

ANEXO A: Detalle estructural de la tipología

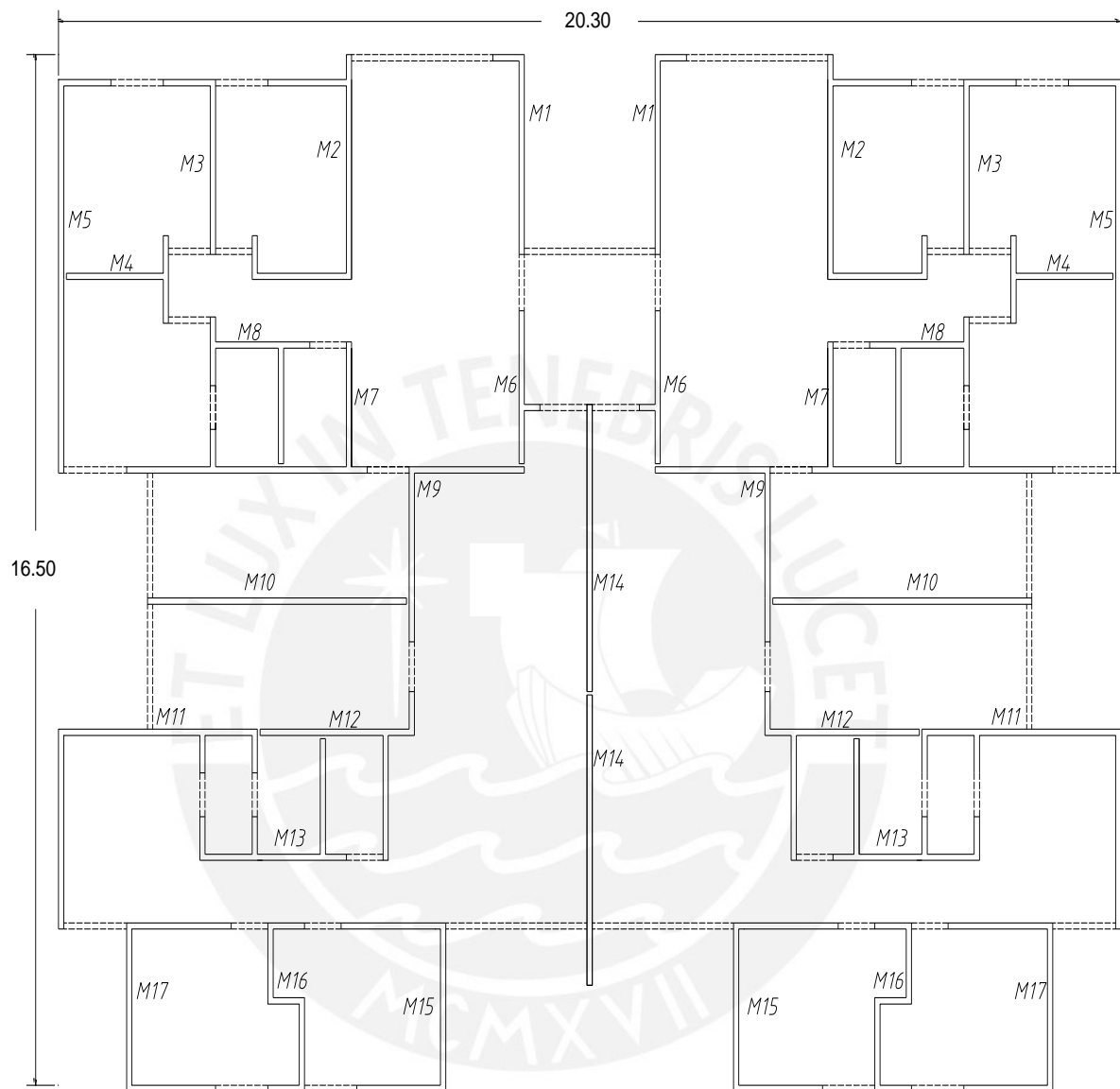
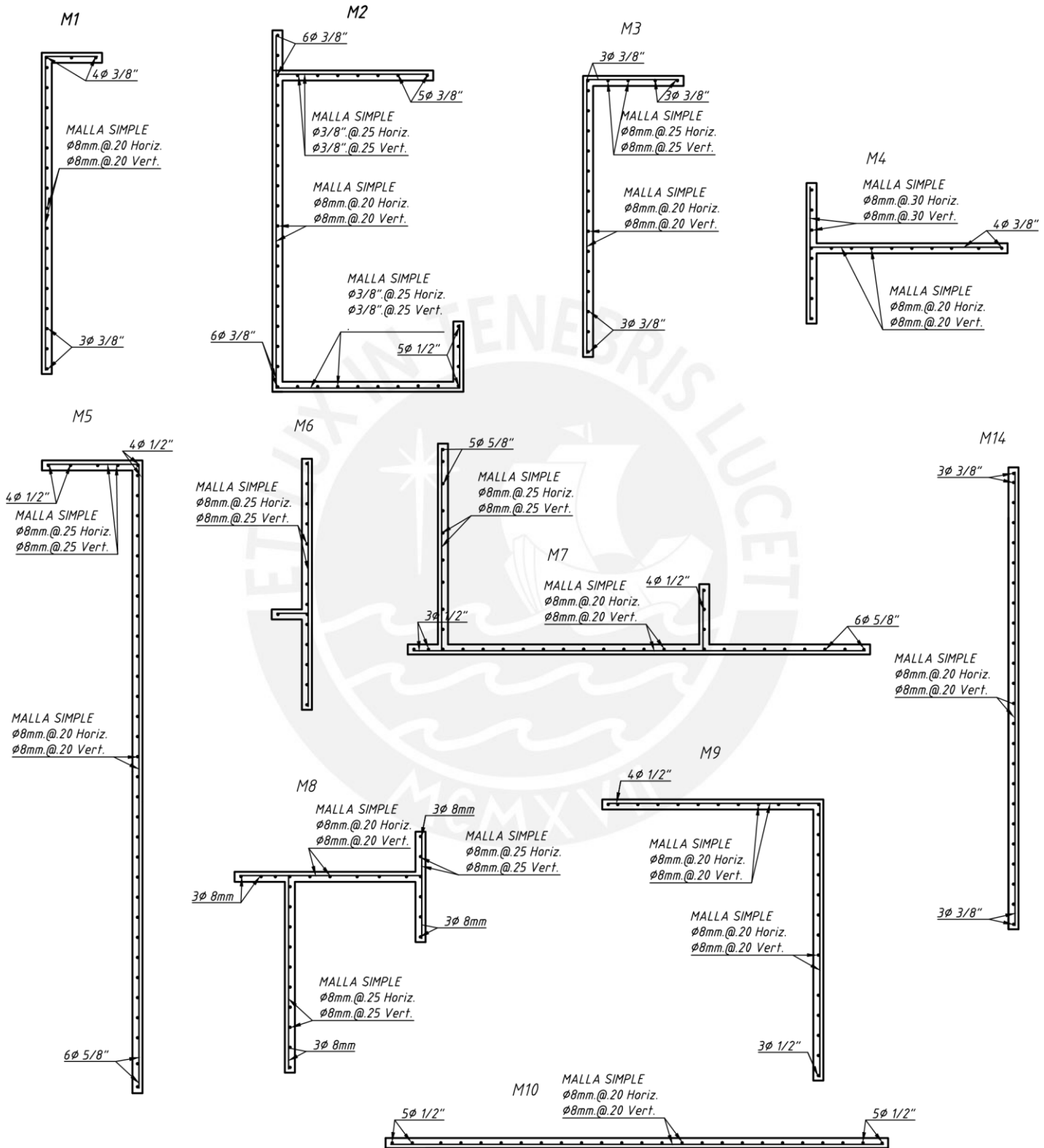


