

Arc Technical Specification

Title

Construction of Transit Centre in Nimroz Province, Afghanistan

Donor Project code number: AFG-NRC-NIM-002

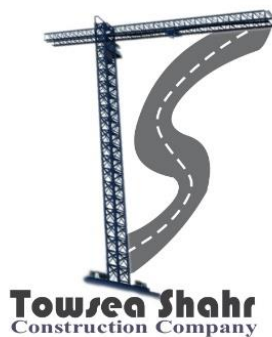
Donor of Project: PATRIP Foundation

Client: Norwegian Refugee Council (NRC)

Prepared By

Toswsea Shahr C.C

Herat, Afghanistan



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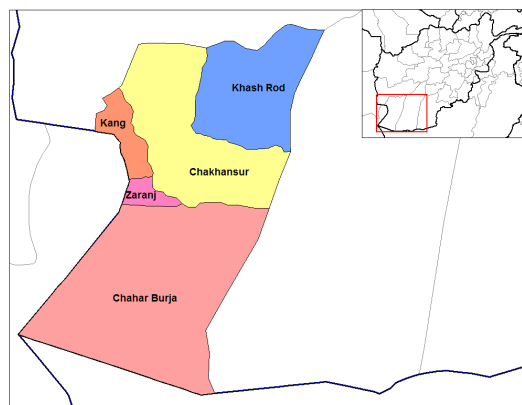
Introduction

1.1 Location of the project

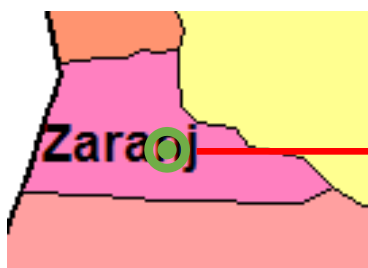
Transit Center will be constructed in Nimroz Province at center of Zarang City,



Location of Nimroz Province



Nimroz Province



Zarang City

Transit Center

1.1.2 Scope

Construction of an appropriate building that accommodates 200 people in a safe, warm environment. This building is designed to provide people with overnight cuisine, and needed facilities for families, children and singles including open space and greenery area.

1.1.3 General Goal

To make sure that the refugees whom pass the Milac Border between Iran and Afghanistan countries have accessibility to suitable accommodates in a safe place for a limited specific Time one or two night.

1.1.4 Specific Goal

Construction of a Transit Center for accommodates of 200 people at the same time.

1.1.5 Target Beneficiaries

This center will be constructed to Afghan refugees whom return for Iran Country either with the documents or official letter or without documents, it is estimated over 35000 people including unaccompanied children, women, elders and disabled pass this border yearly.

1.1.5 Area Requirement

Transit Center shall be involving of bellow items

1. Residential rooms with capacity of accommodate 200 person per night
2. Bathrooms, and toilets separately for men and women
3. Administrative rooms for authorize official staff
4. Main kitchen
5. Buried Water reservoir
6. Generator pad
7. Septic Tank
8. Perimeter wall
9. Fence wall and door for Generator Pad
10. Greenery and open space
11. Store for good and instruments

1.2 Monitoring and inspection

This project will be witness and monitor by Contractor QC Engineer, Consultant Engineer and NRC Engineer.

1.2.1 Contractor Company

Contractor should have Quality Control Engineer at job site to monitor and check all construction process as per drawing, specification and scope of work and schedule, also make sure about the quality of material, goods and implementation. It would be the responsibility of QC Engineer to provide daily QC Report as per the Format which will be provided by NRC Engineer.

1.2.2 Consultant Company

Consultant Company shall provide a schedule plan for monitoring and inspecting the work progress at job site especially for important parts of the construction work, foundation, columns, and slab to make sure the progress is according to designed drawing.

1.2.3 NRC Engineer

NRC Engineer is also present at job site to witness and monitor both the contractor and consultant to make sure the work progress is based on the QC plan, drawing and provided schedule.

1.3 Scope of Work

1.3.1 Work Preparation

Contractor shall conduct the Mobilization and site cleaning as per submitted work schedule as soon as the contract is signed. Company will transport all required machineries, tools and construction materials and personal at site, and make a field camp for accommodating and storing material at job site.

1.3.2 Plan Lay outing and Excavation

Lay outing the Transit Center building, Generator Pad and Perimeter wall and excavation, in this stage of the work the contractor will align and stick out the executive plan of foundation at site, and after check and approval of the client they are supposed to start excavation works of the foundations based on a reference points Bench Mark at site.

1.3.3 Back filling and Compaction

Back filling with compaction for building Transit Center Building ground floor, the contractor shall compact the soil in max. 15cm layers, for optimum compaction of 95% MDD, proctor test is required to show the compaction rate with plate compactor and 20cm with small roller compactor for foundation, bottom of rooms, stair case and ware house.

1.3.4 Plain Cement Concrete

Provide PCC Mark 150 for leveling and provide clean area for foundation reinforcement, PCC for walkway, steps and ramp as per drawing and specification

1.3.5 Reinforcement Concrete

1. Reinforcement should have 60000 PSI tensile strength as per dimensions and bar no according to design drawing the steel fixing of any structure should be inspect and get approval of NRC representative before concrete placement.
2. Casting concrete 21 Mpa for the works of footings, Columns and slab, new metal shuttering or ply wood is required to be used, the contractor shall use crushed aggregate and fresh cement both certified in a registered laboratory, a mix design shall be prepared prior to proceed any mixture of concrete for the entire project. All embedded equipment conduits, sleeves.... should be place properly before concrete placement, the columns should be plumb and straight, the slab should be level before placement, the cover for any element which is defined in specification should be considered before starting the shuttering all around. The permission of NRC representative is required before any concrete placement.
3. Casting concrete strength 21Mpa, contractor shall use crushed aggregate and fresh cement, with a mix design certified by a registered laboratory.

4. Curing concrete should be conducted as soon as concrete gets its initial strength at least for seven days

1.3.6 Brick Masonry work

The Contractor shall use Burnt Brick for masonry shall be category A, shear strength more than 70kg/cm² the brick should be clean of any dust for soil before masonry, for each layer of brick masonry the masonry rope is required to make sure straightness plumbing of walls.

1.3.7 Plaster working

Cement: sand plastering 1:5 shall be used for the interior and exterior surfaces of the main and partition walls, scaffolding is necessary to be installed and fixed with wooden boards appropriately, under the rules and regulation of the safety requirements and specification.

1.3.8 Installing doors and windows

Supplying and installation of PVC doors and windows, the contractor shall make samples for each kind of the doors and windows and submit it officially to the client for approval, if everything met the requirement of the contract, drawings and specification, the contractor can supply and install the doors and windows.

1.3.9 Ceramic Tile

Ceramic and tile works for the floor and walls shall be installed according to the drawings and BoQ, it should be fixed by cement: sand mortar of 1:3 and the joints shall be fixed properly as approved by the engineer, best quality job.

1.3.10 Painting work

Applying three coats of water Acrylic Emulsion Paint for exterior and Plastic Emulsion Paint for interior main walls and partitions. The responsible engineer shall make himself sure that the surface plasters are 100% dried, cleaned, and smooth before applying paint.

1.4 Plumbing work

Plumbing works shall be done properly with the good management system of works, all the pipes shall be fixed in straight lines, green pipe for all water supply uses and PVC Pipes for sewer lines there should be two system of plumbing one for domestic uses and drinking uses including all required and related works such as pipes, fitting, reservoirs.

A Buried water reservoir is required to keep water as a source and by using the pump system water should be conducted to Headed Tanker at top of the ZTC building.

All plumbing work should be tested before covering and approving the NRC Engineer to make sure there is not any leakage neither in water supply nor in sewer system.

Accessories which is required for toilet and bath are as bellow

1. Flash Tanks
2. Hose bib
3. Paper holder
4. Mirror

5. Soap dispenser
6. Towel Rack
7. Faucet
8. Cloth Rack

1.5 Electrical work

Electrical works of the building shall be done according to the drawings, specification and site adaptation so in the case if there would be any alteration in cabling or wiring as build drawing is necessary to be prepared.

The Generator pad should be far from building in a suitable place to access installation and repairing a fence wall should be provided all around the Generator pad to be more secure from reach people

1.6 Mechanical work

Contractor shall provide and install are Heating, Cooling and Ventilation System as per drawing and specification, all ducts should be GI Sheet Gage#18 and should be properly join together and to Exhaust Fan.

1. A Light Test should be conducted for all exhaust canal to make sure is proper sealed.
2. Canal Cooler should have thermal insulation
3. All Exhaust Fan and Make up Air fan should be interlock together when runs
4. All the Exhaust Grill should be install at center of rooms, toilets, Kitchen

1.7 Punch list work

1.7.1 Punch list work

After completion of all activities the contractor should have internal punch list to sure all the parts are completed according to drawing then the contractor as for pre punch list survey.

A joint survey will be done by a team consisting engineers from different parties, in order to find out all the deficiencies and problems if remained during the course of the work, then the found item will be sent to contractor as punch list will be prepared to be followed accordingly by contractor.

After the correcting all deficiencies and listed item it goes to pre final stage, during the pre final stage all the deficiencies and problems shall be fixed by the contractor, if all the problems solved then the completion of work documents shall be signed and approved by all parties, then the project will go to delivery stage.