



UITVOERINGSBEREKENING WAPENING

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Wijzigingen en aanvullingen

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1. Inleiding

Voor een inleiding in het project, zie Palte document 460518-A.

Het doel van dit document is het maken van een berekening van de wapening van de in het werk gestorte betonnen constructieonderdelen inclusief de fundering.

2. Randvoorwaarden en uitgangspunten

Voor de van toepassing zijnde randvoorwaarden en uitgangspunten zie Palte document 460518-A. Hierop zijn geen wijzigingen en of aanvullingen.

3. Beschrijving hoofddraagconstructie

Voor een beschrijving van de hoofddraagconstructie zie Palte document 460518-A. Hierop zijn geen wijzigingen en of aanvullingen.

4. Belastingen en belastingcombinaties

Voor de belastingen en belastingcombinaties zie Palte document 460518-A. Hierop zijn geen wijzigingen en of aanvullingen.

De stukken zijn aangevuld met de volgende Palte tekeningen:

- B010 Fundering deel A, wapening;
- B011 bk. fundering deel B, wapening;
- B012 bk. fundering deel C, wapening.

5. Wapening in het werk gestorte betonconstructie

5.1. Dwarswapening

Uitgangspunten

In het project worden zowel funderingsstroken als funderingspoeren toegepast. De poeren worden aan de onderzijde afgewapend met wapening in twee richtingen, waardoor de buiging in dwarsrichting beschouwd wordt. In de stroken wordt beugelwapening toegepast, waarbij de staven aan de onderzijde de buiging in dwarsrichting opnemen. In het volgende wordt aangetoond dat de minimale dwarskrachtwapening voldoende is om de buiging in dwarsrichting op te nemen.

Controle dwarswapening stroken speelhal

Strook 700 x 400 mm bgls. Ø8-250 mm

$\sigma_{gd,Rd}$	= toelaatbare gronddruk	= conservatief	= 185	kN/m ²
p_{Ed}	= $185 - 1.2 \cdot (0.15 \cdot 25 + 0.24 \cdot 16 + 0.40 \cdot 25) - 1.5 \cdot 4.00$		= 158	kN/m ²
M_{Ed}	= $\frac{1}{2} \cdot 158 \cdot 0.35^2$		= 9.68	kNm/m ¹
d	= $h - c - \varnothing_{sw} \cdot \frac{1}{2} \varnothing_s$	= $400 - 30 - 8 - 8$	= 354	mm
s_{max}	= beugels h.o.h. 250 mm		= 250	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 200	N/mm ²
$A_{s,prov}$	= $\gamma_G \sigma_{Rd} / f_{ywd} A_s$	= $1.35 \cdot 200 / 435 \cdot 201$	= 125	mm ²
$100 \rho_1$	= $A_{s,prov} / (b d)$	= $125 / (700 \cdot 354) \cdot 10^2$	= 0.0504	-
$M_{Rd} / (b d^2)$	= GTB - 11.3		= 202	-
M_{Rd}	= $202 \cdot 0.700 \cdot 0.354^2 / 1.25$		= 14.2	kNm
u.c.	= $M_{Ed} / M_{Rd} \leq 1$	= $9.68 / 14.2$	= $0.68 < 1$	→ voldoet

Strook 1000 x 600 bgls. Ø8-250 mm

$\sigma_{gd,Rd}$	= toelaatbare gronddruk	= conservatief	= 205	kN/m ²
p_{Ed}	= $205 - 1.2 \cdot (0.15 \cdot 25 + 0.24 \cdot 16 + 0.60 \cdot 25) - 1.5 \cdot 4.00$		= 172	kN/m ²
M_{Ed}	= $\frac{1}{2} \cdot 172 \cdot 0.50^2$		= 21.5	kNm/m ¹
d	= $h - c - \varnothing_{sw} \cdot \frac{1}{2} \varnothing_s$	= $600 - 30 - 8 - 8$	= 554	mm
s_{max}	= beugels h.o.h. 250 mm		= 250	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 200	N/mm ²
$A_{s,prov}$	= $\gamma_G \sigma_{Rd} / f_{ywd} A_s$	= $1.35 \cdot 200 / 435 \cdot 201$	= 125	mm ²
$100 \rho_1$	= $A_{s,prov} / (b d)$	= $125 / (1000 \cdot 554) \cdot 10^2$	= 0.0225	-
$M_{Rd} / (b d^2)$	= GTB - 11.3		= 108	-
M_{Rd}	= $108 \cdot 1.000 \cdot 0.554^2 / 1.25$		= 26.6	kNm
u.c.	= $M_{Ed} / M_{Rd} \leq 1$	= $21.5 / 26.6$	= $0.81 < 1$	→ voldoet

Controle stroken centrale hal en speelhal

Strook 700 x 400 mm bgls. Ø8-250 mm

$\sigma_{gd,Rd}$	= toelaatbare gronddruk	= conservatief	= 120	kN/m ²
p_{Ed}	= $120 - 1.2 \cdot (0.20 \cdot 25 + 0.19 \cdot 16 + 0.40 \cdot 25) - 1.5 \cdot 5.00$		= 90.9	kN/m ²
M_{Ed}	= $\frac{1}{2} \cdot 90.9 \cdot 0.35^2$		= 5.56	kNm/m ¹
d	= $h - c - \varnothing_{sw} \cdot \frac{1}{2} \varnothing_s$	= $400 - 30 - 8 - 8$	= 354	mm
s_{max}	= beugels h.o.h. 250 mm		= 250	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 200	N/mm ²
$A_{s,prov}$	= $\gamma_G \sigma_{Rd} / f_{ywd} A_s$	= $1.35 \cdot 200 / 435 \cdot 201$	= 125	mm ²
$100 \rho_1$	= $A_{s,prov} / (b d)$	= $125 / (700 \cdot 354) \cdot 10^2$	= 0.0504	-
$M_{Rd} / (b d^2)$	= GTB - 11.3		= 202	-
M_{Rd}	= $202 \cdot 0.700 \cdot 0.354^2 / 1.25$		= 14.2	kNm
u.c.	= $M_{Ed} / M_{Rd} \leq 1$	= $5.56 / 14.2$	= $0.39 < 1$	→ voldoet

Strook 1000 x 600 mm bgls. Ø8-300 mm

$\sigma_{gd,Rd}$	= toelaatbare gronddruk	= conservatief	= 120	kN/m ²
p_{Ed}	= $120 - 1.2 \cdot (0.20 \cdot 25 + 0.19 \cdot 16 + 0.60 \cdot 25) - 1.5 \cdot 5.00$		= 84.9	kN/m ²
M_{Ed}	= $\frac{1}{2} \cdot 84.9 \cdot 0.50^2$		= 10.6	kNm/m ¹
d	= $h - c - \varnothing_{sw} \frac{1}{2} \varnothing_s$	= 600 - 30 - 8 - 8	= 554	mm
s_{max}	= beugels h.o.h. 300 mm		= 300	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 160	N/mm ²
$A_{s,prov}$	= $\gamma_G \sigma_{Rd} / f_{ywd} A_s$	= $1.35 \cdot 160 / 435 \cdot 168$	= 83.2	mm ²
$100 \rho_1$	= $A_{s,prov} / (b d)$	= $83.2 / (1000 \cdot 554) \cdot 10^2$	= 0.0150	-
$M_{Rd} / (b d^2)$	= GTB - 11.3		= 75.1	-
M_{Rd}	= $75.1 \cdot 1.000 \cdot 0.554^2 / 1.25$		= 18.4	kNm
u.C.	= $M_{Ed} / M_{Rd} \leq 1$	= 10.6 / 18.4	= 0.58 < 1	→ voldoet

Strook 1200 x 400 mm bgls. Ø8-200 mm

$\sigma_{gd,Rd}$	= toelaatbare gronddruk	= conservatief	= 120	kN/m ²
p_{Ed}	= $120 - 1.2 \cdot (0.20 \cdot 25 + 0.19 \cdot 16 + 0.40 \cdot 25) - 1.5 \cdot 5.00$		= 90.9	kN/m ²
M_{Ed}	= $\frac{1}{2} \cdot 90.9 \cdot 0.60^2$		= 16.4	kNm/m ¹
d	= $h - c - \varnothing_{sw} \frac{1}{2} \varnothing_s$	= 400 - 30 - 8 - 8	= 354	mm
s_{max}	= beugels h.o.h. 200 mm		= 200	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 240	N/mm ²
$A_{s,prov}$	= $\gamma_G \sigma_{Rd} / f_{ywd} A_s$	= $1.35 \cdot 240 / 435 \cdot 251$	= 187	mm ²
$100 \rho_1$	= $A_{s,prov} / (b d)$	= $187 / (1200 \cdot 354) \cdot 10^2$	= 0.0441	-
$M_{Rd} / (b d^2)$	= GTB - 11.3		= 180	-
M_{Rd}	= $180 \cdot 1.200 \cdot 0.354^2 / 1.25$		= 21.7	kNm
u.C.	= $M_{Ed} / M_{Rd} \leq 1$	= 16.4 / 21.7	= 0.76 < 1	→ voldoet

Strook 1750 x 600 mm bgls. Ø8-200 mm

$\sigma_{gd,Rd}$	= toelaatbare gronddruk	= conservatief	= 120	kN/m ²
p_{Ed}	= $120 - 1.2 \cdot (0.20 \cdot 25 + 0.19 \cdot 16 + 0.60 \cdot 25) - 1.5 \cdot 5.00$		= 84.9	kN/m ²
M_{Ed}	= $\frac{1}{2} \cdot 84.9 \cdot 0.875^2$		= 32.5	kNm/m ¹
d	= $h - c - \varnothing_{sw} \frac{1}{2} \varnothing_s$	= 600 - 30 - 8 - 8	= 554	mm
s_{max}	= beugels h.o.h. 200 mm		= 200	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 240	N/mm ²
$A_{s,prov}$	= $\gamma_G \sigma_{Rd} / f_{ywd} A_s$	= $1.35 \cdot 240 / 435 \cdot 251$	= 187	mm ²
$100 \rho_1$	= $A_{s,prov} / (b d)$	= $187 / (1750 \cdot 554) \cdot 10^2$	= 0.0193	-
$M_{Rd} / (b d^2)$	= GTB - 11.3		= 96.5	-
M_{Rd}	= $96.5 \cdot 1.750 \cdot 0.554^2 / 1.25$		= 41.5	kNm
u.C.	= $M_{Ed} / M_{Rd} \leq 1$	= 32.5 / 41.5	= 0.78 < 1	→ voldoet

Strook 2500 x 800 mm bgls. Ø8-150 mm

$\sigma_{gd,Rd}$	= toelaatbare gronddruk	= conservatief	= 120	kN/m ²
p_{Ed}	= $120 - 1.2 \cdot (0.20 \cdot 25 + 0.19 \cdot 16 + 0.80 \cdot 25) - 1.5 \cdot 5.00$		= 78.9	kN/m ²
M_{Ed}	= $\frac{1}{2} \cdot 78.9 \cdot 1.25^2$		= 61.6	kNm/m ¹
d	= $h - c - \varnothing_{sw} \frac{1}{2} \varnothing_s$	= 800 - 30 - 8 - 8	= 754	mm
s_{max}	= beugels h.o.h. 150 mm		= 150	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 280	N/mm ²
$A_{s,prov}$	= $\gamma_G \sigma_{Rd} / f_{ywd} A_s$	= $1.35 \cdot 280 / 435 \cdot 335$	= 291	mm ²
$100 \rho_1$	= $A_{s,prov} / (b d)$	= $291 / (2500 \cdot 754) \cdot 10^2$	= 0.0154	-
$M_{Rd} / (b d^2)$	= GTB - 11.3		= 77.2	-
M_{Rd}	= $77.2 \cdot 2.500 \cdot 0.754^2 / 1.25$		= 87.8	kNm
u.C.	= $M_{Ed} / M_{Rd} \leq 1$	= 61.6 / 87.8	= 0.90 < 1	→ voldoet

5.2. Wapening stroken fundering restaurant

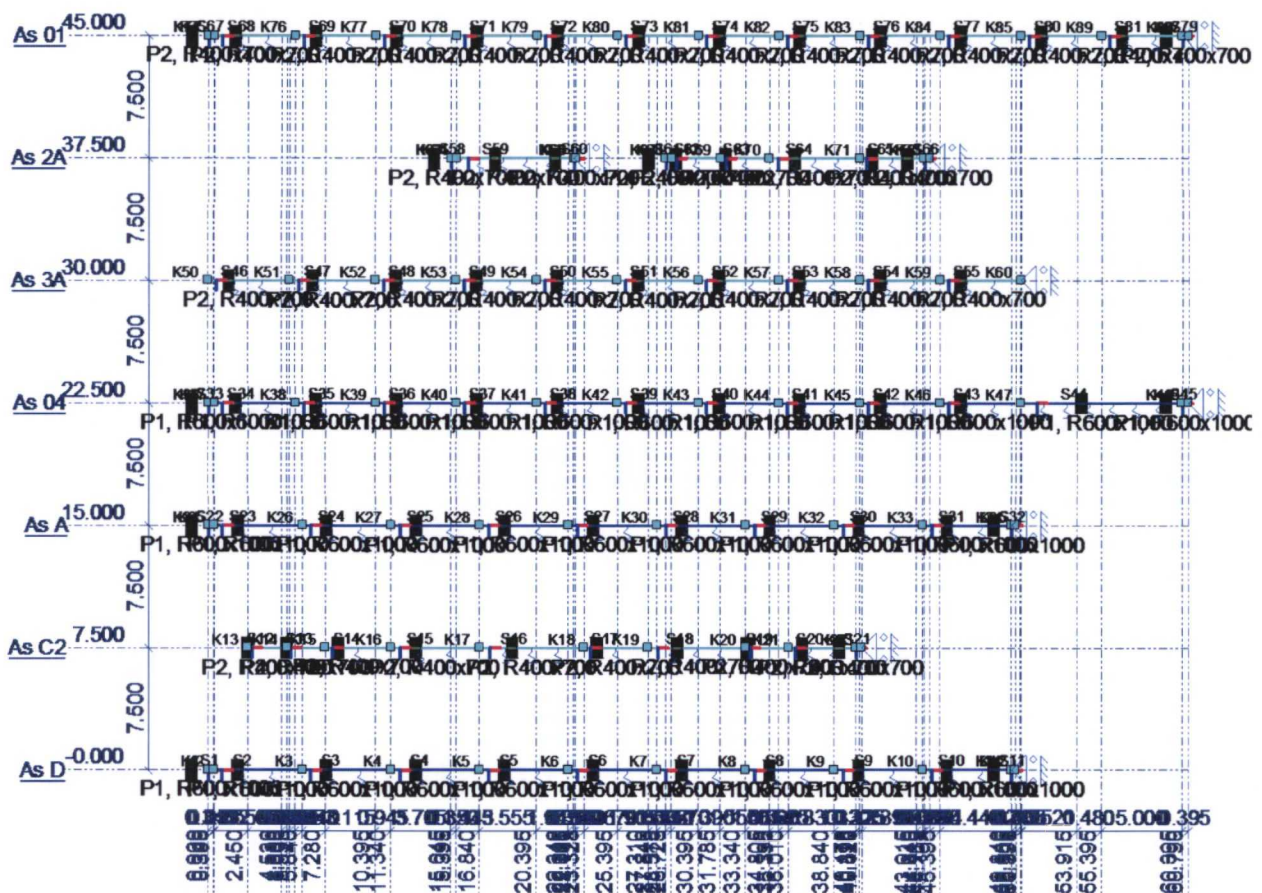
C20/25

5.2.1. Uitgangspunten, geometrie en belastingen

Uitgangspunten

Het restaurant gedeelte wordt gefundeerd op een strokenfundering met poeren ter plekke van relatief grote belastingen. De maatgevende stroken zijn ingevoerd in MatrixFrame. Hierop zijn de belastingen door de kolommen als puntlasten ingevoerd. Als beddingsconstante is er gerekend met $C_z = (C_{z, \text{modaal}} + C_{z, \text{gunstig}}) / 2 = (8000 + 11800) / 2 = 9900 \text{ kN/m}^3$ conform het funderingsadvies GA160509-R01-v1.0. Daarnaast wordt ook de gronddruk getoetst. De dwarswapening is reeds getoetst in hoofdstuk 5.1. De dwarskracht wordt gecontroleerd op d naast de oplegging (kolom). De poeren worden handmatig getoetst en gewapend. Zie computerberekening pag. 1-22.

Overzicht geometrie



BelastingenAlgemeen

q_{EG}	= Eigen Gewicht	= vlgs. SCIA Engineer	= 25	kN/m^3
q_G	= prefab betonplint gevel	= $0.17 \times 0.70 \times 25$	= 3.00	kN/m^1

Strook As D	1000 x 600 mm	m^2	G	Q	S
04	LHg 1.1*7.00*10.0	77.0	42.4	9.80	-
	Dak 1.25*5.00*2.75 / 2	8.59	4.72	12.0	-
	LLg 8.25*7.00 / 2	28.9	15.9	40.5	-
	V+1 7.35*2.75 / 2	10.1	62.5	40.4	-
	Gevel 1.25*7.75*11.00 / 2	53.3	32.0	-	-
3B	Dak 1.1*10.0*5.50	60.5	30.3	56.5	-
	LLg 1.1*5.50*2.00	12.1	6.66	16.9	-
	V+1 5.50*5.00	27.5	164	110	-
	Gevel 1.1*5.50*11.0	66.6	40.0	-	-
3A - 02	Dak 1.1*10.0*5.50	60.5	30.3	56.5	90: 2A-B
	LLg 1.1*5.50*2.00	12.1	6.66	16.9	-
	V+1 1.1*5.50*5.00	27.5	164	110	-
	Gevel 1.1*5.50*11.0	60.5	40.0	-	-
1B	Dak 1.1*10.0*5.50	60.5	30.3	56.5	-
	V+1 3.00*5.00	15.0	89.3	60.0	-
	Gevel 1.1*5.50*11.0	60.5	40.0	-	-
1A	Dak 1.1*10.0*5.50	60.5	30.3	56.5	90:1A
	V+1 0.50*5.00	2.50	14.9	10.0	-
	Gevel 1.1*5.50*11.0	60.5	40.0	-	-
01	Dak 1.25*2.50*2.75 / 2	4.30	2.37	4.01	-
	Gevel 1.25*2.75*11.0 / 2	18.9	11.3	-	-
Strook As C2	700 x 400 mm	m^2	G	Q	S
04-3B	V+1 3.50*4.80	16.8	100	67.2	-
3B-3A	V+1 3.20*4.80 + 3.40*3.50	27.3	162	109	-
3A	V+1 4.80*4.80	23.0	137	92.0	-
03 - 2A	V+1 6.00*5.60	33.6	200	134	-
02	V+1 4.20*4.80	20.2	120	80.8	-
02 - 1B	V+1 1.40*4.80	6.72	40.0	26.9	-
1B	V+1 5.00*4.80 / 2	12.0	71.4	48.0	-
Strook As A	1000 x 600 mm	m^2	G	Q	S
04	Dak 1.25*2.50*2.75 / 2	4.30	2.37	4.01	-
	Gevel 1.25*2.75*11.0 / 2	18.9	11.3	-	-
3B	Dak 1.1*10.0*5.50	60.5	30.3	56.5	90: 3B
	Gevel 1.1*5.50*11.0	66.6	40.0	-	-
3A - 03	Dak 1.1*10.0*5.50	60.5	30.3	56.5	-
	V+1 5.50*5.00	27.5	164	110	-
	Gevel 1.1*5.50*11.0	66.6	40.0	-	-
2B - 02	Dak 1.1*10.0*5.50	60.5	30.3	56.5	90: 2A
	V+1 3.00*5.00	15.0	89.3	60.0	-
	Gevel 1.1*5.50*11.0	66.6	40.0	-	-
1B	Dak 1.1*10.0*5.50	60.5	30.3	56.5	90: 1B
	V+1 3.00*5.00 + 3.50*2.50	23.8	145	95.2	-
	Gevel 1.1*5.50*11.0	66.6	40.0	-	-
1A	Dak 1.1*10.0*5.50	60.5	30.3	56.5	-
	V+1 0.50*5.00 + 2.00*2.50	7.50	46.9	30.0	-
	Gevel 1.25*2.75*11.0	37.8	22.7	-	-
01	Dak 1.25*2.50*2.75 / 2	4.30	2.37	4.01	-
	V+1 2.50*4.60 / 2	5.52	35.3	22.1	-
	Gevel 1.25*2.75*11.0 / 2	18.9	11.3	-	-

Strook As 04	1000 x 600 mm	m ²	G	Q	S
A	Dak 1.25*2.50*2.75 / 2	4.30	2.37	6.02	-
	Gevel 1.25*5.25*11.0 / 2	36.1	21.7	-	-
A1 - A2	Dak 1.1*5.00*2.75	15.1	8.31	21.1	90: A1-2
	Gevel 1.1*5.00*11.0	60.5	33.3	-	-
A3	LHg 1.1*5.00*1.20	6.60	3.63	9.24	-
	Dak 1.1*5.00*2.75	15.1	8.31	21.1	-
	V+1 5.00*5.00	25.0	149	100	-
	Gevel 1.1*5.00*11.0	60.5	36.3	-	-
B	LHg 1.1*5.00*1.20	6.60	3.63	9.24	-
	Dak 1.1*8.75*20.0	182	99.8	102	-
	V+1 5.00*2.75	13.8	81.8	55.2	-
	Gevel 1.1*5.00*11.0	60.5	36.3	-	-
B1	LHg 1.1*5.00*1.20	6.60	3.63	9.24	-
	Dak 1.1*5.00*2.75	15.1	8.31	21.1	-
	V+1 2.50*2.75 + 3.50*5.00	24.4	153	97.6	-
	Gevel 1.1*5.00*11.0	60.5	36.3	-	-
B2	LHg 1.1*5.00*1.20	6.60	3.63	9.24	-
	Dak 1.1*5.00*2.75	15.1	8.31	21.1	-
	V+1 5.00*5.00 + 5.00*3.75	43.8	269	175	-
	Gevel 1.1*5.00*11.0	60.5	36.3	-	-
B3	LHg 1.1*5.00*2.50	13.8	7.59	19.3	-
	Dak 1.1*5.00*2.75	15.1	8.31	21.1	90: B3
	V+1 5.00*5.00 + 5.00*5.00	50.0	309	200	-
	Gevel 1.1*5.00*11.0	60.5	36.3	-	-
C	LHg 1.1*5.00*3.50	19.3	10.6	27.0	-
	Dak 1.1*8.25*20.0	182	99.8	102	-
	V+1 5.00*5.00 + 4.75*6.50	55.9	346	224	-
	Gevel 1.1*5.00*11.0	60.5	36.3	-	-
C1	LHg 1.1*5.00*5.00	27.5	15.1	38.5	-
	Dak 1.1*5.00*2.75	15.1	8.31	21.1	-
	V+1 5.00*3.50 + 2.50*1.75	21.9	132	87.6	-
	Gevel 1.1*5.00*11.0	60.5	36.3	-	-
C2	LHg 1.1*7.50*8.75	72.2	39.7	101	-
	Dak 1.1*7.50*2.75	22.7	12.5	31.8	-
	V+1 5.50*5.00	27.5	176	110	-
	Gevel 1.1*7.50*11.0	90.8	54.5	-	-
D	LHg 1.1*7.00*10.0	77.0	42.4	9.80	-
	Dak 1.25*5.00*2.75 / 2	8.59	4.72	12.0	-
	V+1 7.35*2.75 / 2	10.1	64.6	40.4	-
	Gevel 1.25*7.75*11.00 / 2	53.3	32.0	-	-
Strook As 3A	700 x 400 mm	m ²	G	Q	S
A	Dak 1.1*10.0*5.50 / 2	30.3	16.7	42.4	-
	V+1 4.55*2.50 / 2	5.69	33.9	22.8	-
	Gevel 5.50*9.00 / 2	24.8	13.6	-	-
A1 - B	V+1 5.00*3.10	15.5	92.2	62.0	-
B1 - B2	V+1 5.00*4.70	23.5	140	94.0	-
B3 - C	V+1 5.00*6.75	33.8	201	135	-

Strook As 2A	700 x 400 mm	m ²	G	Q	S
A3	V+1 3.75*4.45	16.7	99.4	66.8	-
B-B1	V+1 3.75*4.45 + 2.95*0.50	18.2	108	72.8	-
B1-B2	V+1 1.60*4.50 + 2.95*0.35	8.23	49.0	32.9	-
B2-B3	V+1 3.10*4.50	14.0	83.3	56.0	-
B3	V+1 1.50*4.50 + 2.80*7.70	28.3	168	113	-
C	V+1 4.85*7.70	37.3	222	149	-
C1	V+1 2.05*7.70	15.8	94.0	63.2	-

Strook As 01	700 x 400 mm	m ²	G	Q	S
A	Dak 1.25*2.50*2.75 / 2	4.30	2.37	4.01	-
	V+1 2.50*4.65 / 2	5.81	34.6	23.2	-
	Gevel 5.25*9.00 / 2	23.6	14.2	-	-
A1 - A3	Dak 1.1*5.00*2.75	15.1	8.31	10.1	90: A2-3
	V+1 5.00*4.65	23.3	139	93.2	-
	Gevel 5.00*9.00	45.0	27.0	-	-
B	Dak 1.1*8.25*20.0	182	99.8	102	-
	V+1 5.00*4.65	23.3	139	93.2	-
	Gevel 5.00*9.00	45.0	27.0	-	-
B1	Dak 1.1*5.00*2.75	15.1	8.31	14.1	-
	V+1 2.50*4.65	11.6	69.0	46.4	-
	Gevel 5.00*9.00	45.0	27.0	-	-
B2	Dak 1.1*5.00*2.75	15.1	8.31	14.1	90: B2
	V+1 5.00*3.40	17.0	101	68.0	-
	Gevel 1.1*5.00*9.00	45.0	27.0	-	-
B3	Dak 1.1*5.00*2.75	15.1	8.31	14.1	-
	V+1 5.00*4.80	24.0	143	96.0	-
	Gevel 5.00*9.00	45.0	27.0	-	-
C	Dak 1.1*8.25*20.0	182	99.8	102	-
	V+1 5.00*4.80	24.0	143	96.0	-
	Gevel 5.00*9.00	45.0	27.0	-	-
C1- C3	Dak 1.1*5.00*2.75	15.1	8.31	14.1	-
	V+1 5.00*4.80	24.0	143	96.0	-
	Gevel 5.00*9.00	45.0	27.0	-	-
D	Dak 1.25*2.50*2.75 / 2	4.30	2.37	4.01	-
	Gevel 5.25*9.00 / 2	23.6	14.2	-	-

5.2.2. Controle gronddruk

Overzicht maximale gronddruk



Controle gronddruk

Controle strook 700 x 400 mm

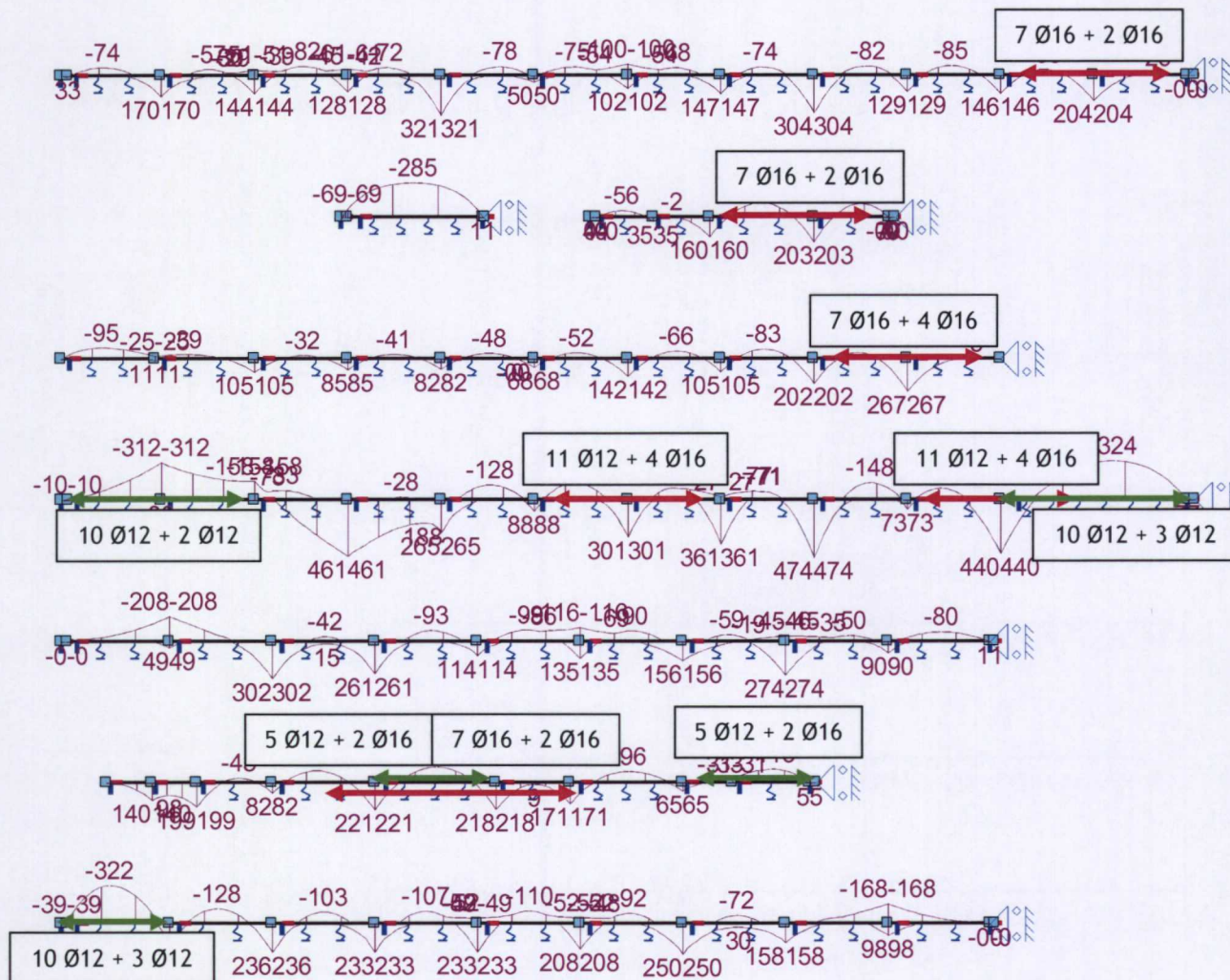
$\sigma_{gd,BG,d}$	$= 1.2 \cdot (0.15 \cdot 25 + 0.24 \cdot 16) + 1.5 \cdot 4.00$	$= 15$	kN/m^1
$\sigma_{gd,d}$	$= \text{volgens computerberekening}$	$= 115$	kN/m^1
$\sigma_{gd,Ed}$	$= 15 + 115$	$= 130$	kN/m^1
$\sigma_{gd,Rd}$	$= \text{onder strook 700 x 400 mm}$	$= 130$	kN/m^1
U.C.	$= \sigma_{gd,Ed} / \sigma_{gd,Rd} \leq 1$	$= 130 / 130$	$= 1.00 < 1 \rightarrow \text{voldoet}$

Controle strook 1000 x 600 mm

$\sigma_{gd,BG,d}$	$= 1.2 \cdot (0.15 \cdot 25 + 0.24 \cdot 16) + 1.5 \cdot 4.00$	$= 15$	kN/m^1
$\sigma_{gd,Ed}$	$= \text{volgens computerberekening}$	$= 172$	kN/m^1
$\sigma_{gd,Ed}$	$= 15 + 172$	$= 187$	kN/m^1
$\sigma_{gd,Rd}$	$= \text{onder strook 1000 x 600 mm}$	$= 205$	kN/m^1
U.C.	$= \sigma_{gd,Ed} / \sigma_{gd,Rd} \leq 1$	$= 187 / 205$	$= 0.91 < 1 \rightarrow \text{voldoet}$

5.2.3. Langswapening stroken

Overzicht maximale dwarskrachten



Basiscapaciteit langswapening en capaciteit met bijlegwapening (incl. scheurwijdte)Controle strook 700 x 400 mm

<u>Capaciteit basiswapening boven</u>		<u>5 Ø12 + 2 Ø16</u>	<u>(incl. scheurwijdte $w_k = 0.3$ mm)</u>	
d	$= h - c - \varnothing_{sw}^{1/2} \varnothing_s$	$= 400 - 30 - 8 - 8$	$= 354$	mm
s_{max}	$= b / n_{staven}$	$= 700 / 7$	$= 100$	mm
σ_{Rd}	$= \text{NEN-EN 1992-1-1}$	$= \text{Tabel 7.3N}$	$= 320$	N/mm ²
$A_{s,prov}$	$= \gamma_G \sigma_{Rd} / f_{ywd} A_s$	$= 1.35 \cdot 320 / 435 \cdot 968$	$= 961$	mm ²
$100 \rho_1$	$= A_{s,prov} / (b d)$	$= 961 / (700 \cdot 354) \cdot 10^2$	$= 0.3878$	-
$M_{Rd} / (b d^2)$	$= \text{GTB} - 11.3$		$= 1589$	-
M_{Rd}	$= 1589 \cdot 0.700 \cdot 0.354^2$		$= 139$	kNm

<u>Capaciteit basiswapening onder</u>		<u>7 Ø16</u>	<u>(incl. scheurwijdte $w_k = 0.3$ mm)</u>	
d	$= h - c - \varnothing_{sw}^{1/2} \varnothing_s$	$= 400 - 35 - 8 - 8$	$= 349$	mm
s_{max}	$= b / n_{staven}$	$= 700 / 7$	$= 100$	mm
σ_{Rd}	$= \text{NEN-EN 1992-1-1}$	$= \text{Tabel 7.3N}$	$= 320$	N/mm ²
$A_{s,prov}$	$= \gamma_G \sigma_{Rd} / f_{ywd} A_s$	$= 1.35 \cdot 320 / 435 \cdot 1407$	$= 1398$	mm ²
$100 \rho_1$	$= A_{s,prov} / (b d)$	$= 1398 / (700 \cdot 349) \cdot 10^2$	$= 0.5721$	-
$M_{Rd} / (b d^2)$	$= \text{GTB} - 11.3$		$= 2240$	-
M_{Rd}	$= 2240 \cdot 0.700 \cdot 0.349^2$		$= 191$	kNm

<u>Capaciteit bijlegwapening onder I</u>		<u>7 Ø16 + 2 Ø16</u>	<u>(incl. scheurwijdte $w_k = 0.3$ mm)</u>	
d	$= h - c - \varnothing_{sw}^{1/2} \varnothing_s$	$= 400 - 35 - 8 - 8$	$= 349$	mm
s_{max}	$= b / n_{staven}$	$= 700 / 7$	$= 100$	mm
σ_{Rd}	$= \text{NEN-EN 1992-1-1}$	$= \text{Tabel 7.3N}$	$= 320$	N/mm ²
$A_{s,prov}$	$= \gamma_G \sigma_{Rd} / f_{ywd} A_s$	$= 1.35 \cdot 320 / 435 \cdot 1810$	$= 1798$	mm ²
$100 \rho_1$	$= A_{s,prov} / (b d)$	$= 1798 / (700 \cdot 349) \cdot 10^2$	$= 0.7358$	-
$M_{Rd} / (b d^2)$	$= \text{GTB} - 11.3$		$= 2786$	-
M_{Rd}	$= 2786 \cdot 0.700 \cdot 0.349^2$		$= 238$	kNm

<u>Capaciteit bijlegwapening onder II</u>		<u>7 Ø16 + 4 Ø16</u>	<u>(incl. scheurwijdte $w_k = 0.3$ mm)</u>	
d	$= h - c - \varnothing_{sw}^{1/2} \varnothing_s$	$= 400 - 35 - 8 - 8$	$= 349$	mm
s_{max}	$= b / n_{staven}$	$= 700 / 7$	$= 100$	mm
σ_{Rd}	$= \text{NEN-EN 1992-1-1}$	$= \text{Tabel 7.3N}$	$= 320$	N/mm ²
$A_{s,prov}$	$= \gamma_G \sigma_{Rd} / f_{ywd} A_s$	$= 1.35 \cdot 320 / 435 \cdot 2212$	$= 2196$	mm ²
$100 \rho_1$	$= A_{s,prov} / (b d)$	$= 2196 / (700 \cdot 349) \cdot 10^2$	$= 0.8991$	-
$M_{Rd} / (b d^2)$	$= \text{GTB} - 11.3$		$= 3323$	-
M_{Rd}	$= 3323 \cdot 0.700 \cdot 0.349^2$		$= 283$	kNm

Controle strook 1000 x 600 mm

<u>Capaciteit basiswapening boven</u>		<u>10 Ø12</u>	<u>(incl. scheurwijdte $w_k = 0.3$ mm)</u>	
d	= $h - c - \varnothing_{sw}^{1/2} \varnothing_s$	= 600 - 30 - 8 - 6	= 556	mm
s_{max}	= b / n_{staven}	= 1000 / 10	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	= $\gamma_G \sigma_{Rd} / f_{ywd} A_s$	= $1.35 \cdot 320 / 435 \cdot 1131$	= 1123	mm ²
100 ρ_1	= $A_{s,prov} / (b d)$	= $1123 / (1000 \cdot 556) \cdot 10^2$	= 0.2020	-
$M_{Rd} / (b d^2)$	= GTB - 11.3	= 860	= 860	-
M_{Rd}	= $860 \cdot 1.000 \cdot 0.556^2$	= 266	= 266	kNm

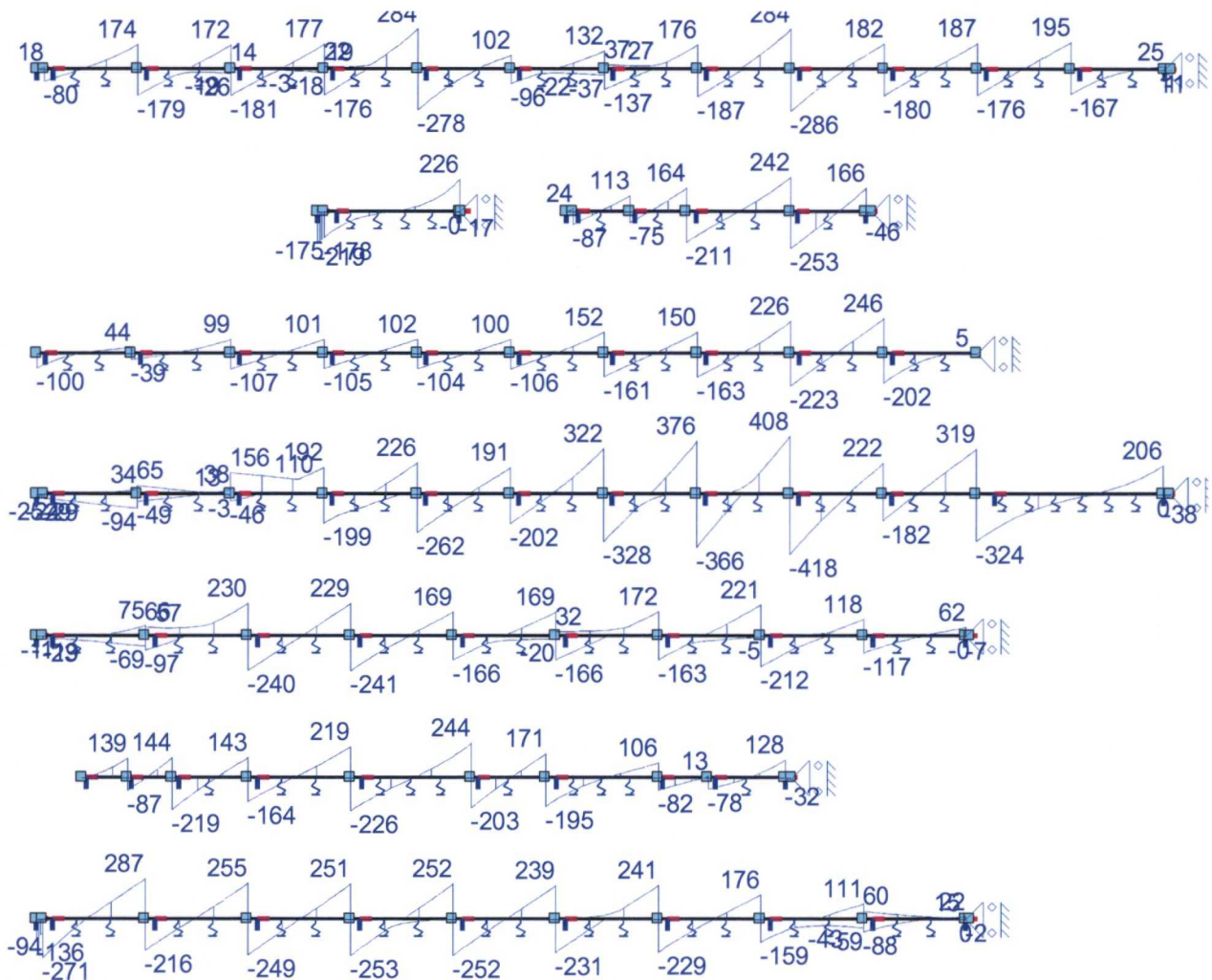
<u>Capaciteit bijlegwapening boven</u>		<u>10 Ø12 + 3 Ø12</u>	<u>(incl. scheurwijdte $w_k = 0.3$ mm)</u>	
d	= $h - c - \varnothing_{sw}^{1/2} \varnothing_s$	= 600 - 30 - 8 - 6	= 556	mm
s_{max}	= b / n_{staven}	= 1000 / 10	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	= $\gamma_G \sigma_{Rd} / f_{ywd} A_s$	= $1.35 \cdot 320 / 435 \cdot 1470$	= 1460	mm ²
100 ρ_1	= $A_{s,prov} / (b d)$	= $1460 / (1000 \cdot 556) \cdot 10^2$	= 0.2626	-
$M_{Rd} / (b d^2)$	= GTB - 11.3	= 1109	= 1109	-
M_{Rd}	= $1109 \cdot 1.000 \cdot 0.556^2$	= 343	= 343	kNm

<u>Capaciteit basiswapening onder</u>		<u>11 Ø12</u>	<u>(incl. scheurwijdte $w_k = 0.3$ mm)</u>	
d	= $h - c - \varnothing_{sw}^{1/2} \varnothing_s$	= 600 - 35 - 8 - 6	= 551	mm
s_{max}	= b / n_{staven}	= 1000 / 11	= 91	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 327	N/mm ²
$A_{s,prov}$	= $\gamma_G \sigma_{Rd} / f_{ywd} A_s$	= $1.35 \cdot 327 / 435 \cdot 1244$	= 1263	mm ²
100 ρ_1	= $A_{s,prov} / (b d)$	= $1263 / (1000 \cdot 551) \cdot 10^2$	= 0.2258	-
$M_{Rd} / (b d^2)$	= GTB - 11.3	= 953	= 953	-
M_{Rd}	= $953 \cdot 1.000 \cdot 0.551^2$	= 289	= 289	kNm

<u>Capaciteit bijlegwapening</u>		<u>11 Ø12 + 4 Ø16</u>	<u>(incl. scheurwijdte $w_k = 0.3$ mm)</u>	
d	= $h - c - \varnothing_{sw}^{1/2} \varnothing_s$	= 600 - 35 - 8 - 8	= 549	mm
s_{max}	= b / n_{staven}	= 1000 / 11	= 91	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 327	N/mm ²
$A_{s,prov}$	= $\gamma_G \sigma_{Rd} / f_{ywd} A_s$	= $1.35 \cdot 327 / 435 \cdot 2048$	= 2078	mm ²
100 ρ_1	= $A_{s,prov} / (b d)$	= $2078 / (1000 \cdot 549) \cdot 10^2$	= 0.3786	-
$M_{Rd} / (b d^2)$	= GTB - 11.3	= 1543	= 1543	-
M_{Rd}	= $1543 \cdot 1.000 \cdot 0.549^2$	= 465	= 465	kNm

5.2.4. Dwarskrachtwapening stroken

Overzicht maximale dwarskrachten



Basiscapaciteit beugels en capaciteit met extra beugels

Controle strook 700 x 400 mm Ø8-250 basis; 3-snedig

$$V_{Rd} = [151 \cdot (0.9 \cdot 400) \cdot 435 \cdot \cot(21.8^\circ) / 250] \cdot 10^{-3}$$

= 236

kN/m¹

Controle strook 1000 x 600 mm Ø8-250 basis; 4-snedig

$$V_{Rd} = [201 \cdot (0.9 \cdot 600) \cdot 435 \cdot \cot(21.8^\circ) / 250] \cdot 10^{-3}$$

= 472

kN/m¹

5.3. Wapening poeren fundering restaurant

C20/25

5.3.1. Uitgangspunten, geometrie en belastingen

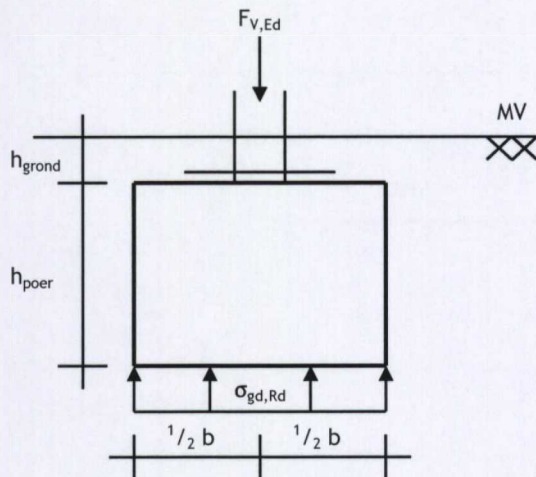
Uitgangspunten

De maximale belasting op de poeren en de bijbehorende gronddruk is reeds gecontroleerd in Palte document 460518-B. Aan de maximaal toelaatbare gronddruk wordt hierbij voldaan. De poeren worden afgewapend op de buiging die ontstaat door de bovenbelasting (uit de kolom). Daarnaast wordt de strookwapening in de poeren doorgezet. De poeren worden door middel van een ringbalk (stroken) gekoppeld. Derhalve worden kantelevenwicht en horizontaal evenwicht niet beschouwd.

De poeren betreffen:

- Poer 2000 x 2000 x 600 mm;
- Poer 2250 x 2250 x 600 mm.

Overzicht geometrie



Belastingen

Poer	P1:	$\sigma_{gd,Rd} = 1088 / (2.00 \cdot 2.00) + 1.2 \cdot (0.15 \cdot 25 + 0.24 \cdot 16) + 1.5 \cdot 4.00$	= 287	(< 295)	kN/m ²
	P2:	$\sigma_{gd,Rd} = 1267 / (2.25 \cdot 2.25) + 1.2 \cdot (0.15 \cdot 25 + 0.24 \cdot 16) + 1.5 \cdot 4.00$	= 265	(< 315)	kN/m ²

5.3.2. Langswapening poeren

Basiscapaciteit langswapening (incl. scheurwijdte)

Controle poer 2000 x 2000 x 600 mm		Ø10-100	(incl. scheurwijdte $w_k = 0.3$ mm)	
K	= uit stalen kolom		= 1088	kN
l_x	= l_y = afmeting poer		= 2000	mm
t_x	= t_y = afmeting voetplaat		= 400	mm
m_{xm}	= m_{ym} = L / t	= 400 / 2000	= 0.20	→ 6.37
M_{Ed}	= 1088 / 6.37		= 171	kNm
d	= $h - c - \varnothing_{sw}^{1/2} \varnothing_s$	= 600 - 35 - 10 - 5	= 550	mm
s_{max}	= b / n_{staven}	= 1000 / 10	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	= $\gamma_G \sigma_{Rd} / f_{ywd} A_s$	= 1.35*320 / 435*785	= 780	mm ²
100 ρ_1	= $A_{s,prov} / (b d)$	= 780 / (1000*550)*10 ²	= 0.1418	-
$M_{Rd} / (b d^2)$	= GTB - 11.3		= 606	-
M_{Rd}	= 606*1.000*0.550 ²		= 183	kNm
u.C.	= $M_{Ed} / M_{Rd} \leq 1$	= 171 / 183	= 0.93 < 1	→ voldoet

Controle poer 2250 x 2250 x 600 mm		Ø12-100	(incl. scheurwijdte $w_k = 0.3$ mm)	
K	= uit stalen kolom		= 1267	kN
l_x	= l_y = afmeting poer		= 2250	mm
t_x	= t_y = afmeting voetplaat		= 400	mm
m_{xm}	= m_{ym} = L / t	= 400 / 2250	= 0.18	→ 6.00
M_{Ed}	= 1267 / 6.00		= 211	kNm
d	= $h - c - \varnothing_{sw}^{1/2} \varnothing_s$	= 600 - 35 - 10 - 6	= 549	mm
s_{max}	= b / n_{staven}	= 1000 / 10	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	= $\gamma_G \sigma_{Rd} / f_{ywd} A_s$	= 1.35*320 / 435*1131	= 1123	mm ²
100 ρ_1	= $A_{s,prov} / (b d)$	= 1123 / (1000*549)*10 ²	= 0.2046	-
$M_{Rd} / (b d^2)$	= GTB - 11.3		= 873	-
M_{Rd}	= 873*1.000*0.549 ²		= 263	kNm
u.C.	= $M_{Ed} / M_{Rd} \leq 1$	= 211 / 263	= 0.80 < 1	→ voldoet

5.3.3. Dwarskrachtwapening poeren

Basiscapaciteit dwarskracht (ongewapend)

Controle poer 2000 x 2000 x 600 mm				
V_{Ed}	= $1/2 \sigma_{Ed} l$	= $1/2 * 287 * 0.800$	= 115	kN
d	= $h - c - \varnothing_{sw}^{1/2} \varnothing_s$	= 600 - 35 - 10 - 5	= 550	mm
k	= $1 + \sqrt{200 / d}$	= $1 + \sqrt{200 / 550}$	= 1.60	-
$V_{Rd,c,min}$	= $0.035 k^{3/2} f_{ck}^{1/2} b d$	= $(0.035 * 1.60^{2/3} * 20^{1/2} * 1000 * 550) * 10^{-3}$	= 175	kN
u.C.	= $V_{Ed} / V_{Rd,c,min} \leq 1$	= 115 / 175	= 0.66 < 1	→ voldoet

Controle poer 2250 x 2250 x 600 mm				
V_{Ed}	= $1/2 \sigma_{Ed} l$	= $1/2 * 265 * 1.050$	= 139	kN
d	= $h - c - \varnothing_{sw}^{1/2} \varnothing_s$	= 600 - 35 - 10 - 6	= 549	mm
k	= $1 + \sqrt{200 / d}$	= $1 + \sqrt{200 / 549}$	= 1.60	-
$V_{Rd,c,min}$	= $0.035 k^{3/2} f_{ck}^{1/2} b d$	= $(0.035 * 1.60^{2/3} * 20^{1/2} * 1000 * 549) * 10^{-3}$	= 174	kN
u.C.	= $V_{Ed} / V_{Rd,c,min} \leq 1$	= 139 / 174	= 0.80 < 1	→ voldoet

5.4. Wapening stroken centrale hal

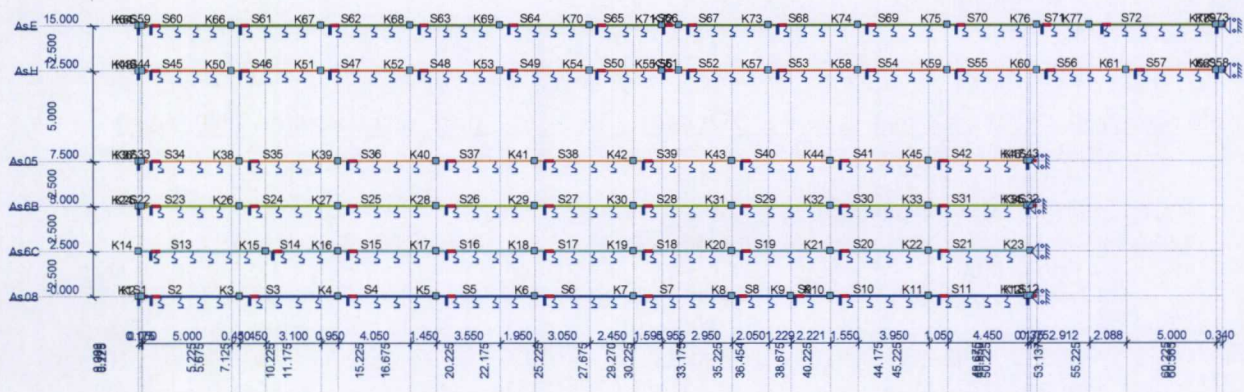
C20/25

5.4.1. Uitgangspunten, geometrie en belastingen

Uitgangspunten

Het speelhal gedeelte wordt gefundeerd op een strokenfundering met poeren ter plekke van relatief grote belastingen. De maatgevende stroken zijn ingevoerd in MatrixFrame. Hierop zijn de belastingen door de kolommen als puntlasten ingevoerd. Als beddingsconstante is er gerekend met $C_z = (C_{z, \text{modaal}} + C_{z, \text{gunstig}}) / 2 = (2300 + 3400) / 2 = 2850 \text{ kN/m}^3$ conform het funderingsadvies GB160509-R01-v1.0. Daarnaast wordt ook de gronddruk getoetst. De dwarswapening is reeds getoetst in hoofdstuk 5.1. De dwarskracht wordt gecontroleerd op d naast de oplegging (kolom). De poeren worden handmatig getoetst en gewapend. Zie computerberekening pag. 23-34.

