

Map of Maldives

Map of Addu City – Southern Most Atoll of Maldives

Figure-1: Map of Addu City

2. Objectives

The primary objective of the project is to establish an efficient and a safer land link between the islands of Hithadhoo and Hulhumeedhoo, resulting in reduced transfer times for goods and passengers by sea. The anticipated total length of the link is approximately 14-15 km, with the exact length pending confirmation after determining the bridge landing points upon completion of this exercise. The comprehensive design of the link may extend beyond the bridge itself to include associated highway link road, coastal, and shore protection elements if required.

The project site encompasses navigation channels, harbours, a port, and Environmentally Protected Areas, in addition to operational and newly reclaimed resort islands. Concurrent construction efforts are in progress for the development of roads, bridges, and land reclamation and shore protection works in the area. These developments anticipate a significant increase in both land and marine traffic in the area. The location of the islands where the proposed link is envisioned is depicted in Figure 2.

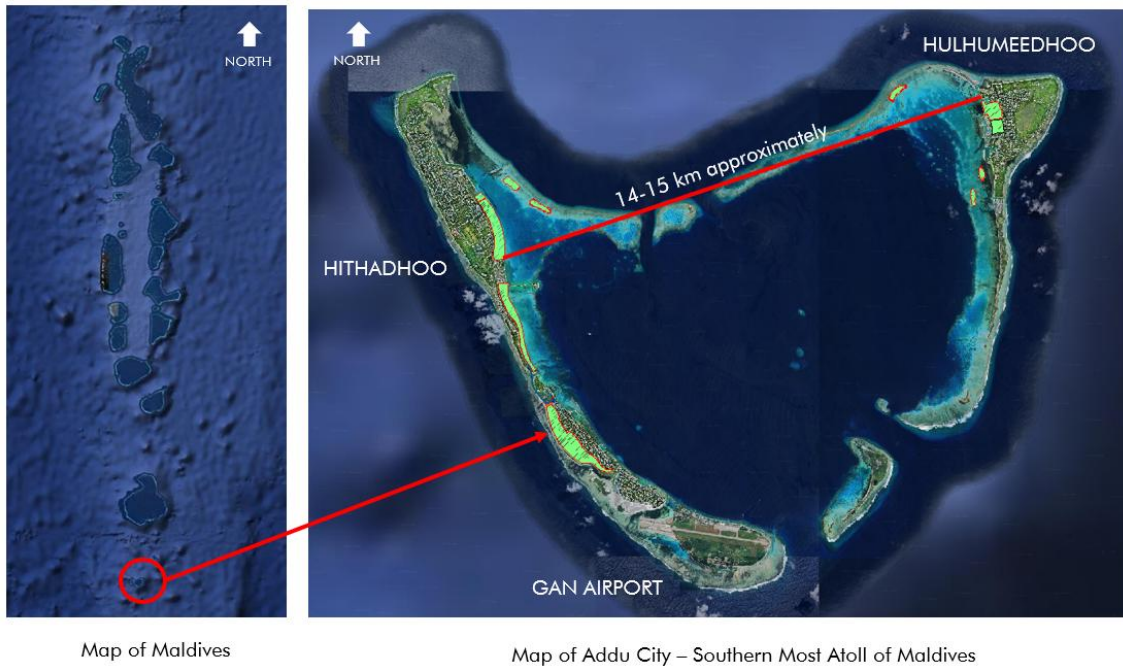


Figure-2: Map of Addu City showing the location of Hithadhoo and Hulhumeedhoo island where the link has been proposed

On behalf of the Government of Maldives, the Ministry of Construction, Housing and Infrastructure (MCHI) will serve as the Implementing Agency for the project. Implementing Agency will be the lead agency in coordinating with the stakeholders and beneficiaries during the pre-construction and construction phase. Implementing Agency shall also provide support in getting any necessary information to achieve compliance to the necessary local laws and regulations.

