Distribution of Houses by Predominant Materials of Roof and Wall and Level of Damage Risk

Table No. : GJ 23 **State : GUJARAT** **NAVSARI**

Wall / Roof		Census Houses		Level of Risk under									Flood Prone Area in %
		No. of Houses	%	| EQ Zone				Wind Velocity m/s					
				V	IV	III	II	55 & 50	47	44 & 39	33		
					Area in %				Area in %				
						100				100			11.3
WALL													
A1 - Mud &	Rural	20,477	5.8										
Unburnt Brick Wall	Urban	2,364	0.7										
	Total	*22,841*	*6.5*			M				M			VH
A2 - Stone Wall	Rural	1,426	0.4										
not packed with mortar	Urban	555	0.2										
	Total	*1,981*	*0.6*			M				L			VH
Total - Category - A		*24,822*	*7.1*										
B - Burnt Bricks Wall	Rural	143,576	40.9										
& Stone wall packed	Urban	96,357	27.5										
with mortar	*Total*	*239,933*	*68.4*			L				L			H/M
Total - Category - B		*239,933*	*68.4*										
C1 - Concrete Wall	Rural	5,515	1.6										
	Urban	6,539	1.9										
	Total	*12,054*	*3.5*			VL				VL			L/VL
C2 - Wood wall	Rural	4,060	1.2										
	Urban	3,998	1.1										
	Total	*8,058*	*2.3*			VL				M			H
Total - Category - C		*20,112*	*5.7*										
X - Other Materials	Rural	62,671	17.9										
	Urban	3,189	0.9										
	Total	*65,860*	*18.8*			VL				M			VH
Total - Category - X		*65,860*	*18.8*										
TOTAL HOUSES*		**350,727**											
ROOF													
R1 - Light Weight	Rural	53,153	15.2										
Sloping Roof	Urban	28,796	8.2										
	Total	*81,949*	*23.4*			L				H			VH
R2 - Heavy Weight	Rural	143,317	40.9										
Sloping Roof	Urban	14,131	4.0										
	Total	*157,448*	*44.9*			L				L			H
R3 - Flat Roof	Rural	41,255	11.8										
	Urban	70,075	20.0										
	Total	*111,330*	*31.8*		*Damage Risk as per that for the Wall supporting it*									
TOTAL HOUSES*		**350,727**											

Probable Maximum Precipitation at a Station of the district in one day for areal extent of 1000 sq.km. is 1112 mm

Housing Category : Wall Types

Category - A : Buildings in field-stone, rural structures, unburnt brick houses, clay houses

Category - B : Ordinary brick building; buildings of the large block & prefabricated type, half-timbered structures, building in natural hewn stone

Category - C : Reinforced building, well built wooden structures

Category - X : Other materials not covered in A,B,C. These are generally light.

Notes : 1. Flood prone area includes that protected area which may have more severe damage under failure of protection works. In some other areas the local damage may be severe under heavy rains and chocked drainage.

2. Damage Risk for wall types is indicated assuming heavy flat roof in categories A, B and C (Reinforced Concrete) building

3. Source of Housing Data : Census of Housing, GOI, 2011

Housing Category : Roof Type

Category - R1 - Light Weight (Grass, Thatch, Bamboo, Wood, Mud, Plastic, Polythene, GI Metal, Asbestos Sheets, Other Materials)

Category - R2 - Heavy Weight (Tiles, Stone/Slate)

Category - R3 - Flat Roof (Brick, Concrete)

EQ Zone V : Very High Damage Risk Zone (MSK > IX)

EQ Zone IV : High Damage Risk Zone (MSK VIII)

EQ Zone III : Moderate Damage Risk Zone (MSK VII)

EQ Zone II : Low Damage Risk Zone (MSK < VI)

Level of Risk : VH = Very High; H = High; M = Moderate; L = Low; VL = Very Low

* Total No.of Houses excluding Vacant/Locked Houses