Overzicht geometrie



BelastingenAlgemeen

q_{EG}	= Eigen Gewicht	= vlgs. SCIA Engineer	= 25	kN/m^3
q_G	= prefab betonplint gevel	= $0.17 \cdot 0.70 \cdot 25$	= 3.00	kN/m^1

Strook As F1 - G		700 x 400 mm	m^2	G	Q
F1	Gevel	$1.1 \cdot 4.60 \cdot 4.00$	20.2	12.1	-
F2	LLg	$1.1 \cdot 13.4 \cdot 5.50$	81.7	44.9	114
	Gevel	$1.1 \cdot 6.60 \cdot 6.00$	43.6	26.2	-
G	LLg	$1.1 \cdot (13.0 \cdot 5.50 + 14.0 \cdot 5.50) / 2$	81.7	44.9	114
	Gevel	$1.1 \cdot 3.30 \cdot 6.00$	21.8	13.1	-

Strook As F - F1		1000 x 600 mm	m^2	G	Q
F	LLg	$1.1 \cdot 6.60 \cdot 3.15$	22.9	12.6	32.1
	Gevel	$1.1 \cdot 9.75 \cdot 4.00$	42.9	25.7	-
F - F1	LLg	$1.1 \cdot (13.0 \cdot 5.50 + 14.0 \cdot 5.50)$	163	89.7	228
	Gevel	$1.1 \cdot 3.30 \cdot 6.00$	21.8	13.1	-
F1	LLg	$1.1 \cdot 6.60 \cdot 3.15$	22.9	12.6	32.1
	Gevel	$1.1 \cdot 9.75 \cdot 4.00$	42.9	25.7	-

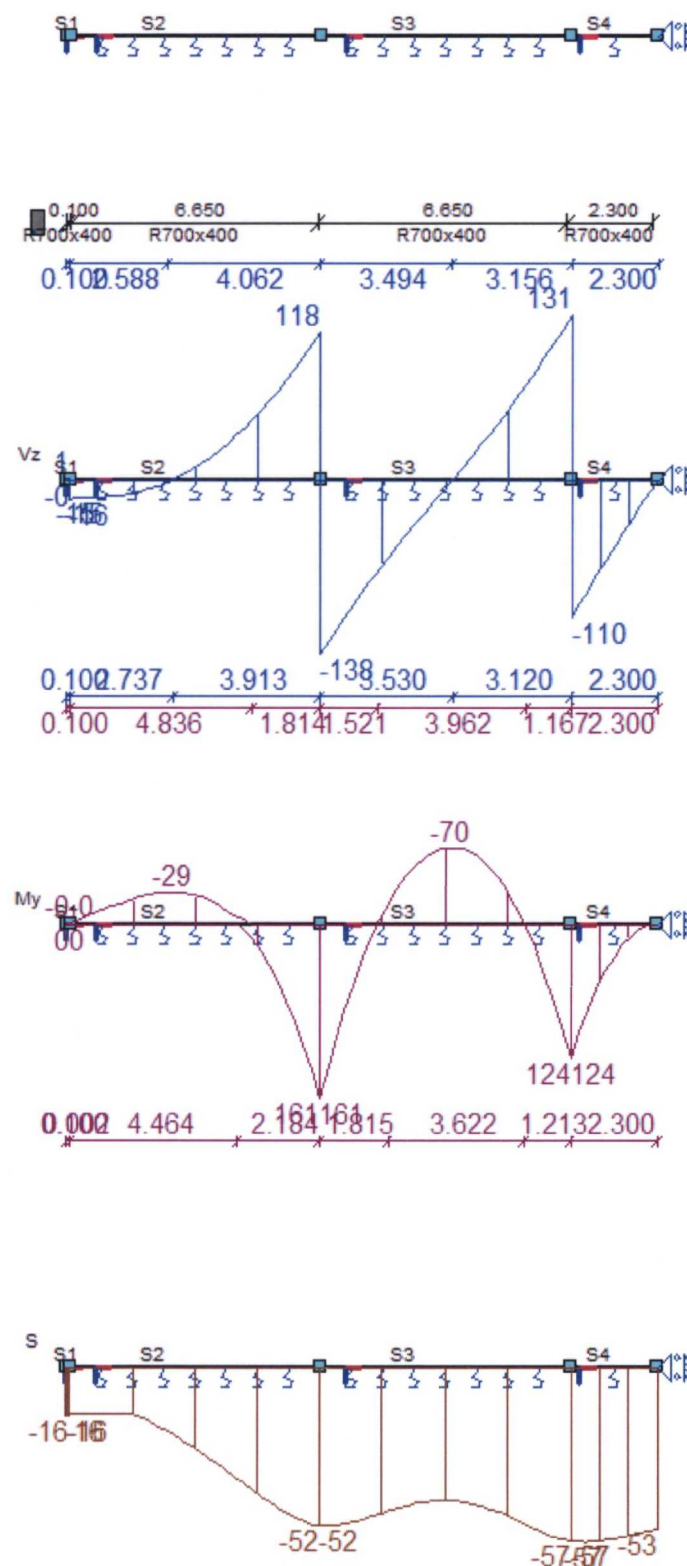
Strook As E2 - F		1000 x 600 mm	m^2	G	Q
E2	LLg	$1.1 \cdot 6.60 \cdot 3.15$	22.9	12.6	32.1
	Gevel	$1.1 \cdot 7.00 \cdot 4.00$	42.9	25.7	-
E2 - F	LLg	$1.1 \cdot (15.5 \cdot 5.50 + 14.0 \cdot 5.50)$	178	97.9	146
	Gevel	$1.1 \cdot 3.30 \cdot 6.00$	21.8	13.1	-
F	LLg	$1.1 \cdot 13.0 \cdot 5.50$	83.7	46.0	117
	Gevel	$1.1 \cdot 6.15 \cdot 6.00$	40.6	24.4	-

Strook As F1 - G		700 x 400 mm	m^2	G	Q
D	Gevel	$1.1 \cdot 2.20 \cdot 6.00$	14.5	8.70	-
E	LLg	$1.1 \cdot 14.2 \cdot 4.75$	74.2	40.8	104
	Gevel	$1.1 \cdot 5.00 \cdot 6.00$	33.0	19.8	-
E1	LLg	$1.1 \cdot 15.6 \cdot 5.50$	94.4	51.9	132
	Gevel	$1.1 \cdot 6.60 \cdot 6.00$	43.6	26.2	-
E2	Gevel	$1.1 \cdot 3.30 \cdot 6.00$	21.8	13.1	-

Strook As D - E2		700 x 400 mm	m ²	G	Q
A3	V+1	3.20*2.50	8.00	51.2	32.0
	Gevel	1.1*5.10*4.60	25.8	15.5	-
B	V+1	5.00*2.50	12.5	80.0	50.0
	Gevel	1.1*5.40*4.60	27.3	16.4	-
B1	V+1	5.00*2.80	14.0	89.6	56.0
	Gevel	1.1*5.25*4.60	25.6	15.4	-
B2	LHg	(1.1*2.30*5.50)*2.20 / 8.00	3.83	2.11	5.36
	V+1	5.00*3.90	19.5	125	78.0
	Gevel	1.1*5.20*(4.60 + 2.30*6.00*2.20 / 8.00)	48.0	28.8	-
B3	LHg	(1.1*3.20*5.50)*4.10 / 10.2	7.78	4.28	10.9
	V+1	5.00*5.20	26.0	166	104
	Gevel	1.1*(5.70*4.60 + 3.20*6.00*4.10 / 10.2)	37.3	22.4	-
C	LHg	(1.1*4.55*5.50)*6.60 / 13.0	14.0	7.70	19.6
	V+1	5.00*6.50	32.5	208	130
	Gevel	1.1*(5.95*4.60 + 4.55*6.00*6.60 / 13.0)	45.4	27.2	-
C1	LHg	(1.1*6.20*5.50)*9.80 / 17.0	21.6	11.9	30.2
	V+1	5.00*7.00	35.0	224	140
	Gevel	1.1*(6.35*4.60 + 6.20*6.00*9.80 / 17.0)	55.7	33.4	-
C2	LHg	(1.1*8.20*5.50)*14.0 / 20.6	33.7	18.5	47.2
	V+1	5.00*7.00	35.0	224	140
	Gevel	1.1*(6.00*4.60 + 8.20*6.00*14.0 / 20.6)	67.1	40.3	-
C3	LHg	(1.1*9.80*5.50)*17.2 / 23.3	43.8	24.1	61.3
	V+1	5.00*7.10	35.5	227	142
	Gevel	1.1*(5.55*4.60 + 9.80*6.00*17.2 / 23.3)	75.8	45.5	-
D	LHg	(1.1*10.8*4.50)*19.3 / 24.8	41.6	22.9	58.2
	V+1	4.50*6.20	27.9	179	112
	Gevel	1.1*(4.80*4.60 + 10.8*6.00*19.3 / 23.3)	83.3	50.0	-

5.4.2. Controle strook As F1 - G 700 x 400 mm

Overzicht dwarskrachten, momenten en gronddruk



Controle gronddrukControle maximale gronddruk 120 kN/m²

$\sigma_{gd,BG,d}$	= $1.2 \cdot (0.20 \cdot 25 + 0.19 \cdot 16) + 1.5 \cdot 5.00$	= 17	kN/m ¹
$\sigma_{gd,d}$	= volgens computerberekening	= 57	kN/m ¹
$\sigma_{gd,Ed}$	= 17 + 57	= 74	kN/m ¹
$\sigma_{gd,Rd}$	= onder strook 700 x 400 mm = $0.700 \cdot 120$	= 84	kN/m ¹
U.C.	= $\sigma_{gd,Ed} / \sigma_{gd,Rd} \leq 1$	= 74 / 84	= 0.88 < 1 → voldoet

Controle langswapeningBasiswapening boven 7 Ø10 mm (incl. scheurwijdte $w_k = 0.3$ mm)

d	= $h - c - \phi_{sw}^{1/2} / 2 \phi_s$	= 400 - 30 - 8 - 8	= 354	mm
s_{max}	= b / n_{staven}	= 700 / 7	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	= $\gamma_G \sigma_{Rd} / f_{ywd} A_s$	= $1.35 \cdot 320 / 435 \cdot 550$	= 546	mm ²
100 ρ_1	= $A_{s,prov} / (b d)$	= $546 / (700 \cdot 354) \cdot 10^2$	= 0.2235	-
$M_{Rd} / (b d^2)$	= GTB - 11.3	= 945	=	-
M_{Rd}	= $945 \cdot 0.700 \cdot 0.354^2$	= 83	=	kNm

Basiswapening onder 7 Ø16 mm (incl. scheurwijdte $w_k = 0.3$ mm)

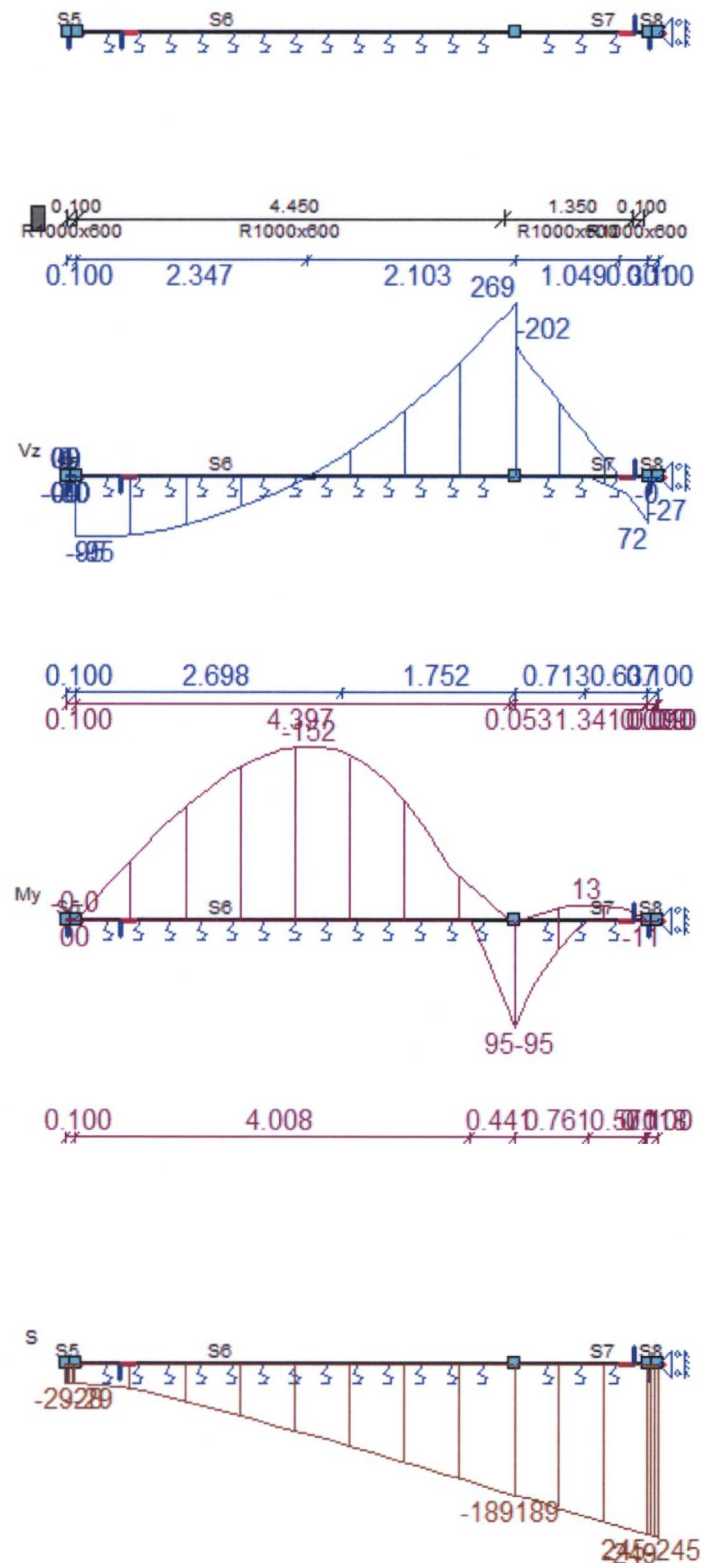
d	= $h - c - \phi_{sw}^{1/2} / 2 \phi_s$	= 400 - 35 - 8 - 8	= 349	mm
s_{max}	= b / n_{staven}	= 700 / 7	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	= $\gamma_G \sigma_{Rd} / f_{ywd} A_s$	= $1.35 \cdot 320 / 435 \cdot 1407$	= 1398	mm ²
100 ρ_1	= $A_{s,prov} / (b d)$	= $1398 / (700 \cdot 349) \cdot 10^2$	= 0.5721	-
$M_{Rd} / (b d^2)$	= GTB - 11.3	= 2261	=	-
M_{Rd}	= $2261 \cdot 0.700 \cdot 0.349^2$	= 193	=	kNm

Controle dwarskrachtControle strook 700 x 400 mm Ø8-250 basis (3-snedig)

V_{Rd}	= $[151 \cdot (0.9 \cdot 400) \cdot 435 \cdot \cot(21.8^\circ) / 250] \cdot 10^{-3}$	= 236	kN/m ¹
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5.4.3. Controle strook As F - F1 1000 x 600 mm

Overzicht dwarskrachten, momenten en gronddruk



Controle gronddruk

Controle maximale gronddruk 120 kN/m²

Ter plekke van de overschrijding van de gronddruk wordt een poer toegepast.

Controle langswapening

Basiswapening boven		10 Ø10 mm	(incl. scheurwijdte $w_k = 0.3$ mm)	
d	$= h - c - \sigma_{sw}^{1/2} \sigma_s$	$= 600 - 30 - 8 - 8$	$= 554$	mm
s_{max}	$= b / n_{staven}$	$= 1000 / 10$	$= 100$	mm
σ_{Rd}	$= NEN-EN 1992-1-1$	$= \text{Tabel 7.3N}$	$= 320$	N/mm ²
$A_{s,prov}$	$= \gamma_G \sigma_{Rd} / f_{ywd} A_s$	$= 1.35 \cdot 320 / 435 \cdot 785$	$= 780$	mm ²
$100 \rho_1$	$= A_{s,prov} / (b d)$	$= 780 / (1000 \cdot 554) \cdot 10^2$	$= 0.1408$	-
$M_{Rd} / (b d^2)$	$= GTB - 11.3$		$= 603$	-
M_{Rd}	$= 603 \cdot 1.000 \cdot 0.554^2$		$= 185$	kNm

Basiswapening onder		10 Ø10 mm	(incl. scheurwijdte $w_k = 0.3$ mm)	
d	$= h - c - \sigma_{sw}^{1/2} \sigma_s$	$= 600 - 35 - 8 - 8$	$= 549$	mm
s_{max}	$= b / n_{staven}$	$= 1000 / 10$	$= 100$	mm
σ_{Rd}	$= NEN-EN 1992-1-1$	$= \text{Tabel 7.3N}$	$= 320$	N/mm ²
$A_{s,prov}$	$= \gamma_G \sigma_{Rd} / f_{ywd} A_s$	$= 1.35 \cdot 320 / 435 \cdot 785$	$= 780$	mm ²
$100 \rho_1$	$= A_{s,prov} / (b d)$	$= 780 / (1000 \cdot 549) \cdot 10^2$	$= 0.1421$	-
$M_{Rd} / (b d^2)$	$= GTB - 11.3$		$= 607$	-
M_{Rd}	$= 607 \cdot 1.000 \cdot 0.549^2$		$= 183$	kNm

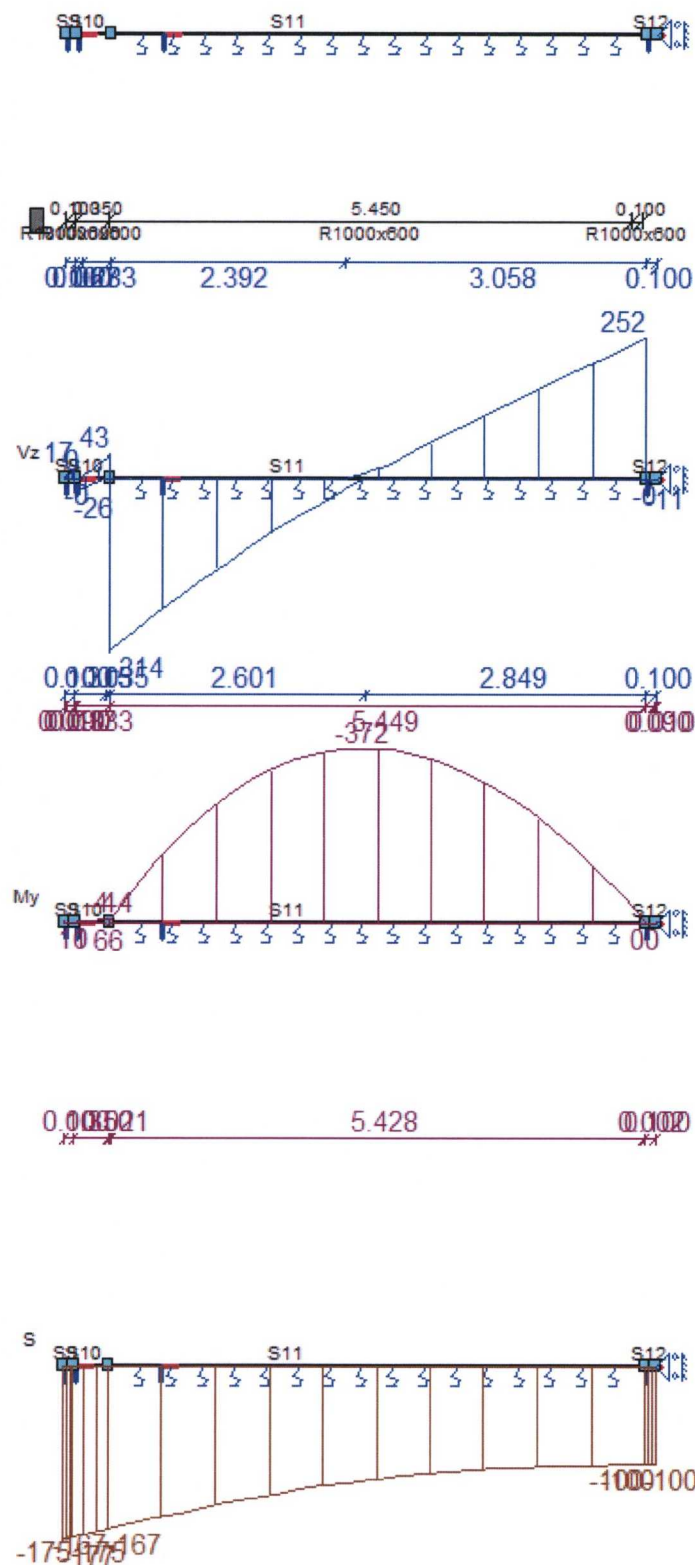
Controle dwarskracht

Controle strook 1000 x 600 mm Ø8-300 basis (3-snedig)

$V_{Rd} = [151 \cdot (0.9 \cdot 600) \cdot 435 \cdot \cot(21.8^\circ) / 300] \cdot 10^{-3} = 296 \text{ kN/m}^1$

5.4.4. Controle strook As E2 - F 1000 x 600 mm

Overzicht dwarskrachten, momenten en gronddruk



Controle gronddruk

Controle maximale gronddruk 120 kN/m²

Ter plekke van de overschrijding van de gronddruk wordt een poer toegepast.

Controle langswapening

Basiswapening boven		10 Ø10 mm	(incl. scheurwijdte $w_k = 0.3$ mm)	
d	$= h - c - \varnothing_{sw}^{1/2} \varnothing_s$	$= 600 - 30 - 8 - 8$	$= 554$	mm
s_{max}	$= b / n_{staven}$	$= 1000 / 10$	$= 100$	mm
σ_{Rd}	$= NEN-EN 1992-1-1$	$= \text{Tabel 7.3N}$	$= 320$	N/mm ²
$A_{s,prov}$	$= Y_G \sigma_{Rd} / f_{ywd} A_s$	$= 1.35 \cdot 320 / 435 \cdot 785$	$= 780$	mm ²
$100 \rho_1$	$= A_{s,prov} / (b d)$	$= 780 / (1000 \cdot 554) \cdot 10^2$	$= 0.1408$	-
$M_{Rd} / (b d^2)$	$= GTB - 11.3$	$= 603$	$= 603$	-
M_{Rd}	$= 603 \cdot 1.000 \cdot 0.554^2$	$= 185$	$= 185$	kNm

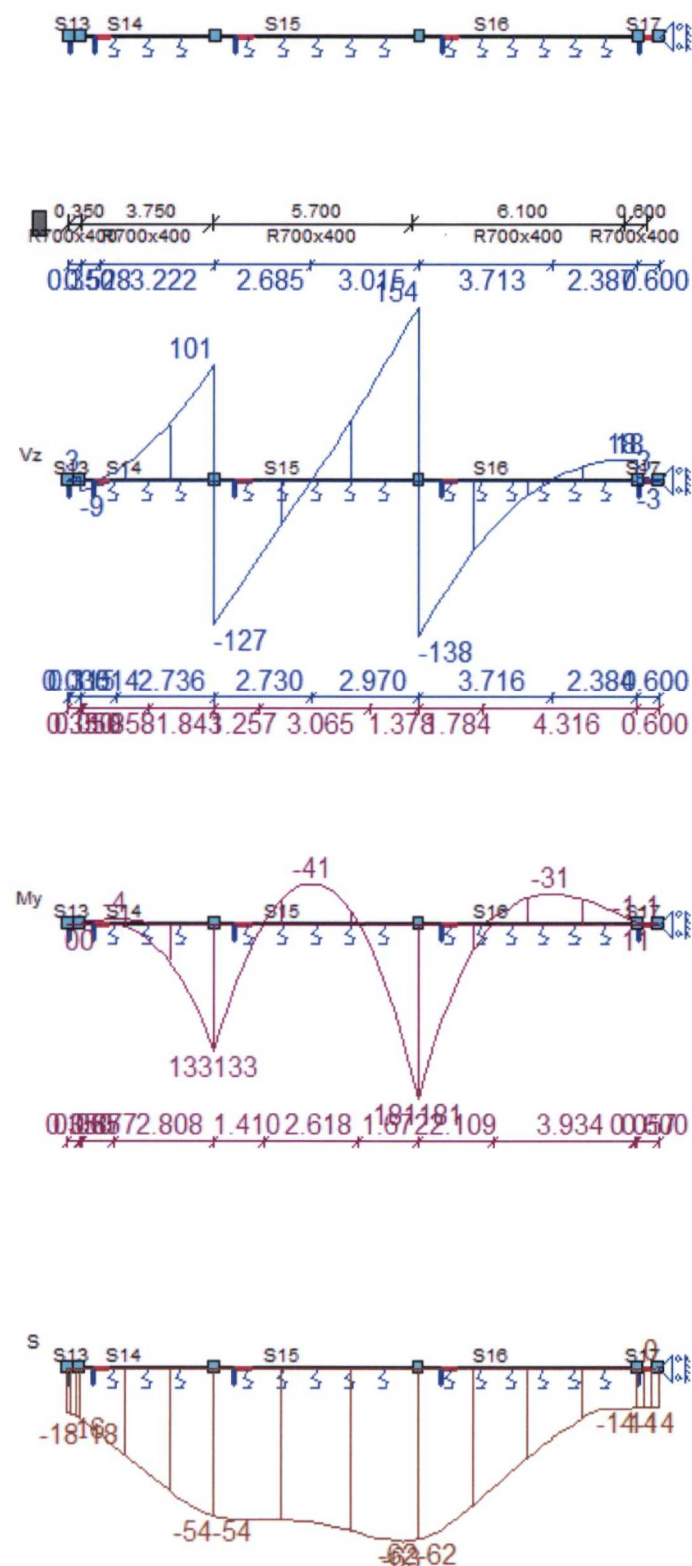
Basiswapening onder		10 Ø16 mm	(incl. scheurwijdte $w_k = 0.3$ mm)	
d	$= h - c - \varnothing_{sw}^{1/2} \varnothing_s$	$= 600 - 35 - 8 - 8$	$= 549$	mm
s_{max}	$= b / n_{staven}$	$= 1000 / 10$	$= 100$	mm
σ_{Rd}	$= NEN-EN 1992-1-1$	$= \text{Tabel 7.3N}$	$= 320$	N/mm ²
$A_{s,prov}$	$= Y_G \sigma_{Rd} / f_{ywd} A_s$	$= 1.35 \cdot 320 / 435 \cdot 2011$	$= 1997$	mm ²
$100 \rho_1$	$= A_{s,prov} / (b d)$	$= 1997 / (1000 \cdot 549) \cdot 10^2$	$= 0.3637$	-
$M_{Rd} / (b d^2)$	$= GTB - 11.3$	$= 1479$	$= 1479$	-
M_{Rd}	$= 1479 \cdot 1.000 \cdot 0.549^2$	$= 446$	$= 446$	kNm

Controle dwarskracht

Controle strook 1000 x 600 mm		Ø8-300 basis (3-snedig)		
V_{Rd}	$= [151 \cdot (0.9 \cdot 600) \cdot 435 \cdot \cot(21.8^\circ) / 300] \cdot 10^{-3}$	$= 296$	$= 296$	kN/m ¹

5.4.5. Controle strook As D - E2 700 x 400 mm

Overzicht dwarskrachten, momenten en gronddruk



Controle gronddruk

<u>Controle maximale gronddruk</u>		120 kN/m ²		
$\sigma_{gd,BG,d}$	= $1.2 \cdot (0.20 \cdot 25 + 0.19 \cdot 16) + 1.5 \cdot 5.00$	= 17	kN/m ¹	
$\sigma_{gd,d}$	= volgens computerberekening	= 62	kN/m ¹	
$\sigma_{gd,Ed}$	= 17 + 62	= 79	kN/m ¹	
$\sigma_{gd,Rd}$	= onder strook 700 x 400 mm = $0.700 \cdot 120$	= 84	kN/m ¹	
U.C.	= $\sigma_{gd,Ed} / \sigma_{gd,Rd} \leq 1$	= 79 / 84	= 0.94 < 1	→ voldoet

Controle langswapening

<u>Basiswapening boven</u>		7 Ø10 mm	(incl. scheurwijdte $w_k = 0.3$ mm)	
d	= $h - c - \phi_{sw}^{1/2} / 2 \phi_s$	= 400 - 30 - 8 - 8	= 354	mm
s_{max}	= b / n_{staven}	= 700 / 7	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	= $\gamma_G \sigma_{Rd} / f_{ywd} A_s$	= $1.35 \cdot 320 / 435 \cdot 550$	= 546	mm ²
100 ρ_1	= $A_{s,prov} / (b d)$	= $546 / (700 \cdot 354) \cdot 10^2$	= 0.2235	-
$M_{Rd} / (b d^2)$	= GTB - 11.3	= 945	= 945	-
M_{Rd}	= $945 \cdot 0.700 \cdot 0.354^2$	= 83	= 83	kNm

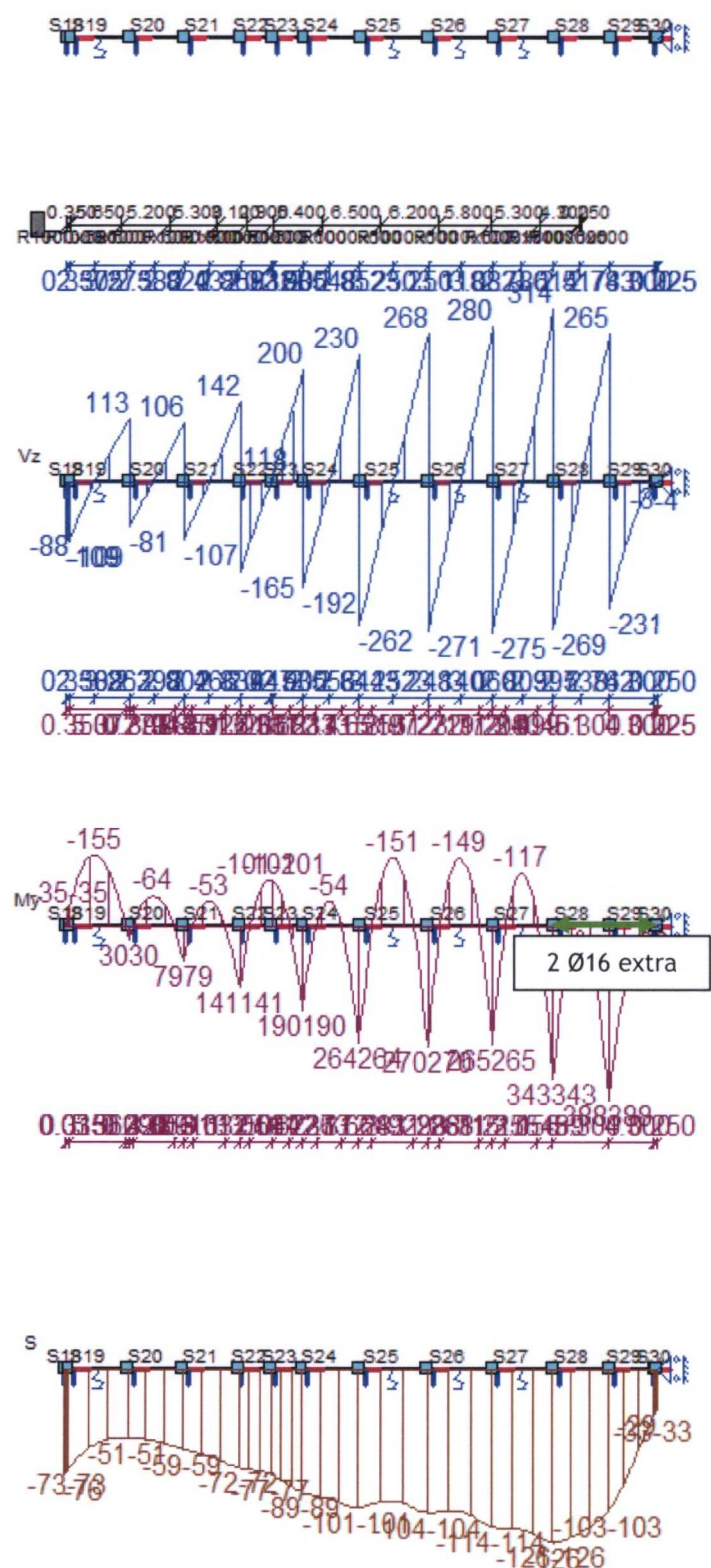
<u>Basiswapening onder</u>		7 Ø16 mm	(incl. scheurwijdte $w_k = 0.3$ mm)	
d	= $h - c - \phi_{sw}^{1/2} / 2 \phi_s$	= 400 - 35 - 8 - 8	= 349	mm
s_{max}	= b / n_{staven}	= 700 / 7	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	= $\gamma_G \sigma_{Rd} / f_{ywd} A_s$	= $1.35 \cdot 320 / 435 \cdot 1407$	= 1398	mm ²
100 ρ_1	= $A_{s,prov} / (b d)$	= $1398 / (700 \cdot 349) \cdot 10^2$	= 0.5721	-
$M_{Rd} / (b d^2)$	= GTB - 11.3	= 2261	= 2261	-
M_{Rd}	= $2261 \cdot 0.700 \cdot 0.349^2$	= 193	= 193	kNm

Controle dwarskracht

<u>Controle strook 700 x 400 mm</u>		Ø8-250 basis (3-snedig)		
V_{Rd}	= $[151 \cdot (0.9 \cdot 400) \cdot 435 \cdot \cot(21.8^\circ) / 250] \cdot 10^{-3}$	= 236	kN/m ¹	

5.4.6. Controle strook As A3 - E 1000 x 600 mm

Overzicht dwarskrachten, momenten en gronddruk



Controle gronddruk

Controle maximale gronddruk		120 kN/m ²		
U.C.	$= \sigma_{gd,Ed} / \sigma_{gd,Rd} \leq 1$	$= 74 / 84$	$= 0.88 < 1$	→ voldoet
$\sigma_{gd,Ed}$	= volgens computerberekening		= 126	kN/m ¹
$\sigma_{gd,Rd}$	= onder strook 700 x 400 mm	$= 1.000 \cdot 120$	= 120	kN/m ¹
U.C.	$= \sigma_{gd,Ed} / \sigma_{gd,Rd} \leq 1$	$= 126 / 120$	$= 1.05 > 1$	→ acceptabel

Controle langswapening

Basiswapening boven		10 Ø10 mm	(incl. scheurwijdte $w_k = 0.3$ mm)	
d	$= h - c - \sigma_{sw}^{1/2} / 2 \cdot \sigma_s$	$= 600 - 30 - 8 - 8$	= 554	mm
s_{max}	$= b / n_{staven}$	$= 1000 / 10$	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	$= \gamma_G \sigma_{Rd} / f_{ywd} A_s$	$= 1.35 \cdot 320 / 435 \cdot 785$	= 780	mm ²
100 ρ_1	$= A_{s,prov} / (b \cdot d)$	$= 780 / (1000 \cdot 554) \cdot 10^2$	= 0.1408	-
$M_{Rd} / (b \cdot d^2)$	= GTB - 11.3		= 603	-
M_{Rd}	$= 603 \cdot 1.000 \cdot 0.554^2$		= 185	kNm

Basiswapening onder		2 Ø16 + 8 Ø12 mm	(incl. scheurwijdte $w_k = 0.3$ mm)	
d	$= h - c - \sigma_{sw}^{1/2} / 2 \cdot \sigma_s$	$= 600 - 35 - 8 - 8$	= 549	mm
s_{max}	$= b / n_{staven}$	$= 1000 / 10$	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	$= \gamma_G \sigma_{Rd} / f_{ywd} A_s$	$= 1.35 \cdot 320 / 435 \cdot 1307$	= 1298	mm ²
100 ρ_1	$= A_{s,prov} / (b \cdot d)$	$= 1298 / (1000 \cdot 549) \cdot 10^2$	= 0.2364	-
$M_{Rd} / (b \cdot d^2)$	= GTB - 11.3		= 988	-
M_{Rd}	$= 988 \cdot 1.000 \cdot 0.549^2$		= 298	kNm

Bijlegwapening onder		(2 Ø16 + 8 Ø12) + 3 Ø16 mm	(incl. scheurwijdte $w_k = 0.3$ mm)	
d	$= h - c - \sigma_{sw}^{1/2} / 2 \cdot \sigma_s$	$= 600 - 35 - 8 - 8$	= 549	mm
s_{max}	$= b / n_{staven}$	$= 1000 / 10$	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	$= \gamma_G \sigma_{Rd} / f_{ywd} A_s$	$= 1.35 \cdot 320 / 435 \cdot 1910$	= 1897	mm ²
100 ρ_1	$= A_{s,prov} / (b \cdot d)$	$= 1897 / (1000 \cdot 549) \cdot 10^2$	= 0.3455	-
$M_{Rd} / (b \cdot d^2)$	= GTB - 11.3		= 1418	-
M_{Rd}	$= 1418 \cdot 1.000 \cdot 0.549^2$		= 428	kNm

Controle dwarskracht

Controle strook 1000 x 600 mm		Ø8-250 basis (3-snedig)		
V_{Rd}	$= [151 \cdot (0.9 \cdot 600) \cdot 435 \cdot \cot(21.8^\circ) / 250] \cdot 10^{-3}$		= 354	kN/m ¹

5.5. Wapening poeren centrale hal

C20/25

5.5.1. Uitgangspunten, geometrie en belastingen

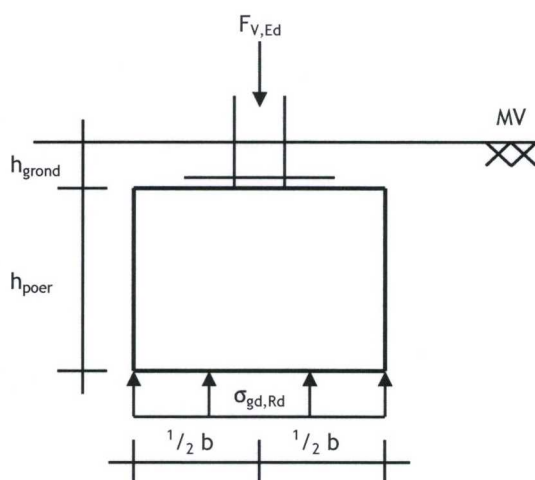
Uitgangspunten

De poeren worden gedimensioneerd op een maximaal toelaatbare belasting van $\sigma_{gd,Rd} \approx 120 \text{ kN/m}^2$ volgens het voor dit gedeelte geldige grondrapport GB106509 - R01 - v1.0. De poeren worden afgewapend op de belasting uit de kolom. Daarnaast wordt de strookwapening in de poeren doorgezet. De poeren worden door middel van een ringbalk (stroken) gekoppeld. Derhalve worden kantelevenwicht en horizontaal evenwicht niet beschouwd.

De poeren betreffen:

- Poer 4000 x 4000 x 800 mm;
- Poer 2750 x 2750 x 600 mm.

Overzicht geometrie



Belastingen

De poeren worden gecontroleerd en gewapend op de maatgevende belasting. De maximaal toelaatbare gronddruk bedraagt volgens grondrapport GB160509 - R01 - V1.0 $\sigma_{gd,Rd} = 120 \text{ kN/m}^2$. De poeren worden gedimensioneerd zodat de gronddruk binnen het interval tussen de 100 en 120 kN/m^2 valt.

5.5.2. Dimensionering poeren en controle gronddruk

As 5A-C3	Poer P3	4000 x 4000 x 800 mm		
F_G	$= 9.50 \cdot 6.20 \cdot 6.40 + 1.50 \cdot 9.50 \cdot 10.1 + 1.1 \cdot 4.80 \cdot 9.50 \cdot 0.55 + 1.1 \cdot 8.60 \cdot 6.00 = 605$			kN
F_Q	$= (9.50 \cdot 6.20 + 1.50 \cdot 6.50) \cdot 4.00 = 275$			
F_d	$= 1.2 \cdot 605 + 1.5 \cdot 275 = 1139$			kN
A_{req}	$= 1139 / 100 \rightarrow l_{req} = b_{req} = \sqrt{11.4} = 3.37$			m
Kies	$\rightarrow$ poer 4000 x 4000 x 800 mm			
$\sigma_{gd,Ed}$	$= 1139 / (4.00 \cdot 4.00) + 1.2 \cdot 0.80 \cdot 25 = 95.2$			kN/m ²
$\sigma_{gd,Rd}$	$= 120 - [1.2 \cdot (0.20 \cdot 25 + 0.19 \cdot 16) + 1.5 \cdot 5.00] = 103$			kN/m ²
u.c.	$\rightarrow 95.2 / 103 = 0.92 < 1 \rightarrow$ voldoet			
Poer As 07 - F	Poer P1(B)	2750 x 2750 x 600 mm		
F_G	$= 1.1 \cdot (6.60 \cdot 3.15 + 15.5 \cdot 5.50 + 14.0 \cdot 5.50) \cdot 0.55 + 1.1 \cdot (7.00 \cdot 4.00 + 3.30 \cdot 6.00) \cdot 0.60 = 141$			kN
F_Q	$= 1.1 \cdot (6.60 \cdot 3.15 + 15.5 \cdot 5.50 + 14.0 \cdot 5.50) \cdot 1.40 = 282$			
F_d	$= 1.2 \cdot 141 + 1.5 \cdot 282 = 592$			kN
A_{req}	$= 592 / 100 \rightarrow l_{req} = b_{req} = \sqrt{5.92} = 2.43$			m
Kies	$\rightarrow$ poer 2750 x 2750 x 600 mm			
$\sigma_{gd,Ed}$	$= 592 / (2.75 \cdot 2.75) + 1.2 \cdot 0.60 \cdot 25 = 96.3$			kN/m ²
$\sigma_{gd,Rd}$	$= 120 - [1.2 \cdot (0.20 \cdot 25 + 0.19 \cdot 16) + 1.5 \cdot 5.00] = 103$			kN/m ²
u.c.	$\rightarrow 96.3 / 103 = 0.93 < 1 \rightarrow$ voldoet			

5.5.3. Langswapening poeren

Basiscapaciteit langswapening (incl. scheurwijdte)

Controle poer 4000 x 4000 x 800 mm		41 Ø12-100 #	(incl. scheurwijdte $w_k = 0.3$ mm)	
K	= uit stalen kolom		= 1139	kN
$l_x = l_y$	= afmeting poer		= 4000	mm
$t_x = t_y$	= afmeting voetplaat		= 350	mm
$m_{xm} = m_{ym}$	= L / t	= 350 / 4000	= 0.09	→ 4.47
M_{Ed}	= 1139 / 4.47		= 255	kNm
d	= $h - c - \varnothing_{sw}^{1/2} \varnothing_s$	= 800 - 35 - 10 - 6	= 749	mm
s_{max}	= b / n_{staven}	= 4000 / (41 - 1)	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	= $\gamma_G \sigma_{Rd} / f_{ywd} A_s$	= 1.35*320 / 435*1131	= 1123	mm ²
100 ρ_1	= $A_{s,prov} / (b d)$	= 1123 / (1000*749)*10 ²	= 0.1500	-
$M_{Rd} / (b d^2)$	= GTB - 11.3		= 633	-
M_{Rd}	= 633*1.000*0.749 ²		= 355	kNm
u.c.	= $M_{Ed} / M_{Rd} \leq 1$	= 255 / 355	= 0.72 < 1	→ voldoet

Controle poer 2750 x 2750 x 600 mm		26 Ø10-100 #	(incl. scheurwijdte $w_k = 0.3$ mm)	
K	= uit stalen kolom		= 592	kN
$l_x = l_y$	= afmeting poer		= 2750	mm
$t_x = t_y$	= afmeting voetplaat		= 330	mm
$m_{xm} = m_{ym}$	= L / t	= 330 / 2750	= 0.12	→ 4.75
M_{Ed}	= 592 / 4.75		= 125	kNm
d	= $h - c - \varnothing_{sw}^{1/2} \varnothing_s$	= 600 - 35 - 10 - 5	= 550	mm
s_{max}	= b / n_{staven}	= 2500 / (26 - 1)	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	= $\gamma_G \sigma_{Rd} / f_{ywd} A_s$	= 1.35*320 / 435*785	= 780	mm ²
100 ρ_1	= $A_{s,prov} / (b d)$	= 780 / (1000*550)*10 ²	= 0.1417	-
$M_{Rd} / (b d^2)$	= GTB - 11.3		= 606	-
M_{Rd}	= 606*1.000*0.550 ²		= 183	kNm
u.c.	= $M_{Ed} / M_{Rd} \leq 1$	= 125 / 183	= 0.68 < 1	→ voldoet

5.5.4. Dwarskrachtwapening poeren

Basiscapaciteit dwarskracht (ongewapend)

Controle poer 4000 x 4000 x 800 mm				
V_{Ed}	= $1/2 \sigma_{gd,Rd} l$	= $1/2 * 71.2 * 1.825$	= 65.0	kN
d	= $h - c - \varnothing_{sw}^{1/2} \varnothing_s$	= 800 - 35 - 10 - 5	= 750	mm
k	= $1 + \sqrt{200 / d}$	= $1 + \sqrt{200 / 750}$	= 1.52	-
$V_{Rd,c,min}$	= $0.035 k^{3/2} f_{ck}^{1/2} b d$	= $(0.035 * 1.52^{3/2} * 20^{1/2} * 1000 * 750) * 10^{-3}$	= 220	kN
u.c.	= $V_{Ed} / V_{Rd,c,min} \leq 1$	= 65.0 / 220	= 0.30 < 1	→ voldoet

Controle poer 2750 x 2750 x 600 mm				
V_{Ed}	= $1/2 \sigma_{gd,Rd} l$	= $1/2 * 96.3 * 1.210$	= 58.3	kN
d	= $h - c - \varnothing_{sw}^{1/2} \varnothing_s$	= 600 - 35 - 10 - 5	= 550	mm
k	= $1 + \sqrt{200 / d}$	= $1 + \sqrt{200 / 550}$	= 1.60	-
$V_{Rd,c,min}$	= $0.035 k^{3/2} f_{ck}^{1/2} b d$	= $(0.035 * 1.60^{3/2} * 20^{1/2} * 1000 * 550) * 10^{-3}$	= 175	kN
u.c.	= $V_{Ed} / V_{Rd,c,min} \leq 1$	= 58.3 / 175	= 0.33 < 1	→ voldoet

5.6. Wapening stroken fundering speelhal

C20/25

5.6.1. Uitgangspunten, geometrie en belastingen

Uitgangspunten

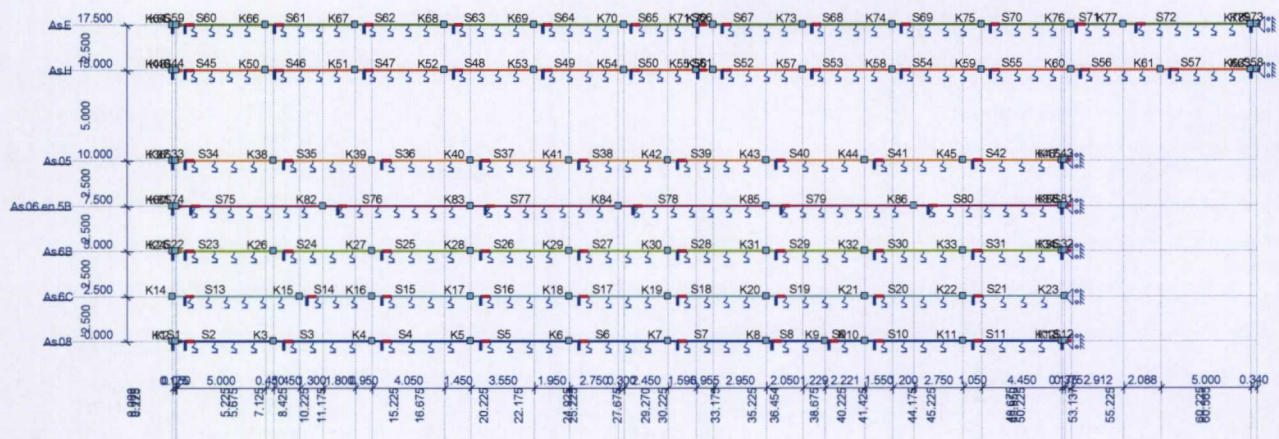
Het speelhal gedeelte wordt gefundeerd op een strokenfundering met poeren ter plekke van relatief grote belastingen. De maatgevende stroken zijn ingevoerd in MatrixFrame. Hierop zijn de belastingen door de kolommen als puntlasten ingevoerd.

Als beddingsconstante is er gerekend met $C_z = (C_{z, \text{modaal}} + C_{z, \text{gunstig}}) / 2 = (2300 + 3400) / 2 = 2850 \text{ kN/m}^3$ conform het funderingsadvies GB160509-R01-v1.0. Daarnaast wordt ook de gronddruk getoetst. De dwarswapening is reeds getoetst in hoofdstuk 5.1. De dwarskracht wordt gecontroleerd op d naast de oplegging (kolom).

De poeren worden handmatig getoetst en gewapend.

Zie computerberekening pag. 35-58.

