

Design of a Disaster Resistant, Affordable, Green and Culturally Relevant House

Disaster Resistant Stone – Earth –Timber 1^{1/2} Story house with improved *Dhajji Diwar* & timber floor deck



Completed house – Random rubble main walls and wood plank gable walls

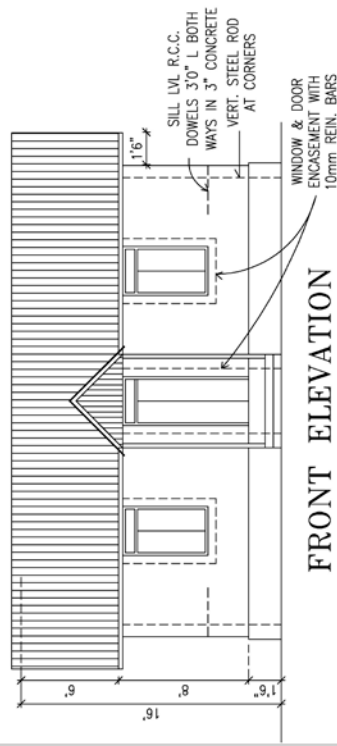


Improved *Dhajji* (timber laced) interior wall with small stone in mud infill

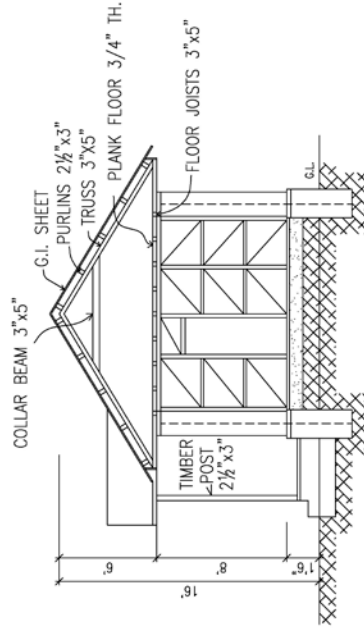


Timber floor deck – Properly anchored to lintel band

Specifications: (A) Exterior Walls – Un-coursed Random-Rubble Masonry in mud mortar with (a) RCC bands at plinth and eave levels, (b) single vertical reinforcing bar within masonry at room corners, (c) door/window opening encasing with reinforcing bars, (d) Walls to have cement pointing on exterior face and mud plaster on interior face, and cement plaster up to 3' height in bathroom/toilet; (B) Interior Walls – Improved *Dhajji* type with small stone in mud mortar infill, chicken wire mesh containment on both faces, better timber to timber joinery, and proper connection with other walls and RC bands; (C) Roof – CGI roofing on timber with timber attic floor securely anchored to lintel band; (D) Gable walls made of timber planks attached to timber frame; (E) Cement stabilized mud floor in all rooms and cement floor in bathroom.



PLAN



SECTION : AA

SCHEDULE OF DOORS & WINDOW		
ITEM	NOS.	SIZE
DOOR – D1	1-Nos.	3'0" X 7'9"
DOOR – D2	1-Nos.	2'3" X 7'9"
WINDOW – W1	2-Nos.	3'0" X 5'3"
WINDOW – W2	2-Nos.	4'0" X 5'3"
VENTILATOR – V	1-Nos.	2'0" X 3'0"

CARPET AREA=25'0"X12'0"=300Sq.ft.
PLINTH AREA=29'0"X15'0"=435Sq.ft.

