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203-00

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STAVBA: I/68 PLAVNICA PRELOŽKA CESTY	ČÍSLO ZÁKAZKY: AP-2019/219/01
	STUPEŇ: DP/DRS
	DÁTUM: 03/2019
ČASŤ STAVBY: MOST CEZ RIEKU POPRAD V KM 1,637	FORMÁT: -
	MIERKA: -
PRÍLOHA: STATICKÝ VÝPOČET	ČÍSLO PRÍLOHY: 8
	SÚPRAVA:

STATICKÝ VÝPOČET

203-00 Most cez rieku Poprad v km 1,637

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1. Identifikačné údaje

Názov stavby:	I/68 Plavnica, preložka cesty
Číslo objektu:	203-00
Názov objektu:	Most cez rieku Poprad v km 1,637
Miesto (obec, okres):	Plavnica, okres Stará Ľubovňa
Kraj:	Prešovský
Katastrálne územie:	Chmelnica, Plavnica
Druh stavby:	novostavba
Kategória a trieda cestnej komunikácie:	cesta I/68, C11,5/80
Druh premosťovanej prekážky:	rieka Poprad
Stupeň dokumentácie:	dokumentácia na ponuku

2. Úvod

2.1 Predmet výpočtu

Predmetom tohto statického výpočtu je návrh a posúdenie mostného objektu 203-00 na stavbe I/68 Plavnica, preložka cesty.

2.1.1 Základné údaje o moste

Charakteristika mosta :	päťpoľová (35,0x45,0x85,0x85,0x45,0) predpätá monolitická jendnokomorová konštrukcia
Dĺžka premostenia:	293,0 m
Dĺžka nosnej konštrukcie:	297,0 m
Dĺžka mosta:	312,0 m
Šikmosť mosta:	kolmý
Šírka vozovky medzi obrubami:	11,5 m
Šírka chodníka:	2x0,75 m (služobný chodník)
Šírka mosta medzi zábradliami:	14,0 m
Výška mosta:	12,5 m (nad dnom)
Stavebná výška:	3,0 - 5,5 m

2.1.2 Charakter prekážky a prevádzanej cesty

Navrhovaný mostný objekt je súčasťou cesty I/68. Účelom mostného objektu je premostenie rieky Poprad. Určujúcimi požiadavkami pre návrh mostného objektu sú priestorové usporiadanie trasy cesty I/68, priečny profil a požadovaný prietok Q_{100} rieky Poprad. Koryto rieky je v súčasnosti v mieste premostenia neupravené. Šírkové usporiadanie na moste je v súlade so šírkovým usporiadaním prevádzanej komunikácie – kategória C11,5/80.

2.1.3 Geologické podmienky

Mostným objektom 203-00 preklenuje preložka cesty I/68 rieku Poprad v km 1,460 – 1,800. Možno predpokladať, že do cca km 1,750 sa nachádza v prostredí fluviálnych sedimentov rieky Poprad. Fluviálne sedimenty sú zastúpené štrkmi takmer od povrchu, pričom povrchová organická vrstva piesčitého ílu s korienkami vegetácie sa nachádza do maximálne zistenej hĺbky 0,4 m.

Ľavý breh rieky Poprad

Na ľavom brehu Popradu boli realizované sondy 203-1 až 203-3 do hĺbky 15 m. Sondy 203-2 a 203-3 boli realizované na ochrannej hrádze rieky Poprad, teda do hĺbky cca 1-2 m sa nachádza antropogénny materiál hrádze, ale jeho charakter, až na uľahnutosť je ťažko odlíšiteľný od podložných fluviálnych zemín.

Sonda 203-2 bola z dôvodu neprístupnosti posunutá od miesta mostnej opory o cca 7 m v smere od rieky.

Štrkovité zeminy sú prevažne charakteru štrku s prímesou jemnozrnnej zeminy **G3 G-F** lokálne s prechodom do štrku ílovitého **G5 GC** (sonda 203-1, hĺbka 0,2 – 1,2 m, sonda 203-3, hĺbka 2,0 – 2,5 m), prípadne štrku zle zrneného **G2 GP** (sonda 203-1, hĺbka 4,0 – 5,5 m). Fluviálne sedimenty v sondách 203-1 až 203-3 siahajú do hĺbky 5,5 – 6,7 m.

V podloží fluviálnych sedimentoch bola v sondách 203-1 a 203-2 overená vrstva eluviálnych sedimentov s hrúbkou 0,1 – 0,45 m. Ich charakter je premenlivý, v závislosti od prevahy podložných ílovcových, či pieskovcových hornín. V oblasti sondy 203-1 je charakteru ílu štrkovitého F2 CG tuhej konzistencie, v sonde 203-2 je v hĺbke 6,7 – 6,8 m charakteru **tuhej** hliny s veľmi vysokou plasticitou **F7 MV**, pričom smerom do podložia do hĺbky 7,15 m prechádza do ílu štrkovitého **F2 CG** s úlomkami pieskovca.

Predkvartérne podložie bolo v oblasti sond 203-1 až 203-3 overené v hĺbke 5,6 – 7,15 m. Je charakteristické striedaním málo pevných ílovcových a pevnejších pieskovcových vrstiev. Po zgeneralizovaní možno rozčleniť predkvartérne podložie do tried, ktorých inžinierskogeologické charakteristiky:

- do hĺbky 9,4 – 11,0 m **R5-R6** – striedanie ílovcov a pieskovcov prevažne silno zvetraných
- v hĺbke 11,0 – 15,0 m **R5** – striedanie ílovcov a pieskovcov prevažne silno až stredne zvetraných,
- v sonde 203-3 v hĺbke 13,0 – 15,0 **R4-R5** – slabo až stredne zvetrané pieskovce s vrstvami ílovca
- v sonde 203-1 bol v hĺbke 12,4 – 13,9 overený pieskovec s vrstvičkami ílovca, pričom jadro bolo v úlomkoch so silnými hrdzavými zátekmi, s diskontinuitami, v hĺbke 13,4 – 13,9 m mokrý (zvodnenie?). Je potrebné upozorniť, že od 14,1 m je podložie charakteru laboratórne stanovenej hliny s veľmi vysokou plasticitou **pevnej konzistencie F7 MV**.

Pravý breh rieky Poprad

Z dôvodu neprístupnosti terénu tu boli realizované len šachtice 203-5, s hĺbkou 1,2 m na brehu Popradu a 203-6 s hĺbkou 1,7 m na vyvýšenom brehu. V obidvoch šachticiach boli overené fluviálne sedimenty, v sonde 203-5 do hĺbky 0,7 m hlina piesčitá **F3 MS veľmi mäkkej konzistencie**, v podloží s balvanitým štrkom **G3 G-F+Cb, B**, pričom balvany mali priemer do 0,4 m. V šachtici 203-6 boli v hĺbke 1,5 – 1,7 m overené bloky lomového kameňa (**CbY**) – predpokladané spevnenie a protierózna ochrana brehu Popradu. V nadloží spevňujúcej vrstvy sú naplavené íly piesčité **F4 CS**, do hĺbky 0,6 m **pevnej**, ďalej **veľmi mäkkej konzistencie**.

Hydrogeologické pomery

Narazená hladina podzemnej vody bola v oblasti sond 203-1 až 203-3 zistená v hĺbke 2,5 – 3,3 m (tab. č. 5.7.1.), na pravom brehu Popradu v hĺbke 1,2 m. Hladina po odvŕtaní vystúpila na ľavom brehu do hĺbky 1,9 – 3,2 m, na pravom brehu do hĺbky 0,9 m p.t., pričom podzemná voda bola na úrovni hladiny rieky Poprad.

Označenie vrtu:	**203 - 1**		
	503,89 m n. m.		
Hĺbka vrtu:	15,0 m		
Hladina p.v. narazená:	2,5 m p.t.		
Hladina p.v. ustálená:	1,9 m p.t.		
Interval odberu vzoriek:	PV- 4,0-4,5, NV – 5,5-5,6, VODA		
Profil vrtu:	**Kvartér**		*Fluviálne sedimenty*
	0,0 - 0,2	F4 CSO	**Íl piesčitý**, tmavohnedý, tuhý, s korienkami rastlín
	0,2 - 1,2	G5 GC	**Štrk ílovitý**, úlomky opracované veľ. do 12 cm
	1,2 – 4,0	G3 G-F – G5 GC	**Štrk s prímesou jemnozrnnej zeminy až štrk ílovitý**, vysoký obsah piesčitej zložky, hnedý, sypký, úlomky poloostrohranné až zaoblené veľ. do 12 cm, prevažne do 7 cm, vlhký, od 2,5 m mokrý, - v 0,7-1,1 m kamenitá frakcia – úlomky zlepenca veľ. nad 17 cm
	4,0 – 5,5	**G2 GP+5%Cb**	**Štrk zle zrnený**, svetlejšie hnedý, mokrý, úlomky poloostrohranné až zaoblené, veľ. detto ako vyššie
			Eluviálne sedimenty
	5,5 – 5,6	**F2 CG**	**Íl štrkovitý**, hnedý, **tuhý**, vlhký, kompaktné jadro
	Paleogén		
	5,6 – 6,1	R5-R6	**Ílovec** silno zvetraný, tmavosivý s prechodom do hnedého, málo pevný, drobivý v ruke, - v 5,65-5,7 m poloha pevného pieskovca, dĺžka súvislého jadra 5 cm
	6,1 – 7,0	R5-R6	**Striedanie ílovca** (60 %) **a pieskovca** (40 %), prevaha hnedej farby, silno zvetraný
	7,0 – 7,5	R5-R6	**Ílovec** silno zvetraný, sivý, - v 7,25 - 7,3 m prevaha pieskovca (80 %)
	7,5 – 8,1	R4-R5	**Pieskovec** hnedý, silno zvetraný, s vrstvami ílovca
	8,1 – 8,6	R5-R6	**Ílovec** hnedý, silno zvetraný s tenkými polohami sivého pieskovca v: 8,45-8,5 m poloha
	8,6 – 8,95	R4	**Pieskovec** tmavosivý stredne zvetraný, jemnozrnný, pevný, dĺžka súvislého jadra do 5 cm, s vrstvičkami ílovca (10 %),
	8,95 – 9,35	R5-R6	**Ílovec** stredne zvetraný tmavosivý s vrstvami hnedej farby (30 %), drobivý v ruke
	9,35 – 9,65	R3	**Pieskovec** stredne zvetraný, tmavosivý s prechodom do hnedej farby, s hrdzavými zátekmi na plochách vrstevnatosti, ťažšie sa rozbíja kladivom, pevný, dĺžka súvislého jadra do 10 cm
	9,65 – 10,55	R5	**Ílovec** tmavosivý s hnedými vrstvami , stredne zvetraný, v striedaní s prachovcom, - v 10,24-10,4 m pieskovec hnedý, súvislé jadro dĺžky 7 cm
	10,55 – 11,25	R3	**Pieskovec** slabo zvetraný, do 10,6 m hnedý, do 10,9 m tmavosivý, jemnozrnný, ďalej sivý, strednozrnný, pevný, súvislé jadro dĺžky nad 10 cm v: 10,57-10,7 m, 10,81-10,97 m, 11,0-11,11 m 11,12-11,24 m
	11,25 – 12,4	R5	**Ílovec v striedaní s prachovcom a pieskovcom** (60:20:20), tmavosivý s hnedými a hrdzavými vrstvičkami (20-30 %), - pieskovec v 11,56-11,66 m, 12,0-12,1 m, so

			silnými hrdzavými zátekmi
	12,4 – 13,2	R4-R5	**Pieskovec s polohami ílovca** (10 %) hnedý, so silným hrdzavým zátekom, stredne ťažko sa rozbíja kladivom, (porucha?), jadro v úlomkoch, - v 12,4-12,5 m hnedý ílovec,
	13,2 – 13,4	R5-R6	**Ílovec** tmavosivý s hnedými vrstvami (30 %)
	13,4 -13,9	R5	**Pieskovec** (90 %) **s vrstvami ílovca**, hnedý (porucha?), mokrý, jadro v úlomkoch, - v 13,86-13,88 m diskontinuita paralelná s osou jadra, so silnými hrdzavými zátekmi,
	13,9 -14,1	R5	**Ílovec – pieskovec** 1:1, v striedaní sivej a hnedej farby, s hrdzavými zátekmi na plochách diskontinuít
	14,1 – 15,0	**F7 MV**	**Hlina s veľmi vysokou plasticitou**, do 14,45m sivá, ďalej zelenosivá , **pevná**

Označenie vrtu:	**203 - 2**		
	504,85 m n. m.		
Hĺbka vrtu:	15,0 m		
Hladina p.v. narazená:	3,20 m p.t.		
Hladina p.v. ustálená:	3,00 m p.t.		
Interval odberu vzoriek:	PV- 1,0-1,6; 4,0-4,8; 6,7-6,8, ÚL. H. – 13,0-15,0		
Profil vrtu:	**Kvartér**		*Antropogénne sedimenty*
	0,0 – 0,1	F4 CSOY	**Íl piesčitý**, tmavohnedý, tuhý, vlhký, s korienkami rastlín, kompaktné jadro, ochranná hrádza
	0,1 – 1,0	G3 G-FY	**Štrk s prímesou jemnozrnnej zeminy**, úlomky polozaoblené až zaoblené veľ. do 12 cm – ochranná hrádza
			Fluviálne sedimenty
	1,0 - 2,8	**G3 G-F+11%Cb**	**Štrk s prímesou jemnozrnnej zeminy**, vlhký, sypký, úlomky polozaoblené až zaoblené, veľ. do 12 cm, prevažne do 8 cm, jemnozrnná zložka pevná
	2,8 - 5,65	**G3 G-F+8%Cb**	**Štrk s prímesou jemnozrnnej zeminy**, hnedý, mokrý, úlomky veľ. do 10 cm
	5,65 - 6,4	G3 – G5	**Štrk ílovitý**, hnedý, úlomky poloostrohranné až zaoblené veľ. do 6 cm, mokrý
	6,4 – 6,7	G5 GC – F2 CG	**Štrk ílovitý až íl štrkovitý**, dtto ako vyššie
			Eluviálne sedimenty
	6,7 – 6,8	**F7 MV**	**Hlina s veľmi vysokou plasticitou**, svetlohnedá, **tuhá**, dobre tvarovateľná kompaktné jadro, silne vlhká
	6,8 – 7,15	F2 CG	**Íl štrkovitý**, do 6,9 m svetlohnedý, ďalej tmavšie sivohnedý, pevný, úlomky pieskovca ostrohranné, veľ. do 10 cm, kompaktné jadro
	Paleogén		
	7,15 – 8,0	R5 – R6	**Ílovec** silno zvetraný, tmavosivý s hnedými preplástkami, drobivý v ruke, málo pevný, **s polohami pieskovca**, ílovec : pieskovec - 2:1, - v 7,8-8,0 hnedý, charakteru ílu až ílu štrkovitého, piesčitého
	8,0 – 8,3	R4	**Pieskovec** prevažne jemnozrnný, tmavosivý s prechodmi do hnedého, so silnými hrdzavými zátekmi, pevný, ťažšie rozbitný kladivom, súvislé jadro dĺžky do 8 cm
	8,3 – 9,3	R5	**Ílovec** silno zvetraný, hnedý charakteru ílu **v striedaní s pieskovcom** hnedým,

			jemnozrnným, rozbíja sa jedným úderom kladiva (ílovec: pieskovec – 60:40) - v 8,3-8,6 m ílovec, 8,6-8,9 m pieskovec, 8,9-9,1 m ílovec, 9,1-9,2 m pieskovec, 9,2-9,3 m ílovec
	9,3 – 10,0	R5-R6	**Ílovec** silno až stredne zvetraný, v prechodoch sivej a hnedej farby, **s polohami pieskovca**, ílovec málo pevný, drobivý, so silnými hrdzavými zátekmi, pieskovec v 9,7-9,85 m
	10,0 – 10,5	R5	**Striedanie ílovca a pieskovca** 1:1, silno až stredne zvetraný, - v 10,0-10,1 m, 10,2-10,35 m, hnedý, silno zvetraný pieskovec, rozbíja sa kladivom
	10,5 – 11,9	R5	**Ílovec** stredne zvetraný, tmavosivý **v striedaní s pieskovcom**, pieskovec v : 10,74-10,79 m, 10,95-11,0 m a 11,45-11,65 m - v 11,7 m hnedosivý, s hrdzavými zátekmi,
	11,9 – 12,2	R3-R4	**Pieskove**c tmavosivý jemno až strednozrnný, dĺžka súvislého jadra do 7 cm, ťažšie sa rozbíja kladivom
	12,2 – 12,8	R5	**Ílovec** detto ako v 10,5-11,9 m, stredne zvetraný, tmavosivý s tenšími hnedými vrstvami hrúbky do 2 cm (10 %), - v 10,45-10,5 m hnedosivý pieskovec, inde prevažne ílovec (iba tenké vrstvy pieskovca)
	12,8 – 15,0	R5-R4	**Ílovec** tmavosivý, slabo zvetraný, **s polohami pieskovca (R2)** - polohy pieskovca v: 13,5-13,66 m 13,8-13,85 m, 13,95-14,0 m. - v 13,0-13,3 m striedanie pieskovec – ílovec 2:1, dĺžky súvislého jadra do 2 cm, ťažšie sa rozbíja kladivom, - dĺžka súvislého jadra do 7 cm v: 14,15-14,22 m, 14,3-14,37 m, dĺžka súvislého jadra do 4 cm v: 14,51-14,6 m, 14,7-14,73 m 14,92-14,95 m

Označenie vrtu:	**203 - 3**		
	504,80 m n. m.		
Hĺbka vrtu:	15,0 m		
Hladina p.v. narazená:	3,3 m p.t.		
Hladina p.v. ustálená:	3,2 m p.t.		
Interval odberu vzoriek:	PV- 2,0-2,5, 6,0-6,5 H - 13,6-14,8		
Profil vrtu:	**Kvartér**		*Antropogénne sedimenty*
	0,0 – 0,15	F4 CSOY	**Íl piesčitý**, tmavohnedý, tuhý, s korienkami vegetácie, ochranná hrádza
	0,15 – 0,4	F4 CSY	**Íl piesčitý**, hnedý, vlhký, tuhý, jadro v hrudách, lokálny výskyt zaoblených úlomkov, ochranná hrádza
	0,4 – 2,0	G3 G-F–G5 GCY?	**Štrk s prímesou jemnozrnnej zeminy až ílovitý**, vysoký obsah piesčitej zložky, vlhký, hnedý, úlomky polozaoblené až zaoblené. veľ. do 12 cm (10 %), prevažne do 6 cm, sypký, ochranná hrádza?
			Fluviálne sedimenty
	2,0 – 2,5	**G5 GC+3%Cb**	**Štrk ílovitý**, hnedý, ílová zložka piesčitá, pevnej konzistencie, vlhká, jadro v hrudách
	2,5 – 6,0	G3 G-F – G5 GC	**Štrk s prímesou jemnozrnnej zeminy až ílovitý**, hnedý, piesčitý, mokrý, úlomky veľ. do 12 cm,
	6,0 – 6,7	**G3 G-F**	**Štrk s prímesou jemnozrnnej zeminy**,

			svetlejšie hnedý, mokrý. úlomky poloostrohranné až polozaoblené, veľ. do 8 cm, jemnozrnná zložka **pevná**
	Paleogén		
	6,7 – 6,9	R5	**Pieskovec** silno zvetraný, hnedý s vložkami hnedého ílu piesčitého, dĺžka súvislého jadra do 3 cm a v úlomkoch, rozbíja sa kladivom
	6,9 – 8,2	R5-R6	**Ílovec** tmavosivý, silno zvetraný, s hnedými vrstvičkami, lokálne s tenkou vrstvou pieskovca: v 7,6-7,61 m, suchý - v 8,0-8,2 m ílovec s vložkami pieskovca (pieskovec - 30 %) – hnedý, s hrdzavými zátekmi
	8,2 – 8,6	R4-R5	**Pieskovec** jemnozrnný, tmavosivý, pevný, rozbíja sa kladivom, dĺžka súvislého jadra do 4 cm **s vrstvami ílovca** (20 %)
	8,6 – 10,3	R5-R6	**Ílovec** silno až stredne zvetraný, s lokálnymi vrstvičkami prachovca, tmavosivý s polohami hnedého (20 – 30 %), - v 10,15-10,2 m pieskovec jemnozrnný, v úlomkoch veľ. do 6 cm, v prechodoch sivej a hnedej farby, rozbíja sa kladivom 1-2 údermi, s hrdzavými zátekmi
	10,3 – 11,0	R5-R6	**Ílovec**, detto ako vyššie, len lokálne vrstvičky hnedej farby (15 %), stredne zvetraný
	11,0 – 11,2	R3	**Pieskovec** sivý, pevný, jemnozrnný, dĺžka súvislého jadra do 8 cm
	11,2 – 13,0	R5	**Ílovec** slabo zvetraný, tmavosivý, lokálne s hrdzavými vrstvičkami, - do 12 m s lokálnymi polohami menej pevného pieskovca, jadro v úlomkoch - v 11,5-11,63, v 11,35-11,4 m - od 12 m s prechodmi do prachovca (20 %)
	13,0 – 13,9	R4	**Pieskovec** slabo až stredne zvetraný, tmavosivý, jemnozrnný, dĺžka súvislého jadra do 5 cm, - v 13,2-13,6 m s vrstvičkami ílovca (20 %), - v 13,6-13,7 m súvislé jadro s diskontinui-tou paralelnou s osou jadra, so silnými hrdzavými zátekmi, v okolí diskontinuity s prechodom pieskovca do hnedej farby
	13,9 – 14,3	R5	**Ílovec** tmavosivý s vrstvičkou hnedej a hrdzavej farby v 14,0-14,15 m
	14,3 – 14,8	**R3**	**Pieskovec** slabo zvetraný tmavosivý, jemnozrnný, pevný, ťažšie sa rozbíja kladivom, dĺžka súvislého jadra do 10 cm - v 14,4-14,5 m diskontinuita cca 10 ° od osi jadra so silnými hrdzavými zátekmi a prechodom do hnedého pieskovca okolo diskontinuity, - v 14,6-14,7 m ílovec sivý
	14,8 – 15,0	R4-R5	**Striedanie ílovca, prachovca a pieskovca** 1:1, slabo zvetraný, sivý

2.2 Podklady

[1] Predchádzajúca projektová dokumentácia stavby I/68 Plavnica, preložka cesty – DSP (Situácia cesty – smerové a výškové vedenie trasy, Geologický prieskum, Korózny prieskum, atď.)

[2] Predchádzajúca projektová dokumentácia objektu 203-00 – DSP

2.3 Použité normy, technické podmienky, programy a literatúra

2.3.1 Normy

STN EN 1990 – Eurokód. Zásady navrhovania konštrukcií
STN EN 1991 – Eurokód 1. Zaťaženia konštrukcií
STN EN 1992 – Eurokód 2. Navrhovanie betónových konštrukcií
STN EN 1997 – Eurokód 7. Navrhovanie geotechnických konštrukcií

2.3.2 Technické podmienky, smernice

VL4 – Vzorové listy stavieb pozemných komunikácií, mosty

2.3.3 Výpočtové programy

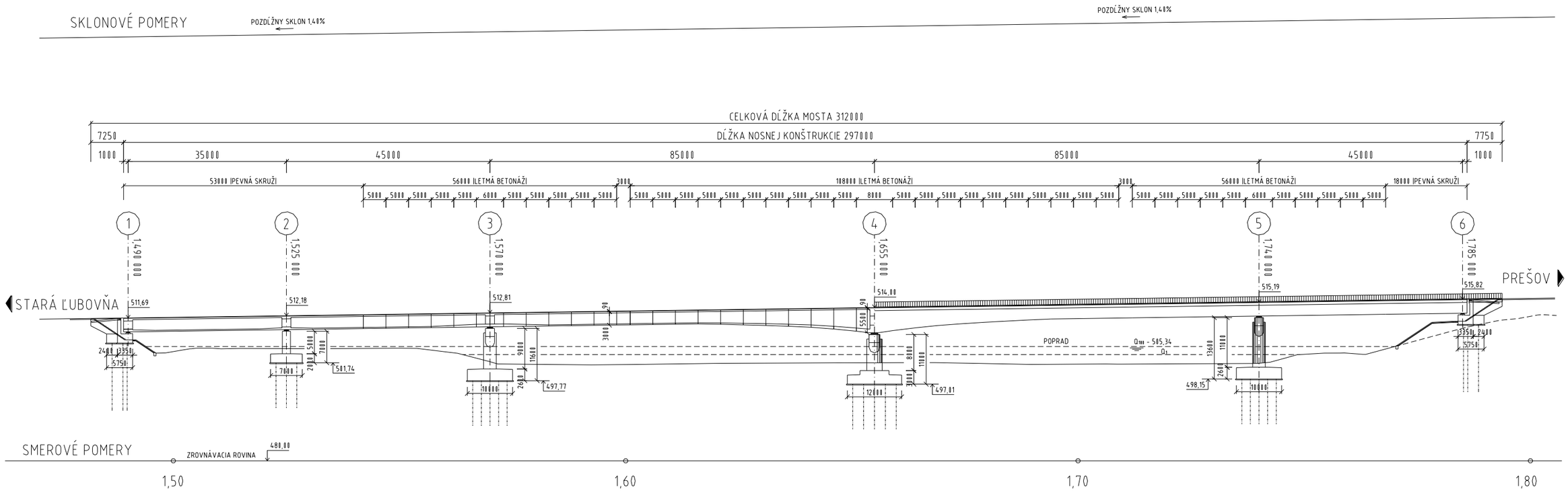
Midas Civil, Scia Engineer, MS Office, Fine EC – Beton 3D, Geo

2.3.4 Literatúra

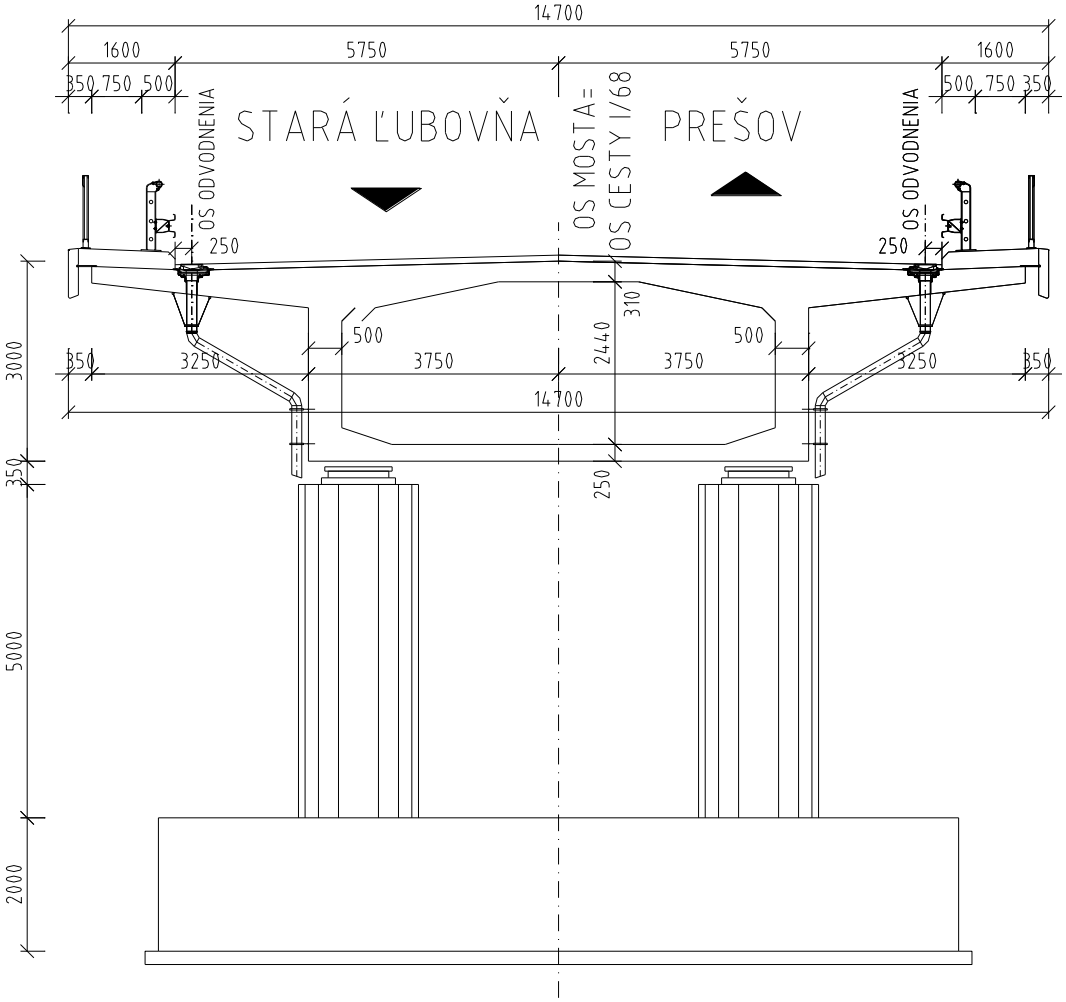
Betónové konštrukcie – Bilčík, Fillo, Benko, Halvoník
Predpätý betón – Ivan Harvan
Betónové mosty I – Martin Moravčík, Štefan Zemko

3. Prehľadný výkres

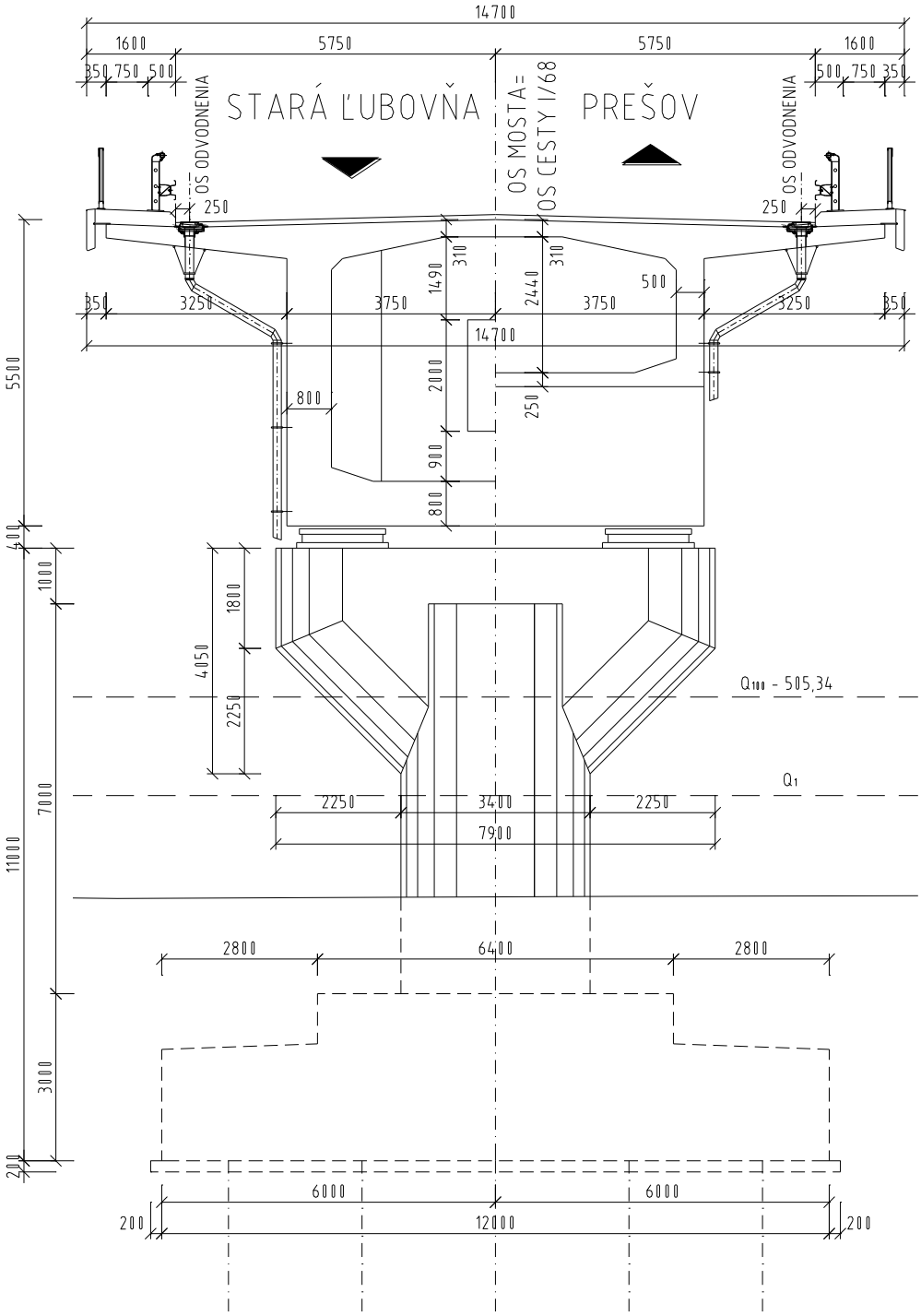
3.1 Pozdĺžny rez



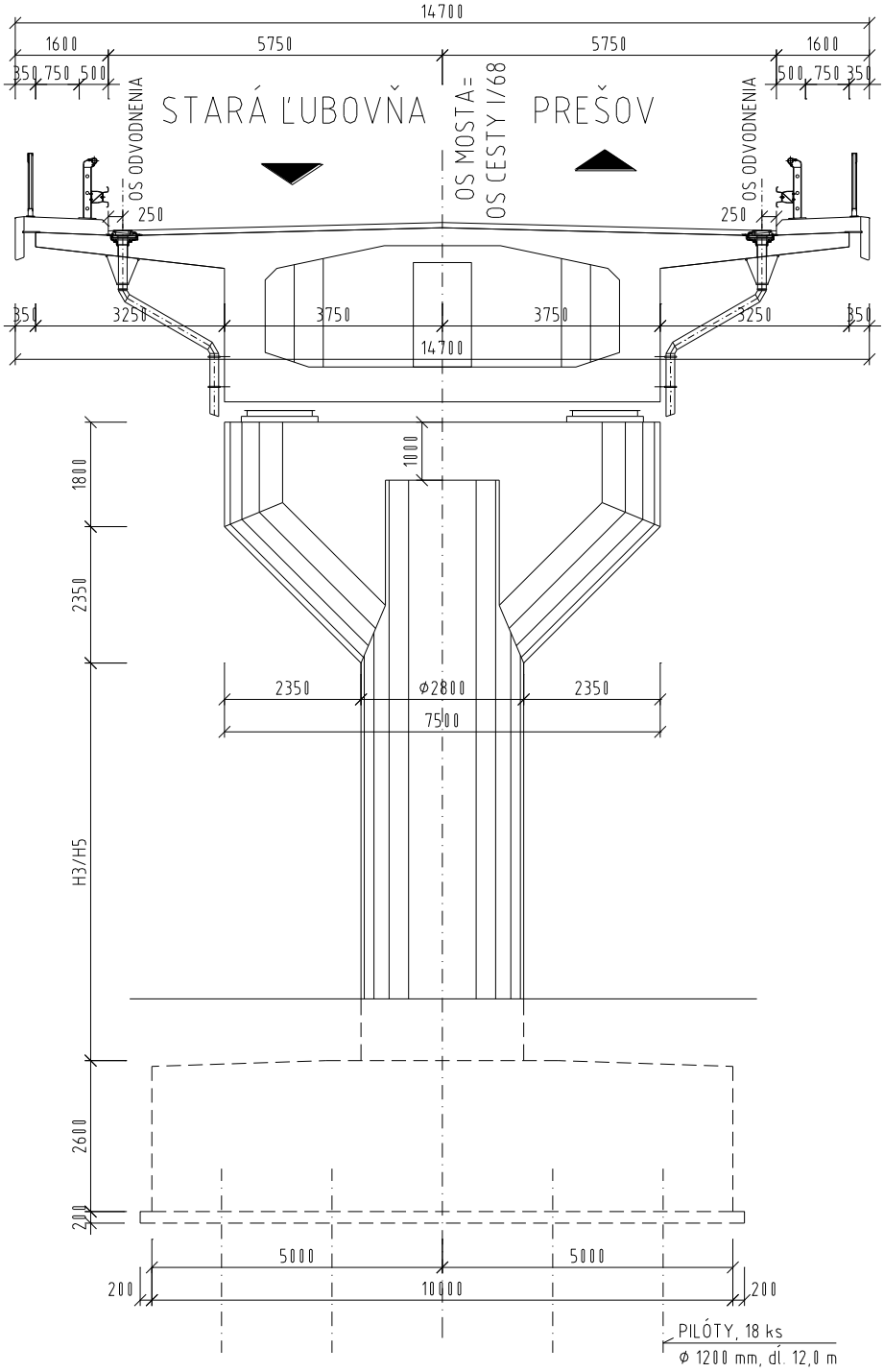
3.2 Priečny rez – podpera 2



3.3 Priečny rez – podpera 4 (3, 5 – tvarovo podobné)



3.4 Priečny rez – podpera 3, 5



4. Zaťaženie

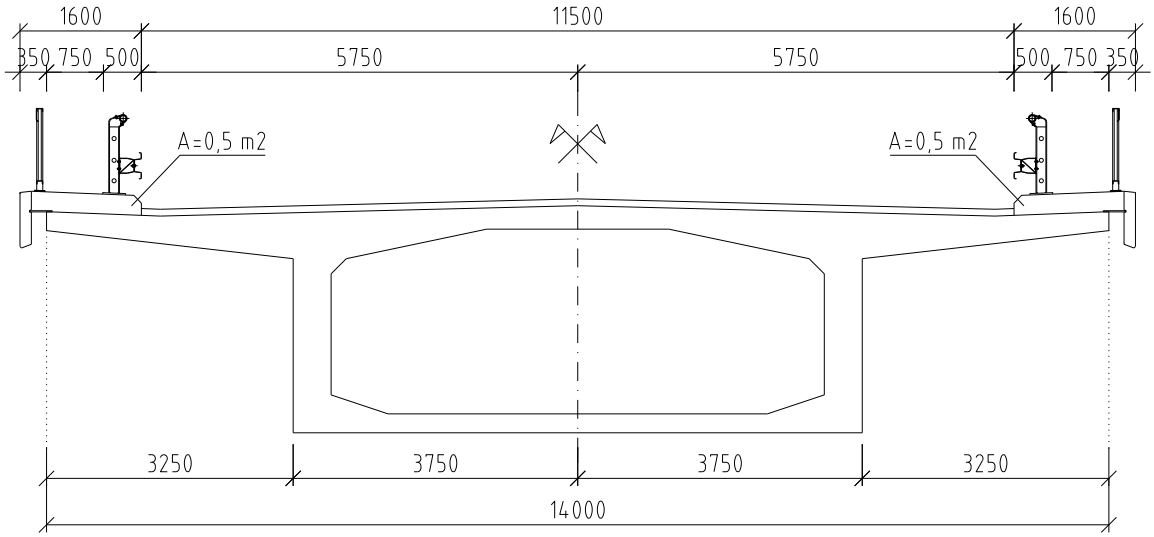
4.1 Stále zaťaženie

Vlastná tiaž:

Vlastná tiaž konštrukcie mostu G_{0K} bola zadaná v statickom výpočtovom programe Midas Civil 2011.

Ostatné stále zaťaženie G_{1K}:
- ľavá rímsa: A_b x γ_b = 0,5 m^2 x 25 kN/m^3 = 12,5 kN/m
- pravá rímsa: A_b x γ_b = 0,5 m^2 x 25 kN/m^3 = 12,5 kN/m
- ľavé oceľové zvodidlo: = 1,0 kN/m
- pravé oceľové zvodidlo: = 1,0 kN/m
- ľavé oceľové zábradlie: = 1,0 kN/m
- pravé oceľové zábradlie: = 1,0 kN/m

zaťaženie vozovkou:
- vozovka: A_V x γ_V = 11,5m x 0,090m x 25 kN/m^3 = 25,9 = 26,0 kN/m



Nerovnomerné sadanie podpier a opôr G_{SET}:

Nerovnomerné sadanie bolo uvažované s hodnotou 10 mm.

Predpätie

Navrhnuté predpínacie jednotky: 7-drôtové holé predpínacie pramence

1 kábel = 19 x Ø15,7 (1860 Mpa)

Prípustné napätie predpínacej výstuže: Počas predpínania $\sigma_{p,max}$ < min (0,9$f_{p0,1k}$; 0,8 f_{pk})

$\sigma_{p,max}$ < min (0,9*1640 ; 0,8*1860)

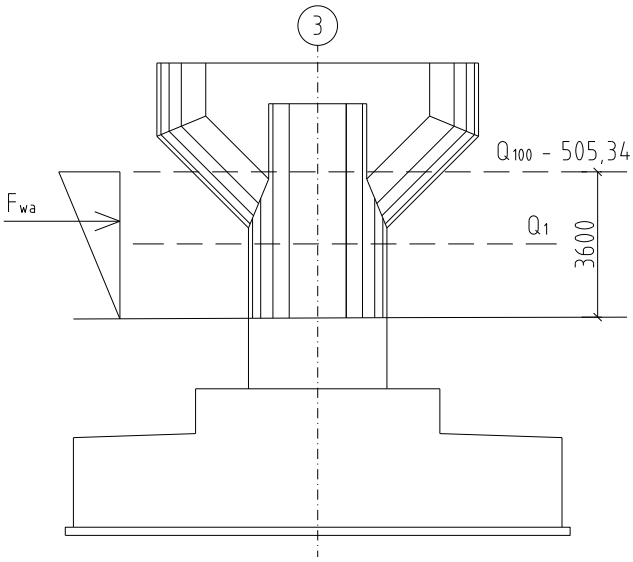
$\sigma_{p,max}$ < min (1476 ; 1488) → **návrh napätia pri predpínaní σ_p = 1450 MPa**

Prípustné napätie predpínacej výstuže: Po transfere predpätia σ_{pm0} < min (0,85$f_{p0,1k}$; 0,75 f_{pk})

σ_{pm0} < min (0,85*1640 ; 0,75*1860)

σ_{pm0} < min (1394 ; 1395) MPa

Zaťaženie vodou



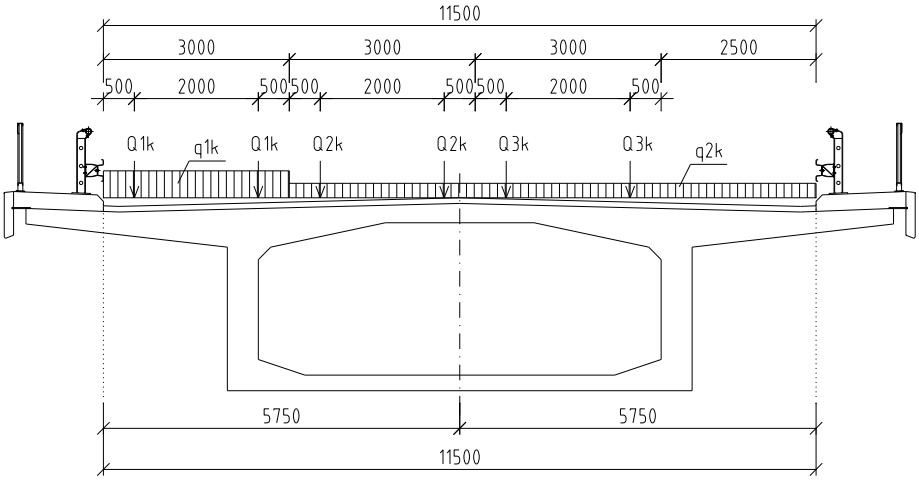
F_{wa} = ½*k*ρ_{wa}*h*b*v_{wa}
k – súčiniteľ tvaru 0,7 (kruh)
ρ_{wa} – hustota vody (kg/m^3)
h – vhĺbka vody (m)
b – šírka objektu (m)
v_{wa} – priemerná rýchlosť vody (m/s)
F_{wa} = ½ * 0,7 * 1000 * 3,6 * 3,4 * 2,75 = 11781 N = 11,8 kN (**v statickom výpočte zanedbané**)

4.2 Premenné zaťaženie

4.2.1 Zaťaženie mosta dopravou – podľa STN EN 1991-2

4.2.1.1 Zaťažovací model 1 (ZM1)

– sa skladá z dvoch čiastkových systémov.
Prvé je sústredené zaťaženie od dvojnápravového vozidla (tandemový systém TS, kde sa uvažuje každá náprava s tiažou $\alpha_Q Q_k$) a druhé je rovnomerné spojité zaťaženie (RSZ systém, ktoré má intenzitu tiaže na štvorcový meter zaťažovacieho pruhu $\alpha_q q_k$).
α_Q, α_q – kategorizačné súčinitele zaťaženia.
Q_k – nápravové zaťaženie,q_k – spojité zaťaženie



4.2.1.2 Zaťažovací model 2 (ZM2)

– je zložený z jednonápravového zaťaženia $\beta_Q Q_{ak}$ (Q_{ak} = 400 kN, vrátane dynamických prírastkov). Používa sa v ľubovoľnej polohe na vozovke.
β_Q – kategorizačný súčiniteľ zaťaženia.

4.2.1.3 Zaťažovací model 3 (ZM3)

– špeciálne vozidlo – 3000/240 (pre mosty na osobitne určených trasách)
Vozidlo sa pohybuje v osi mosta (prípustná kolmá odchýlka od vytýčenej polohy je ± 0,3 m) rýchlosťou do 5 km/hod, pričom musí byť po celej dĺžke mosta vylúčená ostatná doprava.

4.2.1.4 Brzdné a rozjazdové sily

– brzdná sila Q_{1K} pôsobí na povrchu vozovky v pozdĺžnom smere. Excentricita bola zanedbaná a sila uvažovaná ako rovnomerne spojité zaťaženie pozdĺž osi vozovky na príslušnej dĺžke pôsobiaceho zaťaženia.
$Q_{1K} = 0{,}6\alpha_{Q1}(2Q_{1K})+0{,}1\alpha_{q1}q_{1K}w_1L$
L – dĺžka nosnej konštrukcie
Q_{1K} = 0,6*1,0 *(2*300) + 0,1*1,0*9,0*3,0*L = 360,0 + 2,7*297,0 = 1161,9 = 1162 kN
podmienkou je že $Q_{1K} \leq 900$ kN → **Q_{1K} = 900 kN**
Rozjazdové sily majú tú istú veľkosť len opačného smeru ako brzdná sila.

Brzdné a rozjazdové sily prenáša podpera č. 4 na ktorej je umiestnené pevné ložisko.

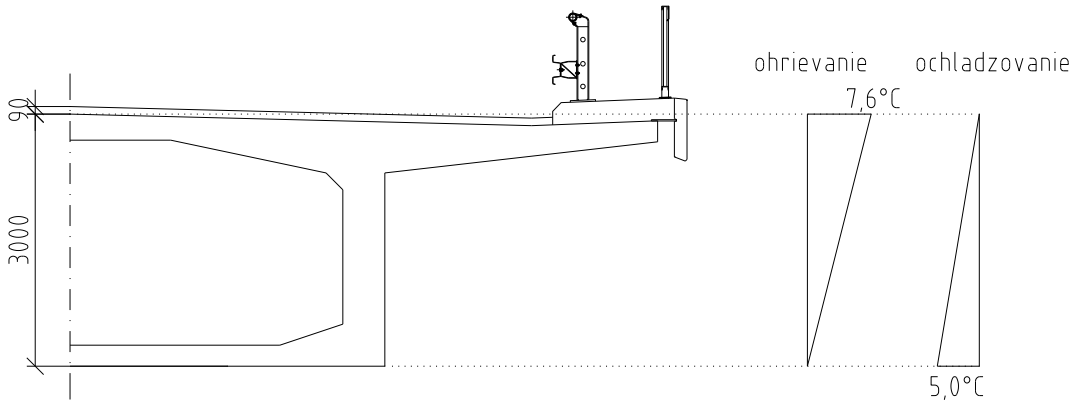
4.2.1.5 Trenie v ložiskách na podperách č. 2, 3 a 5

– vodorovné účinky sa vypočítajú ako 5% zo všetkého zvislého stáleho zaťaženia a 5% z max. zvislého zaťaženia dopravou. Podepra č. 4 má pevné ložisko, sily od trenia na pilier tu vznikajú z nesymetrie konštrukcie k pevnému ložisku.
Zaťaženie – sily v ložiskách pozri kapitolu 5.14.2 – Zaťaženie na ložiská
Podpera 2 (dvojica pilierov) = 0,05*(∑G + Q) = 0,05*((vlastná tiaž
VT+zvršok+vozovka+sadanie+pradpätie) + doprava) = 371,7 kN (na pilier -max)
Podpera 3 = 0,05*(∑G + Q) = 0,05*((VT+zvršok+vozovka+sadanie+pradpätie) + doprava) =
= (718,3+761,8) = 1480,1 kN (na pilier)
Podpera 4 = (opora1 + podpera2 + podpera3 - podpera5 - opora6) =
= (419,7+451,6) = 871,3 kN (na pilier)
Podpera 5 = 0,05*(∑G + Q) = 0,05*((VT+zvršok+vozovka+sadanie+pradpätie) + doprava) =
= (686,4+730,5)= 1416,9 kN (na pilier)

4.2.2 Zaťaženie účinkami teploty – podľa STN EN 1991-1-5

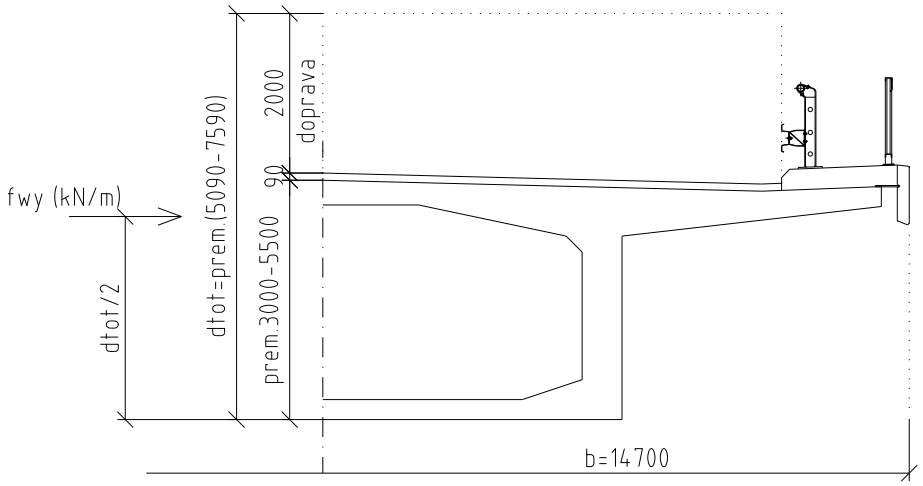
Rovnomerná zložka teploty na moste bola vzhľadom na statický model zanedbaná.
Pre výpočet dilatačných spojov na moste bola uvažovaná rovnomerná zložka teploty nasledovne:
T_{min} – min. teplota vzduchu v tieni: T_{min} = -30 °C
T_{max} – max. teplota vzduchu v tieni: T_{max} = 40 °C
$T_{e,min}$ – min. zložka rovnomernej teploty: $T_{e,min}$ = -38 °C
$T_{e,max}$ – max. zložka rovnomernej teploty: $T_{e,max}$ = 40 °C
T_0 – začiatočná teplota v čase upevnenia konštrukčného prvku
$\Delta T_{N,con} = T_0 - T_{e,min}$ = 10 - (-38) = 48 °C (charakteristická hodnota teploty pri skracovaní mosta)
$\Delta T_{N,exp} = T_{e,max} - T_0$ = 40 - 10 = 30 °C (charakteristická hodnota teploty pri predlžovaní mosta)
Charakteristická hodnota teploty pre dilatačné spoje:
Pri skracovaní: = ($\Delta T_{N,con}$ + 20) °C = 68 °C
Pri predlžovaní: = ($\Delta T_{N,exp}$ + 20) °C = 50 °C

Teplotný spád s lineárnym priebehom na nosnej konštrukcii (postup 1):
a) horný povrch teplejší ako spodný
k_{sur} – súčiniteľ vplyvu hrúbky povrchovej úpravy (vozovka hr. 90 mm)
= $\Delta T_{M,heat} * k_{sur}$ = 10,0 * 0,76 = 7,6 °C
b) spodný povrch teplejší ako horný
= $\Delta T_{M,cool} * k_{sur}$ = 5,0 * 1,0 = 5,0 °C



4.2.3 Zaťaženie vetrom – podľa STN EN 1991-1-4

4.2.3.1 Priečny vietor (v smere osi Y)



súčiniteľ sily $c_{f,y} = c_{fy,0} = 1,3$
(súčiniteľ orografie $c_0 = 1,0$, kategória terénu II) → $c_e(z)$ (viď STN EN 1991-1-4,čl. 4.5, obr. 4.2)
$c_e(z) = 2,4$ – súčiniteľ vystavenia vetru (z – výška nad terénom 10,0m)
$C = c_e * c_{f,y} = 2,4 * 1,3 = 3,12$ (súčiniteľ zaťaženia vetrom)
$v_b = 23,0$ m/s – rýchlosť vetra pri uvážení aj s dopravným zaťažením
$\rho = 1,25$ kg/m^3 – hustota vzduchu
Zaťaženie vetrom:
$f_{wy} = (0,5*\rho* v_b^2 *C)* d_{tot} = (0,5*1,25*23,0^2 *3,12)* d_{tot} = 1,032$ kPa$* d_{tot}$

Výsledné zaťaženie na jednotlivých lamelách NK podľa výšky d_{tot}

Prvok	výška lamely	d_{tot} (m)	$d_{tot}/2$ (m)	dl. prvkov (m)	f_{wy} (kN/m)	F_{wy} (kN)
Zárodok	5,500	7,590	3,795	8,0	7,8	62,6
Lamela 1	4,825	6,915	3,458	10,0	7,1	71,3
Lamela 2	4,325	6,415	3,208	10,0	6,6	66,2
Lamela 3	3,950	6,040	3,020	10,0	6,2	62,3
Lamela 4	3,675	5,765	2,883	10,0	5,9	59,5
Lamela 5	3,450	5,540	2,770	10,0	5,7	57,1
Lamela 6	3,250	5,340	2,670	10,0	5,5	55,1
Lamela 7	3,075	5,165	2,583	10,0	5,3	53,3
Ostatne	3,000	5,090	2,545	219,0	5,3	1149,9
			Celková dlžka mosta=	297,0	Spolu=	1637,3

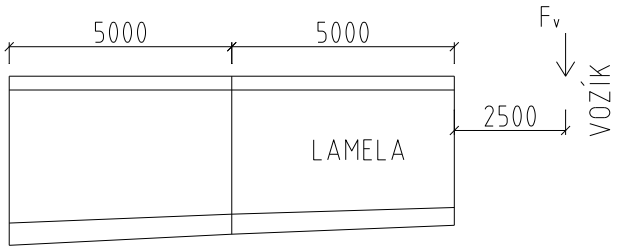
4.2.3.2 Pozdĺžny vietor (v smere osi X):

Sily v pozdĺžnom smere mosta sa uvažujú ako 25% zo síl vetra v priečnom smere:
$f_{wx} = 0{,}25*(F_{wy}/L) = 0{,}25*(1637{,}3 / 297{,}0) = 1{,}4$ kN/m

4.3 Seizmické zaťaženie

Podľa I. Broučka (in O. Čajka, M. Kopecký, 2006) je maximálna intenzita zemetrasenia skúmaného územia 6° MCS (za časové obdobie 1850 – 1970).
Na základe týchto údajov nebolo v statickom výpočte uvažované so seizmickým zaťažením mosta.

4.4 Zaťaženie počas výstavby



4.4.1 Zaťaženie betónovacím vozíkom

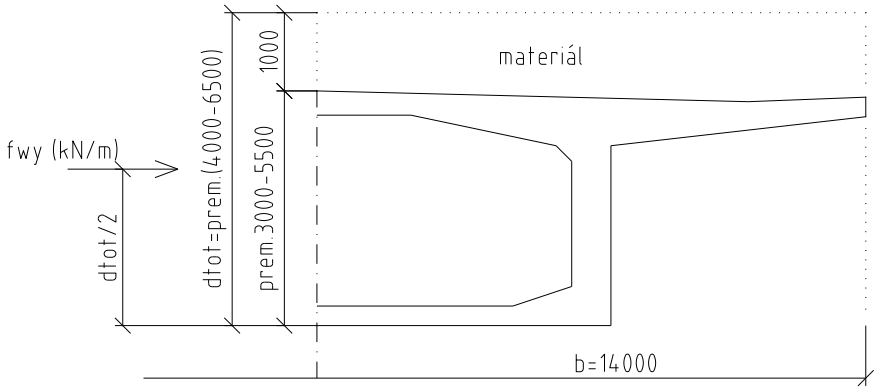
Vlastná tiaž betónovacieho vozíka: veľký vozík Fv = 100 ton = 1000 kN
malý vozík Fv = 60 ton = 600 kN

4.4.2 Zaťaženie od výstavby

Zaťaženie pracovníkmi: q = 1,0 kN/m^2
Zaťaženie – skladovanie premiestniteľných predmetov: q = 0,25 kN/m^2

4.4.3 Zaťaženie vetrom počas výstavby

4.4.3.1 Priečny vietor (v smere osi Y)



súčiniteľ sily $c_{f,y} = c_{fy,0} = 1,3$
(súčiniteľ orografie $c_0 = 1,0$, kategória terénu II) → $c_e(z)$ (viď STN EN 1991-1-4,čl. 4.5, obr. 4.2)
$c_e(z) = 2,4$ – súčiniteľ vystavenia vetru (z – výška nad terénom 10,0m)
$C = c_e * c_{f,y} = 2,4 * 1,3 = 3,12$ (súčiniteľ zaťaženia vetrom)
$v_b = 26,0$ m/s – rýchlosť vetra
$\rho = 1,25$ kg/m^3 – hustota vzduchu
Zaťaženie vetrom:
$f_{wy} = (0,5*\rho* v_b^2 *C)* d_{tot} = (0,5*1,25*26,0^2 *3,12)* d_{tot} = 1,318$ kPa* d_{tot}

Prvok	výška lamely	d_{tot} (m)	$d_{tot}/2$ (m)	dl. prvkov (m)	f_{wy} (kN/m)	F_{wy} (kN)
Zárodok	5,500	6,500	3,250	8,0	8,6	68,5
Lamela 1	4,825	5,825	2,913	10,0	7,7	76,8
Lamela 2	4,325	5,325	2,663	10,0	7,0	70,2
Lamela 3	3,950	4,950	2,475	10,0	6,5	65,3
Lamela 4	3,675	4,675	2,338	10,0	6,2	61,6
Lamela 5	3,450	4,450	2,225	10,0	5,9	58,7
Lamela 6	3,250	4,250	2,125	10,0	5,6	56,0
Lamela 7	3,075	4,075	2,038	10,0	5,4	53,7
Ostatne	3,000	4,000	2,000	219,0	5,3	1154,7
			Celková dlžka mosta=	297,0	Spolu=	1665,5

4.4.3.2 Pozdĺžny vietor (v smere osi X):

Sily v pozdĺžnom smere mosta sa uvažujú ako 25% zo síl vetra v priečnom smere:
$f_{wx} = 0,25*(F_{wy}/L) = 0,25*(1665,5 / 297,0) = 1,4$ kN/m

4.4.4 Zaťaženie nesymetriou betónovacích vozíkov

Vo výpočte bolo uvažované s nesymetriou betónovacích vozíkov pri postupe výstavby nosnej konštrukcie max. o jednu lamelu.

4.4.5 Zaťaženie nesymetriou betonáže lamely

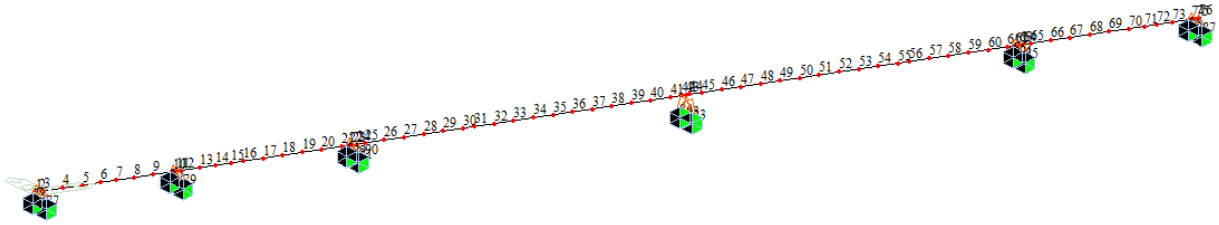
Vo výpočte bolo uvažované s nesymetriou betonáže lamely vahadla pri postupe výstavby nosnej konštrukcie max. o jednu lamelu.

5. NOSNÁ KONŠTRUKCIA

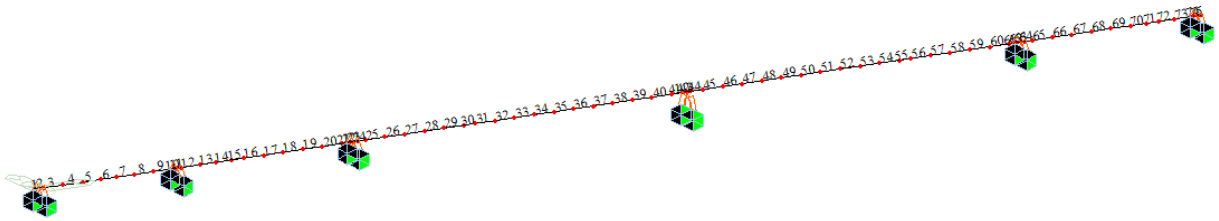
5.1 Použitý materiál

betón - C 40/50 XC4,XF2,XD1 (SK)-Cl0,2-Dmax22-S3
betonárska výstuž - B 500 B
predpínacia výstuž - 1 kábel = 19 x Ø15,7 (1860 Mpa)

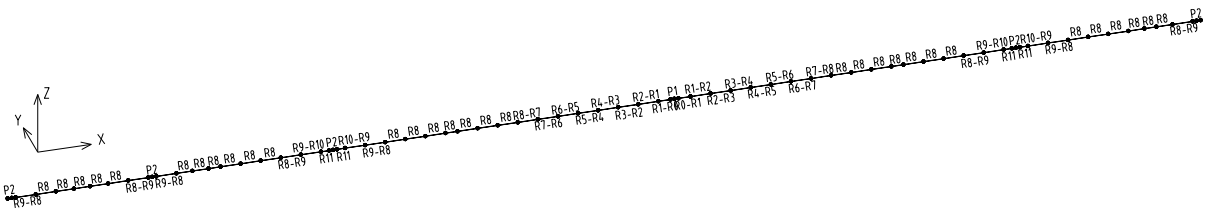
5.2 Statická schéma



Obrázok 1 nodes - body NK (1-76)



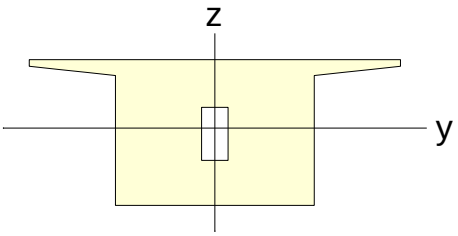
Obrázok 2 elements - prvky NK (1-75)



Obrázok 3 section - prierezy NK (označenie)

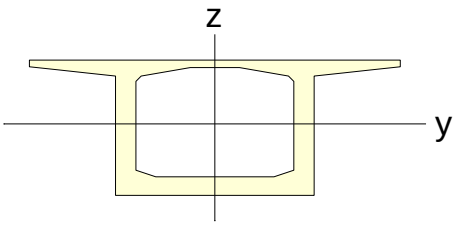
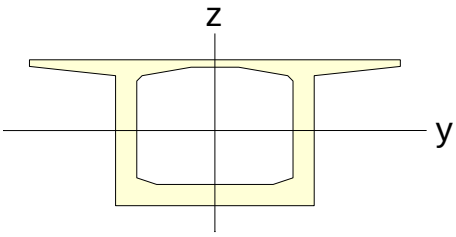
5.3 Prierezové charakteristiky

Tabuľka 1 : P1

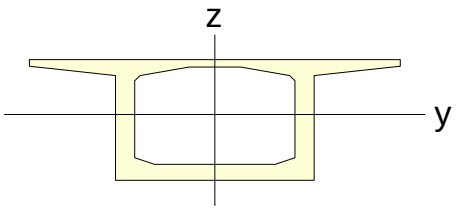
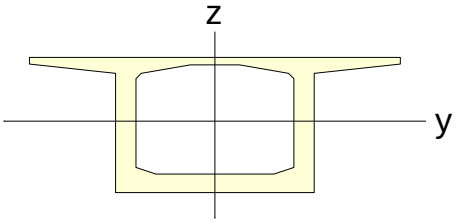


A (m ²)	Asy (m ²)	Asz (m ²)	z (+) (m)	z (-) (m)
42.012	30.464	28.462	2.582	2.918
Ixx (m ⁴)	**Iyy (m ⁴)**	**Izz (m ⁴)**	**y (+) (m)**	**y (-) (m)**
229.704	119.795	268.811	7.000	7.000

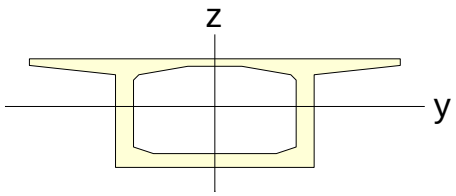
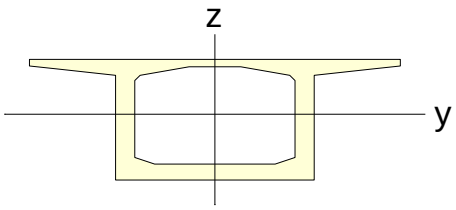
Tabuľka 2 : R1-R0 (R0-R1)

I-End					J-End				
									
A (m ²)	Asy (m ²)	Asz (m ²)	z (+) (m)	z (-) (m)	A (m ²)	Asy (m ²)	Asz (m ²)	z (+) (m)	z (-) (m)
17.405	8.748	6.373	2.403	2.697	18.882	9.228	7.278	2.664	2.836
Ixx (m ⁴)	**Iyy (m ⁴)**	**Izz (m ⁴)**	**y (+) (m)**	**y (-) (m)**	**Ixx (m ⁴)**	**Iyy (m ⁴)**	**Izz (m ⁴)**	**y (+) (m)**	**y (-) (m)**
106.326	65.780	187.917	7.000	7.000	125.360	82.122	198.882	7.000	7.000

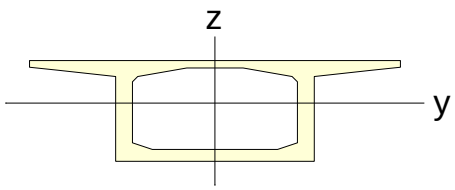
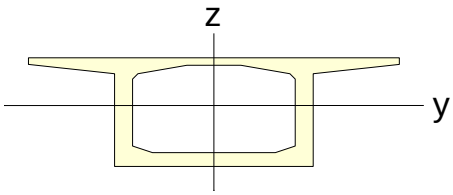
Tabuľka 3 : R2-R1 (R1-R2)

I-End					J-End				
									
A (m ²)	Asy (m ²)	Asz (m ²)	z (+) (m)	z (−) (m)	A (m ²)	Asy (m ²)	Asz (m ²)	z (+) (m)	z (−) (m)
15.631	8.247	5.192	2.068	2.482	17.405	8.748	6.373	2.403	2.697
Ixx (m ⁴)	Iyy (m ⁴)	Izz (m ⁴)	y (+) (m)	y (−) (m)	Ixx (m ⁴)	Iyy (m ⁴)	Izz (m ⁴)	y (+) (m)	y (−) (m)
82.461	47.511	173.749	7.000	7.000	106.326	65.780	187.917	7.000	7.000

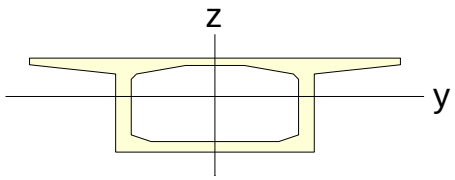
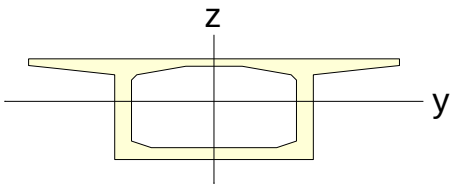
Tabuľka 4 : R3-R2 (R2-R3)

I-End					J-End				
									
A (m ²)	Asy (m ²)	Asz (m ²)	z (+) (m)	z (−) (m)	A (m ²)	Asy (m ²)	Asz (m ²)	z (+) (m)	z (−) (m)
14.198	7.815	4.261	1.797	2.303	15.631	8.247	5.192	2.068	2.482
Ixx (m ⁴)	Iyy (m ⁴)	Izz (m ⁴)	y (+) (m)	y (−) (m)	Ixx (m ⁴)	Iyy (m ⁴)	Izz (m ⁴)	y (+) (m)	y (−) (m)
64.998	35.195	162.209	7.000	7.000	82.461	47.511	173.749	7.000	7.000

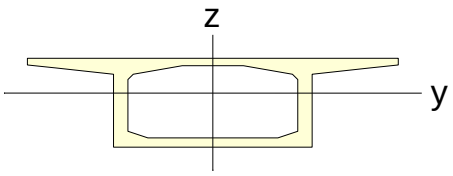
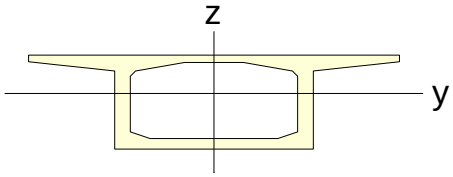
Tabuľka 5 : R4-R3 (R3-R4)

I-End					J-End				
									
A (m ²)	Asy (m ²)	Asz (m ²)	z (+) (m)	z (-) (m)	A (m ²)	Asy (m ²)	Asz (m ²)	z (+) (m)	z (-) (m)
13.084	7.388	3.606	1.604	2.196	14.198	7.815	4.261	1.797	2.303
Ixx (m ⁴)	Iyy (m ⁴)	Izz (m ⁴)	y (+) (m)	y (-) (m)	Ixx (m ⁴)	Iyy (m ⁴)	Izz (m ⁴)	y (+) (m)	y (-) (m)
53.716	27.840	153.671	7.000	7.000	64.998	35.195	162.209	7.000	7.000

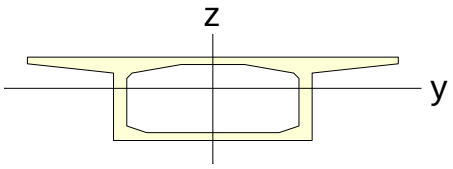
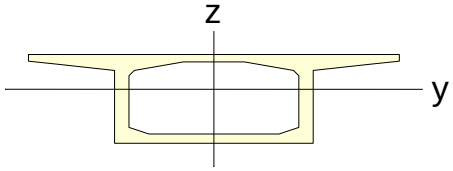
Tabuľka 6 : R5-R4 (R4-R5)

I-End					J-End				
									
A (m ²)	Asy (m ²)	Asz (m ²)	z (+) (m)	z (-) (m)	A (m ²)	Asy (m ²)	Asz (m ²)	z (+) (m)	z (-) (m)
12.197	7.068	3.079	1.448	2.102	13.084	7.388	3.606	1.604	2.196
Ixx (m ⁴)	Iyy (m ⁴)	Izz (m ⁴)	y (+) (m)	y (-) (m)	Ixx (m ⁴)	Iyy (m ⁴)	Izz (m ⁴)	y (+) (m)	y (-) (m)
45.097	22.574	146.588	7.000	7.000	53.716	27.840	153.671	7.000	7.000

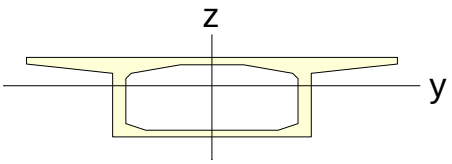
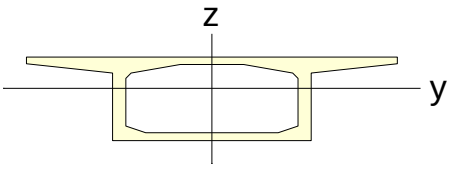
Tabuľka 7 : R6-R5 (R5-R6)

I-End					J-End				
									
A (m ²)	Asy (m ²)	Asz (m ²)	z (+) (m)	z (-) (m)	A (m ²)	Asy (m ²)	Asz (m ²)	z (+) (m)	z (-) (m)
11.400	6.729	2.649	1.313	2.037	12.197	7.068	3.079	1.448	2.102
Ixx (m ⁴)	Iyy (m ⁴)	Izz (m ⁴)	y (+) (m)	y (-) (m)	Ixx (m ⁴)	Iyy (m ⁴)	Izz (m ⁴)	y (+) (m)	y (-) (m)
38.354	18.614	140.455	7.000	7.000	45.097	22.574	146.588	7.000	7.000

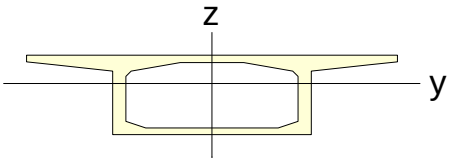
Tabuľka 8 : R7-R6 (R6-R7)

I-End					J-End				
									
A (m ²)	Asy (m ²)	Asz (m ²)	z (+) (m)	z (-) (m)	A (m ²)	Asy (m ²)	Asz (m ²)	z (+) (m)	z (-) (m)
10.630	6.381	2.264	1.178	1.972	11.400	6.729	2.649	1.313	2.037
Ixx (m ⁴)	Iyy (m ⁴)	Izz (m ⁴)	y (+) (m)	y (-) (m)	Ixx (m ⁴)	Iyy (m ⁴)	Izz (m ⁴)	y (+) (m)	y (-) (m)
32.031	15.058	134.532	7.000	7.000	38.354	18.614	140.455	7.000	7.000

Tabuľka 9 : R8-R7 (R7-R8)

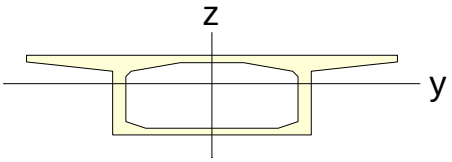
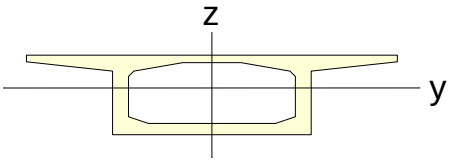
I-End					J-End				
									
A (m ^{2})	Asy (m ^{2})	Asz (m ^{2})	z (+) (m)	z (-) (m)	A (m ^{2})	Asy (m ^{2})	Asz (m ^{2})	z (+) (m)	z (-) (m)
10.155	6.042	2.094	1.069	1.931	10.630	6.381	2.264	1.178	1.972
Ixx (m ^{4})	Iyy (m ^{4})	Izz (m ^{4})	y (+) (m)	y (-) (m)	Ixx (m ^{4})	Iyy (m ^{4})	Izz (m ^{4})	y (+) (m)	y (-) (m)
27.299	12.540	131.547	7.000	7.000	32.031	15.058	134.532	7.000	7.000

Tabuľka 10 : R8

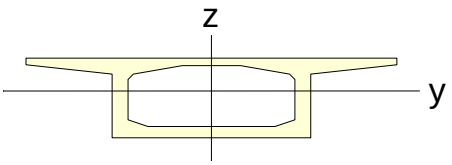
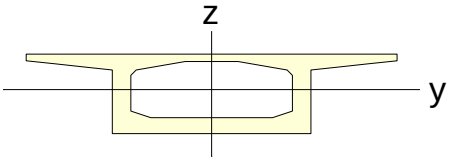


A (m ^{2})	Asy (m ^{2})	Asz (m ^{2})	z (+) (m)	z (-) (m)
10.155	6.042	2.094	1.069	1.931
Ixx (m ^{4})	Iyy (m ^{4})	Izz (m ^{4}[/DRG_MATH])	y (+) (m)	y (-) (m)
27.299	12.540	131.547	7.000	7.000

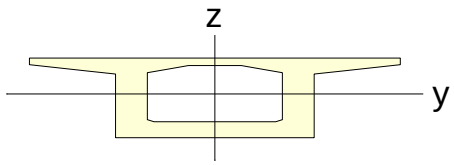
Tabuľka 11 : R8-R9 (R9-R8)

I-End					J-End				
									
A (m ²)	Asy (m ²)	Asz (m ²)	z (+) (m)	z (-) (m)	A (m ²)	Asy (m ²)	Asz (m ²)	z (+) (m)	z (-) (m)
10.155	6.042	2.094	1.069	1.931	11.751	7.351	2.461	1.235	1.765
Ixx (m ⁴)	Iyy (m ⁴)	Izz (m ⁴)	y (+) (m)	y (-) (m)	Ixx (m ⁴)	Iyy (m ⁴)	Izz (m ⁴)	y (+) (m)	y (-) (m)
27.299	12.540	131.547	7.000	7.000	32.680	15.270	139.756	7.000	7.000

Tabuľka 12 : R9-R10 (R10-R9)

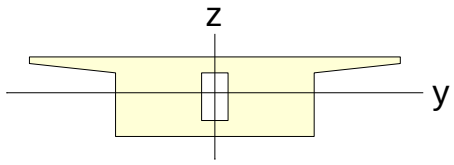
I-End					J-End				
									
A (m ²)	Asy (m ²)	Asz (m ²)	z (+) (m)	z (-) (m)	A (m ²)	Asy (m ²)	Asz (m ²)	z (+) (m)	z (-) (m)
11.751	7.351	2.461	1.235	1.765	13.278	8.612	2.831	1.340	1.660
Ixx (m ⁴)	Iyy (m ⁴)	Izz (m ⁴)	y (+) (m)	y (-) (m)	Ixx (m ⁴)	Iyy (m ⁴)	Izz (m ⁴)	y (+) (m)	y (-) (m)
32.680	15.270	139.756	7.000	7.000	35.413	16.944	146.999	7.000	7.000

Tabuľka 13 : R11



A (m ^{2})	Asy (m ^{2})	Asz (m ^{2})	z (+) (m)	z (-) (m)
14.889	8.668	4.150	1.349	1.651
Ixx (m ^{4})	**Iyy (m ^{4})**	**Izz (m ^{4})**	**y (+) (m)**	**y (-) (m)**
36.161	17.310	159.560	7.000	7.000

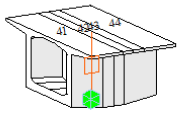
Tabuľka 14 : P2

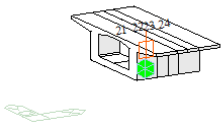


A (m ^{2})	Asy (m ^{2})	Asz (m ^{2})	z (+) (m)	z (-) (m)
23.462	15.289	11.202	1.350	1.650
Ixx (m ^{4})	**Iyy (m ^{4})**	**Izz (m ^{4})**	**y (+) (m)**	**y (-) (m)**
48.426	20.409	180.937	7.000	7.000

5.4 Posúdenie nosnej konštrukcie v štádiu výstavby

5.4.1 Konštrukčné štádium 0 (CS0)



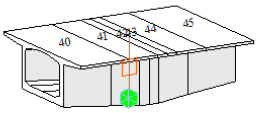


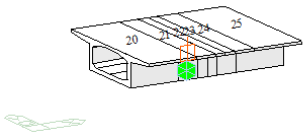
Obrázok 1 CS0

Zaťaženie (Load) = Vlastná tiaž + Vozík + Čerstvý betón + Predpätie (primárne + sekundárne) + Dotvarovanie (sekundárne) + Zmrašťovanie (sekundárne)

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
21	Summation	CS0	I[21]	Max	-9,34E+02	8,78E+02	7,23E-02	-5,57E+01
21	Summation	CS0	I[21]	Min	-9,34E+02	-7,20E+02	-7,23E-02	-1,65E+03
21	Summation	CS0	J[22]	Max	-9,40E+02	5,83E+02	7,42E-02	-3,58E+02
21	Summation	CS0	J[22]	Min	-9,40E+02	-4,79E+02	-7,42E-02	-1,42E+03
22	Summation	CS0	I[22]	Max	-5,96E+02	4,94E+02	6,53E-02	-1,02E+02
22	Summation	CS0	I[22]	Min	-5,96E+02	-4,06E+02	-6,53E-02	-1,00E+03
22	Summation	CS0	J[23]	Max	-5,97E+02	2,56E+02	6,64E-02	-3,41E+02
22	Summation	CS0	J[23]	Min	-5,97E+02	-2,10E+02	-6,64E-02	-8,07E+02
23	Summation	CS0	I[23]	Max	-5,97E+02	2,56E+02	6,64E-02	-3,41E+02
23	Summation	CS0	I[23]	Min	-5,97E+02	-2,10E+02	-6,64E-02	-8,07E+02
23	Summation	CS0	J[24]	Max	-5,96E+02	4,94E+02	6,73E-02	-1,01E+02
23	Summation	CS0	J[24]	Min	-5,96E+02	-4,06E+02	-6,73E-02	-1,00E+03
24	Summation	CS0	I[24]	Max	-9,40E+02	5,83E+02	7,64E-02	-3,57E+02
24	Summation	CS0	I[24]	Min	-9,40E+02	-4,80E+02	-7,64E-02	-1,42E+03
24	Summation	CS0	J[25]	Max	-9,34E+02	8,78E+02	7,72E-02	-5,52E+01
24	Summation	CS0	J[25]	Min	-9,34E+02	-7,23E+02	-7,72E-02	-1,66E+03
41	Summation	CS0	I[41]	Max	-8,18E+02	9,02E+02	1,31E-01	8,39E+01
41	Summation	CS0	I[41]	Min	-8,18E+02	-8,27E+02	-1,31E-01	-1,65E+03
41	Summation	CS0	J[42]	Max	-7,72E+02	5,89E+02	1,30E-01	-1,82E+02
41	Summation	CS0	J[42]	Min	-7,72E+02	-5,72E+02	-1,30E-01	-1,34E+03
42	Summation	CS0	I[42]	Max	-3,36E+02	3,85E+02	9,62E-02	4,91E+01
42	Summation	CS0	I[42]	Min	-3,36E+02	-3,46E+02	-9,62E-02	-6,82E+02
42	Summation	CS0	J[43]	Max	-3,36E+02	2,66E+02	9,65E-02	-7,01E+01
42	Summation	CS0	J[43]	Min	-3,36E+02	-2,39E+02	-9,65E-02	-5,75E+02
43	Summation	CS0	I[43]	Max	-3,36E+02	2,66E+02	9,65E-02	-6,97E+01
43	Summation	CS0	I[43]	Min	-3,36E+02	-2,39E+02	-9,65E-02	-5,75E+02
43	Summation	CS0	J[44]	Max	-3,36E+02	3,85E+02	9,69E-02	4,95E+01
43	Summation	CS0	J[44]	Min	-3,36E+02	-3,46E+02	-9,69E-02	-6,82E+02
44	Summation	CS0	I[44]	Max	-7,72E+02	5,90E+02	1,31E-01	-1,83E+02
44	Summation	CS0	I[44]	Min	-7,72E+02	-5,72E+02	-1,31E-01	-1,34E+03
44	Summation	CS0	J[45]	Max	-8,18E+02	9,01E+02	1,41E-01	8,29E+01
44	Summation	CS0	J[45]	Min	-8,18E+02	-8,26E+02	-1,41E-01	-1,64E+03

5.4.2 Konštrukčné štádium 1 (CS1)





Obrázok 2 CS1

Zaťaženie (Load) = Vlastná tiaž + Vozík + Čerstvý betón + Prevádzkové zaťaženie + Predpätie (primárne + sekundárne) + Dotvarovanie (sekundárne) + Zmrašťovanie (sekundárne)

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
20	Summation	CS1	I[20]	Max	-1,22E+03	1,06E+03	0,00E+00	-1,59E+02
20	Summation	CS1	I[20]	Min	-1,22E+03	-7,36E+02	0,00E+00	-1,96E+03
20	Summation	CS1	J[21]	Max	-1,10E+03	4,60E+01	0,00E+00	-1,05E+03
20	Summation	CS1	J[21]	Min	-1,10E+03	-5,67E+01	0,00E+00	-1,15E+03
21	Summation	CS1	I[21]	Max	-1,90E+03	1,33E+03	7,02E-02	-5,64E+02
21	Summation	CS1	I[21]	Min	-1,90E+03	-1,09E+03	-7,02E-02	-2,98E+03
21	Summation	CS1	J[22]	Max	-1,91E+03	7,79E+02	7,21E-02	-1,13E+03
21	Summation	CS1	J[22]	Min	-1,91E+03	-6,39E+02	-7,21E-02	-2,55E+03
22	Summation	CS1	I[22]	Max	-1,21E+03	6,66E+02	6,35E-02	-5,45E+02
22	Summation	CS1	I[22]	Min	-1,21E+03	-5,46E+02	-6,35E-02	-1,76E+03
22	Summation	CS1	J[23]	Max	-1,21E+03	3,18E+02	6,46E-02	-8,95E+02
22	Summation	CS1	J[23]	Min	-1,21E+03	-2,61E+02	-6,46E-02	-1,47E+03
23	Summation	CS1	I[23]	Max	-1,21E+03	3,18E+02	6,46E-02	-8,94E+02
23	Summation	CS1	I[23]	Min	-1,21E+03	-2,61E+02	-6,46E-02	-1,47E+03
23	Summation	CS1	J[24]	Max	-1,21E+03	6,68E+02	6,56E-02	-5,43E+02
23	Summation	CS1	J[24]	Min	-1,21E+03	-5,48E+02	-6,56E-02	-1,76E+03
24	Summation	CS1	I[24]	Max	-1,91E+03	7,81E+02	7,44E-02	-1,12E+03
24	Summation	CS1	I[24]	Min	-1,91E+03	-6,42E+02	-7,44E-02	-2,55E+03
24	Summation	CS1	J[25]	Max	-1,89E+03	1,33E+03	7,53E-02	-5,61E+02
24	Summation	CS1	J[25]	Min	-1,89E+03	-1,09E+03	-7,53E-02	-2,99E+03
25	Summation	CS1	I[25]	Max	-1,10E+03	4,18E+01	0,00E+00	-1,06E+03
25	Summation	CS1	I[25]	Min	-1,10E+03	-5,12E+01	0,00E+00	-1,15E+03
25	Summation	CS1	J[26]	Max	-1,22E+03	1,06E+03	0,00E+00	-1,61E+02
25	Summation	CS1	J[26]	Min	-1,22E+03	-7,37E+02	0,00E+00	-1,96E+03
40	Summation	CS1	I[40]	Max	-9,30E+02	9,64E+02	0,00E+00	3,38E+01
40	Summation	CS1	I[40]	Min	-9,30E+02	-8,22E+02	0,00E+00	-1,75E+03
40	Summation	CS1	J[41]	Max	-8,58E+02	2,81E+02	0,00E+00	-5,78E+02
40	Summation	CS1	J[41]	Min	-8,58E+02	-2,56E+02	0,00E+00	-1,11E+03
41	Summation	CS1	I[41]	Max	-1,65E+03	1,47E+03	1,27E-01	-1,81E+02
41	Summation	CS1	I[41]	Min	-1,65E+03	-1,35E+03	-1,27E-01	-3,00E+03
41	Summation	CS1	J[42]	Max	-1,55E+03	1,01E+03	1,27E-01	-5,34E+02
41	Summation	CS1	J[42]	Min	-1,55E+03	-9,78E+02	-1,27E-01	-2,53E+03
42	Summation	CS1	I[42]	Max	-6,81E+02	6,57E+02	9,35E-02	-2,44E+01
42	Summation	CS1	I[42]	Min	-6,81E+02	-5,89E+02	-9,35E-02	-1,27E+03
42	Summation	CS1	J[43]	Max	-6,82E+02	4,93E+02	9,39E-02	-1,89E+02
42	Summation	CS1	J[43]	Min	-6,82E+02	-4,42E+02	-9,39E-02	-1,12E+03
43	Summation	CS1	I[43]	Max	-6,81E+02	4,93E+02	9,39E-02	-1,88E+02
43	Summation	CS1	I[43]	Min	-6,81E+02	-4,42E+02	-9,39E-02	-1,12E+03
43	Summation	CS1	J[44]	Max	-6,81E+02	6,57E+02	9,42E-02	-2,38E+01
43	Summation	CS1	J[44]	Min	-6,81E+02	-5,89E+02	-9,42E-02	-1,27E+03
44	Summation	CS1	I[44]	Max	-1,55E+03	1,01E+03	1,28E-01	-5,35E+02
44	Summation	CS1	I[44]	Min	-1,55E+03	-9,79E+02	-1,28E-01	-2,53E+03
44	Summation	CS1	J[45]	Max	-1,65E+03	1,47E+03	1,38E-01	-1,83E+02
44	Summation	CS1	J[45]	Min	-1,65E+03	-1,34E+03	-1,38E-01	-3,00E+03
45	Summation	CS1	I[45]	Max	-8,59E+02	2,80E+02	0,00E+00	-5,79E+02

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
45	Summation	CS1	I[45]	Min	-8,59E+02	-2,55E+02	0,00E+00	-1,11E+03
45	Summation	CS1	J[46]	Max	-9,31E+02	9,64E+02	0,00E+00	3,31E+01
45	Summation	CS1	J[46]	Min	-9,31E+02	-8,21E+02	0,00E+00	-1,75E+03

5.4.3 Konštrukčné štádium 2 (CS2)

Obrázok 3 CS2

Zaťaženie (Load) = Vlastná tiaž + Vozík + Čerstvý betón + Prevádzkové zaťaženie + Predpätie (primárne + sekundárne) + Dotvarovanie (sekundárne) + Zmrašťovanie (sekundárne)

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
19	Summation	CS2	I[19]	Max	-1,37E+03	9,10E+02	0,00E+00	-4,61E+02
19	Summation	CS2	I[19]	Min	-1,37E+03	-4,90E+02	0,00E+00	-1,86E+03
19	Summation	CS2	J[20]	Max	-1,24E+03	1,43E+02	0,00E+00	-1,10E+03
19	Summation	CS2	J[20]	Min	-1,24E+03	-2,07E+02	0,00E+00	-1,45E+03
20	Summation	CS2	I[20]	Max	-2,43E+03	1,33E+03	0,00E+00	-1,10E+03
20	Summation	CS2	I[20]	Min	-2,43E+03	-9,16E+02	0,00E+00	-3,34E+03
20	Summation	CS2	J[21]	Max	-2,18E+03	2,39E+02	0,00E+00	-1,94E+03
20	Summation	CS2	J[21]	Min	-2,18E+03	-2,99E+02	0,00E+00	-2,48E+03
21	Summation	CS2	I[21]	Max	-2,85E+03	1,10E+03	6,90E-02	-1,75E+03
21	Summation	CS2	I[21]	Min	-2,85E+03	-9,02E+02	-6,90E-02	-3,75E+03
21	Summation	CS2	J[22]	Max	-2,87E+03	3,00E+02	7,09E-02	-2,57E+03
21	Summation	CS2	J[22]	Min	-2,87E+03	-2,52E+02	-7,09E-02	-3,12E+03
22	Summation	CS2	I[22]	Max	-1,83E+03	2,71E+02	6,24E-02	-1,55E+03
22	Summation	CS2	I[22]	Min	-1,83E+03	-2,25E+02	-6,24E-02	-2,05E+03
22	Summation	CS2	J[23]	Max	-1,83E+03	1,45E+02	6,35E-02	-1,68E+03
22	Summation	CS2	J[23]	Min	-1,83E+03	-1,82E+02	-6,35E-02	-2,01E+03
23	Summation	CS2	I[23]	Max	-1,83E+03	1,44E+02	6,35E-02	-1,68E+03
23	Summation	CS2	I[23]	Min	-1,83E+03	-1,80E+02	-6,35E-02	-2,01E+03
23	Summation	CS2	J[24]	Max	-1,83E+03	2,75E+02	6,45E-02	-1,55E+03
23	Summation	CS2	J[24]	Min	-1,83E+03	-2,29E+02	-6,45E-02	-2,05E+03
24	Summation	CS2	I[24]	Max	-2,87E+03	3,07E+02	7,32E-02	-2,56E+03
24	Summation	CS2	I[24]	Min	-2,87E+03	-2,58E+02	-7,32E-02	-3,13E+03
24	Summation	CS2	J[25]	Max	-2,85E+03	1,11E+03	7,41E-02	-1,74E+03
24	Summation	CS2	J[25]	Min	-2,85E+03	-9,12E+02	-7,41E-02	-3,76E+03
25	Summation	CS2	I[25]	Max	-2,18E+03	2,30E+02	0,00E+00	-1,95E+03
25	Summation	CS2	I[25]	Min	-2,18E+03	-2,87E+02	0,00E+00	-2,47E+03
25	Summation	CS2	J[26]	Max	-2,43E+03	1,33E+03	0,00E+00	-1,10E+03
25	Summation	CS2	J[26]	Min	-2,43E+03	-9,17E+02	0,00E+00	-3,35E+03
26	Summation	CS2	I[26]	Max	-1,24E+03	1,42E+02	0,00E+00	-1,10E+03
26	Summation	CS2	I[26]	Min	-1,24E+03	-2,06E+02	0,00E+00	-1,44E+03
26	Summation	CS2	J[27]	Max	-1,37E+03	9,09E+02	0,00E+00	-4,64E+02
26	Summation	CS2	J[27]	Min	-1,37E+03	-4,89E+02	0,00E+00	-1,86E+03
39	Summation	CS2	I[39]	Max	-9,95E+02	9,41E+02	0,00E+00	-5,44E+01
39	Summation	CS2	I[39]	Min	-9,95E+02	-7,47E+02	0,00E+00	-1,74E+03
39	Summation	CS2	J[40]	Max	-9,45E+02	1,78E+02	0,00E+00	-7,67E+02
39	Summation	CS2	J[40]	Min	-9,45E+02	-1,51E+02	0,00E+00	-1,10E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
40	Summation	CS2	I[40]	Max	-1,85E+03	1,49E+03	0,00E+00	-3,65E+02
40	Summation	CS2	I[40]	Min	-1,85E+03	-1,26E+03	0,00E+00	-3,11E+03
40	Summation	CS2	J[41]	Max	-1,70E+03	5,53E+02	0,00E+00	-1,14E+03
40	Summation	CS2	J[41]	Min	-1,70E+03	-5,02E+02	0,00E+00	-2,20E+03
41	Summation	CS2	I[41]	Max	-2,48E+03	1,73E+03	1,24E-01	-7,52E+02
41	Summation	CS2	I[41]	Min	-2,48E+03	-1,58E+03	-1,24E-01	-4,06E+03
41	Summation	CS2	J[42]	Max	-2,31E+03	1,18E+03	1,24E-01	-1,13E+03
41	Summation	CS2	J[42]	Min	-2,31E+03	-1,14E+03	-1,24E-01	-3,45E+03
42	Summation	CS2	I[42]	Max	-1,03E+03	7,53E+02	9,19E-02	-2,73E+02
42	Summation	CS2	I[42]	Min	-1,03E+03	-6,75E+02	-9,19E-02	-1,70E+03
42	Summation	CS2	J[43]	Max	-1,03E+03	5,47E+02	9,22E-02	-4,79E+02
42	Summation	CS2	J[43]	Min	-1,03E+03	-4,90E+02	-9,22E-02	-1,52E+03
43	Summation	CS2	I[43]	Max	-1,03E+03	5,46E+02	9,22E-02	-4,79E+02
43	Summation	CS2	I[43]	Min	-1,03E+03	-4,90E+02	-9,22E-02	-1,51E+03
43	Summation	CS2	J[44]	Max	-1,02E+03	7,53E+02	9,26E-02	-2,72E+02
43	Summation	CS2	J[44]	Min	-1,02E+03	-6,75E+02	-9,26E-02	-1,70E+03
44	Summation	CS2	I[44]	Max	-2,32E+03	1,18E+03	1,25E-01	-1,14E+03
44	Summation	CS2	I[44]	Min	-2,32E+03	-1,14E+03	-1,25E-01	-3,46E+03
44	Summation	CS2	J[45]	Max	-2,48E+03	1,73E+03	1,35E-01	-7,55E+02
44	Summation	CS2	J[45]	Min	-2,48E+03	-1,58E+03	-1,35E-01	-4,06E+03
45	Summation	CS2	I[45]	Max	-1,70E+03	5,53E+02	0,00E+00	-1,14E+03
45	Summation	CS2	I[45]	Min	-1,70E+03	-5,01E+02	0,00E+00	-2,20E+03
45	Summation	CS2	J[46]	Max	-1,85E+03	1,49E+03	0,00E+00	-3,66E+02
45	Summation	CS2	J[46]	Min	-1,85E+03	-1,26E+03	0,00E+00	-3,11E+03
46	Summation	CS2	I[46]	Max	-9,46E+02	1,78E+02	0,00E+00	-7,68E+02
46	Summation	CS2	I[46]	Min	-9,46E+02	-1,51E+02	0,00E+00	-1,10E+03
46	Summation	CS2	J[47]	Max	-9,97E+02	9,42E+02	0,00E+00	-5,50E+01
46	Summation	CS2	J[47]	Min	-9,97E+02	-7,48E+02	0,00E+00	-1,74E+03

5.4.4 Konštrukčné štádium 3 (CS3)

Obrázok 4 CS3

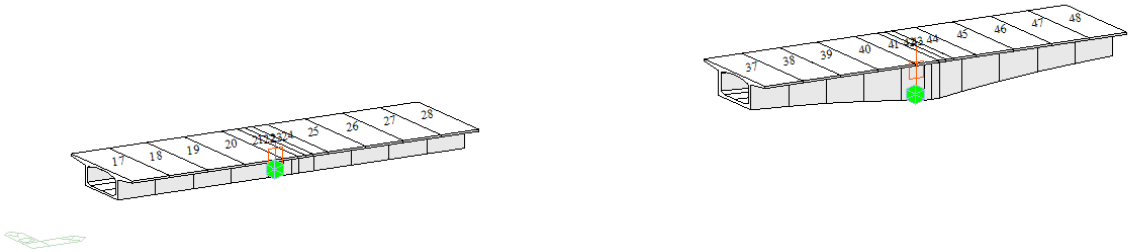
Zaťaženie (Load) = Vlastná tiaž + Vozík + Čerstvý betón + Prevádzkové zaťaženie + Predpätie (primárne + sekundárne) + Dotvarovanie (sekundárne) + Zmrašťovanie (sekundárne)

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
18	Summation	CS3	I[18]	Max	-6,84E+02	9,03E+01	0,00E+00	-5,93E+02
18	Summation	CS3	I[18]	Min	-6,84E+02	-4,87E+01	0,00E+00	-7,32E+02
18	Summation	CS3	J[19]	Max	-7,04E+02	9,12E+02	0,00E+00	2,08E+02
18	Summation	CS3	J[19]	Min	-7,04E+02	-1,69E+03	0,00E+00	-2,39E+03
19	Summation	CS3	I[19]	Max	-2,06E+03	3,23E+01	0,00E+00	-2,03E+03
19	Summation	CS3	I[19]	Min	-2,06E+03	-6,42E+01	0,00E+00	-2,13E+03
19	Summation	CS3	J[20]	Max	-1,85E+03	1,04E+03	0,00E+00	-8,10E+02
19	Summation	CS3	J[20]	Min	-1,85E+03	-1,52E+03	0,00E+00	-3,37E+03
20	Summation	CS3	I[20]	Max	-3,03E+03	7,87E+00	0,00E+00	-3,02E+03
20	Summation	CS3	I[20]	Min	-3,03E+03	-1,67E+01	0,00E+00	-3,04E+03
20	Summation	CS3	J[21]	Max	-2,72E+03	1,56E+03	0,00E+00	-1,16E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
20	Summation	CS3	J[21]	Min	-2,72E+03	-1,97E+03	0,00E+00	-4,69E+03
21	Summation	CS3	I[21]	Max	-3,33E+03	3,89E+02	6,80E-02	-2,94E+03
21	Summation	CS3	I[21]	Min	-3,33E+03	-5,08E+02	-6,80E-02	-3,84E+03
21	Summation	CS3	J[22]	Max	-3,36E+03	1,23E+03	6,99E-02	-2,12E+03
21	Summation	CS3	J[22]	Min	-3,36E+03	-1,55E+03	-6,99E-02	-4,90E+03
22	Summation	CS3	I[22]	Max	-2,14E+03	1,04E+03	6,16E-02	-1,10E+03
22	Summation	CS3	I[22]	Min	-2,14E+03	-1,29E+03	-6,16E-02	-3,43E+03
22	Summation	CS3	J[23]	Max	-2,14E+03	1,50E+03	6,27E-02	-6,46E+02
22	Summation	CS3	J[23]	Min	-2,14E+03	-1,85E+03	-6,27E-02	-3,99E+03
23	Summation	CS3	I[23]	Max	-2,14E+03	1,49E+03	6,27E-02	-6,50E+02
23	Summation	CS3	I[23]	Min	-2,14E+03	-1,84E+03	-6,27E-02	-3,98E+03
23	Summation	CS3	J[24]	Max	-2,14E+03	1,03E+03	6,37E-02	-1,10E+03
23	Summation	CS3	J[24]	Min	-2,14E+03	-1,28E+03	-6,37E-02	-3,42E+03
24	Summation	CS3	I[24]	Max	-3,36E+03	1,23E+03	7,23E-02	-2,13E+03
24	Summation	CS3	I[24]	Min	-3,36E+03	-1,53E+03	-7,23E-02	-4,89E+03
24	Summation	CS3	J[25]	Max	-3,33E+03	3,75E+02	7,32E-02	-2,96E+03
24	Summation	CS3	J[25]	Min	-3,33E+03	-4,90E+02	-7,32E-02	-3,82E+03
25	Summation	CS3	I[25]	Max	-2,72E+03	1,55E+03	0,00E+00	-1,17E+03
25	Summation	CS3	I[25]	Min	-2,72E+03	-1,94E+03	0,00E+00	-4,66E+03
25	Summation	CS3	J[26]	Max	-3,03E+03	1,21E+01	0,00E+00	-3,02E+03
25	Summation	CS3	J[26]	Min	-3,03E+03	-1,96E+01	0,00E+00	-3,05E+03
26	Summation	CS3	I[26]	Max	-1,85E+03	1,04E+03	0,00E+00	-8,12E+02
26	Summation	CS3	I[26]	Min	-1,85E+03	-1,52E+03	0,00E+00	-3,37E+03
26	Summation	CS3	J[27]	Max	-2,06E+03	3,24E+01	0,00E+00	-2,03E+03
26	Summation	CS3	J[27]	Min	-2,06E+03	-6,44E+01	0,00E+00	-2,13E+03
27	Summation	CS3	I[27]	Max	-7,04E+02	9,11E+02	0,00E+00	2,06E+02
27	Summation	CS3	I[27]	Min	-7,04E+02	-1,69E+03	0,00E+00	-2,39E+03
27	Summation	CS3	J[28]	Max	-6,86E+02	8,68E+01	0,00E+00	-6,00E+02
27	Summation	CS3	J[28]	Min	-6,86E+02	-4,65E+01	0,00E+00	-7,33E+02
38	Summation	CS3	I[38]	Max	-1,09E+03	9,50E+02	0,00E+00	-1,37E+02
38	Summation	CS3	I[38]	Min	-1,09E+03	-6,99E+02	0,00E+00	-1,79E+03
38	Summation	CS3	J[39]	Max	-1,03E+03	3,67E+01	0,00E+00	-9,90E+02
38	Summation	CS3	J[39]	Min	-1,03E+03	-4,61E+01	0,00E+00	-1,07E+03
39	Summation	CS3	I[39]	Max	-2,00E+03	1,31E+03	0,00E+00	-6,83E+02
39	Summation	CS3	I[39]	Min	-2,00E+03	-1,04E+03	0,00E+00	-3,03E+03
39	Summation	CS3	J[40]	Max	-1,87E+03	2,92E+02	0,00E+00	-1,58E+03
39	Summation	CS3	J[40]	Min	-1,87E+03	-2,47E+02	0,00E+00	-2,12E+03
40	Summation	CS3	I[40]	Max	-2,77E+03	1,58E+03	0,00E+00	-1,19E+03
40	Summation	CS3	I[40]	Min	-2,77E+03	-1,34E+03	0,00E+00	-4,11E+03
40	Summation	CS3	J[41]	Max	-2,53E+03	5,02E+02	0,00E+00	-2,03E+03
40	Summation	CS3	J[41]	Min	-2,53E+03	-4,56E+02	0,00E+00	-2,98E+03
41	Summation	CS3	I[41]	Max	-3,30E+03	1,67E+03	1,23E-01	-1,64E+03
41	Summation	CS3	I[41]	Min	-3,30E+03	-1,52E+03	-1,23E-01	-4,83E+03
41	Summation	CS3	J[42]	Max	-3,08E+03	1,09E+03	1,23E-01	-1,99E+03
41	Summation	CS3	J[42]	Min	-3,08E+03	-1,06E+03	-1,23E-01	-4,14E+03
42	Summation	CS3	I[42]	Max	-1,37E+03	6,73E+02	9,07E-02	-6,99E+02
42	Summation	CS3	I[42]	Min	-1,37E+03	-6,04E+02	-9,07E-02	-1,98E+03
42	Summation	CS3	J[43]	Max	-1,37E+03	4,28E+02	9,10E-02	-9,45E+02
42	Summation	CS3	J[43]	Min	-1,37E+03	-3,84E+02	-9,10E-02	-1,76E+03
43	Summation	CS3	I[43]	Max	-1,37E+03	4,27E+02	9,10E-02	-9,44E+02
43	Summation	CS3	I[43]	Min	-1,37E+03	-3,83E+02	-9,10E-02	-1,75E+03
43	Summation	CS3	J[44]	Max	-1,37E+03	6,72E+02	9,13E-02	-6,98E+02
43	Summation	CS3	J[44]	Min	-1,37E+03	-6,03E+02	-9,13E-02	-1,97E+03
44	Summation	CS3	I[44]	Max	-3,08E+03	1,10E+03	1,24E-01	-1,99E+03
44	Summation	CS3	I[44]	Min	-3,08E+03	-1,06E+03	-1,24E-01	-4,14E+03
44	Summation	CS3	J[45]	Max	-3,31E+03	1,66E+03	1,34E-01	-1,64E+03
44	Summation	CS3	J[45]	Min	-3,31E+03	-1,52E+03	-1,34E-01	-4,82E+03
45	Summation	CS3	I[45]	Max	-2,53E+03	4,99E+02	0,00E+00	-2,03E+03
45	Summation	CS3	I[45]	Min	-2,53E+03	-4,53E+02	0,00E+00	-2,98E+03
45	Summation	CS3	J[46]	Max	-2,77E+03	1,58E+03	0,00E+00	-1,19E+03
45	Summation	CS3	J[46]	Min	-2,77E+03	-1,34E+03	0,00E+00	-4,11E+03
46	Summation	CS3	I[46]	Max	-1,88E+03	2,89E+02	0,00E+00	-1,59E+03
46	Summation	CS3	I[46]	Min	-1,88E+03	-2,44E+02	0,00E+00	-2,12E+03
46	Summation	CS3	J[47]	Max	-2,00E+03	1,31E+03	0,00E+00	-6,86E+02

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
46	Summation	CS3	J[47]	Min	-2,00E+03	-1,04E+03	0,00E+00	-3,03E+03
47	Summation	CS3	I[47]	Max	-1,03E+03	3,87E+01	0,00E+00	-9,87E+02
47	Summation	CS3	I[47]	Min	-1,03E+03	-4,87E+01	0,00E+00	-1,07E+03
47	Summation	CS3	J[48]	Max	-1,09E+03	9,49E+02	0,00E+00	-1,38E+02
47	Summation	CS3	J[48]	Min	-1,09E+03	-6,98E+02	0,00E+00	-1,79E+03

5.4.5 Konštrukčné štádium 4 (CS4)



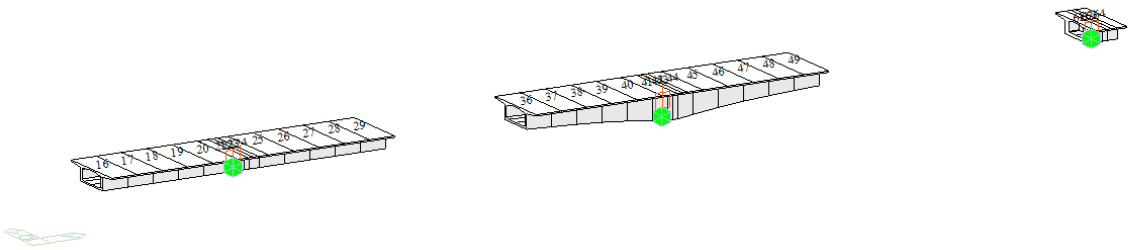
Obrázok 5 CS4

Zaťaženie (Load) = Vlastná tiaž + Vozík + Čerstvý betón + Prevádzkové zaťaženie + Predpätie (primárne + sekundárne) + Dotvarovanie (sekundárne) + Zmrašťovanie (sekundárne)

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
17	Summation	CS4	I[17]	Max	-6,75E+02	7,95E+01	0,00E+00	-5,95E+02
17	Summation	CS4	I[17]	Min	-6,75E+02	-4,28E+01	0,00E+00	-7,18E+02
17	Summation	CS4	J[18]	Max	-6,94E+02	9,18E+02	0,00E+00	2,24E+02
17	Summation	CS4	J[18]	Min	-6,94E+02	-1,71E+03	0,00E+00	-2,40E+03
18	Summation	CS4	I[18]	Max	-1,37E+03	4,75E+02	0,00E+00	-8,96E+02
18	Summation	CS4	I[18]	Min	-1,37E+03	-8,86E+02	0,00E+00	-2,26E+03
18	Summation	CS4	J[19]	Max	-1,40E+03	1,98E+03	0,00E+00	5,78E+02
18	Summation	CS4	J[19]	Min	-1,40E+03	-3,68E+03	0,00E+00	-5,08E+03
19	Summation	CS4	I[19]	Max	-2,75E+03	1,10E+03	0,00E+00	-1,65E+03
19	Summation	CS4	I[19]	Min	-2,75E+03	-2,07E+03	0,00E+00	-4,82E+03
19	Summation	CS4	J[20]	Max	-2,47E+03	2,47E+03	0,00E+00	8,22E+00
19	Summation	CS4	J[20]	Min	-2,47E+03	-3,62E+03	0,00E+00	-6,09E+03
20	Summation	CS4	I[20]	Max	-3,63E+03	1,41E+03	0,00E+00	-2,22E+03
20	Summation	CS4	I[20]	Min	-3,63E+03	-2,09E+03	0,00E+00	-5,72E+03
20	Summation	CS4	J[21]	Max	-3,27E+03	3,39E+03	0,00E+00	1,18E+02
20	Summation	CS4	J[21]	Min	-3,27E+03	-4,28E+03	0,00E+00	-7,56E+03
21	Summation	CS4	I[21]	Max	-3,82E+03	2,17E+03	6,72E-02	-1,65E+03
21	Summation	CS4	I[21]	Min	-3,82E+03	-2,74E+03	-6,72E-02	-6,56E+03
21	Summation	CS4	J[22]	Max	-3,85E+03	3,21E+03	6,92E-02	-6,42E+02
21	Summation	CS4	J[22]	Min	-3,85E+03	-4,01E+03	-6,92E-02	-7,87E+03
22	Summation	CS4	I[22]	Max	-2,45E+03	2,73E+03	6,09E-02	2,73E+02
22	Summation	CS4	I[22]	Min	-2,45E+03	-3,38E+03	-6,09E-02	-5,83E+03
22	Summation	CS4	J[23]	Max	-2,46E+03	3,27E+03	6,21E-02	8,08E+02
22	Summation	CS4	J[23]	Min	-2,46E+03	-4,04E+03	-6,21E-02	-6,50E+03
23	Summation	CS4	I[23]	Max	-2,46E+03	3,26E+03	6,21E-02	7,99E+02
23	Summation	CS4	I[23]	Min	-2,46E+03	-4,03E+03	-6,21E-02	-6,49E+03
23	Summation	CS4	J[24]	Max	-2,45E+03	2,72E+03	6,31E-02	2,61E+02
23	Summation	CS4	J[24]	Min	-2,45E+03	-3,36E+03	-6,31E-02	-5,82E+03
24	Summation	CS4	I[24]	Max	-3,85E+03	3,20E+03	7,16E-02	-6,57E+02
24	Summation	CS4	I[24]	Min	-3,85E+03	-3,99E+03	-7,16E-02	-7,84E+03
24	Summation	CS4	J[25]	Max	-3,82E+03	2,15E+03	7,25E-02	-1,67E+03
24	Summation	CS4	J[25]	Min	-3,82E+03	-2,70E+03	-7,25E-02	-6,52E+03
25	Summation	CS4	I[25]	Max	-3,28E+03	3,36E+03	0,00E+00	8,89E+01
25	Summation	CS4	I[25]	Min	-3,28E+03	-4,23E+03	0,00E+00	-7,51E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
25	Summation	CS4	J[26]	Max	-3,65E+03	1,39E+03	0,00E+00	-2,26E+03
25	Summation	CS4	J[26]	Min	-3,65E+03	-2,06E+03	0,00E+00	-5,70E+03
26	Summation	CS4	I[26]	Max	-2,48E+03	2,45E+03	0,00E+00	-2,60E+01
26	Summation	CS4	I[26]	Min	-2,48E+03	-3,59E+03	0,00E+00	-6,07E+03
26	Summation	CS4	J[27]	Max	-2,77E+03	1,09E+03	0,00E+00	-1,68E+03
26	Summation	CS4	J[27]	Min	-2,77E+03	-2,04E+03	0,00E+00	-4,81E+03
27	Summation	CS4	I[27]	Max	-1,42E+03	1,96E+03	0,00E+00	5,46E+02
27	Summation	CS4	I[27]	Min	-1,42E+03	-3,65E+03	0,00E+00	-5,07E+03
27	Summation	CS4	J[28]	Max	-1,39E+03	4,68E+02	0,00E+00	-9,22E+02
27	Summation	CS4	J[28]	Min	-1,39E+03	-8,79E+02	0,00E+00	-2,27E+03
28	Summation	CS4	I[28]	Max	-7,11E+02	9,09E+02	0,00E+00	1,99E+02
28	Summation	CS4	I[28]	Min	-7,11E+02	-1,70E+03	0,00E+00	-2,41E+03
28	Summation	CS4	J[29]	Max	-6,90E+02	9,13E+01	0,00E+00	-5,99E+02
28	Summation	CS4	J[29]	Min	-6,90E+02	-4,88E+01	0,00E+00	-7,39E+02
37	Summation	CS4	I[37]	Max	-1,14E+03	9,03E+02	0,00E+00	-2,39E+02
37	Summation	CS4	I[37]	Min	-1,14E+03	-6,21E+02	0,00E+00	-1,76E+03
37	Summation	CS4	J[38]	Max	-1,10E+03	1,01E+02	0,00E+00	-9,99E+02
37	Summation	CS4	J[38]	Min	-1,10E+03	-1,37E+02	0,00E+00	-1,24E+03
38	Summation	CS4	I[38]	Max	-2,16E+03	1,30E+03	0,00E+00	-8,60E+02
38	Summation	CS4	I[38]	Min	-2,16E+03	-9,53E+02	0,00E+00	-3,11E+03
38	Summation	CS4	J[39]	Max	-2,03E+03	3,15E+01	0,00E+00	-2,00E+03
38	Summation	CS4	J[39]	Min	-2,03E+03	-3,92E+01	0,00E+00	-2,07E+03
39	Summation	CS4	I[39]	Max	-2,99E+03	1,30E+03	0,00E+00	-1,68E+03
39	Summation	CS4	I[39]	Min	-2,99E+03	-1,03E+03	0,00E+00	-4,02E+03
39	Summation	CS4	J[40]	Max	-2,79E+03	1,09E+02	0,00E+00	-2,68E+03
39	Summation	CS4	J[40]	Min	-2,79E+03	-9,35E+01	0,00E+00	-2,88E+03
40	Summation	CS4	I[40]	Max	-3,67E+03	1,38E+03	0,00E+00	-2,30E+03
40	Summation	CS4	I[40]	Min	-3,67E+03	-1,17E+03	0,00E+00	-4,85E+03
40	Summation	CS4	J[41]	Max	-3,34E+03	2,30E+02	0,00E+00	-3,12E+03
40	Summation	CS4	J[41]	Min	-3,34E+03	-2,13E+02	0,00E+00	-3,56E+03
41	Summation	CS4	I[41]	Max	-4,11E+03	1,38E+03	1,21E-01	-2,73E+03
41	Summation	CS4	I[41]	Min	-4,11E+03	-1,27E+03	-1,21E-01	-5,38E+03
41	Summation	CS4	J[42]	Max	-3,83E+03	8,29E+02	1,21E-01	-3,00E+03
41	Summation	CS4	J[42]	Min	-3,83E+03	-8,08E+02	-1,21E-01	-4,64E+03
42	Summation	CS4	I[42]	Max	-1,71E+03	4,70E+02	8,97E-02	-1,24E+03
42	Summation	CS4	I[42]	Min	-1,71E+03	-4,24E+02	-8,97E-02	-2,14E+03
42	Summation	CS4	J[43]	Max	-1,71E+03	1,88E+02	9,00E-02	-1,52E+03
42	Summation	CS4	J[43]	Min	-1,71E+03	-1,72E+02	-9,00E-02	-1,88E+03
43	Summation	CS4	I[43]	Max	-1,71E+03	1,87E+02	9,00E-02	-1,52E+03
43	Summation	CS4	I[43]	Min	-1,71E+03	-1,70E+02	-9,00E-02	-1,88E+03
43	Summation	CS4	J[44]	Max	-1,71E+03	4,68E+02	9,04E-02	-1,24E+03
43	Summation	CS4	J[44]	Min	-1,71E+03	-4,22E+02	-9,04E-02	-2,13E+03
44	Summation	CS4	I[44]	Max	-3,84E+03	8,31E+02	1,22E-01	-3,01E+03
44	Summation	CS4	I[44]	Min	-3,84E+03	-8,10E+02	-1,22E-01	-4,65E+03
44	Summation	CS4	J[45]	Max	-4,12E+03	1,38E+03	1,33E-01	-2,74E+03
44	Summation	CS4	J[45]	Min	-4,12E+03	-1,27E+03	-1,33E-01	-5,38E+03
45	Summation	CS4	I[45]	Max	-3,35E+03	2,28E+02	0,00E+00	-3,12E+03
45	Summation	CS4	I[45]	Min	-3,35E+03	-2,11E+02	0,00E+00	-3,56E+03
45	Summation	CS4	J[46]	Max	-3,67E+03	1,37E+03	0,00E+00	-2,30E+03
45	Summation	CS4	J[46]	Min	-3,67E+03	-1,17E+03	0,00E+00	-4,84E+03
46	Summation	CS4	I[46]	Max	-2,79E+03	1,02E+02	0,00E+00	-2,69E+03
46	Summation	CS4	I[46]	Min	-2,79E+03	-8,79E+01	0,00E+00	-2,88E+03
46	Summation	CS4	J[47]	Max	-2,98E+03	1,30E+03	0,00E+00	-1,69E+03
46	Summation	CS4	J[47]	Min	-2,98E+03	-1,03E+03	0,00E+00	-4,01E+03
47	Summation	CS4	I[47]	Max	-2,03E+03	3,63E+01	0,00E+00	-1,99E+03
47	Summation	CS4	I[47]	Min	-2,03E+03	-4,54E+01	0,00E+00	-2,07E+03
47	Summation	CS4	J[48]	Max	-2,16E+03	1,29E+03	0,00E+00	-8,63E+02
47	Summation	CS4	J[48]	Min	-2,16E+03	-9,49E+02	0,00E+00	-3,11E+03
48	Summation	CS4	I[48]	Max	-1,10E+03	1,04E+02	0,00E+00	-9,93E+02
48	Summation	CS4	I[48]	Min	-1,10E+03	-1,41E+02	0,00E+00	-1,24E+03
48	Summation	CS4	J[49]	Max	-1,14E+03	8,99E+02	0,00E+00	-2,40E+02
48	Summation	CS4	J[49]	Min	-1,14E+03	-6,19E+02	0,00E+00	-1,76E+03

5.4.6 Konštrukčné štádium 5 (CS5)



Obrázok 6 CS5

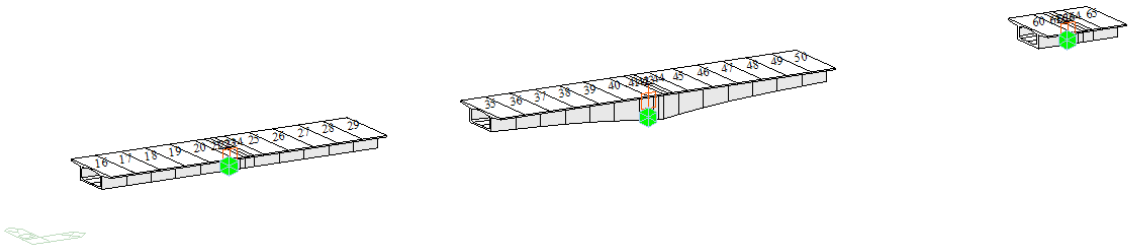
Zaťaženie (Load) = Vlastná tiaž + Vozík + Čerstvý betón + Prevádzkové zaťaženie + Predpätie (primárne + sekundárne) + Dotvarovanie (sekundárne) + Zmrašťovanie (sekundárne)

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
16	Summation	CS5	I[16]	Max	-6,89E+02	8,37E+02	0,00E+00	1,47E+02
16	Summation	CS5	I[16]	Min	-6,89E+02	-4,50E+02	0,00E+00	-1,14E+03
16	Summation	CS5	J[17]	Max	-7,07E+02	5,32E+02	0,00E+00	-1,75E+02
16	Summation	CS5	J[17]	Min	-7,07E+02	-2,86E+02	0,00E+00	-9,93E+02
17	Summation	CS5	I[17]	Max	-1,37E+03	1,34E+03	0,00E+00	-3,49E+01
17	Summation	CS5	I[17]	Min	-1,37E+03	-7,16E+02	0,00E+00	-2,09E+03
17	Summation	CS5	J[18]	Max	-1,40E+03	5,46E+00	0,00E+00	-1,39E+03
17	Summation	CS5	J[18]	Min	-1,40E+03	2,01E+00	0,00E+00	-1,39E+03
18	Summation	CS5	I[18]	Max	-2,06E+03	8,13E+02	0,00E+00	-1,25E+03
18	Summation	CS5	I[18]	Min	-2,06E+03	-4,31E+02	0,00E+00	-2,49E+03
18	Summation	CS5	J[19]	Max	-2,10E+03	8,51E+02	0,00E+00	-1,25E+03
18	Summation	CS5	J[19]	Min	-2,10E+03	-1,57E+03	0,00E+00	-3,66E+03
19	Summation	CS5	I[19]	Max	-3,42E+03	1,73E+01	0,00E+00	-3,41E+03
19	Summation	CS5	I[19]	Min	-3,42E+03	-5,35E+00	0,00E+00	-3,43E+03
19	Summation	CS5	J[20]	Max	-3,04E+03	1,13E+03	0,00E+00	-1,91E+03
19	Summation	CS5	J[20]	Min	-3,04E+03	-1,64E+03	0,00E+00	-4,69E+03
20	Summation	CS5	I[20]	Max	-4,19E+03	8,76E+01	0,00E+00	-4,11E+03
20	Summation	CS5	I[20]	Min	-4,19E+03	-1,36E+02	0,00E+00	-4,33E+03
20	Summation	CS5	J[21]	Max	-3,77E+03	1,86E+03	0,00E+00	-1,91E+03
20	Summation	CS5	J[21]	Min	-3,77E+03	-2,33E+03	0,00E+00	-6,10E+03
21	Summation	CS5	I[21]	Max	-4,25E+03	6,73E+02	6,66E-02	-3,58E+03
21	Summation	CS5	I[21]	Min	-4,25E+03	-8,56E+02	-6,66E-02	-5,11E+03
21	Summation	CS5	J[22]	Max	-4,28E+03	1,64E+03	6,85E-02	-2,65E+03
21	Summation	CS5	J[22]	Min	-4,28E+03	-2,04E+03	-6,85E-02	-6,33E+03
22	Summation	CS5	I[22]	Max	-2,74E+03	1,37E+03	6,04E-02	-1,37E+03
22	Summation	CS5	I[22]	Min	-2,74E+03	-1,69E+03	-6,04E-02	-4,43E+03
22	Summation	CS5	J[23]	Max	-2,74E+03	1,88E+03	6,15E-02	-8,64E+02
22	Summation	CS5	J[23]	Min	-2,74E+03	-2,31E+03	-6,15E-02	-5,05E+03
23	Summation	CS5	I[23]	Max	-2,74E+03	1,86E+03	6,15E-02	-8,80E+02
23	Summation	CS5	I[23]	Min	-2,74E+03	-2,29E+03	-6,15E-02	-5,03E+03
23	Summation	CS5	J[24]	Max	-2,73E+03	1,35E+03	6,25E-02	-1,38E+03
23	Summation	CS5	J[24]	Min	-2,73E+03	-1,67E+03	-6,25E-02	-4,40E+03
24	Summation	CS5	I[24]	Max	-4,28E+03	1,62E+03	7,10E-02	-2,67E+03
24	Summation	CS5	I[24]	Min	-4,28E+03	-2,01E+03	-7,10E-02	-6,29E+03
24	Summation	CS5	J[25]	Max	-4,25E+03	6,45E+02	7,19E-02	-3,60E+03
24	Summation	CS5	J[25]	Min	-4,25E+03	-8,19E+02	-7,19E-02	-5,07E+03
25	Summation	CS5	I[25]	Max	-3,76E+03	1,83E+03	0,00E+00	-1,93E+03
25	Summation	CS5	I[25]	Min	-3,76E+03	-2,29E+03	0,00E+00	-6,05E+03
25	Summation	CS5	J[26]	Max	-4,19E+03	7,66E+01	0,00E+00	-4,12E+03
25	Summation	CS5	J[26]	Min	-4,19E+03	-1,20E+02	0,00E+00	-4,31E+03
26	Summation	CS5	I[26]	Max	-3,04E+03	1,12E+03	0,00E+00	-1,92E+03
26	Summation	CS5	I[26]	Min	-3,04E+03	-1,63E+03	0,00E+00	-4,67E+03
26	Summation	CS5	J[27]	Max	-3,42E+03	1,27E+01	0,00E+00	-3,40E+03
26	Summation	CS5	J[27]	Min	-3,42E+03	-2,94E+00	0,00E+00	-3,42E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
27	Summation	CS5	I[27]	Max	-2,09E+03	8,53E+02	0,00E+00	-1,23E+03
27	Summation	CS5	I[27]	Min	-2,09E+03	-1,57E+03	0,00E+00	-3,66E+03
27	Summation	CS5	J[28]	Max	-2,06E+03	7,93E+02	0,00E+00	-1,26E+03
27	Summation	CS5	J[28]	Min	-2,06E+03	-4,19E+02	0,00E+00	-2,48E+03
28	Summation	CS5	I[28]	Max	-1,39E+03	1,32E+01	0,00E+00	-1,37E+03
28	Summation	CS5	I[28]	Min	-1,39E+03	-1,57E+01	0,00E+00	-1,40E+03
28	Summation	CS5	J[29]	Max	-1,36E+03	1,32E+03	0,00E+00	-4,67E+01
28	Summation	CS5	J[29]	Min	-1,36E+03	-7,01E+02	0,00E+00	-2,06E+03
29	Summation	CS5	I[29]	Max	-6,83E+02	4,94E+02	0,00E+00	-1,88E+02
29	Summation	CS5	I[29]	Min	-6,83E+02	-2,64E+02	0,00E+00	-9,46E+02
29	Summation	CS5	J[30]	Max	-6,66E+02	8,07E+02	0,00E+00	1,41E+02
29	Summation	CS5	J[30]	Min	-6,66E+02	-4,31E+02	0,00E+00	-1,10E+03
36	Summation	CS5	I[36]	Max	-1,21E+03	8,68E+02	0,00E+00	-3,44E+02
36	Summation	CS5	I[36]	Min	-1,21E+03	-5,54E+02	0,00E+00	-1,77E+03
36	Summation	CS5	J[37]	Max	-1,17E+03	2,04E+02	0,00E+00	-9,65E+02
36	Summation	CS5	J[37]	Min	-1,17E+03	-2,97E+02	0,00E+00	-1,46E+03
37	Summation	CS5	I[37]	Max	-2,28E+03	1,16E+03	0,00E+00	-1,13E+03
37	Summation	CS5	I[37]	Min	-2,28E+03	-7,93E+02	0,00E+00	-3,08E+03
37	Summation	CS5	J[38]	Max	-2,18E+03	2,10E+02	0,00E+00	-1,97E+03
37	Summation	CS5	J[38]	Min	-2,18E+03	-2,88E+02	0,00E+00	-2,46E+03
38	Summation	CS5	I[38]	Max	-3,22E+03	1,13E+03	0,00E+00	-2,09E+03
38	Summation	CS5	I[38]	Min	-3,22E+03	-8,32E+02	0,00E+00	-4,05E+03
38	Summation	CS5	J[39]	Max	-3,03E+03	3,39E+02	0,00E+00	-2,69E+03
38	Summation	CS5	J[39]	Min	-3,03E+03	-4,36E+02	0,00E+00	-3,47E+03
39	Summation	CS5	I[39]	Max	-3,97E+03	8,95E+02	0,00E+00	-3,08E+03
39	Summation	CS5	I[39]	Min	-3,97E+03	-7,16E+02	0,00E+00	-4,69E+03
39	Summation	CS5	J[40]	Max	-3,69E+03	3,18E+02	0,00E+00	-3,37E+03
39	Summation	CS5	J[40]	Min	-3,69E+03	-3,88E+02	0,00E+00	-4,08E+03
40	Summation	CS5	I[40]	Max	-4,56E+03	8,66E+02	0,00E+00	-3,70E+03
40	Summation	CS5	I[40]	Min	-4,56E+03	-7,52E+02	0,00E+00	-5,32E+03
40	Summation	CS5	J[41]	Max	-4,15E+03	2,28E+02	0,00E+00	-3,92E+03
40	Summation	CS5	J[41]	Min	-4,15E+03	-2,70E+02	0,00E+00	-4,42E+03
41	Summation	CS5	I[41]	Max	-4,91E+03	8,77E+02	1,20E-01	-4,03E+03
41	Summation	CS5	I[41]	Min	-4,91E+03	-8,24E+02	-1,20E-01	-5,74E+03
41	Summation	CS5	J[42]	Max	-4,57E+03	3,82E+02	1,20E-01	-4,19E+03
41	Summation	CS5	J[42]	Min	-4,57E+03	-3,91E+02	-1,20E-01	-4,97E+03
42	Summation	CS5	I[42]	Max	-2,05E+03	1,40E+02	8,89E-02	-1,91E+03
42	Summation	CS5	I[42]	Min	-2,05E+03	-1,33E+02	-8,89E-02	-2,18E+03
42	Summation	CS5	J[43]	Max	-2,05E+03	1,49E+02	8,92E-02	-1,90E+03
42	Summation	CS5	J[43]	Min	-2,05E+03	-1,75E+02	-8,92E-02	-2,23E+03
43	Summation	CS5	I[43]	Max	-2,05E+03	1,51E+02	8,92E-02	-1,90E+03
43	Summation	CS5	I[43]	Min	-2,05E+03	-1,78E+02	-8,92E-02	-2,22E+03
43	Summation	CS5	J[44]	Max	-2,05E+03	1,38E+02	8,96E-02	-1,91E+03
43	Summation	CS5	J[44]	Min	-2,05E+03	-1,31E+02	-8,96E-02	-2,18E+03
44	Summation	CS5	I[44]	Max	-4,58E+03	3,85E+02	1,21E-01	-4,19E+03
44	Summation	CS5	I[44]	Min	-4,58E+03	-3,94E+02	-1,21E-01	-4,97E+03
44	Summation	CS5	J[45]	Max	-4,92E+03	8,75E+02	1,31E-01	-4,04E+03
44	Summation	CS5	J[45]	Min	-4,92E+03	-8,22E+02	-1,31E-01	-5,74E+03
45	Summation	CS5	I[45]	Max	-4,15E+03	2,29E+02	0,00E+00	-3,92E+03
45	Summation	CS5	I[45]	Min	-4,15E+03	-2,72E+02	0,00E+00	-4,42E+03
45	Summation	CS5	J[46]	Max	-4,56E+03	8,61E+02	0,00E+00	-3,70E+03
45	Summation	CS5	J[46]	Min	-4,56E+03	-7,47E+02	0,00E+00	-5,31E+03
46	Summation	CS5	I[46]	Max	-3,69E+03	3,22E+02	0,00E+00	-3,37E+03
46	Summation	CS5	I[46]	Min	-3,69E+03	-3,94E+02	0,00E+00	-4,08E+03
46	Summation	CS5	J[47]	Max	-3,97E+03	8,86E+02	0,00E+00	-3,08E+03
46	Summation	CS5	J[47]	Min	-3,97E+03	-7,09E+02	0,00E+00	-4,68E+03
47	Summation	CS5	I[47]	Max	-3,03E+03	3,47E+02	0,00E+00	-2,68E+03
47	Summation	CS5	I[47]	Min	-3,03E+03	-4,46E+02	0,00E+00	-3,47E+03
47	Summation	CS5	J[48]	Max	-3,21E+03	1,12E+03	0,00E+00	-2,09E+03
47	Summation	CS5	J[48]	Min	-3,21E+03	-8,26E+02	0,00E+00	-4,04E+03
48	Summation	CS5	I[48]	Max	-2,17E+03	2,16E+02	0,00E+00	-1,96E+03
48	Summation	CS5	I[48]	Min	-2,17E+03	-2,96E+02	0,00E+00	-2,47E+03
48	Summation	CS5	J[49]	Max	-2,28E+03	1,15E+03	0,00E+00	-1,13E+03
48	Summation	CS5	J[49]	Min	-2,28E+03	-7,88E+02	0,00E+00	-3,07E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
49	Summation	CS5	I[49]	Max	-1,17E+03	2,07E+02	0,00E+00	-9,58E+02
49	Summation	CS5	I[49]	Min	-1,17E+03	-3,02E+02	0,00E+00	-1,47E+03
49	Summation	CS5	J[50]	Max	-1,21E+03	8,63E+02	0,00E+00	-3,46E+02
49	Summation	CS5	J[50]	Min	-1,21E+03	-5,51E+02	0,00E+00	-1,76E+03
61	Summation	CS5	I[61]	Max	-9,30E+02	8,77E+02	4,98E-07	-5,34E+01
61	Summation	CS5	I[61]	Min	-9,30E+02	-7,21E+02	-4,98E-07	-1,65E+03
61	Summation	CS5	J[62]	Max	-9,36E+02	5,82E+02	4,92E-07	-3,54E+02
61	Summation	CS5	J[62]	Min	-9,36E+02	-4,79E+02	-4,92E-07	-1,42E+03
62	Summation	CS5	I[62]	Max	-5,93E+02	4,93E+02	4,34E-07	-1,00E+02
62	Summation	CS5	I[62]	Min	-5,93E+02	-4,05E+02	-4,34E-07	-9,98E+02
62	Summation	CS5	J[63]	Max	-5,94E+02	2,55E+02	4,27E-07	-3,39E+02
62	Summation	CS5	J[63]	Min	-5,94E+02	-2,09E+02	-4,27E-07	-8,03E+02
63	Summation	CS5	I[63]	Max	-5,94E+02	2,54E+02	4,27E-07	-3,39E+02
63	Summation	CS5	I[63]	Min	-5,94E+02	-2,09E+02	-4,27E-07	-8,03E+02
63	Summation	CS5	J[64]	Max	-5,93E+02	4,93E+02	4,20E-07	-1,00E+02
63	Summation	CS5	J[64]	Min	-5,93E+02	-4,05E+02	-4,20E-07	-9,98E+02
64	Summation	CS5	I[64]	Max	-9,36E+02	5,81E+02	4,77E-07	-3,55E+02
64	Summation	CS5	I[64]	Min	-9,36E+02	-4,78E+02	-4,77E-07	-1,41E+03
64	Summation	CS5	J[65]	Max	-9,29E+02	8,76E+02	4,65E-07	-5,32E+01
64	Summation	CS5	J[65]	Min	-9,29E+02	-7,19E+02	-4,65E-07	-1,65E+03

5.4.7 Konštrukčné štádium 6 (CS6)



Obrázok 7 CS6

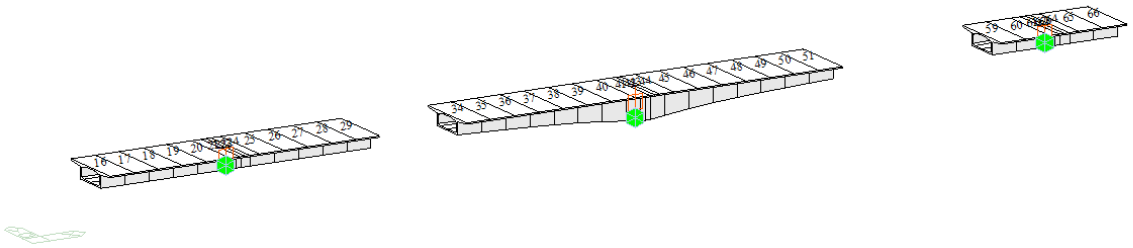
Zaťaženie (Load) = Vlastná tiaž + Vozík + Čerstvý betón + Prevádzkové zaťaženie + Predpätie (primárne + sekundárne) + Dotvarovanie (sekundárne) + Zmrašťovanie (sekundárne)

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
16	Summation	CS6	I[16]	Max	-6,80E+02	8,29E+02	0,00E+00	1,50E+02
16	Summation	CS6	I[16]	Min	-6,80E+02	-4,46E+02	0,00E+00	-1,13E+03
16	Summation	CS6	J[17]	Max	-6,97E+02	4,88E+02	0,00E+00	-2,09E+02
16	Summation	CS6	J[17]	Min	-6,97E+02	-2,62E+02	0,00E+00	-9,59E+02
17	Summation	CS6	I[17]	Max	-1,36E+03	1,29E+03	0,00E+00	-6,99E+01
17	Summation	CS6	I[17]	Min	-1,36E+03	-6,90E+02	0,00E+00	-2,05E+03
17	Summation	CS6	J[18]	Max	-1,38E+03	6,55E+01	0,00E+00	-1,32E+03
17	Summation	CS6	J[18]	Min	-1,38E+03	-1,13E+02	0,00E+00	-1,50E+03
18	Summation	CS6	I[18]	Max	-2,05E+03	6,90E+02	0,00E+00	-1,36E+03
18	Summation	CS6	I[18]	Min	-2,05E+03	-3,66E+02	0,00E+00	-2,41E+03
18	Summation	CS6	J[19]	Max	-2,08E+03	9,53E+02	0,00E+00	-1,13E+03
18	Summation	CS6	J[19]	Min	-2,08E+03	-1,76E+03	0,00E+00	-3,84E+03
19	Summation	CS6	I[19]	Max	-3,40E+03	1,00E+02	0,00E+00	-3,30E+03
19	Summation	CS6	I[19]	Min	-3,40E+03	-1,82E+02	0,00E+00	-3,59E+03
19	Summation	CS6	J[20]	Max	-3,03E+03	1,27E+03	0,00E+00	-1,76E+03
19	Summation	CS6	J[20]	Min	-3,03E+03	-1,85E+03	0,00E+00	-4,87E+03
20	Summation	CS6	I[20]	Max	-4,17E+03	2,26E+02	0,00E+00	-3,95E+03
20	Summation	CS6	I[20]	Min	-4,17E+03	-3,41E+02	0,00E+00	-4,51E+03
20	Summation	CS6	J[21]	Max	-3,75E+03	2,03E+03	0,00E+00	-1,72E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
20	Summation	CS6	J[21]	Min	-3,75E+03	-2,55E+03	0,00E+00	-6,29E+03
21	Summation	CS6	I[21]	Max	-4,23E+03	8,40E+02	6,61E-02	-3,39E+03
21	Summation	CS6	I[21]	Min	-4,23E+03	-1,07E+03	-6,61E-02	-5,30E+03
21	Summation	CS6	J[22]	Max	-4,27E+03	1,82E+03	6,80E-02	-2,45E+03
21	Summation	CS6	J[22]	Min	-4,27E+03	-2,27E+03	-6,80E-02	-6,53E+03
22	Summation	CS6	I[22]	Max	-2,73E+03	1,52E+03	5,99E-02	-1,21E+03
22	Summation	CS6	I[22]	Min	-2,73E+03	-1,88E+03	-5,99E-02	-4,61E+03
22	Summation	CS6	J[23]	Max	-2,73E+03	2,03E+03	6,11E-02	-6,98E+02
22	Summation	CS6	J[23]	Min	-2,73E+03	-2,51E+03	-6,11E-02	-5,24E+03
23	Summation	CS6	I[23]	Max	-2,73E+03	2,02E+03	6,11E-02	-7,13E+02
23	Summation	CS6	I[23]	Min	-2,73E+03	-2,49E+03	-6,11E-02	-5,22E+03
23	Summation	CS6	J[24]	Max	-2,72E+03	1,50E+03	6,21E-02	-1,22E+03
23	Summation	CS6	J[24]	Min	-2,72E+03	-1,86E+03	-6,21E-02	-4,58E+03
24	Summation	CS6	I[24]	Max	-4,26E+03	1,80E+03	7,04E-02	-2,47E+03
24	Summation	CS6	I[24]	Min	-4,26E+03	-2,24E+03	-7,04E-02	-6,50E+03
24	Summation	CS6	J[25]	Max	-4,23E+03	8,13E+02	7,14E-02	-3,42E+03
24	Summation	CS6	J[25]	Min	-4,23E+03	-1,03E+03	-7,14E-02	-5,26E+03
25	Summation	CS6	I[25]	Max	-3,75E+03	2,00E+03	0,00E+00	-1,75E+03
25	Summation	CS6	I[25]	Min	-3,75E+03	-2,50E+03	0,00E+00	-6,25E+03
25	Summation	CS6	J[26]	Max	-4,17E+03	2,15E+02	0,00E+00	-3,96E+03
25	Summation	CS6	J[26]	Min	-4,17E+03	-3,24E+02	0,00E+00	-4,50E+03
26	Summation	CS6	I[26]	Max	-3,03E+03	1,26E+03	0,00E+00	-1,77E+03
26	Summation	CS6	I[26]	Min	-3,03E+03	-1,83E+03	0,00E+00	-4,85E+03
26	Summation	CS6	J[27]	Max	-3,40E+03	1,02E+02	0,00E+00	-3,29E+03
26	Summation	CS6	J[27]	Min	-3,40E+03	-1,85E+02	0,00E+00	-3,58E+03
27	Summation	CS6	I[27]	Max	-2,07E+03	9,55E+02	0,00E+00	-1,12E+03
27	Summation	CS6	I[27]	Min	-2,07E+03	-1,76E+03	0,00E+00	-3,83E+03
27	Summation	CS6	J[28]	Max	-2,04E+03	6,71E+02	0,00E+00	-1,37E+03
27	Summation	CS6	J[28]	Min	-2,04E+03	-3,54E+02	0,00E+00	-2,40E+03
28	Summation	CS6	I[28]	Max	-1,37E+03	7,63E+01	0,00E+00	-1,30E+03
28	Summation	CS6	I[28]	Min	-1,37E+03	-1,34E+02	0,00E+00	-1,51E+03
28	Summation	CS6	J[29]	Max	-1,35E+03	1,27E+03	0,00E+00	-8,17E+01
28	Summation	CS6	J[29]	Min	-1,35E+03	-6,75E+02	0,00E+00	-2,03E+03
29	Summation	CS6	I[29]	Max	-6,73E+02	4,51E+02	0,00E+00	-2,22E+02
29	Summation	CS6	I[29]	Min	-6,73E+02	-2,41E+02	0,00E+00	-9,14E+02
29	Summation	CS6	J[30]	Max	-6,57E+02	8,01E+02	0,00E+00	1,44E+02
29	Summation	CS6	J[30]	Min	-6,57E+02	-4,27E+02	0,00E+00	-1,08E+03
35	Summation	CS6	I[35]	Max	-1,29E+03	8,00E+02	0,00E+00	-4,88E+02
35	Summation	CS6	I[35]	Min	-1,29E+03	-4,67E+02	0,00E+00	-1,75E+03
35	Summation	CS6	J[36]	Max	-1,24E+03	3,15E+02	0,00E+00	-9,23E+02
35	Summation	CS6	J[36]	Min	-1,24E+03	-4,95E+02	0,00E+00	-1,73E+03
36	Summation	CS6	I[36]	Max	-2,42E+03	1,00E+03	0,00E+00	-1,42E+03
36	Summation	CS6	I[36]	Min	-2,42E+03	-6,37E+02	0,00E+00	-3,06E+03
36	Summation	CS6	J[37]	Max	-2,31E+03	4,13E+02	0,00E+00	-1,90E+03
36	Summation	CS6	J[37]	Min	-2,31E+03	-6,05E+02	0,00E+00	-2,92E+03
37	Summation	CS6	I[37]	Max	-3,41E+03	8,24E+02	0,00E+00	-2,59E+03
37	Summation	CS6	I[37]	Min	-3,41E+03	-5,69E+02	0,00E+00	-3,98E+03
37	Summation	CS6	J[38]	Max	-3,25E+03	6,54E+02	0,00E+00	-2,59E+03
37	Summation	CS6	J[38]	Min	-3,25E+03	-9,07E+02	0,00E+00	-4,15E+03
38	Summation	CS6	I[38]	Max	-4,27E+03	5,01E+02	0,00E+00	-3,77E+03
38	Summation	CS6	I[38]	Min	-4,27E+03	-3,81E+02	0,00E+00	-4,66E+03
38	Summation	CS6	J[39]	Max	-4,01E+03	9,34E+02	0,00E+00	-3,08E+03
38	Summation	CS6	J[39]	Min	-4,01E+03	-1,21E+03	0,00E+00	-5,23E+03
39	Summation	CS6	I[39]	Max	-4,94E+03	1,13E+02	0,00E+00	-4,83E+03
39	Summation	CS6	I[39]	Min	-4,94E+03	-1,17E+02	0,00E+00	-5,06E+03
39	Summation	CS6	J[40]	Max	-4,58E+03	9,54E+02	0,00E+00	-3,62E+03
39	Summation	CS6	J[40]	Min	-4,58E+03	-1,16E+03	0,00E+00	-5,74E+03
40	Summation	CS6	I[40]	Max	-5,44E+03	7,82E+01	0,00E+00	-5,36E+03
40	Summation	CS6	I[40]	Min	-5,44E+03	-1,08E+02	0,00E+00	-5,55E+03
40	Summation	CS6	J[41]	Max	-4,94E+03	8,44E+02	0,00E+00	-4,10E+03
40	Summation	CS6	J[41]	Min	-4,94E+03	-9,74E+02	0,00E+00	-5,92E+03
41	Summation	CS6	I[41]	Max	-5,70E+03	1,69E+02	1,19E-01	-5,53E+03
41	Summation	CS6	I[41]	Min	-5,70E+03	-2,06E+02	-1,19E-01	-5,91E+03
41	Summation	CS6	J[42]	Max	-5,31E+03	1,74E+02	1,19E-01	-5,13E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
41	Summation	CS6	J[42]	Min	-5,31E+03	-2,29E+02	-1,19E-01	-5,54E+03
42	Summation	CS6	I[42]	Max	-2,38E+03	2,57E+02	8,82E-02	-2,12E+03
42	Summation	CS6	I[42]	Min	-2,38E+03	-3,02E+02	-8,82E-02	-2,68E+03
42	Summation	CS6	J[43]	Max	-2,38E+03	5,67E+02	8,85E-02	-1,82E+03
42	Summation	CS6	J[43]	Min	-2,38E+03	-6,50E+02	-8,85E-02	-3,03E+03
43	Summation	CS6	I[43]	Max	-2,38E+03	5,70E+02	8,85E-02	-1,81E+03
43	Summation	CS6	I[43]	Min	-2,38E+03	-6,53E+02	-8,85E-02	-3,03E+03
43	Summation	CS6	J[44]	Max	-2,38E+03	2,60E+02	8,89E-02	-2,12E+03
43	Summation	CS6	J[44]	Min	-2,38E+03	-3,05E+02	-8,89E-02	-2,68E+03
44	Summation	CS6	I[44]	Max	-5,31E+03	1,71E+02	1,20E-01	-5,14E+03
44	Summation	CS6	I[44]	Min	-5,31E+03	-2,25E+02	-1,20E-01	-5,54E+03
44	Summation	CS6	J[45]	Max	-5,70E+03	1,67E+02	1,30E-01	-5,54E+03
44	Summation	CS6	J[45]	Min	-5,70E+03	-2,04E+02	-1,30E-01	-5,91E+03
45	Summation	CS6	I[45]	Max	-4,95E+03	8,44E+02	0,00E+00	-4,10E+03
45	Summation	CS6	I[45]	Min	-4,95E+03	-9,75E+02	0,00E+00	-5,92E+03
45	Summation	CS6	J[46]	Max	-5,45E+03	7,39E+01	0,00E+00	-5,37E+03
45	Summation	CS6	J[46]	Min	-5,45E+03	-1,05E+02	0,00E+00	-5,55E+03
46	Summation	CS6	I[46]	Max	-4,58E+03	9,58E+02	0,00E+00	-3,62E+03
46	Summation	CS6	I[46]	Min	-4,58E+03	-1,17E+03	0,00E+00	-5,75E+03
46	Summation	CS6	J[47]	Max	-4,94E+03	1,05E+02	0,00E+00	-4,84E+03
46	Summation	CS6	J[47]	Min	-4,94E+03	-1,11E+02	0,00E+00	-5,05E+03
47	Summation	CS6	I[47]	Max	-4,01E+03	9,40E+02	0,00E+00	-3,07E+03
47	Summation	CS6	I[47]	Min	-4,01E+03	-1,22E+03	0,00E+00	-5,23E+03
47	Summation	CS6	J[48]	Max	-4,27E+03	4,90E+02	0,00E+00	-3,78E+03
47	Summation	CS6	J[48]	Min	-4,27E+03	-3,73E+02	0,00E+00	-4,64E+03
48	Summation	CS6	I[48]	Max	-3,24E+03	6,61E+02	0,00E+00	-2,58E+03
48	Summation	CS6	I[48]	Min	-3,24E+03	-9,17E+02	0,00E+00	-4,16E+03
48	Summation	CS6	J[49]	Max	-3,40E+03	8,15E+02	0,00E+00	-2,59E+03
48	Summation	CS6	J[49]	Min	-3,40E+03	-5,63E+02	0,00E+00	-3,97E+03
49	Summation	CS6	I[49]	Max	-2,31E+03	4,18E+02	0,00E+00	-1,89E+03
49	Summation	CS6	I[49]	Min	-2,31E+03	-6,12E+02	0,00E+00	-2,92E+03
49	Summation	CS6	J[50]	Max	-2,42E+03	9,94E+02	0,00E+00	-1,42E+03
49	Summation	CS6	J[50]	Min	-2,42E+03	-6,33E+02	0,00E+00	-3,05E+03
50	Summation	CS6	I[50]	Max	-1,24E+03	3,17E+02	0,00E+00	-9,20E+02
50	Summation	CS6	I[50]	Min	-1,24E+03	-4,98E+02	0,00E+00	-1,73E+03
50	Summation	CS6	J[51]	Max	-1,29E+03	7,97E+02	0,00E+00	-4,89E+02
50	Summation	CS6	J[51]	Min	-1,29E+03	-4,66E+02	0,00E+00	-1,75E+03
60	Summation	CS6	I[60]	Max	-1,22E+03	1,06E+03	0,00E+00	-1,62E+02
60	Summation	CS6	I[60]	Min	-1,22E+03	-7,37E+02	0,00E+00	-1,96E+03
60	Summation	CS6	J[61]	Max	-1,10E+03	4,16E+01	0,00E+00	-1,06E+03
60	Summation	CS6	J[61]	Min	-1,10E+03	-5,10E+01	0,00E+00	-1,15E+03
61	Summation	CS6	I[61]	Max	-1,89E+03	1,33E+03	4,86E-07	-5,59E+02
61	Summation	CS6	I[61]	Min	-1,89E+03	-1,09E+03	-4,86E-07	-2,98E+03
61	Summation	CS6	J[62]	Max	-1,90E+03	7,80E+02	4,80E-07	-1,12E+03
61	Summation	CS6	J[62]	Min	-1,90E+03	-6,40E+02	-4,80E-07	-2,54E+03
62	Summation	CS6	I[62]	Max	-1,21E+03	6,65E+02	4,22E-07	-5,41E+02
62	Summation	CS6	I[62]	Min	-1,21E+03	-5,46E+02	-4,22E-07	-1,75E+03
62	Summation	CS6	J[63]	Max	-1,21E+03	3,16E+02	4,16E-07	-8,91E+02
62	Summation	CS6	J[63]	Min	-1,21E+03	-2,60E+02	-4,16E-07	-1,47E+03
63	Summation	CS6	I[63]	Max	-1,21E+03	3,15E+02	4,16E-07	-8,93E+02
63	Summation	CS6	I[63]	Min	-1,21E+03	-2,58E+02	-4,16E-07	-1,47E+03
63	Summation	CS6	J[64]	Max	-1,21E+03	6,63E+02	4,09E-07	-5,43E+02
63	Summation	CS6	J[64]	Min	-1,21E+03	-5,44E+02	-4,09E-07	-1,75E+03
64	Summation	CS6	I[64]	Max	-1,90E+03	7,77E+02	4,64E-07	-1,12E+03
64	Summation	CS6	I[64]	Min	-1,90E+03	-6,37E+02	-4,64E-07	-2,54E+03
64	Summation	CS6	J[65]	Max	-1,89E+03	1,33E+03	4,51E-07	-5,60E+02
64	Summation	CS6	J[65]	Min	-1,89E+03	-1,09E+03	-4,51E-07	-2,98E+03
65	Summation	CS6	I[65]	Max	-1,10E+03	4,34E+01	0,00E+00	-1,05E+03
65	Summation	CS6	I[65]	Min	-1,10E+03	-5,33E+01	0,00E+00	-1,15E+03
65	Summation	CS6	J[66]	Max	-1,22E+03	1,06E+03	0,00E+00	-1,58E+02
65	Summation	CS6	J[66]	Min	-1,22E+03	-7,39E+02	0,00E+00	-1,96E+03

