1. Full title of the Project and Relevant Report

1.1 Full title of the Project
Urgent Rehabilitation Project: West Bank Bypass Design under the Urgent Development Study on Rehabilitation and Reconstruction in Muzaffarabad City in the Islamic Republic of Pakistan

1.2 Relevant Report
Interim Report,
Draft Environmental Impact Assessment, Draft Land Acquisition and Resettlement Plan

2. Type of the Study
Basic Design + Detailed Design (Urgent Development Study)

3. Environmental Category and Reason for Categorization

3.1 Environmental Category: A

3.2 Reason for Categorization
Pakistan Environment Protection Agency (Review of IEE/EIA) Regulations 2000, Schedule II, lists down the projects requiring an EIA study as under:
The Projects in schedule-II are generally major Projects and have the potential to affect a large number of people. They also include Projects in environmentally sensitive areas. The impact of such Projects may be irreversible and could lead to significant changes in landuse and the social, physical and biological environment.”
Schedule-II describes the requirements of EIA for transportation projects as under:
Federal or Provincial Highways or major roads greater than 50 Million Rupees in value. Maintenance (rebuilding or reconstruction of existing roads) is exempted from the requirement of an EIA.
As per EPA Guidelines, the present Project is classified as “Schedule-II” project that requires an EIA study and approval from the concerned authority, prior to the construction.
The present Project requires an EIA as it involves significant environmental impacts, i.e. resettlement of people and structures, cutting of trees, change in landuse etc.

4. Agency or Institution Responsible for the Implementation of the Project
The Counterpart agency for “the Urgent Development Study on Rehabilitation and Reconstruction in Muzaffarabad City in the Islamic Republic of Pakistan” is “Earthquake Reconstruction and Rehabilitation Authority (ERRA)”. The responsible agency for the implementation of the “Urgent Rehabilitation Project: West Bank Bypass Design” is “National Highway Authority (NHA)”.

5. Outline of the Project (location, proposed activities, and scope of the study)

5.1 Objectives
The main objective of the Study is to conduct basic design and detailed design of West Bank Bypass Project based on the preliminary design conducted under the M/P Study in order to contribute in the urgent rehabilitation and reconstruction of the Muzaffarabad City. The purpose of the Study is to transfer of technology with regard to road and bridge design required for rehabilitation and reconstruction in a disaster prone area with a particular emphasis on the earthquake resistance technology during the implementation of the Project.
5.2 Location
The Study shall cover proposed route alignment selected in the Preliminary Design Phase totaling about 5.0 km starting from the Supreme Court located in Kohala Muzaffarabad Road and ending at the intersection on the northern side of Chela Bandi Bridge on the Neelum Valley Road including bridge crossing site of the Jhelum River.

5.3 Proposed Activities
The project involves construction of a bridge on River Jehlum at Naluchi and construction of 5.0km road from Naluchi to Chela bandi.

5.4 Scope of the Study
The study is broadly divided into two phases, one is Basic Design Phase and the other is Detailed Design Phase.

During the first phase, the Basic Design Study has been conducted from February to March 2007. The road design and structures including the bridge design in the preliminary design level are refined based on supplemental surveys carried out in February. The preliminary quantity survey, construction schedule, project cost estimates, and economic evaluation have been conducted in March. Prequalification documents and PC-1 were also prepared in March.

Under the second phase, the Detailed Design Study has been planned to be conducted from June to September, 2007. The main work in this phase will be to prepare the tender drawings. The design work will also include to develop small structures such as drains, road safety facilities and intersections. In addition, stress analysis for structures, quantity calculation, examination of project costs, preparation of tender document and preparation of the final report are included in the second phase.

