

**K102**

Bw/D= 25/ 50 I= 3 J= 8 T beam: B2/D2=28/10cm Rh=-1.2m

**COMBINATION** LftM (tm) RgtM (tm) LftVd (t) RgtVd (t)

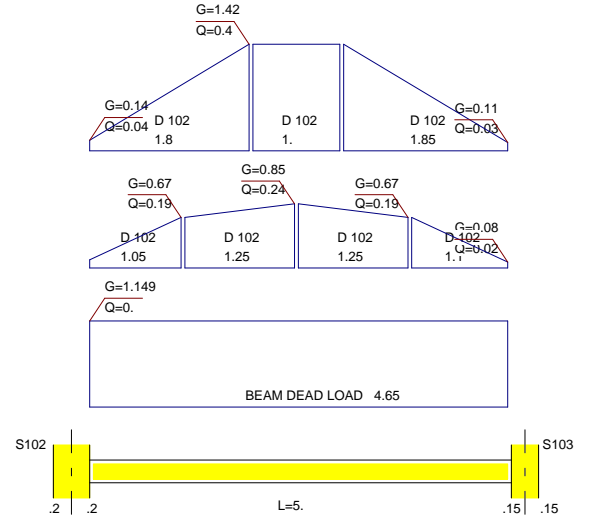
1. (G+G+G+G)	9.00	-8.01	6.35	-5.95
2. (Q+Q+Q+Q)	1.53	-1.35	1.02	-0.94
3. (o+Q+o+Q)	0.08	-0.05	0.01	0.01
4. (Q+o+Q+o)	1.44	-1.30	1.01	-0.95
5. (Q+Q+o+Q)	1.37	-1.46	0.97	-1.00
6. (o+Q+Q+o)	0.10	-0.02	0.02	0.02
7. (o+o+Q+Q)	1.58	-1.24	1.05	-0.91
Soil	0.00	0.00	0.00	0.00
X-Seismic+%5	-4.13	-3.52	-1.47	-1.47
X-Seismic-%5	-4.97	-4.27	-1.76	-1.76
Y-Seismic+%5	0.93	0.82	0.29	0.29
Y-Seismic-%5	2.17	1.91	0.71	0.71
X-Wind +%5	0.00	0.00	0.00	0.00
X-Wind -%5	0.00	0.00	0.00	0.00
Y-Wind +%5	0.00	0.00	0.00	0.00
Y-Wind -%5	0.00	0.00	0.00	0.00

MATERIAL:E1 C30 S420 Fk: 24.88 23.83 cm<sup>2</sup>

**DESIGN** : topMlft botMlft Msp. topMrgt botMrgt

Mcorr. (tm) :	-1.84	0.00	( 2.58m)	1.31	0.00
max M (tm) :	15.55	0.00	5.36	-13.73	0.00
fcd (kg/cm <sup>2</sup> ) :	200.00	0.00	200.00	200.00	0.00
As' (cm <sup>2</sup> ) :	0.00	0.00	0.00	0.00	0.00
As (cm <sup>2</sup> ) :	8.90	4.45	3.24	7.99	3.99

**REINF** : 2ø12 (top.)+2ø12 (web.)+2ø20 (lft top add.)+2ø20 (rgt top add.)  
2ø12 (str)+1ø12 (bent.)+1ø20 (lft bot add.)+1ø16 (rgt bot add.)+ ø10/15/10 (stirrup)