Figura A.1: Planta Típica de la tipología.



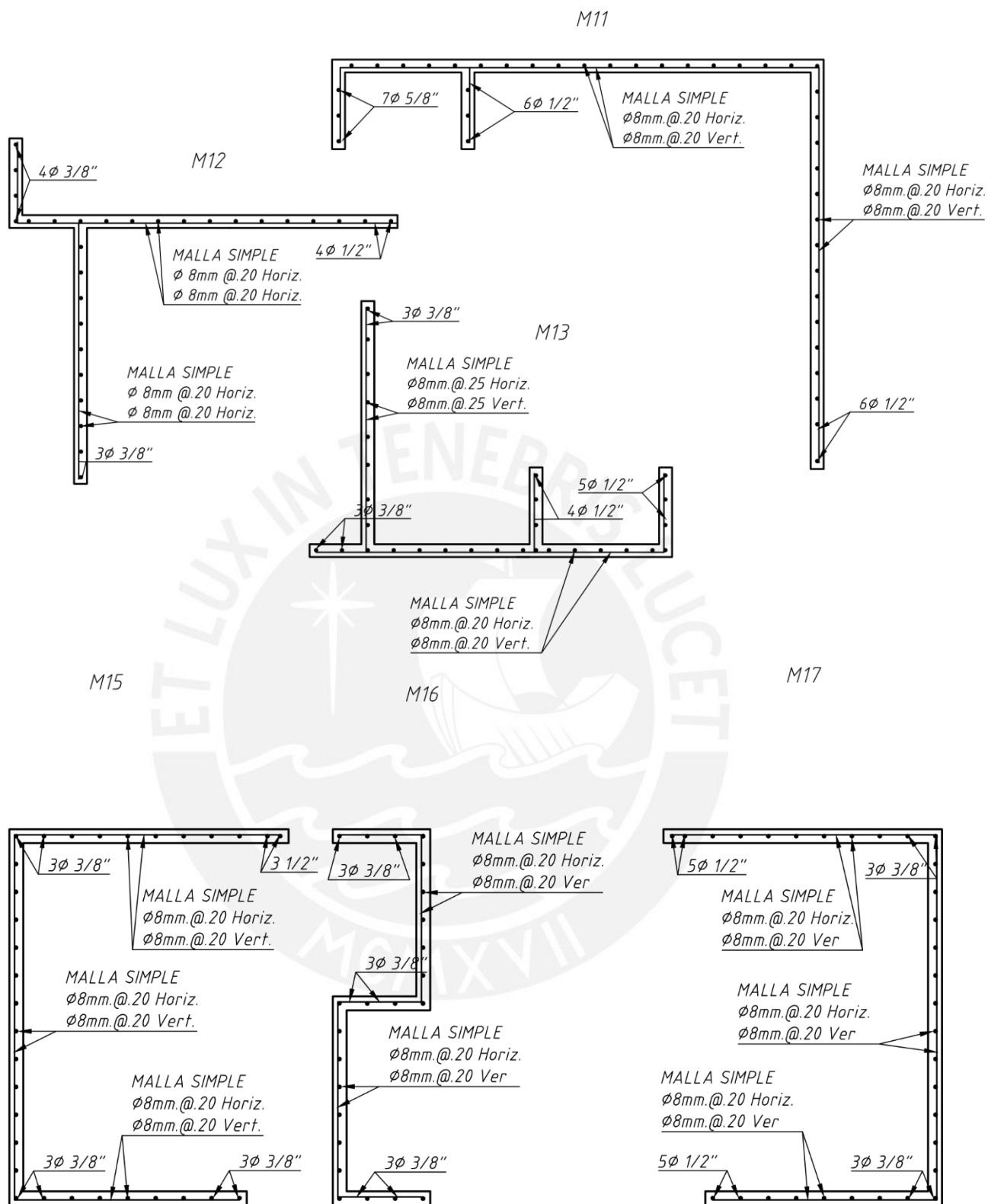


Figura A.2: Detalle estructural de los muros de ductilidad limitada.

