities and for the fauna and flora along the project. The abstraction will be reduced to the maximum during the dry season (June to October).

For the camp, supply of water will store temporally in water tank. For the washing area, the water will be treated by segregation of hydrocarbons, and stock for re-using in order to reduce the abstraction of water. The staff will be regularly trained and sensitized about this issue though tool box meeting. The quantity of water used will be specified

- Oil containers will be kept properly on concrete containment built in such a way that spilled oils can be easily recovered.
- The workshop will be covered with a roof and the unpolluted rain water will not pass thought the interceptor tank.
- Any engine and equipment will be properly serviced to avoid leakage.
- Absorbent material will be permanently available in the workshop to clean up immediately any discharge.
- Smoking will be strictly forbidden in the vicinity of hydrocarbons. Sign boards will be appropriated posted.

Elimination

Motor oil (engine, transmission, and hydraulic oils) have value even after it has been drained from equipment. They can also be recycled.

J.P. Traders Limited will enter into an agreement with its supplier of lubricants so that the used oils are taken back to the supplier for recycling.

The washing area will be build to prevent any pollution of water. J.P. Traders Limited will implement a concrete area connected up with interceptor tank (mud and hydrocarbons), that way we can throw back the water in the environment.

7.4.1.3 Emission of particles (earth) by soil erosion

The target is to implement good working practice in order to avoid soil erosion.

Excavated materials and other construction materials will not be stockpiled or deposited near or on stream banks, or other water course perimeters where they can be washed away by high water or storm run offs or can in any way encroach upon the water course itself. A specific environmental and social impact assessment will be written per each new site and approved by the Resident Engineer.

The limitation of soil erosion will be realized by:

- Avoiding unnecessary disturbance of sensitive areas
- Compaction of the soil surface in disposal area for example.
- Stabilizing the slopes by vegetation
- Diverting storm water and breaking long slopes to reduce the velocity of runoff

7.4.1.4 Emission of bitumen

The hot bitumen mixed with hydrocarbon is liquid and can pollute the surface water.
The personnel will be trained about the risk of pollution and apply good working practice.
The bitumen melting plant will not be installed close to a river.

7.4.1.5 Emission of cement or concrete

- Concrete works will be isolated from watercourses.
- Concrete handling equipment and vehicles will be washed down in an area that is isolated from the watercourses so that the toxic leachate is not allowed to enter the watercourse.
- Storage of cement will be protected against water, especially rain.
- On site, storage of cement will be limited to daily used quantity.
- The staff will be trained for a good environmental behaviour.

7.5 Emergency response

Treated in the Environmental and Social Management Plan
Procedure in case of environmental accident, Reporting immediately to the HSE officer and recording

7.6 Monitoring and control

The HSE officer will be in charge of implementation, monitoring, control and reporting of this Water Management Plan. He/she will ensure that practices on site are in compliance with above instructions. He/she will organize training courses and tool box meeting to impart good practices to all staff. He/she will realize inspection and report directly to the Project Manager

8. LOCAL HIRING PLAN

The magnitude of the project (the estimation of the creation of 200 employments) has created expectations among the inhabitants of the surrounding areas of the project. But at the same time there is a risk of tension between the members of local communities and the immigrants that will come to the region, especially if the local habitants estimate that they do not have the possibility to get benefits from the project in terms of employment.

The Employment policy for workers and contractors applicable to the project operation will be elaborated according to regulations and the Park Administrator, and should be followed by the tenant's enterprises in the Park. This policy must give the priority to local inhabitants in terms of provision of goods and services of the Park, and to local enterprises.

The recruitment policy of the work force and the procurement policy should be based on the following premises:

- The engagement process and acquisition should be accessible to the public through employment offices widely distributed in both the region and the community, so that it avoids strictly the acquisition and the employment "at the gate", in any form or what so ever.
- Pamphlets and brochures must be written and distributed in communities and surrounding villages as well as in communities where migration is expected

- The hiring process of workers should be exclusively through the "Office of Employment" open at County Level and should allow an equitable distribution of employment between the communities surrounding the project. The project Administrator (or the local enterprises, directly) should provide to the Mayors, the list of offers and qualifications, as well as the official form of application for employment to be completed by applicants.
- Local governments will have the responsibility to provide the norms and forms completed by potential workers. The project Administrator should reinforce the prohibition to tenants to hire at the gate of the project camp. Those people interested should be directed to recruitment offices in the cities or "mayor's offices".