**K103**

Bw/D= 25/ 50 I= 8 J= 16 T beam: B2/D2=22/10cm

**COMBINATION** LftM (tm) RgtM (tm) LftVd (t) RgtVd (t)

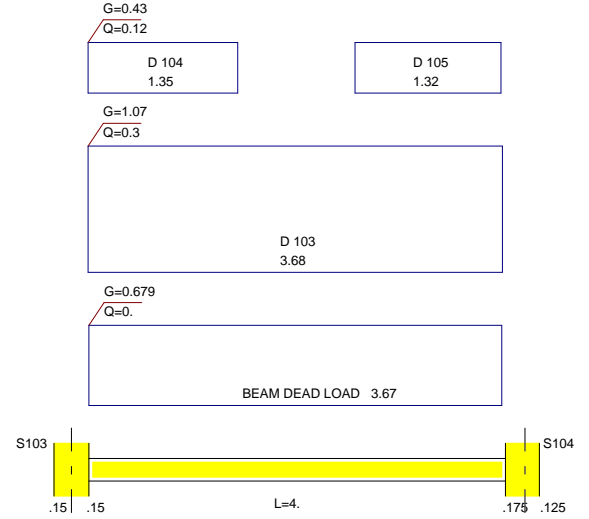
1. (G+G+G+G)	3.88	-1.94	4.28	-3.30
2. (Q+Q+Q+Q)	0.71	-0.34	0.81	-0.62
3. (o+Q+o+Q)	0.25	-0.37	0.68	-0.74
4. (Q+o+Q+o)	0.46	0.03	0.12	0.12
5. (Q+Q+o+Q)	0.75	-0.27	0.83	-0.59
6. (o+Q+Q+o)	0.25	-0.44	0.66	-0.76
7. (o+o+Q+Q)	0.43	0.02	0.11	0.11
Soil	0.00	0.00	0.00	0.00
X-Seismic+%5	-5.30	-6.87	-3.06	-3.06
X-Seismic-%5	-6.04	-7.92	-3.51	-3.51
Y-Seismic+%5	0.17	0.46	0.16	0.16
Y-Seismic-%5	1.24	1.99	0.81	0.81
X-Wind +%5	0.00	0.00	0.00	0.00
X-Wind -%5	0.00	0.00	0.00	0.00
Y-Wind +%5	0.00	0.00	0.00	0.00
Y-Wind -%5	0.00	0.00	0.00	0.00

MATERIAL:E1 C30 S420 Fk: 2.70 2.12 cm<sup>2</sup>

**DESIGN** : topMlft botMlft Msp. topMrgt botMrgt

Mcorr. (tm) :	-1.29	-0.05	( 2.21m)	1.11	-0.08
max M (tm) :	10.68	-2.55	2.16	-10.30	6.17
fcd (kg/cm <sup>2</sup> ) :	200.00	200.00	200.00	200.00	200.00
As' (cm <sup>2</sup> ) :	0.00	0.00	0.00	0.00	0.00
As (cm <sup>2</sup> ) :	5.92	2.96	3.22	5.78	3.69

**REINF** : 2ø12 (top.)+1ø20 (lft top add.)+1ø20 (rgt top add.)  
2ø12 (str)+1ø12 (bent.)+1ø12 (lft bot add.)+1ø14 (rgt bot add.)+ ø8/20/10 (stirrup)



**K104**

Bw/D= 25/ 60 I= 4 J= 9 T beam: B1/D1=24/10cm B2/D2=24/15cm

**COMBINATION** LftM (tm) RgtM (tm) LftVd (t) RgtVd (t)

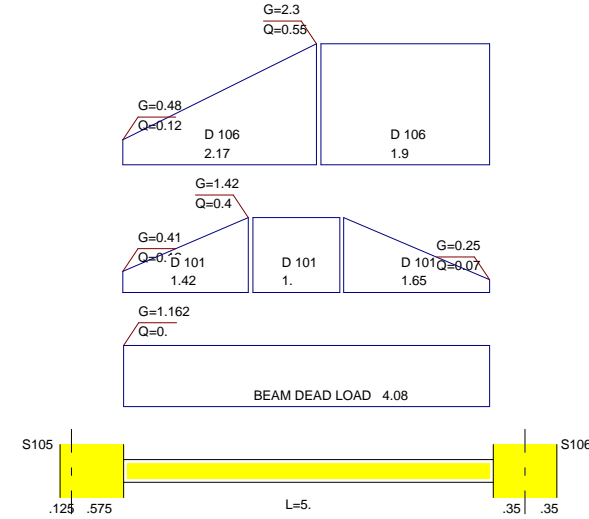
1. (G+G+G+G)	6.25	-9.90	6.86	-9.36
2. (Q+Q+Q+Q)	1.22	-1.75	1.25	-1.68
3. (o+Q+o+Q)	1.24	-1.43	1.31	-1.61
4. (Q+o+Q+o)	-0.03	-0.34	-0.08	-0.08
5. (Q+Q+o+Q)	-0.16	-0.31	-0.10	-0.10
6. (o+Q+Q+o)	1.26	-1.40	1.33	-1.60
7. (o+o+Q+Q)	1.30	-1.82	1.25	-1.68
Soil	0.00	0.00	0.00	0.00
X-Seismic+%5	-22.12	-20.59	-8.95	-8.95
X-Seismic-%5	-23.10	-21.45	-9.33	-9.33
Y-Seismic+%5	1.67	1.27	0.61	0.61
Y-Seismic-%5	3.10	2.52	1.18	1.18
X-Wind +%5	0.00	0.00	0.00	0.00
X-Wind -%5	0.00	0.00	0.00	0.00
Y-Wind +%5	0.00	0.00	0.00	0.00
Y-Wind -%5	0.00	0.00	0.00	0.00

