

Terms of Reference (ToR)

Design and Supervision Services for the Construction 3.6 miles of inland road between Malem and Utwe

1. Background

The Government of the FSM has received a grant from the Adaptation Fund under the “Enhancing The Climate Change Resilience of Vulnerable Island Communities in FSM” Project. The project seeks to enhance community resilience through working with communities focussing on improving water security measures in the outer islands of Yap, Chuuk and Pohnpei, and increase resilience of coastal communities to adapt to coastal hazards and risks induced by climate change in Kosrae.

The project is expected to deliver a set of targeted and interlinked economic, social and environmental benefits, as well as serve as a model for future replication throughout the four states of the country in other sectors (such as food security, and marine resource management). It will also promote a set of innovations, together with partner institutions and organisations that will help create better living conditions for the outer islands and coastal communities of FSM. The overall goal of the project is to build social, ecological and economic resilience of the target island communities of FSM and reduce their vulnerabilities to extreme drought, sea level rise and other climate risks through water resource management, coastal resource and development planning and by promoting gender perspectives and ecologically sound climate resilient livelihoods.

A portion of the grant will fund the construction of 3.6 miles (5.8 km) of inland road between Malem and Utwe in the State of Kosrae. The inland road will be developed around the perimeter of the low slopes of the volcanic part of the island and well above the inland boundary of freshwater swamp or mangrove areas following the 10 meter contour. Under the project, the road will be constructed to the subbase level and will be upgraded to a paved road in the future. The road alignment for the inland road was carried out by the Department of Transport and Infrastructure and finalized as part of the Environmental Impact Assessment which has been approved by the Government (State and municipal) and communities. The alignment has been determined based on observational field surveys including GPS tracking (refer to Annex 1 for the Map of the Road alignment). Ultimately, the intention is to develop the road to the same standard as the two existing lane paved road based on the design standards developed for the Kosrae Circumferential Road Extension Project and located around the base of the volcanic part of the island similar to the present inland sections of the road between the airport and the Tafunsak village.

2. Purpose of the assignment

The purpose of the assignment is to provide engineering services to ensure that the surveys, designs and technical specifications for the inland road are prepared to meet appropriate standards for climate resilient road infrastructure and that the road is constructed in accordance with the plans and specifications and otherwise in accordance with sound technical standards. In this regard, this assignment will require a highly qualified road engineer to undertake the tasks listed under Section 4 of this ToR which is referred to as the ‘Scope of Services’.

3. Objectives

The objectives of this consultancy are to:

(3.1) Undertake the required studies and surveys to inform the final design of the road;

- (3.2) Prepare the designs for the road using the information produced by the surveys and studies, as reviewed and accepted by the client;
- (3.3) Support the preparation of the bidding documents for the road
- (3.4) Ensure that the road is constructed in accordance with the approved designs and specifications.

4. Scope of Services

The selected engineer will undertake the following tasks:

- (4.1) Work in close collaboration with the Kosrae Department of Transport and Infrastructure (KDTI), National Department of Transport, Communication and Infrastructure (DTCI), the Project Management Unit (PMU) and other relevant stakeholders to review previous studies and reports, identify information gaps and implement additional studies and surveys, as required, including the development of the necessary reports, to finalise the detailed information and data that will inform the design of the road;
- (4.2) Assess and advise on low-cost design options to enhance the durability of the road and minimize maintenance costs;
- (4.3) Develop the preliminary designs and technical specifications for the road for consultation with the KDTI, DTCI, PMU and other relevant stakeholders. The designs should allow for the future installation of utility services;
- (4.4) Finalize the designs and technical specifications, based on feedback from the KDTI, DTCI, PMU and other relevant stakeholders;
- (4.5) Develop and provide a costed Bill of Quantities based on the design approved by the Client and relevant authorities.
- (4.6) Prepare bidding documents and support the bidding process, including the evaluation of bids and the preparation of contract documents for the construction of the road;
- (4.7) Provide the necessary guidance notes and reports to guide the use of the design;
- (4.8) Update the EIA report to capture any issues and new risks that may have arisen during the design studies and surveys including how to mitigate these risks.
- (4.9) Set up and manage a quality assurance system to ensure that the work of the Contractor complies with the designs, technical specifications and contract documents
- (4.10) Monitor the progress of the construction works and review payment requests from the Contractor
- (4.11) Provide assistance, as needed, to develop a proposal to upgrade the road to a paved road and to implement the installation of utility services;
- (4.11) Assist with the preparation of a Final Report on the inland road project, which should include lessons learnt on the design and construction as well as recommendations on a maintenance plan for the road and ancillary structures.

5. Qualification and skills

The following qualifications and skills must be met by the engineer in order to be considered eligible to undertake the tasks laid out under the Scope of Services.

- (5.1) A minimum of a Bachelor of Engineering. A Masters Degree in Civil Engineering, with specialization in roads engineering, would be preferred.
- (5.2) A minimum of 15 years overall engineering experience on design and construction of infrastructure projects, at least 10 years of which should be on road design and construction and at least 5 years' experience in the Pacific region.

(5.3) Specific experience on the design and construction of low-volume rural roads in mountainous terrains, is mandatory

(5.4) Must be a registered and/or licensed engineer with an internationally recognized certifying body and with professional qualifications that meets requirements for an APEC Engineer (see the APEC Engineer requirements at the following website: <http://www.ieagreements.org/agreements/apec/members/>)

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(5.5) Demonstrated analytical, reporting and communication skills.

