****

**…….**

**Municipality**

**Terms of Reference (ToR)**

**For**

**Preparation of Detailed Project Report for Construction of Primary Hospital (10-Bed)**

**…..**

**2077, Kartik**

# **Introduction**

………………….Municipality in the fiscal year 2077/78 in its annual planning and budgeting has proposed the construction of primary hosptial (10-Bed) Type B2 in ward number ……………..In line with the proposed plan ……………………..Municipality seeks to outsource the consulting services for preparation of project detailed project report (DPR). In order to outsource the competent Consulting firm this Terms of Reference (ToR) has been prepared for the preparation of the detailed project report for the 10 bedded primary level Type B2 hospital in …………………….Municipality.

# **Objectives**

The main objective of the ToR is,

* To procure a consultancy service for the preparation of the detailed project report (DPR) of 10 bedded primary level Type B2 hospital

The specific objectives of the TOR are to procure theconsultancy services for:

* Carrying out detailed need assessment.
* Conduct topographical survey of the proposed hospital building project site
* Carrying out the detailed geotechnical investigations, and possible multi-hazard risk assessment of the project site and incorporate the findings in the design process to make the construction multi-hazard resilient.
* Preparation of detailed architectural design and drawings, structural design and drawings, electrical design and drawings, sanitary design and drawings and HVAC design and drawings of the proposed hospital building in compliance with Nepal National Building Code (NNBC), Health Building Infrastructure Design and Construction Guidelines 2074 B.S, MoHP, instructions received from Federal Ministry of Health and Population (MoHP) if any and other national/international codes and standards/guidelines.
* Preparing the detailed quantities and cost estimates, analysis of rates, technical specifications, and Bill of Quantities (BOQ) and tender documents for the proposed hospital building project.

# **Scope of the work**

The consulting firm under this terms of reference (TOR) will be required to prepare the DPR in close coordination with the authorities from ……………. Municipality. The consulting should deliver the following documents and services in phases in the process of the preparation of the final DPR.

## **3.1 Detailed Topographic Surveys**

Consultant shall heve to consult topographic survey to determine understand the detailed land profiles and features.

* Conduct an engineering survey of the site to prepare a topographic map of the site using survey tools such as total station, theodolite, and other necessary equipment.
* The map should be prepared in 1:1000 scale with the following features
	+ Should show major contours in 2m interval and minor contour in 0.5m interval
	+ Indicate spot levels and contour labels.
	+ Indicate all the existing features of the site
	+ Should incorporate at least 4 nos. of land profile and cross‐section of the site.
	+ A comparative study should be done with the cadastral map and should be mentioned clearly in the survey report.
* The final submission of the map should be made in the softcopy with 3 sets of hard copies to the ………….. Municipality

## **3.2 Detailed Geotechnical Investigations & Possible Multi-hazards Risk Assessment**

###  **3.2.1 Scope of geotechnical investigations shall be as follows:**

* Borehole advancement to 15 meters at least 3 locations. The number of holes will be decided as per the provisions made in the Building Byelaws 2064 and 2072 B.S
* Standard penetration tests (for Dynamic Cone penetration; if required) at 1.5 m interval;
* Collection of disturbed samples at a regular interval
* Collection of at least two undisturbed samples in each bore holes
* Groundwater table observation
* Laboratory test and analysis of data to determine the engineering properties;
* Technical report of the investigation work;
* Predict liquefaction of soil strata and recommend necessary preventive measures against liquefaction;

The above‐mentioned depths and number are indicative. The Consultant shall decide the required depth of soil investigation according to the field condition and design parameters.

### **3.2.2 Scope of Multi-hazards Risk Assessment shall be as follows:**

The Consultant shall conduct a study on assessment of possible risks/hazards of the proposed site based on the primary and secondary data.