MATERIAL:E1 C30 S420 Fk: 7.15 15.61 cm<sup>2</sup>

**DESIGN** : topMlft botMlft Msp. topMrgt botMrgt

Mcorr. (tm) :	-6.10	1.10	( 2.34m)	7.13	-0.32
max M (tm) :	30.65	-17.48	6.79	-33.17	12.54
fcd (kg/cm <sup>2</sup> ) :	200.00	200.00	200.00	200.00	200.00
As' (cm <sup>2</sup> ) :	0.00	0.00	0.00	0.00	0.00
As (cm <sup>2</sup> ) :	13.38	8.19	3.92	14.30	7.15

**REINF** : 3ø14 (top.)+2ø12 (web.)+3ø20 (lft top add.)+3ø20 (rgt top add.)  
2ø14 (str)+1ø14 (bent.)+2ø20 (lft bot add.)+2ø20 (rgt bot add.)+ ø10/13/11 (stirrup)



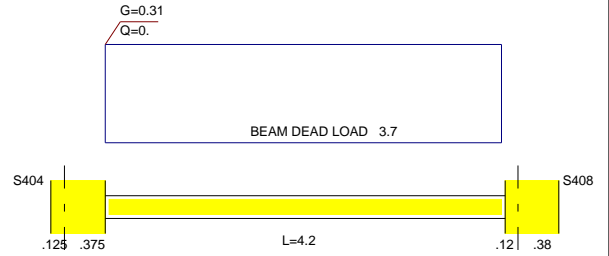
**K416**

Bw/D= 25/ 50 I= 37 J= 44 T beam: B1/D1=22/10cm

COMBINATION	LftM (tm)	RgtM (tm)	LftVd (t)	RgtVd (t)
1.(G+G+G)	1.01	0.20	0.85	-0.30
2.(Q+Q+Q)	0.11	0.11	0.05	0.05
3.(o+Q+o+Q)	0.02	0.01	0.01	0.01
4.(Q+o+Q+o)	0.09	0.09	0.04	0.04
5.(Q+Q+o+Q)	0.07	0.06	0.03	0.03
6.(o+Q+Q+o)	0.09	0.08	0.04	0.04
7.(o+o+Q+Q)	0.04	0.07	0.02	0.02
Soil	0.00	0.00	0.00	0.00
X-Seismic+5	0.79	0.77	0.35	0.35
X-Seismic-5	0.54	0.46	0.22	0.22
Y-Seismic+5	-2.42	-2.76	-1.16	-1.16
Y-Seismic-5	-2.12	-2.39	-1.01	-1.01
X-Wind +5	0.00	0.00	0.00	0.00
X-Wind -5	0.00	0.00	0.00	0.00
Y-Wind +5	0.00	0.00	0.00	0.00
Y-Wind -5	0.00	0.00	0.00	0.00
MATERIAL:E1	C30	S420 Fk:	3.86	1.00 cm <sup>2</sup>

DESIGN	topMlft	botMlft	Msp.	topMrgt	botMrgt
Mcorr. (tm)	-0.53	0.12	( 3.20m)	0.24	-0.37
max M (tm)	3.54	-1.51	0.65	-2.58	3.07
fcd (kg/cm <sup>2</sup> )	200.00	200.00	200.00	200.00	200.00
As' (cm <sup>2</sup> )	0.00	0.00	0.00	0.00	0.00
As (cm <sup>2</sup> )	4.02	2.01	3.22	4.02	2.01

REINF : 2ø12 (top.)+1ø12 (lft top add.)+1ø12 (rgt top add.)  
2ø12 (str)+1ø12 (bent.)+ ø8/20/10 (stirrup)