The confirmed scope of the design is given below:

(1) Basic Design Phase
Based on the results of Preliminary Design, following key tasks were carried out under the Basic Design Phase:
1) Basic Design
   a. Road Design,
   b. Ancillary Structures,
   c. Intersection Design,
   d. Naluchi Bridge,
   e. Small Bridges and Culverts,
   f. Hydrological Survey,
   g. Disaster Prevention Facilities,
   h. Preliminary Construction Schedule,
   i. Preliminary Cost Estimation, and
   j. Economic Evaluation.
   k. Preparation of EIA report
      - Scoping of the Target Area,
      - Land Acquisition and Resettlement,
      - Effects Derived from Roads, and
      - Other Effects.
2) Preparation of Draft Prequalification (PQ) Document
3) Assistance in Preparation of PC-1

(2) Detailed Design Stage
Based on the results of the Basic Design, the following key tasks shall be carried out;
1) Detailed Design
   a. Road Design,
   b. Ancillary Structures,
   c. Intersection Design,
   d. Naluchi Bridge,
e. Other Bridges and Culverts,
f. Construction Schedule, and
g. Cost Estimation.

2) Preparation of the Draft Tender Document
3) Project Evaluation and Recommendations

6. Description of the project site
   The project intends to provide additional capacity of through traffic, especially north and south and
   south and west directions. The project expects to enhance rehabilitation and reconstruction activities
   in the damaged area not only inside city but also outside of the city in terms of providing an
   alternative corridor to ease congestion as well improved the transportation convenience between the
   periphery and the city to reduce travel times, lower the costs of vehicle use and increased access to
   Upper Chatter, Secretariat and adjoining areas for health and other social services.
   Muzaffarabad Districts have distinct seasons marked by wide variation in temperature. The coldest
   month is January having mean maximum temperature (17.7 °C) and the mean minimum temperature
   (2.6 °C).
   Annual average rainfall in the area is approximately 783.3 mm. The Project Area is irrigated
   mainly by the rainwater.

7. Legal Framework of environmental and social considerations
   The Pakistan Environmental Protection Act, 1997 makes it mandatory for the project proponents to
   carry out a full environmental impact assessment of development projects and incorporate
   environmental and social mitigation measures as part of the project planning same has been
   acknowledged vie AJK government through Environmental Protection Ordinance 2001. As for the
   limits for pollutants in industrial and municipal effluents, and in gaseous emissions from industries
   and vehicles, these are defined in the National Environmental Quality Standards (NEQS). The Land
   Acquisition Act (LAA), 1894, regulates the acquisition of land and built-up property, and damage to
   other assets such as crops, trees, and infrastructure.

8. Adverse environmental and social impacts identified
   Various probable impacts on the existing resources due to the Project and vice versa were studied
   under the parameters of resettlement/ land acquisition, change of land use, dismantling of structures,
   relocation of existing utilities, soil erosion, water bodies, air pollution, noise, flora and fauna etc.
   As a result of the EIA Study, increase in long-term economic activity and uplift of the standard of
   life of the people was visualised as a major positive impact of the Project. It was also observed that
   there may be some negative impacts related to the Project. Those are mostly related to the
   construction stage only and include land acquisition, soil erosion, improper disposal of spoil, loss of
   vegetation, displacement of population, disturbance to people, disruption of traffic and some possible
   impacts on the health and safety of general public and workers. Total land to be acquired for the
   construction of additional carriageway is around 2.148 ha, along the proposed bypasses. Construction
   activities will result in relocation/rearrangement of various utilities within the ROW, including
   culverts, bridges, gas pipe line, fibre optic cable and electrical poles.

9. Analysis of alternatives including ‘without project’ option
   Different alternatives of the Project were analysed, by considering no Project, alternative transport
   modes and improvement of the existing carriageway. ‘Upgrade the existing 1-lane road into 2-lane
   dual carriageway from Chela Bandi to Naluchi by extending on both sides from centreline of the
   existing road depending on the availability of vacant space was considered feasible due to least
   impacts and more benefits.
10. Mitigation measures for major environmental/social impacts

The mitigation measures to eliminate/minimize those negative impacts have been proposed to bring them to an acceptable level through implementation of the Environmental Management and Monitoring Plans. Proper compensation will be given to the Project affected persons in a judicious manner. The mitigation measures have been suggested for the design, construction and operational stages of the Project, taking into consideration the environmental impacts of the Project.

11. Result of the stakeholder meetings

The Consultants’ EIA team identified the stakeholders of the Project and discussed the Project with them during the detailed field visits. Their views and concerns were noted and have been incorporated in the Draft EIA Report. After reviewing their concerns, the mitigation measures have been suggested for giving them due compensation.