

TABLE 4.2 Example 4-C – Rigidity of 8 Story Wall at the Fourth Floor

Floor Level	<i>h</i>	Σh_{above}	<i>d</i>	<i>h/d</i>	$\Delta_{top\ of\ wall}$ due to transition of this level	$\Delta_{top\ of\ wall}$ due to rotation of this level	Total $\Delta_{top\ of\ wall}$ due to this level	Correction	Actual $\Delta_{top\ of\ wall}$ due to this level
4	40		30	0.333	0.115	0.000	0.115	0.0971	0.011
3	40	10	30	0.333	0.137	0.006	0.143	0.0461	0.007
2	40	20	30	0.333	0.159	0.019	0.178	0.0461	0.008
1	44	30	30	0.467	0.311	0.058	0.369	0.0461	0.017

$\Delta_{top\ of\ wall} = 0.043$

$$R_{DEF} = \frac{1}{\Delta_T} = \frac{1}{0.043} = 23.26$$

Replace with

Floor Level	<i>h</i>	Σh_{above}	<i>d</i>	<i>h/d</i>	$\Delta_{top\ of\ wall}$ due to transition of this level	$\Delta_{top\ of\ wall}$ due to rotation of this level	Total $\Delta_{top\ of\ wall}$ due to this level	Correction	Actual $\Delta_{top\ of\ wall}$ due to this level
4	10		30	0.333	0.115	0.000	0.115	0.0971	0.011
3	10	10	30	0.333	0.137	0.067	0.204	0.0461	0.009
2	10	20	30	0.333	0.159	0.222	0.381	0.0461	0.018
1	14	30	30	0.467	0.311	0.691	1.002	0.0461	0.046

$\Delta_{top\ of\ wall} = 0.084$

$$R_{DEF} = \frac{1}{\Delta_T} = \frac{1}{0.084} = 11.90$$

TABLE 4.2 Example 4-C – Rigidity of 8 Story Wall at the Roof

Floor Level	<i>h</i>	Σh_{above}	<i>d</i>	<i>h/d</i>	$\Delta_{top\ of\ wall}$ due to transition of this level	$\Delta_{top\ of\ wall}$ due to rotation of this level	Total $\Delta_{top\ of\ wall}$ due to this level	Correction	Actual $\Delta_{top\ of\ wall}$ due to this level
8	40		30	0.333	0.115	0.000	0.115	0.1512	0.017
7	40	10	30	0.333	0.137	0.006	0.143	0.1512	0.022
6	40	20	30	0.333	0.159	0.016	0.178	0.0971	0.017
5	40	30	30	0.333	0.181	0.039	0.220	0.0971	0.021
4	40	40	30	0.333	0.204	0.067	0.270	0.0971	0.026
3	40	50	30	0.333	0.226	0.102	0.328	0.0461	0.015
2	40	60	30	0.333	0.248	0.144	0.393	0.0461	0.018
1	44	70	30	0.467	0.486	0.279	0.765	0.0461	0.035

$\Delta_{top\ of\ wall} = 0.172$

$$R_{DEF} = \frac{1}{\Delta_T} = \frac{1}{0.172} = 5.81$$

Replace with

Floor Level	h	Σh_{above}	d	h/d	$\Delta_{top\ of\ wall\ due\ to\ transition\ of\ this\ level}$	$\Delta_{top\ of\ wall\ due\ to\ rotation\ of\ this\ level}$	Total $\Delta_{top\ of\ wall\ due\ to\ this\ level}$	Correction	Actual $\Delta_{top\ of\ wall\ due\ to\ this\ level}$
8	10		30	0.333	0.115	0.000	0.115	0.1512	0.017
7	10	10	30	0.333	0.137	0.067	0.204	0.1512	0.031
6	10	20	30	0.333	0.159	0.222	0.381	0.0971	0.037
5	10	30	30	0.333	0.181	0.467	0.648	0.971	0.063
4	10	40	30	0.333	0.204	0.800	1.004	0.0971	0.097
3	10	50	30	0.333	0.226	1.222	1.448	0.0461	0.067
2	10	60	30	0.333	0.248	1.733	1.981	0.0461	0.091
1	14	70	30	0.467	0.486	3.354	3.839	0.0461	0.177