5.4.8 Konštrukčné štádium 7 (CS7)



Obrázok 8 CS7

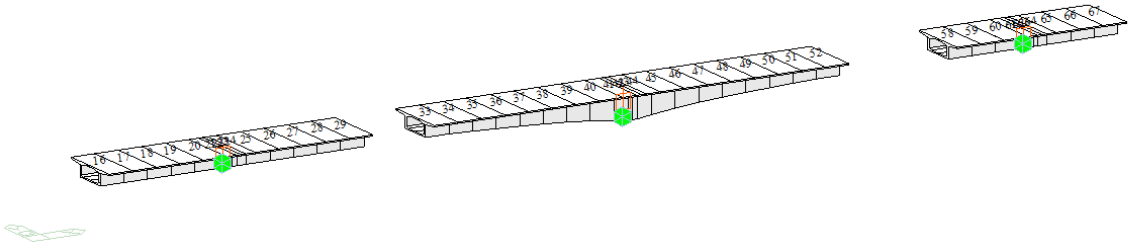
Zaťaženie (Load) = Vlastná tiaž + Vozík + Čerstvý betón + Prevádzkové zaťaženie + Predpätie (primárne + sekundárne) + Dotvarovanie (sekundárne) + Zmrašťovanie (sekundárne)

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
16	Summation	CS7	I[16]	Max	-6,73E+02	8,24E+02	0,00E+00	1,52E+02
16	Summation	CS7	I[16]	Min	-6,73E+02	-4,43E+02	0,00E+00	-1,12E+03
16	Summation	CS7	J[17]	Max	-6,89E+02	4,82E+02	0,00E+00	-2,08E+02
16	Summation	CS7	J[17]	Min	-6,89E+02	-2,59E+02	0,00E+00	-9,48E+02
17	Summation	CS7	I[17]	Max	-1,35E+03	1,28E+03	0,00E+00	-6,99E+01
17	Summation	CS7	I[17]	Min	-1,35E+03	-6,85E+02	0,00E+00	-2,03E+03
17	Summation	CS7	J[18]	Max	-1,37E+03	7,15E+01	0,00E+00	-1,30E+03
17	Summation	CS7	J[18]	Min	-1,37E+03	-1,24E+02	0,00E+00	-1,50E+03
18	Summation	CS7	I[18]	Max	-2,03E+03	6,76E+02	0,00E+00	-1,36E+03
18	Summation	CS7	I[18]	Min	-2,03E+03	-3,58E+02	0,00E+00	-2,39E+03
18	Summation	CS7	J[19]	Max	-2,07E+03	9,61E+02	0,00E+00	-1,11E+03
18	Summation	CS7	J[19]	Min	-2,07E+03	-1,77E+03	0,00E+00	-3,84E+03
19	Summation	CS7	I[19]	Max	-3,39E+03	1,12E+02	0,00E+00	-3,27E+03
19	Summation	CS7	I[19]	Min	-3,39E+03	-2,03E+02	0,00E+00	-3,59E+03
19	Summation	CS7	J[20]	Max	-3,01E+03	1,28E+03	0,00E+00	-1,73E+03
19	Summation	CS7	J[20]	Min	-3,01E+03	-1,87E+03	0,00E+00	-4,88E+03
20	Summation	CS7	I[20]	Max	-4,15E+03	2,43E+02	0,00E+00	-3,91E+03
20	Summation	CS7	I[20]	Min	-4,15E+03	-3,65E+02	0,00E+00	-4,52E+03
20	Summation	CS7	J[21]	Max	-3,73E+03	2,04E+03	0,00E+00	-1,69E+03
20	Summation	CS7	J[21]	Min	-3,73E+03	-2,57E+03	0,00E+00	-6,30E+03
21	Summation	CS7	I[21]	Max	-4,22E+03	8,59E+02	6,56E-02	-3,36E+03
21	Summation	CS7	I[21]	Min	-4,22E+03	-1,09E+03	-6,56E-02	-5,31E+03
21	Summation	CS7	J[22]	Max	-4,25E+03	1,84E+03	6,75E-02	-2,41E+03
21	Summation	CS7	J[22]	Min	-4,25E+03	-2,29E+03	-6,75E-02	-6,54E+03
22	Summation	CS7	I[22]	Max	-2,72E+03	1,53E+03	5,95E-02	-1,18E+03
22	Summation	CS7	I[22]	Min	-2,72E+03	-1,90E+03	-5,95E-02	-4,62E+03
22	Summation	CS7	J[23]	Max	-2,72E+03	2,05E+03	6,06E-02	-6,75E+02
22	Summation	CS7	J[23]	Min	-2,72E+03	-2,52E+03	-6,06E-02	-5,25E+03
23	Summation	CS7	I[23]	Max	-2,72E+03	2,03E+03	6,06E-02	-6,90E+02
23	Summation	CS7	I[23]	Min	-2,72E+03	-2,50E+03	-6,06E-02	-5,23E+03
23	Summation	CS7	J[24]	Max	-2,72E+03	1,52E+03	6,17E-02	-1,20E+03
23	Summation	CS7	J[24]	Min	-2,72E+03	-1,88E+03	-6,17E-02	-4,59E+03
24	Summation	CS7	I[24]	Max	-4,25E+03	1,81E+03	7,00E-02	-2,43E+03
24	Summation	CS7	I[24]	Min	-4,25E+03	-2,26E+03	-7,00E-02	-6,51E+03
24	Summation	CS7	J[25]	Max	-4,22E+03	8,31E+02	7,10E-02	-3,38E+03
24	Summation	CS7	J[25]	Min	-4,22E+03	-1,05E+03	-7,10E-02	-5,27E+03
25	Summation	CS7	I[25]	Max	-3,73E+03	2,01E+03	0,00E+00	-1,71E+03
25	Summation	CS7	I[25]	Min	-3,73E+03	-2,52E+03	0,00E+00	-6,25E+03
25	Summation	CS7	J[26]	Max	-4,15E+03	2,31E+02	0,00E+00	-3,92E+03
25	Summation	CS7	J[26]	Min	-4,15E+03	-3,48E+02	0,00E+00	-4,50E+03
26	Summation	CS7	I[26]	Max	-3,01E+03	1,27E+03	0,00E+00	-1,74E+03
26	Summation	CS7	I[26]	Min	-3,01E+03	-1,85E+03	0,00E+00	-4,86E+03
26	Summation	CS7	J[27]	Max	-3,38E+03	1,13E+02	0,00E+00	-3,27E+03
26	Summation	CS7	J[27]	Min	-3,38E+03	-2,06E+02	0,00E+00	-3,58E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
27	Summation	CS7	I[27]	Max	-2,06E+03	9,62E+02	0,00E+00	-1,10E+03
27	Summation	CS7	I[27]	Min	-2,06E+03	-1,78E+03	0,00E+00	-3,84E+03
27	Summation	CS7	J[28]	Max	-2,03E+03	6,57E+02	0,00E+00	-1,37E+03
27	Summation	CS7	J[28]	Min	-2,03E+03	-3,46E+02	0,00E+00	-2,38E+03
28	Summation	CS7	I[28]	Max	-1,36E+03	8,21E+01	0,00E+00	-1,28E+03
28	Summation	CS7	I[28]	Min	-1,36E+03	-1,45E+02	0,00E+00	-1,51E+03
28	Summation	CS7	J[29]	Max	-1,34E+03	1,26E+03	0,00E+00	-8,16E+01
28	Summation	CS7	J[29]	Min	-1,34E+03	-6,70E+02	0,00E+00	-2,01E+03
29	Summation	CS7	I[29]	Max	-6,67E+02	4,45E+02	0,00E+00	-2,21E+02
29	Summation	CS7	I[29]	Min	-6,67E+02	-2,38E+02	0,00E+00	-9,04E+02
29	Summation	CS7	J[30]	Max	-6,50E+02	7,96E+02	0,00E+00	1,46E+02
29	Summation	CS7	J[30]	Min	-6,50E+02	-4,25E+02	0,00E+00	-1,08E+03
34	Summation	CS7	I[34]	Max	-1,33E+03	7,02E+02	0,00E+00	-6,33E+02
34	Summation	CS7	I[34]	Min	-1,33E+03	-3,76E+02	0,00E+00	-1,71E+03
34	Summation	CS7	J[35]	Max	-1,31E+03	4,81E+02	0,00E+00	-8,33E+02
34	Summation	CS7	J[35]	Min	-1,31E+03	-8,27E+02	0,00E+00	-2,14E+03
35	Summation	CS7	I[35]	Max	-2,57E+03	7,10E+02	0,00E+00	-1,86E+03
35	Summation	CS7	I[35]	Min	-2,57E+03	-4,15E+02	0,00E+00	-2,99E+03
35	Summation	CS7	J[36]	Max	-2,45E+03	6,67E+02	0,00E+00	-1,78E+03
35	Summation	CS7	J[36]	Min	-2,45E+03	-1,05E+03	0,00E+00	-3,50E+03
36	Summation	CS7	I[36]	Max	-3,62E+03	4,17E+02	0,00E+00	-3,20E+03
36	Summation	CS7	I[36]	Min	-3,62E+03	-2,72E+02	0,00E+00	-3,89E+03
36	Summation	CS7	J[37]	Max	-3,44E+03	1,03E+03	0,00E+00	-2,41E+03
36	Summation	CS7	J[37]	Min	-3,44E+03	-1,53E+03	0,00E+00	-4,97E+03
37	Summation	CS7	I[37]	Max	-4,53E+03	5,81E+01	0,00E+00	-4,47E+03
37	Summation	CS7	I[37]	Min	-4,53E+03	-1,15E+02	0,00E+00	-4,64E+03
37	Summation	CS7	J[38]	Max	-4,31E+03	1,45E+03	0,00E+00	-2,86E+03
37	Summation	CS7	J[38]	Min	-4,31E+03	-2,03E+03	0,00E+00	-6,34E+03
38	Summation	CS7	I[38]	Max	-5,32E+03	4,18E+02	0,00E+00	-4,91E+03
38	Summation	CS7	I[38]	Min	-5,32E+03	-6,27E+02	0,00E+00	-5,95E+03
38	Summation	CS7	J[39]	Max	-4,99E+03	1,84E+03	0,00E+00	-3,15E+03
38	Summation	CS7	J[39]	Min	-4,99E+03	-2,40E+03	0,00E+00	-7,39E+03
39	Summation	CS7	I[39]	Max	-5,90E+03	7,87E+02	0,00E+00	-5,12E+03
39	Summation	CS7	I[39]	Min	-5,90E+03	-1,08E+03	0,00E+00	-6,98E+03
39	Summation	CS7	J[40]	Max	-5,45E+03	1,85E+03	0,00E+00	-3,61E+03
39	Summation	CS7	J[40]	Min	-5,45E+03	-2,26E+03	0,00E+00	-7,72E+03
40	Summation	CS7	I[40]	Max	-6,32E+03	7,88E+02	0,00E+00	-5,53E+03
40	Summation	CS7	I[40]	Min	-6,32E+03	-1,03E+03	0,00E+00	-7,34E+03
40	Summation	CS7	J[41]	Max	-5,73E+03	1,67E+03	0,00E+00	-4,06E+03
40	Summation	CS7	J[41]	Min	-5,73E+03	-1,92E+03	0,00E+00	-7,66E+03
41	Summation	CS7	I[41]	Max	-6,48E+03	6,21E+02	1,18E-01	-5,86E+03
41	Summation	CS7	I[41]	Min	-6,48E+03	-7,84E+02	-1,18E-01	-7,27E+03
41	Summation	CS7	J[42]	Max	-6,03E+03	9,24E+02	1,18E-01	-5,11E+03
41	Summation	CS7	J[42]	Min	-6,03E+03	-1,04E+03	-1,18E-01	-7,08E+03
42	Summation	CS7	I[42]	Max	-2,71E+03	7,71E+02	8,76E-02	-1,94E+03
42	Summation	CS7	I[42]	Min	-2,71E+03	-8,89E+02	-8,76E-02	-3,60E+03
42	Summation	CS7	J[43]	Max	-2,72E+03	1,11E+03	8,79E-02	-1,61E+03
42	Summation	CS7	J[43]	Min	-2,72E+03	-1,27E+03	-8,79E-02	-3,98E+03
43	Summation	CS7	I[43]	Max	-2,71E+03	1,11E+03	8,79E-02	-1,60E+03
43	Summation	CS7	I[43]	Min	-2,71E+03	-1,27E+03	-8,79E-02	-3,98E+03
43	Summation	CS7	J[44]	Max	-2,71E+03	7,75E+02	8,83E-02	-1,93E+03
43	Summation	CS7	J[44]	Min	-2,71E+03	-8,93E+02	-8,83E-02	-3,60E+03
44	Summation	CS7	I[44]	Max	-6,04E+03	9,20E+02	1,19E-01	-5,12E+03
44	Summation	CS7	I[44]	Min	-6,04E+03	-1,04E+03	-1,19E-01	-7,08E+03
44	Summation	CS7	J[45]	Max	-6,49E+03	6,22E+02	1,30E-01	-5,87E+03
44	Summation	CS7	J[45]	Min	-6,49E+03	-7,86E+02	-1,30E-01	-7,27E+03
45	Summation	CS7	I[45]	Max	-5,74E+03	1,67E+03	0,00E+00	-4,07E+03
45	Summation	CS7	I[45]	Min	-5,74E+03	-1,92E+03	0,00E+00	-7,66E+03
45	Summation	CS7	J[46]	Max	-6,32E+03	7,91E+02	0,00E+00	-5,53E+03
45	Summation	CS7	J[46]	Min	-6,32E+03	-1,03E+03	0,00E+00	-7,35E+03
46	Summation	CS7	I[46]	Max	-5,46E+03	1,85E+03	0,00E+00	-3,61E+03
46	Summation	CS7	I[46]	Min	-5,46E+03	-2,26E+03	0,00E+00	-7,72E+03
46	Summation	CS7	J[47]	Max	-5,91E+03	7,92E+02	0,00E+00	-5,11E+03
46	Summation	CS7	J[47]	Min	-5,91E+03	-1,08E+03	0,00E+00	-6,99E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
47	Summation	CS7	I[47]	Max	-4,99E+03	1,84E+03	0,00E+00	-3,14E+03
47	Summation	CS7	I[47]	Min	-4,99E+03	-2,41E+03	0,00E+00	-7,39E+03
47	Summation	CS7	J[48]	Max	-5,31E+03	4,35E+02	0,00E+00	-4,88E+03
47	Summation	CS7	J[48]	Min	-5,31E+03	-6,50E+02	0,00E+00	-5,96E+03
48	Summation	CS7	I[48]	Max	-4,30E+03	1,47E+03	0,00E+00	-2,83E+03
48	Summation	CS7	I[48]	Min	-4,30E+03	-2,05E+03	0,00E+00	-6,35E+03
48	Summation	CS7	J[49]	Max	-4,52E+03	6,28E+01	0,00E+00	-4,46E+03
48	Summation	CS7	J[49]	Min	-4,52E+03	-1,22E+02	0,00E+00	-4,65E+03
49	Summation	CS7	I[49]	Max	-3,44E+03	1,04E+03	0,00E+00	-2,41E+03
49	Summation	CS7	I[49]	Min	-3,44E+03	-1,53E+03	0,00E+00	-4,97E+03
49	Summation	CS7	J[50]	Max	-3,61E+03	4,13E+02	0,00E+00	-3,20E+03
49	Summation	CS7	J[50]	Min	-3,61E+03	-2,70E+02	0,00E+00	-3,88E+03
50	Summation	CS7	I[50]	Max	-2,45E+03	6,68E+02	0,00E+00	-1,78E+03
50	Summation	CS7	I[50]	Min	-2,45E+03	-1,06E+03	0,00E+00	-3,51E+03
50	Summation	CS7	J[51]	Max	-2,57E+03	7,09E+02	0,00E+00	-1,86E+03
50	Summation	CS7	J[51]	Min	-2,57E+03	-4,14E+02	0,00E+00	-2,99E+03
51	Summation	CS7	I[51]	Max	-1,32E+03	4,81E+02	0,00E+00	-8,35E+02
51	Summation	CS7	I[51]	Min	-1,32E+03	-8,27E+02	0,00E+00	-2,14E+03
51	Summation	CS7	J[52]	Max	-1,34E+03	7,03E+02	0,00E+00	-6,34E+02
51	Summation	CS7	J[52]	Min	-1,34E+03	-3,76E+02	0,00E+00	-1,71E+03
59	Summation	CS7	I[59]	Max	-1,38E+03	9,10E+02	0,00E+00	-4,66E+02
59	Summation	CS7	I[59]	Min	-1,38E+03	-4,90E+02	0,00E+00	-1,87E+03
59	Summation	CS7	J[60]	Max	-1,24E+03	1,40E+02	0,00E+00	-1,10E+03
59	Summation	CS7	J[60]	Min	-1,24E+03	-2,02E+02	0,00E+00	-1,45E+03
60	Summation	CS7	I[60]	Max	-2,43E+03	1,33E+03	0,00E+00	-1,11E+03
60	Summation	CS7	I[60]	Min	-2,43E+03	-9,19E+02	0,00E+00	-3,35E+03
60	Summation	CS7	J[61]	Max	-2,18E+03	2,29E+02	0,00E+00	-1,95E+03
60	Summation	CS7	J[61]	Min	-2,18E+03	-2,85E+02	0,00E+00	-2,47E+03
61	Summation	CS7	I[61]	Max	-2,84E+03	1,10E+03	4,78E-07	-1,74E+03
61	Summation	CS7	I[61]	Min	-2,84E+03	-9,08E+02	-4,78E-07	-3,75E+03
61	Summation	CS7	J[62]	Max	-2,86E+03	3,06E+02	4,72E-07	-2,55E+03
61	Summation	CS7	J[62]	Min	-2,86E+03	-2,57E+02	-4,72E-07	-3,12E+03
62	Summation	CS7	I[62]	Max	-1,82E+03	2,72E+02	4,15E-07	-1,55E+03
62	Summation	CS7	I[62]	Min	-1,82E+03	-2,26E+02	-4,15E-07	-2,04E+03
62	Summation	CS7	J[63]	Max	-1,82E+03	1,46E+02	4,10E-07	-1,68E+03
62	Summation	CS7	J[63]	Min	-1,82E+03	-1,82E+02	-4,10E-07	-2,00E+03
63	Summation	CS7	I[63]	Max	-1,82E+03	1,51E+02	4,08E-07	-1,67E+03
63	Summation	CS7	I[63]	Min	-1,82E+03	-1,88E+02	-4,08E-07	-2,01E+03
63	Summation	CS7	J[64]	Max	-1,82E+03	2,65E+02	4,01E-07	-1,55E+03
63	Summation	CS7	J[64]	Min	-1,82E+03	-2,21E+02	-4,01E-07	-2,04E+03
64	Summation	CS7	I[64]	Max	-2,86E+03	2,97E+02	4,56E-07	-2,56E+03
64	Summation	CS7	I[64]	Min	-2,86E+03	-2,49E+02	-4,56E-07	-3,11E+03
64	Summation	CS7	J[65]	Max	-2,84E+03	1,10E+03	4,43E-07	-1,75E+03
64	Summation	CS7	J[65]	Min	-2,84E+03	-9,00E+02	-4,43E-07	-3,74E+03
65	Summation	CS7	I[65]	Max	-2,18E+03	2,35E+02	0,00E+00	-1,94E+03
65	Summation	CS7	I[65]	Min	-2,18E+03	-2,93E+02	0,00E+00	-2,47E+03
65	Summation	CS7	J[66]	Max	-2,43E+03	1,33E+03	0,00E+00	-1,10E+03
65	Summation	CS7	J[66]	Min	-2,43E+03	-9,21E+02	0,00E+00	-3,35E+03
66	Summation	CS7	I[66]	Max	-1,24E+03	1,40E+02	0,00E+00	-1,10E+03
66	Summation	CS7	I[66]	Min	-1,24E+03	-2,03E+02	0,00E+00	-1,44E+03
66	Summation	CS7	J[67]	Max	-1,37E+03	9,15E+02	0,00E+00	-4,54E+02
66	Summation	CS7	J[67]	Min	-1,37E+03	-4,97E+02	0,00E+00	-1,87E+03

5.4.9 Konštrukčné štádium 8 (CS8)



Obrázok 9 CS8

Zaťaženie (Load) = Vlastná tiaž + Vozík + Čerstvý betón + Prevádzkové zaťaženie + Predpätie (primárne + sekundárne) + Dotvarovanie (sekundárne) + Zmrašťovanie (sekundárne)

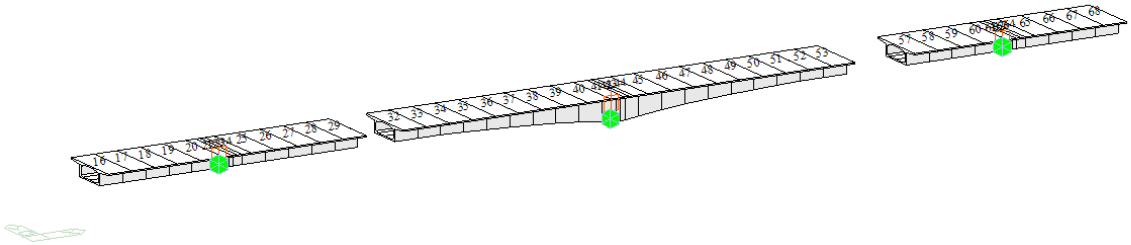
Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
16	Summation	CS8	I[16]	Max	-6,67E+02	8,20E+02	0,00E+00	1,53E+02
16	Summation	CS8	I[16]	Min	-6,67E+02	-4,41E+02	0,00E+00	-1,11E+03
16	Summation	CS8	J[17]	Max	-6,84E+02	4,76E+02	0,00E+00	-2,07E+02
16	Summation	CS8	J[17]	Min	-6,84E+02	-2,56E+02	0,00E+00	-9,39E+02
17	Summation	CS8	I[17]	Max	-1,34E+03	1,27E+03	0,00E+00	-6,98E+01
17	Summation	CS8	I[17]	Min	-1,34E+03	-6,80E+02	0,00E+00	-2,02E+03
17	Summation	CS8	J[18]	Max	-1,36E+03	7,63E+01	0,00E+00	-1,29E+03
17	Summation	CS8	J[18]	Min	-1,36E+03	-1,33E+02	0,00E+00	-1,50E+03
18	Summation	CS8	I[18]	Max	-2,02E+03	6,64E+02	0,00E+00	-1,36E+03
18	Summation	CS8	I[18]	Min	-2,02E+03	-3,52E+02	0,00E+00	-2,37E+03
18	Summation	CS8	J[19]	Max	-2,06E+03	9,68E+02	0,00E+00	-1,09E+03
18	Summation	CS8	J[19]	Min	-2,06E+03	-1,79E+03	0,00E+00	-3,84E+03
19	Summation	CS8	I[19]	Max	-3,37E+03	1,22E+02	0,00E+00	-3,25E+03
19	Summation	CS8	I[19]	Min	-3,37E+03	-2,22E+02	0,00E+00	-3,59E+03
19	Summation	CS8	J[20]	Max	-3,00E+03	1,29E+03	0,00E+00	-1,70E+03
19	Summation	CS8	J[20]	Min	-3,00E+03	-1,88E+03	0,00E+00	-4,88E+03
20	Summation	CS8	I[20]	Max	-4,13E+03	2,57E+02	0,00E+00	-3,88E+03
20	Summation	CS8	I[20]	Min	-4,13E+03	-3,86E+02	0,00E+00	-4,52E+03
20	Summation	CS8	J[21]	Max	-3,72E+03	2,06E+03	0,00E+00	-1,66E+03
20	Summation	CS8	J[21]	Min	-3,72E+03	-2,59E+03	0,00E+00	-6,30E+03
21	Summation	CS8	I[21]	Max	-4,20E+03	8,75E+02	6,52E-02	-3,33E+03
21	Summation	CS8	I[21]	Min	-4,20E+03	-1,11E+03	-6,52E-02	-5,31E+03
21	Summation	CS8	J[22]	Max	-4,23E+03	1,85E+03	6,71E-02	-2,38E+03
21	Summation	CS8	J[22]	Min	-4,23E+03	-2,31E+03	-6,71E-02	-6,55E+03
22	Summation	CS8	I[22]	Max	-2,71E+03	1,55E+03	5,91E-02	-1,16E+03
22	Summation	CS8	I[22]	Min	-2,71E+03	-1,91E+03	-5,91E-02	-4,62E+03
22	Summation	CS8	J[23]	Max	-2,71E+03	2,06E+03	6,03E-02	-6,55E+02
22	Summation	CS8	J[23]	Min	-2,71E+03	-2,54E+03	-6,03E-02	-5,25E+03
23	Summation	CS8	I[23]	Max	-2,71E+03	2,04E+03	6,03E-02	-6,71E+02
23	Summation	CS8	I[23]	Min	-2,71E+03	-2,52E+03	-6,03E-02	-5,23E+03
23	Summation	CS8	J[24]	Max	-2,71E+03	1,53E+03	6,13E-02	-1,18E+03
23	Summation	CS8	J[24]	Min	-2,71E+03	-1,89E+03	-6,13E-02	-4,60E+03
24	Summation	CS8	I[24]	Max	-4,23E+03	1,83E+03	6,96E-02	-2,40E+03
24	Summation	CS8	I[24]	Min	-4,23E+03	-2,28E+03	-6,96E-02	-6,51E+03
24	Summation	CS8	J[25]	Max	-4,20E+03	8,47E+02	7,06E-02	-3,35E+03
24	Summation	CS8	J[25]	Min	-4,20E+03	-1,07E+03	-7,06E-02	-5,27E+03
25	Summation	CS8	I[25]	Max	-3,71E+03	2,03E+03	0,00E+00	-1,69E+03
25	Summation	CS8	I[25]	Min	-3,71E+03	-2,54E+03	0,00E+00	-6,26E+03
25	Summation	CS8	J[26]	Max	-4,14E+03	2,45E+02	0,00E+00	-3,89E+03
25	Summation	CS8	J[26]	Min	-4,14E+03	-3,68E+02	0,00E+00	-4,50E+03
26	Summation	CS8	I[26]	Max	-3,00E+03	1,28E+03	0,00E+00	-1,72E+03
26	Summation	CS8	I[26]	Min	-3,00E+03	-1,86E+03	0,00E+00	-4,86E+03
26	Summation	CS8	J[27]	Max	-3,36E+03	1,22E+02	0,00E+00	-3,24E+03
26	Summation	CS8	J[27]	Min	-3,36E+03	-2,24E+02	0,00E+00	-3,59E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
27	Summation	CS8	I[27]	Max	-2,05E+03	9,69E+02	0,00E+00	-1,08E+03
27	Summation	CS8	I[27]	Min	-2,05E+03	-1,79E+03	0,00E+00	-3,84E+03
27	Summation	CS8	J[28]	Max	-2,02E+03	6,45E+02	0,00E+00	-1,37E+03
27	Summation	CS8	J[28]	Min	-2,02E+03	-3,40E+02	0,00E+00	-2,36E+03
28	Summation	CS8	I[28]	Max	-1,36E+03	8,67E+01	0,00E+00	-1,27E+03
28	Summation	CS8	I[28]	Min	-1,36E+03	-1,54E+02	0,00E+00	-1,51E+03
28	Summation	CS8	J[29]	Max	-1,33E+03	1,25E+03	0,00E+00	-8,13E+01
28	Summation	CS8	J[29]	Min	-1,33E+03	-6,66E+02	0,00E+00	-2,00E+03
29	Summation	CS8	I[29]	Max	-6,61E+02	4,41E+02	0,00E+00	-2,20E+02
29	Summation	CS8	I[29]	Min	-6,61E+02	-2,35E+02	0,00E+00	-8,96E+02
29	Summation	CS8	J[30]	Max	-6,45E+02	7,92E+02	0,00E+00	1,47E+02
29	Summation	CS8	J[30]	Min	-6,45E+02	-4,23E+02	0,00E+00	-1,07E+03
33	Summation	CS8	I[33]	Max	-6,95E+02	3,36E+01	0,00E+00	-6,61E+02
33	Summation	CS8	I[33]	Min	-6,95E+02	-6,26E+01	0,00E+00	-7,57E+02
33	Summation	CS8	J[34]	Max	-7,15E+02	1,16E+03	0,00E+00	4,49E+02
33	Summation	CS8	J[34]	Min	-7,15E+02	-2,17E+03	0,00E+00	-2,89E+03
34	Summation	CS8	I[34]	Max	-2,04E+03	3,11E+02	0,00E+00	-1,73E+03
34	Summation	CS8	I[34]	Min	-2,04E+03	-5,86E+02	0,00E+00	-2,62E+03
34	Summation	CS8	J[35]	Max	-1,99E+03	1,54E+03	0,00E+00	-4,55E+02
34	Summation	CS8	J[35]	Min	-1,99E+03	-2,66E+03	0,00E+00	-4,65E+03
35	Summation	CS8	I[35]	Max	-3,24E+03	6,44E+02	0,00E+00	-2,60E+03
35	Summation	CS8	I[35]	Min	-3,24E+03	-1,13E+03	0,00E+00	-4,37E+03
35	Summation	CS8	J[36]	Max	-3,09E+03	2,00E+03	0,00E+00	-1,08E+03
35	Summation	CS8	J[36]	Min	-3,09E+03	-3,19E+03	0,00E+00	-6,28E+03
36	Summation	CS8	I[36]	Max	-4,25E+03	1,06E+03	0,00E+00	-3,18E+03
36	Summation	CS8	I[36]	Min	-4,25E+03	-1,73E+03	0,00E+00	-5,97E+03
36	Summation	CS8	J[37]	Max	-4,04E+03	2,59E+03	0,00E+00	-1,46E+03
36	Summation	CS8	J[37]	Min	-4,04E+03	-3,85E+03	0,00E+00	-7,89E+03
37	Summation	CS8	I[37]	Max	-5,12E+03	1,61E+03	0,00E+00	-3,52E+03
37	Summation	CS8	I[37]	Min	-5,12E+03	-2,44E+03	0,00E+00	-7,57E+03
37	Summation	CS8	J[38]	Max	-4,87E+03	3,15E+03	0,00E+00	-1,72E+03
37	Summation	CS8	J[38]	Min	-4,87E+03	-4,43E+03	0,00E+00	-9,30E+03
38	Summation	CS8	I[38]	Max	-5,88E+03	2,10E+03	0,00E+00	-3,78E+03
38	Summation	CS8	I[38]	Min	-5,88E+03	-3,02E+03	0,00E+00	-8,90E+03
38	Summation	CS8	J[39]	Max	-5,50E+03	3,60E+03	0,00E+00	-1,90E+03
38	Summation	CS8	J[39]	Min	-5,50E+03	-4,72E+03	0,00E+00	-1,02E+04
39	Summation	CS8	I[39]	Max	-6,41E+03	2,53E+03	0,00E+00	-3,88E+03
39	Summation	CS8	I[39]	Min	-6,41E+03	-3,39E+03	0,00E+00	-9,80E+03
39	Summation	CS8	J[40]	Max	-5,91E+03	3,54E+03	0,00E+00	-2,38E+03
39	Summation	CS8	J[40]	Min	-5,91E+03	-4,34E+03	0,00E+00	-1,03E+04
40	Summation	CS8	I[40]	Max	-6,78E+03	2,47E+03	0,00E+00	-4,31E+03
40	Summation	CS8	I[40]	Min	-6,78E+03	-3,11E+03	0,00E+00	-9,89E+03
40	Summation	CS8	J[41]	Max	-6,14E+03	3,24E+03	0,00E+00	-2,90E+03
40	Summation	CS8	J[41]	Min	-6,14E+03	-3,74E+03	0,00E+00	-9,88E+03
41	Summation	CS8	I[41]	Max	-6,89E+03	2,18E+03	1,17E-01	-4,72E+03
41	Summation	CS8	I[41]	Min	-6,89E+03	-2,59E+03	-1,17E-01	-9,48E+03
41	Summation	CS8	J[42]	Max	-6,41E+03	2,38E+03	1,18E-01	-4,03E+03
41	Summation	CS8	J[42]	Min	-6,41E+03	-2,64E+03	-1,18E-01	-9,05E+03
42	Summation	CS8	I[42]	Max	-2,88E+03	1,77E+03	8,70E-02	-1,11E+03
42	Summation	CS8	I[42]	Min	-2,88E+03	-2,03E+03	-8,70E-02	-4,91E+03
42	Summation	CS8	J[43]	Max	-2,88E+03	2,14E+03	8,74E-02	-7,49E+02
42	Summation	CS8	J[43]	Min	-2,88E+03	-2,44E+03	-8,74E-02	-5,32E+03
43	Summation	CS8	I[43]	Max	-2,88E+03	2,14E+03	8,74E-02	-7,40E+02
43	Summation	CS8	I[43]	Min	-2,88E+03	-2,44E+03	-8,74E-02	-5,32E+03
43	Summation	CS8	J[44]	Max	-2,88E+03	1,78E+03	8,77E-02	-1,10E+03
43	Summation	CS8	J[44]	Min	-2,88E+03	-2,04E+03	-8,77E-02	-4,91E+03
44	Summation	CS8	I[44]	Max	-6,42E+03	2,38E+03	1,19E-01	-4,04E+03
44	Summation	CS8	I[44]	Min	-6,42E+03	-2,64E+03	-1,19E-01	-9,05E+03
44	Summation	CS8	J[45]	Max	-6,90E+03	2,18E+03	1,29E-01	-4,71E+03
44	Summation	CS8	J[45]	Min	-6,90E+03	-2,60E+03	-1,29E-01	-9,49E+03
45	Summation	CS8	I[45]	Max	-6,14E+03	3,24E+03	0,00E+00	-2,90E+03
45	Summation	CS8	I[45]	Min	-6,14E+03	-3,74E+03	0,00E+00	-9,89E+03
45	Summation	CS8	J[46]	Max	-6,77E+03	2,49E+03	0,00E+00	-4,28E+03
45	Summation	CS8	J[46]	Min	-6,77E+03	-3,13E+03	0,00E+00	-9,90E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
46	Summation	CS8	I[46]	Max	-5,91E+03	3,55E+03	0,00E+00	-2,36E+03
46	Summation	CS8	I[46]	Min	-5,91E+03	-4,37E+03	0,00E+00	-1,03E+04
46	Summation	CS8	J[47]	Max	-6,39E+03	2,56E+03	0,00E+00	-3,84E+03
46	Summation	CS8	J[47]	Min	-6,39E+03	-3,42E+03	0,00E+00	-9,82E+03
47	Summation	CS8	I[47]	Max	-5,48E+03	3,62E+03	0,00E+00	-1,85E+03
47	Summation	CS8	I[47]	Min	-5,48E+03	-4,76E+03	0,00E+00	-1,02E+04
47	Summation	CS8	J[48]	Max	-5,83E+03	2,16E+03	0,00E+00	-3,67E+03
47	Summation	CS8	J[48]	Min	-5,83E+03	-3,10E+03	0,00E+00	-8,93E+03
48	Summation	CS8	I[48]	Max	-4,82E+03	3,21E+03	0,00E+00	-1,61E+03
48	Summation	CS8	I[48]	Min	-4,82E+03	-4,51E+03	0,00E+00	-9,33E+03
48	Summation	CS8	J[49]	Max	-5,07E+03	1,66E+03	0,00E+00	-3,41E+03
48	Summation	CS8	J[49]	Min	-5,07E+03	-2,53E+03	0,00E+00	-7,60E+03
49	Summation	CS8	I[49]	Max	-3,99E+03	2,64E+03	0,00E+00	-1,35E+03
49	Summation	CS8	I[49]	Min	-3,99E+03	-3,93E+03	0,00E+00	-7,92E+03
49	Summation	CS8	J[50]	Max	-4,19E+03	1,12E+03	0,00E+00	-3,07E+03
49	Summation	CS8	J[50]	Min	-4,19E+03	-1,81E+03	0,00E+00	-6,00E+03
50	Summation	CS8	I[50]	Max	-3,03E+03	2,06E+03	0,00E+00	-9,74E+02
50	Summation	CS8	I[50]	Min	-3,03E+03	-3,28E+03	0,00E+00	-6,31E+03
50	Summation	CS8	J[51]	Max	-3,18E+03	6,96E+02	0,00E+00	-2,49E+03
50	Summation	CS8	J[51]	Min	-3,18E+03	-1,22E+03	0,00E+00	-4,40E+03
51	Summation	CS8	I[51]	Max	-1,93E+03	1,59E+03	0,00E+00	-3,41E+02
51	Summation	CS8	I[51]	Min	-1,93E+03	-2,75E+03	0,00E+00	-4,68E+03
51	Summation	CS8	J[52]	Max	-1,97E+03	3,62E+02	0,00E+00	-1,61E+03
51	Summation	CS8	J[52]	Min	-1,97E+03	-6,83E+02	0,00E+00	-2,65E+03
52	Summation	CS8	I[52]	Max	-6,47E+02	1,22E+03	0,00E+00	5,70E+02
52	Summation	CS8	I[52]	Min	-6,47E+02	-2,27E+03	0,00E+00	-2,92E+03
52	Summation	CS8	J[53]	Max	-6,28E+02	7,75E+01	0,00E+00	-5,50E+02
52	Summation	CS8	J[53]	Min	-6,28E+02	-1,45E+02	0,00E+00	-7,72E+02
58	Summation	CS8	I[58]	Max	-6,88E+02	8,69E+01	0,00E+00	-6,01E+02
58	Summation	CS8	I[58]	Min	-6,88E+02	-4,65E+01	0,00E+00	-7,34E+02
58	Summation	CS8	J[59]	Max	-7,07E+02	9,10E+02	0,00E+00	2,03E+02
58	Summation	CS8	J[59]	Min	-7,07E+02	-1,69E+03	0,00E+00	-2,40E+03
59	Summation	CS8	I[59]	Max	-2,07E+03	3,06E+01	0,00E+00	-2,04E+03
59	Summation	CS8	I[59]	Min	-2,07E+03	-6,10E+01	0,00E+00	-2,13E+03
59	Summation	CS8	J[60]	Max	-1,86E+03	1,04E+03	0,00E+00	-8,24E+02
59	Summation	CS8	J[60]	Min	-1,86E+03	-1,51E+03	0,00E+00	-3,37E+03
60	Summation	CS8	I[60]	Max	-3,04E+03	1,86E+01	0,00E+00	-3,02E+03
60	Summation	CS8	I[60]	Min	-3,04E+03	-2,40E+01	0,00E+00	-3,06E+03
60	Summation	CS8	J[61]	Max	-2,73E+03	1,55E+03	0,00E+00	-1,18E+03
60	Summation	CS8	J[61]	Min	-2,73E+03	-1,94E+03	0,00E+00	-4,67E+03
61	Summation	CS8	I[61]	Max	-3,33E+03	3,77E+02	4,73E-07	-2,95E+03
61	Summation	CS8	I[61]	Min	-3,33E+03	-4,92E+02	-4,73E-07	-3,82E+03
61	Summation	CS8	J[62]	Max	-3,35E+03	1,22E+03	4,66E-07	-2,12E+03
61	Summation	CS8	J[62]	Min	-3,35E+03	-1,53E+03	-4,66E-07	-4,88E+03
62	Summation	CS8	I[62]	Max	-2,13E+03	1,04E+03	4,10E-07	-1,09E+03
62	Summation	CS8	I[62]	Min	-2,13E+03	-1,28E+03	-4,10E-07	-3,41E+03
62	Summation	CS8	J[63]	Max	-2,13E+03	1,49E+03	4,05E-07	-6,40E+02
62	Summation	CS8	J[63]	Min	-2,13E+03	-1,84E+03	-4,05E-07	-3,98E+03
63	Summation	CS8	I[63]	Max	-2,13E+03	1,50E+03	4,03E-07	-6,29E+02
63	Summation	CS8	I[63]	Min	-2,13E+03	-1,86E+03	-4,03E-07	-3,99E+03
63	Summation	CS8	J[64]	Max	-2,13E+03	1,05E+03	3,96E-07	-1,08E+03
63	Summation	CS8	J[64]	Min	-2,13E+03	-1,30E+03	-3,96E-07	-3,43E+03
64	Summation	CS8	I[64]	Max	-3,35E+03	1,24E+03	4,49E-07	-2,11E+03
64	Summation	CS8	I[64]	Min	-3,35E+03	-1,55E+03	-4,49E-07	-4,90E+03
64	Summation	CS8	J[65]	Max	-3,32E+03	3,93E+02	4,37E-07	-2,93E+03
64	Summation	CS8	J[65]	Min	-3,32E+03	-5,12E+02	-4,37E-07	-3,83E+03
65	Summation	CS8	I[65]	Max	-2,72E+03	1,56E+03	0,00E+00	-1,16E+03
65	Summation	CS8	I[65]	Min	-2,72E+03	-1,96E+03	0,00E+00	-4,68E+03
65	Summation	CS8	J[66]	Max	-3,03E+03	1,35E+01	0,00E+00	-3,01E+03
65	Summation	CS8	J[66]	Min	-3,03E+03	-2,06E+01	0,00E+00	-3,05E+03
66	Summation	CS8	I[66]	Max	-1,85E+03	1,04E+03	0,00E+00	-8,10E+02
66	Summation	CS8	I[66]	Min	-1,85E+03	-1,51E+03	0,00E+00	-3,36E+03
66	Summation	CS8	J[67]	Max	-2,06E+03	2,10E+01	0,00E+00	-2,04E+03
66	Summation	CS8	J[67]	Min	-2,06E+03	-4,29E+01	0,00E+00	-2,10E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
67	Summation	CS8	I[67]	Max	-7,03E+02	9,07E+02	0,00E+00	2,04E+02
67	Summation	CS8	I[67]	Min	-7,03E+02	-1,67E+03	0,00E+00	-2,37E+03
67	Summation	CS8	J[68]	Max	-6,84E+02	9,70E+01	0,00E+00	-5,87E+02
67	Summation	CS8	J[68]	Min	-6,84E+02	-5,27E+01	0,00E+00	-7,37E+02

5.4.10 Konštrukčné štádium 9 (CS9)



Obrázok 10 CS9

Zaťaženie (Load) = Vlastná tiaž + Vozík + Čerstvý betón + Prevádzkové zaťaženie + Predpätie (primárne + sekundárne) + Dotvarovanie (sekundárne) + Zmrašťovanie (sekundárne)

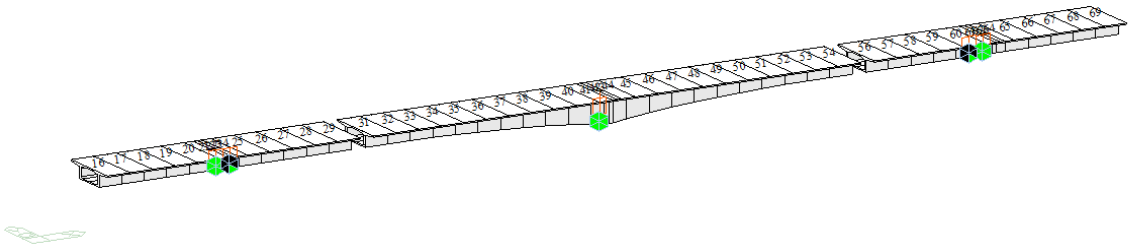
Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
16	Summation	CS9	I[16]	Max	-6,62E+02	8,17E+02	0,00E+00	1,55E+02
16	Summation	CS9	I[16]	Min	-6,62E+02	-4,39E+02	0,00E+00	-1,10E+03
16	Summation	CS9	J[17]	Max	-6,79E+02	4,72E+02	0,00E+00	-2,06E+02
16	Summation	CS9	J[17]	Min	-6,79E+02	-2,54E+02	0,00E+00	-9,32E+02
17	Summation	CS9	I[17]	Max	-1,33E+03	1,26E+03	0,00E+00	-6,96E+01
17	Summation	CS9	I[17]	Min	-1,33E+03	-6,76E+02	0,00E+00	-2,01E+03
17	Summation	CS9	J[18]	Max	-1,36E+03	8,04E+01	0,00E+00	-1,28E+03
17	Summation	CS9	J[18]	Min	-1,36E+03	-1,41E+02	0,00E+00	-1,50E+03
18	Summation	CS9	I[18]	Max	-2,01E+03	6,53E+02	0,00E+00	-1,36E+03
18	Summation	CS9	I[18]	Min	-2,01E+03	-3,46E+02	0,00E+00	-2,36E+03
18	Summation	CS9	J[19]	Max	-2,05E+03	9,74E+02	0,00E+00	-1,07E+03
18	Summation	CS9	J[19]	Min	-2,05E+03	-1,80E+03	0,00E+00	-3,84E+03
19	Summation	CS9	I[19]	Max	-3,36E+03	1,30E+02	0,00E+00	-3,23E+03
19	Summation	CS9	I[19]	Min	-3,36E+03	-2,38E+02	0,00E+00	-3,59E+03
19	Summation	CS9	J[20]	Max	-2,99E+03	1,30E+03	0,00E+00	-1,68E+03
19	Summation	CS9	J[20]	Min	-2,99E+03	-1,90E+03	0,00E+00	-4,88E+03
20	Summation	CS9	I[20]	Max	-4,12E+03	2,69E+02	0,00E+00	-3,85E+03
20	Summation	CS9	I[20]	Min	-4,12E+03	-4,05E+02	0,00E+00	-4,52E+03
20	Summation	CS9	J[21]	Max	-3,70E+03	2,07E+03	0,00E+00	-1,63E+03
20	Summation	CS9	J[21]	Min	-3,70E+03	-2,60E+03	0,00E+00	-6,31E+03
21	Summation	CS9	I[21]	Max	-4,19E+03	8,89E+02	6,48E-02	-3,30E+03
21	Summation	CS9	I[21]	Min	-4,19E+03	-1,13E+03	-6,48E-02	-5,32E+03
21	Summation	CS9	J[22]	Max	-4,22E+03	1,87E+03	6,67E-02	-2,36E+03
21	Summation	CS9	J[22]	Min	-4,22E+03	-2,33E+03	-6,67E-02	-6,55E+03
22	Summation	CS9	I[22]	Max	-2,70E+03	1,56E+03	5,88E-02	-1,14E+03
22	Summation	CS9	I[22]	Min	-2,70E+03	-1,93E+03	-5,88E-02	-4,63E+03
22	Summation	CS9	J[23]	Max	-2,71E+03	2,07E+03	5,99E-02	-6,38E+02
22	Summation	CS9	J[23]	Min	-2,71E+03	-2,55E+03	-5,99E-02	-5,26E+03
23	Summation	CS9	I[23]	Max	-2,71E+03	2,05E+03	5,99E-02	-6,53E+02
23	Summation	CS9	I[23]	Min	-2,71E+03	-2,53E+03	-5,99E-02	-5,24E+03
23	Summation	CS9	J[24]	Max	-2,70E+03	1,54E+03	6,10E-02	-1,16E+03
23	Summation	CS9	J[24]	Min	-2,70E+03	-1,90E+03	-6,10E-02	-4,61E+03
24	Summation	CS9	I[24]	Max	-4,22E+03	1,84E+03	6,92E-02	-2,38E+03
24	Summation	CS9	I[24]	Min	-4,22E+03	-2,30E+03	-6,92E-02	-6,52E+03
24	Summation	CS9	J[25]	Max	-4,19E+03	8,62E+02	7,02E-02	-3,32E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
24	Summation	CS9	J[25]	Min	-4,19E+03	-1,09E+03	-7,02E-02	-5,28E+03
25	Summation	CS9	I[25]	Max	-3,70E+03	2,04E+03	0,00E+00	-1,66E+03
25	Summation	CS9	I[25]	Min	-3,70E+03	-2,56E+03	0,00E+00	-6,26E+03
25	Summation	CS9	J[26]	Max	-4,12E+03	2,57E+02	0,00E+00	-3,86E+03
25	Summation	CS9	J[26]	Min	-4,12E+03	-3,87E+02	0,00E+00	-4,51E+03
26	Summation	CS9	I[26]	Max	-2,99E+03	1,29E+03	0,00E+00	-1,69E+03
26	Summation	CS9	I[26]	Min	-2,99E+03	-1,88E+03	0,00E+00	-4,86E+03
26	Summation	CS9	J[27]	Max	-3,35E+03	1,31E+02	0,00E+00	-3,22E+03
26	Summation	CS9	J[27]	Min	-3,35E+03	-2,40E+02	0,00E+00	-3,59E+03
27	Summation	CS9	I[27]	Max	-2,04E+03	9,74E+02	0,00E+00	-1,07E+03
27	Summation	CS9	I[27]	Min	-2,04E+03	-1,80E+03	0,00E+00	-3,84E+03
27	Summation	CS9	J[28]	Max	-2,01E+03	6,35E+02	0,00E+00	-1,37E+03
27	Summation	CS9	J[28]	Min	-2,01E+03	-3,34E+02	0,00E+00	-2,34E+03
28	Summation	CS9	I[28]	Max	-1,35E+03	9,07E+01	0,00E+00	-1,26E+03
28	Summation	CS9	I[28]	Min	-1,35E+03	-1,61E+02	0,00E+00	-1,51E+03
28	Summation	CS9	J[29]	Max	-1,32E+03	1,24E+03	0,00E+00	-8,10E+01
28	Summation	CS9	J[29]	Min	-1,32E+03	-6,62E+02	0,00E+00	-1,99E+03
29	Summation	CS9	I[29]	Max	-6,56E+02	4,37E+02	0,00E+00	-2,19E+02
29	Summation	CS9	I[29]	Min	-6,56E+02	-2,33E+02	0,00E+00	-8,89E+02
29	Summation	CS9	J[30]	Max	-6,41E+02	7,89E+02	0,00E+00	1,49E+02
29	Summation	CS9	J[30]	Min	-6,41E+02	-4,21E+02	0,00E+00	-1,06E+03
32	Summation	CS9	I[32]	Max	-6,18E+02	8,34E+01	0,00E+00	-5,34E+02
32	Summation	CS9	I[32]	Min	-6,18E+02	-1,56E+02	0,00E+00	-7,73E+02
32	Summation	CS9	J[33]	Max	-6,37E+02	1,22E+03	0,00E+00	5,85E+02
32	Summation	CS9	J[33]	Min	-6,37E+02	-2,29E+03	0,00E+00	-2,92E+03
33	Summation	CS9	I[33]	Max	-1,33E+03	7,75E+02	0,00E+00	-5,50E+02
33	Summation	CS9	I[33]	Min	-1,33E+03	-1,45E+03	0,00E+00	-2,78E+03
33	Summation	CS9	J[34]	Max	-1,36E+03	2,45E+03	0,00E+00	1,09E+03
33	Summation	CS9	J[34]	Min	-1,36E+03	-4,58E+03	0,00E+00	-5,94E+03
34	Summation	CS9	I[34]	Max	-2,67E+03	1,59E+03	0,00E+00	-1,08E+03
34	Summation	CS9	I[34]	Min	-2,67E+03	-3,01E+03	0,00E+00	-5,68E+03
34	Summation	CS9	J[35]	Max	-2,61E+03	3,16E+03	0,00E+00	5,47E+02
34	Summation	CS9	J[35]	Min	-2,61E+03	-5,47E+03	0,00E+00	-8,08E+03
35	Summation	CS9	I[35]	Max	-3,86E+03	2,26E+03	0,00E+00	-1,60E+03
35	Summation	CS9	I[35]	Min	-3,86E+03	-3,95E+03	0,00E+00	-7,81E+03
35	Summation	CS9	J[36]	Max	-3,67E+03	3,84E+03	0,00E+00	1,71E+02
35	Summation	CS9	J[36]	Min	-3,67E+03	-6,14E+03	0,00E+00	-9,81E+03
36	Summation	CS9	I[36]	Max	-4,83E+03	2,89E+03	0,00E+00	-1,93E+03
36	Summation	CS9	I[36]	Min	-4,83E+03	-4,68E+03	0,00E+00	-9,51E+03
36	Summation	CS9	J[37]	Max	-4,60E+03	4,59E+03	0,00E+00	-4,87E+00
36	Summation	CS9	J[37]	Min	-4,60E+03	-6,87E+03	0,00E+00	-1,15E+04
37	Summation	CS9	I[37]	Max	-5,68E+03	3,60E+03	0,00E+00	-2,07E+03
37	Summation	CS9	I[37]	Min	-5,68E+03	-5,46E+03	0,00E+00	-1,11E+04
37	Summation	CS9	J[38]	Max	-5,40E+03	5,24E+03	0,00E+00	-1,68E+02
37	Summation	CS9	J[38]	Min	-5,40E+03	-7,39E+03	0,00E+00	-1,28E+04
38	Summation	CS9	I[38]	Max	-6,41E+03	4,18E+03	0,00E+00	-2,23E+03
38	Summation	CS9	I[38]	Min	-6,41E+03	-5,97E+03	0,00E+00	-1,24E+04
38	Summation	CS9	J[39]	Max	-6,00E+03	5,69E+03	0,00E+00	-3,08E+02
38	Summation	CS9	J[39]	Min	-6,00E+03	-7,49E+03	0,00E+00	-1,35E+04
39	Summation	CS9	I[39]	Max	-6,91E+03	4,61E+03	0,00E+00	-2,30E+03
39	Summation	CS9	I[39]	Min	-6,91E+03	-6,14E+03	0,00E+00	-1,31E+04
39	Summation	CS9	J[40]	Max	-6,37E+03	5,50E+03	0,00E+00	-8,73E+02
39	Summation	CS9	J[40]	Min	-6,37E+03	-6,78E+03	0,00E+00	-1,32E+04
40	Summation	CS9	I[40]	Max	-7,24E+03	4,42E+03	0,00E+00	-2,81E+03
40	Summation	CS9	I[40]	Min	-7,24E+03	-5,55E+03	0,00E+00	-1,28E+04
40	Summation	CS9	J[41]	Max	-6,56E+03	5,03E+03	0,00E+00	-1,53E+03
40	Summation	CS9	J[41]	Min	-6,56E+03	-5,81E+03	0,00E+00	-1,24E+04
41	Summation	CS9	I[41]	Max	-7,31E+03	3,96E+03	1,16E-01	-3,35E+03
41	Summation	CS9	I[41]	Min	-7,31E+03	-4,66E+03	-1,16E-01	-1,20E+04
41	Summation	CS9	J[42]	Max	-6,80E+03	4,04E+03	1,17E-01	-2,76E+03
41	Summation	CS9	J[42]	Min	-6,80E+03	-4,45E+03	-1,17E-01	-1,13E+04
42	Summation	CS9	I[42]	Max	-3,05E+03	2,90E+03	8,65E-02	-1,48E+02
42	Summation	CS9	I[42]	Min	-3,05E+03	-3,33E+03	-8,65E-02	-6,38E+03
42	Summation	CS9	J[43]	Max	-3,06E+03	3,30E+03	8,69E-02	2,41E+02

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
42	Summation	CS9	J[43]	Min	-3,06E+03	-3,77E+03	-8,69E-02	-6,82E+03
43	Summation	CS9	I[43]	Max	-3,05E+03	3,30E+03	8,69E-02	2,51E+02
43	Summation	CS9	I[43]	Min	-3,05E+03	-3,77E+03	-8,69E-02	-6,82E+03
43	Summation	CS9	J[44]	Max	-3,05E+03	2,91E+03	8,72E-02	-1,38E+02
43	Summation	CS9	J[44]	Min	-3,05E+03	-3,33E+03	-8,72E-02	-6,38E+03
44	Summation	CS9	I[44]	Max	-6,81E+03	4,03E+03	1,18E-01	-2,78E+03
44	Summation	CS9	I[44]	Min	-6,81E+03	-4,44E+03	-1,18E-01	-1,13E+04
44	Summation	CS9	J[45]	Max	-7,32E+03	3,96E+03	1,28E-01	-3,36E+03
44	Summation	CS9	J[45]	Min	-7,32E+03	-4,66E+03	-1,28E-01	-1,20E+04
45	Summation	CS9	I[45]	Max	-6,57E+03	5,03E+03	0,00E+00	-1,54E+03
45	Summation	CS9	I[45]	Min	-6,57E+03	-5,81E+03	0,00E+00	-1,24E+04
45	Summation	CS9	J[46]	Max	-7,24E+03	4,42E+03	0,00E+00	-2,82E+03
45	Summation	CS9	J[46]	Min	-7,24E+03	-5,55E+03	0,00E+00	-1,28E+04
46	Summation	CS9	I[46]	Max	-6,38E+03	5,50E+03	0,00E+00	-8,81E+02
46	Summation	CS9	I[46]	Min	-6,38E+03	-6,78E+03	0,00E+00	-1,32E+04
46	Summation	CS9	J[47]	Max	-6,92E+03	4,61E+03	0,00E+00	-2,31E+03
46	Summation	CS9	J[47]	Min	-6,92E+03	-6,15E+03	0,00E+00	-1,31E+04
47	Summation	CS9	I[47]	Max	-6,00E+03	5,69E+03	0,00E+00	-3,11E+02
47	Summation	CS9	I[47]	Min	-6,00E+03	-7,50E+03	0,00E+00	-1,35E+04
47	Summation	CS9	J[48]	Max	-6,39E+03	4,20E+03	0,00E+00	-2,19E+03
47	Summation	CS9	J[48]	Min	-6,39E+03	-6,00E+03	0,00E+00	-1,24E+04
48	Summation	CS9	I[48]	Max	-5,39E+03	5,26E+03	0,00E+00	-1,27E+02
48	Summation	CS9	I[48]	Min	-5,39E+03	-7,43E+03	0,00E+00	-1,28E+04
48	Summation	CS9	J[49]	Max	-5,68E+03	3,61E+03	0,00E+00	-2,07E+03
48	Summation	CS9	J[49]	Min	-5,68E+03	-5,46E+03	0,00E+00	-1,11E+04
49	Summation	CS9	I[49]	Max	-4,60E+03	4,59E+03	0,00E+00	-4,44E+00
49	Summation	CS9	I[49]	Min	-4,60E+03	-6,87E+03	0,00E+00	-1,15E+04
49	Summation	CS9	J[50]	Max	-4,84E+03	2,89E+03	0,00E+00	-1,95E+03
49	Summation	CS9	J[50]	Min	-4,84E+03	-4,67E+03	0,00E+00	-9,51E+03
50	Summation	CS9	I[50]	Max	-3,68E+03	3,83E+03	0,00E+00	1,50E+02
50	Summation	CS9	I[50]	Min	-3,68E+03	-6,13E+03	0,00E+00	-9,81E+03
50	Summation	CS9	J[51]	Max	-3,87E+03	2,25E+03	0,00E+00	-1,62E+03
50	Summation	CS9	J[51]	Min	-3,87E+03	-3,94E+03	0,00E+00	-7,81E+03
51	Summation	CS9	I[51]	Max	-2,63E+03	3,15E+03	0,00E+00	5,23E+02
51	Summation	CS9	I[51]	Min	-2,63E+03	-5,45E+03	0,00E+00	-8,08E+03
51	Summation	CS9	J[52]	Max	-2,69E+03	1,58E+03	0,00E+00	-1,10E+03
51	Summation	CS9	J[52]	Min	-2,69E+03	-2,99E+03	0,00E+00	-5,67E+03
52	Summation	CS9	I[52]	Max	-1,37E+03	2,44E+03	0,00E+00	1,07E+03
52	Summation	CS9	I[52]	Min	-1,37E+03	-4,56E+03	0,00E+00	-5,93E+03
52	Summation	CS9	J[53]	Max	-1,34E+03	7,58E+02	0,00E+00	-5,82E+02
52	Summation	CS9	J[53]	Min	-1,34E+03	-1,42E+03	0,00E+00	-2,76E+03
53	Summation	CS9	I[53]	Max	-7,16E+02	1,16E+03	0,00E+00	4,45E+02
53	Summation	CS9	I[53]	Min	-7,16E+02	-2,17E+03	0,00E+00	-2,89E+03
53	Summation	CS9	J[54]	Max	-6,96E+02	3,37E+01	0,00E+00	-6,62E+02
53	Summation	CS9	J[54]	Min	-6,96E+02	-6,29E+01	0,00E+00	-7,59E+02
57	Summation	CS9	I[57]	Max	-6,79E+02	7,61E+01	0,00E+00	-6,03E+02
57	Summation	CS9	I[57]	Min	-6,79E+02	-4,06E+01	0,00E+00	-7,20E+02
57	Summation	CS9	J[58]	Max	-6,98E+02	9,20E+02	0,00E+00	2,22E+02
57	Summation	CS9	J[58]	Min	-6,98E+02	-1,72E+03	0,00E+00	-2,42E+03
58	Summation	CS9	I[58]	Max	-1,38E+03	4,79E+02	0,00E+00	-9,01E+02
58	Summation	CS9	I[58]	Min	-1,38E+03	-8,98E+02	0,00E+00	-2,28E+03
58	Summation	CS9	J[59]	Max	-1,41E+03	1,97E+03	0,00E+00	5,65E+02
58	Summation	CS9	J[59]	Min	-1,41E+03	-3,67E+03	0,00E+00	-5,08E+03
59	Summation	CS9	I[59]	Max	-2,76E+03	1,10E+03	0,00E+00	-1,67E+03
59	Summation	CS9	I[59]	Min	-2,76E+03	-2,06E+03	0,00E+00	-4,82E+03
59	Summation	CS9	J[60]	Max	-2,47E+03	2,46E+03	0,00E+00	-1,51E+01
59	Summation	CS9	J[60]	Min	-2,47E+03	-3,60E+03	0,00E+00	-6,07E+03
60	Summation	CS9	I[60]	Max	-3,64E+03	1,39E+03	0,00E+00	-2,25E+03
60	Summation	CS9	I[60]	Min	-3,64E+03	-2,07E+03	0,00E+00	-5,71E+03
60	Summation	CS9	J[61]	Max	-3,28E+03	3,37E+03	0,00E+00	8,89E+01
60	Summation	CS9	J[61]	Min	-3,28E+03	-4,24E+03	0,00E+00	-7,51E+03
61	Summation	CS9	I[61]	Max	-3,81E+03	2,16E+03	4,68E-07	-1,66E+03
61	Summation	CS9	I[61]	Min	-3,81E+03	-2,71E+03	-4,68E-07	-6,52E+03
61	Summation	CS9	J[62]	Max	-3,84E+03	3,20E+03	4,61E-07	-6,49E+02

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
61	Summation	CS9	J[62]	Min	-3,84E+03	-3,98E+03	-4,61E-07	-7,83E+03
62	Summation	CS9	I[62]	Max	-2,45E+03	2,72E+03	4,06E-07	2,74E+02
62	Summation	CS9	I[62]	Min	-2,45E+03	-3,36E+03	-4,06E-07	-5,81E+03
62	Summation	CS9	J[63]	Max	-2,45E+03	3,26E+03	4,01E-07	8,09E+02
62	Summation	CS9	J[63]	Min	-2,45E+03	-4,03E+03	-4,01E-07	-6,48E+03
63	Summation	CS9	I[63]	Max	-2,45E+03	3,28E+03	3,98E-07	8,30E+02
63	Summation	CS9	I[63]	Min	-2,45E+03	-4,05E+03	-3,98E-07	-6,50E+03
63	Summation	CS9	J[64]	Max	-2,45E+03	2,74E+03	3,92E-07	2,94E+02
63	Summation	CS9	J[64]	Min	-2,45E+03	-3,39E+03	-3,92E-07	-5,84E+03
64	Summation	CS9	I[64]	Max	-3,84E+03	3,22E+03	4,44E-07	-6,24E+02
64	Summation	CS9	I[64]	Min	-3,84E+03	-4,02E+03	-4,44E-07	-7,86E+03
64	Summation	CS9	J[65]	Max	-3,81E+03	2,18E+03	4,32E-07	-1,64E+03
64	Summation	CS9	J[65]	Min	-3,81E+03	-2,74E+03	-4,32E-07	-6,55E+03
65	Summation	CS9	I[65]	Max	-3,28E+03	3,38E+03	0,00E+00	1,06E+02
65	Summation	CS9	I[65]	Min	-3,28E+03	-4,27E+03	0,00E+00	-7,54E+03
65	Summation	CS9	J[66]	Max	-3,64E+03	1,39E+03	0,00E+00	-2,25E+03
65	Summation	CS9	J[66]	Min	-3,64E+03	-2,06E+03	0,00E+00	-5,70E+03
66	Summation	CS9	I[66]	Max	-2,48E+03	2,46E+03	0,00E+00	-1,80E+01
66	Summation	CS9	I[66]	Min	-2,48E+03	-3,59E+03	0,00E+00	-6,07E+03
66	Summation	CS9	J[67]	Max	-2,76E+03	1,07E+03	0,00E+00	-1,69E+03
66	Summation	CS9	J[67]	Min	-2,76E+03	-2,00E+03	0,00E+00	-4,77E+03
67	Summation	CS9	I[67]	Max	-1,41E+03	1,96E+03	0,00E+00	5,45E+02
67	Summation	CS9	I[67]	Min	-1,41E+03	-3,61E+03	0,00E+00	-5,03E+03
67	Summation	CS9	J[68]	Max	-1,39E+03	4,55E+02	0,00E+00	-9,30E+02
67	Summation	CS9	J[68]	Min	-1,39E+03	-8,42E+02	0,00E+00	-2,23E+03
68	Summation	CS9	I[68]	Max	-7,08E+02	9,01E+02	0,00E+00	1,93E+02
68	Summation	CS9	I[68]	Min	-7,08E+02	-1,66E+03	0,00E+00	-2,37E+03
68	Summation	CS9	J[69]	Max	-6,88E+02	1,01E+02	0,00E+00	-5,87E+02
68	Summation	CS9	J[69]	Min	-6,88E+02	-5,50E+01	0,00E+00	-7,43E+02

5.4.11 Konštrukčné štádium 10 (CS10)



Obrázok 11 CS10

Zaťaženie (Load) = Vlastná tiaž + Vozík + Čerstvý betón + Prevádzkové zaťaženie + Predpätie (primárne + sekundárne) + Dotvarovanie (sekundárne) + Zmrašťovanie (sekundárne)

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
16	Summation	CS10	I[16]	Max	-6,58E+02	8,14E+02	0,00E+00	1,56E+02
16	Summation	CS10	I[16]	Min	-6,58E+02	-4,37E+02	0,00E+00	-1,10E+03
16	Summation	CS10	J[17]	Max	-6,74E+02	4,69E+02	0,00E+00	-2,06E+02
16	Summation	CS10	J[17]	Min	-6,74E+02	-2,52E+02	0,00E+00	-9,26E+02
17	Summation	CS10	I[17]	Max	-1,33E+03	1,26E+03	0,00E+00	-6,94E+01
17	Summation	CS10	I[17]	Min	-1,33E+03	-6,73E+02	0,00E+00	-2,00E+03
17	Summation	CS10	J[18]	Max	-1,35E+03	8,40E+01	0,00E+00	-1,27E+03
17	Summation	CS10	J[18]	Min	-1,35E+03	-1,48E+02	0,00E+00	-1,50E+03
18	Summation	CS10	I[18]	Max	-2,00E+03	6,44E+02	0,00E+00	-1,36E+03
18	Summation	CS10	I[18]	Min	-2,00E+03	-3,42E+02	0,00E+00	-2,35E+03

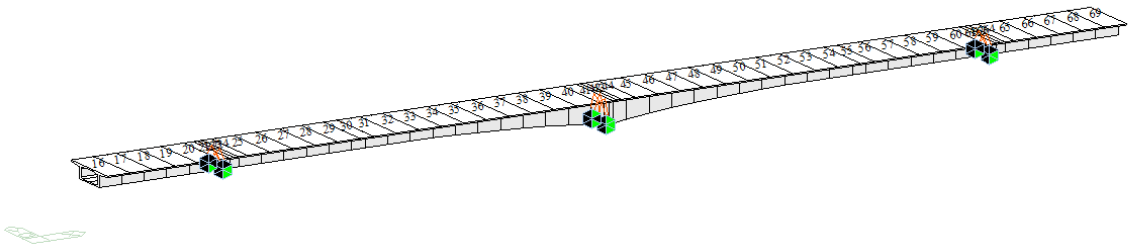
Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
18	Summation	CS10	J[19]	Max	-2,04E+03	9,79E+02	0,00E+00	-1,06E+03
18	Summation	CS10	J[19]	Min	-2,04E+03	-1,81E+03	0,00E+00	-3,85E+03
19	Summation	CS10	I[19]	Max	-3,34E+03	1,38E+02	0,00E+00	-3,21E+03
19	Summation	CS10	I[19]	Min	-3,34E+03	-2,53E+02	0,00E+00	-3,60E+03
19	Summation	CS10	J[20]	Max	-2,98E+03	1,31E+03	0,00E+00	-1,66E+03
19	Summation	CS10	J[20]	Min	-2,98E+03	-1,91E+03	0,00E+00	-4,89E+03
20	Summation	CS10	I[20]	Max	-4,11E+03	2,81E+02	0,00E+00	-3,82E+03
20	Summation	CS10	I[20]	Min	-4,11E+03	-4,21E+02	0,00E+00	-4,53E+03
20	Summation	CS10	J[21]	Max	-3,69E+03	2,08E+03	0,00E+00	-1,61E+03
20	Summation	CS10	J[21]	Min	-3,69E+03	-2,62E+03	0,00E+00	-6,31E+03
21	Summation	CS10	I[21]	Max	-4,18E+03	9,02E+02	6,44E-02	-3,27E+03
21	Summation	CS10	I[21]	Min	-4,18E+03	-1,14E+03	-6,44E-02	-5,32E+03
21	Summation	CS10	J[22]	Max	-4,21E+03	1,88E+03	6,64E-02	-2,33E+03
21	Summation	CS10	J[22]	Min	-4,21E+03	-2,34E+03	-6,64E-02	-6,55E+03
22	Summation	CS10	I[22]	Max	-2,70E+03	1,57E+03	5,85E-02	-1,13E+03
22	Summation	CS10	I[22]	Min	-2,70E+03	-1,94E+03	-5,85E-02	-4,64E+03
22	Summation	CS10	J[23]	Max	-2,70E+03	2,08E+03	5,97E-02	-6,22E+02
22	Summation	CS10	J[23]	Min	-2,70E+03	-2,56E+03	-5,97E-02	-5,27E+03
23	Summation	CS10	I[23]	Max	-2,69E+03	1,01E+03	5,97E-02	-1,68E+03
23	Summation	CS10	I[23]	Min	-2,69E+03	-1,24E+03	-5,97E-02	-3,93E+03
23	Summation	CS10	J[24]	Max	-2,69E+03	1,23E+03	6,07E-02	-1,46E+03
23	Summation	CS10	J[24]	Min	-2,69E+03	-1,52E+03	-6,07E-02	-4,21E+03
24	Summation	CS10	I[24]	Max	-4,20E+03	1,48E+03	6,88E-02	-2,72E+03
24	Summation	CS10	I[24]	Min	-4,20E+03	-1,84E+03	-6,88E-02	-6,04E+03
24	Summation	CS10	J[25]	Max	-4,20E+03	2,20E+03	6,98E-02	-2,00E+03
24	Summation	CS10	J[25]	Min	-4,20E+03	-2,76E+03	-6,98E-02	-6,96E+03
25	Summation	CS10	I[25]	Max	-3,71E+03	3,41E+03	0,00E+00	-3,09E+02
25	Summation	CS10	I[25]	Min	-3,71E+03	-4,29E+03	0,00E+00	-8,00E+03
25	Summation	CS10	J[26]	Max	-4,13E+03	1,40E+03	0,00E+00	-2,73E+03
25	Summation	CS10	J[26]	Min	-4,13E+03	-2,07E+03	0,00E+00	-6,20E+03
26	Summation	CS10	I[26]	Max	-2,99E+03	2,44E+03	0,00E+00	-5,54E+02
26	Summation	CS10	I[26]	Min	-2,99E+03	-3,57E+03	0,00E+00	-6,56E+03
26	Summation	CS10	J[27]	Max	-3,35E+03	1,07E+03	0,00E+00	-2,29E+03
26	Summation	CS10	J[27]	Min	-3,35E+03	-2,01E+03	0,00E+00	-5,36E+03
27	Summation	CS10	I[27]	Max	-2,04E+03	1,92E+03	0,00E+00	-1,23E+02
27	Summation	CS10	I[27]	Min	-2,04E+03	-3,57E+03	0,00E+00	-5,61E+03
27	Summation	CS10	J[28]	Max	-2,01E+03	3,27E+02	0,00E+00	-1,68E+03
27	Summation	CS10	J[28]	Min	-2,01E+03	-6,11E+02	0,00E+00	-2,62E+03
28	Summation	CS10	I[28]	Max	-1,35E+03	7,54E+02	0,00E+00	-5,93E+02
28	Summation	CS10	I[28]	Min	-1,35E+03	-1,41E+03	0,00E+00	-2,75E+03
28	Summation	CS10	J[29]	Max	-1,32E+03	5,36E+02	0,00E+00	-7,84E+02
28	Summation	CS10	J[29]	Min	-1,32E+03	-2,85E+02	0,00E+00	-1,61E+03
29	Summation	CS10	I[29]	Max	-6,53E+02	1,44E+02	0,00E+00	-5,10E+02
29	Summation	CS10	I[29]	Min	-6,53E+02	-2,69E+02	0,00E+00	-9,23E+02
29	Summation	CS10	J[30]	Max	-6,37E+02	6,24E+02	0,00E+00	-1,25E+01
29	Summation	CS10	J[30]	Min	-6,37E+02	-3,33E+02	0,00E+00	-9,70E+02
31	Summation	CS10	I[31]	Max	-6,92E+02	6,76E+02	0,00E+00	-1,63E+01
31	Summation	CS10	I[31]	Min	-6,92E+02	-3,61E+02	0,00E+00	-1,05E+03
31	Summation	CS10	J[32]	Max	-7,10E+02	9,09E+01	0,00E+00	-6,19E+02
31	Summation	CS10	J[32]	Min	-7,10E+02	-1,70E+02	0,00E+00	-8,81E+02
32	Summation	CS10	I[32]	Max	-1,32E+03	5,67E+02	0,00E+00	-7,53E+02
32	Summation	CS10	I[32]	Min	-1,32E+03	-3,01E+02	0,00E+00	-1,62E+03
32	Summation	CS10	J[33]	Max	-1,35E+03	7,10E+02	0,00E+00	-6,35E+02
32	Summation	CS10	J[33]	Min	-1,35E+03	-1,32E+03	0,00E+00	-2,67E+03
33	Summation	CS10	I[33]	Max	-2,02E+03	2,71E+02	0,00E+00	-1,75E+03
33	Summation	CS10	I[33]	Min	-2,02E+03	-5,03E+02	0,00E+00	-2,53E+03
33	Summation	CS10	J[34]	Max	-2,06E+03	1,84E+03	0,00E+00	-2,24E+02
33	Summation	CS10	J[34]	Min	-2,06E+03	-3,43E+03	0,00E+00	-5,49E+03
34	Summation	CS10	I[34]	Max	-3,36E+03	9,98E+02	0,00E+00	-2,36E+03
34	Summation	CS10	I[34]	Min	-3,36E+03	-1,88E+03	0,00E+00	-5,23E+03
34	Summation	CS10	J[35]	Max	-3,27E+03	2,46E+03	0,00E+00	-8,09E+02
34	Summation	CS10	J[35]	Min	-3,27E+03	-4,25E+03	0,00E+00	-7,52E+03
35	Summation	CS10	I[35]	Max	-4,50E+03	1,58E+03	0,00E+00	-2,92E+03
35	Summation	CS10	I[35]	Min	-4,50E+03	-2,75E+03	0,00E+00	-7,25E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
35	Summation	CS10	J[36]	Max	-4,26E+03	3,08E+03	0,00E+00	-1,18E+03
35	Summation	CS10	J[36]	Min	-4,26E+03	-4,92E+03	0,00E+00	-9,19E+03
36	Summation	CS10	I[36]	Max	-5,41E+03	2,15E+03	0,00E+00	-3,26E+03
36	Summation	CS10	I[36]	Min	-5,41E+03	-3,48E+03	0,00E+00	-8,89E+03
36	Summation	CS10	J[37]	Max	-5,14E+03	3,79E+03	0,00E+00	-1,34E+03
36	Summation	CS10	J[37]	Min	-5,14E+03	-5,66E+03	0,00E+00	-1,08E+04
37	Summation	CS10	I[37]	Max	-6,20E+03	2,82E+03	0,00E+00	-3,38E+03
37	Summation	CS10	I[37]	Min	-6,20E+03	-4,27E+03	0,00E+00	-1,05E+04
37	Summation	CS10	J[38]	Max	-5,89E+03	4,41E+03	0,00E+00	-1,48E+03
37	Summation	CS10	J[38]	Min	-5,89E+03	-6,22E+03	0,00E+00	-1,21E+04
38	Summation	CS10	I[38]	Max	-6,89E+03	3,37E+03	0,00E+00	-3,52E+03
38	Summation	CS10	I[38]	Min	-6,89E+03	-4,81E+03	0,00E+00	-1,17E+04
38	Summation	CS10	J[39]	Max	-6,43E+03	4,86E+03	0,00E+00	-1,57E+03
38	Summation	CS10	J[39]	Min	-6,43E+03	-6,39E+03	0,00E+00	-1,28E+04
39	Summation	CS10	I[39]	Max	-7,33E+03	3,79E+03	0,00E+00	-3,54E+03
39	Summation	CS10	I[39]	Min	-7,33E+03	-5,05E+03	0,00E+00	-1,24E+04
39	Summation	CS10	J[40]	Max	-6,76E+03	4,69E+03	0,00E+00	-2,07E+03
39	Summation	CS10	J[40]	Min	-6,76E+03	-5,77E+03	0,00E+00	-1,25E+04
40	Summation	CS10	I[40]	Max	-7,61E+03	3,62E+03	0,00E+00	-3,99E+03
40	Summation	CS10	I[40]	Min	-7,61E+03	-4,55E+03	0,00E+00	-1,22E+04
40	Summation	CS10	J[41]	Max	-6,90E+03	4,25E+03	0,00E+00	-2,65E+03
40	Summation	CS10	J[41]	Min	-6,90E+03	-4,90E+03	0,00E+00	-1,18E+04
41	Summation	CS10	I[41]	Max	-7,64E+03	3,19E+03	1,16E-01	-4,45E+03
41	Summation	CS10	I[41]	Min	-7,64E+03	-3,76E+03	-1,16E-01	-1,14E+04
41	Summation	CS10	J[42]	Max	-7,10E+03	3,28E+03	1,16E-01	-3,82E+03
41	Summation	CS10	J[42]	Min	-7,10E+03	-3,62E+03	-1,16E-01	-1,07E+04
42	Summation	CS10	I[42]	Max	-3,20E+03	2,38E+03	8,61E-02	-8,19E+02
42	Summation	CS10	I[42]	Min	-3,20E+03	-2,73E+03	-8,61E-02	-5,93E+03
42	Summation	CS10	J[43]	Max	-3,20E+03	2,77E+03	8,64E-02	-4,35E+02
42	Summation	CS10	J[43]	Min	-3,20E+03	-3,16E+03	-8,64E-02	-6,37E+03
43	Summation	CS10	I[43]	Max	-3,20E+03	2,77E+03	8,64E-02	-4,23E+02
43	Summation	CS10	I[43]	Min	-3,20E+03	-3,17E+03	-8,64E-02	-6,37E+03
43	Summation	CS10	J[44]	Max	-3,19E+03	2,39E+03	8,68E-02	-8,05E+02
43	Summation	CS10	J[44]	Min	-3,19E+03	-2,73E+03	-8,68E-02	-5,93E+03
44	Summation	CS10	I[44]	Max	-7,11E+03	3,28E+03	1,17E-01	-3,84E+03
44	Summation	CS10	I[44]	Min	-7,11E+03	-3,61E+03	-1,17E-01	-1,07E+04
44	Summation	CS10	J[45]	Max	-7,64E+03	3,19E+03	1,27E-01	-4,45E+03
44	Summation	CS10	J[45]	Min	-7,64E+03	-3,77E+03	-1,27E-01	-1,14E+04
45	Summation	CS10	I[45]	Max	-6,90E+03	4,25E+03	0,00E+00	-2,65E+03
45	Summation	CS10	I[45]	Min	-6,90E+03	-4,91E+03	0,00E+00	-1,18E+04
45	Summation	CS10	J[46]	Max	-7,61E+03	3,64E+03	0,00E+00	-3,97E+03
45	Summation	CS10	J[46]	Min	-7,61E+03	-4,57E+03	0,00E+00	-1,22E+04
46	Summation	CS10	I[46]	Max	-6,75E+03	4,70E+03	0,00E+00	-2,05E+03
46	Summation	CS10	I[46]	Min	-6,75E+03	-5,79E+03	0,00E+00	-1,25E+04
46	Summation	CS10	J[47]	Max	-7,32E+03	3,82E+03	0,00E+00	-3,50E+03
46	Summation	CS10	J[47]	Min	-7,32E+03	-5,09E+03	0,00E+00	-1,24E+04
47	Summation	CS10	I[47]	Max	-6,41E+03	4,88E+03	0,00E+00	-1,53E+03
47	Summation	CS10	I[47]	Min	-6,41E+03	-6,42E+03	0,00E+00	-1,28E+04
47	Summation	CS10	J[48]	Max	-6,83E+03	3,43E+03	0,00E+00	-3,40E+03
47	Summation	CS10	J[48]	Min	-6,83E+03	-4,90E+03	0,00E+00	-1,17E+04
48	Summation	CS10	I[48]	Max	-5,84E+03	4,48E+03	0,00E+00	-1,36E+03
48	Summation	CS10	I[48]	Min	-5,84E+03	-6,31E+03	0,00E+00	-1,21E+04
48	Summation	CS10	J[49]	Max	-6,16E+03	2,87E+03	0,00E+00	-3,29E+03
48	Summation	CS10	J[49]	Min	-6,16E+03	-4,35E+03	0,00E+00	-1,05E+04
49	Summation	CS10	I[49]	Max	-5,09E+03	3,84E+03	0,00E+00	-1,24E+03
49	Summation	CS10	I[49]	Min	-5,09E+03	-5,73E+03	0,00E+00	-1,08E+04
49	Summation	CS10	J[50]	Max	-5,35E+03	2,20E+03	0,00E+00	-3,16E+03
49	Summation	CS10	J[50]	Min	-5,35E+03	-3,56E+03	0,00E+00	-8,91E+03
50	Summation	CS10	I[50]	Max	-4,21E+03	3,13E+03	0,00E+00	-1,08E+03
50	Summation	CS10	I[50]	Min	-4,21E+03	-5,00E+03	0,00E+00	-9,21E+03
50	Summation	CS10	J[51]	Max	-4,44E+03	1,63E+03	0,00E+00	-2,80E+03
50	Summation	CS10	J[51]	Min	-4,44E+03	-2,85E+03	0,00E+00	-7,29E+03
51	Summation	CS10	I[51]	Max	-3,20E+03	2,52E+03	0,00E+00	-6,88E+02
51	Summation	CS10	I[51]	Min	-3,20E+03	-4,35E+03	0,00E+00	-7,55E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
51	Summation	CS10	J[52]	Max	-3,29E+03	1,05E+03	0,00E+00	-2,23E+03
51	Summation	CS10	J[52]	Min	-3,29E+03	-1,98E+03	0,00E+00	-5,27E+03
52	Summation	CS10	I[52]	Max	-1,99E+03	1,90E+03	0,00E+00	-9,14E+01
52	Summation	CS10	I[52]	Min	-1,99E+03	-3,54E+03	0,00E+00	-5,53E+03
52	Summation	CS10	J[53]	Max	-1,95E+03	3,21E+02	0,00E+00	-1,63E+03
52	Summation	CS10	J[53]	Min	-1,95E+03	-5,97E+02	0,00E+00	-2,55E+03
53	Summation	CS10	I[53]	Max	-1,34E+03	7,19E+02	0,00E+00	-6,16E+02
53	Summation	CS10	I[53]	Min	-1,34E+03	-1,34E+03	0,00E+00	-2,68E+03
53	Summation	CS10	J[54]	Max	-1,31E+03	5,30E+02	0,00E+00	-7,80E+02
53	Summation	CS10	J[54]	Min	-1,31E+03	-2,82E+02	0,00E+00	-1,59E+03
54	Summation	CS10	I[54]	Max	-6,22E+02	1,60E+02	0,00E+00	-4,62E+02
54	Summation	CS10	I[54]	Min	-6,22E+02	-2,99E+02	0,00E+00	-9,21E+02
54	Summation	CS10	J[55]	Max	-6,05E+02	5,70E+02	0,00E+00	-3,54E+01
54	Summation	CS10	J[55]	Min	-6,05E+02	-3,04E+02	0,00E+00	-9,09E+02
56	Summation	CS10	I[56]	Max	-6,94E+02	6,76E+02	0,00E+00	-1,74E+01
56	Summation	CS10	I[56]	Min	-6,94E+02	-3,61E+02	0,00E+00	-1,05E+03
56	Summation	CS10	J[57]	Max	-7,12E+02	9,05E+01	0,00E+00	-6,22E+02
56	Summation	CS10	J[57]	Min	-7,12E+02	-1,70E+02	0,00E+00	-8,82E+02
57	Summation	CS10	I[57]	Max	-1,38E+03	6,39E+02	0,00E+00	-7,43E+02
57	Summation	CS10	I[57]	Min	-1,38E+03	-3,40E+02	0,00E+00	-1,72E+03
57	Summation	CS10	J[58]	Max	-1,41E+03	6,62E+02	0,00E+00	-7,46E+02
57	Summation	CS10	J[58]	Min	-1,41E+03	-1,24E+03	0,00E+00	-2,64E+03
58	Summation	CS10	I[58]	Max	-2,08E+03	2,27E+02	0,00E+00	-1,85E+03
58	Summation	CS10	I[58]	Min	-2,08E+03	-4,23E+02	0,00E+00	-2,50E+03
58	Summation	CS10	J[59]	Max	-2,12E+03	1,78E+03	0,00E+00	-3,36E+02
58	Summation	CS10	J[59]	Min	-2,12E+03	-3,31E+03	0,00E+00	-5,42E+03
59	Summation	CS10	I[59]	Max	-3,46E+03	9,15E+02	0,00E+00	-2,54E+03
59	Summation	CS10	I[59]	Min	-3,46E+03	-1,72E+03	0,00E+00	-5,17E+03
59	Summation	CS10	J[60]	Max	-3,07E+03	2,25E+03	0,00E+00	-8,24E+02
59	Summation	CS10	J[60]	Min	-3,07E+03	-3,29E+03	0,00E+00	-6,37E+03
60	Summation	CS10	I[60]	Max	-4,23E+03	1,19E+03	0,00E+00	-3,04E+03
60	Summation	CS10	I[60]	Min	-4,23E+03	-1,77E+03	0,00E+00	-6,00E+03
60	Summation	CS10	J[61]	Max	-3,80E+03	3,18E+03	0,00E+00	-6,21E+02
60	Summation	CS10	J[61]	Min	-3,80E+03	-3,99E+03	0,00E+00	-7,79E+03
61	Summation	CS10	I[61]	Max	-4,27E+03	1,97E+03	4,64E-07	-2,30E+03
61	Summation	CS10	I[61]	Min	-4,27E+03	-2,47E+03	-4,64E-07	-6,74E+03
61	Summation	CS10	J[62]	Max	-4,27E+03	1,45E+03	4,57E-07	-2,82E+03
61	Summation	CS10	J[62]	Min	-4,27E+03	-1,80E+03	-4,57E-07	-6,07E+03
62	Summation	CS10	I[62]	Max	-2,72E+03	1,21E+03	4,03E-07	-1,51E+03
62	Summation	CS10	I[62]	Min	-2,72E+03	-1,49E+03	-4,03E-07	-4,22E+03
62	Summation	CS10	J[63]	Max	-2,72E+03	1,08E+03	3,97E-07	-1,64E+03
62	Summation	CS10	J[63]	Min	-2,72E+03	-1,33E+03	-3,97E-07	-4,05E+03
63	Summation	CS10	I[63]	Max	-2,73E+03	1,90E+03	3,94E-07	-8,34E+02
63	Summation	CS10	I[63]	Min	-2,73E+03	-2,34E+03	-3,94E-07	-5,07E+03
63	Summation	CS10	J[64]	Max	-2,72E+03	1,39E+03	3,88E-07	-1,34E+03
63	Summation	CS10	J[64]	Min	-2,72E+03	-1,72E+03	-3,88E-07	-4,44E+03
64	Summation	CS10	I[64]	Max	-4,27E+03	1,66E+03	4,40E-07	-2,62E+03
64	Summation	CS10	I[64]	Min	-4,27E+03	-2,06E+03	-4,40E-07	-6,33E+03
64	Summation	CS10	J[65]	Max	-4,24E+03	6,87E+02	4,27E-07	-3,56E+03
64	Summation	CS10	J[65]	Min	-4,24E+03	-8,72E+02	-4,27E-07	-5,11E+03
65	Summation	CS10	I[65]	Max	-3,77E+03	1,86E+03	0,00E+00	-1,91E+03
65	Summation	CS10	I[65]	Min	-3,77E+03	-2,33E+03	0,00E+00	-6,10E+03
65	Summation	CS10	J[66]	Max	-4,19E+03	9,00E+01	0,00E+00	-4,10E+03
65	Summation	CS10	J[66]	Min	-4,19E+03	-1,39E+02	0,00E+00	-4,33E+03
66	Summation	CS10	I[66]	Max	-3,04E+03	1,14E+03	0,00E+00	-1,91E+03
66	Summation	CS10	I[66]	Min	-3,04E+03	-1,64E+03	0,00E+00	-4,69E+03
66	Summation	CS10	J[67]	Max	-3,41E+03	2,76E+01	0,00E+00	-3,38E+03
66	Summation	CS10	J[67]	Min	-3,41E+03	-1,11E+01	0,00E+00	-3,42E+03
67	Summation	CS10	I[67]	Max	-2,08E+03	8,53E+02	0,00E+00	-1,23E+03
67	Summation	CS10	I[67]	Min	-2,08E+03	-1,56E+03	0,00E+00	-3,64E+03
67	Summation	CS10	J[68]	Max	-2,05E+03	8,04E+02	0,00E+00	-1,25E+03
67	Summation	CS10	J[68]	Min	-2,05E+03	-4,31E+02	0,00E+00	-2,48E+03
68	Summation	CS10	I[68]	Max	-1,38E+03	6,50E+00	0,00E+00	-1,38E+03
68	Summation	CS10	I[68]	Min	-1,38E+03	-3,06E+00	0,00E+00	-1,39E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
68	Summation	CS10	J[69]	Max	-1,36E+03	1,31E+03	0,00E+00	-4,53E+01
68	Summation	CS10	J[69]	Min	-1,36E+03	-7,10E+02	0,00E+00	-2,07E+03
69	Summation	CS10	I[69]	Max	-6,80E+02	4,94E+02	0,00E+00	-1,86E+02
69	Summation	CS10	I[69]	Min	-6,80E+02	-2,68E+02	0,00E+00	-9,48E+02
69	Summation	CS10	J[70]	Max	-6,64E+02	8,04E+02	0,00E+00	1,40E+02
69	Summation	CS10	J[70]	Min	-6,64E+02	-4,36E+02	0,00E+00	-1,10E+03

5.4.12 Konštrukčné štádium 11 (CS11)



Obrázok 12 CS11

Zaťaženie (Load) = Vlastná tiaž + Vozík + Čerstvý betón + Prevádzkové zaťaženie + Predpätie (primárne + sekundárne) + Dotvarovanie (sekundárne) + Zmrašťovanie (sekundárne)

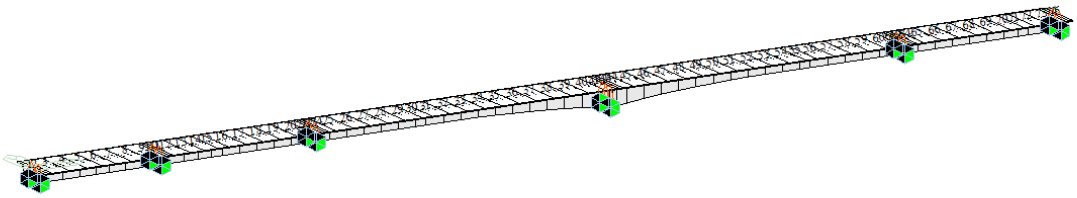
Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
16	Summation	CS11	I[16]	Max	-6,54E+02	8,11E+02	0,00E+00	1,57E+02
16	Summation	CS11	I[16]	Min	-6,54E+02	-4,36E+02	0,00E+00	-1,09E+03
16	Summation	CS11	J[17]	Max	-6,70E+02	4,65E+02	0,00E+00	-2,05E+02
16	Summation	CS11	J[17]	Min	-6,70E+02	-2,50E+02	0,00E+00	-9,20E+02
17	Summation	CS11	I[17]	Max	-1,32E+03	1,25E+03	0,00E+00	-6,92E+01
17	Summation	CS11	I[17]	Min	-1,32E+03	-6,70E+02	0,00E+00	-1,99E+03
17	Summation	CS11	J[18]	Max	-1,34E+03	8,72E+01	0,00E+00	-1,26E+03
17	Summation	CS11	J[18]	Min	-1,34E+03	-1,54E+02	0,00E+00	-1,50E+03
18	Summation	CS11	I[18]	Max	-2,00E+03	6,36E+02	0,00E+00	-1,36E+03
18	Summation	CS11	I[18]	Min	-2,00E+03	-3,37E+02	0,00E+00	-2,33E+03
18	Summation	CS11	J[19]	Max	-2,03E+03	9,83E+02	0,00E+00	-1,05E+03
18	Summation	CS11	J[19]	Min	-2,03E+03	-1,81E+03	0,00E+00	-3,85E+03
19	Summation	CS11	I[19]	Max	-3,33E+03	1,45E+02	0,00E+00	-3,19E+03
19	Summation	CS11	I[19]	Min	-3,33E+03	-2,66E+02	0,00E+00	-3,60E+03
19	Summation	CS11	J[20]	Max	-2,97E+03	1,32E+03	0,00E+00	-1,65E+03
19	Summation	CS11	J[20]	Min	-2,97E+03	-1,92E+03	0,00E+00	-4,89E+03
20	Summation	CS11	I[20]	Max	-4,09E+03	2,91E+02	0,00E+00	-3,80E+03
20	Summation	CS11	I[20]	Min	-4,09E+03	-4,37E+02	0,00E+00	-4,53E+03
20	Summation	CS11	J[21]	Max	-3,68E+03	2,09E+03	0,00E+00	-1,59E+03
20	Summation	CS11	J[21]	Min	-3,68E+03	-2,63E+03	0,00E+00	-6,31E+03
21	Summation	CS11	I[21]	Max	-5,35E+03	1,18E+03	6,41E-02	-4,17E+03
21	Summation	CS11	I[21]	Min	-5,35E+03	-1,49E+03	-6,41E-02	-6,83E+03
21	Summation	CS11	J[22]	Max	-6,68E+03	2,04E+03	6,60E-02	-4,63E+03
21	Summation	CS11	J[22]	Min	-6,68E+03	-2,55E+03	-6,60E-02	-9,22E+03
22	Summation	CS11	I[22]	Max	-4,29E+03	1,67E+03	5,82E-02	-2,62E+03
22	Summation	CS11	I[22]	Min	-4,29E+03	-2,06E+03	-5,82E-02	-6,35E+03
22	Summation	CS11	J[23]	Max	-4,32E+03	2,04E+03	5,94E-02	-2,28E+03
22	Summation	CS11	J[23]	Min	-4,32E+03	-2,52E+03	-5,94E-02	-6,84E+03
23	Summation	CS11	I[23]	Max	-4,32E+03	2,04E+03	5,94E-02	-2,28E+03
23	Summation	CS11	I[23]	Min	-4,32E+03	-2,52E+03	-5,94E-02	-6,84E+03
23	Summation	CS11	J[24]	Max	-4,34E+03	1,51E+03	6,02E-02	-2,83E+03
23	Summation	CS11	J[24]	Min	-4,34E+03	-1,86E+03	-6,02E-02	-6,20E+03
24	Summation	CS11	I[24]	Max	-6,75E+03	1,85E+03	6,83E-02	-4,90E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
24	Summation	CS11	I[24]	Min	-6,75E+03	-2,31E+03	-6,83E-02	-9,06E+03
24	Summation	CS11	J[25]	Max	-6,74E+03	1,40E+03	6,88E-02	-5,34E+03
24	Summation	CS11	J[25]	Min	-6,74E+03	-1,77E+03	-6,88E-02	-8,51E+03
25	Summation	CS11	I[25]	Max	-6,56E+03	2,61E+03	7,96E-04	-3,95E+03
25	Summation	CS11	I[25]	Min	-6,56E+03	-3,28E+03	-7,96E-04	-9,85E+03
25	Summation	CS11	J[26]	Max	-8,00E+03	3,22E+03	2,23E-03	-4,78E+03
25	Summation	CS11	J[26]	Min	-8,00E+03	-4,67E+03	-2,23E-03	-1,27E+04
26	Summation	CS11	I[26]	Max	-6,90E+03	4,25E+03	2,25E-03	-2,65E+03
26	Summation	CS11	I[26]	Min	-6,90E+03	-6,15E+03	-2,25E-03	-1,31E+04
26	Summation	CS11	J[27]	Max	-8,57E+03	5,26E+03	3,87E-03	-3,31E+03
26	Summation	CS11	J[27]	Min	-8,57E+03	-9,37E+03	-3,87E-03	-1,79E+04
27	Summation	CS11	I[27]	Max	-7,30E+03	6,10E+03	3,91E-03	-1,19E+03
27	Summation	CS11	I[27]	Min	-7,30E+03	-1,09E+04	-3,91E-03	-1,82E+04
27	Summation	CS11	J[28]	Max	-7,96E+03	5,44E+03	5,42E-03	-2,52E+03
27	Summation	CS11	J[28]	Min	-7,96E+03	-9,47E+03	-5,42E-03	-1,74E+04
28	Summation	CS11	I[28]	Max	-7,32E+03	5,86E+03	5,46E-03	-1,46E+03
28	Summation	CS11	I[28]	Min	-7,32E+03	-1,02E+04	-5,46E-03	-1,75E+04
28	Summation	CS11	J[29]	Max	-7,31E+03	4,41E+03	6,97E-03	-2,89E+03
28	Summation	CS11	J[29]	Min	-7,31E+03	-7,58E+03	-6,97E-03	-1,49E+04
29	Summation	CS11	I[29]	Max	-6,66E+03	4,83E+03	7,00E-03	-1,83E+03
29	Summation	CS11	I[29]	Min	-6,66E+03	-8,34E+03	-7,00E-03	-1,50E+04
29	Summation	CS11	J[30]	Max	-6,66E+03	3,95E+03	8,53E-03	-2,71E+03
29	Summation	CS11	J[30]	Min	-6,66E+03	-6,75E+03	-8,53E-03	-1,34E+04
30	Summation	CS11	I[30]	Max	-5,92E+03	4,18E+03	8,50E-03	-1,73E+03
30	Summation	CS11	I[30]	Min	-5,92E+03	-7,11E+03	-8,50E-03	-1,30E+04
30	Summation	CS11	J[31]	Max	-5,93E+03	3,86E+03	9,41E-03	-2,06E+03
30	Summation	CS11	J[31]	Min	-5,93E+03	-6,57E+03	-9,41E-03	-1,25E+04
31	Summation	CS11	I[31]	Max	-6,66E+03	3,53E+03	9,43E-03	-3,13E+03
31	Summation	CS11	I[31]	Min	-6,66E+03	-6,00E+03	-9,43E-03	-1,27E+04
31	Summation	CS11	J[32]	Max	-6,68E+03	3,33E+03	1,10E-02	-3,35E+03
31	Summation	CS11	J[32]	Min	-6,68E+03	-5,73E+03	-1,10E-02	-1,24E+04
32	Summation	CS11	I[32]	Max	-7,28E+03	2,98E+03	1,09E-02	-4,30E+03
32	Summation	CS11	I[32]	Min	-7,28E+03	-5,09E+03	-1,09E-02	-1,24E+04
32	Summation	CS11	J[33]	Max	-7,30E+03	3,36E+03	1,24E-02	-3,95E+03
32	Summation	CS11	J[33]	Min	-7,30E+03	-5,89E+03	-1,24E-02	-1,32E+04
33	Summation	CS11	I[33]	Max	-7,96E+03	2,95E+03	1,24E-02	-5,01E+03
33	Summation	CS11	I[33]	Min	-7,96E+03	-5,14E+03	-1,24E-02	-1,31E+04
33	Summation	CS11	J[34]	Max	-7,98E+03	3,88E+03	1,39E-02	-4,11E+03
33	Summation	CS11	J[34]	Min	-7,98E+03	-6,96E+03	-1,39E-02	-1,49E+04
34	Summation	CS11	I[34]	Max	-9,22E+03	3,08E+03	1,37E-02	-6,14E+03
34	Summation	CS11	I[34]	Min	-9,22E+03	-5,51E+03	-1,37E-02	-1,47E+04
34	Summation	CS11	J[35]	Max	-8,23E+03	2,63E+03	1,49E-02	-5,60E+03
34	Summation	CS11	J[35]	Min	-8,23E+03	-4,54E+03	-1,49E-02	-1,28E+04
35	Summation	CS11	I[35]	Max	-9,40E+03	1,80E+03	1,48E-02	-7,61E+03
35	Summation	CS11	I[35]	Min	-9,40E+03	-3,12E+03	-1,48E-02	-1,25E+04
35	Summation	CS11	J[36]	Max	-8,24E+03	1,60E+03	1,56E-02	-6,64E+03
35	Summation	CS11	J[36]	Min	-8,24E+03	-2,63E+03	-1,56E-02	-1,09E+04
36	Summation	CS11	I[36]	Max	-9,34E+03	7,21E+02	1,54E-02	-8,62E+03
36	Summation	CS11	I[36]	Min	-9,34E+03	-1,26E+03	-1,54E-02	-1,06E+04
36	Summation	CS11	J[37]	Max	-8,24E+03	9,19E+02	1,61E-02	-7,32E+03
36	Summation	CS11	J[37]	Min	-8,24E+03	-1,44E+03	-1,61E-02	-9,68E+03
37	Summation	CS11	I[37]	Max	-9,27E+03	1,60E+00	1,60E-02	-9,27E+03
37	Summation	CS11	I[37]	Min	-9,27E+03	-1,09E+02	-1,60E-02	-9,38E+03
37	Summation	CS11	J[38]	Max	-8,74E+03	1,04E+03	1,65E-02	-7,70E+03
37	Summation	CS11	J[38]	Min	-8,74E+03	-1,50E+03	-1,65E-02	-1,02E+04
38	Summation	CS11	I[38]	Max	-9,69E+03	4,99E+01	1,64E-02	-9,64E+03
38	Summation	CS11	I[38]	Min	-9,69E+03	-1,58E+02	-1,64E-02	-9,85E+03
38	Summation	CS11	J[39]	Max	-8,99E+03	8,83E+02	1,68E-02	-8,11E+03
38	Summation	CS11	J[39]	Min	-8,99E+03	-1,15E+03	-1,68E-02	-1,01E+04
39	Summation	CS11	I[39]	Max	-9,85E+03	1,21E+02	1,66E-02	-9,73E+03
39	Summation	CS11	I[39]	Min	-9,85E+03	-1,30E+02	-1,66E-02	-9,98E+03
39	Summation	CS11	J[40]	Max	-9,00E+03	1,71E+02	1,67E-02	-8,83E+03
39	Summation	CS11	J[40]	Min	-9,00E+03	-1,56E+02	-1,67E-02	-9,16E+03
40	Summation	CS11	I[40]	Max	-9,82E+03	1,01E+03	1,66E-02	-8,81E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
40	Summation	CS11	I[40]	Min	-9,82E+03	-8,31E+02	-1,66E-02	-1,07E+04
40	Summation	CS11	J[41]	Max	-8,86E+03	7,78E+02	1,65E-02	-8,08E+03
40	Summation	CS11	J[41]	Min	-8,86E+03	-6,02E+02	-1,65E-02	-9,46E+03
41	Summation	CS11	I[41]	Max	-9,57E+03	1,87E+03	9,89E-02	-7,70E+03
41	Summation	CS11	I[41]	Min	-9,57E+03	-1,61E+03	-9,89E-02	-1,12E+04
41	Summation	CS11	J[42]	Max	-1,08E+04	2,78E+03	9,99E-02	-7,99E+03
41	Summation	CS11	J[42]	Min	-1,08E+04	-2,44E+03	-9,99E-02	-1,32E+04
42	Summation	CS11	I[42]	Max	-4,97E+03	1,88E+03	7,36E-02	-3,09E+03
42	Summation	CS11	I[42]	Min	-4,97E+03	-1,61E+03	-7,36E-02	-6,59E+03
42	Summation	CS11	J[43]	Max	-4,97E+03	1,51E+03	7,38E-02	-3,46E+03
42	Summation	CS11	J[43]	Min	-4,97E+03	-1,28E+03	-7,38E-02	-6,24E+03
43	Summation	CS11	I[43]	Max	-4,96E+03	1,50E+03	7,36E-02	-3,46E+03
43	Summation	CS11	I[43]	Min	-4,96E+03	-1,27E+03	-7,36E-02	-6,23E+03
43	Summation	CS11	J[44]	Max	-4,96E+03	1,88E+03	7,41E-02	-3,08E+03
43	Summation	CS11	J[44]	Min	-4,96E+03	-1,61E+03	-7,41E-02	-6,57E+03
44	Summation	CS11	I[44]	Max	-1,08E+04	2,80E+03	1,01E-01	-7,98E+03
44	Summation	CS11	I[44]	Min	-1,08E+04	-2,45E+03	-1,01E-01	-1,32E+04
44	Summation	CS11	J[45]	Max	-9,60E+03	1,59E+03	1,10E-01	-8,01E+03
44	Summation	CS11	J[45]	Min	-9,60E+03	-1,37E+03	-1,10E-01	-1,10E+04
45	Summation	CS11	I[45]	Max	-8,89E+03	4,94E+02	1,67E-02	-8,39E+03
45	Summation	CS11	I[45]	Min	-8,89E+03	-3,68E+02	-1,67E-02	-9,25E+03
45	Summation	CS11	J[46]	Max	-9,84E+03	7,87E+02	1,68E-02	-9,05E+03
45	Summation	CS11	J[46]	Min	-9,84E+03	-6,54E+02	-1,68E-02	-1,05E+04
46	Summation	CS11	I[46]	Max	-9,02E+03	3,48E+02	1,70E-02	-8,67E+03
46	Summation	CS11	I[46]	Min	-9,02E+03	-3,83E+02	-1,70E-02	-9,40E+03
46	Summation	CS11	J[47]	Max	-9,85E+03	-2,18E+01	1,69E-02	-9,88E+03
46	Summation	CS11	J[47]	Min	-9,85E+03	-2,39E+01	-1,69E-02	-9,88E+03
47	Summation	CS11	I[47]	Max	-8,99E+03	9,88E+02	1,70E-02	-8,00E+03
47	Summation	CS11	I[47]	Min	-8,99E+03	-1,29E+03	-1,70E-02	-1,03E+04
47	Summation	CS11	J[48]	Max	-9,65E+03	1,37E+02	1,66E-02	-9,52E+03
47	Summation	CS11	J[48]	Min	-9,65E+03	-2,82E+02	-1,66E-02	-9,93E+03
48	Summation	CS11	I[48]	Max	-8,70E+03	1,13E+03	1,68E-02	-7,57E+03
48	Summation	CS11	I[48]	Min	-8,70E+03	-1,63E+03	-1,68E-02	-1,03E+04
48	Summation	CS11	J[49]	Max	-9,24E+03	5,95E+01	1,62E-02	-9,18E+03
48	Summation	CS11	J[49]	Min	-9,24E+03	-1,96E+02	-1,62E-02	-9,43E+03
49	Summation	CS11	I[49]	Max	-8,21E+03	9,77E+02	1,64E-02	-7,24E+03
49	Summation	CS11	I[49]	Min	-8,21E+03	-1,52E+03	-1,64E-02	-9,74E+03
49	Summation	CS11	J[50]	Max	-9,31E+03	7,84E+02	1,56E-02	-8,52E+03
49	Summation	CS11	J[50]	Min	-9,31E+03	-1,36E+03	-1,56E-02	-1,07E+04
50	Summation	CS11	I[50]	Max	-8,21E+03	1,67E+03	1,58E-02	-6,55E+03
50	Summation	CS11	I[50]	Min	-8,21E+03	-2,73E+03	-1,58E-02	-1,09E+04
50	Summation	CS11	J[51]	Max	-9,37E+03	1,87E+03	1,50E-02	-7,49E+03
50	Summation	CS11	J[51]	Min	-9,37E+03	-3,25E+03	-1,50E-02	-1,26E+04
51	Summation	CS11	I[51]	Max	-8,19E+03	2,71E+03	1,51E-02	-5,47E+03
51	Summation	CS11	I[51]	Min	-8,19E+03	-4,67E+03	-1,51E-02	-1,29E+04
51	Summation	CS11	J[52]	Max	-9,17E+03	3,16E+03	1,39E-02	-6,01E+03
51	Summation	CS11	J[52]	Min	-9,17E+03	-5,65E+03	-1,39E-02	-1,48E+04
52	Summation	CS11	I[52]	Max	-7,93E+03	3,96E+03	1,41E-02	-3,97E+03
52	Summation	CS11	I[52]	Min	-7,93E+03	-7,12E+03	-1,41E-02	-1,50E+04
52	Summation	CS11	J[53]	Max	-7,92E+03	3,04E+03	1,25E-02	-4,88E+03
52	Summation	CS11	J[53]	Min	-7,92E+03	-5,31E+03	-1,25E-02	-1,32E+04
53	Summation	CS11	I[53]	Max	-7,33E+03	3,41E+03	1,26E-02	-3,91E+03
53	Summation	CS11	I[53]	Min	-7,33E+03	-5,99E+03	-1,26E-02	-1,33E+04
53	Summation	CS11	J[54]	Max	-7,30E+03	3,05E+03	1,11E-02	-4,26E+03
53	Summation	CS11	J[54]	Min	-7,30E+03	-5,21E+03	-1,11E-02	-1,25E+04
54	Summation	CS11	I[54]	Max	-6,63E+03	3,45E+03	1,11E-02	-3,18E+03
54	Summation	CS11	I[54]	Min	-6,63E+03	-5,94E+03	-1,11E-02	-1,26E+04
54	Summation	CS11	J[55]	Max	-6,61E+03	3,64E+03	9,57E-03	-2,97E+03
54	Summation	CS11	J[55]	Min	-6,61E+03	-6,20E+03	-9,57E-03	-1,28E+04
55	Summation	CS11	I[55]	Max	-5,97E+03	3,93E+03	9,56E-03	-2,04E+03
55	Summation	CS11	I[55]	Min	-5,97E+03	-6,68E+03	-9,56E-03	-1,26E+04
55	Summation	CS11	J[56]	Max	-5,96E+03	4,25E+03	8,63E-03	-1,71E+03
55	Summation	CS11	J[56]	Min	-5,96E+03	-7,23E+03	-8,63E-03	-1,32E+04
56	Summation	CS11	I[56]	Max	-6,69E+03	3,91E+03	8,61E-03	-2,78E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
56	Summation	CS11	I[56]	Min	-6,69E+03	-6,65E+03	-8,61E-03	-1,33E+04
56	Summation	CS11	J[57]	Max	-6,69E+03	4,78E+03	7,07E-03	-1,91E+03
56	Summation	CS11	J[57]	Min	-6,69E+03	-8,22E+03	-7,07E-03	-1,49E+04
57	Summation	CS11	I[57]	Max	-7,35E+03	4,39E+03	7,05E-03	-2,97E+03
57	Summation	CS11	I[57]	Min	-7,35E+03	-7,51E+03	-7,05E-03	-1,49E+04
57	Summation	CS11	J[58]	Max	-7,36E+03	5,83E+03	5,52E-03	-1,53E+03
57	Summation	CS11	J[58]	Min	-7,36E+03	-1,01E+04	-5,52E-03	-1,75E+04
58	Summation	CS11	I[58]	Max	-8,02E+03	5,41E+03	5,48E-03	-2,61E+03
58	Summation	CS11	I[58]	Min	-8,02E+03	-9,40E+03	-5,48E-03	-1,74E+04
58	Summation	CS11	J[59]	Max	-7,36E+03	6,08E+03	3,96E-03	-1,28E+03
58	Summation	CS11	J[59]	Min	-7,36E+03	-1,08E+04	-3,96E-03	-1,82E+04
59	Summation	CS11	I[59]	Max	-8,66E+03	5,22E+03	3,91E-03	-3,44E+03
59	Summation	CS11	I[59]	Min	-8,66E+03	-9,28E+03	-3,91E-03	-1,79E+04
59	Summation	CS11	J[60]	Max	-6,98E+03	4,22E+03	2,27E-03	-2,76E+03
59	Summation	CS11	J[60]	Min	-6,98E+03	-6,09E+03	-2,27E-03	-1,31E+04
60	Summation	CS11	I[60]	Max	-8,10E+03	3,17E+03	2,26E-03	-4,93E+03
60	Summation	CS11	I[60]	Min	-8,10E+03	-4,60E+03	-2,26E-03	-1,27E+04
60	Summation	CS11	J[61]	Max	-6,64E+03	2,56E+03	8,06E-04	-4,08E+03
60	Summation	CS11	J[61]	Min	-6,64E+03	-3,22E+03	-8,06E-04	-9,86E+03
61	Summation	CS11	I[61]	Max	-6,81E+03	1,36E+03	7,44E-04	-5,45E+03
61	Summation	CS11	I[61]	Min	-6,81E+03	-1,71E+03	-7,44E-04	-8,52E+03
61	Summation	CS11	J[62]	Max	-6,81E+03	1,80E+03	2,49E-04	-5,01E+03
61	Summation	CS11	J[62]	Min	-6,81E+03	-2,24E+03	-2,49E-04	-9,05E+03
62	Summation	CS11	I[62]	Max	-4,37E+03	1,47E+03	2,21E-04	-2,90E+03
62	Summation	CS11	I[62]	Min	-4,37E+03	-1,82E+03	-2,21E-04	-6,19E+03
62	Summation	CS11	J[63]	Max	-4,35E+03	2,01E+03	4,49E-07	-2,34E+03
62	Summation	CS11	J[63]	Min	-4,35E+03	-2,48E+03	-4,49E-07	-6,82E+03
63	Summation	CS11	I[63]	Max	-4,35E+03	2,01E+03	3,90E-07	-2,33E+03
63	Summation	CS11	I[63]	Min	-4,35E+03	-2,48E+03	-3,90E-07	-6,83E+03
63	Summation	CS11	J[64]	Max	-4,32E+03	1,63E+03	3,85E-07	-2,68E+03
63	Summation	CS11	J[64]	Min	-4,32E+03	-2,02E+03	-3,85E-07	-6,34E+03
64	Summation	CS11	I[64]	Max	-6,73E+03	1,99E+03	4,37E-07	-4,75E+03
64	Summation	CS11	I[64]	Min	-6,73E+03	-2,47E+03	-4,37E-07	-9,21E+03
64	Summation	CS11	J[65]	Max	-5,41E+03	1,12E+03	4,24E-07	-4,30E+03
64	Summation	CS11	J[65]	Min	-5,41E+03	-1,41E+03	-4,24E-07	-6,82E+03
65	Summation	CS11	I[65]	Max	-3,75E+03	2,03E+03	0,00E+00	-1,72E+03
65	Summation	CS11	I[65]	Min	-3,75E+03	-2,55E+03	0,00E+00	-6,30E+03
65	Summation	CS11	J[66]	Max	-4,17E+03	2,27E+02	0,00E+00	-3,95E+03
65	Summation	CS11	J[66]	Min	-4,17E+03	-3,41E+02	0,00E+00	-4,51E+03
66	Summation	CS11	I[66]	Max	-3,03E+03	1,27E+03	0,00E+00	-1,76E+03
66	Summation	CS11	I[66]	Min	-3,03E+03	-1,84E+03	0,00E+00	-4,87E+03
66	Summation	CS11	J[67]	Max	-3,39E+03	9,25E+01	0,00E+00	-3,30E+03
66	Summation	CS11	J[67]	Min	-3,39E+03	-1,66E+02	0,00E+00	-3,56E+03
67	Summation	CS11	I[67]	Max	-2,07E+03	9,54E+02	0,00E+00	-1,12E+03
67	Summation	CS11	I[67]	Min	-2,07E+03	-1,75E+03	0,00E+00	-3,82E+03
67	Summation	CS11	J[68]	Max	-2,04E+03	6,85E+02	0,00E+00	-1,35E+03
67	Summation	CS11	J[68]	Min	-2,04E+03	-3,67E+02	0,00E+00	-2,40E+03
68	Summation	CS11	I[68]	Max	-1,37E+03	6,88E+01	0,00E+00	-1,30E+03
68	Summation	CS11	I[68]	Min	-1,37E+03	-1,18E+02	0,00E+00	-1,49E+03
68	Summation	CS11	J[69]	Max	-1,35E+03	1,27E+03	0,00E+00	-8,02E+01
68	Summation	CS11	J[69]	Min	-1,35E+03	-6,85E+02	0,00E+00	-2,03E+03
69	Summation	CS11	I[69]	Max	-6,72E+02	4,52E+02	0,00E+00	-2,20E+02
69	Summation	CS11	I[69]	Min	-6,72E+02	-2,45E+02	0,00E+00	-9,17E+02
69	Summation	CS11	J[70]	Max	-6,56E+02	7,98E+02	0,00E+00	1,42E+02
69	Summation	CS11	J[70]	Min	-6,56E+02	-4,32E+02	0,00E+00	-1,09E+03

5.4.13 Konštrukčné štádium 12 (CS12)



Obrázok 13 CS12

Zaťaženie (Load) = Vlastná tiaž + Prevádzkové zaťaženie + Predpätie (primárne + sekundárne) + Dotvarovanie (sekundárne) + Zmrašťovanie (sekundárne)

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
1	Summation	SC12	I[1]	Max	9,25E+00	7,27E+00	0,00E+00	1,65E+01
1	Summation	SC12	I[1]	Min	9,25E+00	-5,96E+00	0,00E+00	3,29E+00
1	Summation	SC12	J[2]	Max	-1,61E+03	1,10E+03	0,00E+00	-5,07E+02
1	Summation	SC12	J[2]	Min	-1,61E+03	-1,34E+03	0,00E+00	-2,95E+03
2	Summation	SC12	I[2]	Max	-1,61E+03	1,10E+03	2,83E-05	-5,06E+02
2	Summation	SC12	I[2]	Min	-1,61E+03	-1,34E+03	-2,83E-05	-2,94E+03
2	Summation	SC12	J[3]	Max	-1,62E+03	1,19E+03	5,90E-02	-4,37E+02
2	Summation	SC12	J[3]	Min	-1,62E+03	-1,44E+03	-5,90E-02	-3,07E+03
3	Summation	SC12	I[3]	Max	-3,18E+03	1,78E+03	7,54E-02	-1,41E+03
3	Summation	SC12	I[3]	Min	-3,18E+03	-2,50E+03	-7,54E-02	-5,69E+03
3	Summation	SC12	J[4]	Max	-3,78E+03	2,16E+03	4,83E-01	-1,62E+03
3	Summation	SC12	J[4]	Min	-3,78E+03	-3,76E+03	-4,83E-01	-7,54E+03
4	Summation	SC12	I[4]	Max	-3,77E+03	2,17E+03	4,83E-01	-1,60E+03
4	Summation	SC12	I[4]	Min	-3,77E+03	-3,77E+03	-4,83E-01	-7,55E+03
4	Summation	SC12	J[5]	Max	-4,53E+03	2,14E+03	5,90E+00	-2,39E+03
4	Summation	SC12	J[5]	Min	-4,53E+03	-3,68E+03	-5,90E+00	-8,22E+03
5	Summation	SC12	I[5]	Max	-4,53E+03	2,14E+03	5,90E+00	-2,39E+03
5	Summation	SC12	I[5]	Min	-4,53E+03	-3,68E+03	-5,90E+00	-8,22E+03
5	Summation	SC12	J[6]	Max	-4,57E+03	1,14E+03	5,42E+00	-3,42E+03
5	Summation	SC12	J[6]	Min	-4,57E+03	-1,96E+03	-5,42E+00	-6,54E+03
6	Summation	SC12	I[6]	Max	-4,57E+03	1,14E+03	5,42E+00	-3,42E+03
6	Summation	SC12	I[6]	Min	-4,57E+03	-1,96E+03	-5,42E+00	-6,54E+03
6	Summation	SC12	J[7]	Max	-4,59E+03	6,18E+02	4,98E+00	-3,97E+03
6	Summation	SC12	J[7]	Min	-4,59E+03	-1,06E+03	-4,98E+00	-5,66E+03
7	Summation	SC12	I[7]	Max	-4,59E+03	6,18E+02	4,98E+00	-3,97E+03
7	Summation	SC12	I[7]	Min	-4,59E+03	-1,06E+03	-4,98E+00	-5,66E+03
7	Summation	SC12	J[8]	Max	-4,60E+03	4,36E+02	4,47E+00	-4,16E+03
7	Summation	SC12	J[8]	Min	-4,60E+03	-7,50E+02	-4,47E+00	-5,35E+03
8	Summation	SC12	I[8]	Max	-5,26E+03	4,52E+01	4,46E+00	-5,21E+03
8	Summation	SC12	I[8]	Min	-5,26E+03	-2,60E+01	-4,46E+00	-5,29E+03
8	Summation	SC12	J[9]	Max	-5,90E+03	6,32E+02	3,68E+00	-5,27E+03
8	Summation	SC12	J[9]	Min	-5,90E+03	-3,65E+02	-3,68E+00	-6,27E+03
9	Summation	SC12	I[9]	Max	-6,56E+03	1,40E+03	2,93E+00	-5,16E+03
9	Summation	SC12	I[9]	Min	-6,56E+03	-8,05E+02	-2,93E+00	-7,36E+03
9	Summation	SC12	J[10]	Max	-5,06E+03	2,62E+03	3,32E+00	-2,44E+03
9	Summation	SC12	J[10]	Min	-5,06E+03	-1,86E+03	-3,32E+00	-6,92E+03
10	Summation	SC12	I[10]	Max	-3,09E+03	1,41E+03	2,58E+00	-1,69E+03
10	Summation	SC12	I[10]	Min	-3,09E+03	-1,17E+03	-2,58E+00	-4,26E+03
10	Summation	SC12	J[11]	Max	-3,08E+03	1,13E+03	2,64E+00	-1,95E+03
10	Summation	SC12	J[11]	Min	-3,08E+03	-9,36E+02	-2,64E+00	-4,02E+03
11	Summation	SC12	I[11]	Max	-3,08E+03	1,13E+03	2,64E+00	-1,95E+03
11	Summation	SC12	I[11]	Min	-3,08E+03	-9,36E+02	-2,64E+00	-4,02E+03
11	Summation	SC12	J[12]	Max	-3,09E+03	1,40E+03	2,58E+00	-1,69E+03
11	Summation	SC12	J[12]	Min	-3,09E+03	-1,16E+03	-2,58E+00	-4,26E+03

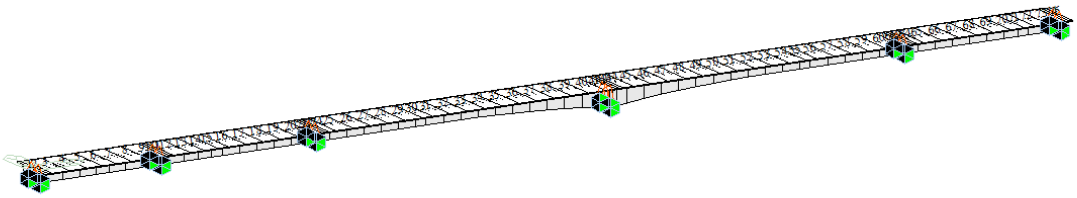
Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
12	Summation	SC12	I[12]	Max	-5,04E+03	2,64E+03	3,33E+00	-2,40E+03
12	Summation	SC12	I[12]	Min	-5,04E+03	-1,88E+03	-3,33E+00	-6,93E+03
12	Summation	SC12	J[13]	Max	-5,86E+03	3,27E+03	3,16E+00	-2,59E+03
12	Summation	SC12	J[13]	Min	-5,86E+03	-1,87E+03	-3,16E+00	-7,74E+03
13	Summation	SC12	I[13]	Max	-6,50E+03	1,55E+03	3,16E+00	-4,94E+03
13	Summation	SC12	I[13]	Min	-6,50E+03	-8,94E+02	-3,16E+00	-7,40E+03
13	Summation	SC12	J[14]	Max	-5,90E+03	9,63E+02	2,03E+00	-4,94E+03
13	Summation	SC12	J[14]	Min	-5,90E+03	-5,56E+02	-2,03E+00	-6,46E+03
14	Summation	SC12	I[14]	Max	-5,91E+03	9,64E+02	2,03E+00	-4,94E+03
14	Summation	SC12	I[14]	Min	-5,91E+03	-5,57E+02	-2,03E+00	-6,47E+03
14	Summation	SC12	J[15]	Max	-4,59E+03	5,37E+02	1,73E+00	-4,05E+03
14	Summation	SC12	J[15]	Min	-4,59E+03	-9,23E+02	-1,73E+00	-5,51E+03
15	Summation	SC12	I[15]	Max	-4,59E+03	5,37E+02	1,73E+00	-4,05E+03
15	Summation	SC12	I[15]	Min	-4,59E+03	-9,23E+02	-1,73E+00	-5,51E+03
15	Summation	SC12	J[16]	Max	-4,58E+03	8,13E+02	1,50E+00	-3,77E+03
15	Summation	SC12	J[16]	Min	-4,58E+03	-1,40E+03	-1,50E+00	-5,98E+03
16	Summation	SC12	I[16]	Max	-5,30E+03	5,12E+02	1,50E+00	-4,79E+03
16	Summation	SC12	I[16]	Min	-5,30E+03	-8,34E+02	-1,50E+00	-6,13E+03
16	Summation	SC12	J[17]	Max	-5,31E+03	1,33E+03	1,12E+00	-3,97E+03
16	Summation	SC12	J[17]	Min	-5,31E+03	-2,29E+03	-1,12E+00	-7,59E+03
17	Summation	SC12	I[17]	Max	-5,93E+03	9,32E+02	1,11E+00	-5,00E+03
17	Summation	SC12	I[17]	Min	-5,93E+03	-1,54E+03	-1,11E+00	-7,47E+03
17	Summation	SC12	J[18]	Max	-5,95E+03	2,32E+03	7,27E-01	-3,62E+03
17	Summation	SC12	J[18]	Min	-5,95E+03	-4,05E+03	-7,27E-01	-1,00E+04
18	Summation	SC12	I[18]	Max	-6,58E+03	1,91E+03	7,21E-01	-4,66E+03
18	Summation	SC12	I[18]	Min	-6,58E+03	-3,30E+03	-7,21E-01	-9,88E+03
18	Summation	SC12	J[19]	Max	-6,61E+03	3,87E+03	3,39E-01	-2,74E+03
18	Summation	SC12	J[19]	Min	-6,61E+03	-6,86E+03	-3,39E-01	-1,35E+04
19	Summation	SC12	I[19]	Max	-7,87E+03	3,05E+03	3,35E-01	-4,82E+03
19	Summation	SC12	I[19]	Min	-7,87E+03	-5,37E+03	-3,35E-01	-1,32E+04
19	Summation	SC12	J[20]	Max	-6,30E+03	2,66E+03	4,07E-02	-3,63E+03
19	Summation	SC12	J[20]	Min	-6,30E+03	-3,83E+03	-4,07E-02	-1,01E+04
20	Summation	SC12	I[20]	Max	-7,39E+03	1,65E+03	4,01E-02	-5,74E+03
20	Summation	SC12	I[20]	Min	-7,39E+03	-2,37E+03	-4,01E-02	-9,76E+03
20	Summation	SC12	J[21]	Max	-6,51E+03	2,03E+03	3,75E-01	-4,48E+03
20	Summation	SC12	J[21]	Min	-6,51E+03	-2,55E+03	-3,75E-01	-9,06E+03
21	Summation	SC12	I[21]	Max	-7,82E+03	1,09E+03	2,75E-01	-6,72E+03
21	Summation	SC12	I[21]	Min	-7,82E+03	-1,39E+03	-2,75E-01	-9,21E+03
21	Summation	SC12	J[22]	Max	-9,05E+03	1,26E+03	3,89E-01	-7,79E+03
21	Summation	SC12	J[22]	Min	-9,05E+03	-1,58E+03	-3,89E-01	-1,06E+04
22	Summation	SC12	I[22]	Max	-5,86E+03	9,65E+02	3,47E-01	-4,89E+03
22	Summation	SC12	I[22]	Min	-5,86E+03	-1,20E+03	-3,47E-01	-7,05E+03
22	Summation	SC12	J[23]	Max	-5,87E+03	1,18E+03	4,00E-01	-4,69E+03
22	Summation	SC12	J[23]	Min	-5,87E+03	-1,45E+03	-4,00E-01	-7,32E+03
23	Summation	SC12	I[23]	Max	-5,87E+03	1,18E+03	4,00E-01	-4,69E+03
23	Summation	SC12	I[23]	Min	-5,87E+03	-1,45E+03	-4,00E-01	-7,32E+03
23	Summation	SC12	J[24]	Max	-5,88E+03	5,43E+02	3,90E-01	-5,33E+03
23	Summation	SC12	J[24]	Min	-5,88E+03	-6,72E+02	-3,90E-01	-6,55E+03
24	Summation	SC12	I[24]	Max	-9,08E+03	7,76E+02	4,37E-01	-8,31E+03
24	Summation	SC12	I[24]	Min	-9,08E+03	-9,68E+02	-4,37E-01	-1,01E+04
24	Summation	SC12	J[25]	Max	-7,81E+03	1,14E+02	4,20E-01	-7,69E+03
24	Summation	SC12	J[25]	Min	-7,81E+03	-1,17E+02	-4,20E-01	-7,92E+03
25	Summation	SC12	I[25]	Max	-6,47E+03	7,83E+02	5,36E-01	-5,68E+03
25	Summation	SC12	I[25]	Min	-6,47E+03	-9,85E+02	-5,36E-01	-7,45E+03
25	Summation	SC12	J[26]	Max	-7,91E+03	1,53E+03	5,06E-01	-6,38E+03
25	Summation	SC12	J[26]	Min	-7,91E+03	-2,25E+03	-5,06E-01	-1,02E+04
26	Summation	SC12	I[26]	Max	-6,82E+03	2,53E+03	5,10E-01	-4,29E+03
26	Summation	SC12	I[26]	Min	-6,82E+03	-3,70E+03	-5,10E-01	-1,05E+04
26	Summation	SC12	J[27]	Max	-8,48E+03	3,63E+03	4,81E-01	-4,84E+03
26	Summation	SC12	J[27]	Min	-8,48E+03	-6,51E+03	-4,81E-01	-1,50E+04
27	Summation	SC12	I[27]	Max	-7,22E+03	4,45E+03	4,86E-01	-2,77E+03
27	Summation	SC12	I[27]	Min	-7,22E+03	-8,00E+03	-4,86E-01	-1,52E+04
27	Summation	SC12	J[28]	Max	-7,87E+03	3,98E+03	4,28E-01	-3,89E+03
27	Summation	SC12	J[28]	Min	-7,87E+03	-6,94E+03	-4,28E-01	-1,48E+04

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
28	Summation	SC12	I[28]	Max	-7,23E+03	4,39E+03	4,31E-01	-2,85E+03
28	Summation	SC12	I[28]	Min	-7,23E+03	-7,68E+03	-4,31E-01	-1,49E+04
28	Summation	SC12	J[29]	Max	-7,22E+03	3,15E+03	3,74E-01	-4,07E+03
28	Summation	SC12	J[29]	Min	-7,22E+03	-5,39E+03	-3,74E-01	-1,26E+04
29	Summation	SC12	I[29]	Max	-6,58E+03	3,56E+03	3,75E-01	-3,02E+03
29	Summation	SC12	I[29]	Min	-6,58E+03	-6,14E+03	-3,75E-01	-1,27E+04
29	Summation	SC12	J[30]	Max	-6,58E+03	2,88E+03	3,18E-01	-3,70E+03
29	Summation	SC12	J[30]	Min	-6,58E+03	-4,90E+03	-3,18E-01	-1,15E+04
30	Summation	SC12	I[30]	Max	-5,79E+03	3,05E+03	3,18E-01	-2,74E+03
30	Summation	SC12	I[30]	Min	-5,79E+03	-5,17E+03	-3,18E-01	-1,10E+04
30	Summation	SC12	J[31]	Max	-5,79E+03	2,85E+03	2,84E-01	-2,94E+03
30	Summation	SC12	J[31]	Min	-5,79E+03	-4,84E+03	-2,84E-01	-1,06E+04
31	Summation	SC12	I[31]	Max	-6,54E+03	2,56E+03	2,83E-01	-3,98E+03
31	Summation	SC12	I[31]	Min	-6,54E+03	-4,34E+03	-2,83E-01	-1,09E+04
31	Summation	SC12	J[32]	Max	-6,55E+03	2,58E+03	2,26E-01	-3,96E+03
31	Summation	SC12	J[32]	Min	-6,55E+03	-4,45E+03	-2,26E-01	-1,10E+04
32	Summation	SC12	I[32]	Max	-7,15E+03	2,25E+03	2,24E-01	-4,90E+03
32	Summation	SC12	I[32]	Min	-7,15E+03	-3,84E+03	-2,24E-01	-1,10E+04
32	Summation	SC12	J[33]	Max	-7,16E+03	2,85E+03	1,67E-01	-4,31E+03
32	Summation	SC12	J[33]	Min	-7,16E+03	-5,01E+03	-1,67E-01	-1,22E+04
33	Summation	SC12	I[33]	Max	-7,82E+03	2,46E+03	1,66E-01	-5,36E+03
33	Summation	SC12	I[33]	Min	-7,82E+03	-4,29E+03	-1,66E-01	-1,21E+04
33	Summation	SC12	J[34]	Max	-7,82E+03	3,60E+03	1,09E-01	-4,22E+03
33	Summation	SC12	J[34]	Min	-7,82E+03	-6,48E+03	-1,09E-01	-1,43E+04
34	Summation	SC12	I[34]	Max	-9,05E+03	2,83E+03	1,08E-01	-6,22E+03
34	Summation	SC12	I[34]	Min	-9,05E+03	-5,06E+03	-1,08E-01	-1,41E+04
34	Summation	SC12	J[35]	Max	-8,08E+03	2,64E+03	5,07E-02	-5,45E+03
34	Summation	SC12	J[35]	Min	-8,08E+03	-4,54E+03	-5,07E-02	-1,26E+04
35	Summation	SC12	I[35]	Max	-9,25E+03	1,81E+03	5,02E-02	-7,44E+03
35	Summation	SC12	I[35]	Min	-9,25E+03	-3,15E+03	-5,02E-02	-1,24E+04
35	Summation	SC12	J[36]	Max	-8,12E+03	1,84E+03	4,66E-03	-6,28E+03
35	Summation	SC12	J[36]	Min	-8,12E+03	-2,99E+03	-4,66E-03	-1,11E+04
36	Summation	SC12	I[36]	Max	-9,21E+03	9,64E+02	4,62E-03	-8,24E+03
36	Summation	SC12	I[36]	Min	-9,21E+03	-1,64E+03	-4,62E-03	-1,08E+04
36	Summation	SC12	J[37]	Max	-8,14E+03	1,34E+03	5,51E-02	-6,79E+03
36	Summation	SC12	J[37]	Min	-8,14E+03	-2,06E+03	-5,51E-02	-1,02E+04
37	Summation	SC12	I[37]	Max	-9,16E+03	4,29E+02	5,46E-02	-8,73E+03
37	Summation	SC12	I[37]	Min	-9,16E+03	-7,41E+02	-5,46E-02	-9,90E+03
37	Summation	SC12	J[38]	Max	-8,64E+03	1,59E+03	1,00E-01	-7,04E+03
37	Summation	SC12	J[38]	Min	-8,64E+03	-2,28E+03	-1,00E-01	-1,09E+04
38	Summation	SC12	I[38]	Max	-9,58E+03	6,02E+02	9,95E-02	-8,98E+03
38	Summation	SC12	I[38]	Min	-9,58E+03	-9,32E+02	-9,95E-02	-1,05E+04
38	Summation	SC12	J[39]	Max	-8,90E+03	1,53E+03	1,40E-01	-7,37E+03
38	Summation	SC12	J[39]	Min	-8,90E+03	-2,00E+03	-1,40E-01	-1,09E+04
39	Summation	SC12	I[39]	Max	-9,75E+03	5,13E+02	1,39E-01	-9,24E+03
39	Summation	SC12	I[39]	Min	-9,75E+03	-7,27E+02	-1,39E-01	-1,05E+04
39	Summation	SC12	J[40]	Max	-8,92E+03	8,57E+02	1,73E-01	-8,06E+03
39	Summation	SC12	J[40]	Min	-8,92E+03	-1,01E+03	-1,73E-01	-9,93E+03
40	Summation	SC12	I[40]	Max	-9,74E+03	1,57E+02	1,72E-01	-9,58E+03
40	Summation	SC12	I[40]	Min	-9,74E+03	-1,43E+02	-1,72E-01	-9,88E+03
40	Summation	SC12	J[41]	Max	-8,79E+03	9,16E+01	1,99E-01	-8,70E+03
40	Summation	SC12	J[41]	Min	-8,79E+03	-3,42E+01	-1,99E-01	-8,82E+03
41	Summation	SC12	I[41]	Max	-9,50E+03	1,06E+03	3,12E-01	-8,44E+03
41	Summation	SC12	I[41]	Min	-9,50E+03	-9,15E+02	-3,12E-01	-1,04E+04
41	Summation	SC12	J[42]	Max	-1,07E+04	2,00E+03	3,20E-01	-8,67E+03
41	Summation	SC12	J[42]	Min	-1,07E+04	-1,74E+03	-3,20E-01	-1,24E+04
42	Summation	SC12	I[42]	Max	-4,93E+03	1,35E+03	2,41E-01	-3,59E+03
42	Summation	SC12	I[42]	Min	-4,93E+03	-1,15E+03	-2,41E-01	-6,08E+03
42	Summation	SC12	J[43]	Max	-4,93E+03	9,58E+02	2,47E-01	-3,97E+03
42	Summation	SC12	J[43]	Min	-4,93E+03	-8,02E+02	-2,47E-01	-5,73E+03
43	Summation	SC12	I[43]	Max	-4,92E+03	9,45E+02	7,20E-02	-3,98E+03
43	Summation	SC12	I[43]	Min	-4,92E+03	-7,90E+02	-7,20E-02	-5,71E+03
43	Summation	SC12	J[44]	Max	-4,92E+03	1,34E+03	7,25E-02	-3,58E+03
43	Summation	SC12	J[44]	Min	-4,92E+03	-1,14E+03	-7,25E-02	-6,06E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
44	Summation	SC12	I[44]	Max	-1,07E+04	2,02E+03	9,85E-02	-8,67E+03
44	Summation	SC12	I[44]	Min	-1,07E+04	-1,76E+03	-9,85E-02	-1,25E+04
44	Summation	SC12	J[45]	Max	-9,53E+03	7,89E+02	1,08E-01	-8,74E+03
44	Summation	SC12	J[45]	Min	-9,53E+03	-6,92E+02	-1,08E-01	-1,02E+04
45	Summation	SC12	I[45]	Max	-8,82E+03	3,14E+02	1,74E-02	-8,50E+03
45	Summation	SC12	I[45]	Min	-8,82E+03	-3,04E+02	-1,74E-02	-9,12E+03
45	Summation	SC12	J[46]	Max	-9,76E+03	1,31E+01	1,74E-02	-9,74E+03
45	Summation	SC12	J[46]	Min	-9,76E+03	-4,46E+01	-1,74E-02	-9,80E+03
46	Summation	SC12	I[46]	Max	-8,94E+03	1,01E+03	1,75E-02	-7,93E+03
46	Summation	SC12	I[46]	Min	-8,94E+03	-1,21E+03	-1,75E-02	-1,02E+04
46	Summation	SC12	J[47]	Max	-9,76E+03	5,87E+02	1,72E-02	-9,18E+03
46	Summation	SC12	J[47]	Min	-9,76E+03	-8,28E+02	-1,72E-02	-1,06E+04
47	Summation	SC12	I[47]	Max	-8,91E+03	1,60E+03	1,74E-02	-7,31E+03
47	Summation	SC12	I[47]	Min	-8,91E+03	-2,10E+03	-1,74E-02	-1,10E+04
47	Summation	SC12	J[48]	Max	-9,55E+03	6,44E+02	1,67E-02	-8,91E+03
47	Summation	SC12	J[48]	Min	-9,55E+03	-9,92E+02	-1,67E-02	-1,05E+04
48	Summation	SC12	I[48]	Max	-8,61E+03	1,63E+03	1,69E-02	-6,97E+03
48	Summation	SC12	I[48]	Min	-8,61E+03	-2,33E+03	-1,69E-02	-1,09E+04
48	Summation	SC12	J[49]	Max	-9,13E+03	4,26E+02	1,60E-02	-8,71E+03
48	Summation	SC12	J[49]	Min	-9,13E+03	-7,37E+02	-1,60E-02	-9,87E+03
49	Summation	SC12	I[49]	Max	-8,11E+03	1,34E+03	1,62E-02	-6,78E+03
49	Summation	SC12	I[49]	Min	-8,11E+03	-2,05E+03	-1,62E-02	-1,02E+04
49	Summation	SC12	J[50]	Max	-9,19E+03	9,50E+02	1,52E-02	-8,24E+03
49	Summation	SC12	J[50]	Min	-9,19E+03	-1,62E+03	-1,52E-02	-1,08E+04
50	Summation	SC12	I[50]	Max	-8,10E+03	1,82E+03	1,53E-02	-6,27E+03
50	Summation	SC12	I[50]	Min	-8,10E+03	-2,98E+03	-1,53E-02	-1,11E+04
50	Summation	SC12	J[51]	Max	-9,23E+03	1,80E+03	1,42E-02	-7,43E+03
50	Summation	SC12	J[51]	Min	-9,23E+03	-3,12E+03	-1,42E-02	-1,24E+04
51	Summation	SC12	I[51]	Max	-8,06E+03	2,62E+03	1,43E-02	-5,44E+03
51	Summation	SC12	I[51]	Min	-8,06E+03	-4,52E+03	-1,43E-02	-1,26E+04
51	Summation	SC12	J[52]	Max	-9,03E+03	2,80E+03	1,28E-02	-6,23E+03
51	Summation	SC12	J[52]	Min	-9,03E+03	-5,02E+03	-1,28E-02	-1,40E+04
52	Summation	SC12	I[52]	Max	-7,79E+03	3,58E+03	1,29E-02	-4,22E+03
52	Summation	SC12	I[52]	Min	-7,79E+03	-6,45E+03	-1,29E-02	-1,42E+04
52	Summation	SC12	J[53]	Max	-7,80E+03	2,43E+03	1,11E-02	-5,37E+03
52	Summation	SC12	J[53]	Min	-7,80E+03	-4,24E+03	-1,11E-02	-1,20E+04
53	Summation	SC12	I[53]	Max	-7,20E+03	2,78E+03	1,11E-02	-4,42E+03
53	Summation	SC12	I[53]	Min	-7,20E+03	-4,90E+03	-1,11E-02	-1,21E+04
53	Summation	SC12	J[54]	Max	-7,19E+03	2,18E+03	9,27E-03	-5,01E+03
53	Summation	SC12	J[54]	Min	-7,19E+03	-3,71E+03	-9,27E-03	-1,09E+04
54	Summation	SC12	I[54]	Max	-6,52E+03	2,56E+03	9,33E-03	-3,96E+03
54	Summation	SC12	I[54]	Min	-6,52E+03	-4,42E+03	-9,33E-03	-1,09E+04
54	Summation	SC12	J[55]	Max	-6,51E+03	2,52E+03	7,46E-03	-3,99E+03
54	Summation	SC12	J[55]	Min	-6,51E+03	-4,27E+03	-7,46E-03	-1,08E+04
55	Summation	SC12	I[55]	Max	-5,86E+03	2,77E+03	7,43E-03	-3,09E+03
55	Summation	SC12	I[55]	Min	-5,86E+03	-4,70E+03	-7,43E-03	-1,06E+04
55	Summation	SC12	J[56]	Max	-5,85E+03	2,95E+03	6,31E-03	-2,90E+03
55	Summation	SC12	J[56]	Min	-5,85E+03	-5,01E+03	-6,31E-03	-1,09E+04
56	Summation	SC12	I[56]	Max	-6,60E+03	2,65E+03	6,32E-03	-3,94E+03
56	Summation	SC12	I[56]	Min	-6,60E+03	-4,49E+03	-6,32E-03	-1,11E+04
56	Summation	SC12	J[57]	Max	-6,60E+03	3,30E+03	4,46E-03	-3,30E+03
56	Summation	SC12	J[57]	Min	-6,60E+03	-5,68E+03	-4,46E-03	-1,23E+04
57	Summation	SC12	I[57]	Max	-7,26E+03	2,93E+03	4,45E-03	-4,33E+03
57	Summation	SC12	I[57]	Min	-7,26E+03	-4,99E+03	-4,45E-03	-1,23E+04
57	Summation	SC12	J[58]	Max	-7,27E+03	4,15E+03	2,60E-03	-3,12E+03
57	Summation	SC12	J[58]	Min	-7,27E+03	-7,25E+03	-2,60E-03	-1,45E+04
58	Summation	SC12	I[58]	Max	-7,93E+03	3,75E+03	2,58E-03	-4,18E+03
58	Summation	SC12	I[58]	Min	-7,93E+03	-6,52E+03	-2,58E-03	-1,45E+04
58	Summation	SC12	J[59]	Max	-7,28E+03	4,21E+03	7,34E-04	-3,07E+03
58	Summation	SC12	J[59]	Min	-7,28E+03	-7,55E+03	-7,34E-04	-1,48E+04
59	Summation	SC12	I[59]	Max	-8,56E+03	3,38E+03	7,21E-04	-5,18E+03
59	Summation	SC12	I[59]	Min	-8,56E+03	-6,05E+03	-7,21E-04	-1,46E+04
59	Summation	SC12	J[60]	Max	-6,88E+03	2,27E+03	1,05E-03	-4,61E+03
59	Summation	SC12	J[60]	Min	-6,88E+03	-3,32E+03	-1,05E-03	-1,02E+04