Community meet will be held on deciding on the location of pedestrian access. All public institution will highly be considered. Complain register will be developed and matter will be resolve through our social specialist with the help of municipal engineer and the municipal social department.

9. MITIGATION AND MONITORING MATRIX

Matrix 1: Project-specific management and mitigation measures that must be implemented during the design phase

Design review phase mitigation measures						
Aspect	**ID**	**Mitigation measure / Procedure**	**Responsible**	**Implementation timeframe**	**Monitoring methods**	**Performance indicators**
Project review design	1.	If a significant impact is expected, depending on land use and ownership: ☐ Implement higher specification procedures to reduce any noise increase according to the national regulations for noise	☐ Contractor in consultation with RE	☐ Before construction	☐ Review plans	☐ Design layout
	2.	☐ Incorporate noise control in the design				
	3.	☐ Design visible permanent structures to be as unobtrusive as possible.				
	4.	☐ Design substation to allow for containment of contaminated storm water runoff and all wastewater generated for treatment.				
	5.	☐ Route storm water around the plant as much as possible to minimize the potential for contaminating runoff.				
	6.	☐ Design substation to allow for containment and contaminated oil spills and all wastewater with oil generated for treatment.				
	7.	☐ Analyses of transformer oil regarding PCBs.				

Matrix 2: Project-specific management and mitigation measures that must be implemented during the construction phase.

Construction phase mitigation measures						
Aspect	**ID**	**Mitigation measure / Procedure**	**Responsible**	**Implementation timeframe**	**Monitoring methods**	**Performance indicators**
Construction preparation	1.	Inform adjacent residents and business owners about completed and planned construction activities, including anticipated construction traffic.	Contractor, in consultation with RE	Immediately	Visual inspections Review reports	Record of meetings, notifications and/or interactions
	2.	Undertake awareness training to ensure that all staff are aware of environmental, health and safety management of construction activities and the stipulations of the management plans, particularly: -Spill protocols (fuel) and emergency procedures; -Run-off management; and -Waste management. Consider implementing a penalty system if required, e.g. contractors are liable for the remediation of sites they pollute and, in the case of repeat offences, consider issuing a stop work order.	Contractors- J.P. Traders Limited and Sub-contractor	Regularly, throughout construction At regular toolbox talks When new personnel comes on site	Keep a record of attendance at all training sessions	Training records Awareness of staff
Construction site	3.	Ensure that access to the construction site is restricted and sign-posted. Control access to all working areas such that only approved vehicles and persons have access.	Contractors- J.P. Traders Limited and Sub-contractor	Throughout construction	Security and entry logs	Number of breaches of access restrictions
	4.	Ensure that the site office, toilets and storage areas for building materials are located in such an area that contamination of nearby water resources are not taken place.			Review site layout	Suitable distance
	5.	Ensure that storage and laydown areas are appropriately bonded to prevent runoff from these areas towards canals or water resources			Weekly visual inspection of areas surrounding construction site	Bund in place No runoff observed from site or in adjacent areas / water bodies
	6.	Keep a copy of the management plans at the construction site.			Check availability of management plans	
	7.	Keep construction sites tidy and all activities, material and machinery contained within an area that is as small as possible. Clear and clean site weekly.			Weekly visual inspection of site	Neat, uncontaminated site
	8.	Keep sufficient firefighting equipment on site at all times, especially where activities such as welding are performed.			Check availability of firefighting equipment	

construct hazardous material storage facilities, especially with suitable impermeable materials and a minimum bund apacity equal to 110% of the largest container.	Contractors- J.P. Traders Limited and Sub-contractor	Throughout construction	Weekly visual inspection of hazardous materials handling and storage	Number of incidents of non-compliance with safety procedures