ANEXO B: Respuesta estructural del modelo por dirección y nivel

Sismo frecuente	Nivel	Lima 1966	Huaraz 1970	Lima 1974	Zarate 1974	La Molina 1974	Arequipa 2001	Pisco 2007	Iquique 2014	Tocopilla 2007	Antofagasta 1995	Punitaqui 1997
Dirección x	1	0.079%	0.071%	0.064%	0.073%	0.096%	0.066%	0.099%	0.047%	0.055%	0.057%	0.070%
	2	0.189%	0.161%	0.147%	0.161%	0.223%	0.147%	0.224%	0.110%	0.116%	0.134%	0.158%
	3	0.253%	0.209%	0.191%	0.201%	0.286%	0.181%	0.280%	0.141%	0.146%	0.173%	0.208%
	4	0.283%	0.228%	0.209%	0.215%	0.307%	0.192%	0.298%	0.157%	0.171%	0.189%	0.237%
	5	0.288%	0.231%	0.212%	0.219%	0.309%	0.193%	0.299%	0.161%	0.178%	0.192%	0.243%
Dirección y	1	0.048%	0.045%	0.030%	0.040%	0.072%	0.048%	0.098%	0.043%	0.035%	0.055%	0.020%
	2	0.108%	0.107%	0.070%	0.097%	0.167%	0.110%	0.213%	0.101%	0.074%	0.129%	0.046%
	3	0.135%	0.139%	0.091%	0.134%	0.213%	0.140%	0.265%	0.131%	0.098%	0.167%	0.057%
	4	0.145%	0.154%	0.101%	0.152%	0.231%	0.153%	0.282%	0.145%	0.113%	0.184%	0.061%
	5	0.147%	0.157%	0.103%	0.156%	0.233%	0.155%	0.282%	0.147%	0.117%	0.187%	0.062%
Deriva de entrepiso residual		0.006%	0.009%	0.000%	0.009%	0.031%	0.007%	0.044%	0.003%	0.000%	0.000%	0.013%

Figura B.1: Respuesta estructural de deriva de entrepiso para sismos frecuentes ($S_a=0.60g$).

Sismo Ocasional	Nivel	Lima 1966	Huaraz 1970	Lima 1974	Zarate 1974	La Molina 1974	Arequipa 2001	Pisco 2007	Iquique 2014	Tocopilla 2007	Antofagasta 1995	Punitaqui 1997
Dirección X	1	0.128%	0.100%	0.097%	0.068%	0.099%	0.093%	0.182%	0.050%	0.068%	0.071%	0.084%
	2	0.291%	0.233%	0.216%	0.179%	0.233%	0.211%	0.353%	0.117%	0.136%	0.147%	0.185%
	3	0.381%	0.301%	0.270%	0.245%	0.301%	0.266%	0.420%	0.154%	0.167%	0.192%	0.246%
	4	0.421%	0.330%	0.284%	0.279%	0.325%	0.284%	0.443%	0.170%	0.188%	0.216%	0.282%
	5	0.427%	0.332%	0.284%	0.286%	0.329%	0.284%	0.445%	0.172%	0.193%	0.223%	0.290%
Dirección Y	1	0.062%	0.094%	0.053%	0.080%	0.089%	0.061%	0.198%	0.075%	0.042%	0.076%	0.021%
	2	0.134%	0.223%	0.126%	0.143%	0.204%	0.144%	0.359%	0.168%	0.085%	0.173%	0.050%
	3	0.172%	0.292%	0.169%	0.202%	0.259%	0.187%	0.420%	0.219%	0.114%	0.216%	0.065%
	4	0.190%	0.319%	0.192%	0.235%	0.280%	0.205%	0.431%	0.244%	0.133%	0.230%	0.071%
	5	0.193%	0.322%	0.198%	0.242%	0.282%	0.210%	0.426%	0.249%	0.138%	0.230%	0.073%
Deriva de entrepiso residual		0.020%	0.050%	0.020%	0.025%	0.040%	0.024%	0.088%	0.013%	0.002%	0.000%	0.020%

Figura B.2: Respuesta estructural de deriva de entrepiso para sismos ocasionales ($S_a=0.75g$).

