

Bauzustand 1

Während der Sanierung der Brücke
werden folgende Arbeiten durchgeführt:

- Entfernen des beschädigten Kappens
sowie Teile des Widerlagers Neckarinsel
- Entfernen des vorhandenen Geländers
- Neubau des abgebrochenen Wider-
lagerbereichs Neckarinsel
- Neubau der Kappen
- Aufbringen eines neuen Brückenbelags
- Neubau des Geländers

Bauablauf:

- 1.) Abbruch Teilbereich Widerlagers Planie,
Geländer und Kappen. Vor Abbruch
des Widerlagers muss die aufgestandene
Platte unterläuft werden.
- 2.) Neubau des abgebrochenen Wider-
lagerbereichs.

- 3.) Neubau der Kappen und des Geländers
- 4.) Neuer Fahrbahnbelag
- 5.) Betonarmierung an der Brückenunterseite.

Anmerkung: Bogengeometrie siehe
S. 1.2 H

Dokumentiert werden nur Eingaben
und Ergebnisse, die vom Zustand des
Endzustandes abweichen.

Einwirkungen

siehe S. 2.1 ff

Das Eigengewicht des Kappens, des Geländers und des Belags enthält im Bauzustand 1

Verkehrslasten werden mit $5,0 \text{ kN/m}^2$ angesetzt.

Auflagerkräfte aus der aufgestellten Gerüst-
Platte s. S. 2.3

Windlasten

Die Windlasten oberhalb der Fahrbahnebene werden durch den Ansatz eines reduzierten Verkehrsbandes berücksichtigt.

$$H = 0,8 \text{ anstatt } 2,0 \text{ m}$$

$$\approx \Delta W = 1,2 \times 1,64 \text{ (S. 5. 2.5)} = 2,0 \text{ kN/m}$$

d. h. die Werte der Sate 2.5 werden um $2,0 \text{ kN/m}$ reduziert

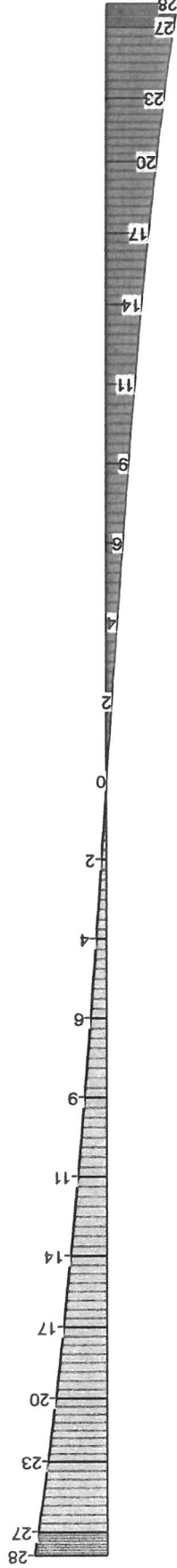
$$\hat{=} 2,0 \text{ kN/m}^2 / 1,64 \text{ kN/m}^2 = 1,2 \text{ m}$$

$$\approx \text{Ersetzverkehrsband} \hat{=} 9,8 \times 2 \times 0,8 \\ = 15,7 \text{ m}^2$$

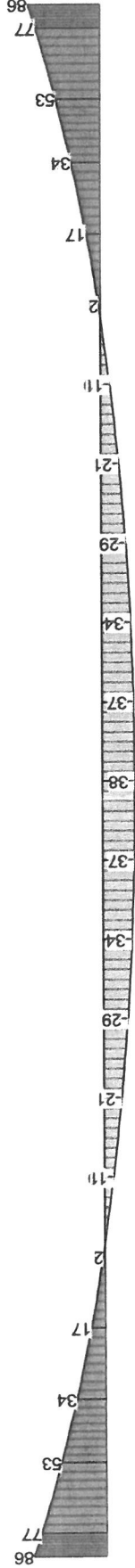


Last-Positionen	Lastpositionen	FE-Mod. BR-TÜ-BZ1-QUER Wind Bauzustand 1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	Maßstab: 1:85
lastfallweise dargestellt aus Lastfall LF-2 (Wind (Querrichtung))		Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10	Seite

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Balkenschnittgrößen	Querlast V_t in [kN]	FE-Mod. BR-TÜ-BZ1-QUER Wind Bauzustand 1	Maßstab: 1:85
	lastfallweise dargestellt aus Lastfall LF-2 (Wind (Querrichtung)) Max = 28, Min = -28	Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	
			Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10	Seite



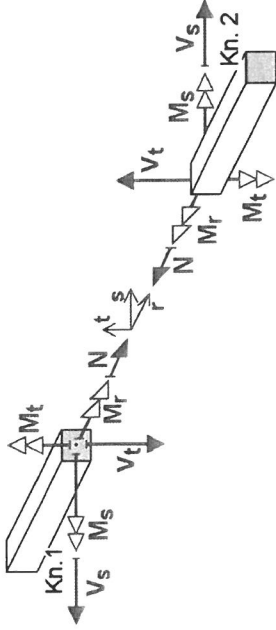
Balkenschnittgrößen		Moment Ms in [kNm]	FE-Mod. BR-TÜ-BZ1-QUER Wind Bauzustand 1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke		Maßstab: 1:85
lastfallweise dargestellt aus Lastfall LF-2 (Wind (Querrichtung)) Max = 86, Min = -38			Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10		
			Seite		

Balkenschnittgr-Stb

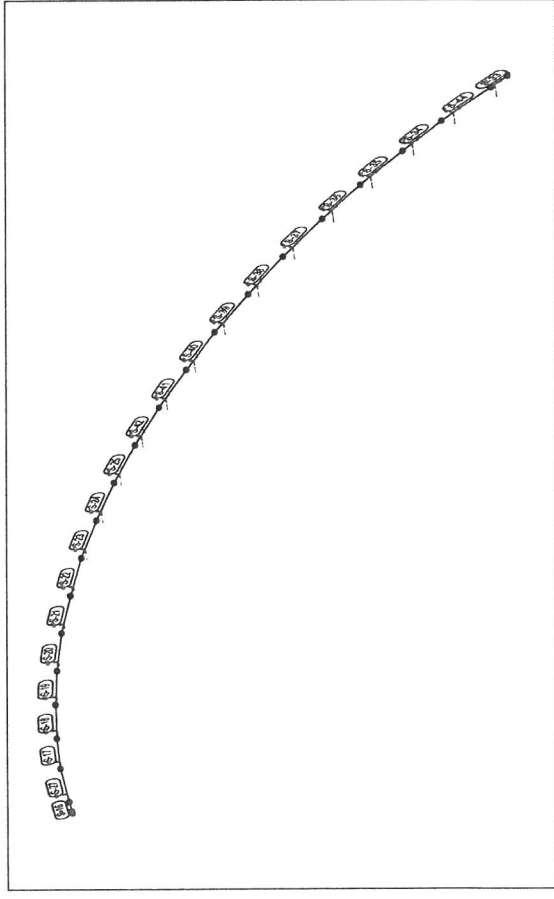
Schnittgrößen

Schnittgrößen Stb-Stützen und 3D-Stäbe

Schnittgrößen der Stützen und 3D-Stäbe



Normalkraft Nr [kN]



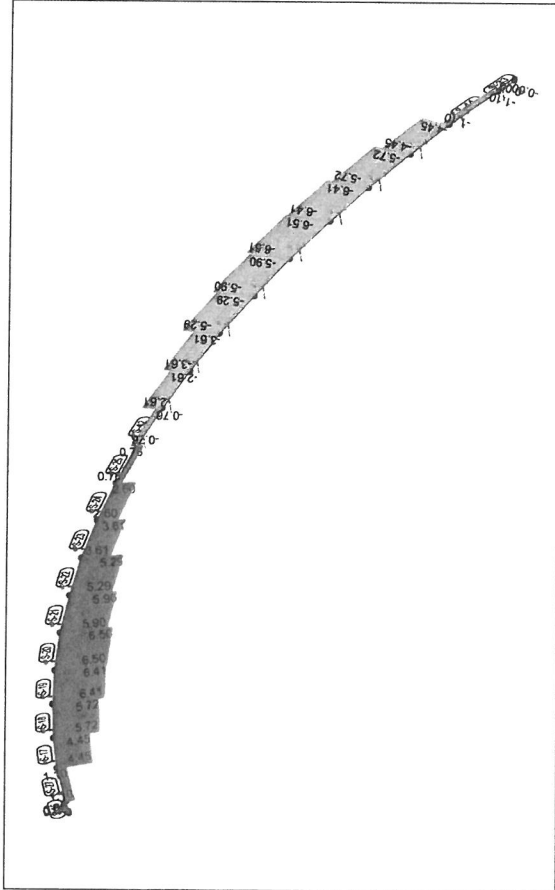
aus Lastkombination LF2

Position	min Nr max Nr	Vs [kN]	Vt [kN]	Mr [kNm]	Ms [kNm]	Mt [kNm]
S-16	0.00 0.00	0.00 -28.07	0.00 -28.07	0.00 0.00	85.75 85.75	0.00 0.00
S-17	0.00 0.00	0.00 -22.66	0.00 -22.66	0.00 4.45	52.54 52.54	0.00 0.00
S-18	0.00 0.00	0.00 -19.62	0.00 -19.62	5.72 5.72	34.31 34.31	0.00 0.00
S-19	0.00 0.00	0.00 -16.59	0.00 -16.59	6.41 6.41	16.91 16.91	0.00 0.00

