Drift

| Stories | Drift X | Allowable Drift X | Drift Y | Allowable Drift Y |
| --- | --- | --- | --- | --- |
| Story 1 | 0.002317 | 0.005556 | 0.002176 | 0.005556 |
| Story 2 | 0.005055 | 0.005556 | 0.004677 | 0.005556 |
| Story 3 | 0.005234 | 0.005556 | 0.004666 | 0.005556 |
| Story 4 | 0.003796 | 0.005556 | 0.003243 | 0.005556 |

Magnifier coff. of eccentricity

| Stories | Aj EXP | Aj EXN | Aj EYP | Aj EYN |
| --- | --- | --- | --- | --- |
| Story 1 | 1.11 | 1.087 | 1.107 | 1.006 |
| Story 2 | 1.087 | 1.108 | 1.102 | 1.01 |
| Story 3 | 1.074 | 1.118 | 1.097 | 1.015 |
| Story 4 | 1.062 | 1.128 | 1.094 | 1.017 |

Periods and Earthquake data

| Parameter | Value |
| --- | --- |
| Response spectrum case data (for design) |  |
| Scale Factor X | 0.96351 |
| Scale Factor Y | 0.90022 |
| Natural period X (sec) | 0.78369 |
| Natural period Y (sec) | 0.7212 |
| T for design X | 0.59813 |
| T for design Y | 0.59813 |
| T for displacement X | 0.78369 |
| T for displacement Y | 0.7212 |
|  |  |
| base shear coffs (for displacement control) |  |
| Earthquake coff. X (Cx) | 0.14874 |
| Earthquake coff. Y (Cy) | 0.15953 |
| K for drift X | 1.14185 |
| K for drift Y | 1.1106 |

Mass And Rigidity Centers

| Height(m) | Mass Center (X,Y) | Rigidity Center (X,Y) | Ecc X% | Ecc Y% |
| --- | --- | --- | --- | --- |
| 2.7 | (4.31 , 5.23) | (3.83 , 5.06) | 5.48% | 1.36% |
| 5.9 | (4.32 , 5.27) | (3.89 , 5.24) | 4.9% | 0.18% |
| 9.1 | (4.32 , 5.25) | (3.94 , 5.36) | 4.4% | 0.86% |
| 12.3 | (4.2 , 5.17) | (3.96 , 5.48) | 2.77% | 2.41% |

Stability Index

| Stories | Stability Index (X) | Allowable Value (X) | Stability Index (Y) | Allowable Value (Y) |
| --- | --- | --- | --- | --- |
| Story 1 | 0.018 | 0.144 | 0.015 | 0.144 |
| Story 2 | 0.031 | 0.144 | 0.027 | 0.144 |
| Story 3 | 0.027 | 0.144 | 0.023 | 0.144 |
| Story 4 | 0.018 | 0.144 | 0.014 | 0.144 |

Overturning Safety Factor

| Parameter | Value |
| --- | --- |
| Overturning Safety Factor About X | 2.504 |
| Overturning Safety Factor About Y | 3.055 |
| Resisting Moment About X (Ton.m) | 2035.996 |
| Resisting Moment About Y (Ton.m) | 2484.13 |
| Overturning Moment About X (Ton.m) | 813.034 |
| Overturning Moment About Y (Ton.m) | 813.034 |

Material Bill

| Parameters | Volume | Weight |
| --- | --- | --- |
| Columns Longitudinal Rebar | 0.57 | 4.45 |
| Columns Stirrup | 0.11 | 0.84 |
| Beams Longitudinal Rebar | 0.51 | 3.99 |
| Beams Stirrup | 0.16 | 1.29 |
| Columns Steel | 0.67 | 5.29 |
| Beams Steel | 0.67 | 5.27 |
| Total Steel | 1.34 | 10.56 |
|  |  |  |
| Columns Concrete | 21.01 | 50.44 |
| Beams Concrete | 47.46 | 113.91 |
| Total Concrete | 68.48 | 164.34 |

Cost

| Parameters | Cost |
| --- | --- |
| Building Concrete | 5478158 |
| Building Steel | 14783019 |
| Building Materials | 20261176 |