Sismo raro	Nivel	Lima 1966	Huaraz 1970	Lima 1974	Zarate 1974	La Molina 1974	Arequipa 2001	Pisco 2007	Iquique 2014	Tocopilla 2007	Antofagasta 1995	Punitaqui 1997
Dirección x	1	0.309%	0.186%	0.201%	0.106%	0.171%	0.269%	0.706%	0.096%	0.105%	0.119%	0.121%
	2	0.557%	0.389%	0.403%	0.246%	0.356%	0.477%	1.131%	0.215%	0.198%	0.260%	0.270%
	3	0.643%	0.494%	0.496%	0.315%	0.453%	0.549%	1.230%	0.279%	0.249%	0.330%	0.356%
	4	0.668%	0.528%	0.523%	0.370%	0.492%	0.560%	1.259%	0.305%	0.277%	0.360%	0.399%
	5	0.669%	0.529%	0.522%	0.386%	0.498%	0.557%	1.259%	0.308%	0.283%	0.364%	0.407%
Dirección y	1	0.140%	0.186%	0.169%	0.152%	0.134%	0.163%	0.582%	0.089%	0.090%	0.125%	0.033%
	2	0.272%	0.377%	0.342%	0.233%	0.297%	0.314%	0.922%	0.217%	0.194%	0.284%	0.077%
	3	0.343%	0.467%	0.417%	0.259%	0.382%	0.372%	1.016%	0.286%	0.272%	0.360%	0.101%
	4	0.365%	0.502%	0.440%	0.298%	0.412%	0.388%	1.031%	0.325%	0.310%	0.389%	0.114%
	5	0.363%	0.507%	0.438%	0.305%	0.415%	0.387%	1.023%	0.335%	0.315%	0.393%	0.116%
Deriva de entropía residual		0.072%	0.103%	0.088%	0.044%	0.077%	0.079%	0.656%	0.046%	0.037%	0.000%	0.062%

Figura B.3: Respuesta estructural de deriva de entropía para sismos raros (Sa=1.20g).

Sismo muy raro	Nivel	Lima 1966	Huaraz 1970	Lima 1974	Zarate 1974	La Molina 1974	Arequipa 2001	Pisco 2007	Iquique 2014	Tocopilla 2007	Antofagasta 1995	Punitaqui 1997
Direcccion x	1	0.409%	0.211%	0.318%	0.145%	0.222%	0.485%	0.874%	0.136%	0.128%	0.175%	0.136%
	2	0.713%	0.418%	0.555%	0.318%	0.444%	0.799%	1.349%	0.300%	0.243%	0.368%	0.299%
	3	0.817%	0.524%	0.673%	0.403%	0.576%	0.926%	1.455%	0.375%	0.276%	0.478%	0.396%
	4	0.855%	0.560%	0.709%	0.437%	0.630%	0.968%	1.472%	0.396%	0.297%	0.523%	0.448%
	5	0.859%	0.558%	0.707%	0.440%	0.634%	0.968%	1.460%	0.395%	0.303%	0.527%	0.456%
Direcccion y	1	0.248%	0.278%	0.280%	0.180%	0.161%	0.274%	0.756%	0.106%	0.126%	0.158%	0.041%
	2	0.397%	0.515%	0.498%	0.282%	0.334%	0.455%	1.203%	0.251%	0.220%	0.347%	0.097%
	3	0.438%	0.618%	0.575%	0.301%	0.414%	0.508%	1.294%	0.328%	0.281%	0.442%	0.128%
	4	0.439%	0.660%	0.593%	0.351%	0.445%	0.521%	1.314%	0.380%	0.308%	0.479%	0.145%
	5	0.434%	0.666%	0.590%	0.377%	0.448%	0.521%	1.311%	0.391%	0.310%	0.483%	0.149%
Deriva de entrepiso residual		0.094%	0.169%	0.200%	0.067%	0.096%	0.146%	0.936%	0.061%	0.045%	0.006%	0.095%

Figura B.4: Respuesta estructural de deriva de entrepiso para sismos muy raros (Sa=1.50g).