TERMS OF REFERENCE

FAEL KHAIR SCHOOL-CUM-SHELTERS PROGRAM, BANGLADESH

ARCHITECTURAL DESIGN COMPETITION

I. BACKGROUND:

1.1. On November 15, 2007, Cyclone Sidr which impacted the South Western Coast of Bangladesh accompanied by heavy rains, a storm surge of about 20 ft high (6 meters) and wind speed of 220 kph, killed at least 3,406 people, injured over 55,000 and generally affected more than 8.9 million people in 30 of the 64 districts of the country.

1.2. The devastating cyclone caused extensive damage to crops (1,000,000 ha) livestock (106,000) and educational institutions (4,200 completely destroyed whilst 12,700 were damaged) as well as disrupting the transportation and communications networks, water and electricity supplies. According to the report "SUPER CYCLONE SIDR 2007" prepared by the Ministry of Food & Disaster Management of the Government of Bangladesh, total damage has been estimated at USD 2.3 billion.

1.3. In response to the urgent need for assistance to the victims of Cyclone Sidr and, in particular, to provide a long term solution to the recurring cyclones which periodically afflict Bangladesh, an anonymous philanthropist (FAEL KHAIR in Arabic) has entrusted to the Islamic Development Bank (IDB) a generous donation of USD 130 million for relief assistance to the Cyclone SIDR victims.

1.4. Considering the number of people and livestock that are usually affected by the cyclones, and the fact that shelters for them during a cyclone could be used as schools in normal times (education being a basic need and priority for the Government), USD 110 million of the donation has been earmarked for the construction of schools-cum-shelters for the local population of the coastal belt of Bangladesh. The balance of USD 20 million has been used to establish a Wakf (Trust) for providing urgent relief in the form of agricultural inputs (seeds, fertilizers and agricultural machinery) to poor and affected farmers, fishing boats and nets to fishermen, and for training and micro credit to small businessmen.

1.5. Bangladesh being one of the most Cyclone-prone countries in the world and with its geographical features so vulnerable to the elements, the construction of buildings to serve as shelters, during the incidence of cyclones was initiated by the government in collaboration with some international NGOs as far back as the early 1960s.

1.6. A study funded by the UNDP and the World Bank entitled 'MULTIPURPOSE CYCLONE SHELTER PROGRAM" and jointly prepared by the Bangladesh University of Engineering & Technology (BUET) and the Bangladesh Institute

of Development Studies (BIDS) in July 1993 has further improved and adapted the shelters to the needs of cyclone victims. The Local Government Engineering Department (LGED) which has constructed several hundreds of the shelters funded by the Government and external donors has also contributed to the current popular design in use in the country.

II. OBJECTIVES:

2.1 The Islamic Development Bank, taking cognizance of the foregoing, hereby invites participants (individually or jointly) to participate in an International Design Competition for the Architectural Design of a model multi-purpose school-cum-shelter which, to the extent possible, should incorporate Islamic architectural features and blend with the local environment.

III. SCOPE OF SERVICES:

The participants in the design competition should take into account the following:

3.1 VISIT TO THE SITE

The participants are encouraged, to visit the coastal belt of Bangladesh with a view to seeing the local environment and inspect some of the existing school-cum-cyclone shelters. The participants may rely on information obtained from local consultants and contractors as well as their own judgement as to the probable geotechnical conditions of the sites and the most appropriate foundations.

3.2 ACCOMMODATION REQUIREMENTS:

The typical shelter will cater for a coastal community of 1,000 – 2,000 people in the event of emergency and about 100 – 200 pupils as a school in normal times. Therefore the structure should accommodate:

- 3 – 6 Classrooms
- 1 – 2 Teachers Offices
- 1 Store
- 2 Toilets and disposal facilities (septic tank & soak away).
- Space for livestock (cattle/sheep/goats/chicken) either on the ground floor or on reclaimed land next to the shelter which will be used as a play ground for the students in normal times.

Depending upon the availability of land, two typical shelter designs are required i.e. one on reclaimed land for livestock (killa) and the other on reinforced concrete stilts without killa.

3.3 ANCILLARY FACILITIES:

a) The shelter should be equipped with regular water supply from tube well as well as rain water storage for supplementary purposes,
b) Electricity should generally be availed from the national grid. However, each shelter will also be equipped with solar energy equipment. It should particularly be adequate to meet the needs of the victims to be sheltered during cyclones and for rescue and mobile operations.
c) The shelter should incorporate User friendly innovations especially for women, children, the aged and the handicapped including the provision of ramps, emergency facilities etc.

3.4 DESIGN GUIDELINES:

a) Since the shelter should safeguard the cyclone victims from the storm surge and floods, its minimum level (i.e. the ground floor level) for accommodation of both humans and livestock should be at least 50 cm, above highest known or recorded flood level or storm surge.
b) The structure of the recommended type of shelter should be designed for a 50-year life span having regard to the probable soil bearing capacity, the various loads bearing on the structure (dead load, live load, of the structure when fully loaded, wind velocity of at least 260 Kph,. seismic load as per the Bangladesh regulations, hydraulic load resulting from the debris of the storm surge etc.) and durable materials.
c) The design chosen shall be based upon architectural expression, cost, timely availability and transportation of construction materials. In this regard, consideration should also be given to the availability and capability of the manpower to utilize such materials in optimum construction time as well as the maintenance of the structure in the years to come.

3.5 REPORTS & TIME SCHEDULE:

a) It is envisaged that the participants in the design competition will submit schematic designs of two types of school-cum-shelter incorporating Islamic Architectural features and giving sufficient description about the design concept. **The architectural renderings and the schematic designs and write-up of the contestants should be received not later than 12-00 noon on 15 April 2009 on CD as well as on A3 size paper in two sets.**

b) The submissions will be evaluated by a panel of renowned architects and engineers from IDB member countries and the three contestants whose proposals have been selected by IDB will be notified. The prizes for the three winners will be USD 25,000, USD 10,000 and USD 5,000 respectively.

c) In the event that IDB decides to adopt the selected design, IDB reserves the rights to retain the successful contestants to prepare more detailed elaborations of his design (as a separate assignment) or to request for such additional services from other sources.

IV CONTACT ADDRESSES FOR SUBMISSION OF DESIGN PROPOSALS:

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