NOTE: SEE SHEET 2 WALL SECTION FOR DETAILS

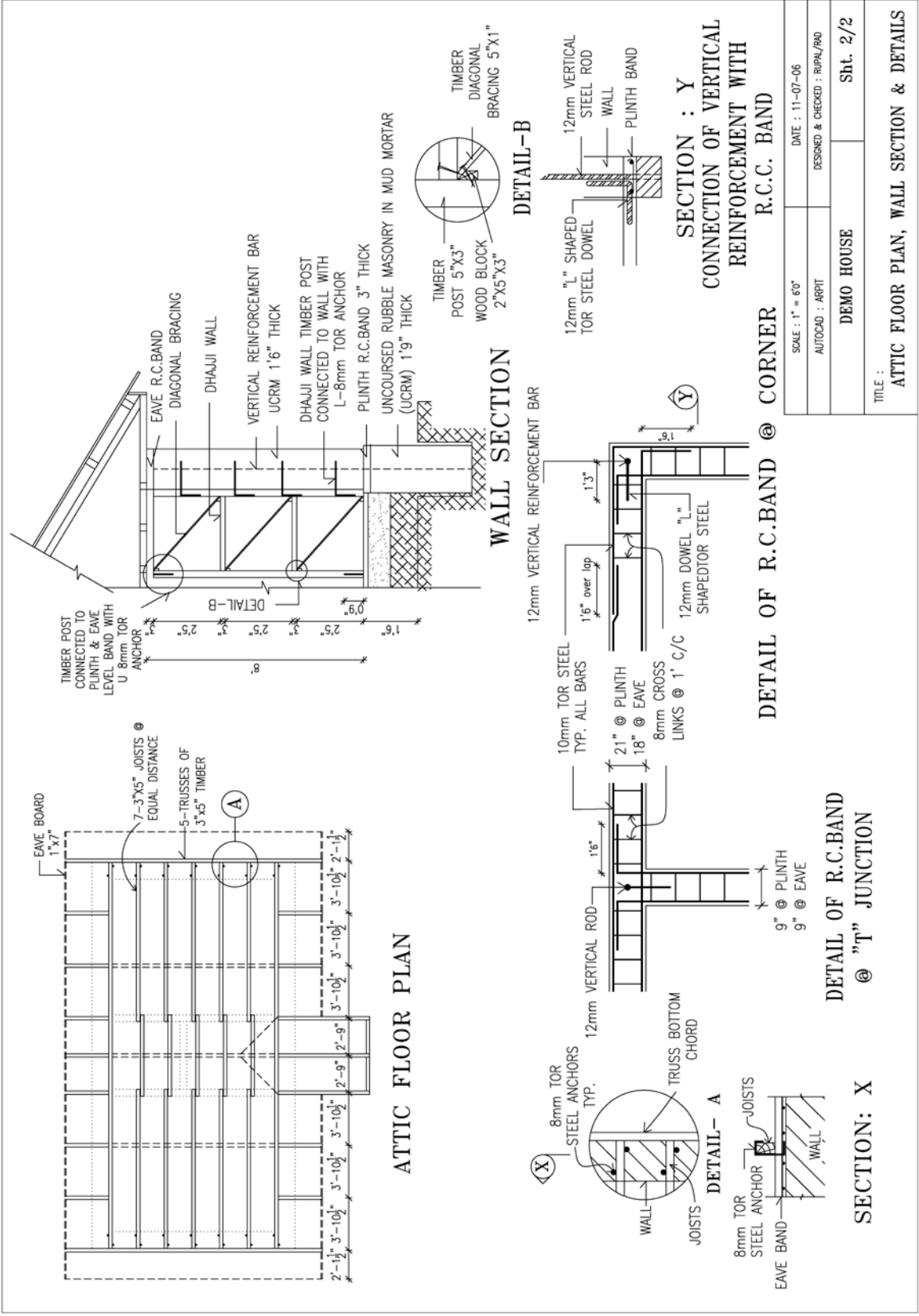
DATE : 11-07-06

AUTOCAD : ARPIT	DESIGNED & CHECKED : RUPAL/RAD
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DEMO HOUSE	Sht. 1/2
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TITLE :

FLOOR PLAN, ELEVATION & SECTION



Construction Item Quantity Estimate for an Un-Coursed Rubble Masonry (UCRM) House

Sr.	Construction Item	Quantity	Unit
1	Foundation Excavation	13	Cu.mt.
2	P.C.C. (1:3:6) for vertical rebars	0.30	Cu.mt.
3	UCRM Below Ground Level	11	Cu.mt.
4	UCRM Up to Plinth Minus Band	7.18	Cu.mt.
5	RC Plinth Band	1.30	Cu.mt.
6	UCRM in Super Structure	25	Cu.mt.
7	Window Jamb Concreting	0.10	Cu.mt.
8	Lintle over Window	0,15	Cu.mt.
9	RC Eave Band	1.02	Cu.mt.
10	Outside plaster	71	Sq.mt.
11	Outside pointing	56	Sq.mt.
12	Mud plaster - inside wall faces	71	Sq.mt.
13	Cement plaster - inside wall faces	5.4	Sq.mt.
14	IPS Floor - 40mm thick	4.9	Sq.mt.
15	Cement Stabilized Earth Floor - 75 thick	25	Sq.mt.
16	Vertical Reinforcement with Concrete	27	R.mt.
17	Corner RC Brackets at sill level	0,12	Cu.mt.
	Built up Area	420	

Prepared By:

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