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
60	Summation	SC12	I[60]	Max	-7,99E+03	1,26E+03	1,04E-03	-6,73E+03
60	Summation	SC12	I[60]	Min	-7,99E+03	-1,86E+03	-1,04E-03	-9,85E+03
60	Summation	SC12	J[61]	Max	-6,53E+03	5,07E+02	2,64E-03	-6,02E+03
60	Summation	SC12	J[61]	Min	-6,53E+03	-6,35E+02	-2,64E-03	-7,16E+03
61	Summation	SC12	I[61]	Max	-7,92E+03	4,40E+02	2,40E-03	-7,48E+03
61	Summation	SC12	I[61]	Min	-7,92E+03	-3,77E+02	-2,40E-03	-8,29E+03
61	Summation	SC12	J[62]	Max	-8,75E+03	6,01E+01	2,98E-03	-8,69E+03
61	Summation	SC12	J[62]	Min	-8,75E+03	-6,89E+01	-2,98E-03	-8,82E+03
62	Summation	SC12	I[62]	Max	-5,64E+03	6,97E+01	2,66E-03	-5,57E+03
62	Summation	SC12	I[62]	Min	-5,64E+03	-5,34E+01	-2,66E-03	-5,70E+03
62	Summation	SC12	J[63]	Max	-5,64E+03	5,12E+02	2,92E-03	-5,12E+03
62	Summation	SC12	J[63]	Min	-5,64E+03	-6,23E+02	-2,92E-03	-6,26E+03
63	Summation	SC12	I[63]	Max	-5,63E+03	5,17E+02	2,92E-03	-5,12E+03
63	Summation	SC12	I[63]	Min	-5,63E+03	-6,29E+02	-2,92E-03	-6,26E+03
63	Summation	SC12	J[64]	Max	-5,62E+03	3,24E+02	2,86E-03	-5,30E+03
63	Summation	SC12	J[64]	Min	-5,62E+03	-4,00E+02	-2,86E-03	-6,02E+03
64	Summation	SC12	I[64]	Max	-8,72E+03	4,98E+02	3,21E-03	-8,22E+03
64	Summation	SC12	I[64]	Min	-8,72E+03	-6,20E+02	-3,21E-03	-9,34E+03
64	Summation	SC12	J[65]	Max	-7,48E+03	4,09E+02	3,10E-03	-7,07E+03
64	Summation	SC12	J[65]	Min	-7,48E+03	-5,33E+02	-3,10E-03	-8,01E+03
65	Summation	SC12	I[65]	Max	-6,12E+03	1,32E+03	3,44E-03	-4,81E+03
65	Summation	SC12	I[65]	Min	-6,12E+03	-1,65E+03	-3,44E-03	-7,77E+03
65	Summation	SC12	J[66]	Max	-6,95E+03	1,40E+03	3,18E-03	-5,56E+03
65	Summation	SC12	J[66]	Min	-6,95E+03	-2,01E+03	-3,18E-03	-8,97E+03
66	Summation	SC12	I[66]	Max	-5,84E+03	2,42E+03	3,21E-03	-3,42E+03
66	Summation	SC12	I[66]	Min	-5,84E+03	-3,48E+03	-3,21E-03	-9,33E+03
66	Summation	SC12	J[67]	Max	-6,68E+03	2,30E+03	2,94E-03	-4,38E+03
66	Summation	SC12	J[67]	Min	-6,68E+03	-4,09E+03	-2,94E-03	-1,08E+04
67	Summation	SC12	I[67]	Max	-5,40E+03	3,14E+03	2,97E-03	-2,25E+03
67	Summation	SC12	I[67]	Min	-5,40E+03	-5,62E+03	-2,97E-03	-1,10E+04
67	Summation	SC12	J[68]	Max	-5,37E+03	1,75E+03	2,51E-03	-3,62E+03
67	Summation	SC12	J[68]	Min	-5,37E+03	-3,05E+03	-2,51E-03	-8,42E+03
68	Summation	SC12	I[68]	Max	-4,72E+03	2,17E+03	2,53E-03	-2,55E+03
68	Summation	SC12	I[68]	Min	-4,72E+03	-3,82E+03	-2,53E-03	-8,54E+03
68	Summation	SC12	J[69]	Max	-4,70E+03	1,34E+03	2,06E-03	-3,36E+03
68	Summation	SC12	J[69]	Min	-4,70E+03	-2,30E+03	-2,06E-03	-7,00E+03
69	Summation	SC12	I[69]	Max	-4,04E+03	1,76E+03	2,07E-03	-2,28E+03
69	Summation	SC12	I[69]	Min	-4,04E+03	-3,07E+03	-2,07E-03	-7,11E+03
69	Summation	SC12	J[70]	Max	-4,03E+03	1,50E+03	1,60E-03	-2,53E+03
69	Summation	SC12	J[70]	Min	-4,03E+03	-2,59E+03	-1,60E-03	-6,62E+03
70	Summation	SC12	I[70]	Max	-3,33E+03	1,84E+03	1,60E-03	-1,49E+03
70	Summation	SC12	I[70]	Min	-3,33E+03	-3,21E+03	-1,60E-03	-6,54E+03
70	Summation	SC12	J[71]	Max	-3,33E+03	1,95E+03	1,23E-03	-1,38E+03
70	Summation	SC12	J[71]	Min	-3,33E+03	-3,40E+03	-1,23E-03	-6,72E+03
71	Summation	SC12	I[71]	Max	-3,33E+03	1,95E+03	1,23E-03	-1,38E+03
71	Summation	SC12	I[71]	Min	-3,33E+03	-3,40E+03	-1,23E-03	-6,72E+03
71	Summation	SC12	J[72]	Max	-3,31E+03	2,23E+03	9,43E-04	-1,08E+03
71	Summation	SC12	J[72]	Min	-3,31E+03	-3,89E+03	-9,43E-04	-7,20E+03
72	Summation	SC12	I[72]	Max	-3,31E+03	2,23E+03	9,43E-04	-1,08E+03
72	Summation	SC12	I[72]	Min	-3,31E+03	-3,89E+03	-9,43E-04	-7,20E+03
72	Summation	SC12	J[73]	Max	-3,22E+03	2,31E+03	5,66E-04	-9,13E+02
72	Summation	SC12	J[73]	Min	-3,22E+03	-4,05E+03	-5,66E-04	-7,27E+03
73	Summation	SC12	I[73]	Max	-3,23E+03	2,30E+03	5,66E-04	-9,23E+02
73	Summation	SC12	I[73]	Min	-3,23E+03	-4,03E+03	-5,66E-04	-7,26E+03
73	Summation	SC12	J[74]	Max	-2,71E+03	1,16E+03	8,82E-05	-1,55E+03
73	Summation	SC12	J[74]	Min	-2,71E+03	-1,65E+03	-8,82E-05	-4,36E+03
74	Summation	SC12	I[74]	Max	-1,38E+03	7,13E+02	6,91E-05	-6,70E+02
74	Summation	SC12	I[74]	Min	-1,38E+03	-8,67E+02	-6,91E-05	-2,25E+03
74	Summation	SC12	J[75]	Max	-1,37E+03	5,61E+02	6,15E-08	-8,11E+02
74	Summation	SC12	J[75]	Min	-1,37E+03	-6,83E+02	-6,15E-08	-2,06E+03
75	Summation	SC12	I[75]	Max	-1,37E+03	5,62E+02	0,00E+00	-8,12E+02
75	Summation	SC12	I[75]	Min	-1,37E+03	-6,84E+02	0,00E+00	-2,06E+03
75	Summation	SC12	J[76]	Max	8,32E+00	6,50E+00	0,00E+00	1,48E+01
75	Summation	SC12	J[76]	Min	8,32E+00	-5,33E+00	0,00E+00	2,99E+00

5.4.14 Konštrukčné štádium 13 (CS13) – po 265 dňoch



Obrázok 14 CS13

Zaťaženie (Load) = Vlastná tiaž + Ostatné stále zaťaženie (zvršok + vozovka) + Prevádzkové zaťaženie + Predpätie (primárne + sekundárne) + Dotvarovanie (sekundárne) + Zmrašťovanie (sekundárne)

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
1	Summation	CS13	I[1]	Max	1,56E+01	1,23E+01	0,00E+00	2,79E+01
1	Summation	CS13	I[1]	Min	1,56E+01	-1,01E+01	0,00E+00	5,58E+00
1	Summation	CS13	J[2]	Max	-1,57E+03	1,07E+03	0,00E+00	-4,94E+02
1	Summation	CS13	J[2]	Min	-1,57E+03	-1,30E+03	0,00E+00	-2,87E+03
2	Summation	CS13	I[2]	Max	-1,56E+03	1,07E+03	2,70E-05	-4,93E+02
2	Summation	CS13	I[2]	Min	-1,56E+03	-1,30E+03	-2,70E-05	-2,87E+03
2	Summation	CS13	J[3]	Max	-1,58E+03	1,12E+03	5,58E-02	-4,60E+02
2	Summation	CS13	J[3]	Min	-1,58E+03	-1,36E+03	-5,58E-02	-2,94E+03
3	Summation	CS13	I[3]	Max	-3,07E+03	1,68E+03	7,12E-02	-1,40E+03
3	Summation	CS13	I[3]	Min	-3,07E+03	-2,36E+03	-7,12E-02	-5,44E+03
3	Summation	CS13	J[4]	Max	-3,65E+03	1,85E+03	4,56E-01	-1,79E+03
3	Summation	CS13	J[4]	Min	-3,65E+03	-3,22E+03	-4,56E-01	-6,86E+03
4	Summation	CS13	I[4]	Max	-3,63E+03	1,86E+03	4,56E-01	-1,77E+03
4	Summation	CS13	I[4]	Min	-3,63E+03	-3,22E+03	-4,56E-01	-6,85E+03
4	Summation	CS13	J[5]	Max	-4,36E+03	1,73E+03	5,39E+00	-2,63E+03
4	Summation	CS13	J[5]	Min	-4,36E+03	-2,96E+03	-5,39E+00	-7,33E+03
5	Summation	CS13	I[5]	Max	-4,36E+03	1,73E+03	5,39E+00	-2,63E+03
5	Summation	CS13	I[5]	Min	-4,36E+03	-2,96E+03	-5,39E+00	-7,32E+03
5	Summation	CS13	J[6]	Max	-4,41E+03	7,71E+02	4,92E+00	-3,63E+03
5	Summation	CS13	J[6]	Min	-4,41E+03	-1,32E+03	-4,92E+00	-5,73E+03
6	Summation	CS13	I[6]	Max	-4,41E+03	7,71E+02	4,92E+00	-3,63E+03
6	Summation	CS13	I[6]	Min	-4,41E+03	-1,32E+03	-4,92E+00	-5,73E+03
6	Summation	CS13	J[7]	Max	-4,43E+03	3,29E+02	4,50E+00	-4,10E+03
6	Summation	CS13	J[7]	Min	-4,43E+03	-5,61E+02	-4,50E+00	-4,99E+03
7	Summation	CS13	I[7]	Max	-4,43E+03	3,29E+02	4,50E+00	-4,10E+03
7	Summation	CS13	I[7]	Min	-4,43E+03	-5,61E+02	-4,50E+00	-4,99E+03
7	Summation	CS13	J[8]	Max	-4,43E+03	2,88E+02	4,01E+00	-4,14E+03
7	Summation	CS13	J[8]	Min	-4,43E+03	-4,93E+02	-4,01E+00	-4,92E+03
8	Summation	CS13	I[8]	Max	-5,06E+03	2,72E+02	4,00E+00	-4,79E+03
8	Summation	CS13	I[8]	Min	-5,06E+03	-1,57E+02	-4,00E+00	-5,22E+03
8	Summation	CS13	J[9]	Max	-5,67E+03	4,37E+02	3,27E+00	-5,23E+03
8	Summation	CS13	J[9]	Min	-5,67E+03	-2,53E+02	-3,27E+00	-5,93E+03
9	Summation	CS13	I[9]	Max	-6,31E+03	1,16E+03	2,58E+00	-5,14E+03
9	Summation	CS13	I[9]	Min	-6,31E+03	-6,70E+02	-2,58E+00	-6,98E+03
9	Summation	CS13	J[10]	Max	-4,87E+03	1,91E+03	3,11E+00	-2,96E+03
9	Summation	CS13	J[10]	Min	-4,87E+03	-1,36E+03	-3,11E+00	-6,24E+03
10	Summation	CS13	I[10]	Max	-3,01E+03	9,12E+02	2,42E+00	-2,10E+03
10	Summation	CS13	I[10]	Min	-3,01E+03	-7,57E+02	-2,42E+00	-3,77E+03
10	Summation	CS13	J[11]	Max	-2,99E+03	5,70E+02	2,48E+00	-2,42E+03
10	Summation	CS13	J[11]	Min	-2,99E+03	-4,74E+02	-2,48E+00	-3,47E+03
11	Summation	CS13	I[11]	Max	-2,99E+03	5,70E+02	2,48E+00	-2,42E+03
11	Summation	CS13	I[11]	Min	-2,99E+03	-4,74E+02	-2,48E+00	-3,47E+03
11	Summation	CS13	J[12]	Max	-3,01E+03	9,00E+02	2,43E+00	-2,11E+03

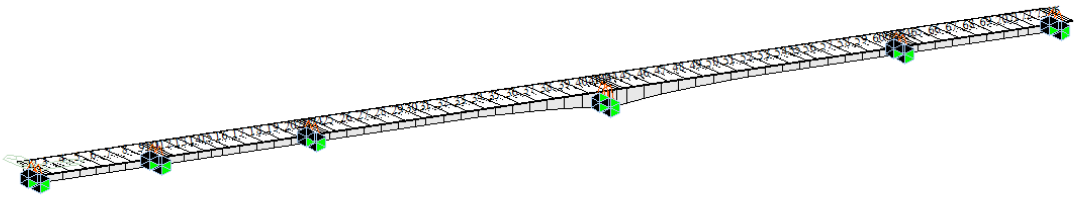
Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
11	Summation	CS13	J[12]	Min	-3,01E+03	-7,48E+02	-2,43E+00	-3,76E+03
12	Summation	CS13	I[12]	Max	-4,86E+03	1,92E+03	3,12E+00	-2,93E+03
12	Summation	CS13	I[12]	Min	-4,86E+03	-1,37E+03	-3,12E+00	-6,24E+03
12	Summation	CS13	J[13]	Max	-5,65E+03	2,84E+03	2,96E+00	-2,81E+03
12	Summation	CS13	J[13]	Min	-5,65E+03	-1,62E+03	-2,96E+00	-7,28E+03
13	Summation	CS13	I[13]	Max	-6,24E+03	1,22E+03	2,95E+00	-5,02E+03
13	Summation	CS13	I[13]	Min	-6,24E+03	-7,05E+02	-2,95E+00	-6,95E+03
13	Summation	CS13	J[14]	Max	-5,68E+03	9,27E+02	1,90E+00	-4,75E+03
13	Summation	CS13	J[14]	Min	-5,68E+03	-5,35E+02	-1,90E+00	-6,21E+03
14	Summation	CS13	I[14]	Max	-5,68E+03	9,27E+02	1,90E+00	-4,76E+03
14	Summation	CS13	I[14]	Min	-5,68E+03	-5,36E+02	-1,90E+00	-6,22E+03
14	Summation	CS13	J[15]	Max	-4,41E+03	4,16E+02	1,62E+00	-4,00E+03
14	Summation	CS13	J[15]	Min	-4,41E+03	-7,13E+02	-1,62E+00	-5,13E+03
15	Summation	CS13	I[15]	Max	-4,42E+03	4,16E+02	1,62E+00	-4,00E+03
15	Summation	CS13	I[15]	Min	-4,42E+03	-7,13E+02	-1,62E+00	-5,13E+03
15	Summation	CS13	J[16]	Max	-4,41E+03	6,41E+02	1,40E+00	-3,77E+03
15	Summation	CS13	J[16]	Min	-4,41E+03	-1,10E+03	-1,40E+00	-5,51E+03
16	Summation	CS13	I[16]	Max	-5,16E+03	3,98E+02	1,41E+00	-4,76E+03
16	Summation	CS13	I[16]	Min	-5,16E+03	-6,38E+02	-1,41E+00	-5,80E+03
16	Summation	CS13	J[17]	Max	-5,16E+03	1,20E+03	1,04E+00	-3,96E+03
16	Summation	CS13	J[17]	Min	-5,16E+03	-2,05E+03	-1,04E+00	-7,21E+03
17	Summation	CS13	I[17]	Max	-5,78E+03	8,06E+02	1,03E+00	-4,97E+03
17	Summation	CS13	I[17]	Min	-5,78E+03	-1,32E+03	-1,03E+00	-7,10E+03
17	Summation	CS13	J[18]	Max	-5,78E+03	2,24E+03	6,65E-01	-3,54E+03
17	Summation	CS13	J[18]	Min	-5,78E+03	-3,91E+03	-6,65E-01	-9,69E+03
18	Summation	CS13	I[18]	Max	-6,41E+03	1,84E+03	6,60E-01	-4,56E+03
18	Summation	CS13	I[18]	Min	-6,41E+03	-3,17E+03	-6,60E-01	-9,58E+03
18	Summation	CS13	J[19]	Max	-6,42E+03	3,90E+03	2,94E-01	-2,52E+03
18	Summation	CS13	J[19]	Min	-6,42E+03	-6,92E+03	-2,94E-01	-1,33E+04
19	Summation	CS13	I[19]	Max	-7,67E+03	3,11E+03	2,90E-01	-4,57E+03
19	Summation	CS13	I[19]	Min	-7,67E+03	-5,48E+03	-2,90E-01	-1,32E+04
19	Summation	CS13	J[20]	Max	-6,15E+03	2,99E+03	6,76E-02	-3,17E+03
19	Summation	CS13	J[20]	Min	-6,15E+03	-4,29E+03	-6,76E-02	-1,04E+04
20	Summation	CS13	I[20]	Max	-7,23E+03	1,99E+03	6,67E-02	-5,24E+03
20	Summation	CS13	I[20]	Min	-7,23E+03	-2,85E+03	-6,67E-02	-1,01E+04
20	Summation	CS13	J[21]	Max	-6,39E+03	2,68E+03	3,86E-01	-3,71E+03
20	Summation	CS13	J[21]	Min	-6,39E+03	-3,37E+03	-3,86E-01	-9,76E+03
21	Summation	CS13	I[21]	Max	-7,68E+03	1,74E+03	2,86E-01	-5,94E+03
21	Summation	CS13	I[21]	Min	-7,68E+03	-2,18E+03	-2,86E-01	-9,86E+03
21	Summation	CS13	J[22]	Max	-8,89E+03	2,06E+03	3,94E-01	-6,83E+03
21	Summation	CS13	J[22]	Min	-8,89E+03	-2,57E+03	-3,94E-01	-1,15E+04
22	Summation	CS13	I[22]	Max	-5,77E+03	1,64E+03	3,52E-01	-4,13E+03
22	Summation	CS13	I[22]	Min	-5,77E+03	-2,03E+03	-3,52E-01	-7,80E+03
22	Summation	CS13	J[23]	Max	-5,79E+03	1,92E+03	4,02E-01	-3,87E+03
22	Summation	CS13	J[23]	Min	-5,79E+03	-2,37E+03	-4,02E-01	-8,15E+03
23	Summation	CS13	I[23]	Max	-5,79E+03	1,92E+03	4,02E-01	-3,87E+03
23	Summation	CS13	I[23]	Min	-5,79E+03	-2,36E+03	-4,02E-01	-8,15E+03
23	Summation	CS13	J[24]	Max	-5,79E+03	1,21E+03	3,93E-01	-4,58E+03
23	Summation	CS13	J[24]	Min	-5,79E+03	-1,49E+03	-3,93E-01	-7,28E+03
24	Summation	CS13	I[24]	Max	-8,92E+03	1,56E+03	4,39E-01	-7,36E+03
24	Summation	CS13	I[24]	Min	-8,92E+03	-1,94E+03	-4,39E-01	-1,09E+04
24	Summation	CS13	J[25]	Max	-7,67E+03	4,85E+02	4,23E-01	-7,19E+03
24	Summation	CS13	J[25]	Min	-7,67E+03	-6,33E+02	-4,23E-01	-8,30E+03
25	Summation	CS13	I[25]	Max	-6,36E+03	1,39E+03	5,37E-01	-4,96E+03
25	Summation	CS13	I[25]	Min	-6,36E+03	-1,75E+03	-5,37E-01	-8,11E+03
25	Summation	CS13	J[26]	Max	-7,75E+03	1,66E+03	5,07E-01	-6,09E+03
25	Summation	CS13	J[26]	Min	-7,75E+03	-2,44E+03	-5,07E-01	-1,02E+04
26	Summation	CS13	I[26]	Max	-6,68E+03	2,65E+03	5,11E-01	-4,03E+03
26	Summation	CS13	I[26]	Min	-6,68E+03	-3,87E+03	-5,11E-01	-1,05E+04
26	Summation	CS13	J[27]	Max	-8,29E+03	3,32E+03	4,81E-01	-4,97E+03
26	Summation	CS13	J[27]	Min	-8,29E+03	-5,97E+03	-4,81E-01	-1,43E+04
27	Summation	CS13	I[27]	Max	-7,05E+03	4,12E+03	4,87E-01	-2,93E+03
27	Summation	CS13	I[27]	Min	-7,05E+03	-7,41E+03	-4,87E-01	-1,45E+04
27	Summation	CS13	J[28]	Max	-7,69E+03	3,34E+03	4,28E-01	-4,34E+03
27	Summation	CS13	J[28]	Min	-7,69E+03	-5,84E+03	-4,28E-01	-1,35E+04

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
28	Summation	CS13	I[28]	Max	-7,06E+03	3,74E+03	4,31E-01	-3,32E+03
28	Summation	CS13	I[28]	Min	-7,06E+03	-6,56E+03	-4,31E-01	-1,36E+04
28	Summation	CS13	J[29]	Max	-7,07E+03	2,31E+03	3,73E-01	-4,76E+03
28	Summation	CS13	J[29]	Min	-7,07E+03	-3,94E+03	-3,73E-01	-1,10E+04
29	Summation	CS13	I[29]	Max	-6,44E+03	2,70E+03	3,75E-01	-3,74E+03
29	Summation	CS13	I[29]	Min	-6,44E+03	-4,67E+03	-3,75E-01	-1,11E+04
29	Summation	CS13	J[30]	Max	-6,45E+03	1,90E+03	3,17E-01	-4,55E+03
29	Summation	CS13	J[30]	Min	-6,45E+03	-3,21E+03	-3,17E-01	-9,66E+03
30	Summation	CS13	I[30]	Max	-5,61E+03	1,98E+03	3,17E-01	-3,63E+03
30	Summation	CS13	I[30]	Min	-5,61E+03	-3,34E+03	-3,17E-01	-8,95E+03
30	Summation	CS13	J[31]	Max	-5,62E+03	1,75E+03	2,82E-01	-3,87E+03
30	Summation	CS13	J[31]	Min	-5,62E+03	-2,95E+03	-2,82E-01	-8,57E+03
31	Summation	CS13	I[31]	Max	-6,38E+03	1,51E+03	2,81E-01	-4,87E+03
31	Summation	CS13	I[31]	Min	-6,38E+03	-2,53E+03	-2,81E-01	-8,90E+03
31	Summation	CS13	J[32]	Max	-6,38E+03	1,52E+03	2,23E-01	-4,86E+03
31	Summation	CS13	J[32]	Min	-6,38E+03	-2,62E+03	-2,23E-01	-9,00E+03
32	Summation	CS13	I[32]	Max	-6,98E+03	1,22E+03	2,22E-01	-5,77E+03
32	Summation	CS13	I[32]	Min	-6,98E+03	-2,04E+03	-2,22E-01	-9,03E+03
32	Summation	CS13	J[33]	Max	-6,98E+03	1,86E+03	1,64E-01	-5,12E+03
32	Summation	CS13	J[33]	Min	-6,98E+03	-3,31E+03	-1,64E-01	-1,03E+04
33	Summation	CS13	I[33]	Max	-7,63E+03	1,49E+03	1,64E-01	-6,13E+03
33	Summation	CS13	I[33]	Min	-7,63E+03	-2,62E+03	-1,64E-01	-1,02E+04
33	Summation	CS13	J[34]	Max	-7,62E+03	2,75E+03	1,06E-01	-4,87E+03
33	Summation	CS13	J[34]	Min	-7,62E+03	-5,01E+03	-1,06E-01	-1,26E+04
34	Summation	CS13	I[34]	Max	-8,82E+03	2,02E+03	1,05E-01	-6,81E+03
34	Summation	CS13	I[34]	Min	-8,82E+03	-3,65E+03	-1,05E-01	-1,25E+04
34	Summation	CS13	J[35]	Max	-7,87E+03	2,10E+03	4,71E-02	-5,77E+03
34	Summation	CS13	J[35]	Min	-7,87E+03	-3,67E+03	-4,71E-02	-1,15E+04
35	Summation	CS13	I[35]	Max	-9,02E+03	1,31E+03	4,66E-02	-7,71E+03
35	Summation	CS13	I[35]	Min	-9,02E+03	-2,32E+03	-4,66E-02	-1,13E+04
35	Summation	CS13	J[36]	Max	-7,92E+03	1,65E+03	8,54E-03	-6,27E+03
35	Summation	CS13	J[36]	Min	-7,92E+03	-2,70E+03	-8,54E-03	-1,06E+04
36	Summation	CS13	I[36]	Max	-8,99E+03	7,97E+02	8,45E-03	-8,19E+03
36	Summation	CS13	I[36]	Min	-8,99E+03	-1,38E+03	-8,45E-03	-1,04E+04
36	Summation	CS13	J[37]	Max	-7,95E+03	1,49E+03	5,92E-02	-6,47E+03
36	Summation	CS13	J[37]	Min	-7,95E+03	-2,27E+03	-5,92E-02	-1,02E+04
37	Summation	CS13	I[37]	Max	-8,96E+03	5,94E+02	5,87E-02	-8,37E+03
37	Summation	CS13	I[37]	Min	-8,96E+03	-9,84E+02	-5,87E-02	-9,94E+03
37	Summation	CS13	J[38]	Max	-8,46E+03	2,05E+03	1,05E-01	-6,42E+03
37	Summation	CS13	J[38]	Min	-8,46E+03	-2,91E+03	-1,05E-01	-1,14E+04
38	Summation	CS13	I[38]	Max	-9,39E+03	1,07E+03	1,04E-01	-8,33E+03
38	Summation	CS13	I[38]	Min	-9,39E+03	-1,58E+03	-1,04E-01	-1,10E+04
38	Summation	CS13	J[39]	Max	-8,74E+03	2,26E+03	1,45E-01	-6,48E+03
38	Summation	CS13	J[39]	Min	-8,74E+03	-2,97E+03	-1,45E-01	-1,17E+04
39	Summation	CS13	I[39]	Max	-9,59E+03	1,25E+03	1,43E-01	-8,33E+03
39	Summation	CS13	I[39]	Min	-9,59E+03	-1,70E+03	-1,43E-01	-1,13E+04
39	Summation	CS13	J[40]	Max	-8,79E+03	1,81E+03	1,77E-01	-6,97E+03
39	Summation	CS13	J[40]	Min	-8,79E+03	-2,19E+03	-1,77E-01	-1,10E+04
40	Summation	CS13	I[40]	Max	-9,60E+03	8,18E+02	1,76E-01	-8,78E+03
40	Summation	CS13	I[40]	Min	-9,60E+03	-1,04E+03	-1,76E-01	-1,06E+04
40	Summation	CS13	J[41]	Max	-8,68E+03	1,20E+03	2,04E-01	-7,48E+03
40	Summation	CS13	J[41]	Min	-8,68E+03	-1,33E+03	-2,04E-01	-1,00E+04
41	Summation	CS13	I[41]	Max	-9,38E+03	1,90E+02	3,13E-01	-9,19E+03
41	Summation	CS13	I[41]	Min	-9,38E+03	-2,38E+02	-3,13E-01	-9,62E+03
41	Summation	CS13	J[42]	Max	-1,05E+04	6,77E+02	3,21E-01	-9,85E+03
41	Summation	CS13	J[42]	Min	-1,05E+04	-5,58E+02	-3,21E-01	-1,11E+04
42	Summation	CS13	I[42]	Max	-4,88E+03	4,37E+02	2,42E-01	-4,44E+03
42	Summation	CS13	I[42]	Min	-4,88E+03	-3,61E+02	-2,42E-01	-5,24E+03
42	Summation	CS13	J[43]	Max	-4,88E+03	2,41E+01	2,48E-01	-4,85E+03
42	Summation	CS13	J[43]	Min	-4,88E+03	4,78E+00	-2,48E-01	-4,87E+03
43	Summation	CS13	I[43]	Max	-4,86E+03	4,29E+01	6,97E-02	-4,82E+03
43	Summation	CS13	I[43]	Min	-4,86E+03	-1,67E+01	-6,97E-02	-4,88E+03
43	Summation	CS13	J[44]	Max	-4,86E+03	4,19E+02	7,03E-02	-4,44E+03
43	Summation	CS13	J[44]	Min	-4,86E+03	-3,45E+02	-7,03E-02	-5,20E+03
44	Summation	CS13	I[44]	Max	-1,06E+04	7,06E+02	9,55E-02	-9,85E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
44	Summation	CS13	I[44]	Min	-1,06E+04	-5,83E+02	-9,55E-02	-1,11E+04
44	Summation	CS13	J[45]	Max	-9,42E+03	4,08E+02	1,05E-01	-9,01E+03
44	Summation	CS13	J[45]	Min	-9,42E+03	-5,01E+02	-1,05E-01	-9,92E+03
45	Summation	CS13	I[45]	Max	-8,71E+03	1,42E+03	1,76E-02	-7,30E+03
45	Summation	CS13	I[45]	Min	-8,71E+03	-1,59E+03	-1,76E-02	-1,03E+04
45	Summation	CS13	J[46]	Max	-9,62E+03	9,74E+02	1,75E-02	-8,65E+03
45	Summation	CS13	J[46]	Min	-9,62E+03	-1,24E+03	-1,75E-02	-1,09E+04
46	Summation	CS13	I[46]	Max	-8,82E+03	1,97E+03	1,77E-02	-6,85E+03
46	Summation	CS13	I[46]	Min	-8,82E+03	-2,39E+03	-1,77E-02	-1,12E+04
46	Summation	CS13	J[47]	Max	-9,61E+03	1,34E+03	1,73E-02	-8,27E+03
46	Summation	CS13	J[47]	Min	-9,61E+03	-1,82E+03	-1,73E-02	-1,14E+04
47	Summation	CS13	I[47]	Max	-8,76E+03	2,34E+03	1,75E-02	-6,42E+03
47	Summation	CS13	I[47]	Min	-8,76E+03	-3,08E+03	-1,75E-02	-1,18E+04
47	Summation	CS13	J[48]	Max	-9,38E+03	1,13E+03	1,67E-02	-8,26E+03
47	Summation	CS13	J[48]	Min	-9,38E+03	-1,67E+03	-1,67E-02	-1,11E+04
48	Summation	CS13	I[48]	Max	-8,45E+03	2,11E+03	1,69E-02	-6,35E+03
48	Summation	CS13	I[48]	Min	-8,45E+03	-3,00E+03	-1,69E-02	-1,15E+04
48	Summation	CS13	J[49]	Max	-8,96E+03	6,25E+02	1,60E-02	-8,33E+03
48	Summation	CS13	J[49]	Min	-8,96E+03	-1,03E+03	-1,60E-02	-9,99E+03
49	Summation	CS13	I[49]	Max	-7,95E+03	1,52E+03	1,61E-02	-6,43E+03
49	Summation	CS13	I[49]	Min	-7,95E+03	-2,32E+03	-1,61E-02	-1,03E+04
49	Summation	CS13	J[50]	Max	-8,99E+03	8,34E+02	1,50E-02	-8,16E+03
49	Summation	CS13	J[50]	Min	-8,99E+03	-1,44E+03	-1,50E-02	-1,04E+04
50	Summation	CS13	I[50]	Max	-7,92E+03	1,69E+03	1,52E-02	-6,24E+03
50	Summation	CS13	I[50]	Min	-7,92E+03	-2,76E+03	-1,52E-02	-1,07E+04
50	Summation	CS13	J[51]	Max	-9,03E+03	1,37E+03	1,39E-02	-7,66E+03
50	Summation	CS13	J[51]	Min	-9,03E+03	-2,42E+03	-1,39E-02	-1,14E+04
51	Summation	CS13	I[51]	Max	-7,88E+03	2,17E+03	1,41E-02	-5,71E+03
51	Summation	CS13	I[51]	Min	-7,88E+03	-3,78E+03	-1,41E-02	-1,17E+04
51	Summation	CS13	J[52]	Max	-8,83E+03	2,08E+03	1,24E-02	-6,75E+03
51	Summation	CS13	J[52]	Min	-8,83E+03	-3,78E+03	-1,24E-02	-1,26E+04
52	Summation	CS13	I[52]	Max	-7,62E+03	2,84E+03	1,26E-02	-4,78E+03
52	Summation	CS13	I[52]	Min	-7,62E+03	-5,17E+03	-1,26E-02	-1,28E+04
52	Summation	CS13	J[53]	Max	-7,64E+03	1,58E+03	1,06E-02	-6,06E+03
52	Summation	CS13	J[53]	Min	-7,64E+03	-2,77E+03	-1,06E-02	-1,04E+04
53	Summation	CS13	I[53]	Max	-7,05E+03	1,92E+03	1,07E-02	-5,13E+03
53	Summation	CS13	I[53]	Min	-7,05E+03	-3,40E+03	-1,07E-02	-1,04E+04
53	Summation	CS13	J[54]	Max	-7,05E+03	1,27E+03	8,71E-03	-5,77E+03
53	Summation	CS13	J[54]	Min	-7,05E+03	-2,15E+03	-8,71E-03	-9,20E+03
54	Summation	CS13	I[54]	Max	-6,38E+03	1,63E+03	8,76E-03	-4,75E+03
54	Summation	CS13	I[54]	Min	-6,38E+03	-2,82E+03	-8,76E-03	-9,20E+03
54	Summation	CS13	J[55]	Max	-6,37E+03	1,61E+03	6,79E-03	-4,76E+03
54	Summation	CS13	J[55]	Min	-6,37E+03	-2,71E+03	-6,79E-03	-9,09E+03
55	Summation	CS13	I[55]	Max	-5,71E+03	1,82E+03	6,74E-03	-3,89E+03
55	Summation	CS13	I[55]	Min	-5,71E+03	-3,07E+03	-6,74E-03	-8,77E+03
55	Summation	CS13	J[56]	Max	-5,70E+03	2,05E+03	5,57E-03	-3,65E+03
55	Summation	CS13	J[56]	Min	-5,70E+03	-3,46E+03	-5,57E-03	-9,15E+03
56	Summation	CS13	I[56]	Max	-6,45E+03	1,79E+03	5,59E-03	-4,66E+03
56	Summation	CS13	I[56]	Min	-6,45E+03	-3,01E+03	-5,59E-03	-9,46E+03
56	Summation	CS13	J[57]	Max	-6,44E+03	2,58E+03	3,63E-03	-3,86E+03
56	Summation	CS13	J[57]	Min	-6,44E+03	-4,44E+03	-3,63E-03	-1,09E+04
57	Summation	CS13	I[57]	Max	-7,10E+03	2,23E+03	3,63E-03	-4,87E+03
57	Summation	CS13	I[57]	Min	-7,10E+03	-3,79E+03	-3,63E-03	-1,09E+04
57	Summation	CS13	J[58]	Max	-7,08E+03	3,65E+03	1,68E-03	-3,44E+03
57	Summation	CS13	J[58]	Min	-7,08E+03	-6,38E+03	-1,68E-03	-1,35E+04
58	Summation	CS13	I[58]	Max	-7,74E+03	3,27E+03	1,67E-03	-4,46E+03
58	Summation	CS13	I[58]	Min	-7,74E+03	-5,69E+03	-1,67E-03	-1,34E+04
58	Summation	CS13	J[59]	Max	-7,09E+03	4,04E+03	2,76E-04	-3,05E+03
58	Summation	CS13	J[59]	Min	-7,09E+03	-7,26E+03	-2,76E-04	-1,44E+04
59	Summation	CS13	I[59]	Max	-8,36E+03	3,24E+03	2,75E-04	-5,12E+03
59	Summation	CS13	I[59]	Min	-8,36E+03	-5,80E+03	-2,75E-04	-1,42E+04
59	Summation	CS13	J[60]	Max	-6,73E+03	2,57E+03	2,09E-03	-4,16E+03
59	Summation	CS13	J[60]	Min	-6,73E+03	-3,75E+03	-2,09E-03	-1,05E+04
60	Summation	CS13	I[60]	Max	-7,81E+03	1,57E+03	2,07E-03	-6,24E+03
60	Summation	CS13	I[60]	Min	-7,81E+03	-2,31E+03	-2,07E-03	-1,01E+04

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
60	Summation	CS13	J[61]	Max	-6,41E+03	1,31E+03	3,71E-03	-5,10E+03
60	Summation	CS13	J[61]	Min	-6,41E+03	-1,65E+03	-3,71E-03	-8,05E+03
61	Summation	CS13	I[61]	Max	-7,76E+03	4,19E+02	3,36E-03	-7,34E+03
61	Summation	CS13	I[61]	Min	-7,76E+03	-5,48E+02	-3,36E-03	-8,31E+03
61	Summation	CS13	J[62]	Max	-8,58E+03	1,05E+03	3,96E-03	-7,53E+03
61	Summation	CS13	J[62]	Min	-8,58E+03	-1,30E+03	-3,96E-03	-9,88E+03
62	Summation	CS13	I[62]	Max	-5,54E+03	7,93E+02	3,54E-03	-4,75E+03
62	Summation	CS13	I[62]	Min	-5,54E+03	-9,77E+02	-3,54E-03	-6,52E+03
62	Summation	CS13	J[63]	Max	-5,54E+03	1,44E+03	3,82E-03	-4,10E+03
62	Summation	CS13	J[63]	Min	-5,54E+03	-1,77E+03	-3,82E-03	-7,31E+03
63	Summation	CS13	I[63]	Max	-5,54E+03	1,44E+03	3,82E-03	-4,10E+03
63	Summation	CS13	I[63]	Min	-5,54E+03	-1,77E+03	-3,82E-03	-7,31E+03
63	Summation	CS13	J[64]	Max	-5,52E+03	1,17E+03	3,73E-03	-4,35E+03
63	Summation	CS13	J[64]	Min	-5,52E+03	-1,45E+03	-3,73E-03	-6,97E+03
64	Summation	CS13	I[64]	Max	-8,55E+03	1,49E+03	4,18E-03	-7,06E+03
64	Summation	CS13	I[64]	Min	-8,55E+03	-1,86E+03	-4,18E-03	-1,04E+04
64	Summation	CS13	J[65]	Max	-7,33E+03	1,22E+03	4,05E-03	-6,11E+03
64	Summation	CS13	J[65]	Min	-7,33E+03	-1,54E+03	-4,05E-03	-8,87E+03
65	Summation	CS13	I[65]	Max	-6,01E+03	2,14E+03	4,50E-03	-3,87E+03
65	Summation	CS13	I[65]	Min	-6,01E+03	-2,68E+03	-4,50E-03	-8,69E+03
65	Summation	CS13	J[66]	Max	-6,80E+03	1,81E+03	4,16E-03	-4,99E+03
65	Summation	CS13	J[66]	Min	-6,80E+03	-2,61E+03	-4,16E-03	-9,41E+03
66	Summation	CS13	I[66]	Max	-5,71E+03	2,82E+03	4,20E-03	-2,89E+03
66	Summation	CS13	I[66]	Min	-5,71E+03	-4,06E+03	-4,20E-03	-9,76E+03
66	Summation	CS13	J[67]	Max	-6,52E+03	2,37E+03	3,84E-03	-4,14E+03
66	Summation	CS13	J[67]	Min	-6,52E+03	-4,23E+03	-3,84E-03	-1,07E+04
67	Summation	CS13	I[67]	Max	-5,25E+03	3,20E+03	3,89E-03	-2,05E+03
67	Summation	CS13	I[67]	Min	-5,25E+03	-5,72E+03	-3,89E-03	-1,10E+04
67	Summation	CS13	J[68]	Max	-5,24E+03	1,59E+03	3,29E-03	-3,65E+03
67	Summation	CS13	J[68]	Min	-5,24E+03	-2,77E+03	-3,29E-03	-8,01E+03
68	Summation	CS13	I[68]	Max	-4,60E+03	2,00E+03	3,32E-03	-2,60E+03
68	Summation	CS13	I[68]	Min	-4,60E+03	-3,52E+03	-3,32E-03	-8,12E+03
68	Summation	CS13	J[69]	Max	-4,59E+03	1,02E+03	2,70E-03	-3,56E+03
68	Summation	CS13	J[69]	Min	-4,59E+03	-1,74E+03	-2,70E-03	-6,33E+03
69	Summation	CS13	I[69]	Max	-3,94E+03	1,43E+03	2,71E-03	-2,51E+03
69	Summation	CS13	I[69]	Min	-3,94E+03	-2,49E+03	-2,71E-03	-6,43E+03
69	Summation	CS13	J[70]	Max	-3,93E+03	1,09E+03	2,10E-03	-2,84E+03
69	Summation	CS13	J[70]	Min	-3,93E+03	-1,87E+03	-2,10E-03	-5,80E+03
70	Summation	CS13	I[70]	Max	-3,21E+03	1,39E+03	2,10E-03	-1,83E+03
70	Summation	CS13	I[70]	Min	-3,21E+03	-2,41E+03	-2,10E-03	-5,63E+03
70	Summation	CS13	J[71]	Max	-3,21E+03	1,48E+03	1,61E-03	-1,72E+03
70	Summation	CS13	J[71]	Min	-3,21E+03	-2,58E+03	-1,61E-03	-5,79E+03
71	Summation	CS13	I[71]	Max	-3,21E+03	1,48E+03	1,61E-03	-1,72E+03
71	Summation	CS13	I[71]	Min	-3,21E+03	-2,58E+03	-1,61E-03	-5,79E+03
71	Summation	CS13	J[72]	Max	-3,19E+03	1,79E+03	1,24E-03	-1,40E+03
71	Summation	CS13	J[72]	Min	-3,19E+03	-3,11E+03	-1,24E-03	-6,30E+03
72	Summation	CS13	I[72]	Max	-3,19E+03	1,79E+03	1,24E-03	-1,40E+03
72	Summation	CS13	I[72]	Min	-3,19E+03	-3,11E+03	-1,24E-03	-6,30E+03
72	Summation	CS13	J[73]	Max	-3,10E+03	1,97E+03	7,42E-04	-1,13E+03
72	Summation	CS13	J[73]	Min	-3,10E+03	-3,44E+03	-7,42E-04	-6,54E+03
73	Summation	CS13	I[73]	Max	-3,11E+03	1,96E+03	7,42E-04	-1,14E+03
73	Summation	CS13	I[73]	Min	-3,11E+03	-3,43E+03	-7,42E-04	-6,54E+03
73	Summation	CS13	J[74]	Max	-2,62E+03	1,08E+03	1,16E-04	-1,54E+03
73	Summation	CS13	J[74]	Min	-2,62E+03	-1,53E+03	-1,16E-04	-4,15E+03
74	Summation	CS13	I[74]	Max	-1,35E+03	6,54E+02	9,08E-05	-6,92E+02
74	Summation	CS13	I[74]	Min	-1,35E+03	-7,95E+02	-9,08E-05	-2,14E+03
74	Summation	CS13	J[75]	Max	-1,34E+03	5,46E+02	9,30E-08	-7,91E+02
74	Summation	CS13	J[75]	Min	-1,34E+03	-6,65E+02	-9,30E-08	-2,00E+03
75	Summation	CS13	I[75]	Max	-1,34E+03	5,47E+02	0,00E+00	-7,92E+02
75	Summation	CS13	I[75]	Min	-1,34E+03	-6,66E+02	0,00E+00	-2,01E+03
75	Summation	CS13	J[76]	Max	1,42E+01	1,11E+01	0,00E+00	2,54E+01
75	Summation	CS13	J[76]	Min	1,42E+01	-9,13E+00	0,00E+00	5,12E+00

5.4.15 Konštrukčné štádium 14 (CS14) – po 10000 dňoch



Obrázok 15 CS14

Zaťaženie (Load) = Vlastná tiaž + Ostatné stále zaťaženie (zvršok + vozovka) + Predpätie (primárne + sekundárne) + Dotvarovanie (sekundárne) + Zmrašťovanie (sekundárne)

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
1	Summation	CS14	I[1]	Max	5,20E+01	4,08E+01	0,00E+00	9,28E+01
1	Summation	CS14	I[1]	Min	5,20E+01	-3,35E+01	0,00E+00	1,85E+01
1	Summation	CS14	J[2]	Max	-1,31E+03	8,95E+02	0,00E+00	-4,13E+02
1	Summation	CS14	J[2]	Min	-1,31E+03	-1,09E+03	0,00E+00	-2,40E+03
2	Summation	CS14	I[2]	Max	-1,30E+03	8,92E+02	2,36E-05	-4,11E+02
2	Summation	CS14	I[2]	Min	-1,30E+03	-1,08E+03	-2,36E-05	-2,39E+03
2	Summation	CS14	J[3]	Max	-1,32E+03	8,98E+02	4,79E-02	-4,18E+02
2	Summation	CS14	J[3]	Min	-1,32E+03	-1,09E+03	-4,79E-02	-2,40E+03
3	Summation	CS14	I[3]	Max	-2,55E+03	1,37E+03	6,08E-02	-1,18E+03
3	Summation	CS14	I[3]	Min	-2,55E+03	-1,93E+03	-6,08E-02	-4,48E+03
3	Summation	CS14	J[4]	Max	-2,99E+03	1,30E+03	3,89E-01	-1,69E+03
3	Summation	CS14	J[4]	Min	-2,99E+03	-2,25E+03	-3,89E-01	-5,24E+03
4	Summation	CS14	I[4]	Max	-2,97E+03	1,30E+03	3,89E-01	-1,67E+03
4	Summation	CS14	I[4]	Min	-2,97E+03	-2,26E+03	-3,89E-01	-5,23E+03
4	Summation	CS14	J[5]	Max	-3,57E+03	1,08E+03	4,15E+00	-2,49E+03
4	Summation	CS14	J[5]	Min	-3,57E+03	-1,84E+03	-4,15E+00	-5,42E+03
5	Summation	CS14	I[5]	Max	-3,57E+03	1,08E+03	4,15E+00	-2,48E+03
5	Summation	CS14	I[5]	Min	-3,57E+03	-1,84E+03	-4,15E+00	-5,41E+03
5	Summation	CS14	J[6]	Max	-3,63E+03	3,20E+02	3,78E+00	-3,31E+03
5	Summation	CS14	J[6]	Min	-3,63E+03	-5,38E+02	-3,78E+00	-4,17E+03
6	Summation	CS14	I[6]	Max	-3,63E+03	3,20E+02	3,78E+00	-3,31E+03
6	Summation	CS14	I[6]	Min	-3,63E+03	-5,38E+02	-3,78E+00	-4,17E+03
6	Summation	CS14	J[7]	Max	-3,66E+03	3,56E+01	3,46E+00	-3,62E+03
6	Summation	CS14	J[7]	Min	-3,66E+03	-5,27E+01	-3,46E+00	-3,72E+03
7	Summation	CS14	I[7]	Max	-3,66E+03	3,56E+01	3,46E+00	-3,62E+03
7	Summation	CS14	I[7]	Min	-3,66E+03	-5,27E+01	-3,46E+00	-3,72E+03
7	Summation	CS14	J[8]	Max	-3,66E+03	1,57E+02	3,09E+00	-3,50E+03
7	Summation	CS14	J[8]	Min	-3,66E+03	-2,66E+02	-3,09E+00	-3,92E+03
8	Summation	CS14	I[8]	Max	-4,18E+03	3,74E+02	3,07E+00	-3,81E+03
8	Summation	CS14	I[8]	Min	-4,18E+03	-2,15E+02	-3,07E+00	-4,40E+03
8	Summation	CS14	J[9]	Max	-4,67E+03	6,92E+01	2,49E+00	-4,60E+03
8	Summation	CS14	J[9]	Min	-4,67E+03	-4,27E+01	-2,49E+00	-4,72E+03
9	Summation	CS14	I[9]	Max	-5,19E+03	6,53E+02	1,95E+00	-4,54E+03
9	Summation	CS14	I[9]	Min	-5,19E+03	-3,79E+02	-1,95E+00	-5,57E+03
9	Summation	CS14	J[10]	Max	-4,04E+03	7,97E+02	2,59E+00	-3,24E+03
9	Summation	CS14	J[10]	Min	-4,04E+03	-5,73E+02	-2,59E+00	-4,62E+03
10	Summation	CS14	I[10]	Max	-2,52E+03	2,24E+02	2,03E+00	-2,29E+03
10	Summation	CS14	I[10]	Min	-2,52E+03	-1,88E+02	-2,03E+00	-2,71E+03
10	Summation	CS14	J[11]	Max	-2,50E+03	1,14E+02	2,07E+00	-2,39E+03
10	Summation	CS14	J[11]	Min	-2,50E+03	-1,40E+02	-2,07E+00	-2,64E+03
11	Summation	CS14	I[11]	Max	-2,50E+03	1,14E+02	2,07E+00	-2,39E+03
11	Summation	CS14	I[11]	Min	-2,50E+03	-1,40E+02	-2,07E+00	-2,64E+03
11	Summation	CS14	J[12]	Max	-2,52E+03	2,07E+02	2,03E+00	-2,31E+03
11	Summation	CS14	J[12]	Min	-2,52E+03	-1,74E+02	-2,03E+00	-2,69E+03
12	Summation	CS14	I[12]	Max	-4,03E+03	8,04E+02	2,60E+00	-3,23E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
12	Summation	CS14	I[12]	Min	-4,03E+03	-5,78E+02	-2,60E+00	-4,61E+03
12	Summation	CS14	J[13]	Max	-4,68E+03	1,89E+03	2,44E+00	-2,79E+03
12	Summation	CS14	J[13]	Min	-4,68E+03	-1,08E+03	-2,44E+00	-5,77E+03
13	Summation	CS14	I[13]	Max	-5,14E+03	6,31E+02	2,43E+00	-4,51E+03
13	Summation	CS14	I[13]	Min	-5,14E+03	-3,66E+02	-2,43E+00	-5,51E+03
13	Summation	CS14	J[14]	Max	-4,68E+03	7,07E+02	1,60E+00	-3,98E+03
13	Summation	CS14	J[14]	Min	-4,68E+03	-4,10E+02	-1,60E+00	-5,10E+03
14	Summation	CS14	I[14]	Max	-4,70E+03	7,08E+02	1,60E+00	-3,99E+03
14	Summation	CS14	I[14]	Min	-4,70E+03	-4,10E+02	-1,60E+00	-5,11E+03
14	Summation	CS14	J[15]	Max	-3,64E+03	2,54E+02	1,36E+00	-3,38E+03
14	Summation	CS14	J[15]	Min	-3,64E+03	-4,32E+02	-1,36E+00	-4,07E+03
15	Summation	CS14	I[15]	Max	-3,65E+03	2,53E+02	1,36E+00	-3,39E+03
15	Summation	CS14	I[15]	Min	-3,65E+03	-4,31E+02	-1,36E+00	-4,08E+03
15	Summation	CS14	J[16]	Max	-3,63E+03	3,81E+02	1,16E+00	-3,25E+03
15	Summation	CS14	J[16]	Min	-3,63E+03	-6,47E+02	-1,16E+00	-4,28E+03
16	Summation	CS14	I[16]	Max	-4,39E+03	2,99E+02	1,19E+00	-4,09E+03
16	Summation	CS14	I[16]	Min	-4,39E+03	-4,65E+02	-1,19E+00	-4,85E+03
16	Summation	CS14	J[17]	Max	-4,38E+03	9,45E+02	8,61E-01	-3,44E+03
16	Summation	CS14	J[17]	Min	-4,38E+03	-1,61E+03	-8,61E-01	-5,99E+03
17	Summation	CS14	I[17]	Max	-4,92E+03	6,17E+02	8,56E-01	-4,30E+03
17	Summation	CS14	I[17]	Min	-4,92E+03	-9,91E+02	-8,56E-01	-5,91E+03
17	Summation	CS14	J[18]	Max	-4,91E+03	1,88E+03	5,31E-01	-3,03E+03
17	Summation	CS14	J[18]	Min	-4,91E+03	-3,27E+03	-5,31E-01	-8,18E+03
18	Summation	CS14	I[18]	Max	-5,45E+03	1,55E+03	5,26E-01	-3,90E+03
18	Summation	CS14	I[18]	Min	-5,45E+03	-2,66E+03	-5,26E-01	-8,11E+03
18	Summation	CS14	J[19]	Max	-5,44E+03	3,42E+03	2,03E-01	-2,02E+03
18	Summation	CS14	J[19]	Min	-5,44E+03	-6,08E+03	-2,03E-01	-1,15E+04
19	Summation	CS14	I[19]	Max	-6,53E+03	2,76E+03	2,00E-01	-3,77E+03
19	Summation	CS14	I[19]	Min	-6,53E+03	-4,86E+03	-2,00E-01	-1,14E+04
19	Summation	CS14	J[20]	Max	-5,25E+03	2,89E+03	1,12E-01	-2,36E+03
19	Summation	CS14	J[20]	Min	-5,25E+03	-4,15E+03	-1,12E-01	-9,40E+03
20	Summation	CS14	I[20]	Max	-6,16E+03	2,02E+03	1,10E-01	-4,13E+03
20	Summation	CS14	I[20]	Min	-6,16E+03	-2,90E+03	-1,10E-01	-9,06E+03
20	Summation	CS14	J[21]	Max	-5,47E+03	2,91E+03	3,88E-01	-2,55E+03
20	Summation	CS14	J[21]	Min	-5,47E+03	-3,66E+03	-3,88E-01	-9,12E+03
21	Summation	CS14	I[21]	Max	-6,58E+03	2,07E+03	2,98E-01	-4,51E+03
21	Summation	CS14	I[21]	Min	-6,58E+03	-2,59E+03	-2,98E-01	-9,16E+03
21	Summation	CS14	J[22]	Max	-7,62E+03	2,49E+03	3,91E-01	-5,13E+03
21	Summation	CS14	J[22]	Min	-7,62E+03	-3,11E+03	-3,91E-01	-1,07E+04
22	Summation	CS14	I[22]	Max	-4,96E+03	2,02E+03	3,51E-01	-2,94E+03
22	Summation	CS14	I[22]	Min	-4,96E+03	-2,50E+03	-3,51E-01	-7,46E+03
22	Summation	CS14	J[23]	Max	-4,98E+03	2,32E+03	3,95E-01	-2,65E+03
22	Summation	CS14	J[23]	Min	-4,98E+03	-2,87E+03	-3,95E-01	-7,85E+03
23	Summation	CS14	I[23]	Max	-4,98E+03	2,32E+03	3,95E-01	-2,66E+03
23	Summation	CS14	I[23]	Min	-4,98E+03	-2,86E+03	-3,95E-01	-7,84E+03
23	Summation	CS14	J[24]	Max	-4,98E+03	1,62E+03	3,86E-01	-3,36E+03
23	Summation	CS14	J[24]	Min	-4,98E+03	-2,00E+03	-3,86E-01	-6,98E+03
24	Summation	CS14	I[24]	Max	-7,64E+03	2,03E+03	4,31E-01	-5,61E+03
24	Summation	CS14	I[24]	Min	-7,64E+03	-2,53E+03	-4,31E-01	-1,02E+04
24	Summation	CS14	J[25]	Max	-6,57E+03	8,96E+02	4,16E-01	-5,67E+03
24	Summation	CS14	J[25]	Min	-6,57E+03	-1,14E+03	-4,16E-01	-7,71E+03
25	Summation	CS14	I[25]	Max	-5,44E+03	1,71E+03	5,18E-01	-3,73E+03
25	Summation	CS14	I[25]	Min	-5,44E+03	-2,15E+03	-5,18E-01	-7,59E+03
25	Summation	CS14	J[26]	Max	-6,61E+03	1,47E+03	4,87E-01	-5,14E+03
25	Summation	CS14	J[26]	Min	-6,61E+03	-2,17E+03	-4,87E-01	-8,78E+03
26	Summation	CS14	I[26]	Max	-5,71E+03	2,32E+03	4,92E-01	-3,39E+03
26	Summation	CS14	I[26]	Min	-5,71E+03	-3,40E+03	-4,92E-01	-9,11E+03
26	Summation	CS14	J[27]	Max	-7,07E+03	2,48E+03	4,62E-01	-4,60E+03
26	Summation	CS14	J[27]	Min	-7,07E+03	-4,48E+03	-4,62E-01	-1,16E+04
27	Summation	CS14	I[27]	Max	-6,00E+03	3,14E+03	4,68E-01	-2,86E+03
27	Summation	CS14	I[27]	Min	-6,00E+03	-5,70E+03	-4,68E-01	-1,17E+04
27	Summation	CS14	J[28]	Max	-6,57E+03	2,16E+03	4,11E-01	-4,40E+03
27	Summation	CS14	J[28]	Min	-6,57E+03	-3,79E+03	-4,11E-01	-1,04E+04
28	Summation	CS14	I[28]	Max	-6,02E+03	2,48E+03	4,14E-01	-3,54E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
28	Summation	CS14	I[28]	Min	-6,02E+03	-4,38E+03	-4,14E-01	-1,04E+04
28	Summation	CS14	J[29]	Max	-6,05E+03	1,04E+03	3,58E-01	-5,01E+03
28	Summation	CS14	J[29]	Min	-6,05E+03	-1,75E+03	-3,58E-01	-7,80E+03
29	Summation	CS14	I[29]	Max	-5,50E+03	1,36E+03	3,60E-01	-4,14E+03
29	Summation	CS14	I[29]	Min	-5,50E+03	-2,36E+03	-3,60E-01	-7,86E+03
29	Summation	CS14	J[30]	Max	-5,53E+03	5,27E+02	3,03E-01	-5,00E+03
29	Summation	CS14	J[30]	Min	-5,53E+03	-8,51E+02	-3,03E-01	-6,38E+03
30	Summation	CS14	I[30]	Max	-4,63E+03	3,59E+02	3,02E-01	-4,27E+03
30	Summation	CS14	I[30]	Min	-4,63E+03	-5,52E+02	-3,02E-01	-5,18E+03
30	Summation	CS14	J[31]	Max	-4,65E+03	1,17E+02	2,68E-01	-4,53E+03
30	Summation	CS14	J[31]	Min	-4,65E+03	-1,40E+02	-2,68E-01	-4,79E+03
31	Summation	CS14	I[31]	Max	-5,38E+03	4,59E+01	2,68E-01	-5,33E+03
31	Summation	CS14	I[31]	Min	-5,38E+03	-1,70E+00	-2,68E-01	-5,38E+03
31	Summation	CS14	J[32]	Max	-5,38E+03	2,90E+01	2,12E-01	-5,35E+03
31	Summation	CS14	J[32]	Min	-5,38E+03	-4,43E+01	-2,12E-01	-5,43E+03
32	Summation	CS14	I[32]	Max	-5,92E+03	3,75E+02	2,10E-01	-5,55E+03
32	Summation	CS14	I[32]	Min	-5,92E+03	-1,83E+02	-2,10E-01	-6,11E+03
32	Summation	CS14	J[33]	Max	-5,90E+03	4,08E+02	1,54E-01	-5,49E+03
32	Summation	CS14	J[33]	Min	-5,90E+03	-7,90E+02	-1,54E-01	-6,69E+03
33	Summation	CS14	I[33]	Max	-6,47E+03	1,37E+02	1,53E-01	-6,34E+03
33	Summation	CS14	I[33]	Min	-6,47E+03	-2,63E+02	-1,53E-01	-6,74E+03
33	Summation	CS14	J[34]	Max	-6,43E+03	1,32E+03	9,75E-02	-5,11E+03
33	Summation	CS14	J[34]	Min	-6,43E+03	-2,53E+03	-9,75E-02	-8,96E+03
34	Summation	CS14	I[34]	Max	-7,48E+03	7,46E+02	9,62E-02	-6,73E+03
34	Summation	CS14	I[34]	Min	-7,48E+03	-1,43E+03	-9,62E-02	-8,91E+03
34	Summation	CS14	J[35]	Max	-6,66E+03	1,10E+03	4,04E-02	-5,56E+03
34	Summation	CS14	J[35]	Min	-6,66E+03	-2,02E+03	-4,04E-02	-8,68E+03
35	Summation	CS14	I[35]	Max	-7,65E+03	4,63E+02	3,98E-02	-7,18E+03
35	Summation	CS14	I[35]	Min	-7,65E+03	-9,18E+02	-3,98E-02	-8,56E+03
35	Summation	CS14	J[36]	Max	-6,71E+03	1,07E+03	1,34E-02	-5,64E+03
35	Summation	CS14	J[36]	Min	-6,71E+03	-1,80E+03	-1,34E-02	-8,51E+03
36	Summation	CS14	I[36]	Max	-7,62E+03	3,68E+02	1,32E-02	-7,26E+03
36	Summation	CS14	I[36]	Min	-7,62E+03	-7,09E+02	-1,32E-02	-8,33E+03
36	Summation	CS14	J[37]	Max	-6,76E+03	1,29E+03	6,23E-02	-5,47E+03
36	Summation	CS14	J[37]	Min	-6,76E+03	-1,98E+03	-6,23E-02	-8,74E+03
37	Summation	CS14	I[37]	Max	-7,61E+03	5,44E+02	6,16E-02	-7,07E+03
37	Summation	CS14	I[37]	Min	-7,61E+03	-9,10E+02	-6,16E-02	-8,52E+03
37	Summation	CS14	J[38]	Max	-7,22E+03	2,12E+03	1,06E-01	-5,10E+03
37	Summation	CS14	J[38]	Min	-7,22E+03	-3,01E+03	-1,06E-01	-1,02E+04
38	Summation	CS14	I[38]	Max	-7,99E+03	1,27E+03	1,05E-01	-6,72E+03
38	Summation	CS14	I[38]	Min	-7,99E+03	-1,87E+03	-1,05E-01	-9,85E+03
38	Summation	CS14	J[39]	Max	-7,46E+03	2,61E+03	1,44E-01	-4,85E+03
38	Summation	CS14	J[39]	Min	-7,46E+03	-3,43E+03	-1,44E-01	-1,09E+04
39	Summation	CS14	I[39]	Max	-8,16E+03	1,73E+03	1,43E-01	-6,43E+03
39	Summation	CS14	I[39]	Min	-8,16E+03	-2,33E+03	-1,43E-01	-1,05E+04
39	Summation	CS14	J[40]	Max	-7,51E+03	2,47E+03	1,76E-01	-5,04E+03
39	Summation	CS14	J[40]	Min	-7,51E+03	-3,02E+03	-1,76E-01	-1,05E+04
40	Summation	CS14	I[40]	Max	-8,20E+03	1,62E+03	1,74E-01	-6,57E+03
40	Summation	CS14	I[40]	Min	-8,20E+03	-2,05E+03	-1,74E-01	-1,02E+04
40	Summation	CS14	J[41]	Max	-7,44E+03	2,15E+03	2,01E-01	-5,29E+03
40	Summation	CS14	J[41]	Min	-7,44E+03	-2,45E+03	-2,01E-01	-9,89E+03
41	Summation	CS14	I[41]	Max	-8,06E+03	1,24E+03	2,89E-01	-6,82E+03
41	Summation	CS14	I[41]	Min	-8,06E+03	-1,46E+03	-2,89E-01	-9,52E+03
41	Summation	CS14	J[42]	Max	-9,03E+03	7,15E+02	2,96E-01	-8,32E+03
41	Summation	CS14	J[42]	Min	-9,03E+03	-7,45E+02	-2,96E-01	-9,78E+03
42	Summation	CS14	I[42]	Max	-4,21E+03	4,34E+02	2,25E-01	-3,78E+03
42	Summation	CS14	I[42]	Min	-4,21E+03	-4,79E+02	-2,25E-01	-4,69E+03
42	Summation	CS14	J[43]	Max	-4,22E+03	8,14E+02	2,31E-01	-3,40E+03
42	Summation	CS14	J[43]	Min	-4,22E+03	-9,06E+02	-2,31E-01	-5,12E+03
43	Summation	CS14	I[43]	Max	-4,19E+03	8,44E+02	5,59E-02	-3,34E+03
43	Summation	CS14	I[43]	Min	-4,19E+03	-9,41E+02	-5,59E-02	-5,13E+03
43	Summation	CS14	J[44]	Max	-4,19E+03	4,61E+02	5,64E-02	-3,72E+03
43	Summation	CS14	J[44]	Min	-4,19E+03	-5,10E+02	-5,64E-02	-4,70E+03
44	Summation	CS14	I[44]	Max	-9,04E+03	6,99E+02	7,64E-02	-8,34E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
44	Summation	CS14	I[44]	Min	-9,04E+03	-7,27E+02	-7,64E-02	-9,77E+03
44	Summation	CS14	J[45]	Max	-8,08E+03	1,42E+03	8,41E-02	-6,65E+03
44	Summation	CS14	J[45]	Min	-8,08E+03	-1,69E+03	-8,41E-02	-9,77E+03
45	Summation	CS14	I[45]	Max	-7,47E+03	2,34E+03	1,54E-02	-5,13E+03
45	Summation	CS14	I[45]	Min	-7,47E+03	-2,67E+03	-1,54E-02	-1,01E+04
45	Summation	CS14	J[46]	Max	-8,21E+03	1,75E+03	1,52E-02	-6,46E+03
45	Summation	CS14	J[46]	Min	-8,21E+03	-2,21E+03	-1,52E-02	-1,04E+04
46	Summation	CS14	I[46]	Max	-7,53E+03	2,61E+03	1,53E-02	-4,92E+03
46	Summation	CS14	I[46]	Min	-7,53E+03	-3,18E+03	-1,53E-02	-1,07E+04
46	Summation	CS14	J[47]	Max	-8,17E+03	1,79E+03	1,50E-02	-6,38E+03
46	Summation	CS14	J[47]	Min	-8,17E+03	-2,41E+03	-1,50E-02	-1,06E+04
47	Summation	CS14	I[47]	Max	-7,47E+03	2,68E+03	1,51E-02	-4,79E+03
47	Summation	CS14	I[47]	Min	-7,47E+03	-3,52E+03	-1,51E-02	-1,10E+04
47	Summation	CS14	J[48]	Max	-7,96E+03	1,30E+03	1,44E-02	-6,66E+03
47	Summation	CS14	J[48]	Min	-7,96E+03	-1,92E+03	-1,44E-02	-9,88E+03
48	Summation	CS14	I[48]	Max	-7,19E+03	2,15E+03	1,46E-02	-5,04E+03
48	Summation	CS14	I[48]	Min	-7,19E+03	-3,06E+03	-1,46E-02	-1,02E+04
48	Summation	CS14	J[49]	Max	-7,59E+03	5,42E+02	1,37E-02	-7,05E+03
48	Summation	CS14	J[49]	Min	-7,59E+03	-9,08E+02	-1,37E-02	-8,50E+03
49	Summation	CS14	I[49]	Max	-6,74E+03	1,29E+03	1,39E-02	-5,45E+03
49	Summation	CS14	I[49]	Min	-6,74E+03	-1,98E+03	-1,39E-02	-8,72E+03
49	Summation	CS14	J[50]	Max	-7,60E+03	3,56E+02	1,28E-02	-7,25E+03
49	Summation	CS14	J[50]	Min	-7,60E+03	-6,93E+02	-1,28E-02	-8,30E+03
50	Summation	CS14	I[50]	Max	-6,69E+03	1,05E+03	1,30E-02	-5,64E+03
50	Summation	CS14	I[50]	Min	-6,69E+03	-1,79E+03	-1,30E-02	-8,48E+03
50	Summation	CS14	J[51]	Max	-7,62E+03	4,46E+02	1,18E-02	-7,18E+03
50	Summation	CS14	J[51]	Min	-7,62E+03	-8,95E+02	-1,18E-02	-8,52E+03
51	Summation	CS14	I[51]	Max	-6,64E+03	1,09E+03	1,19E-02	-5,55E+03
51	Summation	CS14	I[51]	Min	-6,64E+03	-2,00E+03	-1,19E-02	-8,65E+03
51	Summation	CS14	J[52]	Max	-7,45E+03	7,18E+02	1,04E-02	-6,74E+03
51	Summation	CS14	J[52]	Min	-7,45E+03	-1,39E+03	-1,04E-02	-8,85E+03
52	Summation	CS14	I[52]	Max	-6,41E+03	1,30E+03	1,06E-02	-5,11E+03
52	Summation	CS14	I[52]	Min	-6,41E+03	-2,51E+03	-1,06E-02	-8,92E+03
52	Summation	CS14	J[53]	Max	-6,46E+03	1,15E+02	8,81E-03	-6,34E+03
52	Summation	CS14	J[53]	Min	-6,46E+03	-2,31E+02	-8,81E-03	-6,69E+03
53	Summation	CS14	I[53]	Max	-5,94E+03	3,62E+02	8,83E-03	-5,57E+03
53	Summation	CS14	I[53]	Min	-5,94E+03	-7,13E+02	-8,83E-03	-6,65E+03
53	Summation	CS14	J[54]	Max	-5,96E+03	4,56E+02	7,07E-03	-5,50E+03
53	Summation	CS14	J[54]	Min	-5,96E+03	-2,32E+02	-7,07E-03	-6,19E+03
54	Summation	CS14	I[54]	Max	-5,37E+03	2,37E+01	7,11E-03	-5,34E+03
54	Summation	CS14	I[54]	Min	-5,37E+03	-4,57E+01	-7,11E-03	-5,41E+03
54	Summation	CS14	J[55]	Max	-5,37E+03	2,67E+01	5,33E-03	-5,34E+03
54	Summation	CS14	J[55]	Min	-5,37E+03	2,44E+01	-5,33E-03	-5,34E+03
55	Summation	CS14	I[55]	Max	-4,71E+03	7,11E+01	5,22E-03	-4,64E+03
55	Summation	CS14	I[55]	Min	-4,71E+03	-6,19E+01	-5,22E-03	-4,77E+03
55	Summation	CS14	J[56]	Max	-4,69E+03	3,09E+02	4,17E-03	-4,38E+03
55	Summation	CS14	J[56]	Min	-4,69E+03	-4,66E+02	-4,17E-03	-5,15E+03
56	Summation	CS14	I[56]	Max	-5,42E+03	2,28E+02	4,24E-03	-5,19E+03
56	Summation	CS14	I[56]	Min	-5,42E+03	-3,13E+02	-4,24E-03	-5,73E+03
56	Summation	CS14	J[57]	Max	-5,38E+03	1,03E+03	2,47E-03	-4,35E+03
56	Summation	CS14	J[57]	Min	-5,38E+03	-1,76E+03	-2,47E-03	-7,15E+03
57	Summation	CS14	I[57]	Max	-5,97E+03	7,88E+02	2,48E-03	-5,19E+03
57	Summation	CS14	I[57]	Min	-5,97E+03	-1,29E+03	-2,48E-03	-7,27E+03
57	Summation	CS14	J[58]	Max	-5,93E+03	2,20E+03	7,23E-04	-3,73E+03
57	Summation	CS14	J[58]	Min	-5,93E+03	-3,87E+03	-7,23E-04	-9,80E+03
58	Summation	CS14	I[58]	Max	-6,51E+03	1,92E+03	7,22E-04	-4,59E+03
58	Summation	CS14	I[58]	Min	-6,51E+03	-3,34E+03	-7,22E-04	-9,85E+03
58	Summation	CS14	J[59]	Max	-5,95E+03	2,89E+03	1,04E-03	-3,05E+03
58	Summation	CS14	J[59]	Min	-5,95E+03	-5,25E+03	-1,04E-03	-1,12E+04
59	Summation	CS14	I[59]	Max	-7,04E+03	2,26E+03	1,02E-03	-4,78E+03
59	Summation	CS14	I[59]	Min	-7,04E+03	-4,08E+03	-1,02E-03	-1,11E+04
59	Summation	CS14	J[60]	Max	-5,68E+03	2,14E+03	2,62E-03	-3,54E+03
59	Summation	CS14	J[60]	Min	-5,68E+03	-3,13E+03	-2,62E-03	-8,81E+03
60	Summation	CS14	I[60]	Max	-6,59E+03	1,29E+03	2,59E-03	-5,30E+03

Elem	Load	Stage	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
60	Summation	CS14	I[60]	Min	-6,59E+03	-1,91E+03	-2,59E-03	-8,50E+03
60	Summation	CS14	J[61]	Max	-5,42E+03	1,56E+03	4,05E-03	-3,86E+03
60	Summation	CS14	J[61]	Min	-5,42E+03	-1,96E+03	-4,05E-03	-7,38E+03
61	Summation	CS14	I[61]	Max	-6,56E+03	7,71E+02	3,66E-03	-5,79E+03
61	Summation	CS14	I[61]	Min	-6,56E+03	-9,85E+02	-3,66E-03	-7,54E+03
61	Summation	CS14	J[62]	Max	-7,26E+03	1,53E+03	4,19E-03	-5,73E+03
61	Summation	CS14	J[62]	Min	-7,26E+03	-1,90E+03	-4,19E-03	-9,16E+03
62	Summation	CS14	I[62]	Max	-4,73E+03	1,20E+03	3,75E-03	-3,53E+03
62	Summation	CS14	I[62]	Min	-4,73E+03	-1,48E+03	-3,75E-03	-6,21E+03
62	Summation	CS14	J[63]	Max	-4,73E+03	1,84E+03	4,00E-03	-2,88E+03
62	Summation	CS14	J[63]	Min	-4,73E+03	-2,27E+03	-4,00E-03	-7,00E+03
63	Summation	CS14	I[63]	Max	-4,73E+03	1,85E+03	4,00E-03	-2,88E+03
63	Summation	CS14	I[63]	Min	-4,73E+03	-2,28E+03	-4,00E-03	-7,00E+03
63	Summation	CS14	J[64]	Max	-4,71E+03	1,54E+03	3,91E-03	-3,17E+03
63	Summation	CS14	J[64]	Min	-4,71E+03	-1,90E+03	-3,91E-03	-6,61E+03
64	Summation	CS14	I[64]	Max	-7,24E+03	1,92E+03	4,38E-03	-5,31E+03
64	Summation	CS14	I[64]	Min	-7,24E+03	-2,40E+03	-4,38E-03	-9,63E+03
64	Summation	CS14	J[65]	Max	-6,20E+03	1,51E+03	4,25E-03	-4,69E+03
64	Summation	CS14	J[65]	Min	-6,20E+03	-1,90E+03	-4,25E-03	-8,10E+03
65	Summation	CS14	I[65]	Max	-5,08E+03	2,31E+03	4,73E-03	-2,77E+03
65	Summation	CS14	I[65]	Min	-5,08E+03	-2,90E+03	-4,73E-03	-7,98E+03
65	Summation	CS14	J[66]	Max	-5,73E+03	1,66E+03	4,37E-03	-4,07E+03
65	Summation	CS14	J[66]	Min	-5,73E+03	-2,39E+03	-4,37E-03	-8,12E+03
66	Summation	CS14	I[66]	Max	-4,82E+03	2,52E+03	4,42E-03	-2,29E+03
66	Summation	CS14	I[66]	Min	-4,82E+03	-3,63E+03	-4,42E-03	-8,44E+03
66	Summation	CS14	J[67]	Max	-5,49E+03	1,84E+03	4,04E-03	-3,65E+03
66	Summation	CS14	J[67]	Min	-5,49E+03	-3,27E+03	-4,04E-03	-8,76E+03
67	Summation	CS14	I[67]	Max	-4,40E+03	2,51E+03	4,11E-03	-1,89E+03
67	Summation	CS14	I[67]	Min	-4,40E+03	-4,51E+03	-4,11E-03	-8,91E+03
67	Summation	CS14	J[68]	Max	-4,41E+03	9,57E+02	3,47E-03	-3,45E+03
67	Summation	CS14	J[68]	Min	-4,41E+03	-1,65E+03	-3,47E-03	-6,06E+03
68	Summation	CS14	I[68]	Max	-3,85E+03	1,29E+03	3,50E-03	-2,56E+03
68	Summation	CS14	I[68]	Min	-3,85E+03	-2,27E+03	-3,50E-03	-6,12E+03
68	Summation	CS14	J[69]	Max	-3,86E+03	3,52E+02	2,85E-03	-3,51E+03
68	Summation	CS14	J[69]	Min	-3,86E+03	-5,58E+02	-2,85E-03	-4,42E+03
69	Summation	CS14	I[69]	Max	-3,30E+03	6,87E+02	2,87E-03	-2,61E+03
69	Summation	CS14	I[69]	Min	-3,30E+03	-1,18E+03	-2,87E-03	-4,48E+03
69	Summation	CS14	J[70]	Max	-3,30E+03	3,64E+02	2,22E-03	-2,94E+03
69	Summation	CS14	J[70]	Min	-3,30E+03	-5,97E+02	-2,22E-03	-3,90E+03
70	Summation	CS14	I[70]	Max	-2,65E+03	5,63E+02	2,22E-03	-2,09E+03
70	Summation	CS14	I[70]	Min	-2,65E+03	-9,68E+02	-2,22E-03	-3,62E+03
70	Summation	CS14	J[71]	Max	-2,64E+03	6,79E+02	1,70E-03	-1,96E+03
70	Summation	CS14	J[71]	Min	-2,64E+03	-1,17E+03	-1,70E-03	-3,81E+03
71	Summation	CS14	I[71]	Max	-2,64E+03	6,79E+02	1,70E-03	-1,96E+03
71	Summation	CS14	I[71]	Min	-2,64E+03	-1,17E+03	-1,70E-03	-3,81E+03
71	Summation	CS14	J[72]	Max	-2,62E+03	9,96E+02	1,30E-03	-1,62E+03
71	Summation	CS14	J[72]	Min	-2,62E+03	-1,72E+03	-1,30E-03	-4,34E+03
72	Summation	CS14	I[72]	Max	-2,62E+03	9,96E+02	1,30E-03	-1,62E+03
72	Summation	CS14	I[72]	Min	-2,62E+03	-1,72E+03	-1,30E-03	-4,34E+03
72	Summation	CS14	J[73]	Max	-2,54E+03	1,30E+03	7,83E-04	-1,25E+03
72	Summation	CS14	J[73]	Min	-2,54E+03	-2,26E+03	-7,83E-04	-4,81E+03
73	Summation	CS14	I[73]	Max	-2,55E+03	1,30E+03	7,82E-04	-1,25E+03
73	Summation	CS14	I[73]	Min	-2,55E+03	-2,26E+03	-7,82E-04	-4,82E+03
73	Summation	CS14	J[74]	Max	-2,18E+03	8,62E+02	1,22E-04	-1,32E+03
73	Summation	CS14	J[74]	Min	-2,18E+03	-1,22E+03	-1,22E-04	-3,40E+03
74	Summation	CS14	I[74]	Max	-1,12E+03	4,87E+02	9,59E-05	-6,31E+02
74	Summation	CS14	I[74]	Min	-1,12E+03	-5,91E+02	-9,59E-05	-1,71E+03
74	Summation	CS14	J[75]	Max	-1,11E+03	4,46E+02	2,87E-07	-6,64E+02
74	Summation	CS14	J[75]	Min	-1,11E+03	-5,42E+02	-2,87E-07	-1,65E+03
75	Summation	CS14	I[75]	Max	-1,11E+03	4,48E+02	0,00E+00	-6,66E+02
75	Summation	CS14	I[75]	Min	-1,11E+03	-5,46E+02	0,00E+00	-1,66E+03
75	Summation	CS14	J[76]	Max	4,93E+01	3,86E+01	0,00E+00	8,79E+01
75	Summation	CS14	J[76]	Min	4,93E+01	-3,16E+01	0,00E+00	1,77E+01

5.5 Kombinácie pre MSP (SLS) a MSÚ (ULS)

Vysvetlivky:

```
Dead Load – účinky od vlastnej tiaže + zaťaženia v konštrukčných štádiách (CS)
Erection Load – účinky od zaťaženia zvrškom a vozovkou v CS
Tendon Primary – predpätie, primárne účinky
Tendon Secondary - predpätie, sekundárne účinky
Creep Secondary – dotvarovanie, sekundárne účinky
Shrinkage Secondary – zmrašťovanie, sekundárne účinky
```

```
LIST OF LOAD COMBINATIONS
==========================================================================================
NUM  NAME          ACTIVE              TYPE
                LOADCASE(FACTOR) +             LOADCASE(FACTOR) +             LOADCASE(FACTOR)
==========================================================================================
1    teplota       Strength/Stress     Envelope
      nerovno oteplenie( 1.000) +   nerovno ochladenie( 1.000)
------------------------------------------------------------------------------------------
2    LCB2_CH_sup   Serviceability      Add
               Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.100) +     Tendon Secondary( 1.100) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.000) +       vietor priecny( 0.600)
------------------------------------------------------------------------------------------
3    LCB3_CH_sup   Serviceability      Add
               Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.100) +     Tendon Secondary( 1.100) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.000) +       vietor priecny(-0.600)
------------------------------------------------------------------------------------------
4    LCB4_CH_sup   Serviceability      Add
               Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.100) +     Tendon Secondary( 1.100) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +       vietor priecny( 1.000)
------------------------------------------------------------------------------------------
5    LCB5_CH_sup   Serviceability      Add
               Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.100) +     Tendon Secondary( 1.100) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +       vietor priecny(-1.000)
------------------------------------------------------------------------------------------
6    LCB6_CH_sup   Serviceability      Add
               Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.100) +     Tendon Secondary( 1.100) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.000) +              teplota( 0.600)
------------------------------------------------------------------------------------------
7    LCB7_CH_sup   Serviceability      Add
               Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.100) +     Tendon Secondary( 1.100) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +              teplota( 1.000)
------------------------------------------------------------------------------------------
8    LCB8_CH_inf   Serviceability      Add
               Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 0.900) +     Tendon Secondary( 0.900) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.000) +       vietor priecny( 0.600)
------------------------------------------------------------------------------------------
9    LCB9_CH_inf   Serviceability      Add
               Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 0.900) +     Tendon Secondary( 0.900) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.000) +       vietor priecny(-0.600)
------------------------------------------------------------------------------------------
10   LCB10_CH_inf  Serviceability      Add
               Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 0.900) +     Tendon Secondary( 0.900) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +       vietor priecny( 1.000)
------------------------------------------------------------------------------------------
11   LCB11_CH_inf  Serviceability      Add
               Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 0.900) +     Tendon Secondary( 0.900) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +       vietor priecny(-1.000)
------------------------------------------------------------------------------------------
12   LCB12_CH_inf  Serviceability      Add
               Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 0.900) +     Tendon Secondary( 0.900) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.000) +              teplota( 0.600)
------------------------------------------------------------------------------------------
13   LCB13_CH_inf  Serviceability      Add
               Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 0.900) +     Tendon Secondary( 0.900) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +              teplota( 1.000)
------------------------------------------------------------------------------------------
14   LCB14_FR_sup  Serviceability      Add
               Dead Load( 1.000) +        Erection Load( 1.000) +       Tendon Primary( 1.100)
 +     Tendon Secondary( 1.100) +      Creep Secondary( 1.000) +  Shrinkage Secondary( 1.000)
 +              LM 1_FR( 1.000) +              teplota( 0.500) +              sadanie( 1.000)
------------------------------------------------------------------------------------------
```

```
15   LCB15_FR_inf  Serviceability     Add
              Dead Load( 1.000) +        Erection Load( 1.000) +       Tendon Primary( 0.900)
 +     Tendon Secondary( 0.900) +      Creep Secondary( 1.000) +  Shrinkage Secondary( 1.000)
 +              LM 1_FR( 1.000) +              sadanie( 1.000) +              teplota( 0.500)
-----------------------------------------------------------------------------------------------
16   LCB16_QP_sup  Serviceability     Add
              Dead Load( 1.000) +        Erection Load( 1.000) +       Tendon Primary( 1.100)
 +     Tendon Secondary( 1.100) +      Creep Secondary( 1.000) +  Shrinkage Secondary( 1.000)
 +              teplota( 0.500) +              sadanie( 1.000)
-----------------------------------------------------------------------------------------------
17   LCB17_QP_inf  Serviceability     Add
              Dead Load( 1.000) +        Erection Load( 1.000) +       Tendon Primary( 0.900)
 +     Tendon Secondary( 0.900) +      Creep Secondary( 1.000) +  Shrinkage Secondary( 1.000)
 +              teplota( 0.500) +              sadanie( 1.000)
-----------------------------------------------------------------------------------------------
18   LCB18_sup     Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.350) +       vietor priecny( 0.900)
-----------------------------------------------------------------------------------------------
19   LCB19_sup     Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.350) +       vietor priecny(-0.900)
-----------------------------------------------------------------------------------------------
20   LCB20_sup     Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +       vietor priecny( 1.500)
-----------------------------------------------------------------------------------------------
21   LCB21_sup     Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +       vietor priecny(-1.500)
-----------------------------------------------------------------------------------------------
22   LCB22_sup     Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.350) +       vietor priecny( 0.900)
-----------------------------------------------------------------------------------------------
23   LCB23_sup     Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.350) +       vietor priecny(-0.900)
-----------------------------------------------------------------------------------------------
24   LCB24_sup     Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +       vietor priecny( 1.500)
-----------------------------------------------------------------------------------------------
25   LCB25_sup     Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +       vietor priecny(-1.500)
-----------------------------------------------------------------------------------------------
26   LCB26_inf     Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.350) +       vietor priecny( 0.900)
-----------------------------------------------------------------------------------------------
27   LCB27_inf     Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.350) +       vietor priecny(-0.900)
-----------------------------------------------------------------------------------------------
28   LCB28_inf     Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +       vietor priecny( 1.500)
-----------------------------------------------------------------------------------------------
29   LCB29_inf     Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +       vietor priecny(-1.500)
-----------------------------------------------------------------------------------------------
30   LCB30_inf     Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.350) +       vietor priecny( 0.900)
-----------------------------------------------------------------------------------------------
31   LCB31_inf     Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.350) +       vietor priecny(-0.900)
-----------------------------------------------------------------------------------------------
```

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32   LCB32_inf     Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +       vietor priecny( 1.500)
-----------------------------------------------------------------------------------------------
33   LCB33_inf     Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +       vietor priecny(-1.500)
-----------------------------------------------------------------------------------------------
34   LCB34_CH_sup  Serviceability     Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.100) +     Tendon Secondary( 1.100) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.000) +      vietor pozdlzny( 0.600)
-----------------------------------------------------------------------------------------------
35   LCB35_CH_sup  Serviceability     Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.100) +     Tendon Secondary( 1.100) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.000) +      vietor pozdlzny(-0.600)
-----------------------------------------------------------------------------------------------
36   LCB36_CH_sup  Serviceability     Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.100) +     Tendon Secondary( 1.100) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +      vietor pozdlzny( 1.000)
-----------------------------------------------------------------------------------------------
37   LCB37_CH_sup  Serviceability     Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.100) +     Tendon Secondary( 1.100) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +      vietor pozdlzny(-1.000)
-----------------------------------------------------------------------------------------------
38   LCB38_CH_inf  Serviceability     Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 0.900) +     Tendon Secondary( 0.900) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.000) +      vietor pozdlzny( 0.600)
-----------------------------------------------------------------------------------------------
39   LCB39_CH_inf  Serviceability     Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 0.900) +     Tendon Secondary( 0.900) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.000) +      vietor pozdlzny(-0.600)
-----------------------------------------------------------------------------------------------
40   LCB40_CH_inf  Serviceability     Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 0.900) +     Tendon Secondary( 0.900) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +      vietor pozdlzny( 1.000)
-----------------------------------------------------------------------------------------------
41   LCB41_CH_inf  Serviceability     Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 0.900) +     Tendon Secondary( 0.900) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +      vietor pozdlzny(-1.000)
-----------------------------------------------------------------------------------------------
42   LCB42_sup     Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.350) +      vietor pozdlzny( 0.900)
-----------------------------------------------------------------------------------------------
43   LCB43_sup     Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.350) +      vietor pozdlzny(-0.900)
-----------------------------------------------------------------------------------------------
44   LCB44_sup     Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +      vietor pozdlzny( 1.500)
-----------------------------------------------------------------------------------------------
45   LCB45_sup     Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +      vietor pozdlzny(-1.500)
-----------------------------------------------------------------------------------------------
46   LCB46_sup     Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.350) +      vietor pozdlzny( 0.900)
-----------------------------------------------------------------------------------------------
47   LCB47_sup     Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.350) +      vietor pozdlzny(-0.900)
-----------------------------------------------------------------------------------------------
48   LCB48_sup     Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +      vietor pozdlzny( 1.500)
-----------------------------------------------------------------------------------------------
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49   LCB49_sup     Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +      vietor pozdlzny(-1.500)
-----------------------------------------------------------------------------------------------

50   LCB50_inf     Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.350) +      vietor pozdlzny( 0.900)
-----------------------------------------------------------------------------------------------
51   LCB51_inf     Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.350) +      vietor pozdlzny(-0.900)
-----------------------------------------------------------------------------------------------
52   LCB52_inf     Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +      vietor pozdlzny( 1.500)
-----------------------------------------------------------------------------------------------
53   LCB53_inf     Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +      vietor pozdlzny(-1.500)
-----------------------------------------------------------------------------------------------
54   LCB54_inf     Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.350) +      vietor pozdlzny( 0.900)
-----------------------------------------------------------------------------------------------
55   LCB55_inf     Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_CH( 1.350) +      vietor pozdlzny(-0.900)
-----------------------------------------------------------------------------------------------
56   LCB56_inf     Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +      vietor pozdlzny( 1.500)
-----------------------------------------------------------------------------------------------
57   LCB57_inf     Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +              LM 1_FR( 1.000) +      vietor pozdlzny(-1.500)
-----------------------------------------------------------------------------------------------
58   LCB58_sup_krutenie  Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +     LM 1_CH_krutenie( 1.350) +       vietor priecny( 0.900)
-----------------------------------------------------------------------------------------------
59   LCB59_sup_krutenie  Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +     LM 1_CH_krutenie( 1.350) +       vietor priecny(-0.900)
-----------------------------------------------------------------------------------------------
60   LCB60_sup_krutenie  Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +     LM 1_FR_krutenie( 1.000) +       vietor priecny( 1.500)
-----------------------------------------------------------------------------------------------
61   LCB61_sup_krutenie  Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +     LM 1_FR_krutenie( 1.000) +       vietor priecny(-1.500)
-----------------------------------------------------------------------------------------------
62   LCB62_sup_krutenie  Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +     LM 1_CH_krutenie( 1.350) +       vietor priecny( 0.900)
-----------------------------------------------------------------------------------------------
63   LCB63_sup_krutenie  Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +     LM 1_CH_krutenie( 1.350) +       vietor priecny(-0.900)
-----------------------------------------------------------------------------------------------
64   LCB64_sup_krutenie  Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +     LM 1_FR_krutenie( 1.000) +       vietor priecny( 1.500)
-----------------------------------------------------------------------------------------------
65   LCB65_sup_krutenie  Strength/Stress    Add
              Dead Load( 1.350) +        Erection Load( 1.350) +              sadanie( 1.200)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +     LM 1_FR_krutenie( 1.000) +       vietor priecny(-1.500)
-----------------------------------------------------------------------------------------------
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66   LCB66_inf_krutenie  Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +     LM 1_CH_krutenie( 1.350) +       vietor priecny( 0.900)
-----------------------------------------------------------------------------------------------
67   LCB67_inf_krutenie  Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +     LM 1_CH_krutenie( 1.350) +       vietor priecny(-0.900)
-----------------------------------------------------------------------------------------------
68   LCB68_inf_krutenie  Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +     LM 1_FR_krutenie( 1.000) +       vietor priecny( 1.500)
-----------------------------------------------------------------------------------------------
69   LCB69_inf_krutenie  Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.000) +     Tendon Secondary( 1.000) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +     LM 1_FR_krutenie( 1.000) +       vietor priecny(-1.500)
-----------------------------------------------------------------------------------------------
70   LCB70_inf_krutenie  Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +     LM 1_CH_krutenie( 1.350) +       vietor priecny( 0.900)
-----------------------------------------------------------------------------------------------
71   LCB71_inf_krutenie  Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +     LM 1_CH_krutenie( 1.350) +       vietor priecny(-0.900)
-----------------------------------------------------------------------------------------------
72   LCB72_inf_krutenie  Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +     LM 1_FR_krutenie( 1.000) +       vietor priecny( 1.500)
-----------------------------------------------------------------------------------------------
73   LCB73_inf_krutenie  Strength/Stress    Add
              Dead Load( 1.000) +        Erection Load( 1.000) +              sadanie( 1.000)
 +       Tendon Primary( 1.200) +     Tendon Secondary( 1.200) +      Creep Secondary( 1.000)
 +  Shrinkage Secondary( 1.000) +     LM 1_FR_krutenie( 1.000) +       vietor priecny(-1.500)
-----------------------------------------------------------------------------------------------
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5.6 Posúdenie nosnej konštrukcie MSP (SLS) – kontrola limitných napätí

Vysvetlenia symbolov:

FT - napätie v horných vláknach od momentu My a osovej sily

FB - napätie v dolných vláknach od momentu My a osovej sily

FTL - napätie v horných vláknach pri ľavom okraji od momentu My, momentu Mz a osovej sily

FBL - napätie v dolných vláknach pri ľavom okraji od momentu My, momentu Mz a osovej sily

FTR - napätie v horných vláknach pri pravom okraji od momentu My, momentu Mz a osovej sily

FBR - Napätie v dolných vláknach pri pravom okraji od momentu My, momentu Mz a osovej sily

FMAX - Maximálne napätie z hore uvedených napätí (FT, FB, FTL, FBL, FTR, FBR)

ALW - maximálne prípustné napätie

Elem	Part	Comp./Tens.	LCom Name	Type	CHK	FT (kN/m^2)	FB (kN/m^2)	FTL (kN/m^2)	FBL (kN/m^2)	FTR (kN/m^2)	FBR (kN/m^2)	FMAX (kN/m^2)	ALW (kN/m^2)
1	I[1]	Compression	LCB2_CH_sup	MY-MAX	OK	-18,5126	-92,8341	-18,6549	-92,9104	-18,3703	-92,7579	-18,3703	24000
1	J[2]	Compression	LCB35_CH_sup	MY-MIN	OK	421,5144	2686,3183	421,5645	2686,3451	421,4643	2686,2914	2686,3451	24000
2	I[2]	Compression	LCB35_CH_sup	FX-MIN	OK	419,307	2677,207	419,5081	2677,3147	419,1059	2677,0992	2677,3147	24000
2	J[3]	Compression	LCB6_CH_sup	FX-MIN	OK	381,7358	2786,4891	381,9295	2786,6042	381,5	2786,3741	2786,6042	24000
3	I[3]	Compression	LCB6_CH_sup	MX-MIN	OK	1213,6094	5127,5032	1217,0488	5128,238	1210,1701	5124,5529	5128,238	24000
3	J[4]	Compression	LCB6_CH_sup	MX-MIN	OK	1500,9081	6816,1706	1504,9548	6817,06	1496,8614	6812,7239	6817,06	24000
4	I[4]	Compression	LCB6_CH_sup	FX-MIN	OK	1474,2905	6804,7799	1475,6688	6805,547	1472,8056	6804,0128	6805,547	24000
4	J[5]	Compression	LCB6_CH_sup	FX-MIN	OK	2143,6654	7715,0252	2151,6121	7719,3112	2135,6122	7710,7392	7719,3112	24000
5	I[5]	Compression	LCB6_CH_sup	FX-MIN	OK	2139,1261	7710,721	2147,1684	7715,0297	2131,0838	7706,4123	7715,0297	24000
5	J[6]	Compression	LCB6_CH_sup	FX-MIN	OK	2889,5838	6903,6524	2898,6514	6908,5104	2880,5163	6898,7944	6908,5104	24000
6	I[6]	Compression	LCB6_CH_sup	MX-MIN	OK	2889,3722	6903,4598	2898,4397	6908,3178	2880,3047	6898,6018	6908,3178	24000
6	J[7]	Compression	LCB6_CH_sup	MX-MIN	OK	3134,7394	6819,3603	3144,7145	6824,7047	3124,7643	6814,016	6824,7047	24000
7	I[7]	Compression	LCB6_CH_sup	MX-MIN	OK	3134,6928	6819,3172	3144,6679	6824,6616	3124,7177	6813,9729	6824,6616	24000
7	J[8]	Compression	LCB6_CH_sup	MX-MIN	OK	2936,3816	7435,7215	2947,3735	7441,6107	2925,3896	7429,8323	7441,6107	24000
8	I[8]	Compression	LCB6_CH_sup	MX-MIN	OK	3928,5714	7312,6269	3939,5132	7318,4686	3917,6296	7306,7439	7318,4686	24000
8	J[9]	Compression	LCB6_CH_sup	MX-MIN	OK	4271,0598	8512,5765	4282,9328	8518,9172	4259,1868	8506,1946	8518,9172	24000
9	I[9]	Compression	LCB6_CH_sup	FX-MIN	OK	5223,1906	8445,1891	5235,5526	8452,5021	5208,2536	8437,8762	8452,5021	24000
9	J[10]	Compression	LCB2_CH_sup	FX-MAX	OK	6921,4398	987,2043	6883,4515	966,8534	6959,4281	1007,5552	6959,4281	24000
10	I[10]	Compression	LCB12_CH_inf	FX-MIN	OK	1107,4264	4799,8114	1113,3901	4803,0086	1101,4565	4796,6142	4803,0086	24000
10	J[11]	Compression	LCB12_CH_inf	FX-MIN	OK	697,1604	5296,9942	703,3086	5300,2902	691,006	5293,6982	5300,2902	24000
11	I[11]	Compression	LCB12_CH_inf	FX-MIN	OK	697,1475	5296,9899	703,305	5300,2896	690,9888	5293,6902	5300,2896	24000
11	J[12]	Compression	LCB12_CH_inf	FX-MIN	OK	1162,9204	4758,8114	1168,8449	4761,9863	1156,9946	4755,6365	4761,9863	24000
12	I[12]	Compression	LCB2_CH_sup	FX-MAX	OK	6860,2834	1043,9203	6819,6106	1022,1313	6900,9561	1065,7093	6900,9561	24000
12	J[13]	Compression	LCB2_CH_sup	FX-MAX	OK	7701,475	694,6098	7671,486	678,5442	7731,4641	710,6754	7731,4641	24000
13	I[13]	Compression	LCB7_CH_sup	FY-MIN	OK	6366,8473	7980,8922	6368,427	7981,7309	6365,2676	7980,0359	7981,7309	24000
13	J[14]	Compression	LCB7_CH_sup	FX-MIN	OK	7164,9689	5119,2166	7167,0442	5120,3206	7162,8936	5118,095	7167,0442	24000
14	I[14]	Compression	LCB7_CH_sup	FX-MIN	OK	7177,9815	5129,9267	7180,0594	5131,0258	7175,9035	5128,7974	7180,0594	24000

Elem	Part	Comp./Tens.	LCom Name	Type	CHK	FT (kN/m^2)	FB (kN/m^2)	FTL (kN/m^2)	FBL (kN/m^2)	FTR (kN/m^2)	FBR (kN/m^2)	FMAX (kN/m^2)	ALW (kN/m^2)
14	J[15]	Compression	LCB7_CH_sup	MY-MIN	OK	4082,6673	7226,5758	4084,9093	7227,7624	4080,4253	7225,3587	7227,7624	24000
15	I[15]	Compression	LCB7_CH_sup	MY-MIN	OK	4091,4881	7234,0742	4093,7399	7235,2813	4089,2364	7232,8671	7235,2813	24000
15	J[16]	Compression	LCB6_CH_sup	MY-MIN	OK	3109,7267	7522,5304	3116,2939	7526,0489	3103,1595	7519,0119	7526,0489	24000
16	I[16]	Compression	LCB6_CH_sup	MY-MIN	OK	4024,5244	8145,4653	4031,0425	8148,9579	4018,0049	8141,9727	8148,9579	24000
16	J[17]	Compression	LCB6_CH_sup	MY-MIN	OK	3076,9789	9734,33	3083,9395	9738,0595	3070,017	9730,6006	9738,0595	24000
17	I[17]	Compression	LCB6_CH_sup	MY-MIN	OK	4029,6661	9642,8383	4036,6176	9646,5629	4022,7134	9639,1138	9646,5629	24000
17	J[18]	Compression	LCB6_CH_sup	MY-MIN	OK	2372,8441	12513,4939	2380,3002	12517,4886	2365,3869	12509,4992	12517,4886	24000
18	I[18]	Compression	LCB6_CH_sup	MY-MIN	OK	3338,5122	12439,5224	3345,95	12443,5073	3331,0732	12435,5375	12443,5073	24000
18	J[19]	Compression	LCB6_CH_sup	MY-MIN	OK	1024,5707	16537,4166	1032,5719	16541,7031	1016,5683	16533,13	16541,7031	24000
19	I[19]	Compression	LCB6_CH_sup	MY-MIN	OK	2957,9454	16390,9749	2968,2827	16396,2397	2947,6082	16385,1643	16396,2397	24000
19	J[20]	Compression	LCB6_CH_sup	MY-MIN	OK	1208,1536	13641,0009	1219,0859	13646,6199	1197,2212	13634,9072	13646,6199	24000
20	I[20]	Compression	LCB6_CH_sup	MY-MIN	OK	3162,5576	13257,477	3172,3868	13262,5942	3152,7284	13252,0635	13262,5942	24000
20	J[21]	Compression	LCB6_CH_sup	FX-MIN	OK	1075,2853	13299,3626	1085,7579	13304,8409	1064,8126	13293,621	13304,8409	24000
21	I[21]	Compression	LCB6_CH_sup	MX-MIN	OK	3260,4965	13243,2306	3268,8321	13247,7022	3252,1371	13238,7591	13247,7022	24000
21	J[22]	Compression	LCB6_CH_sup	MX-MIN	OK	3754,8414	15199,13	3763,6185	15203,8379	3746,0407	15194,4221	15203,8379	24000
22	I[22]	Compression	LCB12_CH_inf	MX-MIN	OK	-245,3313	11138,295	-237,601	11142,4379	-253,0693	11134,152	11142,4379	24000
22	J[23]	Compression	LCB12_CH_inf	MX-MIN	OK	-711,3457	11736,2692	-703,4063	11740,5241	-719,2928	11732,0142	11740,5241	24000
23	I[23]	Compression	LCB12_CH_inf	FX-MIN	OK	-707,3563	11730,6922	-699,4152	11734,9457	-715,2974	11726,4382	11734,9457	24000
23	J[24]	Compression	LCB12_CH_inf	FX-MIN	OK	174,0674	10653,2885	182,0482	10657,5634	166,0866	10649,0133	10657,5634	24000
24	I[24]	Compression	LCB6_CH_sup	FY-MIN	OK	4327,3496	14548,7427	4336,2918	14553,5352	4318,3982	14543,9502	14553,5352	24000
24	J[25]	Compression	LCB6_CH_sup	FY-MIN	OK	4673,3738	11503,1216	4682,4619	11507,9923	4664,2763	11498,2508	11507,9923	24000
25	I[25]	Compression	LCB6_CH_sup	FX-MIN	OK	2504,8537	11470,9552	2517,6411	11477,6775	2492,0663	11463,9776	11477,6775	24000
25	J[26]	Compression	LCB6_CH_sup	FX-MIN	OK	4697,3605	12341,1948	4710,7258	12348,2109	4683,9952	12333,8918	12348,2109	24000
26	I[26]	Compression	LCB6_CH_sup	FX-MIN	OK	2764,4476	12711,9894	2779,4688	12719,8018	2749,4263	12703,7084	12719,8018	24000
26	J[27]	Compression	LCB6_CH_sup	FX-MIN	OK	4568,7926	15339,0839	4584,4097	15347,1805	4553,1755	15330,4486	15347,1805	24000
27	I[27]	Compression	LCB6_CH_sup	FY-MIN	OK	2649,35	15495,3675	2661,2256	15501,7345	2637,4541	15489,0005	15501,7345	24000
27	J[28]	Compression	LCB7_CH_sup	FY-MIN	OK	5187,4308	13821,5083	5193,559	13824,7997	5181,2689	13818,2169	13824,7997	24000
28	I[28]	Compression	LCB7_CH_sup	FY-MIN	OK	4233,3406	13866,598	4239,5496	13869,9243	4227,1296	13863,2718	13869,9243	24000
28	J[29]	Compression	LCB7_CH_sup	MY-MIN	OK	5854,5827	11136,2444	5861,057	11139,7129	5848,1063	11132,7759	11139,7129	24000
29	I[29]	Compression	LCB7_CH_sup	MY-MIN	OK	4901,2732	11204,6634	4907,7599	11208,1384	4894,7845	11201,1883	11208,1384	24000
29	J[30]	Compression	LCB7_CH_sup	MY-MIN	OK	5859,6799	9672,1081	5866,4368	9675,728	5852,9211	9668,4882	9675,728	24000
30	I[30]	Compression	LCB7_CH_sup	MY-MIN	OK	5057,1116	8357,7187	5063,8871	8361,3481	5050,336	8354,0894	8361,3481	24000
30	J[31]	Compression	LCB6_CH_sup	MY-MIN	OK	4545,1143	8046,3162	4559,3771	8053,9569	4530,8514	8038,6756	8053,9569	24000
31	I[31]	Compression	LCB6_CH_sup	MY-MIN	OK	5428,0675	8695,2197	5442,3091	8702,8483	5413,8259	8687,5899	8702,8483	24000
31	J[32]	Compression	LCB6_CH_sup	MY-MIN	OK	5335,8909	9001,7181	5350,7528	9009,6791	5321,0289	8993,7559	9009,6791	24000
32	I[32]	Compression	LCB3_CH_sup	MY-MAX	OK	9427,2306	1436,7902	9348,1398	1394,4201	9506,3215	1479,1603	9506,3215	24000
32	J[33]	Compression	LCB6_CH_sup	MY-MIN	OK	5441,0315	10524,5149	5456,4643	10532,7818	5425,5986	10516,2468	10532,7818	24000
33	I[33]	Compression	LCB6_CH_sup	MY-MIN	OK	6373,5131	10575,3553	6388,9189	10583,6078	6358,1073	10567,1017	10583,6078	24000
33	J[34]	Compression	LCB6_CH_sup	MY-MIN	OK	5047,4448	13035,4216	5063,4678	13044,0047	5031,4219	13026,8372	13044,0047	24000
34	I[34]	Compression	LCB6_CH_sup	MY-MIN	OK	6831,3961	12977,5067	6848,5427	12986,7879	6813,8927	12968,2255	12986,7879	24000
34	J[35]	Compression	LCB6_CH_sup	MY-MIN	OK	5632,0681	12291,7885	5649,8809	12301,4228	5613,913	12282,1542	12301,4228	24000

Elem	Part	Comp./Tens.	LCom Name	Type	CHK	FT (kN/m^2)	FB (kN/m^2)	FTL (kN/m^2)	FBL (kN/m^2)	FTR (kN/m^2)	FBR (kN/m^2)	FMAX (kN/m^2)	ALW (kN/m^2)
35	I[35]	Compression	LCB6_CH_sup	MY-MIN	OK	7420,0381	12158,9658	7438,151	12168,7848	7401,4936	12149,1468	12168,7848	24000
35	J[36]	Compression	LCB12_CH_inf	MY-MIN	OK	3512,9997	11809,7887	3531,5236	11819,8206	3494,0714	11799,7568	11819,8206	24000
36	I[36]	Compression	LCB12_CH_inf	MY-MIN	OK	4971,0471	11645,2216	4989,464	11655,1955	4952,2286	11635,2478	11655,1955	24000
36	J[37]	Compression	LCB12_CH_inf	FX-MIN	OK	3008,0909	12195,6421	3027,3061	12206,0371	2988,4985	12185,2471	12206,0371	24000
37	I[37]	Compression	LCB12_CH_inf	FX-MIN	OK	4458,833	11996,5846	4478,4488	12007,2127	4438,7708	11985,9564	12007,2127	24000
37	J[38]	Compression	LCB12_CH_inf	FX-MIN	OK	2285,8224	13742,0119	2306,0925	13752,9827	2265,1353	13731,041	13752,9827	24000
38	I[38]	Compression	LCB12_CH_inf	FX-MIN	OK	3762,4147	13380,8189	3783,4288	13392,2151	3740,8839	13369,4228	13392,2151	24000
38	J[39]	Compression	LCB12_CH_inf	FX-MIN	OK	1682,3717	14447,6352	1703,8877	14459,2898	1660,3781	14435,9806	14459,2898	24000
39	I[39]	Compression	LCB12_CH_inf	FX-MIN	OK	3131,034	14052,9211	3154,274	14065,5493	3107,1294	14040,2929	14065,5493	24000
39	J[40]	Compression	LCB12_CH_inf	FX-MIN	OK	1586,5361	14025,8964	1609,9601	14038,6075	1562,5063	14013,1853	14038,6075	24000
40	I[40]	Compression	LCB12_CH_inf	FX-MIN	OK	2987,9576	13772,6569	3012,905	13786,2224	2962,2614	13759,0914	13786,2224	24000
40	J[41]	Compression	LCB12_CH_inf	FX-MIN	OK	1628,8617	13281,251	1653,7025	13294,7397	1603,3456	13267,7622	13294,7397	24000
41	I[41]	Compression	LCB12_CH_inf	FX-MIN	OK	3028,6666	12931,3995	3055,6691	12946,0955	3000,8048	12916,7034	12946,0955	24000
41	J[42]	Compression	LCB12_CH_inf	FX-MIN	OK	4318,9957	12939,8836	4345,4547	12954,2696	4291,7479	12925,4976	12954,2696	24000
42	I[42]	Compression	LCB12_CH_inf	MX-MIN	OK	1242,5702	7132,7107	1254,2411	7138,9629	1230,8993	7126,458	7138,9629	24000
42	J[43]	Compression	LCB12_CH_inf	MX-MIN	OK	804,189	7634,6989	815,9787	7641,0148	792,3994	7628,3826	7641,0148	24000
43	I[43]	Compression	LCB12_CH_inf	FY-MIN	OK	751,9099	7640,1496	764,0747	7646,6663	739,7452	7633,6327	7646,6663	24000
43	J[44]	Compression	LCB12_CH_inf	FY-MIN	OK	1197,441	7127,947	1209,4743	7134,3933	1185,4078	7121,5005	7134,3933	24000
44	I[44]	Compression	LCB12_CH_inf	FX-MIN	OK	4349,3907	12924,256	4376,3937	12938,8613	4321,8674	12909,6508	12938,8613	24000
44	J[45]	Compression	LCB12_CH_inf	FX-MIN	OK	2886,0106	13152,7836	2913,5394	13167,683	2857,9149	13137,8842	13167,683	24000
45	I[45]	Compression	LCB12_CH_inf	FX-MIN	OK	1488,0232	13501,6876	1513,4515	13515,4301	1462,1459	13487,945	13515,4301	24000
45	J[46]	Compression	LCB12_CH_inf	FX-MIN	OK	2893,4116	13942,8123	2918,9007	13956,6005	2867,4247	13929,0241	13956,6005	24000
46	I[46]	Compression	LCB12_CH_inf	FX-MIN	OK	1489,7656	14197,502	1513,707	14210,4357	1465,4213	14184,5684	14210,4357	24000
46	J[47]	Compression	LCB12_CH_inf	FX-MIN	OK	3087,1187	14155,1556	3110,8127	14167,9672	3062,9826	14142,3439	14167,9672	24000
47	I[47]	Compression	LCB12_CH_inf	FX-MIN	OK	1637,1798	14545,6249	1659,1143	14557,4605	1614,9278	14533,7892	14557,4605	24000
47	J[48]	Compression	LCB12_CH_inf	FX-MIN	OK	3715,6603	13441,5146	3737,0103	13453,0441	3693,9667	13429,9851	13453,0441	24000
48	I[48]	Compression	LCB12_CH_inf	FX-MIN	OK	2238,058	13799,962	2258,6438	13811,0643	2217,1952	13788,8597	13811,0643	24000
48	J[49]	Compression	LCB12_CH_inf	FX-MIN	OK	4443,1235	12042,7885	4462,9592	12053,4942	4422,9912	12032,0828	12053,4942	24000
49	I[49]	Compression	LCB12_CH_inf	FX-MIN	OK	2993,503	12242,8555	3012,9253	12253,3274	2973,8303	12232,3836	12253,3274	24000
49	J[50]	Compression	LCB12_CH_inf	MY-MIN	OK	4964,3784	11711,0242	4982,8901	11721,0126	4945,6001	11701,0358	11721,0126	24000
50	I[50]	Compression	LCB12_CH_inf	MY-MIN	OK	3507,5559	11877,7551	3526,1755	11887,8018	3488,668	11867,7085	11887,8018	24000
50	J[51]	Compression	LCB6_CH_sup	MY-MIN	OK	7447,4181	12186,3788	7465,5743	12196,1821	7428,9754	12176,5755	12196,1821	24000
51	I[51]	Compression	LCB6_CH_sup	MY-MIN	OK	5656,5276	12327,7503	5674,3683	12337,3687	5638,4598	12318,1319	12337,3687	24000
51	J[52]	Compression	LCB6_CH_sup	MY-MIN	OK	6903,2986	12967,5752	6920,4169	12976,8092	6885,9435	12958,3412	12976,8092	24000
52	I[52]	Compression	LCB6_CH_sup	MY-MIN	OK	5107,1897	13046,995	5123,1231	13055,5304	5091,2563	13038,4589	13055,5304	24000
52	J[53]	Compression	LCB6_CH_sup	MY-MIN	OK	6464,7192	10578,0631	6479,9767	10586,2364	6449,4617	10569,889	10586,2364	24000
53	I[53]	Compression	LCB6_CH_sup	MY-MIN	OK	5614,2176	10531,8469	5629,5016	10540,0344	5598,9336	10523,6586	10540,0344	24000
53	J[54]	Compression	LCB3_CH_sup	MY-MAX	OK	9519,3809	1386,6536	9440,9739	1344,6499	9597,7879	1428,6574	9597,7879	24000
54	I[54]	Compression	LCB6_CH_sup	MY-MIN	OK	5422,9433	9033,3477	5437,5958	9041,1969	5408,2908	9025,4977	9041,1969	24000
54	J[55]	Compression	LCB6_CH_sup	MY-MIN	OK	5551,5658	8691,539	5565,5387	8699,0242	5537,5929	8684,053	8699,0242	24000
55	I[55]	Compression	LCB6_CH_sup	FX-MIN	OK	4775,4941	8067,717	4789,488	8075,2139	4761,5001	8060,2202	8075,2139	24000

Elem	Part	Comp./Tens.	LCom Name	Type	CHK	FT (kN/m^2)	FB (kN/m^2)	FTL (kN/m^2)	FBL (kN/m^2)	FTR (kN/m^2)	FBR (kN/m^2)	FMAX (kN/m^2)	ALW (kN/m^2)
55	J[56]	Compression	LCB7_CH_sup	MY-MIN	OK	5394,53	8384,4867	5400,9558	8387,9293	5388,1042	8381,0442	8387,9293	24000
56	I[56]	Compression	LCB7_CH_sup	MY-MIN	OK	6283,7973	9015,4717	6290,203	9018,9039	6277,3902	9012,0396	9018,9039	24000
56	J[57]	Compression	LCB7_CH_sup	MY-MIN	OK	5376,1848	10463,2937	5382,2528	10466,5449	5370,1155	10460,0425	10466,5449	24000
57	I[57]	Compression	LCB7_CH_sup	MY-MIN	OK	6294,1679	10595,4733	6300,2255	10598,7189	6288,109	10592,2276	10598,7189	24000
57	J[58]	Compression	LCB7_CH_sup	MX-MIN	OK	4738,7228	13204,7994	4744,4475	13207,8668	4732,9968	13201,7321	13207,8668	24000
58	I[58]	Compression	LCB7_CH_sup	MX-MIN	OK	5682,4818	13263,6031	5688,1349	13266,6378	5676,8062	13260,5685	13266,6378	24000
58	J[59]	Compression	LCB6_CH_sup	MX-MIN	OK	3083,9747	14875,0124	3095,3746	14881,1232	3072,5615	14868,9016	14881,1232	24000
59	I[59]	Compression	LCB6_CH_sup	FX-MIN	OK	4991,4671	14787,9133	5006,585	14795,8335	4976,3492	14779,6355	14795,8335	24000
59	J[60]	Compression	LCB6_CH_sup	FX-MIN	OK	3279,5254	12169,0283	3294,0138	12176,6345	3265,0371	12161,1111	12176,6345	24000
60	I[60]	Compression	LCB6_CH_sup	FX-MIN	OK	5209,3854	11820,3908	5222,2236	11827,1732	5196,5473	11813,4179	11827,1732	24000
60	J[61]	Compression	LCB12_CH_inf	FX-MIN	OK	930,8991	11154,7667	943,123	11161,2306	918,6751	11148,1333	11161,2306	24000
61	I[61]	Compression	LCB12_CH_inf	MX-MIN	OK	2709,177	11141,9123	2717,7336	11146,4994	2700,6087	11137,3251	11146,4994	24000
61	J[62]	Compression	LCB12_CH_inf	MX-MIN	OK	2116,3754	13268,1087	2124,781	13272,6149	2107,9582	13263,6025	13272,6149	24000
62	I[62]	Compression	LCB12_CH_inf	MX-MIN	OK	579,2717	9854,0743	586,8683	9858,1441	571,6747	9850,0045	9858,1441	24000
62	J[63]	Compression	LCB12_CH_inf	MX-MIN	OK	-246,8154	10866,1009	-239,2682	10870,1443	-254,363	10862,0576	10870,1443	24000
63	I[63]	Compression	LCB12_CH_inf	FY-MIN	OK	-252,8658	10871,678	-245,288	10875,7272	-260,4436	10867,608	10875,7272	24000
63	J[64]	Compression	LCB12_CH_inf	FY-MIN	OK	181,6758	10281,1917	189,0857	10285,1509	174,266	10277,2116	10285,1509	24000
64	I[64]	Compression	LCB6_CH_sup	FY-MIN	OK	4279,9055	13814,4392	4288,2899	13818,8961	4271,5211	13809,9126	13818,8961	24000
64	J[65]	Compression	LCB6_CH_sup	FY-MIN	OK	3673,4747	11950,4062	3681,5198	11954,6812	3665,4296	11946,0612	11954,6812	24000
65	I[65]	Compression	LCB6_CH_sup	FX-MIN	OK	1534,488	11926,54	1544,4044	11932,0826	1523,7126	11920,9974	11932,0826	24000
65	J[66]	Compression	LCB6_CH_sup	FX-MIN	OK	3030,9507	12269,5237	3040,0772	12274,6721	3020,8569	12264,3753	12274,6721	24000
66	I[66]	Compression	LCB6_CH_sup	FX-MIN	OK	1070,2459	12637,0818	1080,237	12642,8594	1058,6675	12631,3041	12642,8594	24000
66	J[67]	Compression	LCB6_CH_sup	FX-MIN	OK	2492,4012	13798,3986	2501,2041	13803,6046	2481,7686	13793,1925	13803,6046	24000
67	I[67]	Compression	LCB6_CH_sup	FY-MIN	OK	539,4432	13959,8243	546,9307	13963,8336	531,9557	13955,8111	13963,8336	24000
67	J[68]	Compression	LCB6_CH_sup	FY-MIN	OK	2322,5942	10499,5112	2328,9145	10502,8952	2316,274	10496,1233	10502,8952	24000
68	I[68]	Compression	LCB6_CH_sup	FY-MIN	OK	1341,5724	10567,1349	1347,9113	10570,5288	1335,2334	10563,737	10570,5288	24000
68	J[69]	Compression	LCB6_CH_sup	FY-MIN	OK	2511,711	8241,8733	2516,876	8244,6384	2506,546	8239,1043	8244,6384	24000
69	I[69]	Compression	LCB6_CH_sup	FY-MIN	OK	1524,2565	8314,0583	1529,4313	8316,8285	1519,0818	8311,284	8316,8285	24000
69	J[70]	Compression	LCB6_CH_sup	FY-MIN	OK	2076,3429	7099,8706	2080,3426	7102,0113	2072,3431	7097,7258	7102,0113	24000
70	I[70]	Compression	LCB6_CH_sup	FY-MIN	OK	1137,8189	6790,699	1141,8296	6792,8476	1133,8082	6788,5504	6792,8476	24000
70	J[71]	Compression	LCB6_CH_sup	FY-MIN	OK	1206,8028	6462,7985	1209,8698	6464,4416	1203,7358	6461,1555	6464,4416	24000
71	I[71]	Compression	LCB6_CH_sup	FX-MIN	OK	1206,9033	6462,9081	1209,9684	6464,5507	1203,8363	6461,2656	6464,5507	24000
71	J[72]	Compression	LCB6_CH_sup	FX-MIN	OK	1015,5919	6592,898	1017,9493	6594,1613	1013,2327	6591,6346	6594,1613	24000
72	I[72]	Compression	LCB6_CH_sup	FX-MIN	OK	1016,0145	6593,694	1018,3312	6594,9442	1013,6639	6592,4438	6594,9442	24000
72	J[73]	Compression	LCB6_CH_sup	FX-MIN	OK	881,0062	6445,8703	882,3792	6446,615	879,5992	6445,1257	6446,615	24000
73	I[73]	Compression	LCB6_CH_sup	FY-MIN	OK	893,4359	6460,1505	898,1375	6461,7676	888,7344	6456,7302	6461,7676	24000
73	J[74]	Compression	LCB6_CH_sup	FY-MIN	OK	1352,3422	3947,0562	1356,2919	3948,3912	1348,3925	3944,1593	3948,3912	24000
74	I[74]	Compression	LCB6_CH_sup	FX-MIN	OK	604,0201	2024,9932	604,2203	2025,1074	603,794	2024,879	2025,1074	24000
74	J[75]	Compression	LCB34_CH_sup	FX-MIN	OK	697,8259	1869,5921	698,0221	1869,6972	697,6298	1869,487	1869,6972	24000
75	I[75]	Compression	LCB34_CH_sup	FX-MIN	OK	699,529	1877,0334	699,5539	1877,0468	699,504	1877,0201	1877,0468	24000
75	J[76]	Compression	LCB2_CH_sup	MX-MAX	OK	-17,6817	-87,8907	-17,7525	-87,9286	-17,6109	-87,8527	-17,6109	24000

5.7 Posúdenie nosnej konštrukcie MSP (SLS) – kontrola tlakových napätí (dekompresia)

Elem	Load	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
1	LCB14_FR_sup(all)	I[1]	Max	5,20E+01	4,08E+01	1,05E-01	9,29E+01
1	LCB14_FR_sup(all)	I[1]	Min	5,20E+01	-3,35E+01	-1,05E-01	1,85E+01
1	LCB14_FR_sup(all)	J[2]	Max	-1,44E+03	1,01E+03	1,04E-01	-4,58E+02
1	LCB14_FR_sup(all)	J[2]	Min	-1,44E+03	-1,23E+03	-1,04E-01	-2,67E+03
2	LCB14_FR_sup(all)	I[2]	Max	-1,44E+03	1,01E+03	1,21E-01	-4,56E+02
2	LCB14_FR_sup(all)	I[2]	Min	-1,44E+03	-1,23E+03	-1,21E-01	-2,67E+03
2	LCB14_FR_sup(all)	J[3]	Max	-1,45E+03	1,08E+03	2,44E-01	-5,44E+02
2	LCB14_FR_sup(all)	J[3]	Min	-1,45E+03	-1,31E+03	-2,44E-01	-2,76E+03
3	LCB14_FR_sup(all)	I[3]	Max	-2,82E+03	1,61E+03	4,57E+00	-1,40E+03
3	LCB14_FR_sup(all)	I[3]	Min	-2,82E+03	-2,28E+03	-4,57E+00	-5,09E+03
3	LCB14_FR_sup(all)	J[4]	Max	-3,31E+03	1,92E+03	5,21E+00	-2,44E+03
3	LCB14_FR_sup(all)	J[4]	Min	-3,31E+03	-3,34E+03	-5,21E+00	-6,64E+03
4	LCB14_FR_sup(all)	I[4]	Max	-3,28E+03	1,93E+03	2,07E+00	-2,42E+03
4	LCB14_FR_sup(all)	I[4]	Min	-3,28E+03	-3,35E+03	-2,07E+00	-6,63E+03
4	LCB14_FR_sup(all)	J[5]	Max	-3,94E+03	2,02E+03	6,27E+00	-3,71E+03
4	LCB14_FR_sup(all)	J[5]	Min	-3,94E+03	-3,46E+03	-6,27E+00	-7,41E+03
5	LCB14_FR_sup(all)	I[5]	Max	-3,94E+03	2,02E+03	6,29E+00	-3,70E+03
5	LCB14_FR_sup(all)	I[5]	Min	-3,94E+03	-3,46E+03	-6,29E+00	-7,41E+03
5	LCB14_FR_sup(all)	J[6]	Max	-4,01E+03	1,43E+03	6,60E+00	-4,00E+03
5	LCB14_FR_sup(all)	J[6]	Min	-4,01E+03	-2,46E+03	-6,60E+00	-6,48E+03
6	LCB14_FR_sup(all)	I[6]	Max	-4,01E+03	1,43E+03	6,60E+00	-4,00E+03
6	LCB14_FR_sup(all)	I[6]	Min	-4,01E+03	-2,46E+03	-6,60E+00	-6,47E+03
6	LCB14_FR_sup(all)	J[7]	Max	-4,04E+03	2,43E+03	6,87E+00	-4,04E+03
6	LCB14_FR_sup(all)	J[7]	Min	-4,04E+03	-1,40E+03	-6,87E+00	-6,28E+03
7	LCB14_FR_sup(all)	I[7]	Max	-4,04E+03	2,43E+03	6,87E+00	-4,04E+03
7	LCB14_FR_sup(all)	I[7]	Min	-4,04E+03	-1,40E+03	-6,87E+00	-6,28E+03
7	LCB14_FR_sup(all)	J[8]	Max	-4,03E+03	1,58E+03	7,17E+00	-4,03E+03
7	LCB14_FR_sup(all)	J[8]	Min	-4,03E+03	-2,73E+03	-7,17E+00	-6,77E+03
8	LCB14_FR_sup(all)	I[8]	Max	-4,61E+03	3,24E+03	7,14E+00	-4,62E+03
8	LCB14_FR_sup(all)	I[8]	Min	-4,61E+03	-1,86E+03	-7,14E+00	-6,65E+03
8	LCB14_FR_sup(all)	J[9]	Max	-5,15E+03	3,23E+03	7,28E+00	-5,16E+03
8	LCB14_FR_sup(all)	J[9]	Min	-5,15E+03	-1,85E+03	-7,28E+00	-7,71E+03
9	LCB14_FR_sup(all)	I[9]	Max	-5,73E+03	3,87E+03	9,01E+00	-5,73E+03
9	LCB14_FR_sup(all)	I[9]	Min	-5,73E+03	-2,22E+03	-9,01E+00	-7,95E+03
9	LCB14_FR_sup(all)	J[10]	Max	-4,46E+03	3,84E+03	1,50E+01	-4,46E+03
9	LCB14_FR_sup(all)	J[10]	Min	-4,46E+03	-2,73E+03	-1,50E+01	-7,20E+03
10	LCB14_FR_sup(all)	I[10]	Max	-2,78E+03	2,32E+03	9,10E+00	-2,78E+03
10	LCB14_FR_sup(all)	I[10]	Min	-2,78E+03	-1,92E+03	-9,10E+00	-4,71E+03
10	LCB14_FR_sup(all)	J[11]	Max	-2,76E+03	2,02E+03	9,35E+00	-2,76E+03
10	LCB14_FR_sup(all)	J[11]	Min	-2,76E+03	-1,68E+03	-9,35E+00	-4,47E+03
11	LCB14_FR_sup(all)	I[11]	Max	-2,76E+03	2,02E+03	9,37E+00	-2,76E+03
11	LCB14_FR_sup(all)	I[11]	Min	-2,76E+03	-1,68E+03	-9,37E+00	-4,47E+03
11	LCB14_FR_sup(all)	J[12]	Max	-2,77E+03	2,29E+03	9,15E+00	-2,78E+03
11	LCB14_FR_sup(all)	J[12]	Min	-2,77E+03	-1,89E+03	-9,15E+00	-4,68E+03
12	LCB14_FR_sup(all)	I[12]	Max	-4,45E+03	3,82E+03	1,61E+01	-4,46E+03
12	LCB14_FR_sup(all)	I[12]	Min	-4,45E+03	-2,72E+03	-1,61E+01	-7,18E+03
12	LCB14_FR_sup(all)	J[13]	Max	-5,17E+03	5,16E+03	1,51E+01	-5,17E+03
12	LCB14_FR_sup(all)	J[13]	Min	-5,17E+03	-2,94E+03	-1,51E+01	-8,11E+03
13	LCB14_FR_sup(all)	I[13]	Max	-5,67E+03	3,75E+03	1,09E+01	-5,68E+03
13	LCB14_FR_sup(all)	I[13]	Min	-5,67E+03	-2,15E+03	-1,09E+01	-7,83E+03
13	LCB14_FR_sup(all)	J[14]	Max	-5,17E+03	3,57E+03	9,38E+00	-5,17E+03
13	LCB14_FR_sup(all)	J[14]	Min	-5,17E+03	-2,05E+03	-9,38E+00	-7,23E+03
14	LCB14_FR_sup(all)	I[14]	Max	-5,18E+03	3,58E+03	9,40E+00	-5,18E+03
14	LCB14_FR_sup(all)	I[14]	Min	-5,18E+03	-2,05E+03	-9,40E+00	-7,24E+03
14	LCB14_FR_sup(all)	J[15]	Max	-4,01E+03	1,47E+03	8,84E+00	-4,01E+03
14	LCB14_FR_sup(all)	J[15]	Min	-4,01E+03	-2,55E+03	-8,84E+00	-6,56E+03
15	LCB14_FR_sup(all)	I[15]	Max	-4,02E+03	1,47E+03	8,84E+00	-4,02E+03
15	LCB14_FR_sup(all)	I[15]	Min	-4,02E+03	-2,55E+03	-8,84E+00	-6,57E+03
15	LCB14_FR_sup(all)	J[16]	Max	-4,01E+03	1,60E+03	8,39E+00	-4,01E+03
15	LCB14_FR_sup(all)	J[16]	Min	-4,01E+03	-2,76E+03	-8,39E+00	-6,77E+03

Elem	Load	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
16	LCB14_FR_sup(all)	I[16]	Max	-4,83E+03	1,50E+03	8,40E+00	-4,81E+03
16	LCB14_FR_sup(all)	I[16]	Min	-4,83E+03	-2,56E+03	-8,40E+00	-7,39E+03
16	LCB14_FR_sup(all)	J[17]	Max	-4,83E+03	2,25E+03	7,99E+00	-4,82E+03
16	LCB14_FR_sup(all)	J[17]	Min	-4,83E+03	-3,88E+03	-7,99E+00	-8,71E+03
17	LCB14_FR_sup(all)	I[17]	Max	-5,42E+03	1,89E+03	7,97E+00	-5,39E+03
17	LCB14_FR_sup(all)	I[17]	Min	-5,42E+03	-3,20E+03	-7,97E+00	-8,62E+03
17	LCB14_FR_sup(all)	J[18]	Max	-5,41E+03	3,33E+03	7,67E+00	-5,02E+03
17	LCB14_FR_sup(all)	J[18]	Min	-5,41E+03	-5,81E+03	-7,67E+00	-1,12E+04
18	LCB14_FR_sup(all)	I[18]	Max	-6,01E+03	2,97E+03	7,65E+00	-5,98E+03
18	LCB14_FR_sup(all)	I[18]	Min	-6,01E+03	-5,13E+03	-7,65E+00	-1,11E+04
18	LCB14_FR_sup(all)	J[19]	Max	-6,00E+03	5,08E+03	7,38E+00	-4,00E+03
18	LCB14_FR_sup(all)	J[19]	Min	-6,00E+03	-8,97E+03	-7,38E+00	-1,50E+04
19	LCB14_FR_sup(all)	I[19]	Max	-7,19E+03	4,34E+03	1,05E+01	-5,90E+03
19	LCB14_FR_sup(all)	I[19]	Min	-7,19E+03	-7,62E+03	-1,05E+01	-1,48E+04
19	LCB14_FR_sup(all)	J[20]	Max	-5,79E+03	4,50E+03	9,99E+00	-4,41E+03
19	LCB14_FR_sup(all)	J[20]	Min	-5,79E+03	-6,43E+03	-9,99E+00	-1,22E+04
20	LCB14_FR_sup(all)	I[20]	Max	-6,79E+03	3,54E+03	8,71E+00	-6,35E+03
20	LCB14_FR_sup(all)	I[20]	Min	-6,79E+03	-5,05E+03	-8,71E+00	-1,18E+04
20	LCB14_FR_sup(all)	J[21]	Max	-6,02E+03	4,61E+03	8,43E+00	-4,88E+03
20	LCB14_FR_sup(all)	J[21]	Min	-6,02E+03	-5,77E+03	-8,43E+00	-1,18E+04
21	LCB14_FR_sup(all)	I[21]	Max	-7,25E+03	3,65E+03	6,84E+00	-6,99E+03
21	LCB14_FR_sup(all)	I[21]	Min	-7,25E+03	-4,54E+03	-6,84E+00	-1,18E+04
21	LCB14_FR_sup(all)	J[22]	Max	-8,40E+03	4,16E+03	7,05E+00	-7,88E+03
21	LCB14_FR_sup(all)	J[22]	Min	-8,40E+03	-5,19E+03	-7,05E+00	-1,36E+04
22	LCB14_FR_sup(all)	I[22]	Max	-5,47E+03	3,44E+03	6,26E+00	-5,14E+03
22	LCB14_FR_sup(all)	I[22]	Min	-5,47E+03	-4,25E+03	-6,26E+00	-9,72E+03
22	LCB14_FR_sup(all)	J[23]	Max	-5,48E+03	3,80E+03	6,36E+00	-4,92E+03
22	LCB14_FR_sup(all)	J[23]	Min	-5,48E+03	-4,69E+03	-6,36E+00	-1,02E+04
23	LCB14_FR_sup(all)	I[23]	Max	-5,48E+03	3,79E+03	6,38E+00	-4,92E+03
23	LCB14_FR_sup(all)	I[23]	Min	-5,48E+03	-4,69E+03	-6,38E+00	-1,02E+04
23	LCB14_FR_sup(all)	J[24]	Max	-5,48E+03	2,99E+03	6,42E+00	-5,49E+03
23	LCB14_FR_sup(all)	J[24]	Min	-5,48E+03	-3,70E+03	-6,42E+00	-9,18E+03
24	LCB14_FR_sup(all)	I[24]	Max	-8,42E+03	3,64E+03	7,14E+00	-8,41E+03
24	LCB14_FR_sup(all)	I[24]	Min	-8,42E+03	-4,54E+03	-7,14E+00	-1,30E+04
24	LCB14_FR_sup(all)	J[25]	Max	-7,24E+03	2,32E+03	7,25E+00	-7,26E+03
24	LCB14_FR_sup(all)	J[25]	Min	-7,24E+03	-2,92E+03	-7,25E+00	-1,02E+04
25	LCB14_FR_sup(all)	I[25]	Max	-6,00E+03	3,24E+03	1,07E+01	-6,00E+03
25	LCB14_FR_sup(all)	I[25]	Min	-6,00E+03	-4,08E+03	-1,07E+01	-1,01E+04
25	LCB14_FR_sup(all)	J[26]	Max	-7,28E+03	2,79E+03	1,13E+01	-7,31E+03
25	LCB14_FR_sup(all)	J[26]	Min	-7,28E+03	-4,05E+03	-1,13E+01	-1,13E+04
26	LCB14_FR_sup(all)	I[26]	Max	-6,29E+03	3,74E+03	1,30E+01	-5,46E+03
26	LCB14_FR_sup(all)	I[26]	Min	-6,29E+03	-5,41E+03	-1,30E+01	-1,17E+04
26	LCB14_FR_sup(all)	J[27]	Max	-7,80E+03	3,81E+03	1,36E+01	-6,70E+03
26	LCB14_FR_sup(all)	J[27]	Min	-7,80E+03	-6,79E+03	-1,36E+01	-1,46E+04
27	LCB14_FR_sup(all)	I[27]	Max	-6,61E+03	4,54E+03	9,40E+00	-4,81E+03
27	LCB14_FR_sup(all)	I[27]	Min	-6,61E+03	-8,14E+03	-9,40E+00	-1,48E+04
27	LCB14_FR_sup(all)	J[28]	Max	-7,24E+03	3,44E+03	1,03E+01	-6,43E+03
27	LCB14_FR_sup(all)	J[28]	Min	-7,24E+03	-5,99E+03	-1,03E+01	-1,32E+04
28	LCB14_FR_sup(all)	I[28]	Max	-6,63E+03	3,79E+03	1,04E+01	-5,48E+03
28	LCB14_FR_sup(all)	I[28]	Min	-6,63E+03	-6,64E+03	-1,04E+01	-1,33E+04
28	LCB14_FR_sup(all)	J[29]	Max	-6,67E+03	2,26E+03	1,12E+01	-6,65E+03
28	LCB14_FR_sup(all)	J[29]	Min	-6,67E+03	-3,85E+03	-1,12E+01	-1,05E+04
29	LCB14_FR_sup(all)	I[29]	Max	-6,07E+03	2,62E+03	1,13E+01	-6,07E+03
29	LCB14_FR_sup(all)	I[29]	Min	-6,07E+03	-4,52E+03	-1,13E+01	-1,06E+04
29	LCB14_FR_sup(all)	J[30]	Max	-6,09E+03	1,74E+03	1,21E+01	-6,07E+03
29	LCB14_FR_sup(all)	J[30]	Min	-6,09E+03	-2,94E+03	-1,21E+01	-9,03E+03
30	LCB14_FR_sup(all)	I[30]	Max	-5,11E+03	1,56E+03	1,22E+01	-5,08E+03
30	LCB14_FR_sup(all)	I[30]	Min	-5,11E+03	-2,61E+03	-1,22E+01	-7,72E+03
30	LCB14_FR_sup(all)	J[31]	Max	-5,13E+03	3,15E+03	1,27E+01	-5,11E+03
30	LCB14_FR_sup(all)	J[31]	Min	-5,13E+03	-1,79E+03	-1,27E+01	-7,34E+03
31	LCB14_FR_sup(all)	I[31]	Max	-5,93E+03	3,31E+03	1,27E+01	-5,90E+03
31	LCB14_FR_sup(all)	I[31]	Min	-5,93E+03	-1,87E+03	-1,27E+01	-7,99E+03
31	LCB14_FR_sup(all)	J[32]	Max	-5,93E+03	3,59E+03	1,36E+01	-5,93E+03
31	LCB14_FR_sup(all)	J[32]	Min	-5,93E+03	-2,07E+03	-1,36E+01	-8,12E+03
32	LCB14_FR_sup(all)	I[32]	Max	-6,53E+03	4,05E+03	1,35E+01	-6,50E+03

Elem	Load	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
32	LCB14_FR_sup(all)	I[32]	Min	-6,53E+03	-2,30E+03	-1,35E+01	-8,84E+03
32	LCB14_FR_sup(all)	J[33]	Max	-6,50E+03	3,11E+03	1,44E+01	-6,53E+03
32	LCB14_FR_sup(all)	J[33]	Min	-6,50E+03	-1,83E+03	-1,44E+01	-9,48E+03
33	LCB14_FR_sup(all)	I[33]	Max	-7,13E+03	3,69E+03	1,44E+01	-7,14E+03
33	LCB14_FR_sup(all)	I[33]	Min	-7,13E+03	-2,13E+03	-1,44E+01	-9,53E+03
33	LCB14_FR_sup(all)	J[34]	Max	-7,09E+03	2,60E+03	1,53E+01	-7,18E+03
33	LCB14_FR_sup(all)	J[34]	Min	-7,09E+03	-4,72E+03	-1,53E+01	-1,18E+04
34	LCB14_FR_sup(all)	I[34]	Max	-8,24E+03	1,96E+03	1,71E+01	-8,28E+03
34	LCB14_FR_sup(all)	I[34]	Min	-8,24E+03	-3,51E+03	-1,71E+01	-1,18E+04
34	LCB14_FR_sup(all)	J[35]	Max	-7,34E+03	2,16E+03	1,79E+01	-7,42E+03
34	LCB14_FR_sup(all)	J[35]	Min	-7,34E+03	-3,74E+03	-1,79E+01	-1,11E+04
35	LCB14_FR_sup(all)	I[35]	Max	-8,42E+03	3,06E+03	1,83E+01	-8,48E+03
35	LCB14_FR_sup(all)	I[35]	Min	-8,42E+03	-1,93E+03	-1,83E+01	-1,10E+04
35	LCB14_FR_sup(all)	J[36]	Max	-7,40E+03	1,91E+03	1,87E+01	-7,45E+03
35	LCB14_FR_sup(all)	J[36]	Min	-7,40E+03	-3,08E+03	-1,87E+01	-1,05E+04
36	LCB14_FR_sup(all)	I[36]	Max	-8,40E+03	2,97E+03	1,86E+01	-8,45E+03
36	LCB14_FR_sup(all)	I[36]	Min	-8,40E+03	-1,99E+03	-1,86E+01	-1,04E+04
36	LCB14_FR_sup(all)	J[37]	Max	-7,45E+03	1,94E+03	1,92E+01	-7,49E+03
36	LCB14_FR_sup(all)	J[37]	Min	-7,45E+03	-2,93E+03	-1,92E+01	-1,04E+04
37	LCB14_FR_sup(all)	I[37]	Max	-8,39E+03	2,53E+03	1,96E+01	-8,43E+03
37	LCB14_FR_sup(all)	I[37]	Min	-8,39E+03	-1,78E+03	-1,96E+01	-1,02E+04
37	LCB14_FR_sup(all)	J[38]	Max	-7,95E+03	2,67E+03	2,00E+01	-7,97E+03
37	LCB14_FR_sup(all)	J[38]	Min	-7,95E+03	-3,77E+03	-2,00E+01	-1,17E+04
38	LCB14_FR_sup(all)	I[38]	Max	-8,80E+03	1,73E+03	2,08E+01	-8,84E+03
38	LCB14_FR_sup(all)	I[38]	Min	-8,80E+03	-2,52E+03	-2,08E+01	-1,13E+04
38	LCB14_FR_sup(all)	J[39]	Max	-8,22E+03	3,04E+03	2,10E+01	-7,70E+03
38	LCB14_FR_sup(all)	J[39]	Min	-8,22E+03	-4,00E+03	-2,10E+01	-1,22E+04
39	LCB14_FR_sup(all)	I[39]	Max	-8,99E+03	2,07E+03	2,27E+01	-9,03E+03
39	LCB14_FR_sup(all)	I[39]	Min	-8,99E+03	-2,80E+03	-2,27E+01	-1,18E+04
39	LCB14_FR_sup(all)	J[40]	Max	-8,28E+03	2,74E+03	2,26E+01	-7,82E+03
39	LCB14_FR_sup(all)	J[40]	Min	-8,28E+03	-3,37E+03	-2,26E+01	-1,16E+04
40	LCB14_FR_sup(all)	I[40]	Max	-9,03E+03	1,80E+03	2,41E+01	-9,06E+03
40	LCB14_FR_sup(all)	I[40]	Min	-9,03E+03	-2,30E+03	-2,41E+01	-1,13E+04
40	LCB14_FR_sup(all)	J[41]	Max	-8,20E+03	2,25E+03	2,36E+01	-8,00E+03
40	LCB14_FR_sup(all)	J[41]	Min	-8,20E+03	-2,60E+03	-2,36E+01	-1,08E+04
41	LCB14_FR_sup(all)	I[41]	Max	-8,87E+03	1,25E+03	2,58E+01	-8,91E+03
41	LCB14_FR_sup(all)	I[41]	Min	-8,87E+03	-1,53E+03	-2,58E+01	-1,04E+04
41	LCB14_FR_sup(all)	J[42]	Max	-9,95E+03	1,52E+03	2,51E+01	-9,96E+03
41	LCB14_FR_sup(all)	J[42]	Min	-9,95E+03	-1,37E+03	-2,51E+01	-1,13E+04
42	LCB14_FR_sup(all)	I[42]	Max	-4,64E+03	1,13E+03	1,13E+01	-4,64E+03
42	LCB14_FR_sup(all)	I[42]	Min	-4,64E+03	-9,75E+02	-1,13E+01	-5,63E+03
42	LCB14_FR_sup(all)	J[43]	Max	-4,64E+03	7,75E+02	1,14E+01	-4,64E+03
42	LCB14_FR_sup(all)	J[43]	Min	-4,64E+03	-8,78E+02	-1,14E+01	-5,52E+03
43	LCB14_FR_sup(all)	I[43]	Max	-4,61E+03	8,10E+02	1,13E+01	-4,61E+03
43	LCB14_FR_sup(all)	I[43]	Min	-4,61E+03	-9,18E+02	-1,13E+01	-5,53E+03
43	LCB14_FR_sup(all)	J[44]	Max	-4,61E+03	1,09E+03	1,12E+01	-4,61E+03
43	LCB14_FR_sup(all)	J[44]	Min	-4,61E+03	-9,44E+02	-1,12E+01	-5,56E+03
44	LCB14_FR_sup(all)	I[44]	Max	-9,96E+03	1,54E+03	2,49E+01	-9,97E+03
44	LCB14_FR_sup(all)	I[44]	Min	-9,96E+03	-1,38E+03	-2,49E+01	-1,14E+04
44	LCB14_FR_sup(all)	J[45]	Max	-8,90E+03	1,46E+03	2,56E+01	-8,94E+03
44	LCB14_FR_sup(all)	J[45]	Min	-8,90E+03	-1,77E+03	-2,56E+01	-1,07E+04
45	LCB14_FR_sup(all)	I[45]	Max	-8,23E+03	2,46E+03	2,35E+01	-7,83E+03
45	LCB14_FR_sup(all)	I[45]	Min	-8,23E+03	-2,85E+03	-2,35E+01	-1,11E+04
45	LCB14_FR_sup(all)	J[46]	Max	-9,05E+03	1,95E+03	2,39E+01	-9,08E+03
45	LCB14_FR_sup(all)	J[46]	Min	-9,05E+03	-2,49E+03	-2,39E+01	-1,15E+04
46	LCB14_FR_sup(all)	I[46]	Max	-8,29E+03	2,88E+03	2,25E+01	-7,71E+03
46	LCB14_FR_sup(all)	I[46]	Min	-8,29E+03	-3,55E+03	-2,25E+01	-1,19E+04
46	LCB14_FR_sup(all)	J[47]	Max	-9,00E+03	2,15E+03	2,26E+01	-9,03E+03
46	LCB14_FR_sup(all)	J[47]	Min	-9,00E+03	-2,90E+03	-2,26E+01	-1,19E+04
47	LCB14_FR_sup(all)	I[47]	Max	-8,23E+03	3,12E+03	2,09E+01	-7,66E+03
47	LCB14_FR_sup(all)	I[47]	Min	-8,23E+03	-4,11E+03	-2,09E+01	-1,23E+04
47	LCB14_FR_sup(all)	J[48]	Max	-8,77E+03	1,79E+03	2,07E+01	-8,82E+03
47	LCB14_FR_sup(all)	J[48]	Min	-8,77E+03	-2,60E+03	-2,07E+01	-1,14E+04
48	LCB14_FR_sup(all)	I[48]	Max	-7,92E+03	2,72E+03	1,99E+01	-7,94E+03
48	LCB14_FR_sup(all)	I[48]	Min	-7,92E+03	-3,85E+03	-1,99E+01	-1,18E+04

Elem	Load	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
48	LCB14_FR_sup(all)	J[49]	Max	-8,36E+03	2,61E+03	1,96E+01	-8,41E+03
48	LCB14_FR_sup(all)	J[49]	Min	-8,36E+03	-1,84E+03	-1,96E+01	-1,02E+04
49	LCB14_FR_sup(all)	I[49]	Max	-7,42E+03	1,97E+03	1,91E+01	-7,46E+03
49	LCB14_FR_sup(all)	I[49]	Min	-7,42E+03	-2,98E+03	-1,91E+01	-1,04E+04
49	LCB14_FR_sup(all)	J[50]	Max	-8,38E+03	3,10E+03	1,86E+01	-8,43E+03
49	LCB14_FR_sup(all)	J[50]	Min	-8,38E+03	-2,07E+03	-1,86E+01	-1,05E+04
50	LCB14_FR_sup(all)	I[50]	Max	-7,37E+03	1,93E+03	1,87E+01	-7,43E+03
50	LCB14_FR_sup(all)	I[50]	Min	-7,37E+03	-3,13E+03	-1,87E+01	-1,05E+04
50	LCB14_FR_sup(all)	J[51]	Max	-8,40E+03	3,21E+03	1,84E+01	-8,45E+03
50	LCB14_FR_sup(all)	J[51]	Min	-8,40E+03	-2,03E+03	-1,84E+01	-1,10E+04
51	LCB14_FR_sup(all)	I[51]	Max	-7,32E+03	2,19E+03	1,79E+01	-7,40E+03
51	LCB14_FR_sup(all)	I[51]	Min	-7,32E+03	-3,79E+03	-1,79E+01	-1,11E+04
51	LCB14_FR_sup(all)	J[52]	Max	-8,21E+03	1,94E+03	1,72E+01	-8,26E+03
51	LCB14_FR_sup(all)	J[52]	Min	-8,21E+03	-3,50E+03	-1,72E+01	-1,17E+04
52	LCB14_FR_sup(all)	I[52]	Max	-7,07E+03	2,60E+03	1,54E+01	-7,15E+03
52	LCB14_FR_sup(all)	I[52]	Min	-7,07E+03	-4,73E+03	-1,54E+01	-1,18E+04
52	LCB14_FR_sup(all)	J[53]	Max	-7,12E+03	3,83E+03	1,46E+01	-7,13E+03
52	LCB14_FR_sup(all)	J[53]	Min	-7,12E+03	-2,21E+03	-1,46E+01	-9,48E+03
53	LCB14_FR_sup(all)	I[53]	Max	-6,54E+03	3,30E+03	1,46E+01	-6,57E+03
53	LCB14_FR_sup(all)	I[53]	Min	-6,54E+03	-1,95E+03	-1,46E+01	-9,43E+03
53	LCB14_FR_sup(all)	J[54]	Max	-6,57E+03	4,24E+03	1,38E+01	-6,54E+03
53	LCB14_FR_sup(all)	J[54]	Min	-6,57E+03	-2,41E+03	-1,38E+01	-8,99E+03
54	LCB14_FR_sup(all)	I[54]	Max	-5,92E+03	3,69E+03	1,38E+01	-5,92E+03
54	LCB14_FR_sup(all)	I[54]	Min	-5,92E+03	-2,14E+03	-1,38E+01	-8,09E+03
54	LCB14_FR_sup(all)	J[55]	Max	-5,91E+03	3,43E+03	1,30E+01	-5,89E+03
54	LCB14_FR_sup(all)	J[55]	Min	-5,91E+03	-1,94E+03	-1,30E+01	-7,90E+03
55	LCB14_FR_sup(all)	I[55]	Max	-5,19E+03	3,33E+03	1,30E+01	-5,17E+03
55	LCB14_FR_sup(all)	I[55]	Min	-5,19E+03	-1,90E+03	-1,30E+01	-7,28E+03
55	LCB14_FR_sup(all)	J[56]	Max	-5,17E+03	2,69E+03	1,25E+01	-5,15E+03
55	LCB14_FR_sup(all)	J[56]	Min	-5,17E+03	-1,52E+03	-1,25E+01	-7,66E+03
56	LCB14_FR_sup(all)	I[56]	Max	-5,97E+03	2,86E+03	1,25E+01	-5,94E+03
56	LCB14_FR_sup(all)	I[56]	Min	-5,97E+03	-1,61E+03	-1,25E+01	-8,29E+03
56	LCB14_FR_sup(all)	J[57]	Max	-5,93E+03	2,23E+03	1,17E+01	-5,93E+03
56	LCB14_FR_sup(all)	J[57]	Min	-5,93E+03	-3,82E+03	-1,17E+01	-9,75E+03
57	LCB14_FR_sup(all)	I[57]	Max	-6,58E+03	1,96E+03	1,17E+01	-6,56E+03
57	LCB14_FR_sup(all)	I[57]	Min	-6,58E+03	-3,30E+03	-1,17E+01	-9,89E+03
57	LCB14_FR_sup(all)	J[58]	Max	-6,53E+03	3,42E+03	1,09E+01	-5,69E+03
57	LCB14_FR_sup(all)	J[58]	Min	-6,53E+03	-5,97E+03	-1,09E+01	-1,25E+04
58	LCB14_FR_sup(all)	I[58]	Max	-7,17E+03	3,11E+03	1,07E+01	-6,64E+03
58	LCB14_FR_sup(all)	I[58]	Min	-7,17E+03	-5,39E+03	-1,07E+01	-1,26E+04
58	LCB14_FR_sup(all)	J[59]	Max	-6,55E+03	4,20E+03	9,96E+00	-5,01E+03
58	LCB14_FR_sup(all)	J[59]	Min	-6,55E+03	-7,51E+03	-9,96E+00	-1,41E+04
59	LCB14_FR_sup(all)	I[59]	Max	-7,76E+03	3,49E+03	1,41E+01	-6,89E+03
59	LCB14_FR_sup(all)	I[59]	Min	-7,76E+03	-6,22E+03	-1,41E+01	-1,40E+04
59	LCB14_FR_sup(all)	J[60]	Max	-6,26E+03	3,38E+03	1,35E+01	-5,61E+03
59	LCB14_FR_sup(all)	J[60]	Min	-6,26E+03	-4,89E+03	-1,35E+01	-1,12E+04
60	LCB14_FR_sup(all)	I[60]	Max	-7,26E+03	2,45E+03	1,18E+01	-7,29E+03
60	LCB14_FR_sup(all)	I[60]	Min	-7,26E+03	-3,55E+03	-1,18E+01	-1,08E+04
60	LCB14_FR_sup(all)	J[61]	Max	-5,98E+03	2,90E+03	1,13E+01	-5,98E+03
60	LCB14_FR_sup(all)	J[61]	Min	-5,98E+03	-3,65E+03	-1,13E+01	-9,63E+03
61	LCB14_FR_sup(all)	I[61]	Max	-7,23E+03	2,02E+03	7,61E+00	-7,24E+03
61	LCB14_FR_sup(all)	I[61]	Min	-7,23E+03	-2,54E+03	-7,61E+00	-9,77E+03
61	LCB14_FR_sup(all)	J[62]	Max	-8,00E+03	2,93E+03	7,52E+00	-8,00E+03
61	LCB14_FR_sup(all)	J[62]	Min	-8,00E+03	-3,65E+03	-7,52E+00	-1,17E+04
62	LCB14_FR_sup(all)	I[62]	Max	-5,21E+03	2,38E+03	6,82E+00	-5,21E+03
62	LCB14_FR_sup(all)	I[62]	Min	-5,21E+03	-2,95E+03	-6,82E+00	-8,16E+03
62	LCB14_FR_sup(all)	J[63]	Max	-5,21E+03	3,12E+03	6,79E+00	-5,11E+03
62	LCB14_FR_sup(all)	J[63]	Min	-5,21E+03	-3,86E+03	-6,79E+00	-9,07E+03
63	LCB14_FR_sup(all)	I[63]	Max	-5,21E+03	3,13E+03	6,79E+00	-5,11E+03
63	LCB14_FR_sup(all)	I[63]	Min	-5,21E+03	-3,86E+03	-6,79E+00	-9,07E+03
63	LCB14_FR_sup(all)	J[64]	Max	-5,19E+03	2,79E+03	6,64E+00	-5,19E+03
63	LCB14_FR_sup(all)	J[64]	Min	-5,19E+03	-3,45E+03	-6,64E+00	-8,64E+03
64	LCB14_FR_sup(all)	I[64]	Max	-7,97E+03	3,40E+03	7,47E+00	-7,98E+03
64	LCB14_FR_sup(all)	I[64]	Min	-7,97E+03	-4,24E+03	-7,47E+00	-1,22E+04
64	LCB14_FR_sup(all)	J[65]	Max	-6,83E+03	2,95E+03	7,17E+00	-6,85E+03

