सुचना !!! सुचना !!! सुचना !!!

प्रथम पटक प्रकाशित मितिः २०८१/१२ /०५

प्रस्तुत विषयमा यस कम्पनी अन्तर्गत ललितपुर शाखा कार्यालय मातहतमा रहेको फर्पिङ खानेपानी प्रणालीमा तपशिल बमोजिमको परामर्श सेवा सम्बन्धि कार्य गर्नु परेको हुँदा यस कम्पनीमा आजको मिति सम्म सुची दर्ता भएका कम्पनी / फर्महरुलाई के कति दर रेटमा काम गर सकिन्छ ? यो सुचना प्रकाशन मितिले ३ दिन भित्र Term of Reference (TOR) मा उल्लेख भए अनुसार प्रस्ताव (RFP) पेश गर्नु हुन सबैलाई जानकारी गराईन्छ |

तपशिलः

S.N	Description of Works	Estimated Amount
1	Preparation of Detail Project Report of Water Sources under Lalitpur Branch Office at Pharping System	3,99,843.67

Terms of Reference (ToR) for Water Supply Project for Kathmandu Upatyaka Khanepani Limited (KUKL)

1. Introduction

Kathmandu Upatyaka Khanepani Limited (KUKL) intends to assess and improve the existing Pharping water supply system by conducting a detailed study. This study includes discharge measurement, topographic mapping, distance measurement, GIS-based attribute mapping, and preparation of a **Detailed Project Report (DPR)**.

Pharping water supply system consists of mainly four underground water sources named as Sheshnarayan, Satmul, Kuturi and Phasidol. There is varying size of transmission main, major pipe size is 200mm dia HDPE/DI, 500mm dia DI, 250mm dia DI and 200mm dia DI. From the water source Sheshnarayan and Satmul, water collected at Pharpinh headpond where as from Kuturi and Phasidol, water collected at Pharping pump house.

2. Objectives

The key objectives of this project are:

- To **measure the discharge** at the source for a period of **five months**, with a minimum of **one measurement per month**.
- To **prepare a topographic map** of all existing structures related to the water supply system.
- To **measure and document the distance and elevation** between the **source and water treatment plant**.
- To **develop a GIS-based attribute map** of the water supply system.
- To **prepare a Project Report**

3. Scope of Work

The scope of work includes but is not limited to the following tasks:

3.1 Discharge Measurement

- Identify key locations for discharge measurement.
- Measure discharge using standard methods (e.g., flow meter, weir, or volumetric method).
- Conduct measurements **once every month for five months**.
- Analyze seasonal variations in discharge.

3.2 Topographic Survey

- Conduct a detailed topographic survey of all **existing structures** including sources, pipelines, reservoirs, pipe material, sluice valve and treatment units.
- Use **total station, GPS, or drone survey** for data collection.
- Prepare **contour maps and elevation profiles**.

3.3 Distance Measurement

- Measure the distance and elevation profile **between the water source and water treatment plant** using GPS and survey instruments.
- Identify elevation differences and key geographical challenges along the pipeline route.

3.4 GIS-Based Attribute Mapping

- Collect spatial data on water supply infrastructure.
- Develop a **Shape file** of intake pipelines, reservoirs, and treatment plants and other units.
- Generate thematic maps showing **existing infrastructure, elevation variations, and water source locations**.

3.5 Preparation of Detailed Project Report (DPR)

- Compile all collected data into a **comprehensive report**.
- Provide **analysis and recommendations** for water supply improvement.
- Include **technical designs, maps, and cost estimates**.
- Ensure the report aligns with **KUKL and government standards**.

Note: - Consultant should submit suitable design layout to remove

4. Methodology

The methodology for the study includes:

- **Field surveys** using modern surveying tools.
- **Hydrological data collection and analysis**.
- **GIS-based mapping and database development**.
- **Stakeholder consultations and site visits**.
- **Compilation of findings into the DPR**.

5. Deliverables

The project will deliver the following outputs:

1. Monthly **discharge measurement reports**.
2. **Topographic maps** of all existing structures.
3. **Distance measurement report**.
4. **GIS-based attribute maps**.
5. **Detailed Project Report** including findings.
6. **One time report presentation**

6. Project Duration

The estimated duration for the project is **six months**, which includes four months of discharge measurement and two months for data processing and reporting.

7. Team Composition

The project team will include:

- **Hydrologist/Civil Engineer** (1) – Responsible for discharge measurement.
- **Surveyor** (1) – Responsible for topographic and distance measurement.
- **GIS Expert** (1) – Responsible for GIS mapping.
- **Report Analyst** (1) – Responsible for DPR preparation.

8. Reporting and Coordination

- The consultant will **report to KUKL** at key milestones.
- Monthly progress reports will be submitted.
- The final report will be presented to KUKL with recommendations.

9. Budget and Payment Terms

- The total project budget will be agreed upon between KUKL and the consultant.
- Payments will be made after the submission of report.

10. Conclusion

This project aims to **enhance the efficiency of KUKL's water supply system** through scientific data collection and GIS-based analysis. The final report will serve as a foundation for future improvements and infrastructure development.