6. Reporting Requirements

The selected engineer will be based in the Kosrae Department of Transportation and Infrastructure and will work under the direction of the Project Management Unit (PMU) for the Adaptation Fund Project. He/She will be expected to work closely with the Secretary of the Department of Transport and Infrastructure and other Departments of the Government of Kosrae, including KIRMA, and the Kosrae Project Management Office. He/She will be required to provide the following reports other than those specified under the Scope of Services. The reports must highlight status of tasks, issues and how they have been addressed and resolved.

(6.1) Provide weekly reports via email to KDTI and the PMU on the status of the tasks;

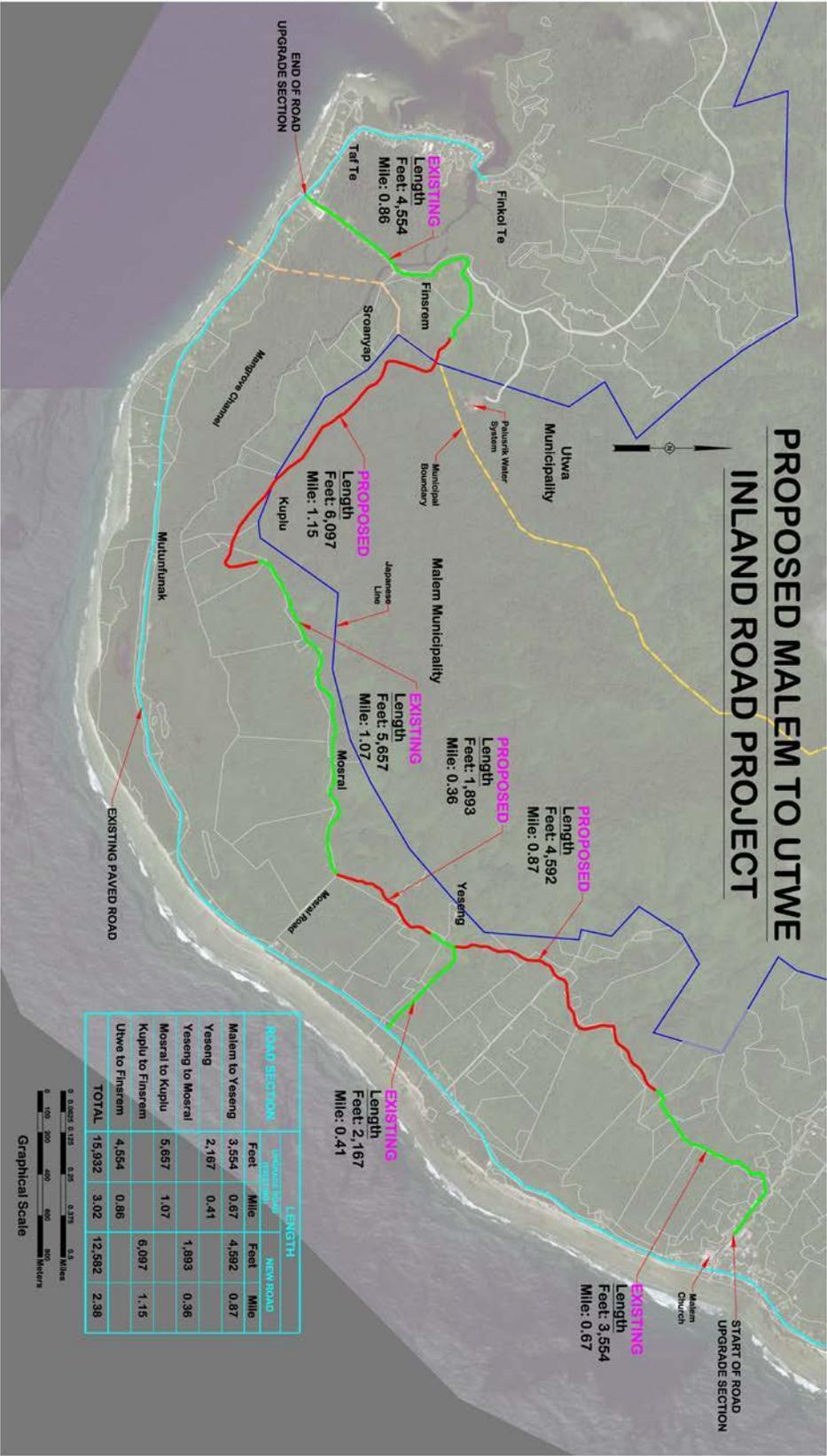
(6.2) Provide monthly reports on completed tasks on a monthly basis

(6.3) Provide a Final Report, within 30 days after completion of the assignment.

7. Duration

The consultancy will be for a period of 12 months.

PROPOSED MALEM TO UTWE INLAND ROAD PROJECT



ROAD SECTION	EXISTING ROAD		NEW ROAD	
	Feet	Mile	Feet	Mile
Malem to Yeseng	3,554	0.67	4,592	0.87
Yeseng	2,167	0.41		
Yeseng to Mooral			1,893	0.36
Mooral to Kuplu	5,657	1.07		
Kuplu to Finsream	4,554	0.86	6,097	1.15
Utwe to Finsream				
TOTAL	15,932	3.02	12,582	2.38



Graphical Scale