Elem	Load	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
64	LCB14_FR_sup(all)	J[65]	Min	-6,83E+03	-3,68E+03	-7,17E+00	-1,05E+04
65	LCB14_FR_sup(all)	I[65]	Max	-5,60E+03	3,85E+03	9,33E+00	-5,06E+03
65	LCB14_FR_sup(all)	I[65]	Min	-5,60E+03	-4,83E+03	-9,33E+00	-1,04E+04
65	LCB14_FR_sup(all)	J[66]	Max	-6,31E+03	3,18E+03	8,73E+00	-6,25E+03
65	LCB14_FR_sup(all)	J[66]	Min	-6,31E+03	-4,55E+03	-8,73E+00	-1,09E+04
66	LCB14_FR_sup(all)	I[66]	Max	-5,31E+03	4,13E+03	1,01E+01	-4,31E+03
66	LCB14_FR_sup(all)	I[66]	Min	-5,31E+03	-5,91E+03	-1,01E+01	-1,12E+04
66	LCB14_FR_sup(all)	J[67]	Max	-6,05E+03	3,46E+03	9,38E+00	-5,75E+03
66	LCB14_FR_sup(all)	J[67]	Min	-6,05E+03	-6,14E+03	-9,38E+00	-1,22E+04
67	LCB14_FR_sup(all)	I[67]	Max	-4,85E+03	4,21E+03	6,74E+00	-3,82E+03
67	LCB14_FR_sup(all)	I[67]	Min	-4,85E+03	-7,50E+03	-6,74E+00	-1,24E+04
67	LCB14_FR_sup(all)	J[68]	Max	-4,86E+03	2,45E+03	5,69E+00	-4,84E+03
67	LCB14_FR_sup(all)	J[68]	Min	-4,86E+03	-4,29E+03	-5,69E+00	-9,15E+03
68	LCB14_FR_sup(all)	I[68]	Max	-4,25E+03	2,82E+03	5,71E+00	-4,25E+03
68	LCB14_FR_sup(all)	I[68]	Min	-4,25E+03	-4,97E+03	-5,71E+00	-9,22E+03
68	LCB14_FR_sup(all)	J[69]	Max	-4,26E+03	1,67E+03	4,65E+00	-4,23E+03
68	LCB14_FR_sup(all)	J[69]	Min	-4,26E+03	-2,88E+03	-4,65E+00	-7,14E+03
69	LCB14_FR_sup(all)	I[69]	Max	-3,64E+03	2,05E+03	4,66E+00	-3,63E+03
69	LCB14_FR_sup(all)	I[69]	Min	-3,64E+03	-3,57E+03	-4,66E+00	-7,21E+03
69	LCB14_FR_sup(all)	J[70]	Max	-3,64E+03	1,51E+03	3,60E+00	-3,62E+03
69	LCB14_FR_sup(all)	J[70]	Min	-3,64E+03	-2,61E+03	-3,60E+00	-6,25E+03
70	LCB14_FR_sup(all)	I[70]	Max	-2,92E+03	1,73E+03	3,61E+00	-2,92E+03
70	LCB14_FR_sup(all)	I[70]	Min	-2,92E+03	-3,01E+03	-3,61E+00	-5,94E+03
70	LCB14_FR_sup(all)	J[71]	Max	-2,91E+03	1,67E+03	2,76E+00	-2,91E+03
70	LCB14_FR_sup(all)	J[71]	Min	-2,91E+03	-2,90E+03	-2,76E+00	-5,81E+03
71	LCB14_FR_sup(all)	I[71]	Max	-2,91E+03	1,67E+03	2,76E+00	-2,91E+03
71	LCB14_FR_sup(all)	I[71]	Min	-2,91E+03	-2,90E+03	-2,76E+00	-5,81E+03
71	LCB14_FR_sup(all)	J[72]	Max	-2,89E+03	1,84E+03	2,12E+00	-2,57E+03
71	LCB14_FR_sup(all)	J[72]	Min	-2,89E+03	-3,20E+03	-2,12E+00	-6,09E+03
72	LCB14_FR_sup(all)	I[72]	Max	-2,89E+03	1,84E+03	2,11E+00	-2,57E+03
72	LCB14_FR_sup(all)	I[72]	Min	-2,89E+03	-3,20E+03	-2,11E+00	-6,09E+03
72	LCB14_FR_sup(all)	J[73]	Max	-2,81E+03	1,91E+03	1,26E+00	-1,88E+03
72	LCB14_FR_sup(all)	J[73]	Min	-2,81E+03	-3,33E+03	-1,26E+00	-6,14E+03
73	LCB14_FR_sup(all)	I[73]	Max	-2,82E+03	1,91E+03	4,95E+00	-1,88E+03
73	LCB14_FR_sup(all)	I[73]	Min	-2,82E+03	-3,33E+03	-4,95E+00	-6,15E+03
73	LCB14_FR_sup(all)	J[74]	Max	-2,41E+03	1,05E+03	4,82E+00	-1,54E+03
73	LCB14_FR_sup(all)	J[74]	Min	-2,41E+03	-1,49E+03	-4,82E+00	-3,90E+03
74	LCB14_FR_sup(all)	I[74]	Max	-1,23E+03	6,22E+02	1,51E-01	-7,66E+02
74	LCB14_FR_sup(all)	I[74]	Min	-1,23E+03	-7,56E+02	-1,51E-01	-1,99E+03
74	LCB14_FR_sup(all)	J[75]	Max	-1,23E+03	5,19E+02	1,15E-01	-7,35E+02
74	LCB14_FR_sup(all)	J[75]	Min	-1,23E+03	-6,31E+02	-1,15E-01	-1,86E+03
75	LCB14_FR_sup(all)	I[75]	Max	-1,23E+03	5,21E+02	5,17E-02	-7,36E+02
75	LCB14_FR_sup(all)	I[75]	Min	-1,23E+03	-6,34E+02	-5,17E-02	-1,87E+03
75	LCB14_FR_sup(all)	J[76]	Max	4,93E+01	3,86E+01	5,21E-02	8,79E+01
75	LCB14_FR_sup(all)	J[76]	Min	4,93E+01	-3,16E+01	-5,21E-02	1,77E+01
1	LCB15_FR_inf(all)	I[1]	Max	5,20E+01	4,08E+01	1,05E-01	9,29E+01
1	LCB15_FR_inf(all)	I[1]	Min	5,20E+01	-3,35E+01	-1,05E-01	1,85E+01
1	LCB15_FR_inf(all)	J[2]	Max	-1,17E+03	8,31E+02	1,04E-01	-3,68E+02
1	LCB15_FR_inf(all)	J[2]	Min	-1,17E+03	-1,01E+03	-1,04E-01	-2,18E+03
2	LCB15_FR_inf(all)	I[2]	Max	-1,17E+03	8,28E+02	1,21E-01	-3,66E+02
2	LCB15_FR_inf(all)	I[2]	Min	-1,17E+03	-1,01E+03	-1,21E-01	-2,17E+03
2	LCB15_FR_inf(all)	J[3]	Max	-1,18E+03	8,42E+02	2,36E-01	-5,07E+02
2	LCB15_FR_inf(all)	J[3]	Min	-1,18E+03	-1,02E+03	-2,36E-01	-2,20E+03
3	LCB15_FR_inf(all)	I[3]	Max	-2,29E+03	1,28E+03	4,56E+00	-1,21E+03
3	LCB15_FR_inf(all)	I[3]	Min	-2,29E+03	-1,80E+03	-4,56E+00	-4,09E+03
3	LCB15_FR_inf(all)	J[4]	Max	-2,69E+03	1,34E+03	5,15E+00	-2,41E+03
3	LCB15_FR_inf(all)	J[4]	Min	-2,69E+03	-2,33E+03	-5,15E+00	-5,01E+03
4	LCB15_FR_inf(all)	I[4]	Max	-2,67E+03	1,34E+03	2,00E+00	-2,39E+03
4	LCB15_FR_inf(all)	I[4]	Min	-2,67E+03	-2,33E+03	-2,00E+00	-5,00E+03
4	LCB15_FR_inf(all)	J[5]	Max	-3,20E+03	1,36E+03	5,42E+00	-3,20E+03
4	LCB15_FR_inf(all)	J[5]	Min	-3,20E+03	-2,33E+03	-5,42E+00	-5,53E+03
5	LCB15_FR_inf(all)	I[5]	Max	-3,20E+03	1,36E+03	5,44E+00	-3,19E+03
5	LCB15_FR_inf(all)	I[5]	Min	-3,20E+03	-2,33E+03	-5,44E+00	-5,53E+03
5	LCB15_FR_inf(all)	J[6]	Max	-3,26E+03	2,43E+03	5,81E+00	-3,25E+03
5	LCB15_FR_inf(all)	J[6]	Min	-3,26E+03	-1,39E+03	-5,81E+00	-4,84E+03

Elem	Load	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
6	LCB15_FR_inf(all)	I[6]	Max	-3,26E+03	2,43E+03	5,81E+00	-3,25E+03
6	LCB15_FR_inf(all)	I[6]	Min	-3,26E+03	-1,39E+03	-5,81E+00	-4,84E+03
6	LCB15_FR_inf(all)	J[7]	Max	-3,28E+03	3,07E+03	6,13E+00	-3,28E+03
6	LCB15_FR_inf(all)	J[7]	Min	-3,28E+03	-1,77E+03	-6,13E+00	-5,05E+03
7	LCB15_FR_inf(all)	I[7]	Max	-3,28E+03	3,07E+03	6,13E+00	-3,28E+03
7	LCB15_FR_inf(all)	I[7]	Min	-3,28E+03	-1,77E+03	-6,13E+00	-5,05E+03
7	LCB15_FR_inf(all)	J[8]	Max	-3,28E+03	2,88E+03	6,50E+00	-3,28E+03
7	LCB15_FR_inf(all)	J[8]	Min	-3,28E+03	-1,66E+03	-6,50E+00	-5,67E+03
8	LCB15_FR_inf(all)	I[8]	Max	-3,75E+03	3,45E+03	6,47E+00	-3,75E+03
8	LCB15_FR_inf(all)	I[8]	Min	-3,75E+03	-1,99E+03	-6,47E+00	-5,74E+03
8	LCB15_FR_inf(all)	J[9]	Max	-4,19E+03	2,92E+03	6,72E+00	-4,20E+03
8	LCB15_FR_inf(all)	J[9]	Min	-4,19E+03	-1,68E+03	-6,72E+00	-7,05E+03
9	LCB15_FR_inf(all)	I[9]	Max	-4,66E+03	3,44E+03	9,46E+00	-4,67E+03
9	LCB15_FR_inf(all)	I[9]	Min	-4,66E+03	-1,97E+03	-9,46E+00	-7,00E+03
9	LCB15_FR_inf(all)	J[10]	Max	-3,63E+03	2,83E+03	1,45E+01	-3,64E+03
9	LCB15_FR_inf(all)	J[10]	Min	-3,63E+03	-2,01E+03	-1,45E+01	-5,94E+03
10	LCB15_FR_inf(all)	I[10]	Max	-2,26E+03	1,58E+03	8,75E+00	-2,26E+03
10	LCB15_FR_inf(all)	I[10]	Min	-2,26E+03	-1,92E+03	-8,75E+00	-4,18E+03
10	LCB15_FR_inf(all)	J[11]	Max	-2,24E+03	1,96E+03	9,00E+00	-2,25E+03
10	LCB15_FR_inf(all)	J[11]	Min	-2,24E+03	-2,37E+03	-9,00E+00	-4,62E+03
11	LCB15_FR_inf(all)	I[11]	Max	-2,24E+03	1,96E+03	9,01E+00	-2,25E+03
11	LCB15_FR_inf(all)	I[11]	Min	-2,24E+03	-2,37E+03	-9,01E+00	-4,62E+03
11	LCB15_FR_inf(all)	J[12]	Max	-2,26E+03	1,57E+03	8,80E+00	-2,26E+03
11	LCB15_FR_inf(all)	J[12]	Min	-2,26E+03	-1,90E+03	-8,80E+00	-4,16E+03
12	LCB15_FR_inf(all)	I[12]	Max	-3,62E+03	2,79E+03	1,56E+01	-3,63E+03
12	LCB15_FR_inf(all)	I[12]	Min	-3,62E+03	-1,99E+03	-1,56E+01	-5,88E+03
12	LCB15_FR_inf(all)	J[13]	Max	-4,20E+03	4,31E+03	1,47E+01	-4,21E+03
12	LCB15_FR_inf(all)	J[13]	Min	-4,20E+03	-2,45E+03	-1,47E+01	-6,67E+03
13	LCB15_FR_inf(all)	I[13]	Max	-4,61E+03	3,15E+03	1,05E+01	-4,62E+03
13	LCB15_FR_inf(all)	I[13]	Min	-4,61E+03	-1,81E+03	-1,05E+01	-6,82E+03
13	LCB15_FR_inf(all)	J[14]	Max	-4,20E+03	3,33E+03	9,11E+00	-4,21E+03
13	LCB15_FR_inf(all)	J[14]	Min	-4,20E+03	-1,91E+03	-9,11E+00	-6,12E+03
14	LCB15_FR_inf(all)	I[14]	Max	-4,21E+03	3,33E+03	9,13E+00	-4,22E+03
14	LCB15_FR_inf(all)	I[14]	Min	-4,21E+03	-1,91E+03	-9,13E+00	-6,14E+03
14	LCB15_FR_inf(all)	J[15]	Max	-3,26E+03	2,56E+03	8,60E+00	-3,26E+03
14	LCB15_FR_inf(all)	J[15]	Min	-3,26E+03	-1,47E+03	-8,60E+00	-5,60E+03
15	LCB15_FR_inf(all)	I[15]	Max	-3,27E+03	2,56E+03	8,61E+00	-3,27E+03
15	LCB15_FR_inf(all)	I[15]	Min	-3,27E+03	-1,47E+03	-8,61E+00	-5,61E+03
15	LCB15_FR_inf(all)	J[16]	Max	-3,26E+03	2,45E+03	8,19E+00	-3,26E+03
15	LCB15_FR_inf(all)	J[16]	Min	-3,26E+03	3,43E+00	-8,19E+00	-5,69E+03
16	LCB15_FR_inf(all)	I[16]	Max	-3,94E+03	2,61E+03	8,19E+00	-3,92E+03
16	LCB15_FR_inf(all)	I[16]	Min	-3,94E+03	-1,47E+03	-8,19E+00	-6,20E+03
16	LCB15_FR_inf(all)	J[17]	Max	-3,93E+03	1,98E+03	7,83E+00	-3,93E+03
16	LCB15_FR_inf(all)	J[17]	Min	-3,93E+03	-3,42E+03	-7,83E+00	-7,36E+03
17	LCB15_FR_inf(all)	I[17]	Max	-4,41E+03	1,68E+03	7,82E+00	-4,39E+03
17	LCB15_FR_inf(all)	I[17]	Min	-4,41E+03	-2,86E+03	-7,82E+00	-7,28E+03
17	LCB15_FR_inf(all)	J[18]	Max	-4,40E+03	3,04E+03	7,57E+00	-4,31E+03
17	LCB15_FR_inf(all)	J[18]	Min	-4,40E+03	-5,32E+03	-7,57E+00	-9,73E+03
18	LCB15_FR_inf(all)	I[18]	Max	-4,90E+03	2,74E+03	7,54E+00	-4,89E+03
18	LCB15_FR_inf(all)	I[18]	Min	-4,90E+03	-4,77E+03	-7,54E+00	-9,67E+03
18	LCB15_FR_inf(all)	J[19]	Max	-4,89E+03	4,78E+03	7,33E+00	-3,19E+03
18	LCB15_FR_inf(all)	J[19]	Min	-4,89E+03	-8,47E+03	-7,33E+00	-1,34E+04
19	LCB15_FR_inf(all)	I[19]	Max	-5,87E+03	4,17E+03	1,04E+01	-4,75E+03
19	LCB15_FR_inf(all)	I[19]	Min	-5,87E+03	-7,37E+03	-1,04E+01	-1,32E+04
19	LCB15_FR_inf(all)	J[20]	Max	-4,72E+03	4,68E+03	9,99E+00	-3,16E+03
19	LCB15_FR_inf(all)	J[20]	Min	-4,72E+03	-6,71E+03	-9,99E+00	-1,14E+04
20	LCB15_FR_inf(all)	I[20]	Max	-5,53E+03	3,89E+03	8,70E+00	-4,75E+03
20	LCB15_FR_inf(all)	I[20]	Min	-5,53E+03	-5,57E+03	-8,70E+00	-1,11E+04
20	LCB15_FR_inf(all)	J[21]	Max	-4,91E+03	5,28E+03	8,47E+00	-3,09E+03
20	LCB15_FR_inf(all)	J[21]	Min	-4,91E+03	-6,62E+03	-8,47E+00	-1,15E+04
21	LCB15_FR_inf(all)	I[21]	Max	-5,91E+03	4,46E+03	6,87E+00	-4,84E+03
21	LCB15_FR_inf(all)	I[21]	Min	-5,91E+03	-5,55E+03	-6,87E+00	-1,15E+04
21	LCB15_FR_inf(all)	J[22]	Max	-6,85E+03	5,14E+03	7,09E+00	-5,35E+03
21	LCB15_FR_inf(all)	J[22]	Min	-6,85E+03	-6,39E+03	-7,09E+00	-1,32E+04
22	LCB15_FR_inf(all)	I[22]	Max	-4,46E+03	4,30E+03	6,29E+00	-3,28E+03

Elem	Load	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
22	LCB15_FR_inf(all)	I[22]	Min	-4,46E+03	-5,30E+03	-6,29E+00	-9,77E+03
22	LCB15_FR_inf(all)	J[23]	Max	-4,47E+03	4,71E+03	6,40E+00	-3,00E+03
22	LCB15_FR_inf(all)	J[23]	Min	-4,47E+03	-5,81E+03	-6,40E+00	-1,03E+04
23	LCB15_FR_inf(all)	I[23]	Max	-4,47E+03	4,70E+03	6,43E+00	-3,00E+03
23	LCB15_FR_inf(all)	I[23]	Min	-4,47E+03	-5,80E+03	-6,43E+00	-1,03E+04
23	LCB15_FR_inf(all)	J[24]	Max	-4,47E+03	3,91E+03	6,46E+00	-3,67E+03
23	LCB15_FR_inf(all)	J[24]	Min	-4,47E+03	-4,83E+03	-6,46E+00	-9,31E+03
24	LCB15_FR_inf(all)	I[24]	Max	-6,87E+03	4,70E+03	7,19E+00	-5,80E+03
24	LCB15_FR_inf(all)	I[24]	Min	-6,87E+03	-5,84E+03	-7,19E+00	-1,27E+04
24	LCB15_FR_inf(all)	J[25]	Max	-5,90E+03	3,33E+03	7,30E+00	-5,91E+03
24	LCB15_FR_inf(all)	J[25]	Min	-5,90E+03	-4,16E+03	-7,30E+00	-1,01E+04
25	LCB15_FR_inf(all)	I[25]	Max	-4,89E+03	4,12E+03	1,08E+01	-4,18E+03
25	LCB15_FR_inf(all)	I[25]	Min	-4,89E+03	-5,18E+03	-1,08E+01	-1,01E+04
25	LCB15_FR_inf(all)	J[26]	Max	-5,94E+03	3,16E+03	1,13E+01	-5,67E+03
25	LCB15_FR_inf(all)	J[26]	Min	-5,94E+03	-4,59E+03	-1,13E+01	-1,05E+04
26	LCB15_FR_inf(all)	I[26]	Max	-5,13E+03	3,94E+03	1,31E+01	-4,10E+03
26	LCB15_FR_inf(all)	I[26]	Min	-5,13E+03	-5,72E+03	-1,31E+01	-1,09E+04
26	LCB15_FR_inf(all)	J[27]	Max	-6,36E+03	3,54E+03	1,37E+01	-5,54E+03
26	LCB15_FR_inf(all)	J[27]	Min	-6,36E+03	-6,37E+03	-1,37E+01	-1,27E+04
27	LCB15_FR_inf(all)	I[27]	Max	-5,39E+03	4,14E+03	9,46E+00	-3,99E+03
27	LCB15_FR_inf(all)	I[27]	Min	-5,39E+03	-7,47E+03	-9,46E+00	-1,29E+04
27	LCB15_FR_inf(all)	J[28]	Max	-5,90E+03	2,88E+03	1,03E+01	-5,65E+03
27	LCB15_FR_inf(all)	J[28]	Min	-5,90E+03	-5,05E+03	-1,03E+01	-1,10E+04
28	LCB15_FR_inf(all)	I[28]	Max	-5,40E+03	3,17E+03	1,04E+01	-4,88E+03
28	LCB15_FR_inf(all)	I[28]	Min	-5,40E+03	-5,59E+03	-1,04E+01	-1,10E+04
28	LCB15_FR_inf(all)	J[29]	Max	-5,43E+03	1,70E+03	1,13E+01	-5,43E+03
28	LCB15_FR_inf(all)	J[29]	Min	-5,43E+03	-2,90E+03	-1,13E+01	-8,34E+03
29	LCB15_FR_inf(all)	I[29]	Max	-4,94E+03	1,99E+03	1,13E+01	-4,96E+03
29	LCB15_FR_inf(all)	I[29]	Min	-4,94E+03	-3,45E+03	-1,13E+01	-8,39E+03
29	LCB15_FR_inf(all)	J[30]	Max	-4,97E+03	3,15E+03	1,22E+01	-4,95E+03
29	LCB15_FR_inf(all)	J[30]	Min	-4,97E+03	-1,80E+03	-1,22E+01	-6,96E+03
30	LCB15_FR_inf(all)	I[30]	Max	-4,15E+03	3,42E+03	1,22E+01	-4,13E+03
30	LCB15_FR_inf(all)	I[30]	Min	-4,15E+03	-1,95E+03	-1,22E+01	-6,12E+03
30	LCB15_FR_inf(all)	J[31]	Max	-4,17E+03	3,95E+03	1,27E+01	-4,15E+03
30	LCB15_FR_inf(all)	J[31]	Min	-4,17E+03	-2,26E+03	-1,27E+01	-6,45E+03
31	LCB15_FR_inf(all)	I[31]	Max	-4,83E+03	4,07E+03	1,27E+01	-4,81E+03
31	LCB15_FR_inf(all)	I[31]	Min	-4,83E+03	-2,32E+03	-1,27E+01	-7,16E+03
31	LCB15_FR_inf(all)	J[32]	Max	-4,83E+03	4,15E+03	1,36E+01	-4,84E+03
31	LCB15_FR_inf(all)	J[32]	Min	-4,83E+03	-2,41E+03	-1,36E+01	-7,25E+03
32	LCB15_FR_inf(all)	I[32]	Max	-5,32E+03	4,53E+03	1,36E+01	-5,31E+03
32	LCB15_FR_inf(all)	I[32]	Min	-5,32E+03	-2,59E+03	-1,36E+01	-7,92E+03
32	LCB15_FR_inf(all)	J[33]	Max	-5,30E+03	3,36E+03	1,44E+01	-5,34E+03
32	LCB15_FR_inf(all)	J[33]	Min	-5,30E+03	-2,00E+03	-1,44E+01	-8,02E+03
33	LCB15_FR_inf(all)	I[33]	Max	-5,81E+03	3,83E+03	1,44E+01	-5,84E+03
33	LCB15_FR_inf(all)	I[33]	Min	-5,81E+03	-2,23E+03	-1,44E+01	-8,06E+03
33	LCB15_FR_inf(all)	J[34]	Max	-5,78E+03	2,63E+03	1,53E+01	-5,88E+03
33	LCB15_FR_inf(all)	J[34]	Min	-5,78E+03	-4,83E+03	-1,53E+01	-1,06E+04
34	LCB15_FR_inf(all)	I[34]	Max	-6,72E+03	2,11E+03	1,71E+01	-6,78E+03
34	LCB15_FR_inf(all)	I[34]	Min	-6,72E+03	-3,84E+03	-1,71E+01	-1,06E+04
34	LCB15_FR_inf(all)	J[35]	Max	-5,99E+03	2,68E+03	1,79E+01	-6,08E+03
34	LCB15_FR_inf(all)	J[35]	Min	-5,99E+03	-4,63E+03	-1,79E+01	-1,06E+04
35	LCB15_FR_inf(all)	I[35]	Max	-6,87E+03	2,10E+03	1,83E+01	-6,95E+03
35	LCB15_FR_inf(all)	I[35]	Min	-6,87E+03	-3,64E+03	-1,83E+01	-1,05E+04
35	LCB15_FR_inf(all)	J[36]	Max	-6,03E+03	2,88E+03	1,87E+01	-6,11E+03
35	LCB15_FR_inf(all)	J[36]	Min	-6,03E+03	-4,62E+03	-1,87E+01	-1,07E+04
36	LCB15_FR_inf(all)	I[36]	Max	-6,85E+03	2,24E+03	1,86E+01	-6,92E+03
36	LCB15_FR_inf(all)	I[36]	Min	-6,85E+03	-3,64E+03	-1,86E+01	-1,05E+04
36	LCB15_FR_inf(all)	J[37]	Max	-6,08E+03	3,34E+03	1,92E+01	-5,63E+03
36	LCB15_FR_inf(all)	J[37]	Min	-6,08E+03	-5,00E+03	-1,92E+01	-1,11E+04
37	LCB15_FR_inf(all)	I[37]	Max	-6,85E+03	2,66E+03	1,96E+01	-6,90E+03
37	LCB15_FR_inf(all)	I[37]	Min	-6,85E+03	-4,03E+03	-1,96E+01	-1,09E+04
37	LCB15_FR_inf(all)	J[38]	Max	-6,49E+03	4,35E+03	2,00E+01	-4,84E+03
37	LCB15_FR_inf(all)	J[38]	Min	-6,49E+03	-6,13E+03	-2,00E+01	-1,26E+04
38	LCB15_FR_inf(all)	I[38]	Max	-7,18E+03	3,56E+03	2,08E+01	-6,30E+03
38	LCB15_FR_inf(all)	I[38]	Min	-7,18E+03	-5,08E+03	-2,08E+01	-1,23E+04

Elem	Load	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
38	LCB15_FR_inf(all)	J[39]	Max	-6,71E+03	5,02E+03	2,10E+01	-4,21E+03
38	LCB15_FR_inf(all)	J[39]	Min	-6,71E+03	-6,59E+03	-2,10E+01	-1,33E+04
39	LCB15_FR_inf(all)	I[39]	Max	-7,34E+03	4,20E+03	2,27E+01	-5,64E+03
39	LCB15_FR_inf(all)	I[39]	Min	-7,34E+03	-5,57E+03	-2,27E+01	-1,29E+04
39	LCB15_FR_inf(all)	J[40]	Max	-6,76E+03	5,00E+03	2,26E+01	-4,04E+03
39	LCB15_FR_inf(all)	J[40]	Min	-6,76E+03	-6,13E+03	-2,26E+01	-1,29E+04
40	LCB15_FR_inf(all)	I[40]	Max	-7,38E+03	4,22E+03	2,40E+01	-5,42E+03
40	LCB15_FR_inf(all)	I[40]	Min	-7,38E+03	-5,25E+03	-2,40E+01	-1,26E+04
40	LCB15_FR_inf(all)	J[41]	Max	-6,70E+03	4,76E+03	2,36E+01	-4,00E+03
40	LCB15_FR_inf(all)	J[41]	Min	-6,70E+03	-5,45E+03	-2,36E+01	-1,22E+04
41	LCB15_FR_inf(all)	I[41]	Max	-7,25E+03	3,91E+03	2,58E+01	-5,38E+03
41	LCB15_FR_inf(all)	I[41]	Min	-7,25E+03	-4,55E+03	-2,58E+01	-1,18E+04
41	LCB15_FR_inf(all)	J[42]	Max	-8,14E+03	3,43E+03	2,50E+01	-6,65E+03
41	LCB15_FR_inf(all)	J[42]	Min	-8,14E+03	-3,72E+03	-2,50E+01	-1,19E+04
42	LCB15_FR_inf(all)	I[42]	Max	-3,79E+03	2,27E+03	1,13E+01	-2,85E+03
42	LCB15_FR_inf(all)	I[42]	Min	-3,79E+03	-2,58E+03	-1,13E+01	-6,38E+03
42	LCB15_FR_inf(all)	J[43]	Max	-3,79E+03	2,69E+03	1,14E+01	-2,47E+03
42	LCB15_FR_inf(all)	J[43]	Min	-3,79E+03	-3,05E+03	-1,14E+01	-6,84E+03
43	LCB15_FR_inf(all)	I[43]	Max	-3,76E+03	2,71E+03	1,13E+01	-2,42E+03
43	LCB15_FR_inf(all)	I[43]	Min	-3,76E+03	-3,08E+03	-1,13E+01	-6,85E+03
43	LCB15_FR_inf(all)	J[44]	Max	-3,76E+03	2,29E+03	1,12E+01	-2,80E+03
43	LCB15_FR_inf(all)	J[44]	Min	-3,76E+03	-2,61E+03	-1,12E+01	-6,37E+03
44	LCB15_FR_inf(all)	I[44]	Max	-8,14E+03	3,41E+03	2,48E+01	-6,67E+03
44	LCB15_FR_inf(all)	I[44]	Min	-8,14E+03	-3,70E+03	-2,48E+01	-1,18E+04
44	LCB15_FR_inf(all)	J[45]	Max	-7,27E+03	4,08E+03	2,56E+01	-5,24E+03
44	LCB15_FR_inf(all)	J[45]	Min	-7,27E+03	-4,76E+03	-2,56E+01	-1,20E+04
45	LCB15_FR_inf(all)	I[45]	Max	-6,72E+03	4,92E+03	2,35E+01	-3,86E+03
45	LCB15_FR_inf(all)	I[45]	Min	-6,72E+03	-5,65E+03	-2,35E+01	-1,24E+04
45	LCB15_FR_inf(all)	J[46]	Max	-7,39E+03	4,35E+03	2,39E+01	-5,33E+03
45	LCB15_FR_inf(all)	J[46]	Min	-7,39E+03	-5,41E+03	-2,39E+01	-1,28E+04
46	LCB15_FR_inf(all)	I[46]	Max	-6,77E+03	5,13E+03	2,25E+01	-3,94E+03
46	LCB15_FR_inf(all)	I[46]	Min	-6,77E+03	-6,29E+03	-2,25E+01	-1,31E+04
46	LCB15_FR_inf(all)	J[47]	Max	-7,35E+03	4,28E+03	2,26E+01	-5,60E+03
46	LCB15_FR_inf(all)	J[47]	Min	-7,35E+03	-5,67E+03	-2,26E+01	-1,30E+04
47	LCB15_FR_inf(all)	I[47]	Max	-6,72E+03	5,10E+03	2,09E+01	-4,17E+03
47	LCB15_FR_inf(all)	I[47]	Min	-6,72E+03	-6,69E+03	-2,09E+01	-1,34E+04
47	LCB15_FR_inf(all)	J[48]	Max	-7,16E+03	3,63E+03	2,07E+01	-6,27E+03
47	LCB15_FR_inf(all)	J[48]	Min	-7,16E+03	-5,17E+03	-2,07E+01	-1,23E+04
48	LCB15_FR_inf(all)	I[48]	Max	-6,47E+03	4,41E+03	1,99E+01	-4,81E+03
48	LCB15_FR_inf(all)	I[48]	Min	-6,47E+03	-6,22E+03	-1,99E+01	-1,27E+04
48	LCB15_FR_inf(all)	J[49]	Max	-6,83E+03	2,71E+03	1,96E+01	-6,88E+03
48	LCB15_FR_inf(all)	J[49]	Min	-6,83E+03	-4,11E+03	-1,96E+01	-1,09E+04
49	LCB15_FR_inf(all)	I[49]	Max	-6,06E+03	3,39E+03	1,91E+01	-5,65E+03
49	LCB15_FR_inf(all)	I[49]	Min	-6,06E+03	-5,07E+03	-1,91E+01	-1,11E+04
49	LCB15_FR_inf(all)	J[50]	Max	-6,84E+03	2,29E+03	1,86E+01	-6,90E+03
49	LCB15_FR_inf(all)	J[50]	Min	-6,84E+03	-3,72E+03	-1,86E+01	-1,06E+04
50	LCB15_FR_inf(all)	I[50]	Max	-6,02E+03	2,93E+03	1,87E+01	-6,09E+03
50	LCB15_FR_inf(all)	I[50]	Min	-6,02E+03	-4,71E+03	-1,87E+01	-1,07E+04
50	LCB15_FR_inf(all)	J[51]	Max	-6,85E+03	2,15E+03	1,84E+01	-6,93E+03
50	LCB15_FR_inf(all)	J[51]	Min	-6,85E+03	-3,74E+03	-1,84E+01	-1,06E+04
51	LCB15_FR_inf(all)	I[51]	Max	-5,97E+03	2,74E+03	1,79E+01	-6,07E+03
51	LCB15_FR_inf(all)	I[51]	Min	-5,97E+03	-4,73E+03	-1,79E+01	-1,07E+04
51	LCB15_FR_inf(all)	J[52]	Max	-6,70E+03	2,14E+03	1,72E+01	-6,77E+03
51	LCB15_FR_inf(all)	J[52]	Min	-6,70E+03	-3,91E+03	-1,72E+01	-1,06E+04
52	LCB15_FR_inf(all)	I[52]	Max	-5,76E+03	2,67E+03	1,54E+01	-5,86E+03
52	LCB15_FR_inf(all)	I[52]	Min	-5,76E+03	-4,91E+03	-1,54E+01	-1,07E+04
52	LCB15_FR_inf(all)	J[53]	Max	-5,80E+03	3,89E+03	1,46E+01	-5,83E+03
52	LCB15_FR_inf(all)	J[53]	Min	-5,80E+03	-2,27E+03	-1,46E+01	-8,11E+03
53	LCB15_FR_inf(all)	I[53]	Max	-5,33E+03	3,45E+03	1,46E+01	-5,37E+03
53	LCB15_FR_inf(all)	I[53]	Min	-5,33E+03	-2,05E+03	-1,46E+01	-8,07E+03
53	LCB15_FR_inf(all)	J[54]	Max	-5,35E+03	4,61E+03	1,38E+01	-5,34E+03
53	LCB15_FR_inf(all)	J[54]	Min	-5,35E+03	-2,64E+03	-1,38E+01	-8,01E+03
54	LCB15_FR_inf(all)	I[54]	Max	-4,82E+03	4,16E+03	1,38E+01	-4,83E+03
54	LCB15_FR_inf(all)	I[54]	Min	-4,82E+03	-2,42E+03	-1,38E+01	-7,25E+03
54	LCB15_FR_inf(all)	J[55]	Max	-4,82E+03	4,09E+03	1,30E+01	-4,80E+03

Elem	Load	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
54	LCB15_FR_inf(all)	J[55]	Min	-4,82E+03	-2,34E+03	-1,30E+01	-7,17E+03
55	LCB15_FR_inf(all)	I[55]	Max	-4,22E+03	4,01E+03	1,30E+01	-4,21E+03
55	LCB15_FR_inf(all)	I[55]	Min	-4,22E+03	-2,30E+03	-1,30E+01	-6,54E+03
55	LCB15_FR_inf(all)	J[56]	Max	-4,21E+03	3,46E+03	1,25E+01	-4,19E+03
55	LCB15_FR_inf(all)	J[56]	Min	-4,21E+03	-1,98E+03	-1,25E+01	-6,20E+03
56	LCB15_FR_inf(all)	I[56]	Max	-4,86E+03	3,60E+03	1,25E+01	-4,84E+03
56	LCB15_FR_inf(all)	I[56]	Min	-4,86E+03	-2,05E+03	-1,25E+01	-6,92E+03
56	LCB15_FR_inf(all)	J[57]	Max	-4,83E+03	1,73E+03	1,17E+01	-4,84E+03
56	LCB15_FR_inf(all)	J[57]	Min	-4,83E+03	-2,98E+03	-1,17E+01	-7,81E+03
57	LCB15_FR_inf(all)	I[57]	Max	-5,37E+03	1,51E+03	1,17E+01	-5,35E+03
57	LCB15_FR_inf(all)	I[57]	Min	-5,37E+03	-2,55E+03	-1,17E+01	-7,92E+03
57	LCB15_FR_inf(all)	J[58]	Max	-5,32E+03	2,92E+03	1,09E+01	-4,99E+03
57	LCB15_FR_inf(all)	J[58]	Min	-5,32E+03	-5,15E+03	-1,09E+01	-1,05E+04
58	LCB15_FR_inf(all)	I[58]	Max	-5,85E+03	2,67E+03	1,07E+01	-5,75E+03
58	LCB15_FR_inf(all)	I[58]	Min	-5,85E+03	-4,67E+03	-1,07E+01	-1,05E+04
58	LCB15_FR_inf(all)	J[59]	Max	-5,34E+03	3,92E+03	9,96E+00	-4,07E+03
58	LCB15_FR_inf(all)	J[59]	Min	-5,34E+03	-7,06E+03	-9,96E+00	-1,24E+04
59	LCB15_FR_inf(all)	I[59]	Max	-6,33E+03	3,34E+03	1,41E+01	-5,61E+03
59	LCB15_FR_inf(all)	I[59]	Min	-6,33E+03	-6,01E+03	-1,41E+01	-1,23E+04
59	LCB15_FR_inf(all)	J[60]	Max	-5,11E+03	3,70E+03	1,35E+01	-4,14E+03
59	LCB15_FR_inf(all)	J[60]	Min	-5,11E+03	-5,37E+03	-1,35E+01	-1,05E+04
60	LCB15_FR_inf(all)	I[60]	Max	-5,92E+03	2,93E+03	1,18E+01	-5,71E+03
60	LCB15_FR_inf(all)	I[60]	Min	-5,92E+03	-4,25E+03	-1,18E+01	-1,02E+04
60	LCB15_FR_inf(all)	J[61]	Max	-4,87E+03	3,90E+03	1,13E+01	-4,17E+03
60	LCB15_FR_inf(all)	J[61]	Min	-4,87E+03	-4,90E+03	-1,13E+01	-9,77E+03
61	LCB15_FR_inf(all)	I[61]	Max	-5,89E+03	3,13E+03	7,61E+00	-5,89E+03
61	LCB15_FR_inf(all)	I[61]	Min	-5,89E+03	-3,92E+03	-7,61E+00	-9,81E+03
61	LCB15_FR_inf(all)	J[62]	Max	-6,52E+03	4,16E+03	7,52E+00	-5,76E+03
61	LCB15_FR_inf(all)	J[62]	Min	-6,52E+03	-5,17E+03	-7,52E+00	-1,17E+04
62	LCB15_FR_inf(all)	I[62]	Max	-4,25E+03	3,46E+03	6,82E+00	-3,70E+03
62	LCB15_FR_inf(all)	I[62]	Min	-4,25E+03	-4,27E+03	-6,82E+00	-8,52E+03
62	LCB15_FR_inf(all)	J[63]	Max	-4,25E+03	4,20E+03	6,79E+00	-3,08E+03
62	LCB15_FR_inf(all)	J[63]	Min	-4,25E+03	-5,18E+03	-6,79E+00	-9,42E+03
63	LCB15_FR_inf(all)	I[63]	Max	-4,25E+03	4,20E+03	6,79E+00	-3,08E+03
63	LCB15_FR_inf(all)	I[63]	Min	-4,25E+03	-5,18E+03	-6,79E+00	-9,43E+03
63	LCB15_FR_inf(all)	J[64]	Max	-4,23E+03	3,80E+03	6,64E+00	-3,38E+03
63	LCB15_FR_inf(all)	J[64]	Min	-4,23E+03	-4,69E+03	-6,64E+00	-8,92E+03
64	LCB15_FR_inf(all)	I[64]	Max	-6,50E+03	4,55E+03	7,47E+00	-5,39E+03
64	LCB15_FR_inf(all)	I[64]	Min	-6,50E+03	-5,66E+03	-7,47E+00	-1,22E+04
64	LCB15_FR_inf(all)	J[65]	Max	-5,57E+03	3,90E+03	7,17E+00	-4,92E+03
64	LCB15_FR_inf(all)	J[65]	Min	-5,57E+03	-4,85E+03	-7,17E+00	-1,04E+04
65	LCB15_FR_inf(all)	I[65]	Max	-4,57E+03	4,68E+03	9,33E+00	-3,20E+03
65	LCB15_FR_inf(all)	I[65]	Min	-4,57E+03	-5,87E+03	-9,33E+00	-1,04E+04
65	LCB15_FR_inf(all)	J[66]	Max	-5,15E+03	3,54E+03	8,73E+00	-4,72E+03
65	LCB15_FR_inf(all)	J[66]	Min	-5,15E+03	-5,09E+03	-8,73E+00	-1,02E+04
66	LCB15_FR_inf(all)	I[66]	Max	-4,33E+03	4,33E+03	1,01E+01	-3,13E+03
66	LCB15_FR_inf(all)	I[66]	Min	-4,33E+03	-6,22E+03	-1,01E+01	-1,06E+04
66	LCB15_FR_inf(all)	J[67]	Max	-4,93E+03	3,32E+03	9,38E+00	-4,77E+03
66	LCB15_FR_inf(all)	J[67]	Min	-4,93E+03	-5,93E+03	-9,38E+00	-1,09E+04
67	LCB15_FR_inf(all)	I[67]	Max	-3,95E+03	3,94E+03	6,74E+00	-3,20E+03
67	LCB15_FR_inf(all)	I[67]	Min	-3,95E+03	-7,04E+03	-6,74E+00	-1,10E+04
67	LCB15_FR_inf(all)	J[68]	Max	-3,96E+03	2,10E+03	5,69E+00	-3,95E+03
67	LCB15_FR_inf(all)	J[68]	Min	-3,96E+03	-3,69E+03	-5,69E+00	-7,65E+03
68	LCB15_FR_inf(all)	I[68]	Max	-3,46E+03	2,40E+03	5,71E+00	-3,46E+03
68	LCB15_FR_inf(all)	I[68]	Min	-3,46E+03	-4,25E+03	-5,71E+00	-7,71E+03
68	LCB15_FR_inf(all)	J[69]	Max	-3,46E+03	2,70E+03	4,65E+00	-3,45E+03
68	LCB15_FR_inf(all)	J[69]	Min	-3,46E+03	-1,50E+03	-4,65E+00	-5,51E+03
69	LCB15_FR_inf(all)	I[69]	Max	-2,96E+03	1,49E+03	4,66E+00	-2,96E+03
69	LCB15_FR_inf(all)	I[69]	Min	-2,96E+03	-2,60E+03	-4,66E+00	-5,57E+03
69	LCB15_FR_inf(all)	J[70]	Max	-2,96E+03	2,49E+03	3,60E+00	-2,95E+03
69	LCB15_FR_inf(all)	J[70]	Min	-2,96E+03	-1,39E+03	-3,60E+00	-4,49E+03
70	LCB15_FR_inf(all)	I[70]	Max	-2,37E+03	2,15E+03	3,61E+00	-2,37E+03
70	LCB15_FR_inf(all)	I[70]	Min	-2,37E+03	-1,22E+03	-3,61E+00	-4,24E+03
70	LCB15_FR_inf(all)	J[71]	Max	-2,36E+03	9,77E+02	2,76E+00	-2,36E+03
70	LCB15_FR_inf(all)	J[71]	Min	-2,36E+03	-1,70E+03	-2,76E+00	-4,06E+03

Elem	Load	Part	Section Position	Sig-xx(Axial) (kN/m^2)	Sig-xx(Moment-y) (kN/m^2)	Sig-xx(Moment-z) (kN/m^2)	Sig-xx(Summation) (kN/m^2)
71	LCB15_FR_inf(all)	I[71]	Max	-2,36E+03	9,77E+02	2,76E+00	-2,36E+03
71	LCB15_FR_inf(all)	I[71]	Min	-2,36E+03	-1,70E+03	-2,76E+00	-4,06E+03
71	LCB15_FR_inf(all)	J[72]	Max	-2,34E+03	1,14E+03	2,12E+00	-2,34E+03
71	LCB15_FR_inf(all)	J[72]	Min	-2,34E+03	-1,98E+03	-2,12E+00	-4,32E+03
72	LCB15_FR_inf(all)	I[72]	Max	-2,34E+03	1,14E+03	2,11E+00	-2,34E+03
72	LCB15_FR_inf(all)	I[72]	Min	-2,34E+03	-1,98E+03	-2,11E+00	-4,32E+03
72	LCB15_FR_inf(all)	J[73]	Max	-2,28E+03	1,28E+03	1,26E+00	-1,97E+03
72	LCB15_FR_inf(all)	J[73]	Min	-2,28E+03	-2,24E+03	-1,26E+00	-4,52E+03
73	LCB15_FR_inf(all)	I[73]	Max	-2,29E+03	1,28E+03	4,95E+00	-1,98E+03
73	LCB15_FR_inf(all)	I[73]	Min	-2,29E+03	-2,24E+03	-4,95E+00	-4,53E+03
73	LCB15_FR_inf(all)	J[74]	Max	-1,96E+03	8,09E+02	4,82E+00	-1,33E+03
73	LCB15_FR_inf(all)	J[74]	Min	-1,96E+03	-1,15E+03	-4,82E+00	-3,11E+03
74	LCB15_FR_inf(all)	I[74]	Max	-1,00E+03	4,61E+02	1,51E-01	-6,92E+02
74	LCB15_FR_inf(all)	I[74]	Min	-1,00E+03	-5,60E+02	-1,51E-01	-1,56E+03
74	LCB15_FR_inf(all)	J[75]	Max	-9,94E+02	4,27E+02	1,15E-01	-5,94E+02
74	LCB15_FR_inf(all)	J[75]	Min	-9,94E+02	-5,20E+02	-1,15E-01	-1,51E+03
75	LCB15_FR_inf(all)	I[75]	Max	-9,98E+02	4,29E+02	5,17E-02	-5,96E+02
75	LCB15_FR_inf(all)	I[75]	Min	-9,98E+02	-5,23E+02	-5,17E-02	-1,52E+03
75	LCB15_FR_inf(all)	J[76]	Max	4,93E+01	3,86E+01	5,21E-02	8,79E+01
75	LCB15_FR_inf(all)	J[76]	Min	4,93E+01	-3,16E+01	-5,21E-02	1,77E+01

5.8 Posúdenie nosnej konštrukcie MSÚ (ULS) – ohybová odolnosť

Elem	Part	Positive/ Negative	LCom Name	Design Situations	Type	CHK	M_Ed (kN*m)	M_Rd (kN*m)	M_Ed/M_Rd	Aps (m^2)
1	I[1]	Negative	LCB18_sup	Persistent & Transient	FX-MAX	OK	0,0	10275,3	0,000	0
1	I[1]	Positive	LCB30_inf	Persistent & Transient	FX-MAX	OK	510,3	14886,7	0,034	0
1	J[2]	Negative	LCB47_sup	Persistent & Transient	FY-MIN	OK	-17338,6	60335,8	-0,287	0,0342
1	J[2]	Positive	LCB52_inf	Persistent & Transient	MY-MAX	OK	0,0	93758,6	0,000	0,0342
2	I[2]	Negative	LCB47_sup	Persistent & Transient	FY-MIN	OK	-17291,1	60335,8	-0,287	0,0342
2	I[2]	Positive	LCB52_inf	Persistent & Transient	FY-MAX	OK	0,0	93758,6	0,000	0,0342
2	J[3]	Negative	LCB55_inf	Persistent & Transient	FX-MIN	OK	-18743,9	51369,2	-0,365	0,0342
2	J[3]	Positive	LCB42_sup	Persistent & Transient	FX-MAX	OK	0,0	102725,1	0,000	0,0342
3	I[3]	Negative	LCB54_inf	Persistent & Transient	MX-MIN	OK	-22661,9	50808,4	-0,446	0,0342
3	I[3]	Positive	LCB43_sup	Persistent & Transient	MX-MAX	OK	0,0	93819,1	0,000	0,0342
3	J[4]	Negative	LCB54_inf	Persistent & Transient	MX-MIN	OK	-27324,9	20717,6	-1,319	0,0342
3	J[4]	Positive	LCB43_sup	Persistent & Transient	MX-MAX	OK	6766,7	122937,4	0,055	0,0342
4	I[4]	Negative	LCB54_inf	Persistent & Transient	FX-MIN	OK	-27401,4	20724,7	-1,322	0,0342
4	I[4]	Positive	LCB43_sup	Persistent & Transient	FX-MAX	OK	6709,8	122937,4	0,055	0,0342
4	J[5]	Negative	LCB54_inf	Persistent & Transient	FX-MIN	OK	-29835,5	13269,4	-2,248	0,0399
4	J[5]	Positive	LCB43_sup	Persistent & Transient	FX-MAX	OK	20427,3	151995,6	0,134	0,0399
5	I[5]	Negative	LCB54_inf	Persistent & Transient	FX-MIN	OK	-29836,9	13269,4	-2,249	0,0399
5	I[5]	Positive	LCB43_sup	Persistent & Transient	FX-MAX	OK	20426,6	151995,6	0,134	0,0399
5	J[6]	Negative	LCB54_inf	Persistent & Transient	FX-MIN	OK	-22510,0	13267,5	-1,697	0,0399
5	J[6]	Positive	LCB43_sup	Persistent & Transient	FX-MAX	OK	34045,5	151998,6	0,224	0,0399
6	I[6]	Negative	LCB54_inf	Persistent & Transient	MX-MIN	OK	-22510,1	13267,5	-1,697	0,0399
6	I[6]	Positive	LCB43_sup	Persistent & Transient	MX-MAX	OK	34045,4	151998,6	0,224	0,0399
6	J[7]	Negative	LCB54_inf	Persistent & Transient	MX-MIN	OK	-20595,1	13267,5	-1,552	0,0399
6	J[7]	Positive	LCB43_sup	Persistent & Transient	MX-MAX	OK	37341,2	151998,6	0,246	0,0399
7	I[7]	Negative	LCB54_inf	Persistent & Transient	MX-MIN	OK	-20595,1	13267,5	-1,552	0,0399
7	I[7]	Positive	LCB43_sup	Persistent & Transient	MX-MAX	OK	37341,2	151998,6	0,246	0,0399
7	J[8]	Negative	LCB54_inf	Persistent & Transient	MX-MIN	OK	-23605,9	13267,5	-1,779	0,0399
7	J[8]	Positive	LCB43_sup	Persistent & Transient	MX-MAX	OK	31268,2	151998,6	0,206	0,0399
8	I[8]	Negative	LCB54_inf	Persistent & Transient	MX-MIN	OK	-18239,1	27461,6	-0,664	0,0456
8	I[8]	Positive	LCB43_sup	Persistent & Transient	MX-MAX	OK	35740,4	152957,8	0,234	0,0456
8	J[9]	Negative	LCB42_sup	Persistent & Transient	MX-MIN	OK	-25993,2	42245,6	-0,615	0,0513
8	J[9]	Positive	LCB47_sup	Persistent & Transient	MX-MAX	OK	25559,8	151412,3	0,169	0,0513
9	I[9]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-21896,4	53526,9	-0,409	0,057
9	I[9]	Positive	LCB47_sup	Persistent & Transient	FX-MAX	OK	30510,7	151971,2	0,201	0,057
9	J[10]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-36234,4	72605,3	-0,499	0,0513
9	J[10]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	38938,9	129661,1	0,300	0,0513
10	I[10]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-40609,5	76358,6	-0,532	0,0627
10	I[10]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	33515,0	171368,0	0,196	0,0627
10	J[11]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-49595,5	75050,2	-0,661	0,0627
10	J[11]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	29875,1	172676,4	0,173	0,0627
11	I[11]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-49595,5	75050,2	-0,661	0,0627
11	I[11]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	29875,0	172676,4	0,173	0,0627
11	J[12]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-40048,8	76319,0	-0,525	0,0627
11	J[12]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	32451,8	171407,6	0,189	0,0627
12	I[12]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-35395,6	72565,8	-0,488	0,0513
12	I[12]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	38185,8	129700,6	0,294	0,0513
12	J[13]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-11456,8	59487,1	-0,193	0,0513
12	J[13]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	35899,4	130589,0	0,275	0,0513
13	I[13]	Negative	LCB42_sup	Persistent & Transient	FY-MIN	OK	-20154,5	54323,0	-0,371	0,057
13	I[13]	Positive	LCB55_inf	Persistent & Transient	FY-MAX	OK	25451,3	150901,7	0,169	0,057
13	J[14]	Negative	LCB43_sup	Persistent & Transient	MY-MIN	OK	-11134,8	41574,0	-0,268	0,0513
13	J[14]	Positive	LCB46_sup	Persistent & Transient	MY-MAX	OK	24909,3	152275,2	0,164	0,0513
14	I[14]	Negative	LCB43_sup	Persistent & Transient	MY-MIN	OK	-11125,4	41573,7	-0,268	0,0513
14	I[14]	Positive	LCB46_sup	Persistent & Transient	MY-MAX	OK	24920,2	152275,2	0,164	0,0513
14	J[15]	Negative	LCB55_inf	Persistent & Transient	MY-MIN	OK	-19673,8	13267,5	-1,483	0,0399
14	J[15]	Positive	LCB42_sup	Persistent & Transient	MY-MAX	OK	21740,1	151998,6	0,143	0,0399
15	I[15]	Negative	LCB55_inf	Persistent & Transient	MY-MIN	OK	-19667,3	13267,5	-1,482	0,0399
15	I[15]	Positive	LCB42_sup	Persistent & Transient	MY-MAX	OK	21745,2	151998,6	0,143	0,0399
15	J[16]	Negative	LCB55_inf	Persistent & Transient	MY-MIN	OK	-23100,2	13267,5	-1,741	0,0399
15	J[16]	Positive	LCB42_sup	Persistent & Transient	MY-MAX	OK	22934,4	151998,6	0,151	0,0399
16	I[16]	Negative	LCB55_inf	Persistent & Transient	MY-MIN	OK	-22040,5	27515,1	-0,801	0,0456
16	I[16]	Positive	LCB42_sup	Persistent & Transient	MY-MAX	OK	23813,9	152957,8	0,156	0,0456

Elem	Part	Positive/ Negative	LCom Name	Design Situations	Type	CHK	M_Ed (kN*m)	M_Rd (kN*m)	M_Ed/M_Rd	Aps (m^2)
16	J[17]	Negative	LCB47_sup	Persistent & Transient	MY-MIN	OK	-36024,9	28460,6	-1,266	0,0456
16	J[17]	Positive	LCB42_sup	Persistent & Transient	MY-MAX	OK	16565,5	151791,2	0,109	0,0456
17	I[17]	Negative	LCB47_sup	Persistent & Transient	MY-MIN	OK	-31448,6	41411,6	-0,759	0,0513
17	I[17]	Positive	LCB42_sup	Persistent & Transient	MY-MAX	OK	20378,4	152566,8	0,134	0,0513
17	J[18]	Negative	LCB47_sup	Persistent & Transient	MY-MIN	OK	-57112,5	42333,1	-1,349	0,0513
17	J[18]	Positive	LCB50_inf	Persistent & Transient	MY-MAX	OK	5659,3	151400,3	0,037	0,0513
18	I[18]	Negative	LCB47_sup	Persistent & Transient	MY-MIN	OK	-52587,9	53631,1	-0,981	0,057
18	I[18]	Positive	LCB50_inf	Persistent & Transient	MY-MAX	OK	9429,0	151959,2	0,062	0,057
18	J[19]	Negative	LCB47_sup	Persistent & Transient	MY-MIN	OK	-88881,0	54530,9	-1,630	0,057
18	J[19]	Positive	LCB50_inf	Persistent & Transient	MY-MAX	OK	0,0	150792,3	0,000	0,057
19	I[19]	Negative	LCB47_sup	Persistent & Transient	MY-MIN	OK	-79880,9	72733,1	-1,098	0,0684
19	I[19]	Positive	LCB50_inf	Persistent & Transient	MY-MAX	OK	0,0	151338,2	0,000	0,0684
19	J[20]	Negative	LCB43_sup	Persistent & Transient	MY-MIN	OK	-97754,1	115077,3	-0,850	0,0627
19	J[20]	Positive	LCB54_inf	Persistent & Transient	MY-MAX	OK	0,0	120705,9	0,000	0,0627
20	I[20]	Negative	LCB43_sup	Persistent & Transient	MY-MIN	OK	-87345,5	137403,7	-0,636	0,0741
20	I[20]	Positive	LCB54_inf	Persistent & Transient	MY-MAX	OK	1706,0	124450,2	0,014	0,0741
20	J[21]	Negative	LCB43_sup	Persistent & Transient	FX-MIN	OK	-122485,3	178768,3	-0,685	0,0741
20	J[21]	Positive	LCB54_inf	Persistent & Transient	FX-MAX	OK	0,0	96943,6	0,000	0,0741
21	I[21]	Negative	LCB43_sup	Persistent & Transient	MX-MIN	OK	-112500,0	214645,1	-0,524	0,1026
21	I[21]	Positive	LCB54_inf	Persistent & Transient	MX-MAX	OK	5578,0	120491,8	0,046	0,1026
21	J[22]	Negative	LCB43_sup	Persistent & Transient	MX-MIN	OK	-129467,8	232713,9	-0,556	0,1197
21	J[22]	Positive	LCB54_inf	Persistent & Transient	MX-MAX	OK	3933,0	111327,6	0,035	0,1197
22	I[22]	Negative	LCB43_sup	Persistent & Transient	MX-MIN	OK	-127763,2	265858,9	-0,481	0,1197
22	I[22]	Positive	LCB54_inf	Persistent & Transient	MX-MAX	OK	6014,8	120281,4	0,050	0,1197
22	J[23]	Negative	LCB43_sup	Persistent & Transient	MX-MIN	OK	-138678,0	273608,2	-0,507	0,1197
22	J[23]	Positive	LCB54_inf	Persistent & Transient	MX-MAX	OK	3234,9	112090,4	0,029	0,1197
23	I[23]	Negative	LCB43_sup	Persistent & Transient	FX-MIN	OK	-138676,5	273608,2	-0,507	0,1197
23	I[23]	Positive	LCB54_inf	Persistent & Transient	FX-MAX	OK	3237,2	112088,2	0,029	0,1197
23	J[24]	Negative	LCB43_sup	Persistent & Transient	FX-MIN	OK	-120556,6	274018,6	-0,440	0,1197
23	J[24]	Positive	LCB54_inf	Persistent & Transient	FX-MAX	OK	13317,0	111662,7	0,119	0,1197
24	I[24]	Negative	LCB43_sup	Persistent & Transient	FY-MIN	OK	-122360,1	240674,0	-0,508	0,1197
24	I[24]	Positive	LCB54_inf	Persistent & Transient	FY-MAX	OK	11118,2	104152,7	0,107	0,1197
24	J[25]	Negative	LCB43_sup	Persistent & Transient	FY-MIN	OK	-93764,7	236236,5	-0,397	0,1026
24	J[25]	Positive	LCB54_inf	Persistent & Transient	FY-MAX	OK	23598,8	99530,0	0,237	0,1026
25	I[25]	Negative	LCB43_sup	Persistent & Transient	FX-MIN	OK	-103650,0	199006,5	-0,521	0,0741
25	I[25]	Positive	LCB54_inf	Persistent & Transient	FX-MAX	OK	11837,7	76705,5	0,154	0,0741
25	J[26]	Negative	LCB43_sup	Persistent & Transient	FX-MIN	OK	-70973,3	144163,5	-0,492	0,0798
25	J[26]	Positive	LCB54_inf	Persistent & Transient	FX-MAX	OK	5568,3	125981,0	0,044	0,0798
26	I[26]	Negative	LCB43_sup	Persistent & Transient	FX-MIN	OK	-81305,5	123925,3	-0,656	0,0684
26	I[26]	Positive	LCB54_inf	Persistent & Transient	FX-MAX	OK	0,0	122790,6	0,000	0,0684
26	J[27]	Negative	LCB47_sup	Persistent & Transient	FX-MIN	OK	-63297,0	74213,9	-0,853	0,0741
26	J[27]	Positive	LCB50_inf	Persistent & Transient	FX-MAX	OK	0,0	160024,7	0,000	0,0741
27	I[27]	Negative	LCB47_sup	Persistent & Transient	FY-MIN	OK	-72310,0	57737,8	-1,252	0,0627
27	I[27]	Positive	LCB50_inf	Persistent & Transient	FY-MAX	OK	0,0	159931,4	0,000	0,0627
27	J[28]	Negative	LCB47_sup	Persistent & Transient	FY-MIN	OK	-49425,1	49292,1	-1,003	0,0684
27	J[28]	Positive	LCB50_inf	Persistent & Transient	FY-MAX	OK	0,0	185791,0	0,000	0,0684
28	I[28]	Negative	LCB47_sup	Persistent & Transient	FY-MIN	OK	-53724,3	39952,1	-1,345	0,0627
28	I[28]	Positive	LCB50_inf	Persistent & Transient	FY-MAX	OK	0,0	185621,7	0,000	0,0627
28	J[29]	Negative	LCB54_inf	Persistent & Transient	MY-MIN	OK	-30963,4	39191,1	-0,790	0,0627
28	J[29]	Positive	LCB43_sup	Persistent & Transient	MY-MAX	OK	21693,7	186788,2	0,116	0,0627
29	I[29]	Negative	LCB54_inf	Persistent & Transient	MY-MIN	OK	-35393,7	28700,1	-1,233	0,057
29	I[29]	Positive	LCB43_sup	Persistent & Transient	MY-MAX	OK	18001,9	186411,6	0,097	0,057
29	J[30]	Negative	LCB54_inf	Persistent & Transient	MY-MIN	OK	-25757,9	27924,3	-0,922	0,057
29	J[30]	Positive	LCB43_sup	Persistent & Transient	MY-MAX	OK	36537,3	187578,2	0,195	0,057
30	I[30]	Negative	LCB54_inf	Persistent & Transient	MY-MIN	OK	-23342,5	16345,6	-1,428	0,0513
30	I[30]	Positive	LCB43_sup	Persistent & Transient	MY-MAX	OK	38554,0	187019,3	0,206	0,0513
30	J[31]	Negative	LCB54_inf	Persistent & Transient	MY-MIN	OK	-21171,1	16345,6	-1,295	0,0513
30	J[31]	Positive	LCB43_sup	Persistent & Transient	MY-MAX	OK	44517,8	187019,3	0,238	0,0513
31	I[31]	Negative	LCB54_inf	Persistent & Transient	MY-MIN	OK	-20201,0	27924,3	-0,723	0,057
31	I[31]	Positive	LCB43_sup	Persistent & Transient	MY-MAX	OK	45324,4	187578,2	0,242	0,057
31	J[32]	Negative	LCB54_inf	Persistent & Transient	MY-MIN	OK	-21722,6	28700,1	-0,757	0,057
31	J[32]	Positive	LCB43_sup	Persistent & Transient	MY-MAX	OK	47218,5	186411,6	0,253	0,057
32	I[32]	Negative	LCB54_inf	Persistent & Transient	MY-MIN	OK	-18761,3	39191,0	-0,479	0,0627
32	I[32]	Positive	LCB43_sup	Persistent & Transient	MY-MAX	OK	49685,7	186788,2	0,266	0,0627
32	J[33]	Negative	LCB46_sup	Persistent & Transient	MY-MIN	OK	-31547,8	39952,1	-0,790	0,0627

Elem	Part	Positive/ Negative	LCom Name	Design Situations	Type	CHK	M_Ed (kN*m)	M_Rd (kN*m)	M_Ed/M_Rd	Aps (m^2)
32	J[33]	Positive	LCB51_inf	Persistent & Transient	MY-MAX	OK	42633,9	185621,7	0,230	0,0627
33	I[33]	Negative	LCB46_sup	Persistent & Transient	MY-MIN	OK	-27793,6	49292,1	-0,564	0,0684
33	I[33]	Positive	LCB51_inf	Persistent & Transient	MY-MAX	OK	45762,0	185791,0	0,246	0,0684
33	J[34]	Negative	LCB42_sup	Persistent & Transient	MY-MIN	OK	-51011,0	50037,4	-1,020	0,0684
33	J[34]	Positive	LCB55_inf	Persistent & Transient	MY-MAX	OK	31791,3	184624,4	0,172	0,0684
34	I[34]	Negative	LCB42_sup	Persistent & Transient	MY-MIN	OK	-44470,1	65818,3	-0,676	0,0798
34	I[34]	Positive	LCB55_inf	Persistent & Transient	MY-MAX	OK	39654,8	184207,2	0,215	0,0798
34	J[35]	Negative	LCB42_sup	Persistent & Transient	MY-MIN	OK	-63622,8	90012,8	-0,707	0,0741
34	J[35]	Positive	LCB55_inf	Persistent & Transient	MY-MAX	OK	37295,4	165072,7	0,226	0,0741
35	I[35]	Negative	LCB42_sup	Persistent & Transient	MY-MIN	OK	-55640,8	105269,7	-0,529	0,0855
35	I[35]	Positive	LCB55_inf	Persistent & Transient	MY-MAX	OK	46893,9	164060,3	0,286	0,0855
35	J[36]	Negative	LCB42_sup	Persistent & Transient	MY-MIN	OK	-81959,7	144065,6	-0,569	0,0798
35	J[36]	Positive	LCB55_inf	Persistent & Transient	MY-MAX	OK	39507,9	143273,5	0,276	0,0798
36	I[36]	Negative	LCB42_sup	Persistent & Transient	MY-MIN	OK	-72272,1	159751,0	-0,452	0,0912
36	I[36]	Positive	LCB55_inf	Persistent & Transient	MY-MAX	OK	51153,2	141604,8	0,361	0,0912
36	J[37]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-108082,9	208908,8	-0,517	0,0855
36	J[37]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	37074,2	118325,9	0,313	0,0855
37	I[37]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-96760,3	223706,2	-0,433	0,0969
37	I[37]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	50682,1	115637,4	0,438	0,0969
37	J[38]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-151798,8	276427,2	-0,549	0,0969
37	J[38]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	22132,1	111334,7	0,199	0,0969
38	I[38]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-137555,9	293882,1	-0,468	0,1083
38	I[38]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	39088,0	106503,2	0,367	0,1083
38	J[39]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-198895,9	371881,1	-0,535	0,1083
38	J[39]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	12253,8	99006,5	0,124	0,1083
39	I[39]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-182259,6	390858,6	-0,466	0,1197
39	I[39]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	32015,4	98225,7	0,326	0,1197
39	J[40]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-243151,9	516466,3	-0,471	0,1197
39	J[40]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	15778,5	87168,8	0,181	0,1197
40	I[40]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-224672,0	531314,3	-0,423	0,1311
40	I[40]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	37969,3	82750,4	0,459	0,1311
40	J[41]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-290192,8	700502,5	-0,414	0,1311
40	J[41]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	27170,6	71126,6	0,382	0,1311
41	I[41]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-266358,6	728874,9	-0,365	0,1425
41	I[41]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	55597,8	75707,5	0,734	0,1425
41	J[42]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-282128,5	857034,2	-0,329	0,1767
41	J[42]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	85181,1	103913,2	0,820	0,1767
42	I[42]	Negative	LCB42_sup	Persistent & Transient	MX-MIN	OK	-279811,4	999659,3	-0,280	0,1767
42	I[42]	Positive	LCB55_inf	Persistent & Transient	MX-MAX	OK	87892,0	124770,9	0,704	0,1767
42	J[43]	Negative	LCB42_sup	Persistent & Transient	MX-MIN	OK	-308334,7	1001297,8	-0,308	0,1767
42	J[43]	Positive	LCB55_inf	Persistent & Transient	MX-MAX	OK	71143,2	123570,5	0,576	0,1767
43	I[43]	Negative	LCB43_sup	Persistent & Transient	FY-MIN	OK	-309833,0	1001297,8	-0,309	0,1767
43	I[43]	Positive	LCB54_inf	Persistent & Transient	FY-MAX	OK	69338,5	123570,5	0,561	0,1767
43	J[44]	Negative	LCB43_sup	Persistent & Transient	FY-MIN	OK	-280840,2	1000081,6	-0,281	0,1767
43	J[44]	Positive	LCB54_inf	Persistent & Transient	FY-MAX	OK	86246,4	124460,9	0,693	0,1767
44	I[44]	Negative	LCB43_sup	Persistent & Transient	FX-MIN	OK	-281318,9	857636,5	-0,328	0,1767
44	I[44]	Positive	LCB54_inf	Persistent & Transient	FX-MAX	OK	85812,7	103667,4	0,828	0,1767
44	J[45]	Negative	LCB43_sup	Persistent & Transient	FX-MIN	OK	-271940,6	719853,4	-0,378	0,1425
44	J[45]	Positive	LCB54_inf	Persistent & Transient	FX-MAX	OK	48857,5	81644,9	0,598	0,1425
45	I[45]	Negative	LCB43_sup	Persistent & Transient	FX-MIN	OK	-295723,2	691930,0	-0,427	0,1311
45	I[45]	Positive	LCB54_inf	Persistent & Transient	FX-MAX	OK	20490,3	77752,4	0,264	0,1311
45	J[46]	Negative	LCB43_sup	Persistent & Transient	FX-MIN	OK	-228122,2	526584,5	-0,433	0,1311
45	J[46]	Positive	LCB54_inf	Persistent & Transient	FX-MAX	OK	34182,9	86493,5	0,395	0,1311
46	I[46]	Negative	LCB43_sup	Persistent & Transient	FX-MIN	OK	-246636,7	511496,5	-0,482	0,1197
46	I[46]	Positive	LCB54_inf	Persistent & Transient	FX-MAX	OK	11954,0	91301,6	0,131	0,1197
46	J[47]	Negative	LCB43_sup	Persistent & Transient	FX-MIN	OK	-184103,9	389035,5	-0,473	0,1197
46	J[47]	Positive	LCB54_inf	Persistent & Transient	FX-MAX	OK	30538,7	99889,5	0,306	0,1197
47	I[47]	Negative	LCB43_sup	Persistent & Transient	FX-MIN	OK	-200708,7	369875,4	-0,543	0,1083
47	I[47]	Positive	LCB54_inf	Persistent & Transient	FX-MAX	OK	10802,3	100873,1	0,107	0,1083
47	J[48]	Negative	LCB43_sup	Persistent & Transient	FX-MIN	OK	-139011,6	293370,7	-0,474	0,1083
47	J[48]	Positive	LCB54_inf	Persistent & Transient	FX-MAX	OK	38486,3	106914,7	0,360	0,1083
48	I[48]	Negative	LCB43_sup	Persistent & Transient	FX-MIN	OK	-153238,8	275829,9	-0,556	0,0969
48	I[48]	Positive	LCB54_inf	Persistent & Transient	FX-MAX	OK	21543,4	111751,4	0,193	0,0969
48	J[49]	Negative	LCB43_sup	Persistent & Transient	FX-MIN	OK	-97928,8	223623,8	-0,438	0,0969
48	J[49]	Positive	LCB54_inf	Persistent & Transient	FX-MAX	OK	50964,9	115615,9	0,441	0,0969

Elem	Part	Positive/ Negative	LCom Name	Design Situations	Type	CHK	M_Ed (kN*m)	M_Rd (kN*m)	M_Ed/M_Rd	Aps (m^2)
49	I[49]	Negative	LCB43_sup	Persistent & Transient	FX-MIN	OK	-109250,9	208791,2	-0,523	0,0855
49	I[49]	Positive	LCB54_inf	Persistent & Transient	FX-MAX	OK	37358,9	118325,9	0,316	0,0855
49	J[50]	Negative	LCB43_sup	Persistent & Transient	MY-MIN	OK	-73614,0	159694,4	-0,461	0,0912
49	J[50]	Positive	LCB54_inf	Persistent & Transient	MY-MAX	OK	51731,6	141604,8	0,365	0,0912
50	I[50]	Negative	LCB43_sup	Persistent & Transient	MY-MIN	OK	-83308,4	144008,6	-0,579	0,0798
50	I[50]	Positive	LCB54_inf	Persistent & Transient	MY-MAX	OK	40079,1	143273,5	0,280	0,0798
50	J[51]	Negative	LCB43_sup	Persistent & Transient	MY-MIN	OK	-57182,8	105269,7	-0,543	0,0855
50	J[51]	Positive	LCB54_inf	Persistent & Transient	MY-MAX	OK	47643,9	164060,3	0,290	0,0855
51	I[51]	Negative	LCB43_sup	Persistent & Transient	MY-MIN	OK	-65218,8	90012,8	-0,725	0,0741
51	I[51]	Positive	LCB54_inf	Persistent & Transient	MY-MAX	OK	37983,3	165072,7	0,230	0,0741
51	J[52]	Negative	LCB43_sup	Persistent & Transient	MY-MIN	OK	-45826,9	65818,3	-0,696	0,0798
51	J[52]	Positive	LCB54_inf	Persistent & Transient	MY-MAX	OK	40384,9	184207,2	0,219	0,0798
52	I[52]	Negative	LCB43_sup	Persistent & Transient	MY-MIN	OK	-52506,5	50037,4	-1,049	0,0684
52	I[52]	Positive	LCB54_inf	Persistent & Transient	MY-MAX	OK	32364,3	184624,4	0,175	0,0684
52	J[53]	Negative	LCB47_sup	Persistent & Transient	MY-MIN	OK	-28744,5	49292,1	-0,583	0,0684
52	J[53]	Positive	LCB50_inf	Persistent & Transient	MY-MAX	OK	45835,3	185791,0	0,247	0,0684
53	I[53]	Negative	LCB47_sup	Persistent & Transient	MY-MIN	OK	-32176,1	39952,1	-0,805	0,0627
53	I[53]	Positive	LCB50_inf	Persistent & Transient	MY-MAX	OK	42976,0	185621,7	0,232	0,0627
53	J[54]	Negative	LCB47_sup	Persistent & Transient	MY-MIN	OK	-18789,1	39191,1	-0,479	0,0627
53	J[54]	Positive	LCB50_inf	Persistent & Transient	MY-MAX	OK	48152,5	186788,2	0,258	0,0627
54	I[54]	Negative	LCB47_sup	Persistent & Transient	MY-MIN	OK	-22362,8	28700,1	-0,779	0,057
54	I[54]	Positive	LCB50_inf	Persistent & Transient	MY-MAX	OK	45175,0	186411,6	0,242	0,057
54	J[55]	Negative	LCB55_inf	Persistent & Transient	MY-MIN	OK	-19431,6	27924,3	-0,696	0,057
54	J[55]	Positive	LCB42_sup	Persistent & Transient	MY-MAX	OK	43123,0	187578,2	0,230	0,057
55	I[55]	Negative	LCB55_inf	Persistent & Transient	FX-MIN	OK	-20073,6	16345,6	-1,228	0,0513
55	I[55]	Positive	LCB42_sup	Persistent & Transient	FX-MAX	OK	42589,7	187019,3	0,228	0,0513
55	J[56]	Negative	LCB55_inf	Persistent & Transient	MY-MIN	OK	-22491,8	16345,6	-1,376	0,0513
55	J[56]	Positive	LCB42_sup	Persistent & Transient	MY-MAX	OK	36374,7	187019,3	0,195	0,0513
56	I[56]	Negative	LCB55_inf	Persistent & Transient	MY-MIN	OK	-21374,5	27924,3	-0,765	0,057
56	I[56]	Positive	LCB42_sup	Persistent & Transient	MY-MAX	OK	37304,1	187578,2	0,199	0,057
56	J[57]	Negative	LCB47_sup	Persistent & Transient	MY-MIN	OK	-32042,7	28700,1	-1,117	0,057
56	J[57]	Positive	LCB50_inf	Persistent & Transient	MY-MAX	OK	19154,1	186411,6	0,103	0,057
57	I[57]	Negative	LCB47_sup	Persistent & Transient	MY-MIN	OK	-28677,9	39191,1	-0,732	0,0627
57	I[57]	Positive	LCB50_inf	Persistent & Transient	MY-MAX	OK	21957,5	186788,2	0,118	0,0627
57	J[58]	Negative	LCB46_sup	Persistent & Transient	MX-MIN	OK	-50996,8	39952,1	-1,276	0,0627
57	J[58]	Positive	LCB51_inf	Persistent & Transient	MX-MAX	OK	0,0	185621,7	0,000	0,0627
58	I[58]	Negative	LCB46_sup	Persistent & Transient	MX-MIN	OK	-47218,2	49292,1	-0,958	0,0684
58	I[58]	Positive	LCB51_inf	Persistent & Transient	MX-MAX	OK	629,2	185791,0	0,003	0,0684
58	J[59]	Negative	LCB46_sup	Persistent & Transient	MX-MIN	OK	-69685,2	57737,8	-1,207	0,0627
58	J[59]	Positive	LCB51_inf	Persistent & Transient	MX-MAX	OK	0,0	159931,4	0,000	0,0627
59	I[59]	Negative	LCB46_sup	Persistent & Transient	FX-MIN	OK	-61043,0	74213,9	-0,823	0,0741
59	I[59]	Positive	LCB51_inf	Persistent & Transient	FX-MAX	OK	0,0	160024,7	0,000	0,0741
59	J[60]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-78938,8	123830,6	-0,638	0,0684
59	J[60]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	0,0	122790,6	0,000	0,0684
60	I[60]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-68702,4	144103,5	-0,477	0,0798
60	I[60]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	6444,0	125981,0	0,051	0,0798
60	J[61]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-101246,9	199006,5	-0,509	0,0741
60	J[61]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	11475,2	76705,5	0,150	0,0741
61	I[61]	Negative	LCB42_sup	Persistent & Transient	MX-MIN	OK	-91698,2	236170,0	-0,388	0,1026
61	I[61]	Positive	LCB55_inf	Persistent & Transient	MX-MAX	OK	22808,3	99525,9	0,229	0,1026
61	J[62]	Negative	LCB42_sup	Persistent & Transient	MX-MIN	OK	-115206,4	248645,0	-0,463	0,114
61	J[62]	Positive	LCB55_inf	Persistent & Transient	MX-MAX	OK	16217,6	94160,8	0,172	0,114
62	I[62]	Negative	LCB42_sup	Persistent & Transient	MX-MIN	OK	-113505,8	275483,1	-0,412	0,114
62	I[62]	Positive	LCB55_inf	Persistent & Transient	MX-MAX	OK	18286,4	99333,9	0,184	0,114
62	J[63]	Negative	LCB42_sup	Persistent & Transient	MX-MIN	OK	-130697,9	276288,7	-0,473	0,114
62	J[63]	Positive	LCB55_inf	Persistent & Transient	MX-MAX	OK	9234,5	98496,6	0,094	0,114
63	I[63]	Negative	LCB42_sup	Persistent & Transient	FY-MIN	OK	-130729,0	276288,7	-0,473	0,114
63	I[63]	Positive	LCB55_inf	Persistent & Transient	FY-MAX	OK	9196,6	98492,2	0,093	0,114
63	J[64]	Negative	LCB42_sup	Persistent & Transient	FY-MIN	OK	-119892,6	269755,4	-0,444	0,114
63	J[64]	Positive	LCB55_inf	Persistent & Transient	FY-MAX	OK	12322,2	105350,4	0,117	0,114
64	I[64]	Negative	LCB42_sup	Persistent & Transient	FY-MIN	OK	-121519,6	242742,1	-0,501	0,114
64	I[64]	Positive	LCB55_inf	Persistent & Transient	FY-MAX	OK	10341,0	99364,0	0,104	0,114
64	J[65]	Negative	LCB42_sup	Persistent & Transient	FY-MIN	OK	-104890,7	226622,5	-0,463	0,0969
64	J[65]	Positive	LCB55_inf	Persistent & Transient	FY-MAX	OK	12365,3	104528,1	0,118	0,0969
65	I[65]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-114471,3	181379,1	-0,631	0,0684

Elem	Part	Positive/ Negative	LCom Name	Design Situations	Type	CHK	M_Ed (kN*m)	M_Rd (kN*m)	M_Ed/M_Rd	Aps (m^2)
65	I[65]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	980,6	77887,3	0,013	0,0684
65	J[66]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-83070,9	148740,1	-0,559	0,0684
65	J[66]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	6838,5	104802,7	0,065	0,0684
66	I[66]	Negative	LCB42_sup	Persistent & Transient	FX-MIN	OK	-93491,0	119478,9	-0,783	0,057
66	I[66]	Positive	LCB55_inf	Persistent & Transient	FX-MAX	OK	0,0	100575,5	0,000	0,057
66	J[67]	Negative	LCB46_sup	Persistent & Transient	FX-MIN	OK	-68785,3	87162,0	-0,789	0,057
66	J[67]	Positive	LCB51_inf	Persistent & Transient	FX-MAX	OK	7453,2	111284,7	0,067	0,057
67	I[67]	Negative	LCB46_sup	Persistent & Transient	FY-MIN	OK	-78076,3	66121,5	-1,181	0,0456
67	I[67]	Positive	LCB51_inf	Persistent & Transient	FY-MAX	OK	0,0	109950,2	0,000	0,0456
67	J[68]	Negative	LCB46_sup	Persistent & Transient	FY-MIN	OK	-46296,7	64983,8	-0,712	0,0456
67	J[68]	Positive	LCB51_inf	Persistent & Transient	FY-MAX	OK	21600,6	111117,1	0,194	0,0456
68	I[68]	Negative	LCB46_sup	Persistent & Transient	FY-MIN	OK	-50930,5	51608,4	-0,987	0,0399
68	I[68]	Positive	LCB51_inf	Persistent & Transient	FY-MAX	OK	17739,6	110157,9	0,161	0,0399
68	J[69]	Negative	LCB54_inf	Persistent & Transient	FY-MIN	OK	-33185,7	50411,6	-0,658	0,0399
68	J[69]	Positive	LCB43_sup	Persistent & Transient	FY-MAX	OK	35021,6	111324,5	0,315	0,0399
69	I[69]	Negative	LCB54_inf	Persistent & Transient	FY-MIN	OK	-37892,3	34139,3	-1,110	0,0342
69	I[69]	Positive	LCB43_sup	Persistent & Transient	FY-MAX	OK	31099,9	110185,3	0,282	0,0342
69	J[70]	Negative	LCB54_inf	Persistent & Transient	FY-MIN	OK	-29566,3	32861,0	-0,900	0,0342
69	J[70]	Positive	LCB43_sup	Persistent & Transient	FY-MAX	OK	36170,0	111351,9	0,325	0,0342
70	I[70]	Negative	LCB54_inf	Persistent & Transient	FY-MIN	OK	-32352,0	14014,2	-2,309	0,0285
70	I[70]	Positive	LCB43_sup	Persistent & Transient	FY-MAX	OK	33850,0	110037,0	0,308	0,0285
70	J[71]	Negative	LCB54_inf	Persistent & Transient	FY-MIN	OK	-29929,1	14011,0	-2,136	0,0285
70	J[71]	Positive	LCB43_sup	Persistent & Transient	FY-MAX	OK	29244,7	110037,0	0,266	0,0285
71	I[71]	Negative	LCB54_inf	Persistent & Transient	FX-MIN	OK	-29929,2	14011,0	-2,136	0,0285
71	I[71]	Positive	LCB43_sup	Persistent & Transient	FX-MAX	OK	29244,7	110037,0	0,266	0,0285
71	J[72]	Negative	LCB54_inf	Persistent & Transient	FX-MIN	OK	-30746,0	14267,3	-2,155	0,0285
71	J[72]	Positive	LCB43_sup	Persistent & Transient	FX-MAX	OK	20532,8	109721,5	0,187	0,0285
72	I[72]	Negative	LCB54_inf	Persistent & Transient	FX-MIN	OK	-30747,6	14267,3	-2,155	0,0285
72	I[72]	Positive	LCB43_sup	Persistent & Transient	FX-MAX	OK	20531,1	109721,5	0,187	0,0285
72	J[73]	Negative	LCB54_inf	Persistent & Transient	FX-MIN	OK	-29165,8	22294,5	-1,308	0,0285
72	J[73]	Positive	LCB43_sup	Persistent & Transient	FX-MAX	OK	7004,2	101868,7	0,069	0,0285
73	I[73]	Negative	LCB54_inf	Persistent & Transient	FY-MIN	OK	-29162,6	22284,3	-1,309	0,0285
73	I[73]	Positive	LCB43_sup	Persistent & Transient	FY-MAX	OK	6986,2	101868,7	0,069	0,0285
73	J[74]	Negative	LCB54_inf	Persistent & Transient	FY-MIN	OK	-15242,2	51253,7	-0,297	0,0285
73	J[74]	Positive	LCB43_sup	Persistent & Transient	FY-MAX	OK	0,0	73092,0	0,000	0,0285
74	I[74]	Negative	LCB54_inf	Persistent & Transient	FX-MIN	OK	-11399,1	51667,1	-0,221	0,0285
74	I[74]	Positive	LCB43_sup	Persistent & Transient	FX-MAX	OK	0,0	82068,2	0,000	0,0285
74	J[75]	Negative	LCB46_sup	Persistent & Transient	MY-MIN	OK	-9083,1	59506,2	-0,153	0,0285
74	J[75]	Positive	LCB53_inf	Persistent & Transient	MY-MAX	OK	0,0	74229,1	0,000	0,0285
75	I[75]	Negative	LCB46_sup	Persistent & Transient	FX-MIN	OK	-9122,5	59506,2	-0,153	0,0285
75	I[75]	Positive	LCB53_inf	Persistent & Transient	MY-MAX	OK	0,0	74229,1	0,000	0,0285
75	J[76]	Negative	LCB18_sup	Persistent & Transient	FZ-MAX	OK	0,0	59560,8	0,000	0,0285
75	J[76]	Positive	LCB30_inf	Persistent & Transient	FX-MAX	OK	482,1	74174,5	0,007	0,0285

5.9 Posúdenie nosnej konštrukcie MSÚ (ULS) – odolnosť v šmyku

Elem	Part	Max/Min	LCom Name	Design Situations	Type	CHK	V_Ed (kN)	V_Rd (kN)	V_Rd,c (kN)	V_Rd,s (kN)	V_Rd,max (kN)	V_Ed/V_Rd
1	I[1]	Max	LCB53_inf	Persistent & Transient	FX-MAX	OK	-3,7	22125,5	22125,5	38592,2	98731,1	0,000
1	I[1]	Min	LCB42_sup	Persistent & Transient	FZ-MIN	OK	-3,7	22126,2	22126,2	38592,2	98731,1	0,000
1	J[2]	Max	LCB47_sup	Persistent & Transient	FX-MAX	OK	9655,7	31612,4	31612,4	38592,2	104650,1	0,305
1	J[2]	Min	LCB52_inf	Persistent & Transient	FZ-MIN	OK	7306,9	30239,5	30239,5	38592,2	103632,0	0,242
2	I[2]	Max	LCB54_inf	Persistent & Transient	FY-MAX	OK	1546,2	31586,2	31586,2	38592,2	104630,2	0,049
2	I[2]	Min	LCB43_sup	Persistent & Transient	FY-MIN	OK	-4819,3	30210,8	30210,8	38592,2	103611,2	0,160
2	J[3]	Max	LCB54_inf	Persistent & Transient	FY-MAX	OK	987,8	31664,1	31664,1	38592,2	104689,3	0,031
2	J[3]	Min	LCB43_sup	Persistent & Transient	FY-MIN	OK	-4842,4	30278,2	30278,2	38592,2	103660,1	0,160
3	I[3]	Max	LCB54_inf	Persistent & Transient	FX-MAX	OK	2051,9	8181,3	8181,3	19296,1	20371,9	0,251
3	I[3]	Min	LCB43_sup	Persistent & Transient	FX-MIN	OK	-3953,9	7719,3	7719,3	19296,1	20013,7	0,512
3	J[4]	Max	LCB54_inf	Persistent & Transient	FX-MAX	OK	399,3	2581,7	2581,7	17293,5	17293,5	0,155
3	J[4]	Min	LCB43_sup	Persistent & Transient	FX-MIN	OK	-4069,9	16939,1	2311,1	16939,1	16939,1	0,240
4	I[4]	Max	LCB54_inf	Persistent & Transient	FY-MAX	OK	-876,1	2575,5	2575,5	12349,6	17285,4	0,340
4	I[4]	Min	LCB43_sup	Persistent & Transient	FY-MIN	OK	-5133,5	12349,6	2299,2	12349,6	16923,6	0,416
4	J[5]	Max	LCB50_inf	Persistent & Transient	FY-MAX	OK	-1665,8	2507,7	2507,7	12349,6	17280,5	0,664
4	J[5]	Min	LCB47_sup	Persistent & Transient	FY-MIN	OK	-5628,0	12349,6	2900,3	12349,6	17710,7	0,456
5	I[5]	Max	LCB50_inf	Persistent & Transient	FY-MAX	OK	-1665,5	2505,8	2505,8	7903,7	17278,0	0,665
5	I[5]	Min	LCB47_sup	Persistent & Transient	FY-MIN	OK	-5627,7	7903,7	2898,5	7903,7	17708,3	0,712
5	J[6]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	249,5	7295,9	7295,9	7903,7	17316,2	0,034
5	J[6]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	-3516,5	7903,7	2933,0	7903,7	17753,5	0,445
6	I[6]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	249,5	7295,7	7295,7	7903,7	17316,1	0,034
6	I[6]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	-3516,5	7903,7	2932,9	7903,7	17753,3	0,445
6	J[7]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	2240,6	7314,8	7314,8	7903,7	17332,1	0,306
6	J[7]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	-2005,6	2947,1	2947,1	7903,7	17771,9	0,681
7	I[7]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	2240,6	7314,8	7314,8	7903,7	17332,1	0,306
7	I[7]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	-2005,6	2947,1	2947,1	7903,7	17771,9	0,681
7	J[8]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	4496,5	7903,7	2545,3	7903,7	17329,7	0,569
7	J[8]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	-358,7	2944,3	2944,3	7903,7	17768,3	0,122
8	I[8]	Max	LCB42_sup	Persistent & Transient	FX-MAX	OK	4066,3	12349,6	2785,9	12349,6	17644,7	0,329
8	I[8]	Min	LCB55_inf	Persistent & Transient	FX-MIN	OK	-875,0	3234,3	3234,3	12349,6	18148,1	0,271
8	J[9]	Max	LCB42_sup	Persistent & Transient	FX-MAX	OK	6943,1	12349,6	3011,1	12349,6	17939,7	0,562
8	J[9]	Min	LCB55_inf	Persistent & Transient	FX-MIN	OK	1321,4	3294,8	3294,8	12349,6	18501,2	0,401
9	I[9]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	4666,7	18257,6	3230,8	18257,6	18257,6	0,256
9	I[9]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	-1405,3	3230,8	3230,8	18881,7	18881,7	0,435
9	J[10]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	6839,5	19296,1	3274,6	19296,1	21073,7	0,355
9	J[10]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	-271,9	3708,0	3708,0	19296,1	21651,6	0,073
10	I[10]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	11064,7	13171,6	13171,6	38592,2	108226,6	0,840
10	I[10]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	4792,2	14647,1	14647,1	38592,2	110158,7	0,327

Elem	Part	Max/Min	LCom Name	Design Situations	Type	CHK	V_Ed (kN)	V_Rd (kN)	V_Rd,c (kN)	V_Rd,s (kN)	V_Rd,max (kN)	V_Ed/V_Rd
10	J[11]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	10621,0	35955,2	35955,2	38592,2	108168,1	0,295
10	J[11]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	3760,1	14593,2	14593,2	38592,2	110088,1	0,258
11	I[11]	Max	LCB55_inf	Persistent & Transient	FX-MAX	OK	-2688,1	38116,9	38116,9	38592,2	110087,9	0,071
11	I[11]	Min	LCB42_sup	Persistent & Transient	FX-MIN	OK	-10400,4	35955,2	35955,2	38592,2	108168,2	0,289
11	J[12]	Max	LCB51_inf	Persistent & Transient	FX-MAX	OK	-3803,1	36005,6	36005,6	38592,2	108211,6	0,106
11	J[12]	Min	LCB46_sup	Persistent & Transient	FX-MIN	OK	-10925,3	38209,2	38209,2	38592,2	110172,4	0,286
12	I[12]	Max	LCB55_inf	Persistent & Transient	FX-MAX	OK	1298,4	9635,9	9635,9	19296,1	21635,7	0,135
12	I[12]	Min	LCB42_sup	Persistent & Transient	FX-MIN	OK	-6660,1	9017,9	9017,9	19296,1	21073,5	0,739
12	J[13]	Max	LCB55_inf	Persistent & Transient	FX-MAX	OK	1846,4	8311,4	8311,4	18501,9	18501,9	0,222
12	J[13]	Min	LCB42_sup	Persistent & Transient	FX-MIN	OK	-4956,4	17953,8	3086,0	17953,8	17953,8	0,276
13	I[13]	Max	LCB55_inf	Persistent & Transient	FY-MAX	OK	-147,8	3230,8	3230,8	12349,6	18844,3	0,046
13	I[13]	Min	LCB42_sup	Persistent & Transient	FY-MIN	OK	-6623,7	12349,6	3294,2	12349,6	18226,5	0,536
13	J[14]	Max	LCB55_inf	Persistent & Transient	FY-MAX	OK	1389,3	3230,8	3230,8	12349,6	18510,7	0,430
13	J[14]	Min	LCB42_sup	Persistent & Transient	FY-MIN	OK	-4400,5	12349,6	3082,3	12349,6	17949,0	0,356
14	I[14]	Max	LCB55_inf	Persistent & Transient	FY-MAX	OK	1389,3	3230,8	3230,8	12349,6	18517,7	0,430
14	I[14]	Min	LCB42_sup	Persistent & Transient	FY-MIN	OK	-4400,6	12349,6	3087,8	12349,6	17956,1	0,356
14	J[15]	Max	LCB55_inf	Persistent & Transient	FY-MAX	OK	2161,7	2869,4	2869,4	12349,6	17754,1	0,753
14	J[15]	Min	LCB42_sup	Persistent & Transient	FY-MIN	OK	-2838,0	12349,6	2602,2	12349,6	17320,3	0,230
15	I[15]	Max	LCB55_inf	Persistent & Transient	FY-MAX	OK	2161,6	2873,2	2873,2	7903,7	17759,0	0,752
15	I[15]	Min	LCB42_sup	Persistent & Transient	FY-MIN	OK	-2837,9	7903,7	2605,9	7903,7	17325,2	0,359
15	J[16]	Max	LCB47_sup	Persistent & Transient	FY-MAX	OK	3400,3	7797,1	7797,1	7903,7	17751,1	0,436
15	J[16]	Min	LCB42_sup	Persistent & Transient	FY-MIN	OK	-1351,0	2601,1	2601,1	7903,7	17319,0	0,519
16	I[16]	Max	LCB47_sup	Persistent & Transient	FX-MAX	OK	2895,2	3230,8	3230,8	7903,7	18258,5	0,896
16	I[16]	Min	LCB42_sup	Persistent & Transient	FX-MIN	OK	-1771,9	2925,8	2925,8	7903,7	17744,0	0,606
16	J[17]	Max	LCB47_sup	Persistent & Transient	FX-MAX	OK	5789,7	7903,7	3230,8	7903,7	18255,0	0,733
16	J[17]	Min	LCB50_inf	Persistent & Transient	FX-MIN	OK	581,7	2924,0	2924,0	7903,7	17741,7	0,199
17	I[17]	Max	LCB47_sup	Persistent & Transient	FX-MAX	OK	5298,4	12349,6	3230,8	12349,6	18624,9	0,429
17	I[17]	Min	LCB50_inf	Persistent & Transient	FX-MIN	OK	172,3	3159,0	3159,0	12349,6	18049,5	0,055
17	J[18]	Max	LCB47_sup	Persistent & Transient	FX-MAX	OK	8223,9	12349,6	3294,8	12349,6	18615,8	0,666
17	J[18]	Min	LCB50_inf	Persistent & Transient	FX-MIN	OK	2461,5	8115,8	8115,8	12349,6	18042,6	0,303
18	I[18]	Max	LCB47_sup	Persistent & Transient	FX-MAX	OK	7726,9	12349,6	3294,8	12349,6	18986,7	0,626
18	I[18]	Min	LCB50_inf	Persistent & Transient	FX-MIN	OK	2047,3	3294,8	3294,8	12349,6	18356,4	0,621
18	J[19]	Max	LCB47_sup	Persistent & Transient	FX-MAX	OK	10675,7	12349,6	3294,8	12349,6	18986,2	0,865
18	J[19]	Min	LCB50_inf	Persistent & Transient	FX-MIN	OK	4280,9	8311,4	8311,4	12349,6	18351,4	0,515
19	I[19]	Max	LCB43_sup	Persistent & Transient	FY-MAX	OK	7301,8	18968,0	3294,8	18968,0	18968,0	0,385
19	I[19]	Min	LCB54_inf	Persistent & Transient	FY-MIN	OK	855,5	3294,8	3294,8	18986,7	18986,7	0,260
19	J[20]	Max	LCB43_sup	Persistent & Transient	FY-MAX	OK	9109,0	9875,6	9875,6	19296,1	21863,7	0,922
19	J[20]	Min	LCB54_inf	Persistent & Transient	FY-MIN	OK	1749,5	9885,0	9885,0	19296,1	22613,8	0,177
20	I[20]	Max	LCB43_sup	Persistent & Transient	FY-MAX	OK	8794,1	19296,1	3884,8	19296,1	22491,7	0,456
20	I[20]	Min	LCB54_inf	Persistent & Transient	FY-MIN	OK	1371,1	3884,8	3884,8	19296,1	22784,1	0,353
20	J[21]	Max	LCB43_sup	Persistent & Transient	FY-MAX	OK	9397,4	11300,8	11300,8	19296,1	25673,3	0,832

Elem	Part	Max/Min	LCom Name	Design Situations	Type	CHK	V_Ed (kN)	V_Rd (kN)	V_Rd,c (kN)	V_Rd,s (kN)	V_Rd,max (kN)	V_Ed/V_Rd
20	J[21]	Min	LCB54_inf	Persistent & Transient	FY-MIN	OK	557,0	4523,1	4523,1	19296,1	26581,4	0,123
21	I[21]	Max	LCB43_sup	Persistent & Transient	FX-MAX	OK	9058,2	19296,1	7753,8	19296,1	45539,1	0,469
21	I[21]	Min	LCB54_inf	Persistent & Transient	FX-MIN	OK	153,5	7753,8	7753,8	19296,1	45568,2	0,020
21	J[22]	Max	LCB43_sup	Persistent & Transient	FX-MAX	OK	9884,8	19296,1	7753,8	19296,1	45568,2	0,512
21	J[22]	Min	LCB54_inf	Persistent & Transient	FX-MIN	OK	408,2	7753,8	7753,8	19296,1	45568,2	0,053
22	I[22]	Max	LCB43_sup	Persistent & Transient	FX-MAX	OK	9795,2	45270,2	45270,2	38592,2	117239,5	0,216
22	I[22]	Min	LCB54_inf	Persistent & Transient	FX-MIN	OK	300,3	20999,9	20999,9	38592,2	121026,6	0,014
22	J[23]	Max	LCB43_sup	Persistent & Transient	FX-MAX	OK	15317,3	45325,7	45325,7	38592,2	117299,8	0,338
22	J[23]	Min	LCB54_inf	Persistent & Transient	FX-MIN	OK	6423,5	20999,9	20999,9	38592,2	121099,4	0,306
23	I[23]	Max	LCB50_inf	Persistent & Transient	FX-MAX	OK	-13080,3	20124,2	20124,2	38592,2	117330,6	0,650
23	I[23]	Min	LCB47_sup	Persistent & Transient	FX-MIN	OK	-22862,8	46396,4	46396,4	38592,2	121064,6	0,493
23	J[24]	Max	LCB54_inf	Persistent & Transient	FX-MAX	OK	-7502,7	20999,9	20999,9	38592,2	121094,5	0,357
23	J[24]	Min	LCB43_sup	Persistent & Transient	FX-MIN	OK	-16294,2	45321,5	45321,5	38592,2	117295,2	0,360
24	I[24]	Max	LCB54_inf	Persistent & Transient	FY-MAX	OK	-7553,7	7753,8	7753,8	19296,1	45568,2	0,974
24	I[24]	Min	LCB43_sup	Persistent & Transient	FY-MIN	OK	-16336,3	18900,9	18900,9	19296,1	45568,2	0,864
24	J[25]	Max	LCB54_inf	Persistent & Transient	FY-MAX	OK	-2866,8	7753,8	7753,8	19296,1	45568,2	0,370
24	J[25]	Min	LCB43_sup	Persistent & Transient	FY-MIN	OK	-11848,0	18900,9	18900,9	19296,1	45523,0	0,627
25	I[25]	Max	LCB54_inf	Persistent & Transient	FX-MAX	OK	-1120,1	4523,1	4523,1	19296,1	26553,0	0,248
25	I[25]	Min	LCB43_sup	Persistent & Transient	FX-MIN	OK	-10395,2	11300,8	11300,8	19296,1	25655,9	0,920
25	J[26]	Max	LCB54_inf	Persistent & Transient	FX-MAX	OK	-381,4	3876,9	3876,9	19296,1	22784,1	0,098
25	J[26]	Min	LCB43_sup	Persistent & Transient	FX-MIN	OK	-8483,2	9885,0	9885,0	19296,1	22784,1	0,858
26	I[26]	Max	LCB54_inf	Persistent & Transient	FX-MAX	OK	-665,6	3884,8	3884,8	19296,1	22784,1	0,171
26	I[26]	Min	LCB43_sup	Persistent & Transient	FX-MIN	OK	-8719,9	9885,0	9885,0	19296,1	22190,8	0,882
26	J[27]	Max	LCB54_inf	Persistent & Transient	FX-MAX	OK	229,7	3294,8	3294,8	18986,7	18986,7	0,070
26	J[27]	Min	LCB43_sup	Persistent & Transient	FX-MIN	OK	-6791,6	18986,7	3294,8	18986,7	18986,7	0,358
27	I[27]	Max	LCB54_inf	Persistent & Transient	FY-MAX	OK	-3709,3	12349,6	3294,8	12349,6	18986,7	0,300
27	I[27]	Min	LCB43_sup	Persistent & Transient	FY-MIN	OK	-10070,1	12349,6	8311,4	12349,6	18670,6	0,815
27	J[28]	Max	LCB50_inf	Persistent & Transient	FY-MAX	OK	-3134,6	3294,8	3294,8	12349,6	18986,7	0,951
27	J[28]	Min	LCB47_sup	Persistent & Transient	FY-MIN	OK	-8774,2	12349,6	3294,8	12349,6	18986,7	0,711
28	I[28]	Max	LCB50_inf	Persistent & Transient	FY-MAX	OK	-3546,1	12349,6	3294,8	12349,6	18705,8	0,287
28	I[28]	Min	LCB47_sup	Persistent & Transient	FY-MIN	OK	-9268,4	12349,6	3294,8	12349,6	18986,7	0,751
28	J[29]	Max	LCB50_inf	Persistent & Transient	FY-MAX	OK	-1431,6	3230,8	3230,8	12349,6	18727,5	0,443
28	J[29]	Min	LCB47_sup	Persistent & Transient	FY-MIN	OK	-6346,0	12349,6	3294,8	12349,6	18986,7	0,514
29	I[29]	Max	LCB50_inf	Persistent & Transient	FY-MAX	OK	-1844,9	3230,8	3230,8	7903,7	18413,5	0,571
29	I[29]	Min	LCB47_sup	Persistent & Transient	FY-MIN	OK	-6842,0	7903,7	3294,8	7903,7	18986,7	0,866
29	J[30]	Max	LCB50_inf	Persistent & Transient	FY-MAX	OK	287,9	8311,4	8311,4	7903,7	18429,0	0,035
29	J[30]	Min	LCB47_sup	Persistent & Transient	FY-MIN	OK	-3945,8	7903,7	3294,8	7903,7	18986,7	0,499
30	I[30]	Max	LCB50_inf	Persistent & Transient	FY-MAX	OK	-115,2	7983,6	7983,6	7903,7	17920,2	0,014
30	I[30]	Min	LCB47_sup	Persistent & Transient	FY-MIN	OK	-4429,6	7903,7	3294,8	7903,7	18466,0	0,561
30	J[31]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	1157,4	7996,4	7996,4	7903,7	17932,0	0,145
30	J[31]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	-3121,7	3294,8	3294,8	7903,7	18479,6	0,948

Elem	Part	Max/Min	LCom Name	Design Situations	Type	CHK	V_Ed (kN)	V_Rd (kN)	V_Rd,c (kN)	V_Rd,s (kN)	V_Rd,max (kN)	V_Ed/V_Rd
31	I[31]	Max	LCB42_sup	Persistent & Transient	FX-MAX	OK	745,8	8311,4	8311,4	7903,7	18345,9	0,090
31	I[31]	Min	LCB55_inf	Persistent & Transient	FX-MIN	OK	-3615,7	7903,7	3294,8	7903,7	18974,7	0,458
31	J[32]	Max	LCB42_sup	Persistent & Transient	FX-MAX	OK	3470,2	8311,4	8311,4	7903,7	18347,7	0,418
31	J[32]	Min	LCB55_inf	Persistent & Transient	FX-MIN	OK	-1280,1	3294,8	3294,8	7903,7	18976,2	0,389
32	I[32]	Max	LCB42_sup	Persistent & Transient	FX-MAX	OK	3103,9	8311,4	8311,4	7903,7	18656,9	0,373
32	I[32]	Min	LCB55_inf	Persistent & Transient	FX-MIN	OK	-1719,7	3294,8	3294,8	7903,7	18986,7	0,522
32	J[33]	Max	LCB42_sup	Persistent & Transient	FX-MAX	OK	5806,8	8311,4	8311,4	7903,7	18643,0	0,699
32	J[33]	Min	LCB55_inf	Persistent & Transient	FX-MIN	OK	538,6	3294,8	3294,8	7903,7	18986,7	0,164
33	I[33]	Max	LCB42_sup	Persistent & Transient	FX-MAX	OK	5399,1	8311,4	8311,4	10000,5	18971,9	0,650
33	I[33]	Min	LCB55_inf	Persistent & Transient	FX-MIN	OK	49,4	3294,8	3294,8	10000,5	18986,7	0,015
33	J[34]	Max	LCB42_sup	Persistent & Transient	FX-MAX	OK	8430,8	10000,5	3230,8	10000,5	18948,5	0,843
33	J[34]	Min	LCB55_inf	Persistent & Transient	FX-MIN	OK	2651,7	3294,8	3294,8	10000,5	18986,7	0,805
34	I[34]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	5943,7	12349,6	3230,8	12349,6	18986,7	0,481
34	I[34]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	-324,4	3294,8	3294,8	12349,6	18986,7	0,099
34	J[35]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	9380,7	12988,4	3390,4	12988,4	19968,8	0,722
34	J[35]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	2698,1	3442,9	3442,9	12988,4	19968,8	0,784
35	I[35]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	7912,2	12988,4	3390,4	12988,4	19968,8	0,609
35	I[35]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	939,0	3442,9	3442,9	12988,4	19968,8	0,273
35	J[36]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	11179,7	13840,1	3935,1	13840,1	23193,3	0,808
35	J[36]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	3664,9	3935,1	3935,1	13840,1	23193,3	0,931
36	I[36]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	10127,1	21625,0	3935,1	21625,0	23193,3	0,468
36	I[36]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	2401,9	3935,1	3935,1	21625,0	23193,3	0,610
36	J[37]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	13508,7	22955,7	4502,3	22955,7	26653,5	0,589
36	J[37]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	5162,4	22955,7	4502,3	22955,7	26653,5	0,225
37	I[37]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	12035,1	22955,7	4502,3	22955,7	26653,5	0,524
37	I[37]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	3397,3	4502,3	4502,3	22955,7	26653,5	0,755
37	J[38]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	14862,6	24619,2	5182,5	24619,2	30765,1	0,604
37	J[38]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	5389,6	24619,2	5182,5	24619,2	30765,1	0,219
38	I[38]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	13309,8	24619,2	5182,5	24619,2	30765,1	0,541
38	I[38]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	3532,5	5182,5	5182,5	24619,2	30765,1	0,682
38	J[39]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	15887,6	26615,4	15481,6	26615,4	35616,5	0,597
38	J[39]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	5113,6	5981,9	5981,9	26615,4	35616,5	0,855
39	I[39]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	12826,7	33383,7	5981,9	33383,7	35616,5	0,384
39	I[39]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	1456,8	5981,9	5981,9	33383,7	35616,5	0,244
39	J[40]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	15947,0	18295,4	18295,4	37139,4	42245,5	0,872
39	J[40]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	3560,1	7067,8	7067,8	37139,4	42245,5	0,504
40	I[40]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	12868,5	42245,5	7067,8	42245,5	42245,5	0,305
40	I[40]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	-116,9	7067,8	7067,8	42245,5	42245,5	0,017
40	J[41]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	17121,6	21725,4	21725,4	49903,7	50413,1	0,788
40	J[41]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	3160,7	8400,6	8400,6	49903,7	50413,1	0,376
41	I[41]	Max	LCB43_sup	Persistent & Transient	FY-MAX	OK	12657,7	21725,4	21725,4	49903,7	50413,1	0,583

Elem	Part	Max/Min	LCom Name	Design Situations	Type	CHK	V_Ed (kN)	V_Rd (kN)	V_Rd,c (kN)	V_Rd,s (kN)	V_Rd,max (kN)	V_Ed/V_Rd
41	I[41]	Min	LCB54_inf	Persistent & Transient	FY-MIN	OK	-2170,3	8400,6	8400,6	49903,7	50413,1	0,258
41	J[42]	Max	LCB43_sup	Persistent & Transient	FY-MAX	OK	13406,9	53896,0	9402,4	53896,0	56567,4	0,249
41	J[42]	Min	LCB54_inf	Persistent & Transient	FY-MIN	OK	-2469,1	9402,4	9402,4	53896,0	56567,4	0,263
42	I[42]	Max	LCB42_sup	Persistent & Transient	FX-MAX	OK	28605,8	77481,9	77481,9	71861,4	213129,2	0,369
42	I[42]	Min	LCB55_inf	Persistent & Transient	FX-MIN	OK	15672,2	34545,4	34545,4	67024,5	204242,1	0,454
42	J[43]	Max	LCB42_sup	Persistent & Transient	FX-MAX	OK	31957,0	77499,9	77499,9	71861,4	213148,1	0,412
42	J[43]	Min	LCB55_inf	Persistent & Transient	FX-MIN	OK	18921,3	36968,3	36968,3	71861,4	219003,6	0,512
43	I[43]	Max	LCB54_inf	Persistent & Transient	FY-MAX	OK	-19600,7	34406,5	34406,5	67024,5	204060,2	0,570
43	I[43]	Min	LCB43_sup	Persistent & Transient	FY-MIN	OK	-32454,3	77307,9	77307,9	71861,4	212947,2	0,420
43	J[44]	Max	LCB54_inf	Persistent & Transient	FY-MAX	OK	-16043,9	34382,6	34382,6	67024,5	204029,0	0,467
43	J[44]	Min	LCB43_sup	Persistent & Transient	FY-MIN	OK	-28847,0	77280,8	77280,8	71861,4	212918,8	0,373
44	I[44]	Max	LCB54_inf	Persistent & Transient	FX-MAX	OK	2125,7	9268,6	9268,6	53103,4	55735,5	0,229
44	I[44]	Min	LCB43_sup	Persistent & Transient	FX-MIN	OK	-13622,4	24259,8	24259,8	53896,0	56567,4	0,562
44	J[45]	Max	LCB54_inf	Persistent & Transient	FX-MAX	OK	1529,0	8298,2	8298,2	49243,2	49745,8	0,184
44	J[45]	Min	LCB43_sup	Persistent & Transient	FX-MIN	OK	-13123,5	21725,4	21725,4	49903,7	50413,1	0,604
45	I[45]	Max	LCB54_inf	Persistent & Transient	FX-MAX	OK	-3809,0	8400,6	8400,6	49903,7	50413,1	0,453
45	I[45]	Min	LCB43_sup	Persistent & Transient	FX-MIN	OK	-17599,3	21725,4	21725,4	49903,7	50413,1	0,810
45	J[46]	Max	LCB54_inf	Persistent & Transient	FX-MAX	OK	-559,9	7067,8	7067,8	42245,5	42245,5	0,079
45	J[46]	Min	LCB43_sup	Persistent & Transient	FX-MIN	OK	-13352,7	18295,4	18295,4	42245,5	42245,5	0,730
46	I[46]	Max	LCB54_inf	Persistent & Transient	FX-MAX	OK	-4247,0	7067,8	7067,8	37139,4	42245,5	0,601
46	I[46]	Min	LCB43_sup	Persistent & Transient	FX-MIN	OK	-16438,5	18295,4	18295,4	37139,4	42245,5	0,899
46	J[47]	Max	LCB54_inf	Persistent & Transient	FX-MAX	OK	-1861,2	5985,2	5985,2	33383,7	35616,5	0,311
46	J[47]	Min	LCB43_sup	Persistent & Transient	FX-MIN	OK	-13081,6	15481,6	15481,6	33383,7	35616,5	0,845
47	I[47]	Max	LCB54_inf	Persistent & Transient	FX-MAX	OK	-5525,7	5981,9	5981,9	26615,3	35616,5	0,924
47	I[47]	Min	LCB43_sup	Persistent & Transient	FX-MIN	OK	-16147,7	26615,3	15481,6	26615,3	35616,5	0,607
47	J[48]	Max	LCB54_inf	Persistent & Transient	FX-MAX	OK	-3763,5	5182,5	5182,5	24619,2	30765,1	0,726
47	J[48]	Min	LCB43_sup	Persistent & Transient	FX-MIN	OK	-13417,2	13418,5	13418,5	24619,2	30765,1	1,000
48	I[48]	Max	LCB54_inf	Persistent & Transient	FX-MAX	OK	-5618,8	24619,2	5182,5	24619,2	30765,1	0,228
48	I[48]	Min	LCB43_sup	Persistent & Transient	FX-MIN	OK	-14967,8	24619,2	13418,5	24619,2	30765,1	0,608
48	J[49]	Max	LCB54_inf	Persistent & Transient	FX-MAX	OK	-3470,8	4502,3	4502,3	22955,7	26653,5	0,771
48	J[49]	Min	LCB43_sup	Persistent & Transient	FX-MIN	OK	-12008,2	22955,7	11658,2	22955,7	26653,5	0,523
49	I[49]	Max	LCB54_inf	Persistent & Transient	FX-MAX	OK	-5236,5	22955,7	4502,3	22955,7	26653,5	0,228
49	I[49]	Min	LCB43_sup	Persistent & Transient	FX-MIN	OK	-13481,9	22955,7	11658,2	22955,7	26653,5	0,587
49	J[50]	Max	LCB54_inf	Persistent & Transient	FX-MAX	OK	-2476,8	3927,4	3927,4	21625,0	23193,3	0,631
49	J[50]	Min	LCB43_sup	Persistent & Transient	FX-MIN	OK	-10097,8	21625,0	3935,1	21625,0	23193,3	0,467
50	I[50]	Max	LCB54_inf	Persistent & Transient	FX-MAX	OK	-3741,7	3927,4	3927,4	13840,1	23193,3	0,953
50	I[50]	Min	LCB43_sup	Persistent & Transient	FX-MIN	OK	-11151,8	13840,1	10172,0	13840,1	23193,3	0,806
50	J[51]	Max	LCB54_inf	Persistent & Transient	FX-MAX	OK	-1017,3	3390,4	3390,4	12988,4	19968,8	0,300
50	J[51]	Min	LCB43_sup	Persistent & Transient	FX-MIN	OK	-7881,8	12988,4	3442,9	12988,4	19968,8	0,607
51	I[51]	Max	LCB54_inf	Persistent & Transient	FX-MAX	OK	-2778,1	3390,4	3390,4	12988,4	19968,8	0,819
51	I[51]	Min	LCB43_sup	Persistent & Transient	FX-MIN	OK	-9351,3	12988,4	3442,9	12988,4	19968,8	0,720

Elem	Part	Max/Min	LCom Name	Design Situations	Type	CHK	V_Ed (kN)	V_Rd (kN)	V_Rd,c (kN)	V_Rd,s (kN)	V_Rd,max (kN)	V_Ed/V_Rd
51	J[52]	Max	LCB54_inf	Persistent & Transient	FX-MAX	OK	247,2	3230,8	3230,8	12349,6	18986,7	0,077
51	J[52]	Min	LCB43_sup	Persistent & Transient	FX-MIN	OK	-5907,6	12349,6	3294,8	12349,6	18986,7	0,478
52	I[52]	Max	LCB54_inf	Persistent & Transient	FY-MAX	OK	-2728,3	3230,8	3230,8	10000,5	18986,7	0,845
52	I[52]	Min	LCB43_sup	Persistent & Transient	FY-MIN	OK	-8392,4	10000,5	3294,8	10000,5	18934,3	0,839
52	J[53]	Max	LCB54_inf	Persistent & Transient	FY-MAX	OK	-172,0	8311,4	8311,4	10000,5	18986,7	0,021
52	J[53]	Min	LCB43_sup	Persistent & Transient	FY-MIN	OK	-5394,1	10000,5	3294,8	10000,5	18962,4	0,539
53	I[53]	Max	LCB54_inf	Persistent & Transient	FY-MAX	OK	-618,9	8311,4	8311,4	7903,7	18986,7	0,075
53	I[53]	Min	LCB43_sup	Persistent & Transient	FY-MIN	OK	-5766,5	7903,7	3294,8	7903,7	18661,7	0,730
53	J[54]	Max	LCB54_inf	Persistent & Transient	FY-MAX	OK	1689,3	8311,4	8311,4	7903,7	18986,7	0,203
53	J[54]	Min	LCB43_sup	Persistent & Transient	FY-MIN	OK	-3016,7	3294,8	3294,8	7903,7	18675,5	0,916
54	I[54]	Max	LCB54_inf	Persistent & Transient	FY-MAX	OK	1196,2	8311,4	8311,4	7903,7	18968,4	0,144
54	I[54]	Min	LCB43_sup	Persistent & Transient	FY-MIN	OK	-3427,6	7903,7	3294,8	7903,7	18337,5	0,434
54	J[55]	Max	LCB54_inf	Persistent & Transient	FY-MAX	OK	3472,3	8311,4	8311,4	7903,7	18968,4	0,418
54	J[55]	Min	LCB43_sup	Persistent & Transient	FY-MIN	OK	-747,1	3294,8	3294,8	7903,7	18336,9	0,227
55	I[55]	Max	LCB54_inf	Persistent & Transient	FY-MAX	OK	3034,5	8311,4	8311,4	7903,7	18522,4	0,365
55	I[55]	Min	LCB43_sup	Persistent & Transient	FY-MIN	OK	-1111,8	3093,6	3093,6	7903,7	17963,8	0,359
55	J[56]	Max	LCB46_sup	Persistent & Transient	FY-MAX	OK	4373,8	7903,7	3230,8	7903,7	18509,7	0,553
55	J[56]	Min	LCB51_inf	Persistent & Transient	FY-MIN	OK	119,9	3085,2	3085,2	7903,7	17952,8	0,039
56	I[56]	Max	LCB46_sup	Persistent & Transient	FX-MAX	OK	3876,2	7903,7	3230,8	7903,7	18986,7	0,490
56	I[56]	Min	LCB51_inf	Persistent & Transient	FX-MIN	OK	-294,8	3294,8	3294,8	7903,7	18365,5	0,090
56	J[57]	Max	LCB46_sup	Persistent & Transient	FX-MAX	OK	6784,0	7903,7	3230,8	7903,7	18978,6	0,858
56	J[57]	Min	LCB51_inf	Persistent & Transient	FX-MIN	OK	1853,4	3294,8	3294,8	7903,7	18344,2	0,563
57	I[57]	Max	LCB46_sup	Persistent & Transient	FX-MAX	OK	6297,3	12349,6	3230,8	12349,6	18986,7	0,510
57	I[57]	Min	LCB51_inf	Persistent & Transient	FX-MIN	OK	1447,9	3294,8	3294,8	12349,6	18682,7	0,439
57	J[58]	Max	LCB46_sup	Persistent & Transient	FX-MAX	OK	9209,1	12349,6	3294,8	12349,6	18986,7	0,746
57	J[58]	Min	LCB51_inf	Persistent & Transient	FX-MIN	OK	3558,9	12349,6	3294,8	12349,6	18653,6	0,288
58	I[58]	Max	LCB46_sup	Persistent & Transient	FX-MAX	OK	8715,1	12349,6	3294,8	12349,6	18986,7	0,706
58	I[58]	Min	LCB51_inf	Persistent & Transient	FX-MIN	OK	3147,4	3294,8	3294,8	12349,6	18986,7	0,955
58	J[59]	Max	LCB42_sup	Persistent & Transient	FX-MAX	OK	10046,4	12349,6	3294,8	12349,6	18641,4	0,814
58	J[59]	Min	LCB55_inf	Persistent & Transient	FX-MIN	OK	3748,1	12349,6	3294,8	12349,6	18986,7	0,304
59	I[59]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	6775,8	18986,7	3294,8	18986,7	18986,7	0,357
59	I[59]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	-178,5	3294,8	3294,8	18986,7	18986,7	0,054
59	J[60]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	8716,9	19296,1	3884,8	19296,1	22166,9	0,452
59	J[60]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	732,6	3884,8	3884,8	19296,1	22784,1	0,189
60	I[60]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	8469,2	19296,1	3884,8	19296,1	22784,1	0,439
60	I[60]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	433,9	3884,8	3884,8	19296,1	22784,1	0,112
60	J[61]	Max	LCB42_sup	Persistent & Transient	FY-MAX	OK	10393,5	11300,8	11300,8	19296,1	25638,8	0,920
60	J[61]	Min	LCB55_inf	Persistent & Transient	FY-MIN	OK	1185,0	4523,1	4523,1	19296,1	26538,4	0,262
61	I[61]	Max	LCB42_sup	Persistent & Transient	FX-MAX	OK	11871,8	19296,1	7753,8	19296,1	45511,6	0,615
61	I[61]	Min	LCB55_inf	Persistent & Transient	FX-MIN	OK	2960,4	7753,8	7753,8	19296,1	45568,2	0,382
61	J[62]	Max	LCB42_sup	Persistent & Transient	FX-MAX	OK	15437,3	19296,1	7753,8	19296,1	45568,2	0,800

Elem	Part	Max/Min	LCom Name	Design Situations	Type	CHK	V_Ed (kN)	V_Rd (kN)	V_Rd,c (kN)	V_Rd,s (kN)	V_Rd,max (kN)	V_Ed/V_Rd
61	J[62]	Min	LCB55_inf	Persistent & Transient	FX-MIN	OK	6538,1	7753,8	7753,8	19296,1	45568,2	0,843
62	I[62]	Max	LCB42_sup	Persistent & Transient	FX-MAX	OK	15386,2	44447,7	44447,7	38592,2	116354,8	0,346
62	I[62]	Min	LCB55_inf	Persistent & Transient	FX-MIN	OK	6476,5	20999,9	20999,9	38592,2	119955,2	0,308
62	J[63]	Max	LCB46_sup	Persistent & Transient	FX-MAX	OK	21765,1	38592,2	20999,9	38592,2	119939,3	0,564
62	J[63]	Min	LCB51_inf	Persistent & Transient	FX-MIN	OK	12248,0	44468,0	44468,0	38592,2	116376,4	0,275
63	I[63]	Max	LCB55_inf	Persistent & Transient	FY-MAX	OK	-6813,1	20999,9	20999,9	38592,2	119953,9	0,324
63	I[63]	Min	LCB42_sup	Persistent & Transient	FY-MIN	OK	-15361,2	44448,2	44448,2	38592,2	116355,3	0,346
63	J[64]	Max	LCB55_inf	Persistent & Transient	FY-MAX	OK	-657,3	20999,9	20999,9	38592,2	119877,0	0,031
63	J[64]	Min	LCB42_sup	Persistent & Transient	FY-MIN	OK	-9818,8	44388,3	44388,3	38592,2	116291,5	0,221
64	I[64]	Max	LCB55_inf	Persistent & Transient	FY-MAX	OK	-763,2	7753,8	7753,8	19296,1	45568,2	0,098
64	I[64]	Min	LCB42_sup	Persistent & Transient	FY-MIN	OK	-9906,9	18900,9	18900,9	19296,1	45568,2	0,524
64	J[65]	Max	LCB55_inf	Persistent & Transient	FY-MAX	OK	45,2	7753,8	7753,8	19296,1	45568,2	0,006
64	J[65]	Min	LCB42_sup	Persistent & Transient	FY-MIN	OK	-8632,0	18900,9	18900,9	19296,1	45013,6	0,457
65	I[65]	Max	LCB55_inf	Persistent & Transient	FX-MAX	OK	-466,6	4523,1	4523,1	19296,1	26199,6	0,103
65	I[65]	Min	LCB42_sup	Persistent & Transient	FX-MIN	OK	-9059,7	11146,1	11146,1	19296,1	25367,1	0,813
65	J[66]	Max	LCB55_inf	Persistent & Transient	FX-MAX	OK	-828,9	3876,9	3876,9	19296,1	22784,1	0,214
65	J[66]	Min	LCB42_sup	Persistent & Transient	FX-MIN	OK	-8086,6	9885,0	9885,0	19296,1	22196,2	0,818
66	I[66]	Max	LCB55_inf	Persistent & Transient	FX-MAX	OK	-1295,1	3884,8	3884,8	19296,1	22236,0	0,333
66	I[66]	Min	LCB42_sup	Persistent & Transient	FX-MIN	OK	-8473,8	9561,3	9561,3	19296,1	21565,8	0,886
66	J[67]	Max	LCB55_inf	Persistent & Transient	FX-MAX	OK	-717,0	3230,8	3230,8	18986,7	18986,7	0,222
66	J[67]	Min	LCB42_sup	Persistent & Transient	FX-MIN	OK	-6903,8	8311,4	8311,4	18365,6	18365,6	0,831
67	I[67]	Max	LCB55_inf	Persistent & Transient	FY-MAX	OK	-3999,5	12349,6	3294,8	12349,6	18257,0	0,324
67	I[67]	Min	LCB42_sup	Persistent & Transient	FY-MIN	OK	-9639,4	12349,6	7775,3	12349,6	17731,6	0,781
67	J[68]	Max	LCB55_inf	Persistent & Transient	FY-MAX	OK	-1742,3	3230,8	3230,8	12349,6	18260,2	0,539
67	J[68]	Min	LCB42_sup	Persistent & Transient	FY-MIN	OK	-6774,0	7779,1	7779,1	12349,6	17734,9	0,871
68	I[68]	Max	LCB55_inf	Persistent & Transient	FY-MAX	OK	-2245,3	2963,7	2963,7	12349,6	17877,6	0,758
68	I[68]	Min	LCB42_sup	Persistent & Transient	FY-MIN	OK	-7193,1	7414,5	7414,5	12349,6	17416,5	0,970
68	J[69]	Max	LCB55_inf	Persistent & Transient	FY-MAX	OK	84,2	7942,1	7942,1	12349,6	17882,2	0,011
68	J[69]	Min	LCB42_sup	Persistent & Transient	FY-MIN	OK	-4326,7	12349,6	2679,1	12349,6	17421,0	0,350
69	I[69]	Max	LCB55_inf	Persistent & Transient	FY-MAX	OK	-422,7	7508,3	7508,3	7903,7	17496,9	0,056
69	I[69]	Min	LCB42_sup	Persistent & Transient	FY-MIN	OK	-4749,1	7033,7	7033,7	7903,7	17100,3	0,675
69	J[70]	Max	LCB55_inf	Persistent & Transient	FY-MAX	OK	1944,7	7507,2	7507,2	7903,7	17496,0	0,259
69	J[70]	Min	LCB42_sup	Persistent & Transient	FY-MIN	OK	-1915,8	2434,1	2434,1	7903,7	17100,2	0,787
70	I[70]	Max	LCB55_inf	Persistent & Transient	FY-MAX	OK	1448,1	6972,4	6972,4	7903,7	17051,0	0,208
70	I[70]	Min	LCB42_sup	Persistent & Transient	FY-MIN	OK	-2329,7	6557,1	6557,1	7903,7	16728,0	0,355
70	J[71]	Max	LCB47_sup	Persistent & Transient	FY-MAX	OK	3009,5	6964,2	6964,2	7903,7	17044,4	0,432
70	J[71]	Min	LCB42_sup	Persistent & Transient	FY-MIN	OK	-415,1	6550,5	6550,5	7903,7	16723,0	0,063
71	I[71]	Max	LCB47_sup	Persistent & Transient	FX-MAX	OK	3009,5	6964,3	6964,3	7903,7	17044,5	0,432
71	I[71]	Min	LCB42_sup	Persistent & Transient	FX-MIN	OK	-415,1	6550,6	6550,6	7903,7	16723,1	0,063
71	J[72]	Max	LCB47_sup	Persistent & Transient	FX-MAX	OK	3998,9	6944,0	6944,0	7903,7	17028,2	0,576
71	J[72]	Min	LCB50_inf	Persistent & Transient	FX-MIN	OK	295,5	6533,1	6533,1	7903,7	16710,0	0,045

Elem	Part	Max/Min	LCom Name	Design Situations	Type	CHK	V_Ed (kN)	V_Rd (kN)	V_Rd,c (kN)	V_Rd,s (kN)	V_Rd,max (kN)	V_Ed/V_Rd
72	I[72]	Max	LCB47_sup	Persistent & Transient	FX-MAX	OK	3999,0	6944,3	6944,3	12349,6	17028,4	0,576
72	I[72]	Min	LCB50_inf	Persistent & Transient	FX-MIN	OK	295,6	6533,6	6533,6	12349,6	16710,3	0,045
72	J[73]	Max	LCB43_sup	Persistent & Transient	FX-MAX	OK	3698,8	6477,9	6477,9	12349,6	16668,6	0,571
72	J[73]	Min	LCB54_inf	Persistent & Transient	FX-MIN	OK	-1074,0	6878,2	6878,2	12349,6	16975,9	0,156
73	I[73]	Max	LCB43_sup	Persistent & Transient	FY-MAX	OK	2790,2	6484,6	6484,6	16673,6	16673,6	0,430
73	I[73]	Min	LCB54_inf	Persistent & Transient	FY-MIN	OK	-2161,9	6888,2	6888,2	16983,8	16983,8	0,314
73	J[74]	Max	LCB43_sup	Persistent & Transient	FY-MAX	OK	3047,0	19296,1	2260,4	19296,1	19745,7	0,158
73	J[74]	Min	LCB54_inf	Persistent & Transient	FY-MIN	OK	-3413,3	7784,5	7784,5	19296,1	20063,0	0,439
74	I[74]	Max	LCB43_sup	Persistent & Transient	FX-MAX	OK	3823,8	29229,0	29229,0	38592,2	102911,5	0,131
74	I[74]	Min	LCB54_inf	Persistent & Transient	FX-MIN	OK	-2484,0	30453,5	30453,5	38592,2	103787,7	0,082
74	J[75]	Max	LCB43_sup	Persistent & Transient	FX-MAX	OK	4282,7	29188,3	29188,3	38592,2	102883,0	0,147
74	J[75]	Min	LCB54_inf	Persistent & Transient	FX-MIN	OK	-2450,3	30407,2	30407,2	38592,2	103753,9	0,081
75	I[75]	Max	LCB53_inf	Persistent & Transient	FZ-MAX	OK	-6437,0	29212,5	29212,5	38592,2	102899,9	0,220
75	I[75]	Min	LCB46_sup	Persistent & Transient	FX-MIN	OK	-8611,8	30429,2	30429,2	38592,2	103770,0	0,283
75	J[76]	Max	LCB45_sup	Persistent & Transient	FZ-MAX	OK	2,9	22144,3	22144,3	38592,2	98731,1	0,000
75	J[76]	Min	LCB52_inf	Persistent & Transient	FX-MIN	OK	2,9	22144,5	22144,5	38592,2	98731,1	0,000

5.10 Posúdenie nosnej konštrukcie MSÚ (ULS) – kombinácia šmyku a krútenia

Elem	Part	Max/Min	LCom Name	Design Situations	Type	CHK	T_Ed (kN*m)	T_Rd,max (kN*m)	V_Ed (kN)	V_Rd,max (kN)	Ratio
1	I[1]	T-Max	LCB71_inf_krutenie	Persistent & Transient	MZ-MIN	OK	0,0	222817,1	-3,7	98731,1	0,000
1	I[1]	V-Max	LCB57_inf	Persistent & Transient	FZ-MAX	OK	0,0	222817,1	-3,7	98731,1	0,000
1	I[1]	V-Min	LCB46_sup	Persistent & Transient	FZ-MIN	OK	0,0	222817,1	-3,7	98731,1	0,000
1	J[2]	T-Max	LCB70_inf_krutenie	Persistent & Transient	MZ-MAX	OK	2009,2	236175,5	9291,1	104650,2	0,097
1	J[2]	V-Max	LCB47_sup	Persistent & Transient	FZ-MAX	OK	2005,0	236175,2	9655,7	104650,1	0,101
1	J[2]	V-Min	LCB52_inf	Persistent & Transient	FZ-MIN	OK	-382,6	233877,6	7306,9	103632,0	0,072
2	I[2]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-6396,1	233831,3	-4023,7	103611,5	0,066
2	I[2]	V-Max	LCB54_inf	Persistent & Transient	MY-MAX	OK	2932,4	236130,3	1546,2	104630,2	0,027
2	I[2]	V-Min	LCB43_sup	Persistent & Transient	MY-MIN	OK	-6325,7	233830,6	-4819,3	103611,2	0,074
2	J[3]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-6164,8	233942,1	-4046,8	103660,6	0,065
2	J[3]	V-Max	LCB54_inf	Persistent & Transient	FZ-MAX	OK	2829,9	236263,7	987,8	104689,3	0,021
2	J[3]	V-Min	LCB43_sup	Persistent & Transient	FZ-MIN	OK	-6098,8	233940,9	-4842,4	103660,1	0,073
3	I[3]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-6156,7	244639,5	-3158,6	20012,4	0,183
3	I[3]	V-Max	LCB54_inf	Persistent & Transient	FZ-MAX	OK	2828,3	249033,9	2051,9	20371,9	0,112
3	I[3]	V-Min	LCB43_sup	Persistent & Transient	FZ-MIN	OK	-6095,7	244655,0	-3953,9	20013,7	0,223
3	J[4]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-5003,1	248471,6	-3274,3	16938,3	0,213
3	J[4]	V-Max	LCB54_inf	Persistent & Transient	FZ-MAX	OK	2541,5	253683,2	399,3	17293,5	0,033
3	J[4]	V-Min	LCB43_sup	Persistent & Transient	FZ-MIN	OK	-4960,8	248484,4	-4069,9	16939,1	0,260
4	I[4]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-4995,4	248265,3	-4337,9	16924,2	0,276
4	I[4]	V-Max	LCB54_inf	Persistent & Transient	FZ-MAX	OK	2542,3	253563,7	-876,1	17285,4	0,061
4	I[4]	V-Min	LCB43_sup	Persistent & Transient	FZ-MIN	OK	-4963,6	248257,2	-5133,5	16923,6	0,323
4	J[5]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-3964,9	253480,7	-4388,4	17279,7	0,270
4	J[5]	V-Max	LCB50_inf	Persistent & Transient	FZ-MAX	OK	2401,1	253491,5	-1665,8	17280,5	0,106
4	J[5]	V-Min	LCB47_sup	Persistent & Transient	FZ-MIN	OK	-3947,8	259803,3	-5628,0	17710,7	0,333
5	I[5]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-3965,5	253442,9	-4388,1	17277,1	0,270
5	I[5]	V-Max	LCB50_inf	Persistent & Transient	FZ-MAX	OK	2401,2	253455,3	-1665,5	17278,0	0,106
5	I[5]	V-Min	LCB47_sup	Persistent & Transient	FZ-MIN	OK	-3947,8	259767,2	-5627,7	17708,3	0,333
5	J[6]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-3186,8	253999,0	-2183,6	17315,1	0,139
5	J[6]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	2683,4	254016,1	249,5	17316,2	0,025
5	J[6]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-3182,2	260429,9	-3516,5	17753,5	0,210
6	I[6]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-3186,8	253997,2	-2183,6	17314,9	0,139
6	I[6]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	2683,4	254014,3	249,5	17316,1	0,025
6	I[6]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-3182,2	260428,2	-3516,5	17753,3	0,210
6	J[7]	T-Max	LCB30_inf	Persistent & Transient	MZ-MAX	OK	3190,4	260722,3	475,3	17773,4	0,039
6	J[7]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	3183,2	254249,4	2240,6	17332,1	0,142
6	J[7]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-2682,6	260701,1	-2005,6	17771,9	0,123
7	I[7]	T-Max	LCB30_inf	Persistent & Transient	MZ-MAX	OK	3190,4	260722,0	475,3	17773,4	0,039
7	I[7]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	3183,2	254249,0	2240,6	17332,1	0,142
7	I[7]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-2682,6	260700,7	-2005,6	17771,9	0,123
7	J[8]	T-Max	LCB30_inf	Persistent & Transient	MZ-MAX	OK	3969,4	260673,4	2244,8	17770,1	0,142
7	J[8]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	3949,0	254213,2	4496,5	17329,7	0,275
7	J[8]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-2401,1	260647,5	-358,7	17768,3	0,029
8	I[8]	T-Max	LCB30_inf	Persistent & Transient	MZ-MAX	OK	3969,2	266243,8	1728,5	18149,8	0,110
8	I[8]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	3949,1	258835,0	4066,3	17644,7	0,246
8	I[8]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-2401,1	266218,9	-875,0	18148,1	0,057
8	J[9]	T-Max	LCB30_inf	Persistent & Transient	MZ-MAX	OK	4999,8	271429,2	4136,8	18503,3	0,242
8	J[9]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	4965,0	263161,4	6943,1	17939,7	0,406
8	J[9]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-2542,4	271399,2	1321,4	18501,2	0,081
9	I[9]	T-Max	LCB22_sup	Persistent & Transient	MX-MAX	OK	4995,1	276996,0	3744,3	18882,8	0,216
9	I[9]	V-Max	LCB42_sup	Persistent & Transient	MX-MAX	OK	4959,5	267825,9	4666,7	18257,6	0,274
9	I[9]	V-Min	LCB55_inf	Persistent & Transient	MX-MIN	OK	-2541,7	276980,3	-1405,3	18881,7	0,084
9	J[10]	T-Max	LCB18_sup	Persistent & Transient	MX-MAX	OK	6144,7	257580,9	6837,3	21071,1	0,348
9	J[10]	V-Max	LCB42_sup	Persistent & Transient	MX-MAX	OK	6094,7	257612,3	6839,5	21073,7	0,348
9	J[10]	V-Min	LCB55_inf	Persistent & Transient	MX-MIN	OK	-2829,8	264676,9	-271,9	21651,6	0,023
10	I[10]	T-Max	LCB30_inf	Persistent & Transient	MZ-MAX	OK	6174,8	248622,6	7977,4	110165,6	0,097
10	I[10]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	6102,8	244246,8	11064,7	108226,6	0,127
10	I[10]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-2830,7	248607,1	4792,2	110158,7	0,055
10	J[11]	T-Max	LCB30_inf	Persistent & Transient	MZ-MAX	OK	6405,7	248463,7	7030,1	110095,2	0,090
10	J[11]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	6329,5	244114,8	10621,0	108168,1	0,124
10	J[11]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-2932,4	248447,7	3760,1	110088,1	0,046
11	I[11]	T-Max	LCB30_inf	Persistent & Transient	MX-MIN	OK	-7095,6	248463,8	-7181,7	110095,2	0,094

Elem	Part	Max/Min	LCom Name	Design Situations	Type	CHK	T_Ed (kN*m)	T_Rd,max (kN*m)	V_Ed (kN)	V_Rd,max (kN)	Ratio
11	I[11]	V-Max	LCB55_inf	Persistent & Transient	MZ-MAX	OK	3358,0	248447,4	-2688,1	110087,9	0,038
11	I[11]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-7010,9	244114,9	-10400,4	108168,2	0,125
11	J[12]	T-Max	LCB30_inf	Persistent & Transient	MX-MIN	OK	-6879,7	248621,2	-8220,2	110165,0	0,102
11	J[12]	V-Max	LCB51_inf	Persistent & Transient	MZ-MAX	OK	3257,0	244212,9	-3803,1	108211,6	0,049
11	J[12]	V-Min	LCB46_sup	Persistent & Transient	MZ-MIN	OK	-6799,3	248638,0	-10925,3	110172,4	0,127
12	I[12]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-6847,0	257577,3	-6655,8	21070,8	0,343
12	I[12]	V-Max	LCB55_inf	Persistent & Transient	MZ-MAX	OK	3253,0	264482,8	1298,4	21635,7	0,072
12	I[12]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-6786,8	257610,5	-6660,1	21073,5	0,342
12	J[13]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-5766,6	263325,1	-4952,2	17950,8	0,298
12	J[13]	V-Max	LCB55_inf	Persistent & Transient	MZ-MAX	OK	2929,5	271409,4	1846,4	18501,9	0,111
12	J[13]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-5725,0	263368,8	-4956,4	17953,8	0,298
13	I[13]	T-Max	LCB26_inf	Persistent & Transient	MX-MIN	OK	-5783,7	267327,0	-4493,9	18223,6	0,268
13	I[13]	V-Max	LCB55_inf	Persistent & Transient	MZ-MAX	OK	2930,4	276432,5	-147,8	18844,3	0,018
13	I[13]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-5737,8	267369,5	-6623,7	18226,5	0,385
13	J[14]	T-Max	LCB30_inf	Persistent & Transient	MX-MIN	OK	-4991,5	271587,3	-2329,5	18514,1	0,144
13	J[14]	V-Max	LCB55_inf	Persistent & Transient	MZ-MAX	OK	2754,5	271537,8	1389,3	18510,7	0,085
13	J[14]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-4957,2	263298,2	-4400,5	17949,0	0,264
14	I[14]	T-Max	LCB30_inf	Persistent & Transient	MX-MIN	OK	-4991,6	271691,7	-2329,6	18521,2	0,144
14	I[14]	V-Max	LCB55_inf	Persistent & Transient	MZ-MAX	OK	2754,5	271641,1	1389,3	18517,7	0,085
14	I[14]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-4957,3	263403,2	-4400,6	17956,1	0,264
14	J[15]	T-Max	LCB30_inf	Persistent & Transient	MX-MIN	OK	-4278,7	260493,9	-1285,4	17757,8	0,089
14	J[15]	V-Max	LCB55_inf	Persistent & Transient	MZ-MAX	OK	2638,7	260439,2	2161,7	17754,1	0,132
14	J[15]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-4256,2	254075,9	-2838,0	17320,3	0,181
15	I[15]	T-Max	LCB30_inf	Persistent & Transient	MX-MIN	OK	-4278,5	260563,5	-1285,3	17762,6	0,089
15	I[15]	V-Max	LCB55_inf	Persistent & Transient	MZ-MAX	OK	2638,7	260511,7	2161,6	17759,0	0,132
15	I[15]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-4255,9	254147,7	-2837,9	17325,2	0,181
15	J[16]	T-Max	LCB30_inf	Persistent & Transient	MX-MIN	OK	-3796,1	260449,9	-122,7	17754,8	0,022
15	J[16]	V-Max	LCB47_sup	Persistent & Transient	FZ-MAX	OK	2701,4	260394,9	3400,3	17751,1	0,202
15	J[16]	V-Min	LCB42_sup	Persistent & Transient	FZ-MIN	OK	-3782,3	254056,1	-1351,0	17319,0	0,093
16	I[16]	T-Max	LCB30_inf	Persistent & Transient	MX-MIN	OK	-3796,1	267893,6	-627,8	18262,3	0,049
16	I[16]	V-Max	LCB47_sup	Persistent & Transient	FZ-MAX	OK	2701,4	267838,5	2895,2	18258,5	0,169
16	I[16]	V-Min	LCB42_sup	Persistent & Transient	FZ-MIN	OK	-3782,2	260291,9	-1771,9	17744,0	0,114
16	J[17]	T-Max	LCB18_sup	Persistent & Transient	MX-MAX	OK	3192,4	260197,8	4395,1	17737,6	0,260
16	J[17]	V-Max	LCB47_sup	Persistent & Transient	FZ-MAX	OK	3191,6	267786,6	5789,7	18255,0	0,329
16	J[17]	V-Min	LCB50_inf	Persistent & Transient	FZ-MIN	OK	-3155,5	260258,1	581,7	17741,7	0,045
17	I[17]	T-Max	LCB18_sup	Persistent & Transient	MX-MAX	OK	3192,4	264711,8	3985,6	18045,3	0,233
17	I[17]	V-Max	LCB47_sup	Persistent & Transient	FZ-MAX	OK	3191,6	273212,8	5298,4	18624,9	0,296
17	I[17]	V-Min	LCB50_inf	Persistent & Transient	FZ-MIN	OK	-3155,5	264772,1	172,3	18049,5	0,022
17	J[18]	T-Max	LCB18_sup	Persistent & Transient	MX-MAX	OK	3854,1	264605,4	6829,3	18038,1	0,393
17	J[18]	V-Max	LCB47_sup	Persistent & Transient	FZ-MAX	OK	3838,6	273080,0	8223,9	18615,8	0,456
17	J[18]	V-Min	LCB50_inf	Persistent & Transient	FZ-MIN	OK	-2677,2	264670,9	2461,5	18042,6	0,147
18	I[18]	T-Max	LCB18_sup	Persistent & Transient	MX-MAX	OK	3853,9	269208,8	6415,1	18351,9	0,364
18	I[18]	V-Max	LCB47_sup	Persistent & Transient	FZ-MAX	OK	3838,6	278521,3	7726,9	18986,7	0,421
18	I[18]	V-Min	LCB50_inf	Persistent & Transient	FZ-MIN	OK	-2677,2	269274,4	2047,3	18356,4	0,122
18	J[19]	T-Max	LCB18_sup	Persistent & Transient	MZ-MAX	OK	4695,1	269130,6	9284,3	18346,6	0,524
18	J[19]	V-Max	LCB47_sup	Persistent & Transient	FZ-MAX	OK	4665,1	278513,7	10675,7	18986,2	0,579
18	J[19]	V-Min	LCB50_inf	Persistent & Transient	FZ-MIN	OK	-2699,3	269201,4	4280,9	18351,4	0,243
19	I[19]	T-Max	LCB26_inf	Persistent & Transient	MX-MAX	OK	4669,1	278267,2	5506,4	18969,4	0,307
19	I[19]	V-Max	LCB43_sup	Persistent & Transient	MX-MAX	OK	4658,7	278246,6	7301,8	18968,0	0,402
19	I[19]	V-Min	LCB54_inf	Persistent & Transient	MX-MIN	OK	-2698,6	278521,3	855,5	18986,7	0,055
19	J[20]	T-Max	LCB26_inf	Persistent & Transient	MX-MAX	OK	5603,8	267278,8	6738,3	21864,4	0,329
19	J[20]	V-Max	LCB43_sup	Persistent & Transient	MX-MAX	OK	5578,7	267270,0	9109,0	21863,7	0,438
19	J[20]	V-Min	LCB54_inf	Persistent & Transient	MX-MIN	OK	-2911,6	276440,2	1749,5	22613,8	0,088
20	I[20]	T-Max	LCB26_inf	Persistent & Transient	MX-MAX	OK	5618,2	274969,5	5929,1	22493,5	0,284
20	I[20]	V-Max	LCB43_sup	Persistent & Transient	FZ-MAX	OK	5581,0	274947,2	8794,1	22491,7	0,411
20	I[20]	V-Min	LCB54_inf	Persistent & Transient	FZ-MIN	OK	-2912,4	278521,3	1371,1	22784,1	0,071
20	J[21]	T-Max	LCB26_inf	Persistent & Transient	MX-MAX	OK	6616,4	269020,5	5888,5	25674,7	0,254
20	J[21]	V-Max	LCB43_sup	Persistent & Transient	FZ-MAX	OK	6560,7	269005,3	9397,4	25673,3	0,390
20	J[21]	V-Min	LCB54_inf	Persistent & Transient	FZ-MIN	OK	-3214,4	278521,3	557,0	26581,4	0,033
21	I[21]	T-Max	LCB18_sup	Persistent & Transient	MZ-MAX	OK	6657,2	278399,9	7951,6	45548,3	0,199
21	I[21]	V-Max	LCB43_sup	Persistent & Transient	FZ-MAX	OK	6564,9	278343,6	9058,2	45539,1	0,223
21	I[21]	V-Min	LCB54_inf	Persistent & Transient	FZ-MIN	OK	-3217,5	278521,3	153,5	45568,2	0,015
21	J[22]	T-Max	LCB18_sup	Persistent & Transient	MZ-MAX	OK	7078,9	278521,3	8778,1	45568,2	0,218
21	J[22]	V-Max	LCB43_sup	Persistent & Transient	FZ-MAX	OK	6978,1	278521,3	9884,8	45568,2	0,242
21	J[22]	V-Min	LCB54_inf	Persistent & Transient	FZ-MIN	OK	-3369,3	278521,3	408,2	45568,2	0,021

