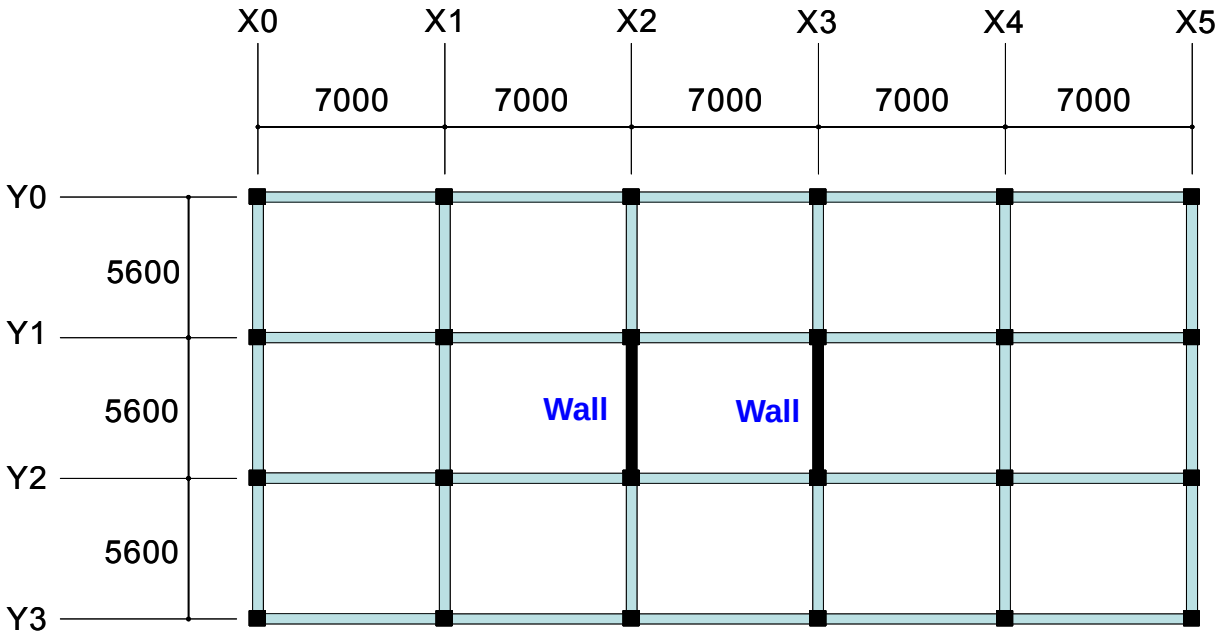
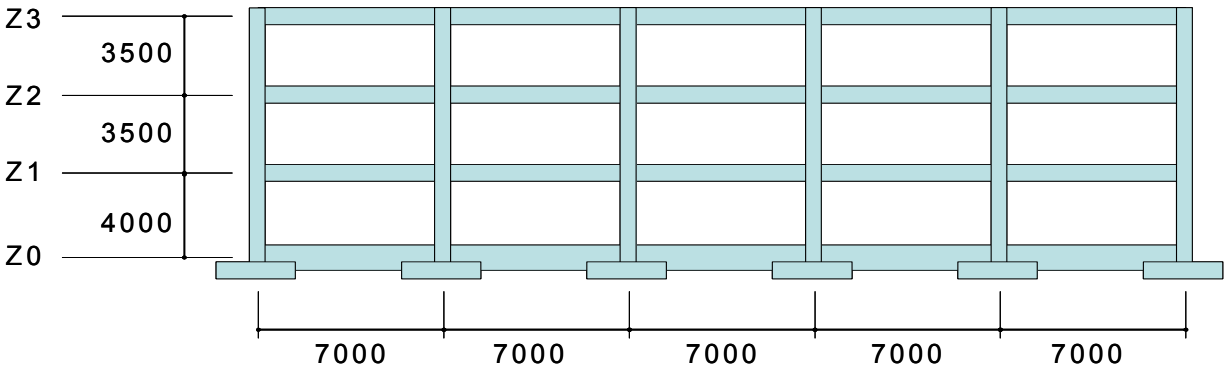
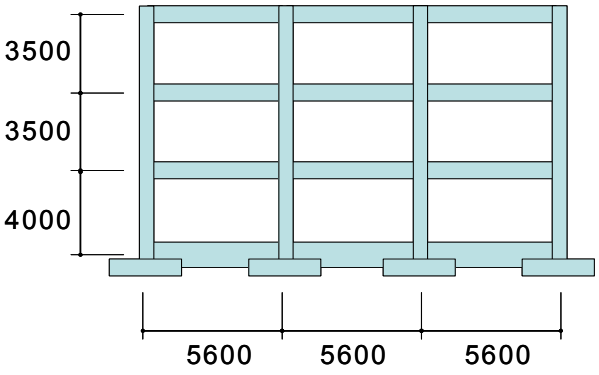
SAMPLE BUILDING 1 : 3-STORY RC FRAME WITH SHEAR WALL