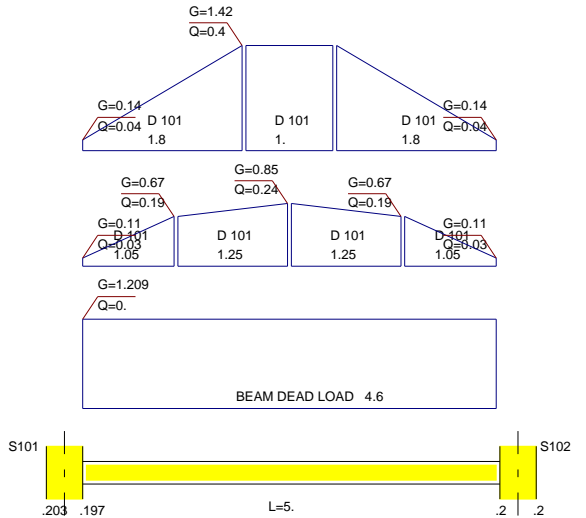
**K101**

Bw/D= 25/ 60 I= 1 J= 3 T beam: B2/D2=28/10cm Rh=-1.2m

COMBINATION	LftM (tm)	RgtM (tm)	LftVd (t)	RgtVd (t)
1.(G+G+G)	7.40	-9.96	5.79	-6.72
2.(Q+Q+Q)	1.25	-1.63	0.91	-1.05
3.(o+Q+o+Q)	1.38	-1.38	0.99	-0.97
4.(Q+o+Q+o)	-0.12	-0.25	-0.08	-0.08
5.(Q+Q+o+Q)	-0.15	-0.23	-0.07	-0.07
6.(o+Q+Q+o)	1.38	-1.38	0.99	-0.97
7.(o+o+Q+Q)	1.27	-1.65	0.91	-1.05
Soil	0.00	0.00	0.00	0.00
X-Seismic+5	-7.16	-7.34	-2.79	-2.79
X-Seismic-5	-8.26	-8.51	-3.22	-3.22
Y-Seismic+5	-1.07	-0.81	-0.31	-0.31
Y-Seismic-5	0.54	0.90	0.31	0.31
X-Wind +5	0.00	0.00	0.00	0.00
X-Wind -5	0.00	0.00	0.00	0.00
Y-Wind +5	0.00	0.00	0.00	0.00
Y-Wind -5	0.00	0.00	0.00	0.00
MATERIAL:E1	C30	S420 Fk:	31.44	34.30 cm <sup>2</sup>

DESIGN	topMlft	botMlft	Msp.	topMrgt	botMrgt
Mcorr. (tm)	-2.01	-0.37	( 2.40m)	2.22	0.00
max M (tm)	17.04	-1.60	5.45	-20.13	0.00
fcd (kg/cm <sup>2</sup> )	200.00	200.00	200.00	200.00	0.00
As' (cm <sup>2</sup> )	0.00	0.00	0.00	0.00	0.00
As (cm <sup>2</sup> )	7.82	3.91	3.92	9.44	4.72

REINF : 3ø12 (top.)+4ø12 (web.)+2ø20 (rgt top add.)  
2ø14 (str)+1ø14 (bent.)+1ø12 (lft bot add.)+1ø16 (rgt bot add.)+ ø10/11/10 (stirrup)



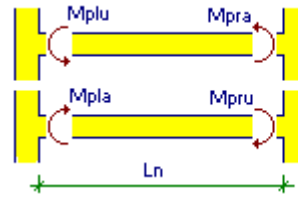
Ck : Column support beam magnification factor  
A4 : A4 Irregularity (Ba=Bax+0.3\*Bay, Ba=0.3\*Bax+Bay)

Rh : Beam arc height

$V_{cr}=0.65 \cdot f_{ctd} \cdot b_w \cdot d$ ,  $V_c=0.80 \cdot V_{cr}$ ,  $V_w=Asw/s \cdot f_{ywd} \cdot d$ ,  $V_r=V_c+V_w > V_d$   
 $T_{cr} = 1.35 \cdot f_{ctd} \cdot S_x$ ,  $T_r=(V_d/V_{cr})^2+(T_d/T_{cr})^2 \leq 1$ ,  $n \cdot Asw/s \geq 0.3 \cdot f_{ctd}/f_{ywd} \cdot b_w$   
 $A_{ov}/s = (V_d-V_c)/(2 \cdot d \cdot f_{ywd})$ ,  $A_{ot}/s = T_d/(2 \cdot A_e \cdot f_{ywd})$ ,  $A_o/s=A_{ov}/s+A_{ot}/s \leq Asw/s$ ,  $Asl=A_{ot}/s \leq U_e \cdot f_{ywd}/f_{yd}$