* Conduct hydro-metrological studies.
* Land use condition and watershed management
* Conduct study of past disasters events in the proposed region
* Identify the possible risks and its recommendations for mitigation measures

## **3.3 Prepare Detailed Architectural / Engineering Design**

##### Architectural and all Engineering Design including Structural, Electrical, Sanitary, and HVAC

* Prepare a masterplan of the Hospital showing all the existing services and the layout of the proposed structures including proposed landscaping.
* Prepare detailed architectural and engineering design and working drawings for the construction of all the buildings and supporting infrastructures. The detailed drawings must include architectural, structural, electrical, water supply and sanitary and HVAC including the landscape design in compliance with the prevailing Nepal National Building code, Health Building Infrastructure Design and Construction Guidelines, MoHP 2074 B.S, instructions received from Ministry of Health and Population (MoHP) if any and other relevant national/ international code and practices.
	+ Building structure includes
		- 10 bed primary hospital type B2 comprising the facilities as provisioned Nepal Health Infrastructure Development Standards (NHIDS) 2074 B.S and Minimum Service Standard (MSS) 2076 B.S.
	+ Other infrastructures and services
		- Access Road and drainage works,
		- Compound wall
		- Retaining wall,
		- MGPS (Medical Gas Plant System) if required in consultation with MUNICIPALITY,
		- The water treatment plant if required in consultation with MUNICIPALITY,
		- Hospital waste management area,
		- Landscaping including parking areas and garages for ambulance,

## **Preparation of detailed cost estimates and procurement documents**

The consultant shall prepare the detailed quantity estimates, analysis of rates, cost estimates, bill of quantities, technical specifications and procurement documents for the works.

# **Deliverables**

The final deliverable and reporting shall be done making the volumes as following:

* 1. Survey Design report – Volume 1
	2. Geotechnical Soil investigation report – Volume 2
	3. Design and Drawings – Volume 3
		1. Architectural design
		2. Structural Design
		3. Sanitary Design
		4. Electrical Design
		5. HVAC Design
		6. Landscape design
	4. Estimating and costing, analysis of rates, specifications, BoQ and tender document- Volume 4

**Detail requirements of the design, drawings and reports are listed below:**

1. **Architectural Working Drawings**
	* + Site plan (1:200) (must show at least site layout, setbacks, land uses and features of land around the site, spot levels and contours, pavement and landscaping work, location of services (water tank, soak pit, septic tank, and placenta pit), entrance gate, north orientation, fencing, etc.
		+ Floor plans (1:100)
		+ Furniture layout plans (1:200)
		+ Finishing schedule plans (1:200)
		+ Four side Elevations (1:100)
		+ 3D
		+ Longitudinal sections (at least from two direction cutting staircase)
		+ Door and window schedule with counts and detailed drawings and specifications.
		+ Typical wall section details
		+ Blow up Details (Staircase; toilets; sill, lintel, parapet, overhangs, ducts, expansion joint, flooring, roofing and counter detail; low walls or partitions detail; handrail; any other if required to illustrate any design idea other than mentioned here need to be prepared.
		+ Blow up details and sections should be cross-referenced with the related small-scaled drawings and Key plans.
		+ Design Report
2. **Detail Structural Working Drawings**
	* + Detailed Drawing of foundation (Isolated, combined or raft/ pile if necessary)
		+ Column Layout plans, Column Details
		+ Beam-Column Junction Details
		+ Water Tank detail and drawing
		+ Tie Beam, Toe wall, Sill Band, Lintel Band & parapet band detail drawing
		+ Beam Layout plan
		+ Beam sections
		+ Slab Reinforcement Details
		+ Staircase Details
		+ Other Roofing like Truss details if required
		+ Ramp details
		+ Retaining wall detail
		+ Other necessary details as required
		+ Design report
3. **Detailed Electrical Design and Drawings**
	* + Lighting and fan layout plan
		+ Power (general and AC point) layout plan
		+ Telecommunication and networking cable layout plan
		+ Power backup system plan
		+ Sound system plan
		+ Fire alarm system
		+ AC unit plan
		+ Lightning arrester and earthing detail
		+ Main Distribution and distribution board design (single line diagram)
		+ A sheet of drawings specifying the standard dimension and position for the placement of the switches, plug sockets, height of hanging light, or wall light.
		+ Design report
4. **Detailed Water Supply, Sanitary and firefighting System Design and Drawings**
	* + Soil and waste pipe layout plan (specifying required slope)
		+ hot water and cold-water layout plan
		+ Rainwater harvesting plan and details.
		+ Section details of piping at the critical locations such as ducts bends etc.
		+ Isometric illustrations for the piping
		+ Toilets and other sanitary fixtures layout plan
		+ Blowup sections showing fixtures specifying height from the floor and floor slopes.
		+ Septic tank and soak pit details
		+ Stormwater flow in the site plan.
		+ A sheet of drawings specifying the standard dimension and position for the placement of the fixtures and fittings.
		+ Firefighting system
		+ Design report
5. **Detailed HVAC Design and Drawings**
	* + Ducting and outlet layout plan
		+ AC unit plan
		+ A sheet of drawings specifying the standard dimension and position for the placement of the ducts, joints, and fixing details.
		+ Design report
6. **Detailed Landscape Design and Drawings**
	* + Landscape plan layout
		+ 3D visualization
		+ Working details of landscape furniture, pavements, curbs, etc.
		+ Design report explaining the design concept and specifications of the items.
		+ A sheet of drawings specifying the standard dimension and position.