Construction phase mitigation measures				
ıre / Procedure	**Responsible**	**Implementation timeframe**	**Monitoring methods**	**Performance indicators**
ous material storage facilities, especially fuel s practically possible from canals or water			areas	concerning hazardous materials, including waste materials Number of spills of hazardous materials, including waste materials Cost of cleaning up spills Evidence of contamination and leaks
ntaminants (including cement) are not placed ground (e.g. mix cement on plastic or metal				
lapt and implement) procedures for the safe ing and storage of potential pollutants.				
sary use and transport of hazardous substances.				
Safety Data Sheets for all hazardous materials on that they are available for reference by staff handling and storage of materials.				
ular maintenance of vehicles and machinery to air minor leaks and prevent equipment failures.	Contractors- J.P. Traders Limited and Sub-contractor	Throughout construction	Weekly visual inspection of vehicles, barges, machinery and refueling/maintenance areas	Number of incidents of non-compliance Number of leaks and spills Cost of cleaning up spills
on-site refueling and maintenance of nery in designated areas. Line these areas with surface and install oil traps.				
ely sized drip trays for all refueling and/or machinery – ensure these are strategically e any spillage of fuel, oil, etc.				
ats and barges do not release pollutants into the adequate mooring or anchoring facilities.				
ance with international safety standards in r operations.				
pills immediately, through containment and product and appropriate disposal of contaminated				
ainment and clean-up equipment at all work polluting materials used at the site.				

Construction near the canals and water resources	22.	Stabilize exposed surfaces if required to avoid soil erosion.	Contractors- J.P. Traders Limited and Sub-contractor	Throughout construction	Weekly visual inspection of construction site and surrounding / downstream land and river areas	Visible erosion
	23.	Avoid dumping of material in canals or near water resources				Indication of dumping in water bodies
	24.	Contain contaminated storm water runoff, contaminated water and all wastewater generated from construction areas and treat				Indication of pollution of / discharge into water bodies

Construction phase mitigation measures						
Aspect	**ID**	**Mitigation measure / Procedure**	**Responsible**	**Implementation timeframe**	**Monitoring methods**	**Performance indicators**
	25.	Avoid washing of vehicles and machinery near the canals or water resources.				Dedicated wash place
Noise and air emissions	26.	Limit the use of heavy machinery and construction activities associated with high noise levels to 08h00 to 17h00 from Mondays to Fridays. Notify any nearby residents if construction work is planned outside of those times.	Contractors- J.P. Traders Limited and Sub-contractor	Throughout construction	Daily visual assessment of dust plumes Random machinery checks	Number of registered complaints Number of days that dust plumes are visible Visibility of dust
	27.	Reduce airborne dust at construction sites through e.g.: -Damping dust-generating areas with freshwater; -Use of cloth or brush-barrier fences; and -Covering dumps or stockpiles of lose material with plastic sheeting or netting, especially during windy conditions.				
	28.	Maintain all generators, vehicles, vessels and other equipment in good working order to minimize exhaust fumes and excess noise.				
	29.	If complaints regarding noise are received from residents, consider installing partial screening around the noisiest activities and/or mufflers on noisy equipment.				
Waste management	30.	Develop a waste management plan or implement the waste management plan.		Immediately	Availability of plan	
	31.	Aim to minimize waste through reducing and re-using (packaging) Material.	Contractors- J.P. Traders Limited and Sub-contractor	Throughout construction	Weekly visual inspection of waste collection and disposal areas Weekly visual inspection of construction areas (litter)	Presence of litter Availability of rubbish bins and skips Degree to which
	32.	Collect all waste in bins and/or skips at the construction site. Prevent littering by construction staff at work sites by providing bins or waste bags in sufficient locations.				
	33.	Provide separate bins for hazardous / polluting materials and mark these clearly. Store hazardous / polluting materials on impermeable ground until it is disposed of / collected.				

	34.	Dispose of waste appropriately to prevent pollution of soil and groundwater.				rubbish bins and skips are filled Degree to which different waste is separated
	35.	Collect recyclables separately if facilities exist to process these. Delivery recyclables to suitable facilities or arrange for collection.				
	36.	Do not allow any burning or burying of waste on site.				

Construction phase mitigation measures						
Aspect	**ID**	**Mitigation measure / Procedure**	**Responsible**	**Implementation timeframe**	**Monitoring methods**	**Performance indicators**
Road traffic management	37.	Manage construction sites and activities so as to minimize impacts on road traffic as far as possible, e.g.: -Attempt to arrange delivery of materials when it will least disrupt traffic; -Keep construction materials and machinery at the construction site throughout the construction period, where possible.	Contractors- J.P. Traders Limited and Sub-contractor	Throughout construction	Keep record of incidents and complaints	Number of incidences and complaints
	38.	Ensure that all safety measures are observed and that drivers comply with the rules of the road.				
	39.	Ensure that trucks transporting abnormal loads or large volumes of hazardous material are clearly marked and escorted by safety vehicles, if necessary.				
	40.	Attempt to maximize the occupancy rate of vehicles to minimize the number of required vehicles. Encourage personnel to carpool when driving to and from the site.			Keep record of vehicles	Number of vehicles travelling to site each day Number of trips
	41.	Ensure compliance with international and national safety standards and procedures for barge and tanker operations.			Inspection of required papers Weekly visual inspection of vessels	Availability of all required papers and certificates Condition of vessels
	42.	Inform all potentially affected parties of any restrictions to road use. Clearly mark areas to which restrictions apply.	Contractor, in consultation with RE	2 weeks before restrictions become effective	Keep record of communication s	Frequency and type of restrictions Number of incidents and complaints
Employment	43.	Consider maximizing the employment of local workers.	Project Manager	Throughout construction		