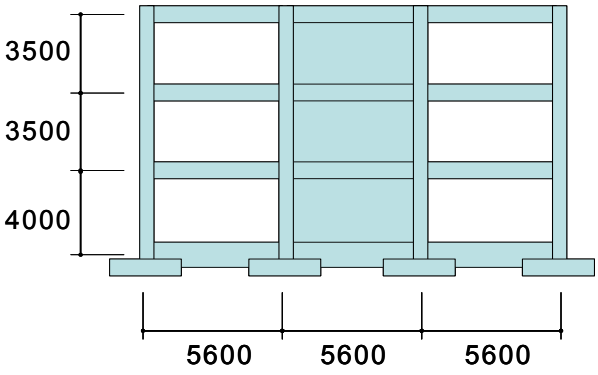
Plan



Elevation (Y0, Y1, Y2, Y3)



Elevation (X0, X1, X4, X5)



Elevation (X2, X3)

Table 1: Column element

Floor		C1
1, 2, 3	Section (mm)	600×600
	Rebar	12-D22
	Stirrup	2-D10@250

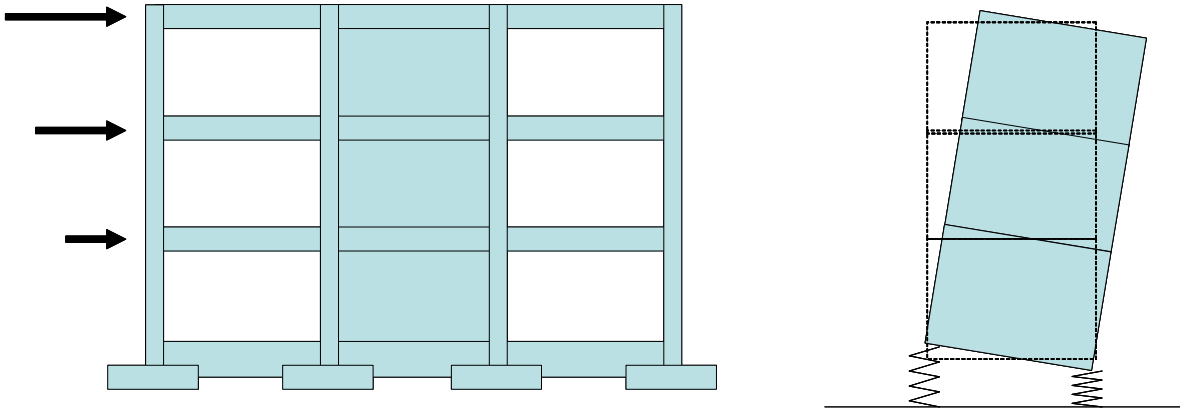
Table 2: Beam element

Floor		B1	B2
2, 3, R	Section (mm)	400×750	350×750
	Rebar (UP)	3-D22	3-D22
	Rebar (DOWN)	2-D22	2-D22
	Stirrup	2-D10@150	2-D10@150
1	Section (mm)	400×750	350×750
	Rebar (UP)	3-D22	3-D22
	Rebar (DOWN)	2-D22	2-D22
	Stirrup	2-D10@150	2-D10@150

Table 3: Wall element

Floor		W1
1, 2, 3	Thickness (mm)	200
	Stirrup	2-D10@200

<u>Vertical spring for ground support</u>



Dynamic ground coefficient	k	= 2.1 (MN/m^3)
Area of foundation under wall element	A_F	= 3×3 (m^2)
Stiffness of spring	KF	= 21×3×3 = 189 kN/mm

Material strength

Concrete	Fc20	Fc = 20 N/mm^2
Steel	SD345	σy = 345 N/mm^2

Weight of floor

Floor	kN
3	5200
2	5200
1	5200
F	6000

Direction of the force