##### Design Report

The consultant shall submit a detail engineering survey report, geotechnical investigations report, architectural design process report, structural design analysis report, electrical design report, and sanitary design report as part of the DPR.

##### Specification

The consultant shall submit the detailed specification of all the above-mentioned works.

##### Quantity, Cost Estimates, Analysis of rates, and tender documents

The consultant shall estimate the quantity of applying accepted methods. The cost estimate shall be carried out based on district rates and approved Government Norms. The rate analysis of each item and the tender document for the project execution shall be prepared.

# **Process of finalizing the Deliverables**

The consultant shall submit the reports to the Municipality in following sequence:

## **10.1 Inception Report**

This is the preliminary report. The inception report is expected to broadly outline the format of the final report. This will enable the consultant the opportunity to organize and define the course of actions for the preparation of proposed DPR. In pursuance to enhance a greater knowledge base and receive expert views on the different activities of the proposed study, the consultant is required to hold interactions with experts as well as key personnel of the proposed hospital. This report should include the site survey report, geo-technical site investigation report and multi-hazard risk assessment report with detailed methodology. Any practical comment and required modification to the TOR must be clearly stated in the report so that necessary actions can be initiated. A detailed work schedule must also be submitted along with this report. The inception report shall be submitted in two copies within 15 (Fifteen) days from the date of the agreement.

## **10.2 Preparation of Draft Report with Conceptual Design**

After submission of the inception report, the consultant must make a field visit of the proposed site to conduct needs assessment and observation before the conceptual design and drawings of the proposed construction work is initiated to reflect the ground reality in the design work. The consultant must submit the conceptual design and masterplan of the proposed facility construction within 45 (Forty five) days from the date of the agreement with a draft report defining the process of preparation of conceptual design. Draft report must also include approximate cost estimate of the total project. The draft report must be presented to Municipality and other concerned stakeholders for discussion. The presentation meeting will be organized by Municipality. The agreed feedback and suggestions received during the presentation must be listed by the consultant to make necessary corrections on the draft designs.

## **10.3 Preparation of final report (DPR)**

After incorporation of the feedback received from the stakeholders meeting, draft final architectural design must be prepared and once again presentation made to Municipality and the stakeholders until an agreement on the draft design in achieved. Once the final draft is agreed the consultant must proceed with finalizing the architectural drawings and based on the final architectural designs the following designs should also be developed.

