

PROJECT TITLE :

	Company		Client	
	Author		File Name	

midas Gen - RC-Slab Flexural Design [NSR-10] Gen 2025

[[[*]]] SLAB DESIGN MAXIMUM RESULT DATA : DOMAIN 1-[1], Dir 1.

Thk	Elem	POS	AsReq	AsUse	Mu (LCB)	fMn	Rat	CHK
200.00	80	BOT	0.2500	0.5161	601.853 (1)	23145.3	0.026	OK
	147	TOP	0.2500	0.5161	947.509 (1)	23145.3	0.041	OK

<< BOTTOM >>

-. Information of Parameters.

Elem No. : 80
 Node No. : 78
 Thickness : 200.0000 mm.
 Materials : fc = 27.5790 MPa.
 Fy = 413.6856 MPa.
 Covering : dB = 75.0000 mm.
 dT = 75.0000 mm.
 LCB No. : 1

-. Information of Strength Reduction Factor.

phic = 0.650
 phit = 0.900
 et = 0.03200
 ety = 0.00207
 etu = 0.00500
 et > etu ; Tension-controlled
 phi = phit = 0.900

-. Information of Design.

b = 1.0000 mm. (by Code Unit Length).
 d = 125.0000 mm.

-. Information of Moments and Result.

Rein. Bar : #4 @250
 As_req = 0.2500 mm²/mm. (250.0000 mm²/m.)
 As_use = 0.5161 mm²/mm. (516.1280 mm²/m.)
 Mn = As_use * Fy * [d - As_use * Fy / (1.7 * fc * b)] = 25716.9770 N-mm./mm.
 phiMn = phi * Mn = 23145.2793 N-mm./mm.
 Mu = 601.8532 N-mm./mm.
 RatM = Mu / phiMn = 0.026 < 1.0 ---> O.K !

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-. Information of Parameters.

Elem No. : 147
 Node No. : 170
 Thickness : 200.0000 mm.
 Materials : fc = 27.5790 MPa.
 Fy = 413.6856 MPa.
 Covering : dB = 75.0000 mm.
 dT = 75.0000 mm.
 LCB No. : 1

-. Information of Strength Reduction Factor.

phic = 0.650
 phit = 0.900
 et = 0.03200
 ety = 0.00207
 etu = 0.00500
 et > etu ; Tension-controlled
 phi = phit = 0.900

-. Information of Design.

b = 1.0000 mm. (by Code Unit Length).
 d = 125.0000 mm.

-. Information of Moments and Result.

Rein. Bar : #4 @250
 As_req = 0.2500 mm²/mm. (250.0000 mm²/m.)
 As_use = 0.5161 mm²/mm. (516.1280 mm²/m.)

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Mn      = As_use*Fy*[d-As_use*Fy/(1.7*fc*b)] = 25716.9770 N-mm./mm.
phiMn   = phi * Mn      = 23145.2793 N-mm./mm.
Mu       = 947.5093 N-mm./mm.
RatM     = Mu / phiMn = 0.041 < 1.0 ---> O.K !

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[[[*]]] SLAB DESIGN MAXIMUM RESULT DATA : DOMAIN 2-[1], Dir 1.

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Thk	Elem	POS	AsReq	AsUse	Mu (LCB)	fMn	Rat	CHK
300.00	267	BOT	0.4500	0.5161	3738.74(1)	42361.6	0.088	OK
	352	TOP	0.4500	0.5161	2508.99(1)	42361.6	0.059	OK

<< BOTTOM >>

-. Information of Parameters.

```

Elem No. : 267
Node No. : 300
Thickness : 300.0000 mm.
Materials : fc = 27.5790 MPa.
           Fy = 413.6856 MPa.
Covering  : dB = 75.0000 mm.
           dT = 75.0000 mm.
LCB No.   : 1

```

-. Information of Strength Reduction Factor.

```

phic = 0.650
phit = 0.900
et    = 0.05999
ety   = 0.00207
etu   = 0.00500
et > etu ; Tension-controlled
phi   = phit = 0.900

```

-. Information of Design.

```

b = 1.0000 mm. (by Code Unit Length).
d = 225.0000 mm.

```

-. Information of Moments and Result.

```

Rein. Bar : #4 @250
As_req = 0.4500 mm^2/mm. ( 450.0000 mm^2/m.)
As_use = 0.5161 mm^2/mm. ( 516.1280 mm^2/m.)
Mn      = As_use*Fy*[d-As_use*Fy/(1.7*fc*b)] = 47068.4474 N-mm./mm.
phiMn   = phi * Mn      = 42361.6026 N-mm./mm.
Mu       = 3738.7403 N-mm./mm.
RatM     = Mu / phiMn = 0.088 < 1.0 ---> O.K !

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-. Information of Parameters.

Elem No. : 352
Node No. : 450
Thickness : 300.0000 mm.
Materials : fc = 27.5790 MPa.
Fy = 413.6856 MPa.
Covering : dB = 75.0000 mm.
dT = 75.0000 mm.
LCB No. : 1

-. Information of Strength Reduction Factor.

phic = 0.650
phit = 0.900
et = 0.05999
ety = 0.00207
etu = 0.00500
et > etu ; Tension-controlled
phi = phit = 0.900

-. Information of Design.

b = 1.0000 mm. (by Code Unit Length).
d = 225.0000 mm.

-. Information of Moments and Result.

Rein. Bar : #4 @250
As_req = 0.4500 mm²/mm. (450.0000 mm²/m.)
As_use = 0.5161 mm²/mm. (516.1280 mm²/m.)
Mn = As_use * Fy * [d - As_use * Fy / (1.7 * fc * b)] = 47068.4474 N-mm./mm.
phiMn = phi * Mn = 42361.6026 N-mm./mm.
Mu = 2508.9871 N-mm./mm.
RatM = Mu / phiMn = 0.059 < 1.0 ---> O.K !