**BEAM SHEAR DESIGN CHECK (tm)**

Beam	Vcr	Vw	Vr	Vd	Td	Tcr	Tr	Aov/s + Aot/s = Ao/s			Asw/s	✓, ✗
K102	10.38	17.60	25.90	10.57	4.1342	1.7959	6.0729	0.0000	0.0494	0.0494	0.0524	✓
K103	10.38	8.45	16.75	8.60	0.0011	1.7959	0.6864	0.0009	0.0000	0.0038	0.0251	✓
K104	12.45	24.72	34.68	20.37	0.0854	2.1551	2.6785	0.0183	0.0031	0.0268	0.0604	✓
K105	12.45	24.72	34.68	19.67	0.1587	2.1551	2.5003	0.0237	0.0025	0.0262	0.0604	✓
K106	10.38	8.45	16.75	11.81	0.1778	1.7959	1.3060	0.0105	0.0034	0.0139	0.0251	✓
K107	10.38	8.45	16.75	11.75	0.0925	1.7959	1.2856	0.0017	0.0014	0.0111	0.0251	✓
K108	10.38	8.45	16.75	12.56	0.1475	1.7959	1.4720	0.0109	0.0040	0.0149	0.0251	✓
K109	10.38	8.45	16.75	9.46	0.1072	1.7959	0.8348	0.0034	0.0021	0.0055	0.0251	✓
K110	10.38	8.45	16.75	12.67	0.1263	1.7959	1.4961	0.0130	0.0024	0.0154	0.0251	✓
K111	10.38	38.01	46.31	9.62	5.4278	1.7959	9.9944	0.0039	0.1041	0.1080	0.1131	✓
K112	10.38	23.99	32.30	18.92	0.1085	1.7959	3.3296	0.0316	0.0021	0.0337	0.0714	✓
K113	14.94	22.85	34.80	19.00	1.1966	3.1034	1.7161	0.0165	0.0071	0.0237	0.0559	✓
K114	10.38	8.45	16.75	11.68	0.0887	1.7959	1.2700	0.0090	0.0017	0.0107	0.0251	✓
K115	10.38	8.45	16.75	13.38	0.6014	1.7959	1.7758	0.0120	0.0116	0.0236	0.0251	✓
K116	10.38	8.45	16.75	7.77	0.0632	1.7959	0.5624	0.0000	0.0012	0.0012	0.0251	✓
K118	10.38	8.45	16.75	7.74	0.0160	1.7959	0.5567	0.0000	0.0003	0.0003	0.0251	✓
K201	10.38	12.99	21.30	10.51	3.7287	1.7959	5.0144	0.0000	0.0307	0.0374	0.0387	✓
K202	10.38	12.99	21.30	10.61	2.9536	1.7959	3.3854	0.0000	0.0351	0.0386	0.0387	✓
K203	10.38	8.45	16.75	7.92	0.0055	1.7959	0.5822	0.0000	0.0001	0.0029	0.0251	✓
K204	12.45	10.28	20.24	16.62	0.0946	2.1551	1.7839	0.0109	0.0019	0.0177	0.0251	✓
K205	12.45	10.28	20.24	17.77	0.1328	2.1551	2.0396	0.0191	0.0021	0.0211	0.0251	✓
K206	10.38	8.45	16.75	10.77	0.0466	1.7959	1.0787	0.0074	0.0009	0.0083	0.0251	✓
K207	10.38	8.45	16.75	10.08	0.2119	1.7959	0.9580	0.0000	0.0030	0.0094	0.0251	✓
K208	10.38	8.45	16.75	11.95	0.2048	1.7959	1.3391	0.0080	0.0039	0.0119	0.0251	✓
K209	10.38	8.45	16.75	8.77	0.0718	1.7959	0.7153	0.0014	0.0014	0.0028	0.0251	✓
K210	10.38	8.45	16.75	11.41	0.0966	1.7959	1.2120	0.0093	0.0019	0.0111	0.0251	✓
K211	10.38	34.55	42.85	9.34	4.9890	1.7959	8.5266	0.0031	0.0957	0.0987	0.1028	✓