Overzicht geometrie



BelastingenAlgemeen

q_{EG}	= Eigen Gewicht	= vlgs. SCIA Engineer	= 25	kN/m^3
q_G	= prefab betonplint gevel	= $0.17 \times 0.70 \times 25$	= 3.00	kN/m^1

Strook As 08		700 x 400 mm	m^2	G	Q	S
E	Dak	$1.25 \times 2.50 \times 2.75 / 2$	4.30	2.37	6.02	-
	Gevel	$1.1 \times 5.25 \times 9.00 / 2$	26.0	15.6	-	-
E1 - G	Dak	$1.1 \times 10.0 \times 5.50$	60.5	33.3	84.7	90: F1
	Gevel	$1.1 \times 5.50 \times 9.00$	54.5	32.7	-	-
G-G1	Gevel	$1.25 \times 2.50 \times 8.50 / 2$	13.3	13.3	-	-
G1 - G2	Dak	$1.1 \times 10.0 \times 5.50$	60.5	33.3	84.7	-
	Gevel	$1.1 \times 5.50 \times 9.00$	54.5	32.7	-	-
H	Dak	$1.25 \times 2.50 \times 2.75 / 2$	4.30	2.37	6.02	45: H
	Gevel	$1.1 \times 5.25 \times 9.00 / 2$	26.0	15.6	-	-

Strook As 6C		800 x 400 mm	m^2	G	Q	S
E1	V+1	1.00×1.25	1.25	7.44	6.25	-
E1-E2	V+1	$2.95 \times 1.25 + 2.10 \times 3.20$	10.4	61.9	52.0	-
E2	V+1	$4.80 \times 1.25 + 4.80 \times 3.20$	21.4	127	107	-
F	V+1	$5.50 \times 1.25 + 5.50 \times 3.20$	24.5	146	123	-
F1	V+1	$5.50 \times 1.25 + 3.35 \times 3.20$	17.6	105	88.0	-
F2 - G1	V+1	5.50×1.25	6.88	40.9	34.4	-
G2	V+1	2.95×1.25	3.69	22.0	18.5	-

Strook As 6B		1200 x 400 mm	m^2	G	Q	S
E	V+1	$2.75 \times 4.25 / 2$	5.84	34.7	29.2	-
	Gevel	$1.1 \times 5.00 \times 9.00 / 2$	24.8	14.9	-	-
E1	V+1	$5.50 \times 5.50 + 3.15 \times 1.25$	34.2	203	171	-
E2 - G1	V+1	$5.50 \times 5.50 + 5.50 \times 1.25$	37.1	221	186	-
G2	V+1	$5.50 \times 5.50 + 3.15 \times 1.25$	34.2	203	171	-
H	V+1	$2.75 \times 5.50 / 2$	7.56	45.0	37.8	-
	Gevel	$1.1 \times 2.50 \times 9.00 / 2$	12.4	7.44	-	-

Strook As 06 en 5B		2500 x 800 mm	m^2	G	Q	S
E	LHg	$1.1 \times 11.2 \times 4.50 / 2$	27.7	15.2	38.8	-
	Dak	$1.1 \times 8.25 \times 20.0 / 2$	90.8	49.9	74.5	-
	V+1	$4.15 \times 10.5 / 2$	21.8	130	109	-
	Gevel	$1.1 \times 5.00 \times 9.00 / 2$	24.8	14.9	-	-
F en G	Dak	$1.1 \times 16.5 \times 20.0$	363	200	203	-
	V+1	8.25×10.5	86.6	515	433	-
E-F; F-G en G-HV+1		8.25×10.5	86.6	515	433	-
H	Dak	$1.1 \times 8.25 \times 20.0 / 2$	90.8	49.9	74.5	-
	V+1	$4.15 \times 10.5 / 2$	21.8	130	109	-
	Gevel	$1.1 \times 5.00 \times 9.00 / 2$	24.8	14.9	-	45: H

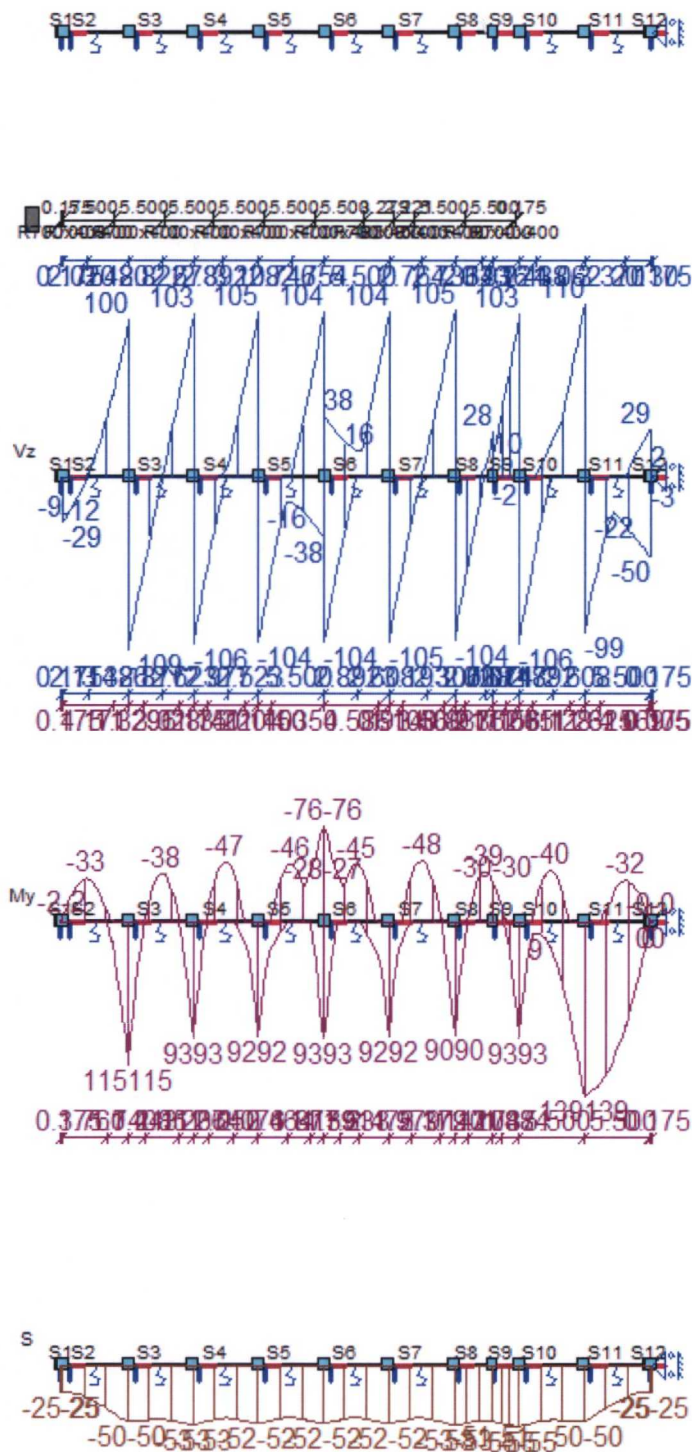
Strook As 05		1750 x 600 mm	m ²	G	Q	S
E	LHg	1.25*4.75*3.75 / 2	11.1	6.11	15.5	-
	Dak	1.25*2.50*2.75 / 2	4.30	2.37	6.02	-
	V+1	2.75*5.00 / 2	6.88	40.9	34.4	-
	Gevel	1.25*5.25*11.0 / 2	36.1	21.7	-	-
E1	LHg	1.1*5.50*3.25	19.7	10.8	27.6	-
	Dak	1.1*10.0*5.50	60.5	33.3	84.7	-
	LLg	1.1*(9.30*5.50 + 8.20*4.75)	99.1	54.5	139	-
	V+1	5.50*5.00	27.5	164	138	-
	Gevel	1.1*5.50*11.0	66.6	40.0	-	-
E2	LHg	1.1*5.50*2.50	15.1	8.31	21.1	-
	Dak	1.1*10.0*5.50	60.5	33.3	84.7	-
	LLg	1.1*8.20*5.50	49.6	27.3	69.4	-
	V+1	5.50*5.00	27.5	164	138	-
	Gevel	1.1*5.50*11.0	66.6	40.0	-	-
F	LHg	1.1*5.50*2.50	15.1	8.31	21.1	-
	Dak	1.1*10.0*5.50	60.5	33.3	84.7	-
	LLg	1.1*6.50*5.50	39.3	21.6	55.0	-
	V+1	5.50*5.00	27.5	164	138	-
	Gevel	1.1*5.50*11.0	66.6	40.0	-	-
F1	LHg	1.1*5.50*2.50	15.1	8.31	21.1	-
	Dak	1.1*10.0*5.50	60.5	33.3	84.7	-
	LLg	1.1*5.00*5.50	30.3	16.7	42.4	-
	V+1	5.50*5.00	27.5	164	138	-
	Gevel	1.1*5.50*11.0	66.6	40.0	-	-
F2	LHg	1.1*5.50*2.50	15.1	8.31	21.1	-
	Dak	1.1*10.0*5.50	60.5	33.3	84.7	90: F2
	LLg	1.1*3.00*5.50	18.2	10.0	25.5	-
	V+1	5.25*5.00 + 0.25*2.20	26.8	159	134	-
	Gevel	1.1*5.50*11.0	66.6	40.0	-	-
G	LHg	1.1*5.50*2.50	15.1	8.31	21.1	-
	Dak	1.1*10.0*5.50	60.5	33.3	84.7	-
	LLg	1.1*2.60*5.50	15.7	8.64	22.0	-
	V+1	5.50*2.20	12.1	72.0	60.5	-
	Gevel	1.1*5.50*11.0	66.6	40.0	-	-
G1	LHg	1.1*5.50*2.50	15.1	8.31	21.1	-
	Dak	1.1*10.0*5.50	60.5	33.3	84.7	-
	LLg	1.1*6.80*5.50	41.1	22.6	57.5	-
	V+1	1.75*2.20 + 3.75*5.00	22.6	134	113	-
	Gevel	1.1*5.50*11.0	66.6	40.0	-	-
G2	LHg	1.1*5.50*2.50	15.1	8.31	21.1	-
	Dak	1.1*10.0*5.50	60.5	33.3	84.7	-
	LLg	1.1*5.70*5.50	34.5	19.0	48.3	-
	V+1	5.50*5.00	27.5	164	138	-
	Gevel	1.1*5.50*11.0	66.6	40.0	-	-
H	LHg	1.25*8.75*2.50 / 2	13.7	7.54	19.2	90: H
	Dak	1.25*2.50*2.75 / 2	4.30	2.37	6.02	-
	LLg	1.25*5.70*10.0 / 2	35.6	19.6	49.8	-
	V+1	2.75*5.00 / 2	6.88	40.9	34.4	-
	Gevel	1.25*5.25*11.0 / 2	36.1	21.7	-	-

Strook As H		700 x 400 mm	m ²	G	Q	S
08	Dak	1.25*2.50*2.75 / 2	4.30	2.37	6.02	-
	Gevel	1.1*5.25*9.00 / 2	26.0	15.6	-	-
7C - 7A	Dak	1.1*5.00*2.75	15.1	8.31	21.1	90: 7C-A
	Gevel	1.1*5.00*9.00	49.5	29.7	-	-
07	Dak	1.1*8.25*20.0	182	100	102	-
	Gevel	1.1*5.00*9.00	49.5	29.7	-	-
6C	Dak	1.1*5.00*2.75	15.1	8.31	21.1	-
	Gevel	1.1*4.50*9.00	44.6	26.8	-	-
6C-6B	V+1	2.75*5.50 / 2	7.56	45.0	37.8	-
	Gevel	1.1*2.50*9.00 / 2	12.4	7.44	-	-
6B	Dak	1.1*5.00*2.75	15.1	8.31	21.1	-
	Gevel	1.1*3.00*9.00	29.7	17.8	-	-
6A	Dak	1.1*5.00*2.75	15.1	8.31	21.1	-
	Gevel	1.1*5.00*9.00	49.5	29.7	-	-
06	Dak	1.1*8.25*20.0	182	100	102	-
	V+1	4.15*10.5	43.6	259	218	-
	Gevel	1.1*5.00*9.00	49.5	29.7	-	-
5C	Dak	1.1*5.00*2.75	15.1	8.31	21.1	-
	Gevel	1.1*5.00*9.00	49.5	29.7	-	-
5B	Dak	1.1*5.00*2.75	15.1	8.31	21.1	-
	V+1	4.15*10.0	41.5	247	208	-
	Gevel	1.1*5.00*9.00	49.5	29.7	-	-
5A	Dak	1.1*5.00*2.75	15.1	8.31	21.1	-
	Gevel	1.1*5.00*9.00	49.5	29.7	-	-
05	LHg	1.25*8.75*2.50 / 2	13.7	7.54	19.2	-
	Dak	1.25*2.50*2.75 / 2	4.30	2.37	6.02	-
	LLg	1.25*5.70*10.0 / 2	35.6	19.6	49.8	-
	V+1	2.75*5.00 / 2	6.88	40.9	34.4	-
	Gevel	1.25*5.25*11.0 / 2	36.1	21.7	-	-

Stroom As E		700 x 400 mm	m ²	G	Q	S
08	Dak	1.25*2.50*2.75 / 2	4.30	2.37	6.02	-
	Gevel	1.1*5.25*9.00 / 2	26.0	15.6	-	-
7C - 7A	Dak	1.1*5.00*2.75	15.1	8.31	21.1	131: 7B-A
	Gevel	1.1*5.00*9.00	49.5	29.7	-	-
07	Dak	1.1*8.25*20.0	182	100	102	-
	Gevel	1.1*5.00*9.00	49.5	29.7	-	-
6C	Dak	1.1*5.00*2.75	15.1	8.31	21.1	131: 6C
	Gevel	1.1*4.50*9.00	44.6	26.8	-	-
6C-6B	V+1	2.75*5.50 / 2	7.56	45.0	37.8	-
	Gevel	1.1*2.50*9.00 / 2	12.4	7.44	-	-
6B	Dak	1.1*5.00*2.75	15.1	8.31	21.1	-
	Gevel	1.1*3.00*9.00	29.7	17.8	-	-
6A	Dak	1.1*5.00*2.75	15.1	8.31	21.1	-
	Gevel	1.1*5.00*9.00	49.5	29.7	-	-
06	LHg	1.1*11.2*4.50 / 2	27.7	15.2	38.8	-
	Dak	1.1*8.25*20.0	182	100	102	-
	V+1	4.15*10.5	43.6	259	218	-
	Gevel	1.1*5.00*9.00	49.5	29.7	-	-
5C	LHg	1.1*11.2*2.00	24.6	13.5	34.4	-
	Dak	1.1*5.00*2.75	15.1	8.31	21.1	-
	Gevel	1.1*5.00*11.0	60.5	36.3	-	-
5B	LHg	1.1*11.2*4.50 / 2	27.7	15.2	38.8	-
	Dak	1.1*5.00*2.75	15.1	8.31	21.1	-
	V+1	6.50*2.00	13.0	77.4	65.0	-
	Gevel	1.1*4.00*11.0	48.4	29.0	-	-
5B-A	V+1	3.00*2.00	6.00	35.7	30.3	-
	Gevel	1.1*2.50*11.0	30.3	18.2	-	-
5A	LHg	1.1*5.00*2.00	11.0	6.05	15.4	-
	Dak	1.1*5.00*2.75	15.1	8.31	21.1	-
	Gevel	1.1*3.50*11.0	42.4	25.4	-	-
05	LHg	1.25*4.75*3.75 / 2	11.1	6.11	15.5	-
	Dak	1.25*2.50*2.75 / 2	4.30	2.37	6.02	-
	V+1	2.75*5.00 / 2	6.88	40.9	34.4	-
	Gevel	1.25*5.25*11.0 / 2	36.1	21.7	-	-

700 x 400 mm

Overzicht dwarskrachten, momenten en gronddruk



Controle gronddruk

Controle maximale gronddruk 120 kN/m²

$\sigma_{gd,BG,d}$	= $1.2 \cdot (0.20 \cdot 25 + 0.19 \cdot 16) + 1.5 \cdot 5.00$	= 17	kN/m ¹
$\sigma_{gd,d}$	= volgens computerberekening	= 52	kN/m ¹
$\sigma_{gd,Ed}$	= 17 + 52	= 69	kN/m ¹
$\sigma_{gd,Rd}$	= onder strook 700 x 400 mm = $0.700 \cdot 120$	= 84	kN/m ¹
U.C.	= $\sigma_{gd,Ed} / \sigma_{gd,Rd} \leq 1$	= 69 / 84	= 0.82 < 1 → voldoet

Controle langswapening

Basiswapening boven 7 Ø10 mm (incl. scheurwijdte $w_k = 0.3$ mm)

d	= $h - c - \sigma_{sw}^{1/2} / 2 \cdot \sigma_s$	= 400 - 30 - 8 - 8	= 354	mm
s_{max}	= b / n_{staven}	= 700 / 7	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	= $\gamma_G \sigma_{Rd} / f_{ywd} A_s$	= $1.35 \cdot 320 / 435 \cdot 550$	= 546	mm ²
100 ρ_1	= $A_{s,prov} / (b \cdot d)$	= $546 / (700 \cdot 354) \cdot 10^2$	= 0.2203	-
$M_{Rd} / (b \cdot d^2)$	= GTB - 11.3	= 934	-	-
M_{Rd}	= $934 \cdot 0.700 \cdot 0.354^2$	= 82	= 82	kNm

Basiswapening onder 5 Ø12 + 2 Ø16 mm (incl. scheurwijdte $w_k = 0.3$ mm)

d	= $h - c - \sigma_{sw}^{1/2} / 2 \cdot \sigma_s$	= 400 - 35 - 8 - 8	= 349	mm
s_{max}	= b / n_{staven}	= 700 / 7	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	= $\gamma_G \sigma_{Rd} / f_{ywd} A_s$	= $1.35 \cdot 320 / 435 \cdot 968$	= 961	mm ²
100 ρ_1	= $A_{s,prov} / (b \cdot d)$	= $961 / (700 \cdot 349) \cdot 10^2$	= 0.3934	-
$M_{Rd} / (b \cdot d^2)$	= GTB - 11.3	= 1611	-	-
M_{Rd}	= $1611 \cdot 0.700 \cdot 0.349^2$	= 137	= 137	kNm

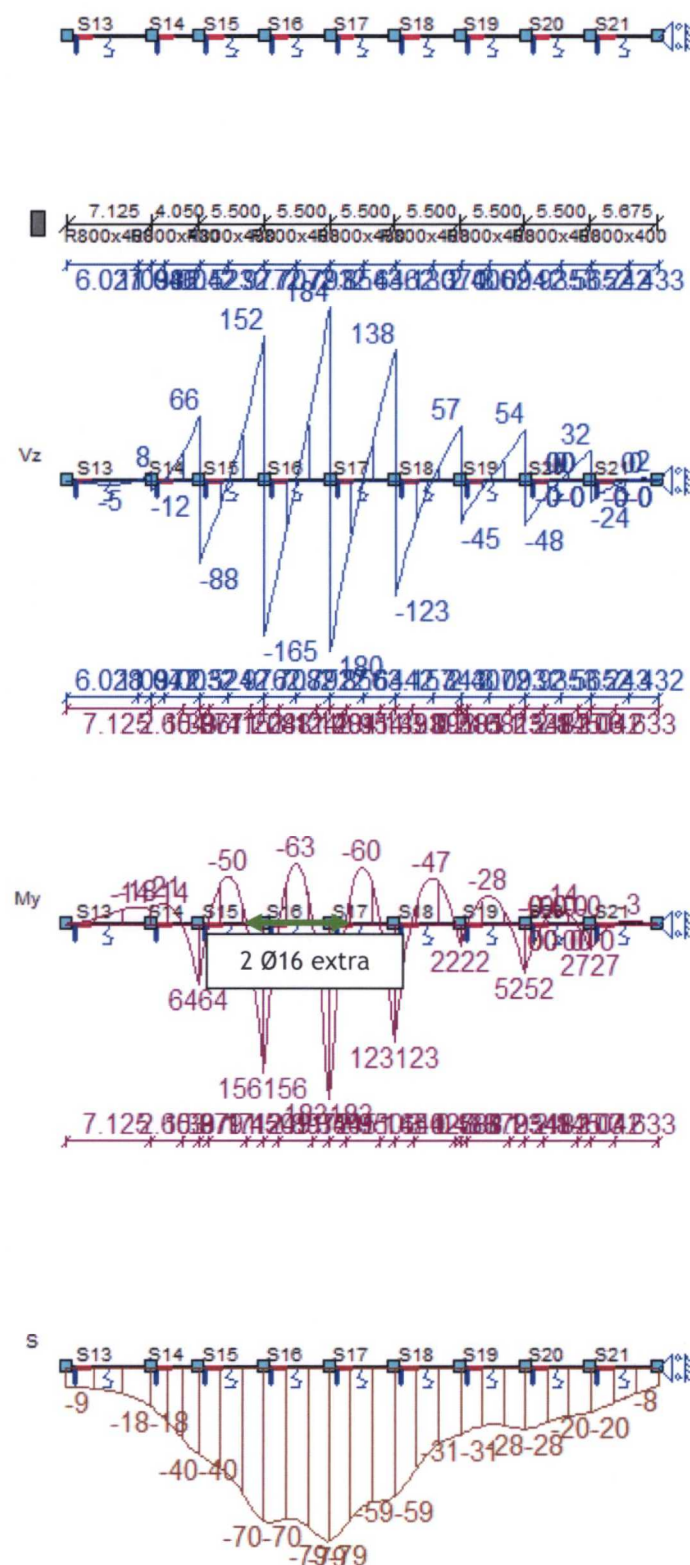
Controle dwarskracht

Controle strook 700 x 400 mm Ø8-250 basis (3-snedig)

V_{Rd}	= $[151 \cdot (0.9 \cdot 400) \cdot 435 \cdot \cot(21.8^\circ) / 250] \cdot 10^{-3}$	= 236	kN/m ¹
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5.6.3. Controle strook As 6C 800 x 400 mm

Overzicht dwarskrachten, momenten en gronddruk



Controle gronddruk

Controle maximale gronddruk		120 kN/m²		
$\sigma_{gd,BG,d}$	$= 1.2 \cdot (0.20 \cdot 25 + 0.19 \cdot 16) + 1.5 \cdot 5.00$		= 17	kN/m ¹
$\sigma_{gd,d}$	= volgens computerberekening		= 79	kN/m ¹
$\sigma_{gd,Ed}$	= 17 + 79		= 96	kN/m ¹
$\sigma_{gd,Rd}$	= onder strook 700 x 400 mm = 0.800*120		= 96	kN/m ¹
U.C.	$= \sigma_{gd,Ed} / \sigma_{gd,Rd} \leq 1$	= 96 / 96	= 1.00 < 1	→ voldoet

Controle langswapening

Basiswapening boven		8 Ø10 mm	(incl. scheurwijdte $w_k = 0.3$ mm)	
d	$= h - c - \phi_{sw}^{1/2} \phi_s$	= 400 - 30 - 8 - 8	= 354	mm
s_{max}	= b / n_{staven}	= 800 / 8	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	$= Y_G \sigma_{Rd} / f_{ywd} A_s$	= 1.35*320 / 435*628	= 624	mm ²
100 ρ_1	$= A_{s,prov} / (b d)$	= 624 / (800*354)*10 ²	= 0.2203	-
$M_{Rd} / (b d^2)$	= GTB - 11.3		= 934	-
M_{Rd}	= 934*0.800*0.354 ²		= 94	kNm

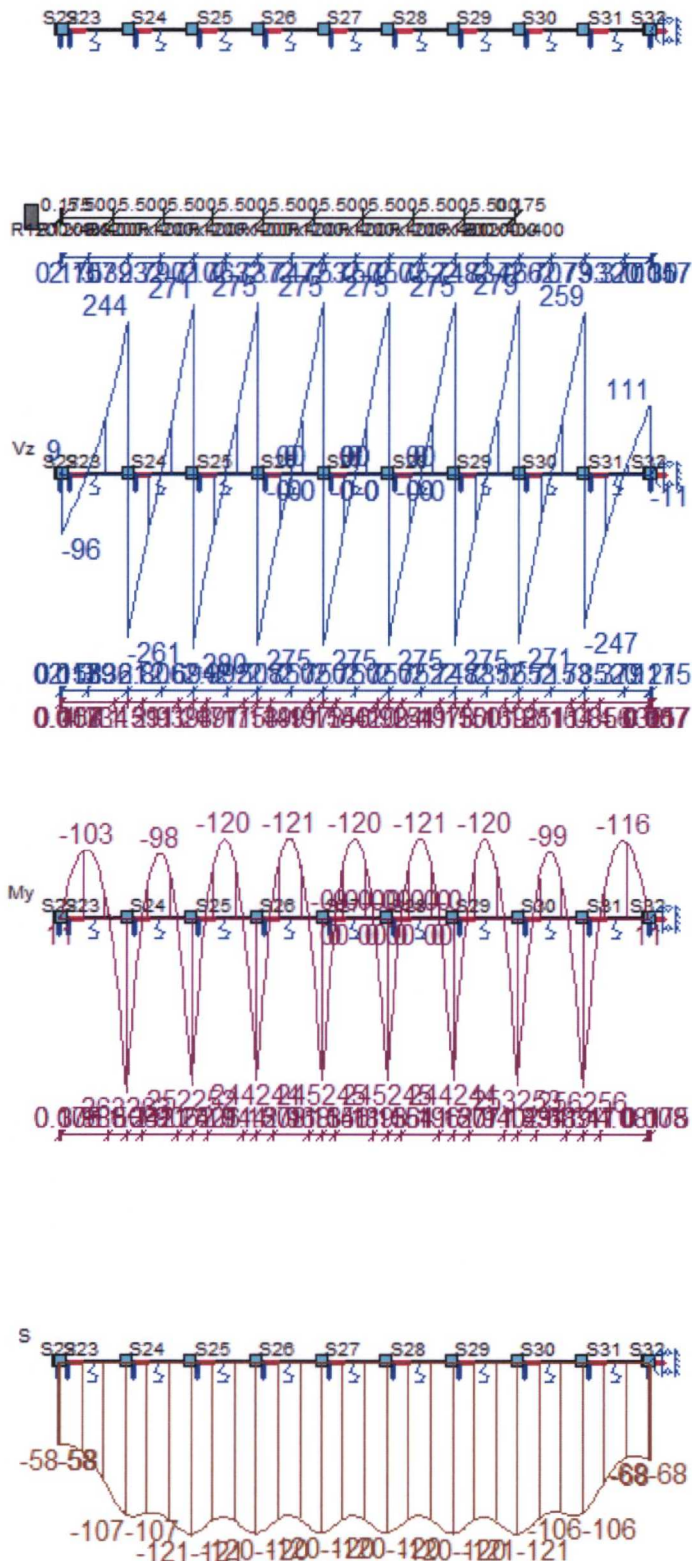
Basiswapening onder		6 Ø12 + 2 Ø16 mm	(incl. scheurwijdte $w_k = 0.3$ mm)	
d	$= h - c - \phi_{sw}^{1/2} \phi_s$	= 400 - 35 - 8 - 8	= 349	mm
s_{max}	= b / n_{staven}	= 800 / 8	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	$= Y_G \sigma_{Rd} / f_{ywd} A_s$	= 1.35*320 / 435*1081	= 1073	mm ²
100 ρ_1	$= A_{s,prov} / (b d)$	= 1073 / (800*349)*10 ²	= 0.3844	-
$M_{Rd} / (b d^2)$	= GTB - 11.3		= 1572	-
M_{Rd}	= 1572*0.800*0.349 ²		= 153	kNm

Bijlegwapening onder		(6 Ø12 + 2 Ø16) + 2 Ø16 mm	(incl. scheurwijdte $w_k = 0.3$ mm)	
d	$= h - c - \phi_{sw}^{1/2} \phi_s$	= 400 - 35 - 8 - 8	= 349	mm
s_{max}	= b / n_{staven}	= 800 / 8	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	$= Y_G \sigma_{Rd} / f_{ywd} A_s$	= 1.35*320 / 435*1709	= 1697	mm ²
100 ρ_1	$= A_{s,prov} / (b d)$	= 1697 / (800*349)*10 ²	= 0.6078	-
$M_{Rd} / (b d^2)$	= GTB - 11.3		= 2359	-
M_{Rd}	= 2359*0.800*0.349 ²		= 230	kNm

Controle dwarskracht

Controle strook 800 x 400 mm		Ø8-250 basis (3-snedig)		
V_{Rd}	$= [151 \cdot (0.9 \cdot 400) \cdot 435 \cdot \cot(21.8^\circ) / 250] \cdot 10^{-3}$		= 236	kN/m ¹

Overzicht dwarskrachten, momenten en gronddruk



Controle gronddrukControle maximale gronddruk 120 kN/m²

$\sigma_{gd,BG,d}$	= $1.2 \cdot (0.20 \cdot 25 + 0.19 \cdot 16) + 1.5 \cdot 5.00$	= 17	kN/m ¹
$\sigma_{gd,d}$	= volgens computerberekening	= 121	kN/m ¹
$\sigma_{gd,Ed}$	= 17 + 121	= 138	kN/m ¹
$\sigma_{gd,Rd}$	= onder strook 700 x 400 mm = 1.200*120	= 144	kN/m ¹
U.C.	= $\sigma_{gd,Ed} / \sigma_{gd,Rd} \leq 1$	= 138 / 144	= 0.96 < 1 → voldoet

Controle langswapeningBasiswapening boven 12 Ø10 mm (incl. scheurwijdte $w_k = 0.3$ mm)

d	= $h - c - \sigma_{sw}^1 / 2 \cdot \sigma_s$	= 400 - 30 - 8 - 8	= 354	mm
s_{max}	= b / n_{staven}	= 1200 / 12	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	= $Y_G \sigma_{Rd} / f_{ywd} A_s$	= $1.35 \cdot 320 / 435 \cdot 942$	= 936	mm ²
100 ρ_1	= $A_{s,prov} / (b \cdot d)$	= $936 / (1200 \cdot 354) \cdot 10^2$	= 0.2203	-
$M_{Rd} / (b \cdot d^2)$	= GTB - 11.3	= 394	-	-
M_{Rd}	= $934 \cdot 1.200 \cdot 0.354^2$	= 141	= 141	kNm

Basiswapening onder 12 Ø16 mm (incl. scheurwijdte $w_k = 0.3$ mm)

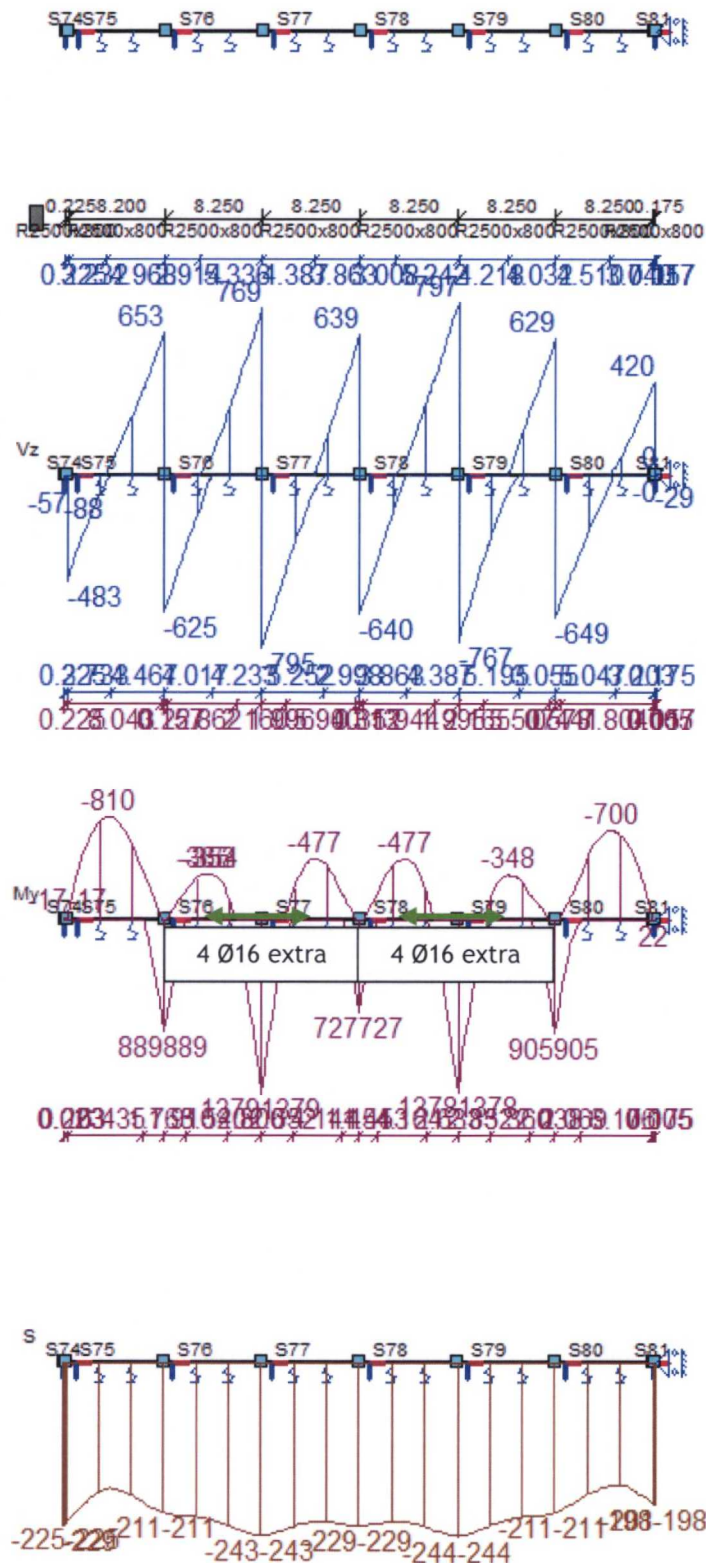
d	= $h - c - \sigma_{sw}^1 / 2 \cdot \sigma_s$	= 400 - 35 - 8 - 8	= 349	mm
s_{max}	= b / n_{staven}	= 1200 / 12	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	= $Y_G \sigma_{Rd} / f_{ywd} A_s$	= $1.35 \cdot 320 / 435 \cdot 2413$	= 2396	mm ²
100 ρ_1	= $A_{s,prov} / (b \cdot d)$	= $2396 / (1200 \cdot 349) \cdot 10^2$	= 0.5721	-
$M_{Rd} / (b \cdot d^2)$	= GTB - 11.3	= 2240	-	-
M_{Rd}	= $2240 \cdot 1.200 \cdot 0.349^2$	= 327	= 327	kNm

Controle dwarskrachtControle strook 1200 x 400 mm Ø8-200 basis (5-snedig)

V_{Rd}	= $[251 \cdot (0.9 \cdot 400) \cdot 435 \cdot \cot(21.8^\circ) / 200] \cdot 10^{-3}$	= 492	kN/m ¹
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5.6.5. Controle strook As 06 en 5B 2500 x 800 mm

Overzicht dwarskrachten, momenten en gronddruk



Controle gronddruk

Controle maximale gronddruk		120 kN/m²		
$\sigma_{gd,BG,d}$	$= 1.2 \cdot (0.20 \cdot 25 + 0.19 \cdot 16) + 1.5 \cdot 5.00$	$= 17$	kN/m^1	
$\sigma_{gd,d}$	$= \text{volgens computerberekening}$	$= 244$	kN/m^1	
$\sigma_{gd,Ed}$	$= 17 + 244$	$= 261$	kN/m^1	
$\sigma_{gd,Rd}$	$= \text{onder strook } 2500 \times 800 \text{ mm} = 2.500 \cdot 120$	$= 300$	kN/m^1	
U.C.	$= \sigma_{gd,Ed} / \sigma_{gd,Rd} \leq 1$	$= 261 / 300$	$= 0.87 < 1$	$\rightarrow \text{voldoet}$

Controle langswapening

Basiswapening boven		25 Ø12 mm	(incl. scheurwijdte $w_k = 0.3 \text{ mm}$)	
d	$= h - c - \phi_{sw}^{1/2} \phi_s$	$= 800 - 30 - 8 - 8$	$= 754$	mm
s_{max}	$= b / n_{staven}$	$= 2500 / 25$	$= 100$	mm
σ_{Rd}	$= \text{NEN-EN 1992-1-1}$	$= \text{Tabel 7.3N}$	$= 320$	N/mm^2
$A_{s,prov}$	$= \gamma_G \sigma_{Rd} / f_{ywd} A_s$	$= 1.35 \cdot 320 / 435 \cdot 2827$	$= 2808$	mm^2
$100 \rho_1$	$= A_{s,prov} / (b d)$	$= 2808 / (2500 \cdot 754) \cdot 10^2$	$= 0.1490$	-
$M_{Rd} / (b d^2)$	$= \text{GTB - 11.3}$	$= 630$	-	-
M_{Rd}	$= 630 \cdot 2.500 \cdot 0.754^2$	$= 895$	$= 895$	kNm

Basiswapening onder		19 Ø12 + 6 Ø16 mm	(incl. scheurwijdte $w_k = 0.3 \text{ mm}$)	
d	$= h - c - \phi_{sw}^{1/2} \phi_s$	$= 800 - 35 - 8 - 8$	$= 749$	mm
s_{max}	$= b / n_{staven}$	$= 2500 / 25$	$= 100$	mm
σ_{Rd}	$= \text{NEN-EN 1992-1-1}$	$= \text{Tabel 7.3N}$	$= 320$	N/mm^2
$A_{s,prov}$	$= \gamma_G \sigma_{Rd} / f_{ywd} A_s$	$= 1.35 \cdot 320 / 435 \cdot 3355$	$= 3332$	mm^2
$100 \rho_1$	$= A_{s,prov} / (b d)$	$= 3332 / (2500 \cdot 749) \cdot 10^2$	$= 0.1779$	-
$M_{Rd} / (b d^2)$	$= \text{GTB - 11.3}$	$= 740$	-	-
M_{Rd}	$= 740 \cdot 2.500 \cdot 0.749^2$	$= 1038$	$= 1038$	kNm

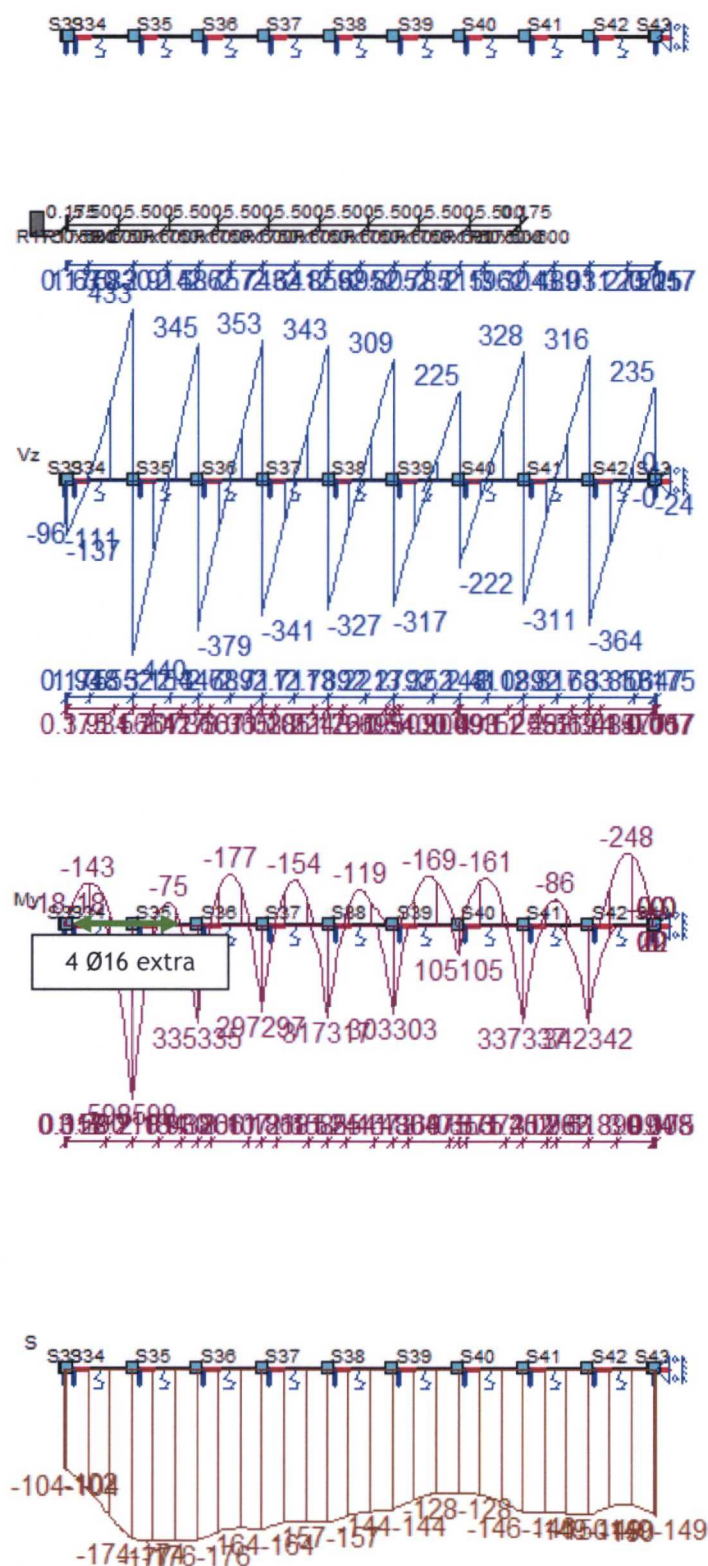
Bijlegwapening onder (As 06)		(19 Ø12 + 6 Ø16) + 4 Ø16 mm	(incl. scheurwijdte $w_k = 0.3 \text{ mm}$)	
d	$= h - c - \phi_{sw}^{1/2} \phi_s$	$= 800 - 35 - 8 - 8$	$= 749$	mm
s_{max}	$= b / n_{staven}$	$= 2500 / 25$	$= 100$	mm
σ_{Rd}	$= \text{NEN-EN 1992-1-1}$	$= \text{Tabel 7.3N}$	$= 320$	N/mm^2
$A_{s,prov}$	$= \gamma_G \sigma_{Rd} / f_{ywd} A_s$	$= 1.35 \cdot 320 / 435 \cdot 4159$	$= 4131$	mm^2
$100 \rho_1$	$= A_{s,prov} / (b d)$	$= 4131 / (2500 \cdot 749) \cdot 10^2$	$= 0.2206$	-
$M_{Rd} / (b d^2)$	$= \text{GTB - 11.3}$	$= 935$	-	-
M_{Rd}	$= 935 \cdot 2.500 \cdot 0.749^2$	$= 1312$	$= 1312$	kNm

Controle dwarskracht

Controle strook 2500 x 800 mm		Ø8-150 basis (5-snedig)		
V_{Rd}	$= [251 \cdot (0.9 \cdot 800) \cdot 435 \cdot \cot(21.8^\circ) / 150] \cdot 10^{-3}$	$= 1312$	kN/m^1	

5.6.6. Controle strook As 05 1750 x 600 mm

Overzicht dwarskrachten, momenten en gronddruk



Controle gronddruk

Controle maximale gronddruk		120 kN/m²		
$\sigma_{gd,BG,d}$	$= 1.2 \cdot (0.20 \cdot 25 + 0.19 \cdot 16) + 1.5 \cdot 5.00$		= 17	kN/m ¹
$\sigma_{gd,d}$	= volgens computerberekening		= 176	kN/m ¹
$\sigma_{gd,Ed}$	= 17 + 176		= 193	kN/m ¹
$\sigma_{gd,Rd}$	= onder strook 1750 x 600 mm = 1.750*120		= 210	kN/m ¹
U.C.	$= \sigma_{gd,Ed} / \sigma_{gd,Rd} \leq 1$	= 193 / 210	= 0.92 < 1	→ voldoet

Controle langswapening

Basiswapening boven		18 Ø10 mm	(incl. scheurwijdte $w_k = 0.3$ mm)	
d	$= h - c - \phi_{sw}^{1/2} \phi_s$	= 600 - 30 - 8 - 8	= 554	mm
s_{max}	$= b / n_{staven}$	= 1750 / 18	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	$= \gamma_G \sigma_{Rd} / f_{ywd} A_s$	= 1.35*320 / 435*1414	= 1404	mm ²
100 ρ_1	$= A_{s,prov} / (b d)$	= 1404 / (1750*554)*10 ²	= 0.1448	-
$M_{Rd} / (b d^2)$	= GTB - 11.3		= 616	-
M_{Rd}	= 616*1.750*0.554 ²		= 331	kNm

Basiswapening onder		18 Ø12 mm	(incl. scheurwijdte $w_k = 0.3$ mm)	
d	$= h - c - \phi_{sw}^{1/2} \phi_s$	= 600 - 35 - 8 - 8	= 549	mm
s_{max}	$= b / n_{staven}$	= 1750 / 18	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	$= \gamma_G \sigma_{Rd} / f_{ywd} A_s$	= 1.35*320 / 435*2036	= 2022	mm ²
100 ρ_1	$= A_{s,prov} / (b d)$	= 2022 / (1750*549)*10 ²	= 0.2104	-
$M_{Rd} / (b d^2)$	= GTB - 11.3		= 901	-
M_{Rd}	= 901*1.750*0.549 ²		= 475	kNm

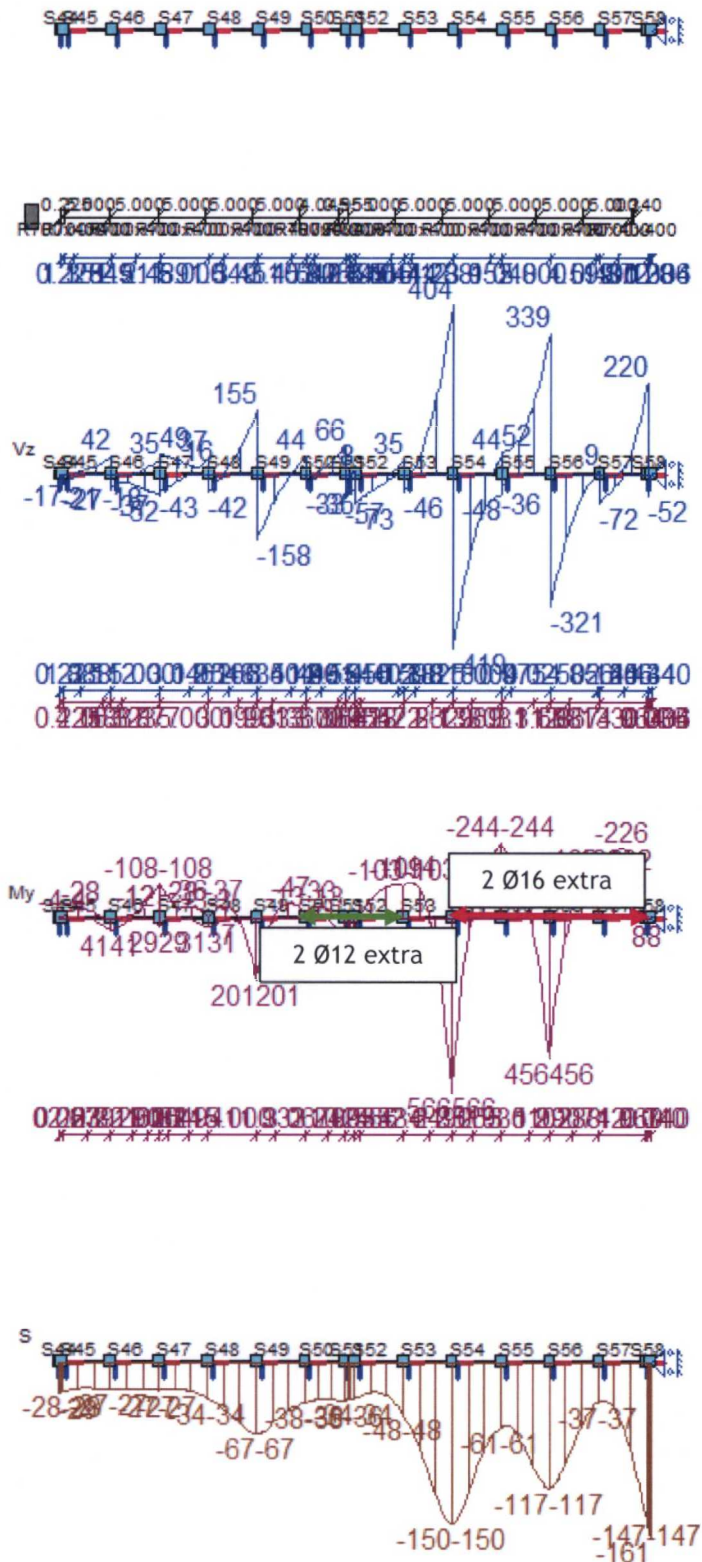
Bijlegwapening onder		(18 Ø12) + 4 Ø16 mm	(incl. scheurwijdte $w_k = 0.3$ mm)	
d	$= h - c - \phi_{sw}^{1/2} \phi_s$	= 600 - 35 - 8 - 8	= 549	mm
s_{max}	$= b / n_{staven}$	= 1750 / 18	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	$= \gamma_G \sigma_{Rd} / f_{ywd} A_s$	= 1.35*320 / 435*2840	= 2820	mm ²
100 ρ_1	$= A_{s,prov} / (b d)$	= 2820 / (1750*549)*10 ²	= 0.2936	-
$M_{Rd} / (b d^2)$	= GTB - 11.3		= 1212	-
M_{Rd}	= 1212*1.750*0.549 ²		= 639	kNm

Controle dwarskracht

Controle strook 1750 x 600 mm		Ø8-200 basis (5-snedig)		
V_{Rd}	$= [251 \cdot (0.9 \cdot 600) \cdot 435 \cdot \cot(21.8^\circ) / 200] \cdot 10^{-3}$		= 738	kN/m ¹

5.6.7. Controle strook As H 700 x 400 mm

Overzicht dwarskrachten, momenten en gronddruk



Controle gronddruk

Controle maximale gronddruk		120 kN/m²		
$\sigma_{gd,BG,d}$	$= 1.2 \cdot (0.20 \cdot 25 + 0.19 \cdot 16) + 1.5 \cdot 5.00$		= 17	kN/m ¹
$\sigma_{gd,d}$	= volgens computerberekening		= 67	kN/m ¹
$\sigma_{gd,Ed}$	= 17 + 67		= 84	kN/m ¹
$\sigma_{gd,Rd}$	= onder strook 700 x 400 mm = 0.700*120		= 84	kN/m ¹
U.C.	$= \sigma_{gd,Ed} / \sigma_{gd,Rd} \leq 1$	= 84 / 84	= 1.00 < 1	→ voldoet

Controle langswapening

Basiswapening boven		7 Ø16 mm	(incl. scheurwijdte $w_k = 0.3$ mm)	
d	$= h - c - \phi_{sw}^{1/2} \phi_s$	= 400 - 30 - 8 - 8	= 354	mm
s_{max}	= b / n_{staven}	= 700 / 7	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	$= Y_G \sigma_{Rd} / f_{ywd} A_s$	= 1.35*320 / 435*1407	= 1398	mm ²
100 ρ_1	$= A_{s,prov} / (b d)$	= 1398 / (700*354)*10 ²	= 0.5641	-
$M_{Rd} / (b d^2)$	= GTB - 11.3	= 2214	= 2214	-
M_{Rd}	= 2214*0.700*0.354 ²	= 194	= 194	kNm

Bijlegwapening boven		(7 Ø16) + 2 Ø16 mm	(incl. scheurwijdte $w_k = 0.3$ mm)	
d	$= h - c - \phi_{sw}^{1/2} \phi_s$	= 400 - 30 - 8 - 8	= 354	mm
s_{max}	= b / n_{staven}	= 700 / 7	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	$= Y_G \sigma_{Rd} / f_{ywd} A_s$	= 1.35*320 / 435*1810	= 1797	mm ²
100 ρ_1	$= A_{s,prov} / (b d)$	= 1797 / (700*354)*10 ²	= 0.7252	-
$M_{Rd} / (b d^2)$	= GTB - 11.3	= 2751	= 2751	-
M_{Rd}	= 2751*0.700*0.354 ²	= 241	= 241	kNm

Basiswapening onder		7 Ø10 mm	(incl. scheurwijdte $w_k = 0.3$ mm)	
d	$= h - c - \phi_{sw}^{1/2} \phi_s$	= 400 - 35 - 8 - 8	= 349	mm
s_{max}	= b / n_{staven}	= 700 / 7	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	$= Y_G \sigma_{Rd} / f_{ywd} A_s$	= 1.35*320 / 435*550	= 546	mm ²
100 ρ_1	$= A_{s,prov} / (b d)$	= 546 / (700*349)*10 ²	= 0.2235	-
$M_{Rd} / (b d^2)$	= GTB - 11.3	= 945	= 945	-
M_{Rd}	= 945*0.700*0.349 ²	= 81	= 81	kNm

Bijlegwapening onder		(7 Ø10) + 2 Ø12 mm	(incl. scheurwijdte $w_k = 0.3$ mm)	
d	$= h - c - \phi_{sw}^{1/2} \phi_s$	= 400 - 35 - 8 - 8	= 349	mm
s_{max}	= b / n_{staven}	= 700 / 7	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	$= Y_G \sigma_{Rd} / f_{ywd} A_s$	= 1.35*320 / 435*776	= 771	mm ²
100 ρ_1	$= A_{s,prov} / (b d)$	= 771 / (700*349)*10 ²	= 0.3154	-
$M_{Rd} / (b d^2)$	= GTB - 11.3	= 1285	= 1285	-
M_{Rd}	= 1285*0.700*0.349 ²	= 110	= 110	kNm

Controle dwarskracht

Controle strook 700 x 400 mm		Ø8-250 basis (3-snedig)		
V_{Rd}	$= [151 \cdot (0.9 \cdot 400) \cdot 435 \cdot \cot(21.8^\circ) / 250] \cdot 10^{-3}$		= 236	kN/m ¹

Controle gronddruk

Controle maximale gronddruk		120 kN/m²		
$\sigma_{gd,BG,d}$	$= 1.2 \cdot (0.20 \cdot 25 + 0.19 \cdot 16) + 1.5 \cdot 5.00$		= 17	kN/m ¹
$\sigma_{gd,d}$	= volgens computerberekening		= 67	kN/m ¹
$\sigma_{gd,Ed}$	= 17 + 67		= 84	kN/m ¹
$\sigma_{gd,Rd}$	= onder strook 700 x 400 mm = 0.700*120		= 84	kN/m ¹
U.C.	$= \sigma_{gd,Ed} / \sigma_{gd,Rd} \leq 1$	= 84 / 84	= 1.00 < 1	→ voldoet

Controle langswapening

Basiswapening boven		7 Ø16 mm	(incl. scheurwijdte $w_k = 0.3$ mm)	
d	$= h - c - \phi_{sw}^{1/2} / 2 \phi_s$	= 400 - 30 - 8 - 8	= 354	mm
s_{max}	= b / n_{staven}	= 700 / 7	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	$= Y_G \sigma_{Rd} / f_{ywd} A_s$	= 1.35*320 / 435*1407	= 1398	mm ²
100 ρ_1	$= A_{s,prov} / (b d)$	= 1398 / (700*354)*10 ²	= 0.5641	-
$M_{Rd} / (b d^2)$	= GTB - 11.3	= 2214	= 2214	-
M_{Rd}	= 2214*0.700*0.354 ²	= 194	= 194	kNm

Basiswapening onder		7 Ø10 mm	(incl. scheurwijdte $w_k = 0.3$ mm)	
d	$= h - c - \phi_{sw}^{1/2} / 2 \phi_s$	= 400 - 35 - 8 - 8	= 349	mm
s_{max}	= b / n_{staven}	= 700 / 7	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	$= Y_G \sigma_{Rd} / f_{ywd} A_s$	= 1.35*320 / 435*550	= 546	mm ²
100 ρ_1	$= A_{s,prov} / (b d)$	= 546 / (700*349)*10 ²	= 0.2235	-
$M_{Rd} / (b d^2)$	= GTB - 11.3	= 945	= 945	-
M_{Rd}	= 945*0.700*0.349 ²	= 81	= 81	kNm

Bijlegwapening onder		(7 Ø10) + 2 Ø12 mm	(incl. scheurwijdte $w_k = 0.3$ mm)	
d	$= h - c - \phi_{sw}^{1/2} / 2 \phi_s$	= 400 - 35 - 8 - 8	= 349	mm
s_{max}	= b / n_{staven}	= 700 / 7	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	$= Y_G \sigma_{Rd} / f_{ywd} A_s$	= 1.35*320 / 435*776	= 771	mm ²
100 ρ_1	$= A_{s,prov} / (b d)$	= 771 / (700*349)*10 ²	= 0.3154	-
$M_{Rd} / (b d^2)$	= GTB - 11.3	= 1285	= 1285	-
M_{Rd}	= 1285*0.700*0.349 ²	= 110	= 110	kNm

Controle dwarskracht

Controle strook 700 x 400 mm		Ø8-250 basis (3-snedig)		
V_{Rd}	$= [151 \cdot (0.9 \cdot 400) \cdot 435 \cdot \cot(21.8^\circ) / 250] \cdot 10^{-3}$		= 236	kN/m ¹

5.7. Wapening poeren fundering speelhal

C20/25

5.7.1. Uitgangspunten, geometrie en belastingen

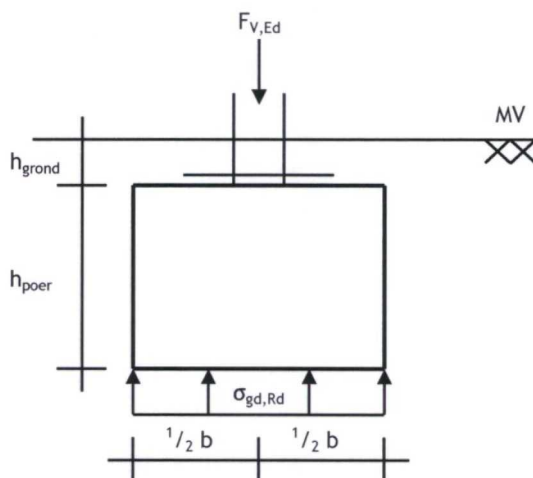
Uitgangspunten

De poeren worden gedimensioneerd op een maximaal toelaatbare belasting van $\sigma_{gd,Rd} = 120 \text{ kN/m}^2$ volgens het voor dit gedeelte geldige grondrapport GB106509 - R01 - v1.0. Conservatief worden de poeren afgewapend op het moment dat ontstaat door de maximaal toelaatbare gronddruk. Daarnaast wordt de strookwapening in de poeren doorgezet. De poeren worden door middel van een ringbalk (stroken) gekoppeld. Derhalve worden kantelevenwicht en horizontaal evenwicht niet beschouwd.

De poeren betreffen:

- Poer 3000 x 3000 x 600 mm;
- Poer 2000 x 2000 x 600 mm;
- Poer 3750 x 3750 x 800 mm;
- Poer 4000 x 4000 x 800 mm;
- Poer 1750 x 1750 x 600 mm.

Overzicht geometrie



Belastingen

De poeren worden gecontroleerd en gewapend op de maatgevende belasting. De maximaal toelaatbare gronddruk bedraagt volgens grondrapport GB160509 - R01 - V1.0 $\sigma_{gd,Rd} = 120 \text{ kN/m}^2$. De poeren worden gedimensioneerd zodat de gronddruk binnen het interval tussen de 100 en 120 kN/m^2 valt.

