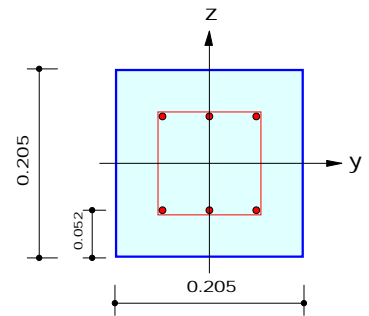
	Company		Project Title	
	Author		File Name	D:\...\MidasCal81_100_V6.mgb

1. Design Condition

Design Code : ACI318-11
 Member Number: 2 (PM), 36 (Shear)
 Material Data : $f_c = 1.5 \times 10^6$, $f_y = 4 \times 10^7$, $f_{ys} = 2.4 \times 10^7$ kgf/m²
 Column Height : 5 m
 Section Property: C1 (No : 10)
 Rebar Pattern : 6 - 2 - P12 $A_{st} = 0.0006786 \text{ m}^2$ (Rhost = 0.016)



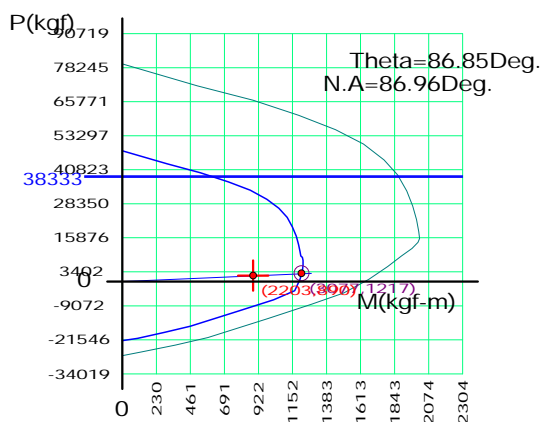
2. Applied Loads

Load Combination : 3 AT (J) Point
 $P_u = 2203.29 \text{ kgf}$ $M_{cy} = 47.1283 \text{ kgf-m}$ $M_{cz} = 888.663 \text{ kgf-m}$
 $M_c = \sqrt{M_{cy}^2 + M_{cz}^2} = 889.912 \text{ kgf-m}$

3. Axial Forces and Moments Capacity Check

Concentric Max. Axial Load $\phi P_n\text{-max} = 38333.1 \text{ kgf}$
 Axial Load Ratio $P_u/\phi P_n = 2203.29 / 3076.62 = 0.716 < 1.000$ O.K
 Moment Ratio $M_c/\phi M_n = 889.912 / 1216.98 = 0.731 < 1.000$ O.K
 $M_{cy}/\phi M_{ny} = 47.1283 / 66.8909 = 0.705 < 1.000$ O.K
 $M_{cz}/\phi M_{nz} = 888.663 / 1215.14 = 0.731 < 1.000$ O.K

4. P-M Interaction Diagram



ϕP_n (kgf)	ϕM_n (kgf-m)
47916.40	0.00
39826.63	532.18
33416.08	867.23
26818.98	1063.81
19977.13	1156.36
13582.14	1196.12
9442.03	1209.86
7591.53	1225.02
3791.61	1219.68
-3356.10	1172.04
-10978.03	786.65
-18709.17	288.11
-21715.20	0.00

5. Shear Force Capacity Check

Applied Shear Strength $V_u = 1055.35 \text{ kgf}$ (Load Combination : 6)
 Design Shear Strength $\phi V_c + \phi V_s = 1792.08 + 807.391 = 2599.47 \text{ kgf}$ ($A_s/H_{\text{use}} = 0.00031 \text{ m}^2/\text{m}$, 2-P6 @180)
 Shear Ratio $V_u/\phi V_n = 0.406 < 1.000$ O.K