K212	10.38	20.30	28.60	15.06	0.0835	1.7959	2.1074	0.0201	0.0016	0.0217	0.0604	✓
K213	14.94	22.85	34.80	18.37	1.1828	3.1034	1.6545	0.0144	0.0089	0.0233	0.0559	✓
K214	10.38	8.45	16.75	11.08	0.1096	1.7959	1.1449	0.0073	0.0021	0.0094	0.0251	✓
K215	10.38	8.45	16.75	11.64	0.7185	1.7959	1.3393	0.0077	0.0086	0.0163	0.0251	✓
K216	10.38	8.45	16.75	5.97	0.0738	1.7959	0.3323	0.0000	0.0014	0.0014	0.0251	✓
K218	10.38	8.45	16.75	7.79	0.0327	1.7959	0.5637	0.0000	0.0006	0.0006	0.0251	✓
K301	10.38	12.07	20.37	11.15	2.2787	1.7959	2.7648	0.0000	0.0339	0.0346	0.0359	✓
K302	10.38	12.07	20.37	10.75	2.5466	1.7959	3.0844	0.0000	0.0348	0.0348	0.0359	✓
K303	10.38	8.45	16.75	8.55	0.1501	1.7959	0.6859	0.0007	0.0029	0.0036	0.0251	✓
K304	10.38	8.45	16.75	11.95	0.0999	1.7959	1.3285	0.0073	0.0019	0.0128	0.0251	✓
K305	10.38	8.45	16.75	11.53	0.1365	1.7959	1.2402	0.0071	0.0026	0.0122	0.0251	✓
K306	10.38	8.45	16.75	9.17	0.1118	1.7959	0.7840	0.0026	0.0021	0.0047	0.0251	✓
K307	10.38	8.45	16.75	5.13	0.1071	1.7959	0.2476	0.0000	0.0020	0.0021	0.0251	✓
K308	10.38	8.45	16.75	7.77	0.0656	1.7959	0.5616	0.0000	0.0013	0.0013	0.0251	✓
K309	31.13	53.61	78.52	10.10	1.9501	5.3878	0.2057	0.0000	0.0111	0.0111	0.0503	✓
K310	10.38	8.45	16.75	9.70	0.1321	1.7959	0.8791	0.0042	0.0025	0.0067	0.0251	✓
K311	10.38	8.45	16.75	5.85	0.2287	1.7959	0.3337	0.0000	0.0044	0.0044	0.0251	✓
K312	10.38	8.45	16.75	8.76	0.0796	1.7959	0.7149	0.0014	0.0015	0.0029	0.0251	✓
K313	10.38	8.45	16.75	16.98	0.2393	1.7959	2.6940	0.0152	0.0037	0.0188	0.0251	✓
K314	10.38	8.45	16.75	7.63	0.1102	1.7959	0.5442	0.0000	0.0014	0.0021	0.0251	✓
K315	31.13	53.61	78.52	11.35	3.0283	5.3878	0.4423	0.0000	0.0172	0.0172	0.0503	✓
K316	10.38	8.45	16.75	2.71	0.0334	1.7959	0.0686	0.0000	0.0006	0.0006	0.0251	✓
K317	10.38	8.45	16.75	12.98	0.0517	1.7959	1.5652	0.0138	0.0008	0.0146	0.0251	✓
K318	10.38	8.45	16.75	8.65	0.3840	1.7959	0.7413	0.0000	0.0073	0.0084	0.0251	✓
K403	10.38	8.45	16.75	4.07	0.0683	1.7959	0.1553	0.0000	0.0013	0.0013	0.0251	✓
K406	10.38	8.45	16.75	6.74	0.0901	1.7959	0.4250	0.0000	0.0017	0.0017	0.0251	✓
K414	10.38	8.45	16.75	2.99	0.0045	1.7959	0.0831	0.0000	0.0001	0.0001	0.0251	✓
K416	10.38	8.45	16.75	2.05	0.0090	1.7959	0.0392	0.0000	0.0002	0.0003	0.0251	✓
K101	12.45	29.21	39.17	11.09	5.6892	2.1551	7.7473	0.0000	0.0662	0.0662	0.0714	✓