5.7.2. Dimensionering poeren en controle gronddruk

Poer As 07 - F Poer P1(B) 3250 x 3250 x 600 mm

$$\begin{aligned}
 F_G &= 1.1 \cdot 16.5 \cdot 20.0 \cdot 0.55 + 5.50 \cdot 3.25 \cdot 5.95 &= 306 & \text{kN} \\
 F_Q &= 1.1 \cdot 16.5 \cdot 20.0 \cdot 0.56 + 5.50 \cdot 3.25 \cdot 5.00 &= 293 & \text{kN} \\
 F_d &= 1.2 \cdot 306 + 1.5 \cdot 293 &= 807 & \text{kN} \\
 A_{\text{req}} &= 807 / 100 \quad \rightarrow l_{\text{req}} = b_{\text{req}} = \sqrt{8.07} &= 2.84 & \text{m}
 \end{aligned}$$

$$\begin{aligned}
 \text{Kies} &\rightarrow \text{poer } 3250 \times 3250 \times 600 \text{ mm} \\
 \sigma_{\text{gd,Ed}} &= 807 / (3.25 \cdot 3.25) + 1.2 \cdot 0.60 \cdot 25 &= 94.4 & \text{kN/m}^2 \\
 \sigma_{\text{gd,Rd}} &= 120 - [1.2 \cdot (0.20 \cdot 25 + 0.19 \cdot 16) + 1.5 \cdot 5.00] &= 103 & \text{kN/m}^2 \\
 \text{u.C.} &\rightarrow 94.4 / 103 &= 0.92 < 1 &\rightarrow \text{voldoet}
 \end{aligned}$$

As 07 - H Poer P2 2250 x 2250 x 600 mm

$$\begin{aligned}
 F_G &= 1.1 \cdot 8.25 \cdot 20.0 \cdot 0.55 + 1.1 \cdot 5.00 \cdot 9.00 \cdot 0.60 &= 130 & \text{kN} \\
 F_Q &= 1.1 \cdot 8.25 \cdot 20.0 \cdot 0.82 &= 149 & \text{kN} \\
 F_d &= 1.2 \cdot 130 + 1.5 \cdot 149 &= 380 & \text{kN} \\
 A_{\text{req}} &= 380 / 100 \quad \rightarrow l_{\text{req}} = b_{\text{req}} = \sqrt{3.80} &= 1.95 & \text{m}
 \end{aligned}$$

$$\begin{aligned}
 \text{Kies} &\rightarrow \text{poer } 2250 \times 2250 \times 600 \text{ mm} \\
 \sigma_{\text{gd,Ed}} &= 380 / (2.25 \cdot 2.25) + 1.2 \cdot 0.60 \cdot 25 &= 93.1 & \text{kN/m}^2 \\
 \sigma_{\text{gd,Rd}} &= 120 - [1.2 \cdot (0.20 \cdot 25 + 0.19 \cdot 16) + 1.5 \cdot 5.00] &= 103 & \text{kN/m}^2 \\
 \text{u.C.} &\rightarrow 93.1 / 120 &= 0.78 < 1 &\rightarrow \text{voldoet}
 \end{aligned}$$

5.7.3. Langswapening poeren

Basiscapaciteit langswapening (incl. scheurwijdte)

Controle poer 2250 x 2250 x 600 mm		23 Ø10-100 #	(incl. scheurwijdte $w_k = 0.3$ mm)	
K	= uit stalen kolom		= 380	kN
l_x	= l_y = afmeting poer		= 2250	mm
t_x	= t_y = afmeting voetplaat		= 310	mm
m_{xm}	= m_{ym} = t / L	= 310 / 2750	= 0.11	→ 3.98
M_{Ed}	= 380 / 3.98		= 95.4	kNm
d	= $h - c - \varnothing_{sw}^{1/2} \varnothing_s$	= 600 - 35 - 10 - 5	= 550	mm
s_{max}	= b / n_{staven}	= 2250 / (23 - 1)	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	= $\gamma_G \sigma_{Rd} / f_{ywd} A_s$	= 1.35*320 / 435*785	= 780	mm ²
100 ρ_1	= $A_{s,prov} / (b d)$	= 780 / (1000*550)*10 ²	= 0.1418	-
$M_{Rd} / (b d^2)$	= GTB - 11.3		= 364	-
M_{Rd}	= 606*1.000*0.550 ²		= 183	kNm
u.c.	= $M_{Ed} / M_{Rd} \leq 1$	= 95.4 / 183	= 0.52 < 1	→ voldoet

Controle poer 3250 x 3250 x 600 mm		31 Ø10-100 #	(incl. scheurwijdte $w_k = 0.3$ mm)	
K	= uit stalen kolom		= 807	kN
l_x	= l_y = afmeting poer		= 3250	mm
t_x	= t_y = afmeting voetplaat		= 400	mm
m_{xm}	= m_{ym} = L / t	= 400 / 3250	= 0.12	→ 5.10
M_{Ed}	= 807 / 5.10		= 158	kNm
d	= $h - c - \varnothing_{sw}^{1/2} \varnothing_s$	= 600 - 35 - 10 - 5	= 550	mm
s_{max}	= b / n_{staven}	= 3000 / (31 - 1)	= 100	mm
σ_{Rd}	= NEN-EN 1992-1-1	= Tabel 7.3N	= 320	N/mm ²
$A_{s,prov}$	= $\gamma_G \sigma_{Rd} / f_{ywd} A_s$	= 1.35*320 / 435*785	= 780	mm ²
100 ρ_1	= $A_{s,prov} / (b d)$	= 780 / (1000*550)*10 ²	= 0.1418	-
$M_{Rd} / (b d^2)$	= GTB - 11.3		= 606	-
M_{Rd}	= 606*1.000*0.550 ²		= 183	kNm
u.c.	= $M_{Ed} / M_{Rd} \leq 1$	= 158 / 183	= 0.86 < 1	→ voldoet

5.7.4. Dwarskrachtwapening poeren

Basiscapaciteit dwarskracht (ongewapend)

Controle poer 2250 x 2250 x 600 mm				
V_{Ed}	= $1/2 \sigma_{gd,Rd} l$	= $1/2 * 75.1 * 0.970$	= 36.4	kN
d	= $h - c - \varnothing_{sw}^{1/2} \varnothing_s$	= 600 - 35 - 10 - 5	= 550	mm
k	= $1 + \sqrt{200 / d}$	= $1 + \sqrt{200 / 550}$	= 1.60	-
$V_{Rd,c,min}$	= $0.035 k^{3/2} f_{ck}^{1/2} b d$	= $(0.035 * 1.60^{3/2} * 20^{1/2} * 1000 * 550) * 10^{-3}$	= 175	kN
u.c.	= $V_{Ed} / V_{Rd,c,min} \leq 1$	= 36.4 / 175	= 0.21 < 1	→ voldoet

Controle poer 3250 x 3250 x 600 mm				
V_{Ed}	= $1/2 \sigma_{gd,Rd} l$	= $1/2 * 76.4 * 1.425$	= 54.4	kN
d	= $h - c - \varnothing_{sw}^{1/2} \varnothing_s$	= 600 - 35 - 10 - 5	= 550	mm
k	= $1 + \sqrt{200 / d}$	= $1 + \sqrt{200 / 550}$	= 1.60	-
$V_{Rd,c,min}$	= $0.035 k^{3/2} f_{ck}^{1/2} b d$	= $(0.035 * 1.60^{3/2} * 20^{1/2} * 1000 * 550) * 10^{-3}$	= 175	kN
u.c.	= $V_{Ed} / V_{Rd,c,min} \leq 1$	= 54.4 / 175	= 0.31 < 1	→ voldoet

6. Bijlagen

6.1. Computerberekening

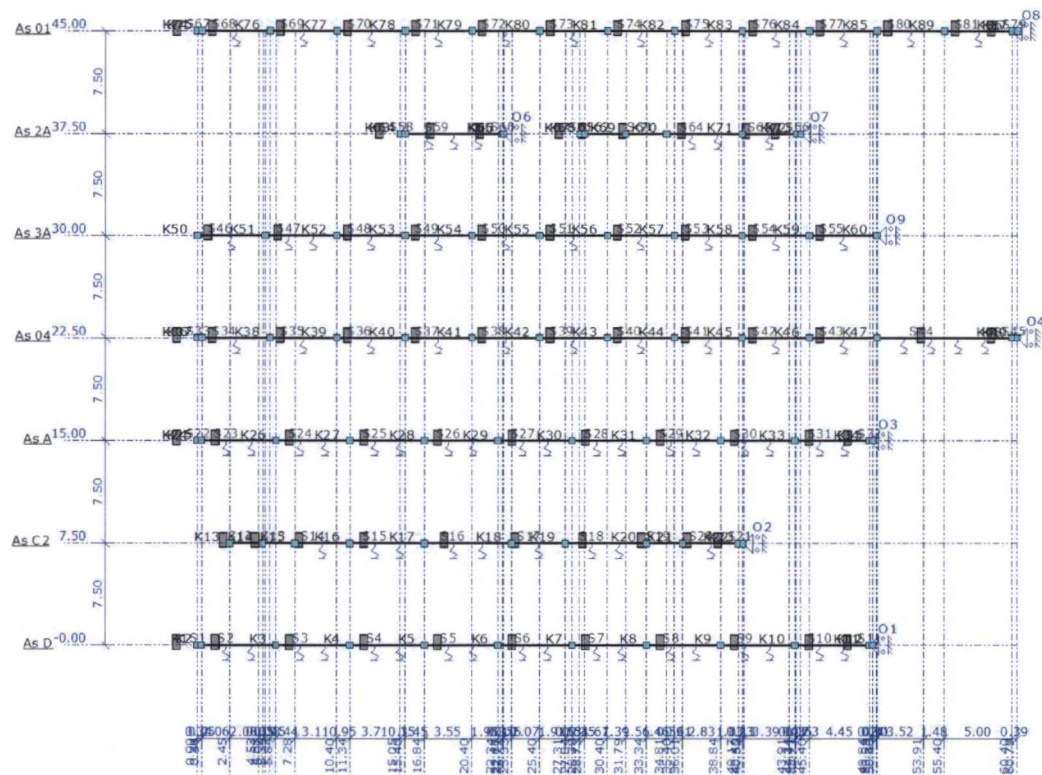
Fundering restaurant.....	pag. 1 - 22
Fundering centrale hal.....	pag. 23 - 34
Fundering speelhal.....	pag. 35 - 58

Valkenburg aan de Geul		Ingenieursbureau A. Palte BV		043 - 601 36 37	
Computerberekening					
Projectnaam	Schatberg Sevenum		Projectnummer	460518	
Omschrijving	Fundering restaurant		Constructeur	DaKr	
Opdrachtgever	Hoopzak Sevenum Holding B.V.		Eenheden	m, kN, kNm	
Bestand	P:\460518\ber\460518-C - Uitvoeringsberekening wapening\460518-C-0 - Fundering restaurant.mxf				

CONSTRUCTIEGEGEVENS

Projecttype	Knoppen	Staven	Opleggingen	Profielen	Bel.gev.	Bel.comb.
2D-Raamwerk	86	78	8	2	11	16

AFB. GEOMETRIE RAAMWERK



STAVEN

Staaf	Knoop B	B	Scharnier E	Knoop E	Profiel	X-B	Z-B	X-E	Z-E	Lengte
S1	K1	NVM	NVM	K2	P1	0.000	0.000	0.340	0.000	0.340
S2	K2	NVM	NVM	K3	P1	0.340	0.000	5.840	0.000	5.500
S3	K3	NVM	NVM	K4	P1	5.840	0.000	11.340	0.000	5.500
S4	K4	NVM	NVM	K5	P1	11.340	0.000	16.840	0.000	5.500
S5	K5	NVM	NVM	K6	P1	16.840	0.000	22.340	0.000	5.500
S6	K6	NVM	NVM	K7	P1	22.340	0.000	27.840	0.000	5.500
S7	K7	NVM	NVM	K8	P1	27.840	0.000	33.340	0.000	5.500
S8	K8	NVM	NVM	K9	P1	33.340	0.000	38.840	0.000	5.500
S9	K9	NVM	NVM	K10	P1	38.840	0.000	44.340	0.000	5.500
S10	K10	NVM	NVM	K11	P1	44.340	0.000	49.840	0.000	5.500
S11	K11	NVM	NVM	K12	P1	49.840	0.000	50.085	0.000	0.245
S12	K13	NVM	NVM	K14	P2	2.450	-7.500	4.880	-7.500	2.430
S13	K14	NVM	NVM	K15	P2	4.880	-7.500	7.280	-7.500	2.400
S14	K15	NVM	NVM	K16	P2	7.280	-7.500	11.340	-7.500	4.060
S15	K16	NVM	NVM	K17	P2	11.340	-7.500	16.840	-7.500	5.500
S16	K17	NVM	NVM	K18	P2	16.840	-7.500	23.328	-7.500	6.488
S17	K18	NVM	NVM	K19	P2	23.328	-7.500	27.310	-7.500	3.982
S18	K19	NVM	NVM	K20	P2	27.310	-7.500	33.340	-7.500	6.030
S19	K20	NVM	NVM	K21	P2	33.340	-7.500	36.010	-7.500	2.670
S20	K21	NVM	NVM	K22	P2	36.010	-7.500	40.170	-7.500	4.160
S21	K22	NVM	NVM	K23	P2	40.170	-7.500	40.520	-7.500	0.350

Staafl	Knoop	Scharnier		Knoop	Profiel	X-B	Z-B	X-E	Z-E	Lengte
	B	B	E	E						
S22	K24	NVM	NVM	K25	P1	0.000	-15.000	0.340	-15.000	0.340
S23	K25	NVM	NVM	K26	P1	0.340	-15.000	5.840	-15.000	5.500
S24	K26	NVM	NVM	K27	P1	5.840	-15.000	11.340	-15.000	5.500
S25	K27	NVM	NVM	K28	P1	11.340	-15.000	16.840	-15.000	5.500
S26	K28	NVM	NVM	K29	P1	16.840	-15.000	22.340	-15.000	5.500
S27	K29	NVM	NVM	K30	P1	22.340	-15.000	27.840	-15.000	5.500
S28	K30	NVM	NVM	K31	P1	27.840	-15.000	33.340	-15.000	5.500
S29	K31	NVM	NVM	K32	P1	33.340	-15.000	38.840	-15.000	5.500
S30	K32	NVM	NVM	K33	P1	38.840	-15.000	44.340	-15.000	5.500
S31	K33	NVM	NVM	K34	P1	44.340	-15.000	49.840	-15.000	5.500
S32	K34	NVM	NVM	K35	P1	49.840	-15.000	50.085	-15.000	0.245
S33	K36	NVM	NVM	K37	P1	0.000	-22.500	0.395	-22.500	0.395
S34	K37	NVM	NVM	K38	P1	0.395	-22.500	5.395	-22.500	5.000
S35	K38	NVM	NVM	K39	P1	5.395	-22.500	10.395	-22.500	5.000
S36	K39	NVM	NVM	K40	P1	10.395	-22.500	15.395	-22.500	5.000
S37	K40	NVM	NVM	K41	P1	15.395	-22.500	20.395	-22.500	5.000
S38	K41	NVM	NVM	K42	P1	20.395	-22.500	25.395	-22.500	5.000
S39	K42	NVM	NVM	K43	P1	25.395	-22.500	30.395	-22.500	5.000
S40	K43	NVM	NVM	K44	P1	30.395	-22.500	35.395	-22.500	5.000
S41	K44	NVM	NVM	K45	P1	35.395	-22.500	40.395	-22.500	5.000
S42	K45	NVM	NVM	K46	P1	40.395	-22.500	45.395	-22.500	5.000
S43	K46	NVM	NVM	K47	P1	45.395	-22.500	50.395	-22.500	5.000
S44	K47	NVM	NVM	K48	P1	50.395	-22.500	60.395	-22.500	10.000
S45	K48	NVM	NVM	K49	P1	60.395	-22.500	60.790	-22.500	0.395
S46	K50	NVM	NVM	K51	P2	0.000	-30.000	5.065	-30.000	5.065
S47	K51	NVM	NVM	K52	P2	5.065	-30.000	10.395	-30.000	5.330
S48	K52	NVM	NVM	K53	P2	10.395	-30.000	15.395	-30.000	5.000
S49	K53	NVM	NVM	K54	P2	15.395	-30.000	20.395	-30.000	5.000
S50	K54	NVM	NVM	K55	P2	20.395	-30.000	25.395	-30.000	5.000
S51	K55	NVM	NVM	K56	P2	25.395	-30.000	30.395	-30.000	5.000
S52	K56	NVM	NVM	K57	P2	30.395	-30.000	35.395	-30.000	5.000
S53	K57	NVM	NVM	K58	P2	35.395	-30.000	40.395	-30.000	5.000
S54	K58	NVM	NVM	K59	P2	40.395	-30.000	45.395	-30.000	5.000
S55	K59	NVM	NVM	K60	P2	45.395	-30.000	50.395	-30.000	5.000
S58	K63	NVM	NVM	K64	P2	15.045	-37.500	15.395	-37.500	0.350
S59	K64	NVM	NVM	K65	P2	15.395	-37.500	22.665	-37.500	7.270
S60	K65	NVM	NVM	K66	P2	22.665	-37.500	22.765	-37.500	0.100
S61	K67	NVM	NVM	K68	P2	28.375	-37.500	28.725	-37.500	0.350
S62	K68	NVM	NVM	K69	P2	28.725	-37.500	31.785	-37.500	3.060
S63	K69	NVM	NVM	K70	P2	31.785	-37.500	34.805	-37.500	3.020
S64	K70	NVM	NVM	K71	P2	34.805	-37.500	40.395	-37.500	5.590
S65	K71	NVM	NVM	K72	P2	40.395	-37.500	44.415	-37.500	4.020
S66	K72	NVM	NVM	K73	P2	44.415	-37.500	44.765	-37.500	0.350
S67	K74	NVM	NVM	K75	P2	0.000	-45.000	0.395	-45.000	0.395
S68	K75	NVM	NVM	K76	P2	0.395	-45.000	5.395	-45.000	5.000
S69	K76	NVM	NVM	K77	P2	5.395	-45.000	10.395	-45.000	5.000
S70	K77	NVM	NVM	K78	P2	10.395	-45.000	15.395	-45.000	5.000
S71	K78	NVM	NVM	K79	P2	15.395	-45.000	20.395	-45.000	5.000
S72	K79	NVM	NVM	K80	P2	20.395	-45.000	25.395	-45.000	5.000
S73	K80	NVM	NVM	K81	P2	25.395	-45.000	30.395	-45.000	5.000
S74	K81	NVM	NVM	K82	P2	30.395	-45.000	35.395	-45.000	5.000
S75	K82	NVM	NVM	K83	P2	35.395	-45.000	40.395	-45.000	5.000
S76	K83	NVM	NVM	K84	P2	40.395	-45.000	45.395	-45.000	5.000
S77	K84	NVM	NVM	K85	P2	45.395	-45.000	50.395	-45.000	5.000
S79	K86	NVM	NVM	K87	P2	60.395	-45.000	60.790	-45.000	0.395
S80	K85	NVM	NVM	K89	P2	50.395	-45.000	55.395	-45.000	5.000
S81	K89	NVM	NVM	K86	P2	55.395	-45.000	60.395	-45.000	5.000
-	-	-	-	-	-	m	m	m	m	m

PROFIELEN

Profiel	Profielnaam	Oppervlakte	ly Materiaal	Hoek
P1	R600x1000	6.0000e-01	5.0000e-02 C20/25	0.0
P2	R400x700	2.8000e-01	1.1433e-02 C20/25	0.0
-	-	m2	m4 -	°

PROFIELVORMEN

Profiel	Verl. h.	hB	hE	tf	tw	tf2	B	bL	bR Raatl.	Hoogte
P1	Nee	1.000	1.000	0.000	0.000	0.000	0.600	0.000	0.000 Nee	0.000
P2	Nee	0.700	0.700	0.000	0.000	0.000	0.400	0.000	0.000 Nee	0.000
-	-	m	m	m	m	m	m	m	m -	m

MATERIALEN

Materiaal	Dichtheid	E-Modulus	Uitzettingcoeff
C20/25	25.00	1.0000e+07	10.0000e-06

-	kN/m3	kN/m2	C°m
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ELASTISCHE BEDDING

Staaf	Verl. h.	Type constant	Eenheden	Cz B	Cz E	Pasternak instellingen		Breedte	Trek
						Pasternak	Cfy B	Cfy E	
									Verwijdering
S1	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S2	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S3	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S4	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S5	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S6	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S7	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S8	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S9	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S10	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S11	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S12	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t. Ja
S13	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t. Ja
S14	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t. Ja
S15	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t. Ja
S16	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t. Ja
S17	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t. Ja
S18	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t. Ja
S19	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t. Ja
S20	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t. Ja
S21	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t. Ja
S22	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S23	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S24	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S25	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S26	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S27	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S28	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S29	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S30	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S31	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S32	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S33	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S34	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S35	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S36	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S37	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S38	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S39	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S40	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S41	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S42	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S43	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S44	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S45	Nee	Veer	kN/m3*(m)	9900.00	9900.00	Nee	0.00	0.00	N.v.t. Ja
S46	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t. Ja
S47	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t. Ja
S48	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t. Ja
S49	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t. Ja
S50	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t. Ja
S51	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t. Ja
S52	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t. Ja
S53	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t. Ja
S54	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t. Ja
S55	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t. Ja
S58	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t. Ja
S59	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t. Ja

Staafl	Verl. h.	Type constant	Eenheden	Cz B	Cz E	Pasternak Instellingen		Breedte	Trek
						Pasternak	Cfy B	Cfy E	
S60	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t.
S61	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t.
S62	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t.
S63	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t.
S64	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t.
S65	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t.
S66	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t.
S67	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t.
S68	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t.
S69	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t.
S70	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t.
S71	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t.
S72	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t.
S73	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t.
S74	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t.
S75	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t.
S76	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t.
S77	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t.
S79	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t.
S80	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t.
S81	Nee	Veer	kN/m3*(m)	6930.00	6930.00	Nee	0.00	0.00	N.v.t.
-	-	-	-	kN/m3*(m)	kN/m3*(m)	-	kN/m3*(m)	kN/m3*(m)	m

OPLEGGINGEN

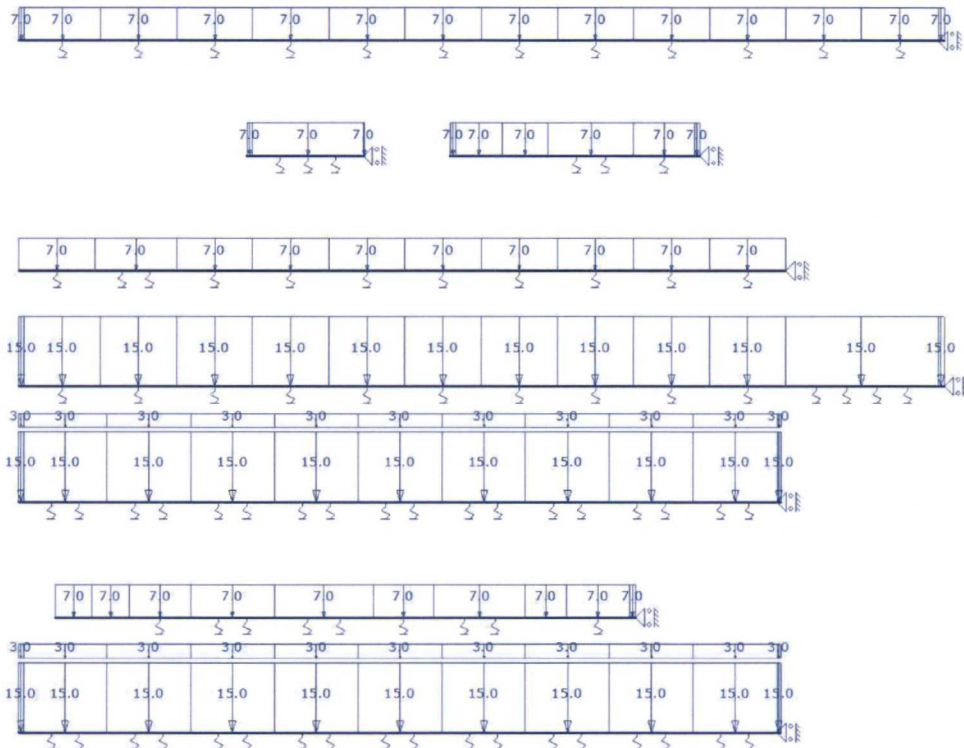
Oplegging	Knoop	X	Z	Yr	HoekYr
O1	K11	vast	0.00:0.00	vrij	0
O2	K23	vast	0.00:0.00	vrij	0
O3	K34	vast	0.00:0.00	vrij	0
O4	K49	vast	0.00:0.00	vrij	0
O6	K65	vast	0.00:0.00	vrij	0
O7	K73	vast	0.00:0.00	vrij	0
O8	K86	vast	0.00:0.00	vrij	0
O9	K60	vast	0.00:0.00	vrij	0
-	-	kN/m	kN/m	kNm/rad	°

B.G.1: EIGEN GEWICHT

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staafl of knoop
B.G.1: Eigen Gewicht					
qG	15.00 (1.00x)	15.00 (1.00x)	0.000	0.340(L)	Z" S1,S22
qG	15.00 (1.00x)	15.00 (1.00x)	0.000	5.500(L)	Z" S2-S10,S23-S31
qG	15.00 (1.00x)	15.00 (1.00x)	0.000	0.245(L)	Z" S11,S32
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	2.430(L)	Z" S12
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	2.400(L)	Z" S13
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	4.060(L)	Z" S14
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	5.500(L)	Z" S15
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	6.488(L)	Z" S16
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	3.982(L)	Z" S17
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	6.030(L)	Z" S18
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	2.670(L)	Z" S19
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	4.160(L)	Z" S20
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	0.350(L)	Z" S21,S58,S61,S66
qG	15.00 (1.00x)	15.00 (1.00x)	0.000	0.395(L)	Z" S33,S45
qG	15.00 (1.00x)	15.00 (1.00x)	0.000	5.000(L)	Z" S34-S43
qG	15.00 (1.00x)	15.00 (1.00x)	0.000	10.000(L)	Z" S44
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	5.065(L)	Z" S46
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	5.330(L)	Z" S47
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	5.000(L)	Z" S48-S55,S68-S77,S80-S81
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	7.270(L)	Z" S59
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	0.100(L)	Z" S60
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	3.060(L)	Z" S62

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.1: Eigen Gewicht					
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	3.020(L)	Z" S63
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	5.590(L)	Z" S64
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	4.020(L)	Z" S65
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	0.395(L)	Z" S67,S79
q	3.00	3.00	0.000	0.340(L)	Z' S1-S11,S22-S32
-	-	-	m	m	- -

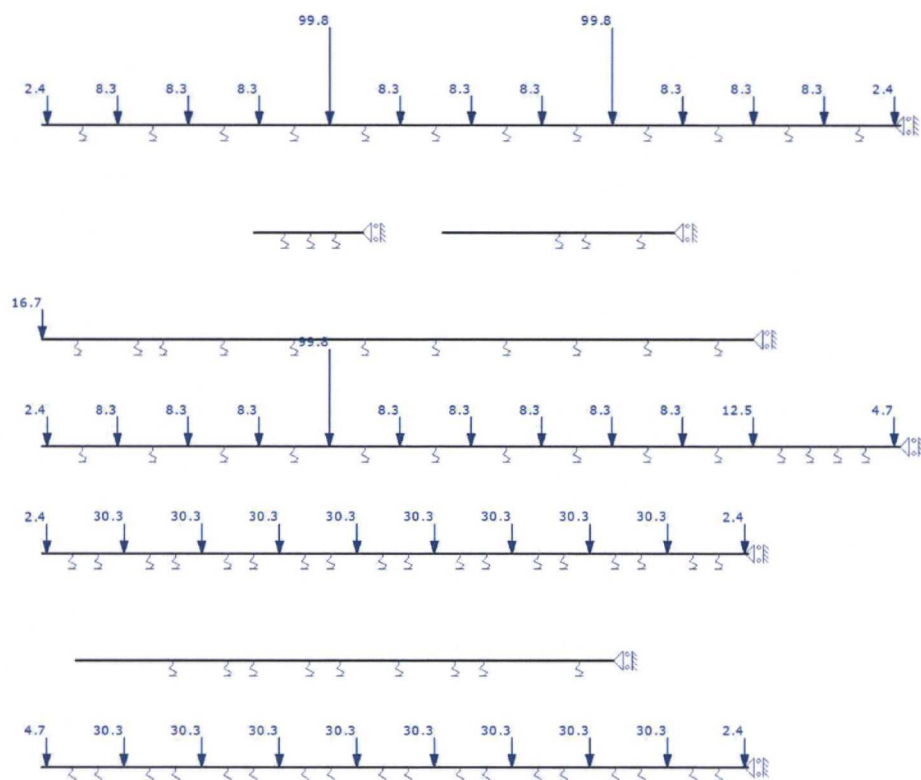
B.G.1: EIGEN GEWICHT



B.G.2: PERMANENT LHG

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.2: Permanent LHg					
N	42.40				Z K2
N	3.63				Z K40-K41,K43
N	3.63				Z K42
N	7.59				Z K44
N	10.60				Z K45
N	15.10				Z K46
N	39.70				Z K47
N	42.40				Z K48
-	-	-	m	m	- -

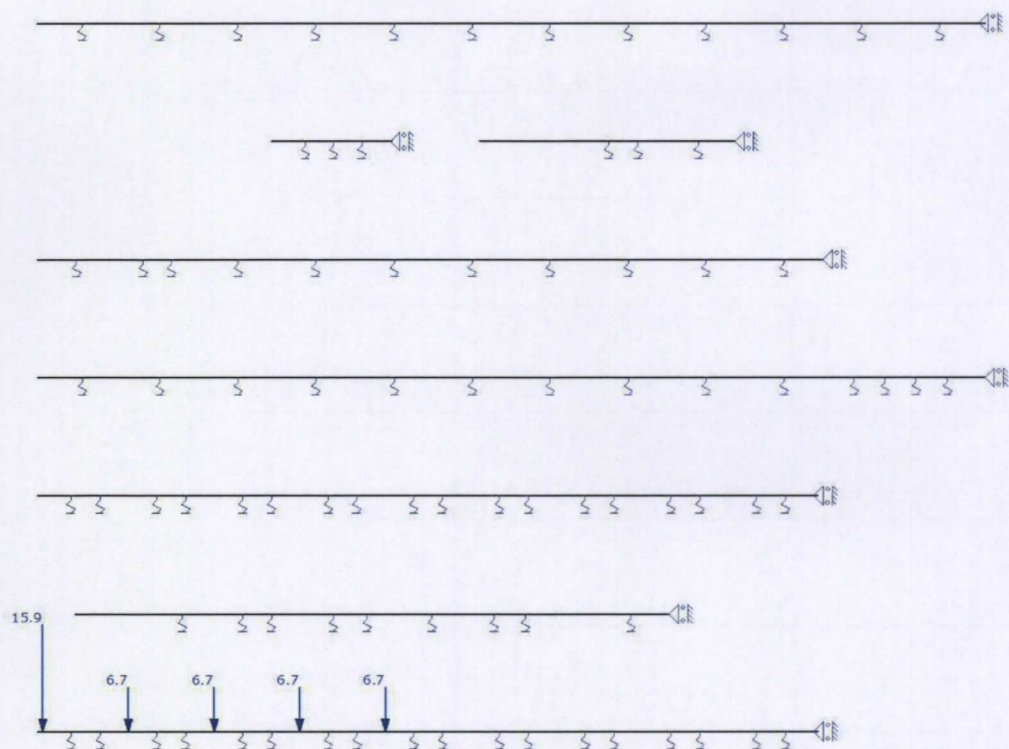
B.G.3: PERMANENT DAK



B.G.4: PERMANENT LLG

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.4: Permanent LLg					
N	15.90				Z K2
N	6.66				Z K3
N	6.66				Z K4-K6
-	-	-	m	m	- -

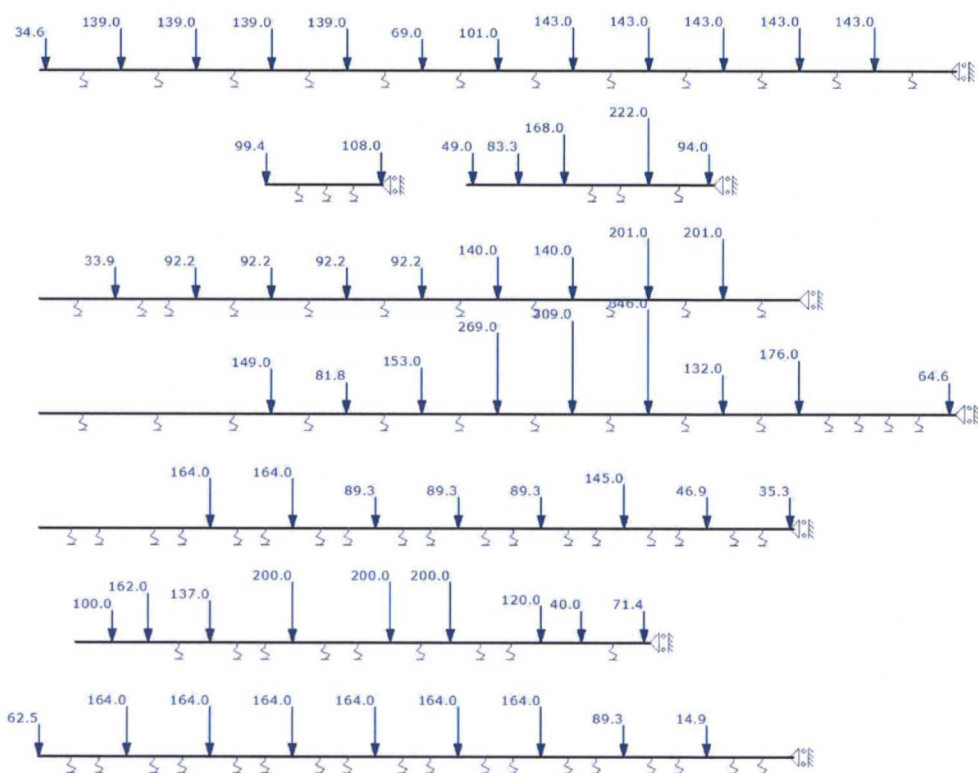
B.G.4: PERMANENT LLG



B.G.5: PERMANENT V+1

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting	Staf of knoop
B.G.5: Permanent V+1						
N	62.50					Z K1
N	164.00					Z K3-K8, K27-K28
N	89.30					Z K9, K29-K31
N	14.90					Z K10
N	100.00					Z K14
N	162.00					Z K15
N	137.00					Z K16
N	200.00					Z K17-K19
N	120.00					Z K20
N	40.00					Z K21
N	71.40					Z K22
N	145.00					Z K32
N	46.90					Z K33
N	35.30					Z K34
N	149.00					Z K40
N	81.80					Z K41
N	153.00					Z K42
N	269.00					Z K43
N	309.00					Z K44
N	346.00					Z K45
N	132.00					Z K46
N	176.00					Z K47
N	64.60					Z K48
N	33.90					Z K51
N	92.20					Z K52-K55

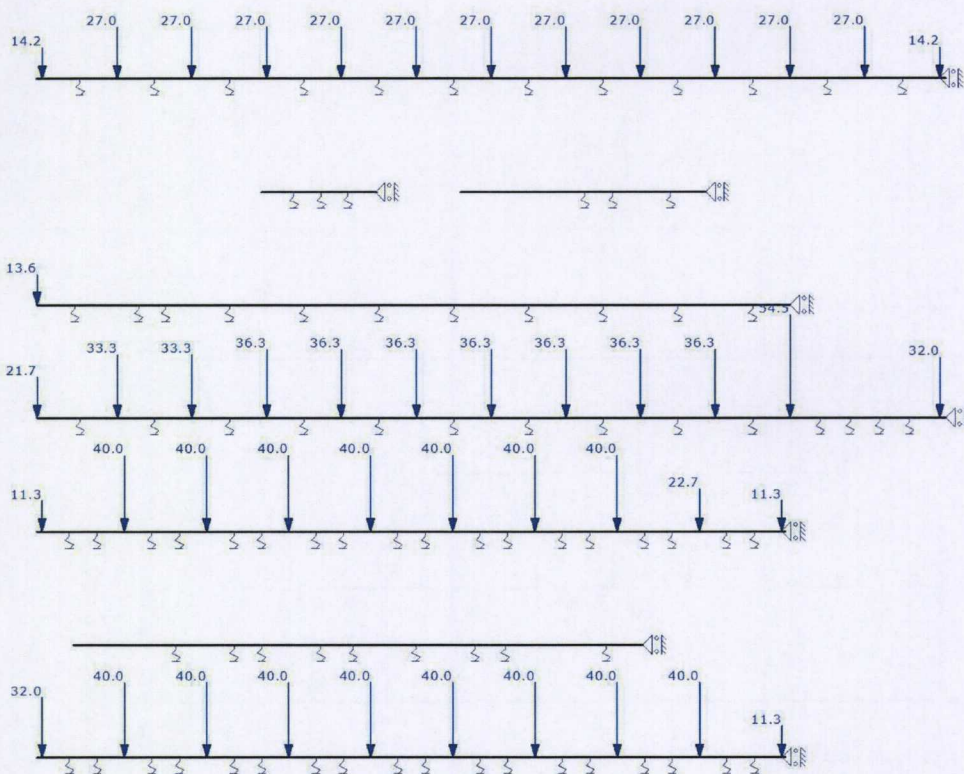
Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.5: Permanent V+1					
N	140.00				Z K56-K57
N	201.00				Z K58-K59
N	99.40				Z K63
N	108.00				Z K65
N	49.00				Z K68
N	83.30				Z K69
N	168.00				Z K70
N	222.00				Z K71
N	94.00				Z K72
N	34.60				Z K75
N	139.00				Z K76-K79
N	69.00				Z K80
N	101.00				Z K81
N	143.00				Z K82-K85,K89
-	-	-	m	m	- -

B.G.5: PERMANENT V+1**B.G.6: PERMANENT GEVEL**

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.6: Permanent Gevel					
N	32.00				Z K2,K48
N	40.00				Z K3-K10,K26-K32
N	11.30				Z K11,K25,K34
N	22.70				Z K33
N	21.70				Z K36
N	33.30				Z K38-K39
N	36.30				Z K40-K46

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.6: Permanent Gevel					
N	54.50				Z K47
N	13.60				Z K50
N	14.20				Z K75,K86
N	27.00				Z K76-K85,K89
-	-	-	m	m	- -

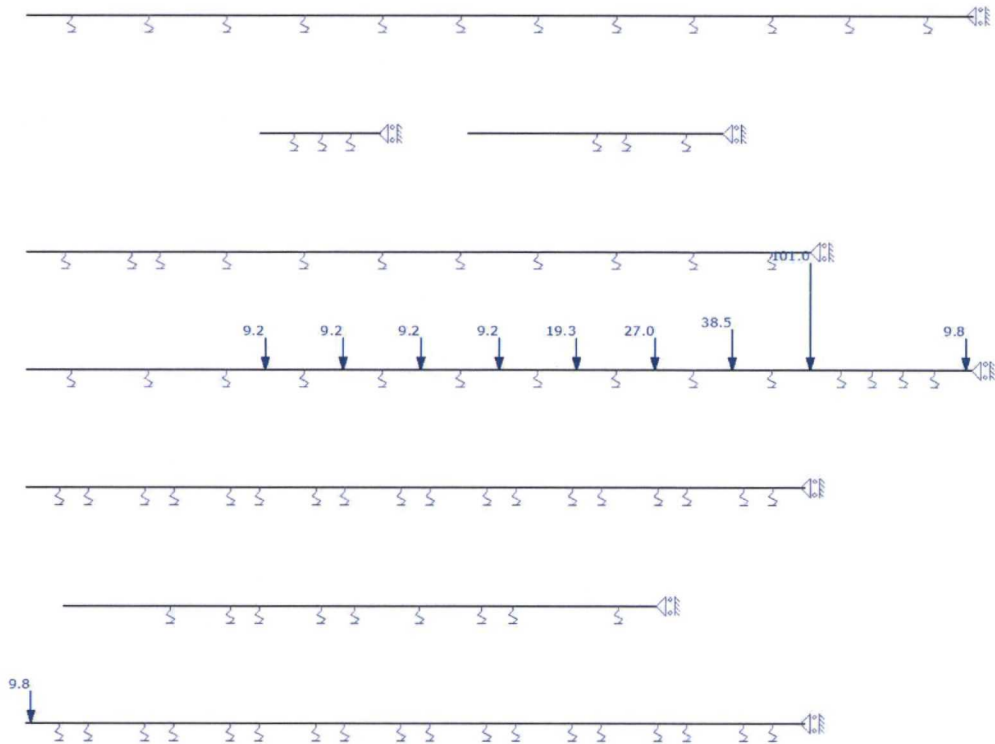
B.G.6: PERMANENT GEVEL



B.G.7: VERANDERLIJK LHG

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.7: Veranderlijk LHg					
N	9.80				Z K2,K48
N	9.24				Z K40-K43
N	19.30				Z K44
N	27.00				Z K45
N	38.50				Z K46
N	101.00				Z K47
-	-	-	m	m	- -

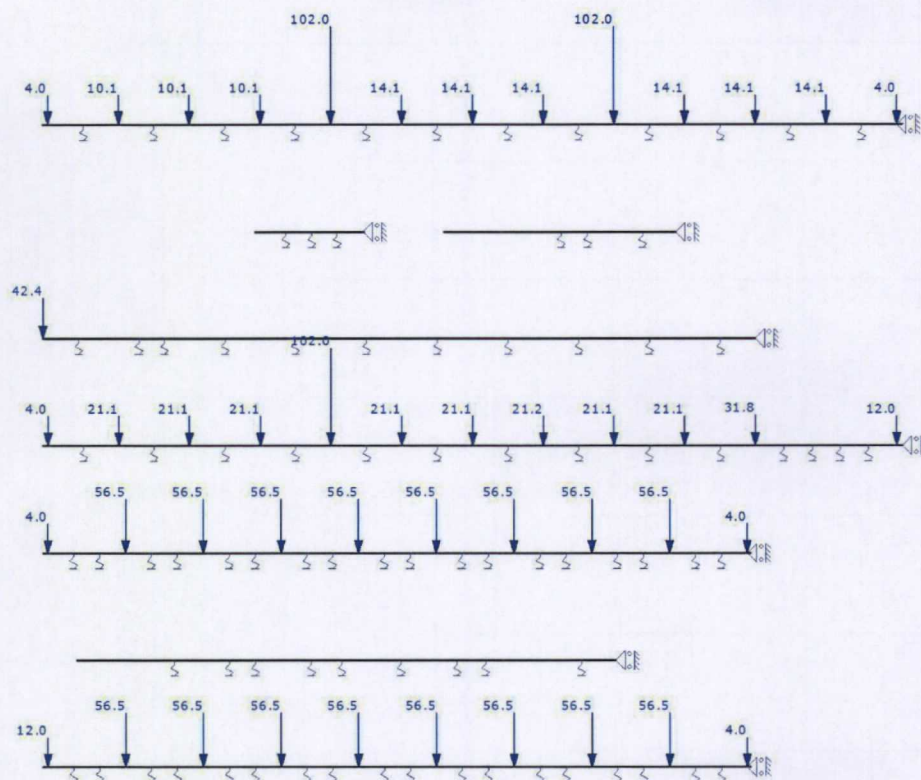
B.G.7: VERANDERLIJK LHG



B.G.8: VERANDERLIJK DAK

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.8: Veranderlijk Dak					
N	12.00				Z K2,K48
N	56.50				Z K3-K10,K26-K33
N	4.01				Z K11,K25,K34,K37,K75,K86
N	21.10				Z K38-K40,K42-K43,K45-K46
N	102.00				Z K41,K79,K83
N	21.21				Z K44
N	31.80				Z K47
N	42.40				Z K50
N	10.10				Z K76-K78
N	14.10				Z K80-K82,K84-K85,K89
-	-	-	m	m	- -

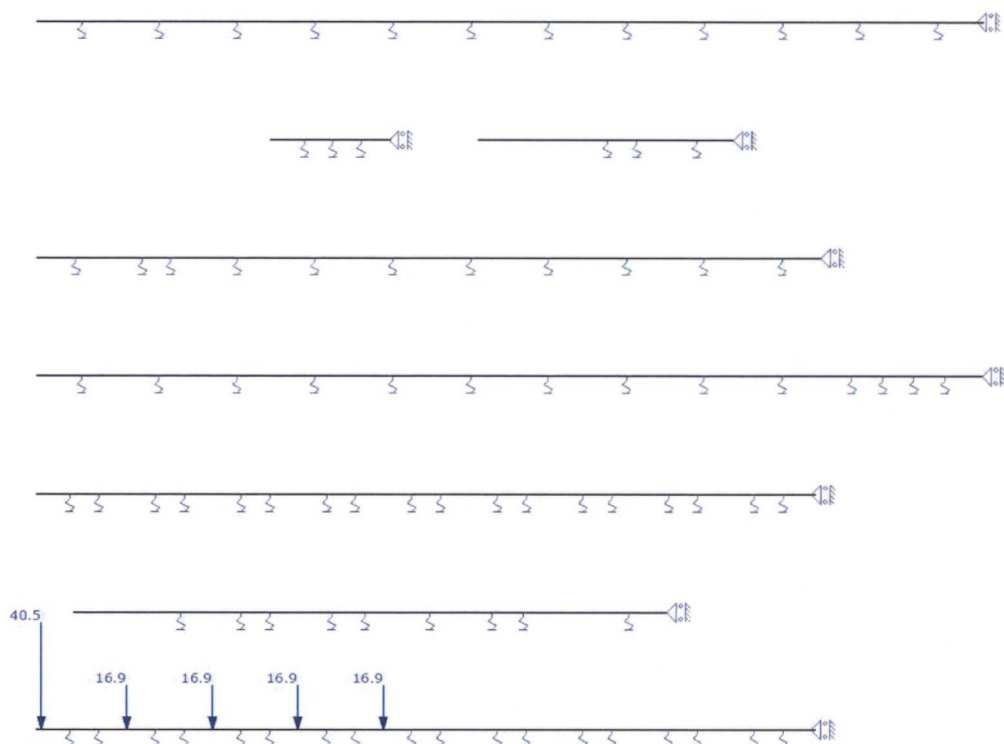
B.G.8: VERANDERLIJK DAK



B.G.9: VERANDERLIJK LLG

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.9: Veranderlijk LLg					
N	40.50				Z K2
N	16.90				Z K3-K6
-	-	-	m	m	- -

B.G.9: VERANDERLIJK LLG

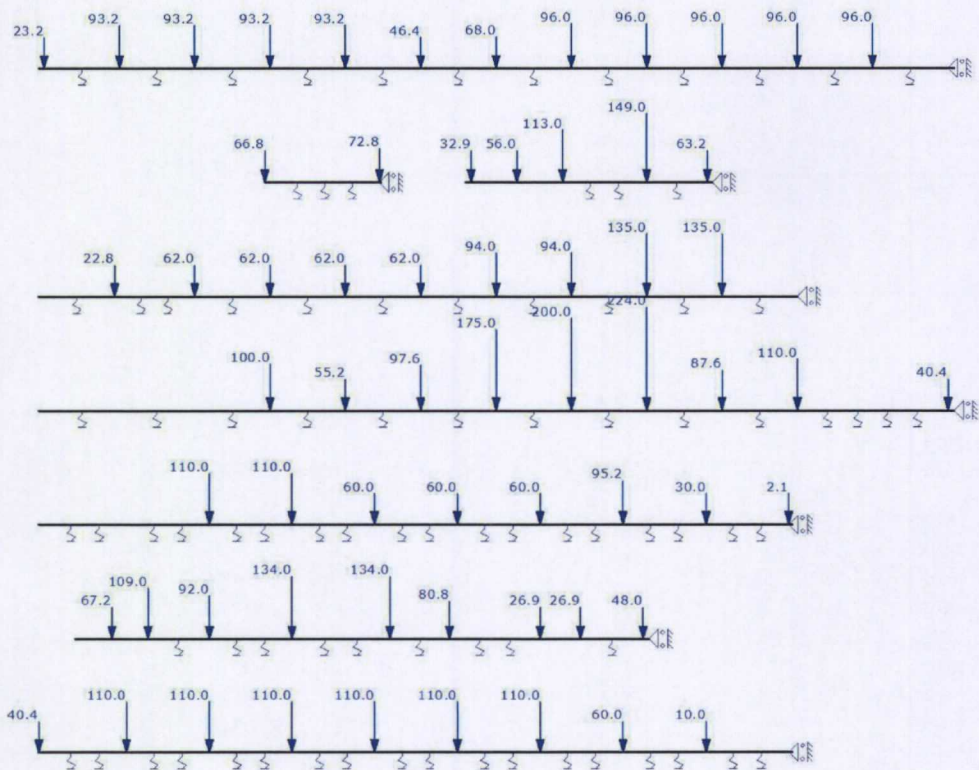


B.G.10: VERANDERLIJK V+1

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting	Staf of knoop
B.G.10: Veranderlijk V+1						
N	40.40				Z	K1,K48
N	110.00				Z	K3-K8,K27-K28,K47
N	60.00				Z	K9,K29-K31
N	10.00				Z	K10
N	67.20				Z	K14
N	109.00				Z	K15
N	92.00				Z	K16
N	134.00				Z	K17-K18
N	80.80				Z	K19
N	26.90				Z	K20-K21
N	48.00				Z	K22
N	95.20				Z	K32
N	30.00				Z	K33
N	2.10				Z	K34
N	100.00				Z	K40
N	55.20				Z	K41
N	97.60				Z	K42
N	175.00				Z	K43
N	200.00				Z	K44
N	224.00				Z	K45
N	87.60				Z	K46
N	22.80				Z	K51
N	62.00				Z	K52-K55
N	94.00				Z	K56-K57
N	135.00				Z	K58-K59

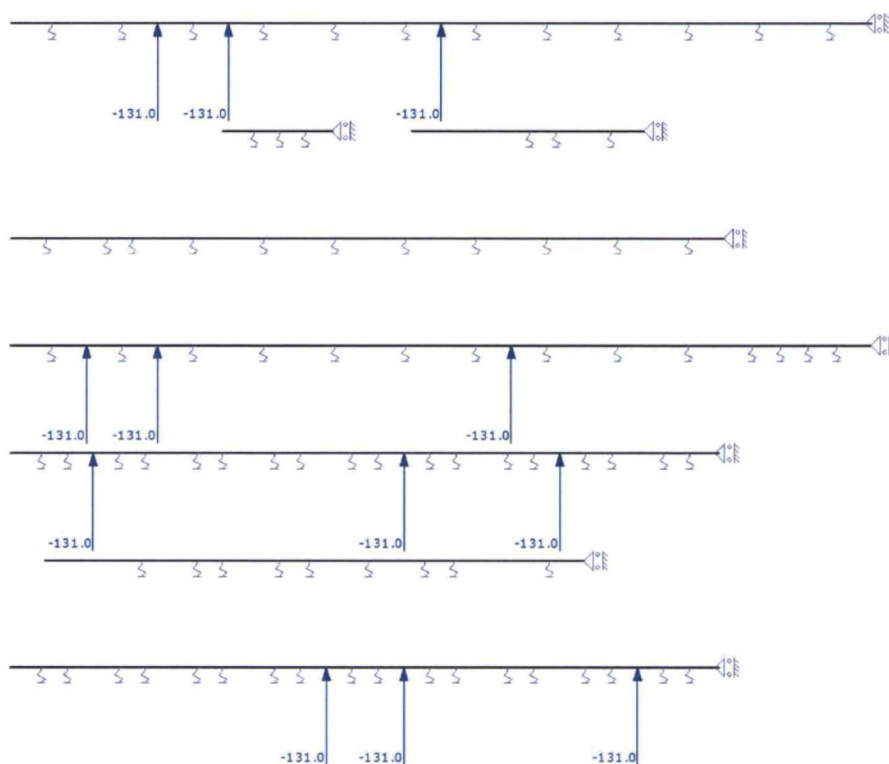
Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.10: Veranderlijk V+1					
N	66.80				Z K63
N	72.80				Z K65
N	32.90				Z K68
N	56.00				Z K69
N	113.00				Z K70
N	149.00				Z K71
N	63.20				Z K72
N	23.20				Z K75
N	93.20				Z K76-K79
N	46.40				Z K80
N	68.00				Z K81
N	96.00				Z K82-K85,K89
-	-	-	m	m	- -

B.G.10: VERANDERLIJK V+1



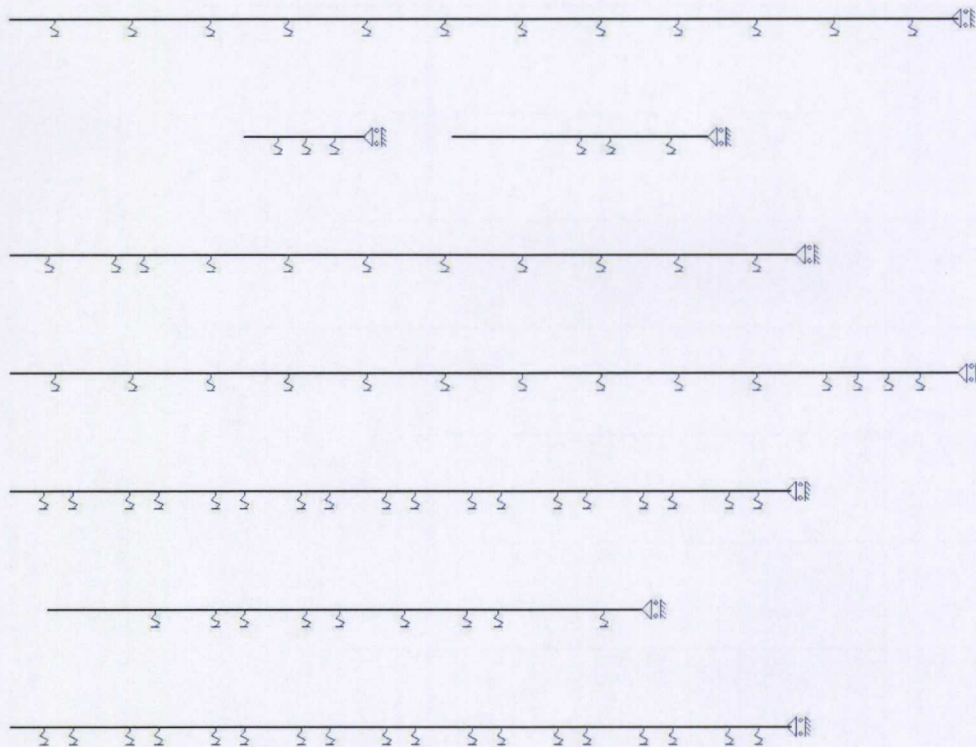
B.G.11: STABILITEIT					
Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.11: Stabiliteit					
N	-131.00				Z K6-K7
N	-131.00				Z K10,K26,K30,K32, K38-K39,K44,K77-K78,K81
-	-	-	m	m	- -

B.G.11: STABILITEIT



FUNDAMENTEEL BELASTINGSCOMBINATIES (TABEL)

B.G.	Omschrijving	Fu.C.1	Fu.C.2	Fu.C.3	Fu.C.4	Fu.C.5
B.G.1	Eigen Gewicht	1.35	1.20	1.20	0.90	0.90
B.G.2	Permanent LHg	1.35	1.20	1.20	0.90	0.90
B.G.3	Permanent Dak	1.35	1.20	1.20	0.90	0.90
B.G.4	Permanent LLg	1.35	1.20	1.20	0.90	0.90
B.G.5	Permanent V+1	1.35	1.20	1.20	0.90	0.90
B.G.6	Permanent Gevel	1.35	1.20	1.20	0.90	0.90
B.G.7	Veranderlijk LHg	-	1.50	-	-	-
B.G.8	Veranderlijk Dak	-	1.50	-	-	-
B.G.9	Veranderlijk LLg	-	1.50	-	-	-
B.G.10	Veranderlijk V+1	0.90	0.90	1.50	0.90	-
B.G.11	Stabiliteit	-	-	-	1.50	1.50



FU.C. EXTREME STAAFKRACHTEN ANALYSE

Staaf	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve
S1	Fu.C.1	0.00	0.00	0.000	-34.46	0.000	0.000 -	0.00	-120.74	-120.74	-78.86
	Fu.C.3	0.00	0.00	0.000	-39.49	0.000	0.000 -	0.00	-135.60	-135.60	-93.64
S2	Fu.C.2	-29.48	-321.95	2.292	142.63	4.954	0.000 -	0.00	-270.66	287.50	287.50
	Fu.C.3	-39.49	-262.11	2.241	157.37	4.807	0.000 -	0.00	-211.60	256.47	256.47
S3	Fu.C.2	142.63	-128.29	2.546	235.93	0.794	4.317 -	0.00	-216.22	254.96	254.96
	Fu.C.3	157.37	-104.21	2.648	217.41	0.966	4.274 -	0.00	-202.72	230.26	230.26
S4	Fu.C.2	235.93	-102.52	2.750	233.08	1.240	4.284 -	0.00	-248.97	250.98	250.98
	Fu.C.3	217.41	-94.71	2.750	209.82	1.241	4.300 -	0.00	-229.21	-229.21	228.33
S5	Fu.C.2	233.08	-107.45	2.750	232.83	1.198	4.299 -	0.00	-253.12	-253.12	252.13
	Fu.C.5	151.13	-51.91	4.685	-48.83	2.039	0.000 -	0.00	-107.88	-107.88	7.87
S6	Fu.C.2	232.83	-110.29	2.801	208.01	1.200	4.389 -	0.00	-251.93	-251.93	239.28
	Fu.C.3	205.97	-103.22	2.750	207.15	1.154	4.341 -	0.00	-229.91	230.37	230.37
	Fu.C.5	-48.83	-64.70	2.954	-51.85	0.000	0.000 -	0.00	-13.70	-13.70	12.66
S7	Fu.C.2	208.01	-91.69	2.648	247.20	1.179	4.136 -	0.00	-231.25	241.48	241.48
	Fu.C.3	207.15	-78.61	2.648	249.67	1.250	4.042 -	0.00	-221.21	232.56	232.56
	Fu.C.5	-51.85	-52.18	0.306	177.09	3.138	0.000 -	0.00	-2.93	112.37	112.37
S8	Fu.C.2	247.20	-71.64	2.903	157.60	1.506	4.345 -	0.00	-228.81	-228.81	175.73
	Fu.C.3	249.67	-60.04	3.005	132.14	1.637	4.371 -	0.00	-218.77	-218.77	150.03
	Fu.C.5	177.09	29.69	3.005	118.13	0.000	0.000 -	0.00	-101.03	-101.03	68.09
S9	Fu.C.2	157.60	-54.04	2.852	98.15	1.369	4.398 -	0.00	-158.84	-158.84	111.12
	Fu.C.3	132.14	-56.12	3.056	34.07	1.324	4.958 -	0.00	-135.31	-135.31	70.43
	Fu.C.4	143.04	0.00	0.000	-168.10	1.865	0.000 -	0.00	-103.15	-103.15	-52.16
	Fu.C.5	118.13	0.00	0.000	-163.07	2.004	0.000 -	0.00	-77.48	-77.48	-59.39
S10	Fu.C.2	98.15	-27.29	3.361	0.11	1.653	5.495 -	0.00	-87.79	-87.79	21.54
	Fu.C.4	-168.10	0.00	0.000	-0.01	0.000	0.000 -	0.00	58.34	58.34	12.48
	Fu.C.5	-163.07	0.00	0.000	0.03	5.498	0.000 -	0.00	60.24	60.24	12.16
S11	Fu.C.1	0.08	0.00	0.000	0.00	0.000	0.000 -	0.00	-1.42	-1.42	0.00
	Fu.C.2	0.11	0.00	0.000	0.00	0.000	0.000 -	0.00	-1.62	-1.62	0.00