Elem	Part	Max/Min	LCom Name	Design Situations	Type	CHK	T_Ed (kN*m)	T_Rd,max (kN*m)	V_Ed (kN)	V_Rd,max (kN)	Ratio
22	I[22]	T-Max	LCB18_sup	Persistent & Transient	MZ-MAX	OK	7077,5	264623,3	8688,4	117255,6	0,101
22	I[22]	V-Max	LCB43_sup	Persistent & Transient	FZ-MAX	OK	6977,9	264587,0	9795,2	117239,5	0,110
22	I[22]	V-Min	LCB54_inf	Persistent & Transient	FZ-MIN	OK	-3369,1	273133,9	300,3	121026,6	0,015
22	J[23]	T-Max	LCB18_sup	Persistent & Transient	MZ-MAX	OK	7288,4	264759,9	14210,5	117316,1	0,149
22	J[23]	V-Max	LCB43_sup	Persistent & Transient	FZ-MAX	OK	7184,5	264723,1	15317,3	117299,8	0,158
22	J[23]	V-Min	LCB54_inf	Persistent & Transient	FZ-MIN	OK	-3468,3	273298,2	6423,5	121099,4	0,066
23	I[23]	T-Max	LCB18_sup	Persistent & Transient	MX-MIN	OK	-9308,2	264755,3	-21477,3	117314,0	0,218
23	I[23]	V-Max	LCB50_inf	Persistent & Transient	MZ-MAX	OK	4692,4	264792,6	-13080,3	117330,6	0,129
23	I[23]	V-Min	LCB47_sup	Persistent & Transient	MZ-MIN	OK	-9143,9	273219,7	-22862,8	121064,6	0,222
23	J[24]	T-Max	LCB18_sup	Persistent & Transient	MX-MIN	OK	-9116,6	264749,6	-15736,9	117311,5	0,169
23	J[24]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	4595,0	273287,1	-7502,7	121094,5	0,079
23	J[24]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-8956,6	264712,8	-16294,2	117295,2	0,173
24	I[24]	T-Max	LCB18_sup	Persistent & Transient	MX-MIN	OK	-9117,3	278521,3	-15779,1	45568,2	0,379
24	I[24]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	4595,2	278521,3	-7553,7	45568,2	0,182
24	I[24]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-8956,9	278521,3	-16336,3	45568,2	0,391
24	J[25]	T-Max	LCB18_sup	Persistent & Transient	MX-MIN	OK	-8734,1	278304,7	-11290,8	45532,7	0,279
24	J[25]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	4429,7	278521,3	-2866,8	45568,2	0,079
24	J[25]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-8582,2	278245,0	-11848,0	45523,0	0,291
25	I[25]	T-Max	LCB22_sup	Persistent & Transient	MZ-MIN	OK	-8696,7	278261,8	-9324,7	26556,7	0,382
25	I[25]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	4425,5	278223,8	-1120,1	26553,0	0,058
25	I[25]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-8576,2	268823,2	-10395,2	25655,9	0,437
25	J[26]	T-Max	LCB22_sup	Persistent & Transient	MZ-MIN	OK	-7773,1	278521,3	-7598,0	22784,1	0,361
25	J[26]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	4061,8	278521,3	-381,4	22784,1	0,031
25	J[26]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-7673,6	278521,3	-8483,2	22784,1	0,400
26	I[26]	T-Max	LCB22_sup	Persistent & Transient	MZ-MIN	OK	-7759,2	278521,3	-7881,2	22784,1	0,374
26	I[26]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	4058,9	278521,3	-665,6	22784,1	0,044
26	I[26]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-7667,9	271268,8	-8719,9	22190,8	0,421
26	J[27]	T-Max	LCB22_sup	Persistent & Transient	MZ-MIN	OK	-6876,4	278521,3	-6081,9	18986,7	0,345
26	J[27]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	3753,6	278521,3	229,7	18986,7	0,026
26	J[27]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-6803,7	278521,3	-6791,6	18986,7	0,382
27	I[27]	T-Max	LCB18_sup	Persistent & Transient	MX-MIN	OK	-6893,8	273982,3	-9512,9	18677,3	0,535
27	I[27]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	3759,3	278521,3	-3709,3	18986,7	0,209
27	I[27]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-6818,5	273884,3	-10070,1	18670,6	0,564
27	J[28]	T-Max	LCB18_sup	Persistent & Transient	MX-MIN	OK	-6076,1	278521,3	-8056,2	18986,7	0,446
27	J[28]	V-Max	LCB50_inf	Persistent & Transient	MZ-MAX	OK	3519,8	278521,3	-3134,6	18986,7	0,178
27	J[28]	V-Min	LCB47_sup	Persistent & Transient	MZ-MIN	OK	-6015,4	278521,3	-8774,2	18986,7	0,484
28	I[28]	T-Max	LCB22_sup	Persistent & Transient	MX-MIN	OK	-6076,3	278521,3	-8711,1	18986,7	0,481
28	I[28]	V-Max	LCB50_inf	Persistent & Transient	MZ-MAX	OK	3519,6	274400,5	-3546,1	18705,8	0,202
28	I[28]	V-Min	LCB47_sup	Persistent & Transient	MZ-MIN	OK	-6014,9	278521,3	-9268,4	18986,7	0,510
28	J[29]	T-Max	LCB18_sup	Persistent & Transient	MX-MIN	OK	-5339,2	274610,7	-5628,1	18720,2	0,320
28	J[29]	V-Max	LCB50_inf	Persistent & Transient	MZ-MAX	OK	3339,7	274718,4	-1431,6	18727,5	0,089
28	J[29]	V-Min	LCB47_sup	Persistent & Transient	MZ-MIN	OK	-5292,5	278521,3	-6346,0	18986,7	0,353
29	I[29]	T-Max	LCB22_sup	Persistent & Transient	MX-MIN	OK	-5339,3	278521,3	-6284,7	18986,7	0,350
29	I[29]	V-Max	LCB50_inf	Persistent & Transient	MZ-MAX	OK	3339,6	270111,7	-1844,9	18413,5	0,113
29	I[29]	V-Min	LCB47_sup	Persistent & Transient	MZ-MIN	OK	-5292,5	278521,3	-6842,0	18986,7	0,379
29	J[30]	T-Max	LCB18_sup	Persistent & Transient	MX-MIN	OK	-4682,7	270227,4	-3226,0	18421,3	0,192
29	J[30]	V-Max	LCB50_inf	Persistent & Transient	MZ-MAX	OK	3348,6	270340,2	287,9	18429,0	0,028
29	J[30]	V-Min	LCB47_sup	Persistent & Transient	MZ-MIN	OK	-4650,4	278521,3	-3945,8	18986,7	0,225
30	I[30]	T-Max	LCB18_sup	Persistent & Transient	MX-MIN	OK	-4682,8	262763,2	-3629,1	17912,5	0,220
30	I[30]	V-Max	LCB50_inf	Persistent & Transient	MZ-MAX	OK	3348,6	262876,2	-115,2	17920,2	0,019
30	I[30]	V-Min	LCB47_sup	Persistent & Transient	MZ-MIN	OK	-4650,4	270882,3	-4429,6	18466,0	0,257
30	J[31]	T-Max	LCB18_sup	Persistent & Transient	MX-MIN	OK	-4345,9	262932,6	-2190,0	17924,1	0,139
30	J[31]	V-Max	LCB42_sup	Persistent & Transient	MZ-MAX	OK	3562,1	263048,7	1157,4	17932,0	0,078
30	J[31]	V-Min	LCB55_inf	Persistent & Transient	MZ-MIN	OK	-4322,3	271082,4	-3121,7	18479,6	0,185
31	I[31]	T-Max	LCB22_sup	Persistent & Transient	MX-MIN	OK	-4345,9	278461,4	-2927,1	18982,7	0,170
31	I[31]	V-Max	LCB42_sup	Persistent & Transient	MZ-MAX	OK	3562,1	269120,0	745,8	18345,9	0,054
31	I[31]	V-Min	LCB55_inf	Persistent & Transient	MZ-MIN	OK	-4322,3	278345,4	-3615,7	18974,7	0,206
31	J[32]	T-Max	LCB27_inf	Persistent & Transient	MX-MAX	OK	3991,2	269026,3	2241,1	18339,5	0,137
31	J[32]	V-Max	LCB42_sup	Persistent & Transient	MZ-MAX	OK	3982,2	269147,5	3470,2	18347,7	0,204
31	J[32]	V-Min	LCB55_inf	Persistent & Transient	MZ-MIN	OK	-3865,4	278367,0	-1280,1	18976,2	0,081
32	I[32]	T-Max	LCB27_inf	Persistent & Transient	MX-MAX	OK	3991,2	273562,2	1874,8	18648,7	0,115
32	I[32]	V-Max	LCB42_sup	Persistent & Transient	MZ-MAX	OK	3982,2	273683,4	3103,9	18656,9	0,181
32	I[32]	V-Min	LCB55_inf	Persistent & Transient	MZ-MIN	OK	-3865,4	278521,3	-1719,7	18986,7	0,105
32	J[33]	T-Max	LCB26_inf	Persistent & Transient	MX-MAX	OK	4500,6	273352,3	4037,1	18634,4	0,233
32	J[33]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	4494,9	273478,7	5806,8	18643,0	0,328

Elem	Part	Max/Min	LCom Name	Design Situations	Type	CHK	T_Ed (kN*m)	T_Rd,max (kN*m)	V_Ed (kN)	V_Rd,max (kN)	Ratio
32	J[33]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-3488,9	278521,3	538,6	18986,7	0,041
33	I[33]	T-Max	LCB26_inf	Persistent & Transient	MX-MAX	OK	4500,6	278176,7	3629,4	18963,2	0,208
33	I[33]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	4494,9	278303,1	5399,1	18971,9	0,301
33	I[33]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-3488,9	278521,3	49,4	18986,7	0,015
33	J[34]	T-Max	LCB26_inf	Persistent & Transient	MX-MAX	OK	5152,8	277828,1	6120,6	18939,5	0,342
33	J[34]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	5132,5	277959,6	8430,8	18948,5	0,463
33	J[34]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-3282,1	278521,3	2651,7	18986,7	0,151
34	I[34]	T-Max	LCB22_sup	Persistent & Transient	MX-MAX	OK	5171,9	278521,3	4703,1	18986,7	0,266
34	I[34]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	5123,0	278521,3	5943,7	18986,7	0,331
34	I[34]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-3281,1	278521,3	-324,4	18986,7	0,029
34	J[35]	T-Max	LCB22_sup	Persistent & Transient	MZ-MAX	OK	5884,2	301169,9	8344,7	19968,8	0,437
34	J[35]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	5821,6	301169,9	9380,7	19968,8	0,489
34	J[35]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-3466,1	301169,9	2698,1	19968,8	0,147
35	I[35]	T-Max	LCB22_sup	Persistent & Transient	MX-MAX	OK	5887,1	301169,9	6832,9	19968,8	0,362
35	I[35]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	5818,3	301169,9	7912,2	19968,8	0,416
35	I[35]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-3465,2	301169,9	939,0	19968,8	0,059
35	J[36]	T-Max	LCB22_sup	Persistent & Transient	MX-MAX	OK	6632,9	332430,1	10247,2	23193,3	0,462
35	J[36]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	6549,2	332430,1	11179,7	23193,3	0,502
35	J[36]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-3711,7	332430,1	3664,9	23193,3	0,169
36	I[36]	T-Max	LCB22_sup	Persistent & Transient	MX-MAX	OK	6632,7	332430,1	8984,2	23193,3	0,407
36	I[36]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	6549,4	332430,1	10127,1	23193,3	0,456
36	I[36]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-3711,7	332430,1	2401,9	23193,3	0,115
36	J[37]	T-Max	LCB22_sup	Persistent & Transient	MX-MAX	OK	7405,3	364865,3	12506,5	26653,5	0,490
36	J[37]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	7305,8	364865,3	13508,7	26653,5	0,527
36	J[37]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-4009,4	364865,3	5162,4	26653,5	0,205
37	I[37]	T-Max	LCB22_sup	Persistent & Transient	MX-MAX	OK	7402,7	364865,3	10903,8	26653,5	0,429
37	I[37]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	7301,9	364865,3	12035,1	26653,5	0,472
37	I[37]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-4008,0	364865,3	3397,3	26653,5	0,138
37	J[38]	T-Max	LCB22_sup	Persistent & Transient	MX-MAX	OK	8198,6	407000,0	13730,7	30765,1	0,467
37	J[38]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	8080,4	407000,0	14862,6	30765,1	0,503
37	J[38]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-4349,0	407000,0	5389,6	30765,1	0,186
38	I[38]	T-Max	LCB22_sup	Persistent & Transient	MX-MAX	OK	8189,1	407000,0	11999,1	30765,1	0,410
38	I[38]	V-Max	LCB42_sup	Persistent & Transient	MX-MAX	OK	8073,2	407000,0	13309,8	30765,1	0,453
38	I[38]	V-Min	LCB55_inf	Persistent & Transient	MX-MIN	OK	-4346,0	407000,0	3532,5	30765,1	0,126
38	J[39]	T-Max	LCB22_sup	Persistent & Transient	MX-MAX	OK	9003,2	459796,5	14491,2	35616,5	0,426
38	J[39]	V-Max	LCB42_sup	Persistent & Transient	MX-MAX	OK	8868,6	459796,5	15887,6	35616,5	0,465
38	J[39]	V-Min	LCB55_inf	Persistent & Transient	MX-MIN	OK	-4723,9	459796,5	5113,6	35616,5	0,154
39	I[39]	T-Max	LCB18_sup	Persistent & Transient	MX-MAX	OK	8970,9	459796,5	12821,9	35616,5	0,380
39	I[39]	V-Max	LCB42_sup	Persistent & Transient	MX-MAX	OK	8851,6	459796,5	12826,7	35616,5	0,379
39	I[39]	V-Min	LCB55_inf	Persistent & Transient	MX-MIN	OK	-4715,9	459796,5	1456,8	35616,5	0,051
39	J[40]	T-Max	LCB18_sup	Persistent & Transient	MX-MAX	OK	9797,3	543311,4	15942,6	42245,5	0,395
39	J[40]	V-Max	LCB42_sup	Persistent & Transient	MX-MAX	OK	9657,9	543311,4	15947,0	42245,5	0,395
39	J[40]	V-Min	LCB55_inf	Persistent & Transient	MX-MIN	OK	-5124,8	543311,4	3560,1	42245,5	0,094
40	I[40]	T-Max	LCB18_sup	Persistent & Transient	MX-MAX	OK	9756,7	543311,4	12866,5	42245,5	0,323
40	I[40]	V-Max	LCB42_sup	Persistent & Transient	MX-MAX	OK	9641,7	543311,4	12868,5	42245,5	0,322
40	I[40]	V-Min	LCB55_inf	Persistent & Transient	MX-MIN	OK	-5116,4	543311,4	-116,9	42245,5	0,012
40	J[41]	T-Max	LCB18_sup	Persistent & Transient	MX-MAX	OK	10591,4	651937,7	17120,1	50413,1	0,356
40	J[41]	V-Max	LCB42_sup	Persistent & Transient	MX-MAX	OK	10454,0	651937,7	17121,6	50413,1	0,356
40	J[41]	V-Min	LCB55_inf	Persistent & Transient	MX-MIN	OK	-5550,6	651937,7	3160,7	50413,1	0,071
41	I[41]	T-Max	LCB18_sup	Persistent & Transient	MX-MAX	OK	10510,5	651937,7	12655,6	50413,1	0,267
41	I[41]	V-Max	LCB43_sup	Persistent & Transient	MX-MAX	OK	10426,9	651937,7	12657,7	50413,1	0,267
41	I[41]	V-Min	LCB54_inf	Persistent & Transient	MX-MIN	OK	-5535,8	651937,7	-2170,3	50413,1	0,052
41	J[42]	T-Max	LCB18_sup	Persistent & Transient	MX-MAX	OK	11015,2	735135,3	13404,4	56567,4	0,252
41	J[42]	V-Max	LCB43_sup	Persistent & Transient	MX-MAX	OK	10917,0	735135,3	13406,9	56567,4	0,252
41	J[42]	V-Min	LCB54_inf	Persistent & Transient	MX-MIN	OK	-5809,0	735135,3	-2469,1	56567,4	0,052
42	I[42]	T-Max	LCB30_inf	Persistent & Transient	MZ-MAX	OK	11405,0	700619,8	20455,8	204273,8	0,116
42	I[42]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	11016,7	681790,2	28605,8	213129,2	0,150
42	I[42]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-5866,7	700511,0	15672,2	204242,1	0,085
42	J[43]	T-Max	LCB30_inf	Persistent & Transient	MZ-MAX	OK	11572,7	700691,4	23777,4	204294,7	0,133
42	J[43]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	11178,3	681850,5	31957,0	213148,1	0,166
42	J[43]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-5964,8	700581,9	18921,3	219003,6	0,095
43	I[43]	T-Max	LCB30_inf	Persistent & Transient	MX-MIN	OK	-11608,8	699974,2	-24492,8	218813,6	0,129
43	I[43]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	5965,7	699887,3	-19600,7	204060,2	0,105
43	I[43]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-11178,0	681207,7	-32454,3	212947,2	0,169
43	J[44]	T-Max	LCB30_inf	Persistent & Transient	MX-MIN	OK	-11441,0	699866,3	-20863,8	204054,1	0,119

Elem	Part	Max/Min	LCom Name	Design Situations	Type	CHK	T_Ed (kN*m)	T_Rd,max (kN*m)	V_Ed (kN)	V_Rd,max (kN)	Ratio
43	J[44]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	5867,3	699780,1	-16043,9	204029,0	0,087
43	J[44]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-11016,4	681117,1	-28847,0	212918,8	0,152
44	I[44]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-11057,7	735135,3	-13621,7	56567,4	0,256
44	I[44]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	5809,3	735135,3	2125,7	55735,5	0,046
44	I[44]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-10918,0	735135,3	-13622,4	56567,4	0,256
44	J[45]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-10547,7	651937,7	-13122,5	50413,1	0,277
44	J[45]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	5536,1	651937,7	1529,0	49745,8	0,039
44	J[45]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-10428,1	651937,7	-13123,5	50413,1	0,276
45	I[45]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-10625,1	651937,7	-17595,5	50413,1	0,365
45	I[45]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	5550,5	651937,7	-3809,0	50413,1	0,084
45	I[45]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-10454,1	651937,7	-17599,3	50413,1	0,365
45	J[46]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-9779,8	543311,4	-13348,5	42245,5	0,334
45	J[46]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	5116,3	543311,4	-559,9	42245,5	0,023
45	J[46]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-9641,8	543311,4	-13352,7	42245,5	0,334
46	I[46]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-9819,9	543311,4	-16432,4	42245,5	0,407
46	I[46]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	5124,7	543311,4	-4247,0	42245,5	0,110
46	I[46]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-9657,8	543311,4	-16438,5	42245,5	0,407
46	J[47]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-8985,4	459796,5	-13075,1	35616,5	0,387
46	J[47]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	4715,8	459796,5	-1861,2	35616,5	0,063
46	J[47]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-8851,5	459796,5	-13081,6	35616,5	0,387
47	I[47]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-9017,5	459796,5	-16139,0	35616,5	0,473
47	I[47]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	4723,9	459796,5	-5525,7	35616,5	0,165
47	I[47]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-8868,5	459796,5	-16147,7	35616,5	0,473
47	J[48]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-8197,9	407000,0	-13408,2	30765,1	0,456
47	J[48]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	4346,0	407000,0	-3763,5	30765,1	0,133
47	J[48]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-8073,2	407000,0	-13417,2	30765,1	0,456
48	I[48]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-8207,4	407000,0	-14957,9	30765,1	0,506
48	I[48]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	4349,1	407000,0	-5618,8	30765,1	0,193
48	I[48]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-8080,4	407000,0	-14967,8	30765,1	0,506
48	J[49]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-7407,3	364865,3	-11998,0	26653,5	0,470
48	J[49]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	4008,0	364865,3	-3470,8	26653,5	0,141
48	J[49]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-7301,8	364865,3	-12008,2	26653,5	0,471
49	I[49]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-7409,9	364865,3	-13471,1	26653,5	0,526
49	I[49]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	4009,5	364865,3	-5236,5	26653,5	0,208
49	I[49]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-7305,7	364865,3	-13481,9	26653,5	0,526
49	J[50]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-6633,8	332430,1	-10086,8	23193,3	0,455
49	J[50]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	3711,7	332430,1	-2476,8	23193,3	0,118
49	J[50]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-6549,4	332430,1	-10097,8	23193,3	0,455
50	I[50]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-6634,0	332430,1	-11140,9	23193,3	0,500
50	I[50]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	3711,8	332430,1	-3741,7	23193,3	0,173
50	I[50]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-6549,2	332430,1	-11151,8	23193,3	0,501
50	J[51]	T-Max	LCB18_sup	Persistent & Transient	MZ-MIN	OK	-5884,9	301169,9	-7870,7	19968,8	0,414
50	J[51]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	3465,2	301169,9	-1017,3	19968,8	0,062
50	J[51]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-5818,3	301169,9	-7881,8	19968,8	0,414
51	I[51]	T-Max	LCB18_sup	Persistent & Transient	MX-MIN	OK	-5882,1	301169,9	-8999,9	19968,8	0,470
51	I[51]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	3466,1	301169,9	-2778,1	19968,8	0,151
51	I[51]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-5821,6	301169,9	-9351,3	19968,8	0,488
51	J[52]	T-Max	LCB18_sup	Persistent & Transient	MX-MIN	OK	-5167,2	278521,3	-5556,0	18986,7	0,311
51	J[52]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	3281,2	278521,3	247,2	18986,7	0,025
51	J[52]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-5123,0	278521,3	-5907,6	18986,7	0,330
52	I[52]	T-Max	LCB26_inf	Persistent & Transient	MX-MIN	OK	-5148,4	277656,2	-6174,9	18927,8	0,345
52	I[52]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	3282,1	278521,3	-2728,3	18986,7	0,156
52	I[52]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-5132,5	277751,4	-8392,4	18934,3	0,462
52	J[53]	T-Max	LCB26_inf	Persistent & Transient	MX-MIN	OK	-4496,2	278074,4	-3717,1	18956,3	0,212
52	J[53]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	3489,0	278521,3	-172,0	18986,7	0,022
52	J[53]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-4494,9	278164,5	-5394,1	18962,4	0,301
53	I[53]	T-Max	LCB26_inf	Persistent & Transient	MX-MIN	OK	-4496,2	273662,7	-4089,5	18655,5	0,236
53	I[53]	V-Max	LCB54_inf	Persistent & Transient	MZ-MAX	OK	3489,0	278521,3	-618,9	18986,7	0,045
53	I[53]	V-Min	LCB43_sup	Persistent & Transient	MZ-MIN	OK	-4494,9	273752,8	-5766,5	18661,7	0,325
53	J[54]	T-Max	LCB27_inf	Persistent & Transient	MZ-MIN	OK	-3995,6	273871,2	-1880,2	18669,7	0,115
53	J[54]	V-Max	LCB54_inf	Persistent & Transient	FZ-MAX	OK	3865,4	278521,3	1689,3	18986,7	0,103
53	J[54]	V-Min	LCB43_sup	Persistent & Transient	FZ-MIN	OK	-3982,2	273956,2	-3016,7	18675,5	0,176
54	I[54]	T-Max	LCB27_inf	Persistent & Transient	MZ-MIN	OK	-3995,6	268911,8	-2291,1	18331,7	0,140
54	I[54]	V-Max	LCB54_inf	Persistent & Transient	FZ-MAX	OK	3865,4	278251,7	1196,2	18968,4	0,077
54	I[54]	V-Min	LCB43_sup	Persistent & Transient	FZ-MIN	OK	-3982,2	268996,7	-3427,6	18337,5	0,202

Elem	Part	Max/Min	LCom Name	Design Situations	Type	CHK	T_Ed (kN*m)	T_Rd,max (kN*m)	V_Ed (kN)	V_Rd,max (kN)	Ratio
54	J[55]	T-Max	LCB22_sup	Persistent & Transient	MZ-MAX	OK	4350,4	278332,6	2876,3	18973,9	0,167
54	J[55]	V-Max	LCB54_inf	Persistent & Transient	FZ-MAX	OK	4322,3	278252,8	3472,3	18968,4	0,199
54	J[55]	V-Min	LCB43_sup	Persistent & Transient	FZ-MIN	OK	-3562,1	268988,2	-747,1	18336,9	0,054
55	I[55]	T-Max	LCB22_sup	Persistent & Transient	MZ-MAX	OK	4350,4	271789,8	2438,6	18527,9	0,148
55	I[55]	V-Max	LCB54_inf	Persistent & Transient	FZ-MAX	OK	4322,3	271710,0	3034,5	18522,4	0,180
55	I[55]	V-Min	LCB43_sup	Persistent & Transient	FZ-MIN	OK	-3562,1	263515,9	-1111,8	17963,8	0,075
55	J[56]	T-Max	LCB22_sup	Persistent & Transient	MZ-MAX	OK	4687,3	271599,9	3876,0	18514,9	0,227
55	J[56]	V-Max	LCB46_sup	Persistent & Transient	FZ-MAX	OK	4650,4	271523,2	4373,8	18509,7	0,253
55	J[56]	V-Min	LCB51_inf	Persistent & Transient	FZ-MIN	OK	-3348,6	263354,6	119,9	17952,8	0,019
56	I[56]	T-Max	LCB22_sup	Persistent & Transient	MZ-MAX	OK	4687,1	278521,3	3378,4	18986,7	0,195
56	I[56]	V-Max	LCB46_sup	Persistent & Transient	FZ-MAX	OK	4650,5	278521,3	3876,2	18986,7	0,221
56	I[56]	V-Min	LCB51_inf	Persistent & Transient	FZ-MIN	OK	-3348,6	269407,7	-294,8	18365,5	0,029
56	J[57]	T-Max	LCB22_sup	Persistent & Transient	MZ-MAX	OK	5343,8	278473,7	6286,2	18983,5	0,350
56	J[57]	V-Max	LCB46_sup	Persistent & Transient	FZ-MAX	OK	5292,5	278402,1	6784,0	18978,6	0,377
56	J[57]	V-Min	LCB51_inf	Persistent & Transient	FZ-MIN	OK	-3339,7	269095,9	1853,4	18344,2	0,113
57	I[57]	T-Max	LCB22_sup	Persistent & Transient	MZ-MAX	OK	5343,7	278521,3	5799,5	18986,7	0,325
57	I[57]	V-Max	LCB46_sup	Persistent & Transient	FZ-MAX	OK	5292,5	278521,3	6297,3	18986,7	0,351
57	I[57]	V-Min	LCB51_inf	Persistent & Transient	FZ-MIN	OK	-3339,7	274060,7	1447,9	18682,7	0,090
57	J[58]	T-Max	LCB22_sup	Persistent & Transient	MZ-MAX	OK	6080,7	278521,3	8711,3	18986,7	0,481
57	J[58]	V-Max	LCB46_sup	Persistent & Transient	FZ-MAX	OK	6014,9	278521,3	9209,1	18986,7	0,507
57	J[58]	V-Min	LCB51_inf	Persistent & Transient	FZ-MIN	OK	-3519,6	273634,6	3558,9	18653,6	0,204
58	I[58]	T-Max	LCB22_sup	Persistent & Transient	MZ-MAX	OK	6080,6	278521,3	8217,3	18986,7	0,455
58	I[58]	V-Max	LCB46_sup	Persistent & Transient	FZ-MAX	OK	6015,4	278521,3	8715,1	18986,7	0,481
58	I[58]	V-Min	LCB51_inf	Persistent & Transient	FZ-MIN	OK	-3519,8	278521,3	3147,4	18986,7	0,178
58	J[59]	T-Max	LCB22_sup	Persistent & Transient	MZ-MAX	OK	6898,3	278521,3	9499,3	18986,7	0,525
58	J[59]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	6818,5	273455,9	10046,4	18641,4	0,564
58	J[59]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-3759,3	278521,3	3748,1	18986,7	0,211
59	I[59]	T-Max	LCB18_sup	Persistent & Transient	MX-MAX	OK	6878,7	278521,3	6759,3	18986,7	0,381
59	I[59]	V-Max	LCB42_sup	Persistent & Transient	MX-MAX	OK	6803,6	278521,3	6775,8	18986,7	0,381
59	I[59]	V-Min	LCB55_inf	Persistent & Transient	MX-MIN	OK	-3753,9	278521,3	-178,5	18986,7	0,023
59	J[60]	T-Max	LCB18_sup	Persistent & Transient	MX-MAX	OK	7757,6	271025,2	8700,6	22170,9	0,421
59	J[60]	V-Max	LCB42_sup	Persistent & Transient	MX-MAX	OK	7667,8	270977,1	8716,9	22166,9	0,422
59	J[60]	V-Min	LCB55_inf	Persistent & Transient	MX-MIN	OK	-4059,3	278521,3	732,6	22784,1	0,047
60	I[60]	T-Max	LCB18_sup	Persistent & Transient	MX-MAX	OK	7772,4	278521,3	8453,7	22784,1	0,399
60	I[60]	V-Max	LCB42_sup	Persistent & Transient	MX-MAX	OK	7673,6	278521,3	8469,2	22784,1	0,399
60	I[60]	V-Min	LCB55_inf	Persistent & Transient	MX-MIN	OK	-4062,0	278521,3	433,9	22784,1	0,034
60	J[61]	T-Max	LCB22_sup	Persistent & Transient	MX-MAX	OK	8693,5	278021,8	9313,7	26533,8	0,382
60	J[61]	V-Max	LCB42_sup	Persistent & Transient	MX-MAX	OK	8576,1	268644,5	10393,5	25638,8	0,437
60	J[61]	V-Min	LCB55_inf	Persistent & Transient	MX-MIN	OK	-4425,7	278070,1	1185,0	26538,4	0,061
61	I[61]	T-Max	LCB22_sup	Persistent & Transient	MZ-MAX	OK	8734,1	278521,3	10606,1	45568,2	0,264
61	I[61]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	8582,7	278175,7	11871,8	45511,6	0,292
61	I[61]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-4429,6	278521,3	2960,4	45568,2	0,081
61	J[62]	T-Max	LCB22_sup	Persistent & Transient	MZ-MAX	OK	9117,3	278521,3	14625,1	45568,2	0,354
61	J[62]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	8957,3	278521,3	15437,3	45568,2	0,371
61	J[62]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-4595,2	278521,3	6538,1	45568,2	0,160
62	I[62]	T-Max	LCB22_sup	Persistent & Transient	MZ-MAX	OK	9115,4	270693,7	14563,5	119945,3	0,155
62	I[62]	V-Max	LCB42_sup	Persistent & Transient	FZ-MAX	OK	8956,9	262590,5	15386,2	116354,8	0,166
62	I[62]	V-Min	LCB55_inf	Persistent & Transient	FZ-MIN	OK	-4594,9	270716,0	6476,5	119955,2	0,071
62	J[63]	T-Max	LCB18_sup	Persistent & Transient	MZ-MAX	OK	9306,9	262617,5	20631,2	116366,8	0,213
62	J[63]	V-Max	LCB46_sup	Persistent & Transient	FZ-MAX	OK	9144,1	270680,0	21765,1	119939,3	0,215
62	J[63]	V-Min	LCB51_inf	Persistent & Transient	FZ-MIN	OK	-4692,4	262639,3	12248,0	116376,4	0,123
63	I[63]	T-Max	LCB22_sup	Persistent & Transient	MX-MIN	OK	-7298,9	270693,8	-14476,3	119945,4	0,148
63	I[63]	V-Max	LCB55_inf	Persistent & Transient	MZ-MAX	OK	3467,3	270713,0	-6813,1	119953,9	0,070
63	I[63]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-7185,7	262591,5	-15361,2	116355,3	0,159
63	J[64]	T-Max	LCB22_sup	Persistent & Transient	MX-MIN	OK	-7088,3	270520,5	-8014,9	119868,6	0,093
63	J[64]	V-Max	LCB55_inf	Persistent & Transient	MZ-MAX	OK	3368,7	270539,3	-657,3	119877,0	0,018
63	J[64]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-6979,3	262447,6	-9818,8	116291,5	0,111
64	I[64]	T-Max	LCB22_sup	Persistent & Transient	MX-MIN	OK	-7089,5	278521,3	-8120,8	45568,2	0,204
64	I[64]	V-Max	LCB55_inf	Persistent & Transient	MZ-MAX	OK	3368,9	278521,3	-763,2	45568,2	0,029
64	I[64]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-6979,6	278521,3	-9906,9	45568,2	0,243
64	J[65]	T-Max	LCB22_sup	Persistent & Transient	MX-MIN	OK	-6667,9	278521,3	-6854,2	45568,2	0,174
64	J[65]	V-Max	LCB55_inf	Persistent & Transient	MZ-MAX	OK	3217,0	278521,3	45,2	45568,2	0,013
64	J[65]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-6566,5	275131,9	-8632,0	45013,6	0,216
65	I[65]	T-Max	LCB30_inf	Persistent & Transient	MZ-MIN	OK	-6626,0	274536,5	-4434,9	26201,1	0,193
65	I[65]	V-Max	LCB55_inf	Persistent & Transient	MZ-MAX	OK	3214,4	274520,7	-466,6	26199,6	0,030

Elem	Part	Max/Min	LCom Name	Design Situations	Type	CHK	T_Ed (kN*m)	T_Rd,max (kN*m)	V_Ed (kN)	V_Rd,max (kN)	Ratio
65	I[65]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-6562,1	265797,0	-9059,7	25367,1	0,382
65	J[66]	T-Max	LCB26_inf	Persistent & Transient	MZ-MIN	OK	-5625,4	271328,2	-5421,1	22195,7	0,265
65	J[66]	V-Max	LCB55_inf	Persistent & Transient	MZ-MAX	OK	2912,3	278521,3	-828,9	22784,1	0,047
65	J[66]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-5582,6	271334,5	-8086,6	22196,2	0,385
66	I[66]	T-Max	LCB26_inf	Persistent & Transient	MZ-MIN	OK	-5610,2	263599,8	-5808,6	21563,5	0,291
66	I[66]	V-Max	LCB55_inf	Persistent & Transient	MZ-MAX	OK	2911,5	271821,5	-1295,1	22236,0	0,069
66	I[66]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-5580,2	263628,5	-8473,8	21565,8	0,414
66	J[67]	T-Max	LCB26_inf	Persistent & Transient	MZ-MIN	OK	-4671,5	269387,0	-4814,0	18364,1	0,280
66	J[67]	V-Max	LCB55_inf	Persistent & Transient	MZ-MAX	OK	2698,4	278521,3	-717,0	18986,7	0,048
66	J[67]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-4660,1	269409,7	-6903,8	18365,6	0,393
67	I[67]	T-Max	LCB18_sup	Persistent & Transient	MX-MIN	OK	-4694,8	260143,2	-9261,9	17733,9	0,540
67	I[67]	V-Max	LCB55_inf	Persistent & Transient	MZ-MAX	OK	2699,0	267816,3	-3999,5	18257,0	0,229
67	I[67]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-4665,6	260109,0	-9639,4	17731,6	0,562
67	J[68]	T-Max	LCB22_sup	Persistent & Transient	MX-MIN	OK	-3853,6	267834,8	-6216,0	18258,2	0,355
67	J[68]	V-Max	LCB55_inf	Persistent & Transient	MZ-MAX	OK	2676,7	267863,8	-1742,3	18260,2	0,105
67	J[68]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-3839,1	260158,1	-6774,0	17734,9	0,397
68	I[68]	T-Max	LCB18_sup	Persistent & Transient	MX-MIN	OK	-3853,8	255516,0	-6815,7	17418,5	0,406
68	I[68]	V-Max	LCB55_inf	Persistent & Transient	MZ-MAX	OK	2676,7	262251,6	-2245,3	17877,6	0,136
68	I[68]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-3839,1	255486,9	-7193,1	17416,5	0,428
68	J[69]	T-Max	LCB18_sup	Persistent & Transient	MX-MIN	OK	-3192,0	255576,7	-3949,2	17422,6	0,239
68	J[69]	V-Max	LCB55_inf	Persistent & Transient	MZ-MAX	OK	3154,9	262319,2	84,2	17882,2	0,017
68	J[69]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-3192,0	255552,8	-4326,7	17421,0	0,261
69	I[69]	T-Max	LCB18_sup	Persistent & Transient	MX-MIN	OK	-3192,1	250872,7	-4371,7	17101,9	0,268
69	I[69]	V-Max	LCB55_inf	Persistent & Transient	MZ-MAX	OK	3154,9	256667,2	-422,7	17496,9	0,037
69	I[69]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-3192,0	250848,8	-4749,1	17100,3	0,290
69	J[70]	T-Max	LCB26_inf	Persistent & Transient	MX-MAX	OK	3796,1	250865,6	1450,0	17101,5	0,100
69	J[70]	V-Max	LCB55_inf	Persistent & Transient	MZ-MAX	OK	3781,5	256653,7	1944,7	17496,0	0,126
69	J[70]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-2701,7	250847,1	-1915,8	17100,2	0,123
70	I[70]	T-Max	LCB30_inf	Persistent & Transient	MX-MAX	OK	3796,0	250106,4	1132,9	17049,7	0,082
70	I[70]	V-Max	LCB55_inf	Persistent & Transient	MZ-MAX	OK	3781,5	250125,0	1448,1	17051,0	0,100
70	I[70]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-2701,7	245386,9	-2329,7	16728,0	0,150
70	J[71]	T-Max	LCB30_inf	Persistent & Transient	MX-MAX	OK	4449,1	250014,2	2663,9	17043,4	0,174
70	J[71]	V-Max	LCB47_sup	Persistent & Transient	MZ-MAX	OK	4422,9	250028,7	3009,5	17044,4	0,194
70	J[71]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-2662,4	245314,3	-415,1	16723,0	0,036
71	I[71]	T-Max	LCB30_inf	Persistent & Transient	MX-MAX	OK	4449,1	250015,0	2663,9	17043,5	0,174
71	I[71]	V-Max	LCB47_sup	Persistent & Transient	MZ-MAX	OK	4422,9	250029,5	3009,5	17044,5	0,194
71	I[71]	V-Min	LCB42_sup	Persistent & Transient	MZ-MIN	OK	-2662,4	245315,1	-415,1	16723,1	0,036
71	J[72]	T-Max	LCB30_inf	Persistent & Transient	MX-MAX	OK	4991,2	249780,1	3329,0	17027,5	0,216
71	J[72]	V-Max	LCB47_sup	Persistent & Transient	MZ-MAX	OK	4956,2	249791,5	3998,9	17028,2	0,255
71	J[72]	V-Min	LCB50_inf	Persistent & Transient	MZ-MIN	OK	-2754,7	245122,5	295,5	16710,0	0,029
72	I[72]	T-Max	LCB30_inf	Persistent & Transient	MX-MAX	OK	4991,0	249783,5	3329,0	17027,7	0,216
72	I[72]	V-Max	LCB47_sup	Persistent & Transient	MZ-MAX	OK	4956,2	249794,5	3999,0	17028,4	0,255
72	I[72]	V-Min	LCB50_inf	Persistent & Transient	MZ-MIN	OK	-2754,7	245127,4	295,6	16710,3	0,029
72	J[73]	T-Max	LCB30_inf	Persistent & Transient	MX-MAX	OK	5783,7	249030,4	2148,7	16976,3	0,150
72	J[73]	V-Max	LCB43_sup	Persistent & Transient	MZ-MAX	OK	5737,2	244516,5	3698,8	16668,6	0,245
72	J[73]	V-Min	LCB54_inf	Persistent & Transient	MZ-MIN	OK	-2929,9	249024,5	-1074,0	16975,9	0,075
73	I[73]	T-Max	LCB26_inf	Persistent & Transient	MX-MAX	OK	5789,1	244555,6	1688,6	16671,3	0,125
73	I[73]	V-Max	LCB43_sup	Persistent & Transient	MZ-MAX	OK	5734,2	244589,9	2790,2	16673,6	0,191
73	I[73]	V-Min	LCB54_inf	Persistent & Transient	MZ-MIN	OK	-2928,5	249140,2	-2161,9	16983,8	0,139
73	J[74]	T-Max	LCB26_inf	Persistent & Transient	MX-MAX	OK	6862,1	241340,3	1370,1	19742,5	0,098
73	J[74]	V-Max	LCB43_sup	Persistent & Transient	MZ-MAX	OK	6792,6	241378,9	3047,0	19745,7	0,183
73	J[74]	V-Min	LCB54_inf	Persistent & Transient	MZ-MIN	OK	-3254,1	245257,2	-3413,3	20063,0	0,183
74	I[74]	T-Max	LCB26_inf	Persistent & Transient	MX-MAX	OK	6869,9	232251,4	2146,0	102911,4	0,050
74	I[74]	V-Max	LCB43_sup	Persistent & Transient	MZ-MAX	OK	6796,0	232251,5	3823,8	102911,5	0,066
74	I[74]	V-Min	LCB54_inf	Persistent & Transient	MZ-MIN	OK	-3255,8	234228,9	-2484,0	103787,7	0,038
74	J[75]	T-Max	LCB26_inf	Persistent & Transient	MX-MAX	OK	7085,9	232187,5	2380,3	102883,1	0,054
74	J[75]	V-Max	LCB43_sup	Persistent & Transient	MZ-MAX	OK	7007,7	232187,2	4282,7	102883,0	0,072
74	J[75]	V-Min	LCB54_inf	Persistent & Transient	MZ-MIN	OK	-3356,8	234152,7	-2450,3	103753,9	0,038
75	I[75]	T-Max	LCB70_inf_krutenie	Persistent & Transient	MZ-MIN	OK	-2009,2	234189,2	-8247,1	103770,1	0,088
75	I[75]	V-Max	LCB53_inf	Persistent & Transient	FZ-MAX	OK	382,6	232225,4	-6437,0	102899,9	0,064
75	I[75]	V-Min	LCB46_sup	Persistent & Transient	MZ-MIN	OK	-2005,0	234188,9	-8611,8	103770,0	0,092
75	J[76]	T-Max	LCB71_inf_krutenie	Persistent & Transient	MZ-MAX	OK	0,0	222817,1	2,9	98731,1	0,000
75	J[76]	V-Max	LCB49_sup	Persistent & Transient	FZ-MAX	OK	0,0	222817,1	2,9	98731,1	0,000
75	J[76]	V-Min	LCB56_inf	Persistent & Transient	MZ-MIN	OK	0,0	222817,1	2,9	98731,1	0,000

5.11 Napätie v predpínacej výstuži

Vysvetlenia symbolov:

f_p1 - maximálne napätie v lane v kotve po zavedení predpätia

f_p2 - maximálne napätie v lane mimo kotvy

f_pe - maximálne napätie v lane po všetkých stratách

Stress Limit At anch. - maximálne prípustné napätie v kotve po zavedení predpätia

Stress Limit Away from anch. - maximálne prípustné napätie v lane mimo kotvy

Stress Limit At service - maximálne prípustné napätie v lane po všetkých stratách

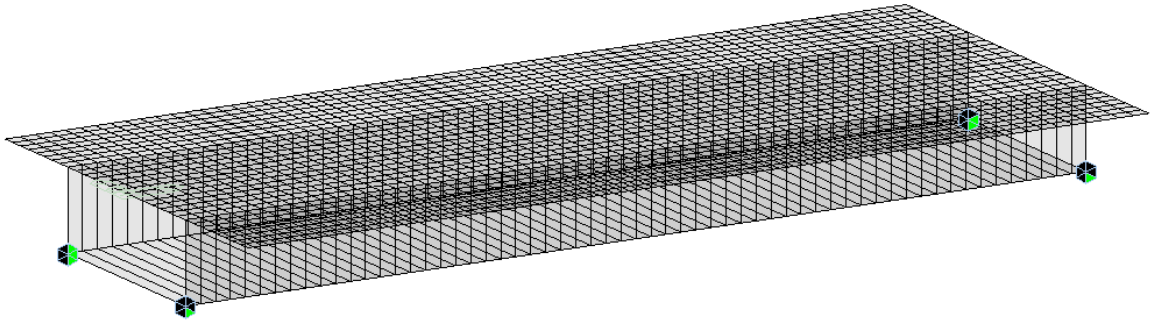
	Tendon Stress			Tendon Stress Limit		
				Immediately after anchor set		
Tendon	f_p1 (kN/m^2)	f_p2 (kN/m^2)	f_pe (kN/m^2)	At anch.	Away from anch.	At service
10L-VV	1229591,563	1304023,411	1057125,076	1304282	1397445	1255248
10P-VV	1229591,563	1304023,411	1057127,492	1304282	1397445	1255248
11L-VV	1238652,707	1307802,057	1050476,3	1304282	1397445	1255248
11P-VV	1238652,707	1307802,057	1050477,391	1304282	1397445	1255248
12L-VV	1236538,284	1307472,046	1052742,163	1304282	1397445	1255248
12P-VV	1236538,284	1307472,046	1052744,672	1304282	1397445	1255248
13L-VV	1243011,913	1311329,594	1044904,093	1304282	1397445	1255248
13P-VV	1243011,913	1311329,594	1044905,068	1304282	1397445	1255248
14L-VV	1239064,99	1308792,474	1045697,598	1304282	1397445	1255248
14P-VV	1239064,99	1308792,474	1045700,2	1304282	1397445	1255248
15L-VV	1243907,743	1312780,877	1044517,872	1304282	1397445	1255248
15P-VV	1243907,743	1312780,877	1044518,459	1304282	1397445	1255248
16L-VV	1243529,718	1309283,492	1039113,659	1304282	1397445	1255248
16P-VV	1243529,718	1309283,492	1039116,354	1304282	1397445	1255248
17L-VV	1246737,413	1315408,084	1037407,565	1304282	1397445	1255248
17P-VV	1246737,413	1315408,084	1037408,073	1304282	1397445	1255248
18L-VV	1247819,194	1317327,134	1028155,871	1304282	1397445	1255248
18P-VV	1247819,194	1317327,134	1028155,65	1304282	1397445	1255248
19L-VV	1245117,099	1307449,656	1022901,527	1304282	1397445	1255248
19P-VV	1245117,099	1307449,656	1022901,229	1304282	1397445	1255248
1L-VV	1260214,196	1258953,883	1002436,538	1304282	1397445	1255248
1P-VV	1260213,371	1258953,051	1002437,725	1304282	1397445	1255248
21L-MV1	1245528,439	1244761,447	997371,8733	1304282	1397445	1255248
21P-MV1	1245528,107	1244761,113	997367,7656	1304282	1397445	1255248
22L-MV1	1245524,09	1244756,431	1001312,979	1304282	1397445	1255248
22P-MV1	1245378,978	1244611,059	1001203,584	1304282	1397445	1255248
23L-MV1	1293401,461	1296560,557	1044728,07	1304282	1397445	1255248
23P-MV1	1293401,461	1296560,557	1044724,493	1304282	1397445	1255248
24L-MV1	1293411,456	1296571,533	1044728,3	1304282	1397445	1255248
24P-MV1	1293411,456	1296571,533	1044723,983	1304282	1397445	1255248
25L-MV1	1226895,966	1289571,479	1051685,256	1304282	1397445	1255248
25P-MV1	1226895,966	1289571,479	1051681,974	1304282	1397445	1255248
26L-MV1	1260342,129	1302534,293	1060881,174	1304282	1397445	1255248
26P-MV1	1260342,129	1302534,293	1060875,972	1304282	1397445	1255248
27L-MV1	1231810,006	1309312,202	1064473,101	1304282	1397445	1255248
27P-MV1	1231810,006	1309312,214	1064468,073	1304282	1397445	1255248
28L-MV1	1240106,358	1313331,695	1054539,253	1304282	1397445	1255248
28P-MV1	1240106,358	1313331,695	1054536,203	1304282	1397445	1255248
29L-MV1	1243887,005	1302853,637	1055870,904	1304282	1397445	1255248
29P-MV1	1243887,005	1302853,637	1055869,441	1304282	1397445	1255248
2L-VV	1259937,469	1258678,762	1002422,064	1304282	1397445	1255248
2P-VV	1259626,896	1258367,257	1002194,451	1304282	1397445	1255248
31L-MV3	1243679,794	1242906,748	988272,9857	1304282	1397445	1255248
31P-MV3	1243679,795	1242906,749	988273,0267	1304282	1397445	1255248
32L-MV3	1243674,133	1242902,272	984488,0054	1304282	1397445	1255248
32P-MV3	1243674,133	1242902,271	984488,0528	1304282	1397445	1255248
33L-MV3	1294182,925	1297344,017	1034105,369	1304282	1397445	1255248

Tendon	Tendon Stress			Tendon Stress Limit		
				Immediately after anchor set		
	f_p1 (kN/m^2)	f_p2 (kN/m^2)	f_pe (kN/m^2)	At anch.	Away from anch.	At service
33P-MV3	1294182,925	1297344,017	1034105,406	1304282	1397445	1255248
34L-MV3	1294179,854	1297340,661	1034105,226	1304282	1397445	1255248
34P-MV3	1294179,854	1297340,661	1034105,271	1304282	1397445	1255248
35L-MV3	1228108,798	1290206,681	1042634,986	1304282	1397445	1255248
35P-MV3	1228108,798	1290206,681	1042635,027	1304282	1397445	1255248
36L-MV3	1261545,693	1303151,737	1051190,45	1304282	1397445	1255248
36P-MV3	1261545,693	1303151,737	1051190,504	1304282	1397445	1255248
37L-MV3	1232898,467	1309333,914	1055219,272	1304282	1397445	1255248
37P-MV3	1232898,467	1309333,914	1055219,329	1304282	1397445	1255248
38L-MV3	1241196,25	1313704,555	1057506,748	1304282	1397445	1255248
38P-MV3	1241196,25	1313704,555	1057506,784	1304282	1397445	1255248
39L-MV3	1245400,056	1307631,013	1044731,017	1304282	1397445	1255248
39P-MV3	1245400,056	1307631,013	1044731,042	1304282	1397445	1255248
3L-VV	1290723,194	1295312,826	1042101,311	1304282	1397445	1255248
3P-VV	1290723,194	1295312,826	1042102,92	1304282	1397445	1255248
41L	1246976,255	1306090,207	1065659,88	1304282	1397445	1255248
41P	1246976,267	1306090,208	1065661,809	1304282	1397445	1255248
42L	1188725,29	1266475,867	1046307,984	1304282	1397445	1255248
42P	1188725,296	1266475,867	1046302,912	1304282	1397445	1255248
43L	1245993,925	1303127,778	1063169,748	1304282	1397445	1255248
43P	1245993,937	1303127,779	1063171,678	1304282	1397445	1255248
44L	1185506,743	1265056,749	1049956,747	1304282	1397445	1255248
44P	1185506,748	1265056,749	1049951,676	1304282	1397445	1255248
45L	1238756,701	1302873,563	1056560,029	1304282	1397445	1255248
45P	1238756,713	1302873,566	1056561,959	1304282	1397445	1255248
46L	1185687,203	1269175,93	1052039,127	1304282	1397445	1255248
46P	1185687,208	1269175,93	1052033,975	1304282	1397445	1255248
47L	1268918,57	1298688,109	1072647,763	1304282	1397445	1255248
47P	1268918,569	1298688,105	1072644,622	1304282	1397445	1255248
48L	1268759,316	1297947,853	1087721,835	1304282	1397445	1255248
48P	1268759,316	1297947,852	1087718,891	1304282	1397445	1255248
49L	1274243,358	1297456,141	1087374,997	1304282	1397445	1255248
49P	1274243,357	1297456,139	1087372,248	1304282	1397445	1255248
4L-VV	1290346,907	1294942,942	1042100,994	1304282	1397445	1255248
4P-VV	1290346,907	1294942,942	1042102,97	1304282	1397445	1255248
51L	1254539,238	1308607,759	1062901,777	1304282	1397445	1255248
51P	1254539,252	1308607,76	1062901,956	1304282	1397445	1255248
52L	1186595,54	1265181,788	1033252,078	1304282	1397445	1255248
52P	1186595,54	1265181,787	1033252,113	1304282	1397445	1255248
53L	1255021,209	1307587,587	1061192,344	1304282	1397445	1255248
53P	1255021,222	1307587,587	1061192,523	1304282	1397445	1255248
54L	1183126,145	1263192,803	1036058,95	1304282	1397445	1255248
54P	1183126,145	1263192,802	1036058,992	1304282	1397445	1255248
55L	1251190,92	1308051,339	1058524,393	1304282	1397445	1255248
55P	1251190,933	1308051,34	1058524,339	1304282	1397445	1255248
56L	1183040,334	1267784,36	1042975,446	1304282	1397445	1255248
56P	1183040,334	1267784,359	1042975,491	1304282	1397445	1255248
57L	1273114,35	1302672,668	1075016,647	1304282	1397445	1255248
57P	1273114,349	1302672,665	1075016,62	1304282	1397445	1255248
58L	1266326,348	1298858,547	1072079,47	1304282	1397445	1255248
58P	1266326,347	1298858,542	1072079,45	1304282	1397445	1255248
59L	1269448,418	1292292,225	1065427,711	1304282	1397445	1255248
59P	1269448,417	1292292,22	1065427,692	1304282	1397445	1255248
5L-VV	1239002,26	1295400,135	1048977,739	1304282	1397445	1255248
5P-VV	1239002,26	1295400,155	1048979,189	1304282	1397445	1255248
61L	1230870,478	1253490,847	1040964,288	1304282	1397445	1255248
61P	1230870,478	1253477,129	1040964,288	1304282	1397445	1255248
62L	1196176,613	1262037,198	1044413,02	1304282	1397445	1255248
62P	1196176,291	1262036,528	1044411,882	1304282	1397445	1255248
63L	1204906,474	1246503,586	1021962,18	1304282	1397445	1255248
63P	1204906,474	1246491,101	1021962,18	1304282	1397445	1255248
64L	1163105,973	1255649,821	1037456,564	1304282	1397445	1255248

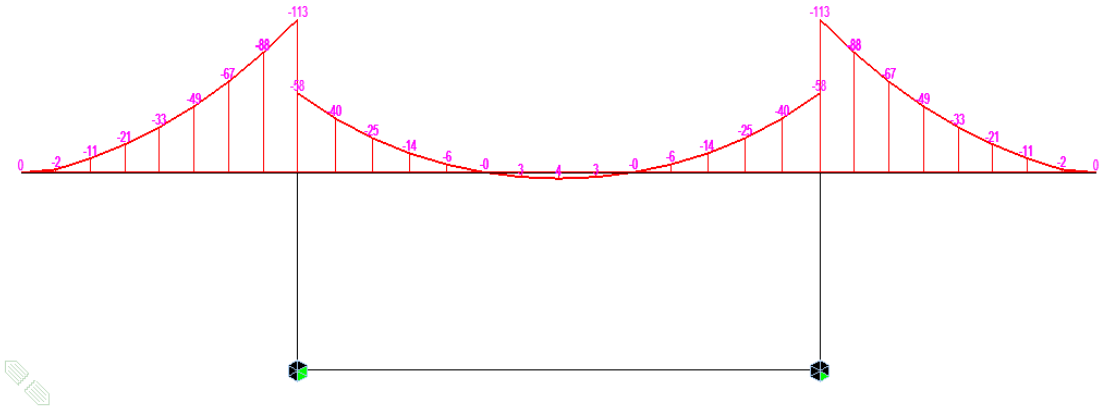
Tendon	Tendon Stress			Tendon Stress Limit		
				Immediately after anchor set		
	f_p1 (kN/m^2)	f_p2 (kN/m^2)	f_pe (kN/m^2)	At anch.	Away from anch.	At service
64P	1163105,651	1255649,225	1037455,009	1304282	1397445	1255248
65L	1147390,73	1227733,133	1030214,337	1304282	1397445	1255248
65P	1147390,426	1227732,67	1030216,373	1304282	1397445	1255248
66L	1218870,953	1271535,641	1049027,232	1304282	1397445	1255248
66P	1218870,669	1271535,05	1049027,269	1304282	1397445	1255248
67L	1266428,968	1286728,995	1073638,471	1304282	1397445	1255248
67P	1266434,98	1286728,59	1073640,252	1304282	1397445	1255248
68L	1192396,424	1247095,398	1017957,653	1304282	1397445	1255248
68P	1192396,424	1247087,346	1017924,384	1304282	1397445	1255248
69L	1155040,439	1219068,54	995715,8289	1304282	1397445	1255248
69P	1155040,439	1219063,698	995690,2059	1304282	1397445	1255248
6L-VV	1257234,844	1304019,664	1055268,994	1304282	1397445	1255248
6P-VV	1257234,844	1304019,691	1055271,337	1304282	1397445	1255248
70L	1277112,645	1278009,128	1035106,595	1304282	1397445	1255248
70P	1291782,275	1293113,666	1046564,981	1304282	1397445	1255248
71L	1225853,578	1261864,625	1053901,017	1304282	1397445	1255248
71P	1225853,578	1261864,628	1053901,036	1304282	1397445	1255248
72L	1196873,418	1262864,554	1038466,011	1304282	1397445	1255248
72P	1196873,42	1262864,557	1038466,04	1304282	1397445	1255248
73L	1199403,138	1259236,614	1052749,784	1304282	1397445	1255248
73P	1199403,138	1259236,617	1052749,803	1304282	1397445	1255248
74L	1164085,785	1256441,732	1033029,198	1304282	1397445	1255248
74P	1164085,788	1256441,735	1033029,227	1304282	1397445	1255248
75L	1186510,274	1263041,934	1055528,694	1304282	1397445	1255248
75P	1186510,274	1263041,937	1055528,711	1304282	1397445	1255248
7L-VV	1226603,027	1302355,791	1059758,678	1304282	1397445	1255248
7P-VV	1226603,027	1302355,804	1059760,006	1304282	1397445	1255248
80L	1245252,155	1267110,286	1048234,527	1304282	1397445	1255248
80P	1245247,151	1267114,187	1048252,49	1304282	1397445	1255248
81L	1250740,01	1257403,034	1041020,628	1304282	1397445	1255248
81P	1250743,49	1257406,709	1041037,433	1304282	1397445	1255248
82L	1244262,029	1242478,276	1025153,805	1304282	1397445	1255248
82P	1242368,466	1240572,176	1023685,836	1304282	1397445	1255248
8L-VV	1258471,73	1316682,076	1070229,608	1304282	1397445	1255248
8P-VV	1258471,73	1316682,101	1070232,041	1304282	1397445	1255248
9L-VV	1234420,394	1305603,343	1056157,059	1304282	1397445	1255248
9P-VV	1234420,394	1305603,343	1056158,266	1304282	1397445	1255248

5.12 Nosná konštrukcia – priečny smer

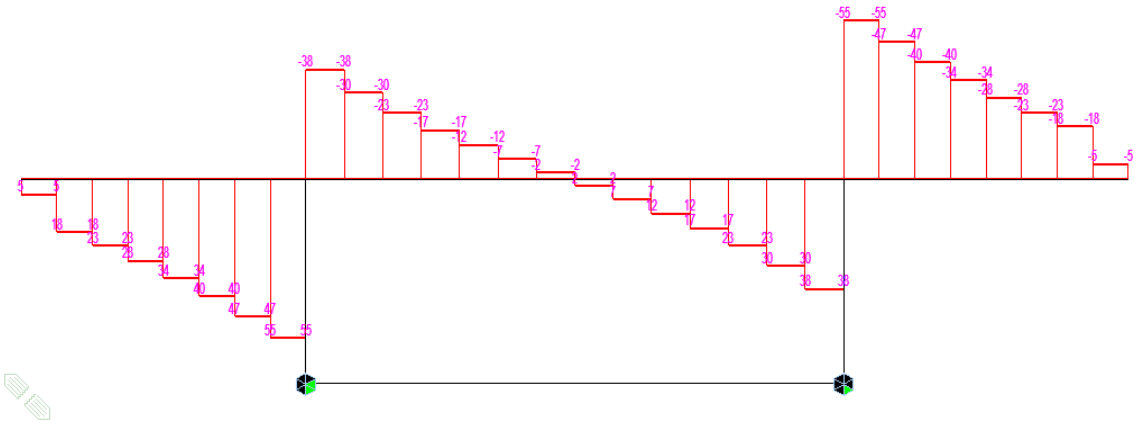
5.12.1 Stále zaťaženie (viď. kapitola 4.1 – Stále zaťaženie)



Obrázok - statická schema

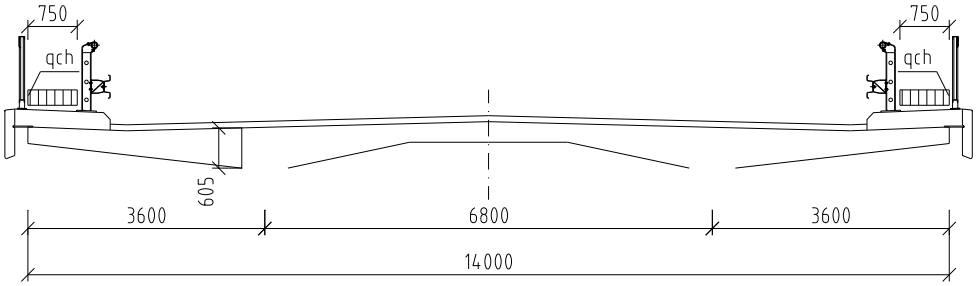


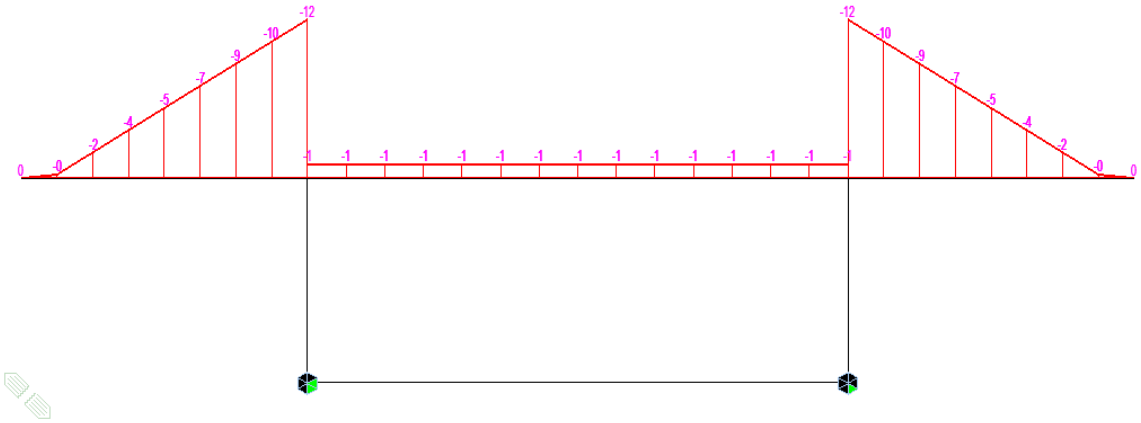
Stále spolu - Mxx kNm/m



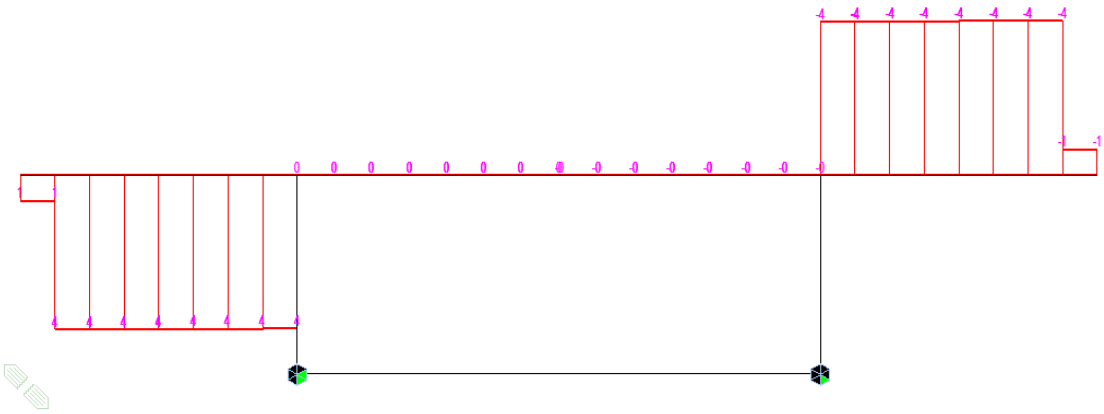
Stále spolu Vxx kN/m

5.12.2 Zaťaženie dopravou – konzola, chodci (5,0 kN/m^2)



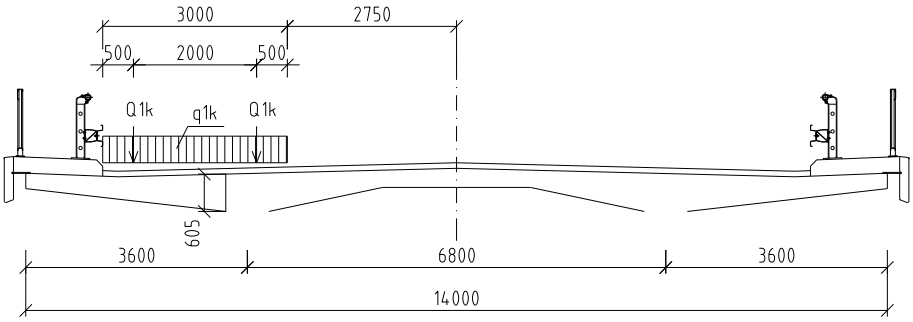


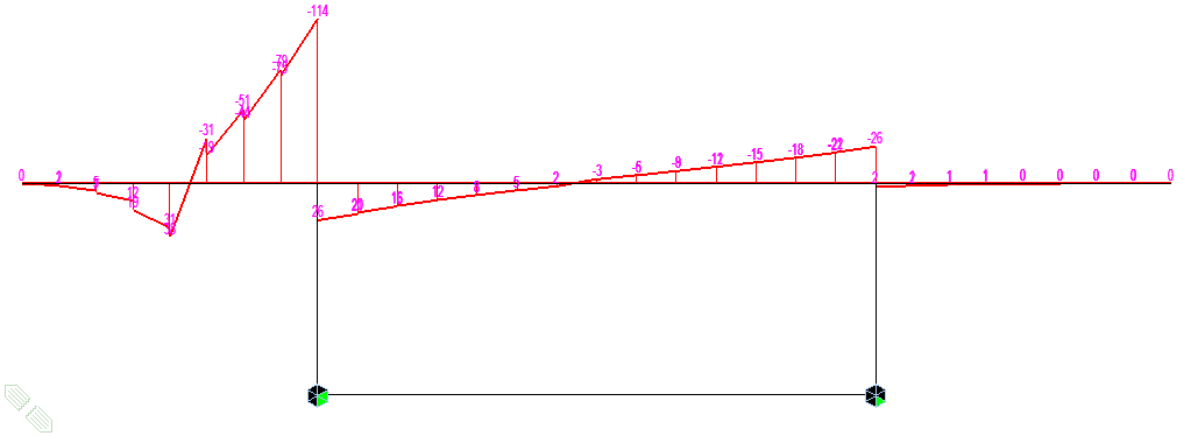
Chodci Mxx kNm/m



Chodci Vxx kN/m

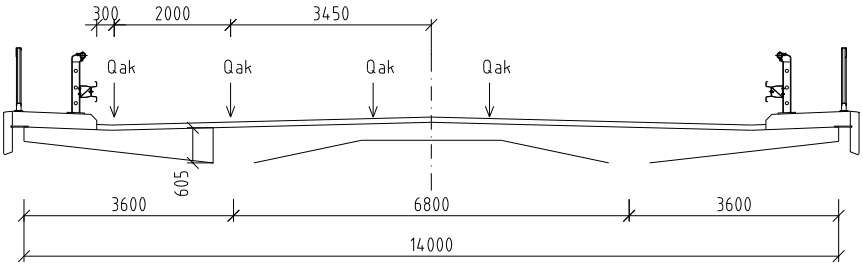
5.12.3 Zaťaženie dopravou – konzola ZM1

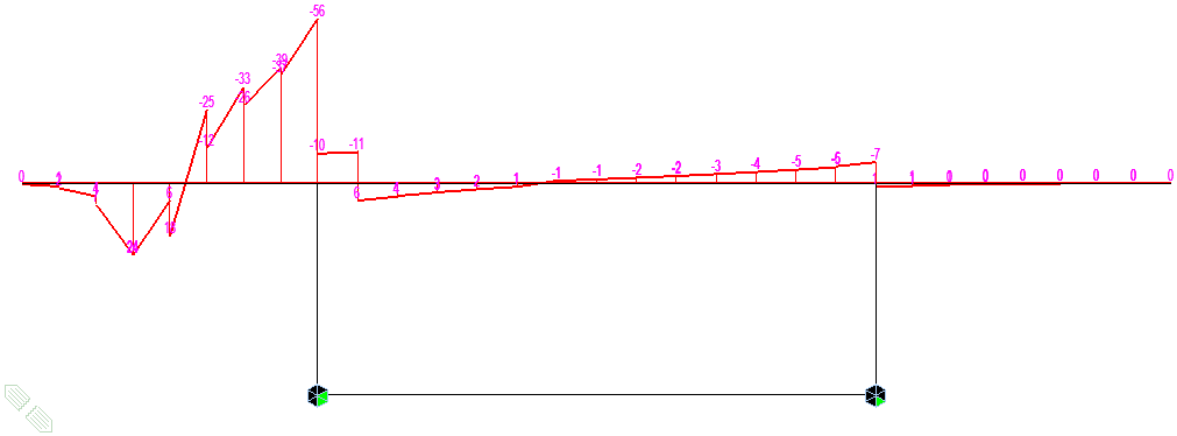




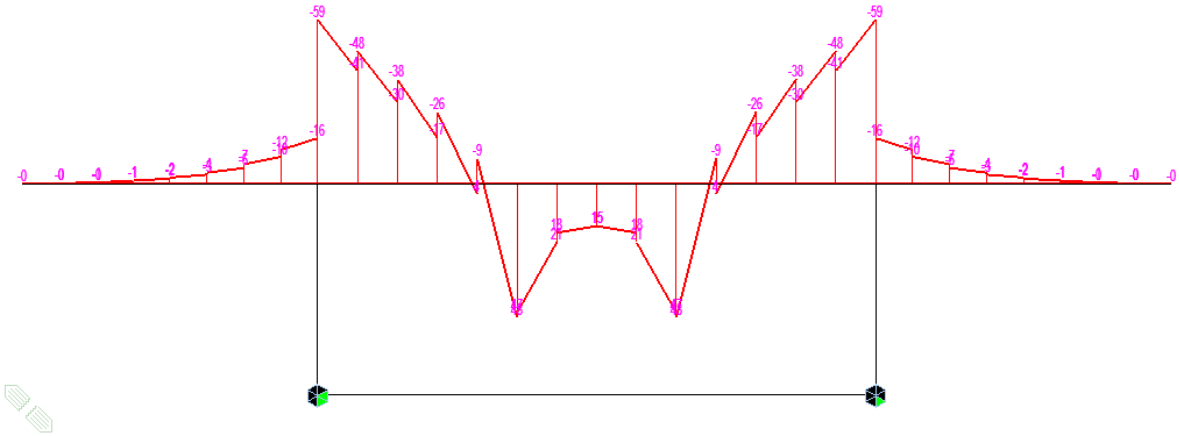
ZM1 konzola Mxx kNm/m

5.12.4 Zaťaženie dopravou – konzola, doska ZM2



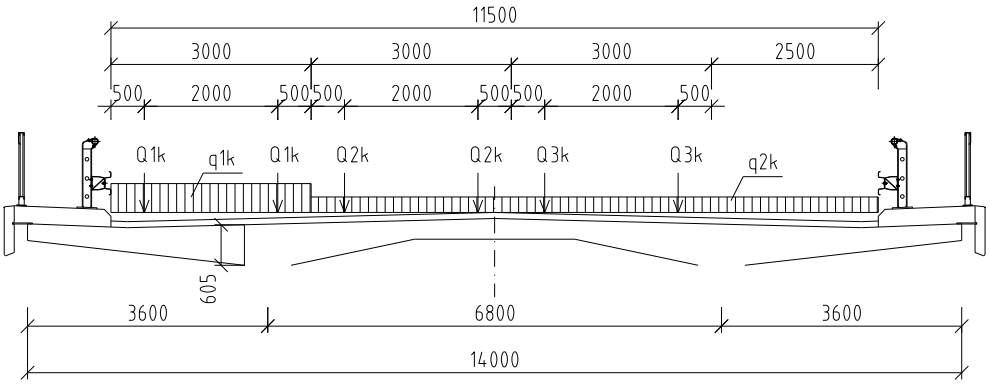


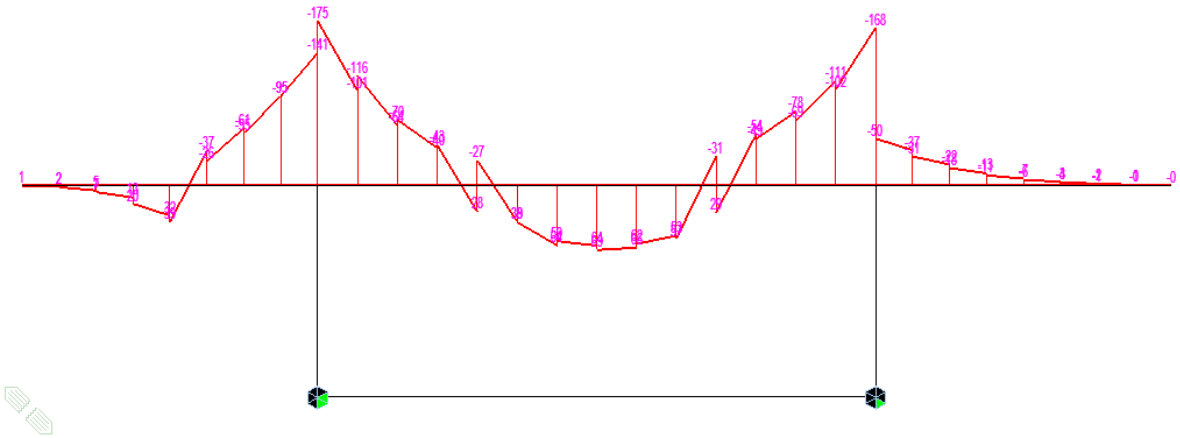
ZM2 konzola Mxx kNm/m



ZM2 stred Mxx kNm/m

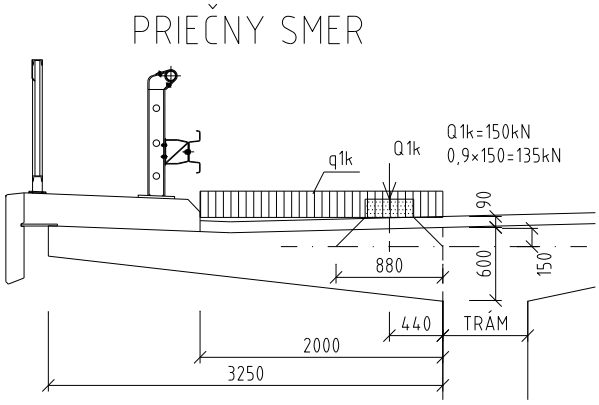
5.12.5 Zaťaženie dopravou – doska ZM1(komplet)

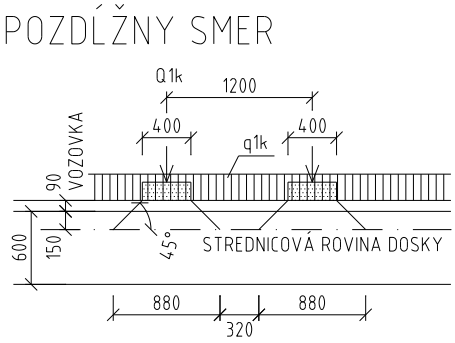


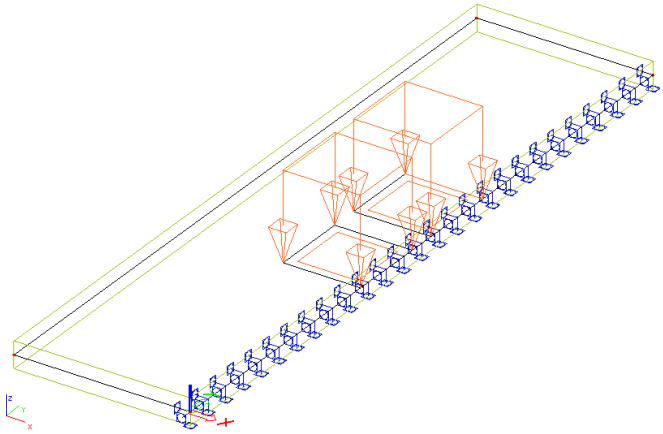


ZM1 komplet Mxx kNm/m

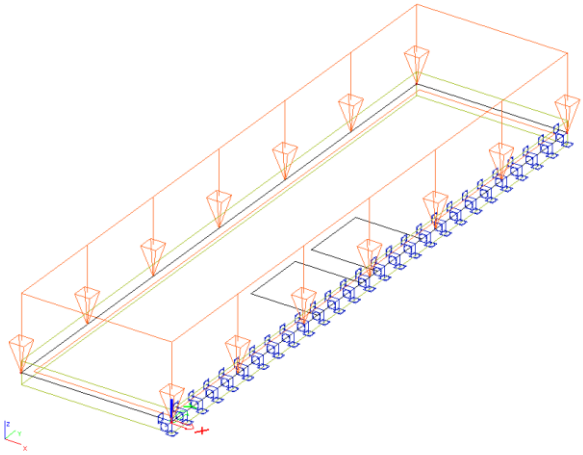
Stanovenie V_{max} na konzole



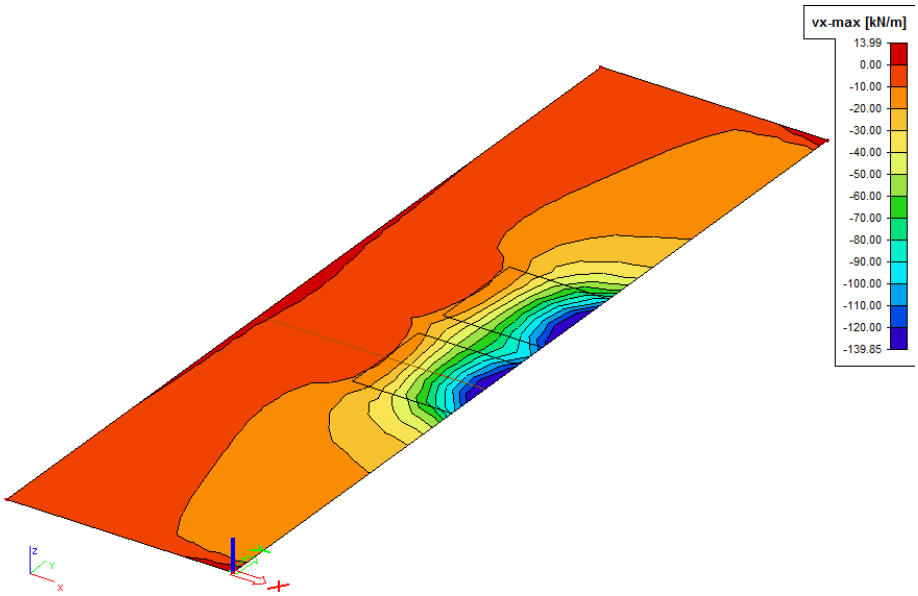




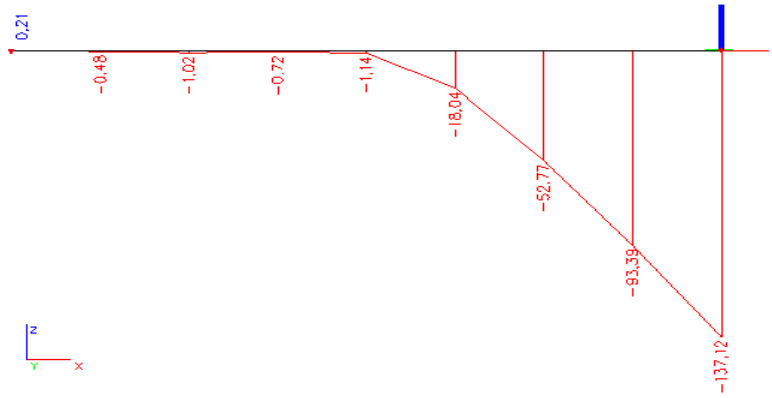
Kolesové tlaky - Q_k



Rovnomerné zaťaženie - q_k

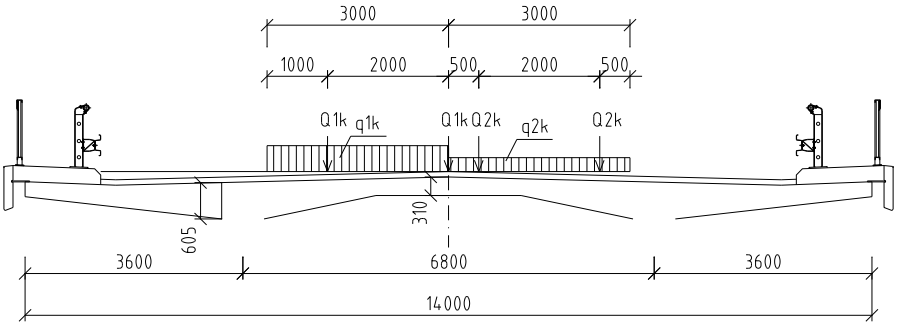


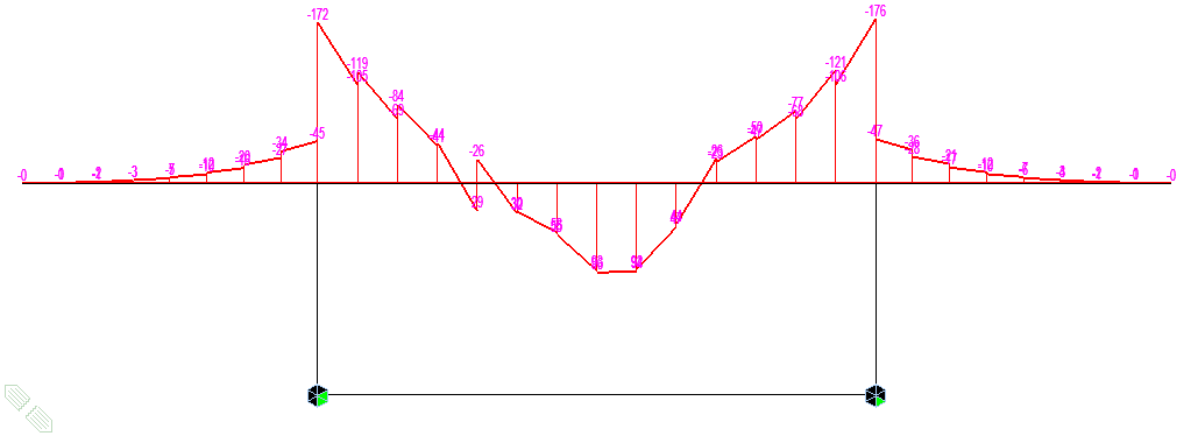
Výsledky - vx ($\alpha_{Q1*}Q_k + \alpha_{q1*}q_k$)



Výsledky- REZ - vx ($\alpha_{Q1*}Q_k + \alpha_{q1*}q_k$)

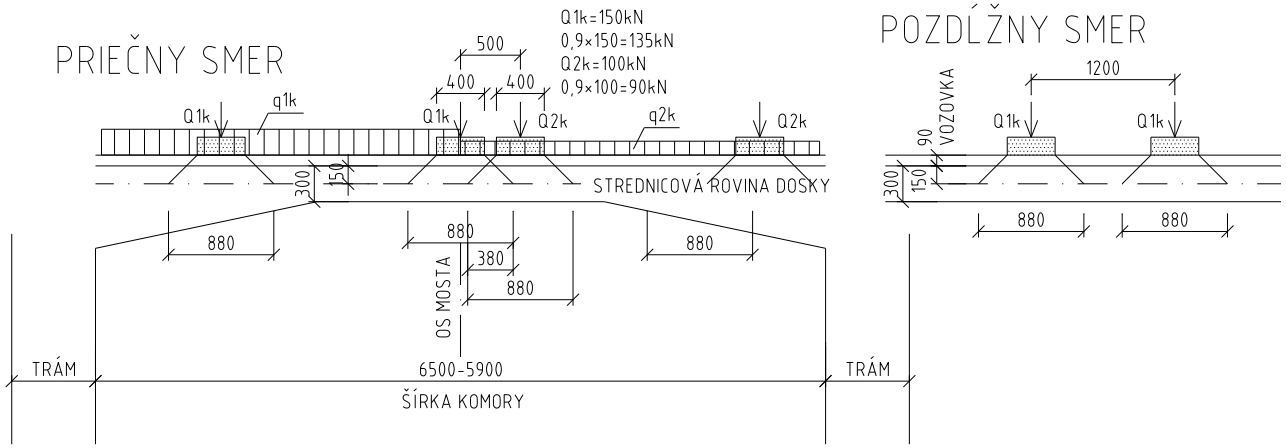
5.12.6 Zaťaženie dopravou – doska ZM1

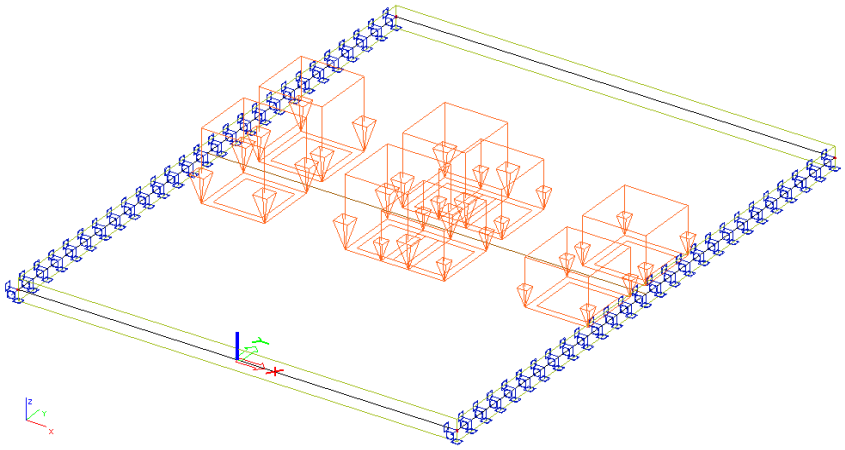




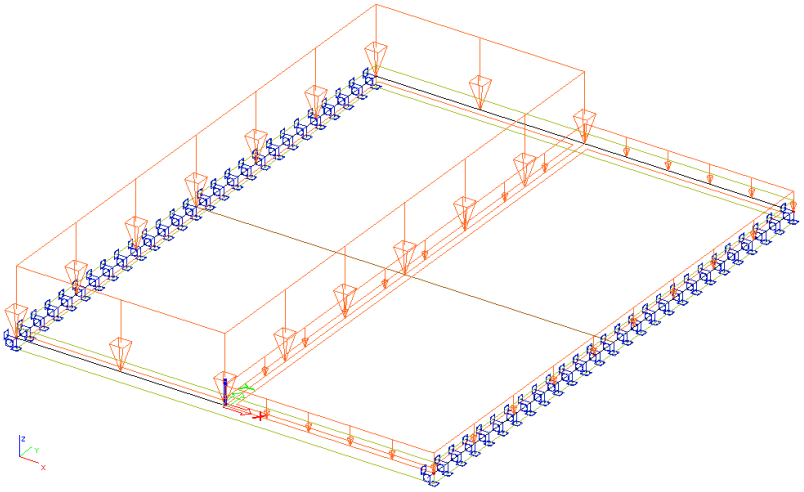
ZM1 stred Mxx kNm/m

Stanovenie V_{max} na doske

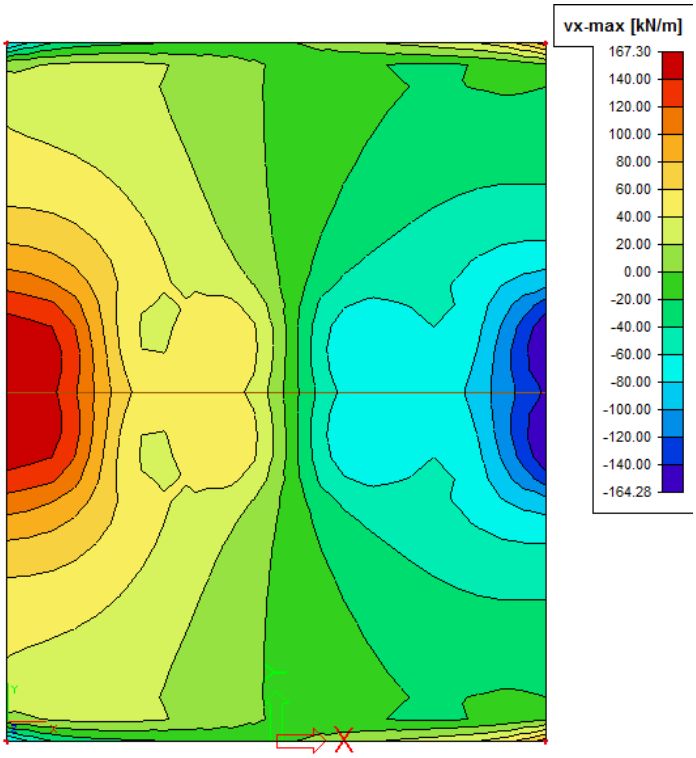




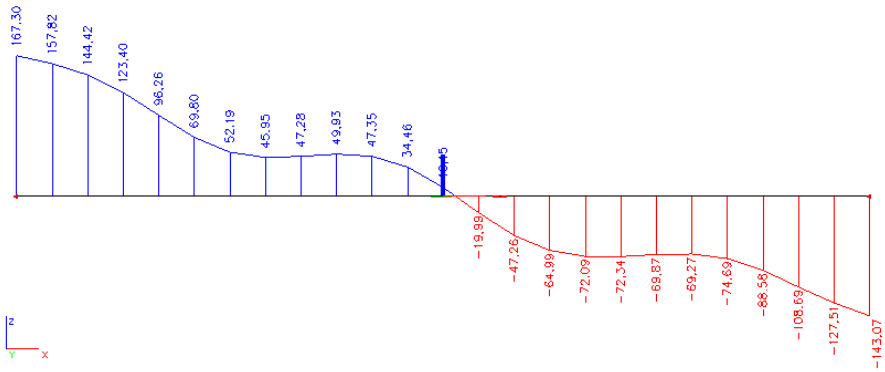
Kolesové tlaky - Q_k



Rovnomerné zaťaženie - q_k



Výsledky - vx ($\alpha_{Q1*}Q_k + \alpha_{q1*}q_k$)



Výsledky- REZ - vx ($\alpha_{Q1*}Q_k + \alpha_{q1*}q_k$)

5.12.7 Dimenzačné hodnoty

Na konzole: M_{Edmax} = stale + chodci + max. doprava

M_{Edmax} = (-113 + -12,0 + -175,0)*1,35 = - 405,0 kNm/m

V_{Ed} = (55,0 + 4,0 + 167,3)*1,35 = 305,5 kN/m

Na doske (stred): M_{Edmax} = stale + max. doprava

M_{Edmax} = (4,0 + 96,0)*1,35 = 135,0 kNm/m

V_{Ed} = (0,0 + 72,0)*1,35 = 97,2 kN/m

5.12.8 Posúdenie

Součinitele výpočtu

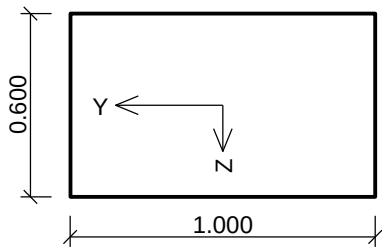
Uvažovány dle normy ČSN EN 1992-1-1.

1 Doska-konzola

1.1 Vstupní data

Typ prvku: deska
Prostředí: XC4, XD1, XF2
Požadovaná třída betonu: C30/37

Průřez



Materiály
Beton : C 40/50
f_{ck} = 40.0 MPa; f_{ct} = 3.5 MPa; E_{cm} = 35000.0 MPa

Ocel podélná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Ocel příčná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Vnitřní síly - návrhová (MSÚ)

č.	Název zatěžovacího případu	N_{Ed} [kN]	V_{Edz} [kN]	V_{Edy} [kN]	M_{Edy} [kNm]	M_{Edz} [kNm]	T_{Ed} [kNm]	QP koef. [-]
1	Zat. případ 1	0.00	305.50	0.00	-405.00	0.00	0.00	1.000

Vyztužení průřezu

Počet	Profil [mm]	Krytí [mm]	Umístění
10	18.0	65.0	horní výztuž
5	16.0	75.0	dolní výztuž

S tlačenou výztuží není počítáno.

Smyková výztuž

Spony
Profil: 12.0 mm; Vzdálenost: 0.20 m; Svislé střihy: 2; Vodor. střihy: 2

Minimální krytí

Třída konstrukce: S4

c_{min} = max($c_{min,b}$; $c_{min,dur}$; 10) = max(18; 35; 10) = 35 mm
c_{nom} = c_{min} + Δc_{dev} = 35 + 10 = 45 mm

1.2 Výsledky

Posouzení min. a max. stupně vyztužení

Deska (tažená výztuž):
$\rho_{s,min}$ = 0.00121 ≤ ρ_s = 0.00521 ≤ $\rho_{s,max}$ = 0.04 ⇒ **VYHOVUJE**

Stupeň vyztužení smykovou výztuží

$\rho_{w,min}$ = 0.00101 ≤ ρ_w = 0.00113 ⇒ **VYHOVUJE**
Maximální vzdálenost třmínků $s_{l,max}$ = 0.34 m ⇒ **VYHOVUJE**
Maximální vzdálenost větví třmínků $s_{t,max}$ = 0.68 m

Posouzení mezního stavu únosnosti

č.	Název	N_{Ed} N_{Rd} [kN]	V_{Edz} V_{Rdz} [kN]	V_{Edy} V_{Rdy} [kN]	M_{Edy} M_{Rdy} [kNm]	M_{Edz} M_{Rdz} [kNm]	T_{Ed} T_{Rd} [kNm]	Posouzení
1	Zat. případ 1	0.00	305.50	0.00	-405.00	0.00	0.00	Vyhovuje
		0.00	524.87	0.00	-579.99	0.00	0.00	

Mezní stav únosnosti (ohyb, smyk, kroucení) VYHOVUJE

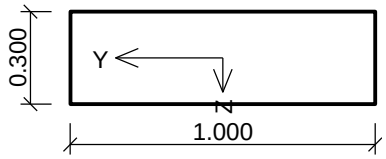
Celkové posouzení - Průřez VYHOVUJE
Využití průřezu: 69.8 %

2 Doska-stred

2.1 Vstupní data

Typ prvku: deska
Prostředí: XC4, XD1, XF2
Požadovaná třída betonu: C30/37

Průřez



Materiály
Beton : C 40/50
f_{ck} = 40.0 MPa; f_{ct} = 3.5 MPa; E_{cm} = 35000.0 MPa

Ocel podélná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Ocel příčná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Vnitřní síly - návrhová (MSÚ)

č.	Název zatěžovacího případu	N_{Ed} [kN]	V_{Edz} [kN]	V_{Edy} [kN]	M_{Edy} [kNm]	M_{Edz} [kNm]	T_{Ed} [kNm]	QP koef. [-]
1	Zat. případ 1	0.00	97.20	0.00	135.00	0.00	0.00	1.000

Vyztužení průřezu

Počet	Profil [mm]	Krytí [mm]	Umístění
5	18.0	65.0	horní výztuž
10	16.0	75.0	dolní výztuž

S tlačenou výztuží není počítáno.

Smyková výztuž

Průřez bez smykové výztuže.

Minimální krytí

Třída konstrukce: S4

c_{min} = max($c_{min,b}$; $c_{min,dur}$; 10) = max(18; 35; 10) = 35 mm
c_{nom} = c_{min} + Δc_{dev} = 35 + 10 = 45 mm

2.2 Výsledky

Posouzení min. a max. stupně vyztužení

Deska (tažená výztuž):
$\rho_{s,min} = 980.10^{-6} \leq \rho_s = 0.00911 \leq \rho_{s,max} = 0.04 \Rightarrow$ **VYHOVUJE**

Posouzení mezního stavu únosnosti

č.	Název	N_{Ed} N_{Rd} [kN]	V_{Edz} V_{Rdz} [kN]	V_{Edy} V_{Rdy} [kN]	M_{Edy} M_{Rdy} [kNm]	M_{Edz} M_{Rdz} [kNm]	T_{Ed} T_{Rd} [kNm]	Posouzení
1	Zat. případ 1	0.00	97.20	0.00	135.00	0.00	0.00	Vyhovuje
		0.00	180.63	0.00	186.82	0.00	0.00	

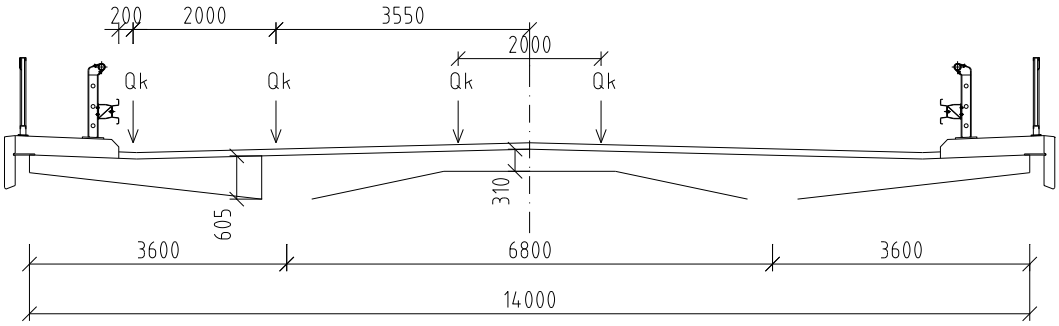
Mezní stav únosnosti (ohyb, smyk, kroucení) VYHOVUJE

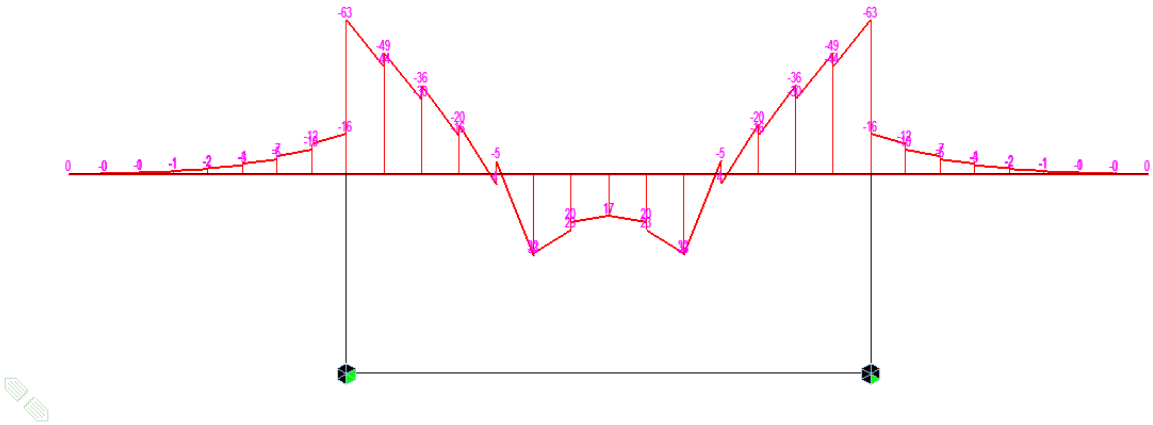
Celkové posouzení - Průřez VYHOVUJE
Využití průřezu: 72.3 %

5.13 Nosná konštrukcia – únava, priečny smer

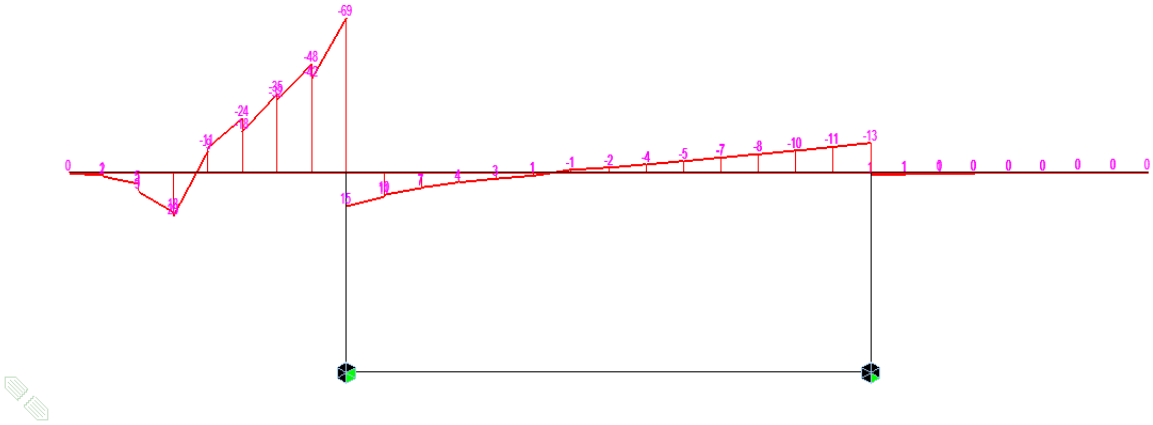
Overenie s použitím ekvivalentného rozkmitu napätí spôsobujúceho poškodenia

Únava v priečnom smere nosnej konštrukcie bola počítaná únavovým zaťažovacím modelom 3 (samostatné vozidlo). Zaťaženie náprav zväčšené o súčiniteľ 1,40





FLM3 stred Mxx kNm/m



FLM3 konzola Mxx kNm/m

Korekčný súčiniteľ ekvivalentného poškodenia pre únavu $\lambda_s = \varphi_{fat} * \lambda_{s,1} * \lambda_{s,2} * \lambda_{s,3} * \lambda_{s,4}$
φ_{fat} dynamický súčiniteľ ekvivalentného poškodenia, závislý od drsnoti povrchu 1,0
$\lambda_{s,1}$ = súčiniteľ ktorý zohľadňuje typ prvku 1,25
$\lambda_{s,2}$ = súčiniteľ ktorý zohľadňuje objem dopravy 1,0
$\lambda_{s,3}$ = súčiniteľ ktorý zohľadňuje návrhovú životnosť mosta 1,0
$\lambda_{s,4}$ = súčiniteľ ktorý sa použije ak je nosný prvok zaťažený viac ako jedným jazdným pásom 1,0
λ_s = 1,00 * 1,25 * 1,0 * 1,0 * 1,0 = 1,25

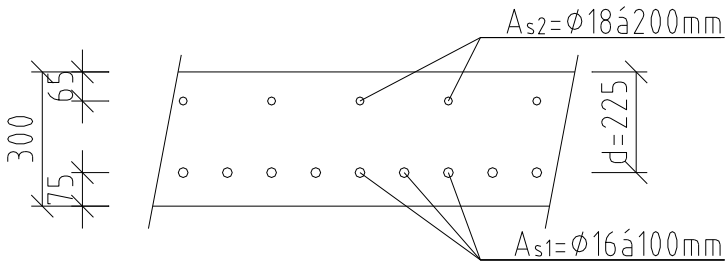
5.13.1 Dimenzačné hodnoty

Na doske (stred): M_{max} = 33,0 kNm/m
M_{min} = 0,0 kNm/m

Na konzole: M_{max} = 0,0 kNm/m
M_{min} = -69,0 kNm/m

5.13.2 Posúdenie na doske (M_{max})

Výpočet napäti



$A_{s1} = 2010mm^2$ ... plocha spodnej výstuže (10Ø16 / 1m) $d_1 = 75mm$ $d = h - d_1$

$A_{s2} = 1275mm^2$ ... plocha hornej výstuže (5Ø18 / 1m) $d_2 = 65mm$ $d = 0.225m$

$\alpha_e = \frac{E_s}{E_{cm}}$ $\alpha_e = 6$ ... pracovný súčiniteľ

Na základe podmienky

$$x^2 + \frac{2x}{b}\left[\left(\alpha_e - 1\right)A_{s2} + \alpha_e \cdot A_{s1}\right] - \frac{2}{b}\left[\left(\alpha_e - 1\right)\cdot A_{s2}\cdot d_2 + \alpha_e \cdot A_{s1}\cdot d\right] = 0$$

sa vypočíta x

$$x = \frac{5\cdot\left[\sqrt{3}\cdot\sqrt{mm^3\cdot(83410m + 4531323mm)} - 3687\cdot mm^2\right]}{m} \qquad x = 0.063m$$

$$x^2 + \frac{2}{b}\left[(\alpha_e - 1)A_{s2} + \alpha_e \cdot A_{s1}\right]\cdot x - \frac{2}{b}\left[(\alpha_e - 1)\cdot A_{s2}\cdot d_2 + \alpha_e \cdot A_{s1}\cdot d\right] = 0\,m^2$$

$$I_{ir} = \frac{1}{3}\cdot b\cdot x^3 + (\alpha_e - 1)\cdot A_{s2}\cdot (x - d_2)^2 + \alpha_e \cdot A_{s1}\cdot (d - x)^2$$

$I_{ir} = 3.999\times 10^8\,mm^4$ ... moment zotrvačnosti ideál. prierezu

$\sigma_{c.max} = \frac{M}{I_{ir}}\cdot x$ $\sigma_{c.max} = 5.18\,MPa$ ... maximálne tlakové napätie v betóne

$\sigma_{c.min} = 0\,MPa$ ... minimálne tlakové napätie v betóne

$\sigma_{s1} = \alpha_e \cdot \frac{M}{I_{ir}}(d - x)$ $\Delta\sigma_s = \sigma_{s1}$ $\Delta\sigma_s = 80.325\,MPa$ ... rozkmit napätia vo výstuži

$\lambda_s = 1.25$ ... korekčný súčiniteľ ekvivalentného poškodenia pre únavu

$\Delta\sigma_{s.equ} = \Delta\sigma_s \cdot \lambda_s$ $\Delta\sigma_{s.equ} = 100.407\,MPa$

Posúdenie betonárskej výstuže

$$\boxed{\gamma_{F.fat}\cdot \Delta\sigma_{s.equ} \le \frac{\Delta\sigma_{Rsk}}{\gamma_{S.fat}}}$$

$\gamma_{F.fat} = 1$ ... parciálny faktor spo¾ahlivosti únavového zaaženia

$\gamma_{S.fat} = 1.15$ ... parciálny faktor spo¾ahlivosti únavovej odolnosti ocele $\Delta\sigma_{Rsk} = 162.5\,MPa$

$\gamma_{F.fat}\cdot \Delta\sigma_{s.equ} = 100.407\,MPa$ $\frac{\Delta\sigma_{Rsk}}{\gamma_{S.fat}} = 141.304\,MPa$ $100.407\,MPa < 141.304\,MPa$ **vyhovuje**

Posúdenie betónu v tlaku

$$\frac{\sigma_{c.max}}{f_{cd.fat}} \le 0.5 + \frac{0.45\sigma_{c.min}}{f_{cd.fat}}$$

$k_1 = 0.85$ ... odp. hodnota, platí pre N=10^6 cyklov

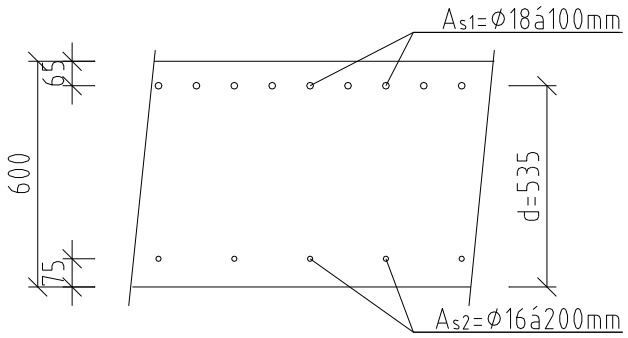
$\beta_{cc} = 1$ ... koeficient pre pevnosť betónu pri prvom pôsobení zaťaženia (1.0 - najnepriaznivejšia hodno

$f_{cd.fat} = k_1\cdot \beta_{cc}\cdot \frac{f_{ck}}{1.5}\cdot\left(1 - \frac{f_{ck}}{250\,MPa}\right)$ $f_{cd.fat} = 19.04\,MPa$

$\frac{\sigma_{c.max}}{f_{cd.fat}} = 0.272$ $0.272 < 0.5$ **vyhovuje**

5.13.3 Posúdenie na konzole (M_{min})

Výpočet napätí



$A_{s1} = 2550mm^2$ ... plocha hornej výstuže (10ϕ18 / 1m) $d_1 = 65mm$ $d = h - d_1$

$A_{s2} = 1005mm^2$ ... plocha spodnej výstuže (6ϕ16 / 1m) $d_2 = 75mm$ $d = 0.535m$

$\alpha_e = \frac{E_s}{E_{cm}}$ $\alpha_e = 6$ ... pracovný súčiniteľ

Na základe podmienky

$$x^2 + \frac{2x}{b}\left[(\alpha_e - 1)A_{s2} + \alpha_e \cdot A_{s1}\right] - \frac{2}{b}\left[(\alpha_e - 1)\cdot A_{s2}\cdot d_2 + \alpha_e \cdot A_{s1}\cdot d\right] = 0$$

sa vypočíta x

$$x = \frac{15\cdot\left[\sqrt{5}\cdot\sqrt{mm^3\cdot(15222m + 367205mm)} - 1355mm^2\right]}{m} \qquad x = 0.112m$$

$$x^2 + \frac{2}{b}\left[(\alpha_e - 1)A_{s2} + \alpha_e \cdot A_{s1}\right]\cdot x - \frac{2}{b}\left[(\alpha_e - 1)\cdot A_{s2}\cdot d_2 + \alpha_e \cdot A_{s1}\cdot d\right] = 0m^2$$

$$I_{ir} = \frac{1}{3}\cdot b\cdot x^3 + (\alpha_e - 1)\cdot A_{s2}\cdot(x - d_2)^2 + \alpha_e \cdot A_{s1}\cdot(d - x)^2$$

$I_{ir} = 3.213\times 10^9 mm^4$ ... moment zotrvačnosti ideál. prierezu

$\sigma_{c.max} = \frac{M}{I_{ir}}\cdot x$ $\sigma_{c.max} = 2.41MPa$ ... maximálne tlakové napätie v betóne

$\sigma_{c.min} = 0MPa$ ... minimálne tlakové napätie v betóne

$\sigma_{s1} = \alpha_e \cdot \frac{M}{I_{ir}}(d - x)$ $\Delta\sigma_s = \sigma_{s1}$ $\Delta\sigma_s = 54.494MPa$ ... rozkmit napätia vo výstuži

$\lambda_s = 1.25$ ... korekčný súčiniteľ ekvivalentného poškodenia pre únavu

$\Delta\sigma_{s.equ} = \Delta\sigma_s \cdot \lambda_s$ $\Delta\sigma_{s.equ} = 68.117MPa$

Posúdenie betonárskej výstuže

$$\boxed{\gamma_{F.fat} \cdot \Delta\sigma_{s.equ} \le \frac{\Delta\sigma_{Rsk}}{\gamma_{S.fat}}}$$

$\gamma_{F.fat} = 1$ ... parciálny faktor spo¾ahlivosti únavového zaaženia

$\gamma_{S.fat} = 1.15$ ... parciálny faktor spo¾ahlivosti únavovej odolnosti ocele $\Delta\sigma_{Rsk} = 162.5\,MPa$

$\gamma_{F.fat} \cdot \Delta\sigma_{s.equ} = 68.117\,MPa$ $\quad \frac{\Delta\sigma_{Rsk}}{\gamma_{S.fat}} = 141.304\,MPa$ $\quad 68.117\,MPa < 141.304\,MPa$ **vyhovuje**

Posúdenie betónu v tlaku

$$\frac{\sigma_{c.max}}{f_{cd.fat}} \le 0.5 + \frac{0.45\sigma_{c.min}}{f_{cd.fat}} \qquad \left(\frac{0.45\sigma_{c.min}}{f_{cd.fat}} = 0\right)$$

$k_1 = 0.85$ ... odp. hodnota, platí pre N=10^6 cyklov

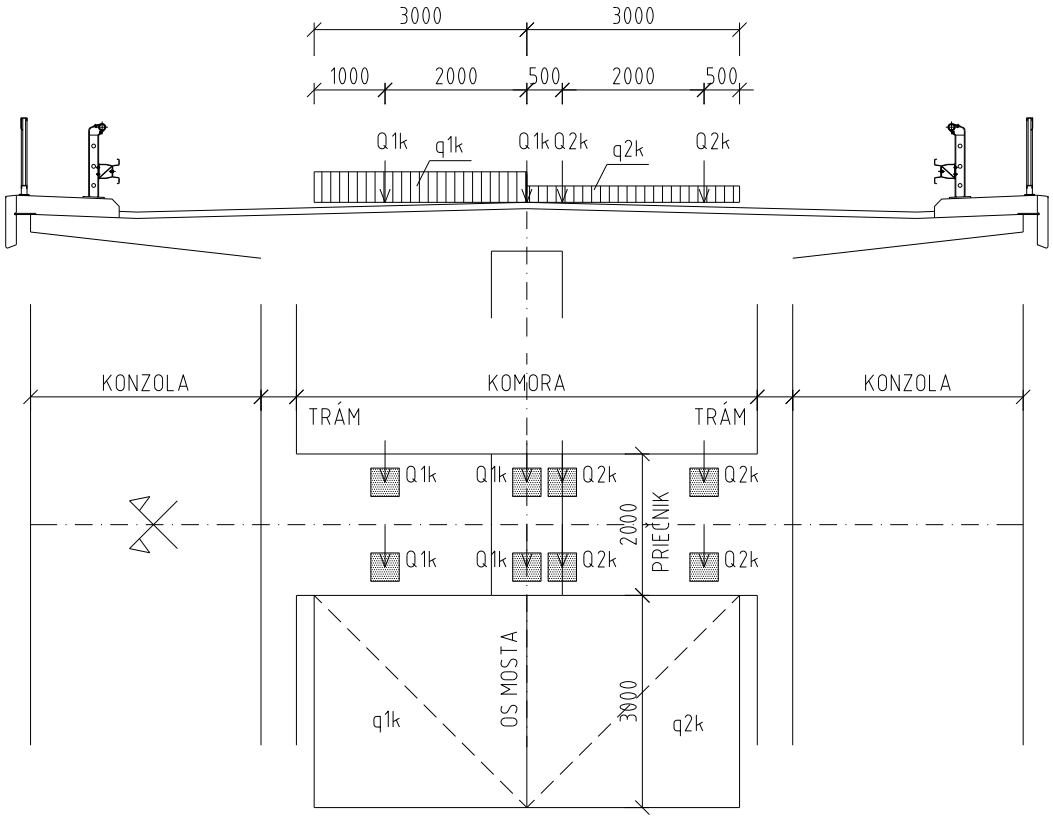
$\beta_{cc} = 1$ ... koeficient pre pevnosť betónu pri prvom pôsobení zaťaženia (1.0 - najnepriaznivejšia hodno

$$f_{cd.fat} = k_1 \cdot \beta_{cc} \cdot \frac{f_{ck}}{1.5} \cdot \left(1 - \frac{f_{ck}}{250\,MPa}\right) \qquad f_{cd.fat} = 19.04\,MPa$$

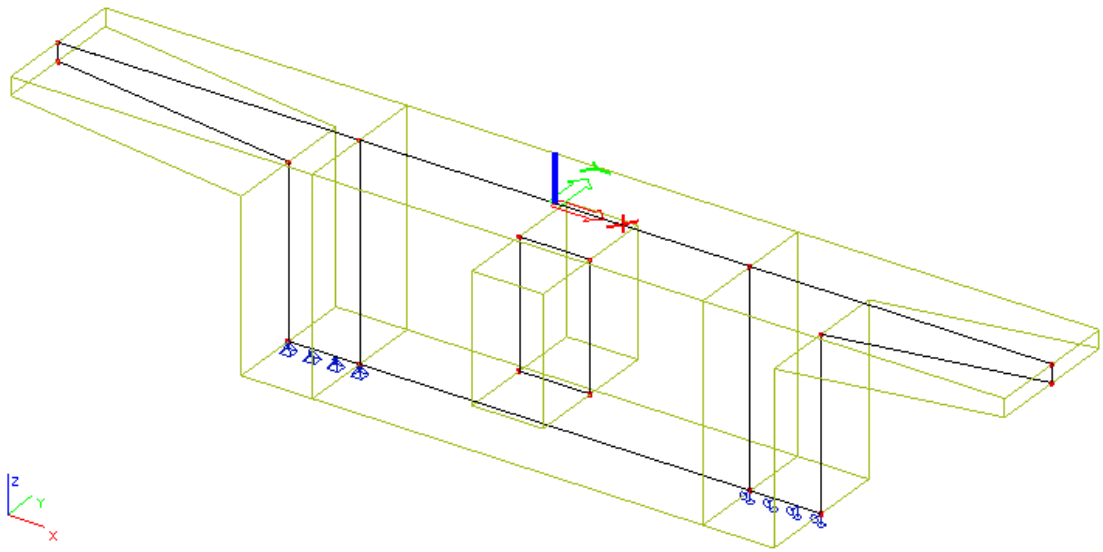
$\frac{\sigma_{c.max}}{f_{cd.fat}} = 0.126$ $\quad 0.126 < 0.5$ **vyhovuje**

5.14 Nosná konštrukcia – priečnik

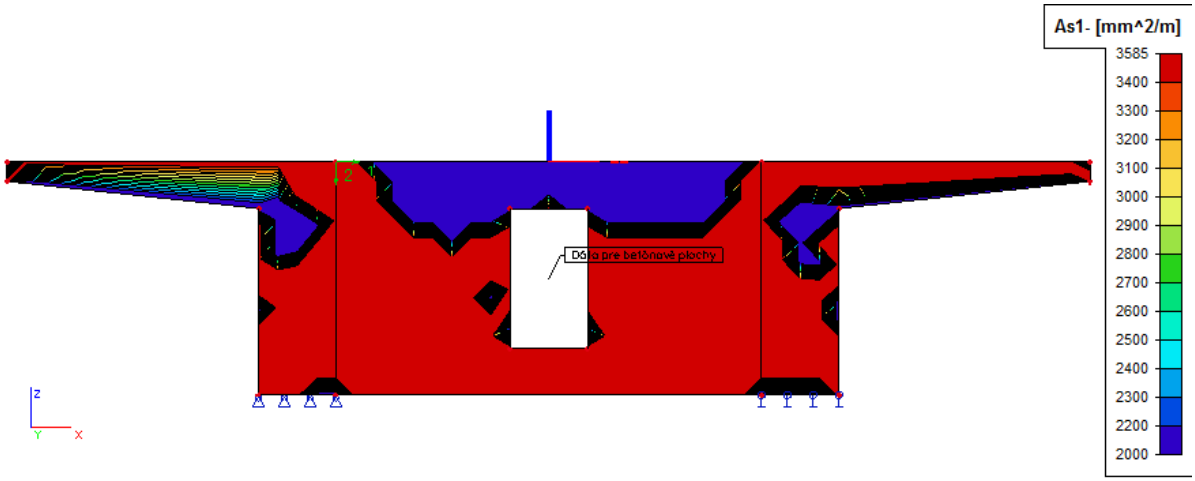
5.14.1 Zaťaženie

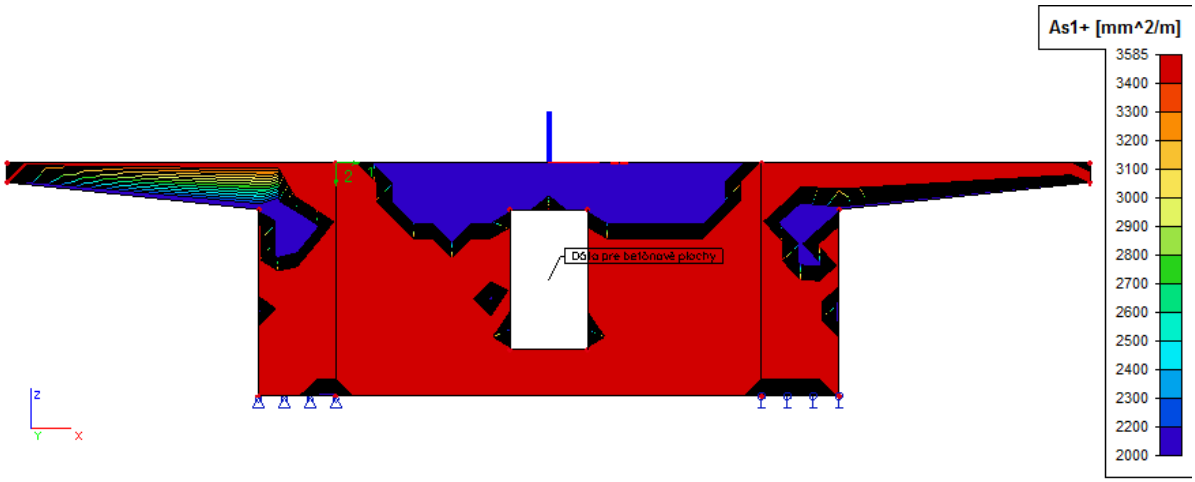


5.14.2 Statická schéma (š priečnika = 2,00 m)



5.14.3 Výsledky – potrebná plocha výstuže





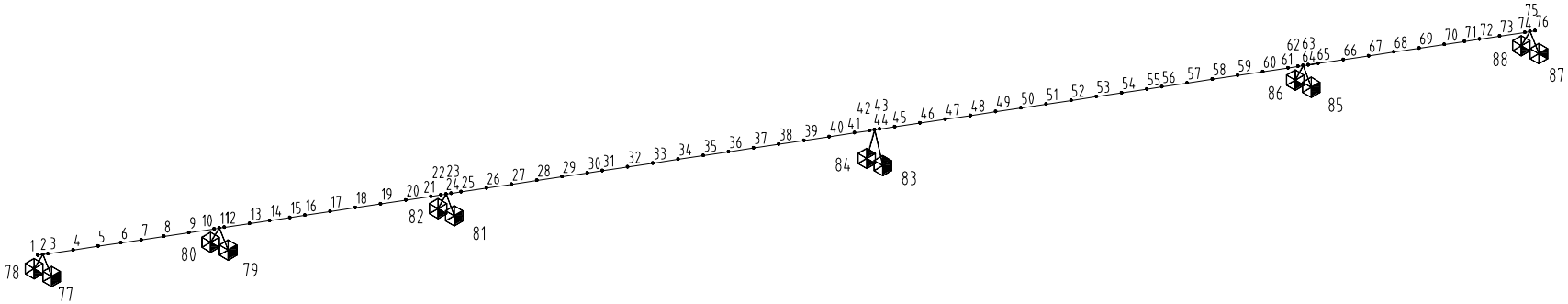
5.14.4 Návrh ťahanej výstuže

$A_s = 5\phi32 = 4020\ mm^2/m > A_{s\ pot} = 3585\ mm^2/m$

Do priečnika š = 2,00 m → $A_s = 10\phi32 = 8040\ mm^2$

5.15 Návrh ložísk

5.15.1 Statická schéma – obrázok



Obrázok nodes - body NK a podpier

5.15.2 Zaťaženie na ložíská

Zaťaženie na hrncové ložiská - charakteristické hodnoty - v konečnom štádiu

	Opora 1 (J, V)				Podpera 2 (J, V)				Podpera 3 (J, V)				Podpera 4 (P, J)				Podpera 5 (J, V)				Opora 6 (J, V)			
Load	**Node**	**FX (kN)**	**FY (kN)**	**FZ (kN)**	**Node**	**FX (kN)**	**FY (kN)**	**FZ (kN)**	**Node**	**FX (kN)**	**FY (kN)**	**FZ (kN)**	**Node**	**FX (kN)**	**FY (kN)**	**FZ (kN)**	**Node**	**FX (kN)**	**FY (kN)**	**FZ (kN)**	**Node**	**FX (kN)**	**FY (kN)**	**FZ (kN)**
Vlastna tiaz	77			2291,0	79			5156,0	81			8178,0	83			18278,0	85			8658,0	87			2140,0
Vlastna tiaz	78			2291,0	80			5156,0	82			8178,0	84			18278,0	86			8658,0	88			2140,0
Ostatne stale	77			422,0	79			1024,0	81			1752,0	83			2727,0	85			1838,0	87			404,0
Ostatne stale	78			422,0	80			1024,0	82			1752,0	84			2727,0	86			1838,0	88			404,0
Predpatie, sekundarne	77			1117,0	79			-1831,0	81			1324,0	83			-1175,0	85			323,0	87			242,0
Predpatie, sekundarne	78			1117,0	80			-1831,0	82			1324,0	84			-1175,0	86			323,0	88			242,0
Ohrievanie	77			217,0	79			-264,0	81			94,0	83			-79,0	85			-120,0	87			152,0
Ohrievanie	78			217,0	80			-264,0	82			94,0	84			-79,0	86			-120,0	88			152,0
Ochladzovanie	77			-143,0	79			174,0	81			-62,0	83			52,0	85			79,0	87			-100,0
Ochladzovanie	78			-143,0	80			174,0	82			-62,0	84			52,0	86			79,0	88			-100,0
vietor priecny	77		-83	-39,0	79		-187	-87,0	81		-366	-177,0	83		-558	-486,0	85		-381	-184,0	87		-71	-37,0
vietor priecny	78		0	39,0	80			87,0	82			177,0	84			486,0	86			184,0	88			37,0
vietor pozdlzny	77			-2,0	79			5,0	81			-11,0	83	-208		0,0	85			10,0	87			-2,0
vietor pozdlzny	78			-2,0	80			5,0	82			-11,0	84	-208		0,0	86			10,0	88			-2,0
LM 1_CH(max)	77			1130,0	79			2009,0	81			2768,0	83	207		3614,0	85			2730,0	87			1257,0
LM 1_CH(max)	78			1665,0	80			2690,0	82			3639,0	84	207		4804,0	86			3612,0	88			1823,0
LM 1_CH(min)	77			-374,0	79			-682,0	81			-790,0	83	-207		-869,0	85			-674,0	87			-526,0
LM 1_CH(min)	78			-212,0	80			-601,0	82			-557,0	84	-207		-335,0	86			-451,0	88			-369,0
Sadanie(max)	77			165,0	79			394,0	81			343,0	83			214,0	85			179,0	87			78,0
Sadanie(max)	78			165,0	80			394,0	82			343,0	84			214,0	86			179,0	88			78,0
Sadanie(min)	77			-165,0	79			-394,0	81			-343,0	83			-214,0	85			-179,0	87			-78,0
Sadanie(min)	78			-165,0	80			-394,0	82			-343,0	84			-214,0	86			-179,0	88			-78,0
Trenie (max)	77	283,0			79	371,7			81	761,8			83	451,6			85	730,5			87	234,4		
Trenie (max)	78	283,0			80	371,7			82	761,8			84	451,6			86	730,5			88	234,4		
Brzdné sily (max)	77				79				81				83	450,0			85				87			
Brzdné sily (max)	78				80				82				84	450,0			86				88			
MAX F (kN)-1 ložisko		**283,0**	**83,0**	**5916,0**		**371,7**	**187,0**	**7694,0**		**761,8**	**366,0**	**15507,0**		**1316,6**	**558,0**	**25386,0**		**730,5**	**381,0**	**14873,0**		**234,4**	**71,0**	**4876,0**
MIN F (kN)-1 ložisko		**256,3**		**3109,0**		**337,6**		**2922,0**		**718,3**		**9882,0**		**1316,6**		**18182,0**		**686,4**		**9662,0**		**206,1**		**2045,0**

P - pevné ložisko, J - jednosmerné ložisko, V - všesmerné ložisko

Sily od vetra, trenie v ložiskách, brzdné sily - treba uvažovať s hodnotami ±

5.16 Návrh mostného záveru

Zaťaženie	Opora 1		Opora 6	
	predĺženie	skrátenie	predĺženie	skrátenie
	[m]	[m]	[m]	[m]
Dead load		-0,0005		-0,0013
Erection load	0,0004		0,0003	
Tendon primary		-0,005	0,003	
Creep primary		-0,017		-0,013
Shrinkage primary		-0,026		-0,023
Rovnomerne oteplenie	0,083		0,066	
Rovnomerne ochladenie		-0,113		-0,089
Nerovnomerne oteplenie	0,0003		0,0007	
Nerovnomerne ochladenie		-0,0002		-0,0005
Priehyb od dopravy max		-0,004	0,005	
Priehyb od dopravy min	0,004			-0,005
Max posuny	0,088	-0,166	0,075	-0,132
Spolu	0,253		0,207	

Vysvetlivky:
Dead Load – účinky od vlastnej tiaže + zaťaženia v konštrukčných štádiách (CS) t=10000 dni t=10000 dni
Erection Load – účinky od zaťaženia zvrškom a vozovkou v CS t=10000 dni
Tendon Primary – predpätie, primárne účinky t=10000 dni
Creep Primary – dotvarovanie, primárne účinky (t=10000-265) dni – v čase osadenia MZ
Shrinkage Primary – zmrašťovanie, primárne účinky (t=10000-265) dni – v čase osadenia MZ

6. Spodná stavba

6.1 Použitý materiál

betón - základy - C 30/37 XC2,XA1 (SK)-Cl0,4-Dmax22-S3
betón - podpery - C 35/45 XC4,XF3,XD1 (SK)-Cl0,4-Dmax22-S3
betonárska výstuž - B 500 B

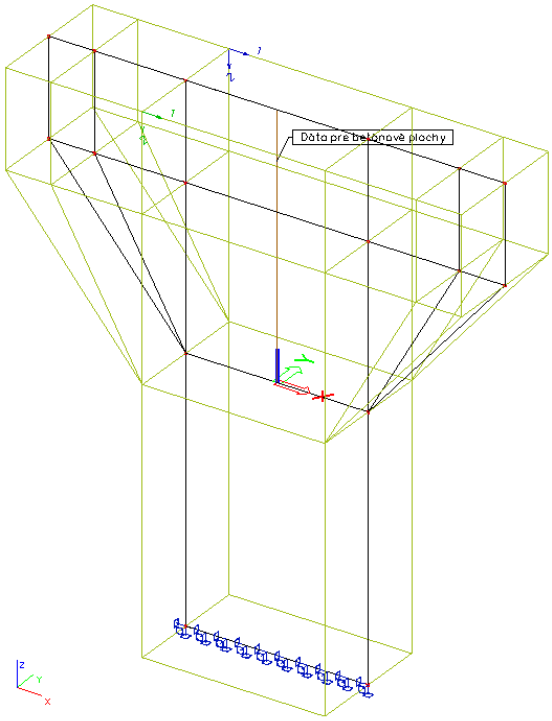
6.2 Spodná stavba – hlavica

6.2.1 Hlavica 3, 5

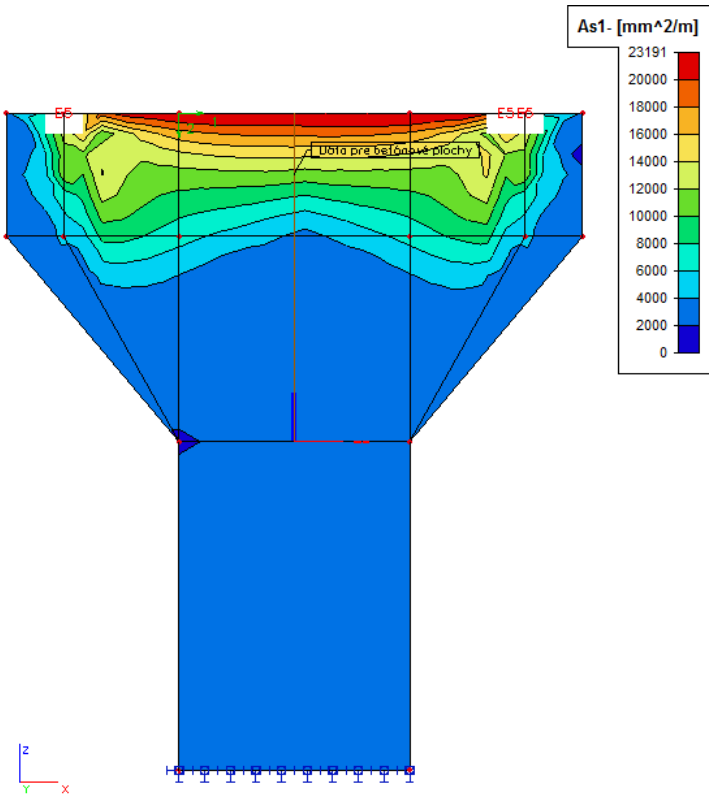
6.2.1.1 Zaťaženie

	Podpera 3 (J, V)								Podpera 5 (J, V)							
Load	**Node**	**FX (kN)**	**FY (kN)**	**FZ (kN)**	**γ**	**Fzed max (kN)**	**γ**	**Fzed min (kN)**	**Node**	**FX (kN)**	**FY (kN)**	**FZ (kN)**	**γ**	**Fzed max (kN)**	**γ**	**Fzed min (kN)**
Vlastna tiaz	81			8178,0	1,35	11040,3	1,00	8178,0	85			8658,0	1,35	11688,3	1,00	8658,0
Vlastna tiaz	82			8178,0	1,35	11040,3	1,00	8178,0	86			8658,0	1,35	11688,3	1,00	8658,0
Ostatne stale	81			1752,0	1,35	2365,2	1,00	1752,0	85			1838,0	1,35	2481,3	1,00	1838,0
Ostatne stale	82			1752,0	1,35	2365,2	1,00	1752,0	86			1838,0	1,35	2481,3	1,00	1838,0
Predpatie, sek.	81			1324,0	1,20	1588,8	1,00	1324,0	85			323,0	1,20	387,6	1,00	323,0
Predpatie, sek.	82			1324,0	1,20	1588,8	1,00	1324,0	86			323,0	1,20	387,6	1,00	323,0
Ohrievanie	81			94,0					85			-120,0				
Ohrievanie	82			94,0					86			-120,0				
Ochladzovanie	81			-62,0					85			79,0				
Ochladzovanie	82			-62,0					86			79,0				
vietor priecny	81		-366	-177,0	0,90	-159,3	0,90	-159,3	85		-381	-184,0	0,90	-165,6	0,90	-165,6
vietor priecny	82			177,0	0,90	159,3	0,90	159,3	86			184,0	0,90	165,6	0,90	165,6
vietor pozdlzny	81			-11,0					85			10,0				
vietor pozdlzny	82			-11,0					86			10,0				
LM 1_CH(max)	81			2768,0	1,35	3736,8	1,35	3736,8	85			2730,0	1,35	3685,5	1,35	3685,5
LM 1_CH(max)	82			3639,0	1,35	4912,7	1,35	4912,7	86			3612,0	1,35	4876,2	1,35	4876,2
LM 1_CH(min)	81			-790,0					85			-674,0				
LM 1_CH(min)	82			-557,0					86			-451,0				
Sadanie(max)	81			343,0	1,20	411,6			85			179,0	1,20	214,8		
Sadanie(max)	82			343,0	1,20	411,6			86			179,0	1,20	214,8		
Sadanie(min)	81			-343,0			1,00	-343,0	85			-179,0			1,00	-179,0
Sadanie(min)	82			-343,0			1,00	-343,0	86			-179,0			1,00	-179,0
Trenie (max)	81	761,8							85	730,5						
Trenie (max)	82	761,8							86	730,5						
Brzdné sily (max)	81								85							
Brzdné sily (max)	82								86							
Fd (kN)	**81**	**1028,4**	**494,1**			**18983,4**		**14488,5**	**85**	**986,2**	**514,4**			**18291,9**		**14159,9**
Fd (kN)	**82**	**1028,4**				**20477,9**		**15983,0**	**86**	**986,2**				**19813,8**		**15681,8**

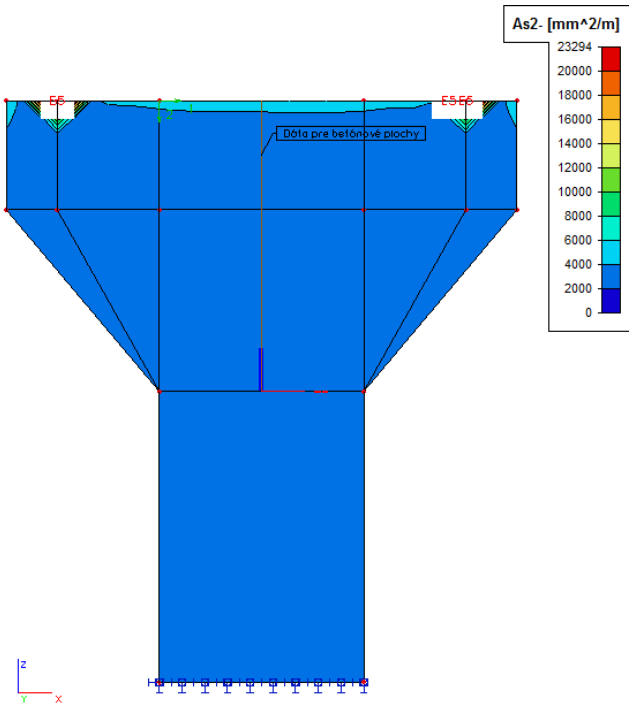
6.2.1.2 Výsledky



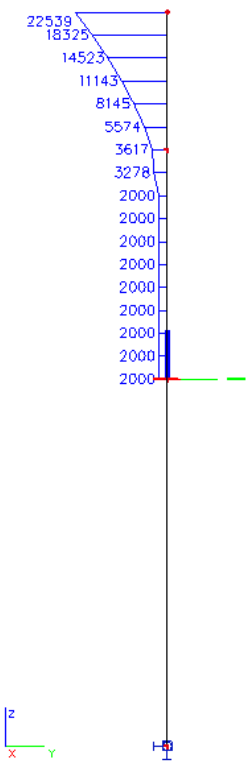
Statická schéma (smer výstuže)

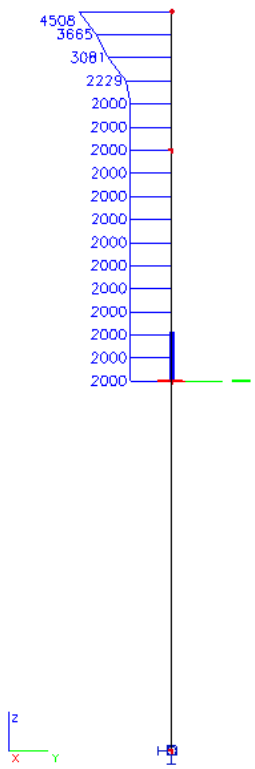


Potrebná plocha výstuže (smer 1 = As1)



Potrebná plocha výstuže (smer 2 = As2)





Rez v osi - As1 (potrebná plocha)

Rez v osi - As2 (potrebná plocha)

6.2.1.3 Návrh výstuže

Hlavica 3, 5 - As1 - jeden povrch

min. plocha	priem. plocha	šírka pásu	min plocha		Výstuž k obom povrchom	
(mm^2/m)	(mm^2/m)	(m)	pás 0,25 m		min výstuž	návrh
22539					(ks)	(ks)
18325	20432	0,25	5108	ϕ 32	13	14
14523	16424	0,25	4106	ϕ 32	10	14
11143	12833	0,25	3208	ϕ 32	8	14
8145	9644	0,25	2411	ϕ 32	6	7
5574	6860	0,25	1715	ϕ 32	4	7
3617	4596	0,25	1149	ϕ 32	3	7
3278	3448	0,25	862	ϕ 16	9	11
2000	2639	0,25	660	ϕ 16	7	11
2000	2000	0,25	500	ϕ 16	5	6
2000	2000	0,25	500	ϕ 16	5	6

Hlavica 3,5 - As2-jeden povrch

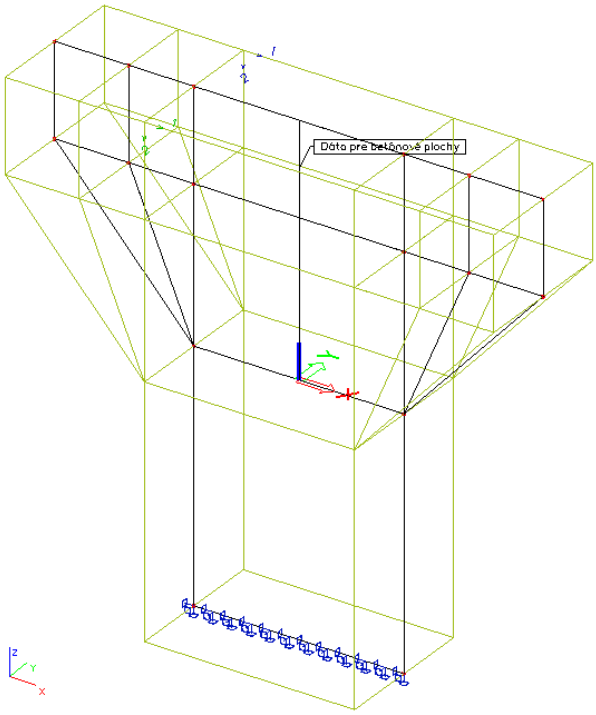
min. plocha		min výstuž
(mm^2/m)		(ks)
2000	ϕ 32	2,5
ohyb pokryje výstuž piliera !!		

6.2.2 Hlavica 4

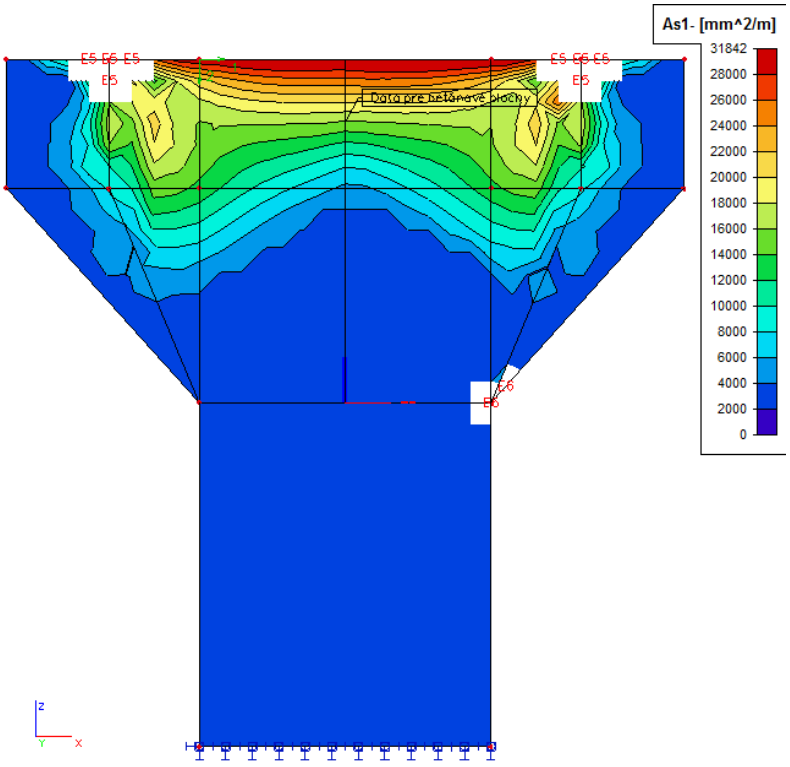
6.2.2.1 Zaťaženie

Load	Podpera 4 (P, J)							
	Node	FX (kN)	FY (kN)	FZ (kN)	γ	Fzed max (kN)	γ	Fzed min (kN)
Vlastna tiaz	83			18278,0	1,35	24675,3	1,00	18278,0
Vlastna tiaz	84			18278,0	1,35	24675,3	1,00	18278,0
Ostatne stale	83			2727,0	1,35	3681,5	1,00	2727,0
Ostatne stale	84			2727,0	1,35	3681,5	1,00	2727,0
Predpatie, sekundarne	83			-1175,0	1,00	-1175,0	1,20	-1410,0
Predpatie, sekundarne	84			-1175,0	1,00	-1175,0	1,20	-1410,0
Ohrievanie	83			-79,0				
Ohrievanie	84			-79,0				
Ochladzovanie	83			52,0				
Ochladzovanie	84			52,0				
vietor priecny	83		-558	-486,0	0,90	-437,4	0,90	-437,4
vietor priecny	84			486,0	0,90	437,4	0,90	437,4
vietor pozdlzny	83	-208		0,0				
vietor pozdlzny	84	-208		0,0				
LM 1_CH(max)	83	207		3614,0	1,35	4878,9	1,35	4878,9
LM 1_CH(max)	84	207		4804,0	1,35	6485,4	1,35	6485,4
LM 1_CH(min)	83	-207		-869,0				
LM 1_CH(min)	84	-207		-335,0				
Sadanie(max)	83			214,0	1,20	256,8		
Sadanie(max)	84			214,0	1,20	256,8		
Sadanie(min)	83			-214,0			1,00	-214,0
Sadanie(min)	84			-214,0			1,00	-214,0
Trenie (max)	83	451,6						
Trenie (max)	84	451,6						
Brzdné sily (max)	83	450,0						
Brzdné sily (max)	84	450,0						
Fd (kN)	**83**	**1683,8**	**753,3**			**31880,1**		**23822,5**
Fd (kN)	**84**	**1683,8**				**34361,4**		**26303,8**

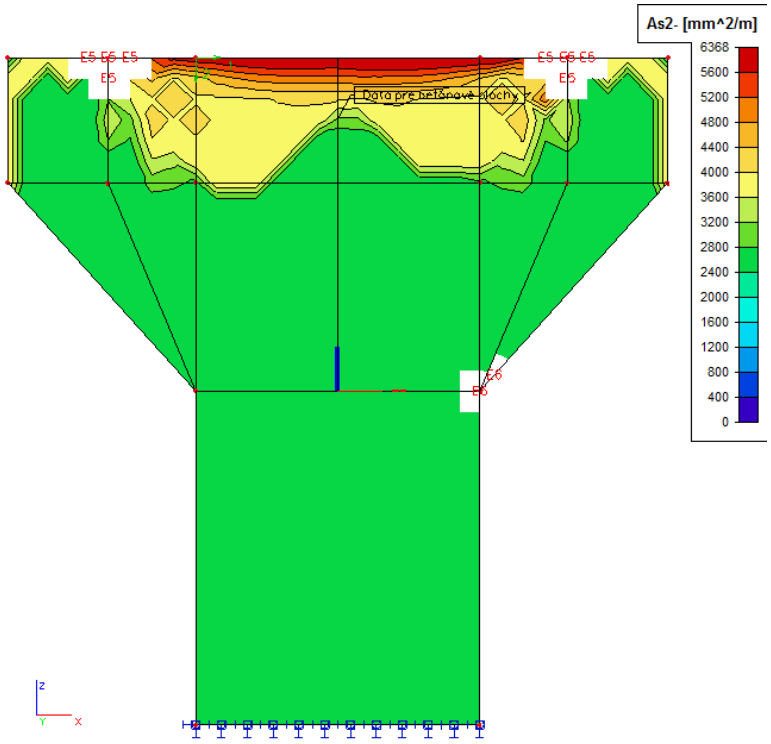
6.2.2.2 Výsledky



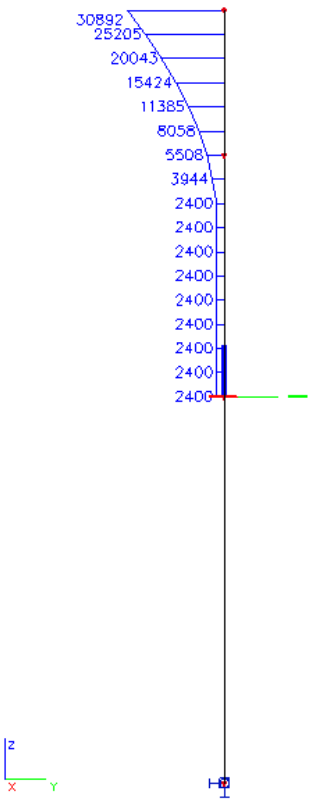
Statická schéma (smer výstuže)

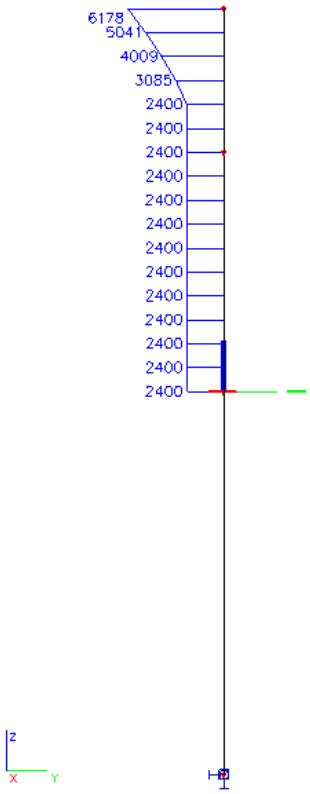


Potrebná plocha výstuže (smer 1 = As1)



Potrebná plocha výstuže (smer 2 = As2)





Rez v osi - As1 (potrebná plocha)

Rez v osi - As2 (potrebná plocha)

6.2.2.3 Návrh výstuže

Hlavica 4 - As1 - jeden povrch

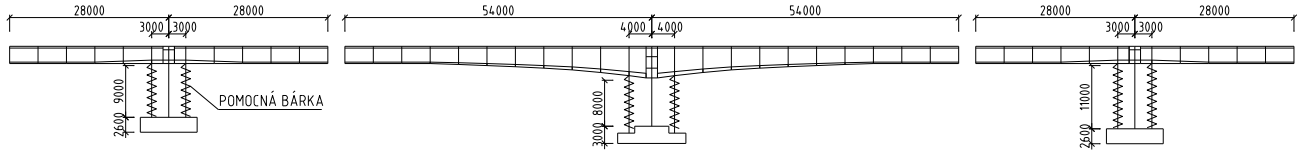
min. plocha	priem. plocha	šírka pásu	min plocha		**Výstuž k obom povrchom**	
(mm^2/m)	(mm^2/m)	(m)	pás 0,25 m		min výstuž	návrh
30892					(ks)	(ks)
25205	28049	0,25	7012	ϕ 32	18	18
20043	22624	0,25	5656	ϕ 32	14	18
15424	17734	0,25	4433	ϕ 32	11	18
11385	13405	0,25	3351	ϕ 32	8	8
8058	9722	0,25	2430	ϕ 32	6	8
5508	6783	0,25	1696	ϕ 32	4	8
3944	4726	0,25	1182	ϕ 16	12	15
2400	3172	0,25	793	ϕ 16	8	15
2400	2400	0,25	600	ϕ 16	6	8
2400	2400	0,25	600	ϕ 16	6	8

Hlavica 4 - As2 - jeden povrch

min. plocha		min výstuž
(mm^2/m)		(ks)
2400	ϕ 32	3
ohyb pokryje výstuž piliera !!		

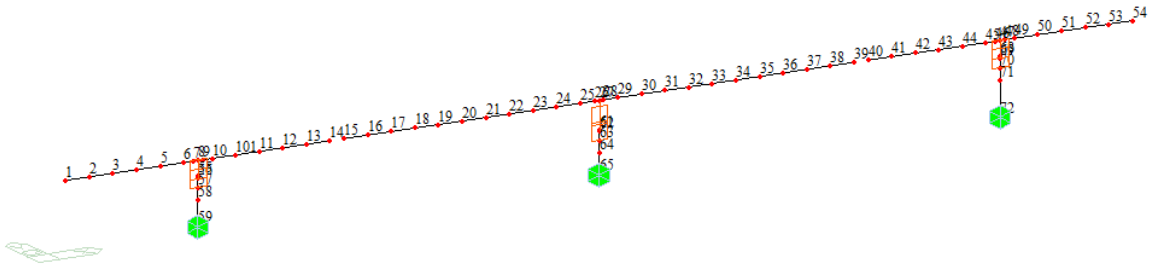
6.3 Spodná stavba – počas výstavby

Pomocné bárky v štádiu výstavby – slúžia iba na zachytenie účinkov pri nesymetrickom zaťažení v štádiu výstavby vahadla (od vozíka, od čerstvého betónu, od prevádzkového zaťaženia).



6.3.1 Statická schéma bez pomocných bárok

Všetko zvislé zaťaženie v štádiu výstavby prenášajú piliere spodnej stavby (na ložiskách)



Obrázok vahadla – bez pomocnych barok (nodes - body)

6.3.2 Výsledné reakcie

Kombinácie jednotlivých zaťažení v štádiu výstavby

```
1    LCB1          Strength/Stress    Add
           vlastna tiaz( 1.350) +       vietor priecny( 1.500) +                vozik( 1.000)
 +          prevadzkove( 1.000)
-----------------------------------------------------------------------------------------------
2    LCB2          Strength/Stress    Add
           vlastna tiaz( 1.000) +       vietor priecny( 1.500) +                vozik( 1.000)
 +          prevadzkove( 1.000)
-----------------------------------------------------------------------------------------------
3    LCB3          Strength/Stress    Add
           vlastna tiaz( 1.350) +      vietor pozdlzny( 1.500) +                vozik( 1.000)
 +          prevadzkove( 1.000)
-----------------------------------------------------------------------------------------------
4    LCB4          Strength/Stress    Add
           vlastna tiaz( 1.000) +      vietor pozdlzny( 1.500) +                vozik( 1.000)
 +          prevadzkove( 1.000)
-----------------------------------------------------------------------------------------------
```

Podpera 3 - reakcie

Node	Load	FX (kN)	FY (kN)	FZ (kN)	MX (kN*m)	MY (kN*m)	MZ (kN*m)
59	LCB1	0	-445	26741	5079	0	0
59	LCB2	0	-445	20373	5079	0	0
59	LCB3	-118	0	26741	0	-1324	0
59	LCB4	-118	0	20373	0	-1324	0

Podpera 4 – reakcie

Node	Load	FX (kN)	FY (kN)	FZ (kN)	MX (kN*m)	MY (kN*m)	MZ (kN*m)
65	LCB1	0	-1006	54642	12592	0	0
65	LCB2	0	-1006	41484	12592	0	0
65	LCB3	-227	0	54642	0	-2814	0
65	LCB4	-227	0	41484	0	-2814	0

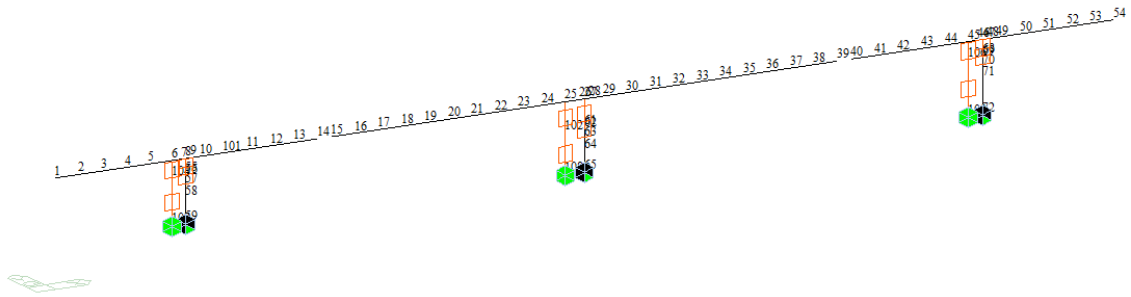
Podpera 5 – reakcie

Node	Load	FX (kN)	FY (kN)	FZ (kN)	MX (kN*m)	MY (kN*m)	MZ (kN*m)
72	LCB1	0	-445	27218	5970	0	0
72	LCB2	0	-445	20727	5970	0	0
72	LCB3	-118	0	27218	0	-1559	0
72	LCB4	-118	0	20727	0	-1559	0

6.3.3 Statická schéma s pomocnými bárkami

Pre etapy výstavby, v priebehu ktorých vzniká riziko straty statickej rovnováhy (mimoriadne zaťaženie), sa majú kombinácie zaťažení stanoviť podľa: STN EN 1990/A1, Tab. A2.5 – poznámka (3).