The final DPR must be submitted with 5 copies of all sets of drawings with soft copy within the 75 (Seventy five) days from the date of the agreement. The sets of drawings must include following drawings:

## **10.4 Time schedule for submission of the Report**

|  |  |  |
| --- | --- | --- |
| **Report Submission Phases** | **Copies** | **Time** |
| Inception Report | 2 | 15 days from the date of Agreement |
| Draft Report with Conceptual Design  | 2 | 45 days from the date of Agreement |
| Final Report | 10 | 75 days from the date of Agreement |

# **Composition of the Consultant's team**

The composition of the consultant's team for the proposed task shall not be limited to as follows:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SN** | **Description** | **Person** | **Person month** | **Minimum Qualification** |
|  | **Key Expert** |  |  |  |
| 1 | Team Leader /Architect | 1 | 2.5 | Bachelor in Architecture and master’s degree in architecture/ urban planning / urban design/housing with minimum 7 years of experience in the related field  |
| 2 | Structural Engineer | 1 | 1.5 | Masters in Structural/Earthquake Engineering with a minimum of 7 years of experience in the related field |
| 3 | Architect | 1 | 1.5 | The architect must have a Bachelors’ degree in Architecture and a minimum of 6 yrs of experience in the related field. |
| 4 | Civil Engineer/Quantity Surveyor | 1 | 1.5 | Civil Engineers must have a Bachelors’ degree in Civil Engineering and a minimum of 5 yrs of experience in the related field. |
| 5 | Sub Engineer/Draft Person | 2 | 1 | Diploma in Civil Engineering and 3 years relevant experience after diploma |
|  | **Non-Key Expert** |  |  |  |
| 1 | DRR Expert | 1 | 0.75 | Masters in Earthquake Engg/ Structural Engg/ DRR/ DRM /climate change and a minimum of 3 yrs. of experience in the related field. |
| 2 | Electrical Engineer | 1 | 0.75 | Bachelor's degree in Electrical Engineering and a minimum of 3 yrs. of experience in the related field. |
| 3 | Civil/ Sanitary Engineer | 1 | 0.75 | Bachelor's degree in Civil/ Sanitary Engineering or any other related field and a minimum of 3 yrs of experience in the related field. |
| 4 | HVAC Expert | 1 | 0.5 | Bachelor's degree in mechanical engineering or any other related field and a minimum of 3 yrs of experience in the related field. |
| 5 | Procurement Expert | 1 | 0.5 | Bachelor's degree in Civil Engineering / Masters in Construction mangement or any other related field and a minimum of 3 yrs of experience in the preparation of procurement document/ related field. |

The Key Experts CV is required only for Evaluation.

# **Mode of Payment**

The payments shall be made in three installments. Each installment shall be paid only when the required reports are submitted and accepted by the Municipality. In each report, the contents, formats, and copies to be submitted should be strictly maintained as mentioned above. The details of the period for various report submission, payment amount, and the report to be submitted are shown in the following table.

|  |  |  |  |
| --- | --- | --- | --- |
| **No. of installment** | **Period** | **Payment in % of the total contract amount** | **Report to be submitted** |
| First | Within 15 days | 20% | Inception report |
| Second | Within 45 days | 40% | Draft-final report with conceptual design |
| Final | Within 75 days | 40% | Final report (DPR) |

# **Client’s Input and Counterpart Personnel**

Client (MUNICIPALITY) will provide all the available information, studies, reports, and documents relevant to the hospital building design and development to the consultant. Client will also appoint an authorized representative to help the consultant’s team to organise discussions and meeting with the related stakeholders for the purpose of development of the DPR and coordinate with concerned authorities to provide access to the consultant’s team the construction site and available information.

# **Consultant’s Obligations**

Consultant is required to review and understand the scope of services and be able to produce the acceptable deliverables as outlined in the TOR. Consultant must organize and manage necessary experts and support staff members transportation and logistics required to complete the proposed DPR and accordingly quote all the financial requirements in their financial proposal.

# **Duration of Services**

The intended commencement date for the Consulting Service is Kartik 2077 (Approximately) and the period of execution of the contract will be 75 days from the date of agreement.

# **Evaluation of Consultant’s EOI Application**

Consultant’s EOI application which meets the eligibility criteria will be ranked on the basis of the Ranking Criteria.