$\Delta_{top\ of\ wall} = 0.581$

$$R_{DEF} = \frac{1}{\Delta_T} = \frac{1}{0.581} = 1.72$$

Page 399 – Revise dimension callout in Figure 11-22

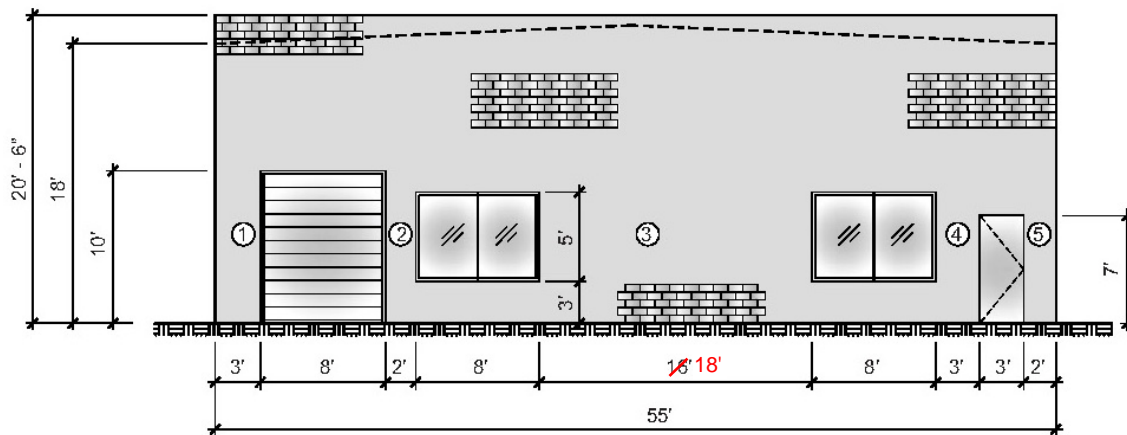
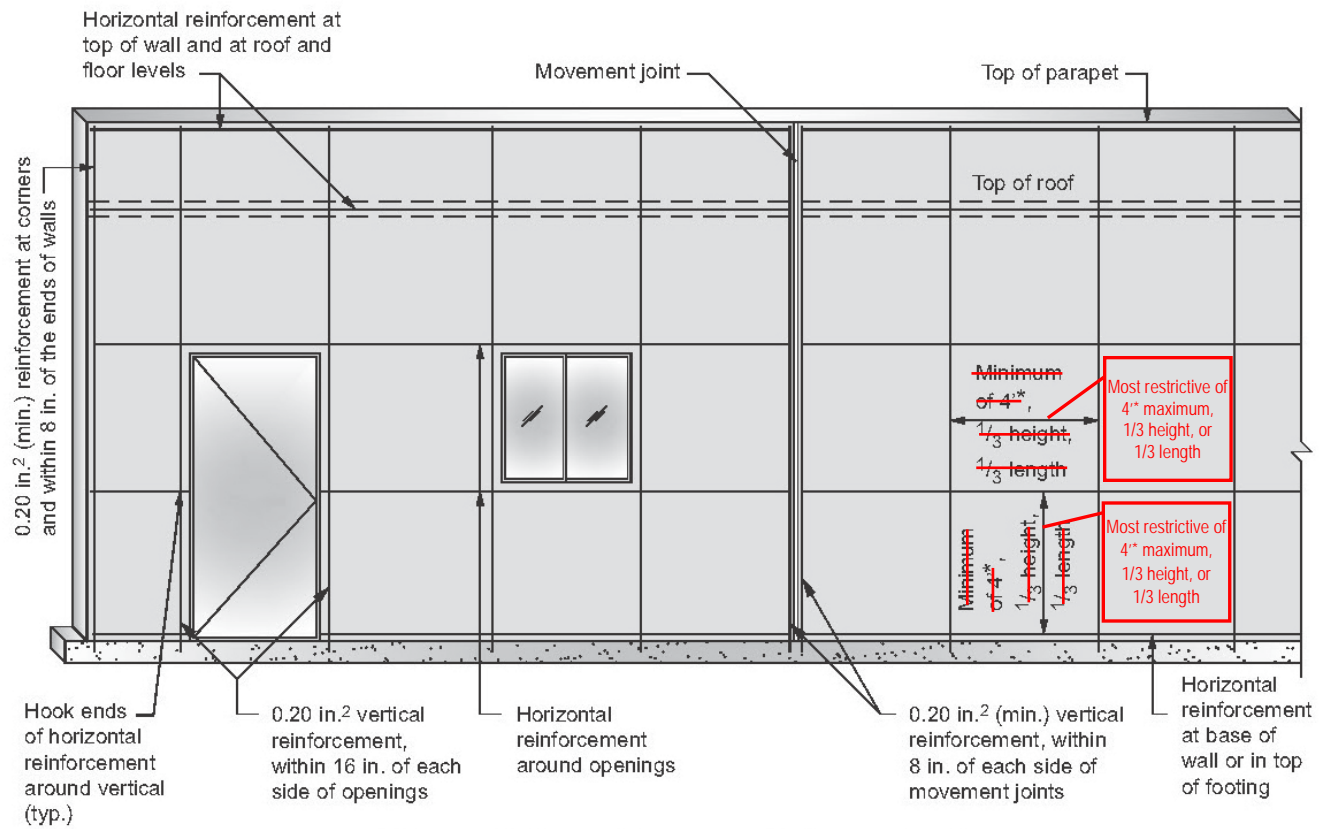


FIGURE 11.22 West elevation.



*Reduced to 24 in. for reinforcement not laid in running bond

Note: Horizontal reinforcement shall consist of at least two longitudinal wires of W1.7 joint reinforcement spaced at 16 in. on center maximum or 0.2 in.² of bond beam reinforcement spaced at 120 in. on center maximum.

FIGURE 7.37 Minimum reinforcement for special reinforced masonry shear walls.