Annex 1: List of traffic signboards

LIST OF TRAFFIC SIGNBOARDS (NOT LIMITED)

Title of the Project

KAZI MBELE (100 cm X 60 cm)	⟷	 H= 60 cm
END OF SPEED LIMIT MWISHO WA KIZIBITI MWENDO	 D= 60 cm OR	MWISHO WA MATENGENEZO YA BARABARA (100 cm X 60 cm)
SPEED LIMITED AT 30 KPH MWENDO USIOZIDI 30 PKH	⟷	 D= 60 cm
ROAD NARROWS BARABARA NYEMBAMBA	⟷	 H=60 cm
SPEED BUMP PUNGUZA MWENDO	⟷	 H=60cm
INDICATION OF DIRECTION TO FOLLOW MWELEKEO UNAOTAKIWA KUFUATWA	⟷	 120cmX60cm
BE CAREFUL! EXIT TRUCKS	⟷	HATARI MALORI YANATOKA 100cmX60cm
BE CAREFUL! DIVERSION AT XXX	⟷	KUWA MUANGALIFU KUNA KONA MBELE MITA XXX (100 cm X 100 cm)
CONE TO SEPARATE WORK AREA FROM TRAVELED WAY	⟷	 H=60cm  H=1m
INSTRUCTION TO STOP AND WATCH BEFORE CONTINUE SIMAMA NA KUANGALIA KABLA YA KUENDELEA	⟷	 H=60cm
INSTRUCTION TO STOP OR TO GO MAELEKEZO YA KUSIMAMA AU KUENDELEA	⟷	 D=30cm

WORK PROGRAM

JPT

J.P. TRADERS LIMITED

WORK PROGRAMME FOR TENDER NO: AE/055/2021-22/HQ/TCRP/W/01

S/N	DESCRIPTION OF ITEMS	Moths / Weeks	1				2				3				4				5				6			
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1.0	**Preliminary**																									
1.1	Mobilazation of Plant and Equipment																									
1.2	site establishment accomodetion of traffic																									
1.3	Exploratory excavation & laboratory Test																									
2.0	**Road works**																									
2.1	grass cutting																									
2.2	Site clearence tree removel																									
2.3	Fill with selected materials																									
2.4	Light reshaping																									
3.0	**Drainage works**																									
3.1	Excavation new mitre/ catch water																									
3.2	Excavation of drains																									
3.3	OPEN DRAINS																									
3.4	C20 CONCRETE																									
4.0	Demobilization of equipment																									

INTEGRITY FORM

MEMORANDUM (Format 1)

(Regulation 78(2) of the Public Procurement Regulations, 2013 - Government Notice No. 446 of 2013 as amended in 2016)

This company **J.P. TRADERS LIMITED** places importance on competitive tendering taking place on a basis that is free, fair, competitive and not open to abuse. It is pleased to confirm that it will not offer or facilitate, directly or indirectly, any improper inducement or reward to any public officer their relations or business associates, in connection with its tender, or in the subsequent performance of the contract if it is successful.

This company has an Anti-Bribery Policy/Code of Conduct and a Compliance Program which includes all reasonable steps necessary to assure that the No-bribery commitment given in this statement will be complied with by its managers and employees, as well as by all third parties working with this company on the public sector projects, or contract including agents, consultants, consortium partners, sub- contractors and suppliers. Copies of our Anti-Bribery Policy/Code of Conduct and Compliance Program are attached.

Authorized Signature:_____

Name and Title of Signatory: **BALIVUMU MATHIAS LUGIYE (Technical Director)**

Name of Bidder: **J.P. TRADERS LIMITED**

Address: P.O. Box 76007 Dar es Salaam

J.P. TRADERS LIMITED P. O. Box 76007 DAR ES SALAAM