* MEMBER NAME : S01
  1. General Information
     1. Design Code : ACI318M-14
     2. Unit System : N, mm
  2. Material
     1. : 24.00MPa
     2. : 400MPa
  3. Design Load
     1. Dead Load : 2.000kN/m²
     2. Live Load : 2.000kN/m²
  4. Section Size
     1. Span(X) : 4.000m
     2. Span(Y) : 6.000m
     3. Thickness : 201mm
     4. Cover : 20.00mm
     5. Use clear span : Yes



* 1. Slab Type & Support
     1. Slab Type : 2-Way Slab
     2. Support Type : Case-2
     3. Boundary Beams (mm)
        + B1 : 100 x 200 B2 : 100 x 200
        + B3 : 100 x 200 B4 : 100 x 200
  2. Check Load
     1. Calculate factored load
        + LCB01 = 2.800kN/m² ( 1.4D )
        + LCB02 = 5.600kN/m² ( 1.2D+1.6L )
        + 5.600kN/m²
  3. Check Thickness of Slab
     1. Calculate factors
     2. Calculate minimum thickness required
        + = 179mm
  4. Check Capacity of Slab
     1. Calculate Moment & Shear [ Direction X ]

|  |  |  |  |
| --- | --- | --- | --- |
| **Check Items** | **TOP** | **MIDDLE** | **BOTTOM** |
| Bar-1 | #5@450 | #5@450 | #5@450 |
| Bar-2 | #5@450 | #5@450 | #5@450 |
| Bar-3 | #5@450 | #5@450 | #5@450 |
| Moment Coefficient (DL) | 0.000 | 0.0316 | 0.000 |
| Moment Coefficient (LL) | 0.000 | 0.0521 | 0.000 |
| Moment Coefficient (FL) | 0.0763 | 0.000 | 0.0763 |
| Shear Coefficient | 0.841 | 0.000 | 0.841 |
|  | 6.502 | 3.689 | 6.502 |
|  | 9.186 | 0.000 | 9.186 |
|  | 52.59 | 52.59 | 52.59 |
|  | 108 | 108 | 108 |
|  | OK(0.124) | OK(0.0701) | OK(0.124) |
|  | OK(0.0850) | OK(0.000) | OK(0.0850) |

* + 1. Calculate Moment & Shear [ Direction Y ]

|  |  |  |  |
| --- | --- | --- | --- |
| **Check Items** | **LEFT** | **CENTER** | **RIGHT** |
| Bar-1 | #5@450 | #5@450 | #5@450 |
| Bar-2 | #5@450 | #5@450 | #5@450 |
| Bar-3 | #5@450 | #5@450 | #5@450 |
| Moment Coefficient (DL) | 0.000 | 0.00622 | 0.000 |
| Moment Coefficient (LL) | 0.000 | 0.0104 | 0.000 |
| Moment Coefficient (FL) | 0.0147 | 0.000 | 0.0147 |
| Shear Coefficient | 0.159 | 0.000 | 0.159 |
|  | 2.858 | 1.683 | 2.858 |
|  | 2.623 | 0.000 | 2.623 |
|  | 47.51 | 47.51 | 47.51 |
|  | 98.18 | 98.18 | 98.18 |
|  | OK(0.0601) | OK(0.0354) | OK(0.0601) |
|  | OK(0.0267) | OK(0.000) | OK(0.0267) |