Súčiniteľ γ = 1,0 a ψ_2 = 1,0



Obrázok - pomocne barky (nodes - body)

Sily v pomocných bárkach - reakcie

Node	Load	FX (kN)	FY (kN)	FZ (kN)	MX (kN*m)	MY (kN*m)	MZ (kN*m)
107	nesymetria vozik	0	0	1200	0	600	0
108	nesymetria vozik	0	0	1998	0	2994	0
109	nesymetria vozik	0	0	1200	0	599	0
107	nesym prevadzkove	0	0	892	0	446	0
108	nesym prevadzkove	0	0	1801	0	2698	0
109	nesym prevadzkove	0	0	895	0	446	0
107	nesymetria VT	0	0	2540	0	1269	0
108	nesymetria VT	0	0	2538	0	3802	0
109	nesymetria VT	0	0	2540	0	1269	0

Sily prepočítané na os základu

	Node	x (m)	FZ (kN)	MY (kN*m)
	59	3,00	200	3600
	65	4,00	748	7994
	72	3,00	200	3599
	59	3,00	149	2677
	65	4,00	675	7204
	72	3,00	149	2686
	59	3,00	423	7619
	65	4,00	950	10152
	72	3,00	423	7619
spolu	59		771	13896
spolu	65		2373	25350
spolu	72		771	13905

6.3.4 Reakcie v podperách pôsobiace na základ – štádium výstavby

(reakcie = vahadlo bez bárok + vahadlo s barkami)

Podpera 3

Node	Load	FX (kN)	FY (kN)	FZ (kN)	MX (kN*m)	MY (kN*m)	MZ (kN*m)
59	LCB1	0	-445	27512	5079	13896	0
59	LCB2	0	-445	21144	5079	13896	0
59	LCB3	-118	0	27512	0	15220	0
59	LCB4	-118	0	21144	0	15220	0

Podpera 4

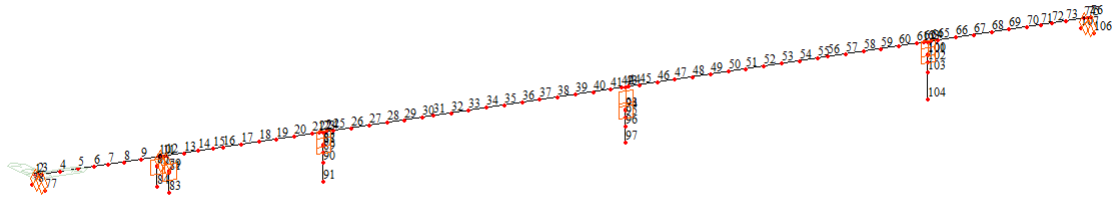
Node	Load	FX (kN)	FY (kN)	FZ (kN)	MX (kN*m)	MY (kN*m)	MZ (kN*m)
65	LCB1	0	-1006	57015	12592	25350	0
65	LCB2	0	-1006	43857	12592	25350	0
65	LCB3	-227	0	57015	0	28164	0
65	LCB4	-227	0	43857	0	28164	0

Podpera 5

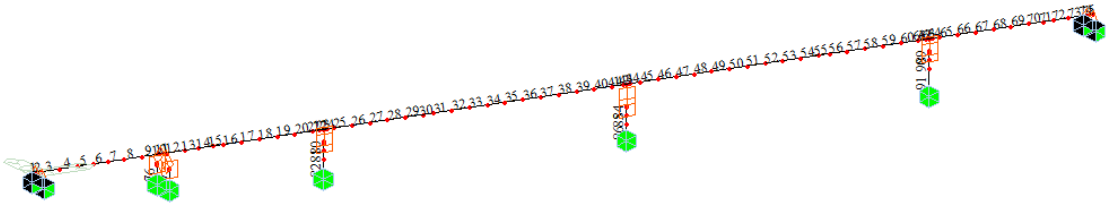
Node	Load	FX (kN)	FY (kN)	FZ (kN)	MX (kN*m)	MY (kN*m)	MZ (kN*m)
72	LCB1	0	-445	27989	5970	13905	0
72	LCB2	0	-445	21498	5970	13905	0
72	LCB3	-118	0	27989	0	15464	0
72	LCB4	-118	0	21498	0	15464	0

6.4 Spodná stavba – konečné štádium (final)

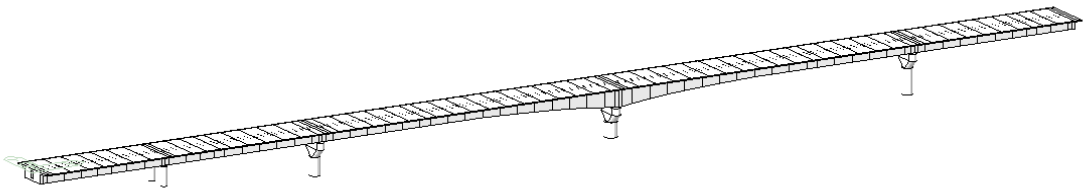
6.4.1 Statická schéma



Obrázok 1 nodes - body



Obrázok 16 Elements - prvky



Obrázok 3

6.4.2 Kombinácie

```
LIST OF LOAD COMBINATIONS
=================================================================================================
NUM  NAME          ACTIVE              TYPE
                LOADCASE(FACTOR) +             LOADCASE(FACTOR) +             LOADCASE(FACTOR)
=================================================================================================
1    LCB1          Strength/Stress     Add
           vlastna tiaz( 1.350) +              zvrsok( 1.350) +              vozovka( 1.400)
 +              sadanie( 1.200) +             LM 1_CH( 1.350) +          brzdne sily( 1.350)
 +   trenie v loziskach( 1.350) +       vietor priecny( 0.900)
-------------------------------------------------------------------------------------------------
2    LCB2          Strength/Stress     Add
           vlastna tiaz( 1.350) +              zvrsok( 1.350) +              vozovka( 1.400)
 +              sadanie( 1.200) +             LM 1_CH( 1.350) +          brzdne sily(-1.350)
 +   trenie v loziskach( 1.350) +       vietor priecny( 0.900)
-------------------------------------------------------------------------------------------------
3    LCB3          Strength/Stress     Add
           vlastna tiaz( 1.350) +              zvrsok( 1.350) +              vozovka( 1.400)
 +              sadanie( 1.200) +             LM 1_CH( 1.350) +          brzdne sily(-1.350)
 +   trenie v loziskach( 1.350) +       vietor priecny(-0.900)
-------------------------------------------------------------------------------------------------
4    LCB4          Strength/Stress     Add
           vlastna tiaz( 1.350) +              zvrsok( 1.350) +              vozovka( 1.400)
 +              sadanie( 1.200) +             LM 1_CH( 1.350) +          brzdne sily( 1.350)
 +   trenie v loziskach( 1.350) +       vietor priecny(-0.900)
-------------------------------------------------------------------------------------------------
5    LCB5          Strength/Stress     Add
           vlastna tiaz( 1.350) +              zvrsok( 1.350) +              vozovka( 1.400)
 +              sadanie( 1.200) +             LM 1_FR( 1.000) +       vietor priecny( 1.500)
-------------------------------------------------------------------------------------------------
6    LCB6          Strength/Stress     Add
           vlastna tiaz( 1.350) +              zvrsok( 1.350) +              vozovka( 1.400)
 +              sadanie( 1.200) +             LM 1_FR( 1.000) +       vietor priecny(-1.500)
-------------------------------------------------------------------------------------------------
7    LCB7          Strength/Stress     Add
           vlastna tiaz( 1.000) +              zvrsok( 1.000) +              vozovka( 1.000)
 +              sadanie( 1.000) +             LM 1_CH( 1.350) +          brzdne sily( 1.350)
 +   trenie v loziskach( 1.350) +       vietor priecny( 0.900)
-------------------------------------------------------------------------------------------------
8    LCB8          Strength/Stress     Add
           vlastna tiaz( 1.000) +              zvrsok( 1.000) +              vozovka( 1.000)
 +              sadanie( 1.000) +             LM 1_CH( 1.350) +          brzdne sily(-1.350)
 +   trenie v loziskach( 1.350) +       vietor priecny( 0.900)
-------------------------------------------------------------------------------------------------
9    LCB9          Strength/Stress     Add
           vlastna tiaz( 1.000) +              zvrsok( 1.000) +              vozovka( 1.000)
 +              sadanie( 1.000) +             LM 1_CH( 1.350) +          brzdne sily(-1.350)
 +   trenie v loziskach( 1.350) +       vietor priecny(-0.900)
-------------------------------------------------------------------------------------------------
10   LCB10         Strength/Stress     Add
           vlastna tiaz( 1.000) +              zvrsok( 1.000) +              vozovka( 1.000)
 +              sadanie( 1.000) +             LM 1_CH( 1.350) +          brzdne sily( 1.350)
 +   trenie v loziskach( 1.350) +       vietor priecny(-0.900)
-------------------------------------------------------------------------------------------------
11   LCB11         Strength/Stress     Add
           vlastna tiaz( 1.000) +              zvrsok( 1.000) +              vozovka( 1.000)
 +              sadanie( 1.000) +             LM 1_FR( 1.000) +       vietor priecny( 1.500)
-------------------------------------------------------------------------------------------------
12   LCB12         Strength/Stress     Add
           vlastna tiaz( 1.000) +              zvrsok( 1.000) +              vozovka( 1.000)
 +              sadanie( 1.000) +             LM 1_FR( 1.000) +       vietor priecny(-1.500)
-------------------------------------------------------------------------------------------------
13   LCB13         Strength/Stress     Add
           vlastna tiaz( 1.350) +              zvrsok( 1.350) +              vozovka( 1.400)
 +              sadanie( 1.200) +             LM 1_CH( 1.350) +          brzdne sily( 1.350)
 +   trenie v loziskach( 1.350) +      vietor pozdlzny( 0.900)
-------------------------------------------------------------------------------------------------
14   LCB14         Strength/Stress     Add
           vlastna tiaz( 1.350) +              zvrsok( 1.350) +              vozovka( 1.400)
 +              sadanie( 1.200) +             LM 1_CH( 1.350) +          brzdne sily(-1.350)
 +   trenie v loziskach( 1.350) +      vietor pozdlzny( 0.900)
-------------------------------------------------------------------------------------------------
15   LCB15         Strength/Stress     Add
           vlastna tiaz( 1.350) +              zvrsok( 1.350) +              vozovka( 1.400)
 +              sadanie( 1.200) +             LM 1_CH( 1.350) +          brzdne sily(-1.350)
 +   trenie v loziskach( 1.350) +      vietor pozdlzny(-0.900)
-------------------------------------------------------------------------------------------------
16   LCB16         Strength/Stress     Add
           vlastna tiaz( 1.350) +              zvrsok( 1.350) +              vozovka( 1.400)
 +              sadanie( 1.200) +             LM 1_CH( 1.350) +          brzdne sily( 1.350)
 +   trenie v loziskach( 1.350) +      vietor pozdlzny(-0.900)
-------------------------------------------------------------------------------------------------
17   LCB17         Strength/Stress     Add
           vlastna tiaz( 1.350) +              zvrsok( 1.350) +              vozovka( 1.400)
 +              sadanie( 1.200) +             LM 1_FR( 1.000) +      vietor pozdlzny( 1.500)
-------------------------------------------------------------------------------------------------
```

```
18   LCB18         Strength/Stress    Add
           vlastna tiaz( 1.350) +               zvrsok( 1.350) +              vozovka( 1.400)
 +              sadanie( 1.200) +              LM 1_FR( 1.000) +      vietor pozdlzny(-1.500)
-----------------------------------------------------------------------------------------------
19   LCB19         Strength/Stress    Add
           vlastna tiaz( 1.000) +               zvrsok( 1.000) +              vozovka( 1.000)
 +              sadanie( 1.000) +              LM 1_CH( 1.350) +          brzdne sily( 1.350)
 +   trenie v loziskach( 1.350) +      vietor pozdlzny( 0.900)
-----------------------------------------------------------------------------------------------
20   LCB20         Strength/Stress    Add
           vlastna tiaz( 1.000) +               zvrsok( 1.000) +              vozovka( 1.000)
 +              sadanie( 1.000) +              LM 1_CH( 1.350) +          brzdne sily(-1.350)
 +   trenie v loziskach( 1.350) +      vietor pozdlzny( 0.900)
-----------------------------------------------------------------------------------------------
21   LCB21         Strength/Stress    Add
           vlastna tiaz( 1.000) +               zvrsok( 1.000) +              vozovka( 1.000)
 +              sadanie( 1.000) +              LM 1_CH( 1.350) +          brzdne sily(-1.350)
 +   trenie v loziskach( 1.350) +      vietor pozdlzny(-0.900)
-----------------------------------------------------------------------------------------------
22   LCB22         Strength/Stress    Add
           vlastna tiaz( 1.000) +               zvrsok( 1.000) +              vozovka( 1.000)
 +              sadanie( 1.000) +              LM 1_CH( 1.350) +          brzdne sily( 1.350)
 +   trenie v loziskach( 1.350) +      vietor pozdlzny(-0.900)
-----------------------------------------------------------------------------------------------
23   LCB23         Strength/Stress    Add
           vlastna tiaz( 1.000) +               zvrsok( 1.000) +              vozovka( 1.000)
 +              sadanie( 1.000) +              LM 1_FR( 1.000) +      vietor pozdlzny( 1.500)
-----------------------------------------------------------------------------------------------
24   LCB24         Strength/Stress    Add
           vlastna tiaz( 1.000) +               zvrsok( 1.000) +              vozovka( 1.000)
 +              sadanie( 1.000) +              LM 1_FR( 1.000) +      vietor pozdlzny(-1.500)
```

6.4.3 Výsledné reakcie v podperách

Podpera 2 (jednosmerné ložisko)

Node	Load	FX (kN)	FY (kN)	FZ (kN)	MX (kN*m)	MY (kN*m)	MZ (kN*m)
83	LCB1(max)	-502	-86	12067	1604	-2511	0
83	LCB2(max)	-502	-86	12015	1604	-2511	0
83	LCB3(max)	-502	254	12439	-95	-2511	0
83	LCB4(max)	-502	254	12491	-95	-2511	0
83	LCB5(max)	0	-254	9984	1698	0	0
83	LCB6(max)	0	313	10691	-1135	0	0
83	LCB7(max)	-502	-86	9691	1604	-2511	0
83	LCB8(max)	-502	-86	9639	1604	-2511	0
83	LCB9(max)	-502	254	10063	-95	-2511	0
83	LCB10(max)	-502	254	10115	-95	-2511	0
83	LCB11(max)	0	-254	7608	1698	0	0
83	LCB12(max)	0	313	8315	-1135	0	0
83	LCB13(max)	-502	84	12286	754	-2511	0
83	LCB14(max)	-502	84	12234	755	-2511	0
83	LCB15(max)	-502	84	12220	755	-2511	0
83	LCB16(max)	-502	84	12272	754	-2511	0
83	LCB17(max)	0	30	10349	281	0	0
83	LCB18(max)	0	30	10326	281	0	0
83	LCB19(max)	-502	84	9910	755	-2511	0
83	LCB20(max)	-502	84	9858	755	-2511	0
83	LCB21(max)	-502	84	9844	755	-2511	0
83	LCB22(max)	-502	84	9896	755	-2511	0
83	LCB23(max)	0	30	7973	281	0	0
83	LCB24(max)	0	30	7950	281	0	0
83	LCB1(min)	-502	-321	6202	428	-2511	0
83	LCB2(min)	-502	-321	6151	428	-2511	0
83	LCB3(min)	-502	19	6575	-1272	-2511	0
83	LCB4(min)	-502	19	6627	-1272	-2511	0
83	LCB5(min)	0	-340	7282	1269	0	0
83	LCB6(min)	0	227	7988	-1564	0	0
83	LCB7(min)	-502	-321	3982	428	-2511	0
83	LCB8(min)	-502	-321	3931	428	-2511	0
83	LCB9(min)	-502	19	4355	-1272	-2511	0
83	LCB10(min)	-502	19	4406	-1272	-2511	0
83	LCB11(min)	0	-340	5061	1269	0	0
83	LCB12(min)	0	227	5768	-1564	0	0
83	LCB13(min)	-502	-151	6421	-422	-2511	0
83	LCB14(min)	-502	-151	6370	-422	-2511	0
83	LCB15(min)	-502	-151	6356	-422	-2511	0
83	LCB16(min)	-502	-151	6408	-422	-2511	0
83	LCB17(min)	0	-56	7647	-148	0	0
83	LCB18(min)	0	-56	7623	-148	0	0
83	LCB19(min)	-502	-151	4201	-422	-2511	0
83	LCB20(min)	-502	-151	4150	-422	-2511	0
83	LCB21(min)	-502	-151	4136	-422	-2511	0
83	LCB22(min)	-502	-151	4187	-422	-2511	0
83	LCB23(min)	0	-56	5426	-148	0	0
83	LCB24(min)	0	-56	5403	-148	0	0

Podpera 2 (všesmerné ložisko)

Node	Load	FX (kN)	FY (kN)	FZ (kN)	MX (kN*m)	MY (kN*m)	MZ (kN*m)
84	LCB1(max)	-502	0	13752	0	-2511	0
84	LCB2(max)	-502	0	13701	0	-2511	0
84	LCB3(max)	-502	0	13277	0	-2511	0
84	LCB4(max)	-502	0	13328	0	-2511	0
84	LCB5(max)	0	0	11201	0	0	0
84	LCB6(max)	0	0	10495	0	0	0
84	LCB7(max)	-502	0	11376	0	-2511	0
84	LCB8(max)	-502	0	11325	0	-2511	0
84	LCB9(max)	-502	0	10901	0	-2511	0
84	LCB10(max)	-502	0	10952	0	-2511	0
84	LCB11(max)	0	0	8826	0	0	0
84	LCB12(max)	0	0	8119	0	0	0
84	LCB13(max)	-502	0	13547	0	-2511	0
84	LCB14(max)	-502	0	13496	0	-2511	0
84	LCB15(max)	-502	0	13482	0	-2511	0
84	LCB16(max)	-502	0	13533	0	-2511	0
84	LCB17(max)	0	0	10860	0	0	0
84	LCB18(max)	0	0	10836	0	0	0
84	LCB19(max)	-502	0	11171	0	-2511	0
84	LCB20(max)	-502	0	11120	0	-2511	0
84	LCB21(max)	-502	0	11106	0	-2511	0
84	LCB22(max)	-502	0	11157	0	-2511	0
84	LCB23(max)	0	0	8484	0	0	0
84	LCB24(max)	0	0	8461	0	0	0
84	LCB1(min)	-502	0	7375	0	-2511	0
84	LCB2(min)	-502	0	7324	0	-2511	0
84	LCB3(min)	-502	0	6899	0	-2511	0
84	LCB4(min)	-502	0	6951	0	-2511	0
84	LCB5(min)	0	0	8271	0	0	0
84	LCB6(min)	0	0	7565	0	0	0
84	LCB7(min)	-502	0	5154	0	-2511	0
84	LCB8(min)	-502	0	5103	0	-2511	0
84	LCB9(min)	-502	0	4679	0	-2511	0
84	LCB10(min)	-502	0	4730	0	-2511	0
84	LCB11(min)	0	0	6051	0	0	0
84	LCB12(min)	0	0	5344	0	0	0
84	LCB13(min)	-502	0	7170	0	-2511	0
84	LCB14(min)	-502	0	7118	0	-2511	0
84	LCB15(min)	-502	0	7105	0	-2511	0
84	LCB16(min)	-502	0	7156	0	-2511	0
84	LCB17(min)	0	0	7930	0	0	0
84	LCB18(min)	0	0	7906	0	0	0
84	LCB19(min)	-502	0	4949	0	-2511	0
84	LCB20(min)	-502	0	4898	0	-2511	0
84	LCB21(min)	-502	0	4884	0	-2511	0
84	LCB22(min)	-502	0	4935	0	-2511	0
84	LCB23(min)	0	0	5709	0	0	0
84	LCB24(min)	0	0	5686	0	0	0

Podpera 3

Node	Load	FX (kN)	FY (kN)	FZ (kN)	MX (kN*m)	MY (kN*m)	MZ (kN*m)
91	LCB1(max)	-1998	-150	38942	4396	-17982	0
91	LCB2(max)	-1998	-150	39167	4396	-17982	0
91	LCB3(max)	-1998	465	39167	-1136	-17982	0
91	LCB4(max)	-1998	465	38942	-1136	-17982	0
91	LCB5(max)	0	-454	35045	5185	0	0
91	LCB6(max)	0	571	35045	-4035	0	0
91	LCB7(max)	-1998	-150	30449	4396	-17982	0
91	LCB8(max)	-1998	-150	30674	4396	-17982	0
91	LCB9(max)	-1998	465	30674	-1136	-17982	0
91	LCB10(max)	-1998	465	30449	-1136	-17982	0
91	LCB11(max)	0	-454	26552	5185	0	0
91	LCB12(max)	0	571	26552	-4035	0	0
91	LCB13(max)	-1998	158	38911	1630	-17982	0
91	LCB14(max)	-1998	158	39136	1630	-17982	0
91	LCB15(max)	-1998	158	39198	1630	-17982	0
91	LCB16(max)	-1998	158	38973	1630	-17982	0
91	LCB17(max)	0	58	34993	575	0	0
91	LCB18(max)	0	58	35096	575	0	0
91	LCB19(max)	-1998	158	30418	1630	-17982	0
91	LCB20(max)	-1998	158	30643	1630	-17982	0
91	LCB21(max)	-1998	158	30705	1630	-17982	0
91	LCB22(max)	-1998	158	30480	1630	-17982	0
91	LCB23(max)	0	58	26500	575	0	0
91	LCB24(max)	0	58	26603	575	0	0
91	LCB1(min)	-1998	-488	30098	1347	-17982	0
91	LCB2(min)	-1998	-488	30323	1347	-17982	0
91	LCB3(min)	-1998	126	30323	-4184	-17982	0
91	LCB4(min)	-1998	126	30098	-4184	-17982	0
91	LCB5(min)	0	-576	30804	4083	0	0
91	LCB6(min)	0	448	30804	-5136	0	0
91	LCB7(min)	-1998	-488	21877	1347	-17982	0
91	LCB8(min)	-1998	-488	22102	1347	-17982	0
91	LCB9(min)	-1998	126	22102	-4184	-17982	0
91	LCB10(min)	-1998	126	21877	-4184	-17982	0
91	LCB11(min)	0	-576	22584	4083	0	0
91	LCB12(min)	0	448	22584	-5136	0	0
91	LCB13(min)	-1998	-181	30067	-1419	-17982	0
91	LCB14(min)	-1998	-181	30292	-1419	-17982	0
91	LCB15(min)	-1998	-181	30354	-1419	-17982	0
91	LCB16(min)	-1998	-181	30129	-1419	-17982	0
91	LCB17(min)	0	-64	30753	-526	0	0
91	LCB18(min)	0	-64	30856	-526	0	0
91	LCB19(min)	-1998	-181	21847	-1419	-17982	0
91	LCB20(min)	-1998	-181	22072	-1419	-17982	0
91	LCB21(min)	-1998	-181	22133	-1419	-17982	0
91	LCB22(min)	-1998	-181	21908	-1419	-17982	0
91	LCB23(min)	0	-64	22533	-526	0	0
91	LCB24(min)	0	-64	22635	-526	0	0

Podpera 4

Node	Load	FX (kN)	FY (kN)	FZ (kN)	MX (kN*m)	MY (kN*m)	MZ (kN*m)
97	LCB1(max)	-38	-346	63167	27262	28042	367
97	LCB2(max)	2392	-346	63164	27262	43432	367
97	LCB3(max)	2392	764	63164	13471	43432	596
97	LCB4(max)	-38	764	63167	13471	28042	596
97	LCB5(max)	0	-851	58034	18230	14836	-20
97	LCB6(max)	0	999	58034	-4755	14836	362
97	LCB7(max)	-38	-346	48773	27262	26887	367
97	LCB8(max)	2392	-346	48769	27262	42278	367
97	LCB9(max)	2392	764	48769	13471	42278	596
97	LCB10(max)	-38	764	48773	13471	26887	596
97	LCB11(max)	0	-851	43639	18230	13682	-20
97	LCB12(max)	0	999	43639	-4755	13682	362
97	LCB13(max)	-412	209	63168	20366	25814	482
97	LCB14(max)	2018	209	63164	20366	41204	482
97	LCB15(max)	2766	209	63163	20366	45661	482
97	LCB16(max)	336	209	63167	20366	30270	482
97	LCB17(max)	-624	74	58035	6737	11122	171
97	LCB18(max)	624	74	58032	6737	18550	171
97	LCB19(max)	-412	209	48773	20366	24659	482
97	LCB20(max)	2018	209	48770	20366	40049	482
97	LCB21(max)	2766	209	48768	20366	44506	482
97	LCB22(max)	336	209	48772	20366	29116	482
97	LCB23(max)	-624	74	43640	6737	9968	171
97	LCB24(max)	624	74	43638	6737	17396	171
97	LCB1(min)	-38	-682	53916	-5110	-27795	-630
97	LCB2(min)	2392	-682	53912	-5110	-12405	-630
97	LCB3(min)	2392	429	53912	-18901	-12405	-400
97	LCB4(min)	-38	429	53916	-18901	-27795	-400
97	LCB5(min)	0	-968	54166	7693	-10945	-372
97	LCB6(min)	0	882	54166	-15292	-10945	10
97	LCB7(min)	-38	-682	39691	-5110	-27646	-630
97	LCB8(min)	2392	-682	39687	-5110	-12255	-630
97	LCB9(min)	2392	429	39687	-18901	-12255	-400
97	LCB10(min)	-38	429	39691	-18901	-27646	-400
97	LCB11(min)	0	-968	39941	7693	-10795	-372
97	LCB12(min)	0	882	39941	-15292	-10795	10
97	LCB13(min)	-412	-126	53917	-12006	-30024	-515
97	LCB14(min)	2018	-126	53913	-12006	-14633	-515
97	LCB15(min)	2766	-126	53912	-12006	-10176	-515
97	LCB16(min)	336	-126	53915	-12006	-25567	-515
97	LCB17(min)	-624	-43	54167	-3799	-14659	-181
97	LCB18(min)	624	-43	54165	-3799	-7231	-181
97	LCB19(min)	-412	-126	39692	-12006	-29874	-515
97	LCB20(min)	2018	-126	39688	-12006	-14484	-515
97	LCB21(min)	2766	-126	39686	-12006	-10027	-515
97	LCB22(min)	336	-126	39690	-12006	-25417	-515
97	LCB23(min)	-624	-43	39942	-3799	-14509	-181
97	LCB24(min)	624	-43	39940	-3799	-7081	-181

Podpera 5

Node	Load	FX (kN)	FY (kN)	FZ (kN)	MX (kN*m)	MY (kN*m)	MZ (kN*m)
104	LCB1(max)	1913	-107	40364	4520	21042	0
104	LCB2(max)	1913	-107	40164	4520	21042	0
104	LCB3(max)	1913	366	40164	-685	21042	0
104	LCB4(max)	1913	366	40364	-685	21042	0
104	LCB5(max)	0	-346	36380	5009	0	0
104	LCB6(max)	0	442	36380	-3667	0	0
104	LCB7(max)	1913	-107	31477	4520	21042	0
104	LCB8(max)	1913	-107	31277	4520	21042	0
104	LCB9(max)	1913	366	31277	-685	21042	0
104	LCB10(max)	1913	366	31477	-685	21042	0
104	LCB11(max)	0	-346	27493	5009	0	0
104	LCB12(max)	0	442	27493	-3667	0	0
104	LCB13(max)	1913	130	40391	1917	21042	0
104	LCB14(max)	1913	130	40191	1917	21042	0
104	LCB15(max)	1913	130	40137	1917	21042	0
104	LCB16(max)	1913	130	40337	1917	21042	0
104	LCB17(max)	0	48	36425	671	0	0
104	LCB18(max)	0	48	36335	671	0	0
104	LCB19(max)	1913	130	31505	1917	21042	0
104	LCB20(max)	1913	130	31304	1917	21042	0
104	LCB21(max)	1913	130	31250	1917	21042	0
104	LCB22(max)	1913	130	31450	1917	21042	0
104	LCB23(max)	0	48	27539	671	0	0
104	LCB24(max)	0	48	27448	671	0	0
104	LCB1(min)	1913	-411	32605	1176	21042	0
104	LCB2(min)	1913	-411	32405	1176	21042	0
104	LCB3(min)	1913	62	32405	-4030	21042	0
104	LCB4(min)	1913	62	32605	-4030	21042	0
104	LCB5(min)	0	-455	33043	3811	0	0
104	LCB6(min)	0	333	33043	-4864	0	0
104	LCB7(min)	1913	-411	23858	1176	21042	0
104	LCB8(min)	1913	-411	23658	1176	21042	0
104	LCB9(min)	1913	62	23658	-4030	21042	0
104	LCB10(min)	1913	62	23858	-4030	21042	0
104	LCB11(min)	0	-455	24296	3811	0	0
104	LCB12(min)	0	333	24296	-4864	0	0
104	LCB13(min)	1913	-174	32632	-1427	21042	0
104	LCB14(min)	1913	-174	32432	-1427	21042	0
104	LCB15(min)	1913	-174	32378	-1427	21042	0
104	LCB16(min)	1913	-174	32578	-1427	21042	0
104	LCB17(min)	0	-61	33088	-527	0	0
104	LCB18(min)	0	-61	32998	-527	0	0
104	LCB19(min)	1913	-174	23885	-1427	21042	0
104	LCB20(min)	1913	-174	23685	-1427	21042	0
104	LCB21(min)	1913	-174	23631	-1427	21042	0
104	LCB22(min)	1913	-174	23831	-1427	21042	0
104	LCB23(min)	0	-61	24341	-527	0	0
104	LCB24(min)	0	-61	24251	-527	0	0

6.4.4 Posúdenie – piliere č. 2, 3, 4, 5

Součinitele výpočtu

Uvažovány dle normy ČSN EN 1992-1-1.

Dílčí součinitel betonu	γ_C	=	1.5	[-]
Dílčí součinitel oceli	γ_S	=	1.15	[-]
Součinitel tlakové pevnosti betonu	α_{cc}	=	1	[-]
Dílčí součinitel modulu pružnosti betonu	γ_{CE}	=	1.2	[-]

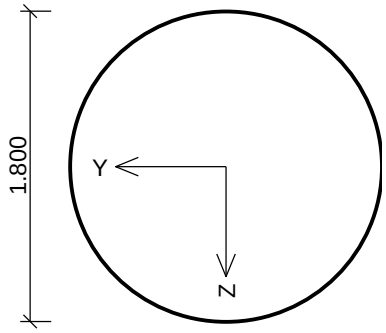
1 Podpera 2 (jednosmerné ložisko)

1 Podpera 2a

1.1 Vstupní data

Typ prvku:	sloup
Prostředí:	XC4, XD1, XF3, XA1
Požadovaná třída betonu:	C30/37

Průřez



Materiály
Beton : C 35/45
f_{ck} = 35.0 MPa; f_{ct} = 3.2 MPa; E_{cm} = 34000.0 MPa

Ocel podélná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Ocel příčná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Vnitřní síly - návrhová (MSÚ)

č.	Název zatěžovacího případu	N_{Ed} [kN]	V_{Edz} [kN]	V_{Edy} [kN]	M_{Edy} [kNm]	M_{Edz} [kNm]	T_{Ed} [kNm]	QP koef. [-]
1	Zat. případ 1 LCB1 max	-12067.00	502.00	86.00	2511.00	1604.00	0.00	1.000
2	Zat. případ 2 LCB9 min	-4355.00	502.00	19.00	2511.00	1272.00	0.00	1.000
3	Zat. případ 3 Nmin Mmax	-4355.00	0.00	0.00	2511.00	1604.00	0.00	1.000

Vzpěr

Délka prvku [m]	Koef. vzpěru [–]	Vzpěrná délka [m]	Kolmo k ose
5.00	2.00	10.00	Y
5.00	2.00	10.00	Z

Vyztužení průřezu

Kruh:24ks × profil 20.0, krytí 90.0 mm

S tlačenou výztuží není počítáno.

Smyková výztuž

Třmínky
Profil: 12.0 mm; Vzdálenost: 0.20 m; Svislé střihy: 2; Vodor. střihy: 2

Minimální krytí

Třída konstrukce: S4

c_{min} = max($c_{min,b}$; $c_{min,dur}$; 10) = max(20; 35; 10) = 35 mm
c_{nom} = c_{min} + Δc_{dev} = 35 + 10 = 45 mm

1.2 Výsledky

Posouzení min. a max. stupně vyztužení

Sloup (celková výztuž):
$\rho_{s,min}$ = 0.002 ≤ ρ_s = 0.00297 ≤ $\rho_{s,max}$ = 0.04 ⇒ **VYHOVUJE**

Posouzení konstrukčních zásad třmínků - Posouzení svisle
Minimální průměr třmínků d = 6.00 mm ⇒ **VYHOVUJE**

Maximální vzdálenost třmínků $s_{cl,max}$ = 0.30 m ⇒ **VYHOVUJE**

Posouzení konstrukčních zásad třmínků - Posouzení vodorovně
Minimální průměr třmínků d = 6.00 mm ⇒ **VYHOVUJE**
Maximální vzdálenost třmínků $s_{cl,max}$ = 0.30 m ⇒ **VYHOVUJE**

Posouzení mezního stavu únosnosti

č.	Název	N_{Ed} N_{Rd} [kN]	V_{Edz} V_{Rdz} [kN]	V_{Edy} V_{Rdy} [kN]	M_{0Edy} [kNm]	M_{Edy} M_{Rdy} [kNm]	M_{0Edz} [kNm]	M_{Edz} M_{Rdz} [kNm]	T_{Ed} T_{Rd} [kNm]	Posouzení
1	Zat. případ 1 LCB1 max	-12067.00	502.00	86.00	2638.12	2638.12	1685.20	1685.20	0.00	Vyhovuje
		-59327.88	1904.60	326.29	-	7565.20	-	4832.57	0.00	
2	Zat. případ 2 LCB9 min	-4355.00	502.00	19.00	2559.56	2559.56	1296.60	1296.60	0.00	Vyhovuje
		-59327.88	1277.52	48.35	-	4830.80	-	2447.14	0.00	
3	Zat. případ 3 Nmin Mmax	-4355.00	0.00	0.00	2556.88	2556.88	1633.31	1633.31	0.00	Vyhovuje
		-59327.88	0.00	0.00	-	4563.47	-	2915.10	0.00	

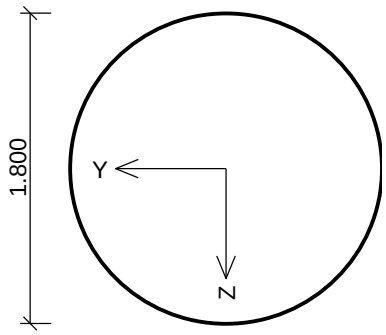
Mezní stav únosnosti (ohyb, smyk, kroucení) VYHOVUJE

Celkové posouzení - Průřez VYHOVUJE
Využití průřezu: 56.0 %

2 Podpera 2 (všesmerné ložisko)

2.1 Vstupní data
Typ prvku: sloup
Prostředí: XC4, XD1, XF3, XA1
Požadovaná třída betonu: C30/37

Průřez



Materiály
Beton : C 35/45
f_{ck} = 35.0 MPa; f_{ct} = 3.2 MPa; E_{cm} = 34000.0 MPa

Ocel podélná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Ocel příčná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Vnitřní síly - návrhová (MSÚ)

č.	Název zatěžovacího případu	N_{Ed} [kN]	V_{Edz} [kN]	V_{Edy} [kN]	M_{Edy} [kNm]	M_{Edz} [kNm]	T_{Ed} [kNm]	QP koef. [-]
1	Zat. případ 1 LCB1 max	-13752.00	502.00	0.00	2511.00	0.00	0.00	1.000
2	Zat. případ 2 LCB9 min	-4679.00	502.00	0.00	2511.00	0.00	0.00	1.000

Vzpěr

Délka prvku [m]	Koef. vzpěru [–]	Vzpěrná délka [m]	Kolmo k ose
5.00	2.00	10.00	Y
5.00	2.00	10.00	Z

Vyztužení průřezu

Kruh:24ks × profil 20.0, krytí 90.0 mm

S tlačenou výztuží není počítáno.

Smyková výztuž

Třmínky
Profil: 12.0 mm; Vzdálenost: 0.20 m; Svislé střihy: 2; Vodor. střihy: 2

Minimální krytí

Třída konstrukce: S4

c_{min} = max($c_{min,b}$; $c_{min,dur}$; 10) = max(20; 35; 10) = 35 mm
c_{nom} = c_{min} + Δc_{dev} = 35 + 10 = 45 mm

2.2 Výsledky

Posouzení min. a max. stupně vyztužení

Sloup (celková výztuž):
$\rho_{s,min}$ = 0.002 ≤ ρ_s = 0.00297 ≤ $\rho_{s,max}$ = 0.04 ⇒ **VYHOVUJE**

Posouzení konstrukčních zásad třmínků
Minimální průměr třmínků d = 6.00 mm ⇒ **VYHOVUJE**
Maximální vzdálenost třmínků $s_{cl,max}$ = 0.30 m ⇒ **VYHOVUJE**

Posouzení mezního stavu únosnosti

č.	Název	N_{Ed} / N_{Rd} [kN]	V_{Edz} / V_{Rdz} [kN]	V_{Edy} / V_{Rdy} [kN]	M_{0Edy} [kNm]	M_{Edy} / M_{Rdy} [kNm]	M_{0Edz} [kNm]	M_{Edz} / M_{Rdz} [kNm]	T_{Ed} / T_{Rd} [kNm]	Posouzení
1	Zat. případ 1 LCB1 max	-13752.00	502.00	0.00	2682.90	2682.90	-825.12	-825.12	0.00	Vyhovuje
		-59327.88	2030.15	0.00	-	9122.64	-	-2805.65	0.00	
2	Zat. případ 2 LCB9 min	-4679.00	502.00	0.00	2569.49	2569.49	-280.74	-280.74	0.00	Vyhovuje
		-59327.88	1278.47	0.00	-	5567.16	-	-608.26	0.00	

Mezní stav únosnosti (ohyb, smyk, kroucení) VYHOVUJE

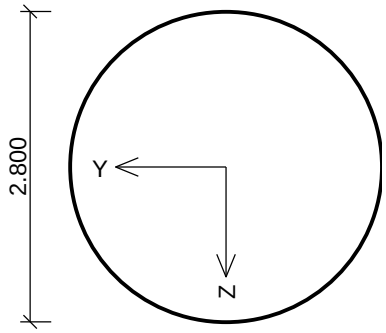
Celkové posouzení - Průřez VYHOVUJE
Využití průřezu: 46.2 %

3 Podpera 3

3.1 Vstupní data

Typ prvku: sloup
Prostředí: XC4, XD1, XF3, XA1
Požadovaná třída betonu: C30/37

Průřez



Materiály
Beton : C 35/45
f_{ck} = 35.0 MPa; f_{ct} = 3.2 MPa; E_{cm} = 34000.0 MPa

Ocel podélná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Ocel příčná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Vnitřní síly - návrhová (MSÚ)

č.	Název zatěžovacího případu	N_{Ed} [kN]	V_{Edz} [kN]	V_{Edy} [kN]	M_{Edy} [kNm]	M_{Edz} [kNm]	T_{Ed} [kNm]	QP koef. [-]
1	Zat. případ 1 LCB2 max	-39167.00	1998.00	150.00	17982.00	4396.00	0.00	1.000
2	Zat. případ 2 LCB10 min	-21877.00	1998.00	126.00	17982.00	4184.00	0.00	1.000
3	Zat. případ 3 vahadlo	-20373.00	0.00	445.00	0.00	5079.00	0.00	1.000

Vzpěr

Délka prvku [m]	Koef. vzpěru [–]	Vzpěrná délka [m]	Kolmo k ose
9.00	2.00	18.00	Y
9.00	2.00	18.00	Z

Vyztužení průřezu

Kruh:40ks × profil 25.0, krytí 85.0 mm

S tlačenou výztuží není počítáno.

Smyková výztuž

Třmínky
Profil: 12.0 mm; Vzdálenost: 0.20 m; Svislé střihy: 4; Vodor. střihy: 4

Minimální krytí

Třída konstrukce: S4

c_{min} = max($c_{min,b}$; $c_{min,dur}$; 10) = max(25; 35; 10) = 35 mm
c_{nom} = $c_{min} + \Delta c_{dev}$ = 35 + 10 = 45 mm

3.2 Výsledky

Posouzení min. a max. stupně vyztužení

Sloup (celková výztuž):
$\rho_{s,min}$ = 0.002 ≤ ρ_s = 0.00319 ≤ $\rho_{s,max}$ = 0.04 ⇒ **VYHOVUJE**

Posouzení konstrukčních zásad třmínků
Minimální průměr třmínků d = 6.25 mm ⇒ **VYHOVUJE**
Maximální vzdálenost třmínků $s_{cl,max}$ = 0.30 m ⇒ **VYHOVUJE**

Posouzení mezního stavu únosnosti

č.	Název	N_{Ed} / N_{Rd} [kN]	V_{Edz} / V_{Rdz} [kN]	V_{Edy} / V_{Rdy} [kN]	M_{0Edy} [kNm]	M_{Edy} / M_{Rdy} [kNm]	M_{0Edz} [kNm]	M_{Edz} / M_{Rdz} [kNm]	T_{Ed} / T_{Rd} [kNm]	Posouzení
1	Zat. případ 1 LCB2 max	-39167.00	1998.00	150.00	18838.05	25130.60	4605.28	6143.59	0.00	Vyhovuje
		-143558.82	5064.53	380.22	-	37906.94	-	9266.98	0.00	
2	Zat. případ 2 LCB10 min	-21877.00	1998.00	126.00	18461.43	18461.43	4295.55	4295.55	0.00	Vyhovuje
		-143558.82	4124.40	260.10	-	29107.63	-	6772.68	0.00	
3	Zat. případ 3 vahadlo	-20373.00	0.00	445.00	1900.32	1900.32	5537.39	5537.39	0.00	Vyhovuje
		-143558.82	0.00	4138.09	-	9363.97	-	27285.91	0.00	

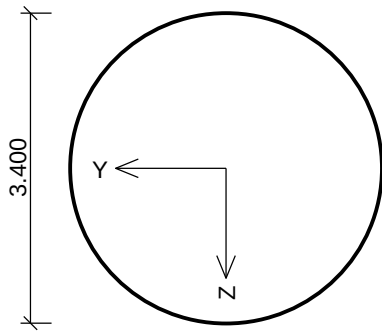
Mezní stav únosnosti (ohyb, smyk, kroucení) VYHOVUJE

Celkové posouzení - Průřez VYHOVUJE
Využití průřezu: 66.3 %

4 Podpera 4

4.1 Vstupní data
Typ prvku: sloup
Prostředí: XC4, XD1, XF3, XA1
Požadovaná třída betonu: C30/37

Průřez



Materiály
Beton : C 35/45
f_{ck} = 35.0 MPa; f_{ct} = 3.2 MPa; E_{cm} = 34000.0 MPa

Ocel podélná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Ocel příčná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Vnitřní síly - návrhová (MSÚ)

č.	Název zatěžovacího případu	N_{Ed} [kN]	V_{Edz} [kN]	V_{Edy} [kN]	M_{Edy} [kNm]	M_{Edz} [kNm]	T_{Ed} [kNm]	QP koef. [-]
1	Zat. případ 1 LCB2 max	-63164.00	2392.00	346.00	43432.00	27262.00	0.00	1.000
2	Zat. případ 2 LCB10 min	-39691.00	38.00	429.00	27646.00	18901.00	0.00	1.000
3	Zat. případ 3 LCB19 min	-39692.00	412.00	126.00	29874.00	12006.00	0.00	1.000
4	Zat. případ 4 vahadlo	-41484.00	0.00	1006.00	0.00	12592.00	0.00	1.000
5	Zat. případ 5 Nmin Mmax	-39691.00	0.00	0.00	43432.00	27262.00	0.00	1.000

Vzpěr

Délka prvku [m]	Koef. vzpěru [–]	Vzpěrná délka [m]	Kolmo k ose
8.00	2.00	16.00	Y
8.00	2.00	16.00	Z

Vyztužení průřezu

Kruh:52ks × profil 32.0, krytí 85.0 mm

S tlačenou výztuží není počítáno.

Smyková výztuž

Třmínky
Profil: 12.0 mm; Vzdálenost: 0.20 m; Svislé střihy: 6; Vodor. střihy: 6

Minimální krytí

Třída konstrukce: S4

c_{min} = max($c_{min,b}$; $c_{min,dur}$; 10) = max(32; 35; 10) = 35 mm
c_{nom} = c_{min} + Δc_{dev} = 35 + 10 = 45 mm

4.2 Výsledky

Posouzení min. a max. stupně vyztužení

Sloup (celková výztuž):
$\rho_{s,min}$ = 0.002 ≤ ρ_s = 0.00461 ≤ $\rho_{s,max}$ = 0.04 ⇒ **VYHOVUJE**

Posouzení konstrukčních zásad třmínků - Posouzení svisle
Minimální průměr třmínků d = 8.00 mm ⇒ **VYHOVUJE**
Maximální vzdálenost třmínků $s_{cl,max}$ = 0.30 m ⇒ **VYHOVUJE**

Posouzení konstrukčních zásad třmínků - Posouzení vodorovně
Minimální průměr třmínků d = 8.00 mm ⇒ **VYHOVUJE**
Maximální vzdálenost třmínků $s_{cl,max}$ = 0.30 m ⇒ **VYHOVUJE**

Posouzení mezního stavu únosnosti

č.	Název	N_{Ed} / N_{Rd} [kN]	V_{Edz} / V_{Rdz} [kN]	V_{Edy} / V_{Rdy} [kN]	M_{0Edy} [kNm]	M_{Edy} / M_{Rdy} [kNm]	M_{0Edz} [kNm]	M_{Edz} / M_{Rdz} [kNm]	T_{Ed} / T_{Rd} [kNm]	Posouzení
1	Zat. případ 1 LCB2 max	-63164.00	2392.00	346.00	44501.96	44501.96	27933.61	27933.61	0.00	Vyhovuje
		-211676.02	7574.90	1095.70	-	64318.54	-	40372.35	0.00	
2	Zat. případ 2 LCB10 min	-39691.00	38.00	429.00	28301.31	28301.31	19349.02	19349.02	0.00	Vyhovuje
		-211676.02	671.96	7586.07	-	52961.02	-	36208.36	0.00	
3	Zat. případ 3 LCB19 min	-39692.00	412.00	126.00	30610.58	30610.58	12302.02	12302.02	0.00	Vyhovuje
		-211676.02	7282.81	2227.27	-	59530.05	-	23924.41	0.00	
4	Zat. případ 4 vahadlo	-41484.00	0.00	1006.00	4698.66	4698.66	13421.68	13421.68	0.00	Vyhovuje
		-211676.02	0.00	7617.31	-	21579.80	-	61642.56	0.00	
5	Zat. případ 5 Nmin Mmax	-39691.00	0.00	0.00	44104.34	44104.34	27684.03	27684.03	0.00	Vyhovuje
		-211676.02	0.00	0.00	-	54334.59	-	34105.49	0.00	

Mezní stav únosnosti (ohyb, smyk, kroucení) VYHOVUJE

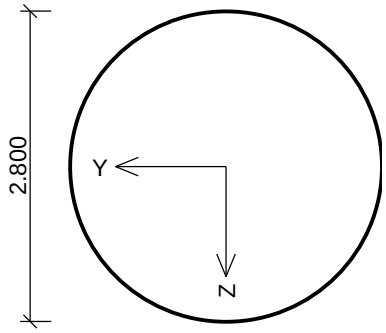
Celkové posouzení - Průřez VYHOVUJE
Využití průřezu: 81.2 %

5 Podpera 5

5.1 Vstupní data

Typ prvku: sloup
Prostředí: XC4, XD1, XF3, XA1
Požadovaná třída betonu: C30/37

Průřez



Materiály
Beton : C 35/45
f_{ck} = 35.0 MPa; f_{ct} = 3.2 MPa; E_{cm} = 34000.0 MPa

Ocel podélná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Ocel příčná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Vnitřní síly - návrhová (MSÚ)

č.	Název zatěžovacího případu	N_{Ed} [kN]	V_{Edz} [kN]	V_{Edy} [kN]	M_{Edy} [kNm]	M_{Edz} [kNm]	T_{Ed} [kNm]	QP koef. [-]
1	Zat. případ 1 LCB1 max	-40364.00	1913.00	107.00	21042.00	4520.00	0.00	1.000
2	Zat. případ 2 LCB10 min	-23858.00	1913.00	62.00	21042.00	4030.00	0.00	1.000
3	Zat. případ 3 vahadlo	-20727.00	0.00	445.00	0.00	5970.00	0.00	1.000

Vzpěr

Délka prvku [m]	Koef. vzpěru [–]	Vzpěrná délka [m]	Kolmo k ose
11.00	2.00	22.00	Y
11.00	2.00	22.00	Z

Vyztužení průřezu

Kruh:40ks × profil 28.0, krytí 85.0 mm

S tlačenou výztuží není počítáno.

Smyková výztuž

Třmínky
Profil: 12.0 mm; Vzdálenost: 0.20 m; Svislé střihy: 4; Vodor. střihy: 4

Minimální krytí

Třída konstrukce: S4

c_{min} = max($c_{min,b}$; $c_{min,dur}$; 10) = max(28; 35; 10) = 35 mm
c_{nom} = c_{min} + Δc_{dev} = 35 + 10 = 45 mm

5.2 Výsledky

Posouzení min. a max. stupně vyztužení

Sloup (celková výztuž):
$\rho_{s,min}$ = 0.002 ≤ ρ_s = 0.004 ≤ $\rho_{s,max}$ = 0.04 ⇒ **VYHOVUJE**

Posouzení konstrukčních zásad třmínků
Minimální průměr třmínků d = 7.00 mm ⇒ **VYHOVUJE**
Maximální vzdálenost třmínků $s_{cl,max}$ = 0.30 m ⇒ **VYHOVUJE**

Posouzení mezního stavu únosnosti

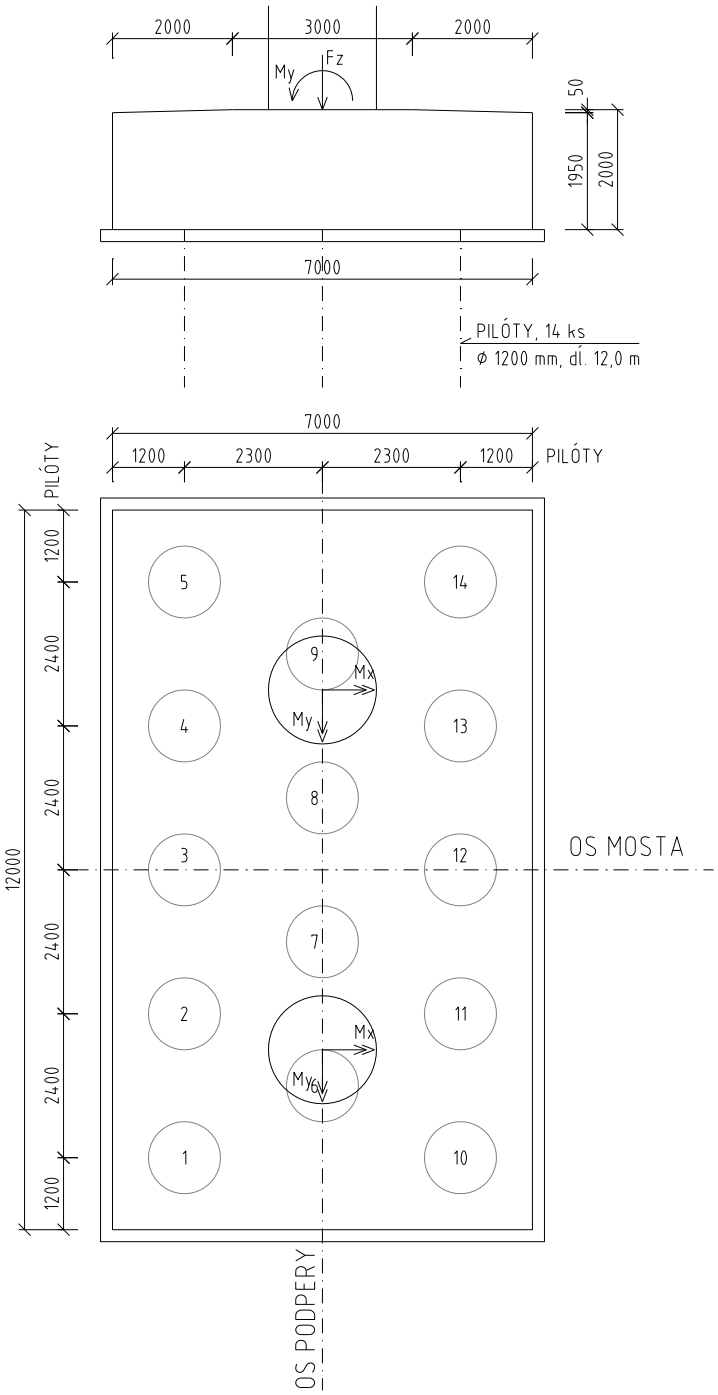
č.	Název	N_{Ed} N_{Rd} [kN]	V_{Edz} V_{Rdz} [kN]	V_{Edy} V_{Rdy} [kN]	M_{0Edy} [kNm]	M_{Edy} M_{Rdy} [kNm]	M_{0Edz} [kNm]	M_{Edz} M_{Rdz} [kNm]	T_{Ed} T_{Rd} [kNm]	Posouzení
1	Zat. případ 1 LCB1 max	-40364.00	1913.00	107.00	22127.25	31963.28	4753.12	6865.98	0.00	Vyhovuje
		-143558.82	5115.19	286.11	-	39781.32	-	8545.36	0.00	
2	Zat. případ 2 LCB10 min	-23858.00	1913.00	62.00	21686.38	27506.74	4153.41	5268.14	0.00	Vyhovuje
		-143558.82	4140.09	134.18	-	32243.65	-	6175.36	0.00	

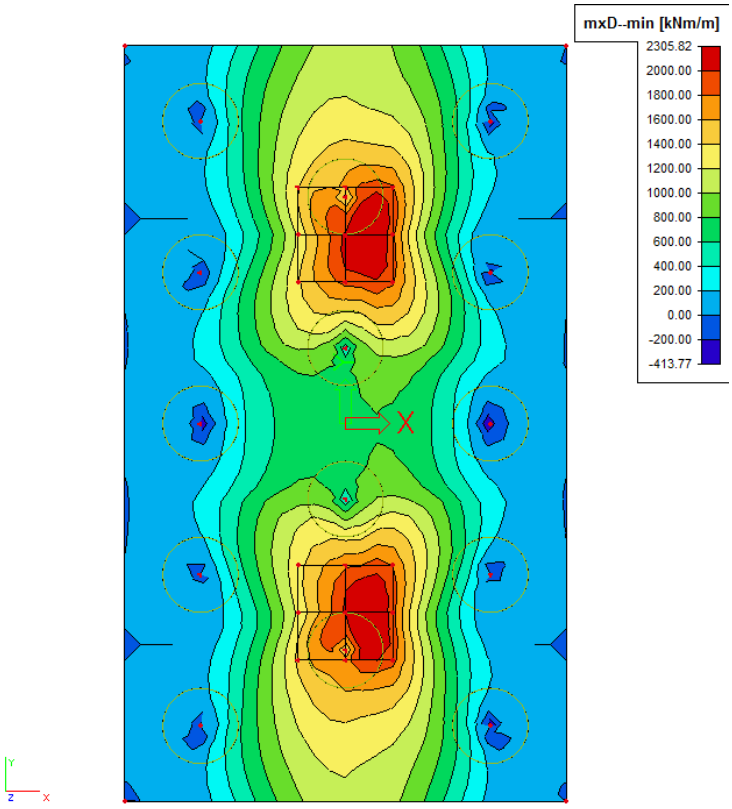
č.	Název	N_{Ed} / N_{Rd} [kN]	V_{Edz} / V_{Rdz} [kN]	V_{Edy} / V_{Rdy} [kN]	M_{0Edy} [kNm]	M_{Edy} / M_{Rdy} [kNm]	M_{0Edz} [kNm]	M_{Edz} / M_{Rdz} [kNm]	T_{Ed} / T_{Rd} [kNm]	Posouzení
3	Zat. případ 3 vahadlo	-20727.00	0.00	445.00	1933.34	2385.98	6539.99	8071.14	0.00	Vyhovuje
		-143558.82	0.00	4135.63	-	8739.23	-	29562.53	0.00	

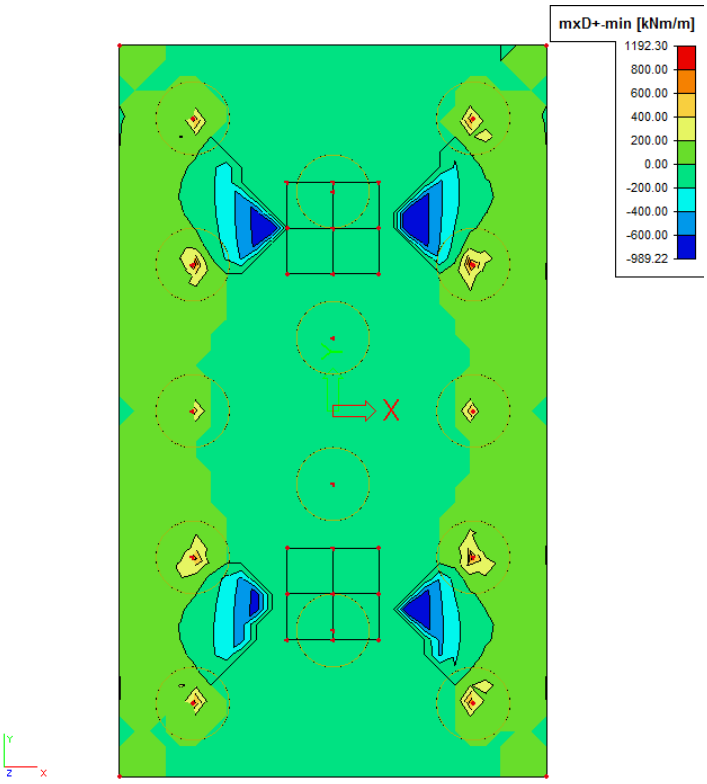
Mezní stav únosnosti (ohyb, smyk, kroucení) VYHOVUJE

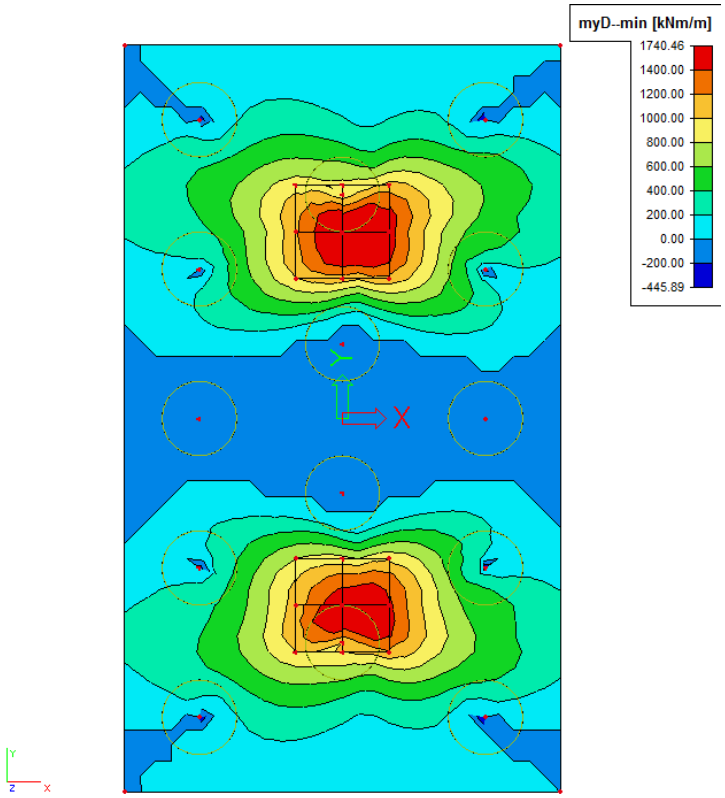
Celkové posouzení - Průřez VYHOVUJE
Využití průřezu: 85.3 %

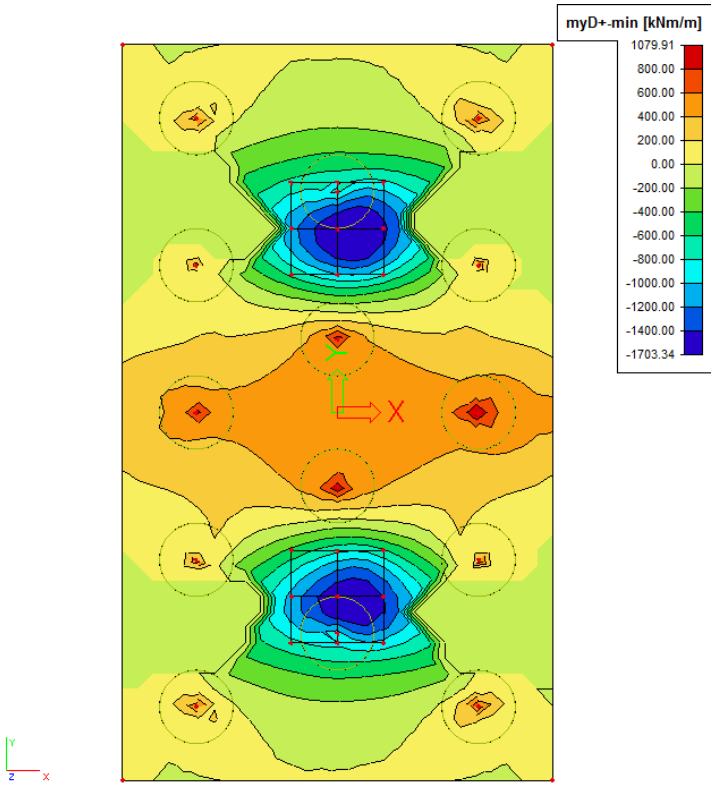
6.4.5 Posúdenie – základ č. 2




mxD--min [kNm/m]
2305.82
2000.00
1800.00
1600.00
1400.00
1200.00
1000.00
800.00
600.00
400.00
200.00
0.00
-200.00
-413.77
X


mxD+-min [kNm/m]
1192.30
800.00
600.00
400.00
200.00
0.00
-200.00
-400.00
-600.00
-989.22
X


myD--min [kNm/m]
1740.46
1400.00
1200.00
1000.00
800.00
600.00
400.00
200.00
0.00
-200.00
-445.89
X

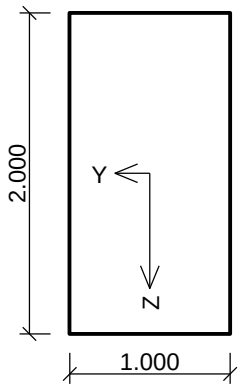

myD+-min [kNm/m]
1079.91
800.00
600.00
400.00
200.00
0.00
-200.00
-400.00
-600.00
-800.00
-1000.00
-1200.00
-1400.00
-1703.34
X

Zaklad 2 - smer X (1bm)

1.1 Vstupní data

Typ prvku: deska
Prostředí: XC2, XA1
Požadovaná třída betonu: C25/30

Průřez



Materiály
Beton : C 30/37
f_{ck} = 30.0 MPa; f_{ct} = 2.9 MPa; E_{cm} = 33000.0 MPa

Ocel podélná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Ocel příčná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Vnitřní síly - návrhová (MSÚ)

č.	Název zatěžovacího případu	N_{Ed} [kN]	V_{Edz} [kN]	V_{Edy} [kN]	M_{Edy} [kNm]	M_{Edz} [kNm]	T_{Ed} [kNm]	QP koef. [-]
1	Zat. případ 1	0.00	0.00	0.00	2306.00	0.00	0.00	1.000
2	Zat. případ 2	0.00	0.00	0.00	-1192.00	0.00	0.00	1.000

Vyztužení průřezu

Počet	Profil [mm]	Krytí [mm]	Umístění
5	18.0	95.0	horní výztuž
2	12.0	500.0	horní výztuž
2	12.0	1000.0	horní výztuž
10	22.0	85.0	dolní výztuž
2	12.0	500.0	dolní výztuž

S tlačenou výztuží není počítáno.

Minimální krytí

Třída konstrukce: S4

c_{min} = max($c_{min,b}$; $c_{min,dur}$; 10) = max(22; 25; 10) = 25 mm
c_{nom} = c_{min} + Δc_{dev} = 25 + 10 = 35 mm

1.2 Výsledky

Posouzení min. a max. stupně vyztužení

Deska (tažená výztuž):
$\rho_{s,min}$ = 0.00119 ≤ ρ_s = 0.00148 ≤ $\rho_{s,max}$ = 0.04 ⇒ **VYHOVUJE**

Posouzení mezního stavu únosnosti

č.	Název	N_{Ed} / N_{Rd} [kN]	V_{Edz} / V_{Rdz} [kN]	V_{Edy} / V_{Rdy} [kN]	M_{Edy} / M_{Rdy} [kNm]	M_{Edz} / M_{Rdz} [kNm]	T_{Ed} / T_{Rd} [kNm]	Posouzení
1	Zat. případ 1	0.00	0.00	0.00	2306.00	0.00	0.00	Vyhovuje
		0.00	0.00	0.00	3507.05	0.00	0.00	
2	Zat. případ 2	0.00	0.00	0.00	-1192.00	0.00	0.00	Vyhovuje
		0.00	0.00	0.00	-1425.11	0.00	0.00	

Mezní stav únosnosti (ohyb, smyk, kroucení) VYHOVUJE

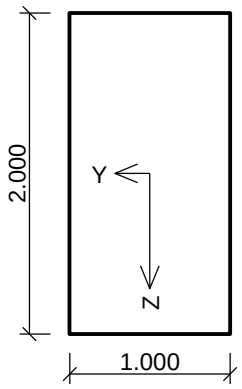
Celkové posouzení - Průřez VYHOVUJE

Zaklad 2 - smer Y (1bm)

2.1 Vstupní data

Typ prvku: deska
Prostředí: XC2, XA1
Požadovaná třída betonu: C25/30

Průřez



Materiály
Beton : C 30/37
f_{ck} = 30.0 MPa; f_{ct} = 2.9 MPa; E_{cm} = 33000.0 MPa

Ocel podélná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Ocel příčná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Vnitřní síly - návrhová (MSÚ)

č.	Název zatěžovacího případu	N_{Ed} [kN]	V_{Edz} [kN]	V_{Edy} [kN]	M_{Edy} [kNm]	M_{Edz} [kNm]	T_{Ed} [kNm]	QP koef. [-]
1	Zat. případ 1	0.00	0.00	0.00	1741.00	0.00	0.00	1.000
2	Zat. případ 2	0.00	0.00	0.00	-1080.00	0.00	0.00	1.000

Vyztužení průřezu

Počet	Profil [mm]	Krytí [mm]	Umístění
4	18.0	85.0	horní výztuž
2	12.0	500.0	horní výztuž
2	12.0	1000.0	horní výztuž
6	22.0	95.0	dolní výztuž
2	12.0	500.0	dolní výztuž

S tlačenou výztuží není počítáno.

Minimální krytí

Třída konstrukce: S4

c_{min} = max($c_{min,b}$; $c_{min,dur}$; 10) = max(22; 25; 10) = 25 mm
c_{nom} = c_{min} + Δc_{dev} = 25 + 10 = 35 mm

2.2 Výsledky

Posouzení min. a max. stupně vyztužení

Deska (tažená výztuž):
$\rho_{s,min}$ = 0.00116 ≤ ρ_s = 0.00141 ≤ $\rho_{s,max}$ = 0.04 ⇒ **VYHOVUJE**

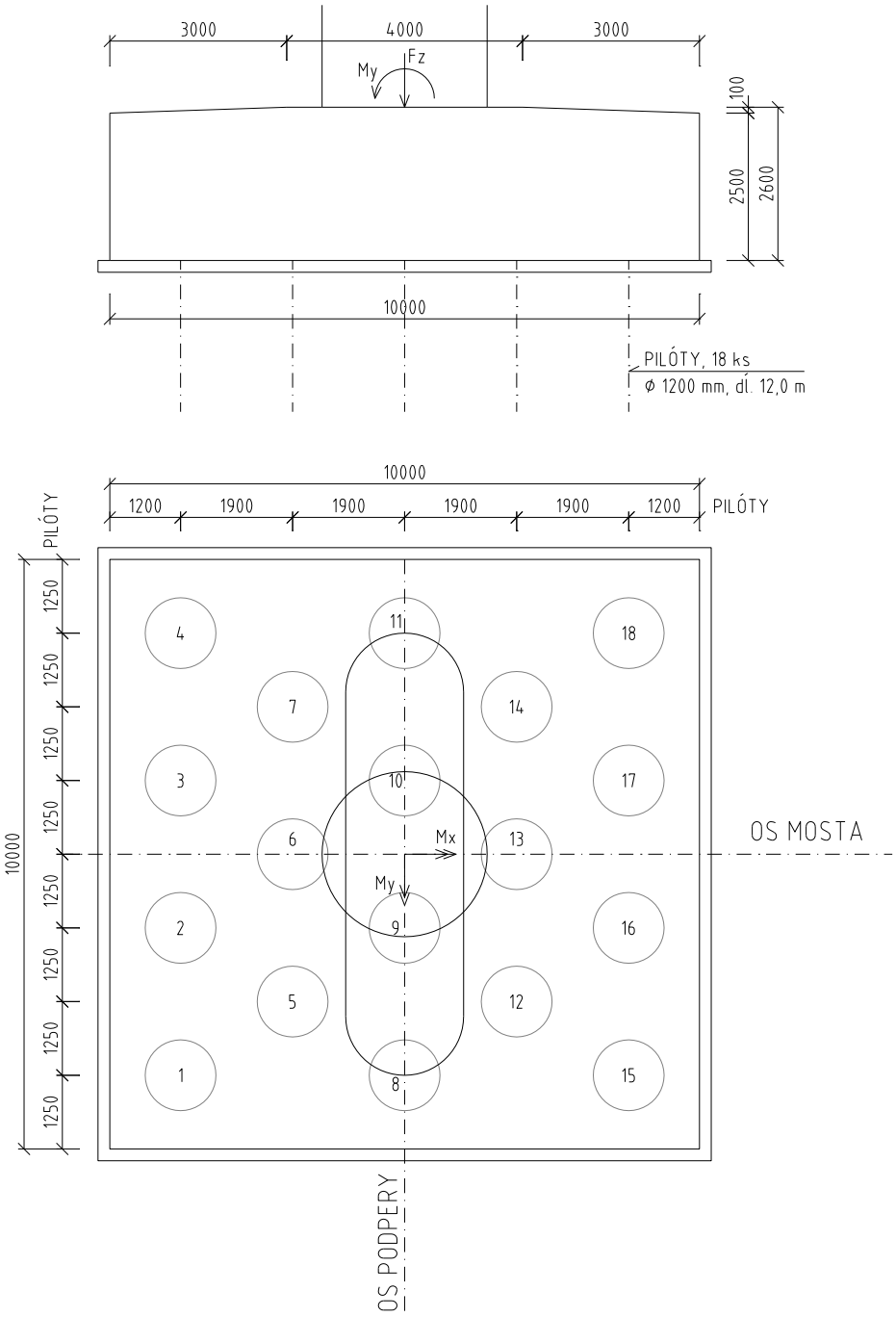
Posouzení mezního stavu únosnosti

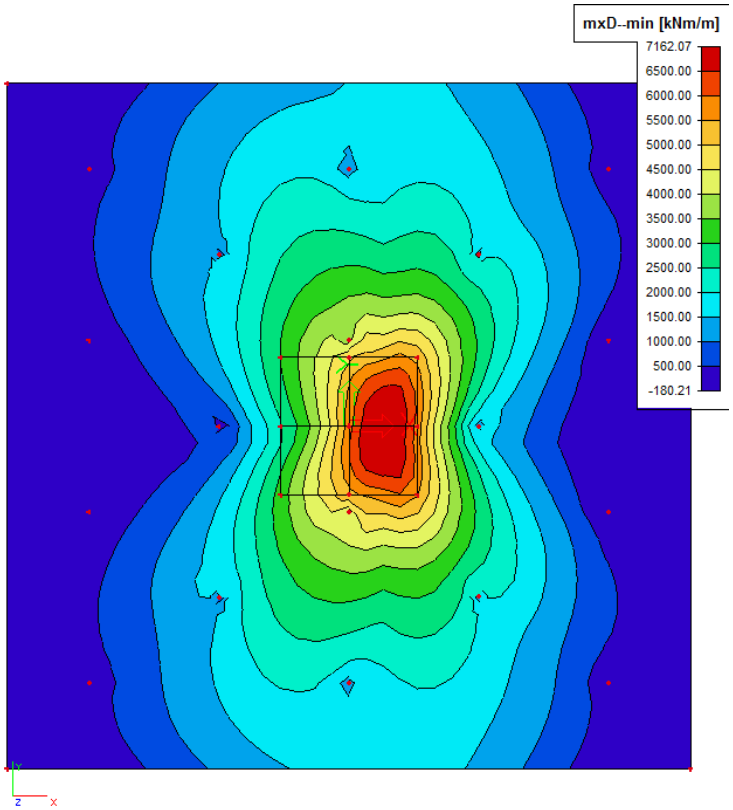
č.	Název	N_{Ed} N_{Rd} [kN]	V_{Edz} V_{Rdz} [kN]	V_{Edy} V_{Rdy} [kN]	M_{Edy} M_{Rdy} [kNm]	M_{Edz} M_{Rdz} [kNm]	T_{Ed} T_{Rd} [kNm]	Posouzení
1	Zat. případ 1	0.00	0.00	0.00	1741.00	0.00	0.00	Vyhovuje
		0.00	0.00	0.00	2273.58	0.00	0.00	
2	Zat. případ 2	0.00	0.00	0.00	-1080.00	0.00	0.00	Vyhovuje
		0.00	0.00	0.00	-1218.84	0.00	0.00	

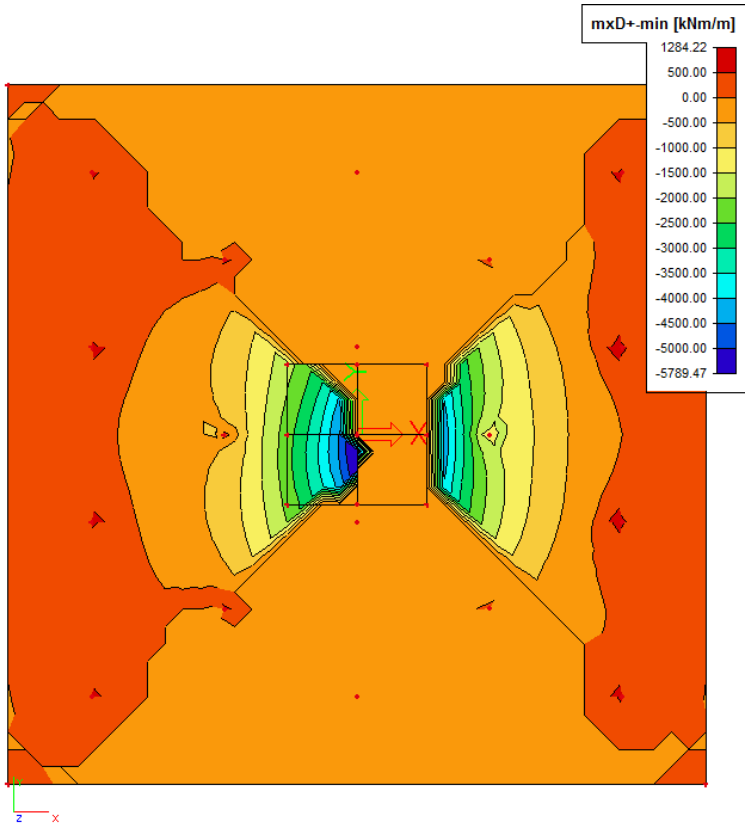
Mezní stav únosnosti (ohyb, smyk, kroucení) VYHOVUJE

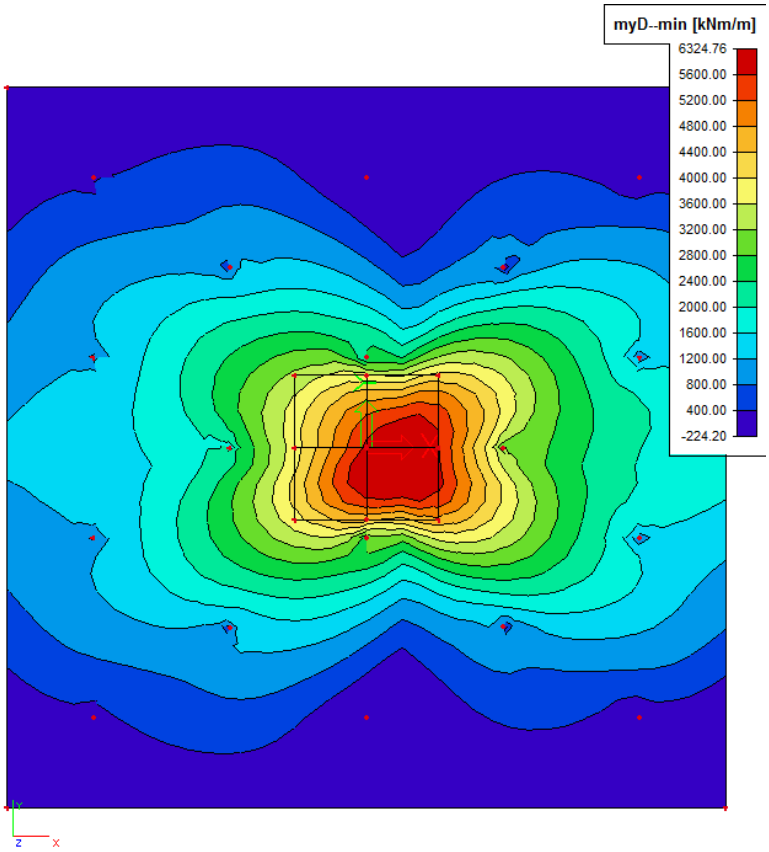
Celkové posouzení - Průřez VYHOVUJE

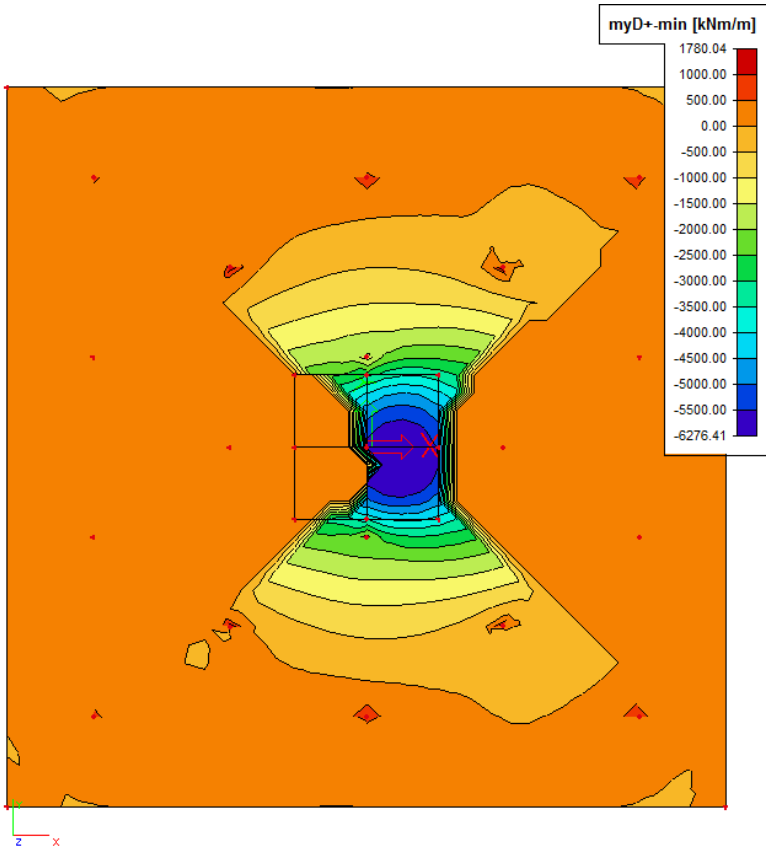
6.4.6 Posúdenie – základ č. 3




mxD--min [kNm/m]
7162.07
6500.00
6000.00
5500.00
5000.00
4500.00
4000.00
3500.00
3000.00
2500.00
2000.00
1500.00
1000.00
500.00
-180.21


mxD+-min [kNm/m]
1284.22
500.00
0.00
-500.00
-1000.00
-1500.00
-2000.00
-2500.00
-3000.00
-3500.00
-4000.00
-4500.00
-5000.00
-5789.47


myD--min [kNm/m]
6324.76
5600.00
5200.00
4800.00
4400.00
4000.00
3600.00
3200.00
2800.00
2400.00
2000.00
1600.00
1200.00
800.00
400.00
-224.20
z
x

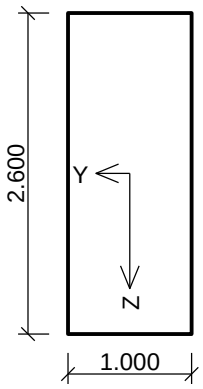

myD+-min [kNm/m]
1780.04
1000.00
500.00
0.00
-500.00
-1000.00
-1500.00
-2000.00
-2500.00
-3000.00
-3500.00
-4000.00
-4500.00
-5000.00
-5500.00
-6276.41
z
x

Zaklad 3 - smer X (1bm)

1.1 Vstupní data

Typ prvku: deska
Prostředí: XC2, XA1
Požadovaná třída betonu: C25/30

Průřez



Materiály
Beton : C 30/37
f_{ck} = 30.0 MPa; f_{ct} = 2.9 MPa; E_{cm} = 33000.0 MPa

Ocel podélná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Ocel příčná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Vnitřní síly - návrhová (MSÚ)

č.	Název zatěžovacího případu	N_{Ed} [kN]	V_{Edz} [kN]	V_{Edy} [kN]	M_{Edy} [kNm]	M_{Edz} [kNm]	T_{Ed} [kNm]	QP koef. [-]
1	Zat. případ 1	0.00	0.00	0.00	7162.00	0.00	0.00	1.000
2	Zat. případ 2	0.00	0.00	0.00	-1284.00	0.00	0.00	1.000

Vyztužení průřezu

Počet	Profil [mm]	Krytí [mm]	Umístění
5	18.0	95.0	horní výztuž
2	12.0	500.0	horní výztuž
2	12.0	1000.0	horní výztuž
10	32.0	85.0	dolní výztuž
2	12.0	500.0	dolní výztuž
2	12.0	1000.0	dolní výztuž

S tlačenou výztuží není počítáno.

Minimální krytí

Třída konstrukce: S4

c_{min} = max($c_{min,b}$; $c_{min,dur}$; 10) = max(32; 25; 10) = 32 mm
c_{nom} = c_{min} + Δc_{dev} = 32 + 10 = 42 mm

1.2 Výsledky

Posouzení min. a max. stupně vyztužení

Deska (tažená výztuž):
$\rho_{s,min}$ = 0.00116 ≤ ρ_s = 0.00122 ≤ $\rho_{s,max}$ = 0.04 ⇒ **VYHOVUJE**

Posouzení mezního stavu únosnosti

č.	Název	N_{Ed} N_{Rd} [kN]	V_{Edz} V_{Rdz} [kN]	V_{Edy} V_{Rdy} [kN]	M_{Edy} M_{Rdy} [kNm]	M_{Edz} M_{Rdz} [kNm]	T_{Ed} T_{Rd} [kNm]	Posouzení
1	Zat. případ 1	0.00	0.00	0.00	7162.00	0.00	0.00	Vyhovuje
		0.00	0.00	0.00	9130.09	0.00	0.00	
2	Zat. případ 2	0.00	0.00	0.00	-1284.00	0.00	0.00	Vyhovuje
		0.00	0.00	0.00	-2001.24	0.00	0.00	

Mezní stav únosnosti (ohyb, smyk, kroucení) VYHOVUJE

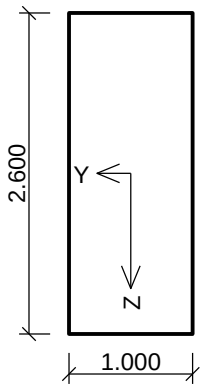
Celkové posouzení - Průřez VYHOVUJE

Zaklad 3 - smer Y (1bm)

2.1 Vstupní data

Typ prvku: deska
Prostředí: XC2, XA1
Požadovaná třída betonu: C25/30

Průřez



Materiály
Beton : C 30/37
f_{ck} = 30.0 MPa; f_{ct} = 2.9 MPa; E_{cm} = 33000.0 MPa

Ocel podélná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Ocel příčná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Vnitřní síly - návrhová (MSÚ)

č.	Název zatěžovacího případu	N_{Ed} [kN]	V_{Edz} [kN]	V_{Edy} [kN]	M_{Edy} [kNm]	M_{Edz} [kNm]	T_{Ed} [kNm]	QP koef. [-]
1	Zat. případ 1	0.00	0.00	0.00	6325.00	0.00	0.00	1.000
2	Zat. případ 2	0.00	0.00	0.00	-1780.00	0.00	0.00	1.000

Vyztužení průřezu

Počet	Profil [mm]	Krytí [mm]	Umístění
5	18.0	85.0	horní výztuž
2	12.0	500.0	horní výztuž
2	12.0	1000.0	horní výztuž
10	32.0	100.0	dolní výztuž
2	12.0	500.0	dolní výztuž
2	12.0	1000.0	dolní výztuž

S tlačenou výztuží není počítáno.

Minimální krytí

Třída konstrukce: S4

c_{min} = max($c_{min,b}$; $c_{min,dur}$; 10) = max(32; 25; 10) = 32 mm
c_{nom} = c_{min} + Δc_{dev} = 32 + 10 = 42 mm

2.2 Výsledky

Posouzení min. a max. stupně vyztužení

Deska (tažená výztuž):
$\rho_{s,min}$ = 0.00116 ≤ ρ_s = 0.0014 ≤ $\rho_{s,max}$ = 0.04 ⇒ **VYHOVUJE**

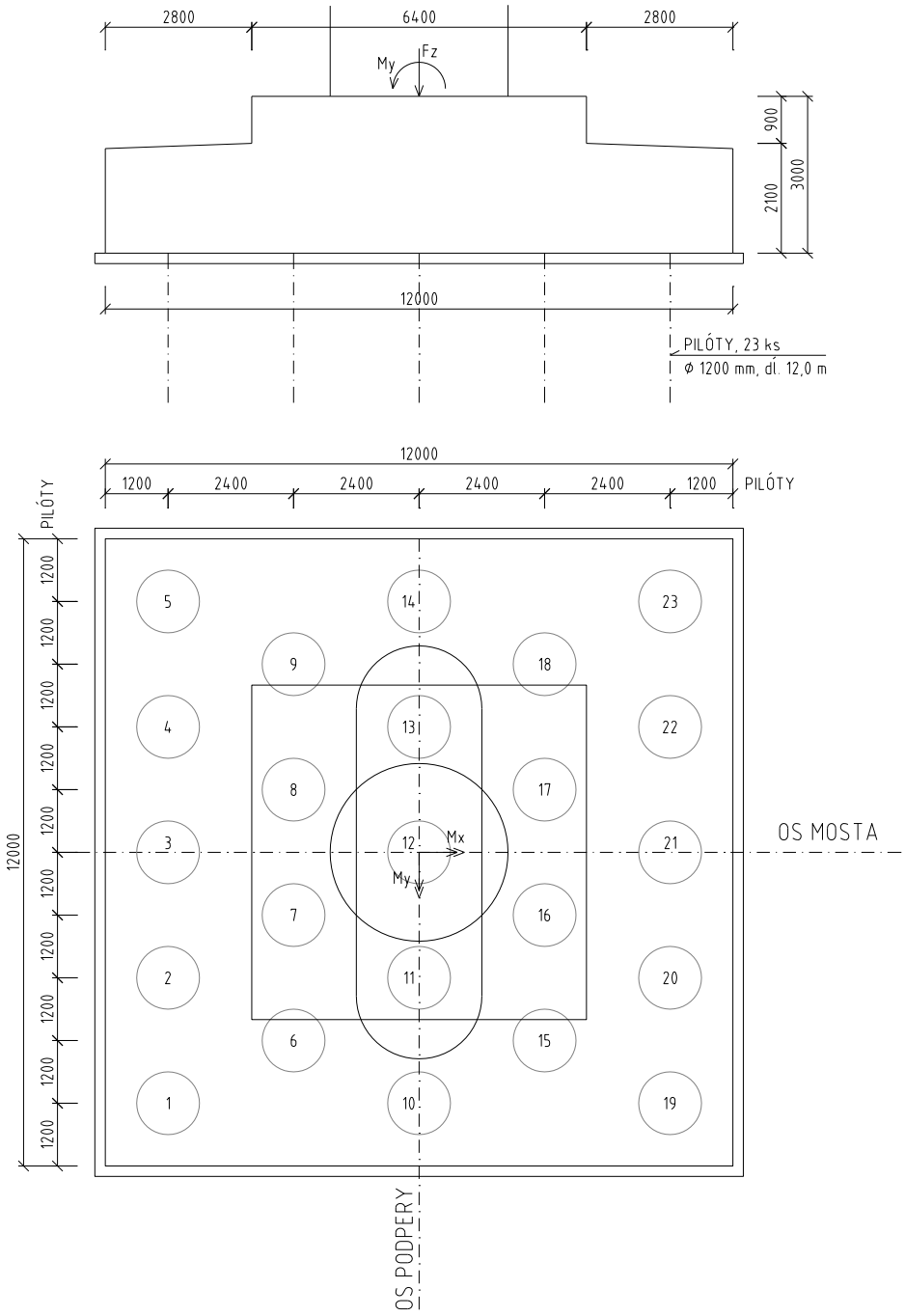
Posouzení mezního stavu únosnosti

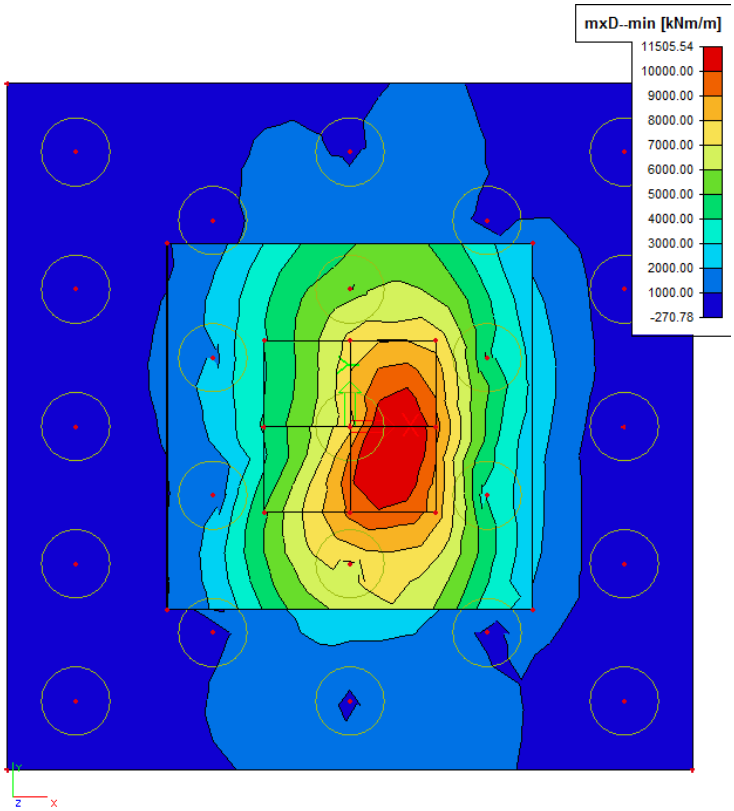
č.	Název	N_{Ed} N_{Rd} [kN]	V_{Edz} V_{Rdz} [kN]	V_{Edy} V_{Rdy} [kN]	M_{Edy} M_{Rdy} [kNm]	M_{Edz} M_{Rdz} [kNm]	T_{Ed} T_{Rd} [kNm]	Posouzení
1	Zat. případ 1	0.00	0.00	0.00	6325.00	0.00	0.00	Vyhovuje
		0.00	0.00	0.00	9074.14	0.00	0.00	
2	Zat. případ 2	0.00	0.00	0.00	-1780.00	0.00	0.00	Vyhovuje
		0.00	0.00	0.00	-2021.40	0.00	0.00	

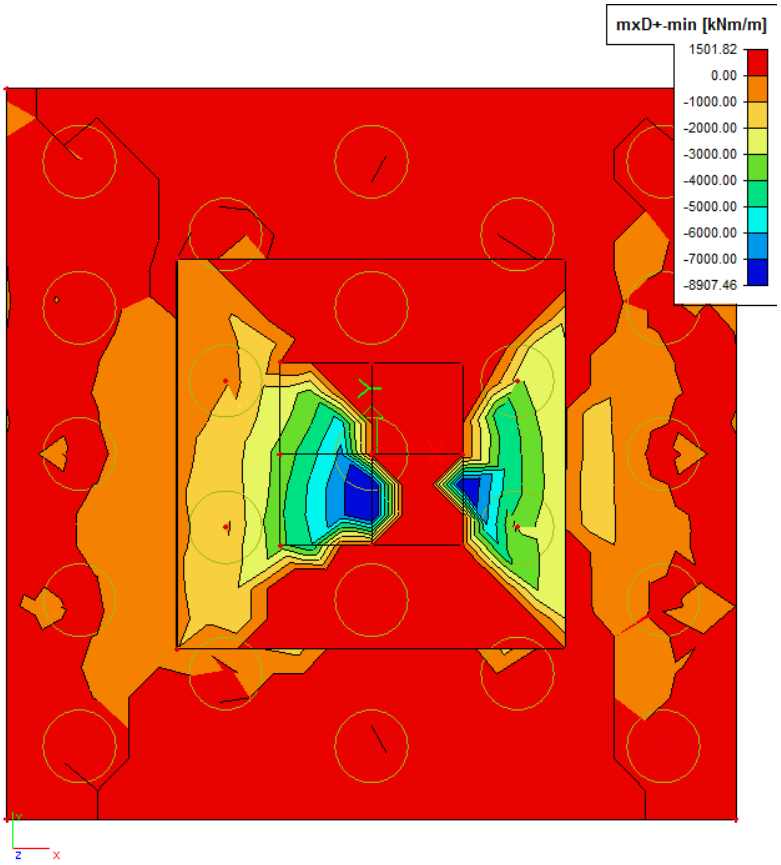
Mezní stav únosnosti (ohyb, smyk, kroucení) VYHOVUJE

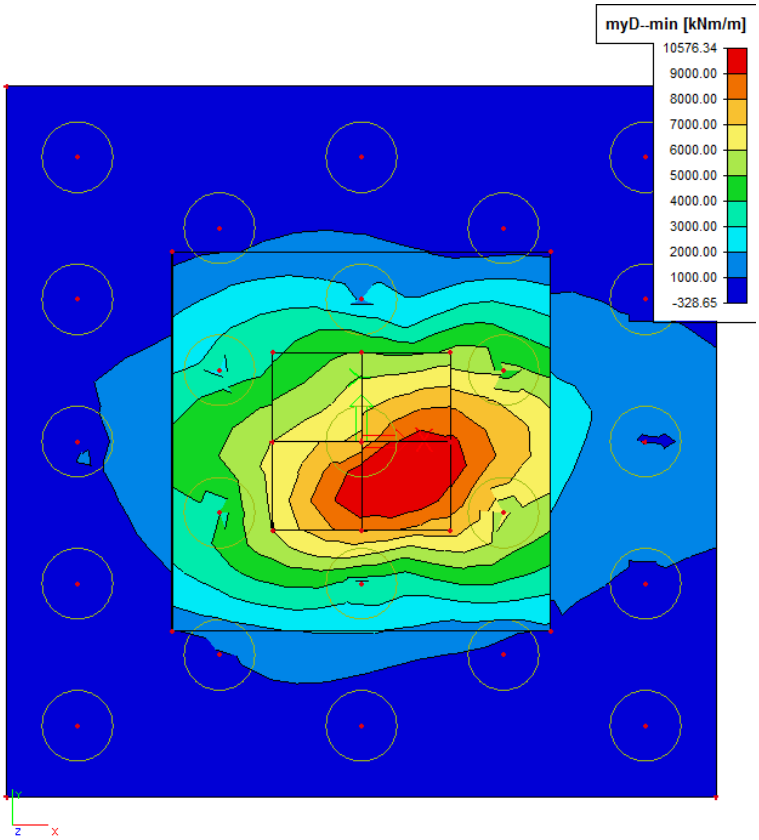
Celkové posouzení - Průřez VYHOVUJE

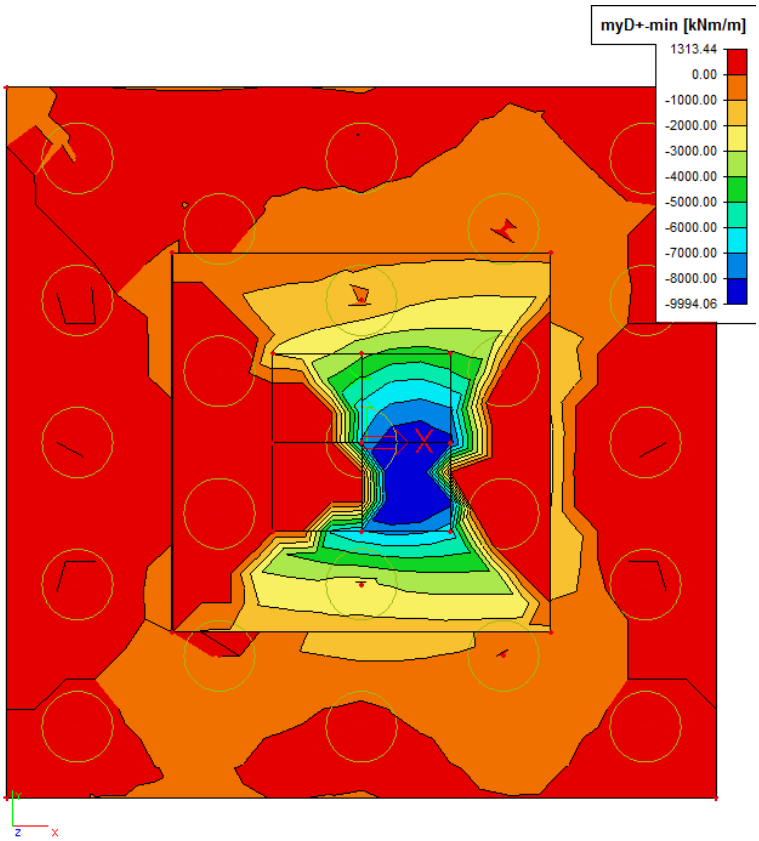
6.4.7 Posúdenie – základ č. 4




mxD--min [kNm/m]
11505.54
10000.00
9000.00
8000.00
7000.00
6000.00
5000.00
4000.00
3000.00
2000.00
1000.00
-270.78


mxD+-min [kNm/m]
1501.82
0.00
-1000.00
-2000.00
-3000.00
-4000.00
-5000.00
-6000.00
-7000.00
-8907.46


myD--min [kNm/m]
10576.34
9000.00
8000.00
7000.00
6000.00
5000.00
4000.00
3000.00
2000.00
1000.00
-328.65

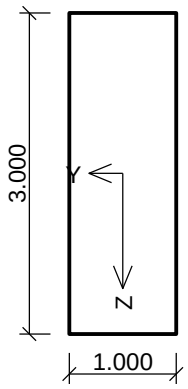

myD+-min [kNm/m]
1313.44
0.00
-1000.00
-2000.00
-3000.00
-4000.00
-5000.00
-6000.00
-7000.00
-8000.00
-9994.06

Zaklad 4 - smer X (1bm)

1.1 Vstupní data

Typ prvku: deska
Prostředí: XC2, XA1
Požadovaná třída betonu: C25/30

Průřez



Materiály
Beton : C 30/37
f_{ck} = 30.0 MPa; f_{ct} = 2.9 MPa; E_{cm} = 33000.0 MPa

Ocel podélná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Ocel příčná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Vnitřní síly - návrhová (MSÚ)

č.	Název zatěžovacího případu	N_{Ed} [kN]	V_{Edz} [kN]	V_{Edy} [kN]	M_{Edy} [kNm]	M_{Edz} [kNm]	T_{Ed} [kNm]	QP koef. [-]
1	Zat. případ 1	0.00	0.00	0.00	11506.00	0.00	0.00	1.000
2	Zat. případ 2	0.00	0.00	0.00	-1502.00	0.00	0.00	1.000

Vyztužení průřezu

Počet	Profil [mm]	Krytí [mm]	Umístění
5	18.0	95.0	horní výztuž
2	12.0	500.0	horní výztuž
2	12.0	1000.0	horní výztuž
10	32.0	85.0	dolní výztuž
2	12.0	500.0	dolní výztuž
2	12.0	1000.0	dolní výztuž
5	32.0	185.0	dolní výztuž

S tlačenou výztuží není počítáno.

Minimální krytí

Třída konstrukce: S4

c_{min} = max($c_{min,b}$; $c_{min,dur}$; 10) = max(32; 25; 10) = 32 mm
c_{nom} = c_{min} + Δc_{dev} = 32 + 10 = 42 mm

1.2 Výsledky

Posouzení min. a max. stupně vyztužení

Deska (tažená výztuž):
$\rho_{s,min}$ = 0.00139 ≤ ρ_s = 0.00432 ≤ $\rho_{s,max}$ = 0.04 ⇒ **VYHOVUJE**

Posouzení mezního stavu únosnosti

č.	Název	N_{Ed} N_{Rd} [kN]	V_{Edz} V_{Rdz} [kN]	V_{Edy} V_{Rdy} [kN]	M_{Edy} M_{Rdy} [kNm]	M_{Edz} M_{Rdz} [kNm]	T_{Ed} T_{Rd} [kNm]	Posouzení
1	Zat. případ 1	0.00	0.00	0.00	11506.00	0.00	0.00	Vyhovuje
		0.00	0.00	0.00	15139.29	0.00	0.00	
2	Zat. případ 2	0.00	0.00	0.00	-1502.00	0.00	0.00	Vyhovuje
		0.00	0.00	0.00	-2452.70	0.00	0.00	

Mezní stav únosnosti (ohyb, smyk, kroucení) VYHOVUJE

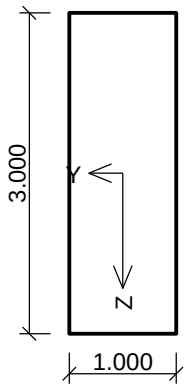
Celkové posouzení - Průřez VYHOVUJE

Zaklad 4 - smer Y (1bm)

2.1 Vstupní data

Typ prvku: deska
Prostředí: XC2, XA1
Požadovaná třída betonu: C25/30

Průřez



Materiály
Beton : C 30/37
f_{ck} = 30.0 MPa; f_{ct} = 2.9 MPa; E_{cm} = 33000.0 MPa

Ocel podélná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Ocel příčná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Vnitřní síly - návrhová (MSÚ)

č.	Název zatěžovacího případu	N_{Ed} [kN]	V_{Edz} [kN]	V_{Edy} [kN]	M_{Edy} [kNm]	M_{Edz} [kNm]	T_{Ed} [kNm]	QP koef. [-]
1	Zat. případ 1	0.00	0.00	0.00	10577.00	0.00	0.00	1.000
2	Zat. případ 2	0.00	0.00	0.00	-1314.00	0.00	0.00	1.000

Vyztužení průřezu

Počet	Profil [mm]	Krytí [mm]	Umístění
5	18.0	85.0	horní výztuž
2	12.0	500.0	horní výztuž
2	12.0	1000.0	horní výztuž
10	32.0	100.0	dolní výztuž
2	12.0	500.0	dolní výztuž
2	12.0	1000.0	dolní výztuž
5	32.0	200.0	dolní výztuž

S tlačenou výztuží není počítáno.

Minimální krytí

Třída konstrukce: S4

c_{min} = max($c_{min,b}$; $c_{min,dur}$; 10) = max(32; 25; 10) = 32 mm
c_{nom} = c_{min} + Δc_{dev} = 32 + 10 = 42 mm

2.2 Výsledky

Posouzení min. a max. stupně vyztužení

Deska (tažená výztuž):
$\rho_{s,min}$ = 0.00139 ≤ ρ_s = 0.00432 ≤ $\rho_{s,max}$ = 0.04 ⇒ **VYHOVUJE**

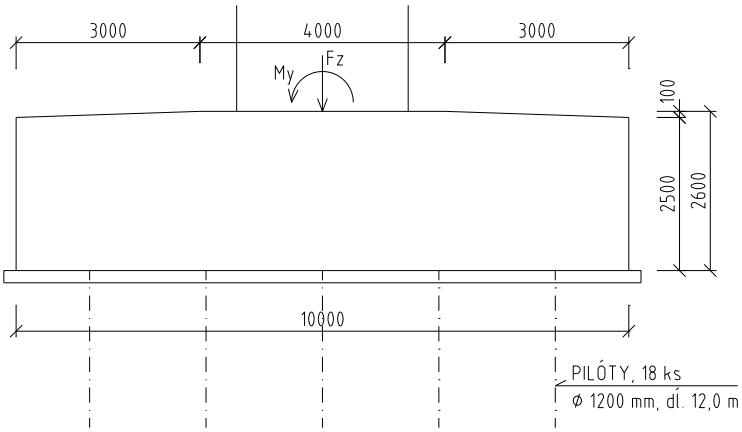
Posouzení mezního stavu únosnosti

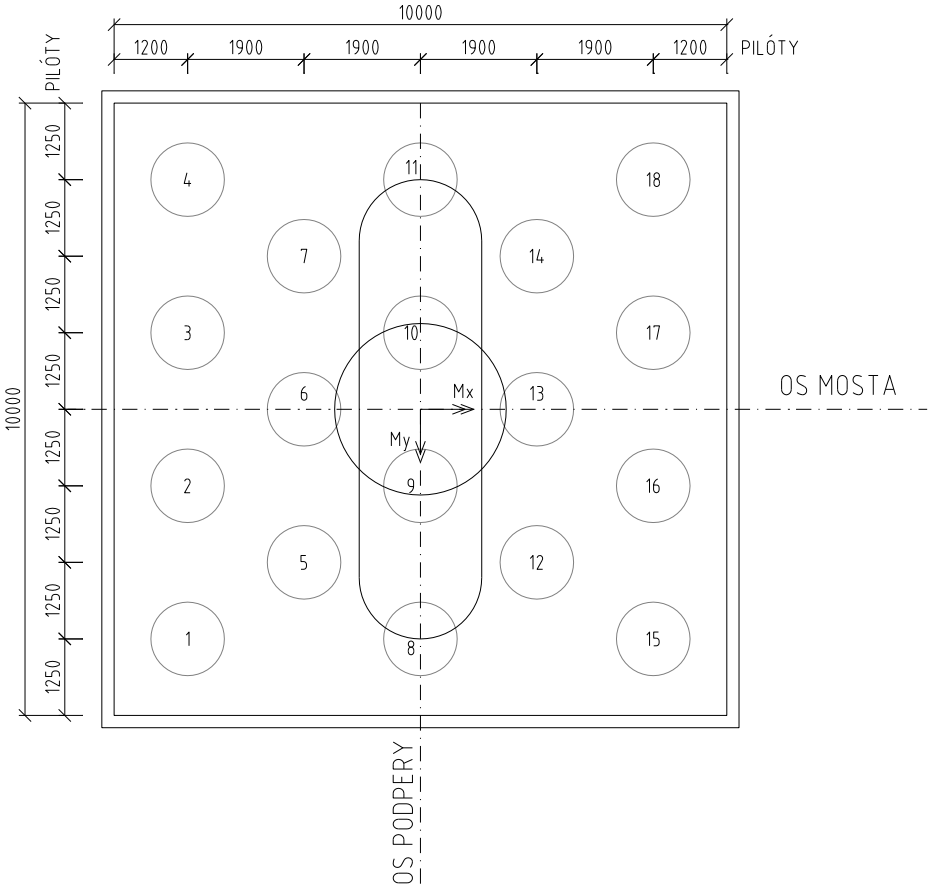
č.	Název	N_{Ed} N_{Rd} [kN]	V_{Edz} V_{Rdz} [kN]	V_{Edy} V_{Rdy} [kN]	M_{Edy} M_{Rdy} [kNm]	M_{Edz} M_{Rdz} [kNm]	T_{Ed} T_{Rd} [kNm]	Posouzení
1	Zat. případ 1	0.00	0.00	0.00	10577.00	0.00	0.00	Vyhovuje
		0.00	0.00	0.00	15056.55	0.00	0.00	
2	Zat. případ 2	0.00	0.00	0.00	-1314.00	0.00	0.00	Vyhovuje
		0.00	0.00	0.00	-2487.53	0.00	0.00	

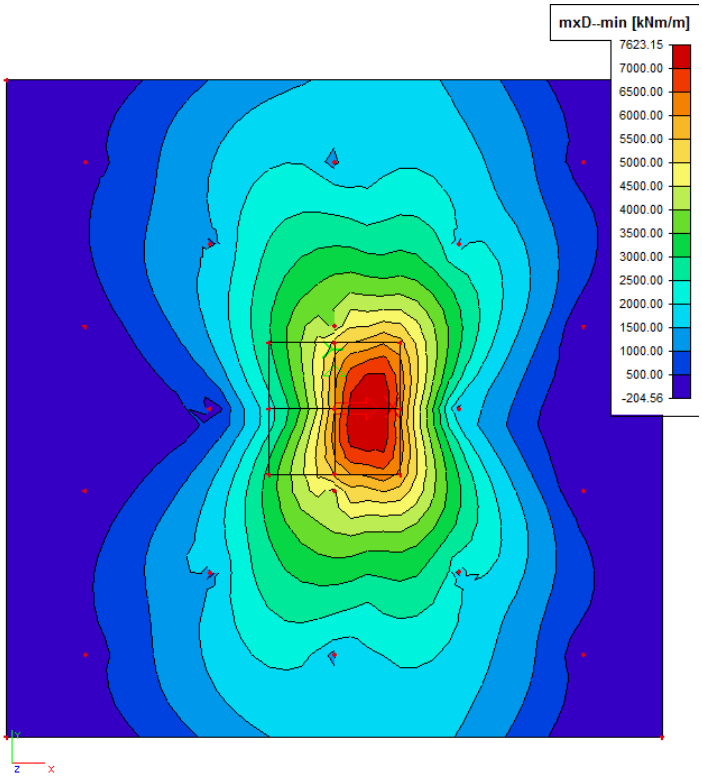
Mezní stav únosnosti (ohyb, smyk, kroucení) VYHOVUJE

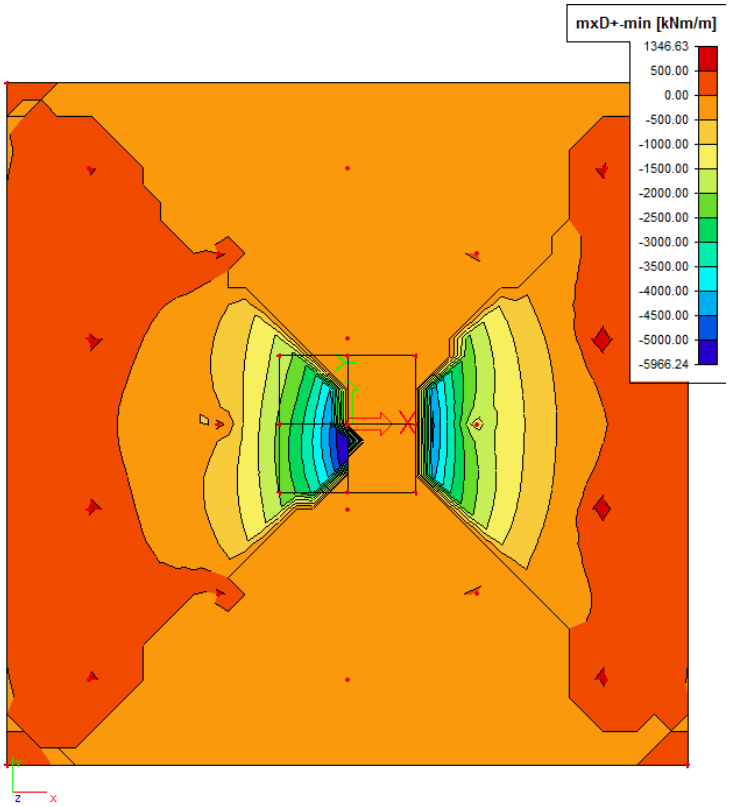
Celkové posouzení - Průřez VYHOVUJE

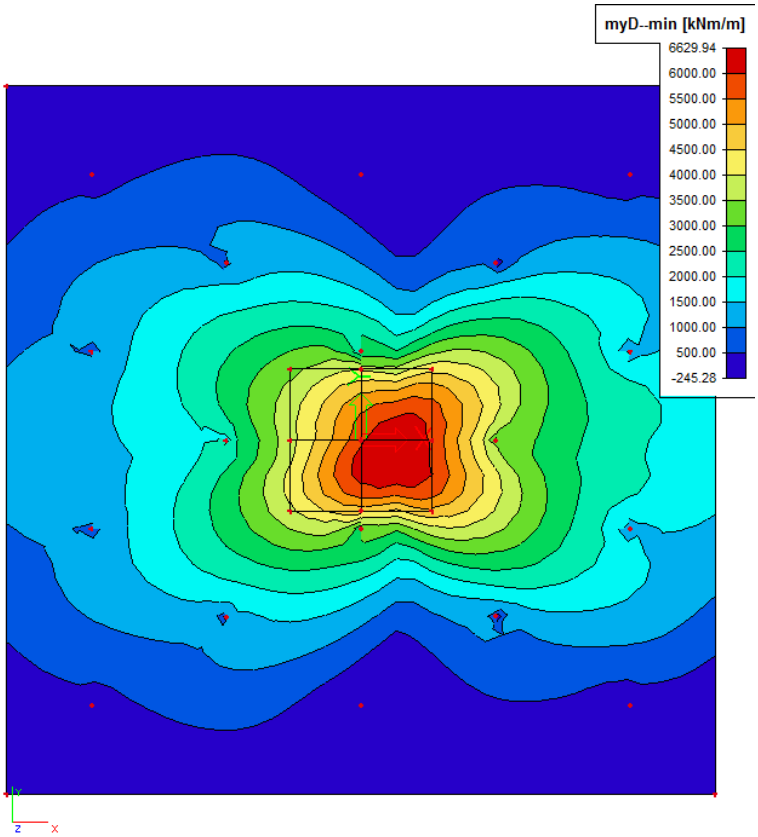
6.4.8 Posúdenie – základ č. 5

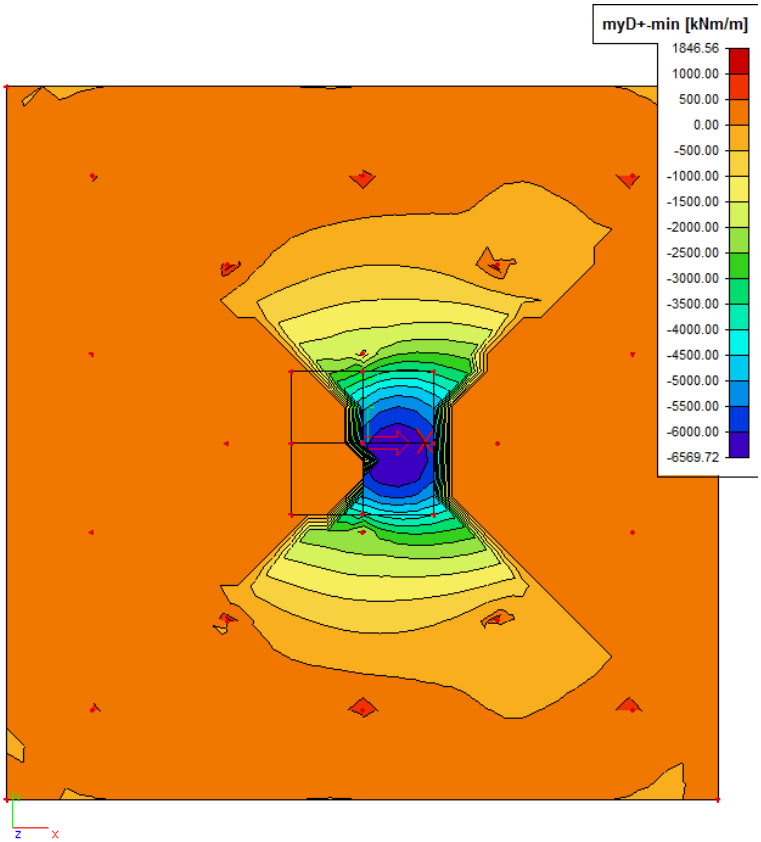





mxD--min [kNm/m]
7623.15
7000.00
6500.00
6000.00
5500.00
5000.00
4500.00
4000.00
3500.00
3000.00
2500.00
2000.00
1500.00
1000.00
500.00
-204.56


mxD+-min [kNm/m]
1346.63
500.00
0.00
-500.00
-1000.00
-1500.00
-2000.00
-2500.00
-3000.00
-3500.00
-4000.00
-4500.00
-5000.00
-5966.24


myD--min [kNm/m]
6629.94
6000.00
5500.00
5000.00
4500.00
4000.00
3500.00
3000.00
2500.00
2000.00
1500.00
1000.00
500.00
-245.28

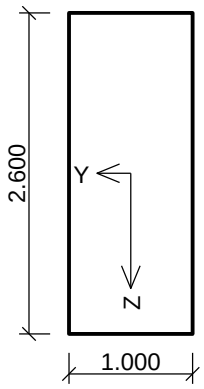

myD+-min [kNm/m]
1846.56
1000.00
500.00
0.00
-500.00
-1000.00
-1500.00
-2000.00
-2500.00
-3000.00
-3500.00
-4000.00
-4500.00
-5000.00
-5500.00
-6000.00
-6569.72

Zaklad 5 - smer X (1bm)

1.1 Vstupní data

Typ prvku: deska
Prostředí: XC2, XA1
Požadovaná třída betonu: C25/30

Průřez



Materiály
Beton : C 30/37
f_{ck} = 30.0 MPa; f_{ct} = 2.9 MPa; E_{cm} = 33000.0 MPa

Ocel podélná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Ocel příčná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Vnitřní síly - návrhová (MSÚ)

č.	Název zatěžovacího případu	N_{Ed} [kN]	V_{Edz} [kN]	V_{Edy} [kN]	M_{Edy} [kNm]	M_{Edz} [kNm]	T_{Ed} [kNm]	QP koef. [-]
1	Zat. případ 1	0.00	0.00	0.00	7623.00	0.00	0.00	1.000
2	Zat. případ 2	0.00	0.00	0.00	-1347.00	0.00	0.00	1.000

Vyztužení průřezu

Počet	Profil [mm]	Krytí [mm]	Umístění
5	18.0	95.0	horní výztuž
2	12.0	500.0	horní výztuž
2	12.0	1000.0	horní výztuž
10	32.0	85.0	dolní výztuž
2	12.0	500.0	dolní výztuž
2	12.0	1000.0	dolní výztuž

S tlačenou výztuží není počítáno.

Minimální krytí

Třída konstrukce: S4

c_{min} = max($c_{min,b}$; $c_{min,dur}$; 10) = max(32; 25; 10) = 32 mm
c_{nom} = c_{min} + Δc_{dev} = 32 + 10 = 42 mm

1.2 Výsledky

Posouzení min. a max. stupně vyztužení

Deska (tažená výztuž):
$\rho_{s,min}$ = 0.00116 ≤ ρ_s = 0.00122 ≤ $\rho_{s,max}$ = 0.04 ⇒ **VYHOVUJE**

Posouzení mezního stavu únosnosti

č.	Název	N_{Ed} N_{Rd} [kN]	V_{Edz} V_{Rdz} [kN]	V_{Edy} V_{Rdy} [kN]	M_{Edy} M_{Rdy} [kNm]	M_{Edz} M_{Rdz} [kNm]	T_{Ed} T_{Rd} [kNm]	Posouzení
1	Zat. případ 1	0.00	0.00	0.00	7623.00	0.00	0.00	Vyhovuje
		0.00	0.00	0.00	9130.09	0.00	0.00	
2	Zat. případ 2	0.00	0.00	0.00	-1347.00	0.00	0.00	Vyhovuje
		0.00	0.00	0.00	-2001.24	0.00	0.00	

Mezní stav únosnosti (ohyb, smyk, kroucení) VYHOVUJE

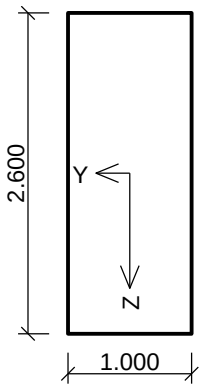
Celkové posouzení - Průřez VYHOVUJE

Zaklad 5 - smer Y (1bm)

2.1 Vstupní data

Typ prvku: deska
Prostředí: XC2, XA1
Požadovaná třída betonu: C25/30

Průřez



Materiály
Beton : C 30/37
f_{ck} = 30.0 MPa; f_{ct} = 2.9 MPa; E_{cm} = 33000.0 MPa

Ocel podélná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Ocel příčná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Vnitřní síly - návrhová (MSÚ)

č.	Název zatěžovacího případu	N_{Ed} [kN]	V_{Edz} [kN]	V_{Edy} [kN]	M_{Edy} [kNm]	M_{Edz} [kNm]	T_{Ed} [kNm]	QP koef. [-]
1	Zat. případ 1	0.00	0.00	0.00	6630.00	0.00	0.00	1.000
2	Zat. případ 2	0.00	0.00	0.00	-1847.00	0.00	0.00	1.000

Vyztužení průřezu

Počet	Profil [mm]	Krytí [mm]	Umístění
5	18.0	85.0	horní výztuž
2	12.0	500.0	horní výztuž
2	12.0	1000.0	horní výztuž
10	32.0	100.0	dolní výztuž
2	12.0	500.0	dolní výztuž
2	12.0	1000.0	dolní výztuž

S tlačenou výztuží není počítáno.

Minimální krytí

Třída konstrukce: S4

c_{min} = max($c_{min,b}$; $c_{min,dur}$; 10) = max(32; 25; 10) = 32 mm
c_{nom} = c_{min} + Δc_{dev} = 32 + 10 = 42 mm

2.2 Výsledky

Posouzení min. a max. stupně vyztužení

Deska (tažená výztuž):
$\rho_{s,min}$ = 0.00116 ≤ ρ_s = 0.0014 ≤ $\rho_{s,max}$ = 0.04 ⇒ **VYHOVUJE**

Posouzení mezního stavu únosnosti

č.	Název	N_{Ed} N_{Rd} [kN]	V_{Edz} V_{Rdz} [kN]	V_{Edy} V_{Rdy} [kN]	M_{Edy} M_{Rdy} [kNm]	M_{Edz} M_{Rdz} [kNm]	T_{Ed} T_{Rd} [kNm]	Posouzení
1	Zat. případ 1	0.00	0.00	0.00	6630.00	0.00	0.00	Vyhovuje
		0.00	0.00	0.00	9074.14	0.00	0.00	
2	Zat. případ 2	0.00	0.00	0.00	-1847.00	0.00	0.00	Vyhovuje
		0.00	0.00	0.00	-2021.40	0.00	0.00	

Mezní stav únosnosti (ohyb, smyk, kroucení) VYHOVUJE

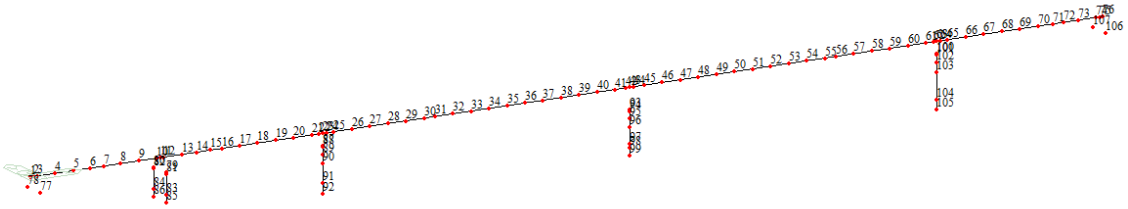
Celkové posouzení - Průřez VYHOVUJE

7. Zakladanie

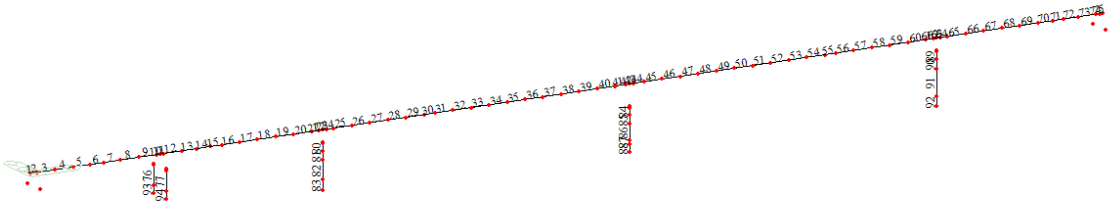
7.1 Použitý materiál

betón – pilóty (ϕ1200 mm) - C 20/25 XC2,XA1 (SK)-Cl0,4-Dmax22-S3
betonárska výstuž - B 500 B

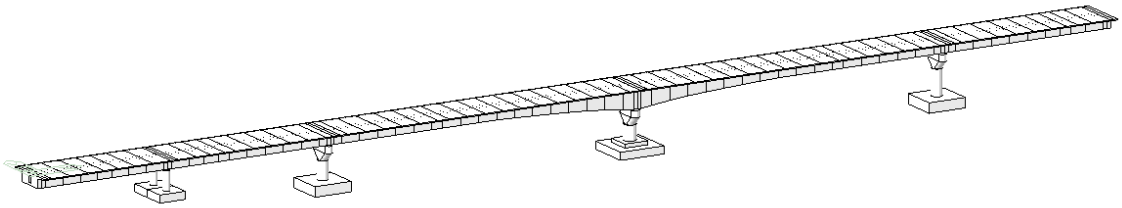
7.2 Statická schéma



Obrázok 17 Nodes - body



Obrázok 18 Elements - prvky



Obrázok 19

7.3 Kombinácie

(obdobne ako pri spodnej stavbe pri pilieroch)

```
LIST OF LOAD COMBINATIONS
=================================================================================================
NUM  NAME          ACTIVE              TYPE
                LOADCASE(FACTOR) +             LOADCASE(FACTOR) +             LOADCASE(FACTOR)
=================================================================================================
1    LCB1          Strength/Stress     Add
           vlastna tiaz( 1.350) +              zvrsok( 1.350) +              vozovka( 1.400)
 +       vietor priecny( 0.900) +          brzdne sily( 1.350) +   trenie v loziskach( 1.350)
 +              LM 1_CH( 1.350) +             sadanie( 1.200)
-------------------------------------------------------------------------------------------------
2    LCB2          Strength/Stress     Add
           vlastna tiaz( 1.350) +              zvrsok( 1.350) +              vozovka( 1.400)
 +       vietor priecny( 0.900) +          brzdne sily(-1.350) +   trenie v loziskach( 1.350)
 +              LM 1_CH( 1.350) +             sadanie( 1.200)
-------------------------------------------------------------------------------------------------
3    LCB3          Strength/Stress     Add
           vlastna tiaz( 1.350) +              zvrsok( 1.350) +              vozovka( 1.400)
 +       vietor priecny(-0.900) +          brzdne sily(-1.350) +   trenie v loziskach( 1.350)
 +              LM 1_CH( 1.350) +             sadanie( 1.200)
-------------------------------------------------------------------------------------------------
4    LCB4          Strength/Stress     Add
           vlastna tiaz( 1.350) +              zvrsok( 1.350) +              vozovka( 1.400)
 +       vietor priecny(-0.900) +          brzdne sily( 1.350) +   trenie v loziskach( 1.350)
 +              LM 1_CH( 1.350) +             sadanie( 1.200)
-------------------------------------------------------------------------------------------------
5    LCB5          Strength/Stress     Add
           vlastna tiaz( 1.350) +              zvrsok( 1.350) +              vozovka( 1.400)
 +       vietor priecny( 1.500) +             LM 1_FR( 1.000) +              sadanie( 1.200)
-------------------------------------------------------------------------------------------------
6    LCB6          Strength/Stress     Add
           vlastna tiaz( 1.350) +              zvrsok( 1.350) +              vozovka( 1.400)
 +       vietor priecny(-1.500) +             LM 1_FR( 1.000) +              sadanie( 1.200)
-------------------------------------------------------------------------------------------------
7    LCB7          Strength/Stress     Add
           vlastna tiaz( 1.000) +              zvrsok( 1.000) +              vozovka( 1.000)
 +       vietor priecny( 0.900) +          brzdne sily( 1.350) +   trenie v loziskach( 1.350)
 +              LM 1_CH( 1.350) +             sadanie( 1.000)
-------------------------------------------------------------------------------------------------
8    LCB8          Strength/Stress     Add
           vlastna tiaz( 1.000) +              zvrsok( 1.000) +              vozovka( 1.000)
 +       vietor priecny( 0.900) +          brzdne sily(-1.350) +   trenie v loziskach( 1.350)
 +              LM 1_CH( 1.350) +             sadanie( 1.000)
-------------------------------------------------------------------------------------------------
9    LCB9          Strength/Stress     Add
           vlastna tiaz( 1.000) +              zvrsok( 1.000) +              vozovka( 1.000)
 +       vietor priecny(-0.900) +          brzdne sily(-1.350) +   trenie v loziskach( 1.350)
 +              LM 1_CH( 1.350) +             sadanie( 1.000)
-------------------------------------------------------------------------------------------------
10   LCB10         Strength/Stress     Add
           vlastna tiaz( 1.000) +              zvrsok( 1.000) +              vozovka( 1.000)
 +       vietor priecny(-0.900) +          brzdne sily( 1.350) +   trenie v loziskach( 1.350)
 +              LM 1_CH( 1.350) +             sadanie( 1.000)
-------------------------------------------------------------------------------------------------
11   LCB11         Strength/Stress     Add
           vlastna tiaz( 1.000) +              zvrsok( 1.000) +              vozovka( 1.000)
 +       vietor priecny( 1.500) +             LM 1_FR( 1.000) +              sadanie( 1.000)
-------------------------------------------------------------------------------------------------
12   LCB12         Strength/Stress     Add
           vlastna tiaz( 1.000) +              zvrsok( 1.000) +              vozovka( 1.000)
 +       vietor priecny(-1.500) +             LM 1_FR( 1.000) +              sadanie( 1.000)
-------------------------------------------------------------------------------------------------
13   LCB13         Strength/Stress     Add
           vlastna tiaz( 1.350) +              zvrsok( 1.350) +              vozovka( 1.400)
 +      vietor pozdlzny( 0.900) +          brzdne sily( 1.350) +   trenie v loziskach( 1.350)
 +              LM 1_CH( 1.350) +             sadanie( 1.200)
-------------------------------------------------------------------------------------------------
14   LCB14         Strength/Stress     Add
           vlastna tiaz( 1.350) +              zvrsok( 1.350) +              vozovka( 1.400)
 +      vietor pozdlzny( 0.900) +          brzdne sily(-1.350) +   trenie v loziskach( 1.350)
 +              LM 1_CH( 1.350) +             sadanie( 1.200)
-------------------------------------------------------------------------------------------------
15   LCB15         Strength/Stress     Add
           vlastna tiaz( 1.350) +              zvrsok( 1.350) +              vozovka( 1.400)
 +      vietor pozdlzny(-0.900) +          brzdne sily(-1.350) +   trenie v loziskach( 1.350)
 +              LM 1_CH( 1.350) +             sadanie( 1.200)
-------------------------------------------------------------------------------------------------
16   LCB16         Strength/Stress     Add
           vlastna tiaz( 1.350) +              zvrsok( 1.350) +              vozovka( 1.400)
 +      vietor pozdlzny(-0.900) +          brzdne sily( 1.350) +   trenie v loziskach( 1.350)
 +              LM 1_CH( 1.350) +             sadanie( 1.200)
-------------------------------------------------------------------------------------------------
```

```
17   LCB17         Strength/Stress    Add
           vlastna tiaz( 1.350) +               zvrsok( 1.350) +              vozovka( 1.400)
 +      vietor pozdlzny( 1.500) +              LM 1_FR( 1.000) +              sadanie( 1.200)
-----------------------------------------------------------------------------------------------
18   LCB18         Strength/Stress    Add
           vlastna tiaz( 1.350) +               zvrsok( 1.350) +              vozovka( 1.400)
 +      vietor pozdlzny(-1.500) +              LM 1_FR( 1.000) +              sadanie( 1.200)
-----------------------------------------------------------------------------------------------
19   LCB19         Strength/Stress    Add
           vlastna tiaz( 1.000) +               zvrsok( 1.000) +              vozovka( 1.000)
 +      vietor pozdlzny( 0.900) +          brzdne sily( 1.350) +   trenie v loziskach( 1.350)
 +             LM 1_CH( 1.350) +              sadanie( 1.000)
-----------------------------------------------------------------------------------------------
20   LCB20         Strength/Stress    Add
           vlastna tiaz( 1.000) +               zvrsok( 1.000) +              vozovka( 1.000)
 +      vietor pozdlzny( 0.900) +          brzdne sily(-1.350) +   trenie v loziskach( 1.350)
 +             LM 1_CH( 1.350) +              sadanie( 1.000)
-----------------------------------------------------------------------------------------------
21   LCB21         Strength/Stress    Add
           vlastna tiaz( 1.000) +               zvrsok( 1.000) +              vozovka( 1.000)
 +      vietor pozdlzny(-0.900) +          brzdne sily(-1.350) +   trenie v loziskach( 1.350)
 +             LM 1_CH( 1.350) +              sadanie( 1.000)
-----------------------------------------------------------------------------------------------
22   LCB22         Strength/Stress    Add
           vlastna tiaz( 1.000) +               zvrsok( 1.000) +              vozovka( 1.000)
 +      vietor pozdlzny(-0.900) +          brzdne sily( 1.350) +   trenie v loziskach( 1.350)
 +             LM 1_CH( 1.350) +              sadanie( 1.000)
-----------------------------------------------------------------------------------------------
23   LCB23         Strength/Stress    Add
           vlastna tiaz( 1.000) +               zvrsok( 1.000) +              vozovka( 1.000)
 +      vietor pozdlzny( 1.500) +              LM 1_FR( 1.000) +              sadanie( 1.000)
-----------------------------------------------------------------------------------------------
24   LCB24         Strength/Stress    Add
           vlastna tiaz( 1.000) +               zvrsok( 1.000) +              vozovka( 1.000)
 +      vietor pozdlzny(-1.500) +              LM 1_FR( 1.000) +              sadanie( 1.000)
-----------------------------------------------------------------------------------------------
```

7.4 Zaťaženie v mieste základovej škáry

Podpera 2 (jednosmerné ložisko)

Node	Load	FX (kN)	FY (kN)	FZ (kN)	MX (kN*m)	MY (kN*m)	MZ (kN*m)
85	LCB1(max)	-502	-86	14902	2236	-3515	0
85	LCB2(max)	-502	-86	14851	2236	-3515	0
85	LCB3(max)	-502	253	15276	-138	-3515	0
85	LCB4(max)	-502	253	15328	-138	-3515	0
85	LCB5(max)	0	-253	12818	2369	0	0
85	LCB6(max)	0	312	13527	-1587	0	0
85	LCB7(max)	-502	-86	11792	2236	-3515	0
85	LCB8(max)	-502	-86	11740	2236	-3515	0
85	LCB9(max)	-502	253	12166	-138	-3515	0
85	LCB10(max)	-502	253	12217	-138	-3515	0
85	LCB11(max)	0	-253	9707	2370	0	0
85	LCB12(max)	0	312	10416	-1587	0	0
85	LCB13(max)	-502	84	15122	1049	-3515	0
85	LCB14(max)	-502	84	15071	1049	-3515	0
85	LCB15(max)	-502	84	15057	1049	-3515	0
85	LCB16(max)	-502	84	15108	1049	-3515	0
85	LCB17(max)	0	29	13184	391	0	0
85	LCB18(max)	0	29	13160	391	0	0
85	LCB19(max)	-502	84	12011	1049	-3515	0
85	LCB20(max)	-502	84	11960	1049	-3515	0
85	LCB21(max)	-502	84	11946	1049	-3515	0
85	LCB22(max)	-502	84	11997	1049	-3515	0
85	LCB23(max)	0	29	10073	391	0	0
85	LCB24(max)	0	29	10050	391	0	0
85	LCB1(min)	-502	-319	9425	600	-3515	0
85	LCB2(min)	-502	-319	9373	600	-3515	0
85	LCB3(min)	-502	20	9799	-1774	-3515	0
85	LCB4(min)	-502	20	9850	-1774	-3515	0
85	LCB5(min)	0	-338	10501	1773	0	0
85	LCB6(min)	0	227	11210	-2184	0	0
85	LCB7(min)	-502	-319	6405	600	-3515	0
85	LCB8(min)	-502	-319	6353	600	-3515	0
85	LCB9(min)	-502	20	6779	-1774	-3515	0
85	LCB10(min)	-502	20	6830	-1774	-3515	0
85	LCB11(min)	0	-339	7481	1773	0	0
85	LCB12(min)	0	227	8190	-2184	0	0
85	LCB13(min)	-502	-150	9644	-587	-3515	0
85	LCB14(min)	-502	-150	9593	-587	-3515	0
85	LCB15(min)	-502	-150	9579	-587	-3515	0
85	LCB16(min)	-502	-150	9630	-587	-3515	0
85	LCB17(min)	0	-56	10867	-205	0	0
85	LCB18(min)	0	-56	10844	-205	0	0
85	LCB19(min)	-502	-150	6625	-587	-3515	0
85	LCB20(min)	-502	-150	6573	-587	-3515	0
85	LCB21(min)	-502	-150	6559	-587	-3515	0
85	LCB22(min)	-502	-150	6611	-587	-3515	0
85	LCB23(min)	0	-56	7847	-205	0	0
85	LCB24(min)	0	-56	7824	-205	0	0

Podpera 2 (všesmerné ložisko)

Node	Load	FX (kN)	FY (kN)	FZ (kN)	MX (kN*m)	MY (kN*m)	MZ (kN*m)
86	LCB1(max)	-502	0	16589	0	-3515	0
86	LCB2(max)	-502	0	16537	0	-3515	0
86	LCB3(max)	-502	0	16112	0	-3515	0
86	LCB4(max)	-502	0	16163	0	-3515	0
86	LCB5(max)	0	0	14037	0	0	0
86	LCB6(max)	0	0	13328	0	0	0
86	LCB7(max)	-502	0	13478	0	-3515	0
86	LCB8(max)	-502	0	13426	0	-3515	0
86	LCB9(max)	-502	0	13001	0	-3515	0
86	LCB10(max)	-502	0	13053	0	-3515	0
86	LCB11(max)	0	0	10926	0	0	0
86	LCB12(max)	0	0	10217	0	0	0
86	LCB13(max)	-502	0	16383	0	-3515	0
86	LCB14(max)	-502	0	16332	0	-3515	0
86	LCB15(max)	-502	0	16318	0	-3515	0
86	LCB16(max)	-502	0	16369	0	-3515	0
86	LCB17(max)	0	0	13694	0	0	0
86	LCB18(max)	0	0	13671	0	0	0
86	LCB19(max)	-502	0	13272	0	-3515	0
86	LCB20(max)	-502	0	13221	0	-3515	0
86	LCB21(max)	-502	0	13207	0	-3515	0
86	LCB22(max)	-502	0	13258	0	-3515	0
86	LCB23(max)	0	0	10583	0	0	0
86	LCB24(max)	0	0	10560	0	0	0
86	LCB1(min)	-502	0	10598	0	-3515	0
86	LCB2(min)	-502	0	10546	0	-3515	0
86	LCB3(min)	-502	0	10121	0	-3515	0
86	LCB4(min)	-502	0	10173	0	-3515	0
86	LCB5(min)	0	0	11493	0	0	0
86	LCB6(min)	0	0	10784	0	0	0
86	LCB7(min)	-502	0	7578	0	-3515	0
86	LCB8(min)	-502	0	7527	0	-3515	0
86	LCB9(min)	-502	0	7101	0	-3515	0
86	LCB10(min)	-502	0	7153	0	-3515	0
86	LCB11(min)	0	0	8473	0	0	0
86	LCB12(min)	0	0	7764	0	0	0
86	LCB13(min)	-502	0	10392	0	-3515	0
86	LCB14(min)	-502	0	10341	0	-3515	0
86	LCB15(min)	-502	0	10327	0	-3515	0
86	LCB16(min)	-502	0	10378	0	-3515	0
86	LCB17(min)	0	0	11150	0	0	0
86	LCB18(min)	0	0	11127	0	0	0
86	LCB19(min)	-502	0	7372	0	-3515	0
86	LCB20(min)	-502	0	7321	0	-3515	0
86	LCB21(min)	-502	0	7307	0	-3515	0
86	LCB22(min)	-502	0	7358	0	-3515	0
86	LCB23(min)	0	0	8130	0	0	0
86	LCB24(min)	0	0	8107	0	0	0

Podpera 3

Node	Load	FX (kN)	FY (kN)	FZ (kN)	MX (kN*m)	MY (kN*m)	MZ (kN*m)
92	LCB1(max)	-1998	-151	47177	5697	-23177	0
92	LCB2(max)	-1998	-151	47403	5697	-23177	0
92	LCB3(max)	-1998	465	47403	-1452	-23177	0
92	LCB4(max)	-1998	465	47177	-1452	-23177	0
92	LCB5(max)	0	-455	43288	6706	0	0
92	LCB6(max)	0	572	43288	-5210	0	0
92	LCB7(max)	-1998	-151	36498	5697	-23177	0
92	LCB8(max)	-1998	-151	36724	5697	-23177	0
92	LCB9(max)	-1998	465	36724	-1452	-23177	0
92	LCB10(max)	-1998	465	36498	-1452	-23177	0
92	LCB11(max)	0	-455	32609	6706	0	0
92	LCB12(max)	0	572	32609	-5209	0	0
92	LCB13(max)	-1998	157	47146	2122	-23177	0
92	LCB14(max)	-1998	157	47372	2122	-23177	0
92	LCB15(max)	-1998	157	47434	2122	-23177	0
92	LCB16(max)	-1998	157	47208	2122	-23177	0
92	LCB17(max)	0	58	43237	748	0	0
92	LCB18(max)	0	58	43340	748	0	0
92	LCB19(max)	-1998	157	36467	2122	-23177	0
92	LCB20(max)	-1998	157	36693	2122	-23177	0
92	LCB21(max)	-1998	157	36755	2122	-23177	0
92	LCB22(max)	-1998	157	36529	2122	-23177	0
92	LCB23(max)	0	58	32557	748	0	0
92	LCB24(max)	0	58	32660	748	0	0
92	LCB1(min)	-1998	-491	38863	1753	-23177	0
92	LCB2(min)	-1998	-491	39089	1753	-23177	0
92	LCB3(min)	-1998	125	39089	-5396	-23177	0
92	LCB4(min)	-1998	125	38863	-5396	-23177	0
92	LCB5(min)	0	-578	39580	5282	0	0
92	LCB6(min)	0	449	39580	-6633	0	0
92	LCB7(min)	-1998	-491	28367	1753	-23177	0
92	LCB8(min)	-1998	-491	28593	1753	-23177	0
92	LCB9(min)	-1998	125	28593	-5396	-23177	0
92	LCB10(min)	-1998	125	28367	-5396	-23177	0
92	LCB11(min)	0	-578	29084	5282	0	0
92	LCB12(min)	0	449	29084	-6633	0	0
92	LCB13(min)	-1998	-183	38832	-1821	-23177	0
92	LCB14(min)	-1998	-183	39058	-1821	-23177	0
92	LCB15(min)	-1998	-183	39120	-1821	-23177	0
92	LCB16(min)	-1998	-183	38894	-1821	-23177	0
92	LCB17(min)	0	-64	39528	-676	0	0
92	LCB18(min)	0	-64	39631	-676	0	0
92	LCB19(min)	-1998	-183	28337	-1821	-23177	0
92	LCB20(min)	-1998	-183	28563	-1821	-23177	0
92	LCB21(min)	-1998	-183	28624	-1821	-23177	0
92	LCB22(min)	-1998	-183	28398	-1821	-23177	0
92	LCB23(min)	0	-64	29032	-676	0	0
92	LCB24(min)	0	-64	29135	-676	0	0

Podpera 4

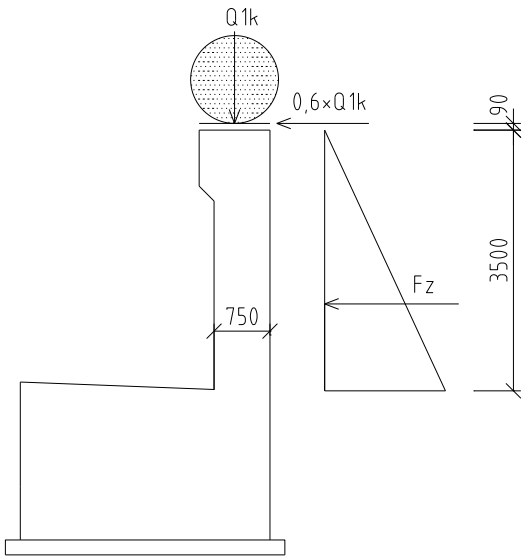
Node	Load	FX (kN)	FY (kN)	FZ (kN)	MX (kN*m)	MY (kN*m)	MZ (kN*m)
99	LCB1(max)	-38	-342	74269	28278	27788	363
99	LCB2(max)	2392	-342	74265	28278	50383	363
99	LCB3(max)	2392	765	74265	11213	50383	591
99	LCB4(max)	-38	765	74269	11213	27788	591
99	LCB5(max)	0	-848	69135	20736	14761	-20
99	LCB6(max)	0	998	69135	-7706	14761	359
99	LCB7(max)	-38	-342	56996	28278	26640	363
99	LCB8(max)	2392	-342	56992	28278	49235	363
99	LCB9(max)	2392	765	56992	11213	49235	591
99	LCB10(max)	-38	765	56996	11213	26640	591
99	LCB11(max)	0	-848	51862	20736	13613	-20
99	LCB12(max)	0	998	51862	-7706	13613	359
99	LCB13(max)	-412	212	74270	19745	24449	477
99	LCB14(max)	2018	212	74266	19745	47045	477
99	LCB15(max)	2766	212	74265	19745	53722	477
99	LCB16(max)	336	212	74268	19745	31127	477
99	LCB17(max)	-624	75	69137	6515	9197	170
99	LCB18(max)	624	75	69134	6515	20326	170
99	LCB19(max)	-412	212	56997	19745	23301	477
99	LCB20(max)	2018	212	56993	19745	45896	477
99	LCB21(max)	2766	212	56992	19745	52573	477
99	LCB22(max)	336	212	56995	19745	29978	477
99	LCB23(max)	-624	75	51864	6515	8048	170
99	LCB24(max)	624	75	51861	6515	19177	170
99	LCB1(min)	-38	-682	65165	-3126	-26470	-625
99	LCB2(min)	2392	-682	65161	-3126	-3875	-625
99	LCB3(min)	2392	426	65161	-20191	-3875	-397
99	LCB4(min)	-38	426	65165	-20191	-26470	-397
99	LCB5(min)	0	-967	65415	10538	-9589	-369
99	LCB6(min)	0	880	65415	-17904	-9589	11
99	LCB7(min)	-38	-682	48037	-3126	-26538	-625
99	LCB8(min)	2392	-682	48033	-3126	-3942	-625
99	LCB9(min)	2392	426	48033	-20191	-3942	-397
99	LCB10(min)	-38	426	48037	-20191	-26538	-397
99	LCB11(min)	0	-967	48287	10538	-9657	-369
99	LCB12(min)	0	880	48287	-17904	-9657	11
99	LCB13(min)	-412	-128	65166	-11659	-29808	-511
99	LCB14(min)	2018	-128	65162	-11659	-7213	-511
99	LCB15(min)	2766	-128	65161	-11659	-536	-511
99	LCB16(min)	336	-128	65164	-11659	-23131	-511
99	LCB17(min)	-624	-44	65416	-3683	-15154	-179
99	LCB18(min)	624	-44	65414	-3683	-4025	-179
99	LCB19(min)	-412	-128	48038	-11659	-29876	-511
99	LCB20(min)	2018	-128	48034	-11659	-7281	-511
99	LCB21(min)	2766	-128	48033	-11659	-604	-511
99	LCB22(min)	336	-128	48036	-11659	-23199	-511
99	LCB23(min)	-624	-44	48288	-3683	-15222	-179
99	LCB24(min)	624	-44	48286	-3683	-4093	-179

Podpera 5

Node	Load	FX (kN)	FY (kN)	FZ (kN)	MX (kN*m)	MY (kN*m)	MZ (kN*m)
105	LCB1(max)	1913	-108	49103	5625	26016	0
105	LCB2(max)	1913	-108	48902	5625	26016	0
105	LCB3(max)	1913	367	48902	-831	26016	0
105	LCB4(max)	1913	367	49103	-831	26016	0
105	LCB5(max)	0	-348	45110	6219	0	0
105	LCB6(max)	0	443	45110	-4542	0	0
105	LCB7(max)	1913	-108	37949	5625	26016	0
105	LCB8(max)	1913	-108	37748	5625	26016	0
105	LCB9(max)	1913	367	37748	-831	26016	0
105	LCB10(max)	1913	367	37949	-831	26016	0
105	LCB11(max)	0	-348	33956	6219	0	0
105	LCB12(max)	0	443	33956	-4542	0	0
105	LCB13(max)	1913	130	49130	2397	26016	0
105	LCB14(max)	1913	130	48929	2397	26016	0
105	LCB15(max)	1913	130	48875	2397	26016	0
105	LCB16(max)	1913	130	49076	2397	26016	0
105	LCB17(max)	0	48	45156	838	0	0
105	LCB18(max)	0	48	45065	838	0	0
105	LCB19(max)	1913	130	37976	2397	26016	0
105	LCB20(max)	1913	130	37775	2397	26016	0
105	LCB21(max)	1913	130	37720	2397	26016	0
105	LCB22(max)	1913	130	37922	2397	26016	0
105	LCB23(max)	0	48	34001	838	0	0
105	LCB24(max)	0	48	33911	838	0	0
105	LCB1(min)	1913	-414	41388	1465	26016	0
105	LCB2(min)	1913	-414	41186	1465	26016	0
105	LCB3(min)	1913	61	41186	-4992	26016	0
105	LCB4(min)	1913	61	41388	-4992	26016	0
105	LCB5(min)	0	-457	41818	4730	0	0
105	LCB6(min)	0	334	41818	-6031	0	0
105	LCB7(min)	1913	-414	30365	1465	26016	0
105	LCB8(min)	1913	-414	30164	1465	26016	0
105	LCB9(min)	1913	61	30164	-4992	26016	0
105	LCB10(min)	1913	61	30365	-4992	26016	0
105	LCB11(min)	0	-457	30796	4730	0	0
105	LCB12(min)	0	334	30796	-6031	0	0
105	LCB13(min)	1913	-176	41415	-1763	26016	0
105	LCB14(min)	1913	-176	41214	-1763	26016	0
105	LCB15(min)	1913	-176	41159	-1763	26016	0
105	LCB16(min)	1913	-176	41360	-1763	26016	0
105	LCB17(min)	0	-62	41863	-650	0	0
105	LCB18(min)	0	-62	41773	-650	0	0
105	LCB19(min)	1913	-176	30393	-1763	26016	0
105	LCB20(min)	1913	-176	30191	-1763	26016	0
105	LCB21(min)	1913	-176	30137	-1763	26016	0
105	LCB22(min)	1913	-176	30338	-1763	26016	0
105	LCB23(min)	0	-62	30841	-650	0	0
105	LCB24(min)	0	-62	30750	-650	0	0

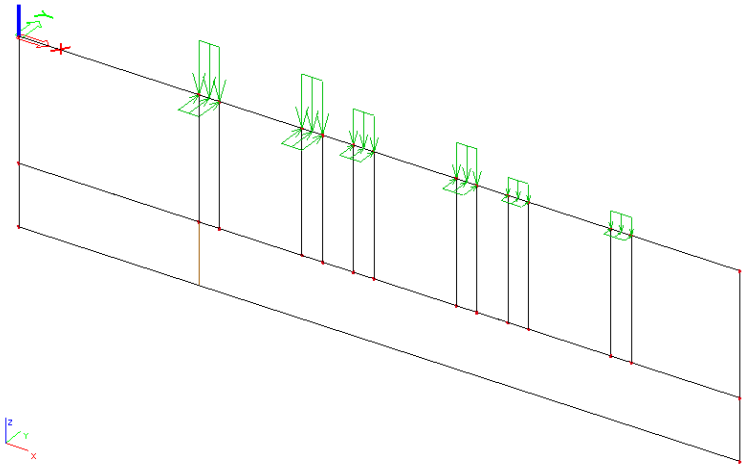
7.4.1 Opora

7.4.1.1 Návrh záverného múrika

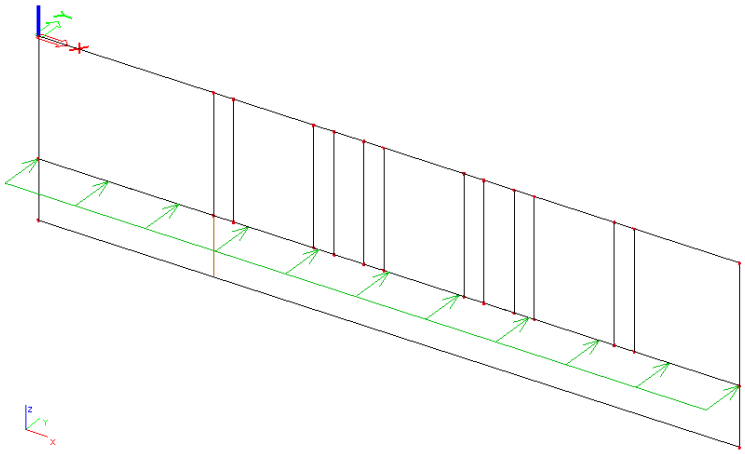


Q_k = podľa STN EN 1991-2 (zaťažovací model - LM1)
F_Z – zemný tlak
φ - uhol vnútorného trenia 32°
$\varphi_d = \text{atan}(\tan \varphi/\gamma_\varphi) = \text{atan}(\tan 32/1{,}25) = 26{,}6°$
$K_0 = 0{,}55$
$q_z = \gamma_{Gz} * \gamma_z * K_0 * h = 1{,}0*20{,}0*0{,}55*3{,}5 = 38{,}5\ kN/m^2$

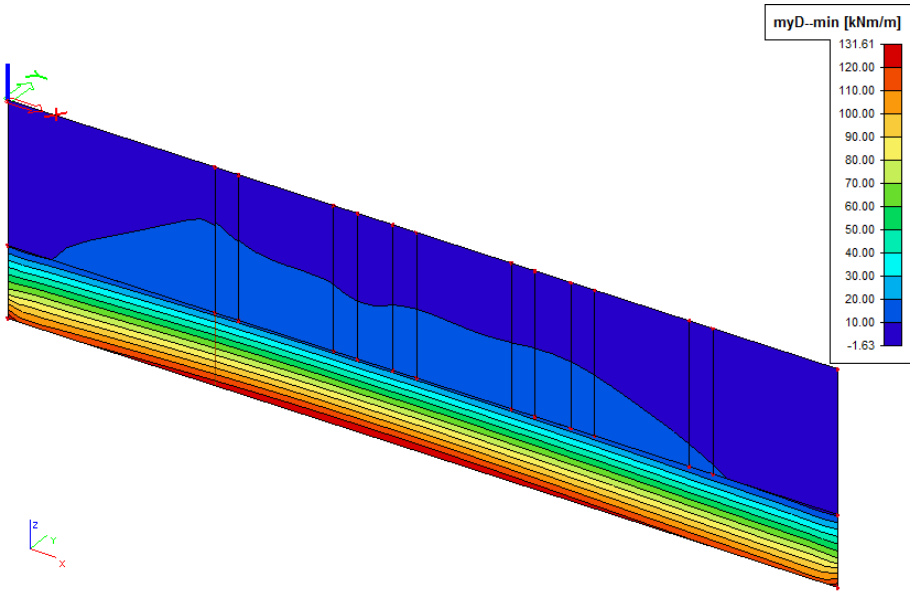
7.4.1.1.1 Výsledky



Kolesové tlaky - Q_k



Zemný tlak - q_{zem}



Výsledky - myD $(\alpha_{Q1*}Q_k + q_{zem})*\gamma$

7.4.1.1.2 Posúdenie

Součinitele výpočtu

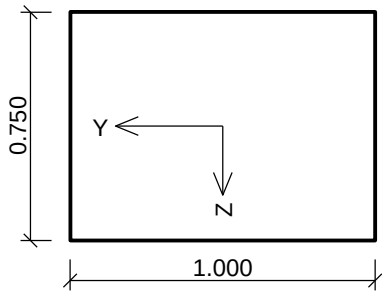
Uvažovány dle normy ČSN EN 1992-1-1.

