

## **TERMS OF REFERENCE**

### **NRA District Support Engineer**

#### **1. Background**

Nepal spans nearly 1000 km of the central part of the 2,400 km long Himalayan arc. Nepal is vulnerable to a large number of natural as well as man-made disasters. In particular, Nepal is prone to large-scale and damaging earthquakes which have been recorded over the centuries. This is the result of the movement of Indian plate moving northward and colliding with the southern part of the Eurasian plate. This is occurring at a rate of 2cm per year and results in the build-up of stress across an 80-100 km stretch from higher Himalaya to the Churia range. The April 25, 2015 earthquake was the result of this movement, similarly with other earthquakes that have occurred in the past in this region.

Established in December 2015 the National Reconstruction Authority (NRA) is tasked with the oversight and coordination of the reconstruction effort in Nepal. This includes the registration of affected households, the distribution of reconstruction grants, supporting central, district and local level line ministries in the reconstruction approach and coordinating with Partner Organisations.

#### **2. Problem Statement**

The Department for Urban Development and Building Construction (DUDBC) has provided a guideline for the monitoring of rural re-construction and distribution of subsequent grants. A number of issues are seen with the quality of construction, field level monitoring and clarity of the existing processes to document, escalate and resolve technical issues as discovered in the field as well as clear guidance to resolve grievances, provide specific technical guidance to masons and homeowners and to issue cease and desist orders. There are a large number of relatively new engineers in the field and the number of experienced engineers that can support them, given the distances and remote locations is very limited.

#### **3. Objective**

District Support Engineer (DSE) primary role is to find ways to help the government, engineers and community accelerate seismic resistant reconstruction in accordance with government policies and regulations, sensitive to community concerns and needs. They are hired and trained to support, mentor, coach and troubleshoot operational blockages in the districts with the aim of significantly increasing safe house construction and resolve the grievances and technical faults. The DSE will be embedded into existing District Level NRA teams to support, identify and collect feedback in districts to map the technical issues. In turn, issues that require only correct messaging and training could be guided at the district level itself. The issues that need decision at central level need to be quickly escalated to technical team at NRA central level for solutions and undertaking overarching technical decisions. Similarly, workshops will be organized to brainstorm these issues and create a series of training resources and support solutions to feedback to DSE and DLPIU Engineers.

The DSE will be expected to be consistently travel throughout VDC's and Wards, travelling across their district of appointment to effectively carry out their duties as per the TOR.

#### 4. Scope of Work

The DSE will report to the Chief of NRA district office (working as secretariat of District Coordination Committee) under Chief District Officer and will be based in NRA district office. The DSE will carry out the following tasks:

1. Collecting and analysing the issues and undertaking necessary actions:
  - a. Undertake a quick study to gather high level information and collect feedback from VDC/Municipality and district level colleagues regarding existing operational blockages.
  - b. Collect information on technical issues (problems or mistakes being made in commonly adopted construction systems by the house owners, non-compliances to standards and norms). This needs be done through various methods – direct observations and discussions with stakeholders during field visits, documentation by inspection teams, and documentation by Partner Organizations.
  - c. Travel to allocated locations and undertake informal interviews with VDC officials, WCF representatives and community members including POs, material suppliers, masons and contractors to understand local challenges and issues currently restricting re-construction.
  - d. Collect and analyse the problems related to materials, specifications, construction quality, technical details, information and communication, technical skills, or any other issues. Collect photographic evidences to support above objectives
  - e. Identify possible solutions and communication for resolution of problems. These may require – providing details, information and training, developing new IEC materials, inputs to training program, or retrofitting measures in some cases, technical guidance to implement solutions.
  - e. The problems beyond the capacity of DSE, need to be escalated to national level NRA Technical Task Force or any mandated authority to bring about the resolution and then facilitating its implementation.
  - f. Prepare and submit weekly progress report on issues identified and resolution, including actions taken reports.
  
2. Developing training resources and support solutions:
  - a. Participate in District and central level workshops. Workshops will be focused to articulate the priority concerns across the districts, map problems and potential solutions.
  - b. Support in the development, testing and implementation of training materials and content.
  - c. Provide periodic feedback to improve and refine training materials as needed.

3. Support and mentor VDC Level DUDBC engineers and support DUDBC District Level Engineers:

- d. Provide Peer Review of technical issues, advise on best practises, Build Back Safer approaches, safe building construction guidelines and applicable Nepal Building Code to District Level DUDBC Engineers.
- e. Advise on social and administrative issues related to the monitoring and inspection of construction, conflict resolution, approval and release of reconstruction grants.

Facilitate and provide training to District level engineers and relevant colleagues on new developments, conflict resolution, monitoring and inspection guidelines, best practices, use of monitoring technology and software, etc.

## 5. Qualification Requirements

The DSE should meet the following basic qualification requirements;

1. Teamwork Skills:
  - a. Excellent and proven technical, organizational, leadership and teamwork skills.
  - b. Strong communication and interpersonal skills including the ability to write technical reports in English language.
  - c. Knowledge of the Government of Nepal systems and structure, familiarity with NRA /DUDBC procedures is an advantage.
2. Education/Experience/Language requirements:
  - a. A Master's Degree or equivalent in in Earthquake Engineering, Structural Engineering, Civil Engineering or other related fields and disciplines from a recognized university.
  - b. At least three years relevant work experience
  - c. University (Bachelor's) Degree from a recognized institute with five years similar experience will substitute the Master's Degree.
  - d. Relevant experiences will be counted positively.
  - e. A valid motorcycle driving license.
  - f. Excellent written and oral command of English and Nepali languages.

Preferences in selection

Priority	Qualification and experiences	Experience
1	M. Sc (or equivalent) in earthquake Engineering with experiences in LSM buildings	Experiences in design and retrofitting with real implementation of Low Strength Masonry will be special advantage
2	M. Sc (or equivalent) in structural Engineering with experiences in LSM buildings	
3	M. Sc (or equivalent) in geotechnical Engineering who taken the courses of earthquake engineering and working experiences of analysis, design and retrofitting with experiences in LSM buildings	

4	B. E. Civil with at least 5 years of experiences in analysis, design, retrofitting and implementation of building related construction	
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## **6. Duration**

The DSE will be engaged for a period of 6 months with high possibility of extension based on performance.

## **7. Coordination and Communication mechanism**

- a. The DSE should work in close coordination with the respective district level NRA and DLPIU office.
- b. The DSE will report to the Chief of NRA District Office as well as the concerned Division in central level NRA. He/she will also keep the DL-PIU in the loop and maintain regular communications.
- c. The issues that need decision from NRA central level need to be quickly escalated to Technical Task Force at NRA through the respective channel.

## **8. Deliverable and Payment**

The DSE will be paid in monthly basis, upon submission of the monthly report. The payment will encompass the service as well as logistics such as travel, lodging and communications.