Staaf	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve
S11	Fu.C.4	-0.01	0.00	0.000	0.00	0.245	0.000 -	0.00	0.25	-0.25	0.00
S12	Fu.C.2	0.00	0.00	0.000	114.26	0.000	0.000 -	0.00	0.00	113.33	113.33
	Fu.C.3	0.00	0.00	0.000	139.79	0.000	0.000 -	0.00	0.00	138.61	138.61
S13	Fu.C.3	139.79	98.21	0.950	198.74	0.000	0.000 -	0.00	-86.68	144.38	144.38
S14	Fu.C.3	198.74	-43.40	2.284	82.17	1.312	3.330 -	0.00	-219.02	-219.02	142.97
S15	Fu.C.3	82.17	-103.38	2.394	220.79	0.589	4.174 -	0.00	-163.71	219.05	219.05
S16	Fu.C.3	220.79	-132.98	3.295	218.48	1.247	5.330 -	0.00	-226.30	243.70	243.70
S17	Fu.C.3	218.48	9.38	2.096	170.85	0.000	0.000 -	0.00	-202.59	-202.59	170.73
	Fu.C.5	84.12	3.66	1.939	89.02	0.000	0.000 -	0.00	-82.56	85.14	85.14
S18	Fu.C.1	164.82	-89.45	3.116	64.68	1.183	5.332 -	0.00	-185.17	-185.17	106.33
	Fu.C.3	170.85	-96.09	3.166	57.52	1.160	5.417 -	0.00	-195.18	-195.18	105.96
S19	Fu.C.1	64.68	-30.23	2.413	-29.06	1.031	0.000 -	0.00	-82.19	-82.19	9.68
	Fu.C.3	57.52	-33.28	2.311	-31.23	0.907	0.000 -	0.00	-80.63	-80.63	12.77
S20	Fu.C.3	-31.23	-114.50	2.080	5.30	4.118	0.000 -	0.00	-77.73	128.23	128.23
S21	Fu.C.2	4.28	0.00	0.000	0.00	0.000	0.000 -	0.00	-26.07	-26.07	0.00
	Fu.C.3	5.30	0.00	0.000	0.00	0.000	0.000 -	0.00	-32.18	-32.18	0.00
S22	Fu.C.1	0.00	0.00	0.000	-0.09	0.000	0.000 -	0.00	0.00	-0.44	-0.15
	Fu.C.2	0.00	0.00	0.000	-0.03	0.000	0.000 -	0.00	0.00	0.51	-0.51
	Fu.C.3	0.00	0.00	0.000	-0.19	0.000	0.000 -	0.00	0.00	-1.05	-0.59
	Fu.C.4	0.00	0.00	0.000	-0.17	0.000	0.000 -	0.00	0.00	-1.06	-0.78
S23	Fu.C.2	-0.03	-40.21	2.699	48.77	4.677	0.000 -	0.00	-22.57	75.13	75.13
	Fu.C.3	-0.19	-51.70	3.769	-26.42	0.000	0.000 -	0.00	-17.56	33.70	33.70
	Fu.C.4	-0.17	0.00	0.000	-208.25	0.000	0.000 -	0.00	-13.45	-69.10	-69.10
S24	Fu.C.2	48.77	-59.17	2.139	296.12	0.578	3.577 -	0.00	-96.96	230.43	230.43
	Fu.C.3	-26.42	-72.68	1.681	301.87	3.484	0.000 -	0.00	-53.02	222.84	222.84
	Fu.C.4	-208.25	0.00	0.000	246.81	3.325	0.000 -	0.00	63.78	157.59	157.59
	Fu.C.5	-186.55	0.00	0.000	175.48	3.310	0.000 -	0.00	66.21	108.00	108.00
S25	Fu.C.2	296.12	-42.37	2.852	257.55	1.839	3.845 -	0.00	-239.71	-239.71	229.36
	Fu.C.3	301.87	-23.70	2.852	260.65	2.090	3.623 -	0.00	-228.26	-228.26	218.53
	Fu.C.5	175.48	15.04	2.954	143.03	0.000	0.000 -	0.00	-105.21	-105.21	103.47
S26	Fu.C.2	257.55	-93.00	3.056	114.36	1.449	4.681 -	0.00	-241.00	-241.00	168.92
	Fu.C.3	260.65	-86.56	3.157	84.46	1.541	4.811 -	0.00	-232.87	-232.87	144.54
S27	Fu.C.2	114.36	-99.08	2.648	135.15	0.838	4.513 -	0.00	-165.78	168.57	168.57
	Fu.C.4	95.20	-98.93	4.838	-96.46	1.168	0.000 -	0.00	-101.47	-101.47	7.95
	Fu.C.5	82.49	0.00	0.000	-116.16	1.390	0.000 -	0.00	-74.65	-74.65	-19.79
S28	Fu.C.2	135.15	-90.28	2.750	136.59	1.013	4.503 -	0.00	-165.86	171.53	171.53
	Fu.C.4	-96.46	0.00	0.000	155.60	3.490	0.000 -	0.00	5.44	103.50	103.50
	Fu.C.5	-116.16	0.00	0.000	135.71	3.171	0.000 -	0.00	32.19	75.07	75.07
S29	Fu.C.2	136.59	-58.58	2.394	274.20	1.094	3.722 -	0.00	-163.18	221.26	221.26
	Fu.C.4	155.60	-17.02	3.718	16.95	2.533	4.980 -	0.00	-96.32	-96.32	38.92
	Fu.C.5	135.71	0.00	0.000	-45.18	2.794	0.000 -	0.00	-70.17	-70.17	-5.35
S30	Fu.C.1	253.70	-49.89	3.463	32.51	2.011	5.039 -	0.00	-187.87	-187.87	80.12
	Fu.C.2	274.20	-47.74	3.208	90.49	1.935	4.537 -	0.00	-212.34	-212.34	118.45
	Fu.C.4	16.95	-34.74	2.343	54.94	0.416	4.316 -	0.00	-45.90	58.31	58.31
	Fu.C.5	-45.18	-45.96	0.509	46.44	4.160	0.000 -	0.00	-3.79	43.15	43.15
S31	Fu.C.1	32.51	-80.28	2.903	0.73	0.428	5.488 -	0.00	-84.75	-84.75	62.16
	Fu.C.2	90.49	-74.64	3.106	0.69	0.966	5.489 -	0.00	-116.61	-116.61	61.16
S32	Fu.C.1	0.73	0.00	0.000	0.00	0.000	0.000 -	0.00	-7.22	-7.22	0.00
S33	Fu.C.1	0.00	0.00	0.000	-10.42	0.000	0.000 -	0.00	-29.30	-29.30	-22.68
	Fu.C.4	0.00	0.00	0.000	-8.77	0.000	0.000 -	0.00	-19.53	-24.86	-24.86
	Fu.C.5	0.00	0.00	0.000	-8.77	0.000	0.000 -	0.00	-19.53	-24.86	-24.86
S34	Fu.C.1	-10.42	-39.71	2.350	-10.20	0.000	0.000 -	0.00	-26.91	-26.91	22.74
	Fu.C.2	-9.07	-39.03	2.150	8.22	4.744	0.000 -	0.00	-28.95	34.41	34.41
	Fu.C.5	-8.77	0.00	0.000	-312.49	0.000	0.000 -	0.00	-27.00	-94.49	-94.49
S35	Fu.C.2	8.22	-76.73	3.350	-48.35	0.175	0.000 -	0.00	-48.70	-48.70	37.52
	Fu.C.4	-312.49	-158.12	4.800	-158.44	0.000	0.000 -	0.00	64.56	64.56	-2.94
	Fu.C.5	-312.49	-158.12	4.800	-158.44	0.000	0.000 -	0.00	64.56	64.56	-2.94
S36	Fu.C.2	-48.35	-82.94	1.450	213.71	3.437	0.000 -	0.00	-46.27	189.79	189.79
	Fu.C.3	-61.73	-73.69	0.950	259.64	3.018	0.000 -	0.00	-25.01	191.94	191.94
	Fu.C.4	-158.44	0.00	0.000	460.90	1.064	0.000 -	0.00	156.11	156.11	108.38
	Fu.C.5	-158.44	0.00	0.000	453.36	1.064	0.000 -	0.00	156.11	156.11	88.61
S37	Fu.C.2	213.71	-16.14	2.450	265.13	1.796	3.056 -	0.00	-186.78	225.77	225.77
	Fu.C.3	259.64	-28.17	2.900	131.95	1.990	3.777 -	0.00	-198.86	-198.86	155.12
	Fu.C.4	460.90	118.31	3.700	166.87	0.000	0.000 -	0.00	-160.69	-160.69	78.63
	Fu.C.5	453.36	188.29	4.050	208.74	0.000	0.000 -	0.00	-88.90	-94.23	46.07
S38	Fu.C.2	265.13	-112.09	2.950	69.66	1.331	4.560 -	0.00	-262.03	-262.03	180.51

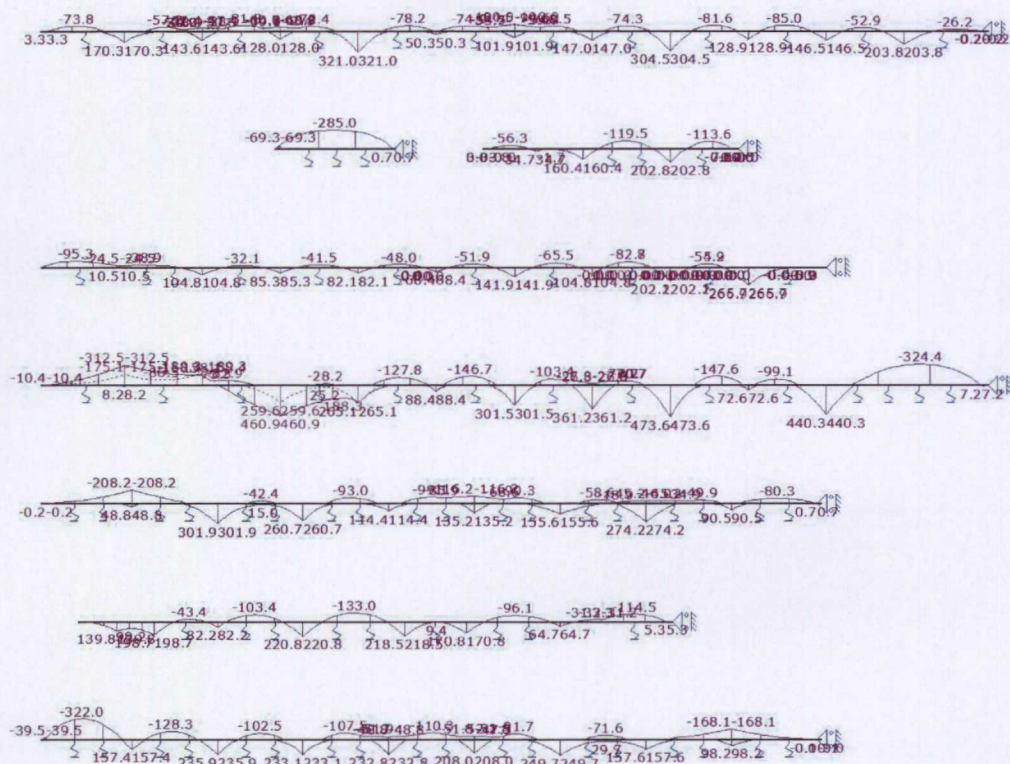
Staaf	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve
S38	Fu.C.3	131.95	-127.81	2.650	88.35	0.792	4.467 -	0.00	-198.11	-198.11	191.14
S39	Fu.C.2	69.66	-146.74	2.200	253.27	0.387	3.910 -	0.00	-199.64	296.81	296.81
	Fu.C.3	88.35	-131.93	2.150	301.48	0.497	3.759 -	0.00	-201.97	322.42	322.42
S40	Fu.C.2	253.27	-103.37	2.450	325.70	1.128	3.704 -	0.00	-293.52	344.46	344.46
	Fu.C.3	301.48	-102.42	2.450	361.21	1.228	3.665 -	0.00	-327.96	376.05	376.05
	Fu.C.4	236.15	-97.28	2.950	63.20	1.353	4.550 -	0.00	-229.74	-229.74	160.53
	Fu.C.5	155.34	-82.61	3.350	-27.26	1.350	0.000 -	0.00	-148.17	-148.17	68.60
S41	Fu.C.3	361.21	-62.91	2.350	473.64	1.443	3.257 -	0.00	-365.98	408.14	408.14
	Fu.C.4	63.20	-76.74	1.850	361.29	0.482	3.185 -	0.00	-152.70	286.90	286.90
	Fu.C.5	-27.26	-71.82	1.450	240.71	3.191	0.000 -	0.00	-62.73	186.02	186.02
S42	Fu.C.2	413.30	-147.59	3.000	72.62	1.441	4.636 -	0.00	-389.49	-389.49	222.11
	Fu.C.3	473.64	-142.46	3.150	45.68	1.585	4.752 -	0.00	-417.70	-417.70	199.56
S43	Fu.C.2	72.62	-81.60	1.750	440.28	0.471	3.021 -	0.00	-182.40	318.73	318.73
	Fu.C.3	45.68	-99.11	1.800	317.25	0.305	3.339 -	0.00	-167.69	255.21	255.21
S44	Fu.C.2	440.28	-324.36	6.050	7.14	1.787	9.965 -	0.00	-324.15	-324.15	206.43
	Fu.C.3	317.25	-296.81	6.150	7.17	1.597	9.963 -	0.00	-253.49	-253.49	197.84
S45	Fu.C.1	7.13	0.00	0.000	0.00	0.000	0.000 -	0.00	-38.18	-38.18	0.00
	Fu.C.2	7.14	0.00	0.000	0.00	0.000	0.000 -	0.00	-38.21	-38.21	0.00
	Fu.C.3	7.17	0.00	0.000	0.00	0.000	0.000 -	0.00	-38.35	-38.35	0.00
S46	Fu.C.2	0.00	-95.31	2.229	-24.54	0.000	0.000 -	0.00	-99.96	-99.96	44.01
	Fu.C.3	0.00	-37.66	2.279	10.52	4.753	0.000 -	0.00	-36.36	36.65	36.65
S47	Fu.C.2	-24.54	-38.91	1.589	88.22	3.834	0.000 -	0.00	-18.17	82.02	82.02
	Fu.C.3	10.52	-33.93	2.153	104.84	0.288	3.829 -	0.00	-39.43	99.47	99.47
S48	Fu.C.3	104.84	-32.15	2.600	85.30	1.343	3.872 -	0.00	-106.63	-106.63	101.47
S49	Fu.C.3	85.30	-41.49	2.500	82.09	1.059	3.961 -	0.00	-104.78	-104.78	102.04
S50	Fu.C.3	82.09	-47.98	2.600	68.43	1.002	4.150 -	0.00	-104.13	-104.13	100.48
S51	Fu.C.3	68.43	-51.87	2.300	141.95	0.789	3.722 -	0.00	-105.81	151.53	151.53
S52	Fu.C.3	141.95	-65.51	2.650	104.75	1.149	4.119 -	0.00	-160.99	-160.99	150.28
S53	Fu.C.3	104.75	-82.80	2.300	202.11	0.783	3.798 -	0.00	-162.54	226.04	226.04
S54	Fu.C.3	202.11	-54.95	2.350	266.86	1.260	3.451 -	0.00	-222.81	246.27	246.27
S55	Fu.C.1	235.78	-5.18	3.500	0.00	2.779	0.000 -	0.00	-179.41	-179.41	0.00
	Fu.C.3	266.86	-5.02	3.500	0.00	2.834	0.000 -	0.00	-202.36	-202.36	0.00
S58	Fu.C.2	0.00	0.00	0.000	-56.68	0.000	0.000 -	0.00	-179.40	-179.40	-142.75
	Fu.C.3	0.00	0.00	0.000	-69.34	0.000	0.000 -	0.00	-219.48	-219.48	-174.69
S59	Fu.C.3	-69.34	-285.00	3.534	0.68	7.267	0.000 -	0.00	-178.23	225.67	225.67
S60	Fu.C.2	0.55	0.00	0.000	0.00	0.000	0.000 -	0.00	-13.96	-13.96	0.00
	Fu.C.3	0.68	0.00	0.000	0.00	0.000	0.000 -	0.00	-17.04	-17.04	0.00
S61	Fu.C.1	0.00	0.00	0.000	3.37	0.000	0.000 -	0.00	0.00	20.90	20.90
	Fu.C.3	0.00	0.00	0.000	3.81	0.000	0.000 -	0.00	0.00	23.55	23.55
S62	Fu.C.3	3.81	-56.33	1.377	34.72	0.045	2.709 -	0.00	-86.70	113.27	113.27
S63	Fu.C.3	34.72	-1.66	1.007	160.39	0.782	1.199 -	0.00	-74.71	164.42	164.42
S64	Fu.C.3	160.39	-119.52	2.743	202.80	0.938	4.515 -	0.00	-211.30	242.23	242.23
S65	Fu.C.3	202.80	-113.63	2.513	7.47	1.012	3.974 -	0.00	-253.08	-253.08	165.74
S66	Fu.C.1	6.61	0.00	0.000	0.00	0.000	0.000 -	0.00	-40.43	-40.43	0.00
	Fu.C.3	7.47	0.00	0.000	0.00	0.000	0.000 -	0.00	-45.61	-45.61	0.00
S67	Fu.C.2	0.00	0.00	0.000	3.03	0.000	0.000 -	0.00	0.00	16.46	16.46
	Fu.C.3	0.00	0.00	0.000	3.25	0.000	0.000 -	0.00	0.00	17.69	17.69
S68	Fu.C.3	3.25	-73.75	1.900	170.32	0.041	3.678 -	0.00	-80.01	174.13	174.13
S69	Fu.C.3	170.32	-57.21	2.600	143.64	1.288	3.889 -	0.00	-178.68	-178.68	172.09
	Fu.C.5	108.99	0.00	0.000	-51.37	2.531	0.000 -	0.00	-72.35	-72.35	-25.73
S70	Fu.C.2	125.17	-81.79	2.650	91.23	0.968	4.279 -	0.00	-161.89	-161.89	153.97
	Fu.C.3	143.64	-80.39	2.550	127.97	1.013	4.088 -	0.00	-181.00	-181.00	177.17
	Fu.C.5	-51.37	-36.07	2.200	-60.69	0.000	0.000 -	0.00	13.89	-17.61	-17.61
S71	Fu.C.2	91.23	-72.39	2.050	321.05	0.697	3.359 -	0.00	-158.23	283.70	283.70
	Fu.C.3	127.97	-67.42	2.250	244.70	0.928	3.547 -	0.00	-176.08	235.54	235.54
	Fu.C.5	-60.69	0.00	0.000	168.71	2.659	0.000 -	0.00	22.01	118.34	118.34
S72	Fu.C.2	321.05	-78.17	3.200	15.44	1.695	4.838 -	0.00	-277.85	-277.85	100.50
	Fu.C.3	244.70	-71.46	3.050	30.11	1.528	4.675 -	0.00	-228.11	-228.11	101.84
	Fu.C.4	206.39	-23.44	3.050	50.32	2.008	4.113 -	0.00	-163.79	-163.79	71.56
S73	Fu.C.2	15.44	-74.94	2.100	91.39	0.183	4.079 -	0.00	-90.41	122.18	122.18
	Fu.C.3	30.11	-70.99	2.200	101.93	0.349	4.026 -	0.00	-95.69	131.65	131.65
	Fu.C.4	50.32	0.00	0.000	-70.55	0.967	0.000 -	0.00	-65.86	-65.86	-7.59
	Fu.C.5	44.16	0.00	0.000	-100.01	1.292	0.000 -	0.00	-45.14	-45.14	-36.56
S74	Fu.C.2	91.39	-68.46	2.500	110.99	0.880	4.087 -	0.00	-126.55	155.62	155.62
	Fu.C.3	101.93	-64.77	2.450	147.01	0.924	3.885 -	0.00	-137.02	175.54	175.54
	Fu.C.5	-100.01	0.00	0.000	90.59	3.264	0.000 -	0.00	37.26	74.97	74.97

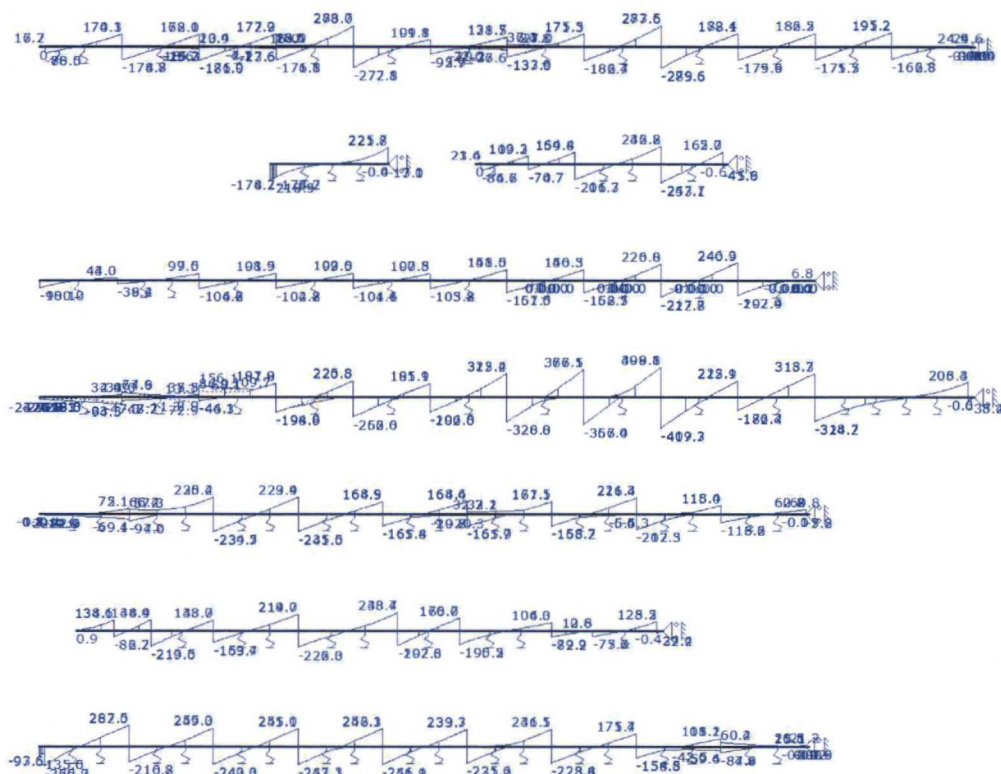
Staaf	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve
S75	Fu.C.2	110.99	-74.31	2.150	304.48	0.803	3.456 -	0.00	-169.95	283.53	283.53
	Fu.C.3	147.01	-71.64	2.350	225.57	1.012	3.679 -	0.00	-186.70	235.29	235.29
S76	Fu.C.2	304.48	-81.62	2.900	95.34	1.516	4.312 -	0.00	-285.57	-285.57	166.22
	Fu.C.3	225.57	-79.33	2.700	128.94	1.292	4.115 -	0.00	-237.65	-237.65	182.39
S77	Fu.C.2	95.34	-85.02	2.350	129.98	0.727	4.038 -	0.00	-159.39	169.40	169.40
	Fu.C.3	128.94	-83.34	2.450	146.47	0.901	3.999 -	0.00	-179.90	186.51	186.51
S79	Fu.C.1	-0.03	-0.03	0.079	0.00	0.000	0.000 -	0.00	-0.48	-0.48	0.00
	Fu.C.2	0.16	0.00	0.000	0.00	0.000	0.000 -	0.00	-1.40	-1.40	0.00
	Fu.C.3	-0.24	0.00	0.000	0.00	0.000	0.000 -	0.00	0.63	0.86	0.00
	Fu.C.4	-0.11	0.00	0.000	0.00	0.000	0.000 -	0.00	0.13	0.37	0.00
	Fu.C.5	0.17	0.00	0.000	0.00	0.000	0.000 -	0.00	-1.22	-1.22	0.00
S80	Fu.C.3	146.47	-52.92	2.350	203.84	1.122	3.547 -	0.00	-175.73	195.16	195.16
S81	Fu.C.2	180.83	-26.23	3.250	0.16	1.948	4.994 -	0.00	-151.25	-151.25	24.90
	Fu.C.3	203.84	-23.51	3.300	-0.24	2.069	0.000 -	0.00	-166.80	-166.80	20.78
	Fu.C.5	89.36	-14.42	3.250	0.17	1.888	4.988 -	0.00	-75.80	-75.80	13.99
-	-	kNm	kNm	m	kNm	m	m -	kN	kN	kN	kN

AFB. FU.C. TEGENDRUK OMHULLENDE

Fundamenteel Belastingscombinaties



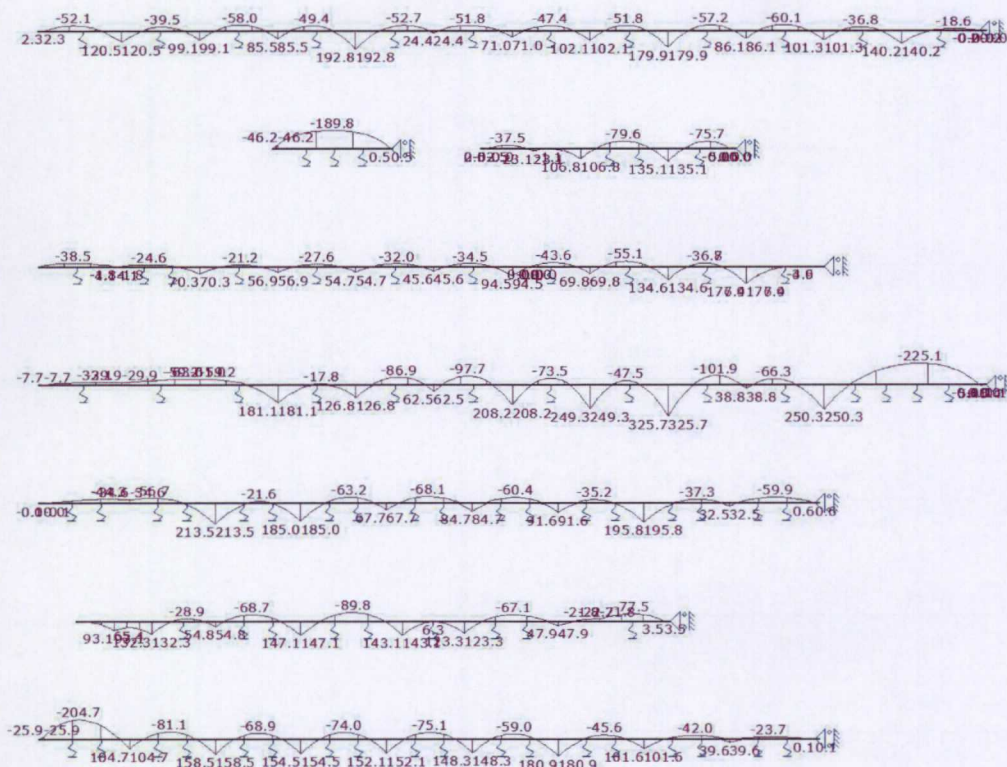


**KARAKTERISTIEK BELASTINGSCOMBINATIES (TABEL)**

B.G.	Omschrijving	Ka.C.(w1)	Ka.C.1	Ka.C.2	Ka.C.3	Ka.C.4
B.G.1	Eigen Gewicht	1.00	1.00	1.00	1.00	1.00
B.G.2	Permanent LHg	1.00	1.00	1.00	1.00	1.00
B.G.3	Permanent Dak	1.00	1.00	1.00	1.00	1.00
B.G.4	Permanent LLg	1.00	1.00	1.00	1.00	1.00
B.G.5	Permanent V+1	1.00	1.00	1.00	1.00	1.00
B.G.6	Permanent Gevel	1.00	1.00	1.00	1.00	1.00
B.G.7	Veranderlijk LHg	-	1.00	-	-	-
B.G.8	Veranderlijk Dak	-	1.00	-	-	-
B.G.9	Veranderlijk LLg	-	1.00	-	-	-
B.G.10	Veranderlijk V+1	-	0.60	1.00	0.60	-
B.G.11	Stabiliteit	-	-	-	1.00	1.00

FREQUENT BELASTINGSCOMBINATIES (TABEL)

B.G.	Omschrijving	Fr.C.(w1)	Fr.C.1	Fr.C.2	Fr.C.3	Fr.C.4
B.G.1	Eigen Gewicht	1.00	1.00	1.00	1.00	1.00
B.G.2	Permanent LHg	1.00	1.00	1.00	1.00	1.00
B.G.3	Permanent Dak	1.00	1.00	1.00	1.00	1.00
B.G.4	Permanent LLg	1.00	1.00	1.00	1.00	1.00
B.G.5	Permanent V+1	1.00	1.00	1.00	1.00	1.00
B.G.6	Permanent Gevel	1.00	1.00	1.00	1.00	1.00
B.G.7	Veranderlijk LHg	-	0.20	-	-	-
B.G.8	Veranderlijk Dak	-	0.20	-	-	-
B.G.9	Veranderlijk LLg	-	0.20	-	-	-
B.G.10	Veranderlijk V+1	-	0.70	0.70	0.70	-
B.G.11	Stabiliteit	-	-	-	0.20	0.20

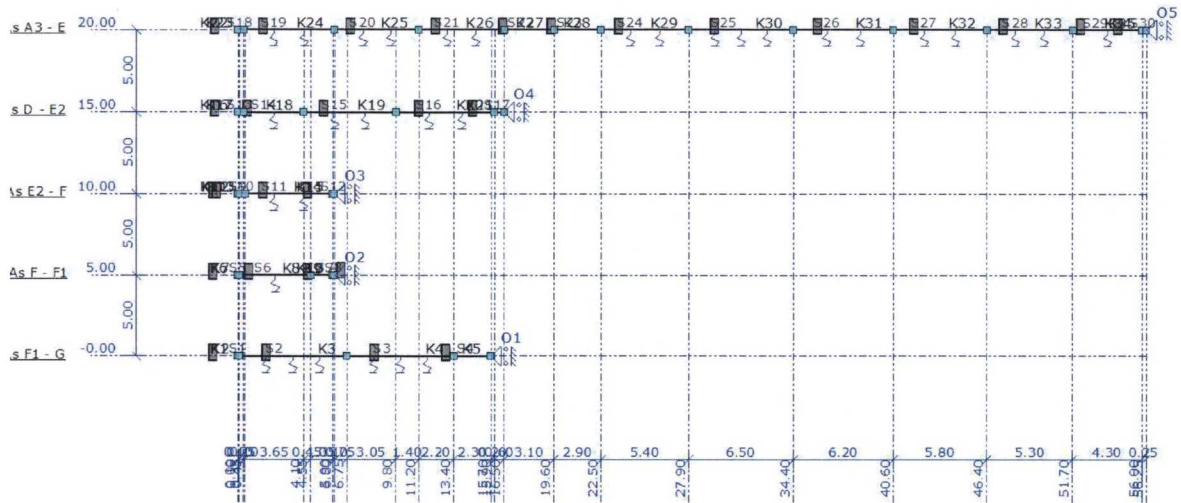


QUASI-PERMANENT BELASTINGSCOMBINATIES (TABEL)

B.G.	Omschrijving	Qu.C.1
B.G.1	Eigen Gewicht	1.00
B.G.2	Permanent LHg	1.00
B.G.3	Permanent Dak	1.00
B.G.4	Permanent LLg	1.00
B.G.5	Permanent V+1	1.00
B.G.6	Permanent Gevel	1.00
B.G.7	Veranderlijk LHg	-
B.G.8	Veranderlijk Dak	-
B.G.9	Veranderlijk LLg	-
B.G.10	Veranderlijk V+1	0.60
B.G.11	Stabiliteit	-

Valkenburg aan de Geul		Ingenieursbureau A. Palte BV		043 - 601 36 37	
Computerberekening					
Projectnaam	Nieuwbouw recreatiecentrum 'De Schatberg'		Projectnummer	460518	
Omschrijving	Fundering centrale hal		Constructeur	DaKr	
Opdrachtgever	Janssen Wuts Architecten BV		Eenheden	m, kN, kNm	
Bestand	P:\460518\ber\460518-C - Uitvoeringsberekening wapening\460518-C-0 - Fundering centrale hal.mxf				

AFB. GEOMETRIE RAAMWERK



STAVEN

Staaf	Knoop B	Scharnier E	Knoop E	Profiel	X-B	Z-B	X-E	Z-E	Lengte
S1	K1	NVM	NVM	K2	P1	0.000	0.000	0.100	0.100
S2	K2	NVM	NVM	K3	P1	0.100	0.000	6.750	6.650
S3	K3	NVM	NVM	K4	P1	6.750	0.000	13.400	6.650
S4	K4	NVM	NVM	K5	P1	13.400	0.000	15.700	2.300
S5	K6	NVM	NVM	K7	P2	0.000	-5.000	0.100	0.100
S6	K7	NVM	NVM	K8	P2	0.100	-5.000	4.550	4.450
S7	K9	NVM	NVM	K8	P2	5.900	-5.000	4.550	1.350
S8	K9	NVM	NVM	K10	P2	5.900	-5.000	6.000	0.100
S9	K11	NVM	NVM	K12	P3	0.000	-10.000	0.100	0.100
S10	K12	NVM	NVM	K13	P3	0.100	-10.000	0.450	0.350
S11	K13	NVM	NVM	K14	P3	0.450	-10.000	5.900	5.450
S12	K14	NVM	NVM	K15	P3	5.900	-10.000	6.000	0.100
S13	K16	NVM	NVM	K17	P4	0.000	-15.000	0.350	0.350
S14	K17	NVM	NVM	K18	P4	0.350	-15.000	4.100	3.750
S15	K18	NVM	NVM	K19	P4	4.100	-15.000	9.800	5.700
S16	K19	NVM	NVM	K20	P4	9.800	-15.000	15.900	6.100
S17	K20	NVM	NVM	K21	P4	15.900	-15.000	16.500	0.600
S18	K22	NVM	NVM	K23	P5	0.000	-20.000	0.350	0.350
S19	K23	NVM	NVM	K24	P5	0.350	-20.000	6.000	5.650
S20	K24	NVM	NVM	K25	P5	6.000	-20.000	11.200	5.200
S21	K25	NVM	NVM	K26	P5	11.200	-20.000	16.500	5.300
S22	K26	NVM	NVM	K27	P5	16.500	-20.000	19.600	3.100
S23	K27	NVM	NVM	K28	P5	19.600	-20.000	22.500	2.900
S24	K28	NVM	NVM	K29	P5	22.500	-20.000	27.900	5.400
S25	K29	NVM	NVM	K30	P5	27.900	-20.000	34.400	6.500
S26	K30	NVM	NVM	K31	P5	34.400	-20.000	40.600	6.200
S27	K31	NVM	NVM	K32	P5	40.600	-20.000	46.400	5.800
S28	K32	NVM	NVM	K33	P5	46.400	-20.000	51.700	5.300
S29	K33	NVM	NVM	K34	P5	51.700	-20.000	56.000	4.300
S30	K34	NVM	NVM	K35	P5	56.000	-20.000	56.250	0.250
-	-	-	-	-	-	m	m	m	m

PROFIELEN

Profiel	Profielnaam	Oppervlakte	Iy Materiaal	Hoek
P1	R700x400	2.8000e-01	3.7333e-03 C20/25	0.0

Valkenburg aan de Geul	Ingenieursbureau A. Palte BV	043 - 601 36 37
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Profiel	Profielnaam	Oppervlakte	ly Materiaal	Hoek
P2	R1000x600	6.0000e-01	1.8000e-02 C20/25	0.0
P3	R1000x600	6.0000e-01	1.8000e-02 C20/25	0.0
P4	R700x400	2.8000e-01	3.7333e-03 C20/25	0.0
P5	R1000x600	6.0000e-01	1.8000e-02 C20/25	0.0
-	-	m2	m4 -	°

PROFIELVORMEN

Profiel	Verl. h.	hB	hE	tf	tw	tf2	B	bL	bR Raatl.	Hoogte
P1	Nee	0.400	0.400	0.000	0.000	0.000	0.700	0.000	0.000 Nee	0.000
P2	Nee	0.600	0.600	0.000	0.000	0.000	1.000	0.000	0.000 Nee	0.000
P3	Nee	0.600	0.600	0.000	0.000	0.000	1.000	0.000	0.000 Nee	0.000
P4	Nee	0.400	0.400	0.000	0.000	0.000	0.700	0.000	0.000 Nee	0.000
P5	Nee	0.600	0.600	0.000	0.000	0.000	1.000	0.000	0.000 Nee	0.000
-	-	m	m	m	m	m	m	m	m -	m

MATERIALEN

Materiaal	Dichtheid	E-Modulus	Uitzettingcoëff
C20/25	25.00	1.0000e+07	10.0000e-06
-	kN/m3	kN/m2	C°m

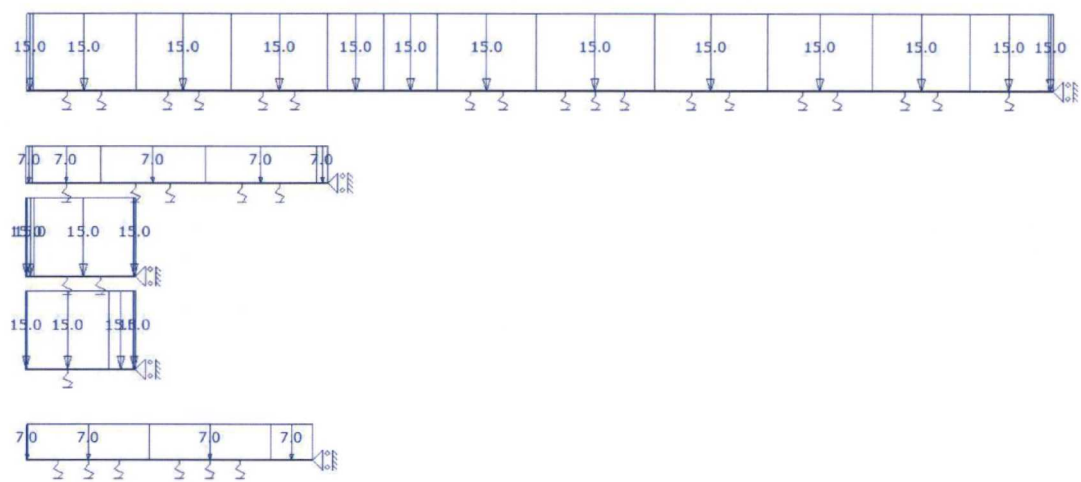
OPLEGGINGEN

Oplegging	Knoop	X	Z	Yr	HoekYr
O1	K5	vast	0.00:0.00	vrij	0
O2	K10	vast	0.00:0.00	vrij	0
O3	K15	vast	0.00:0.00	vrij	0
O4	K21	vast	0.00:0.00	vrij	0
O5	K35	vast	0.00:0.00	vrij	0
-	-	kN/m	kN/m	kNm/rad	°

B.G.1: EIGEN GEWICHT

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.1: Eigen Gewicht					
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	0.100(L)	Z" S1
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	6.650(L)	Z" S2-S3
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	2.300(L)	Z" S4
qG	15.00 (1.00x)	15.00 (1.00x)	0.000	0.100(L)	Z" S5,S8
qG	15.00 (1.00x)	15.00 (1.00x)	0.000	4.450(L)	Z" S6
qG	15.00 (1.00x)	15.00 (1.00x)	0.000	1.350(L)	Z" S7
qG	15.00 (1.00x)	15.00 (1.00x)	0.000	0.100(L)	Z" S9,S12
qG	15.00 (1.00x)	15.00 (1.00x)	0.000	0.350(L)	Z" S10,S18
qG	15.00 (1.00x)	15.00 (1.00x)	0.000	5.450(L)	Z" S11
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	0.350(L)	Z" S13
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	3.750(L)	Z" S14
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	5.700(L)	Z" S15
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	6.100(L)	Z" S16
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	0.600(L)	Z" S17
qG	15.00 (1.00x)	15.00 (1.00x)	0.000	5.650(L)	Z" S19
qG	15.00 (1.00x)	15.00 (1.00x)	0.000	5.200(L)	Z" S20
qG	15.00 (1.00x)	15.00 (1.00x)	0.000	5.300(L)	Z" S21,S28
qG	15.00 (1.00x)	15.00 (1.00x)	0.000	3.100(L)	Z" S22
qG	15.00 (1.00x)	15.00 (1.00x)	0.000	2.900(L)	Z" S23
qG	15.00 (1.00x)	15.00 (1.00x)	0.000	5.400(L)	Z" S24
qG	15.00 (1.00x)	15.00 (1.00x)	0.000	6.500(L)	Z" S25
qG	15.00 (1.00x)	15.00 (1.00x)	0.000	6.200(L)	Z" S26
qG	15.00 (1.00x)	15.00 (1.00x)	0.000	5.800(L)	Z" S27
qG	15.00 (1.00x)	15.00 (1.00x)	0.000	4.300(L)	Z" S29
qG	15.00 (1.00x)	15.00 (1.00x)	0.000	0.250(L)	Z" S30
-	-	-	m	m	- -

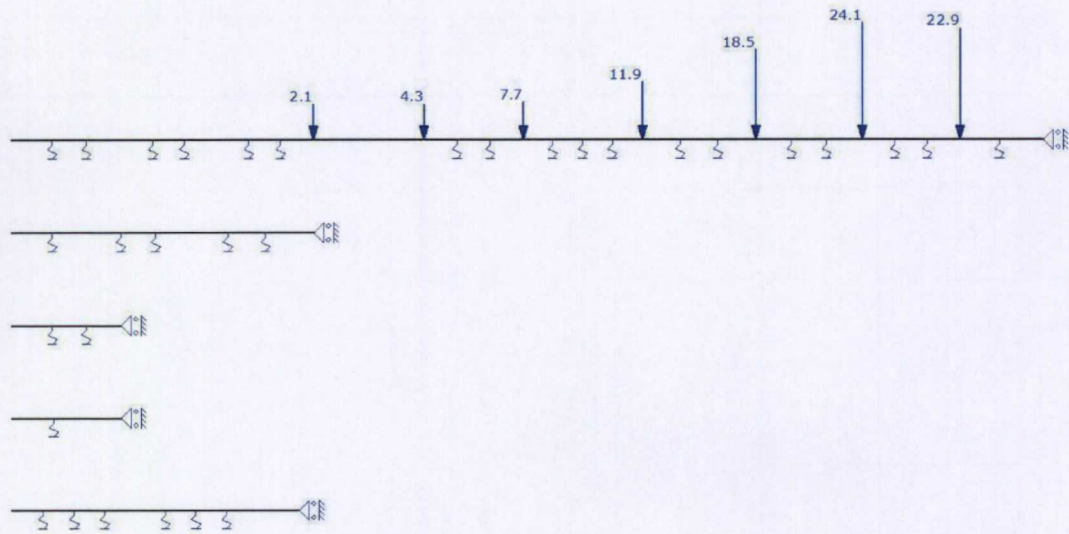
B.G.1: EIGEN GEWICHT



B.G.2: PERMANENT LHG

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting	Staaaf of knoop
B.G.2: Permanent LHg						
N	2.11					Z K26
N	4.28					Z K28
N	7.70					Z K29
N	11.90					Z K30
N	18.50					Z K31
N	24.10					Z K32
N	22.90					Z K33
-	-	-	m	m	-	-

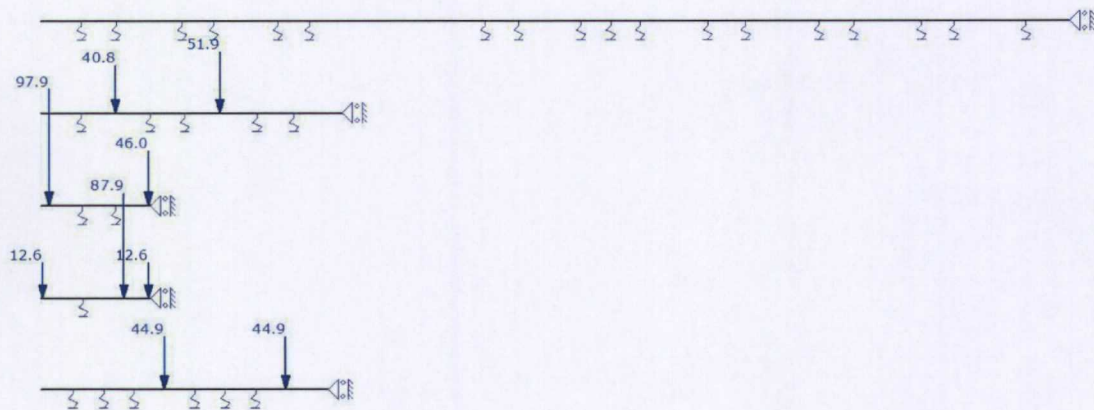
B.G.2: PERMANENT LHG



B.G.3: PERMANENT LLG

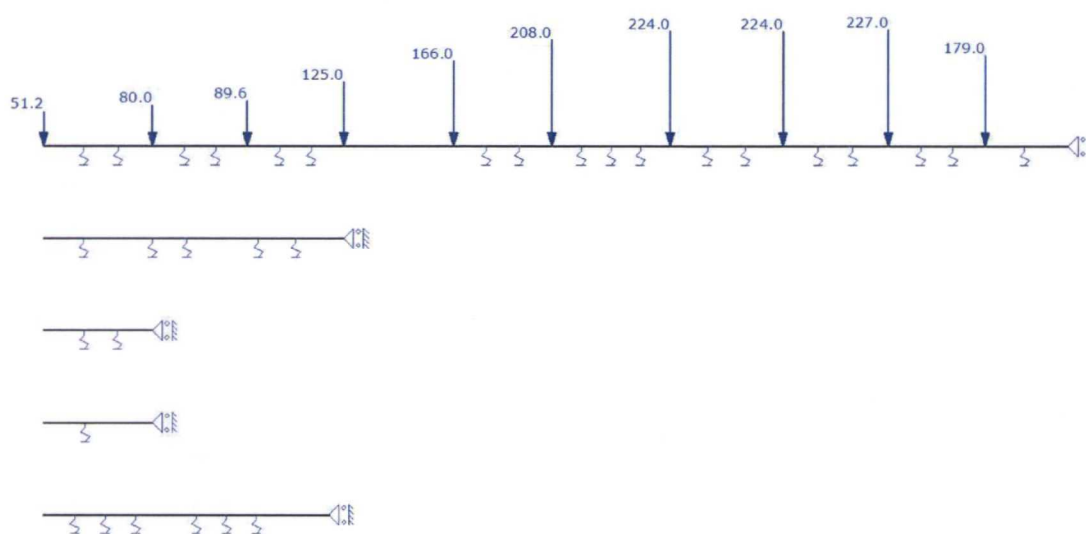
Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting	Staaf of knoop
B.G.3: Permanent LLg						
N	44.90					Z K3-K4
N	12.60					Z K7,K9
N	87.90					Z K8
N	97.90					Z K13
N	46.00					Z K14
N	40.80					Z K18
N	51.90					Z K19
-	-	-	m	m	-	-

B.G.3: PERMANENT LLG



B.G.4: PERMANENT V+1

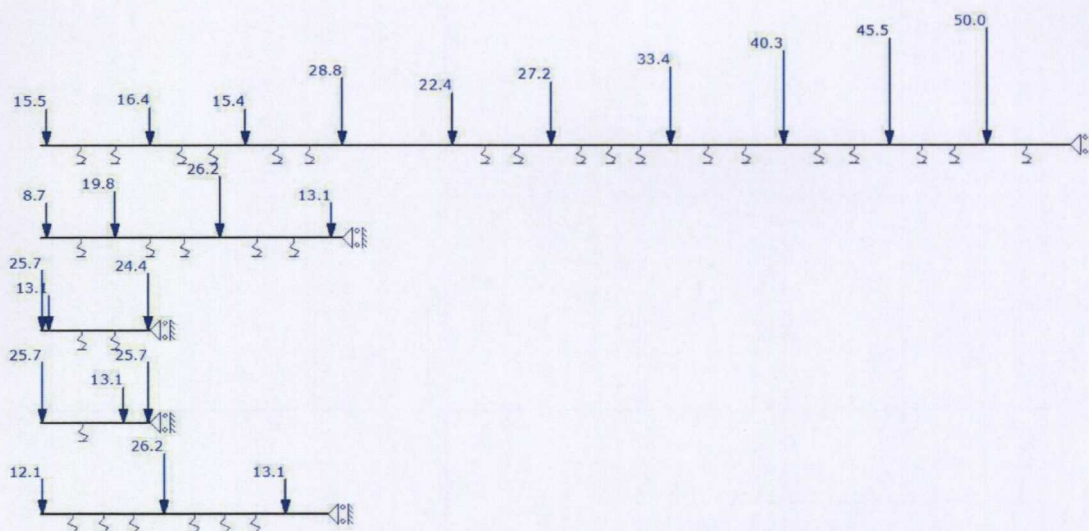
Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.4: Permanent V+1					
N	51.20				Z K22
N	80.00				Z K24
N	89.60				Z K25
N	125.00				Z K26
N	166.00				Z K28
N	208.00				Z K29
N	224.00				Z K30-K31
N	227.00				Z K32
N	179.00				Z K33
-	-	-	m	m	- -

B.G.4: PERMANENT V+1**B.G.5: PERMANENT GEVEL**

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.5: Permanent Gevel					
N	12.10				Z K2
N	26.20				Z K3
N	13.10				Z K4,K13,K20
N	25.70				Z K7,K12
N	13.10				Z K8
N	25.70				Z K9
N	24.40				Z K14
N	8.70				Z K17
N	19.80				Z K18
N	26.20				Z K19
N	15.50				Z K23
N	16.40				Z K24
N	15.40				Z K25
N	28.80				Z K26
N	22.40				Z K28
N	27.20				Z K29
N	33.40				Z K30
N	40.30				Z K31
N	45.50				Z K32

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.5: Permanent Gevel					
N	50.00				Z K33
-	-	-	m	m	- -

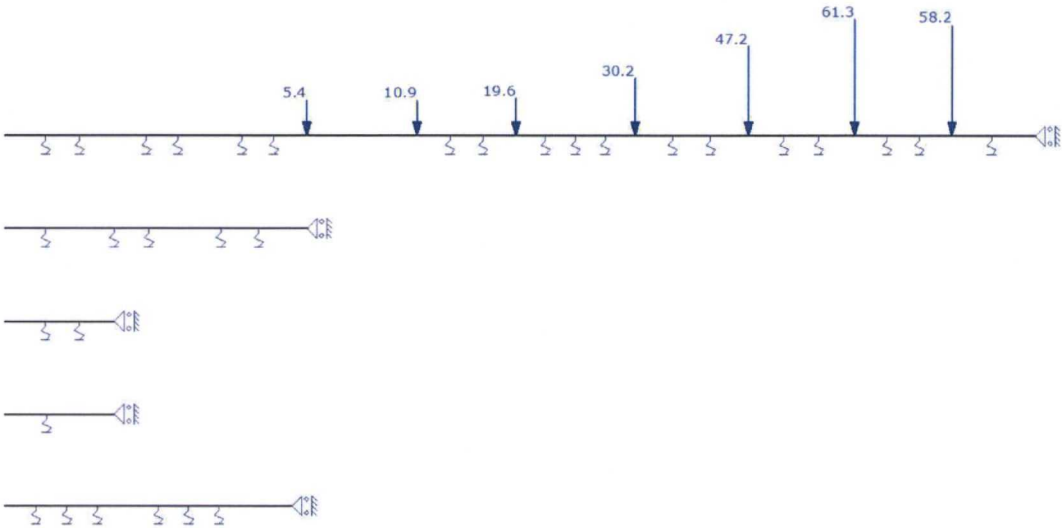
B.G.5: PERMANENT GEVEL



B.G.6: VERANDERLIJK LHG

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.6: Veranderlijk LHg					
N	5.36				Z K26
N	10.90				Z K28
N	19.60				Z K29
N	30.20				Z K30
N	47.20				Z K31
N	61.30				Z K32
N	58.20				Z K33
-	-	-	m	m	- -

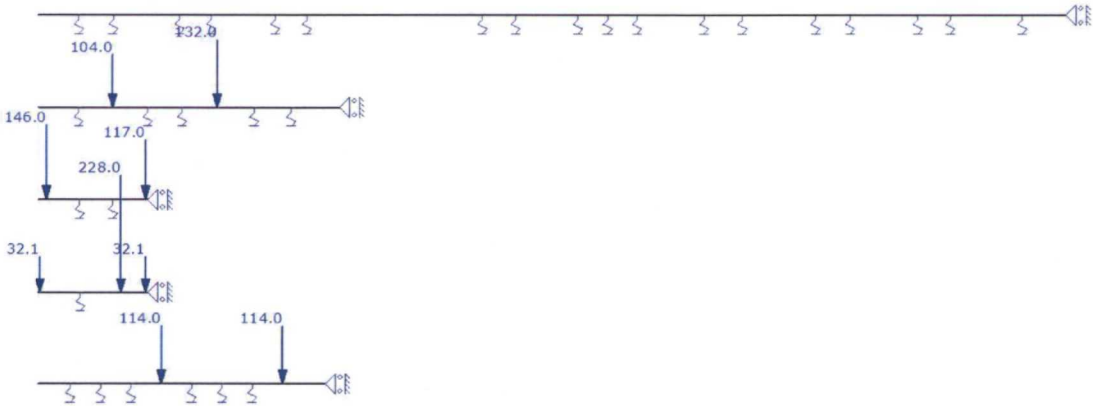
B.G.6: VERANDERLIJK LHG



B.G.7: VERANDERLIJK LLG

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting	Staf of knoop
B.G.7: Veranderlijk LLg						
N	114.00					Z K3-K4
N	32.10					Z K7,K9
N	228.00					Z K8
N	146.00					Z K13
N	117.00					Z K14
N	104.00					Z K18
N	132.00					Z K19
-	-	-	m	m	-	-