**i) Eligibility & Completeness Test**

|  |  |  |
| --- | --- | --- |
| **S.N.** | **Criteria Title** | **Compliance** Yes/No |
| 1. | Corporate Registration Certificate |  |
| 2. | VAT/PAN Registration.  |  |
| 3. | Tax Clearance/Tax Return Submission/Letter of Time Extension for Tax Return Submission. |  |
| 4. | EOI Form 1: Letter of Application |  |
| 10. | EOI Form 2: Applicant’s Information Form |  |
| 6. | EOI Form 3: Experience (3(A) and 3(B)) |  |
| 7. | EOI Form 4: Capacity  |  |
| 8. | EOI Form 10: Qualification of Key Experts |  |
| 9. | Power of Attorney in case if JV. |  |
| 10. | Self-Declaration |  |
| 11. | Adherence to code of ethics and Anti-corruption Policy. |  |
| 12 | The Lead firm must have Minimum 10 years of Experience. |  |

**ii) EOI Evaluation Criteria**

**A .Qualification**

|  |  |  |  |
| --- | --- | --- | --- |
| **SN.** | **Criteria** | Minimum Requirement | Score (Out of 100 %) |
| **1** | Qualification of Key Experts | As Per ToR | Mark Allocated 40 |
| **2** | Experience of Key Experts | As Per ToR |

|  |  |  |  |
| --- | --- | --- | --- |
| **SN.** | **Criteria** | Minimum Requirement | Score (Out of 100 %) |
| 1. | General Experience of the Consulting Firm | Experience in Preparation of any engineering consultancy service successfully completed within last 7 years.  | Mark Allocated 45 |
| 2. | Specific Experience of the consulting Firm | Experience in Detailed Engineering Survey Design/ DPR of Academic building/Institutional building/10 Bed Hospital Buildings within last 7 years. |
| 3. | Similar Geographical Experience of the consulting Firm. | Experience in Preparation of any engineering consultancy service successfully completed within last 7 years in the Similar Geographic Region.  |

1. **Capacity**

|  |  |  |  |
| --- | --- | --- | --- |
| **SN.** | **Criteria** | Minimum Requirement | Score (Out of 100 %) |
| 1. | Financial Capacity | Minimum Average annual turnover of best three year = ……………. of last seven years. | Mark Allocated 15 |
| 2. | Infrastructure/equipment related to the proposed assignment | Office Spaces, Survey Equipment, Geotechnical investigation Equipment, Vehicles, software, etc. |

**Pass Mark: 70 Marks**

Note: In Case, a corruption case is being filed to Court against the Natural Person or Board of Director of the firm/institution /company or any partner of JV, such Natural Person or Board of Director of the firm/institution /company or any partner of JV such firm’s or JV Expression of Interest (EoI) shall be excluded from the evaluation, if public entity receives instruction from Government of Nepal.

**Adherence to Code of Ethics and Adherence to Anti-Corruption Policy**

##### Commitment for code of ethics

We follow the following code of ethics and committed for:

* We consider humankind as a family, hence we do not discriminate any one by religion, cast and gender.
* As a follower of social and economic justice, we speak and act truthfully and with compassion, dealing fairy with all, avoiding prejudice and hatred.
* As a business entity, topmost priority is given on confidentiality of data, works, analysis, result or information and without proper authority of the respective client, will not published or given or made available to anyone.
* We fully abide by the work done by us undertaking full responsible about the authenticity and accuracy of our service.
* Being a legal entity, the company understand, respect and comply with all of the laws, regulations, policies and procedures that apply in the Nepal.

……………………..

Authorized Signature in blue ink: Name and Title of Signatory: Name of Consulting Firms:

Seal of Consulting Firm: Address:

**Note: If you agree on the above statement, please sign to indicate your commitment.**

##### Commitment for adherence to anti-corruption policy:

We, incorporated under Nepal Company Act, are a legal body and we fully abide by the laws of the land. Our policies prohibit offering and kind of bribes to anyone in the course of obtaining contract. All the officials in the company are fully committed to abide by the act.

………………………….

Authorized Signature in blue ink: Name and Title of Signatory: Name of Consulting Firms:

Seal of Consulting Firm: Address: