

**A BREIF
PROJECT REPORT
PREFAB HOUSE CONSTRUCTION:
COMMUNITY EYE CENTRE
LIWANG, ROLPA
JUNE, 2016**

SUBMITTED TO:
AMERICAN NEPAL MEDICAL FOUNDATION

SUBMITTED BY:
PREFAB CONSTRUCTION & MAINTENACE COMMITTEE
NEPAL EYE PROGRAM
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GAUSHALA, KATHMANDU, NEPAL

1. PROJECT BACKGROUND

The pre-fabricated house construction was successfully completed in Liwang Rolpa by end of May 2016. After earthquake, it is the second successful project of pre-fabricated house construction in rural community eye centres of Tilganga Institute of Ophthalmology (TIO).

The Community Eye Center (CEC), Rolpa was established by Nepal Eye Program, Tilganga Institute of Ophthalmology in coordination with Nepal Red Cross Society District Chapter, on 22 June 2008 in Liwang, Rolpa in financial support of the Fred Hollows Foundation. The centre provides promotional, preventional and curable eye health services to people of district through clinic and outreach activities. The main objective of CEC is to reduce the blindness by providing affordable and accessible eye health services and by reaching the most unreached areas of district. It has played a vital role in integrating with primary health services facilities at community. Furthermore, the Centre has been playing an important role to achieve long term financial self-sustainable by applying Tilganga's strategy.

The massive earthquake 7.8 magnitude in board day around 11:55 AM (Nepal Standard Time), epicenter in Gorkha with depth of only 11 KM beneath earth surface and the tremors (aftershocks) were felt about 40-50 times in past 3 days from April 25 to 28, after that the M 7.3 aftershock on May 12 at 07:05 UTC on Dolakha center point. At least 8,669 people killed, 384 missing, 17,866 injured, 500,717 houses destroyed and 269,190 affected in this earthquake. Damage estimates exceed 5 billion US dollars. (Source: DRR Portal)

In Rolpa, one people died, 5 injured, 43 houses (1 government and 42 private) completed damaged and 95 houses (15 Government and 80 private) were destroyed many people are suffering from tread of that even. (Source: DRR Portal). After that event there was strong demand of an earthquake resistance building is essential for smooth operation of the eye center with providing effective eye health services to patient with minimum tread of earthquake.

Fortunately, the CEC received over 400 square meter area of land in free of cost by a local social worker Mr Chinta Mani Acharya. After receiving land the project of construction of pre-fabricated building for Community Eye Centre in Rolpa has been developed and proposed to American Nepal Medical Foundation (ANMF). Thanks to (ANMF) for accepting project proposal of building construction in Rolpa.

Despite, several hindrances such as fuel crisis, delay in availability of material, availability of labour, the structural construction work of building has been completed by end of May 2016. The internal furnishing, water and electricity connection are on progress and has set the target to complete by mid-July. The shifting of eye health care activities in new building will be completed by mid-July.

1.1. OBJECTIVES OF THE PROJECT

The major objectives of the project were as followings:

- Construction of earthquake resistance (prefab) house in Liwang for community Eye Center
- Providing a comprehensive high quality eye health services to people
- Upgrading the eye health service facilities at district

1.2. LOCATION

The location of this construction project is at Liwang municipality of district headquarter of Rolpa district in Rapti Zone of Mid-western Development Region. Furthermore, it is 467.09 Km far from Kathmandu. For detail of land location has been given below:

Land: Rolpa district, Liwang Municipality-5

Plot no. 2003,

Area of land = 460 Sqm =4950 Sqft

Latitude: 28°18'22.2"N

Longitude: 82°37'58.3"E

Altitude: 4297 ft

1.3. TOPOGRAPHY

The topographical setting of the prefab house alignment corridor is characterized by hill and river basin. It is largely a rugged terrain consisting of southeast to northwest and south to north trending ridges.

1.4 GENERAL INFORMATION'S

1. **Project name :** Prefab House
Construction
for Community Eye Center, Rolpa
2. **Building Ownership:** Nepal Eye
Program
Community Eye Center, Rolpa
3. **Client/ Consultant:** Nepal Eye Program
Tilganga Institute of Ophthalmology,
Gaushala-8, Kathmandu
4. **Name of the Contractor:** Prerak
Construction & Prefab Homes (P) Ltd.
Parijat path-4, Makawanpur, Hetauda
5. **Agreement date:** 28th February 2016
(Between Client &
Contractor)
6. **Completion date:** 27th May 2016 (3
months)
7. **Handover date:** 4th June 2016
8. **Financial Support:** American Nepal Medical
Foundation

2. PROJECT WORK DESCRIPTION

The prefab house was constructed according to the standard of building design for TIO Community Eye Centre with minor change as per land location and users requirement coordination with CEC, Rolpa and TIO Prefab construction & maintenance committee. The land of the construction site was steep slope by which there was maintained about 9ft height stone masonry wall on lower part

and about 3ft earth cutting for level the building plinth area. In front of building lobby black square pipe steel Verandah with handrail was added for protection and the road access to toilet. The slope of land was maintained by cutting and filling ground.

The actual construction period was a little bit longer time to the extra work for land preparation, inaccessibility of vehicle and rock mixed soil on foundation land. All the construction materials were carried out by human effort about 250 meters away from the road to the construction site. Due to inaccessible of excavator or vehicle to the construction site, it took more time than proposed for excavation and leveling using human effort. Despite those challenges, the construction work has completed within three months of period (2 months proposed and 1 month additional).

The hand-over of pre-fab building from contractor to client (Rolpa CEC) was completed on 4th June 2016.

3. FINANCIAL REPORT:

According to our project agreement with contractor the project estimated cost was NRs. 2,738,405.64. The land development cost was not included in that because of distance. That was measured according to work performed on site. Thus, the total project of building installation/construction has been completed at the cost of NRs.3, 100,430.46. This cost doesn't include the consultant and project monitoring and evaluation cost. The summary of expenditure has been given below table.

Table 1. Cost Summary of Project (NRs)

SN	Description	BOQ Amount	Actual Amount
A	As per contract work		
1	Civil Works	2,172,807.82	2,147,828.80
2	Electrical Works	106,900.00	101,400.00
3	Sanitary Works	143,660.00	128,515.00
	Sub-total of A	2,423,367.82	2,377,743.80
B	Land development work	-	365,999.97
	Total of A & B	2,423,367.82	2,743,743.77

	VAT @13%	315,037.82	356,686.69
Total Amount in NRs		2,738,405.64	3,100,430.46
Total amount in US\$			31,004.30
Received Amount (US\$)			10,000.00
Balance (US\$)			21,004.30

The cost of project monitoring and evaluation including consultant, furnishing of building was covered by Tilganga Institute and Rolpa Community Eye Centre (CEC). That cost is not included into the financial report.

According to midterm report of the project, Tilganga seeks to receive another US\$ 20,000 fund from ANMF for this project. Tilganga and Rolpa CEC will cover the remaining.

4. CONCLUSION

In summary, the successfully completed project of pre-fab building in Liwang will be great asset for TIO and Rolpa CEC for achieving its mission of providing high quality eye health services to most needy people at their locality. Furthermore, this project will play a significant role in achieving financial sustainability in long run. On behalf direct beneficiary Rolpa people, we would like to offer our sincere thanks to American Nepal Medical Foundation Board of Directorates and its well-wishers for making the project success in Rolpa.

5. APPENDIX

1) Contraction design & images

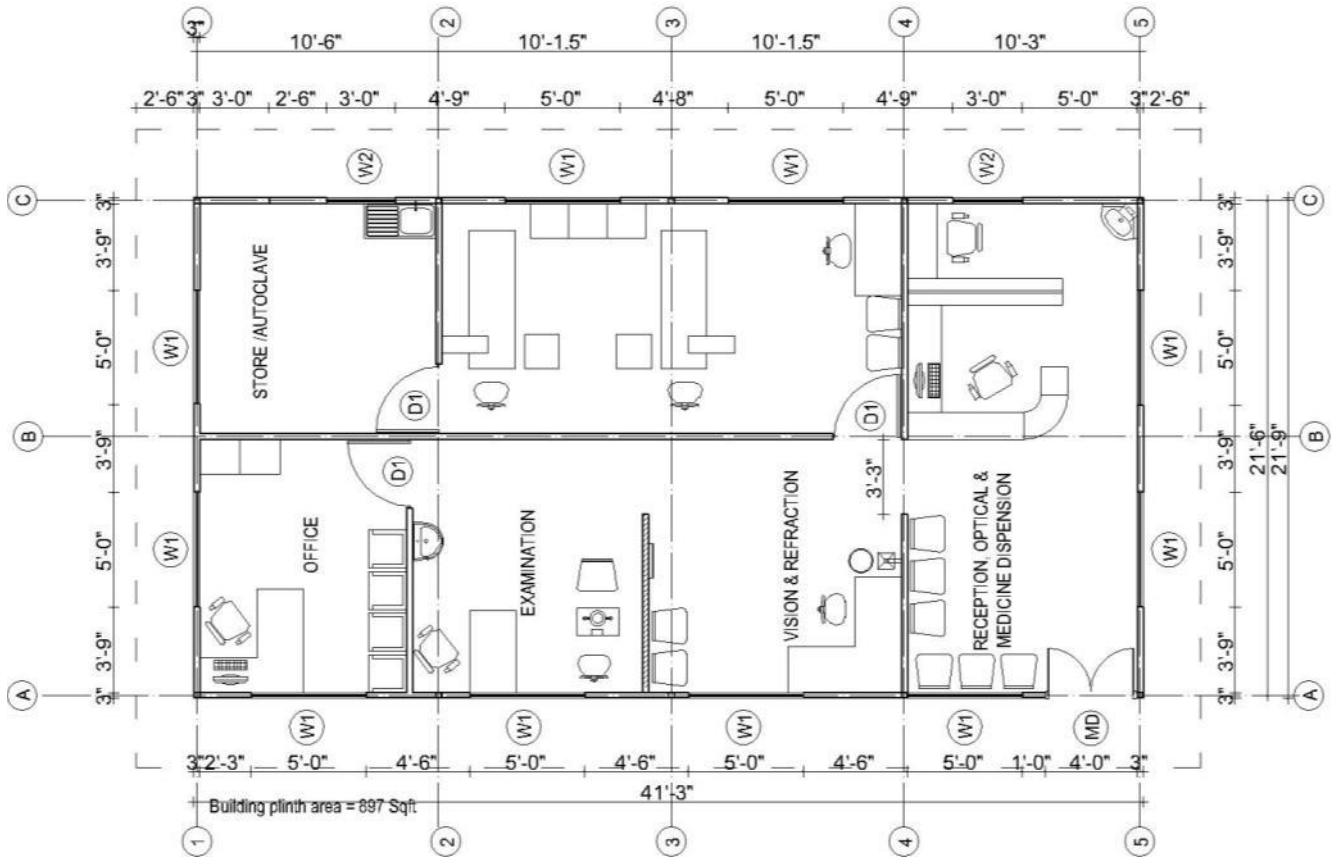


Figure 1: Design of CEC, Rolpa Prefab House



Figure 2: Donated land for CEC, Rolpa before construction



Figure 3: Land layout and side clearance by cutting tree



Figure 4: PCC work on foundation after stone soling



Figure 5: Stone masonry wall work for foundation and front lobby



Figure 6: Excavation for leveling and earth filling on constructed wall



Figure 7: Stone masonry wall completion



Figure 8: After completion foundation post erection and stone soling for PCC flooring



Figure 9: Post erection for truss



Figure 10: Compaction of soling with hammering



Figure 11: Reinforcement binding and formwork for RCC work



Figure 12: Toilet foundation, RCC & post erection and Septic tank excavation



Figure 13: Completion of RCC work and preparation for truss installation



Figure 14: Post leveling for truss installation



Figure 16: Truss & Prefab board installation



Figure 15: Prefab installation



Figure 17: Color CGI sheet & gutter installation



Figure 18: False ceiling installation & toilet roofing installation



Figure 19: Tapping and putting on wall gap for paint



Figure 20: Excavation for Septic tank and stone masonry wall work



Figure 21: Completion of septic tank



Figure 22: Completion of toilet



Figure 23: Completion of inner false ceiling, wall paint and electrical



Figure 24: Completion of inner partition



Figure 25: Completion of exterior paint



Figure 26: From road view of completion building



Figure 27: Back side view of building



Figure 28: Handover and takeover Prefab house construction from Contractor to Client