$$V_e = \frac{M_{plu} + M_{pra}}{L_n}$$

$$V_e = \frac{M_{pla} + M_{pru}}{L_n}$$

$V_e < V_r$   
 $V_e < 0.22 b_w d f_{cd}$

**SHEAR DESIGN CHECK FOR BEAMS (tm)**

Beam	$L_n$	$M_{plu}$	$M_{pla}$	$M_{pru}$	$M_{pra}$	$V_{dl} +$	$V_{pl} =$	$V_{el} <$	$V_{rl}$	$V_{dr} +$	$V_{pr} =$	$V_{er} <$	$V_{rr}$	✓, ✗
K102	4.65	17.13	9.98	17.13	7.98	7.37	5.40	12.77	26.38	6.90	5.83	12.73	26.38	✓
K103	3.67	11.94	6.39	11.94	7.13	5.08	5.19	10.27	16.88	3.92	4.99	8.91	16.88	✓
K104	4.08	31.71	20.07	34.39	20.07	8.11	12.71	20.81	29.19	11.04	13.36	24.41	29.19	✓
K105	4.05	34.39	20.07	31.71	20.07	10.47	13.45	23.91	29.19	8.63	12.79	21.41	29.19	✓
K106	3.70	25.82	20.27	13.85	9.98	6.54	9.68	16.22	16.88	5.34	9.22	14.57	16.88	✓
K107	4.45	15.30	7.98	20.66	9.98	4.85	5.68	10.53	16.88	7.74	6.43	14.17	16.88	✓
K108	4.32	20.66	9.98	15.71	9.98	8.44	7.08	15.52	16.88	5.69	5.94	11.63	16.88	✓
K109	3.45	15.71	9.98	13.85	9.98	4.22	7.45	11.66	16.88	3.24	6.91	10.14	16.88	✓
K110	5.05	25.25	11.50	25.25	15.30	7.07	8.03	15.10	16.88	6.42	7.28	13.70	16.88	✓
K111	3.64	30.01	13.43	13.85	7.98	4.57	10.44	15.01	37.98	3.11	7.49	10.60	37.98	✓
K112	3.38	35.12	20.27	19.50	20.27	7.52	16.41	23.93	26.38	1.75	11.79	13.53	26.38	✓
K113	5.10	29.23	21.15	22.61	12.78	13.15	8.24	21.39	22.83	9.66	8.58	18.24	22.83	✓
K114	3.50	23.64	15.30	23.54	13.43	4.05	10.59	14.64	16.88	3.55	11.10	14.65	16.88	✓
K115	4.57	18.52	18.13	20.27	11.07	8.18	6.48	14.66	16.88	5.48	8.40	13.88	16.88	✓
K116	3.70	18.92	15.30	18.52	15.30	1.46	9.24	10.69	16.88	1.17	9.13	10.30	16.88	✓
K201	4.65	18.52	13.43	17.13	9.98	6.92	6.13	13.05	16.88	7.35	6.57	13.91	16.88	✓
K202	4.72	17.78	8.59	17.78	7.86	7.41	5.43	12.84	16.88	6.97	5.58	12.56	16.88	✓
K203	3.70	9.98	6.39	11.94	6.39	4.68	4.42	9.10	16.88	4.38	4.95	9.34	16.88	✓
K204	4.28	23.68	13.68	26.59	13.68	8.38	8.74	17.12	20.55	10.57	9.42	19.99	20.55	✓
K205	4.10	26.59	13.68	29.53	15.50	10.03	10.27	20.30	20.55	8.54	10.54	19.08	20.55	✓
K206	3.70	24.22	16.73	11.94	6.39	6.18	8.27	14.45	16.88	5.64	7.75	13.39	16.88	✓
K207	4.50	17.13	7.13	15.30	7.98	5.00	5.58	10.58	16.88	6.98	4.98	11.96	16.88	✓
K208	4.42	15.30	7.98	13.85	7.13	8.35	5.07	13.41	16.88	5.50	4.93	10.43	16.88	✓
K209	3.45	13.85	7.13	11.94	7.98	4.07	6.33	10.40	16.88	3.38	5.53	8.91	16.88	✓