Zaverny murik

1.1 Vstupní data

Typ prvku: deska
Prostředí: X0
Požadovaná třída betonu: C12/15

Průřez



Materiály
Beton : C 30/37
f_{ck} = 30.0 MPa; f_{ct} = 2.9 MPa; E_{cm} = 33000.0 MPa

Ocel podélná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Ocel příčná : B500 (f_{yk} = 500.0 MPa; E = 200000.0 MPa)

Vnitřní síly - návrhová (MSÚ)

č.	Název zatěžovacího případu	N_{Ed} [kN]	V_{Edz} [kN]	V_{Edy} [kN]	M_{Edy} [kNm]	M_{Edz} [kNm]	T_{Ed} [kNm]	QP koef. [-]
1	Zat. případ 1	0.00	0.00	0.00	131.60	0.00	0.00	1.000

Vyztužení průřezu

Počet	Profil [mm]	Krytí [mm]	Umístění
5	14.0	80.0	horní výztuž
5	14.0	80.0	dolní výztuž

S tlačenou výztuží není počítáno.

Minimální krytí

Třída konstrukce: S4

c_{min} = max($c_{min,b}$; $c_{min,dur}$; 10) = max(14; 10; 10) = 14 mm
c_{nom} = c_{min} + Δc_{dev} = 14 + 10 = 24 mm

1.2 Výsledky

Posouzení min. a max. stupně vyztužení

Deska (tažená výztuž):
$\rho_{s,min} = 754.10^{-6} \leq \rho_s = 0.00205 \leq \rho_{s,max} = 0.04 \Rightarrow$ **VYHOVUJE**

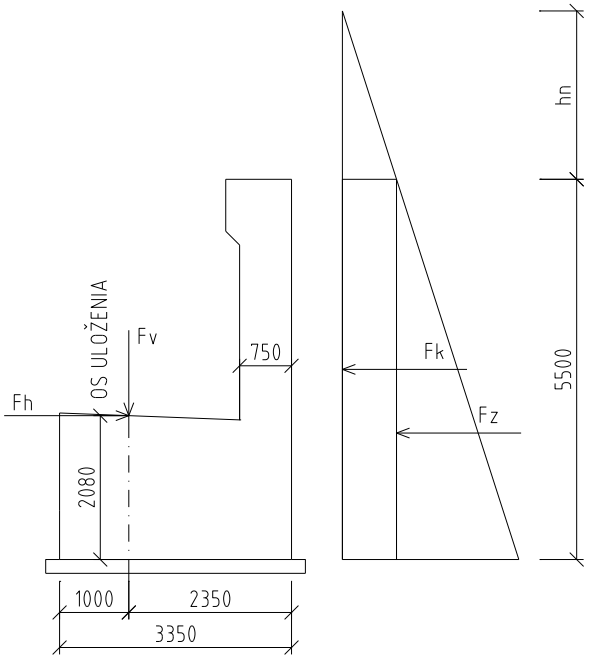
Posouzení mezního stavu únosnosti

č.	Název	N_{Ed} N_{Rd} [kN]	V_{Edz} V_{Rdz} [kN]	V_{Edy} V_{Rdy} [kN]	M_{Edy} M_{Rdy} [kNm]	M_{Edz} M_{Rdz} [kNm]	T_{Ed} T_{Rd} [kNm]	Posouzení
1	Zat. případ 1	0.00	0.00	0.00	131.60	0.00	0.00	Vyhovuje
		0.00	0.00	0.00	250.79	0.00	0.00	

Mezní stav únosnosti (ohyb, smyk, kroucení) VYHOVUJE

Celkové posouzení - Průřez VYHOVUJE

7.4.1.2 Zaťaženie opory



Zaťaženie v mieste ložísk silou F

Load	Opora 1 (J, V)						Opora 6 (J, V)					
	Node	FX (kN)	FY (kN)	FZ (kN)	γ	FZed (kN)	Node	FX (kN)	FY (kN)	FZ (kN)	γ	FZed (kN)
Vlastna tiaz	77			2291,0			106			2140,0		
Vlastna tiaz	78			2291,0	1,35	3092,9	107			2140,0	1,35	2889,0
Ostatne stale	77			422,0			106			404,0		
Ostatne stale	78			422,0	1,35	569,7	107			404,0	1,35	545,4
Predpatie, sekundarne	77			1117,0			106			242,0		
Predpatie, sekundarne	78			1117,0	1,00	1117,0	107			242,0	1,00	242,0
Ohrievanie	77			217,0			106			152,0		
Ohrievanie	78			217,0	0,00	0,0	107			152,0	0,00	0,0
Ochladzovanie	77			-143,0			106			-100,0		
Ochladzovanie	78			-143,0			107			-100,0		
vietor priecny	77		-83	-39,0			106		-71	-37,0		
vietor priecny	78		0	39,0	0,90	35,1	107			37,0	0,90	33,3
vietor pozdlzny	77			-2,0			106			-2,0		
vietor pozdlzny	78			-2,0			107			-2,0		
LM 1_CH(max)	77			1130,0			106			1257,0		
LM 1_CH(max)	78			1665,0	1,35	2247,8	107			1823,0	1,35	2461,1
LM 1_CH(min)	77			-374,0			106			-526,0		
LM 1_CH(min)	78			-212,0			107			-369,0		
Sadanie(max)	77			165,0			106			78,0		
Sadanie(max)	78			165,0	1,20	198,0	107			78,0	1,20	93,6
Sadanie(min)	77			-165,0			106			-78,0		
Sadanie(min)	78			-165,0			107			-78,0		
Trenie (max)	77	256,3					106	206,1				
Trenie (max)	78	283,0					107	234,4				
Brzdné sily (max)	77						106					
Brzdné sily (max)	78						107					
MAX Fed (kN)-1 ložisko		**382,1**		**5916,0**		**7260,4**		**316,4**		**4876,0**		**6264,4**

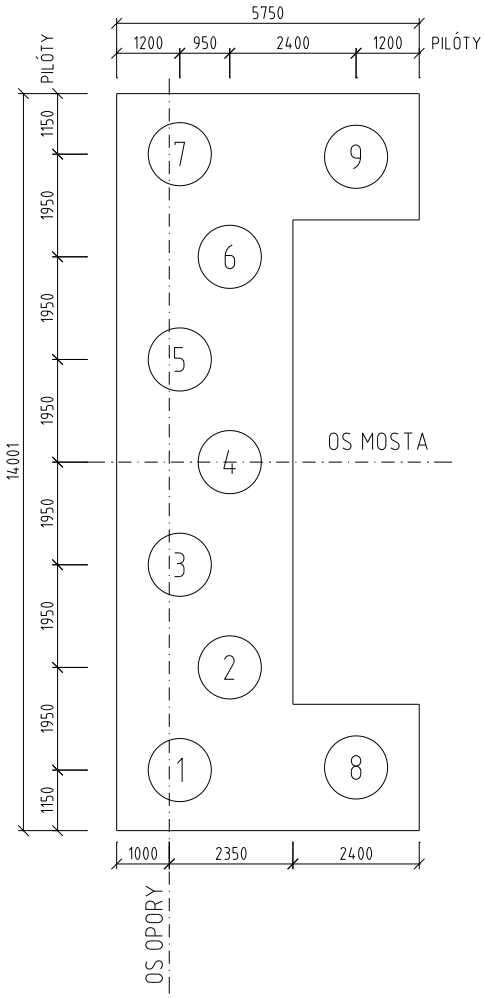
Priťaženie od dopravy za oporou

$Q_K = \alpha_{Q1}(2Q_{1K}) = 0{,}9*2*300 = 540$ kN
$q_K = Q_K/(L*š) + 9{,}0$ kN/m^2 = 540/(3,0*2,2) + 9,0 = 82,0 + 9,0 = 91,0 kN/m^2
- Pôsobiaca plocha podľa STN EN 1991-2, čl.4.9.1, poznámka 1

G-vlastná tiaž opory
$G = A*\gamma_b = 9{,}7*25{,}0 = 242{,}5 = 250{,}0$ kN/m
$G_{dsup} = \gamma_{Gsup} * G = 1{,}35 * 250{,}0 = 337{,}5$ kN/m (ak pôsobí vlastná tiaž nepriaznivo)
$G_{dinf} = \gamma_{Ginf} * G = 1{,}0 * 250{,}0 = 250{,}0$ kN/m (ak pôsobí vlastná tiaž priaznivo)

F_Z – zemný tlak
φ - uhol vnútorného trenia 32°
$\varphi_d = \text{atan}(\tan \varphi/\gamma_\varphi) = \text{atan}(\tan 32/1{,}25) = 26{,}6°$
$K_0 = 0{,}55$
$q_z = \gamma_{Gz} * \gamma_z * K_0 * h = 1{,}0*20{,}0*0{,}55*5{,}5 = 60{,}5$ kN/m^2
$F_Z = q_z * h / 2 = (60{,}5*5{,}5)/2 = 166{,}4$ kN/m → $F_{dZ} = 166{,}4 *1{,}3 = 216{,}3$ kN/m

F_K – priťaženie od dopravy za oporou
$h_n = q_k / \gamma_{Gz}* \gamma_z = 91{,}0 / (1{,}0*20{,}0) = 4{,}55$ m
$q_{zk} = \gamma_{Gz} * \gamma_z * K_0 * h_n = 1{,}0*20{,}0*0{,}55*4{,}55= 12{,}98 = 50{,}1$ kN/m^2
$F_K = q_{zk} * h = 50{,}1*5{,}5 = 275{,}6$ kN/m → $F_{dK} = 275{,}6 * 1{,}3 = 358{,}3$ kN/m



Rozpočítané zaťaženie na pilóty:
- bez priťaženia dopravy za oporou: max sily na ložisko s dopravou na moste

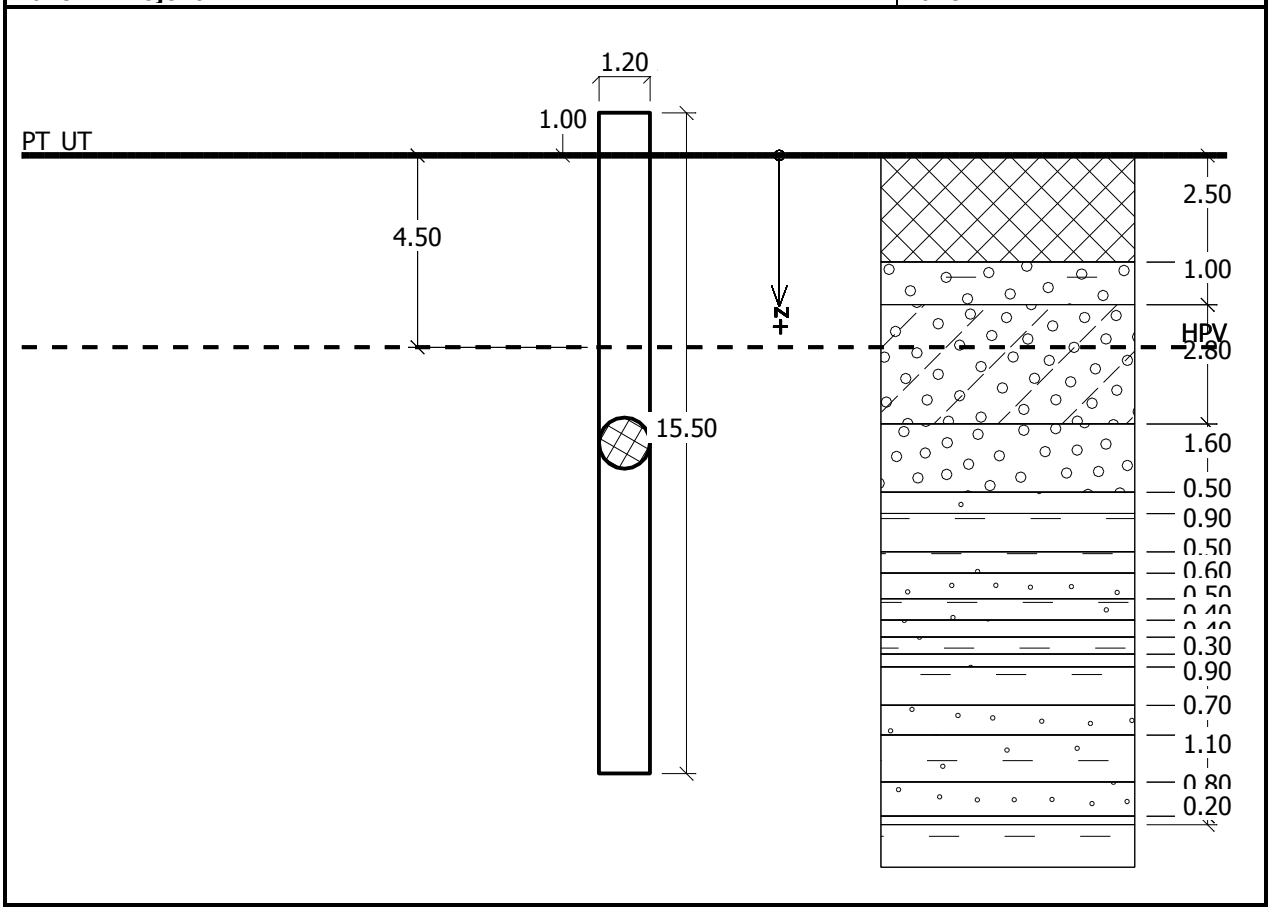
Opora 6				
N v pilote	N (Fz/ks)	N od zeminy	N od trenia ±	Spolu
Pilota	(kN)	(kN)	(kN)	N (kN)
1	2775	750	250	3775
2	2775	-750	250	2275
3	2775	750	250	3775
4	2775	-750	250	2275

7.4.1.3 Posúdenie pilót opory č. 1

Vstupní data

Projekt
Datum : 6. 12. 2011

Název : Projekt | **Fáze : 1**



Základní parametry zemin

Číslo	Název	Vzorek	φef [°]	cef [kPa]	γ [kN/m3]	γsu [kN/m3]
1	G3 G-F Štrk s prímesou j. zeminy		30.00	0.00	19.00	9.50
2	G5 GC Štrk ílovitý		28.00	2.00	19.50	10.00
3	R5 - R6 Ílovec silno zvetraný		20.00	14.00	19.00	9.50

Číslo	Názov	Vzorek	φ_{ef} [°]	c_{ef} [kPa]	γ [kN/m^3]	γ_{su} [kN/m^3]
4	R4 Pieskovec		35.00	85.00	21.00	11.10
5	R5 Ílovec silno zvetraný		26.00	10.00	21.00	11.10
6	R5 Striedanie ílovca a pieskovca		30.00	10.00	20.50	11.00
7	R3 Pieskovec		36.00	0.00	21.00	11.10
8	R5 Ilovec hlbka		26.00	10.00	21.00	11.10
9	Nasyp		34.00	0.00	20.00	10.10
10	F7 MV Hlina s v. vysokou plasticitou		16.00	6.00	21.00	11.50

Pro výpočet tlaku v klidu jsou všechny zeminy zadány jako nesoudržné.

Číslo	Názov	Vzorek	E_{oed} [MPa]	E_{def} [MPa]	γ_{sat} [kN/m^3]	γ_s [kN/m^3]	n [-]
1	G3 G-F Štrk s prímesou j. zeminy		-	80.00	19.50	-	-
2	G5 GC Štrk ílovitý		-	40.00	20.00	-	-
3	R5 - R6 Ílovec silno zvetraný		-	15.00	19.50	-	-
4	R4 Pieskovec		-	100.00	21.10	-	-
5	R5 Ílovec silno zvetraný		-	30.00	21.10	-	-
6	R5 Striedanie ílovca a pieskovca		-	40.00	21.00	-	-
7	R3 Pieskovec		-	150.00	21.10	-	-
8	R5 Ilovec hlbka		-	100.00	21.10	-	-
9	Nasyp		-	150.00	20.10	-	-
10	F7 MV Hlina s v. vysokou plasticitou		-	4.00	21.50	-	-

Parametry zemin pro výpočet modulu reakce podloží

Číslo	Název	Vzorek	β
1	G3 G-F Štrk s prímesou j. zeminy		0.83
2	G5 GC Štrk ílovitý		0.74
3	R5 - R6 Ílovec silno zvetraný		0.62
4	R4 Pieskovec		0.78
5	R5 Ílovec silno zvetraný		0.78
6	R5 Striedanie ílovca a pieskovca		0.62
7	R3 Pieskovec		0.62
8	R5 Ilovec hlbka		0.47
9	Nasyp		0.83
10	F7 MV Hlina s v. vysokou plasticitou		0.47

Parametry zemin

G3 G-F Štrk s prímesou j. zeminy

Objemová tíha :	γ	=	19,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	30,00	°
Soudržnost zeminy :	c_{ef}	=	0,00	kPa
Poissonovo číslo :	ν	=	0,25	
Modul přetvárnosti :	E_{def}	=	80,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	19,50	kN/m3
Úhel roznášení :	β	=	0,83	°

G5 GC Štrk ílovitý

Objemová tíha :	γ	=	19,50	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	28,00	°
Soudržnost zeminy :	c_{ef}	=	2,00	kPa
Poissonovo číslo :	ν	=	0,30	
Modul přetvárnosti :	E_{def}	=	40,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	20,00	kN/m3
Úhel roznášení :	β	=	0,74	°

R5 - R6 Ílovec silno zvetraný

Objemová tíha :	γ	=	19,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	20,00	°
Soudržnost zeminy :	c_{ef}	=	14,00	kPa

Poissonovo číslo :	ν	=	0,35	
Modul přetvárnosti :	E_{def}	=	15,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	19,50	kN/m^3
Úhel roznášení :	β	=	0,62	°

R4 Pieskovec

Objemová tíha :	γ	=	21,00	kN/m^3
Úhel vnitřního tření :	φ_{ef}	=	35,00	°
Soudržnost zeminy :	c_{ef}	=	85,00	kPa
Poissonovo číslo :	ν	=	0,25	
Modul přetvárnosti :	E_{def}	=	100,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m^3
Úhel roznášení :	β	=	0,78	°

R5 Ílovec silno zvetraný

Objemová tíha :	γ	=	21,00	kN/m^3
Úhel vnitřního tření :	φ_{ef}	=	26,00	°
Soudržnost zeminy :	c_{ef}	=	10,00	kPa
Poissonovo číslo :	ν	=	0,30	
Modul přetvárnosti :	E_{def}	=	30,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m^3
Úhel roznášení :	β	=	0,78	°

R5 Striedanie ílovca a pieskovca

Objemová tíha :	γ	=	20,50	kN/m^3
Úhel vnitřního tření :	φ_{ef}	=	30,00	°
Soudržnost zeminy :	c_{ef}	=	10,00	kPa
Poissonovo číslo :	ν	=	0,35	
Modul přetvárnosti :	E_{def}	=	40,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,00	kN/m^3
Úhel roznášení :	β	=	0,62	°

R3 Pieskovec

Objemová tíha :	γ	=	21,00	kN/m^3
Úhel vnitřního tření :	φ_{ef}	=	36,00	°
Soudržnost zeminy :	c_{ef}	=	0,00	kPa
Poissonovo číslo :	ν	=	0,28	
Modul přetvárnosti :	E_{def}	=	150,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m^3
Úhel roznášení :	β	=	0,62	°

R5 Ilovec hlbka

Objemová tíha :	γ	=	21,00	kN/m^3
Úhel vnitřního tření :	φ_{ef}	=	26,00	°
Soudržnost zeminy :	c_{ef}	=	10,00	kPa
Poissonovo číslo :	ν	=	0,20	
Modul přetvárnosti :	E_{def}	=	100,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m^3

Úhel roznášení : β = 0,47 °

Nasyp

Objemová tíha :	γ	=	20,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	34,00	°
Soudržnost zeminy :	c_{ef}	=	0,00	kPa
Poissonovo číslo :	ν	=	0,35	
Modul přetvárnosti :	E_{def}	=	150,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	20,10	kN/m3
Úhel roznášení :	β	=	0,83	°

F7 MV Hlina s v. vysokou plasticitou

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	16,00	°
Soudržnost zeminy :	c_{ef}	=	6,00	kPa
Poissonovo číslo :	ν	=	0,40	
Modul přetvárnosti :	E_{def}	=	4,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,50	kN/m3
Úhel roznášení :	β	=	0,47	°

Geometrie konstrukce

Geometrie piloty
Profil piloty: kruhová
Rozměry
Průměr d = 1.20 m
Délka l = 15.50 m
Umístění
Vysazení h = 1.00 m
Hloubka upraveného terénu h_z = 0.00 m
Redukce odporu na patě = 0.80
Redukce odporu na plášti = 0.60
Modul reakce podloží uvažován jako konstantní.

Materiál konstrukce
Výpočet betonových konstrukcí proveden podle normy EN 1992 1-1 (EC2).

Beton : C 20/25

Válcová pevnost v tlaku	f_{ck}	=	20.00	MPa
Pevnost v tahu	f_{ct}	=	2.20	MPa
Modul pružnosti	E_{cm}	=	29000.00	MPa

Ocel podélná : B500

Mez kluzu	f_{yk}	=	500.00	MPa
Modul pružnosti	E	=	200000.00	MPa

Geologický profil a přiřazení zemin

Číslo	Vrstva [m]	Přiřazená zemina	Vzorek
1	2.50	Nasyp	
2	1.00	G5 GC Štrk ílovitý	
3	2.80	G3 G-F Štrk s prímesou j. zeminy	
4	1.60	G5 GC Štrk ílovitý	
5	0.50	R5 - R6 Ílovec silno zvetraný	
6	0.90	R5 Striedanie ílovca a pieskovca	
7	0.50	R5 - R6 Ílovec silno zvetraný	
8	0.60	R4 Pieskovec	
9	0.50	R5 - R6 Ílovec silno zvetraný	
10	0.40	R5 - R6 Ílovec silno zvetraný	
11	0.40	R5 - R6 Ílovec silno zvetraný	
12	0.30	R3 Pieskovec	
13	0.90	R5 Ílovec silno zvetraný	
14	0.70	R3 Pieskovec	
15	1.10	R5 Ilovec hlbka	
16	0.80	R4 Pieskovec	
17	0.20	R5 Ilovec hlbka	
18	-	R5 Striedanie ílovca a pieskovca	

Zatížení

Číslo	Zatížení nové	Zatížení změna	Název	Typ	N [kN]	M_x [kNm]	M_y [kNm]	H_x [kN]	H_y [kN]
1	ANO		LCB 1(max)	Výpočtové	3720.00	0.00	0.00	193.00	0.00

Hladina podzemní vody
Hladina podzemní vody je v hloubce 4.50 m od původního terénu.

Nastavení výpočtu
Výpočet proveden podle teorie mezních stavů s redukcí vstupních parametrů zemin.

Součinitel redukce úhlu vnitřního tření $\gamma_{m\phi}$ = 1.10

Součinitel redukce soudržnosti γ_{mc} = 1.40

Posouzení čís. 1

Posouzení svislé únosnosti piloty podle teorie MS - mezivýsledky
Výpočet únosnosti v patě:

Součinitel únosnosti	Nc	=	13.57	
Součinitel únosnosti	Nd	=	5.56	
Součinitel únosnosti	Nb	=	2.30	
Součinitel únosnosti	K1	=	1.15	
Výpočtová únosnost na patě piloty	R_d	=	1492.75	kPa
Plocha příčného řezu piloty	A_s	=	1.131E+00	m^2

Únosnost na plášti piloty:
Zkrácení účinné délky piloty Lp [m] = 0.94 m

Hloubka [m]	Mocnost [m]	ϕ_d [°]	cd [kPa]	γ [kN/m^3]	γ R2 [-]	fs [kPa]	Ufdi [kN]
1.00	1.00	24.29	0.00	20.00	1.30	3.69	13.90
2.00	1.00	24.29	0.00	20.00	1.20	11.06	41.70
2.50	0.50	24.29	0.00	20.00	1.10	16.59	31.27
3.00	0.50	20.00	1.00	19.50	1.10	17.34	32.68
3.50	0.50	20.00	1.00	19.50	1.00	20.35	38.35
4.50	1.00	21.43	0.00	19.00	1.00	25.45	95.95
6.30	1.80	21.43	0.00	9.50	1.00	31.27	212.17
7.90	1.60	20.00	1.00	10.00	1.00	35.01	211.17
8.40	0.50	14.29	7.00	9.50	1.00	33.14	62.46
9.30	0.90	21.43	5.00	11.00	1.00	47.30	160.49
9.80	0.50	14.29	7.00	9.50	1.00	36.22	68.28
10.00	0.20	25.00	42.50	11.10	1.00	96.58	72.82
10.40	0.40	25.00	42.50	11.10	1.00	98.01	147.80
10.90	0.50	14.29	7.00	9.50	1.00	38.92	73.36
11.30	0.40	14.29	7.00	9.50	1.00	40.00	60.32
11.70	0.40	14.29	7.00	9.50	1.00	40.96	61.77
12.00	0.30	25.71	0.00	11.10	1.00	64.90	73.40
12.90	0.90	18.57	5.00	11.10	1.00	53.00	179.82
13.56	0.66	25.71	0.00	11.10	1.00	72.11	179.03

Posouzení svislé únosnosti piloty podle teorie MS - výsledky
Výpočet proveden s automatickým výběrem nejnepříznivějších zatěžovacích stavů.
Součinitel vlivu technologie GamaR1 = 1.20

Únosnost piloty na plášti U_{fd} = 1816.74 kN
Únosnost piloty v patě U_{bd} = 1941.50 kN

Únosnost piloty U_{vd} = 3758.24 kN
Extrémní svislá síla V_d = 3720.00 kN

U_{vd} = 3758.24 kN > 3720.00 kN = V_d

Svislá únosnost plovoucí piloty VYHOVUJE

Posouzení čís. 1

Vstupní data pro výpočet vodorovné únosnosti piloty
Výpočet proveden s automatickým výběrem nejnepříznivějších zatěžovacích stavů.
Vodorovná únosnost posouzena ve směru maximálního účinku zatížení.

Průběhy vnitřních sil a deformace piloty
Průběh deformací a vnitřních sil po pilotě - maximální hodnoty:

Vzdál. [m]	Modul k [MN/m^3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
0.00	0.00	1.46	0.48	0.00	193.00	0.00
0.78	0.00	1.09	0.46	49.70	193.00	149.58
1.00	0.00	0.99	0.44	65.16	170.40	183.71
1.00	182.22	0.99	0.44	65.16	170.40	183.71
1.55	182.22	0.75	0.41	102.96	115.17	267.14
2.33	182.22	0.47	0.33	85.43	12.46	313.48
3.10	182.22	0.25	0.25	36.76	47.30	297.55
3.50	182.22	0.16	0.21	21.93	56.25	274.59
3.50	48.74	0.16	0.21	21.93	56.25	274.59
3.88	48.74	0.09	0.17	8.03	64.64	253.06
4.50	48.74	0.04	0.13	3.28	66.07	211.72
4.50	97.18	0.04	0.13	3.28	66.07	211.72
4.65	97.18	0.03	0.11	2.14	66.41	201.79
5.43	97.18	0.09	0.07	9.17	60.74	152.12
6.20	97.18	0.13	0.03	12.89	50.29	108.87
6.98	97.18	0.15	0.01	12.63	37.44	74.78
7.30	97.18	0.15	0.01	11.14	33.18	64.27
7.30	48.74	0.15	0.01	11.14	33.18	64.27
7.75	48.74	0.15	0.01	9.07	27.28	49.70
8.53	48.74	0.14	0.02	5.73	20.71	31.13
8.90	48.74	0.13	0.02	4.96	18.72	24.15
8.90	18.35	0.13	0.02	4.96	18.72	24.15
9.30	18.35	0.12	0.02	4.14	16.60	16.71
9.40	18.35	0.12	0.02	4.40	16.15	15.23
9.40	48.94	0.12	0.02	4.40	16.15	15.23
10.08	48.94	0.10	0.03	6.17	13.05	5.26

Vzdál. [m]	Modul k [MN/m3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
10.30	48.94	0.10	0.03	6.25	10.90	4.28
10.30	18.35	0.10	0.03	6.25	10.90	4.28
10.80	18.35	0.08	0.03	6.43	6.12	2.10
10.80	121.69	0.08	0.03	6.43	6.12	2.10
10.85	121.69	0.08	0.03	6.45	5.64	1.88
11.40	121.69	0.07	0.03	3.83	2.28	3.62
11.40	18.35	0.07	0.03	3.83	2.28	3.62
11.63	18.35	0.06	0.03	2.77	0.91	4.33
11.90	18.35	0.06	0.03	2.13	0.59	4.45
11.90	18.35	0.06	0.03	2.13	0.59	4.45
12.30	18.35	0.05	0.02	1.22	0.12	4.62
12.30	18.35	0.05	0.02	1.22	0.12	4.62
12.40	18.35	0.04	0.02	0.99	0.00	4.66
12.70	18.35	0.04	0.02	1.25	0.33	4.52
12.70	183.53	0.04	0.02	1.25	0.33	4.52
13.00	183.53	0.03	0.02	1.52	0.66	4.38
13.00	36.51	0.03	0.02	1.52	0.66	4.38
13.18	36.51	0.02	0.02	1.68	0.85	4.30
13.90	36.51	0.01	0.02	0.93	2.34	3.00
13.90	183.53	0.01	0.02	0.93	2.34	3.00
13.95	183.53	0.01	0.02	0.88	2.44	2.91
14.60	183.53	0.01	0.02	1.36	2.21	1.28
14.60	122.98	0.01	0.02	1.36	2.21	1.28
14.73	122.98	0.01	0.02	1.45	2.17	0.97
15.50	122.98	0.03	0.02	3.37	0.00	0.00

Průběh deformací a vnitřních sil po pilotě - minimální hodnoty:

Vzdál. [m]	Modul k [MN/m3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
0.00	0.00	-1.46	-0.48	0.00	-193.00	-0.00
0.78	0.00	-1.09	-0.46	-49.70	-193.00	-149.58
1.00	0.00	-0.99	-0.44	-65.16	-170.40	-183.71
1.00	182.22	-0.99	-0.44	-65.16	-170.40	-183.71
1.55	182.22	-0.75	-0.41	-102.96	-115.17	-267.14
2.33	182.22	-0.47	-0.33	-85.43	-12.46	-313.48
3.10	182.22	-0.25	-0.25	-36.76	-47.30	-297.55
3.50	182.22	-0.16	-0.21	-21.93	-56.25	-274.59
3.50	48.74	-0.16	-0.21	-21.93	-56.25	-274.59
3.88	48.74	-0.09	-0.17	-8.03	-64.64	-253.06
4.50	48.74	-0.04	-0.13	-3.28	-66.07	-211.72
4.50	97.18	-0.04	-0.13	-3.28	-66.07	-211.72
4.65	97.18	-0.03	-0.11	-2.14	-66.41	-201.79
5.43	97.18	-0.09	-0.07	-9.17	-60.74	-152.12
6.20	97.18	-0.13	-0.03	-12.89	-50.29	-108.87
6.98	97.18	-0.15	-0.01	-12.63	-37.44	-74.78
7.30	97.18	-0.15	-0.01	-11.14	-33.18	-64.27

Vzdál. [m]	Modul k [MN/m3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
7.30	48.74	-0.15	-0.01	-11.14	-33.18	-64.27
7.75	48.74	-0.15	-0.01	-9.07	-27.28	-49.70
8.53	48.74	-0.14	-0.02	-5.73	-20.71	-31.13
8.90	48.74	-0.13	-0.02	-4.96	-18.72	-24.15
8.90	18.35	-0.13	-0.02	-4.96	-18.72	-24.15
9.30	18.35	-0.12	-0.02	-4.14	-16.60	-16.71
9.40	18.35	-0.12	-0.02	-4.40	-16.15	-15.23
9.40	48.94	-0.12	-0.02	-4.40	-16.15	-15.23
10.08	48.94	-0.10	-0.03	-6.17	-13.05	-5.26
10.30	48.94	-0.10	-0.03	-6.25	-10.90	-4.28
10.30	18.35	-0.10	-0.03	-6.25	-10.90	-4.28
10.80	18.35	-0.08	-0.03	-6.43	-6.12	-2.10
10.80	121.69	-0.08	-0.03	-6.43	-6.12	-2.10
10.85	121.69	-0.08	-0.03	-6.45	-5.64	-1.88
11.40	121.69	-0.07	-0.03	-3.83	-2.28	-3.62
11.40	18.35	-0.07	-0.03	-3.83	-2.28	-3.62
11.63	18.35	-0.06	-0.03	-2.77	-0.91	-4.33
11.90	18.35	-0.06	-0.03	-2.13	-0.59	-4.45
11.90	18.35	-0.06	-0.03	-2.13	-0.59	-4.45
12.30	18.35	-0.05	-0.02	-1.22	-0.12	-4.62
12.30	18.35	-0.05	-0.02	-1.22	-0.12	-4.62
12.40	18.35	-0.04	-0.02	-0.99	-0.00	-4.66
12.70	18.35	-0.04	-0.02	-1.25	-0.33	-4.52
12.70	183.53	-0.04	-0.02	-1.25	-0.33	-4.52
13.00	183.53	-0.03	-0.02	-1.52	-0.66	-4.38
13.00	36.51	-0.03	-0.02	-1.52	-0.66	-4.38
13.18	36.51	-0.02	-0.02	-1.68	-0.85	-4.30
13.90	36.51	-0.01	-0.02	-0.93	-2.34	-3.00
13.90	183.53	-0.01	-0.02	-0.93	-2.34	-3.00
13.95	183.53	-0.01	-0.02	-0.88	-2.44	-2.91
14.60	183.53	-0.01	-0.02	-1.36	-2.21	-1.28
14.60	122.98	-0.01	-0.02	-1.36	-2.21	-1.28
14.73	122.98	-0.01	-0.02	-1.45	-2.17	-0.97
15.50	122.98	-0.03	-0.02	-3.37	-0.00	-0.00

Maximální vnitřní síly a deformace:
Max.deformace piloty = 1.5 mm
Max.posouvající síla = 193.00 kN
Maximální moment = 313.48 kNm

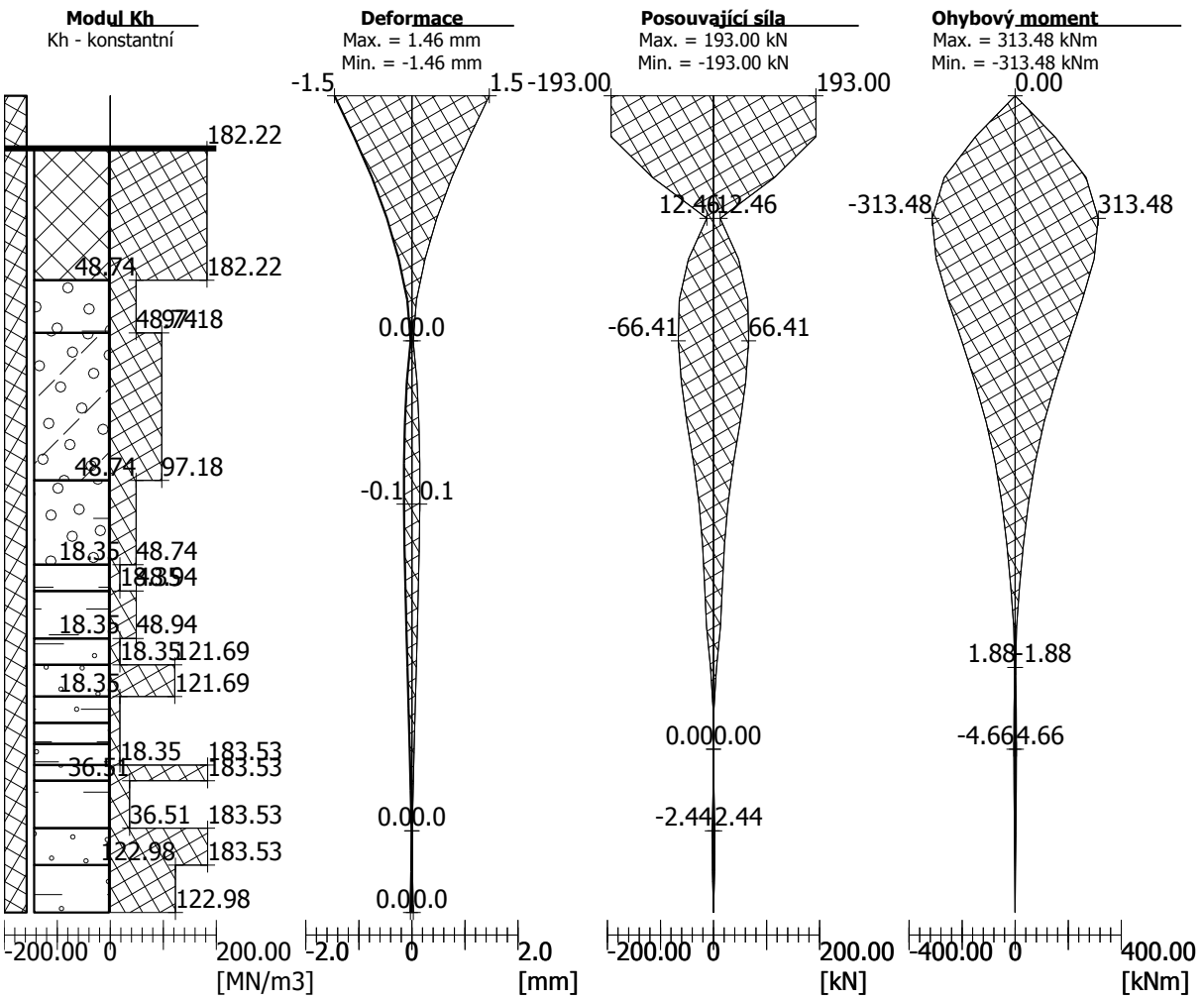
Dimenzace výztuže:
Vyztužení - 16 ks profil 18.0 mm; krytí 100.0 mm

Stupeň vyztužení $\rho = 0.180\ \% > 0.130\ \% = \rho_{min}$

Zatížení : N_{Ed} = -3720.00 kN (tlak) ; M_{Ed} = 313.48 kNm
Únosnost : N_{Rd} = -12326.94 kN; M_{Rd} = 1037.43 kNm

Navržená výztuž piloty VYHOVUJE

Název : Vod. únosn. | **Fáze : 1; Posouzení : 1**

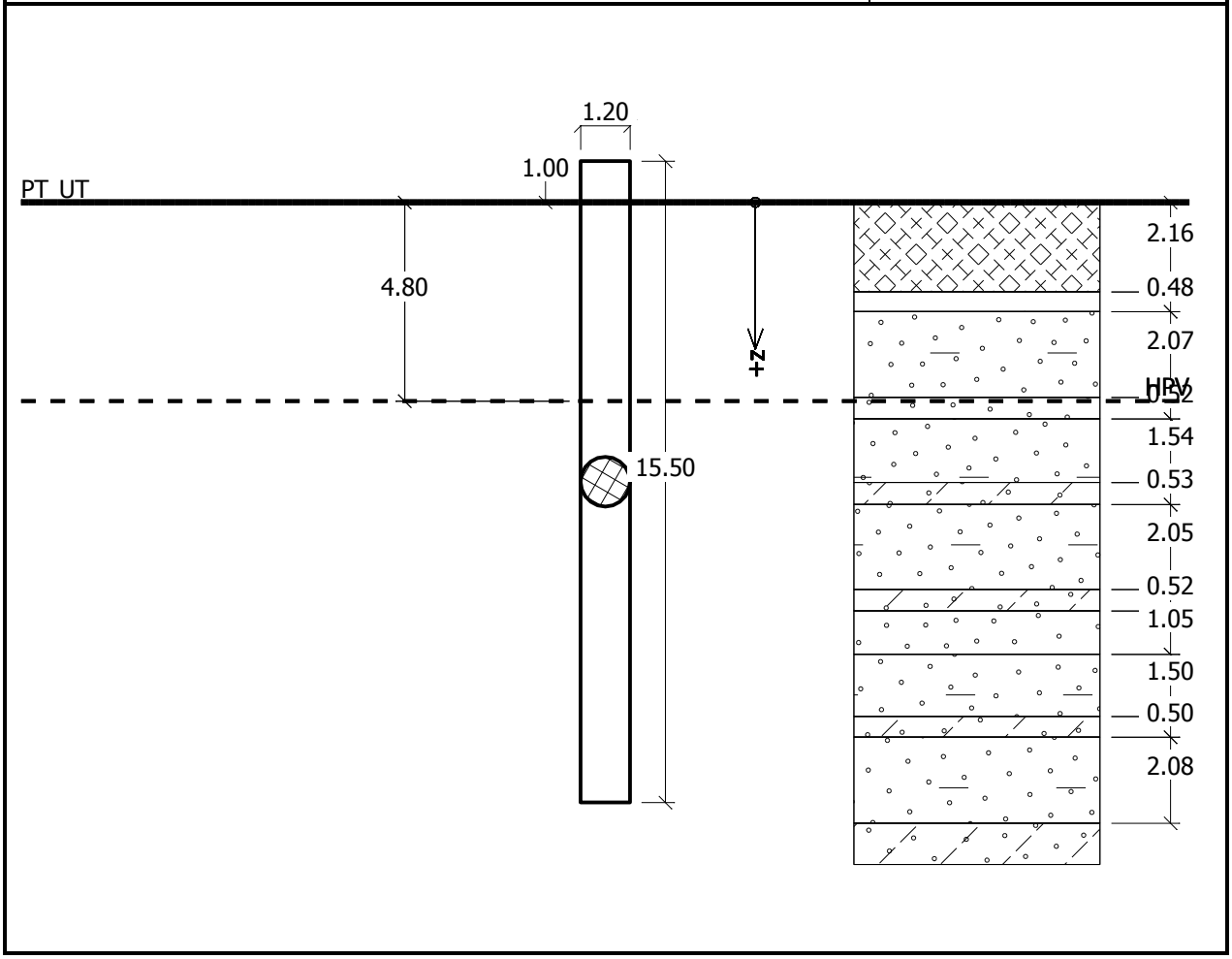


7.4.1.4 Posúdenie pilót opory č.6 – v násype

Vstupní data

Projekt
Datum : 5. 12. 2011

Název : Projekt	**Fáze : 1**



Základní parametry zemin

Číslo	Název	Vzorek	φef [°]	cef [kPa]	γ [kN/m3]	γsu [kN/m3]
1	strk ilovity G5 GC		28.00	2.00	19.50	10.00
2	strk-primes jem. zeminy G3 G-F		30.00	0.00	19.00	9.50
3	pieskovec R5		26.00	8.00	21.00	11.10
4	ilovec R5-R6		22.00	20.00	20.00	10.20
5	pieskovec R4-R5		30.00	5.00	21.00	11.10
6	pieskovec R3		36.00	0.00	21.00	11.10

Číslo	Název	Vzorek	φ_{ef} [°]	c_{ef} [kPa]	γ [kN/m^3]	γ_{su} [kN/m^3]
7	pieskovec R4		35.00	5.00	21.00	11.10
8	ilovec R5		26.00	10.00	21.00	11.10
9	Kvartérne sedimenty F4		22.00	14.00	18.50	9.50
10	násypové teleso		30.00	8.00	21.00	11.10

Pro výpočet tlaku v klidu jsou všechny zeminy zadány jako nesoudržné.

Číslo	Název	Vzorek	E_{oed} [MPa]	E_{def} [MPa]	γ_{sat} [kN/m^3]	γ_s [kN/m^3]	n [-]
1	strk ilovity G5 GC		-	40.00	20.00	-	-
2	strk-primes jem. zeminy G3 G-F		-	80.00	19.50	-	-
3	pieskovec R5		-	30.00	21.10	-	-
4	ilovec R5-R6		-	15.00	20.20	-	-
5	pieskovec R4-R5		-	60.00	21.10	-	-
6	pieskovec R3		-	200.00	21.10	-	-
7	pieskovec R4		-	20.00	21.10	-	-
8	ilovec R5		-	100.00	21.10	-	-
9	Kvartérne sedimenty F4		-	5.00	19.50	-	-
10	násypové teleso		-	100.00	21.10	-	-

Parametry zemin pro výpočet modulu reakce podloží

Číslo	Název	Vzorek	β
1	strk ilovity G5 GC		0.74
2	strk-primes jem. zeminy G3 G-F		0.83
3	pieskovec R5		0.62

Číslo	Název	Vzorek	β
4	ilovec R5-R6		0.62
5	pieskovec R4-R5		0.78
6	pieskovec R3		0.78
7	pieskovec R4		0.78
8	ilovec R5		0.47
9	Kvartérne sedimenty F4		0.83
10	násypové teleso		0.78

Parametry zemin
strk ilovity G5 GC

Objemová tíha :	γ	=	19,50	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	28,00	°
Soudržnost zeminy :	c_{ef}	=	2,00	kPa
Poissonovo číslo :	ν	=	0,30	
Modul přetvárnosti :	E_{def}	=	40,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	20,00	kN/m3
Úhel roznášení :	β	=	0,74	°

strk-primes jem. zeminy G3 G-F

Objemová tíha :	γ	=	19,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	30,00	°
Soudržnost zeminy :	c_{ef}	=	0,00	kPa
Poissonovo číslo :	ν	=	0,20	
Modul přetvárnosti :	E_{def}	=	80,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	19,50	kN/m3
Úhel roznášení :	β	=	0,83	°

pieskovec R5

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	26,00	°
Soudržnost zeminy :	c_{ef}	=	8,00	kPa
Poissonovo číslo :	ν	=	0,30	
Modul přetvárnosti :	E_{def}	=	30,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3
Úhel roznášení :	β	=	0,62	°

ilovec R5-R6

Objemová tíha :	γ	=	20,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	22,00	°

Soudržnost zeminy :	c_{ef}	=	20,00	kPa
Poissonovo číslo :	ν	=	0,35	
Modul přetvárnosti :	E_{def}	=	15,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	20,20	kN/m3
Úhel roznášení :	β	=	0,62	°

pieskovec R4-R5

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	30,00	°
Soudržnost zeminy :	c_{ef}	=	5,00	kPa
Poissonovo číslo :	ν	=	0,25	
Modul přetvárnosti :	E_{def}	=	60,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3
Úhel roznášení :	β	=	0,78	°

pieskovec R3

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	36,00	°
Soudržnost zeminy :	c_{ef}	=	0,00	kPa
Poissonovo číslo :	ν	=	0,28	
Modul přetvárnosti :	E_{def}	=	200,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3
Úhel roznášení :	β	=	0,78	°

pieskovec R4

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	35,00	°
Soudržnost zeminy :	c_{ef}	=	5,00	kPa
Poissonovo číslo :	ν	=	0,28	
Modul přetvárnosti :	E_{def}	=	20,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3
Úhel roznášení :	β	=	0,78	°

ilovec R5

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	26,00	°
Soudržnost zeminy :	c_{ef}	=	10,00	kPa
Poissonovo číslo :	ν	=	0,20	
Modul přetvárnosti :	E_{def}	=	100,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3
Úhel roznášení :	β	=	0,47	°

Kvartérne sedimenty F4

Objemová tíha :	γ	=	18,50	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	22,00	°
Soudržnost zeminy :	c_{ef}	=	14,00	kPa
Poissonovo číslo :	ν	=	0,35	
Modul přetvárnosti :	E_{def}	=	5,00	MPa

Obj.tíha sat.zeminy : γ_{sat} = 19,50 kN/m3
Úhel roznášení : β = 0,83 °

násypové teleso
Objemová tíha : γ = 21,00 kN/m3
Úhel vnitřního tření : φ_{ef} = 30,00 °
Soudržnost zeminy : c_{ef} = 8,00 kPa
Poissonovo číslo : ν = 0,25
Modul přetvárnosti : E_{def} = 100,00 MPa
Obj.tíha sat.zeminy : γ_{sat} = 21,10 kN/m3
Úhel roznášení : β = 0,78 °

Geometrie konstrukce

Geometrie piloty
Profil piloty: kruhová
Rozměry
Průměr d = 1.20 m
Délka l = 15.50 m
Umístění
Vysazení h = 1.00 m
Hloubka upraveného terénu h_z = 0.00 m
Redukce odporu na patě = 0.80
Redukce odporu na plášti = 0.60
Modul reakce podloží uvažován jako konstantní.

Materiál konstrukce
Výpočet betonových konstrukcí proveden podle normy EN 1992 1-1 (EC2).

Beton : C 20/25
Válcová pevnost v tlaku f_{ck} = 20.00 MPa
Pevnost v tahu f_{ct} = 2.20 MPa
Modul pružnosti E_{cm} = 29000.00 MPa
Ocel podélná : B500
Mez kluzu f_{yk} = 500.00 MPa
Modul pružnosti E = 200000.00 MPa

Geologický profil a přiřazení zemin

Číslo	Vrstva [m]	Přiřazená zemina	Vzorek
1	2.16	násypové teleso	
2	0.48	Kvartérne sedimenty F4	
3	2.07	ilovec R5	
4	0.52	pieskovec R5	

Číslo	Vrstva [m]	Přiřazená zemina	Vzorek
5	1.54	ilovec R5	
6	0.53	pieskovec R3	
7	2.05	ilovec R5	
8	0.52	pieskovec R3	
9	1.05	ilovec R5	
10	1.50	ilovec R5	
11	0.50	pieskovec R3	
12	2.08	ilovec R5	
13	-	pieskovec R3	

Zatížení

Číslo	Zatížení nové	Zatížení změna	Název	Typ	N [kN]	M_x [kNm]	M_y [kNm]	H_x [kN]	H_y [kN]
1	ANO		LCB 2(max)	Výpočtové	2950.00	0.00	0.00	177.00	0.00
2	ANO		LCB 2(MAX)	Výpočtové	3850.00	0.00	0.00	177.00	0.00

Hladina podzemní vody
Hladina podzemní vody je v hloubce 4.80 m od původního terénu.

Nastavení výpočtu
Výpočet proveden podle teorie mezních stavů s redukcí vstupních parametrů zemin.

Součinitel redukce úhlu vnitřního tření $\gamma_{m\phi}$ = 1.10

Součinitel redukce soudržnosti γ_{mc} = 1.40

Posouzení čís. 1

Posouzení svislé únosnosti piloty podle teorie MS - mezivýsledky
Výpočet únosnosti v patě:

Součinitel únosnosti	Nc	=	13.57	
Součinitel únosnosti	Nd	=	5.56	
Součinitel únosnosti	Nb	=	2.30	
Součinitel únosnosti	K1	=	1.15	
Výpočtová únosnost na patě piloty	R_d	=	1611.35	kPa
Plocha příčného řezu piloty	A_s	=	1.131E+00	m^2

Únosnost na plášti piloty:
Zkrácení účinné délky piloty Lp [m] = 0.94 m

Hloubka [m]	Mocnost [m]	ϕ_d [°]	cd [kPa]	γ [kN/m^3]	γ R2 [-]	fs [kPa]	Ufdi [kN]
1.00	1.00	21.43	4.00	21.00	1.30	6.46	24.35
2.00	1.00	21.43	4.00	21.00	1.20	13.48	50.82
2.16	0.16	21.43	4.00	21.00	1.10	17.71	10.68
2.64	0.48	15.71	7.00	18.50	1.10	17.95	32.48
3.00	0.36	18.57	5.00	21.00	1.10	20.61	27.97
4.71	1.71	18.57	5.00	21.00	1.00	27.08	174.59
4.80	0.09	18.57	4.00	21.00	1.00	31.32	10.63
5.23	0.43	18.57	4.00	11.10	1.00	32.24	52.26
6.77	1.54	18.57	5.00	11.10	1.00	36.26	210.54
7.30	0.53	25.71	0.00	11.10	1.00	48.83	97.56
9.35	2.05	18.57	5.00	11.10	1.00	43.41	335.49
9.87	0.52	25.71	0.00	11.10	1.00	60.04	117.71
10.00	0.13	18.57	5.00	11.10	1.00	48.36	23.70
10.92	0.92	18.57	5.00	11.10	1.00	50.25	174.30
12.42	1.50	18.57	5.00	11.10	1.00	54.72	309.42
12.92	0.50	25.71	0.00	11.10	1.00	75.70	142.69
13.56	0.64	18.57	5.00	11.10	1.00	60.50	145.65

Posouzení svislé únosnosti piloty podle teorie MS - výsledky
Výpočet proveden s automatickým výběrem nejnepříznivějších zatěžovacích stavů.
Součinitel vlivu technologie GamaR1 = 1.20

Únosnost piloty na plášti U_{fd} = 1940.84 kN
Únosnost piloty v patě U_{bd} = 2095.75 kN

Únosnost piloty U_{vd} = 4036.59 kN
Extrémní svislá síla V_d = 3850.00 kN

U_{vd} = 4036.59 kN > 3850.00 kN = V_d

Svislá únosnost plovoucí piloty VYHOVUJE

Posouzení čís. 1

Vstupní data pro výpočet vodorovné únosnosti piloty
Výpočet proveden s automatickým výběrem nejnepříznivějších zatěžovacích stavů.
Vodorovná únosnost posouzena ve směru maximálního účinku zatížení.

Průběhy vnitřních sil a deformace piloty
Průběh deformací a vnitřních sil po pilotě - maximální hodnoty:

Vzdál. [m]	Modul k [MN/m^3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
0.00	0.00	1.65	0.50	0.00	177.00	0.00
0.78	0.00	1.26	0.48	38.44	177.00	137.17
1.00	0.00	1.16	0.47	51.33	159.22	169.73

Vzdál. [m]	Modul k [MN/m3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
1.00	121.69	1.16	0.47	51.33	159.22	169.73
1.55	121.69	0.91	0.43	82.82	115.76	249.32
2.33	121.69	0.60	0.36	73.13	30.96	303.93
3.10	121.69	0.36	0.28	43.36	22.57	305.39
3.16	121.69	0.34	0.27	41.64	24.85	303.04
3.16	6.07	0.34	0.27	41.64	24.85	303.04
3.64	6.07	0.23	0.22	27.81	43.06	284.32
3.64	122.98	0.23	0.22	27.81	43.06	284.32
3.88	122.98	0.17	0.20	21.03	51.98	275.15
4.65	122.98	0.04	0.13	5.32	63.77	229.35
5.43	122.98	0.04	0.08	3.89	63.66	179.37
5.71	122.98	0.05	0.06	4.91	61.92	161.82
5.71	36.71	0.05	0.06	4.91	61.92	161.82
6.20	36.71	0.08	0.04	6.66	58.94	131.65
6.23	36.71	0.08	0.04	6.80	58.67	129.98
6.23	122.98	0.08	0.04	6.80	58.67	129.98
6.98	122.98	0.10	0.01	10.30	51.94	88.60
7.75	122.98	0.10	0.01	12.50	40.18	52.90
7.77	243.37	0.10	0.01	12.46	39.89	52.21
8.30	243.37	0.09	0.02	11.55	32.32	33.91
8.30	122.98	0.09	0.02	11.55	32.32	33.91
8.53	122.98	0.09	0.02	11.16	29.10	26.14
9.30	122.98	0.07	0.02	9.15	19.62	7.38
10.08	122.98	0.06	0.02	8.65	12.13	4.80
10.35	122.98	0.05	0.02	8.14	9.24	6.95
10.35	243.37	0.05	0.02	8.14	9.24	6.95
10.85	243.37	0.04	0.02	7.22	3.99	10.86
10.87	122.98	0.04	0.02	7.13	3.92	10.88
11.63	122.98	0.02	0.02	3.75	1.42	11.69
11.92	122.98	0.02	0.02	2.88	2.21	10.93
11.92	122.98	0.02	0.02	2.88	2.21	10.93
12.40	122.98	0.01	0.01	1.46	3.48	9.69
13.18	122.98	0.00	0.01	0.15	4.21	6.63
13.42	122.98	0.00	0.01	0.42	4.09	5.63
13.42	243.37	0.00	0.01	0.42	4.09	5.63
13.92	243.37	0.01	0.01	0.96	3.83	3.58
13.92	122.98	0.01	0.01	0.96	3.83	3.58
13.95	122.98	0.01	0.01	1.00	3.81	3.45
14.73	122.98	0.02	0.01	2.05	2.39	0.99
15.50	122.98	0.03	0.01	3.08	0.00	0.00

Průběh deformací a vnitřních sil po pilotě - minimální hodnoty:

Vzdál. [m]	Modul k [MN/m3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
0.00	0.00	-1.65	-0.50	0.00	-177.00	-0.00
0.78	0.00	-1.26	-0.48	-38.44	-177.00	-137.17

Vzdál. [m]	Modul k [MN/m3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
1.00	0.00	-1.16	-0.47	-51.33	-159.22	-169.73
1.00	121.69	-1.16	-0.47	-51.33	-159.22	-169.73
1.55	121.69	-0.91	-0.43	-82.82	-115.76	-249.32
2.33	121.69	-0.60	-0.36	-73.13	-30.96	-303.93
3.10	121.69	-0.36	-0.28	-43.36	-22.57	-305.39
3.16	121.69	-0.34	-0.27	-41.64	-24.85	-303.04
3.16	6.07	-0.34	-0.27	-41.64	-24.85	-303.04
3.64	6.07	-0.23	-0.22	-27.81	-43.06	-284.32
3.64	122.98	-0.23	-0.22	-27.81	-43.06	-284.32
3.88	122.98	-0.17	-0.20	-21.03	-51.98	-275.15
4.65	122.98	-0.04	-0.13	-5.32	-63.77	-229.35
5.43	122.98	-0.04	-0.08	-3.89	-63.66	-179.37
5.71	122.98	-0.05	-0.06	-4.91	-61.92	-161.82
5.71	36.71	-0.05	-0.06	-4.91	-61.92	-161.82
6.20	36.71	-0.08	-0.04	-6.66	-58.94	-131.65
6.23	36.71	-0.08	-0.04	-6.80	-58.67	-129.98
6.23	122.98	-0.08	-0.04	-6.80	-58.67	-129.98
6.98	122.98	-0.10	-0.01	-10.30	-51.94	-88.60
7.75	122.98	-0.10	-0.01	-12.50	-40.18	-52.90
7.77	243.37	-0.10	-0.01	-12.46	-39.89	-52.21
8.30	243.37	-0.09	-0.02	-11.55	-32.32	-33.91
8.30	122.98	-0.09	-0.02	-11.55	-32.32	-33.91
8.53	122.98	-0.09	-0.02	-11.16	-29.10	-26.14
9.30	122.98	-0.07	-0.02	-9.15	-19.62	-7.38
10.08	122.98	-0.06	-0.02	-8.65	-12.13	-4.80
10.35	122.98	-0.05	-0.02	-8.14	-9.24	-6.95
10.35	243.37	-0.05	-0.02	-8.14	-9.24	-6.95
10.85	243.37	-0.04	-0.02	-7.22	-3.99	-10.86
10.87	122.98	-0.04	-0.02	-7.13	-3.92	-10.88
11.63	122.98	-0.02	-0.02	-3.75	-1.42	-11.69
11.92	122.98	-0.02	-0.02	-2.88	-2.21	-10.93
11.92	122.98	-0.02	-0.02	-2.88	-2.21	-10.93
12.40	122.98	-0.01	-0.01	-1.46	-3.48	-9.69
13.18	122.98	-0.00	-0.01	-0.15	-4.21	-6.63
13.42	122.98	-0.00	-0.01	-0.42	-4.09	-5.63
13.42	243.37	-0.00	-0.01	-0.42	-4.09	-5.63
13.92	243.37	-0.01	-0.01	-0.96	-3.83	-3.58
13.92	122.98	-0.01	-0.01	-0.96	-3.83	-3.58
13.95	122.98	-0.01	-0.01	-1.00	-3.81	-3.45
14.73	122.98	-0.02	-0.01	-2.05	-2.39	-0.99
15.50	122.98	-0.03	-0.01	-3.08	-0.00	-0.00

Maximální vnitřní síly a deformace:

Max.deformace piloty = 1.6 mm
Max.posouvající síla = 177.00 kN
Maximální moment = 305.39 kNm

Dimenzace výztuže:
Vyztužení - 16 ks profil 18.0 mm; krytí 100.0 mm

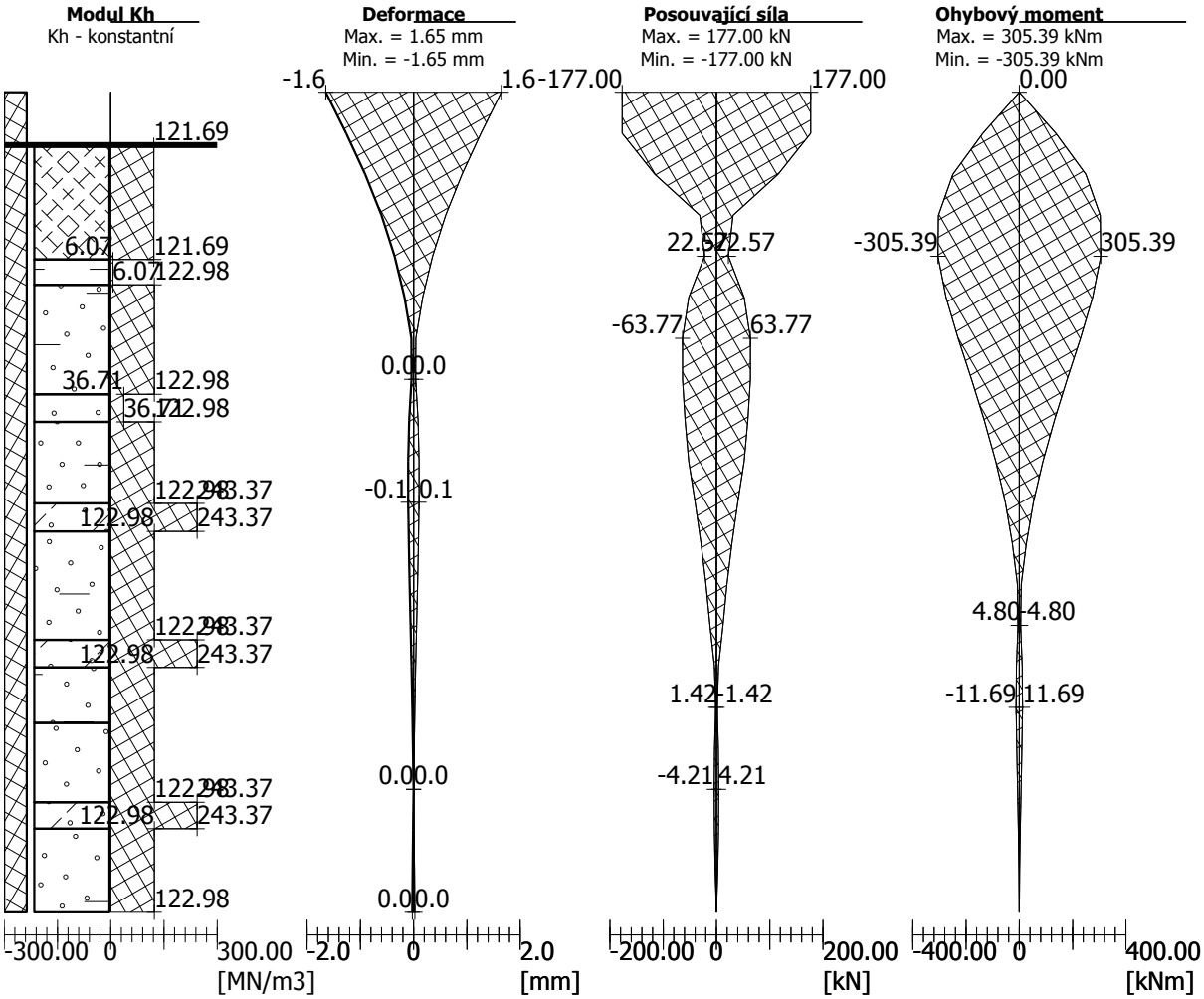
Stupeň vyztužení $\rho = 0.180\ \% > 0.130\ \% = \rho_{min}$

Zatížení : N_{Ed} = -3850.00 kN (tlak) ; M_{Ed} = 305.39 kNm
Únosnost : N_{Rd} = -12326.94 kN; M_{Rd} = 978.27 kNm

Zatížení : N_{Ed} = -2950.00 kN (tlak) ; M_{Ed} = 305.39 kNm
Únosnost : N_{Rd} = -11802.29 kN; M_{Rd} = 1221.35 kNm

Navržená výztuž piloty VYHOVUJE

Název : Vod. únosn.	**Fáze : 1; Posouzení : 1**

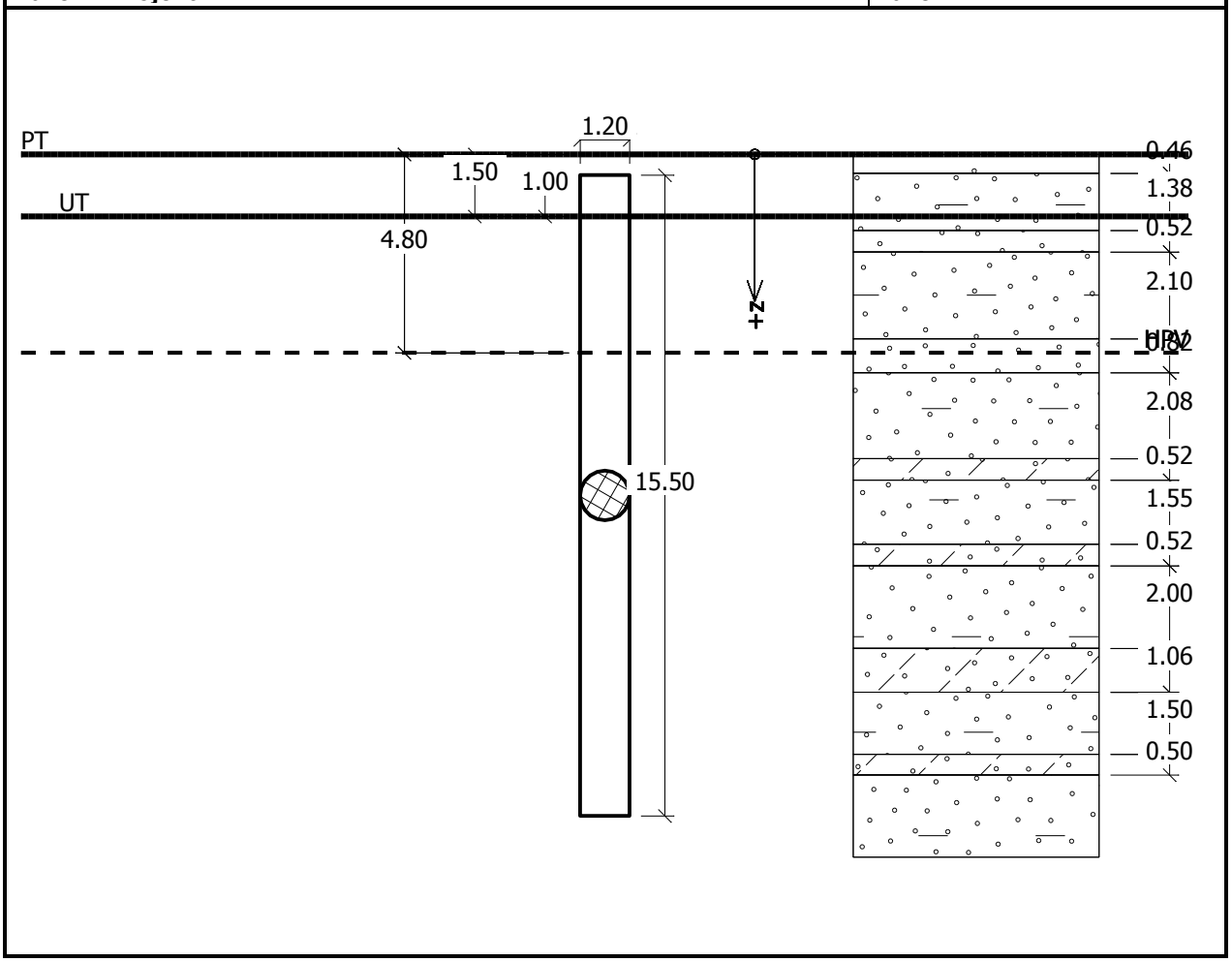


7.4.1.5 Posúdenie pilót opory č.6 – v záreze

Vstupní data

Projekt
Datum : 5. 12. 2011

Název : Projekt	**Fáze : 1**



Základní parametry zemin

Číslo	Název	Vzorek	φef [°]	cef [kPa]	γ [kN/m3]	γsu [kN/m3]
1	strk ilovity G5 GC		28.00	2.00	19.50	10.00
2	strk-primes jem. zeminy G3 G-F		30.00	0.00	19.00	9.50
3	pieskovec R5		26.00	8.00	21.00	11.10
4	ilovec R5-R6		23.00	20.00	20.00	10.20
5	pieskovec R4-R5		30.00	5.00	21.00	11.10
6	pieskovec R3		38.00	0.00	21.00	11.10

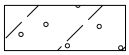
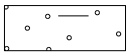
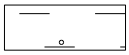
Číslo	Název	Vzorek	φ_{ef} [°]	c_{ef} [kPa]	γ [kN/m^3]	γ_{su} [kN/m^3]
7	pieskovec R4		35.00	5.00	21.00	11.10
8	ilovec R5		26.00	11.00	21.00	11.10
9	Kvartérne sedimenty F4		22.00	14.00	18.50	9.50

Pro výpočet tlaku v klidu jsou všechny zeminy zadány jako nesoudržné.

Číslo	Název	Vzorek	E_{oed} [MPa]	E_{def} [MPa]	γ_{sat} [kN/m^3]	γ_s [kN/m^3]	n [-]
1	strk ilovity G5 GC		-	40.00	20.00	-	-
2	strk-primes jem. zeminy G3 G-F		-	80.00	19.50	-	-
3	pieskovec R5		-	80.00	21.10	-	-
4	ilovec R5-R6		-	15.00	20.20	-	-
5	pieskovec R4-R5		-	60.00	21.10	-	-
6	pieskovec R3		-	200.00	21.10	-	-
7	pieskovec R4		-	20.00	21.10	-	-
8	ilovec R5		-	100.00	21.10	-	-
9	Kvartérne sedimenty F4		-	5.00	19.50	-	-

Parametry zemin pro výpočet modulu reakce podloží

Číslo	Název	Vzorek	β
1	strk ilovity G5 GC		0.74
2	strk-primes jem. zeminy G3 G-F		0.83
3	pieskovec R5		0.62
4	ilovec R5-R6		0.62
5	pieskovec R4-R5		0.78

Číslo	Názov	Vzorek	β
6	pieskovec R3		0.78
7	pieskovec R4		0.78
8	ilovec R5		0.47
9	Kvartérne sedimenty F4		0.83

Parametry zemin
strk ilovity G5 GC

Objemová tíha :	γ	=	19,50	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	28,00	°
Soudržnost zeminy :	c_{ef}	=	2,00	kPa
Poissonovo číslo :	ν	=	0,30	
Modul přetvárnosti :	E_{def}	=	40,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	20,00	kN/m3
Úhel roznášení :	β	=	0,74	°

strk-primes jem. zeminy G3 G-F

Objemová tíha :	γ	=	19,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	30,00	°
Soudržnost zeminy :	c_{ef}	=	0,00	kPa
Poissonovo číslo :	ν	=	0,20	
Modul přetvárnosti :	E_{def}	=	80,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	19,50	kN/m3
Úhel roznášení :	β	=	0,83	°

pieskovec R5

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	26,00	°
Soudržnost zeminy :	c_{ef}	=	8,00	kPa
Poissonovo číslo :	ν	=	0,30	
Modul přetvárnosti :	E_{def}	=	80,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3
Úhel roznášení :	β	=	0,62	°

ilovec R5-R6

Objemová tíha :	γ	=	20,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	23,00	°
Soudržnost zeminy :	c_{ef}	=	20,00	kPa
Poissonovo číslo :	ν	=	0,35	
Modul přetvárnosti :	E_{def}	=	15,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	20,20	kN/m3
Úhel roznášení :	β	=	0,62	°

pieskovec R4-R5

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	30,00	°
Soudržnost zeminy :	c_{ef}	=	5,00	kPa
Poissonovo číslo :	ν	=	0,25	
Modul přetvárnosti :	E_{def}	=	60,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3
Úhel roznášení :	β	=	0,78	°

pieskovec R3

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	38,00	°
Soudržnost zeminy :	c_{ef}	=	0,00	kPa
Poissonovo číslo :	ν	=	0,28	
Modul přetvárnosti :	E_{def}	=	200,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3
Úhel roznášení :	β	=	0,78	°

pieskovec R4

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	35,00	°
Soudržnost zeminy :	c_{ef}	=	5,00	kPa
Poissonovo číslo :	ν	=	0,28	
Modul přetvárnosti :	E_{def}	=	20,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3
Úhel roznášení :	β	=	0,78	°

ilovec R5

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	26,00	°
Soudržnost zeminy :	c_{ef}	=	11,00	kPa
Poissonovo číslo :	ν	=	0,20	
Modul přetvárnosti :	E_{def}	=	100,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3
Úhel roznášení :	β	=	0,47	°

Kvartérne sedimenty F4

Objemová tíha :	γ	=	18,50	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	22,00	°
Soudržnost zeminy :	c_{ef}	=	14,00	kPa
Poissonovo číslo :	ν	=	0,35	
Modul přetvárnosti :	E_{def}	=	5,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	19,50	kN/m3
Úhel roznášení :	β	=	0,83	°

Geometrie konstrukce

Geometrie piloty
Profil piloty: kruhová
Rozměry

Průměr d = 1.20 m
Délka l = 15.50 m

Umístění

Vysazení h_z = 1.00 m
Hloubka upraveného terénu h_z = 1.50 m

Redukce odporu na patě = 0.80
Redukce odporu na plášti = 0.60
Modul reakce podloží uvažován jako konstantní.

Materiál konstrukce

Výpočet betonových konstrukcí proveden podle normy EN 1992 1-1 (EC2).

Beton : C 20/25

Válcová pevnost v tlaku	f_{ck}	=	20.00	MPa
Pevnost v tahu	f_{ct}	=	2.20	MPa
Modul pružnosti	E_{cm}	=	29000.00	MPa

Ocel podélná : B500

Mez kluzu	f_{yk}	=	500.00	MPa
Modul pružnosti	E	=	200000.00	MPa

Geologický profil a přiřazení zemin

Číslo	Vrstva [m]	Přiřazená zemina	Vzorek
1	0.46	Kvartérne sedimenty F4	
2	1.38	ilovec R5	
3	0.52	pieskovec R5	
4	2.10	ilovec R5	
5	0.82	pieskovec R5	
6	2.08	ilovec R5	
7	0.52	pieskovec R3	
8	1.55	ilovec R5	
9	0.52	pieskovec R3	
10	2.00	ilovec R5	
11	1.06	pieskovec R3	

Číslo	Vrstva [m]	Přiřazená zemina	Vzorek
12	1.50	ilovec R5	
13	0.50	pieskovec R3	
14	-	ilovec R5	

Zatížení

Číslo	Zatížení nové	Zatížení změna	Název	Typ	N [kN]	M_x [kNm]	M_y [kNm]	H_x [kN]	H_y [kN]
1	ANO		LCB 2(max)	Výpočtové	2950.00	0.00	0.00	177.00	0.00
2	ANO		LCB 2(MAX)	Výpočtové	3850.00	0.00	0.00	177.00	0.00

Hladina podzemní vody
Hladina podzemní vody je v hloubce 4.80 m od původního terénu.

Nastavení výpočtu
Výpočet proveden podle teorie mezních stavů s redukcí vstupních parametrů zemin.

Součinitel redukce úhlu vnitřního tření $\gamma_{m\phi}$ = 1.10

Součinitel redukce soudržnosti γ_{mc} = 1.40

Posouzení čís. 1

Posouzení svislé únosnosti piloty podle teorie MS - mezivýsledky
Výpočet únosnosti v patě:

Součinitel únosnosti	Nc	=	13.57	
Součinitel únosnosti	Nd	=	5.56	
Součinitel únosnosti	Nb	=	2.30	
Součinitel únosnosti	K1	=	1.15	
Výpočtová únosnost na patě piloty	R_d	=	1519.44	kPa
Plocha příčného řezu piloty	A_s	=	1.131E+00	m^2

Únosnost na plášti piloty:
Zkrácení účinné délky piloty Lp [m] = 0.94 m

Hloubka [m]	Mocnost [m]	ϕ_d [°]	cd [kPa]	γ [kN/m^3]	γ R2 [-]	fs [kPa]	Ufdi [kN]
0.34	0.34	18.57	5.50	21.00	1.30	5.22	6.69
0.86	0.52	18.57	4.00	21.00	1.30	6.57	12.87
1.00	0.14	18.57	5.50	21.00	1.30	9.64	5.09
2.00	1.00	18.57	5.50	21.00	1.20	13.30	50.16
2.96	0.96	18.57	5.50	21.00	1.10	19.42	70.28
3.00	0.04	18.57	4.00	21.00	1.10	20.96	3.16
3.30	0.30	18.57	4.00	21.00	1.00	22.32	25.24
3.78	0.48	18.57	4.00	11.10	1.00	23.93	43.29

Hloubka [m]	Mocnost [m]	ϕ_d [°]	cd [kPa]	γ [kN/m^3]	γ R2 [-]	fs [kPa]	Ufdi [kN]
5.86	2.08	18.57	5.50	11.10	1.00	29.36	230.22
6.38	0.52	27.14	0.00	11.10	1.00	41.92	82.17
7.93	1.55	18.57	5.50	11.10	1.00	36.54	213.49
8.45	0.52	27.14	0.00	11.10	1.00	51.49	100.94
10.00	1.55	18.57	5.50	11.10	1.00	42.90	250.66
10.45	0.45	18.57	5.50	11.10	1.00	46.11	78.22
11.51	1.06	27.14	0.00	11.10	1.00	65.30	260.94
13.01	1.50	18.57	5.50	11.10	1.00	53.61	303.18
13.51	0.50	27.14	0.00	11.10	1.00	77.95	146.94
13.56	0.05	18.57	5.50	11.10	1.00	58.31	10.68

Posouzení svislé únosnosti piloty podle teorie MS - výsledky
Výpočet proveden s automatickým výběrem nejnepříznivějších zatěžovacích stavů.
Součinitel vlivu technologie GamaR1 = 1.20

Únosnost piloty na plášti U_{fd} = 1894.21 kN
Únosnost piloty v patě U_{bd} = 1976.21 kN

Únosnost piloty U_{vd} = 3870.42 kN
Extrémní svislá síla V_d = 3850.00 kN

U_{vd} = 3870.42 kN > 3850.00 kN = V_d

Svislá únosnost plovoucí piloty VYHOVUJE

Posouzení čís. 1

Vstupní data pro výpočet vodorovné únosnosti piloty
Výpočet proveden s automatickým výběrem nejnepříznivějších zatěžovacích stavů.
Vodorovná únosnost posouzena ve směru maximálního účinku zatížení.

Průběhy vnitřních sil a deformace piloty
Průběh deformací a vnitřních sil po pilotě - maximální hodnoty:

Vzdál. [m]	Modul k [MN/m^3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
0.00	0.00	1.75	0.52	0.00	177.00	0.00
0.78	0.00	1.35	0.50	33.12	177.00	137.18
1.00	0.00	1.25	0.49	46.21	161.62	170.72
1.00	122.98	1.25	0.49	46.21	161.62	170.72
1.34	122.98	1.08	0.47	65.99	138.38	221.42
1.34	97.88	1.08	0.47	65.99	138.38	221.42
1.55	97.88	0.98	0.45	78.20	124.02	252.73
1.86	97.88	0.85	0.42	77.73	90.51	277.33
1.86	122.98	0.85	0.42	77.73	90.51	277.33
2.33	122.98	0.66	0.38	77.02	40.24	314.24
3.10	122.98	0.40	0.29	49.38	19.84	320.24
3.88	122.98	0.21	0.21	24.23	54.07	290.16
3.96	122.98	0.19	0.20	22.45	55.60	284.88

Vzdál. [m]	Modul k [MN/m3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
3.96	97.88	0.19	0.20	22.45	55.60	284.88
4.65	97.88	0.07	0.14	8.00	67.99	241.97
4.78	97.88	0.06	0.13	6.92	68.43	232.86
4.78	122.98	0.06	0.13	6.92	68.43	232.86
5.43	122.98	0.01	0.08	1.59	70.63	187.69
6.20	122.98	0.06	0.04	9.41	66.03	134.38
6.86	122.98	0.08	0.02	14.16	55.36	94.74
6.86	243.37	0.08	0.02	14.16	55.36	94.74
6.98	243.37	0.08	0.01	14.99	53.51	87.84
7.38	243.37	0.08	0.01	13.88	46.02	69.06
7.38	122.98	0.08	0.01	13.88	46.02	69.06
7.75	122.98	0.08	0.01	12.88	39.17	51.90
8.53	122.98	0.08	0.02	11.59	29.96	25.17
8.93	122.98	0.07	0.02	11.47	23.80	15.50
8.93	243.37	0.07	0.02	11.47	23.80	15.50
9.30	243.37	0.06	0.02	11.37	18.18	6.67
9.45	243.37	0.06	0.02	10.56	16.38	6.09
9.45	122.98	0.06	0.02	10.56	16.38	6.09
10.08	122.98	0.05	0.02	7.18	8.90	3.66
10.85	122.98	0.03	0.02	4.96	4.38	8.70
11.45	122.98	0.02	0.02	4.35	1.00	9.89
11.45	243.37	0.02	0.02	4.35	1.00	9.89
11.63	243.37	0.02	0.02	4.18	0.02	10.24
12.40	243.37	0.01	0.01	1.88	3.20	8.84
12.51	243.37	0.01	0.01	1.62	3.30	8.44
12.51	122.98	0.01	0.01	1.62	3.30	8.44
13.18	122.98	0.00	0.01	0.03	3.91	5.99
13.95	122.98	0.01	0.01	0.98	3.44	3.08
14.01	122.98	0.01	0.01	1.04	3.34	2.91
14.01	243.37	0.01	0.01	1.04	3.34	2.91
14.51	243.37	0.01	0.01	1.61	2.49	1.49
14.51	122.98	0.01	0.01	1.61	2.49	1.49
14.73	122.98	0.02	0.01	1.85	2.12	0.87
15.50	122.98	0.02	0.01	2.71	0.00	0.00

Průběh deformací a vnitřních sil po pilotě - minimální hodnoty:

Vzdál. [m]	Modul k [MN/m3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
0.00	0.00	-1.75	-0.52	0.00	-177.00	-0.00
0.78	0.00	-1.35	-0.50	-33.12	-177.00	-137.18
1.00	0.00	-1.25	-0.49	-46.21	-161.62	-170.72
1.00	122.98	-1.25	-0.49	-46.21	-161.62	-170.72
1.34	122.98	-1.08	-0.47	-65.99	-138.38	-221.42
1.34	97.88	-1.08	-0.47	-65.99	-138.38	-221.42
1.55	97.88	-0.98	-0.45	-78.20	-124.02	-252.73
1.86	97.88	-0.85	-0.42	-77.73	-90.51	-277.33

Vzdál. [m]	Modul k [MN/m3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
1.86	122.98	-0.85	-0.42	-77.73	-90.51	-277.33
2.33	122.98	-0.66	-0.38	-77.02	-40.24	-314.24
3.10	122.98	-0.40	-0.29	-49.38	-19.84	-320.24
3.88	122.98	-0.21	-0.21	-24.23	-54.07	-290.16
3.96	122.98	-0.19	-0.20	-22.45	-55.60	-284.88
3.96	97.88	-0.19	-0.20	-22.45	-55.60	-284.88
4.65	97.88	-0.07	-0.14	-8.00	-67.99	-241.97
4.78	97.88	-0.06	-0.13	-6.92	-68.43	-232.86
4.78	122.98	-0.06	-0.13	-6.92	-68.43	-232.86
5.43	122.98	-0.01	-0.08	-1.59	-70.63	-187.69
6.20	122.98	-0.06	-0.04	-9.41	-66.03	-134.38
6.86	122.98	-0.08	-0.02	-14.16	-55.36	-94.74
6.86	243.37	-0.08	-0.02	-14.16	-55.36	-94.74
6.98	243.37	-0.08	-0.01	-14.99	-53.51	-87.84
7.38	243.37	-0.08	-0.01	-13.88	-46.02	-69.06
7.38	122.98	-0.08	-0.01	-13.88	-46.02	-69.06
7.75	122.98	-0.08	-0.01	-12.88	-39.17	-51.90
8.53	122.98	-0.08	-0.02	-11.59	-29.96	-25.17
8.93	122.98	-0.07	-0.02	-11.47	-23.80	-15.50
8.93	243.37	-0.07	-0.02	-11.47	-23.80	-15.50
9.30	243.37	-0.06	-0.02	-11.37	-18.18	-6.67
9.45	243.37	-0.06	-0.02	-10.56	-16.38	-6.09
9.45	122.98	-0.06	-0.02	-10.56	-16.38	-6.09
10.08	122.98	-0.05	-0.02	-7.18	-8.90	-3.66
10.85	122.98	-0.03	-0.02	-4.96	-4.38	-8.70
11.45	122.98	-0.02	-0.02	-4.35	-1.00	-9.89
11.45	243.37	-0.02	-0.02	-4.35	-1.00	-9.89
11.63	243.37	-0.02	-0.02	-4.18	-0.02	-10.24
12.40	243.37	-0.01	-0.01	-1.88	-3.20	-8.84
12.51	243.37	-0.01	-0.01	-1.62	-3.30	-8.44
12.51	122.98	-0.01	-0.01	-1.62	-3.30	-8.44
13.18	122.98	-0.00	-0.01	-0.03	-3.91	-5.99
13.95	122.98	-0.01	-0.01	-0.98	-3.44	-3.08
14.01	122.98	-0.01	-0.01	-1.04	-3.34	-2.91
14.01	243.37	-0.01	-0.01	-1.04	-3.34	-2.91
14.51	243.37	-0.01	-0.01	-1.61	-2.49	-1.49
14.51	122.98	-0.01	-0.01	-1.61	-2.49	-1.49
14.73	122.98	-0.02	-0.01	-1.85	-2.12	-0.87
15.50	122.98	-0.02	-0.01	-2.71	-0.00	-0.00

Maximální vnitřní síly a deformace:

Max.deformace piloty = 1.8 mm
Max.posouvající síla = 177.00 kN
Maximální moment = 320.24 kNm

Dimenzace výztuže:

Vyztužení - 16 ks profil 18.0 mm; krytí 100.0 mm

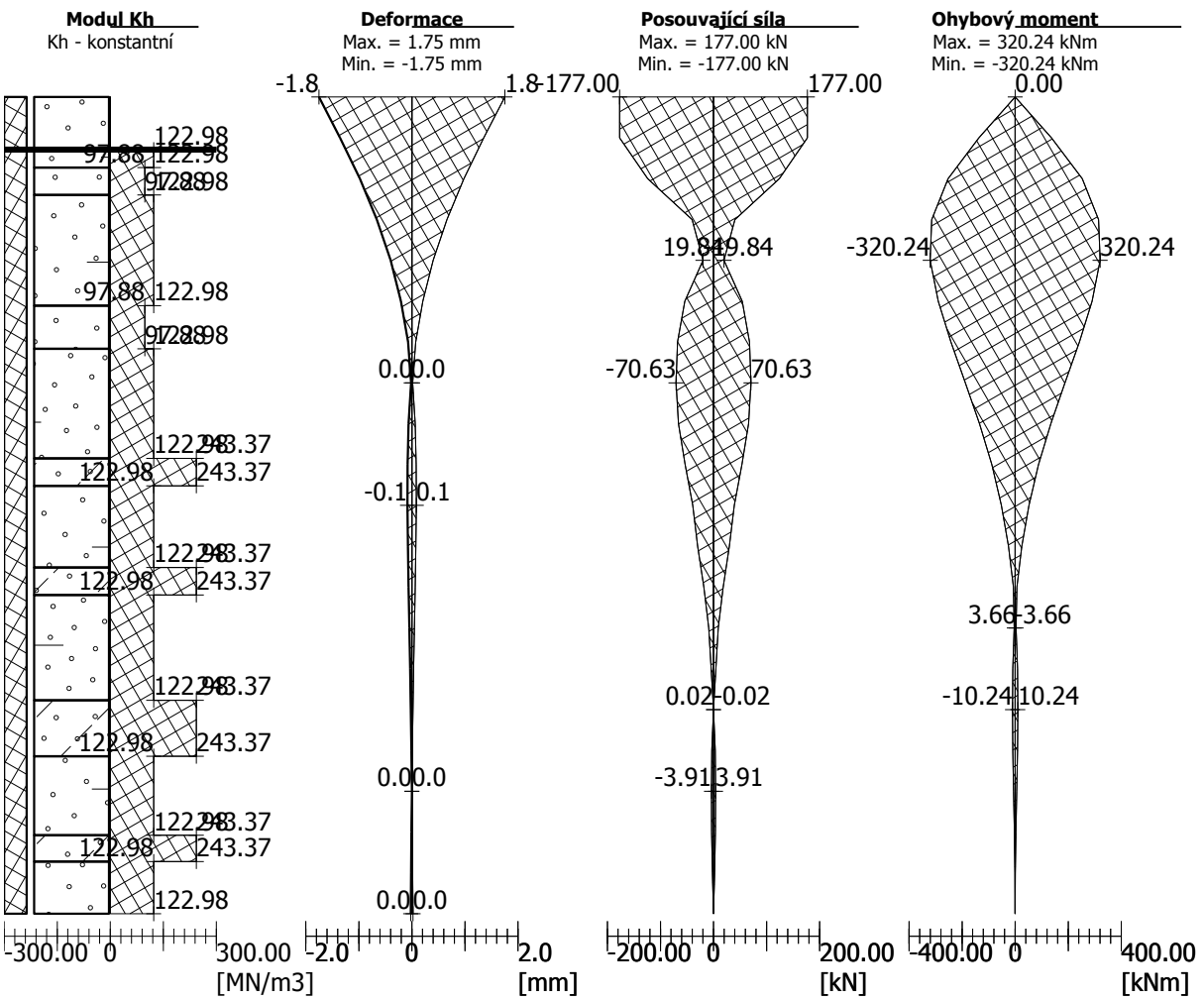
Stupeň vyztužení $\rho = 0.180\ \% > 0.130\ \% = \rho_{min}$

Zatížení : N_{Ed} = -3850.00 kN (tlak) ; M_{Ed} = 320.24 kNm
Únosnost : N_{Rd} = -12326.94 kN; M_{Rd} = 1024.77 kNm

Zatížení : N_{Ed} = -2950.00 kN (tlak) ; M_{Ed} = 320.24 kNm
Únosnost : N_{Rd} = -11659.98 kN; M_{Rd} = 1264.90 kNm

Navržená výztuž piloty VYHOVUJE

Název : Vod. únosn.	**Fáze : 1; Posouzení : 1**

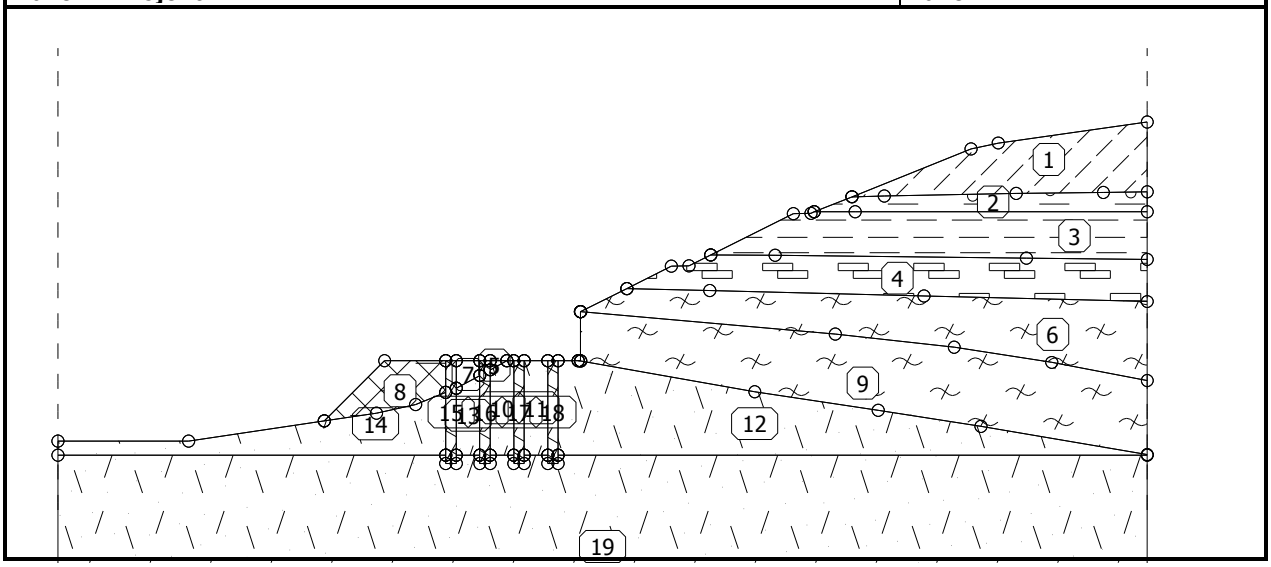


7.4.1.6 Posúdenie stability svahu pri opore č.6

Vstupní data

Projekt
Akce : N040 Plavnica
Část : 203
Datum : 20. 10. 2011

Název : Projekt	**Fáze : 1**



Parametry zemin - efektivní napjatost

Číslo	Název	Vzorek	φef [°]	cef [kPa]	γ [kN/m3]
1	Pg-F6CL		25,00	14,90	19,90
2	Pg-F4CS		24,00	12,00	18,50
3	Ft-F2CG		24,00	10,00	19,00
4	E-F6CL		18,00	16,00	21,00
5	R5-R6 ílovec		23,00	20,00	20,00
6	NASYP		30,00	20,00	19,50
7	SRTKODRVA		38,50	0,00	20,00

Číslo	Názov	Vzorek	φef [°]	cef [kPa]	γ [kN/m3]
8	R5 - ilovec preložený pieskovcom		30,00	15,00	21,00
9	R4 - pieskovec		35,00	25,00	21,00

Parametry zemin - vztlak

Číslo	Názov	Vzorek	γsat [kN/m3]	γs [kN/m3]	n [–]
1	Pg-F6CL		20,00		
2	Pg-F4CS		18,60		
3	Ft-F2CG		19,10		
4	E-F6CL		21,10		
5	R5-R6 ílovec		20,10		
6	NASYP		20,10		
7	SRTKODRVA		21,10		
8	R5 - ilovec preložený pieskovcom		21,10		
9	R4 - pieskovec		21,10		

Parametry zemin
Pg-F6CL

Objemová tíha : γ = 19,90 kN/m3
Úhel vnitřního tření : φ_{ef} = 25,00 °
Soudržnost zeminy : c_{ef} = 14,90 kPa
Obj.tíha sat.zeminy : γ_{sat} = 20,00 kN/m3

Pg-F4CS

Objemová tíha :	γ	=	18,50	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	24,00	°
Soudržnost zeminy :	c_{ef}	=	12,00	kPa
Obj.tíha sat.zeminy :	γ_{sat}	=	18,60	kN/m3

Ft-F2CG

Objemová tíha :	γ	=	19,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	24,00	°
Soudržnost zeminy :	c_{ef}	=	10,00	kPa
Obj.tíha sat.zeminy :	γ_{sat}	=	19,10	kN/m3

E-F6CL

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	18,00	°
Soudržnost zeminy :	c_{ef}	=	16,00	kPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3

R5-R6 ílovec

Objemová tíha :	γ	=	20,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	23,00	°
Soudržnost zeminy :	c_{ef}	=	20,00	kPa
Obj.tíha sat.zeminy :	γ_{sat}	=	20,10	kN/m3

NASYP

Objemová tíha :	γ	=	19,50	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	30,00	°
Soudržnost zeminy :	c_{ef}	=	20,00	kPa
Obj.tíha sat.zeminy :	γ_{sat}	=	20,10	kN/m3

SRTKODRVA

Objemová tíha :	γ	=	20,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	38,50	°
Soudržnost zeminy :	c_{ef}	=	0,00	kPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3

R5 - ilovec preložený pieskovcom

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	30,00	°
Soudržnost zeminy :	c_{ef}	=	15,00	kPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3

R4 - pieskovec

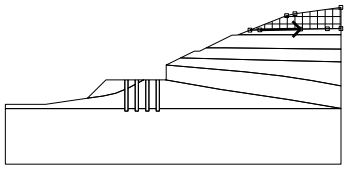
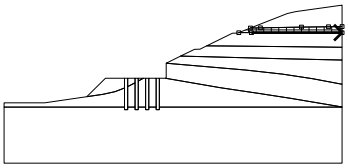
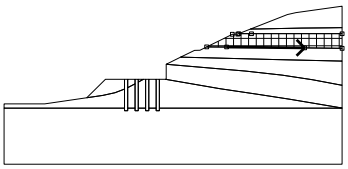
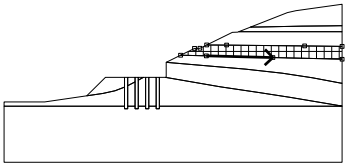
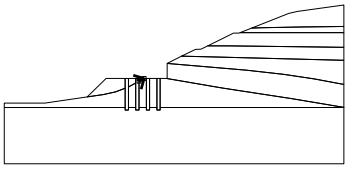
Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	35,00	°
Soudržnost zeminy :	c_{ef}	=	25,00	kPa

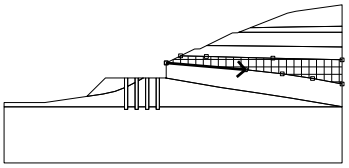
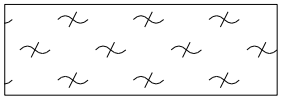
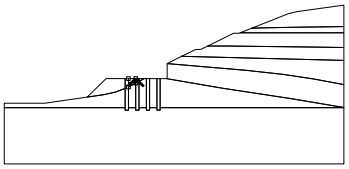
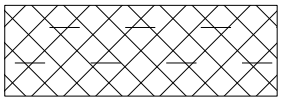
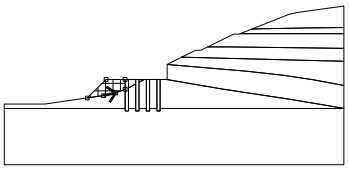
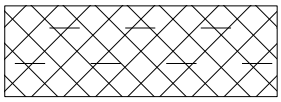
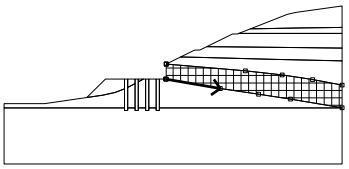
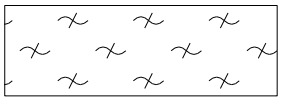
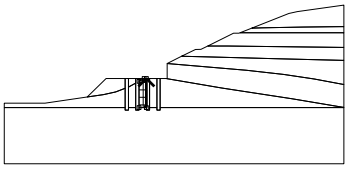
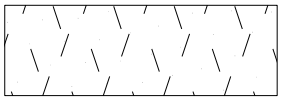
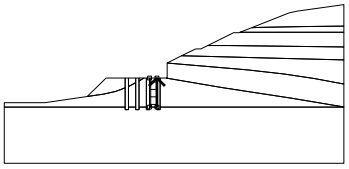
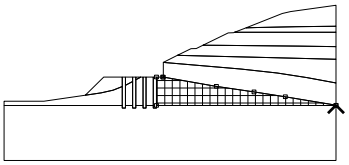
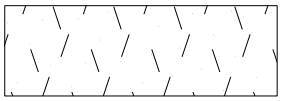
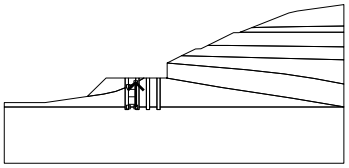
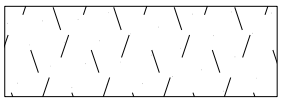
Obj.tíha sat.zeminy : γ_{sat} = 21,10 kN/m3

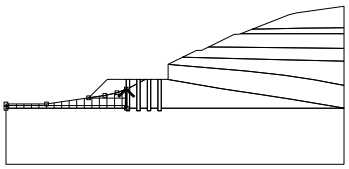
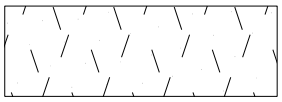
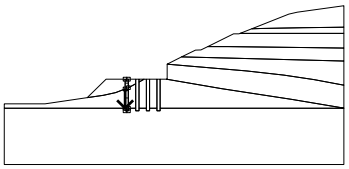
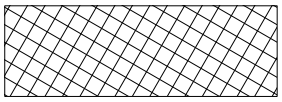
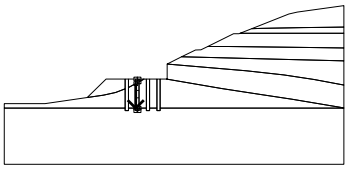
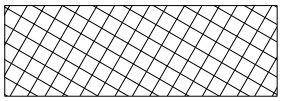
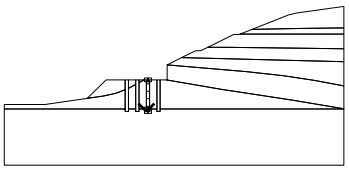
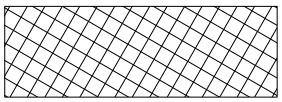
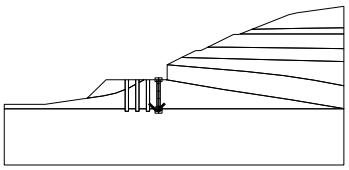
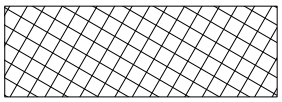
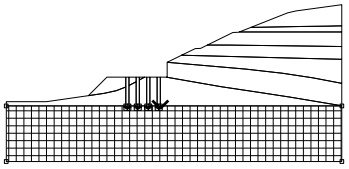
Tuhá tělesa

Číslo	Název	Vzorek	γ [kN/m3]
1	Schodisko		25,00
2	Pilóta		25,00
3	Mostná opora		25,00

Přiřazení a plochy

Číslo	Umístění plochy	Souřadnice bodů plochy [m] x	z	x	z	Přiřazená zemina
1		79,81	25,91	94,97	26,21	Pg-F6CL
		104,97	26,33	110,00	26,39	
		110,00	34,40	92,89	32,00	
		89,78	31,31	76,10	25,83	
2		76,48	24,11	110,00	24,11	Ft-F2CG
		110,00	26,39	104,97	26,33	
		94,97	26,21	79,81	25,91	
		76,10	25,83	71,79	24,11	
3		67,28	19,13	96,12	18,80	E-F6CL
		110,00	18,64	110,00	24,11	
		76,48	24,11	71,79	24,11	
		71,40	23,95	69,40	23,91	
		59,91	19,17			
4		59,79	15,08	84,39	14,46	R5-R6 ílovec
		110,00	13,82	110,00	18,64	
		96,12	18,80	67,28	19,13	
		59,91	19,17	57,40	17,91	
		55,40	17,87	50,28	15,32	
5		34,60	5,99	36,51	7,05	NASYP
		34,60	7,05			

Číslo	Umístění plochy	Souřadnice bodů plochy [m]				Přiřazená zemina
		x	z	x	z	
6		44,99	12,65	74,21	10,10	R5 - ilovec preložený pieskovcom
		87,85	8,57	99,05	6,84	
		110,00	4,77	110,00	13,82	
		84,39	14,46	59,79	15,08	
		50,28	15,32	44,96	12,65	
7		33,40	5,33	33,40	7,05	NASYP
		30,70	7,05	30,70	3,88	
						
8		21,55	1,00	26,04	2,00	NASYP
		29,50	3,40	29,50	7,05	
		22,49	7,05	15,56	0,12	
9		44,98	7,00	64,96	3,49	R5 - ilovec preložený pieskovcom
		79,11	1,35	90,92	-0,48	
		110,00	-3,72	110,00	4,77	
		99,05	6,84	87,85	8,57	
		74,21	10,10	44,99	12,65	
		44,96	12,65	44,95	12,65	
		44,95	7,05	44,70	7,05	
10		37,30	-3,79	37,30	7,05	R4 - pieskovec
		36,51	7,05	34,60	5,99	
		34,60	-3,79			
11		41,20	-3,79	41,20	7,05	R4 - pieskovec
		38,50	7,05	38,50	-3,79	
12		110,00	-3,79	110,00	-3,72	R4 - pieskovec
		90,92	-0,48	79,11	1,35	
		64,96	3,49	44,98	7,00	
		44,70	7,05	42,40	7,05	
		42,40	-3,79			
13		33,40	-3,79	33,40	5,33	R4 - pieskovec
		30,70	3,88	30,70	-3,79	
						

Číslo	Umístění plochy	Souřadnice bodů plochy [m]				Přiřazená zemina
		x	z	x	z	
14		29,50	-3,79	29,50	3,40	R4 - pieskovec
		26,04	2,00	21,55	1,00	
		15,56	0,12	0,00	-2,17	
		-15,00	-2,17	-15,00	-3,79	
15		29,50	3,40	29,50	-3,79	Pilóta
		29,50	-4,75	30,70	-4,75	
		30,70	-3,79	30,70	3,88	
		30,70	7,05	29,50	7,05	
16		33,40	5,33	33,40	-3,79	Pilóta
		33,40	-4,75	34,60	-4,75	
		34,60	-3,79	34,60	5,99	
		34,60	7,05	33,40	7,05	
17		37,30	-3,79	37,30	-4,75	Pilóta
		38,50	-4,75	38,50	-3,79	
		38,50	7,05	37,30	7,05	
18		41,20	-3,79	41,20	-4,75	Pilóta
		42,40	-4,75	42,40	-3,79	
		42,40	7,05	41,20	7,05	
19		42,40	-3,79	42,40	-4,75	R4 - pieskovec
		41,20	-4,75	41,20	-3,79	
		38,50	-3,79	38,50	-4,75	
		37,30	-4,75	37,30	-3,79	
		34,60	-3,79	34,60	-4,75	
		33,40	-4,75	33,40	-3,79	
		30,70	-3,79	30,70	-4,75	
		29,50	-4,75	29,50	-3,79	
		-15,00	-3,79	-15,00	-24,75	
		110,00	-24,75	110,00	-3,79	

Voda
Typ vody : Voda není

Tahová trhlina
Tahová trhlina není zadána.

Zemětřesení
Se zemětřesením se nepočítá.

Celkové nastavení výpočtu
Typ výpočtu : v efektivních parametrech

Nastavení výpočtu fáze
Nastavení výpočtu : Uživatelské

Typ výpočtu : Stupeň bezpečnosti
Stupeň bezpečnosti : 1,30

Výsledky (Fáze budování 1)

Výpočet 1 (fáze 1)
Kruhová smyková plocha

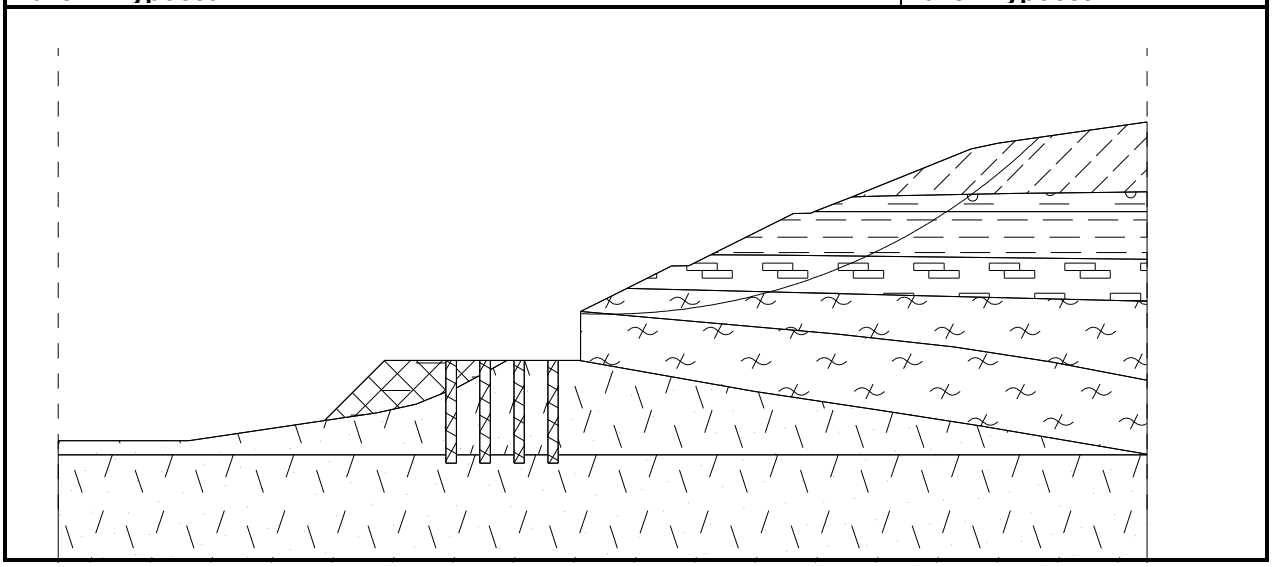
Parametry smykové plochy							
Střed :	x =	47,78	[m]	Úhly :	α_1 =	-2,28	[°]
	z =	83,60	[m]		α_2 =	44,35	[°]
Poloměr :	R =	71,24	[m]				
Výpočet bez optimalizace smykové plochy.							

Posouzení stability svahu (Bishop)
Sumace aktivních sil : F_a = 1986,48 kN/m
Sumace pasivních sil : F_p = 3494,25 kN/m

Moment sesouvající : M_a = 141516,73 kNm/m
Moment vzdorující : M_p = 248930,37 kNm/m

Stupeň bezpečnosti = 1,76 > 1,30
Stabilita svahu VYHOVUJE

Název : Výpočet	**Fáze - výpočet : 1 - 1**



Výpočet 2 (fáze 1)
Kruhová smyková plocha

Parametry smykové plochy							
Střed :	x =	7,71	[m]	Úhly :	α_1 =	16,04	[°]
	z =	136,59	[m]		α_2 =	39,05	[°]
Poloměr :	R =	134,76	[m]				
Smyková plocha po optimalizaci.							

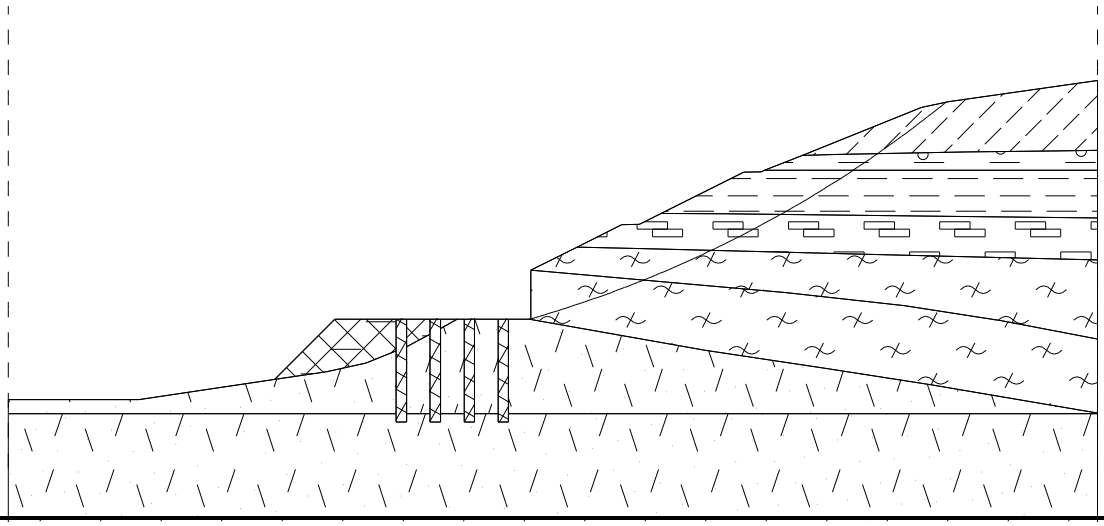
Posouzení stability svahu (Bishop)
Sumace aktivních sil : F_a = 2246,50 kN/m
Sumace pasivních sil : F_p = 3233,74 kN/m

Moment sesouvající : M_a = 302737,99 kNm/m
Moment vzdorující : M_p = 435779,38 kNm/m

Stupeň bezpečnosti = 1,44 > 1,30

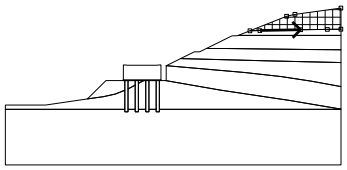
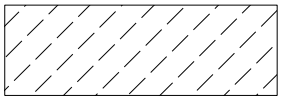
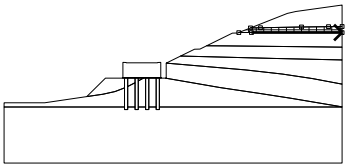
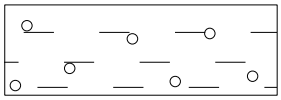
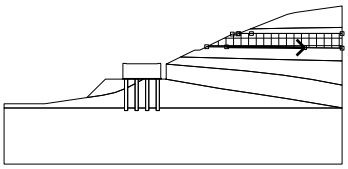
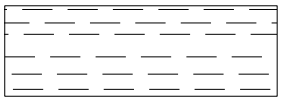
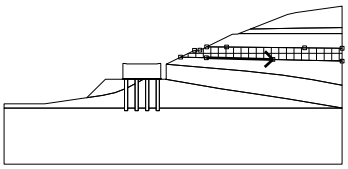
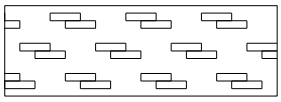
Stabilita svahu VYHOVUJE

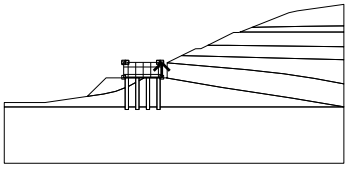
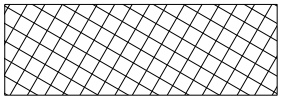
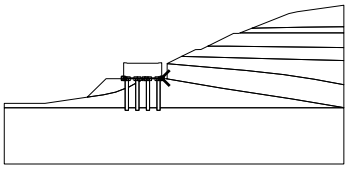
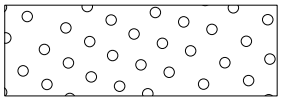
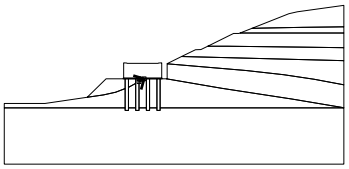
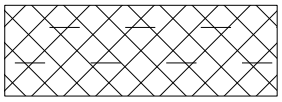
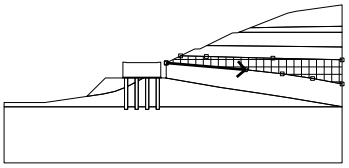
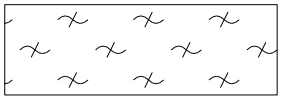
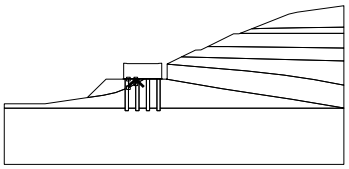
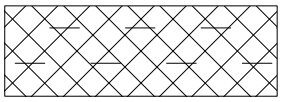
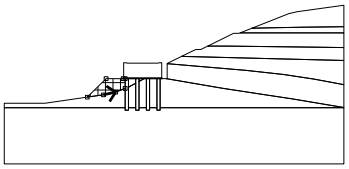
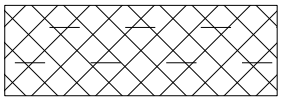
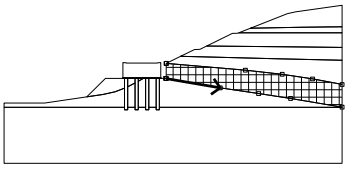
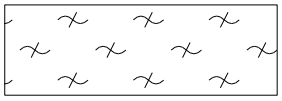
Název : Výpočet	Fáze - výpočet : 1 - 2

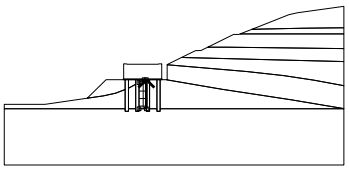
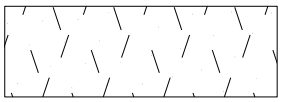
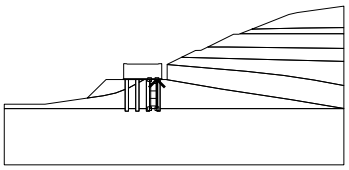
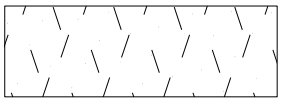
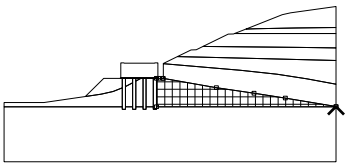
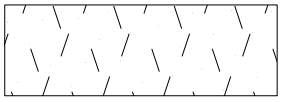
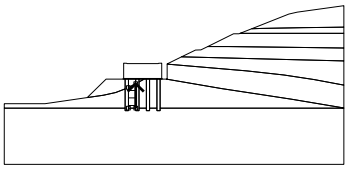
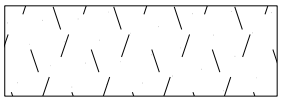
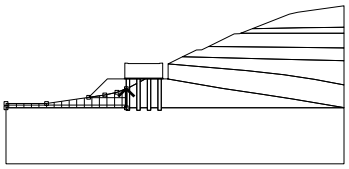
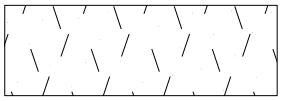
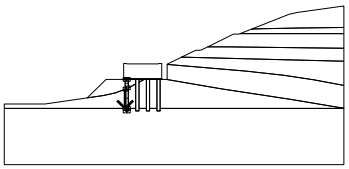
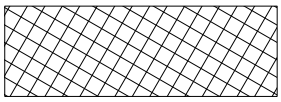
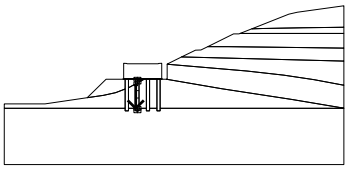
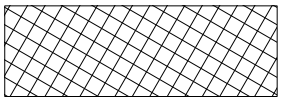
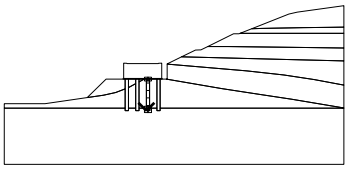
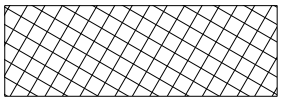


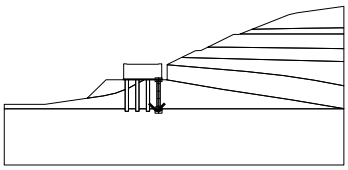
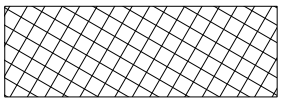
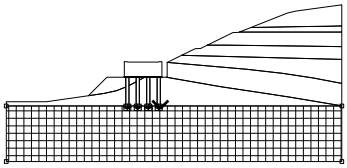
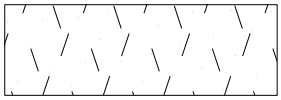
Vstupní data (Fáze budování 2)

Přiřazení a plochy

Číslo	Umístění plochy	Souřadnice bodů plochy [m] x	z	x	z	Přiřazená zemina
1		79,81	25,91	94,97	26,21	Pg-F6CL
		104,97	26,33	110,00	26,39	
		110,00	34,40	92,89	32,00	
		89,78	31,31	76,10	25,83	
2		76,48	24,11	110,00	24,11	Ft-F2CG
		110,00	26,39	104,97	26,33	
		94,97	26,21	79,81	25,91	
		76,10	25,83	71,79	24,11	
3		67,28	19,13	96,12	18,80	E-F6CL
		110,00	18,64	110,00	24,11	
		76,48	24,11	71,79	24,11	
		71,40	23,95	69,40	23,91	
		59,91	19,17			
4		59,79	15,08	84,39	14,46	R5-R6 ílovec
		110,00	13,82	110,00	18,64	
		96,12	18,80	67,28	19,13	
		59,91	19,17	57,40	17,91	
		55,40	17,87	50,28	15,32	

Číslo	Umístění plochy	Souřadnice bodů plochy [m]				Přiřazená zemina
		x	z	x	z	
5		42,95	7,25	42,95	12,65	Mostná opora
		42,95	12,95	41,80	12,90	
		41,70	12,80	30,20	12,80	
		30,10	12,90	28,95	12,95	
		28,95	12,66	28,95	7,25	
6		43,15	7,25	42,95	7,25	SRTKODRVA
		28,95	7,25	28,75	7,25	
		28,75	7,05	29,50	7,05	
		30,70	7,05	33,40	7,05	
		34,60	7,05	36,51	7,05	
		37,30	7,05	38,50	7,05	
		41,20	7,05	42,40	7,05	
		43,15	7,05			
7		34,60	5,99	36,51	7,05	NASYP
		34,60	7,05			
8		44,99	12,65	74,21	10,10	R5 - ilovec preložený pieskovcom
		87,85	8,57	99,05	6,84	
		110,00	4,77	110,00	13,82	
		84,39	14,46	59,79	15,08	
		50,28	15,32	44,98	12,66	
		44,96	12,65			
9		33,40	5,33	33,40	7,05	NASYP
		30,70	7,05	30,70	3,88	
						
10		21,55	1,00	26,04	2,00	NASYP
		29,50	3,40	29,50	7,05	
		28,75	7,05	22,49	7,05	
		15,56	0,12			
11		44,98	7,00	64,96	3,49	R5 - ilovec preložený pieskovcom
		79,11	1,35	90,92	-0,48	
		110,00	-3,72	110,00	4,77	
		99,05	6,84	87,85	8,57	
		74,21	10,10	44,99	12,65	
		44,96	12,65	44,95	12,65	
		44,95	7,05	44,70	7,05	

Číslo	Umístění plochy	Souřadnice bodů plochy [m]				Přiřazená zemina
		x	z	x	z	
12		37,30	-3,79	37,30	7,05	R4 - pieskovec
		36,51	7,05	34,60	5,99	
		34,60	-3,79			
13		41,20	-3,79	41,20	7,05	R4 - pieskovec
		38,50	7,05	38,50	-3,79	
						
14		110,00	-3,79	110,00	-3,72	R4 - pieskovec
		90,92	-0,48	79,11	1,35	
		64,96	3,49	44,98	7,00	
		44,70	7,05	43,15	7,05	
		42,40	7,05	42,40	-3,79	
15		33,40	-3,79	33,40	5,33	R4 - pieskovec
		30,70	3,88	30,70	-3,79	
						
16		29,50	-3,79	29,50	3,40	R4 - pieskovec
		26,04	2,00	21,55	1,00	
		15,56	0,12	0,00	-2,17	
		-15,00	-2,17	-15,00	-3,79	
17		29,50	3,40	29,50	-3,79	Pilóta
		29,50	-4,75	30,70	-4,75	
		30,70	-3,79	30,70	3,88	
		30,70	7,05	29,50	7,05	
18		33,40	5,33	33,40	-3,79	Pilóta
		33,40	-4,75	34,60	-4,75	
		34,60	-3,79	34,60	5,99	
		34,60	7,05	33,40	7,05	
19		37,30	-3,79	37,30	-4,75	Pilóta
		38,50	-4,75	38,50	-3,79	
		38,50	7,05	37,30	7,05	

Číslo	Umístění plochy	Souřadnice bodů plochy [m] x	z	x	z	Přiřazená zemina
20		41,20	-3,79	41,20	-4,75	Pilóta
		42,40	-4,75	42,40	-3,79	
		42,40	7,05	41,20	7,05	
21		42,40	-3,79	42,40	-4,75	R4 - pieskovec
		41,20	-4,75	41,20	-3,79	
		38,50	-3,79	38,50	-4,75	
		37,30	-4,75	37,30	-3,79	
		34,60	-3,79	34,60	-4,75	
		33,40	-4,75	33,40	-3,79	
		30,70	-3,79	30,70	-4,75	
		29,50	-4,75	29,50	-3,79	
		-15,00	-3,79	-15,00	-24,75	
		110,00	-24,75	110,00	-3,79	

Voda
Typ vody : Voda není

Tahová trhlina
Tahová trhlina není zadána.

Zemětřesení
Se zemětřesením se nepočítá.

Nastavení výpočtu
Nastavení výpočtu : Uživatelské
Typ výpočtu : Stupeň bezpečnosti
Stupeň bezpečnosti : 1,30

Výsledky (Fáze budování 2)

Výpočet 1 (fáze 2)
Kruhová smyková plocha

Parametry smykové plochy							
Střed :	x =	-34,81	[m]	Úhly :	α_1 =	20,02	[°]
	z =	226,01	[m]		α_2 =	33,71	[°]
Poloměr :	R =	232,97	[m]				
Smyková plocha po optimalizaci.							

Posouzení stability svahu (Bishop)
Sumace aktivních sil : F_a = 2099,72 kN/m
Sumace pasivních sil : F_p = 3017,08 kN/m

Moment sesouvající : M_a = 489171,70 kNm/m
Moment vzdorující : M_p = 702889,91 kNm/m

Stupeň bezpečnosti = 1,44 > 1,30
Stabilita svahu VYHOVUJE

Výpočet 2 (fáze 2)
Kruhová smyková plocha

Parametry smykové plochy							
Střed :	x =	-11,38	[m]	Úhly :	α_1 =	18,02	[°]
	z =	180,39	[m]		α_2 =	35,57	[°]
Poloměr :	R =	182,15	[m]				
Smyková plocha po optimalizaci.							

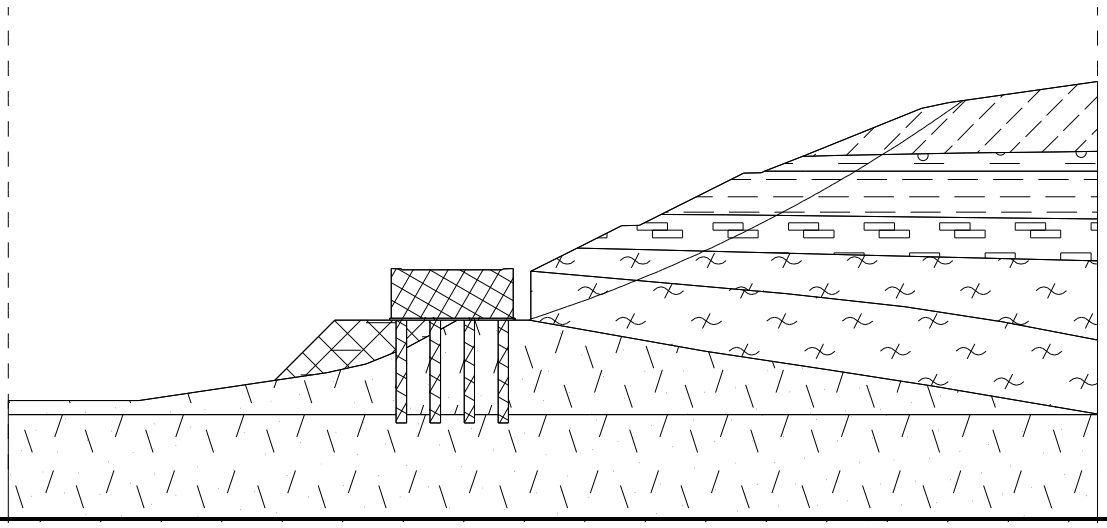
Posouzení stability svahu (Bishop)

Sumace aktivních sil : F_a = 2214,63 kN/m
Sumace pasivních sil : F_p = 3192,46 kN/m

Moment sesouvající : M_a = 403395,41 kNm/m
Moment vzdorující : M_p = 581507,48 kNm/m

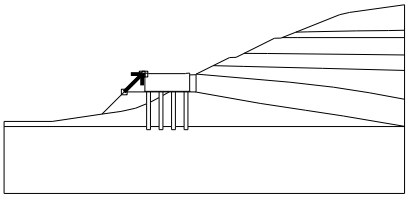
Stupeň bezpečnosti = 1,44 > 1,30
Stabilita svahu VYHOVUJE

Název : Výpočet	**Fáze - výpočet : 2 - 2**

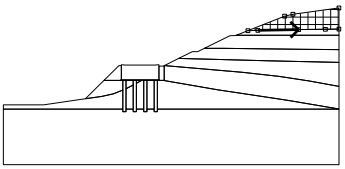
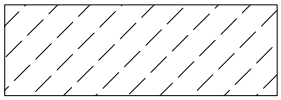
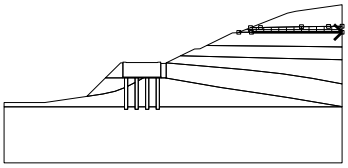
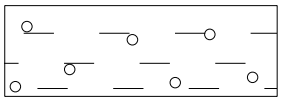
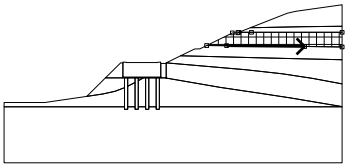
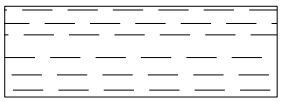
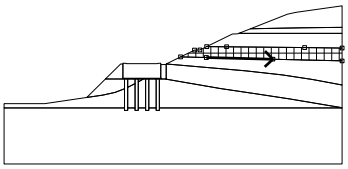
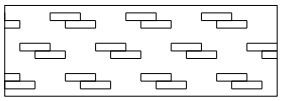
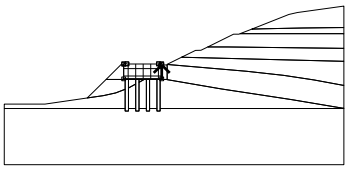
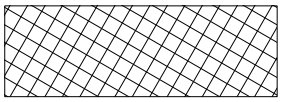
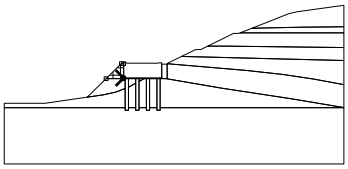
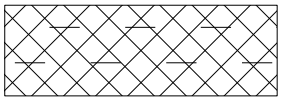
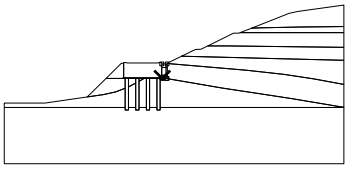
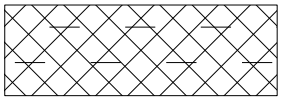


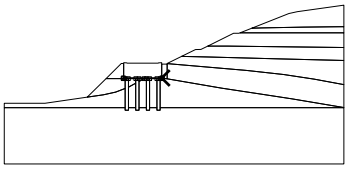
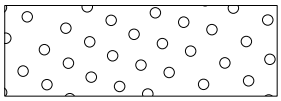
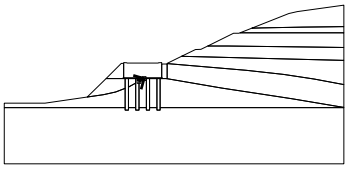
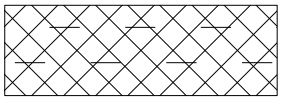
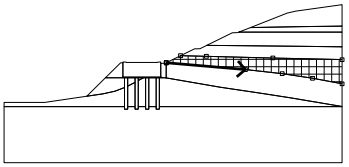
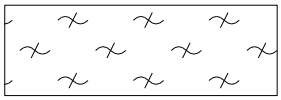
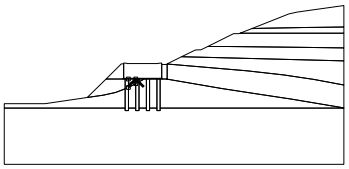
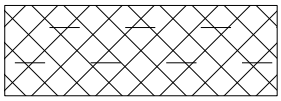
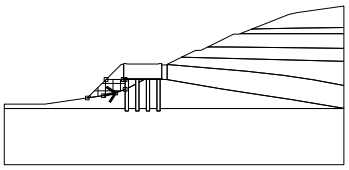
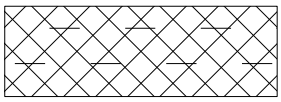
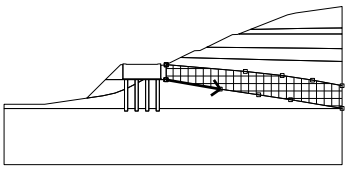
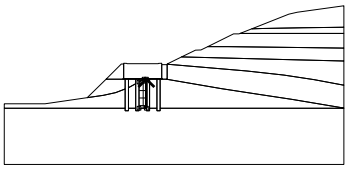
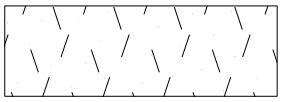
Vstupní data (Fáze budování 4)

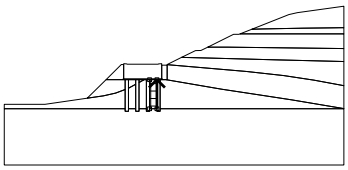
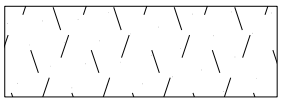
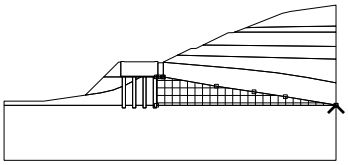
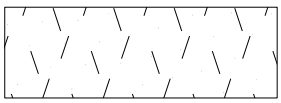
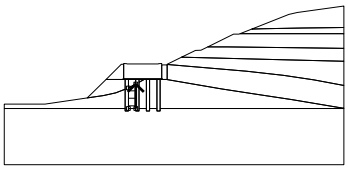
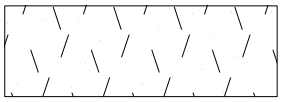
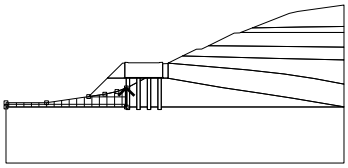
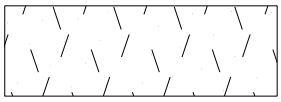
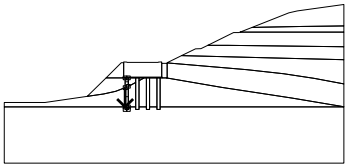
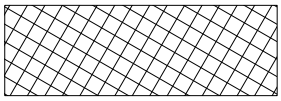
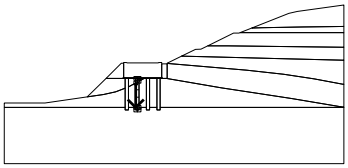
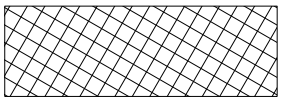
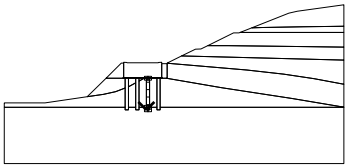
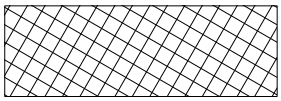
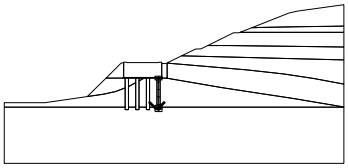
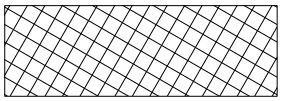
Rozhraní náspu

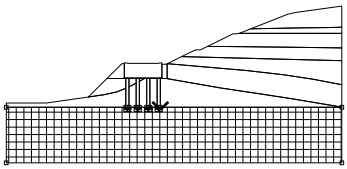
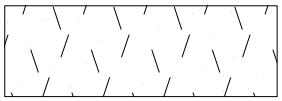
Číslo	Umístění rozhraní	Souřadnice bodů rozhraní [m]					
		x	z	x	z	x	z
1		22,49	7,05	28,10	12,66	28,95	12,66

Přiřazení a plochy

Číslo	Umístění plochy	Souřadnice bodů plochy [m] x	z	x	z	Přiřazená zemina
1		79,81	25,91	94,97	26,21	Pg-F6CL
		104,97	26,33	110,00	26,39	
		110,00	34,40	92,89	32,00	
		89,78	31,31	76,10	25,83	
2		76,48	24,11	110,00	24,11	Ft-F2CG
		110,00	26,39	104,97	26,33	
		94,97	26,21	79,81	25,91	
		76,10	25,83	71,79	24,11	
3		67,28	19,13	96,12	18,80	E-F6CL
		110,00	18,64	110,00	24,11	
		76,48	24,11	71,79	24,11	
		71,40	23,95	69,40	23,91	
		59,91	19,17			
4		59,79	15,08	84,39	14,46	R5-R6 ílovec
		110,00	13,82	110,00	18,64	
		96,12	18,80	67,28	19,13	
		59,91	19,17	57,40	17,91	
		55,40	17,87	50,28	15,32	
5		42,95	7,25	42,95	12,43	Mostná opora
		42,95	12,65	42,95	12,95	
		41,80	12,90	41,70	12,80	
		30,20	12,80	30,10	12,90	
		28,95	12,95	28,95	12,66	
		28,95	7,25			
6		28,75	7,25	28,95	7,25	NASYP
		28,95	12,66	28,10	12,66	
		22,49	7,05	28,75	7,05	
7		43,15	7,25	43,15	7,05	NASYP
		44,70	7,05	44,95	7,05	
		44,95	12,46	42,95	12,43	
		42,95	7,25			

Číslo	Umístění plochy	Souřadnice bodů plochy [m]				Přiřazená zemina
		x	z	x	z	
8		43,15	7,25	42,95	7,25	SRTKODRVA
		28,95	7,25	28,75	7,25	
		28,75	7,05	29,50	7,05	
		30,70	7,05	33,40	7,05	
		34,60	7,05	36,51	7,05	
		37,30	7,05	38,50	7,05	
		41,20	7,05	42,40	7,05	
		43,15	7,05			
9		34,60	5,99	36,51	7,05	NASYP
		34,60	7,05			
10		44,99	12,65	74,21	10,10	R5 - ilovec preložený pieskovcom
		87,85	8,57	99,05	6,84	
		110,00	4,77	110,00	13,82	
		84,39	14,46	59,79	15,08	
		50,28	15,32	44,98	12,66	
		44,96	12,65			
11		33,40	5,33	33,40	7,05	NASYP
		30,70	7,05	30,70	3,88	
12		21,55	1,00	26,04	2,00	NASYP
		29,50	3,40	29,50	7,05	
		28,75	7,05	22,49	7,05	
		15,56	0,12			
13		44,98	7,00	64,96	3,49	R5 - ilovec preložený pieskovcom
		79,11	1,35	90,92	-0,48	
		110,00	-3,72	110,00	4,77	
		99,05	6,84	87,85	8,57	
		74,21	10,10	44,99	12,65	
		44,96	12,65	44,95	12,65	
		44,95	12,46	44,95	7,05	
		44,70	7,05			
14		37,30	-3,79	37,30	7,05	R4 - pieskovec
		36,51	7,05	34,60	5,99	
		34,60	-3,79			

Číslo	Umístění plochy	Souřadnice bodů plochy [m]				Přiřazená zemina
		x	z	x	z	
15		41,20	-3,79	41,20	7,05	R4 - pieskovec
		38,50	7,05	38,50	-3,79	
16		110,00	-3,79	110,00	-3,72	R4 - pieskovec
		90,92	-0,48	79,11	1,35	
		64,96	3,49	44,98	7,00	
		44,70	7,05	43,15	7,05	
		42,40	7,05	42,40	-3,79	
17		33,40	-3,79	33,40	5,33	R4 - pieskovec
		30,70	3,88	30,70	-3,79	
18		29,50	-3,79	29,50	3,40	R4 - pieskovec
		26,04	2,00	21,55	1,00	
		15,56	0,12	0,00	-2,17	
		-15,00	-2,17	-15,00	-3,79	
19		29,50	3,40	29,50	-3,79	Pilóta
		29,50	-4,75	30,70	-4,75	
		30,70	-3,79	30,70	3,88	
		30,70	7,05	29,50	7,05	
20		33,40	5,33	33,40	-3,79	Pilóta
		33,40	-4,75	34,60	-4,75	
		34,60	-3,79	34,60	5,99	
		34,60	7,05	33,40	7,05	
21		37,30	-3,79	37,30	-4,75	Pilóta
		38,50	-4,75	38,50	-3,79	
		38,50	7,05	37,30	7,05	
22		41,20	-3,79	41,20	-4,75	Pilóta
		42,40	-4,75	42,40	-3,79	
		42,40	7,05	41,20	7,05	

Číslo	Umístění plochy	Souřadnice bodů plochy [m]				Přiřazená zemina
		x	z	x	z	
23		42,40	-3,79	42,40	-4,75	R4 - pieskovec
		41,20	-4,75	41,20	-3,79	
		38,50	-3,79	38,50	-4,75	
		37,30	-4,75	37,30	-3,79	
		34,60	-3,79	34,60	-4,75	
		33,40	-4,75	33,40	-3,79	
		30,70	-3,79	30,70	-4,75	
		29,50	-4,75	29,50	-3,79	
		-15,00	-3,79	-15,00	-24,75	
		110,00	-24,75	110,00	-3,79	

Voda
Typ vody : Voda není

Tahová trhlina
Tahová trhlina není zadána.

Zemětřesení
Se zemětřesením se nepočítá.

Nastavení výpočtu
Nastavení výpočtu : Uživatelské
Typ výpočtu : Stupeň bezpečnosti
Stupeň bezpečnosti : 1,30

Výsledky (Fáze budování 4)

Výpočet 1 (fáze 4)
Kruhová smyková plocha

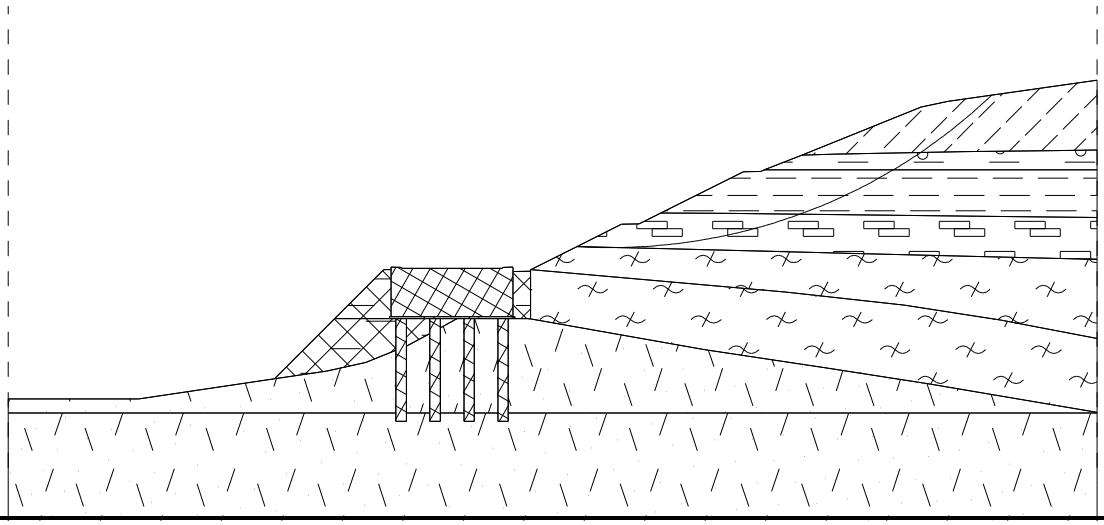
Parametry smykové plochy							
Střed :	x =	54,18	[m]	Úhly :	α_1 =	-3,53	[°]
	z =	78,55	[m]		α_2 =	43,64	[°]
Poloměr :	R =	63,35	[m]				
Smyková plocha po optimalizaci.							

Posouzení stability svahu (Bishop)
Sumace aktivních sil : F_a = 1515,56 kN/m
Sumace pasivních sil : F_p = 2648,86 kN/m

Moment sesouvající : M_a = 96010,89 kNm/m
Moment vzdorující : M_p = 167805,38 kNm/m

Stupeň bezpečnosti = 1,75 > 1,30
Stabilita svahu VYHOVUJE

Název : Výpočet	**Fáze - výpočet : 4 - 1**



Výpočet 2 (fáze 4)
Kruhová smyková plocha

Parametry smykové plochy							
Střed :	x =	23,34	[m]	Úhly :	α_1 =	-16,60	[°]
	z =	96,20	[m]		α_2 =	52,46	[°]
Poloměr :	R =	102,65	[m]				
Smyková plocha po optimalizaci.							