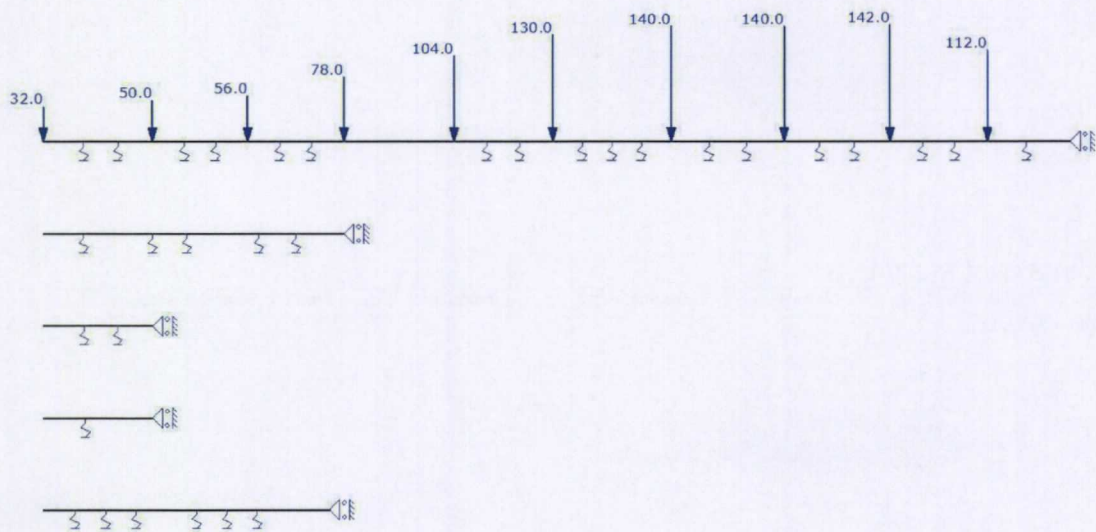
B.G.7: VERANDERLIJK LLG



B.G.8: VERANDERLIJK V+1

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting	Staaf of knoop
B.G.8: Veranderlijk V+1						
N	32.00					Z K22
N	50.00					Z K24
N	56.00					Z K25
N	78.00					Z K26
N	104.00					Z K28
N	130.00					Z K29
N	140.00					Z K30-K31
N	142.00					Z K32
N	112.00					Z K33
-	-	-	m	m	-	-

B.G.8: VERANDERLIJK V+1



UITGANGSPUNTEN VAN DE ANALYSE

Geavanceerde Analyse

Trekeliminatie voor fundering(en) gebruikt

FUNDAMENTEEL BELASTINGSCOMBINATIES (TABEL)

B.G.	Omschrijving	Fu.C.1	Fu.C.2	Fu.C.3	Fu.C.4	Fu.C.5
B.G.1	Eigen Gewicht	1.35	1.20	1.20	0.90	0.90
B.G.2	Permanent LHg	1.35	1.20	1.20	0.90	0.90
B.G.3	Permanent LLg	1.35	1.20	1.20	0.90	0.90
B.G.4	Permanent V+1	1.35	1.20	1.20	0.90	0.90
B.G.5	Permanent Gevel	1.35	1.20	1.20	0.90	0.90
B.G.6	Veranderlijk LHg	-	1.50	-	1.50	-
B.G.7	Veranderlijk LLg	-	1.50	-	1.50	-
B.G.8	Veranderlijk V+1	0.90	0.90	1.50	0.90	1.50

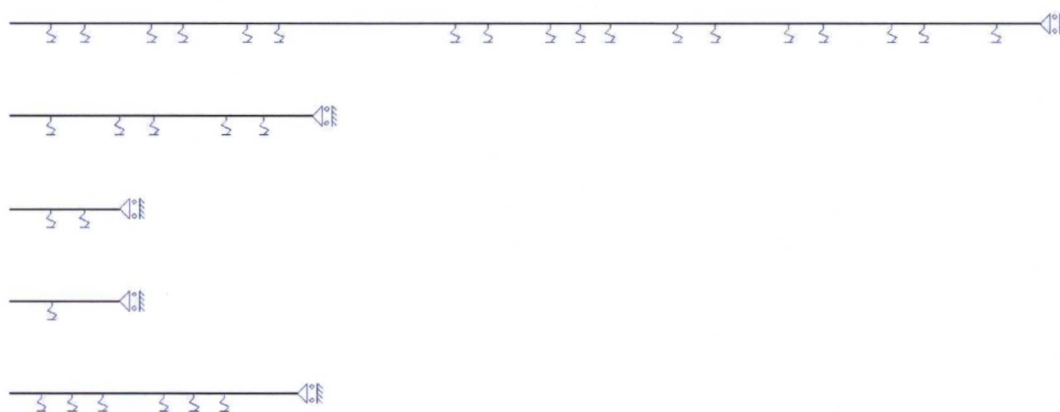
FU.C. OPLEGREACTIES ANALYSE

B.C.	Oplegging	Knoop	X	Z	My
Fu.C.1	O1	K5	0.00	0.00	0.00
	O2	K10	0.00	0.00	0.00
	O3	K15	0.00	0.00	0.00
	O4	K21	0.00	0.00	0.00
	O5	K35	0.00	0.00	0.00
Som Reacties			0.00	0.00	

B.C.	Oplegging	Knoop	X	Z	My
Fu.C.2	Som Lasten		0.00	0.00	
	O1	K5	0.00	0.00	0.00
	O2	K10	0.00	0.00	0.00
	O3	K15	0.00	0.00	0.00
	O4	K21	0.00	0.00	0.00
	O5	K35	0.00	0.00	0.00
Fu.C.3	Som Reacties		0.00	0.00	
	Som Lasten		0.00	0.00	
	O1	K5	0.00	0.00	0.00
	O2	K10	0.00	0.00	0.00
	O3	K15	0.00	0.00	0.00
	O4	K21	0.00	0.00	0.00
Fu.C.4	Som Reacties		0.00	0.00	
	Som Lasten		0.00	0.00	
	O1	K5	0.00	0.00	0.00
	O2	K10	0.00	0.00	0.00
	O3	K15	0.00	0.00	0.00
	O4	K21	0.00	0.00	0.00
Fu.C.5	Som Reacties		0.00	0.00	
	Som Lasten		0.00	0.00	
	O1	K5	0.00	0.00	0.00
	O2	K10	0.00	0.00	0.00
	O3	K15	0.00	0.00	0.00
	O4	K21	0.00	0.00	0.00
-	Som Reacties		0.00	0.00	
	Som Lasten		0.00	0.00	
-	-	-	kN	kN	kNm

AFB, FU,C. OPLEGREACTIES OMHULLENDE

Fundamenteel Belastingscombinaties



FU.C. STAAFKRACHTEN ANALYSE

Staaf	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve
S1	Fu.C.1	0.00			0.03	0.000	0.000 -	0.00	0.00	0.63	0.63
	Fu.C.2	0.00			-0.01	0.000	0.000 -	0.00	0.00	-0.19	-0.19
	Fu.C.3	0.00			0.03	0.000	0.000 -	0.00	0.00	0.56	0.56
	Fu.C.4	0.00			-0.02	0.000	0.000 -	0.00	0.00	-0.33	-0.33
	Fu.C.5	0.00			0.02	0.000	0.000 -	0.00	0.00	0.42	0.42
S2	Fu.C.1	0.03	-20.41	2.569	59.02	0.002	4.836 -	0.00	-15.70	46.16	46.16
	Fu.C.2	-0.01	-29.32	2.720	160.56	4.506	0.000 -	0.00	-14.71	117.98	117.98
	Fu.C.3	0.03	-18.15	2.569	52.46	0.002	4.836 -	0.00	-13.96	41.03	41.03
	Fu.C.4	-0.02	-24.80	2.720	147.45	4.466	0.000 -	0.00	-11.22	107.73	107.73

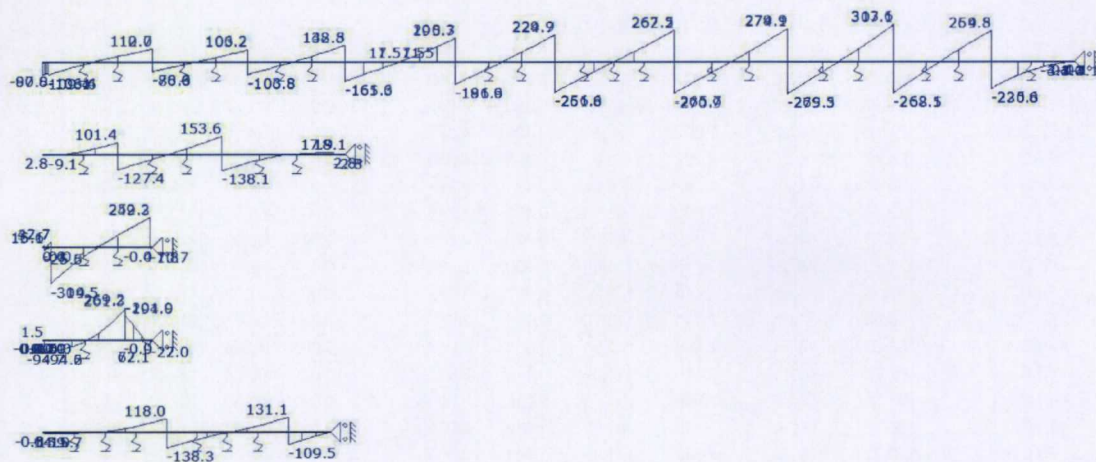
Staaf	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve
S2	Fu.C.5	0.02	-13.61	2.569	39.35	0.002	4.836 -	0.00	-10.47	30.77	30.77
S3	Fu.C.1	59.02	-24.13	3.527	39.75	1.578	5.483 -	0.00	-49.83	-49.83	43.07
	Fu.C.2	160.56	-70.50	3.476	123.97	1.526	5.440 -	0.00	-138.34	-138.34	131.07
	Fu.C.3	52.46	-21.45	3.527	35.33	1.578	5.483 -	0.00	-44.29	-44.29	38.29
	Fu.C.4	147.45	-65.14	3.476	115.14	1.521	5.437 -	0.00	-127.26	-127.26	121.50
	Fu.C.5	39.35	-16.09	3.527	26.50	1.578	5.483 -	0.00	-33.22	-33.22	28.71
S4	Fu.C.1	39.75			0.00	0.000	0.000 -	0.00	-35.23	-35.23	0.00
	Fu.C.2	123.97			0.00	0.000	0.000 -	0.00	-109.53	-109.53	0.00
	Fu.C.3	35.33			0.00	0.000	0.000 -	0.00	-31.31	-31.31	0.00
	Fu.C.4	115.14			0.00	0.000	0.000 -	0.00	-101.70	-101.70	0.00
	Fu.C.5	26.50			0.00	0.000	0.000 -	0.00	-23.49	-23.49	0.00
S5	Fu.C.1	0.00			0.04	0.000	0.000 -	0.00	0.00	1.50	1.50
	Fu.C.2	0.00			-0.03	0.000	0.000 -	0.00	0.00	-0.45	-0.09
	Fu.C.3	0.00			0.03	0.000	0.000 -	0.00	0.00	1.33	1.33
	Fu.C.4	0.00			-0.03	0.000	0.000 -	0.00	0.00	-0.60	-0.42
	Fu.C.5	0.00			0.03	0.000	0.000 -	0.00	0.00	1.00	1.00
S6	Fu.C.1	0.04	-76.03	2.478	4.65	0.001	4.397 -	0.00	-51.03	91.28	91.28
	Fu.C.2	-0.03	-151.97	2.377	94.66	4.043	0.000 -	0.00	-94.63	269.22	269.22
	Fu.C.3	0.03	-67.58	2.478	4.13	0.001	4.397 -	0.00	-45.36	81.14	81.14
	Fu.C.4	-0.03	-135.13	2.326	93.63	4.009	0.000 -	0.00	-83.29	248.93	248.93
	Fu.C.5	0.03	-50.69	2.478	3.10	0.001	4.397 -	0.00	-34.02	60.86	60.86
S7	Fu.C.1	-0.38	12.87	0.608	-4.65	0.009	1.242 -	0.00	44.41	-48.37	-48.37
	Fu.C.2	-1.15	10.24	0.338	-94.66	0.017	0.637 -	0.00	72.14	-201.94	-201.94
	Fu.C.3	-0.34	11.44	0.608	-4.13	0.009	1.242 -	0.00	39.48	-43.00	-43.00
	Fu.C.4	-1.06	8.09	0.304	-93.63	0.018	0.589 -	0.00	62.28	-191.19	-191.19
	Fu.C.5	-0.26	8.58	0.608	-3.10	0.009	1.242 -	0.00	29.61	-32.25	-32.25
S8	Fu.C.1	0.38			0.00	0.000	0.000 -	0.00	-9.27	-9.27	0.00
	Fu.C.2	1.15			0.00	0.000	0.000 -	0.00	-27.01	-27.01	0.00
	Fu.C.3	0.34			0.00	0.000	0.000 -	0.00	-8.24	-8.24	0.00
	Fu.C.4	1.06			0.00	0.000	0.000 -	0.00	-24.95	-24.95	0.00
	Fu.C.5	0.26			0.00	0.000	0.000 -	0.00	-6.18	-6.18	0.00
S9	Fu.C.1	0.00			0.43	0.000	0.000 -	0.00	0.00	9.08	9.08
	Fu.C.2	0.00			0.79	0.000	0.000 -	0.00	0.00	16.57	16.57
	Fu.C.3	0.00			0.38	0.000	0.000 -	0.00	0.00	8.07	8.07
	Fu.C.4	0.00			0.70	0.000	0.000 -	0.00	0.00	14.55	14.55
	Fu.C.5	0.00			0.29	0.000	0.000 -	0.00	0.00	6.05	6.05
S10	Fu.C.1	0.43	-3.63	0.315	-3.58	0.017	0.000 -	0.00	-26.48	-26.48	5.32
	Fu.C.2	0.79	0.07	0.096	4.97	0.000	0.000 -	0.00	-15.69	42.66	42.66
	Fu.C.3	0.38	-3.23	0.315	-3.19	0.017	0.000 -	0.00	-23.53	-23.53	4.73
	Fu.C.4	0.70	0.39	0.070	5.77	0.000	0.000 -	0.00	-9.81	41.48	41.48
	Fu.C.5	0.29	-2.42	0.315	-2.39	0.017	0.000 -	0.00	-17.65	-17.65	3.55
S11	Fu.C.1	-3.58	-162.77	2.372	0.09	5.449	0.000 -	0.00	-147.48	-147.48	93.36
	Fu.C.2	4.97	-371.87	2.574	0.41	0.016	5.448 -	0.00	-314.48	-314.48	252.16
	Fu.C.3	-3.19	-144.68	2.372	0.08	5.449	0.000 -	0.00	-131.10	-131.10	82.99
	Fu.C.4	5.77	-335.88	2.624	0.39	0.021	5.448 -	0.00	-281.70	-281.70	231.41
	Fu.C.5	-2.39	-108.51	2.372	0.06	5.449	0.000 -	0.00	-98.32	-98.32	62.24
S12	Fu.C.1	0.09			0.00	0.000	0.000 -	0.00	-2.81	-2.81	0.00
	Fu.C.2	0.41			0.00	0.000	0.000 -	0.00	-10.72	-10.72	0.00
	Fu.C.3	0.08			0.00	0.000	0.000 -	0.00	-2.49	-2.49	0.00
	Fu.C.4	0.39			0.00	0.000	0.000 -	0.00	-10.10	-10.10	0.00
	Fu.C.5	0.06			0.00	0.000	0.000 -	0.00	-1.87	-1.87	0.00
S13	Fu.C.1	0.00			0.45	0.000	0.000 -	0.00	0.00	2.60	2.60
	Fu.C.2	0.00			0.45	0.000	0.000 -	0.00	0.00	2.77	2.77
	Fu.C.3	0.00			0.40	0.000	0.000 -	0.00	0.00	2.31	2.31
	Fu.C.4	0.00			0.35	0.000	0.000 -	0.00	0.00	2.19	2.19
	Fu.C.5	0.00			0.30	0.000	0.000 -	0.00	0.00	1.73	1.73
S14	Fu.C.1	0.45	-4.40	0.990	42.67	0.050	1.907 -	0.00	-9.15	37.39	37.39
	Fu.C.2	0.45	-2.02	0.573	132.79	0.061	1.070 -	0.00	-7.67	101.36	101.36
	Fu.C.3	0.40	-3.91	0.990	37.93	0.050	1.907 -	0.00	-8.13	33.24	33.24
	Fu.C.4	0.35	-1.27	0.521	123.31	0.065	0.942 -	0.00	-5.64	93.05	93.05
	Fu.C.5	0.30	-2.93	0.990	28.45	0.050	1.907 -	0.00	-6.10	24.93	24.93
S15	Fu.C.1	42.67	-16.75	2.697	62.86	1.257	4.092 -	0.00	-44.42	54.37	54.37
	Fu.C.2	132.79	-41.50	2.748	180.86	1.398	4.034 -	0.00	-127.36	153.60	153.60
	Fu.C.3	37.93	-14.89	2.697	55.87	1.257	4.092 -	0.00	-39.48	48.33	48.33
	Fu.C.4	123.31	-37.78	2.748	166.89	1.410	4.028 -	0.00	-117.49	141.51	141.51
	Fu.C.5	28.45	-11.17	2.697	41.90	1.257	4.092 -	0.00	-29.61	36.25	36.25

Staaf	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve
S16	Fu.C.1	62.86	-18.35	3.711	0.84	1.784	6.043 -	0.00	-51.07	-51.07	14.85
	Fu.C.2	180.86	-31.11	3.711	-0.79	2.077	0.000 -	0.00	-138.12	-138.12	17.91
	Fu.C.3	55.87	-16.31	3.711	0.74	1.784	6.043 -	0.00	-45.39	-45.39	13.20
	Fu.C.4	166.89	-27.03	3.711	-0.97	2.109	0.000 -	0.00	-126.78	-126.78	14.61
	Fu.C.5	41.90	-12.23	3.711	0.56	1.784	6.043 -	0.00	-34.04	-34.04	9.90
S17	Fu.C.1	0.84			0.00	0.000	0.000 -	0.00	-2.83	-2.83	0.00
	Fu.C.2	-0.79			0.00	0.000	0.000 -	0.00	2.19	2.19	0.00
	Fu.C.3	0.74			0.00	0.000	0.000 -	0.00	-2.52	-2.52	0.00
	Fu.C.4	-0.97			0.00	0.000	0.000 -	0.00	2.82	2.82	0.00
	Fu.C.5	0.56			0.00	0.000	0.000 -	0.00	-1.89	-1.89	0.00
S18	Fu.C.1	0.00			-31.03	0.000	0.000 -	0.00	-97.92	-97.92	-77.78
	Fu.C.2	0.00			-28.62	0.000	0.000 -	0.00	-90.24	-90.24	-71.81
	Fu.C.3	0.00			-34.81	0.000	0.000 -	0.00	-109.44	-109.44	-87.80
	Fu.C.4	0.00			-23.78	0.000	0.000 -	0.00	-74.88	-74.88	-59.85
	Fu.C.5	0.00			-29.97	0.000	0.000 -	0.00	-94.08	-94.08	-75.85
S19	Fu.C.1	-31.03	-143.31	2.371	27.16	5.373	0.000 -	0.00	-100.81	103.63	103.63
	Fu.C.2	-28.62	-131.45	2.371	24.47	5.377	0.000 -	0.00	-92.32	94.78	94.78
	Fu.C.3	-34.81	-155.38	2.371	30.46	5.364	0.000 -	0.00	-108.56	112.66	112.66
	Fu.C.4	-23.78	-107.60	2.371	20.24	5.375	0.000 -	0.00	-75.33	77.63	77.63
	Fu.C.5	-29.97	-131.52	2.371	26.23	5.360	0.000 -	0.00	-91.57	95.50	95.50
S20	Fu.C.1	27.16	-59.92	2.392	71.25	0.408	4.305 -	0.00	-74.11	97.45	97.45
	Fu.C.2	24.47	-56.25	2.392	63.08	0.398	4.339 -	0.00	-68.24	89.17	89.17
	Fu.C.3	30.46	-64.43	2.392	78.68	0.421	4.291 -	0.00	-80.63	106.19	106.19
	Fu.C.4	20.24	-46.12	2.392	51.63	0.401	4.341 -	0.00	-55.99	73.11	73.11
	Fu.C.5	26.23	-54.31	2.392	67.23	0.428	4.284 -	0.00	-68.38	90.12	90.12
S21	Fu.C.1	71.25	-48.45	2.446	131.34	0.900	3.950 -	0.00	-97.66	131.73	131.73
	Fu.C.2	63.08	-46.65	2.446	123.27	0.857	3.959 -	0.00	-89.93	124.11	124.11
	Fu.C.3	78.68	-53.05	2.446	140.72	0.909	3.968 -	0.00	-106.83	142.49	142.49
	Fu.C.4	51.63	-38.74	2.446	100.93	0.851	3.967 -	0.00	-73.94	102.09	102.09
	Fu.C.5	67.23	-45.14	2.446	118.39	0.913	3.977 -	0.00	-90.84	120.47	120.47
S22	Fu.C.1	131.34	-93.39	2.945	-92.76	1.056	0.000 -	0.00	-152.53	-152.53	10.12
	Fu.C.2	123.27	-89.90	2.945	-89.27	1.042	0.000 -	0.00	-144.54	-144.54	9.82
	Fu.C.3	140.72	-102.23	2.945	-101.46	1.041	0.000 -	0.00	-165.28	-165.28	11.50
	Fu.C.4	100.93	-74.64	2.945	-74.09	1.033	0.000 -	0.00	-119.13	-119.13	8.29
	Fu.C.5	118.39	-86.97	2.945	-86.28	1.033	0.000 -	0.00	-139.88	-139.88	9.96
S23	Fu.C.1	-92.76			172.84	1.682	0.000 -	0.00	6.28	183.01	183.01
	Fu.C.2	-89.27			165.97	1.683	0.000 -	0.00	6.22	175.99	175.99
	Fu.C.3	-101.46			190.05	1.676	0.000 -	0.00	7.53	200.30	200.30
	Fu.C.4	-74.09			137.97	1.681	0.000 -	0.00	5.38	146.07	146.07
	Fu.C.5	-86.28			162.05	1.673	0.000 -	0.00	6.69	170.38	170.38
S24	Fu.C.1	172.84	-50.19	2.544	241.27	1.348	3.746 -	0.00	-175.14	210.31	210.31
	Fu.C.2	165.97	-49.59	2.544	236.12	1.333	3.749 -	0.00	-169.38	206.02	206.02
	Fu.C.3	190.05	-54.16	2.544	264.47	1.358	3.739 -	0.00	-191.56	229.89	229.89
	Fu.C.4	137.97	-41.16	2.544	196.79	1.334	3.746 -	0.00	-140.71	171.56	171.56
	Fu.C.5	162.05	-45.73	2.544	225.15	1.363	3.736 -	0.00	-162.88	195.42	195.42
S25	Fu.C.1	241.27	-139.01	3.250	247.76	1.276	5.214 -	0.00	-239.52	245.50	245.50
	Fu.C.2	236.12	-140.47	3.250	246.52	1.258	5.226 -	0.00	-236.59	246.33	246.33
	Fu.C.3	264.47	-151.30	3.250	270.33	1.280	5.213 -	0.00	-261.76	267.50	267.50
	Fu.C.4	196.79	-117.51	3.250	205.78	1.256	5.228 -	0.00	-197.32	205.85	205.85
	Fu.C.5	225.15	-128.33	3.250	229.59	1.283	5.212 -	0.00	-222.49	227.02	227.02
S26	Fu.C.1	247.76	-137.60	3.150	245.06	1.261	4.990 -	0.00	-249.06	258.56	258.56
	Fu.C.2	246.52	-144.44	3.100	258.56	1.224	4.984 -	0.00	-253.07	271.79	271.79
	Fu.C.3	270.33	-149.05	3.150	265.31	1.265	4.991 -	0.00	-270.91	279.91	279.91
	Fu.C.4	205.78	-121.51	3.100	217.67	1.219	4.983 -	0.00	-211.88	228.64	228.64
	Fu.C.5	229.59	-126.11	3.150	224.41	1.268	4.992 -	0.00	-229.71	236.76	236.76
S27	Fu.C.1	245.06	-108.79	2.796	311.90	1.250	4.339 -	0.00	-254.78	288.23	288.23
	Fu.C.2	258.56	-115.85	2.796	342.98	1.241	4.316 -	0.00	-270.07	313.62	313.62
	Fu.C.3	265.31	-117.05	2.796	336.16	1.253	4.338 -	0.00	-275.27	310.32	310.32
	Fu.C.4	217.67	-97.49	2.796	290.50	1.240	4.311 -	0.00	-227.40	265.03	265.03
	Fu.C.5	224.41	-98.70	2.796	283.68	1.255	4.337 -	0.00	-232.60	261.73	261.73
S28	Fu.C.1	311.90	9.06	2.548	346.15	0.000	0.000 -	0.00	-246.11	-246.11	238.83
	Fu.C.2	342.98	13.20	2.497	387.99	0.000	0.000 -	0.00	-268.52	-268.52	264.79
	Fu.C.3	336.16	9.14	2.548	368.20	0.000	0.000 -	0.00	-264.99	-264.99	254.86
	Fu.C.4	290.50	11.51	2.497	328.36	0.000	0.000 -	0.00	-227.04	-227.04	223.88
	Fu.C.5	283.68	7.44	2.548	308.56	0.000	0.000 -	0.00	-223.51	-223.51	213.94
S29	Fu.C.1	346.15			0.33	0.000	0.000 -	0.00	-206.97	-206.97	-2.68

Staal	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve
S29	Fu.C.2	387.99			0.38	0.000	0.000 -	0.00	-230.84	-230.84	-3.12
	Fu.C.3	368.20			0.34	0.000	0.000 -	0.00	-220.52	-220.52	-2.82
	Fu.C.4	328.36			0.32	0.000	0.000 -	0.00	-195.29	-195.29	-2.65
	Fu.C.5	308.56			0.28	0.000	0.000 -	0.00	-184.96	-184.96	-2.35
S30	Fu.C.1	0.33			0.00	0.000	0.000 -	0.00	-3.65	-3.65	0.00
	Fu.C.2	0.38			0.00	0.000	0.000 -	0.00	-4.07	-4.07	0.00
	Fu.C.3	0.34			0.00	0.000	0.000 -	0.00	-3.74	-3.74	0.00
	Fu.C.4	0.32			0.00	0.000	0.000 -	0.00	-3.41	-3.41	0.00
	Fu.C.5	0.28			0.00	0.000	0.000 -	0.00	-3.07	-3.07	0.00
-	-	kNm	kNm	m	kNm	m	m -	kN	kN	kN	kN

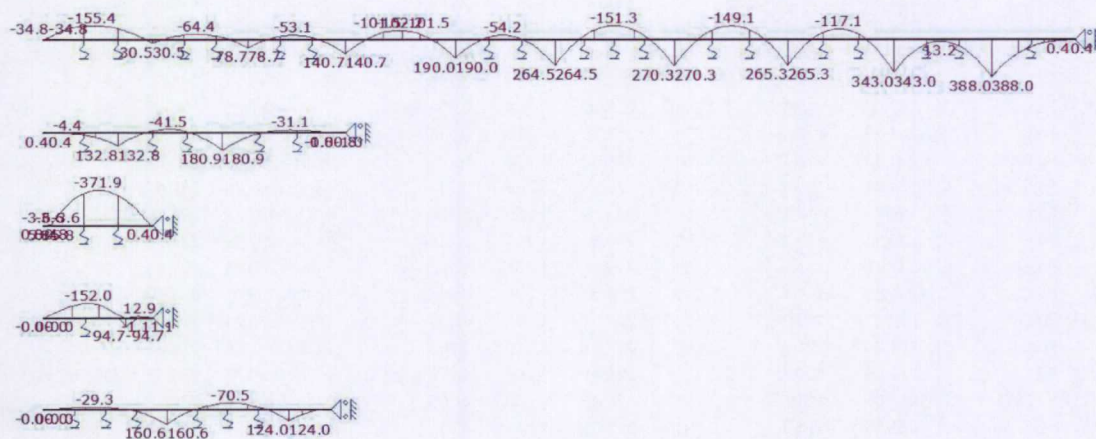
AFB. FU.C. DWARSKRACHT (VZ) OMHULLENDE

Fundamenteel Belastingscombinaties



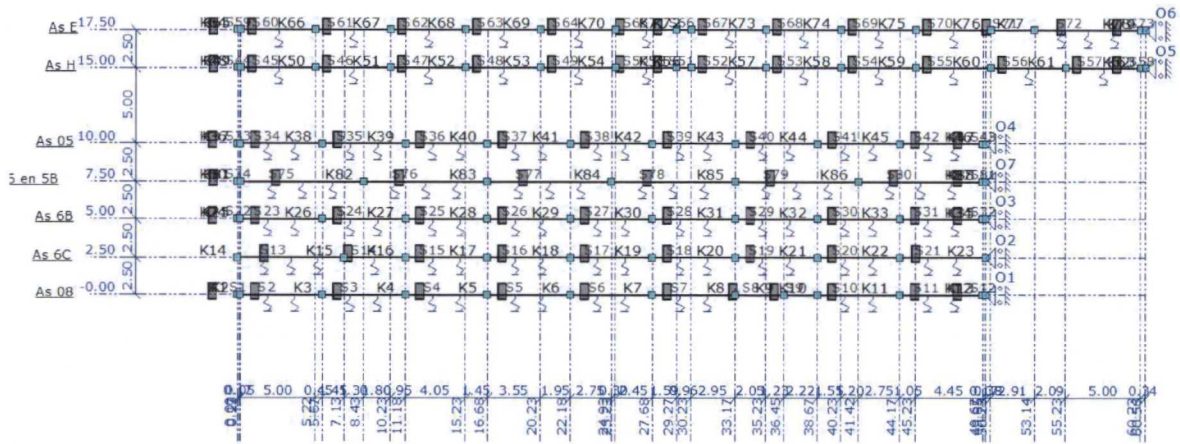
AFB. FU.C. MOMENT (MY) OMHULLENDE

Fundamenteel Belastingscombinaties



Valkenburg aan de Geul		Ingenieursbureau A. Palte BV		043 - 601 36 37	
Computerberekening					
Projectnaam	Nieuwbouw recreatiecentrum 'De Schatberg'		Projectnummer	460518	
Omschrijving	Fundering speelhal		Constructeur	DaKr	
Opdrachtgever	Janssen Wuts Architecten BV		Eenheden	m, kN, kNm	
Bestand	P:\460518\ber\460518-C - Uitvoeringsberekening wapening\460518-C-0 - Fundering speelhal.mxf				

AFB. GEOMETRIE RAAMWERK



STAVEN

Staf	Knoop B	Scharnier E	Knoop E	Profiel	X-B	Z-B	X-E	Z-E	Lengte
S1	K1	NVM	NVM	K2	P1	0.000	0.000	0.175	0.175
S2	K2	NVM	NVM	K3	P1	0.175	0.000	5.675	5.500
S3	K3	NVM	NVM	K4	P1	5.675	0.000	11.175	5.500
S4	K4	NVM	NVM	K5	P1	11.175	0.000	16.675	5.500
S5	K5	NVM	NVM	K6	P1	16.675	0.000	22.175	5.500
S6	K6	NVM	NVM	K7	P1	22.175	0.000	27.675	5.500
S7	K7	NVM	NVM	K8	P1	27.675	0.000	33.175	5.500
S8	K8	NVM	NVM	K9	P1	33.175	0.000	38.675	3.279
S9	K9	NVM	NVM	K10	P1	38.675	0.000	44.175	2.221
S10	K10	NVM	NVM	K11	P1	44.175	0.000	49.675	5.500
S11	K11	NVM	NVM	K12	P1	49.675	0.000	55.175	5.500
S12	K12	NVM	NVM	K13	P1	55.175	0.000	60.675	0.175
S13	K14	NVM	NVM	K15	P2	0.000	-2.500	7.125	7.125
S14	K15	NVM	NVM	K16	P2	7.125	-2.500	11.175	4.050
S15	K16	NVM	NVM	K17	P2	11.175	-2.500	16.675	5.500
S16	K17	NVM	NVM	K18	P2	16.675	-2.500	22.175	5.500
S17	K18	NVM	NVM	K19	P2	22.175	-2.500	27.675	5.500
S18	K19	NVM	NVM	K20	P2	27.675	-2.500	33.175	5.500
S19	K20	NVM	NVM	K21	P2	33.175	-2.500	38.675	5.500
S20	K21	NVM	NVM	K22	P2	38.675	-2.500	44.175	5.500
S21	K22	NVM	NVM	K23	P2	44.175	-2.500	49.675	5.675
S22	K24	NVM	NVM	K25	P3	0.000	-5.000	0.175	0.175
S23	K25	NVM	NVM	K26	P3	0.175	-5.000	5.675	5.500
S24	K26	NVM	NVM	K27	P3	5.675	-5.000	11.175	5.500
S25	K27	NVM	NVM	K28	P3	11.175	-5.000	16.675	5.500
S26	K28	NVM	NVM	K29	P3	16.675	-5.000	22.175	5.500
S27	K29	NVM	NVM	K30	P3	22.175	-5.000	27.675	5.500
S28	K30	NVM	NVM	K31	P3	27.675	-5.000	33.175	5.500
S29	K31	NVM	NVM	K32	P3	33.175	-5.000	38.675	5.500
S30	K32	NVM	NVM	K33	P3	38.675	-5.000	44.175	5.500
S31	K33	NVM	NVM	K34	P3	44.175	-5.000	49.675	5.500
S32	K34	NVM	NVM	K35	P3	49.675	-5.000	55.175	0.175
S33	K36	NVM	NVM	K37	P4	0.000	-10.000	0.175	0.175
S34	K37	NVM	NVM	K38	P4	0.175	-10.000	5.675	5.500
S35	K38	NVM	NVM	K39	P4	5.675	-10.000	11.175	5.500
S36	K39	NVM	NVM	K40	P4	11.175	-10.000	16.675	5.500
S37	K40	NVM	NVM	K41	P4	16.675	-10.000	22.175	5.500
S38	K41	NVM	NVM	K42	P4	22.175	-10.000	27.675	5.500
S39	K42	NVM	NVM	K43	P4	27.675	-10.000	33.175	5.500

Staaf	Knoop B	B	Scharnier E	Knoop E	Profiel	X-B	Z-B	X-E	Z-E	Lengte
S40	K43	NVM	NVM	K44	P4	33.175	-10.000	38.675	-10.000	5.500
S41	K44	NVM	NVM	K45	P4	38.675	-10.000	44.175	-10.000	5.500
S42	K45	NVM	NVM	K46	P4	44.175	-10.000	49.675	-10.000	5.500
S43	K46	NVM	NVM	K47	P4	49.675	-10.000	49.850	-10.000	0.175
S44	K48	NVM	NVM	K49	P5	0.000	-15.000	0.225	-15.000	0.225
S45	K49	NVM	NVM	K50	P5	0.225	-15.000	5.225	-15.000	5.000
S46	K50	NVM	NVM	K51	P5	5.225	-15.000	10.225	-15.000	5.000
S47	K51	NVM	NVM	K52	P5	10.225	-15.000	15.225	-15.000	5.000
S48	K52	NVM	NVM	K53	P5	15.225	-15.000	20.225	-15.000	5.000
S49	K53	NVM	NVM	K54	P5	20.225	-15.000	25.225	-15.000	5.000
S50	K54	NVM	NVM	K55	P5	25.225	-15.000	29.270	-15.000	4.045
S51	K55	NVM	NVM	K56	P5	29.270	-15.000	30.225	-15.000	0.955
S52	K56	NVM	NVM	K57	P5	30.225	-15.000	35.225	-15.000	5.000
S53	K57	NVM	NVM	K58	P5	35.225	-15.000	40.225	-15.000	5.000
S54	K58	NVM	NVM	K59	P5	40.225	-15.000	45.225	-15.000	5.000
S55	K59	NVM	NVM	K60	P5	45.225	-15.000	50.225	-15.000	5.000
S56	K60	NVM	NVM	K61	P5	50.225	-15.000	55.225	-15.000	5.000
S57	K61	NVM	NVM	K62	P5	55.225	-15.000	60.225	-15.000	5.000
S58	K62	NVM	NVM	K63	P5	60.225	-15.000	60.565	-15.000	0.340
S59	K64	NVM	NVM	K65	P6	0.000	-17.500	0.225	-17.500	0.225
S60	K65	NVM	NVM	K66	P6	0.225	-17.500	5.225	-17.500	5.000
S61	K66	NVM	NVM	K67	P6	5.225	-17.500	10.225	-17.500	5.000
S62	K67	NVM	NVM	K68	P6	10.225	-17.500	15.225	-17.500	5.000
S63	K68	NVM	NVM	K69	P6	15.225	-17.500	20.225	-17.500	5.000
S64	K69	NVM	NVM	K70	P6	20.225	-17.500	25.225	-17.500	5.000
S65	K70	NVM	NVM	K71	P6	25.225	-17.500	29.270	-17.500	4.045
S66	K71	NVM	NVM	K72	P6	29.270	-17.500	30.225	-17.500	0.955
S67	K72	NVM	NVM	K73	P6	30.225	-17.500	35.225	-17.500	5.000
S68	K73	NVM	NVM	K74	P6	35.225	-17.500	40.225	-17.500	5.000
S69	K74	NVM	NVM	K75	P6	40.225	-17.500	45.225	-17.500	5.000
S70	K75	NVM	NVM	K76	P6	45.225	-17.500	50.225	-17.500	5.000
S71	K76	NVM	NVM	K77	P6	50.225	-17.500	53.137	-17.500	2.912
S72	K77	NVM	NVM	K78	P6	53.137	-17.500	60.225	-17.500	7.088
S73	K78	NVM	NVM	K79	P6	60.225	-17.500	60.565	-17.500	0.340
S74	K80	NVM	NVM	K81	P7	0.000	-7.500	0.225	-7.500	0.225
S75	K81	NVM	NVM	K82	P7	0.225	-7.500	8.425	-7.500	8.200
S76	K82	NVM	NVM	K83	P7	8.425	-7.500	16.675	-7.500	8.250
S77	K83	NVM	NVM	K84	P7	16.675	-7.500	24.925	-7.500	8.250
S78	K84	NVM	NVM	K85	P7	24.925	-7.500	33.175	-7.500	8.250
S79	K85	NVM	NVM	K86	P7	33.175	-7.500	41.425	-7.500	8.250
S80	K86	NVM	NVM	K87	P7	41.425	-7.500	49.675	-7.500	8.250
S81	K87	NVM	NVM	K88	P7	49.675	-7.500	49.850	-7.500	0.175
-	-	-	-	-	-	m	m	m	m	m

PROFIELEN

Profiel	Profielnaam	Oppervlakte	ly Materiaal	Hoek
P1	R700x400	2.8000e-01	3.7333e-03 C20/25	0.0
P2	R800x400	3.2000e-01	4.2667e-03 C20/25	0.0
P3	R1200x400	4.8000e-01	6.4000e-03 C20/25	0.0
P4	R1750x600	1.0500e+00	3.1500e-02 C20/25	0.0
P5	R700x400	2.8000e-01	3.7333e-03 C20/25	0.0
P6	R700x400	2.8000e-01	3.7333e-03 C20/25	0.0
P7	R2750x600	1.6500e+00	4.9500e-02 C20/25	0.0
-	-	m2	m4	°

PROFIELVORMEN

Profiel	Verl. h.	hB	hE	tf	tw	tf2	B	bL	bR Raatl.	Hoogte
P1	Nee	0.400	0.400	0.000	0.000	0.000	0.700	0.000	0.000 Nee	0.000
P2	Nee	0.400	0.400	0.000	0.000	0.000	0.800	0.000	0.000 Nee	0.000
P3	Nee	0.400	0.400	0.000	0.000	0.000	1.200	0.000	0.000 Nee	0.000
P4	Nee	0.600	0.600	0.000	0.000	0.000	1.750	0.000	0.000 Nee	0.000
P5	Nee	0.400	0.400	0.000	0.000	0.000	0.700	0.000	0.000 Nee	0.000
P6	Nee	0.400	0.400	0.000	0.000	0.000	0.700	0.000	0.000 Nee	0.000
P7	Nee	0.600	0.600	0.000	0.000	0.000	2.750	0.000	0.000 Nee	0.000
-	-	m	m	m	m	m	m	m	m -	m

MATERIALEN

Materiaal	Dichtheid	E-Modulus	Uitzettingcoëff
C20/25	25.00	1.0000e+07	10.0000e-06
-	kN/m3	kN/m2	C°m

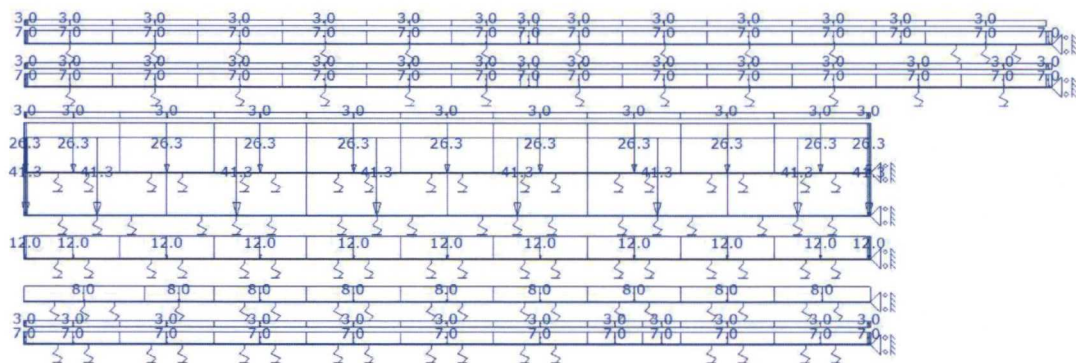
OPLEGGINGEN

Oplegging	Knoop	X	Z	Yr	HoekYr
O1	K13	vast	0.00:0.00	vrij	0
O2	K23	vast	0.00:0.00	vrij	0
O3	K35	vast	0.00:0.00	vrij	0
O4	K47	vast	0.00:0.00	vrij	0
O5	K63	vast	0.00:0.00	vrij	0
O6	K79	vast	0.00:0.00	vrij	0
O7	K88	vast	0.00:0.00	vrij	0
-	-	kN/m	kN/m	kNm/rad	°

B.G.1: EIGEN GEWICHT

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.1: Eigen Gewicht					
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	0.175(L)	Z" S1,S12
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	5.500(L)	Z" S2-S7,S10-S11
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	3.279(L)	Z" S8
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	2.221(L)	Z" S9
qG	8.00 (1.00x)	8.00 (1.00x)	0.000	7.125(L)	Z" S13
qG	8.00 (1.00x)	8.00 (1.00x)	0.000	4.050(L)	Z" S14
qG	8.00 (1.00x)	8.00 (1.00x)	0.000	5.500(L)	Z" S15-S20
qG	8.00 (1.00x)	8.00 (1.00x)	0.000	5.675(L)	Z" S21
qG	12.00 (1.00x)	12.00 (1.00x)	0.000	0.175(L)	Z" S22,S32
qG	12.00 (1.00x)	12.00 (1.00x)	0.000	5.500(L)	Z" S23-S31
qG	26.25 (1.00x)	26.25 (1.00x)	0.000	0.175(L)	Z" S33,S43
qG	26.25 (1.00x)	26.25 (1.00x)	0.000	5.500(L)	Z" S34-S42
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	0.225(L)	Z" S44,S59
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	5.000(L)	Z" S45-S49,S52-S57,S60-S64,S67-S70
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	4.045(L)	Z" S50,S65
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	0.955(L)	Z" S51,S66
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	0.340(L)	Z" S58,S73
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	2.912(L)	Z" S71
qG	7.00 (1.00x)	7.00 (1.00x)	0.000	7.088(L)	Z" S72
q	3.00	3.00	0.000	5.000(L)	Z' S1-S12,S33-S72
qG	41.25 (1.00x)	41.25 (1.00x)	0.000	0.225(L)	Z" S74
qG	41.25 (1.00x)	41.25 (1.00x)	0.000	8.200(L)	Z" S75
qG	41.25 (1.00x)	41.25 (1.00x)	0.000	8.250(L)	Z" S76-S80
qG	41.25 (1.00x)	41.25 (1.00x)	0.000	0.175(L)	Z" S81
-	-	-	m	m	- -

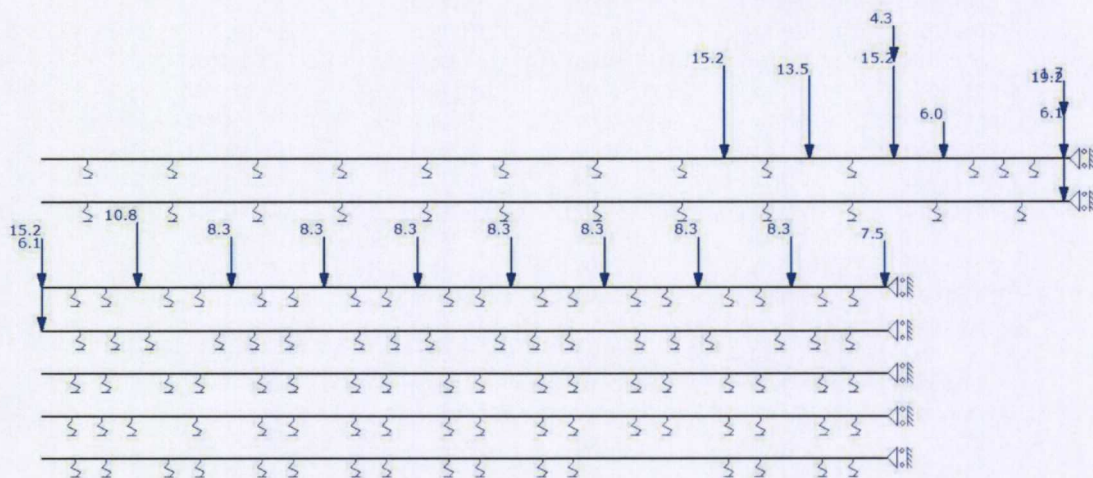
B.G.1: EIGEN GEWICHT



B.G.2: PERMANENT LHG

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.2: Permanent LHg					
N	6.11				Z K36
N	10.80				Z K38
N	8.31				Z K39-K45
N	7.54				Z K46
N	19.20				Z K62
N	15.20				Z K74,K76
N	13.50				Z K75
N	6.05				Z K77
N	4.32				Z K76
N	1.73				Z K78
N	6.11				Z K78
N	15.20				Z K80
-	-	-	m	m	- -

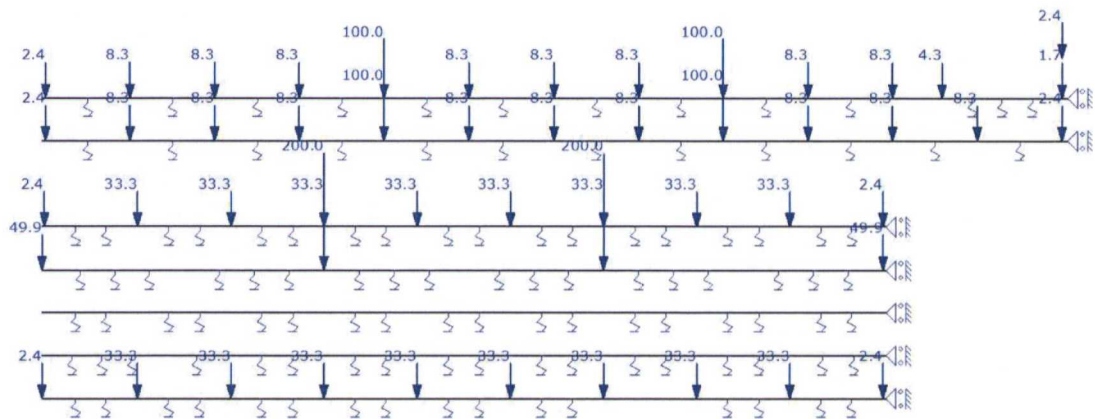
B.G.2: PERMANENT LHG



B.G.3: PERMANENT DAK

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.3: Permanent Dak					
N	2.37				Z K1,K78
N	33.30				Z K3-K8
N	33.30				Z K10-K11,K38-K45
N	2.37				Z K12,K37,K46,K49,K62,K65
N	8.31				Z K50-K52,K54,K56-K57, K66-K68,K70,K72-K73,K75-K76
N	100.00				Z K53,K58,K69,K74
N	8.31				Z K59-K61
N	4.32				Z K77
N	1.73				Z K78
N	49.90				Z K80,K87
N	200.00				Z K83,K85
-	-	-	m	m	- -

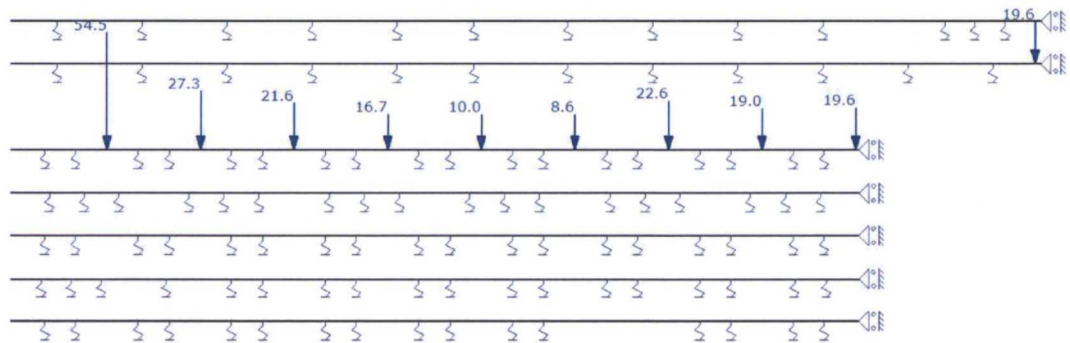
B.G.3: PERMANENT DAK



B.G.4: PERMANENT LLG

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.4: Permanent LLG					
N	54.50				Z K38
N	27.30				Z K39
N	21.60				Z K40
N	16.70				Z K41
N	10.00				Z K42
N	8.64				Z K43
N	22.60				Z K44
N	19.00				Z K45
N	19.60				Z K46,K62
-	-	-	m	m	- -

B.G.4: PERMANENT LLG

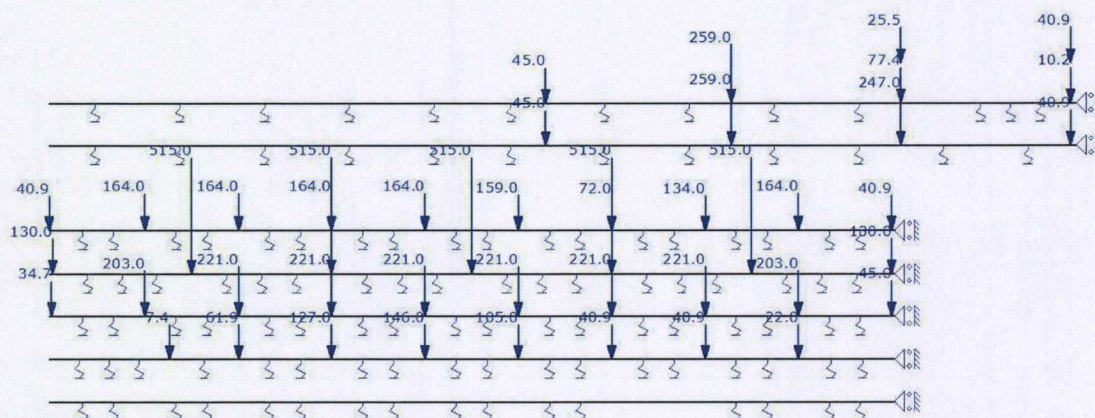


B.G.5: PERMANENT V+1

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.5: Permanent V+1					
N	7.44				Z K15
N	61.90				Z K16

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting	StAAF of knoop
B.G.5: Permanent V+1						
N	127.00					Z K17
N	146.00					Z K18
N	105.00					Z K19
N	40.90					Z K20-K21,K36,K46,K62
N	22.00					Z K22
N	34.70					Z K25
N	203.00					Z K26,K33
N	221.00					Z K27-K32
N	45.00					Z K34,K55,K71
N	164.00					Z K38-K41,K45
N	159.00					Z K42
N	72.00					Z K43
N	134.00					Z K44
N	259.00					Z K58,K74
N	247.00					Z K60
N	77.40					Z K76
N	25.50					Z K76
N	10.20					Z K78
N	40.90					Z K78
N	130.00					Z K81,K87
N	515.00					Z K82-K86
-	-	-	m	m	-	-

B.G.5: PERMANENT V+1

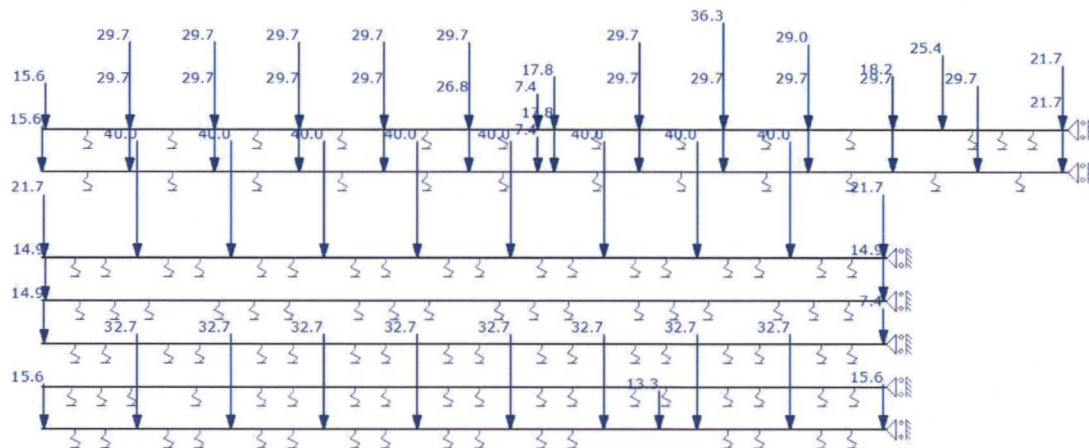


B.G.6: PERMANENT GEVEL

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting	StAAF of knoop
B.G.6: Permanent Gevel						
N	15.60					Z K2,K12,K48,K65
N	32.70					Z K3-K8,K10-K11
N	13.30					Z K9
N	14.90					Z K25
N	7.44					Z K34,K55,K71
N	21.70					Z K37,K46,K62,K78
N	40.00					Z K38-K45
N	29.70					Z K50-K53,K57-K61,K66-K69,K73
N	26.80					Z K54
N	17.80					Z K56,K72
N	29.70					Z K70

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.6: Permanent Gevel					
N	36.30				Z K74
N	29.00				Z K75
N	18.20				Z K76
N	25.40				Z K77
N	14.90				Z K81,K87
-	-	-	m	m	- -

B.G.6: PERMANENT GEVEL



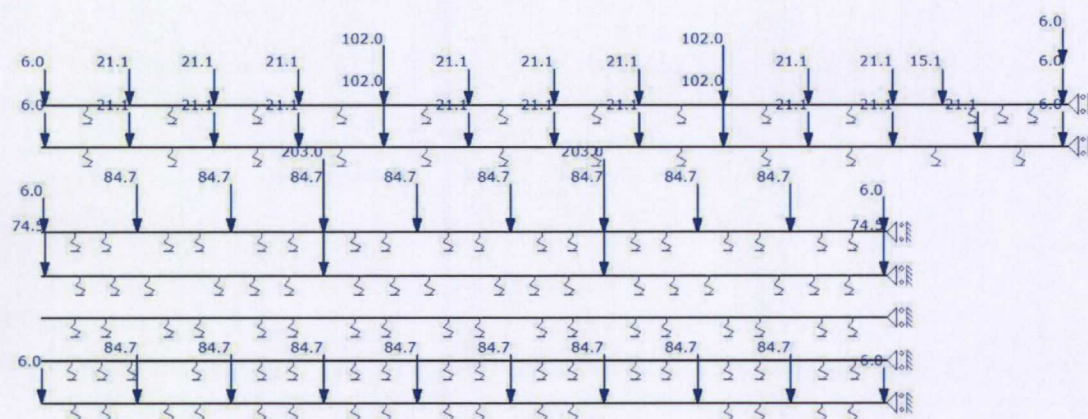
B.G.7: VERANDERLIJK LHG

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.7: Veranderlijk LHg					
N	15.50				Z K36,K79
N	27.60				Z K38
N	21.10				Z K39-K45
N	19.20				Z K46,K62
N	38.80				Z K74,K76
N	34.40				Z K75
N	15.40				Z K77
N	11.00				Z K77
N	4.40				Z K79
N	38.80				Z K81
-	-	-	m	m	- -

B.G.8: VERANDERLIJK DAK

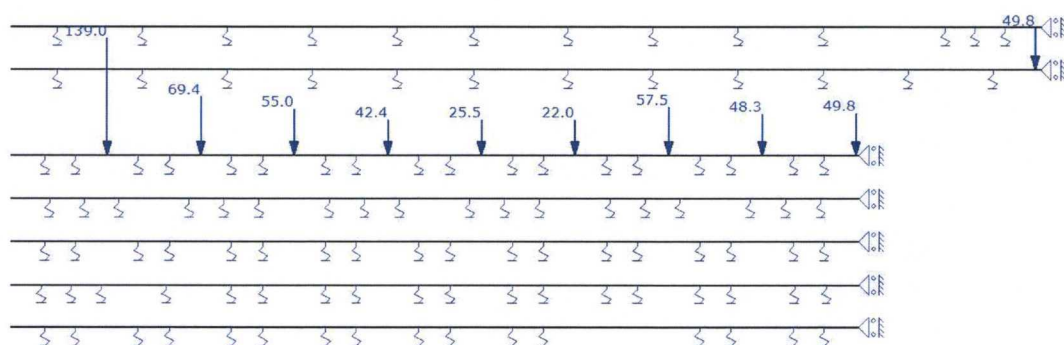
Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.8: Veranderlijk Dak					
N	6.02				Z K1,K12,K37,K46,K49,K62,K65,K78
N	84.70				Z K3-K8,K10-K11,K38-K45
N	21.10				Z K50-K52,K54,K56-K57, K59-K61,K66-K68,K70,K72-K73,K75-K76
N	102.00				Z K53,K58,K69,K74
N	15.10				Z K77
N	6.03				Z K78
N	74.50				Z K81,K87
N	203.00				Z K83,K85
-	-	-	m	m	- -

B.G.8: VERANDERLIJK DAK



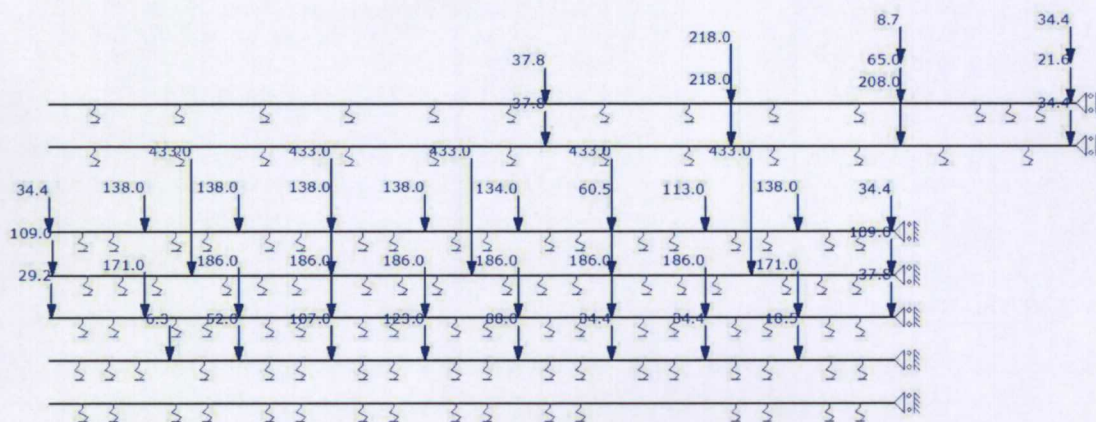
B.G.9: VERANDERLIJK LLG

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.9: Veranderlijk LLg					
N	139.00				Z K38
N	69.40				Z K39
N	55.00				Z K40
N	42.40				Z K41
N	25.50				Z K42
N	22.00				Z K43
N	57.50				Z K44
N	48.30				Z K45
N	49.80				Z K46,K62
-	-	-	m	m	- -

B.G.9: VERANDERLIJK LLG**B.G.10: VERANDERLIJK V+1**

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.10: Veranderlijk V+1					
N	6.25				Z K15
N	52.00				Z K16
N	107.00				Z K17
N	123.00				Z K18
N	88.00				Z K19
N	34.40				Z K20-K21,K36,K46,K62,K78
N	18.50				Z K22
N	29.20				Z K25
N	171.00				Z K26,K33
N	186.00				Z K27-K32
N	37.80				Z K34,K55,K71
N	138.00				Z K38-K41,K45
N	134.00				Z K42
N	60.50				Z K43
N	113.00				Z K44
N	218.00				Z K58,K74
N	208.00				Z K60
N	65.00				Z K76
N	21.60				Z K78
N	8.66				Z K76
N	109.00				Z K81,K87
N	433.00				Z K82-K86
-	-	-	m	m	- -

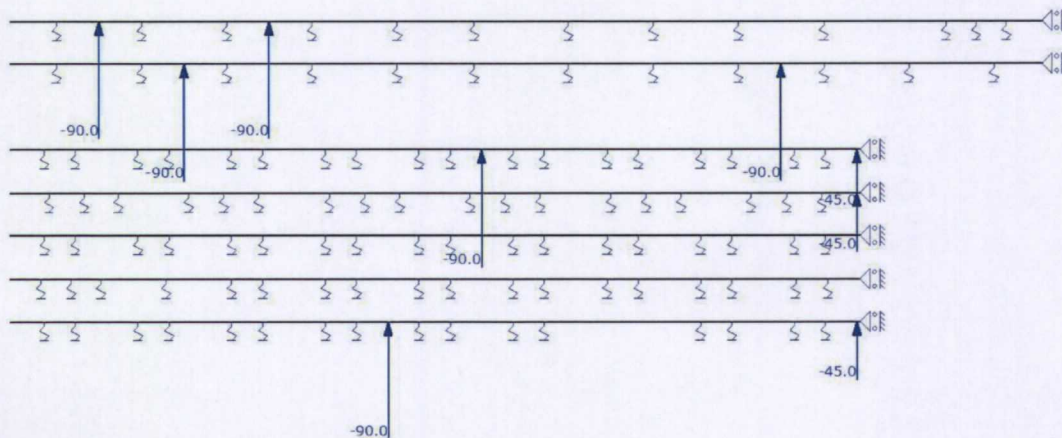
B.G.10: VERANDERLIJK V+1



B.G.11: STABILITEIT

Type	Beginwaarde	Eindwaarde	Beginafstand	Eindafstand	Richting Staaf of knoop
B.G.11: Stabiliteit					
N	-90.00				Z K6,K42,K51,K59,K66,K68
N	-45.00				Z K12,K46
N	-45.00				Z K87
-	-	-	m	m	- -

B.G.11: STABILITEIT



UITGANGSPUNTEN VAN DE ANALYSE

Geavanceerde Analyse

Trekeliminatie voor fundering(en) gebruikt

FUNDAMENTEEL BELASTINGSCOMBINATIES (TABEL)

B.G.	Omschrijving	Fu.C.1	Fu.C.2	Fu.C.3	Fu.C.4	Fu.C.5	Fu.C.6	Fu.C.7	Fu.C.8
B.G.1	Eigen Gewicht	1.35	1.20	1.20	1.20	1.20	0.90	0.90	0.90
B.G.2	Permanent LHg	1.35	1.20	1.20	1.20	1.20	0.90	0.90	0.90

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MatrixFrame® 5.3 SP2

B.G.3	Permanent Dak	1.35	1.20	1.20	1.20	1.20	0.90	0.90	0.90
B.G.4	Permanent LLg	1.35	1.20	1.20	1.20	1.20	0.90	0.90	0.90
B.G.5	Permanent V+1	1.35	1.20	1.20	1.20	1.20	0.90	0.90	0.90
B.G.6	Permanent Gevel	1.35	1.20	1.20	1.20	1.20	0.90	0.90	0.90
B.G.7	Veranderlijk LHg	-	1.50	1.50	-	-	1.50	1.50	-
B.G.8	Veranderlijk Dak	-	1.50	1.50	-	-	1.50	1.50	-
B.G.9	Veranderlijk LLg	-	1.50	1.50	-	-	1.50	1.50	-
B.G.10	Veranderlijk V+1	0.90	-	0.90	1.50	0.90	-	0.90	1.50
B.G.11	Stabiliteit	-	-	-	-	1.50	-	-	-
B.G.	Omschrijving	Fu.C.9							
B.G.1	Eigen Gewicht	0.90							
B.G.2	Permanent LHg	0.90							
B.G.3	Permanent Dak	0.90							
B.G.4	Permanent LLg	0.90							
B.G.5	Permanent V+1	0.90							
B.G.6	Permanent Gevel	0.90							
B.G.7	Veranderlijk LHg	-							
B.G.8	Veranderlijk Dak	-							
B.G.9	Veranderlijk LLg	-							
B.G.10	Veranderlijk V+1	0.90							
B.G.11	Stabiliteit	1.50							

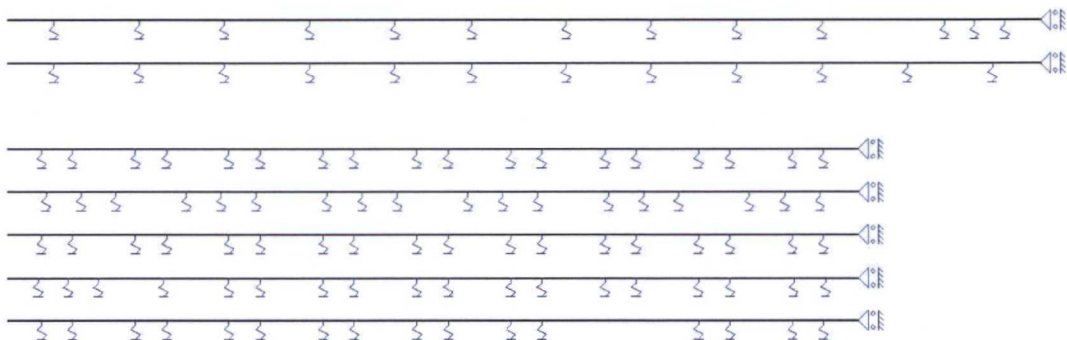
FU.C. OPLEGREACTIES ANALYSE

B.C.	Oplegging	Knoop	X	Z	My
Fu.C.1	O1	K13	0.00	0.00	0.00
	O2	K23	0.00	0.00	0.00
	O3	K35	0.00	0.00	0.00
	O4	K47	0.00	0.00	0.00
	O5	K63	0.00	0.00	0.00
	O6	K79	0.00	0.00	0.00
	O7	K88	0.00	0.00	0.00
	Som Reacties		0.00	0.00	
Som Lasten			0.00	0.00	
Fu.C.2	O1	K13	0.00	0.00	0.00
	O2	K23	0.00	0.00	0.00
	O3	K35	0.00	0.00	0.00
	O4	K47	0.00	0.00	0.00
	O5	K63	0.00	0.00	0.00
	O6	K79	0.00	0.00	0.00
	O7	K88	0.00	0.00	0.00
	Som Reacties		0.00	0.00	
Som Lasten			0.00	0.00	
Fu.C.3	O1	K13	0.00	0.00	0.00
	O2	K23	0.00	0.00	0.00
	O3	K35	0.00	0.00	0.00
	O4	K47	0.00	0.00	0.00
	O5	K63	0.00	0.00	0.00
	O6	K79	0.00	0.00	0.00
	O7	K88	0.00	0.00	0.00
	Som Reacties		0.00	0.00	
Som Lasten			0.00	0.00	
Fu.C.4	O1	K13	0.00	0.00	0.00
	O2	K23	0.00	0.00	0.00
	O3	K35	0.00	0.00	0.00
	O4	K47	0.00	0.00	0.00
	O5	K63	0.00	0.00	0.00
	O6	K79	0.00	0.00	0.00
	O7	K88	0.00	0.00	0.00
	Som Reacties		0.00	0.00	
Som Lasten			0.00	0.00	
Fu.C.5	O1	K13	0.00	0.00	0.00
	O2	K23	0.00	0.00	0.00
	O3	K35	0.00	0.00	0.00
	O4	K47	0.00	0.00	0.00
	O5	K63	0.00	0.00	0.00
	O6	K79	0.00	0.00	0.00
	O7	K88	0.00	0.00	0.00
	Som Reacties		0.00	0.00	
Som Lasten			0.00	0.00	
Fu.C.6	O1	K13	0.00	0.00	0.00

B.C.	Oplegging	Knoop	X	Z	My
Fu.C.6	O2	K23	0.00	0.00	0.00
	O3	K35	0.00	0.00	0.00
	O4	K47	0.00	0.00	0.00
	O5	K63	0.00	0.00	0.00
	O6	K79	0.00	0.00	0.00
	O7	K88	0.00	0.00	0.00
	Som Reacties		0.00	0.00	
	Som Lasten		0.00	0.00	
Fu.C.7	O1	K13	0.00	0.00	0.00
	O2	K23	0.00	0.00	0.00
	O3	K35	0.00	0.00	0.00
	O4	K47	0.00	0.00	0.00
	O5	K63	0.00	0.00	0.00
	O6	K79	0.00	0.00	0.00
	O7	K88	0.00	0.00	0.00
	Som Reacties		0.00	0.00	
	Som Lasten		0.00	0.00	
Fu.C.8	O1	K13	0.00	0.00	0.00
	O2	K23	0.00	0.00	0.00
	O3	K35	0.00	0.00	0.00
	O4	K47	0.00	0.00	0.00
	O5	K63	0.00	0.00	0.00
	O6	K79	0.00	0.00	0.00
	O7	K88	0.00	0.00	0.00
	Som Reacties		0.00	0.00	
	Som Lasten		0.00	0.00	
Fu.C.9	O1	K13	0.00	0.00	0.00
	O2	K23	0.00	0.00	0.00
	O3	K35	0.00	0.00	0.00
	O4	K47	0.00	0.00	0.00
	O5	K63	0.00	0.00	0.00
	O6	K79	0.00	0.00	0.00
	O7	K88	0.00	0.00	0.00
	Som Reacties		0.00	0.00	
	Som Lasten		0.00	0.00	
-	-	-	kN	kN	kNm

AFB. FU.C. OPLEGREACTIES OMHULLENDE

Fundamenteel Belastingscombinaties



FU.C. STAAFKRACHTEN ANALYSE

Staaf	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve
S1	Fu.C.1	0.00			-0.38	0.000	0.000 -	0.00	-3.20	-3.20	-0.54
	Fu.C.2	0.00			-1.91	0.000	0.000 -	0.00	-11.87	-11.87	-9.35
	Fu.C.3	0.00			-1.91	0.000	0.000 -	0.00	-11.87	-11.87	-9.35
	Fu.C.4	0.00			-0.34	0.000	0.000 -	0.00	-2.84	-2.84	-0.48
	Fu.C.5	0.00			-0.34	0.000	0.000 -	0.00	-2.84	-2.84	-0.49
	Fu.C.6	0.00			-1.83	0.000	0.000 -	0.00	-11.16	-11.16	-9.23

Staaf	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve
S1	Fu.C.7	0.00			-1.83	0.000	0.000 -	0.00	-11.16	-11.16	-9.23
	Fu.C.8	0.00			-0.25	0.000	0.000 -	0.00	-2.13	-2.13	-0.36
	Fu.C.9	0.00			-0.26	0.000	0.000 -	0.00	-2.13	-2.13	-0.37
S2	Fu.C.1	-0.38	-23.34	2.088	45.61	4.152	0.000 -	0.00	-22.35	45.06	45.06
	Fu.C.2	-1.91	-33.26	2.037	115.36	3.806	0.000 -	0.00	-28.77	99.53	99.53
	Fu.C.3	-1.91	-33.26	2.037	115.36	3.806	0.000 -	0.00	-28.77	99.53	99.53
	Fu.C.4	-0.34	-20.75	2.088	40.54	4.152	0.000 -	0.00	-19.86	40.05	40.05
	Fu.C.5	-0.34	-20.81	2.088	40.03	4.166	0.000 -	0.00	-19.87	39.86	39.86
	Fu.C.6	-1.83	-28.08	2.037	105.22	3.760	0.000 -	0.00	-23.80	89.52	89.52
	Fu.C.7	-1.83	-28.08	2.037	105.22	3.760	0.000 -	0.00	-23.80	89.52	89.52
	Fu.C.8	-0.25	-15.56	2.088	30.41	4.152	0.000 -	0.00	-14.90	30.04	30.04
	Fu.C.9	-0.26	-15.62	2.139	29.87	4.171	0.000 -	0.00	-14.90	29.84	29.84
S3	Fu.C.1	45.61	-16.91	2.801	40.52	1.347	4.294 -	0.00	-45.55	-45.55	44.83
	Fu.C.2	115.36	-37.92	2.852	92.93	1.434	4.301 -	0.00	-109.27	-109.27	103.14
	Fu.C.3	115.36	-37.92	2.852	92.93	1.434	4.301 -	0.00	-109.27	-109.27	103.14
	Fu.C.4	40.54	-15.03	2.801	36.01	1.347	4.294 -	0.00	-40.49	-40.49	39.85
	Fu.C.5	40.03	-15.92	2.801	36.64	1.311	4.316 -	0.00	-40.68	41.19	41.19
	Fu.C.6	105.22	-34.17	2.852	83.93	1.443	4.302 -	0.00	-99.15	-99.15	93.18
	Fu.C.7	105.22	-34.17	2.852	83.93	1.443	4.302 -	0.00	-99.15	-99.15	93.18
	Fu.C.8	30.41	-11.27	2.801	27.01	1.347	4.294 -	0.00	-30.37	-30.37	29.89
	Fu.C.9	29.87	-12.20	2.801	27.67	1.296	4.325 -	0.00	-30.57	31.30	31.30
S4	Fu.C.1	40.52	-19.91	2.750	39.90	1.156	4.354 -	0.00	-45.85	-45.85	45.40
	Fu.C.2	92.93	-46.68	2.750	92.19	1.141	4.359 -	0.00	-105.80	-105.80	104.69
	Fu.C.3	92.93	-46.68	2.750	92.19	1.141	4.359 -	0.00	-105.80	-105.80	104.69
	Fu.C.4	36.01	-17.69	2.750	35.46	1.156	4.354 -	0.00	-40.75	-40.75	40.35
	Fu.C.5	36.64	-10.54	2.495	54.59	1.299	3.695 -	0.00	-39.45	43.36	43.36
	Fu.C.6	83.93	-42.26	2.750	83.32	1.140	4.360 -	0.00	-95.61	-95.61	94.60
	Fu.C.7	83.93	-42.26	2.750	83.32	1.140	4.360 -	0.00	-95.61	-95.61	94.60
	Fu.C.8	27.01	-13.27	2.750	26.60	1.156	4.354 -	0.00	-30.57	-30.57	30.26
	Fu.C.9	27.67	-5.94	2.394	46.68	1.374	3.424 -	0.00	-29.19	33.40	33.40
S5	Fu.C.1	39.90	-19.67	2.750	40.19	1.152	4.341 -	0.00	-45.27	45.35	45.35
	Fu.C.2	92.19	-45.59	2.750	92.90	1.150	4.343 -	0.00	-104.20	104.47	104.47
	Fu.C.3	92.19	-45.59	2.750	92.90	1.150	4.343 -	0.00	-104.20	104.47	104.47
	Fu.C.4	35.46	-17.49	2.750	35.72	1.152	4.341 -	0.00	-40.24	40.31	40.31
	Fu.C.5	54.59			-63.54	2.178	0.000 -	0.00	-37.12	-37.12	-27.76
	Fu.C.6	83.32	-41.22	2.750	83.97	1.150	4.343 -	0.00	-94.14	94.39	94.39
	Fu.C.7	83.32	-41.22	2.750	83.97	1.150	4.343 -	0.00	-94.14	94.39	94.39
	Fu.C.8	26.60	-13.12	2.750	26.79	1.152	4.341 -	0.00	-30.18	30.23	30.23
	Fu.C.9	46.68			-75.88	2.464	0.000 -	0.00	-26.92	-37.76	-37.76
S6	Fu.C.1	40.19	-19.66	2.750	39.31	1.160	4.357 -	0.00	-45.31	-45.31	44.87
	Fu.C.2	92.90	-45.49	2.750	92.12	1.158	4.349 -	0.00	-104.42	-104.42	104.03
	Fu.C.3	92.90	-45.49	2.750	92.12	1.158	4.349 -	0.00	-104.42	-104.42	104.03
	Fu.C.4	35.72	-17.48	2.750	34.94	1.160	4.357 -	0.00	-40.28	-40.28	39.89
	Fu.C.5	-63.54			54.24	3.318	0.000 -	0.00	27.82	36.78	36.78
	Fu.C.6	83.97	-41.12	2.750	83.38	1.158	4.348 -	0.00	-94.35	-94.35	94.06
	Fu.C.7	83.97	-41.12	2.750	83.38	1.158	4.348 -	0.00	-94.35	-94.35	94.06
	Fu.C.8	26.79	-13.11	2.750	26.20	1.160	4.357 -	0.00	-30.21	-30.21	29.92
	Fu.C.9	-75.88			46.52	3.025	0.000 -	0.00	37.84	37.84	26.61
S7	Fu.C.1	39.31	-22.03	2.801	37.91	1.103	4.454 -	0.00	-45.79	46.62	46.62
	Fu.C.2	92.12	-47.67	2.750	90.42	1.135	4.391 -	0.00	-104.86	105.40	105.40
	Fu.C.3	92.12	-47.67	2.750	90.42	1.135	4.391 -	0.00	-104.86	105.40	105.40
	Fu.C.4	34.94	-19.58	2.801	33.70	1.103	4.454 -	0.00	-40.70	41.44	41.44
	Fu.C.5	54.24	-12.61	3.056	33.26	1.739	4.358 -	0.00	-43.69	-43.69	39.48
	Fu.C.6	83.38	-42.78	2.750	82.00	1.139	4.384 -	0.00	-94.68	95.04	95.04
	Fu.C.7	83.38	-42.78	2.750	82.00	1.139	4.384 -	0.00	-94.68	95.04	95.04
	Fu.C.8	26.20	-14.69	2.801	25.27	1.103	4.454 -	0.00	-30.52	31.08	31.08
	Fu.C.9	46.52	-8.09	3.208	23.30	1.979	4.381 -	0.00	-33.70	-33.70	28.55
S8	Fu.C.1	37.91	-12.54	2.357	-4.52	1.171	0.000 -	0.00	-44.12	-44.12	18.00
	Fu.C.2	90.42	-39.35	2.562	-30.02	1.149	0.000 -	0.00	-103.56	-103.56	28.07
	Fu.C.3	90.42	-39.35	2.562	-30.02	1.149	0.000 -	0.00	-103.56	-103.56	28.07
	Fu.C.4	33.70	-11.14	2.357	-4.02	1.171	0.000 -	0.00	-39.22	-39.22	16.00
	Fu.C.5	33.26	-15.00	2.408	-8.60	1.060	0.000 -	0.00	-41.20	-41.20	15.43
	Fu.C.6	82.00	-36.70	2.613	-29.01	1.147	0.000 -	0.00	-93.76	-93.76	24.07
	Fu.C.7	82.00	-36.70	2.613	-29.01	1.147	0.000 -	0.00	-93.76	-93.76	24.07
	Fu.C.8	25.27	-8.36	2.357	-3.01	1.171	0.000 -	0.00	-29.42	-29.42	12.00
	Fu.C.9	23.30	-14.53	2.408	-9.47	0.917	0.000 -	0.00	-31.97	-31.97	12.35

Staaf	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve
S9	Fu.C.1	-4.52	-4.54	0.050	40.77	0.737	0.000 -	0.00	1.59	42.82	42.82
	Fu.C.2	-30.02			93.11	0.991	0.000 -	0.00	9.53	103.09	103.09
	Fu.C.3	-30.02			93.11	0.991	0.000 -	0.00	9.53	103.09	103.09
	Fu.C.4	-4.02	-4.03	0.050	36.24	0.737	0.000 -	0.00	1.41	38.06	38.06
	Fu.C.5	-8.60	-8.64	0.050	32.57	1.069	0.000 -	0.00	-2.01	40.00	40.00
	Fu.C.6	-29.01			84.05	1.010	0.000 -	0.00	9.89	93.58	93.58
	Fu.C.7	-29.01			84.05	1.010	0.000 -	0.00	9.89	93.58	93.58
	Fu.C.8	-3.01	-3.02	0.050	27.18	0.737	0.000 -	0.00	1.06	28.55	28.55
	Fu.C.9	-9.47			27.16	1.156	0.000 -	0.00	0.79	35.06	35.06
S10	Fu.C.1	40.77	-19.65	2.648	44.35	1.120	4.239 -	0.00	-47.95	-47.95	46.16
	Fu.C.2	93.11	-40.43	2.648	114.37	1.163	4.101 -	0.00	-105.93	109.96	109.96
	Fu.C.3	93.11	-40.43	2.648	114.37	1.163	4.101 -	0.00	-105.93	109.96	109.96
	Fu.C.4	36.24	-17.47	2.648	39.42	1.120	4.239 -	0.00	-42.62	-42.62	41.03
	Fu.C.5	32.57	-9.35	2.139	95.95	1.111	3.120 -	0.00	-40.78	61.64	61.64
	Fu.C.6	84.05	-36.06	2.597	104.52	1.168	4.087 -	0.00	-95.27	99.70	99.70
	Fu.C.7	84.05	-36.06	2.597	104.52	1.168	4.087 -	0.00	-95.27	99.70	99.70
	Fu.C.8	27.18	-13.10	2.648	29.57	1.120	4.239 -	0.00	-31.97	-31.97	30.77
	Fu.C.9	27.16	9.14	1.426	138.52	0.000	0.000 -	0.00	-25.67	54.98	54.98
S11	Fu.C.1	44.35	-23.10	3.361	0.18	1.325	5.492 -	0.00	-44.45	-44.45	22.37
	Fu.C.2	114.37	-31.98	3.412	0.16	1.698	5.494 -	0.00	-98.84	-98.84	28.85
	Fu.C.3	114.37	-31.98	3.412	0.16	1.698	5.494 -	0.00	-98.84	-98.84	28.85
	Fu.C.4	39.42	-20.54	3.361	0.16	1.325	5.492 -	0.00	-39.51	-39.51	19.89
	Fu.C.5	95.95			-0.18	5.496	0.000 -	0.00	-18.94	-43.84	-43.84
	Fu.C.6	104.52	-26.86	3.463	0.12	1.748	5.495 -	0.00	-88.97	-88.97	23.88
	Fu.C.7	104.52	-26.86	3.463	0.12	1.748	5.495 -	0.00	-88.97	-88.97	23.88
	Fu.C.8	29.57	-15.40	3.361	0.12	1.325	5.492 -	0.00	-29.63	-29.63	14.91
	Fu.C.9	138.52			-0.14	5.497	0.000 -	0.00	-4.98	-49.75	-49.75
S12	Fu.C.1	0.18			0.00	0.000	0.000 -	0.00	-2.63	-2.63	0.00
	Fu.C.2	0.16			0.00	0.000	0.000 -	0.00	-2.43	-2.43	0.00
	Fu.C.3	0.16			0.00	0.000	0.000 -	0.00	-2.43	-2.43	0.00
	Fu.C.4	0.16			0.00	0.000	0.000 -	0.00	-2.34	-2.34	0.00
	Fu.C.5	-0.18			0.00	0.000	0.000 -	0.00	2.10	2.10	0.00
	Fu.C.6	0.12			0.00	0.000	0.000 -	0.00	-1.84	-1.84	0.00
	Fu.C.7	0.12			0.00	0.000	0.000 -	0.00	-1.84	-1.84	0.00
	Fu.C.8	0.12			0.00	0.000	0.000 -	0.00	-1.75	-1.75	0.00
	Fu.C.9	-0.14			0.00	0.000	0.000 -	0.00	1.57	1.57	0.00
S13	Fu.C.1	0.00	-15.36	6.005	-12.37	0.000	0.000 -	0.00	0.00	6.52	6.52
	Fu.C.2	0.00	-8.75	6.005	-7.05	0.000	0.000 -	0.00	0.00	3.80	3.80
	Fu.C.3	0.00	-14.27	6.005	-11.49	0.000	0.000 -	0.00	0.00	6.04	6.04
	Fu.C.4	0.00	-17.95	6.005	-14.45	0.000	0.000 -	0.00	0.00	7.54	7.54
	Fu.C.5	0.00	-14.27	6.005	-11.49	0.000	0.000 -	0.00	0.00	6.04	6.04
	Fu.C.6	0.00	-6.57	6.005	-5.29	0.000	0.000 -	0.00	0.00	2.85	2.85
	Fu.C.7	0.00	-12.08	6.005	-9.73	0.000	0.000 -	0.00	0.00	5.09	5.09
	Fu.C.8	0.00	-15.76	6.005	-12.69	0.000	0.000 -	0.00	0.00	6.58	6.58
	Fu.C.9	0.00	-12.08	6.005	-9.73	0.000	0.000 -	0.00	0.00	5.09	5.09
S14	Fu.C.1	-12.37	-17.77	1.063	54.93	2.654	0.000 -	0.00	-10.07	56.96	56.96
	Fu.C.2	-7.05	-10.12	1.063	31.32	2.653	0.000 -	0.00	-5.82	32.55	32.55
	Fu.C.3	-11.49	-16.50	1.063	51.02	2.654	0.000 -	0.00	-9.34	52.89	52.89
	Fu.C.4	-14.45	-20.76	1.063	64.15	2.654	0.000 -	0.00	-11.68	66.45	66.45
	Fu.C.5	-11.49	-16.50	1.063	51.02	2.654	0.000 -	0.00	-9.34	52.89	52.89
	Fu.C.6	-5.29	-7.59	1.063	23.49	2.653	0.000 -	0.00	-4.37	24.41	24.41
	Fu.C.7	-9.73	-13.97	1.063	43.19	2.654	0.000 -	0.00	-7.88	44.75	44.75
	Fu.C.8	-12.69	-18.23	1.063	56.31	2.654	0.000 -	0.00	-10.23	58.32	58.32
	Fu.C.9	-9.73	-13.97	1.063	43.19	2.654	0.000 -	0.00	-7.88	44.75	44.75
S15	Fu.C.1	54.93	-42.70	2.546	133.66	0.878	4.050 -	0.00	-75.27	129.71	129.71
	Fu.C.2	31.32	-24.31	2.546	76.07	0.879	4.051 -	0.00	-42.97	73.92	73.92
	Fu.C.3	51.02	-39.66	2.546	124.15	0.878	4.050 -	0.00	-69.90	120.47	120.47
	Fu.C.4	64.15	-49.90	2.546	156.21	0.878	4.050 -	0.00	-87.85	151.51	151.51
	Fu.C.5	51.02	-39.66	2.546	124.15	0.878	4.050 -	0.00	-69.90	120.47	120.47
	Fu.C.6	23.49	-18.23	2.546	57.05	0.879	4.051 -	0.00	-32.23	55.44	55.44
	Fu.C.7	43.19	-33.59	2.546	105.14	0.878	4.050 -	0.00	-59.16	101.99	101.99
	Fu.C.8	56.31	-43.82	2.546	137.20	0.877	4.050 -	0.00	-77.11	133.03	133.03
	Fu.C.9	43.19	-33.59	2.546	105.14	0.878	4.050 -	0.00	-59.16	101.99	101.99
S16	Fu.C.1	133.66	-54.30	2.699	156.48	1.249	4.146 -	0.00	-141.23	157.30	157.30
	Fu.C.2	76.07	-30.93	2.699	89.04	1.248	4.147 -	0.00	-80.47	89.62	89.62
	Fu.C.3	124.15	-50.44	2.699	145.35	1.249	4.146 -	0.00	-131.17	146.10	146.10

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Staaf	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve
S16	Fu.C.4	156.21	-63.44	2.699	182.90	1.249	4.146 -	0.00	-164.96	183.75	183.75
	Fu.C.5	124.15	-50.44	2.699	145.35	1.249	4.146 -	0.00	-131.17	146.10	146.10
	Fu.C.6	57.05	-23.19	2.699	66.78	1.248	4.147 -	0.00	-60.35	67.21	67.21
	Fu.C.7	105.14	-42.70	2.699	123.09	1.249	4.146 -	0.00	-111.05	123.69	123.69
	Fu.C.8	137.20	-55.71	2.699	160.64	1.249	4.146 -	0.00	-144.84	161.34	161.34
S17	Fu.C.9	105.14	-42.70	2.699	123.09	1.249	4.146 -	0.00	-111.05	123.69	123.69
	Fu.C.1	156.48	-51.01	2.852	105.68	1.405	4.356 -	0.00	-154.09	-154.09	118.52
	Fu.C.2	89.04	-29.05	2.852	60.32	1.404	4.355 -	0.00	-87.80	-87.80	67.67
	Fu.C.3	145.35	-47.38	2.852	98.14	1.405	4.357 -	0.00	-143.11	-143.11	110.06
	Fu.C.4	182.90	-59.60	2.852	123.35	1.405	4.357 -	0.00	-179.99	-179.99	138.33
	Fu.C.5	145.35	-47.38	2.852	98.14	1.405	4.357 -	0.00	-143.11	-143.11	110.06
	Fu.C.6	66.78	-21.78	2.852	45.24	1.404	4.355 -	0.00	-65.85	-65.85	50.75
	Fu.C.7	123.09	-40.11	2.852	83.06	1.405	4.357 -	0.00	-121.16	-121.16	93.15
	Fu.C.8	160.64	-52.33	2.852	108.27	1.405	4.357 -	0.00	-158.04	-158.04	121.41
S18	Fu.C.9	123.09	-40.11	2.852	83.06	1.405	4.357 -	0.00	-121.16	-121.16	93.15
	Fu.C.1	105.68	-40.62	3.106	19.18	1.394	5.067 -	0.00	-105.14	-105.14	49.03
	Fu.C.2	60.32	-23.15	3.157	10.90	1.395	5.068 -	0.00	-60.05	-60.05	28.02
	Fu.C.3	98.14	-37.73	3.106	17.82	1.394	5.067 -	0.00	-97.63	-97.63	45.53
	Fu.C.4	123.35	-47.45	3.106	22.43	1.393	5.067 -	0.00	-122.69	-122.69	57.21
	Fu.C.5	98.14	-37.73	3.106	17.82	1.394	5.067 -	0.00	-97.63	-97.63	45.53
	Fu.C.6	45.24	-17.36	3.157	8.18	1.395	5.068 -	0.00	-45.04	-45.04	21.01
	Fu.C.7	83.06	-31.94	3.106	15.10	1.394	5.067 -	0.00	-82.62	-82.62	38.53
	Fu.C.8	108.27	-41.66	3.106	19.71	1.393	5.067 -	0.00	-107.67	-107.67	50.20
S19	Fu.C.9	83.06	-31.94	3.106	15.10	1.394	5.067 -	0.00	-82.62	-82.62	38.53
	Fu.C.1	19.18	-24.37	2.394	44.39	0.587	4.267 -	0.00	-38.61	46.32	46.32
	Fu.C.2	10.90	-13.89	2.394	25.28	0.585	4.267 -	0.00	-22.07	26.47	26.47
	Fu.C.3	17.82	-22.64	2.394	41.23	0.587	4.267 -	0.00	-35.85	43.01	43.01
	Fu.C.4	22.43	-28.47	2.394	51.86	0.587	4.266 -	0.00	-45.03	54.04	54.04
	Fu.C.5	17.82	-22.64	2.394	41.23	0.587	4.267 -	0.00	-35.85	43.01	43.01
	Fu.C.6	8.18	-10.42	2.394	18.96	0.585	4.267 -	0.00	-16.56	19.85	19.85
	Fu.C.7	15.10	-19.16	2.394	34.91	0.587	4.266 -	0.00	-30.33	36.40	36.40
	Fu.C.8	19.71	-24.99	2.394	45.54	0.588	4.266 -	0.00	-39.51	47.42	47.42
S20	Fu.C.9	15.10	-19.16	2.394	34.91	0.587	4.266 -	0.00	-30.33	36.40	36.40
	Fu.C.1	44.39	-11.69	2.954	23.49	1.548	4.393 -	0.00	-41.21	-41.21	27.08
	Fu.C.2	25.28	-6.66	2.954	13.38	1.548	4.393 -	0.00	-23.55	-23.55	15.51
	Fu.C.3	41.23	-10.86	2.954	21.82	1.548	4.394 -	0.00	-38.26	-38.26	25.14
	Fu.C.4	51.86	-13.65	2.954	27.44	1.548	4.394 -	0.00	-48.07	-48.07	31.56
	Fu.C.5	41.23	-10.86	2.954	21.82	1.548	4.394 -	0.00	-38.26	-38.26	25.14
	Fu.C.6	18.96	-4.99	2.954	10.03	1.548	4.393 -	0.00	-17.67	-17.67	11.63
	Fu.C.7	34.91	-9.19	2.954	18.47	1.548	4.394 -	0.00	-32.37	-32.37	21.26
	Fu.C.8	45.54	-11.99	2.954	24.10	1.548	4.394 -	0.00	-42.18	-42.18	27.68
S21	Fu.C.9	34.91	-9.19	2.954	18.47	1.548	4.394 -	0.00	-32.37	-32.37	21.26
	Fu.C.1	23.49	-2.46	3.243	0.00	2.042	0.000 -	0.00	-20.29	-20.29	0.00
	Fu.C.2	13.38	-1.40	3.243	0.00	2.042	0.000 -	0.00	-11.64	-11.64	0.00
	Fu.C.3	21.82	-2.29	3.243	0.00	2.042	0.000 -	0.00	-18.83	-18.83	0.00
	Fu.C.4	27.44	-2.88	3.243	0.00	2.042	0.000 -	0.00	-23.63	-23.63	0.00
	Fu.C.5	21.82	-2.29	3.243	0.00	2.042	0.000 -	0.00	-18.83	-18.83	0.00
	Fu.C.6	10.03	-1.05	3.243	0.00	2.042	0.000 -	0.00	-8.73	-8.73	0.00
	Fu.C.7	18.47	-1.94	3.243	0.00	2.042	0.000 -	0.00	-15.92	-15.92	0.00
	Fu.C.8	24.10	-2.53	3.243	0.00	2.042	0.000 -	0.00	-20.72	-20.72	0.00
S22	Fu.C.9	18.47	-1.94	3.243	0.00	2.042	0.000 -	0.00	-15.92	-15.92	0.00
	Fu.C.1	0.00			0.61	0.000	0.000 -	0.00	0.00	8.44	8.44
	Fu.C.2	0.00			0.41	0.000	0.000 -	0.00	0.00	5.74	5.74
	Fu.C.3	0.00			0.56	0.000	0.000 -	0.00	0.00	7.72	7.72
	Fu.C.4	0.00			0.66	0.000	0.000 -	0.00	0.00	9.05	9.05
	Fu.C.5	0.00			0.56	0.000	0.000 -	0.00	0.00	7.72	7.72
	Fu.C.6	0.00			0.31	0.000	0.000 -	0.00	0.00	4.30	4.30
	Fu.C.7	0.00			0.46	0.000	0.000 -	0.00	0.00	6.29	6.29
	Fu.C.8	0.00			0.56	0.000	0.000 -	0.00	0.00	7.61	7.61
S23	Fu.C.9	0.00			0.46	0.000	0.000 -	0.00	0.00	6.29	6.29
	Fu.C.1	0.61	-91.91	2.139	222.98	0.007	4.040 -	0.00	-86.48	209.75	209.75
	Fu.C.2	0.41	-57.71	2.139	124.43	0.008	4.109 -	0.00	-55.01	120.62	120.62
	Fu.C.3	0.56	-84.70	2.088	207.42	0.007	4.034 -	0.00	-79.60	194.67	194.67
	Fu.C.4	0.66	-102.71	2.088	262.75	0.007	4.009 -	0.00	-95.99	244.04	244.04
	Fu.C.5	0.56	-84.70	2.088	207.42	0.007	4.034 -	0.00	-79.60	194.67	194.67
	Fu.C.6	0.31	-43.28	2.139	93.32	0.008	4.109 -	0.00	-41.26	90.47	90.47

Staaf	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve
S23	Fu.C.7	0.46	-70.28	2.088	176.32	0.007	4.020 -	0.00	-65.85	164.52	164.52
	Fu.C.8	0.56	-88.28	2.088	231.65	0.007	3.994 -	0.00	-82.24	213.89	213.89
	Fu.C.9	0.46	-70.28	2.088	176.32	0.007	4.020 -	0.00	-65.85	164.52	164.52
S24	Fu.C.1	222.98	-84.14	2.801	216.12	1.330	4.250 -	0.00	-223.04	231.89	231.89
	Fu.C.2	124.43	-48.22	2.801	123.29	1.311	4.248 -	0.00	-125.99	132.20	132.20
	Fu.C.3	207.42	-78.11	2.801	200.71	1.332	4.250 -	0.00	-207.29	215.37	215.37
	Fu.C.4	262.75	-98.04	2.801	252.32	1.338	4.250 -	0.00	-261.49	270.81	270.81
	Fu.C.5	207.42	-78.11	2.801	200.71	1.332	4.250 -	0.00	-207.29	215.37	215.37
	Fu.C.6	93.32	-36.17	2.801	92.47	1.311	4.248 -	0.00	-94.49	99.15	99.15
	Fu.C.7	176.32	-66.06	2.801	169.88	1.335	4.250 -	0.00	-175.79	182.32	182.32
	Fu.C.8	231.65	-85.98	2.801	221.49	1.342	4.251 -	0.00	-229.99	237.76	237.76
	Fu.C.9	176.32	-66.06	2.801	169.88	1.335	4.250 -	0.00	-175.79	182.32	182.32
S25	Fu.C.1	216.12	-102.65	2.750	208.50	1.179	4.351 -	0.00	-239.33	-239.33	235.64
	Fu.C.2	123.29	-58.29	2.750	118.76	1.182	4.350 -	0.00	-136.37	-136.37	134.28
	Fu.C.3	200.71	-95.36	2.750	193.65	1.178	4.351 -	0.00	-222.28	-222.28	218.85
	Fu.C.4	252.32	-120.08	2.750	243.58	1.177	4.351 -	0.00	-279.56	-279.56	275.24
	Fu.C.5	200.71	-95.36	2.750	193.65	1.178	4.351 -	0.00	-222.28	-222.28	218.85
	Fu.C.6	92.47	-43.72	2.750	89.07	1.182	4.350 -	0.00	-102.28	-102.28	100.71
	Fu.C.7	169.88	-80.79	2.750	163.96	1.178	4.351 -	0.00	-188.19	-188.19	185.29
	Fu.C.8	221.49	-105.51	2.750	213.89	1.177	4.351 -	0.00	-245.47	-245.47	241.67
	Fu.C.9	169.88	-80.79	2.750	163.96	1.178	4.351 -	0.00	-188.19	-188.19	185.29
S26	Fu.C.1	208.50	-103.32	2.750	209.38	1.150	4.346 -	0.00	-235.54	235.68	235.68
	Fu.C.2	118.76	-58.84	2.750	119.21	1.150	4.346 -	0.00	-134.28	134.33	134.33
	Fu.C.3	193.65	-95.97	2.750	194.48	1.149	4.346 -	0.00	-218.76	218.89	218.89
	Fu.C.4	243.58	-120.72	2.750	244.66	1.149	4.346 -	0.00	-275.08	275.26	275.26
	Fu.C.5	193.65	-95.97	2.750	194.48	1.149	4.346 -	0.00	-218.76	218.89	218.89
	Fu.C.6	89.07	-44.13	2.750	89.41	1.150	4.346 -	0.00	-100.71	100.75	100.75
	Fu.C.7	163.96	-81.26	2.750	164.68	1.149	4.346 -	0.00	-185.19	185.30	185.30
	Fu.C.8	213.89	-106.01	2.750	214.86	1.149	4.346 -	0.00	-241.50	241.67	241.67
	Fu.C.9	163.96	-81.26	2.750	164.68	1.149	4.346 -	0.00	-185.19	185.30	185.30
S27	Fu.C.1	209.38	-102.80	2.750	209.37	1.156	4.344 -	0.00	-235.49	-235.49	235.49
	Fu.C.2	119.21	-58.54	2.750	119.21	1.156	4.344 -	0.00	-134.22	-134.22	134.22
	Fu.C.3	194.48	-95.48	2.750	194.47	1.156	4.344 -	0.00	-218.72	-218.72	218.71
	Fu.C.4	244.66	-120.11	2.750	244.64	1.156	4.344 -	0.00	-275.05	-275.05	275.04
	Fu.C.5	194.48	-95.48	2.750	194.47	1.156	4.344 -	0.00	-218.72	-218.72	218.71
	Fu.C.6	89.41	-43.90	2.750	89.41	1.156	4.344 -	0.00	-100.67	-100.67	100.66
	Fu.C.7	164.68	-80.85	2.750	164.66	1.156	4.344 -	0.00	-185.16	-185.16	185.16
	Fu.C.8	214.86	-105.47	2.750	214.83	1.156	4.344 -	0.00	-241.49	-241.49	241.48
	Fu.C.9	164.68	-80.85	2.750	164.66	1.156	4.344 -	0.00	-185.16	-185.16	185.16
S28	Fu.C.1	209.37	-103.34	2.750	208.57	1.154	4.350 -	0.00	-235.68	-235.68	235.60
	Fu.C.2	119.21	-58.84	2.750	118.78	1.154	4.350 -	0.00	-134.33	-134.33	134.30
	Fu.C.3	194.47	-95.98	2.750	193.72	1.154	4.350 -	0.00	-218.89	-218.89	218.81
	Fu.C.4	244.64	-120.74	2.750	243.68	1.154	4.350 -	0.00	-275.26	-275.26	275.15
	Fu.C.5	194.47	-95.98	2.750	193.72	1.154	4.350 -	0.00	-218.89	-218.89	218.81
	Fu.C.6	89.41	-44.13	2.750	89.08	1.154	4.350 -	0.00	-100.75	-100.75	100.72
	Fu.C.7	164.66	-81.27	2.750	164.02	1.154	4.350 -	0.00	-185.31	-185.31	185.24
	Fu.C.8	214.83	-106.03	2.750	213.99	1.154	4.350 -	0.00	-241.68	-241.68	241.58
	Fu.C.9	164.66	-81.27	2.750	164.02	1.154	4.350 -	0.00	-185.31	-185.31	185.24
S29	Fu.C.1	208.57	-102.37	2.750	216.52	1.150	4.318 -	0.00	-235.59	239.26	239.26
	Fu.C.2	118.78	-58.21	2.750	123.41	1.151	4.317 -	0.00	-134.26	136.35	136.35
	Fu.C.3	193.72	-95.09	2.750	201.09	1.150	4.318 -	0.00	-218.80	222.22	222.22
	Fu.C.4	243.68	-119.68	2.750	252.88	1.150	4.319 -	0.00	-275.17	279.46	279.46
	Fu.C.5	193.72	-95.09	2.750	201.09	1.150	4.318 -	0.00	-218.80	222.22	222.22
	Fu.C.6	89.08	-43.65	2.750	92.56	1.151	4.317 -	0.00	-100.70	102.26	102.26
	Fu.C.7	164.02	-80.54	2.750	170.24	1.150	4.319 -	0.00	-185.24	188.13	188.13
	Fu.C.8	213.99	-105.13	2.750	222.03	1.150	4.319 -	0.00	-241.60	245.37	245.37
	Fu.C.9	164.02	-80.54	2.750	170.24	1.150	4.319 -	0.00	-185.24	188.13	188.13
S30	Fu.C.1	216.52	-84.71	2.699	218.52	1.252	4.189 -	0.00	-231.95	-231.95	221.05
	Fu.C.2	123.41	-48.39	2.699	123.12	1.253	4.198 -	0.00	-132.22	-132.22	125.40
	Fu.C.3	201.09	-78.66	2.699	203.13	1.252	4.188 -	0.00	-215.43	-215.43	205.38
	Fu.C.4	252.88	-98.84	2.699	256.47	1.252	4.185 -	0.00	-270.89	-270.89	258.69
	Fu.C.5	201.09	-78.66	2.699	203.13	1.252	4.188 -	0.00	-215.43	-215.43	205.38
	Fu.C.6	92.56	-36.29	2.699	92.34	1.253	4.198 -	0.00	-99.17	-99.17	94.05
	Fu.C.7	170.24	-66.56	2.699	172.35	1.252	4.186 -	0.00	-182.37	-182.37	174.03
	Fu.C.8	222.03	-86.74	2.699	225.69	1.251	4.183 -	0.00	-237.84	-237.84	227.34
	Fu.C.9	170.24	-66.56	2.699	172.35	1.252	4.186 -	0.00	-182.37	-182.37	174.03

Staaf	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve
S31	Fu.C.1	218.52	-101.58	3.361	0.72	1.389	5.492 -	0.00	-211.72	-211.72	96.82
	Fu.C.2	123.12	-60.55	3.361	0.44	1.356	5.492 -	0.00	-121.20	-121.20	58.06
	Fu.C.3	203.13	-94.01	3.361	0.67	1.392	5.492 -	0.00	-196.57	-196.57	89.57
	Fu.C.4	256.47	-116.32	3.361	0.82	1.404	5.492 -	0.00	-246.82	-246.82	110.57
	Fu.C.5	203.13	-94.01	3.361	0.67	1.392	5.492 -	0.00	-196.57	-196.57	89.57
	Fu.C.6	92.34	-45.42	3.361	0.33	1.356	5.492 -	0.00	-90.90	-90.90	43.54
	Fu.C.7	172.35	-78.88	3.361	0.56	1.399	5.492 -	0.00	-166.27	-166.27	75.05
	Fu.C.8	225.69	-101.18	3.361	0.71	1.411	5.493 -	0.00	-216.52	-216.52	96.06
	Fu.C.9	172.35	-78.88	3.361	0.56	1.399	5.492 -	0.00	-166.27	-166.27	75.05
S32	Fu.C.1	0.72			0.00	0.000	0.000 -	0.00	-9.88	-9.88	0.00
	Fu.C.2	0.44			0.00	0.000	0.000 -	0.00	-6.16	-6.16	0.00
	Fu.C.3	0.67			0.00	0.000	0.000 -	0.00	-9.11	-9.11	0.00
	Fu.C.4	0.82			0.00	0.000	0.000 -	0.00	-11.07	-11.07	0.00
	Fu.C.5	0.67			0.00	0.000	0.000 -	0.00	-9.11	-9.11	0.00
	Fu.C.6	0.33			0.00	0.000	0.000 -	0.00	-4.62	-4.62	0.00
	Fu.C.7	0.56			0.00	0.000	0.000 -	0.00	-7.57	-7.57	0.00
	Fu.C.8	0.71			0.00	0.000	0.000 -	0.00	-9.53	-9.53	0.00
	Fu.C.9	0.56			0.00	0.000	0.000 -	0.00	-7.57	-7.57	0.00
S33	Fu.C.1	0.00			-15.65	0.000	0.000 -	0.00	-94.42	-94.42	-81.90
	Fu.C.2	0.00			-13.12	0.000	0.000 -	0.00	-79.66	-79.66	-67.94
	Fu.C.3	0.00			-18.32	0.000	0.000 -	0.00	-110.62	-110.62	-96.10
	Fu.C.4	0.00			-17.96	0.000	0.000 -	0.00	-108.01	-108.01	-94.71
	Fu.C.5	0.00			-14.49	0.000	0.000 -	0.00	-87.37	-87.37	-75.94
	Fu.C.6	0.00			-10.80	0.000	0.000 -	0.00	-65.56	-65.56	-55.99
	Fu.C.7	0.00			-16.00	0.000	0.000 -	0.00	-96.52	-96.52	-84.16
	Fu.C.8	0.00			-15.64	0.000	0.000 -	0.00	-93.91	-93.91	-82.77
	Fu.C.9	0.00			-12.17	0.000	0.000 -	0.00	-73.27	-73.27	-64.00
S34	Fu.C.1	-15.65	-130.86	1.935	322.87	3.903	0.000 -	0.00	-117.29	272.92	272.92
	Fu.C.2	-13.12	-109.76	1.731	526.15	3.373	0.000 -	0.00	-108.53	369.47	369.47
	Fu.C.3	-18.32	-143.05	1.731	597.56	3.482	0.000 -	0.00	-137.11	433.04	433.04
	Fu.C.4	-17.96	-142.55	1.935	342.53	3.923	0.000 -	0.00	-126.49	292.03	292.03
	Fu.C.5	-14.49	-120.18	1.935	294.22	3.910	0.000 -	0.00	-107.45	249.45	249.45
	Fu.C.6	-10.80	-88.49	1.681	470.27	3.290	0.000 -	0.00	-88.82	322.95	322.95
	Fu.C.7	-16.00	-121.68	1.731	541.68	3.431	0.000 -	0.00	-117.40	386.52	386.52
	Fu.C.8	-15.64	-120.96	1.935	286.65	3.934	0.000 -	0.00	-106.78	245.51	245.51
	Fu.C.9	-12.17	-98.59	1.935	238.34	3.919	0.000 -	0.00	-87.73	202.92	202.92
S35	Fu.C.1	322.87	-64.54	2.954	238.08	1.738	4.124 -	0.00	-266.26	-266.26	240.97
	Fu.C.2	526.15	-59.09	3.106	273.81	2.132	4.127 -	0.00	-378.38	-378.38	284.29
	Fu.C.3	597.56	-75.16	3.106	335.33	2.053	4.120 -	0.00	-440.07	-440.07	344.86
	Fu.C.4	342.53	-70.35	2.903	259.47	1.718	4.117 -	0.00	-284.65	-284.65	261.30
	Fu.C.5	294.22	-60.41	2.954	217.82	1.724	4.134 -	0.00	-243.74	-243.74	221.51
	Fu.C.6	470.27	-48.73	3.157	234.58	2.184	4.126 -	0.00	-332.92	-332.92	244.20
	Fu.C.7	541.68	-64.68	3.106	296.10	2.087	4.118 -	0.00	-394.61	-394.61	304.77
	Fu.C.8	286.65	-59.73	2.903	220.24	1.707	4.114 -	0.00	-239.19	-239.19	221.21
	Fu.C.9	238.34	-49.77	2.903	178.59	1.713	4.134 -	0.00	-198.28	-198.28	181.43
S36	Fu.C.1	238.08	-113.66	2.801	216.01	1.196	4.383 -	0.00	-258.47	-258.47	247.52
	Fu.C.2	273.81	-149.18	2.801	241.01	1.117	4.461 -	0.00	-313.76	-313.76	290.30
	Fu.C.3	335.33	-176.76	2.801	297.03	1.137	4.442 -	0.00	-378.58	-378.58	353.12
	Fu.C.4	259.47	-122.48	2.801	235.59	1.203	4.377 -	0.00	-280.16	-280.16	268.88
	Fu.C.5	217.82	-101.25	2.750	209.38	1.200	4.328 -	0.00	-236.38	-236.38	231.00
	Fu.C.6	234.58	-130.05	2.801	205.45	1.107	4.472 -	0.00	-270.73	-270.73	249.26
	Fu.C.7	296.10	-157.63	2.801	261.48	1.131	4.449 -	0.00	-335.55	-335.55	312.07
	Fu.C.8	220.24	-103.35	2.801	200.04	1.206	4.374 -	0.00	-237.13	-237.13	227.83
	Fu.C.9	178.59	-82.13	2.750	173.83	1.204	4.314 -	0.00	-193.34	-193.34	189.96
S37	Fu.C.1	216.01	-106.82	2.699	234.69	1.144	4.272 -	0.00	-244.07	249.02	249.02
	Fu.C.2	241.01	-127.13	2.699	254.67	1.110	4.322 -	0.00	-278.70	-278.70	277.83
	Fu.C.3	297.03	-154.06	2.699	317.22	1.118	4.306 -	0.00	-341.27	342.67	342.67
	Fu.C.4	235.59	-115.90	2.699	257.26	1.146	4.266 -	0.00	-265.62	271.78	271.78
	Fu.C.5	209.38	-75.07	2.648	242.52	1.283	4.035 -	0.00	-219.93	225.18	225.18
	Fu.C.6	205.45	-109.37	2.699	216.41	1.105	4.328 -	0.00	-238.36	-238.36	236.90
	Fu.C.7	261.48	-136.31	2.699	278.96	1.115	4.309 -	0.00	-300.94	301.74	301.74
	Fu.C.8	200.04	-98.15	2.699	219.01	1.147	4.263 -	0.00	-225.28	230.85	230.85
	Fu.C.9	173.83	-57.34	2.648	204.27	1.318	3.976 -	0.00	-179.60	184.25	184.25
S38	Fu.C.1	234.69	-75.59	2.699	242.58	1.361	4.063 -	0.00	-235.84	-235.84	229.23
	Fu.C.2	254.67	-102.96	2.750	234.68	1.271	4.273 -	0.00	-266.06	-266.06	249.28
	Fu.C.3	317.22	-119.25	2.750	303.01	1.301	4.206 -	0.00	-326.61	-326.61	309.00

Staaf	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve
S38	Fu.C.4	257.26	-79.90	2.699	268.77	1.375	4.035 -	0.00	-256.73	-256.73	250.21
	Fu.C.5	242.52	-82.17	3.106	87.98	1.516	4.761 -	0.00	-219.48	-219.48	142.11
	Fu.C.6	216.41	-89.80	2.750	195.96	1.261	4.300 -	0.00	-227.11	-227.11	211.61
	Fu.C.7	278.96	-106.09	2.750	264.29	1.296	4.219 -	0.00	-287.66	-287.66	271.33
	Fu.C.8	219.01	-66.74	2.699	230.05	1.383	4.020 -	0.00	-217.78	-217.78	212.54
S39	Fu.C.9	204.27	-70.34	3.208	49.26	1.554	4.960 -	0.00	-180.53	-180.53	104.44
	Fu.C.1	242.58	-124.46	3.259	28.39	1.339	5.282 -	0.00	-235.72	-235.72	139.36
	Fu.C.2	234.68	-136.23	3.005	105.25	1.172	4.882 -	0.00	-254.72	-254.72	197.81
	Fu.C.3	303.01	-169.14	3.106	97.07	1.225	5.013 -	0.00	-316.62	-316.62	225.15
	Fu.C.4	268.77	-137.28	3.310	18.87	1.358	5.363 -	0.00	-257.67	-257.67	145.14
S40	Fu.C.5	87.98	-117.41	2.903	47.81	0.689	5.092 -	0.00	-148.83	-148.83	129.72
	Fu.C.6	195.96	-116.32	3.005	97.12	1.150	4.844 -	0.00	-216.09	-216.09	172.91
	Fu.C.7	264.29	-149.08	3.106	88.94	1.215	4.997 -	0.00	-277.99	-277.99	200.26
	Fu.C.8	230.05	-117.29	3.361	10.74	1.368	5.407 -	0.00	-219.05	-219.05	120.25
	Fu.C.9	49.26	-98.02	2.801	39.69	0.503	5.081 -	0.00	-110.20	-110.20	104.83
S41	Fu.C.1	28.39	-125.70	2.241	221.33	0.218	4.233 -	0.00	-139.24	-139.24	224.05
	Fu.C.2	105.25	-125.12	2.394	283.71	0.633	4.133 -	0.00	-194.42	-194.42	273.59
	Fu.C.3	97.07	-160.58	2.343	337.15	0.495	4.159 -	0.00	-222.21	-222.21	328.47
	Fu.C.4	18.87	-139.69	2.190	238.30	0.136	4.241 -	0.00	-145.38	-145.38	241.84
	Fu.C.5	47.81	-93.74	2.292	219.61	0.433	4.081 -	0.00	-123.80	-123.80	206.47
S42	Fu.C.6	97.12	-105.18	2.394	246.40	0.675	4.120 -	0.00	-169.66	-169.66	236.00
	Fu.C.7	88.94	-140.61	2.343	299.83	0.512	4.152 -	0.00	-197.45	-197.45	290.87
	Fu.C.8	10.74	-119.79	2.190	200.99	0.093	4.245 -	0.00	-120.62	-120.62	204.24
	Fu.C.9	39.69	-73.77	2.292	182.30	0.450	4.048 -	0.00	-99.03	-99.03	168.88
	Fu.C.1	221.33	-46.74	2.648	276.15	1.540	3.733 -	0.00	-205.06	-205.06	230.40
S43	Fu.C.2	283.71	-79.72	2.801	259.83	1.485	4.110 -	0.00	-263.74	-263.74	255.72
	Fu.C.3	337.15	-85.79	2.750	341.72	1.511	3.985 -	0.00	-311.49	-311.49	316.15
	Fu.C.4	238.30	-46.66	2.597	309.15	1.561	3.667 -	0.00	-219.41	-219.41	251.79
	Fu.C.5	219.61	-13.44	2.546	315.19	1.919	3.126 -	0.00	-186.49	-186.49	223.31
	Fu.C.6	246.40	-70.87	2.801	216.66	1.483	4.152 -	0.00	-228.78	-228.78	217.95
S44	Fu.C.7	299.83	-76.87	2.750	298.55	1.511	4.002 -	0.00	-276.53	-276.53	278.37
	Fu.C.8	200.99	-37.76	2.597	265.98	1.573	3.632 -	0.00	-184.45	-184.45	214.02
	Fu.C.9	182.30	-4.71	2.495	272.02	2.096	2.882 -	0.00	-151.53	-151.53	185.54
	Fu.C.1	276.15	-146.56	3.412	1.08	1.385	5.492 -	0.00	-257.12	-257.12	143.46
	Fu.C.2	259.83	-220.88	3.310	1.54	1.051	5.492 -	0.00	-299.54	-299.54	206.11
S45	Fu.C.3	341.72	-247.93	3.310	1.76	1.159	5.492 -	0.00	-364.35	-364.35	234.65
	Fu.C.4	309.15	-151.63	3.463	1.13	1.444	5.492 -	0.00	-278.96	-278.96	149.72
	Fu.C.5	315.19	-63.13	3.718	0.49	2.118	5.493 -	0.00	-223.90	-223.90	68.63
	Fu.C.6	216.66	-194.46	3.259	1.35	1.015	5.492 -	0.00	-256.80	-256.80	180.57
	Fu.C.7	298.55	-221.47	3.310	1.56	1.143	5.492 -	0.00	-321.61	-321.61	209.11
S46	Fu.C.8	265.98	-125.18	3.463	0.94	1.475	5.492 -	0.00	-236.23	-236.23	124.18
	Fu.C.9	272.02	-37.60	3.870	0.30	2.399	5.493 -	0.00	-181.17	-181.17	43.09
	Fu.C.1	1.08			0.00	0.000	0.000 -	0.00	-15.13	-15.13	0.00
	Fu.C.2	1.54			0.00	0.000	0.000 -	0.00	-20.98	-20.98	0.00
	Fu.C.3	1.76			0.00	0.000	0.000 -	0.00	-23.82	-23.82	0.00
S47	Fu.C.4	1.13			0.00	0.000	0.000 -	0.00	-15.66	-15.66	0.00
	Fu.C.5	0.49			0.00	0.000	0.000 -	0.00	-7.39	-7.39	0.00
	Fu.C.6	1.35			0.00	0.000	0.000 -	0.00	-18.25	-18.25	0.00
	Fu.C.7	1.56			0.00	0.000	0.000 -	0.00	-21.09	-21.09	0.00
	Fu.C.8	0.94			0.00	0.000	0.000 -	0.00	-12.93	-12.93	0.00
S48	Fu.C.9	0.30			0.00	0.000	0.000 -	0.00	-4.66	-4.66	0.00
	Fu.C.1	0.00			-4.38	0.000	0.000 -	0.00	-21.06	-21.06	-17.24
	Fu.C.2	0.00			-3.78	0.000	0.000 -	0.00	-18.72	-18.72	-14.22
	Fu.C.3	0.00			-3.78	0.000	0.000 -	0.00	-18.72	-18.72	-14.23
	Fu.C.4	0.00			-3.90	0.000	0.000 -	0.00	-18.72	-18.72	-15.33
S49	Fu.C.5	0.00			-3.83	0.000	0.000 -	0.00	-18.72	-18.72	-14.65
	Fu.C.6	0.00			-2.81	0.000	0.000 -	0.00	-14.04	-14.04	-10.39
	Fu.C.7	0.00			-2.81	0.000	0.000 -	0.00	-14.04	-14.04	-10.39
	Fu.C.8	0.00			-2.92	0.000	0.000 -	0.00	-14.04	-14.04	-11.50
	Fu.C.9	0.00			-2.82	0.000	0.000 -	0.00	-14.04	-14.04	-10.46
S50	Fu.C.1	-4.38	-23.01	1.900	20.16	4.162	0.000 -	0.00	-21.20	28.60	28.60
	Fu.C.2	-3.78	-27.90	1.900	33.73	4.001	0.000 -	0.00	-26.89	41.55	41.55
	Fu.C.3	-3.78	-27.90	1.900	33.73	4.001	0.000 -	0.00	-26.89	41.55	41.55
	Fu.C.4	-3.90	-20.46	1.900	17.92	4.163	0.000 -	0.00	-18.84	25.42	25.42
	Fu.C.5	-3.83	-16.23	1.450	37.77	3.304	0.000 -	0.00	-18.24	27.59	27.59
S51	Fu.C.6	-2.81	-22.79	1.900	29.25	3.969	0.000 -	0.00	-22.18	35.19	35.19

Staaf	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve
S45	Fu.C.7	-2.81	-22.79	1.900	29.24	3.970	0.000 -	0.00	-22.18	35.19	35.19
	Fu.C.8	-2.92	-15.34	1.900	13.44	4.163	0.000 -	0.00	-14.13	19.06	19.06
	Fu.C.9	-2.82	-10.01	1.150	40.70	2.679	0.000 -	0.00	-13.21	20.62	20.62
S46	Fu.C.1	20.16	-8.74	2.500	19.93	1.123	3.897 -	0.00	-23.87	24.05	24.05
	Fu.C.2	33.73	-12.39	2.550	28.92	1.229	3.908 -	0.00	-37.04	-37.04	35.11
	Fu.C.3	33.73	-12.39	2.550	28.95	1.229	3.908 -	0.00	-37.04	-37.04	35.13
	Fu.C.4	17.92	-7.77	2.500	17.74	1.123	3.896 -	0.00	-21.22	21.39	21.39
	Fu.C.5	37.77			-84.19	2.290	0.000 -	0.00	-18.85	-46.61	-46.61
	Fu.C.6	29.25	-10.45	2.600	24.50	1.247	3.910 -	0.00	-31.73	-31.73	29.77
	Fu.C.7	29.24	-10.45	2.600	24.53	1.246	3.910 -	0.00	-31.74	-31.74	29.79
	Fu.C.8	13.44	-5.83	2.500	13.32	1.123	3.896 -	0.00	-15.91	16.05	16.05
	Fu.C.9	40.70			-108.46	2.225	0.000 -	0.00	-14.03	-51.57	-51.57
S47	Fu.C.1	19.93	-20.55	2.900	3.00	0.840	4.871 -	0.00	-28.43	-28.43	24.86
	Fu.C.2	28.92	-35.80	3.050	-2.86	0.778	0.000 -	0.00	-43.49	-43.49	36.75
	Fu.C.3	28.95	-35.66	3.050	-2.67	0.780	0.000 -	0.00	-43.46	-43.46	36.75
	Fu.C.4	17.74	-18.17	2.900	2.81	0.842	4.864 -	0.00	-25.26	-25.26	22.09
	Fu.C.5	-84.19			23.83	3.445	0.000 -	0.00	42.78	42.78	20.35
	Fu.C.6	24.50	-31.22	3.050	-3.48	0.768	0.000 -	0.00	-37.16	-37.16	31.23
	Fu.C.7	24.53	-31.08	3.050	-3.30	0.770	0.000 -	0.00	-37.14	-37.14	31.22
	Fu.C.8	13.32	-13.57	2.900	2.19	0.844	4.858 -	0.00	-18.93	-18.93	16.57
	Fu.C.9	-108.46			31.48	3.059	0.000 -	0.00	49.22	49.22	15.41
S48	Fu.C.1	3.00	-20.79	1.650	109.37	0.114	3.089 -	0.00	-27.83	86.88	86.88
	Fu.C.2	-2.86	-36.98	1.550	200.53	3.022	0.000 -	0.00	-42.23	155.10	155.10
	Fu.C.3	-2.67	-36.88	1.550	199.36	3.026	0.000 -	0.00	-42.23	154.40	154.40
	Fu.C.4	2.81	-18.41	1.700	96.31	0.120	3.095 -	0.00	-24.74	76.69	76.69
	Fu.C.5	23.83	-4.07	1.950	99.57	1.246	2.606 -	0.00	-26.29	74.92	74.92
	Fu.C.6	-3.48	-32.37	1.550	175.97	3.013	0.000 -	0.00	-36.05	135.64	135.64
	Fu.C.7	-3.30	-32.26	1.550	174.80	3.018	0.000 -	0.00	-36.05	134.94	134.94
	Fu.C.8	2.19	-13.77	1.700	71.75	0.125	3.099 -	0.00	-18.55	57.23	57.23
	Fu.C.9	31.48	6.68	2.150	76.65	0.000	0.000 -	0.00	-19.40	54.32	54.32
S49	Fu.C.1	109.37	-32.04	3.450	-9.51	1.727	0.000 -	0.00	-90.45	-90.45	29.45
	Fu.C.2	200.53	-42.87	3.500	-9.56	1.915	0.000 -	0.00	-156.90	-156.90	42.85
	Fu.C.3	199.36	-46.94	3.500	-13.43	1.869	0.000 -	0.00	-157.59	-157.59	43.94
	Fu.C.4	96.31	-31.62	3.500	-11.46	1.670	0.000 -	0.00	-80.93	-80.93	27.03
	Fu.C.5	99.57	-29.81	3.450	-9.75	1.715	0.000 -	0.00	-82.75	-82.75	26.40
	Fu.C.6	175.97	-36.66	3.500	-8.30	1.933	0.000 -	0.00	-136.95	-136.95	36.55
	Fu.C.7	174.80	-40.73	3.500	-12.17	1.879	0.000 -	0.00	-137.64	-137.64	37.64
	Fu.C.8	71.75	-25.41	3.500	-10.21	1.633	0.000 -	0.00	-60.98	-60.98	20.73
	Fu.C.9	76.65	-23.90	3.500	-8.85	1.699	0.000 -	0.00	-63.97	-63.97	20.13
S50	Fu.C.1	-9.51	-19.37	1.062	65.87	2.504	0.000 -	0.00	-19.52	59.19	59.19
	Fu.C.2	-9.56	-31.94	1.466	33.11	3.266	0.000 -	0.00	-32.76	50.37	50.37
	Fu.C.3	-13.43	-32.54	1.264	57.13	2.944	0.000 -	0.00	-31.74	65.51	65.51
	Fu.C.4	-11.46	-18.72	0.910	77.23	2.334	0.000 -	0.00	-16.57	64.39	64.39
	Fu.C.5	-9.75	-18.17	1.011	60.47	2.503	0.000 -	0.00	-17.15	54.21	54.21
	Fu.C.6	-8.30	-28.01	1.466	23.81	3.364	0.000 -	0.00	-28.19	40.58	40.58
	Fu.C.7	-12.17	-28.53	1.264	47.83	2.968	0.000 -	0.00	-27.18	55.72	55.72
	Fu.C.8	-10.21	-14.98	0.809	67.93	2.242	0.000 -	0.00	-12.00	54.60	54.60
	Fu.C.9	-8.85	-14.59	0.961	51.09	2.443	0.000 -	0.00	-12.55	44.47	44.47
S51	Fu.C.1	65.87			31.21	0.000	0.000 -	0.00	-46.90	-46.90	-26.07
	Fu.C.2	33.11	28.72	0.692	29.41	0.000	0.000 -	0.00	-13.72	-13.72	5.78
	Fu.C.3	57.13			37.41	0.000	0.000 -	0.00	-32.78	-32.78	-8.85
	Fu.C.4	77.23			33.96	0.000	0.000 -	0.00	-56.51	-56.51	-34.55
	Fu.C.5	60.47			27.80	0.000	0.000 -	0.00	-43.90	-43.90	-24.88
	Fu.C.6	23.81	22.27	0.454	24.26	0.000	0.000 -	0.00	-7.54	8.32	8.32
	Fu.C.7	47.83			32.26	0.000	0.000 -	0.00	-26.59	-26.59	-6.31
	Fu.C.8	67.93			28.81	0.000	0.000 -	0.00	-50.32	-50.32	-32.01
	Fu.C.9	51.09			22.60	0.000	0.000 -	0.00	-37.65	-37.65	-22.31
S52	Fu.C.1	31.21	-95.67	4.150	-87.11	0.546	0.000 -	0.00	-62.51	-62.51	22.05
	Fu.C.2	29.41	-74.57	3.600	-52.80	0.555	0.000 -	0.00	-58.32	-58.32	34.95
	Fu.C.3	37.41	-102.69	3.900	-85.66	0.561	0.000 -	0.00	-73.09	-73.09	33.98
	Fu.C.4	33.96	-108.83	4.300	-103.00	0.553	0.000 -	0.00	-67.06	-67.06	18.85
	Fu.C.5	27.80	-87.58	4.100	-78.70	0.529	0.000 -	0.00	-57.30	-57.30	21.69
	Fu.C.6	24.26	-59.96	3.550	-40.74	0.560	0.000 -	0.00	-47.71	-47.71	29.83
	Fu.C.7	32.26	-87.99	3.900	-73.61	0.566	0.000 -	0.00	-62.48	-62.48	28.86
	Fu.C.8	28.81	-94.61	4.400	-90.94	0.557	0.000 -	0.00	-56.45	-56.45	13.73
	Fu.C.9	22.60	-72.99	4.150	-66.63	0.528	0.000 -	0.00	-46.65	-46.65	16.57

Staaf	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve
S53	Fu.C.1	-87.11	-101.02	0.850	503.98	2.792	0.000 -	0.00	-31.38	356.21	356.21
	Fu.C.2	-52.80	-79.45	1.150	424.97	2.855	0.000 -	0.00	-44.44	308.24	308.24
	Fu.C.3	-85.66	-109.49	1.000	565.77	2.820	0.000 -	0.00	-45.69	404.47	404.47
	Fu.C.4	-103.00	-114.36	0.750	557.49	2.777	0.000 -	0.00	-28.87	391.47	391.47
	Fu.C.5	-78.70	-88.81	0.750	483.95	2.679	0.000 -	0.00	-25.89	328.81	328.81
	Fu.C.6	-40.74	-63.96	1.200	344.27	2.862	0.000 -	0.00	-37.75	250.47	250.47
	Fu.C.7	-73.61	-93.92	1.000	485.06	2.820	0.000 -	0.00	-39.00	346.70	346.70
	Fu.C.8	-90.94	-99.06	0.700	476.78	2.770	0.000 -	0.00	-22.17	333.70	333.70
	Fu.C.9	-66.63	-73.52	0.700	403.24	2.649	0.000 -	0.00	-19.19	271.04	271.04
S54	Fu.C.1	503.98	-164.97	4.350	-155.91	1.969	0.000 -	0.00	-371.44	-371.44	29.58
	Fu.C.2	424.97	-113.93	4.000	-91.75	1.981	0.000 -	0.00	-317.11	-317.11	44.01
	Fu.C.3	565.77	-166.95	4.200	-148.94	1.981	0.000 -	0.00	-418.67	-418.67	44.49
	Fu.C.4	557.49	-189.85	4.450	-183.06	1.971	0.000 -	0.00	-409.17	-409.17	26.67
	Fu.C.5	483.95			-244.21	2.049	0.000 -	0.00	-339.78	-339.78	-41.73
	Fu.C.6	344.27	-89.61	3.950	-69.81	1.985	0.000 -	0.00	-257.13	-257.13	37.54
	Fu.C.7	485.06	-142.44	4.200	-127.00	1.983	0.000 -	0.00	-358.70	-358.70	38.02
	Fu.C.8	476.78	-165.70	4.500	-161.13	1.972	0.000 -	0.00	-349.19	-349.19	20.20
	Fu.C.9	403.24			-222.27	2.065	0.000 -	0.00	-279.81	-279.81	-48.20
S55	Fu.C.1	-155.91	-162.22	0.550	395.23	3.140	0.000 -	0.00	-24.55	296.89	296.89
	Fu.C.2	-91.75	-107.57	0.950	244.80	3.286	0.000 -	0.00	-35.80	193.89	193.89
	Fu.C.3	-148.94	-161.12	0.700	379.44	3.203	0.000 -	0.00	-35.83	290.83	290.83
	Fu.C.4	-183.06	-187.61	0.450	456.03	3.116	0.000 -	0.00	-21.85	339.30	339.30
	Fu.C.5	-244.21			386.56	3.038	0.000 -	0.00	46.24	272.99	272.99
	Fu.C.6	-69.81	-83.90	1.000	186.89	3.312	0.000 -	0.00	-30.35	149.46	149.46
	Fu.C.7	-127.00	-137.29	0.700	321.53	3.205	0.000 -	0.00	-30.39	246.39	246.39
	Fu.C.8	-161.13	-164.12	0.400	398.12	3.104	0.000 -	0.00	-16.40	294.86	294.86
	Fu.C.9	-222.27			328.65	3.010	0.000 -	0.00	51.69	228.56	228.56
S56	Fu.C.1	395.23	-113.36	4.650	-111.95	2.120	0.000 -	0.00	-280.36	-280.36	8.96
	Fu.C.2	244.80	-94.62	4.600	-92.95	1.907	0.000 -	0.00	-183.34	-183.34	9.12
	Fu.C.3	379.44	-132.39	4.750	-131.68	2.015	0.000 -	0.00	-275.10	-275.10	6.98
	Fu.C.4	456.03	-130.24	4.800	-129.64	2.149	0.000 -	0.00	-320.58	-320.58	6.30
	Fu.C.5	386.56	-101.83	4.800	-101.29	2.250	0.000 -	0.00	-260.90	-260.90	5.69
	Fu.C.6	186.89	-77.76	4.650	-76.68	1.867	0.000 -	0.00	-141.43	-141.43	6.65
	Fu.C.7	321.53	-115.73	4.850	-115.41	2.007	0.000 -	0.00	-233.19	-233.19	4.51
	Fu.C.8	398.12	-113.61	4.850	-113.37	2.163	0.000 -	0.00	-278.67	-278.67	3.83
	Fu.C.9	328.65	-85.20	4.850	-85.02	2.288	0.000 -	0.00	-218.99	-218.99	3.22
S57	Fu.C.1	-111.95	-158.35	2.100	5.10	4.963	0.000 -	0.00	-44.14	141.96	141.96
	Fu.C.2	-92.95	-191.80	2.550	7.50	4.961	0.000 -	0.00	-69.77	194.26	194.26
	Fu.C.3	-131.68	-225.89	2.400	8.34	4.961	0.000 -	0.00	-72.15	220.39	220.39
	Fu.C.4	-129.64	-168.88	1.950	5.19	4.964	0.000 -	0.00	-41.09	146.51	146.51
	Fu.C.5	-101.29	-144.69	2.100	4.62	4.964	0.000 -	0.00	-41.59	129.16	129.16
	Fu.C.6	-76.68	-164.62	2.550	6.55	4.960	0.000 -	0.00	-60.49	168.52	168.52
	Fu.C.7	-115.41	-198.58	2.400	7.40	4.961	0.000 -	0.00	-62.86	194.65	194.65
	Fu.C.8	-113.37	-141.93	1.850	4.25	4.964	0.000 -	0.00	-31.81	120.77	120.77
	Fu.C.9	-85.02	-117.50	2.050	3.67	4.964	0.000 -	0.00	-32.31	103.42	103.42
S58	Fu.C.1	5.10			0.00	0.000	0.000 -	0.00	-31.89	-31.89	0.00
	Fu.C.2	7.50			0.00	0.000	0.000 -	0.00	-46.68	-46.68	0.00
	Fu.C.3	8.34			0.00	0.000	0.000 -	0.00	-51.91	-51.91	0.00
	Fu.C.4	5.19			0.00	0.000	0.000 -	0.00	-32.41	-32.41	0.00
	Fu.C.5	4.62			0.00	0.000	0.000 -	0.00	-28.85	-28.85	0.00
	Fu.C.6	6.55			0.00	0.000	0.000 -	0.00	-40.76	-40.76	0.00
	Fu.C.7	7.40			0.00	0.000	0.000 -	0.00	-45.99	-45.99	0.00
	Fu.C.8	4.25			0.00	0.000	0.000 -	0.00	-26.49	-26.49	0.00
	Fu.C.9	3.67			0.00	0.000	0.000 -	0.00	-22.93	-22.93	0.00
S59	Fu.C.1	0.00			0.33	0.000	0.000 -	0.00	0.00	3.57	3.57
	Fu.C.2	0.00			0.40	0.000	0.000 -	0.00	0.00	4.27	4.27
	Fu.C.3	0.00			0.40	0.000	0.000 -	0.00	0.00	4.27	4.27
	Fu.C.4	0.00			0.29	0.000	0.000 -	0.00	0.00	3.17	3.17
	Fu.C.5	0.00			0.36	0.000	0.000 -	0.00	0.00	3.73	3.73
	Fu.C.6	0.00			0.33	0.000	0.000 -	0.00	0.00	3.48	3.48
	Fu.C.7	0.00			0.33	0.000	0.000 -	0.00	0.00	3.48	3.48
	Fu.C.8	0.00			0.22	0.000	0.000 -	0.00	0.00	2.38	2.38
	Fu.C.9	0.00			0.27	0.000	0.000 -	0.00	0.00	2.78	2.78
S60	Fu.C.1	0.33	-19.81	2.000	20.79	0.016	4.103 -	0.00	-21.42	28.07	28.07
	Fu.C.2	0.40	-25.04	1.950	34.29	0.015	3.957 -	0.00	-27.09	41.08	41.08
	Fu.C.3	0.40	-25.04	1.950	34.28	0.015	3.957 -	0.00	-27.09	41.08	41.08

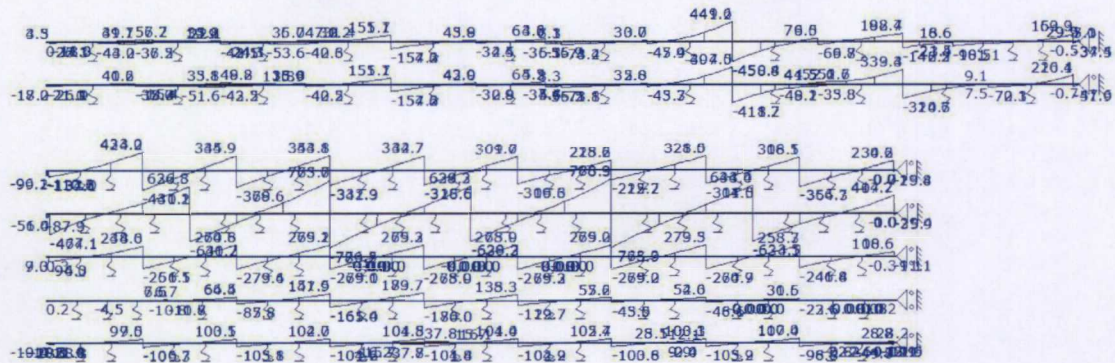
Staaf	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve
S60	Fu.C.4	0.29	-17.61	2.000	18.47	0.016	4.103 -	0.00	-19.04	24.95	24.95
	Fu.C.5	0.36			-85.08	0.020	0.000 -	0.00	-18.52	-38.02	-38.02
	Fu.C.6	0.33	-20.64	1.950	29.67	0.015	3.929 -	0.00	-22.33	34.84	34.84
	Fu.C.7	0.33	-20.64	1.950	29.66	0.015	3.930 -	0.00	-22.33	34.84	34.84
	Fu.C.8	0.22	-13.21	2.000	13.85	0.016	4.103 -	0.00	-14.28	18.71	18.71
S61	Fu.C.9	0.27			-111.67	0.020	0.000 -	0.00	-13.89	-43.05	-43.05
	Fu.C.1	20.79	-8.86	2.500	19.77	1.136	3.911 -	0.00	-24.40	-24.40	24.08
	Fu.C.2	34.29	-12.50	2.600	28.77	1.235	3.917 -	0.00	-37.52	-37.52	35.14
	Fu.C.3	34.28	-12.50	2.600	28.80	1.235	3.917 -	0.00	-37.52	-37.52	35.16
	Fu.C.4	18.47	-7.88	2.500	17.59	1.135	3.911 -	0.00	-21.69	-21.69	21.43
	Fu.C.5	-85.08			59.90	2.220	0.000 -	0.00	51.37	51.37	21.07
	Fu.C.6	29.67	-10.54	2.600	24.39	1.252	3.918 -	0.00	-32.09	-32.09	29.79
	Fu.C.7	29.66	-10.54	2.600	24.42	1.251	3.917 -	0.00	-32.09	-32.09	29.82
	Fu.C.8	13.85	-5.91	2.500	13.21	1.135	3.910 -	0.00	-16.27	-16.27	16.08
	Fu.C.9	-111.67			66.28	2.373	0.000 -	0.00	57.74	57.74	16.55
S62	Fu.C.1	19.77	-20.61	2.900	2.91	0.833	4.874 -	0.00	-28.40	-28.40	24.81
	Fu.C.2	28.77	-35.85	3.050	-2.95	0.774	0.000 -	0.00	-43.45	-43.45	36.70
	Fu.C.3	28.80	-35.71	3.050	-2.76	0.776	0.000 -	0.00	-43.43	-43.43	36.70
	Fu.C.4	17.59	-18.22	2.900	2.73	0.836	4.867 -	0.00	-25.22	-25.22	22.05
	Fu.C.5	59.90			-94.12	2.425	0.000 -	0.00	-25.20	-48.35	-48.35
	Fu.C.6	24.39	-31.26	3.050	-3.55	0.765	0.000 -	0.00	-37.14	-37.14	31.19
	Fu.C.7	24.42	-31.12	3.050	-3.37	0.767	0.000 -	0.00	-37.12	-37.12	31.18
	Fu.C.8	13.21	-13.61	2.900	2.13	0.837	4.862 -	0.00	-18.91	-18.91	16.54
	Fu.C.9	66.28			-98.10	2.738	0.000 -	0.00	-17.90	-53.55	-53.55
S63	Fu.C.1	2.91	-21.01	1.700	108.80	0.110	3.101 -	0.00	-27.88	86.86	86.86
	Fu.C.2	-2.95	-37.18	1.550	200.03	3.029	0.000 -	0.00	-42.28	155.10	155.10
	Fu.C.3	-2.76	-37.08	1.550	198.86	3.032	0.000 -	0.00	-42.28	154.40	154.40
	Fu.C.4	2.73	-18.61	1.700	95.80	0.117	3.108 -	0.00	-24.78	76.66	76.66
	Fu.C.5	-94.12			116.05	2.776	0.000 -	0.00	40.91	75.62	75.62
	Fu.C.6	-3.55	-32.52	1.550	175.59	3.019	0.000 -	0.00	-36.08	135.64	135.64
	Fu.C.7	-3.37	-32.42	1.550	174.42	3.023	0.000 -	0.00	-36.08	134.95	134.95
	Fu.C.8	2.13	-13.92	1.700	71.36	0.121	3.112 -	0.00	-18.59	57.21	57.21
	Fu.C.9	-98.10			92.91	2.684	0.000 -	0.00	47.24	55.97	55.97
S64	Fu.C.1	108.80	-31.31	3.400	-6.40	1.717	0.000 -	0.00	-90.48	-90.48	31.49
	Fu.C.2	200.03	-42.01	3.450	-6.47	1.912	0.000 -	0.00	-156.91	-156.91	44.74
	Fu.C.3	198.86	-46.04	3.450	-10.31	1.866	0.000 -	0.00	-157.59	-157.59	45.83
	Fu.C.4	95.80	-30.94	3.450	-8.67	1.661	0.000 -	0.00	-80.96	-80.96	28.84
	Fu.C.5	116.05	-21.75	3.600	-3.80	2.108	0.000 -	0.00	-81.83	-81.83	26.02
	Fu.C.6	175.59	-35.95	3.450	-5.90	1.931	0.000 -	0.00	-136.95	-136.95	37.98
	Fu.C.7	174.42	-39.98	3.500	-9.74	1.877	0.000 -	0.00	-137.64	-137.64	39.08
	Fu.C.8	71.36	-24.88	3.450	-8.11	1.623	0.000 -	0.00	-61.00	-61.00	22.09
	Fu.C.9	92.91	-15.50	3.700	-3.13	2.238	0.000 -	0.00	-62.06	-62.06	19.15
S65	Fu.C.1	-6.40	-17.95	1.112	65.23	2.499	0.000 -	0.00	-21.44	58.74	58.74
	Fu.C.2	-6.47	-30.67	1.517	32.46	3.267	0.000 -	0.00	-34.38	49.50	49.50
	Fu.C.3	-10.31	-31.05	1.315	56.49	2.939	0.000 -	0.00	-33.36	64.60	64.60
	Fu.C.4	-8.67	-17.26	0.961	76.67	2.324	0.000 -	0.00	-18.26	63.97	63.97
	Fu.C.5	-3.80	-15.65	1.163	59.80	2.495	0.000 -	0.00	-21.07	53.92	53.92
	Fu.C.6	-5.90	-26.98	1.517	23.30	3.365	0.000 -	0.00	-29.39	39.80	39.80
	Fu.C.7	-9.74	-27.30	1.315	47.33	2.961	0.000 -	0.00	-28.37	54.91	54.91
	Fu.C.8	-8.11	-13.79	0.910	67.51	2.230	0.000 -	0.00	-13.27	54.27	54.27
	Fu.C.9	-3.13	-11.96	1.112	50.59	2.424	0.000 -	0.00	-16.21	44.23	44.23
S66	Fu.C.1	65.23			30.11	0.000	0.000 -	0.00	-47.35	-47.35	-26.63
	Fu.C.2	32.46	27.36	0.740	27.76	0.000	0.000 -	0.00	-14.58	-14.58	4.48
	Fu.C.3	56.49			35.72	0.000	0.000 -	0.00	-33.67	-33.67	-10.21
	Fu.C.4	76.67			32.96	0.000	0.000 -	0.00	-56.94	-56.94	-35.09
	Fu.C.5	59.80			26.89	0.000	0.000 -	0.00	-44.19	-44.19	-25.15
	Fu.C.6	23.30	21.36	0.501	22.84	0.000	0.000 -	0.00	-8.30	-8.30	7.13
	Fu.C.7	47.33			30.80	0.000	0.000 -	0.00	-27.39	-27.39	-7.56
	Fu.C.8	67.51			28.04	0.000	0.000 -	0.00	-50.65	-50.65	-32.44
	Fu.C.9	50.59			21.92	0.000	0.000 -	0.00	-37.90	-37.90	-22.49
S67	Fu.C.1	30.11	-101.22	4.200	-93.61	0.519	0.000 -	0.00	-63.06	-63.06	21.19
	Fu.C.2	27.76	-85.20	3.750	-67.12	0.506	0.000 -	0.00	-59.60	-59.60	32.96
	Fu.C.3	35.72	-114.70	4.000	-100.71	0.521	0.000 -	0.00	-74.43	-74.43	31.84
	Fu.C.4	32.96	-114.43	4.350	-109.33	0.530	0.000 -	0.00	-67.59	-67.59	17.97
	Fu.C.5	26.89	-93.53	4.200	-86.98	0.507	0.000 -	0.00	-57.56	-57.56	18.78
	Fu.C.6	22.84	-69.49	3.750	-53.78	0.507	0.000 -	0.00	-48.88	-48.88	28.00

Staaf	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve
S67	Fu.C.7	30.80	-98.98	4.050	-87.37	0.525	0.000 -	0.00	-63.71	-63.71	26.88
	Fu.C.8	28.04	-99.15	4.450	-95.99	0.536	0.000 -	0.00	-56.88	-56.88	13.01
	Fu.C.9	21.92	-78.01	4.300	-73.65	0.508	0.000 -	0.00	-46.83	-46.83	13.82
S68	Fu.C.1	-93.61	-107.89	0.850	528.33	2.808	0.000 -	0.00	-32.29	375.66	375.66
	Fu.C.2	-67.12	-94.40	1.100	479.03	2.885	0.000 -	0.00	-46.53	351.41	351.41
	Fu.C.3	-100.71	-125.42	1.000	621.90	2.850	0.000 -	0.00	-47.92	449.62	449.62
	Fu.C.4	-109.33	-121.09	0.750	580.75	2.794	0.000 -	0.00	-29.79	410.30	410.30
	Fu.C.5	-86.98	-99.48	0.850	485.53	2.805	0.000 -	0.00	-28.79	344.82	344.82
	Fu.C.6	-53.78	-77.57	1.150	393.37	2.896	0.000 -	0.00	-39.66	289.75	289.75
	Fu.C.7	-87.37	-108.51	1.000	536.25	2.852	0.000 -	0.00	-41.06	387.96	387.96
	Fu.C.8	-95.99	-104.44	0.700	495.10	2.786	0.000 -	0.00	-22.92	348.65	348.65
	Fu.C.9	-73.65	-82.70	0.800	399.87	2.799	0.000 -	0.00	-21.92	283.17	283.17
S69	Fu.C.1	528.33	-123.26	4.100	-104.14	2.100	0.000 -	0.00	-381.80	-381.80	41.39
	Fu.C.2	479.03	-99.49	3.650	-46.21	2.016	0.000 -	0.00	-359.13	-359.13	77.50
	Fu.C.3	621.90	-133.61	3.800	-84.91	2.053	0.000 -	0.00	-458.76	-458.76	79.46
	Fu.C.4	580.75	-138.53	4.200	-122.67	2.115	0.000 -	0.00	-416.86	-416.86	38.32
	Fu.C.5	485.53	-113.68	4.100	-96.86	2.103	0.000 -	0.00	-350.45	-350.45	37.01
	Fu.C.6	393.37	-80.64	3.600	-31.66	2.004	0.000 -	0.00	-296.42	-296.42	68.74
	Fu.C.7	536.25	-114.41	3.800	-70.37	2.050	0.000 -	0.00	-396.05	-396.05	70.70
	Fu.C.8	495.10	-119.57	4.250	-108.13	2.123	0.000 -	0.00	-354.16	-354.16	29.56
	Fu.C.9	399.87	-94.55	4.150	-82.32	2.110	0.000 -	0.00	-287.75	-287.75	28.25
S70	Fu.C.1	-104.14	-115.37	0.800	172.30	3.529	0.000 -	0.00	-29.80	149.77	149.77
	Fu.C.2	-46.21	-96.99	1.550	158.20	3.711	0.000 -	0.00	-69.80	156.81	156.81
	Fu.C.3	-84.91	-126.96	1.300	204.41	3.641	0.000 -	0.00	-68.19	192.39	192.39
	Fu.C.4	-122.67	-130.29	0.650	189.10	3.499	0.000 -	0.00	-25.24	160.80	160.80
	Fu.C.5	-96.86	-106.46	0.800	158.29	3.524	0.000 -	0.00	-26.31	137.08	137.08
	Fu.C.6	-31.66	-79.68	1.600	130.18	3.736	0.000 -	0.00	-62.82	131.44	131.44
	Fu.C.7	-70.37	-109.12	1.350	176.39	3.649	0.000 -	0.00	-61.21	167.01	167.01
	Fu.C.8	-108.13	-112.88	0.550	161.08	3.483	0.000 -	0.00	-18.26	135.42	135.42
	Fu.C.9	-82.32	-88.73	0.700	130.27	3.510	0.000 -	0.00	-19.33	111.70	111.70
S71	Fu.C.1	172.30			-8.44	2.500	0.000 -	0.00	-120.49	-120.49	-14.36
	Fu.C.2	158.20	26.55	2.444	30.53	0.000	0.000 -	0.00	-114.98	-114.98	17.89
	Fu.C.3	204.41	18.98	2.756	19.36	0.000	0.000 -	0.00	-146.17	-146.17	6.64
	Fu.C.4	189.10			-16.19	2.363	0.000 -	0.00	-131.36	-131.36	-21.52
	Fu.C.5	158.29			-8.75	2.472	0.000 -	0.00	-110.57	-110.57	-14.02
	Fu.C.6	130.18	24.87	2.340	29.92	0.000	0.000 -	0.00	-95.14	-95.14	18.58
	Fu.C.7	176.39	18.17	2.704	18.75	0.000	0.000 -	0.00	-126.32	-126.32	7.33
	Fu.C.8	161.08			-16.80	2.310	0.000 -	0.00	-111.51	-111.51	-20.82
	Fu.C.9	130.27			-9.35	2.408	0.000 -	0.00	-90.72	-90.72	-13.32
S72	Fu.C.1	-8.44	-140.12	4.354	5.35	7.047	0.000 -	0.00	-64.57	134.26	134.26
	Fu.C.2	30.53	-138.92	4.354	-5.34	0.371	0.000 -	0.00	-89.64	122.15	122.15
	Fu.C.3	19.36	-179.90	4.354	-3.71	0.201	0.000 -	0.00	-101.06	163.25	163.25
	Fu.C.4	-16.19	-156.43	4.354	6.02	7.047	0.000 -	0.00	-66.28	151.31	151.31
	Fu.C.5	-8.75	-129.11	4.354	4.94	7.047	0.000 -	0.00	-58.66	123.91	123.91
	Fu.C.6	29.92	-116.89	4.354	-6.16	0.422	0.000 -	0.00	-77.83	101.45	101.45
	Fu.C.7	18.75	-157.88	4.405	-4.53	0.222	0.000 -	0.00	-89.25	142.55	142.55
	Fu.C.8	-16.80	-134.39	4.354	5.20	7.047	0.000 -	0.00	-54.47	130.61	130.61
	Fu.C.9	-9.35	-107.08	4.354	4.11	7.047	0.000 -	0.00	-46.85	103.21	103.21
S73	Fu.C.2	-5.34			0.00	0.000	0.000 -	0.00	0.16	29.85	29.85
	Fu.C.3	-3.71	-3.97	0.068	0.00	0.000	0.000 -	0.00	-10.23	29.85	29.85
	Fu.C.4	6.02			0.00	0.000	0.000 -	0.00	-37.49	-37.49	0.00
	Fu.C.5	4.94			0.00	0.000	0.000 -	0.00	-30.78	-30.78	0.00
	Fu.C.6	-6.16			0.00	0.000	0.000 -	0.00	5.02	29.85	29.85
	Fu.C.7	-4.53	-4.57	0.026	0.00	0.000	0.000 -	0.00	-5.05	29.85	29.85
	Fu.C.8	5.20			0.00	0.000	0.000 -	0.00	-32.32	-32.32	0.00
	Fu.C.9	4.11			0.00	0.000	0.000 -	0.00	-25.60	-25.60	0.00
	Fu.C.1	5.35			0.00	0.000	0.000 -	0.00	-33.37	-33.37	0.00
S74	Fu.C.1	0.00			-16.15	0.000	0.000 -	0.00	-87.88	-87.88	-50.97
	Fu.C.2	0.00			-13.12	0.000	0.000 -	0.00	-78.12	-78.12	-33.35
	Fu.C.3	0.00			-12.29	0.000	0.000 -	0.00	-78.12	-78.12	-25.18
	Fu.C.4	0.00			-13.71	0.000	0.000 -	0.00	-78.12	-78.12	-38.95
	Fu.C.5	0.00			-14.26	0.000	0.000 -	0.00	-78.12	-78.12	-44.40
	Fu.C.6	0.00			-9.35	0.000	0.000 -	0.00	-58.59	-58.59	-20.21
	Fu.C.7	0.00			-8.52	0.000	0.000 -	0.00	-58.59	-58.59	-12.04
	Fu.C.8	0.00			-9.94	0.000	0.000 -	0.00	-58.59	-58.59	-25.81
	Fu.C.9	0.00			-10.49	0.000	0.000 -	0.00	-58.59	-58.59	-31.25

Valkenburg aan de Geul				Ingenieursbureau A. Palte BV				043 - 601 36 37			
Staaf	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve
S75	Fu.C.1	-16.15	-527.79	3.150	725.70	6.525	0.000 -	0.00	-350.12	547.71	547.71
	Fu.C.2	-13.12	-549.12	3.250	265.29	7.307	0.000 -	0.00	-383.30	-383.30	332.68
	Fu.C.3	-12.29	-687.20	3.200	558.17	6.947	0.000 -	0.00	-474.13	525.41	525.41
	Fu.C.4	-13.71	-576.58	3.150	872.87	6.444	0.000 -	0.00	-381.86	636.76	636.76
	Fu.C.5	-14.26	-484.50	3.150	677.61	6.511	0.000 -	0.00	-321.31	508.27	508.27
	Fu.C.6	-9.35	-462.56	3.250	169.11	7.470	0.000 -	0.00	-325.68	-325.68	253.79
	Fu.C.7	-8.52	-600.61	3.200	461.99	6.988	0.000 -	0.00	-416.51	446.53	446.53
	Fu.C.8	-9.94	-489.99	3.150	776.69	6.405	0.000 -	0.00	-324.24	557.87	557.87
	Fu.C.9	-10.49	-397.90	3.150	581.43	6.474	0.000 -	0.00	-263.69	429.39	429.39
S76	Fu.C.1	725.70	-352.63	4.024	1001.57	1.709	6.229 -	0.00	-546.86	678.20	678.20
	Fu.C.2	265.29	-262.41	3.572	971.51	1.071	5.838 -	0.00	-291.54	580.71	580.71
	Fu.C.3	558.17	-370.86	3.773	1232.17	1.401	6.013 -	0.00	-490.99	775.65	775.65
	Fu.C.4	872.87	-402.42	4.075	1093.03	1.766	6.283 -	0.00	-641.22	754.47	754.47
	Fu.C.5	677.61	-326.16	4.024	919.31	1.719	6.238 -	0.00	-508.26	624.53	624.53
	Fu.C.6	169.11	-210.82	3.471	806.86	0.907	5.773 -	0.00	-214.34	473.31	473.31
	Fu.C.7	461.99	-317.89	3.773	1067.53	1.369	5.996 -	0.00	-413.79	668.26	668.26
	Fu.C.8	776.69	-349.63	4.075	928.38	1.793	6.310 -	0.00	-564.02	647.08	647.08
	Fu.C.9	581.43	-273.21	4.024	754.66	1.745	6.263 -	0.00	-431.06	517.14	517.14
S77	Fu.C.1	1001.57	-404.53	4.377	630.00	1.957	6.808 -	0.00	-688.54	-688.54	547.55
	Fu.C.2	971.51	-312.00	4.779	225.65	2.308	7.420 -	0.00	-591.77	-591.77	312.34
	Fu.C.3	1232.17	-433.74	4.578	485.03	2.153	7.104 -	0.00	-789.17	-789.17	508.50
	Fu.C.4	1093.03	-458.57	4.326	761.74	1.908	6.744 -	0.00	-765.56	-765.56	639.28
	Fu.C.5	919.31	-373.56	4.326	588.78	1.949	6.796 -	0.00	-633.94	-633.94	508.37
	Fu.C.6	806.86	-251.50	4.880	143.29	2.367	7.562 -	0.00	-482.63	-482.63	234.25
	Fu.C.7	1067.53	-372.07	4.578	402.67	2.168	7.130 -	0.00	-680.02	-680.02	430.41
	Fu.C.8	928.38	-397.12	4.276	679.38	1.884	6.714 -	0.00	-656.42	-656.42	561.19
	Fu.C.9	754.66	-311.96	4.326	506.42	1.927	6.767 -	0.00	-524.80	-524.80	430.28
S78	Fu.C.1	630.00	-404.92	3.873	1000.54	1.442	6.295 -	0.00	-547.63	688.45	688.45
	Fu.C.2	225.65	-313.25	3.471	967.78	0.829	5.951 -	0.00	-312.65	591.50	591.50
	Fu.C.3	485.03	-435.07	3.672	1228.55	1.145	6.104 -	0.00	-508.80	788.92	788.92
	Fu.C.4	761.74	-458.92	3.924	1092.19	1.506	6.344 -	0.00	-639.35	765.51	765.51
	Fu.C.5	588.78	-375.21	3.924	915.05	1.452	6.311 -	0.00	-508.71	633.61	633.61
	Fu.C.6	143.29	-252.63	3.370	803.39	0.687	5.894 -	0.00	-234.54	482.38	482.38
	Fu.C.7	402.67	-373.32	3.672	1064.16	1.119	6.090 -	0.00	-430.69	679.81	679.81
	Fu.C.8	679.38	-397.37	3.974	927.80	1.536	6.368 -	0.00	-561.24	656.39	656.39
	Fu.C.9	506.42	-313.52	3.924	750.65	1.481	6.335 -	0.00	-430.60	524.49	524.49
S79	Fu.C.1	1000.54	-352.44	4.226	734.05	2.018	6.529 -	0.00	-678.29	-678.29	550.16
	Fu.C.2	967.78	-259.71	4.678	296.14	2.399	7.088 -	0.00	-581.00	-581.00	303.42
	Fu.C.3	1228.55	-368.76	4.477	588.83	2.228	6.797 -	0.00	-775.91	-775.91	502.62
	Fu.C.4	1092.19	-402.12	4.175	880.14	1.965	6.474 -	0.00	-754.53	-754.53	643.96
	Fu.C.5	915.05	-325.23	4.226	712.38	1.999	6.478 -	0.00	-624.88	-624.88	521.79
	Fu.C.6	803.39	-207.86	4.729	198.06	2.463	7.224 -	0.00	-473.58	-473.58	225.43
	Fu.C.7	1064.16	-315.83	4.477	490.74	2.245	6.822 -	0.00	-668.49	-668.49	424.62
	Fu.C.8	927.80	-349.32	4.175	782.05	1.939	6.449 -	0.00	-647.11	-647.11	565.97
	Fu.C.9	750.65	-272.37	4.175	614.30	1.972	6.446 -	0.00	-517.46	-517.46	443.80
S80	Fu.C.1	734.05	-503.28	5.030	2.05	1.720	8.244 -	0.00	-544.47	-544.47	338.59
	Fu.C.2	296.14	-461.49	4.980	2.16	1.065	8.243 -	0.00	-320.93	321.83	321.83
	Fu.C.3	588.83	-602.47	4.980	2.67	1.385	8.243 -	0.00	-513.91	-513.91	414.23
	Fu.C.4	880.14	-557.09	5.030	2.22	1.790	8.244 -	0.00	-634.08	-634.08	372.83
	Fu.C.5	712.38	-383.76	5.030	1.39	1.907	8.244 -	0.00	-494.88	-494.88	249.15
	Fu.C.6	198.06	-381.04	4.930	1.81	0.922	8.243 -	0.00	-242.82	267.12	267.12
	Fu.C.7	490.74	-521.99	4.980	2.33	1.354	8.243 -	0.00	-435.80	-435.80	359.52
	Fu.C.8	782.05	-476.60	5.030	1.88	1.824	8.244 -	0.00	-555.97	-555.97	318.13
	Fu.C.9	614.30	-303.27	5.030	1.05	1.980	8.245 -	0.00	-416.77	-416.77	194.44
S81	Fu.C.1	2.05			0.00	0.000	0.000 -	0.00	-28.02	-28.02	0.00
	Fu.C.2	2.16			0.00	0.000	0.000 -	0.00	-29.20	-29.20	0.00
	Fu.C.3	2.67			0.00	0.000	0.000 -	0.00	-35.88	-35.88	0.00
	Fu.C.4	2.22			0.00	0.000	0.000 -	0.00	-30.10	-30.10	0.00
	Fu.C.5	1.39			0.00	0.000	0.000 -	0.00	-19.32	-19.32	0.00
	Fu.C.6	1.81			0.00	0.000	0.000 -	0.00	-24.46	-24.46	0.00
	Fu.C.7	2.33			0.00	0.000	0.000 -	0.00	-31.14	-31.14	0.00
	Fu.C.8	1.88			0.00	0.000	0.000 -	0.00	-25.35	-25.35	0.00
	Fu.C.9	1.05			0.00	0.000	0.000 -	0.00	-14.58	-14.58	0.00
-	-	kNm	kNm	m	kNm	m	m -	kN	kN	kN	kN

AFB. FU.C. DWARSKRACHT (VZ) OMHULLENDE

Fundamenteel Belastingscombinaties



AFB. FU.C. MOMENT (MY) OMHULLENDE

Fundamenteel Belastingscombinaties