K210	5.10	19.55	11.40	19.55	11.40	7.11	6.07	13.18	16.88	5.94	6.07	12.01	16.88	✓
K211	3.64	20.66	9.98	11.94	7.98	4.88	7.87	12.75	37.98	2.80	6.02	8.82	37.98	✓
K212	3.38	25.38	15.30	13.22	15.30	7.58	12.05	19.64	26.38	1.65	8.45	10.10	26.38	✓
K213	5.10	29.35	22.73	22.73	13.92	12.89	8.49	21.37	22.83	9.43	8.91	18.35	22.83	✓
K214	3.50	23.64	11.50	23.64	11.94	4.46	10.16	14.62	16.88	3.14	10.04	13.18	16.88	✓
K215	4.67	15.30	9.98	18.92	9.98	7.93	5.41	13.34	16.88	5.85	6.19	12.04	16.88	✓
K216	3.70	15.30	9.98	15.30	9.98	1.18	6.82	8.01	16.88	0.93	6.82	7.75	16.88	✓
K301	4.65	11.13	5.81	19.55	9.43	6.46	4.42	10.87	24.52	7.81	5.45	13.26	24.52	✓
K302	4.72	17.78	8.59	17.78	7.86	7.48	5.43	12.91	16.88	6.90	5.58	12.48	16.88	✓
K303	3.70	9.98	6.39	8.43	4.30	5.89	3.86	9.75	16.88	4.91	4.00	8.92	16.88	✓
K304	4.38	11.94	6.39	12.36	6.39	7.54	4.19	11.73	24.52	8.34	4.29	12.62	24.52	✓
K305	4.20	12.36	6.39	17.13	7.98	7.68	4.84	12.52	24.52	7.85	5.60	13.45	24.52	✓
K306	3.70	18.92	7.98	8.43	6.39	6.27	6.84	13.11	16.88	2.97	4.43	7.40	16.88	✓
K307	4.50	8.43	4.30	10.42	4.30	3.35	2.83	6.17	16.88	3.56	3.27	6.83	16.88	✓
K308	4.42	10.42	4.30	23.64	4.30	5.41	3.33	8.74	16.88	5.30	6.31	11.61	16.88	✓
K309	3.45	74.80	67.67	68.97	67.67	5.89	41.30	47.18	53.58	3.71	39.61	43.31	53.58	✓
K310	5.10	13.43	7.53	11.50	7.53	6.81	4.11	10.92	24.52	5.86	3.73	9.59	24.52	✓
K311	3.64	15.30	7.13	13.43	4.30	3.32	5.39	8.71	16.88	1.30	5.65	6.95	16.88	✓
K312	3.38	20.27	9.98	11.94	4.30	6.01	7.28	13.29	16.88	2.71	6.49	9.21	16.88	✓
K313	5.10	18.82	10.58	11.83	8.59	11.90	5.37	17.28	24.52	8.45	4.39	12.84	24.52	✓
K314	3.50	11.94	6.39	18.82	6.39	3.63	5.24	8.87	16.88	3.97	7.20	11.17	16.88	✓
K315	4.67	74.80	67.67	68.97	67.67	7.76	30.51	38.27	53.58	5.83	29.26	35.09	53.58	✓
K316	3.70	8.43	6.39	23.64	4.30	0.99	3.44	4.42	16.88	0.16	8.10	8.26	16.88	✓
K317	5.18	11.94	11.50	9.98	11.50	9.02	4.53	13.55	24.52	7.18	4.15	11.33	24.52	✓
K403	3.70	8.43	4.30	8.43	4.30	2.58	3.44	6.02	16.88	2.81	3.44	6.25	16.88	✓
K406	3.70	8.43	4.30	8.43	4.30	4.68	3.44	8.12	16.88	3.93	3.44	7.37	16.88	✓
K414	3.50	8.43	4.30	8.43	4.30	2.06	3.64	5.69	16.88	2.07	3.64	5.71	16.88	✓
K416	3.70	8.43	4.30	8.43	4.30	0.89	3.44	4.33	16.88	0.25	3.44	3.69	16.88	✓
K101	4.60	19.76	13.68	23.68	11.29	6.70	6.75	13.45	32.11	7.77	8.12	15.89	32.11	✓