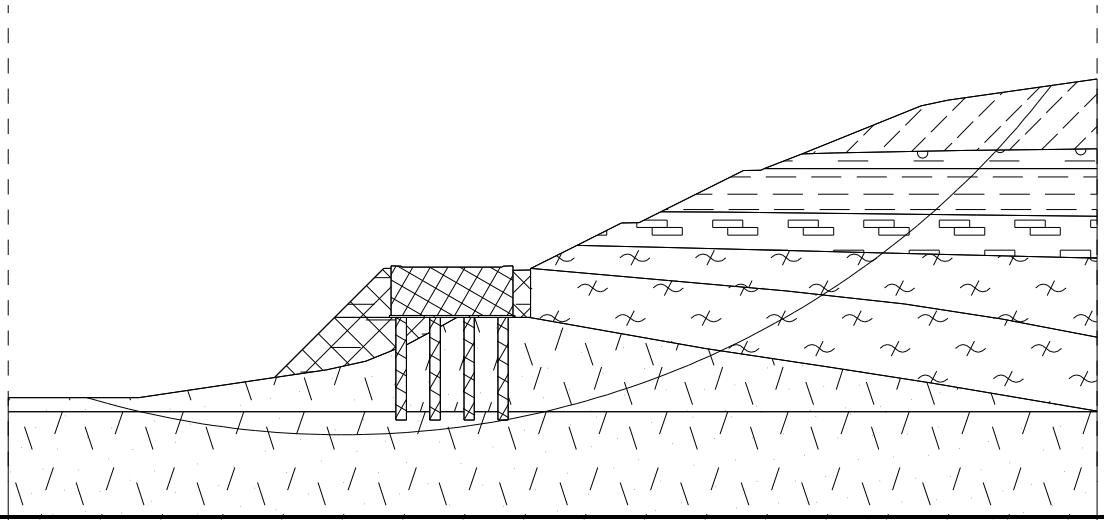
Posouzení stability svahu (Bishop)

Sumace aktivních sil : F_a = 9103,07 kN/m
Sumace pasivních sil : F_p = 21857,61 kN/m

Moment sesouvající : M_a = 934429,71 kNm/m
Moment vzdorující : M_p = 2243683,66 kNm/m

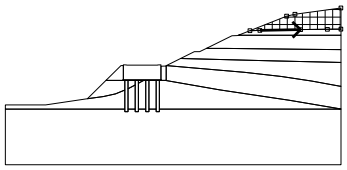
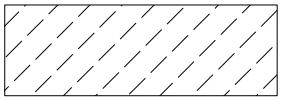
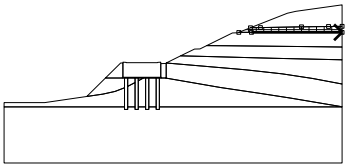
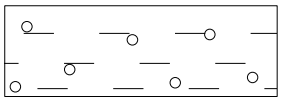
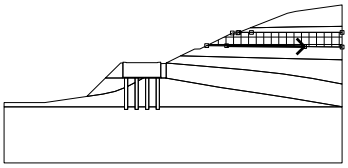
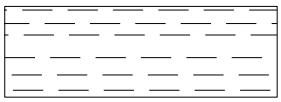
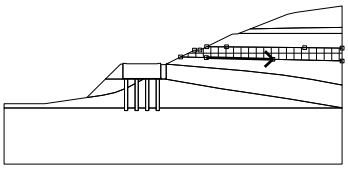
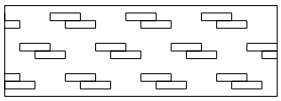
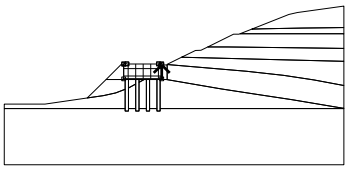
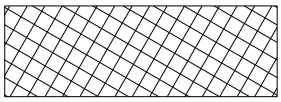
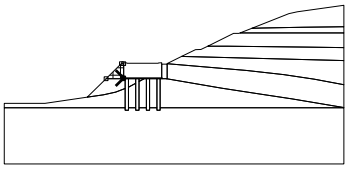
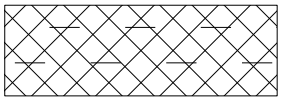
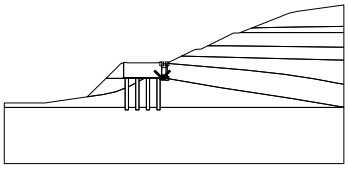
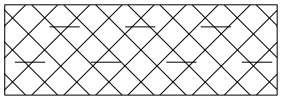
Stupeň bezpečnosti = 2,40 > 1,30
Stabilita svahu VYHOVUJE

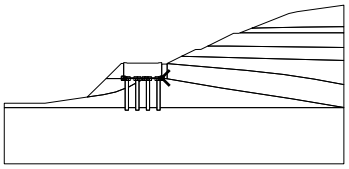
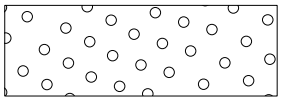
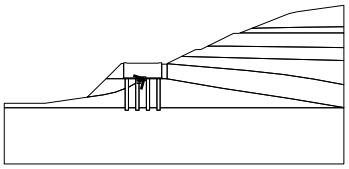
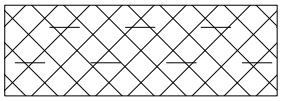
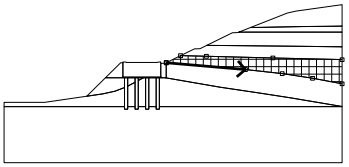
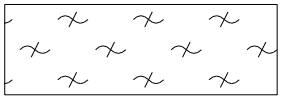
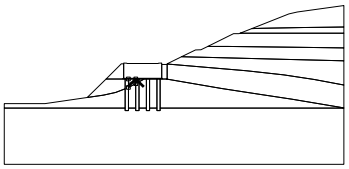
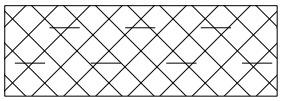
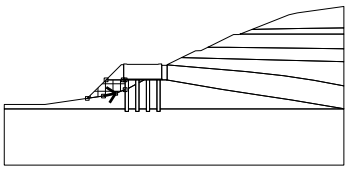
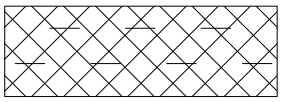
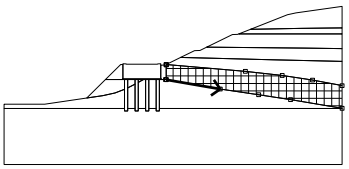
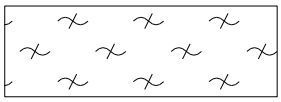
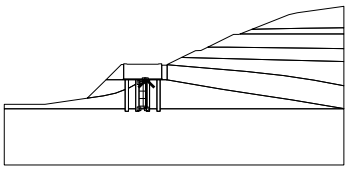
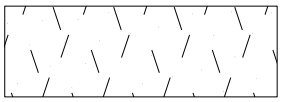
Název : Výpočet	**Fáze - výpočet : 4 - 2**

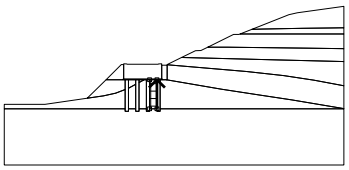
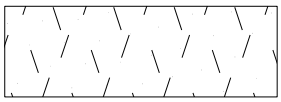
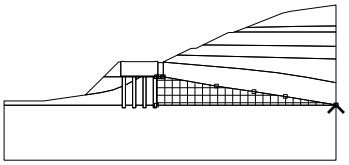
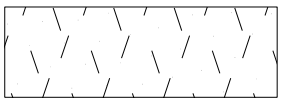
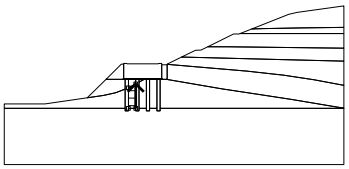
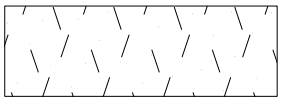
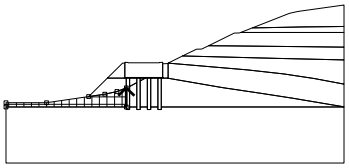
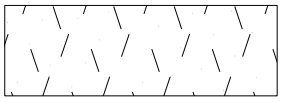
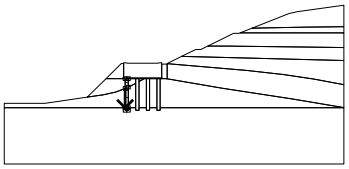
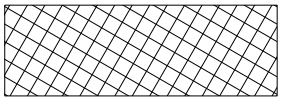
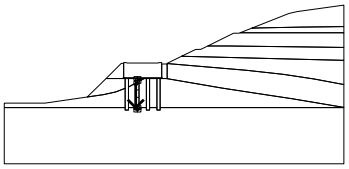
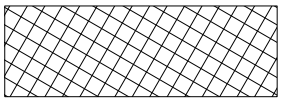
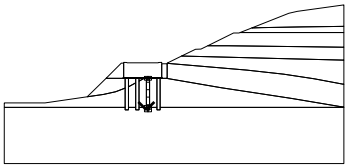
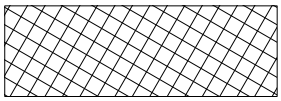
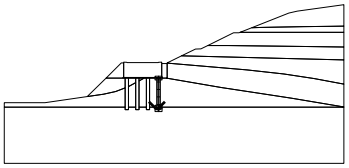
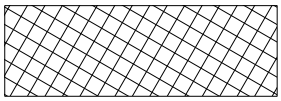


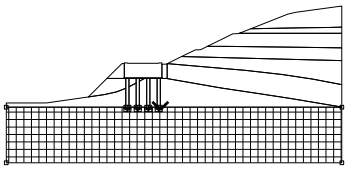
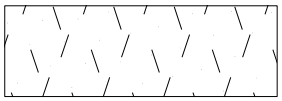
Vstupní data (Fáze budování 6)

Přiřazení a plochy

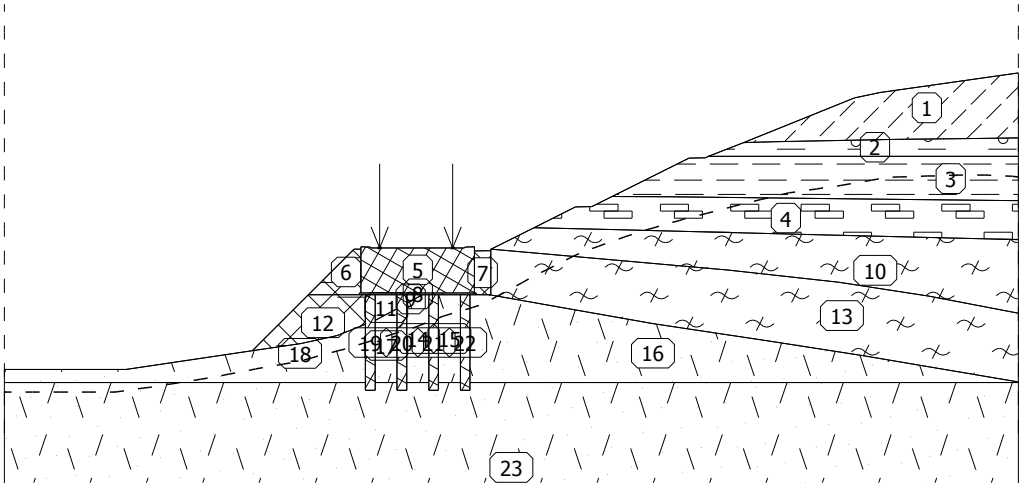
Číslo	Umístění plochy	Souřadnice bodů plochy [m] x	z	x	z	Přiřazená zemina
1		79,81	25,91	94,97	26,21	Pg-F6CL
		104,97	26,33	110,00	26,39	
		110,00	34,40	92,89	32,00	
		89,78	31,31	76,10	25,83	
2		76,48	24,11	110,00	24,11	Ft-F2CG
		110,00	26,39	104,97	26,33	
		94,97	26,21	79,81	25,91	
		76,10	25,83	71,79	24,11	
3		67,28	19,13	96,12	18,80	E-F6CL
		110,00	18,64	110,00	24,11	
		76,48	24,11	71,79	24,11	
		71,40	23,95	69,40	23,91	
		59,91	19,17			
4		59,79	15,08	84,39	14,46	R5-R6 ílovec
		110,00	13,82	110,00	18,64	
		96,12	18,80	67,28	19,13	
		59,91	19,17	57,40	17,91	
		55,40	17,87	50,28	15,32	
5		42,95	7,25	42,95	12,43	Mostná opora
		42,95	12,65	42,95	12,95	
		41,80	12,90	41,70	12,80	
		30,20	12,80	30,10	12,90	
		28,95	12,95	28,95	12,66	
		28,95	7,25			
6		28,75	7,25	28,95	7,25	NASYP
		28,95	12,66	28,10	12,66	
		22,49	7,05	28,75	7,05	
7		43,15	7,25	43,15	7,05	NASYP
		44,70	7,05	44,95	7,05	
		44,95	12,46	42,95	12,43	
		42,95	7,25			

Číslo	Umístění plochy	Souřadnice bodů plochy [m]				Přiřazená zemina
		x	z	x	z	
8		43,15	7,25	42,95	7,25	SRTKODRVA
		28,95	7,25	28,75	7,25	
		28,75	7,05	29,50	7,05	
		30,70	7,05	33,40	7,05	
		34,60	7,05	36,51	7,05	
		37,30	7,05	38,50	7,05	
		41,20	7,05	42,40	7,05	
		43,15	7,05			
9		34,60	5,99	36,51	7,05	NASYP
		34,60	7,05			
10		44,99	12,65	74,21	10,10	R5 - ilovec preložený pieskovcom
		87,85	8,57	99,05	6,84	
		110,00	4,77	110,00	13,82	
		84,39	14,46	59,79	15,08	
		50,28	15,32	44,98	12,66	
		44,96	12,65			
11		33,40	5,33	33,40	7,05	NASYP
		30,70	7,05	30,70	3,88	
12		21,55	1,00	26,04	2,00	NASYP
		29,50	3,40	29,50	7,05	
		28,75	7,05	22,49	7,05	
		15,56	0,12			
13		44,98	7,00	64,96	3,49	R5 - ilovec preložený pieskovcom
		79,11	1,35	90,92	-0,48	
		110,00	-3,72	110,00	4,77	
		99,05	6,84	87,85	8,57	
		74,21	10,10	44,99	12,65	
		44,96	12,65	44,95	12,65	
		44,95	12,46	44,95	7,05	
		44,70	7,05			
14		37,30	-3,79	37,30	7,05	R4 - pieskovec
		36,51	7,05	34,60	5,99	
		34,60	-3,79			

Číslo	Umístění plochy	Souřadnice bodů plochy [m]				Přiřazená zemina
		x	z	x	z	
15		41,20	-3,79	41,20	7,05	R4 - pieskovec
		38,50	7,05	38,50	-3,79	
16		110,00	-3,79	110,00	-3,72	R4 - pieskovec
		90,92	-0,48	79,11	1,35	
		64,96	3,49	44,98	7,00	
		44,70	7,05	43,15	7,05	
		42,40	7,05	42,40	-3,79	
17		33,40	-3,79	33,40	5,33	R4 - pieskovec
		30,70	3,88	30,70	-3,79	
18		29,50	-3,79	29,50	3,40	R4 - pieskovec
		26,04	2,00	21,55	1,00	
		15,56	0,12	0,00	-2,17	
		-15,00	-2,17	-15,00	-3,79	
19		29,50	3,40	29,50	-3,79	Pilóta
		29,50	-4,75	30,70	-4,75	
		30,70	-3,79	30,70	3,88	
		30,70	7,05	29,50	7,05	
20		33,40	5,33	33,40	-3,79	Pilóta
		33,40	-4,75	34,60	-4,75	
		34,60	-3,79	34,60	5,99	
		34,60	7,05	33,40	7,05	
21		37,30	-3,79	37,30	-4,75	Pilóta
		38,50	-4,75	38,50	-3,79	
		38,50	7,05	37,30	7,05	
22		41,20	-3,79	41,20	-4,75	Pilóta
		42,40	-4,75	42,40	-3,79	
		42,40	7,05	41,20	7,05	

Číslo	Umístění plochy	Souřadnice bodů plochy [m] x	z	x	z	Přiřazená zemina
23		42,40	-3,79	42,40	-4,75	R4 - pieskovec
		41,20	-4,75	41,20	-3,79	
		38,50	-3,79	38,50	-4,75	
		37,30	-4,75	37,30	-3,79	
		34,60	-3,79	34,60	-4,75	
		33,40	-4,75	33,40	-3,79	
		30,70	-3,79	30,70	-4,75	
		29,50	-4,75	29,50	-3,79	
		-15,00	-3,79	-15,00	-24,75	
		110,00	-24,75	110,00	-3,79	

Název : Zeminy a přiřazení | **Fáze : 6**



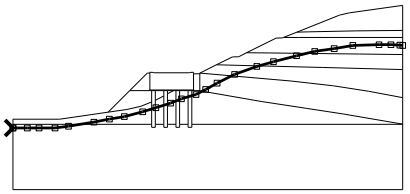
Přitížení

Číslo	Přitížení nové	změna	Typ	Působení	Umístění z [m]	Počátek x [m]	Délka l [m]	Šířka b [m]	Sklon α [°]	Velikost q, q1, f, F	q2	jednotka
1	Ne	Ne	bodové	stálé	na povrchu	x = 31,00	l = 0,50	b = 0,50		7260,00		kN
2	Ne	Ne	bodové	stálé	na povrchu	x = 40,00	l = 0,50	b = 0,50		7260,00		kN

Názvy přitížení

Číslo	Název
1	most-1
2	most-2

Voda
Typ vody : HPV

Číslo	Umístění HPV	Souřadnice bodů HPV [m]					
		x	z	x	z	x	z
1		-15,00	-4,97	-14,92	-4,97	-10,36	-4,97
		-6,61	-4,97	-1,48	-4,97	2,84	-4,40
		10,98	-3,10	15,95	-2,12	20,76	-1,31
		26,62	0,24	30,86	1,54	35,58	3,01
		39,08	4,39	43,72	5,78	46,82	7,41
		50,49	9,45	56,09	12,25	63,22	14,79
		68,57	16,32	75,95	18,23	81,80	19,63
		88,04	20,52	94,02	21,54	102,42	21,79
		106,23	21,79	109,10	21,66	110,00	21,55

Tahová trhlina
Tahová trhlina není zadána.

Zemětřesení
Se zemětřesením se nepočítá.

Nastavení výpočtu
Nastavení výpočtu : Uživatelské
Typ výpočtu : Stupeň bezpečnosti
Stupeň bezpečnosti : 1,30

Výsledky (Fáze budování 6)

Výpočet 1 (fáze 6)
Kruhová smyková plocha

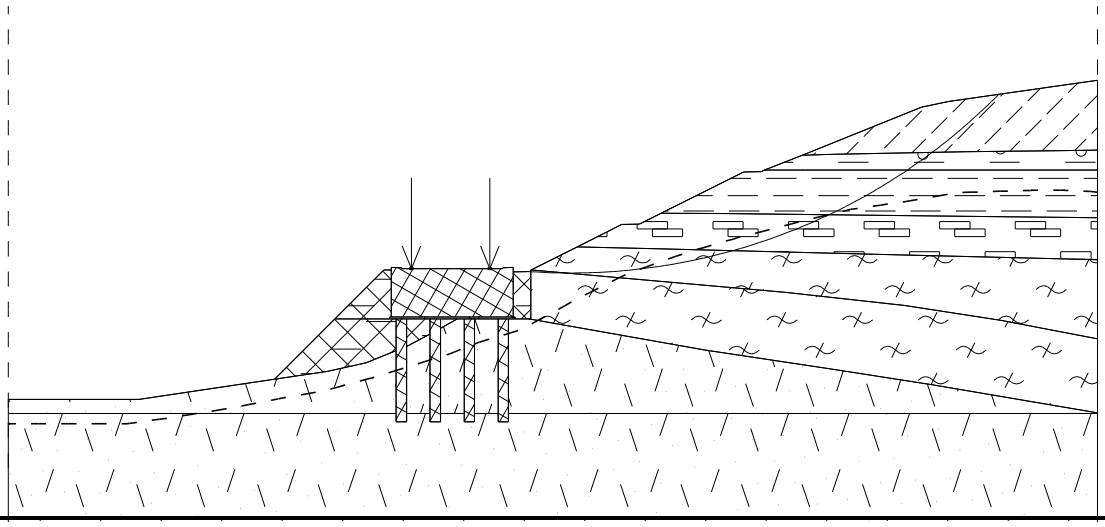
Parametry smykové plochy							
Střed :	x =	49,48	[m]	Úhly :	α_1 =	-3,75	[°]
	z =	81,58	[m]		α_2 =	45,25	[°]
Poloměr :	R =	69,27	[m]				
Smyková plocha po optimalizaci.							

Posouzení stability svahu (Bishop)
Sumace aktivních sil : F_a = 2174,06 kN/m
Sumace pasivních sil : F_p = 3749,37 kN/m

Moment sesouvající : M_a = 150596,93 kNm/m
Moment vzdorující : M_p = 259718,52 kNm/m

Stupeň bezpečnosti = 1,72 > 1,30
Stabilita svahu VYHOVUJE

Název : Výpočet	**Fáze - výpočet : 6 - 1**



Výpočet 2 (fáze 6)
Kruhová smyková plocha

Parametry smykové plochy							
Střed :	x =	24,56	[m]	Úhly :	α_1 =	-15,72	[°]
	z =	101,49	[m]		α_2 =	51,33	[°]
Poloměr :	R =	107,69	[m]				
Smyková plocha po optimalizaci.							

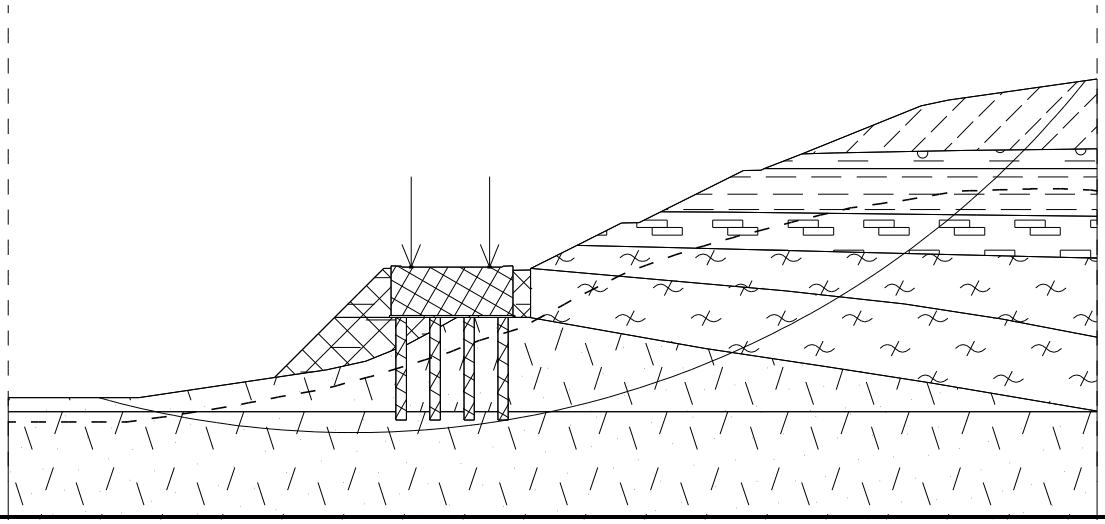
Posouzení stability svahu (Bishop)

Sumace aktivních sil : F_a = 9577,04 kN/m
Sumace pasivních sil : F_p = 17795,00 kN/m

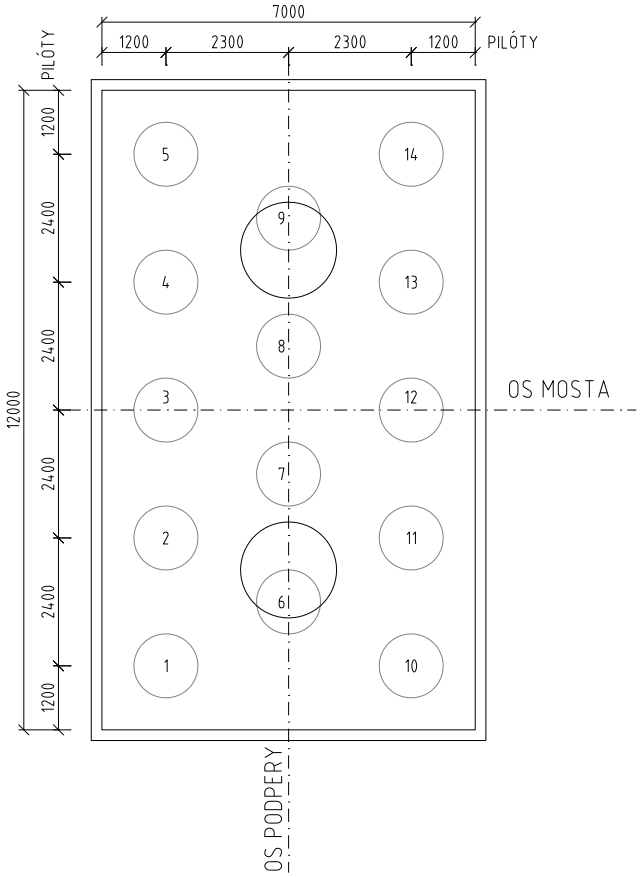
Moment sesouvající : M_a = 1031351,02 kNm/m
Moment vzdorující : M_p = 1916343,98 kNm/m

Stupeň bezpečnosti = 1,86 > 1,30
Stabilita svahu VYHOVUJE

Název : Výpočet	**Fáze - výpočet : 6 - 2**



7.4.2 Základ č. 2 - posúdenie



Zaťaženie na pilóty - rozpočítané

Základ 2	Zaťaženie 1000 kN		
Pilota		N od My	N od Mx
1		83	67
2		89	19
3		82	0
6		0	71
7		0	3

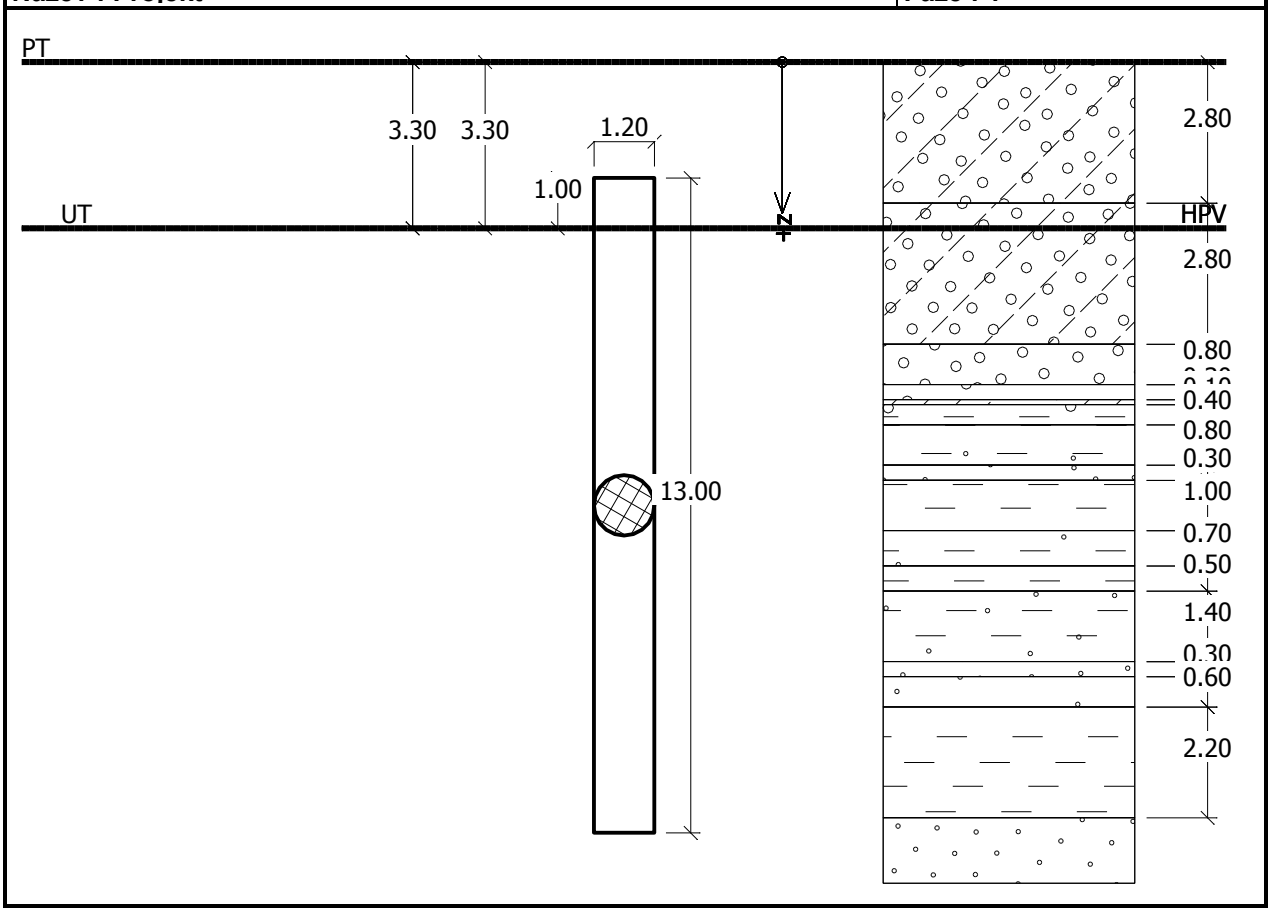
Zaťaženie	Fz (kN)	My (kNm)	Mx (kNm)
Základ 2	16589	3515	2236

N v pilote	N (Fz/ks)	N od My	N od Mx	Spolu
Pilota	(kN)	(kN)	(kN)	N (kN)
1	1185	291	151	1626
2	1185	312	42	1538
3	1185	288	0	1473
6	1185	0	159	1344
7	1185	0	6	1191

Vstupní data

Projekt
Datum : 6. 12. 2011

Název : Projekt	**Fáze : 1**



Základní parametry zemin

Číslo	Název	Vzorek	φef [°]	cef [kPa]	γ [kN/m3]	γsu [kN/m3]
1	G3 G-F Štrk s prímesou j. zeminy		30.00	0.00	19.00	9.50
2	G5 GC Štrk ílovitý		28.00	2.00	19.50	10.00
3	F2 CG íl štrkovitý		25.00	10.00	19.50	10.00
4	F7 MV Hlina s v. vysokou plasticitou		16.00	6.00	21.00	11.50
5	F2 CG Íl štrkovitý Eluviálne		25.00	8.00	20.50	11.00
6	R5 - R6 Ílovec silno zvetraný		20.00	14.00	19.00	9.50
7	R4 Pieskovec		35.00	85.00	21.00	11.10

Číslo	Název	Vzorek	φ_{ef} [°]	c_{ef} [kPa]	γ [kN/m^3]	γ_{su} [kN/m^3]
8	R5 Ílovec silno zvetraný		26.00	10.00	21.00	11.10
9	R5 Striedanie ílovca a pieskovca		30.00	10.00	20.50	11.00
10	R3 Pieskovec		36.00	0.00	21.00	11.10
11	R5 Ilovec hlbka		26.00	10.00	21.00	11.10

Pro výpočet tlaku v klidu jsou všechny zeminy zadány jako nesoudržné.

Číslo	Název	Vzorek	E_{oed} [MPa]	E_{def} [MPa]	γ_{sat} [kN/m^3]	γ_s [kN/m^3]	n [-]
1	G3 G-F Štrk s prímesou j. zeminy		-	80.00	19.50	-	-
2	G5 GC Štrk ílovitý		-	40.00	20.00	-	-
3	F2 CG íl štrkovitý		-	10.00	20.00	-	-
4	F7 MV Hlina s v. vysokou plasticitou		-	4.00	21.50	-	-
5	F2 CG Íl štrkovitý Eluviálne		-	4.00	21.00	-	-
6	R5 - R6 Ílovec silno zvetraný		-	15.00	19.50	-	-
7	R4 Pieskovec		-	100.00	21.10	-	-
8	R5 Ílovec silno zvetraný		-	30.00	21.10	-	-
9	R5 Striedanie ílovca a pieskovca		-	40.00	21.00	-	-
10	R3 Pieskovec		-	150.00	21.10	-	-
11	R5 Ilovec hlbka		-	100.00	21.10	-	-

Parametry zemin pro výpočet modulu reakce podloží

Číslo	Název	Vzorek	β
1	G3 G-F Štrk s prímesou j. zeminy		0.83
2	G5 GC Štrk ílovitý		0.74

Číslo	Název	Vzorek	β
3	F2 CG íl štrkovitý		0.62
4	F7 MV Hlina s v. vysokou plasticitou		0.47
5	F2 CG Íl štrkovitý Eluviálne		0.62
6	R5 - R6 Ílovec silno zvetraný		0.62
7	R4 Pieskovec		0.78
8	R5 Ílovec silno zvetraný		0.78
9	R5 Striedanie ílovca a pieskovca		0.62
10	R3 Pieskovec		0.62
11	R5 Ilovec hlbka		0.47

Parametry zemin

G3 G-F Štrk s prímesou j. zeminy

Objemová tíha :	γ	=	19,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	30,00	°
Soudržnost zeminy :	c_{ef}	=	0,00	kPa
Poissonovo číslo :	ν	=	0,25	
Modul přetvárnosti :	E_{def}	=	80,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	19,50	kN/m3
Úhel roznášení :	β	=	0,83	°

G5 GC Štrk ílovitý

Objemová tíha :	γ	=	19,50	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	28,00	°
Soudržnost zeminy :	c_{ef}	=	2,00	kPa
Poissonovo číslo :	ν	=	0,30	
Modul přetvárnosti :	E_{def}	=	40,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	20,00	kN/m3
Úhel roznášení :	β	=	0,74	°

F2 CG íl štrkovitý

Objemová tíha :	γ	=	19,50	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	25,00	°
Soudržnost zeminy :	c_{ef}	=	10,00	kPa
Poissonovo číslo :	ν	=	0,30	
Modul přetvárnosti :	E_{def}	=	10,00	MPa

Obj.tíha sat.zeminy :	γ_{sat}	=	20,00	kN/m3
Úhel roznášení :	β	=	0,62	°

F7 MV Hlina s v. vysokou plasticitou

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	16,00	°
Soudržnost zeminy :	c_{ef}	=	6,00	kPa
Poissonovo číslo :	ν	=	0,40	
Modul přetvárnosti :	E_{def}	=	4,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,50	kN/m3
Úhel roznášení :	β	=	0,47	°

F2 CG Íl štrkovitý Eluviálne

Objemová tíha :	γ	=	20,50	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	25,00	°
Soudržnost zeminy :	c_{ef}	=	8,00	kPa
Poissonovo číslo :	ν	=	0,35	
Modul přetvárnosti :	E_{def}	=	4,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,00	kN/m3
Úhel roznášení :	β	=	0,62	°

R5 - R6 Ílovec silno zvetraný

Objemová tíha :	γ	=	19,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	20,00	°
Soudržnost zeminy :	c_{ef}	=	14,00	kPa
Poissonovo číslo :	ν	=	0,35	
Modul přetvárnosti :	E_{def}	=	15,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	19,50	kN/m3
Úhel roznášení :	β	=	0,62	°

R4 Pieskovec

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	35,00	°
Soudržnost zeminy :	c_{ef}	=	85,00	kPa
Poissonovo číslo :	ν	=	0,25	
Modul přetvárnosti :	E_{def}	=	100,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3
Úhel roznášení :	β	=	0,78	°

R5 Ílovec silno zvetraný

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	26,00	°
Soudržnost zeminy :	c_{ef}	=	10,00	kPa
Poissonovo číslo :	ν	=	0,30	
Modul přetvárnosti :	E_{def}	=	30,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3
Úhel roznášení :	β	=	0,78	°

R5 Striedanie ílovca a pieskovca

Objemová tíha :	γ	=	20,50	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	30,00	°
Soudržnost zeminy :	c_{ef}	=	10,00	kPa
Poissonovo číslo :	ν	=	0,35	
Modul přetvárnosti :	E_{def}	=	40,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,00	kN/m3
Úhel roznášení :	β	=	0,62	°

R3 Pieskovec

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	36,00	°
Soudržnost zeminy :	c_{ef}	=	0,00	kPa
Poissonovo číslo :	ν	=	0,28	
Modul přetvárnosti :	E_{def}	=	150,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3
Úhel roznášení :	β	=	0,62	°

R5 Ilovec hlbka

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	26,00	°
Soudržnost zeminy :	c_{ef}	=	10,00	kPa
Poissonovo číslo :	ν	=	0,20	
Modul přetvárnosti :	E_{def}	=	100,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3
Úhel roznášení :	β	=	0,47	°

Geometrie konstrukce

Geometrie piloty
Profil piloty: kruhová
Rozměry
Průměr d = 1.20 m
Délka l = 13.00 m
Umístění

Vysazení	h	=	1.00	m
Hloubka upraveného terénu	h_z	=	3.30	m

Redukce odporu na patě = 0.80
Redukce odporu na plášti = 0.60
Modul reakce podloží uvažován jako konstantní.

Materiál konstrukce
Výpočet betonových konstrukcí proveden podle normy EN 1992 1-1 (EC2).

Beton : C 20/25

Válcová pevnost v tlaku	f_{ck}	=	20.00	MPa
Pevnost v tahu	f_{ct}	=	2.20	MPa
Modul pružnosti	E_{cm}	=	29000.00	MPa

Ocel podélná : B500

Mez kluzu	f_{yk}	=	500.00	MPa
Modul pružnosti	E	=	200000.00	MPa

Geologický profil a přiřazení zemin

Číslo	Vrstva [m]	Přiřazená zemina	Vzorek
1	2.80	G3 G-F Štrk s prímesou j. zeminy	
2	2.80	G3 G-F Štrk s prímesou j. zeminy	
3	0.80	G5 GC Štrk ílovitý	
4	0.30	F2 CG íl štrkovitý	
5	0.10	F7 MV Hlina s v. vysokou plasticitou	
6	0.40	F2 CG Íl štrkovitý Eluviálne	
7	0.80	R5 - R6 Ílovec silno zvetraný	
8	0.30	R4 Pieskovec	
9	1.00	R5 Ílovec silno zvetraný	
10	0.70	R5 - R6 Ílovec silno zvetraný	
11	0.50	R5 Striedanie ílovca a pieskovca	
12	1.40	R5 Ilovec hlbka	
13	0.30	R3 Pieskovec	
14	0.60	R5 Ilovec hlbka	
15	2.20	R5 Striedanie ílovca a pieskovca	
16	-	R3 Pieskovec	

Zatížení

Číslo	Zatížení		Název	Typ	N [kN]	M_x [kNm]	M_y [kNm]	H_x [kN]	H_y [kN]
	nové	změna							
1	ANO		LCB 1(max)	Výpočtové	2066.00	125.00	116.00	-72.00	-6.00

Hladina podzemní vody

Hladina podzemní vody je v hloubce 3.30 m od původního terénu.

Nastavení výpočtu
Výpočet proveden podle teorie mezních stavů s redukcí vstupních parametrů zemin.

Součinitel redukce úhlu vnitřního tření $\gamma_{m\phi}$ = 1.10

Součinitel redukce soudržnosti γ_{mc} = 1.40

Posouzení čís. 1

Posouzení svislé únosnosti piloty podle teorie MS - mezivýsledky
Výpočet únosnosti v patě:

Součinitel únosnosti	Nc	=	21.80	
Součinitel únosnosti	Nd	=	11.50	
Součinitel únosnosti	Nb	=	7.58	
Součinitel únosnosti	K1	=	1.15	
Výpočtová únosnost na patě piloty	R_d	=	2106.92	kPa
Plocha příčného řezu piloty	A_s	=	1.131E+00	m^2

Únosnost na plášti piloty:
Zkrácení účinné délky piloty Lp [m] = 1.53 m

Hloubka [m]	Mocnost [m]	ϕ_d [°]	cd [kPa]	γ [kN/m^3]	γ R2 [-]	fs [kPa]	Ufdi [kN]
1.00	1.00	21.43	0.00	9.50	1.30	1.53	5.77
2.00	1.00	21.43	0.00	9.50	1.20	4.59	17.31
2.30	0.30	21.43	0.00	9.50	1.10	6.58	7.44
3.00	0.70	20.00	1.00	10.00	1.10	8.50	22.43
3.10	0.10	20.00	1.00	10.00	1.00	9.79	3.69
3.40	0.30	17.86	5.00	10.00	1.00	13.33	15.08
3.50	0.10	11.43	3.00	11.50	1.00	8.61	3.25
3.90	0.40	17.86	4.00	11.00	1.00	13.62	20.54
4.70	0.80	14.29	7.00	9.50	1.00	15.90	47.94
5.00	0.30	25.00	42.50	11.10	1.00	60.64	68.58
6.00	1.00	18.57	5.00	11.10	1.00	20.20	76.13
6.70	0.70	14.29	7.00	9.50	1.00	20.44	53.94
7.20	0.50	21.43	5.00	11.00	1.00	27.50	51.83
8.60	1.40	18.57	5.00	11.10	1.00	27.25	143.81
8.90	0.30	25.71	0.00	11.10	1.00	35.24	39.85
9.50	0.60	18.57	5.00	11.10	1.00	31.24	70.67
10.00	0.50	21.43	5.00	11.00	1.00	37.67	71.01
10.47	0.47	21.43	5.00	11.00	1.00	39.74	70.65

Posouzení svislé únosnosti piloty podle teorie MS - výsledky
Výpočet proveden s automatickým výběrem nejnepříznivějších zatěžovacích stavů.
Součinitel vlivu technologie GamaR1 = 1.20

Únosnost piloty na plášti	U_{fd}	=	789.91	kN
Únosnost piloty v patě	U_{bd}	=	2740.31	kN
Únosnost piloty	U_{vd}	=	3530.22	kN
Extrémní svislá síla	V_d	=	2066.00	kN

U_{vd} = 3530.22 kN > 2066.00 kN = V_d

Svislá únosnost plovoucí piloty VYHOVUJE

Posouzení čís. 1

Vstupní data pro výpočet vodorovné únosnosti piloty
Výpočet proveden s automatickým výběrem nejnepříznivějších zatěžovacích stavů.
Vodorovná únosnost posouzena ve směru maximálního účinku zatížení.

Průběhy vnitřních sil a deformace piloty
Průběh deformací a vnitřních sil po pilotě - maximální hodnoty:

Vzdál. [m]	Modul k [MN/m^3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
0.00	0.00	1.03	0.37	0.00	72.00	170.53
0.65	0.00	0.80	0.33	19.00	72.00	199.51
1.00	0.00	0.69	0.31	31.60	57.81	210.97
1.00	97.18	0.69	0.31	31.60	57.81	210.97
1.30	97.18	0.59	0.29	42.40	45.64	220.79
1.95	97.18	0.42	0.24	39.71	19.03	224.46
2.60	97.18	0.27	0.20	25.75	28.34	211.83
3.25	97.18	0.15	0.15	12.81	38.82	189.58
3.30	97.18	0.14	0.15	12.06	39.03	187.76
3.30	48.74	0.14	0.15	12.06	39.03	187.76
3.90	48.74	0.06	0.12	3.14	41.53	165.91
4.10	48.74	0.06	0.11	2.21	41.41	158.28
4.10	12.24	0.06	0.11	2.21	41.41	158.28
4.40	12.24	0.06	0.09	0.80	41.24	146.83
4.40	4.92	0.06	0.09	0.80	41.24	146.83
4.50	4.92	0.05	0.08	0.34	41.18	143.02
4.50	4.89	0.05	0.08	0.34	41.18	143.02
4.55	4.89	0.05	0.08	0.10	41.15	141.11
4.90	4.89	0.07	0.07	1.14	40.85	127.72
4.90	18.35	0.07	0.07	1.14	40.85	127.72
5.20	18.35	0.08	0.05	2.02	40.59	116.23
5.70	18.35	0.09	0.04	4.86	36.86	97.92
5.70	121.69	0.09	0.04	4.86	36.86	97.92
5.85	121.69	0.10	0.03	5.72	35.75	92.42
6.00	121.69	0.10	0.03	5.50	34.43	87.54
6.00	36.51	0.10	0.03	5.50	34.43	87.54
6.50	36.51	0.10	0.01	4.80	30.02	71.28
7.00	36.51	0.10	0.00	3.29	28.58	56.73
7.00	18.35	0.10	0.00	3.29	28.58	56.73
7.15	18.35	0.10	0.00	2.84	28.15	52.37
7.70	18.35	0.09	0.01	4.91	26.22	37.52
7.70	48.94	0.09	0.01	4.91	26.22	37.52
7.80	48.94	0.09	0.01	5.29	25.86	34.82
8.20	48.94	0.08	0.02	7.08	22.56	25.57
8.20	122.98	0.08	0.02	7.08	22.56	25.57
8.45	122.98	0.08	0.02	8.21	20.49	19.79

Vzdál. [m]	Modul k [MN/m3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
9.10	122.98	0.06	0.02	9.10	13.82	8.70
9.60	122.98	0.05	0.02	8.21	8.59	3.56
9.60	183.53	0.05	0.02	8.21	8.59	3.56
9.75	183.53	0.05	0.02	7.95	7.02	2.01
9.90	183.53	0.05	0.02	7.15	5.83	1.79
9.90	122.98	0.05	0.02	7.15	5.83	1.79
10.40	122.98	0.04	0.02	4.50	1.84	1.06
10.50	122.98	0.03	0.02	4.05	1.60	1.12
10.50	48.94	0.03	0.02	4.05	1.60	1.12
11.05	48.94	0.02	0.02	1.58	0.29	1.48
11.70	48.94	0.01	0.02	0.46	0.92	1.06
12.35	48.94	0.00	0.02	0.90	1.02	0.40
12.70	48.94	0.01	0.02	1.99	0.47	0.18
12.70	183.53	0.01	0.02	1.99	0.47	0.18
13.00	183.53	0.02	0.02	2.93	0.00	0.00

Průběh deformací a vnitřních sil po pilotě - minimální hodnoty:

Vzdál. [m]	Modul k [MN/m3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
0.00	0.00	-1.00	-0.37	0.00	-72.25	-116.00
0.65	0.00	-0.78	-0.34	-19.47	-72.25	-162.80
1.00	0.00	-0.67	-0.32	-32.30	-58.38	-183.16
1.00	97.18	-0.67	-0.32	-32.30	-58.38	-183.16
1.30	97.18	-0.58	-0.30	-43.30	-46.49	-200.61
1.95	97.18	-0.41	-0.25	-40.35	-9.13	-217.17
2.60	97.18	-0.26	-0.20	-25.97	-18.09	-213.15
3.25	97.18	-0.15	-0.16	-12.72	-33.70	-195.83
3.30	97.18	-0.14	-0.16	-11.97	-34.15	-193.98
3.30	48.74	-0.14	-0.16	-11.97	-34.15	-193.98
3.90	48.74	-0.06	-0.12	-2.99	-39.53	-171.76
4.10	48.74	-0.05	-0.11	-2.39	-39.69	-163.78
4.10	12.24	-0.05	-0.11	-2.39	-39.69	-163.78
4.40	12.24	-0.02	-0.09	-1.49	-39.94	-151.80
4.40	4.92	-0.02	-0.09	-1.49	-39.94	-151.80
4.50	4.92	-0.01	-0.09	-1.19	-40.02	-147.81
4.50	4.89	-0.01	-0.09	-1.19	-40.02	-147.81
4.55	4.89	-0.01	-0.08	-1.04	-40.06	-145.82
4.90	4.89	-0.03	-0.07	-2.19	-39.92	-131.83
4.90	18.35	-0.03	-0.07	-2.19	-39.92	-131.83
5.20	18.35	-0.05	-0.05	-3.18	-39.80	-119.84
5.70	18.35	-0.07	-0.04	-6.29	-37.09	-100.76
5.70	121.69	-0.07	-0.04	-6.29	-37.09	-100.76
5.85	121.69	-0.08	-0.03	-7.23	-36.28	-95.04
6.00	121.69	-0.08	-0.03	-6.83	-35.08	-89.97
6.00	36.51	-0.08	-0.03	-6.83	-35.08	-89.97
6.50	36.51	-0.09	-0.01	-5.52	-31.07	-73.10

Vzdál. [m]	Modul k [MN/m3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
7.00	36.51	-0.09	-0.01	-3.65	-29.55	-58.06
7.00	18.35	-0.09	-0.01	-3.65	-29.55	-58.06
7.15	18.35	-0.09	-0.01	-3.09	-29.10	-53.54
7.70	18.35	-0.09	-0.02	-5.15	-27.07	-38.20
7.70	48.94	-0.09	-0.02	-5.15	-27.07	-38.20
7.80	48.94	-0.09	-0.02	-5.53	-26.70	-35.41
8.20	48.94	-0.08	-0.02	-7.24	-23.24	-25.88
8.20	122.98	-0.08	-0.02	-7.24	-23.24	-25.88
8.45	122.98	-0.08	-0.02	-8.30	-21.08	-19.92
9.10	122.98	-0.07	-0.02	-8.91	-14.14	-8.54
9.60	122.98	-0.06	-0.02	-7.97	-8.72	-4.70
9.60	183.53	-0.06	-0.02	-7.97	-8.72	-4.70
9.75	183.53	-0.05	-0.02	-7.69	-7.10	-3.55
9.90	183.53	-0.05	-0.02	-6.92	-5.86	-3.50
9.90	122.98	-0.05	-0.02	-6.92	-5.86	-3.50
10.40	122.98	-0.04	-0.02	-4.37	-1.75	-3.33
10.50	122.98	-0.04	-0.02	-3.94	-1.72	-3.25
10.50	48.94	-0.04	-0.02	-3.94	-1.72	-3.25
11.05	48.94	-0.02	-0.02	-1.56	-1.58	-2.79
11.70	48.94	-0.01	-0.02	-0.48	-1.77	-1.74
12.35	48.94	-0.01	-0.02	-0.36	-1.63	-0.60
12.70	48.94	-0.02	-0.02	-1.30	-0.75	-0.28
12.70	183.53	-0.02	-0.02	-1.30	-0.75	-0.28
13.00	183.53	-0.03	-0.02	-2.10	-0.00	-0.00

Maximální vnitřní síly a deformace:
Max.deformace piloty = 1.0 mm
Max.posouvající síla = 72.25 kN
Maximální moment = 224.46 kNm

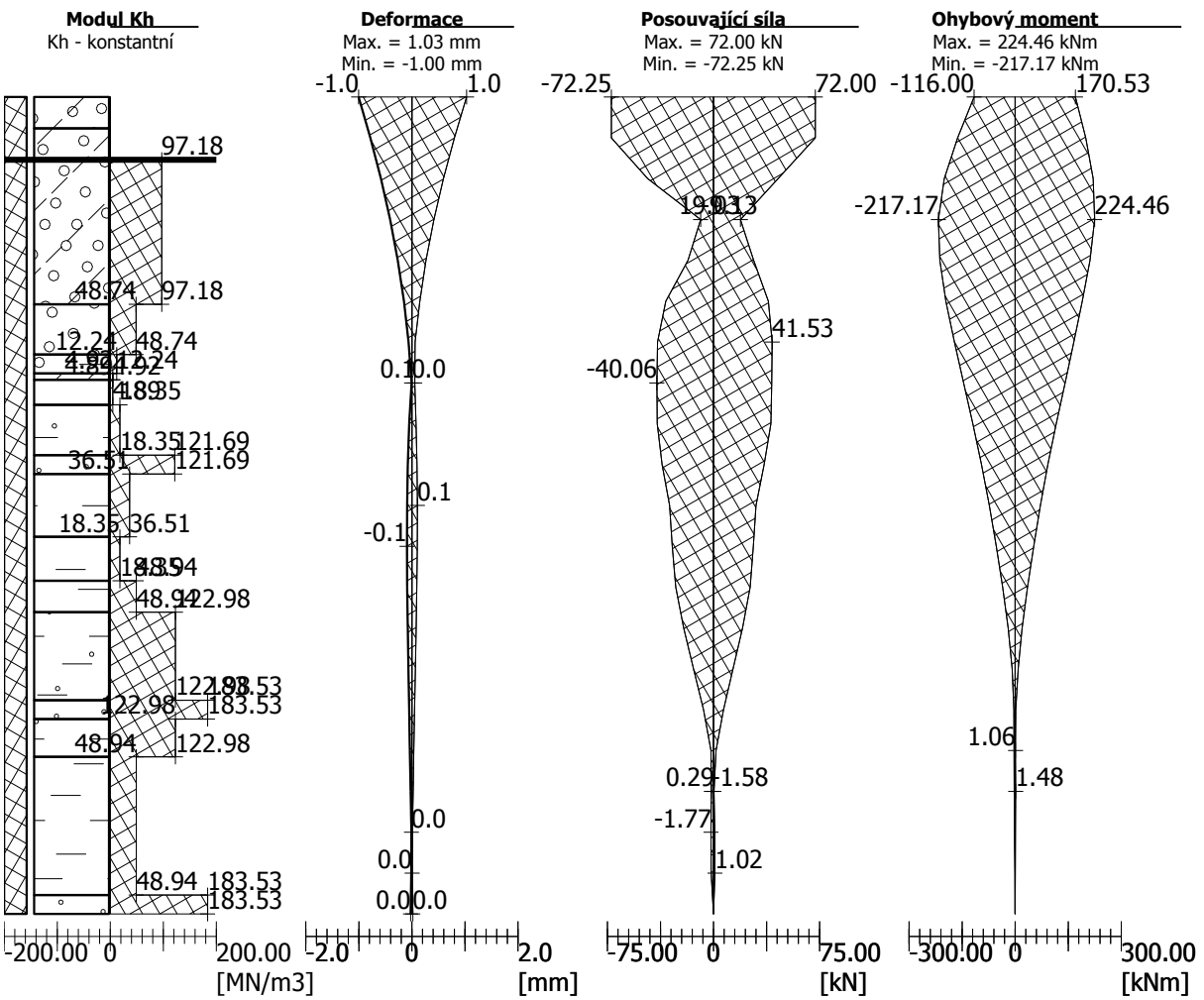
Dimenzace výztuže:
Vyztužení - 16 ks profil 18.0 mm; krytí 100.0 mm

Stupeň vyztužení $\rho = 0.180\ \% > 0.130\ \% = \rho_{min}$

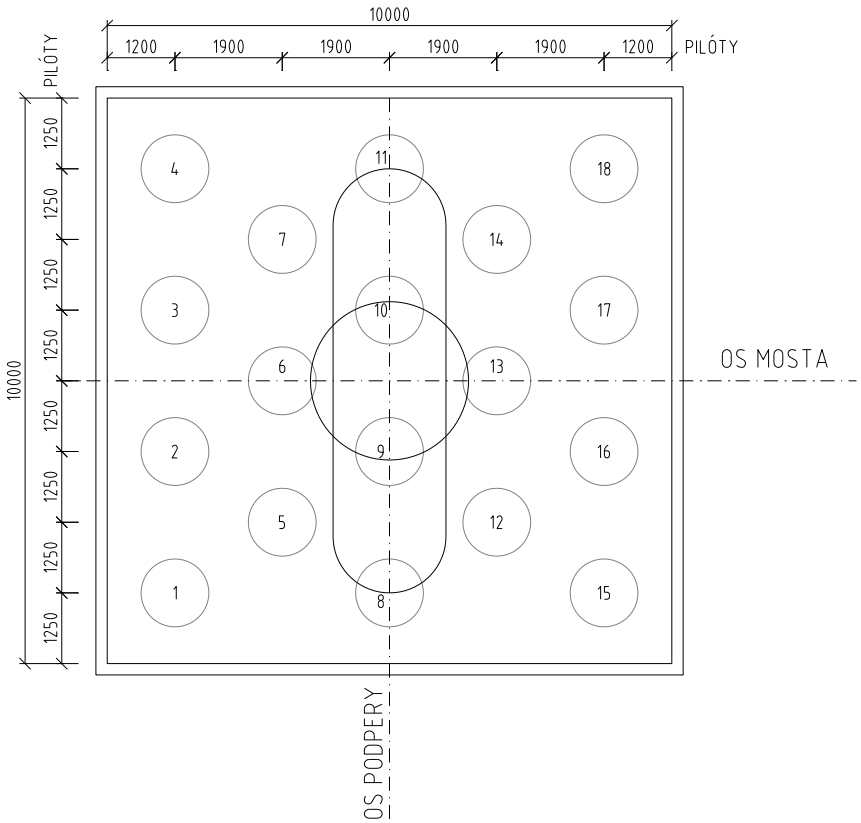
Zatížení : N_{Ed} = -2066.00 kN (tlak) ; M_{Ed} = 224.46 kNm
Únosnost : N_{Rd} = -11655.26 kN; M_{Rd} = 1266.32 kNm

Navržená výztuž piloty VYHOVUJE

Název : Vod. únosn.	Fáze : 1; Posouzení : 1



7.4.3 Základ č. 3, 5 - posúdenie



Zaťaženie na pilóty - rozpočítané

Základ 3,5	Zaťaženie 1000 kN		
Pilota		N od My	N od Mx
1		23	26
2		28	10
5		16	24
6		24	0
8		0	33
9		0	24

Zaťaženie	Fz (kN)	My (kNm)	Mx (kNm)
Základ 3	47403	23177	5697

Zaťaženie	Fz (kN)	My (kNm)	Mx (kNm)
Základ 5	49103	26016	5625

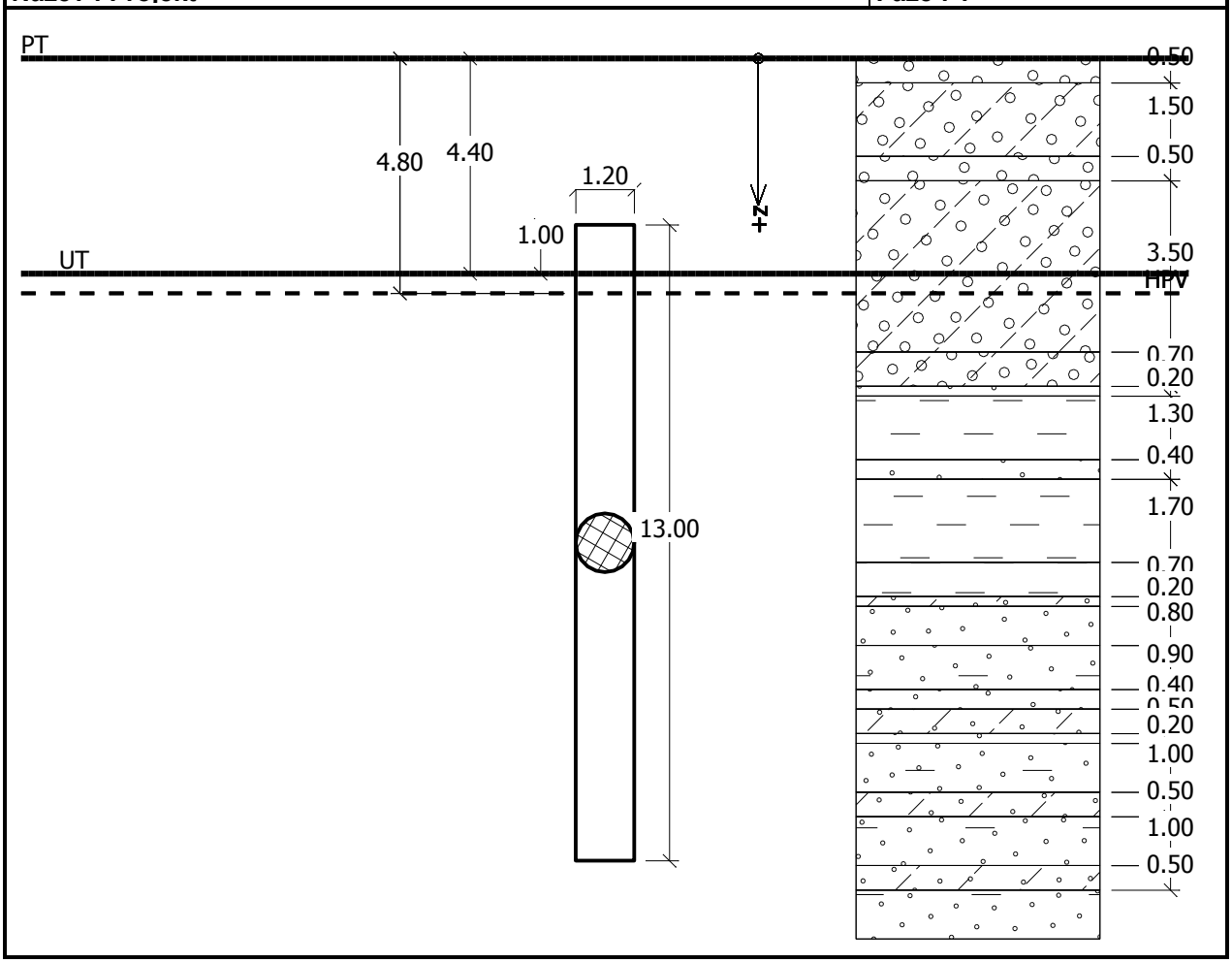
N v pilote	N (Fz/ks)	N od My	N od Mx	Spolu
Pilota	(kN)	(kN)	(kN)	N (kN)
1	2634	536	150	3320
2	2634	649	55	3339
5	2634	368	134	3136
6	2634	552	0	3186
8	2634	0	188	2822
9	2634	0	139	2773

N v pilote	N (Fz/ks)	N od My	N od Mx	Spolu
Pilota	(kN)	(kN)	(kN)	N (kN)
1	2728	602	148	3478
2	2728	729	55	3512
5	2728	413	132	3274
6	2728	619	0	3347
8	2728	0	186	2914
9	2728	0	138	2866

Vstupní data

Projekt
Datum : 5. 12. 2011

Název : Projekt	**Fáze : 1**



Základní parametry zemin

Číslo	Název	Vzorek	φef [°]	cef [kPa]	γ [kN/m3]	γsu [kN/m3]
1	strk ilovity G5 GC		28.00	2.00	19.50	10.00
2	strk-primes jem. zeminy G3 G-F		30.00	0.00	19.00	9.50
3	pieskovec R5		26.00	8.00	21.00	11.10
4	ilovec R5-R6		22.00	20.00	20.00	10.20
5	pieskovec R4-R5		30.00	5.00	21.00	11.10
6	pieskovec R3		36.00	0.00	21.00	11.10

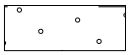
Číslo	Název	Vzorek	φ_{ef} [°]	c_{ef} [kPa]	γ [kN/m3]	γ_{su} [kN/m3]
7	pieskovec R4		35.00	5.00	21.00	11.10
8	ilovec R5		26.00	10.00	21.00	11.10

Pro výpočet tlaku v klidu jsou všechny zeminy zadány jako nesoudržné.

Číslo	Název	Vzorek	E_{oed} [MPa]	E_{def} [MPa]	γ_{sat} [kN/m3]	γ_s [kN/m3]	n [-]
1	strk ilovity G5 GC		-	40.00	20.00	-	-
2	strk-primes jem. zeminy G3 G-F		-	80.00	19.50	-	-
3	pieskovec R5		-	30.00	21.10	-	-
4	ilovec R5-R6		-	15.00	20.20	-	-
5	pieskovec R4-R5		-	60.00	21.10	-	-
6	pieskovec R3		-	200.00	21.10	-	-
7	pieskovec R4		-	100.00	21.10	-	-
8	ilovec R5		-	100.00	21.10	-	-

Parametry zemin pro výpočet modulu reakce podloží

Číslo	Název	Vzorek	β
1	strk ilovity G5 GC		0.74
2	strk-primes jem. zeminy G3 G-F		0.83
3	pieskovec R5		0.62
4	ilovec R5-R6		0.62
5	pieskovec R4-R5		0.78
6	pieskovec R3		0.78
7	pieskovec R4		0.78

Číslo	Název	Vzorek	β
8	ilovec R5		0.47

Parametry zemin
strk ilovity G5 GC

Objemová tíha :	γ	=	19,50	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	28,00	°
Soudržnost zeminy :	c_{ef}	=	2,00	kPa
Poissonovo číslo :	ν	=	0,30	
Modul přetvárnosti :	E_{def}	=	40,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	20,00	kN/m3
Úhel roznášení :	β	=	0,74	°

strk-primes jem. zeminy G3 G-F

Objemová tíha :	γ	=	19,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	30,00	°
Soudržnost zeminy :	c_{ef}	=	0,00	kPa
Poissonovo číslo :	ν	=	0,20	
Modul přetvárnosti :	E_{def}	=	80,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	19,50	kN/m3
Úhel roznášení :	β	=	0,83	°

pieskovec R5

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	26,00	°
Soudržnost zeminy :	c_{ef}	=	8,00	kPa
Poissonovo číslo :	ν	=	0,30	
Modul přetvárnosti :	E_{def}	=	30,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3
Úhel roznášení :	β	=	0,62	°

ilovec R5-R6

Objemová tíha :	γ	=	20,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	22,00	°
Soudržnost zeminy :	c_{ef}	=	20,00	kPa
Poissonovo číslo :	ν	=	0,35	
Modul přetvárnosti :	E_{def}	=	15,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	20,20	kN/m3
Úhel roznášení :	β	=	0,62	°

pieskovec R4-R5

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	30,00	°
Soudržnost zeminy :	c_{ef}	=	5,00	kPa
Poissonovo číslo :	ν	=	0,25	
Modul přetvárnosti :	E_{def}	=	60,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3

Úhel roznášení :	β	=	0,78	°

pieskovec R3

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	36,00	°
Soudržnost zeminy :	c_{ef}	=	0,00	kPa
Poissonovo číslo :	ν	=	0,28	
Modul přetvárnosti :	E_{def}	=	200,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3
Úhel roznášení :	β	=	0,78	°

pieskovec R4

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	35,00	°
Soudržnost zeminy :	c_{ef}	=	5,00	kPa
Poissonovo číslo :	ν	=	0,28	
Modul přetvárnosti :	E_{def}	=	100,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3
Úhel roznášení :	β	=	0,78	°

ilovec R5

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	26,00	°
Soudržnost zeminy :	c_{ef}	=	10,00	kPa
Poissonovo číslo :	ν	=	0,20	
Modul přetvárnosti :	E_{def}	=	100,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3
Úhel roznášení :	β	=	0,47	°

Geometrie konstrukce

Geometrie piloty
Profil piloty: kruhová
Rozměry
Průměr d = 1.20 m
Délka l = 13.00 m
Umístění
Vysazení h = 1.00 m
Hloubka upraveného terénu h_z = 4.40 m
Redukce odporu na patě = 0.80
Redukce odporu na plášti = 0.60
Modul reakce podloží uvažován jako konstantní.

Materiál konstrukce
Výpočet betonových konstrukcí proveden podle normy EN 1992 1-1 (EC2).

Beton : C 20/25

Válcová pevnost v tlaku	f_{ck}	=	20.00	MPa
Pevnost v tahu	f_{ct}	=	2.20	MPa
Modul pružnosti	E_{cm}	=	29000.00	MPa

Ocel podélná : B500

Mez kluzu	f_{yk}	=	500.00	MPa
Modul pružnosti	E	=	200000.00	MPa

Geologický profil a přiřazení zemin

Číslo	Vrstva [m]	Přiřazená zemina	Vzorek
1	0.50	strk ilovity G5 GC	
2	1.50	strk-primes jem. zeminy G3 G-F	
3	0.50	strk ilovity G5 GC	
4	3.50	strk-primes jem. zeminy G3 G-F	
5	0.70	strk-primes jem. zeminy G3 G-F	
6	0.20	pieskovec R5	
7	1.30	ilovec R5-R6	
8	0.40	pieskovec R4-R5	
9	1.70	ilovec R5-R6	
10	0.70	ilovec R5-R6	
11	0.20	pieskovec R3	
12	0.80	ilovec R5	
13	0.90	pieskovec R4	
14	0.40	ilovec R5	
15	0.50	pieskovec R3	
16	0.20	pieskovec R4-R5	
17	1.00	pieskovec R4	
18	0.50	pieskovec R3	

Číslo	Vrstva [m]	Přiřazená zemina	Vzorek
19	1.00	pieskovec R4	
20	0.50	pieskovec R3	
21	-	pieskovec R4	

Zatížení

Číslo	Zatížení nové	Zatížení změna	Název	Typ	N [kN]	M_x [kNm]	M_y [kNm]	H_x [kN]	H_y [kN]
1	ANO		LCB 2(max)	Výpočtové	2634.00	116.00	125.00	-111.00	-8.00

Hladina podzemní vody
Hladina podzemní vody je v hloubce 4.80 m od původního terénu.

Nastavení výpočtu
Výpočet proveden podle teorie mezních stavů s redukcí vstupních parametrů zemin.

Součinitel redukce úhlu vnitřního tření $\gamma_{m\phi}$ = 1.10

Součinitel redukce soudržnosti γ_{mc} = 1.40

Posouzení čís. 1

Posouzení svislé únosnosti piloty podle teorie MS - mezivýsledky
Výpočet únosnosti v patě:

Součinitel únosnosti	Nc	=	20.72	
Součinitel únosnosti	Nd	=	10.66	
Součinitel únosnosti	Nb	=	6.76	
Součinitel únosnosti	K1	=	1.15	
Výpočtová únosnost na patě piloty	R_d	=	2065.38	kPa
Plocha příčného řezu piloty	A_s	=	1.131E+00	m^2

Únosnost na plášti piloty:
Zkrácení účinné délky piloty Lp [m] = 1.45 m

Hloubka [m]	Mocnost [m]	ϕ_d [°]	cd [kPa]	γ [kN/m^3]	γ R2 [-]	fs [kPa]	Ufdi [kN]
0.40	0.40	21.43	0.00	19.00	1.30	1.22	1.85
1.00	0.60	21.43	0.00	9.50	1.30	3.37	7.62
1.60	0.60	21.43	0.00	9.50	1.20	5.20	11.77
2.00	0.40	21.43	0.00	9.50	1.20	6.73	10.15
2.30	0.30	21.43	0.00	9.50	1.10	7.80	8.83
2.50	0.20	18.57	4.00	11.10	1.10	11.05	8.33
3.00	0.50	15.71	10.00	10.20	1.10	16.17	30.47
3.80	0.80	15.71	10.00	10.20	1.00	18.62	56.15
4.20	0.40	21.43	2.50	11.10	1.00	16.47	24.83
5.90	1.70	15.71	10.00	10.20	1.00	22.62	144.95

Hloubka [m]	Mocnost [m]	ϕ_d [°]	cd [kPa]	γ [kN/m^3]	γ R2 [-]	fs [kPa]	Ufdi [kN]
6.60	0.70	15.71	10.00	10.20	1.00	25.46	67.20
6.80	0.20	25.71	0.00	11.10	1.00	27.93	21.06
7.60	0.80	18.57	5.00	11.10	1.00	26.24	79.14
8.50	0.90	25.00	2.50	11.10	1.00	35.28	119.70
8.90	0.40	18.57	5.00	11.10	1.00	30.85	46.52
9.40	0.50	25.71	0.00	11.10	1.00	38.60	72.76
9.60	0.20	21.43	2.50	11.10	1.00	35.44	26.72
10.00	0.40	25.00	2.50	11.10	1.00	42.67	64.35
10.55	0.55	25.00	2.50	11.10	1.00	44.90	92.55

Posouzení svislé únosnosti piloty podle teorie MS - výsledky
Výpočet proveden s automatickým výběrem nejnepříznivějších zatěžovacích stavů.
Součinitel vlivu technologie GamaR1 = 1.20

Únosnost piloty na plášti U_{fd} = 894.94 kN
Únosnost piloty v patě U_{bd} = 2686.27 kN

Únosnost piloty U_{vd} = 3581.21 kN
Extrémní svislá síla V_d = 2634.00 kN

U_{vd} = 3581.21 kN > 2634.00 kN = V_d

Svislá únosnost plovoucí piloty VYHOVUJE

Posouzení čís. 1

Vstupní data pro výpočet vodorovné únosnosti piloty
Výpočet proveden s automatickým výběrem nejnepříznivějších zatěžovacích stavů.
Vodorovná únosnost posouzena ve směru maximálního účinku zatížení.

Průběhy vnitřních sil a deformace piloty
Průběh deformací a vnitřních sil po pilotě - maximální hodnoty:

Vzdál. [m]	Modul k [MN/m^3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
0.00	0.00	1.44	0.14	0.00	111.29	116.00
0.65	0.00	1.13	0.12	4.03	111.29	110.80
1.00	0.00	0.98	0.10	5.69	91.43	107.06
1.00	97.18	0.98	0.10	5.69	91.43	107.06
1.30	97.18	0.85	0.09	7.11	74.40	103.85
1.95	97.18	0.60	0.07	4.27	20.20	93.51
2.60	97.18	0.40	0.05	0.36	19.94	80.95
2.60	97.18	0.40	0.05	0.36	19.94	80.95
3.25	97.18	0.24	0.04	-1.94	19.06	68.15
3.30	97.18	0.23	0.04	-1.92	18.94	67.24
3.30	36.71	0.23	0.04	-1.92	18.94	67.24
3.50	36.71	0.19	0.03	-1.83	18.45	63.57
3.50	18.35	0.19	0.03	-1.83	18.45	63.57
3.90	18.35	0.11	0.02	-1.67	17.47	56.24

Vzdál. [m]	Modul k [MN/m3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
4.55	18.35	0.05	0.01	0.78	16.76	45.10
4.80	18.35	0.06	0.01	1.39	15.97	41.16
4.80	73.01	0.06	0.01	1.39	15.97	41.16
5.20	73.01	0.06	0.00	2.37	14.72	34.86
5.20	18.35	0.06	0.00	2.37	14.72	34.86
5.85	18.35	0.06	-0.00	1.88	13.87	25.57
6.50	18.35	0.05	-0.01	2.10	13.06	16.82
6.90	18.35	0.05	0.00	6.03	12.61	11.75
6.90	18.35	0.05	0.00	6.03	12.61	11.75
7.15	18.35	0.05	0.01	8.49	12.33	8.58
7.60	18.35	0.04	0.02	11.94	9.26	4.06
7.60	243.37	0.04	0.02	11.94	9.26	4.06
7.80	243.37	0.04	0.02	13.47	7.90	2.05
7.80	122.98	0.04	0.02	13.47	7.90	2.05
8.45	122.98	0.03	0.02	11.58	4.51	-1.94
8.60	122.98	0.03	0.03	11.13	3.92	-2.42
8.60	121.69	0.03	0.03	11.13	3.92	-2.42
9.10	121.69	0.02	0.03	9.64	1.93	-4.00
9.50	121.69	0.02	0.03	9.47	0.80	-1.07
9.50	122.98	0.02	0.03	9.47	0.80	-1.07
9.75	122.98	0.02	0.03	9.37	0.09	0.76
9.90	122.98	0.01	0.03	8.62	-0.23	1.42
9.90	243.37	0.01	0.03	8.62	-0.23	1.42
10.40	243.37	0.01	0.03	6.09	-1.28	3.62
10.40	73.01	0.01	0.03	6.09	-1.28	3.62
10.60	73.01	0.01	0.03	5.32	-0.60	3.63
10.60	121.69	0.01	0.03	5.32	-0.60	3.63
11.05	121.69	0.00	0.03	3.58	0.93	3.66
11.60	121.69	-0.00	0.03	1.84	2.38	2.56
11.60	243.37	-0.00	0.03	1.84	2.38	2.56
11.70	243.37	-0.00	0.03	1.52	2.65	2.37
12.10	243.37	0.01	0.03	1.43	2.24	1.36
12.10	121.69	0.01	0.03	1.43	2.24	1.36
12.35	121.69	0.01	0.03	1.37	1.99	0.73
13.00	121.69	0.03	0.03	1.78	0.00	0.00

Průběh deformací a vnitřních sil po pilotě - minimální hodnoty:

Vzdál. [m]	Modul k [MN/m3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
0.00	0.00	-0.25	-0.49	0.00	8.00	-170.53
0.65	0.00	-0.17	-0.46	-27.41	8.00	-219.88
1.00	0.00	-0.13	-0.43	-45.91	10.66	-240.80
1.00	97.18	-0.13	-0.43	-45.91	10.66	-240.80
1.30	97.18	-0.10	-0.41	-61.77	12.94	-258.72
1.95	97.18	-0.04	-0.35	-58.59	1.50	-285.68
2.60	97.18	-0.00	-0.28	-38.77	-27.32	-284.90

Vzdál. [m]	Modul k [MN/m3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
2.60	97.18	-0.00	-0.28	-38.77	-27.32	-284.90
3.25	97.18	0.02	-0.22	-18.33	-44.16	-264.29
3.30	97.18	0.03	-0.22	-17.25	-44.63	-261.95
3.30	36.71	0.03	-0.22	-17.25	-44.63	-261.95
3.50	36.71	0.03	-0.20	-12.93	-46.48	-252.58
3.50	18.35	0.03	-0.20	-12.93	-46.48	-252.58
3.90	18.35	0.04	-0.17	-4.28	-50.20	-233.84
4.55	18.35	-0.02	-0.12	-1.75	-51.07	-200.85
4.80	18.35	-0.04	-0.10	-1.81	-50.85	-188.11
4.80	73.01	-0.04	-0.10	-1.81	-50.85	-188.11
5.20	73.01	-0.07	-0.08	-1.89	-50.48	-167.72
5.20	18.35	-0.07	-0.08	-1.89	-50.48	-167.72
5.85	18.35	-0.10	-0.04	-1.07	-49.51	-135.19
6.50	18.35	-0.11	-0.02	-0.99	-48.12	-103.45
6.90	18.35	-0.11	-0.01	-2.56	-47.16	-84.51
6.90	18.35	-0.11	-0.01	-2.56	-47.16	-84.51
7.15	18.35	-0.11	-0.01	-3.54	-46.55	-72.67
7.60	18.35	-0.11	-0.01	-4.55	-38.82	-54.26
7.60	243.37	-0.11	-0.01	-4.55	-38.82	-54.26
7.80	243.37	-0.11	-0.01	-5.00	-35.39	-46.07
7.80	122.98	-0.11	-0.01	-5.00	-35.39	-46.07
8.45	122.98	-0.09	-0.01	-3.82	-25.73	-26.34
8.60	122.98	-0.09	-0.01	-3.59	-23.82	-23.16
8.60	121.69	-0.09	-0.01	-3.59	-23.82	-23.16
9.10	121.69	-0.08	-0.01	-2.82	-17.45	-12.57
9.50	121.69	-0.07	-0.01	-2.55	-13.33	-7.67
9.50	122.98	-0.07	-0.01	-2.55	-13.33	-7.67
9.75	122.98	-0.06	-0.01	-2.38	-10.75	-4.61
9.90	122.98	-0.06	-0.01	-2.12	-9.05	-4.48
9.90	243.37	-0.06	-0.01	-2.12	-9.05	-4.48
10.40	243.37	-0.04	-0.01	-1.23	-3.38	-4.05
10.40	73.01	-0.04	-0.01	-1.23	-3.38	-4.05
10.60	73.01	-0.04	-0.01	-0.96	-2.97	-3.67
10.60	121.69	-0.04	-0.01	-0.96	-2.97	-3.67
11.05	121.69	-0.03	-0.01	-0.35	-2.07	-2.82
11.60	121.69	-0.01	-0.01	0.47	-2.01	-1.66
11.60	243.37	-0.01	-0.01	0.47	-2.01	-1.66
11.70	243.37	-0.01	-0.01	0.61	-2.00	-1.45
12.10	243.37	-0.01	-0.01	-0.96	-1.46	-0.80
12.10	121.69	-0.01	-0.01	-0.96	-1.46	-0.80
12.35	121.69	-0.01	-0.01	-1.95	-1.12	-0.39
13.00	121.69	-0.01	-0.01	-3.55	-0.00	-0.00

Maximální vnitřní síly a deformace:

Max.deformace piloty = 1.4 mm
Max.posouvající síla = 111.29 kN
Maximální moment = 285.68 kNm

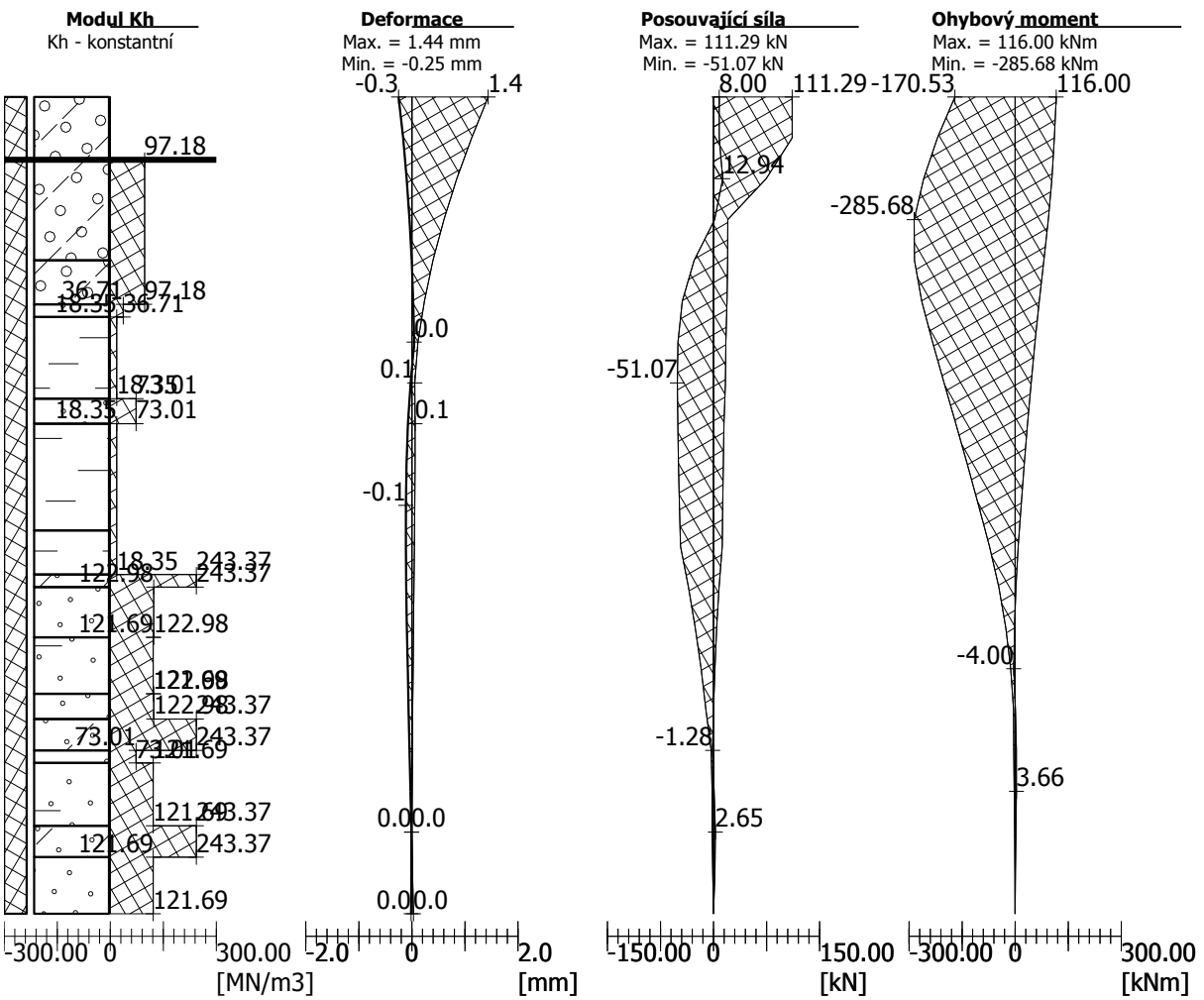
Dimenzace výztuže:
Vyztužení - 16 ks profil 18.0 mm; krytí 100.0 mm

Stupeň vyztužení $\rho = 0.180\ \% > 0.130\ \% = \rho_{min}$

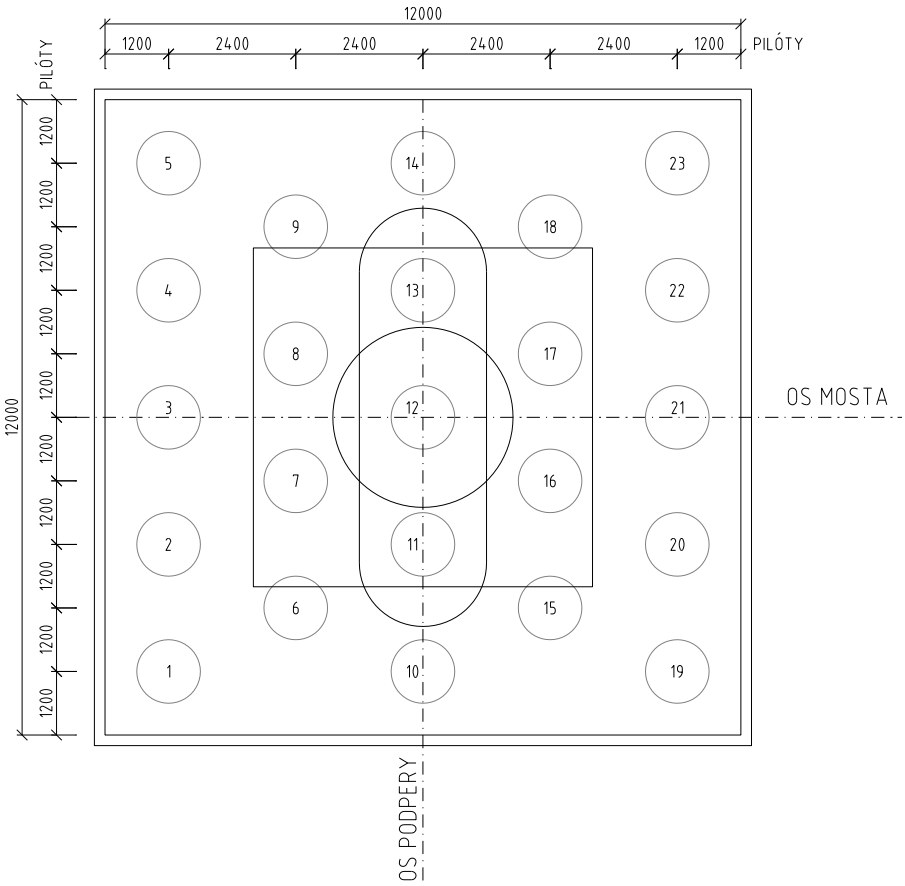
Zatížení : N_{Ed} = -2634.00 kN (tlak) ; M_{Ed} = 285.68 kNm
Únosnost : N_{Rd} = -11659.98 kN; M_{Rd} = 1264.90 kNm

Navržená výztuž piloty VYHOVUJE

Název : Vod. únosn.	**Fáze : 1; Posouzení : 1**



7.4.4 Základ č. 4 - posúdenie



Zaťaženie na pilóty - rozpočítané

Základ 4	Zaťaženie 1000 kN		
Pilota		N od My	N od Mx
1		12	15
2		17	9
3		19	0
6		10	18
7		16	9
10		0	24
11		0	19
12		0	0

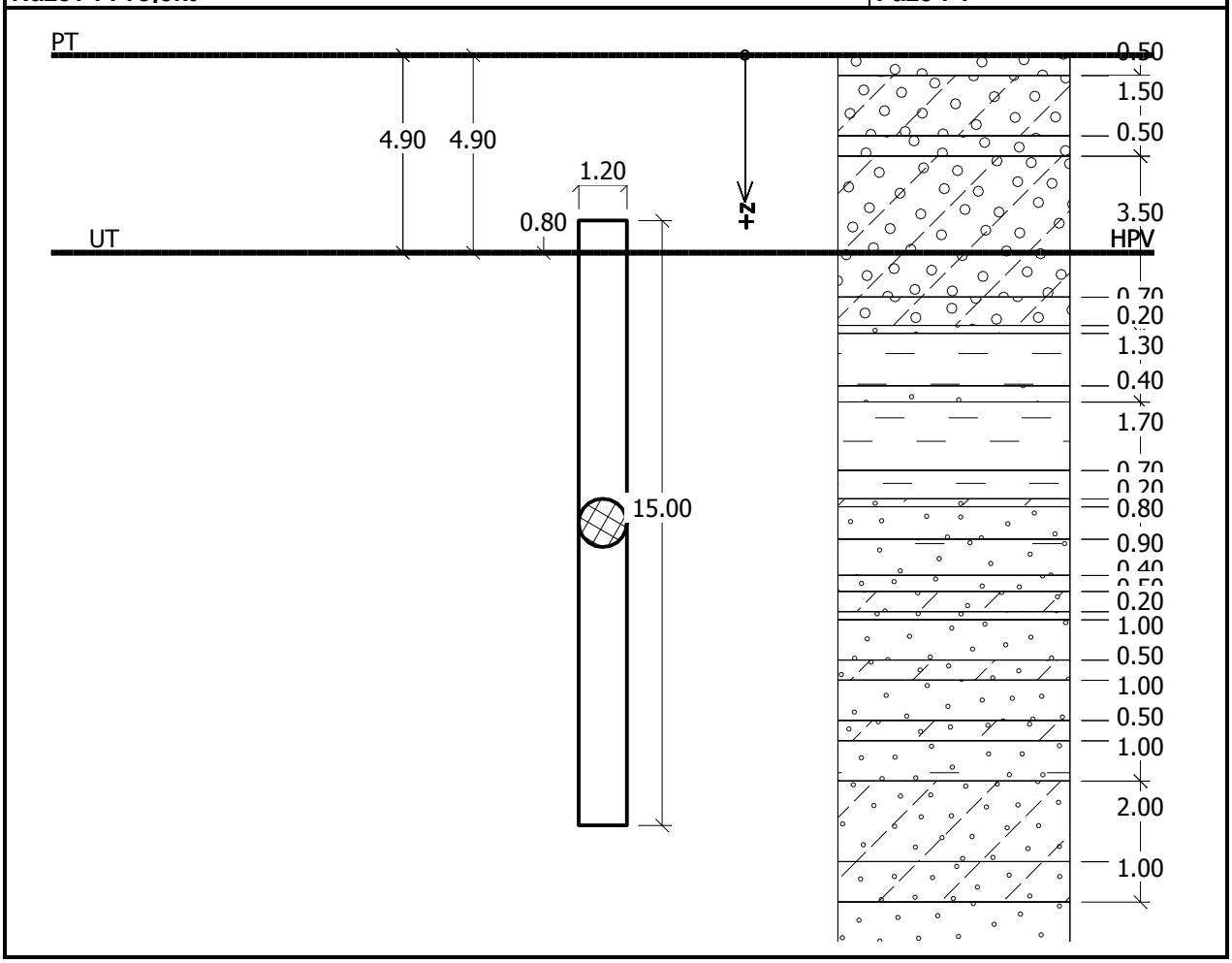
Zaťaženie	Fz (kN)	My (kNm)	Mx (kNm)
Základ 4	74265	50383	28278

N v pilote	N (Fz/ks)	N od My	N od Mx	Spolu
Pilota	(kN)	(kN)	(kN)	N (kN)
1	3229	621	428	4278
2	3229	852	245	4326
3	3229	974	0	4203
6	3229	503	509	4241
7	3229	792	250	4270
10	3229	0	666	3895
11	3229	0	532	3761
12	3229	0	0	3229

Vstupní data

Projekt
Datum : 5. 12. 2011

Název : Projekt | **Fáze : 1**



Základní parametry zemin

Číslo	Název	Vzorek	φef [°]	cef [kPa]	γ [kN/m3]	γsu [kN/m3]
1	strk ilovity G5 GC		28.00	2.00	19.50	10.00
2	strk-primes jem. zeminy G3 G-F		30.00	0.00	19.00	9.50
3	pieskovec R5		26.00	8.00	21.00	11.10
4	ilovec R5-R6		22.00	20.00	20.00	10.20
5	pieskovec R4-R5		30.00	5.00	21.00	11.10
6	pieskovec R3		36.00	0.00	21.00	11.10

Číslo	Název	Vzorek	φ_{ef} [°]	c_{ef} [kPa]	γ [kN/m^3]	γ_{su} [kN/m^3]
7	pieskovec R4		35.00	5.00	21.00	11.10
8	ilovec R5		26.00	10.00	21.00	11.10

Pro výpočet tlaku v klidu jsou všechny zeminy zadány jako nesoudržné.

Číslo	Název	Vzorek	E_{oed} [MPa]	E_{def} [MPa]	γ_{sat} [kN/m^3]	γ_s [kN/m^3]	n [-]
1	strk ilovity G5 GC		-	40.00	20.00	-	-
2	strk-primes jem. zeminy G3 G-F		-	80.00	19.50	-	-
3	pieskovec R5		-	30.00	21.10	-	-
4	ilovec R5-R6		-	15.00	20.20	-	-
5	pieskovec R4-R5		-	60.00	21.10	-	-
6	pieskovec R3		-	200.00	21.10	-	-
7	pieskovec R4		-	100.00	21.10	-	-
8	ilovec R5		-	100.00	21.10	-	-

Parametry zemin pro výpočet modulu reakce podloží

Číslo	Název	Vzorek	β
1	strk ilovity G5 GC		0.74
2	strk-primes jem. zeminy G3 G-F		0.83
3	pieskovec R5		0.62
4	ilovec R5-R6		0.62
5	pieskovec R4-R5		0.78
6	pieskovec R3		0.78
7	pieskovec R4		0.78

Číslo	Název	Vzorek	β
8	ilovec R5		0.47

Parametry zemin
strk ilovity G5 GC

Objemová tíha :	γ	=	19,50	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	28,00	°
Soudržnost zeminy :	c_{ef}	=	2,00	kPa
Poissonovo číslo :	ν	=	0,30	
Modul přetvárnosti :	E_{def}	=	40,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	20,00	kN/m3
Úhel roznášení :	β	=	0,74	°

strk-primes jem. zeminy G3 G-F

Objemová tíha :	γ	=	19,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	30,00	°
Soudržnost zeminy :	c_{ef}	=	0,00	kPa
Poissonovo číslo :	ν	=	0,20	
Modul přetvárnosti :	E_{def}	=	80,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	19,50	kN/m3
Úhel roznášení :	β	=	0,83	°

pieskovec R5

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	26,00	°
Soudržnost zeminy :	c_{ef}	=	8,00	kPa
Poissonovo číslo :	ν	=	0,30	
Modul přetvárnosti :	E_{def}	=	30,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3
Úhel roznášení :	β	=	0,62	°

ilovec R5-R6

Objemová tíha :	γ	=	20,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	22,00	°
Soudržnost zeminy :	c_{ef}	=	20,00	kPa
Poissonovo číslo :	ν	=	0,35	
Modul přetvárnosti :	E_{def}	=	15,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	20,20	kN/m3
Úhel roznášení :	β	=	0,62	°

pieskovec R4-R5

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	30,00	°
Soudržnost zeminy :	c_{ef}	=	5,00	kPa
Poissonovo číslo :	ν	=	0,25	
Modul přetvárnosti :	E_{def}	=	60,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3

Úhel roznášení : β = 0,78 °

pieskovec R3

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	36,00	°
Soudržnost zeminy :	c_{ef}	=	0,00	kPa
Poissonovo číslo :	ν	=	0,28	
Modul přetvárnosti :	E_{def}	=	200,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3
Úhel roznášení :	β	=	0,78	°

pieskovec R4

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	35,00	°
Soudržnost zeminy :	c_{ef}	=	5,00	kPa
Poissonovo číslo :	ν	=	0,28	
Modul přetvárnosti :	E_{def}	=	100,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3
Úhel roznášení :	β	=	0,78	°

ilovec R5

Objemová tíha :	γ	=	21,00	kN/m3
Úhel vnitřního tření :	φ_{ef}	=	26,00	°
Soudržnost zeminy :	c_{ef}	=	10,00	kPa
Poissonovo číslo :	ν	=	0,20	
Modul přetvárnosti :	E_{def}	=	100,00	MPa
Obj.tíha sat.zeminy :	γ_{sat}	=	21,10	kN/m3
Úhel roznášení :	β	=	0,47	°

Geometrie konstrukce

Geometrie piloty
Profil piloty: kruhová
Rozměry
Průměr d = 1.20 m
Délka l = 15.00 m
Umístění
Vysazení h = 0.80 m
Hloubka upraveného terénu h_z = 4.90 m
Redukce odporu na patě = 0.80
Redukce odporu na plášti = 0.60
Modul reakce podloží uvažován jako konstantní.

Materiál konstrukce
Výpočet betonových konstrukcí proveden podle normy EN 1992 1-1 (EC2).

Beton : C 20/25

Válcová pevnost v tlaku	f_{ck}	=	20.00	MPa
Pevnost v tahu	f_{ct}	=	2.20	MPa
Modul pružnosti	E_{cm}	=	29000.00	MPa

Ocel podélná : B500

Mez kluzu f_{yk} = 500.00 MPa

Modul pružnosti E = 200000.00 MPa

Geologický profil a přiřazení zemin

Číslo	Vrstva [m]	Přiřazená zemina	Vzorek
1	0.50	strk ilovity G5 GC	
2	1.50	strk-primes jem. zeminy G3 G-F	
3	0.50	strk ilovity G5 GC	
4	3.50	strk-primes jem. zeminy G3 G-F	
5	0.70	strk-primes jem. zeminy G3 G-F	
6	0.20	pieskovec R5	
7	1.30	ilovec R5-R6	
8	0.40	pieskovec R4-R5	
9	1.70	ilovec R5-R6	
10	0.70	ilovec R5-R6	
11	0.20	pieskovec R3	
12	0.80	ilovec R5	
13	0.90	pieskovec R4	
14	0.40	ilovec R5	
15	0.50	pieskovec R3	
16	0.20	pieskovec R4-R5	
17	1.00	pieskovec R4	
18	0.50	pieskovec R3	

Číslo	Vrstva [m]	Přiřazená zemina	Vzorek
19	1.00	ilovec R5	
20	0.50	pieskovec R3	
21	1.00	pieskovec R4	
22	2.00	pieskovec R3	
23	1.00	pieskovec R3	
24	-	ilovec R5	

Zatížení

Číslo	Zatížení nové	Zatížení změna	Název	Typ	N [kN]	M_x [kNm]	M_y [kNm]	H_x [kN]	H_y [kN]
1	ANO		LCB 2(max)	Výpočtové	3229.00	170.00	215.00	104.00	-15.00
2	ANO		LCB 2(MAX)	Výpočtové	4326.00	170.00	215.00	104.00	-15.00

Hladina podzemní vody
Hladina podzemní vody je v hloubce 4.90 m od původního terénu.

Nastavení výpočtu
Výpočet proveden podle teorie mezních stavů s redukcí vstupních parametrů zemin.

Součinitel redukce úhlu vnitřního tření $\gamma_{m\phi}$ = 1.10

Součinitel redukce soudržnosti γ_{mc} = 1.40

Posouzení čís. 1

Posouzení svislé únosnosti piloty podle teorie MS - mezivýsledky
Výpočet únosnosti v patě:

Součinitel únosnosti	Nc	=	21.80	
Součinitel únosnosti	Nd	=	11.50	
Součinitel únosnosti	Nb	=	7.58	
Součinitel únosnosti	K1	=	1.15	
Výpočtová únosnost na patě piloty	R_d	=	2531.82	kPa
Plocha příčného řezu piloty	A_s	=	1.131E+00	m^2

Únosnost na plášti piloty:
Zkrácení účinné délky piloty Lp [m] = 1.53 m

Hloubka [m]	Mocnost [m]	ϕ_d [°]	cd [kPa]	γ [kN/m^3]	γ R2 [-]	fs [kPa]	Ufdi [kN]
1.00	1.00	21.43	0.00	9.50	1.30	1.53	5.77
1.10	0.10	21.43	0.00	9.50	1.20	3.21	1.21
1.80	0.70	21.43	0.00	9.50	1.20	4.44	11.71
2.00	0.20	18.57	4.00	11.10	1.20	8.38	6.31
3.00	1.00	15.71	10.00	10.20	1.10	14.77	55.69
3.30	0.30	15.71	10.00	10.20	1.00	17.22	19.48
3.70	0.40	21.43	2.50	11.10	1.00	13.71	20.68
5.40	1.70	15.71	10.00	10.20	1.00	20.63	132.20
6.10	0.70	15.71	10.00	10.20	1.00	23.48	61.95
6.30	0.20	25.71	0.00	11.10	1.00	24.57	18.53
7.10	0.80	18.57	5.00	11.10	1.00	23.87	72.00
8.00	0.90	25.00	2.50	11.10	1.00	32.03	108.67
8.40	0.40	18.57	5.00	11.10	1.00	28.48	42.95
8.90	0.50	25.71	0.00	11.10	1.00	35.25	66.44
9.10	0.20	21.43	2.50	11.10	1.00	32.68	24.64
10.00	0.90	25.00	2.50	11.10	1.00	40.48	137.33
10.10	0.10	25.00	2.50	11.10	1.00	42.63	16.07
10.60	0.50	25.71	0.00	11.10	1.00	42.96	80.97
11.60	1.00	18.57	5.00	11.10	1.00	38.07	143.52
12.10	0.50	25.71	0.00	11.10	1.00	50.80	95.75
12.67	0.57	25.00	2.50	11.10	1.00	54.47	117.38

Posouzení svislé únosnosti piloty podle teorie MS - výsledky
Výpočet proveden s automatickým výběrem nejnepříznivějších zatěžovacích stavů.
Součinitel vlivu technologie GamaR1 = 1.20

Únosnost piloty na plášti U_{fd} = 1239.25 kN
Únosnost piloty v patě U_{bd} = 3292.94 kN

Únosnost piloty U_{vd} = 4532.19 kN
Extrémní svislá síla V_d = 4326.00 kN

U_{vd} = 4532.19 kN > 4326.00 kN = V_d

Svislá únosnost plovoucí piloty VYHOVUJE

Posouzení čís. 1

Vstupní data pro výpočet vodorovné únosnosti piloty
Výpočet proveden s automatickým výběrem nejnepříznivějších zatěžovacích stavů.
Vodorovná únosnost posouzena ve směru maximálního účinku zatížení.

Průběhy vnitřních sil a deformace piloty

Průběh deformací a vnitřních sil po pilotě - maximální hodnoty:

Vzdál. [m]	Modul k [MN/m3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
0.00	0.00	-0.21	0.20	0.00	15.00	170.00
0.75	0.00	-0.21	0.16	12.57	15.00	158.75
0.80	0.00	-0.21	0.16	14.01	15.46	157.81
0.80	97.18	-0.21	0.16	14.01	15.46	157.81
1.50	97.18	-0.11	0.12	34.26	21.85	144.64
1.90	97.18	-0.06	0.10	32.92	24.85	134.54
1.90	97.18	-0.06	0.10	32.92	24.85	134.54
2.25	97.18	-0.03	0.09	31.74	27.48	125.71
2.60	97.18	-0.00	0.09	23.07	27.42	116.03
2.60	36.71	-0.00	0.09	23.07	27.42	116.03
2.80	36.71	0.01	0.09	18.11	27.39	110.50
2.80	18.35	0.01	0.09	18.11	27.39	110.50
3.00	18.35	0.03	0.09	13.16	27.36	104.97
3.75	18.35	0.06	0.08	9.21	26.58	84.71
4.10	18.35	0.07	0.08	8.36	25.17	75.91
4.10	73.01	0.07	0.08	8.36	25.17	75.91
4.50	73.01	0.08	0.08	7.40	23.55	65.86
4.50	18.35	0.08	0.08	7.40	23.55	65.86
5.25	18.35	0.09	0.07	3.42	22.13	48.72
6.00	18.35	0.09	0.06	2.71	20.69	39.80
6.20	18.35	0.08	0.06	3.30	20.33	40.24
6.20	18.35	0.08	0.06	3.30	20.33	40.24
6.75	18.35	0.08	0.05	4.94	19.35	41.46
6.90	18.35	0.07	0.05	5.46	18.47	41.35
6.90	243.37	0.07	0.05	5.46	18.47	41.35
7.10	243.37	0.07	0.04	6.16	17.29	41.19
7.10	122.98	0.07	0.04	6.16	17.29	41.19
7.50	122.98	0.06	0.04	7.56	14.92	40.87
7.90	122.98	0.06	0.04	6.87	11.62	38.98
7.90	121.69	0.06	0.04	6.87	11.62	38.98
8.25	121.69	0.05	0.03	6.26	8.73	37.32
8.80	121.69	0.04	0.03	4.10	8.72	33.50
8.80	122.98	0.04	0.03	4.10	8.72	33.50
9.00	122.98	0.04	0.02	3.31	8.72	32.11
9.20	122.98	0.03	0.02	2.80	8.80	30.41
9.20	243.37	0.03	0.02	2.80	8.80	30.41
9.70	243.37	0.03	0.02	1.54	9.02	26.16
9.70	73.01	0.03	0.02	1.54	9.02	26.16
9.75	73.01	0.03	0.02	1.42	9.04	25.74
9.90	73.01	0.02	0.02	1.24	8.95	24.73
9.90	121.69	0.02	0.02	1.24	8.95	24.73
10.50	121.69	0.02	0.01	0.54	8.62	20.68
10.90	121.69	0.01	0.01	-0.03	7.97	17.82
10.90	243.37	0.01	0.01	-0.03	7.97	17.82

Vzdál. [m]	Modul k [MN/m3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
11.25	243.37	0.01	0.01	-0.53	7.40	15.32
11.40	243.37	0.01	0.01	-0.52	7.17	14.31
11.40	122.98	0.01	0.01	-0.52	7.17	14.31
12.00	122.98	0.01	0.00	-0.50	6.26	10.27
12.40	122.98	0.01	0.00	-0.09	5.58	8.01
12.40	243.37	0.01	0.00	-0.09	5.58	8.01
12.75	243.37	0.01	0.00	0.26	4.99	6.04
12.90	243.37	0.01	0.00	0.38	4.70	5.40
12.90	121.69	0.01	0.00	0.38	4.70	5.40
13.50	121.69	0.01	0.00	0.84	3.53	2.84
13.90	121.69	0.01	0.00	1.23	2.72	1.73
13.90	243.37	0.01	0.00	1.23	2.72	1.73
14.25	243.37	0.01	-0.00	1.56	2.02	0.76
15.00	243.37	0.01	-0.00	2.40	0.00	0.00

Průběh deformací a vnitřních sil po pilotě - minimální hodnoty:

Vzdál. [m]	Modul k [MN/m3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
0.00	0.00	-0.54	-0.12	0.00	-105.08	-274.09
0.75	0.00	-0.52	-0.06	5.16	-105.08	-205.93
0.80	0.00	-0.51	-0.06	5.33	-103.71	-201.70
0.80	97.18	-0.51	-0.06	5.33	-103.71	-201.70
1.50	97.18	-0.47	-0.02	7.72	-84.62	-142.46
1.90	97.18	-0.44	-0.00	4.72	-66.91	-116.55
1.90	97.18	-0.44	-0.00	4.72	-66.91	-116.55
2.25	97.18	-0.41	0.01	2.09	-51.41	-93.87
2.60	97.18	-0.38	0.02	0.62	-44.19	-78.61
2.60	36.71	-0.38	0.02	0.62	-44.19	-78.61
2.80	36.71	-0.36	0.03	-0.23	-40.06	-69.89
2.80	18.35	-0.36	0.03	-0.23	-40.06	-69.89
3.00	18.35	-0.35	0.03	-1.07	-35.94	-61.17
3.75	18.35	-0.29	0.04	-2.02	-31.40	-35.95
4.10	18.35	-0.26	0.03	-2.30	-26.74	-26.75
4.10	73.01	-0.26	0.03	-2.30	-26.74	-26.75
4.50	73.01	-0.23	0.02	-2.62	-21.42	-16.24
4.50	18.35	-0.23	0.02	-2.62	-21.42	-16.24
5.25	18.35	-0.19	0.00	-1.62	-18.02	-1.49
6.00	18.35	-0.15	-0.01	-1.56	-15.27	10.96
6.20	18.35	-0.14	-0.01	-2.05	-14.70	12.75
6.20	18.35	-0.14	-0.01	-2.05	-14.70	12.75
6.75	18.35	-0.11	-0.02	-3.37	-13.14	17.66
6.90	18.35	-0.10	-0.02	-3.92	-11.94	15.10
6.90	243.37	-0.10	-0.02	-3.92	-11.94	15.10
7.10	243.37	-0.10	-0.02	-4.64	-10.34	11.69
7.10	122.98	-0.10	-0.02	-4.64	-10.34	11.69
7.50	122.98	-0.08	-0.02	-6.09	-7.14	4.86

Vzdál. [m]	Modul k [MN/m3]	Deformace [mm]	Pootoč. [mRad]	Napětí [kPa]	Pos.síla [kN]	Moment [kNm]
7.90	122.98	-0.06	-0.02	-6.07	-3.37	0.18
7.90	121.69	-0.06	-0.02	-6.07	-3.37	0.18
8.25	121.69	-0.05	-0.02	-6.05	-0.06	-3.92
8.80	121.69	-0.04	-0.02	-4.56	2.92	-7.35
8.80	122.98	-0.04	-0.02	-4.56	2.92	-7.35
9.00	122.98	-0.03	-0.02	-4.02	4.01	-8.60
9.20	122.98	-0.03	-0.02	-3.60	3.29	-9.12
9.20	243.37	-0.03	-0.02	-3.60	3.29	-9.12
9.70	243.37	-0.02	-0.01	-2.55	1.49	-10.41
9.70	73.01	-0.02	-0.01	-2.55	1.49	-10.41
9.75	73.01	-0.01	-0.01	-2.45	1.31	-10.53
9.90	73.01	-0.01	-0.01	-2.40	0.95	-10.59
9.90	121.69	-0.01	-0.01	-2.40	0.95	-10.59
10.50	121.69	-0.00	-0.01	-2.19	-0.46	-10.80
10.90	121.69	-0.00	-0.01	-2.02	-1.49	-10.19
10.90	243.37	-0.00	-0.01	-2.02	-1.49	-10.19
11.25	243.37	0.00	-0.01	-1.87	-2.40	-9.65
11.40	243.37	0.00	-0.01	-1.88	-2.58	-9.21
11.40	122.98	0.00	-0.01	-1.88	-2.58	-9.21
12.00	122.98	0.00	-0.01	-1.95	-3.28	-7.46
12.40	122.98	0.00	-0.01	-1.87	-3.33	-6.11
12.40	243.37	0.00	-0.01	-1.87	-3.33	-6.11
12.75	243.37	-0.00	-0.00	-1.79	-3.37	-4.92
12.90	243.37	-0.00	-0.00	-1.77	-3.27	-4.45
12.90	121.69	-0.00	-0.00	-1.77	-3.27	-4.45
13.50	121.69	-0.00	-0.00	-1.67	-2.87	-2.55
13.90	121.69	-0.01	-0.00	-1.83	-2.34	-1.59
13.90	243.37	-0.01	-0.00	-1.83	-2.34	-1.59
14.25	243.37	-0.01	-0.00	-1.97	-1.88	-0.74
15.00	243.37	-0.01	-0.00	-2.23	-0.00	-0.00

Maximální vnitřní síly a deformace:
Max.deformace piloty = 0.5 mm
Max.posouvající síla = 105.08 kN
Maximální moment = 274.09 kNm

Dimenzace výztuže:
Vyztužení - 16 ks profil 18.0 mm; krytí 100.0 mm

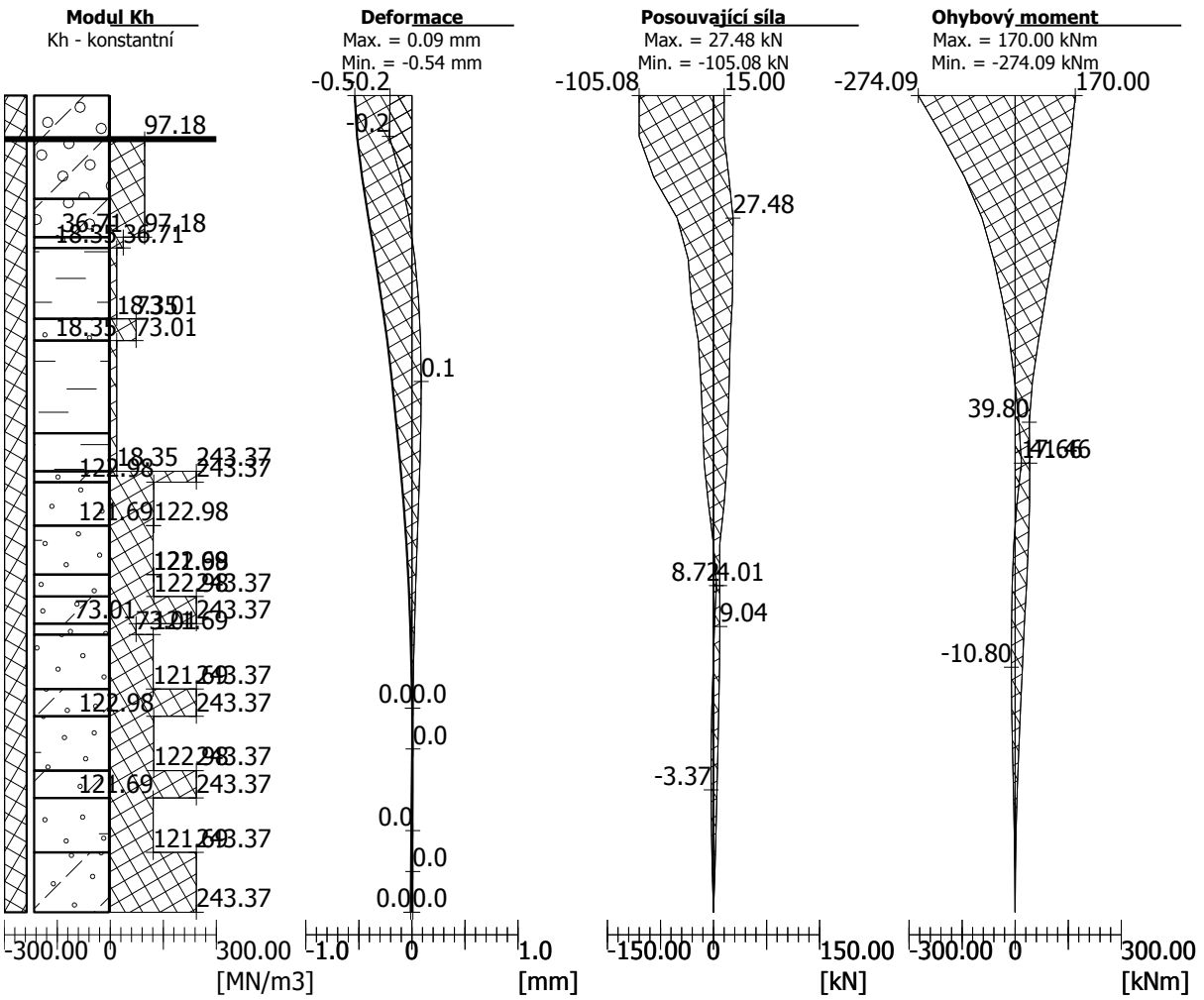
Stupeň vyztužení $\rho = 0.180\ \% > 0.130\ \% = \rho_{min}$

Zatížení : N_{Ed} = -4326.00 kN (tlak) ; M_{Ed} = 274.09 kNm
Únosnost : N_{Rd} = -12326.94 kN; M_{Rd} = 783.79 kNm

Zatížení : N_{Ed} = -3229.00 kN (tlak) ; M_{Ed} = 274.09 kNm
Únosnost : N_{Rd} = -12326.94 kN; M_{Rd} = 1045.87 kNm

Navržená výztuž piloty VYHOVUJE

Název : Vod. únosn. | **Fáze : 1; Posouzení : 1**



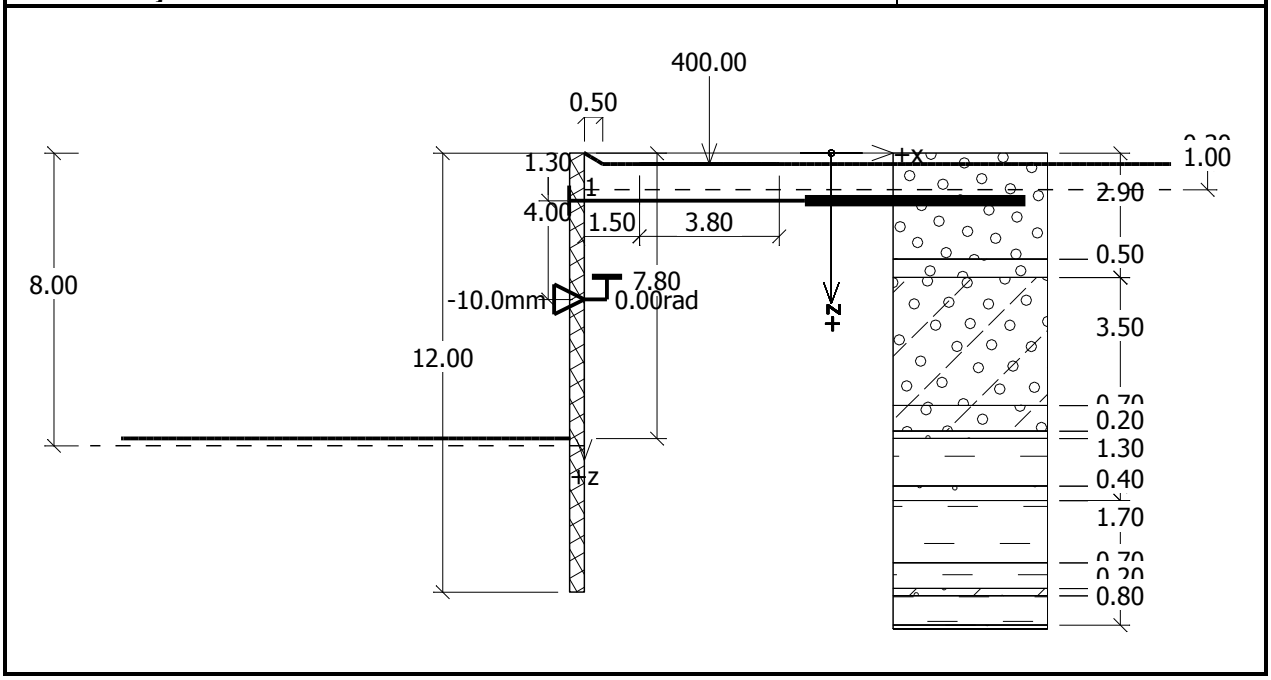
7.4.5 Paženie stavebnej jamy č. 4 - vnútorné

Posouzení pažící konstrukce

Vstupní data

Projekt
Datum : 7. 11. 2011

Název : Projekt	**Fáze : 1**



Geometrie konstrukce
Délka konstrukce = 12.00 m

Typ konstrukce : Štětovnice IIIn 436 x 168 x 13.0 mm
Koef.redukce tlaku před stěnou = 1.00

Plocha průřezu	A	=	1.973E-02	m^2/m
Moment setrvačnosti	I	=	2.320E-04	m^4/m
Modul pružnosti	E	=	210000.00	MPa
Modul pružnosti ve smyku	G	=	81000.00	MPa

Modul reakce podloží vypočten z přetvárných charakteristik zemin.

Základní parametry zemin

Číslo	**Název**	**Vzorek**	**φef [°]**	**cef [kPa]**	**γ [kN/m3]**	**γsu [kN/m3]**	**δa [°]**	**δp [°]**
1	zasyp ostrova		34.00	0.00	20.00	10.50	17.00	17.00
2	strk ilovity G5 GC		28.00	2.00	19.50	10.00	18.50	18.50
3	strk-primes jem. zeminy G3 G-F		30.00	0.00	19.00	9.50	20.00	20.00
4	pieskovec R5		26.00	8.00	21.00	11.10	17.00	17.00

Číslo	Názov	Vzorek	φ_{ef} [°]	c_{ef} [kPa]	γ [kN/m3]	γ_{su} [kN/m3]	δ_a [°]	δ_p [°]
5	ilovec R5-R6		22.00	20.00	20.00	10.20	14.50	14.50
6	pieskovec R4-R5		30.00	5.00	21.00	11.10	20.00	20.00
7	pieskovec R3		36.00	0.00	21.00	11.10	24.00	24.00
8	pieskovec R4		35.00	5.00	21.00	11.10	23.50	23.50
9	ilovec R5		26.00	10.00	21.00	11.10	17.00	17.00

Parametry zemin pro výpočet tlaku v klidu

Číslo	Názov	Vzorek	Typ výpočtu	φ [°]	ν [-]	OCR [-]	K_r [-]
1	zasyp ostrova		nesoudržná	34.00	-	-	-
2	strk ilovity G5 GC		soudržná	-	0.30	-	-
3	strk-primes jem. zeminy G3 G-F		nesoudržná	30.00	-	-	-
4	pieskovec R5		soudržná	-	0.20	-	-
5	ilovec R5-R6		soudržná	-	0.35	-	-
6	pieskovec R4-R5		soudržná	-	0.25	-	-
7	pieskovec R3		nesoudržná	36.00	-	-	-
8	pieskovec R4		soudržná	-	0.28	-	-
9	ilovec R5		soudržná	-	0.20	-	-

Parametry zemin pro výpočet modulu reakce podloží (iterovat)

Číslo	Názov	Vzorek	ν [-]	E_{oed} [MPa]	E_{def} [MPa]	m [-]
1	zasyp ostrova		0.20	-	150.00	0.30
2	strk ilovity G5 GC		0.30	-	40.00	0.30
3	strk-primes jem. zeminy G3 G-F		0.20	-	80.00	0.30

Číslo	Názov	Vzorek	ν [-]	E_{oed} [MPa]	E_{def} [MPa]	m [-]
4	pieskovec R5		0.20	-	30.00	0.30
5	ilovec R5-R6		0.35	-	15.00	0.30
6	pieskovec R4-R5		0.25	-	60.00	0.30
7	pieskovec R3		0.28	-	200.00	0.20
8	pieskovec R4		0.28	-	100.00	0.30
9	ilovec R5		0.20	-	100.00	0.30

Geologický profil a přiřazení zemin

Číslo	Vrstva [m]	Přiřazená zemina	Vzorek
1	2.90	zasyp ostrova	
2	0.50	strk ilovity G5 GC	
3	3.50	strk-primes jem. zeminy G3 G-F	
4	0.70	strk-primes jem. zeminy G3 G-F	
5	0.20	pieskovec R5	
6	1.30	ilovec R5-R6	
7	0.40	pieskovec R4-R5	
8	1.70	ilovec R5-R6	
9	0.70	ilovec R5-R6	
10	0.20	pieskovec R3	
11	0.80	ilovec R5	
12	0.90	pieskovec R4	
13	0.40	ilovec R5	

Číslo	Vrstva [m]	Přiřazená zemina	Vzorek
14	0.50	pieskovec R3	
15	0.20	pieskovec R4-R5	
16	-	pieskovec R3	

Hloubení
Zemina před stěnou je odebrána do hloubky 7.80 m.

Tvar terénu
Terén za konstrukcí je ve sklonu 1: 1.67 (úhel sklonu je 30.96 °).
Hloubka výkopu je 0.30 m, délka výkopu je 0.50 m.

Vliv vody
Hladina podzemní vody za konstrukcí je v hloubce 1.00 m
Hladina podzemní vody před konstrukcí je v hloubce 8.00 m
Podloží u paty konstrukce je nepropustné.

Zadaná bodová přitížení

Číslo	Přitížení nové	Přitížení změna	Název	Působ.	Velikost [kN]	Poř.x x [m]	Délka l [m]	Šířka b[m]	Hloubka z [m]
1	ANO			stálé	400.00	1.50	3.80	6.00	na terénu

Zadané kotvy

Číslo	Nová kotva	Hloubka z [m]	Délka l [m]	Kořen l_k [m]	Sklon α [°]	Vzd. mezi b [m]
1	ANO	1.30	6.00	6.00	0.00	2.50

Číslo	Průměr d [mm]	Plocha A [mm^2]	Modul E [MPa]	Dopnutí	Síla F [kN]
1	20.0		210000.00		100.00

Zadané podpory

Číslo	Nová podpora	Hloubka z [m]	Vzdálenost b [m]
1	ANO	4.00	5.00

Číslo	Typ posunutí	Pružina [kN/m]	Vynuc. def. [mm]	Typ pružina	Pružina [kNm/rad]	Vynuc. def. [rad]
1	Vynuc. def.		0.00	Vynuc. def.		0.00

Celkové nastavení výpočtu
Metodika posouzení : klasický výpočet
Výpočet aktivního tlaku - Coulomb (ČSN 730037)
Výpočet pasivního tlaku - Caqout-Kerisel (ČSN 730037)
Počet dělení stěny na konečné prvky = 20

Nastavení výpočtu fáze
Výpočet proveden bez redukce vstupních dat.
Minimální dimenzační tlak je uvažován hodnotou $\sigma_{z,min} = 0.20\sigma_z$.

Výsledky výpočtu

Průběhy tlaků na konstrukci (před a za stěnou)

Hloubka [m]	Ta,p [kPa]	Tk,p [kPa]	Tp,p [kPa]	Ta,z [kPa]	Tk,z [kPa]	Tp,z [kPa]
0.00	-0.00	-0.00	-0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.30	0.00	0.00	0.00	1.20	2.06	13.67
0.47	0.00	0.00	0.00	1.89	3.53	21.52
0.80	0.00	0.00	0.00	3.20	6.32	62.47
1.00	-0.00	-0.00	-0.00	4.00	9.47	87.46
1.31	0.00	0.00	0.00	7.43	15.54	111.02
1.31	0.00	0.00	0.00	9.04	15.54	111.02
1.43	0.00	0.00	0.00	10.42	17.81	119.81
1.60	0.00	0.00	0.00	12.57	21.16	132.81
1.66	0.00	0.00	0.00	13.31	22.17	137.31
2.40	0.00	0.00	0.00	22.55	33.66	193.29
2.90	-0.00	-0.00	-0.00	28.80	40.23	231.08
2.90	0.00	0.00	0.00	29.23	39.81	182.38
3.20	0.00	0.00	0.00	33.11	43.47	199.08
3.40	-0.00	-0.00	-0.00	35.69	45.89	210.22
3.40	0.00	0.00	0.00	36.50	48.68	224.44
4.00	0.00	0.00	0.00	44.02	56.26	259.77
4.80	0.00	0.00	0.00	54.05	66.72	306.88
5.60	0.00	0.00	0.00	64.08	77.59	353.99
6.40	0.00	0.00	0.00	74.11	88.79	401.10
6.90	-0.00	-0.00	-0.00	80.38	95.90	430.54
7.20	0.00	0.00	0.00	84.14	100.20	448.21
7.60	-0.00	-0.00	-0.00	89.16	105.96	471.76
7.60	0.00	0.00	0.00	85.36	86.05	409.07
7.80	-0.00	-0.00	-0.00	88.07	88.55	419.85
7.80	-0.00	-0.00	-69.24	78.85	112.23	388.13
7.84	0.00	-0.40	-71.56	79.37	112.80	389.69
7.84	0.00	-0.40	-71.56	79.37	112.80	389.69
8.00	-0.00	-2.15	-81.62	81.62	115.27	396.44
8.00	0.00	-2.15	-81.62	81.62	115.27	396.44
8.41	0.00	-4.39	-94.45	83.18	117.42	409.27
8.41	0.00	-4.39	-94.45	81.74	117.42	409.27
8.80	0.00	-6.55	-106.87	83.32	119.49	421.69
9.10	-0.00	-8.20	-116.34	84.52	121.09	431.16
9.10	0.00	-5.07	-100.31	91.75	101.59	577.41
9.21	-0.00	-5.50	-106.87	92.10	102.01	583.97
9.50	-0.88	-6.55	-123.16	92.99	103.03	600.26
9.50	-0.00	-10.59	-130.08	86.26	123.43	444.90
9.60	0.00	-11.14	-133.24	86.66	123.96	448.06
10.40	0.00	-15.53	-158.49	89.87	128.28	473.31
11.20	-0.00	-19.92	-183.74	93.07	132.62	498.56
11.90	-0.00	-23.77	-205.84	95.87	136.43	520.66
11.90	-9.47	-18.20	-373.95	96.45	120.83	1114.15

Hloubka [m]	Ta,p [kPa]	Tk,p [kPa]	Tp,p [kPa]	Ta,z [kPa]	Tk,z [kPa]	Tp,z [kPa]
12.00	-9.71	-18.65	-383.35	96.69	121.28	1123.56

Průběhy modulu reakce podloží a vnitřních sil po konstrukci

Hloubka [m]	kh,p [MN/m3]	kh,z [MN/m3]	Deformace [mm]	Tlak [kPa]	Pos.síla [kN/m]	Moment [kNm/m]
0.00	0.00	0.00	-5.79	0.00	0.00	0.00
0.60	0.00	0.00	-6.66	2.40	-0.72	0.14
1.20	0.00	0.00	-7.53	6.20	-3.30	1.24
1.30	0.00	0.00	-7.68	7.68	-3.99	1.60
1.30	0.00	0.00	-7.68	7.68	36.01	1.60
1.80	0.00	0.00	-8.39	15.06	30.32	-15.14
2.40	0.00	0.00	-9.15	22.55	19.04	-30.17
3.00	0.00	0.00	-9.69	30.53	3.11	-37.05
3.60	0.00	0.00	-9.96	39.01	-17.75	-32.92
4.00	0.00	0.00	-10.00	44.02	-34.35	-22.56
4.00	0.00	0.00	-10.00	44.02	187.62	191.33
4.20	0.00	0.00	-10.07	46.53	178.56	154.70
4.80	0.00	0.00	-10.94	54.05	148.39	56.39
5.40	0.00	0.00	-12.24	61.57	113.70	-22.46
6.00	0.00	0.00	-13.39	69.10	74.50	-79.15
6.60	0.00	0.00	-13.97	76.62	30.79	-110.96
7.20	0.00	0.00	-13.74	84.14	-17.44	-115.19
7.79	0.00	0.00	-12.71	87.94	-68.20	-90.03
7.81	0.00	0.00	-12.66	9.13	-69.57	-88.65
8.40	0.00	0.00	-10.98	-11.09	-68.99	-47.19
9.00	0.00	0.00	-8.92	-29.06	-56.95	-8.87
9.60	0.00	0.00	-6.79	-46.57	-34.26	19.02
10.20	0.00	0.00	-4.79	-63.11	-1.35	30.20
10.80	12.18	0.00	-2.99	37.27	9.61	21.24
11.40	65.75	0.00	-1.37	-17.17	16.37	11.58
12.00	0.00	150.00	0.16	134.94	0.00	-0.00

Celkový provedený počet iterací modulu reakce podloží - 41.

Maximální posouvající síla = 187.62 kN/m
Maximální moment = 191.33 kNm/m
Maximální deformace = 14.0 mm

Reakce v podporách

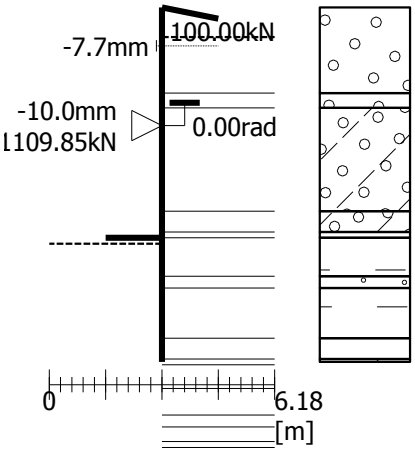
Číslo	Hloubka [m]	Deformace [mm]	Reakce [kN]
1	4.00	-10.0	1109.85

Síly v kotvách

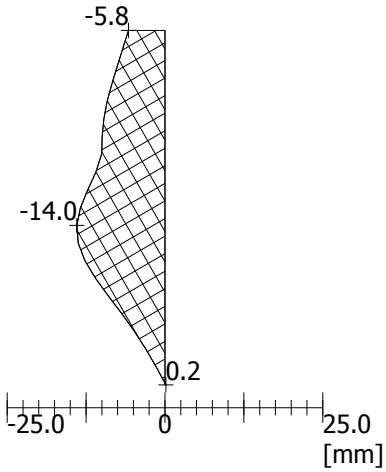
Číslo	Hloubka [m]	Deformace [mm]	Síla v kotvě [kN]
1	1.30	-7.7	100.00

Název : Výpočet | **Fáze : 1**

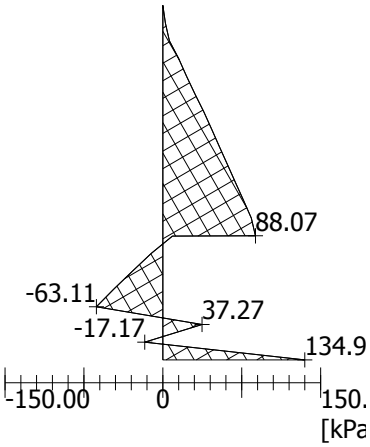
Geometrie konstrukce
Délka konstrukce = 12.00m



Deformace konstrukce
Max. def. = 14.0mm

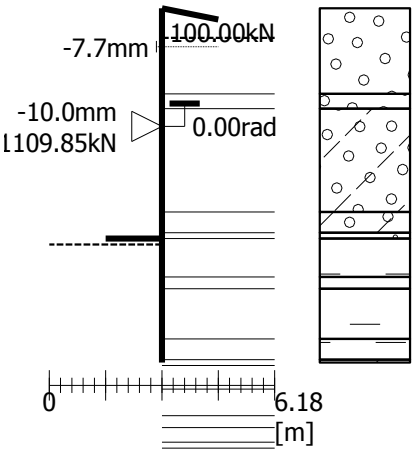


Tlak na konstrukci
Max. tlak = 134.94kPa

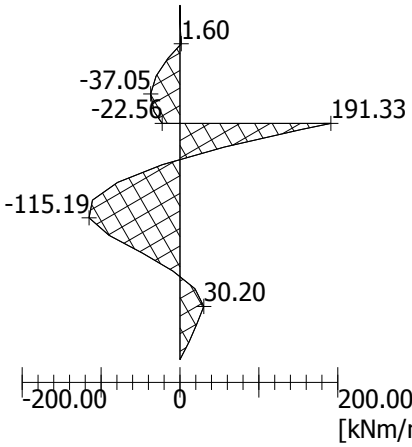


Název : Výpočet | **Fáze : 1**

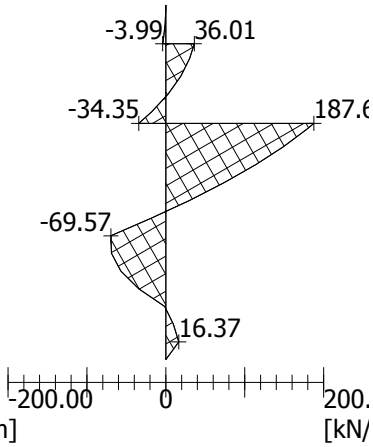
Geometrie konstrukce
Délka konstrukce = 12.00m



Ohybový moment
Max. M = 191.33kNm/m



Posouvající síla
Max. Q = 187.62kN/m



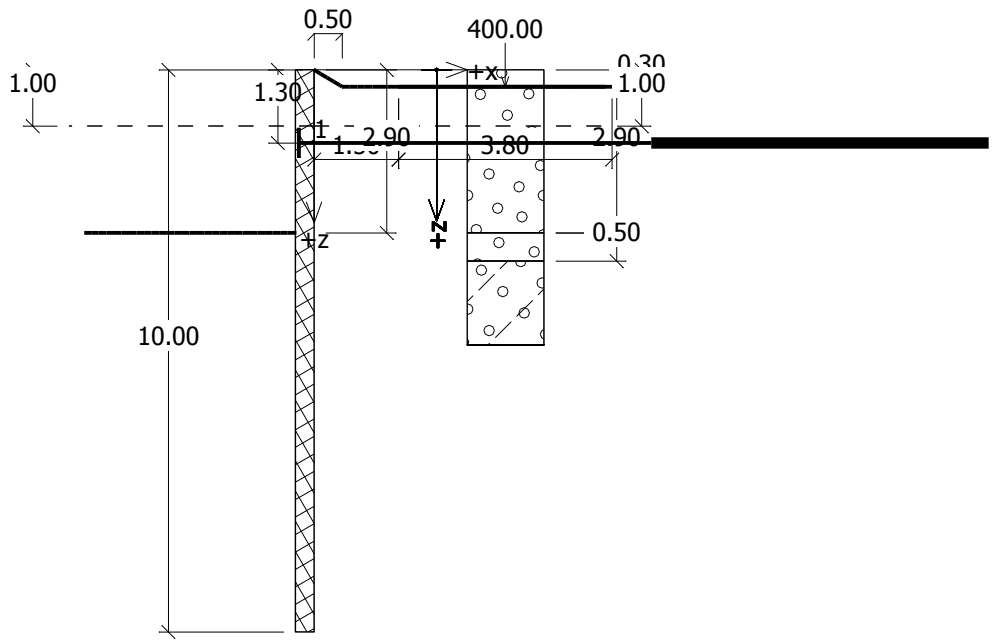
7.4.6 Paženie stavebnej jamy č. 4 - vonkajšie

Posouzení pažící konstrukce

Vstupní data

Projekt
Datum : 7. 11. 2011

Název : Projekt	**Fáze : 1**



Geometrie konstrukce
Délka konstrukce = 10.00 m

Typ konstrukce : Štětovnice IIIn 436 x 168 x 13.0 mm
Koef.redukce tlaku před stěnou = 1.00

Plocha průřezu	A	=	1.973E-02	m^2/m
Moment setrvačnosti	I	=	2.320E-04	m^4/m
Modul pružnosti	E	=	210000.00	MPa
Modul pružnosti ve smyku	G	=	81000.00	MPa

Modul reakce podloží vypočten z přetvárných charakteristik zemin.

Základní parametry zemin

Číslo	**Název**	**Vzorek**	**φ_{ef} [°]**	**c_{ef} [kPa]**	**γ [kN/m³]**	**γ_{su} [kN/m³]**	**δ_a [°]**	**δ_p [°]**
1	zasyp ostrova		34.00	0.00	20.00	10.50	17.00	17.00
2	strk ilovity G5 GC		28.00	2.00	19.50	10.00	18.50	18.50
3	strk-primes jem. zeminy G3 G-F		30.00	0.00	19.00	9.50	20.00	20.00
4	pieskovec R5		26.00	8.00	21.00	11.10	17.00	17.00

Číslo	Název	Vzorek	φ_{ef} [°]	c_{ef} [kPa]	γ [kN/m3]	γ_{su} [kN/m3]	δ_a [°]	δ_p [°]
5	ilovec R5-R6		22.00	20.00	20.00	10.50	14.50	14.50
6	pieskovec R4-R5		30.00	5.00	21.00	11.10	20.00	20.00
7	pieskovec R3		36.00	0.00	21.00	11.10	24.00	24.00
8	pieskovec R4		35.00	5.00	21.00	11.10	23.50	23.50
9	ilovec R5		26.00	10.00	21.00	11.10	17.00	17.00

Parametry zemin pro výpočet tlaku v klidu

Číslo	Název	Vzorek	Typ výpočtu	φ [°]	ν [-]	OCR [-]	K_r [-]
1	zasyp ostrova		nesoudržná	34.00	-	-	-
2	strk ilovity G5 GC		soudržná	-	0.30	-	-
3	strk-primes jem. zeminy G3 G-F		nesoudržná	30.00	-	-	-
4	pieskovec R5		soudržná	-	0.20	-	-
5	ilovec R5-R6		soudržná	-	0.35	-	-
6	pieskovec R4-R5		soudržná	-	0.25	-	-
7	pieskovec R3		nesoudržná	36.00	-	-	-
8	pieskovec R4		soudržná	-	0.28	-	-
9	ilovec R5		soudržná	-	0.20	-	-

Parametry zemin pro výpočet modulu reakce podloží (iterovat)

Číslo	Název	Vzorek	ν [-]	E_{oed} [MPa]	E_{def} [MPa]	m [-]
1	zasyp ostrova		0.20	-	150.00	0.30
2	strk ilovity G5 GC		0.30	-	40.00	0.30
3	strk-primes jem. zeminy G3 G-F		0.20	-	80.00	0.30

Číslo	Název	Vzorek	ν [-]	E_{oed} [MPa]	E_{def} [MPa]	m [-]
4	pieskovec R5		0.20	-	30.00	0.30
5	ilovec R5-R6		0.35	-	15.00	0.30
6	pieskovec R4-R5		0.25	-	60.00	0.30
7	pieskovec R3		0.28	-	200.00	0.20
8	pieskovec R4		0.28	-	100.00	0.30
9	ilovec R5		0.20	-	100.00	0.30

Geologický profil a přiřazení zemin

Číslo	Vrstva [m]	Přiřazená zemina	Vzorek
1	2.90	zasyp ostrova	
2	0.50	strk ilovity G5 GC	
3	3.50	strk-primes jem. zeminy G3 G-F	
4	0.70	strk-primes jem. zeminy G3 G-F	
5	0.20	pieskovec R5	
6	1.30	ilovec R5-R6	
7	0.40	pieskovec R4-R5	
8	1.70	ilovec R5-R6	
9	0.70	ilovec R5-R6	
10	0.20	pieskovec R3	
11	0.80	ilovec R5	
12	0.90	pieskovec R4	
13	0.40	ilovec R5	

Číslo	Vrstva [m]	Přiřazená zemina	Vzorek
14	0.50	pieskovec R3	
15	0.20	pieskovec R4-R5	
16	-	pieskovec R3	

Hloubení
Zemina před stěnou je odebrána do hloubky 2.90 m.

Tvar terénu
Terén za konstrukcí je ve sklonu 1: 1.67 (úhel sklonu je 30.96 °).
Hloubka výkopu je 0.30 m, délka výkopu je 0.50 m.

Vliv vody
Hladina podzemní vody za konstrukcí je v hloubce 1.00 m
Hladina podzemní vody před konstrukcí je v hloubce 1.00 m
Podloží u paty konstrukce je nepropustné.

Zadaná bodová přitížení

Číslo	Přitížení nové	Přitížení změna	Název	Působ.	Velikost [kN]	Poř.x x [m]	Délka l [m]	Šířka b[m]	Hloubka z [m]
1	ANO			stálé	400.00	1.50	3.80	6.00	na terénu

Zadané kotvy

Číslo	Nová kotva	Hloubka z [m]	Délka l [m]	Kořen l_k [m]	Sklon α [°]	Vzd. mezi b [m]
1	ANO	1.30	6.00	6.00	0.00	2.50

Číslo	Průměr d [mm]	Plocha A [mm^2]	Modul E [MPa]	Dopnutí	Síla F [kN]
1	20.0		210000.00		100.00

Celkové nastavení výpočtu
Metodika posouzení : klasický výpočet
Výpočet aktivního tlaku - Coulomb (ČSN 730037)
Výpočet pasivního tlaku - Caqout-Kerisel (ČSN 730037)
Počet dělení stěny na konečné prvky = 20

Nastavení výpočtu fáze
Výpočet proveden bez redukce vstupních dat.
Minimální dimenzační tlak je uvažován hodnotou $\sigma_{z,min} = 0.20\sigma_z$.

Výsledky výpočtu

Průběhy tlaků na konstrukci (před a za stěnou)

Hloubka [m]	Ta,p [kPa]	Tk,p [kPa]	Tp,p [kPa]	Ta,z [kPa]	Tk,z [kPa]	Tp,z [kPa]
0.00	-0.00	-0.00	-0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hloubka [m]	Ta,p [kPa]	Tk,p [kPa]	Tp,p [kPa]	Ta,z [kPa]	Tk,z [kPa]	Tp,z [kPa]
0.30	0.00	0.00	0.00	1.20	2.06	13.67
0.47	0.00	0.00	0.00	1.89	3.24	21.52
0.59	0.00	0.00	0.00	2.35	4.03	36.01
1.00	-0.00	-0.00	-0.00	4.00	9.47	87.46
1.18	0.00	0.00	0.00	4.37	11.43	99.03
1.31	0.00	0.00	0.00	4.65	12.59	107.91
1.31	0.00	0.00	0.00	5.92	12.59	107.91
1.43	0.00	0.00	0.00	6.14	13.59	115.53
1.66	0.00	0.00	0.00	6.71	15.57	130.71
1.76	0.00	0.00	0.00	6.98	16.35	137.62
2.35	0.00	0.00	0.00	8.44	19.48	176.20
2.90	-0.00	-0.00	-0.00	9.80	21.23	212.08
2.90	-0.00	-0.00	-8.33	10.23	20.81	163.39
2.94	0.00	-0.18	-10.21	10.35	20.91	165.26
3.40	-0.00	-2.14	-31.16	11.69	21.89	186.22
3.40	-1.40	-2.50	-25.73	12.50	24.68	200.44
3.53	-1.74	-3.11	-32.06	12.83	25.01	206.76
4.12	-3.30	-5.91	-60.81	14.32	26.60	235.52
4.71	-4.86	-8.70	-89.57	15.81	28.40	264.28
5.29	-6.42	-11.50	-118.33	17.30	30.45	293.03
5.88	-7.99	-14.29	-147.08	18.80	32.69	321.79
6.47	-9.55	-17.09	-175.84	20.29	35.08	350.55
6.90	-10.69	-19.13	-196.83	21.38	36.90	371.54
7.06	-11.11	-19.88	-204.60	21.78	37.59	379.31
7.60	-12.54	-22.45	-231.06	23.16	39.96	405.76
7.60	-6.74	-11.23	-208.76	19.36	20.05	343.07
7.65	-6.92	-11.36	-210.82	19.53	20.16	345.14
7.80	-7.48	-11.78	-217.54	20.07	20.55	351.85
7.80	-0.00	-25.37	-215.06	17.41	44.23	320.12
7.84	0.00	-25.58	-216.25	17.49	44.43	321.31
8.24	0.00	-27.83	-229.20	18.33	46.58	334.27
8.40	0.00	-28.78	-234.64	18.68	47.49	339.71
8.77	-0.00	-30.88	-246.70	19.46	49.51	351.77
8.82	-0.20	-31.16	-248.32	19.56	49.78	353.38
9.10	-1.34	-32.72	-257.30	20.14	51.30	362.37
9.10	-12.37	-20.26	-334.71	21.86	31.72	509.42
9.41	-13.34	-21.41	-352.52	22.82	32.84	527.23
9.50	-13.61	-21.74	-357.56	23.10	33.16	532.27
9.50	-3.09	-35.11	-271.04	21.03	53.64	376.11
10.00	-5.15	-37.94	-287.29	22.08	56.41	392.36

Průběhy modulu reakce podloží a vnitřních sil po konstrukci

Hloubka [m]	kh,p [MN/m^3]	kh,z [MN/m^3]	Deformace [mm]	Tlak [kPa]	Pos.síla [kN/m]	Moment [kNm/m]
0.00	0.00	0.00	0.01	0.00	-0.00	-0.00
0.50	0.00	247.77	0.02	8.35	-1.74	0.30

Hloubka [m]	kh,p [MN/m3]	kh,z [MN/m3]	Deformace [mm]	Tlak [kPa]	Pos.síla [kN/m]	Moment [kNm/m]
1.00	0.00	473.58	0.03	23.13	-9.47	2.84
1.30	0.00	647.05	0.03	27.29	-17.59	6.88
1.30	0.00	647.05	0.03	27.29	22.41	6.88
1.50	0.00	762.70	0.02	30.05	16.31	3.01
2.00	0.00	1312.21	-0.00	12.74	3.89	-1.61
2.50	0.00	0.00	-0.02	8.80	1.88	-2.52
2.89	0.00	0.00	-0.03	9.77	-1.74	-2.56
2.91	8.45	0.00	-0.03	9.97	-1.94	-2.52
3.00	84.51	0.00	-0.03	7.59	-2.73	-2.31
3.50	507.04	420.00	-0.03	-2.09	-3.55	-1.15
4.00	800.00	0.00	-0.02	-6.06	-1.64	0.42
4.50	800.00	800.00	-0.01	-1.63	0.59	0.21
5.00	800.00	800.00	-0.01	0.67	0.68	-0.15
5.50	800.00	800.00	-0.01	0.94	0.24	-0.38
6.00	800.00	800.00	-0.01	1.08	-0.26	-0.37
6.50	800.00	800.00	-0.01	1.06	-0.84	-0.09
7.00	800.00	800.00	-0.01	-1.36	-0.94	0.40
7.50	800.00	675.00	-0.02	-7.70	1.10	0.53
8.00	412.68	240.00	-0.03	1.53	3.49	-0.44
8.50	175.35	150.00	-0.04	7.17	1.76	-1.66
9.00	150.00	150.00	-0.04	7.10	-1.71	-1.65
9.50	150.00	0.00	-0.04	-3.92	-2.53	-0.07
10.00	600.00	150.00	-0.03	-5.27	-0.00	-0.00

Celkový provedený počet iterací modulu reakce podloží - 131.

Maximální posouvající síla = 22.41 kN/m
Maximální moment = 6.88 kNm/m
Maximální deformace = 0.0 mm

Síly v kotvách

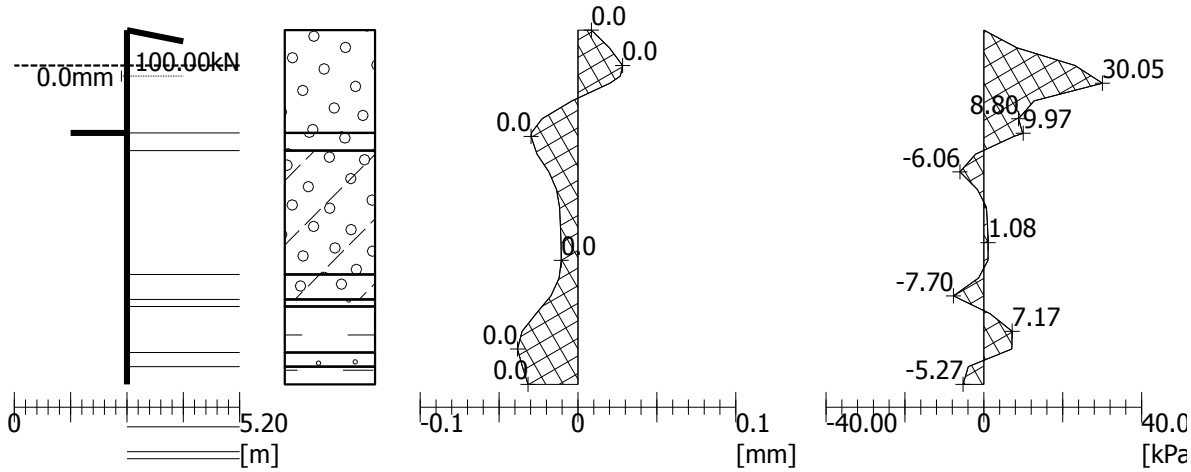
Číslo	Hloubka [m]	Deformace [mm]	Síla v kotvě [kN]
1	1.30	0.0	100.00

Název : Výpočet | **Fáze : 1**

Geometrie konstrukce
Délka konstrukce = 10.00m

Deformace konstrukce
Max. def. = 0.0mm

Tlak na konstrukci
Max. tlak = 30.05kPa

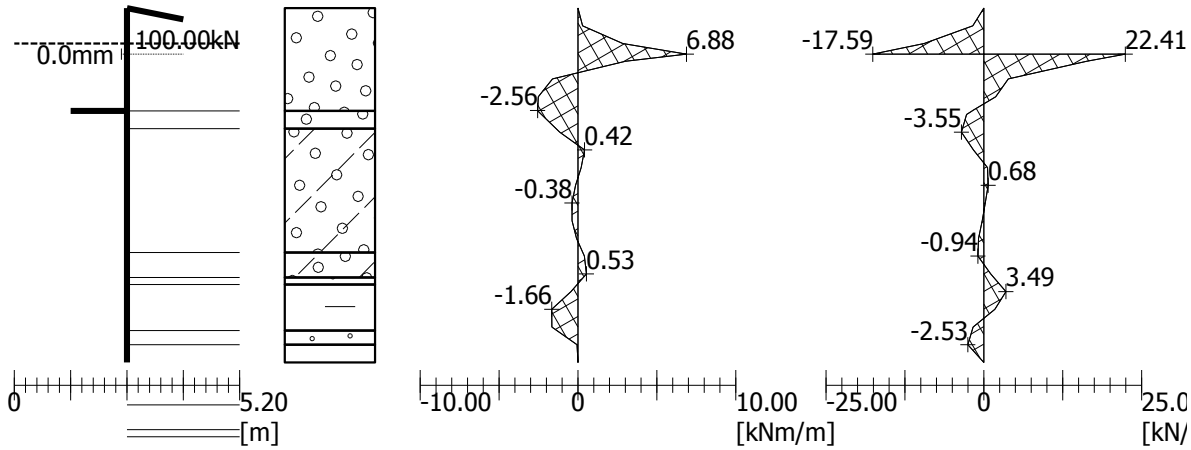


Název : Výpočet | **Fáze : 1**

Geometrie konstrukce
Délka konstrukce = 10.00m

Ohybový moment
Max. M = 6.88kNm/m

Posouvající síla
Max. Q = 22.41kN/m



8. Záver

Tento statický výpočet preukazuje, že navrhnutá konštrukcia staticky vyhovuje požiadavkám platných noriem.

December 2011
V Bratislave

Vypracoval
Ing. Jozef Gajdošík
Ing. Soňa Horáčeková (časť Zakladanie)