3. Scope of Services

Government of Maldives now seeks a consultancy firm for development of the detailed employer's requirement, survey, technical documentation and bidding documents for the engagement of a Design and Build Contractor to construct the 3 bridges, other coastal structures and link road (hereinafter collectively to be referred as the "Project").

The specific services shall be the following but not limited to:

- a. Review all existing documentation on the Project and assist the government in defining the functional and aesthetical requirements of the Project;
- b. Prepare detailed Employer's requirements including Specimen Design, Definition Drawings, Design Criteria, Technical Specifications for the Project;
- c. Carry out feasibility study and an economic impact assessment for the proposed Project;



- d. Carry out preliminary cost estimate of the Project;
- e. Carry out the Topographic and Bathymetric Surveys required to prepare the Specimen Design;
 - 1. Topographic Survey
 - 1.1. Surveys should be carried out in reference to the existing Permanent Station Marks (PSMs) established in each island. In case if PSMs are not established within the islands, the surveyor shall establish a PSM as per the guidelines set by the Ministry of Finance and Planning.
 - 1.2. The survey must provide a comprehensive depiction of the landscape, encompassing detailed representations of physical features and infrastructure elements and elevation data taken at an appropriate grid interval. This includes capturing the centreline and edge lines of roadways clearly demarcating plot boundaries at potential landing points. Additionally, the survey must delineate key geographical aspects such as harbours, ports, shoreline limits, high and low water levels, inland lakes, ponds, mangroves, and areas characterized by swampy ground. Detailed attention should be given to mapping all vegetation, particularly significant trees. Furthermore, the survey should illustrate additional features such as streetlights, utility distribution boxes, CCTV camera poles etc.
 - 1.3. Survey and the resulting maps should be completed to international and local standards, and should be acceptable to the Employer.
 - 1.4. All distances used in the surveys should be in metric unit system and all angles should be in degrees, minutes and seconds.
 - 2. Bathymetric Survey
 - 2.1. Performing marine investigations and mapping of underwater features of the sea bed.
 - 2.2. Mapping the contours of the seabed in both deep and shallow waters along the alignment.
- f. Carry out the Environmental Impact Assessment of the Project as per the Environmental regulations of the Maldives and the guidelines of Environmental Protection Agency of the Maldives;
- g. Prepare tender and contract documentation in accordance with the requirements of the Ministry of Finance and Planning. Tender documentation must include Instruction to Bidders, General and Specific Conditions of Contract (form of contract shall either be FIDIC Yellow or Silver Book), Technical and Financial capacity evaluation criteria, Employer's Requirements including Technical Requirements, Schedule of Rates and any other documents deemed required for the successful seeking of a Construction Contractor on a design and build basis;
- h. Notwithstanding any specific references, there is presumption that all the design Services for the Project, shall be carried out in accordance with Eurocodes.
- i. Assistance to Client during tender evaluation process and selection of a suitable contractor;
- j. Incorporate any additional requirement of the Funding Agency / Institute

In addition to the above the Consultant is tasked with exploring various options in collaboration with the Employer and relevant stakeholders to determine the most economically feasible and technically viable solution for the link. It is imperative to ensure that the bridge alignment avoids conflicts with marine traffic in and around port, harbours and resort islands. Additionally, the profiles must guarantee sufficient clearance for navigation channels, facilitating unimpeded passage for marine vessels.



4. Reporting

Competencies of the Project Team Monthly consultant's performance report thereafter describing of key issues, cost status, schedule status with achievements, any other necessary information, as required must be submitted in addition to the following reports for each Phase of the consultancy.

- a. Inception report within two weeks of contract signing– outline work plan of the consultant, team composition, and updated work schedules with key milestones as per the scope of works assigned in article 4.0.
- b. Preliminary conceptual design report, feasibility report and economic impact assessment report for government discussion and approval. This report shall be presented to relevant government agencies.
- c. Design and Build Tender document comprising of the Employer's requirement and other documents for bidding.
- d. Monthly consultant's performance report thereafter describing of key issues, cost status, schedule status with achievements, any other necessary information, as required.
- e. Tender evaluation report.

5. Competencies of the Project Team

All engineering work shall be performed by experienced personnel, and the Consultant shall use the necessary tools to perform the engineering work in a professional manner and in accordance with accepted engineering practices.

The scope of works listed above broadly requires competencies in civil, structural, mechanical, electrical engineering, surveying and construction management, pre-construction, construction and post-construction.

As a minimum the consultant's team shall comprise of these experts with the minimum qualifications and carry out the following responsibilities. Use of local professionals is highly encouraged where available;

The key expertise required for consulting services and construction supervision is:

1.1. Team Leader

1.1.1 Qualifications;

- a. He/She should be graduated at university level in the civil/structure disciplines and have at least 20 years working experience after graduation. Experience shall also include at least 10 years experience of bridge design and construction projects.
- b. The Team Leader shall have extensive knowledge and experience in planning, administration, detailed design, tender documents and the construction of bridge infrastructure.

1.1.2 His/her responsibilities shall include but not be limited to:

- a. Overall coordination of the Consultant's team of experts and any other matters related to the smooth execution of the consulting services contract.
- b. Overall responsibility for management and the project liaison with the Client, and all authorities concerned with matters relevant to the design;



- c. Responsible for provision of Specimen Design, review of Detailed Design and Tender Documents and any other information necessary, assessing the requirements, organization of personnel review of surveys and obtaining Client's approval;
- d. Responsible for selection of contractors, tender evaluation and construction supervision;
- e. Responsible for all progress reporting, financial control, advice to the Client on all measures to improve efficiency;

In addition, the following services are expected to be carried out by the Consultants' team. Consultant is required to submit their experts with the minimum years of similar work experience for not less than 7 years and education qualification of the proposed expert required to carry out the services.

1.2. Bridge Engineer	<ul style="list-style-type: none"> a. Review and assessment of all available data and information related to the bridge to provide the Employer with the functional and aesthetical design concept based on the Employer's requirement b. Prepare the Employer's requirement which includes the technical specifications for the Design and Build tender document c. Review the tender documents and assist in the technical evaluation of the bids
1.3. Procurement Specialist	<ul style="list-style-type: none"> a. Preparation of tender documents consisting of instruction to bidders, general and particular conditions of contract, technical documentation and schedule of rates. b. Assist in tender evaluation and preparation of evaluation report for government review and concurrence, preparation of draft contract documents.
1.4. Geotechnical Engineer	<ul style="list-style-type: none"> a. Review and assessment of all available data and information related to the subsoil condition, foundation and pier designs to provide the input during the pre-construction phase.
1.5. Services Engineer	<ul style="list-style-type: none"> a. Review and assessment of all available data and information related to the services to be incorporated into permanent works and provision for future requirements.
1.6. Quantity Surveyor	<ul style="list-style-type: none"> a. Review and assessment of all available data and carry out the Cost estimation works.
1.7. Environmental Engineer (should be a registered consultant at Environment Protection Agency)	<ul style="list-style-type: none"> a. Preparation of an environmental and social management plan for the construction works. b. Carry out the Environmental Impact Assessment for the Project.



6. Deliverables

All final reports and documents will be submitted in English in 1 (one) hard copy, and 1 (one) electronic copy. Draft reports and documents may be submitted to the Client electronically.

All reports and documents will be submitted in Draft. The Client will review the reports and documents and provide comments to the consultant within 2 (two) weeks of receipt.

7. Duration

The successful party must be available to commence the services in April 2025 and the maximum duration to complete the services is 6 months.

8. Services and Facilities Provided by the Client

- a) The Client will furnish all available and related data, maps and information required for the execution of the services.
- b) The Client will assign counterpart personnel for the purpose of liaison with other Government agencies.
- c) The Client will make available a focal person to co-ordinate procurement approvals, and other clearances, approvals as required from the Client (with technical assistance provided by the consultant as necessary).