Position

Position	min Nr max Nr	Vs [kN]	Vt [kN]	Mr [kNm]	Ms [kNm]	Mt [kNm]
S-20	0.00 0.00	0.00 -16.59	0.00 -16.59	6.41 6.41	16.91 16.91	0.00 0.00
S-21	0.00 0.00	0.00 -13.87	0.00 -13.87	6.50 6.50	2.42 2.42	0.00 0.00
S-22	0.00 0.00	0.00 -11.09	0.00 -11.09	5.90 5.90	-10.78 -10.78	0.00 0.00
S-23	0.00 0.00	0.00 -11.09	0.00 -11.09	5.90 5.90	-10.78 -10.78	0.00 0.00
S-24	0.00 0.00	0.00 -8.54	0.00 -8.54	5.29 5.29	-20.91 -20.91	0.00 0.00
S-25	0.00 0.00	0.00 -6.21	0.00 -6.21	3.61 3.61	-28.63 -28.63	0.00 0.00
S-26	0.00 0.00	0.00 -4.05	0.00 -4.05	2.60 2.60	-33.88 -33.88	0.00 0.00
S-27	0.00 0.00	0.00 -2.00	0.00 -2.00	0.76 0.76	-36.99 -36.99	0.00 0.00
S-28	0.00 0.00	0.00 -26.61	0.00 -26.61	1.10 1.10	76.69 76.69	0.00 0.00
S-29	0.00 0.00	0.00 -26.61	0.00 -26.61	1.10 1.10	76.69 76.69	0.00 0.00
S-30	0.00 0.00	0.00 26.61	0.00 26.61	0.00 0.00	76.73 76.73	0.00 0.00
S-31	0.00 0.00	0.00 26.61	0.00 26.61	0.00 0.00	76.73 76.73	0.00 0.00
S-32	0.00 0.00	0.00 19.63	0.00 19.63	-4.45 -4.45	34.52 34.52	0.00 0.00
S-33	0.00 0.00	0.00 19.63	0.00 19.63	-4.45 -4.45	34.52 34.52	0.00 0.00
S-34	0.00 0.00	0.00 16.59	0.00 16.59	-5.72 -5.72	17.18 17.18	0.00 0.00
S-35	0.00 0.00	0.00 16.59	0.00 16.59	-5.72 -5.72	17.18 17.18	0.00 0.00
S-36	0.00 0.00	0.00 13.87	0.00 13.87	-6.41 -6.41	2.68 2.68	0.00 0.00
S-37	0.00 0.00	0.00 11.09	0.00 11.09	-6.51 -6.51	-10.41 -10.41	0.00 0.00
S-38	0.00 0.00	0.00 11.09	0.00 11.09	-6.51 -6.51	-10.41 -10.41	0.00 0.00
S-39	0.00 0.00	0.00 8.55	0.00 8.55	-5.90 -5.90	-20.74 -20.74	0.00 0.00
S-40	0.00 0.00	0.00 8.55	0.00 8.55	-5.90 -5.90	-20.74 -20.74	0.00 0.00
S-41	0.00 0.00	0.00 6.22	0.00 6.22	-5.29 -5.29	-28.36 -28.36	0.00 0.00
S-42	0.00 0.00	0.00 6.22	0.00 6.22	-5.29 -5.29	-28.36 -28.36	0.00 0.00
S-43	0.00 0.00	0.00 4.06	0.00 4.06	-3.61 -3.61	-33.78 -33.78	0.00 0.00
S-44	0.00 0.00	0.00 4.06	0.00 4.06	-3.61 -3.61	-33.78 -33.78	0.00 0.00
S-45	0.00 0.00	0.00 2.00	0.00 2.00	-2.61 -2.61	-36.90 -36.90	0.00 0.00
S-46	0.00 0.00	0.00 2.00	0.00 2.00	-2.61 -2.61	-36.90 -36.90	0.00 0.00
S-47	0.00 0.00	0.00 0.00	0.00 0.00	-0.76 -0.76	-37.98 -37.98	0.00 0.00
S-48	0.00 0.00	0.00 0.00	0.00 0.00	-1.10 -1.10	52.74 52.74	0.00 0.00
S-49	0.00 0.00	0.00 22.66	0.00 22.66	-1.10 -1.10	52.74 52.74	0.00 0.00

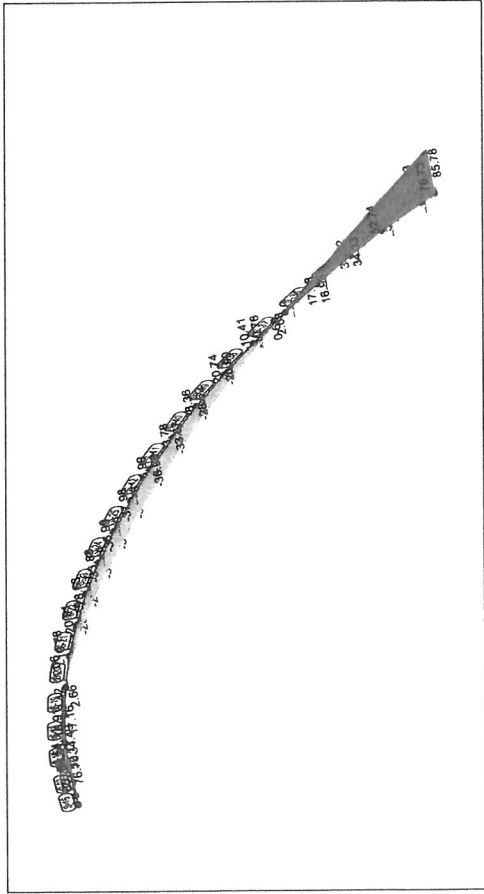
Moment Mr [kNm]



Position	aus Lastkombination LF2									
	Nr	Nr	Vs	Vt	min Mr	Ms	Mt	Nr	Nr	Vs
S-16	0.00	0.00	0.00	-27.34	0.00	81.17	0.00	0.00	0.00	0.00
S-17	0.00	0.00	0.00	-28.07	0.00	85.75	0.00	0.00	0.00	0.00
S-18	0.00	0.00	0.00	-21.11	4.45	43.19	0.00	0.00	0.00	0.00
S-19	0.00	0.00	0.00	-22.66	4.45	52.54	0.00	0.00	0.00	0.00
S-20	0.00	0.00	0.00	-19.62	5.72	34.31	0.00	0.00	0.00	0.00
S-21	0.00	0.00	0.00	-18.06	5.72	25.37	0.00	0.00	0.00	0.00
S-22	0.00	0.00	0.00	-16.59	6.41	16.91	0.00	0.00	0.00	0.00
S-23	0.00	0.00	0.00	-15.21	6.41	9.47	0.00	0.00	0.00	0.00
S-24	0.00	0.00	0.00	-13.87	6.50	2.42	0.00	0.00	0.00	0.00
S-25	0.00	0.00	0.00	-12.45	6.50	-4.36	0.00	0.00	0.00	0.00
S-27	0.00	0.00	0.00	-11.09	5.90	-10.78	0.00	0.00	0.00	0.00
S-33	0.00	0.00	0.00	-8.54	5.29	-20.91	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	-6.21	3.61	-28.63	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	-5.12	3.61	-31.48	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	-4.05	2.60	-33.88	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	-3.01	2.60	-35.65	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	-2.00	0.76	-36.99	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	-1.00	0.76	-37.73	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	-24.55	1.10	64.22	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	-26.61	0.00	76.69	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	27.34	0.00	81.20	0.00	0.00	0.00	0.00

Position										
	Nr	Nr	Vs	Vt	min Mr	Ms	Mt	Nr	Nr	Vs
S-34	0.00	0.00	0.00	19.63	-4.45	34.52	0.00	0.00	0.00	0.00
S-35	0.00	0.00	0.00	21.11	-4.45	43.22	0.00	0.00	0.00	0.00
S-36	0.00	0.00	0.00	16.59	-5.72	17.18	0.00	0.00	0.00	0.00
S-37	0.00	0.00	0.00	13.87	-5.72	17.18	0.00	0.00	0.00	0.00
S-38	0.00	0.00	0.00	15.21	-6.41	2.68	0.00	0.00	0.00	0.00
S-39	0.00	0.00	0.00	11.09	-6.41	9.49	0.00	0.00	0.00	0.00
S-40	0.00	0.00	0.00	11.09	-6.51	-10.41	0.00	0.00	0.00	0.00
S-41	0.00	0.00	0.00	8.55	-5.90	-10.41	0.00	0.00	0.00	0.00
S-42	0.00	0.00	0.00	8.55	-5.90	-20.74	0.00	0.00	0.00	0.00
S-44	0.00	0.00	0.00	7.36	-5.29	-24.93	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	6.22	-5.29	-28.36	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	4.06	-3.61	-33.78	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	5.12	-3.61	-31.47	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	2.00	-2.61	-36.90	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	3.02	-2.61	-35.64	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	-0.76	-37.98	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	1.00	-1.10	-37.73	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	24.55	-1.10	64.25	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	22.66	-1.10	52.74	0.00	0.00	0.00	0.00

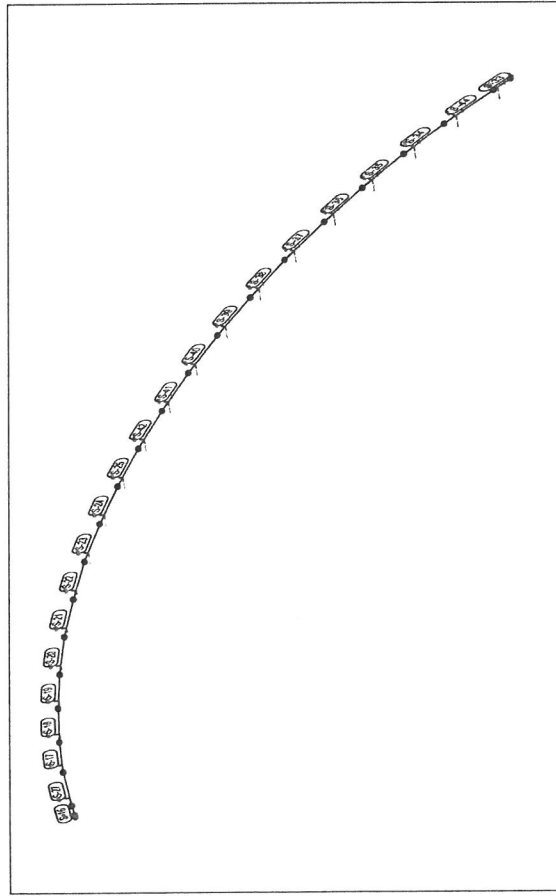
Moment Ms [kNm]



Position	aus Lastkombination LF2					Vt		Mr		min Ms		Mt	
	Nr	Nr	Vs	Vs	Vt	Mr	Mr	max Ms	max Ms	min Ms	max Ms	Mt	Mt
	[kN]	[kN]	[kN]	[kN]	[kN]	[kNm]	[kNm]	[kNm]	[kNm]	[kNm]	[kNm]	[kNm]	[kNm]
S-16	0.00	0.00	0.00	0.00	-26.61	0.00	0.00	76.70	76.70	0.00	0.00	0.00	0.00
S-17	0.00	0.00	0.00	0.00	-28.07	0.00	0.00	85.75	85.75	0.00	0.00	0.00	0.00
S-18	0.00	0.00	0.00	0.00	-19.62	4.45	4.45	34.49	34.49	0.00	0.00	0.00	0.00
S-19	0.00	0.00	0.00	0.00	-22.66	4.45	4.45	52.54	52.54	0.00	0.00	0.00	0.00
S-20	0.00	0.00	0.00	0.00	-16.59	5.72	5.72	17.16	17.16	0.00	0.00	0.00	0.00
S-21	0.00	0.00	0.00	0.00	-13.87	5.72	5.72	34.31	34.31	0.00	0.00	0.00	0.00
S-22	0.00	0.00	0.00	0.00	-16.59	6.41	6.41	16.91	16.91	0.00	0.00	0.00	0.00
S-23	0.00	0.00	0.00	0.00	-11.09	6.50	6.50	-10.42	-10.42	0.00	0.00	0.00	0.00
S-24	0.00	0.00	0.00	0.00	-13.87	5.90	5.90	2.42	2.42	0.00	0.00	0.00	0.00
S-25	0.00	0.00	0.00	0.00	-8.54	5.90	5.90	-20.75	-20.75	0.00	0.00	0.00	0.00
S-27	0.00	0.00	0.00	0.00	-11.09	5.90	5.90	-10.78	-10.78	0.00	0.00	0.00	0.00
S-33	0.00	0.00	0.00	0.00	-6.21	5.29	5.29	-28.37	-28.37	0.00	0.00	0.00	0.00
S-34	0.00	0.00	0.00	0.00	-8.54	5.29	5.29	-20.91	-20.91	0.00	0.00	0.00	0.00
S-35	0.00	0.00	0.00	0.00	-4.05	3.61	3.61	-33.78	-33.78	0.00	0.00	0.00	0.00
S-36	0.00	0.00	0.00	0.00	-6.21	3.61	3.61	-28.63	-28.63	0.00	0.00	0.00	0.00
S-37	0.00	0.00	0.00	0.00	-2.00	2.60	2.60	-36.90	-36.90	0.00	0.00	0.00	0.00
S-38	0.00	0.00	0.00	0.00	-4.05	2.60	2.60	-33.88	-33.88	0.00	0.00	0.00	0.00
S-39	0.00	0.00	0.00	0.00	0.00	0.76	0.76	-37.98	-37.98	0.00	0.00	0.00	0.00
S-40	0.00	0.00	0.00	0.00	-2.00	0.76	0.76	-36.99	-36.99	0.00	0.00	0.00	0.00
S-41	0.00	0.00	0.00	0.00	-22.66	1.10	1.10	52.71	52.71	0.00	0.00	0.00	0.00
S-42	0.00	0.00	0.00	0.00	-26.61	1.10	1.10	76.69	76.69	0.00	0.00	0.00	0.00
S-43	0.00	0.00	0.00	0.00	26.61	0.00	0.00	76.73	76.73	0.00	0.00	0.00	0.00
S-44	0.00	0.00	0.00	0.00	28.07	0.00	0.00	85.78	85.78	0.00	0.00	0.00	0.00
S-45	0.00	0.00	0.00	0.00	19.63	-4.45	-4.45	34.52	34.52	0.00	0.00	0.00	0.00
S-46	0.00	0.00	0.00	0.00	22.66	-4.45	-4.45	52.57	52.57	0.00	0.00	0.00	0.00
S-47	0.00	0.00	0.00	0.00	16.59	-5.72	-5.72	17.18	17.18	0.00	0.00	0.00	0.00

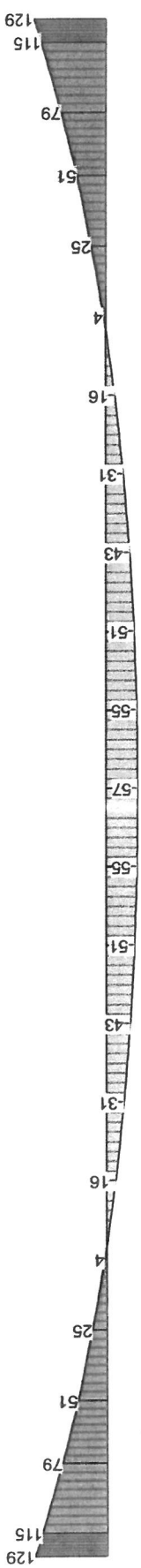
Position	Nr		Vs		Vt		Mr		min Ms		Mt	
	Nr	[kN]	Nr	[kN]	Nr	[kN]	Mr	[kNm]	max Ms	max Ms	Mt	Mt
S-36	0.00	0.00	0.00	0.00	19.63	19.63	-5.72	-5.72	34.33	34.33	0.00	0.00
S-37	0.00	0.00	0.00	0.00	13.87	13.87	-6.41	-6.41	2.68	2.68	0.00	0.00
S-38	0.00	0.00	0.00	0.00	16.59	16.59	-6.41	-6.41	16.93	16.93	0.00	0.00
S-39	0.00	0.00	0.00	0.00	11.09	11.09	-6.51	-6.51	-10.41	-10.41	0.00	0.00
S-40	0.00	0.00	0.00	0.00	13.87	13.87	-6.51	-6.51	2.44	2.44	0.00	0.00
S-41	0.00	0.00	0.00	0.00	8.55	8.55	-5.90	-5.90	-20.74	-20.74	0.00	0.00
S-42	0.00	0.00	0.00	0.00	11.09	11.09	-5.90	-5.90	-10.76	-10.76	0.00	0.00
S-43	0.00	0.00	0.00	0.00	6.22	6.22	-5.29	-5.29	-28.36	-28.36	0.00	0.00
S-44	0.00	0.00	0.00	0.00	8.55	8.55	-5.29	-5.29	-20.90	-20.90	0.00	0.00
S-45	0.00	0.00	0.00	0.00	4.06	4.06	-3.61	-3.61	-33.78	-33.78	0.00	0.00
S-46	0.00	0.00	0.00	0.00	6.22	6.22	-2.61	-2.61	-36.90	-36.90	0.00	0.00
S-47	0.00	0.00	0.00	0.00	2.00	2.00	-2.61	-2.61	-33.87	-33.87	0.00	0.00
S-48	0.00	0.00	0.00	0.00	0.00	0.00	-0.76	-0.76	-37.98	-37.98	0.00	0.00
S-49	0.00	0.00	0.00	0.00	2.00	2.00	-0.76	-0.76	-36.98	-36.98	0.00	0.00
S-50	0.00	0.00	0.00	0.00	22.66	22.66	-1.10	-1.10	52.74	52.74	0.00	0.00
S-51	0.00	0.00	0.00	0.00	26.61	26.61	-1.10	-1.10	76.73	76.73	0.00	0.00

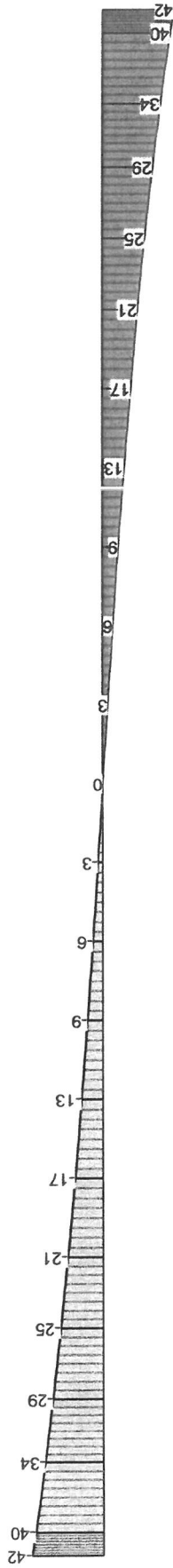
Moment Mt [kNm]



Position	aus Lastkombination LF2						min Mt	
	Nr	Nr	Vs	Vt	Mr	Ms	max Mt	
	[kN]	[kN]	[kN]	[kN]	[kNm]	[kNm]	[kNm]	
S-16	0.00	0.00	0.00	-28.07	0.00	85.75	0.00	0.00
S-17	0.00	0.00	0.00	-28.07	0.00	85.75	0.00	0.00
S-18	0.00	0.00	0.00	-22.66	4.45	52.54	0.00	0.00
S-19	0.00	0.00	0.00	-19.62	5.72	34.31	0.00	0.00
S-20	0.00	0.00	0.00	-16.59	6.41	16.91	0.00	0.00
S-21	0.00	0.00	0.00	-13.87	6.50	2.42	0.00	0.00
S-22	0.00	0.00	0.00	-11.09	5.90	-10.78	0.00	0.00
S-23	0.00	0.00	0.00	-8.54	5.29	-20.91	0.00	0.00
S-24	0.00	0.00	0.00	-6.21	3.61	-28.63	0.00	0.00
S-25	0.00	0.00	0.00	-4.05	2.60	-33.88	0.00	0.00
S-27	0.00	0.00	0.00	-2.00	0.76	-36.99	0.00	0.00
S-33	0.00	0.00	0.00	-26.61	1.10	76.69	0.00	0.00

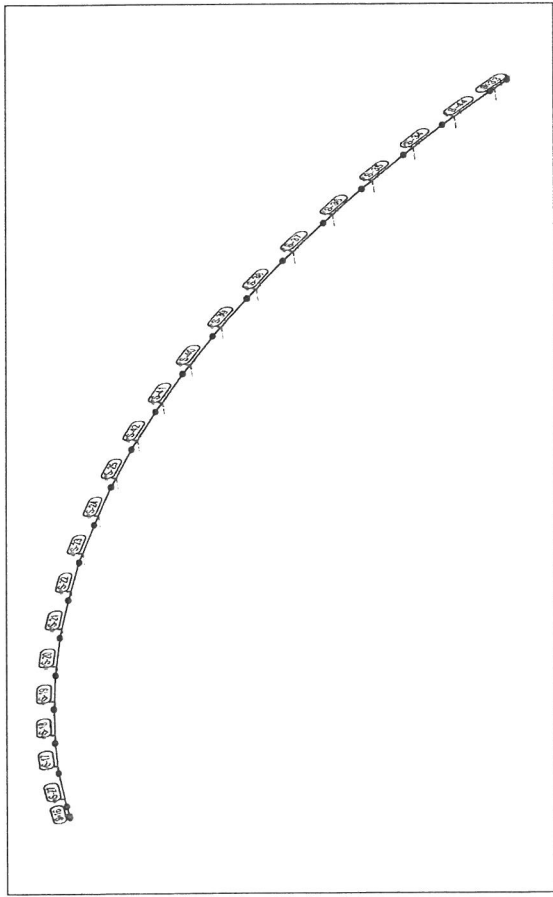
Position	Nr		Vs		Vt		Mr		Ms		min Mt	
	Nr	[kN]	Nr	[kN]	Nr	[kN]	Nr	[kNm]	Nr	[kNm]	max Mt	[kNm]
S-34	0.00	0.00	0.00	0.00	0.00	19.63	-4.45	34.52	0.00	0.00	0.00	0.00
S-35	0.00	0.00	0.00	0.00	0.00	19.63	-4.45	34.52	0.00	0.00	0.00	0.00
S-36	0.00	0.00	0.00	0.00	0.00	16.59	-5.72	17.18	0.00	0.00	0.00	0.00
S-37	0.00	0.00	0.00	0.00	0.00	13.87	-6.41	2.68	0.00	0.00	0.00	0.00
S-38	0.00	0.00	0.00	0.00	0.00	11.09	-6.51	-10.41	0.00	0.00	0.00	0.00
S-39	0.00	0.00	0.00	0.00	0.00	8.55	-5.90	-20.74	0.00	0.00	0.00	0.00
S-40	0.00	0.00	0.00	0.00	0.00	6.22	-5.29	-28.36	0.00	0.00	0.00	0.00
S-41	0.00	0.00	0.00	0.00	0.00	4.06	-3.61	-33.78	0.00	0.00	0.00	0.00
S-42	0.00	0.00	0.00	0.00	0.00	2.00	-2.61	-36.90	0.00	0.00	0.00	0.00
S-44	0.00	0.00	0.00	0.00	0.00	0.00	-0.76	-37.98	0.00	0.00	0.00	0.00

		Balkenschnittgrößen Moment Ms in [kNm]		FE-Mod. BR-TÜ-BZ1-QUER Wind Bauzustand 1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	Maßstab: 1:85	
lastkombinationsweise dargestellt aus Lastkombination LF2 Max = 129, Min = -57						
Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10					Seite	



Balkenschnittgrößen		Querkraft Vt in [kN]	FE-Mod. BR-TÜ-BZ1-QUER Wird Bauzustand 1	Maßstab: 1:85
lastkombinationsweise dargestellt aus Lastkombination LF2 Max = 42, Min = -42			Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	
			Kuhn Decker GmbH & Co. KG Ingenieurbüro und Architekten Tel: 07031 61169-10	Seite

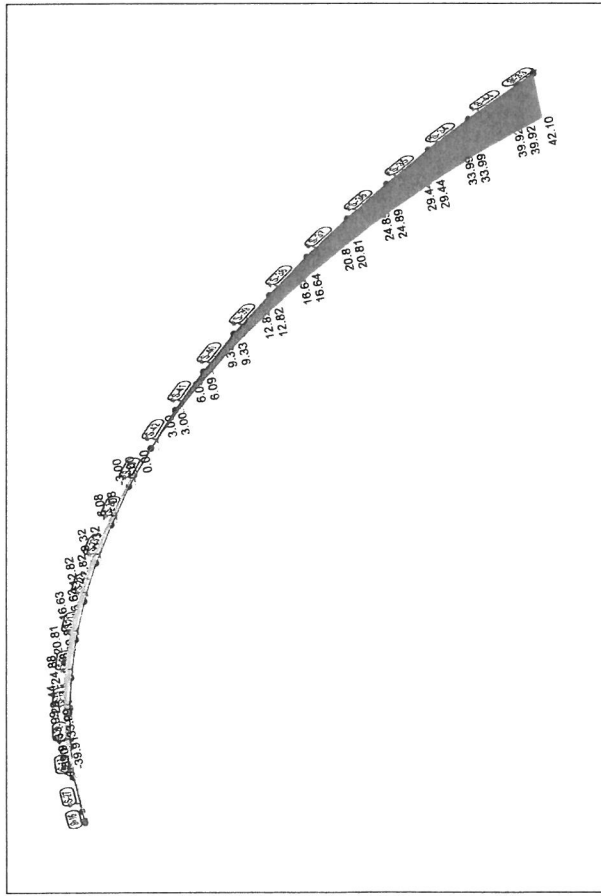
Querkraft Vs [kN]



Position	aus Lastkombination LF2						
	Nr	min Vs	max Vs	Vt	Mr	Ms	Mt
	Nr	[kN]	[kN]	[kN]	[kNm]	[kNm]	[kNm]
S-16	0.00	0.00	-42.10	0.01	128.63	0.00	0.00
S-17	0.00	0.00	-42.10	0.01	128.63	0.00	0.00
S-18	0.00	0.00	-33.99	6.67	78.81	0.00	0.00
S-19	0.00	0.00	-29.44	8.58	51.46	0.00	0.00
S-20	0.00	0.00	-24.88	9.61	25.37	0.00	0.00
S-21	0.00	0.00	-20.81	9.75	3.64	0.00	0.00
S-22	0.00	0.00	-16.63	8.84	-16.16	0.00	0.00
S-23	0.00	0.00	-12.82	7.93	-31.37	0.00	0.00
S-24	0.00	0.00	-9.32	5.41	-42.95	0.00	0.00
S-25	0.00	0.00	-6.08	3.90	-50.81	0.00	0.00
S-27	0.00	0.00	-3.00	1.13	-55.48	0.00	0.00
S-33	0.00	0.00	-39.91	1.65	115.04	0.00	0.00
	0.00	0.00	-39.91	1.65	115.04	0.00	0.00
	0.00	0.00	39.92	-0.01	115.10	0.00	0.00
	0.00	0.00	39.92	-0.01	115.10	0.00	0.00

Position	Nr		min Vs		Vt	Mr		Ms		Mt	
		[kN]		[kN]	[kN]		[kNm]		[kNm]		[kNm]
S-34	0.00	0.00	0.00	0.00	29.44	-6.67	-15.61	51.78	0.00	0.00	0.00
S-35	0.00	0.00	0.00	0.00	29.44	-6.67	-15.61	51.78	0.00	0.00	0.00
S-36	0.00	0.00	0.00	0.00	24.89	-8.58	-9.76	25.77	0.00	0.00	0.00
S-37	0.00	0.00	0.00	0.00	20.81	-9.62	-9.76	4.02	0.00	0.00	0.00
S-38	0.00	0.00	0.00	0.00	16.64	-9.76	-15.61	4.02	0.00	0.00	0.00
S-39	0.00	0.00	0.00	0.00	12.82	-8.85	-31.11	-15.61	0.00	0.00	0.00
S-40	0.00	0.00	0.00	0.00	9.33	-8.85	-31.11	-31.11	0.00	0.00	0.00
S-41	0.00	0.00	0.00	0.00	6.09	-7.94	-42.54	-42.54	0.00	0.00	0.00
S-42	0.00	0.00	0.00	0.00	3.00	-5.42	-50.67	-50.67	0.00	0.00	0.00
S-44	0.00	0.00	0.00	0.00	0.00	-3.91	-55.35	-55.35	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	-1.14	-56.98	-56.98	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	33.99	-1.65	79.11	79.11	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	33.99	-1.65	79.11	79.11	0.00	0.00	0.00

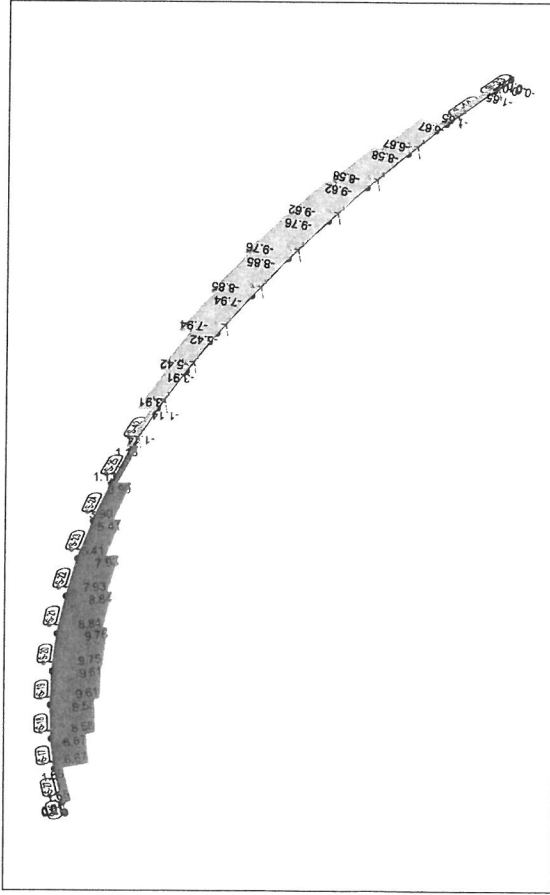
Querkraft Vt [kN]



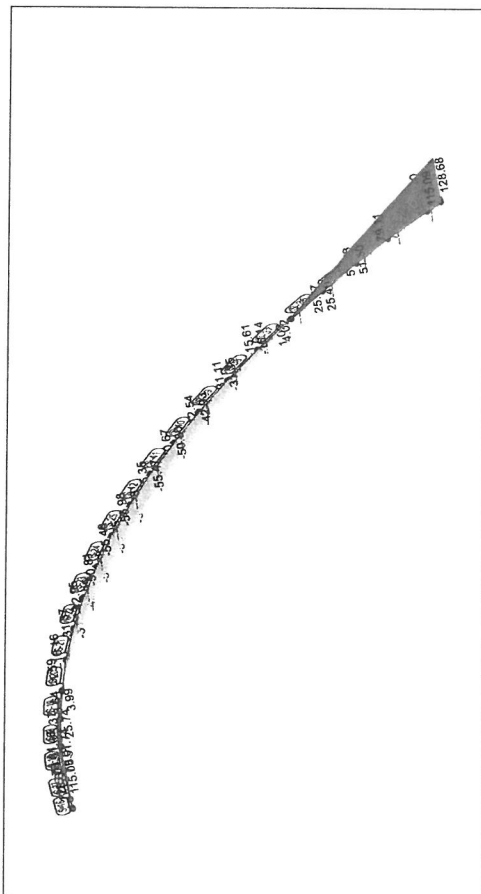
aus Lastkombination LF2

Position	aus Lastkombination LF2											
	Nr		Vs		min Vt		Mr		Ms		Mt	
	Nr	[kN]	Nr	[kN]	max	Vt [kN]	Mr	[kNm]	Ms	[kNm]	Mr	Mt [kNm]
S-16	0.00	0.00	0.00	0.00	-42.10	-39.91	0.01	128.63	0.00	0.00	0.00	0.00
S-17	0.00	0.00	0.00	0.00	-33.99	-29.44	6.67	78.81	0.00	115.05	0.00	0.00
S-18	0.00	0.00	0.00	0.00	-29.44	-24.88	8.58	51.46	0.00	78.81	0.00	0.00
S-19	0.00	0.00	0.00	0.00	-24.88	-20.81	9.61	25.37	0.00	51.74	0.00	0.00
S-20	0.00	0.00	0.00	0.00	-20.81	-16.63	9.75	3.64	0.00	115.05	0.00	0.00
S-21	0.00	0.00	0.00	0.00	-16.63	-12.82	9.75	-15.63	0.00	78.81	0.00	0.00
S-22	0.00	0.00	0.00	0.00	-12.82	-9.32	8.84	-16.16	0.00	51.74	0.00	0.00
S-23	0.00	0.00	0.00	0.00	-9.32	-6.08	8.84	-31.13	0.00	25.74	0.00	0.00
S-24	0.00	0.00	0.00	0.00	-6.08	-3.00	7.93	-31.37	0.00	8.58	0.00	0.00
S-25	0.00	0.00	0.00	0.00	-3.00	-39.91	7.93	-42.55	0.00	6.67	0.00	0.00
S-27	0.00	0.00	0.00	0.00	-39.91	-33.99	5.41	-42.95	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	-33.99		5.41	-50.68	0.00	0.00	0.00	0.00
							3.90	-50.81	0.00	0.00	0.00	0.00
							3.90	-55.35	0.00	0.00	0.00	0.00
							1.13	-55.48	0.00	0.00	0.00	0.00
							1.13	-56.98	0.00	0.00	0.00	0.00
							1.65	115.04	0.00	0.00	0.00	0.00
							1.65	79.07	0.00	0.00	0.00	0.00

Moment Mr [kNm]



Position	aus Lastkombination LF2											
	Nr	Vs	Vt	min Mr	Ms	Mt	Nr	Vs	Vt	max Mr	Ms	Mt
	[kN]	[kN]	[kN]	[kNm]	[kNm]	[kNm]		[kN]	[kN]	[kNm]	[kNm]	[kNm]
S-16	0.00	0.00	-41.01	0.01	121.75	0.00				0.01	121.75	0.00
S-17	0.00	0.00	-42.10	0.01	128.63	0.00				0.01	128.63	0.00
S-18	0.00	0.00	-31.66	6.67	64.79	0.00				6.67	64.79	0.00
S-19	0.00	0.00	-33.99	6.67	78.81	0.00				6.67	78.81	0.00
S-20	0.00	0.00	-29.44	8.58	51.46	0.00				8.58	51.46	0.00
S-21	0.00	0.00	-27.09	8.58	38.06	0.00				8.58	38.06	0.00
S-22	0.00	0.00	-24.88	9.61	25.37	0.00				9.61	25.37	0.00
S-23	0.00	0.00	-22.81	9.61	14.20	0.00				9.61	14.20	0.00
S-24	0.00	0.00	-20.81	9.75	3.64	0.00				9.75	3.64	0.00
S-25	0.00	0.00	-18.68	9.75	-6.54	0.00				9.75	-6.54	0.00
S-27	0.00	0.00	-16.63	8.84	-16.16	0.00				8.84	-16.16	0.00
S-33	0.00	0.00	-16.63	8.84	-16.16	0.00				8.84	-16.16	0.00
	0.00	0.00	-12.82	7.93	-31.37	0.00				7.93	-31.37	0.00
	0.00	0.00	-12.82	7.93	-31.37	0.00				7.93	-31.37	0.00
	0.00	0.00	-9.32	5.41	-42.95	0.00				5.41	-42.95	0.00
	0.00	0.00	-7.68	5.41	-47.22	0.00				5.41	-47.22	0.00
	0.00	0.00	-6.08	3.90	-50.81	0.00				3.90	-50.81	0.00
	0.00	0.00	-4.52	3.90	-53.47	0.00				3.90	-53.47	0.00
	0.00	0.00	-3.00	1.13	-55.48	0.00				1.13	-55.48	0.00
	0.00	0.00	-1.50	1.13	-56.60	0.00				1.13	-56.60	0.00
	0.00	0.00	-36.82	1.65	96.33	0.00				1.65	96.33	0.00
	0.00	0.00	-39.91	1.65	115.04	0.00				1.65	115.04	0.00
	0.00	0.00	39.92	-0.01	115.10	0.00				-0.01	115.10	0.00
	0.00	0.00	41.01	-0.01	121.80	0.00				-0.01	121.80	0.00

Moment M_s [kNm][illegible]

Lastkombinationen

Auf den folgenden Seiten werden die Ergebnisse der Lastkombinationen ausgegeben.

Prinzipiell werden dieselben berechnet wie im Endzustand (siehe S.4.1)

Abweichung: Die LF 4 (Gewicht Kappen), LF 5 (Gewicht Geländer) und LF 6 (Belag) entfallen.

Lastkombinationen

Lastkombinationen für lineare Berechnung

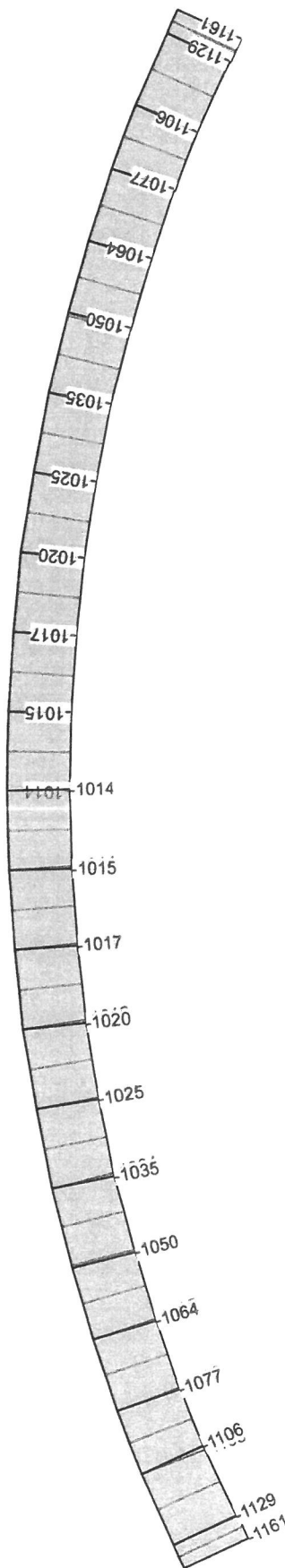
Kombinationen

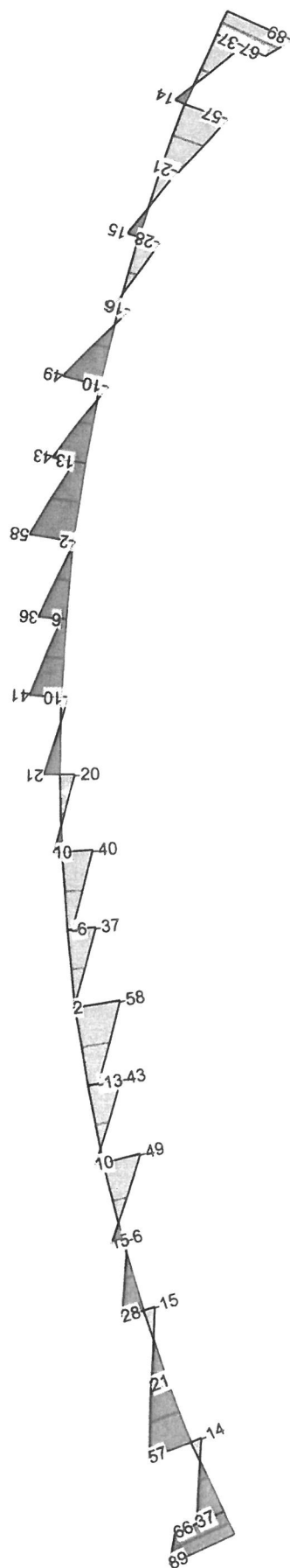
Manuell vorgegebene Lastkombinationen

	Ew Lg Lf	Einwirkungsname Lastgruppenname Lastfallname				
	Ew Lg Lf	Gk LF-1	Gk LF-4	Gk LF-5	Gk LF-6	Qk.N LF-7
LK-1		1.35	.	.	.	.
LK-2		1.35	.	.	.	1.50
LK-3		1.35	.	.	.	.
LK-4		1.35	.	.	.	.
LK-5		1.35	.	.	.	.
LK-6		1.35	.	.	.	1.50
LK-7		1.35	.	.	.	.
LK-8		1.35	.	.	.	1.50
LK-9		1.00	.	.	.	.
LK-10		1.00	.	.	.	1.50
LK-11		1.00	.	.	.	.
LK-12		1.00	.	.	.	.
LK-13		1.00	.	.	.	.
LK-14		1.00	.	.	.	1.50
LK-15		1.00	.	.	.	.
LK-16		1.00	.	.	.	1.50
	Ew Lg Lf	Qk.N LF-8	Qk.N LF-9	Qk.N LF-10	Qk.N LF-11	Qk.N LF-12
LK-1	
LK-2		1.50	1.50	.	.	.
LK-3	
LK-4		.	.	1.50	1.50	1.50
LK-5	
LK-6		1.50	1.50	1.50	1.50	1.50
LK-7	
LK-8		1.50	1.50	1.50	1.50	1.50
LK-9	
LK-10		1.50	1.50	.	.	.
LK-11	
LK-12		.	.	1.50	1.50	1.50
LK-13	
LK-14		1.50	1.50	1.50	1.50	1.50
LK-15	
LK-16		1.50	1.50	1.50	1.50	1.50
	Ew Lg Lf	Qk.N LF-13	Qk.N LF-14	Qk.N LF-15	Qk.N LF-16	Qk.N LF-17
LK-1	
LK-2	
LK-3		1.50	1.50	1.50	.	.
LK-4	

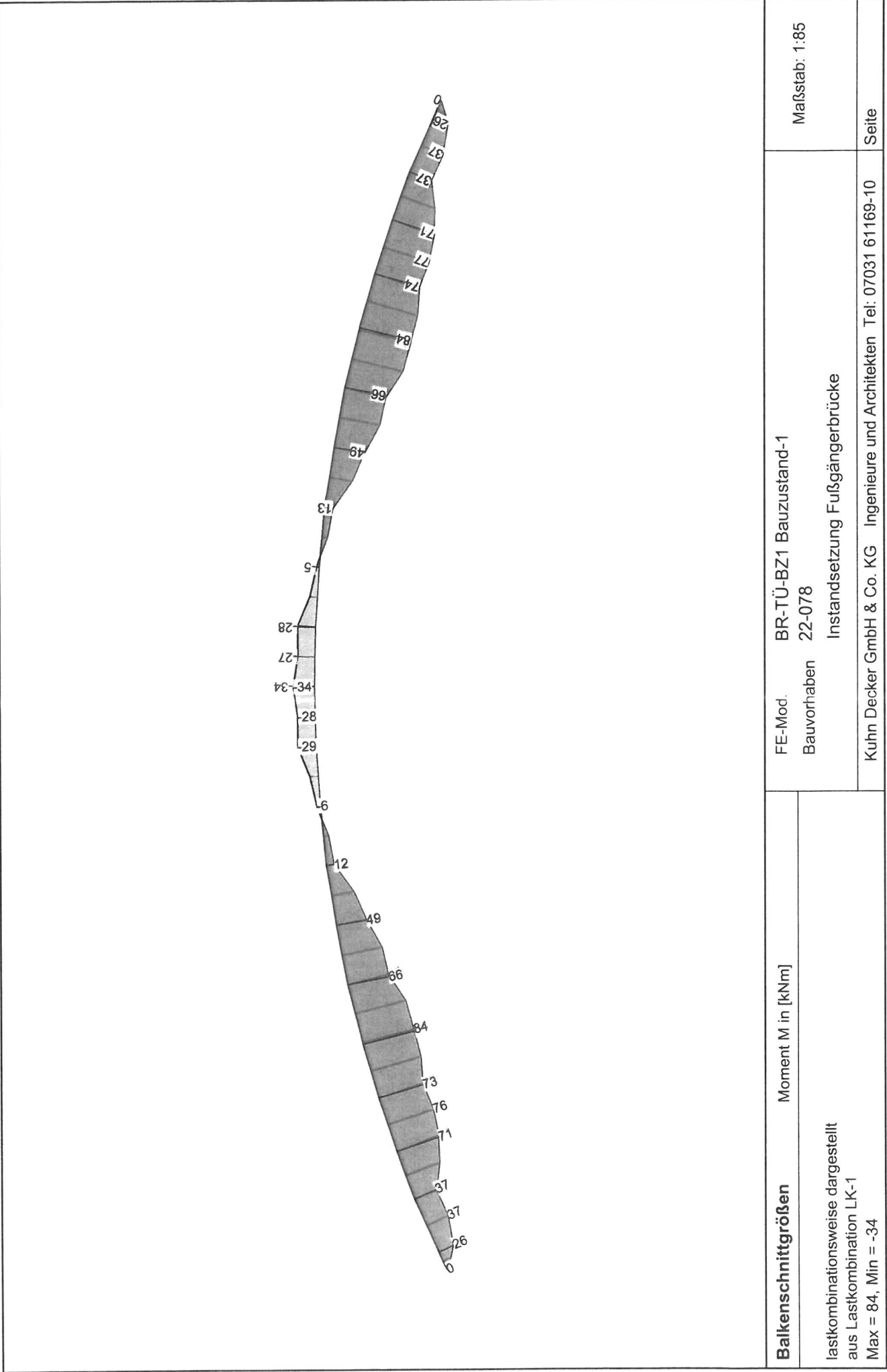
	Ew	Qk.N	Qk.N	Qk.N	Qk.N	Qk.N
	Lg					
	Lf	LF-13	LF-14	LF-15	LF-16	LF-17
LK-5		.	.	.	1.50	1.50
LK-6	
LK-7		1.50	1.50	1.50	1.50	1.50
LK-8		1.50	1.50	1.50	1.50	1.50
LK-9	
LK-10	
LK-11		1.50	1.50	1.50	.	.
LK-12	
LK-13		.	.	.	1.50	1.50
LK-14	
LK-15		1.50	1.50	1.50	1.50	1.50
LK-16		1.50	1.50	1.50	1.50	1.50

	Ew	Qk.N
	Lg	
	Lf	LF-18
LK-1		.
LK-2		.
LK-3		.
LK-4		.
LK-5		1.50
LK-6		.
LK-7		1.50
LK-8		1.50
LK-9		.
LK-10		.
LK-11		.
LK-12		.
LK-13		1.50
LK-14		.
LK-15		1.50
LK-16		1.50

		Balkenschnittgrößen		Normalkraft N in [kN]	lastkombinationsweise dargestellt aus Lastkombination LK-1 Max = -1014, Min = -1161	
FE-Mod. BR-TÜ-BZ1 Bauzustand-1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke		Maßstab: 1:85		Seite		
Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10		MicroFe 2018.051				



Balkenschnittgrößen	Querkraft V in [kN]	FE-Mod. BR-TÜ-BZ1 Bauzustand-1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	Maßstab: 1:85
lastkombinationsweise dargestellt aus Lastkombination LK-1 Max = 89, Min = -89		Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10	Seite

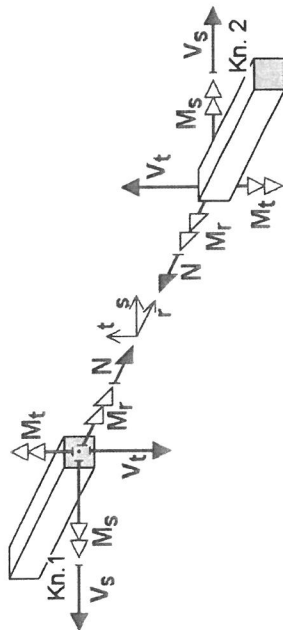


Balkenschnittgr-Stb

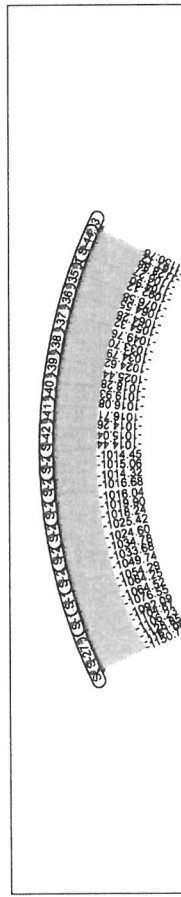
Schnittgrößen

Schnittgrößen Stb-Stützen und 3D-Stäbe

Schnittgrößen der Stützen und 3D-Stäbe



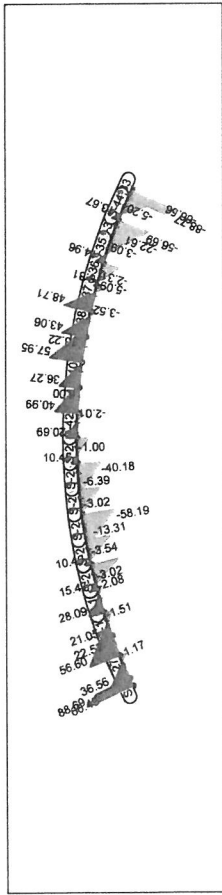
Normalkraft Nr [kN]



aus Lastkombination LK-1

Position	min Nr max Nr [kN]	Vs [kN]	Mt [kNm]
S-16	-1161.08 88.69	88.69	0.00
S-17	-1150.72 66.48	66.48	25.69
S-18	-1104.87 56.60	56.60	36.81
S-19	-1092.09 22.52	22.52	70.62
S-20	-1076.55 21.05	21.05	70.62
S-21	-1064.52 15.05	15.05	73.46
S-22	-1064.25 28.09	28.09	73.46
S-23	-1054.29 15.47	15.47	83.62
S-24	-1049.74 15.47	15.47	83.62
S-25	-1033.68 10.40	10.40	65.77
S-26	-1034.78 -43.15	-43.15	48.54
S-27	-1024.60 -13.31	-13.31	48.54
S-28	-1025.42 -58.19	-58.19	11.97
S-29	-1018.24 1.94	1.94	11.97
S-30	-1019.90 -36.66	-36.66	-5.75
S-31	-1016.04 -6.39	-6.39	-5.75
S-32	-1016.68 -40.18	-40.18	-29.28
S-33	-1014.32 10.45	10.45	-29.28
S-34	-1015.06 -19.89	-19.89	-34.04
S-35	-1014.45 36.56	36.56	25.69
S-36	-1128.85 -13.75	-13.75	36.81
S-37	-1106.23 -88.77	-88.77	0.00

Querkraft Vs [kN]



aus Lastkombination LK-1

Position	Nr	Nr [kN]	min Vs max Vs [kN]	Mt Mt [kNm]
S-16	-1150.72	66.48	25.69	0.00
S-17	-1161.08	88.69	0.00	70.62
S-18	-1092.09	22.52	36.81	73.46
S-19	-1104.87	56.60	-15.05	70.62
S-20	-1064.52	21.05	-6.40	83.62
S-21	-1076.55	28.09	-48.80	73.46
S-22	-1054.29	15.47	15.47	83.62
S-23	-1064.25	-43.15	10.40	65.77
S-24	-1033.68	-58.19	-13.31	48.54
S-25	-1049.74	-36.66	-36.66	-5.75
S-26	-1024.60	1.94	-40.18	-29.28
S-27	-1034.78	-6.39	-19.89	-5.75
S-28	-1018.24	10.45	-29.28	-34.04
S-29	-1025.42	-13.75	13.75	36.81
S-30	-1016.04	36.56	36.56	25.69
S-31	-1019.90	-88.77	-88.77	0.00
S-32	-1014.32	-1150.72	-66.56	25.71
S-33	-1016.68	-56.69	-56.69	36.92
S-34	-1014.45	-22.61	-22.61	70.80
S-35	-1015.06	-21.13	14.96	73.73
S-36	-1076.58	-28.18	-28.18	73.73
S-37	-1064.28	6.31	6.31	83.97
S-38	-1054.32	-15.55	-15.55	83.97
S-39	-1049.76	-10.49	-10.49	66.20
S-40	-1034.79	43.06	43.06	66.20
S-41	-1024.62	13.22	13.22	49.07
S-42	-1025.44	57.95	57.95	12.66
S-43	-1018.28	-2.18	-2.18	12.66
S-44	-1019.93	36.27	36.27	-4.74
S-45	-1016.08	6.00	6.00	-4.74

14.8

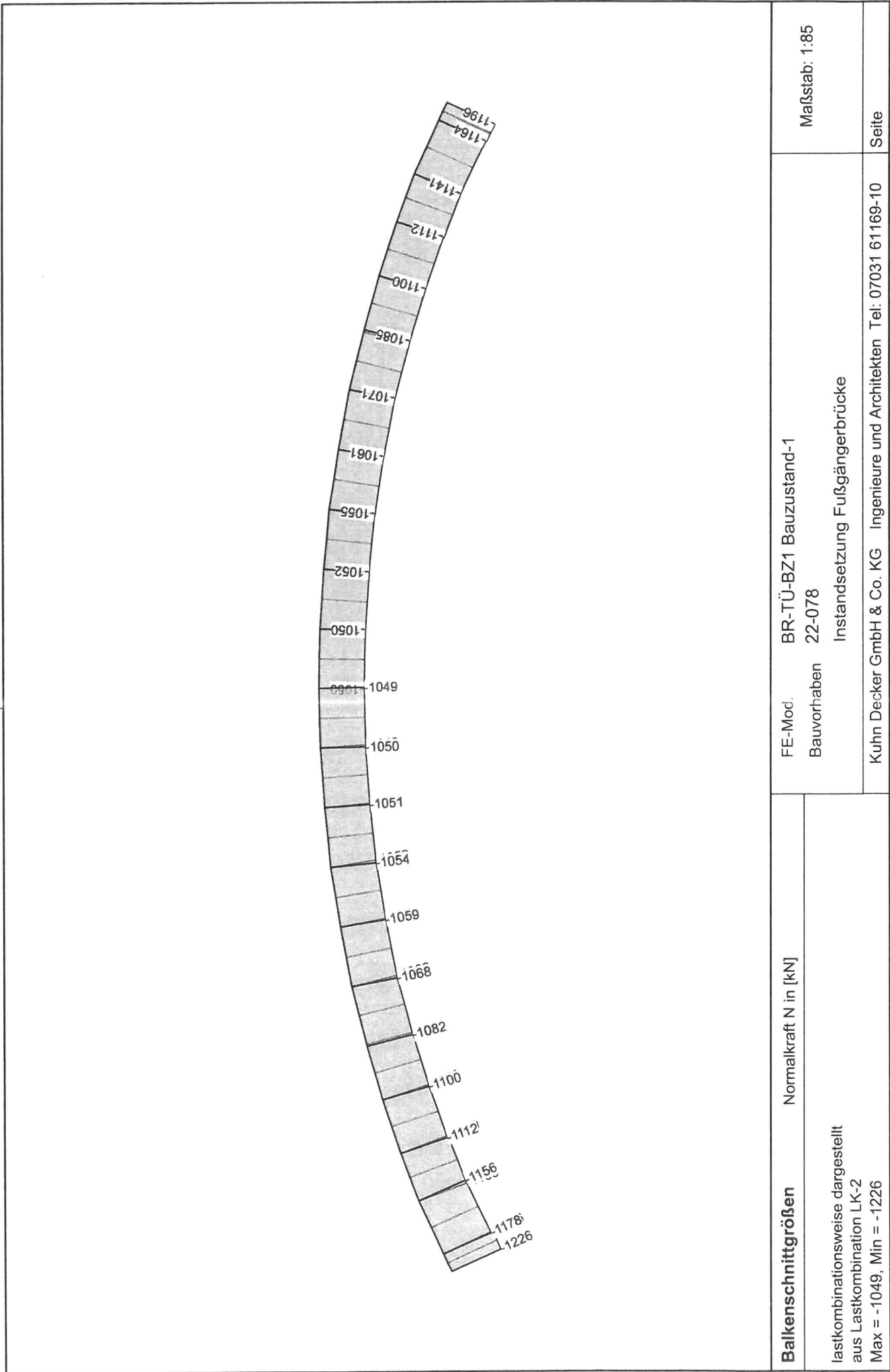
Moment Mt [kNm]



aus Lastkombination LK-1

Position	Nr		Vs		min Mt	
	Nr	[kN]	Nr	[kN]	max Mt	[kNm]
S-16	-1161.08	88.69	0.00	0.00	25.69	
S-17	-1150.72	66.48	36.81	36.81	70.62	
S-18	-1104.87	56.60	22.52	22.52	76.41	
S-19	-1092.09	21.05	-1.51	-1.51	73.46	
S-20	-1076.55	28.09	-2.08	-2.08	84.12	
S-21	-1069.03	-48.80	-3.02	-3.02	85.38	
S-22	-1064.25	-43.15	3.43	3.43	66.64	
S-23	-1055.54	-58.19	11.97	11.97	48.54	
S-24	-1045.12	-13.31	-5.75	-5.75	48.54	
S-25	-1033.68	-1025.42	-36.66	-36.66	11.97	
S-26	-1018.24	-1016.04	1.94	1.94	-29.28	
S-27	-1019.90	-40.18	-6.39	-6.39	-34.04	
S-28	-1014.32	-19.89	-1.00	-1.00	-27.50	
S-29	-1014.83	36.56	25.69	25.69	38.63	
S-30	-1128.85	-1.17	0.00	0.00	25.71	
S-31	-1111.89	-88.77	-66.56	-66.56	36.92	
S-32	-1161.12	-1150.76	-22.61	-22.61	70.80	
S-33	-1104.90	-56.69	1.42	1.42	76.64	
S-34	-1092.12	-21.13	-28.18	-28.18	73.73	
S-35	-1076.58	2.00	84.46	84.46	66.20	
S-36	-1064.28	2.93	85.76	85.76	49.07	
S-37	-1055.56	43.06	3.45	3.45	67.10	
S-38	-1033.70	57.95	12.66	12.66	49.07	
S-39	-1045.14	13.22	-4.74	-4.74	12.66	
S-40	-1024.62	36.27	-2.18	-2.18	-28.47	
S-41	-1018.28	-1025.44	40.99	40.99	-4.74	
S-42	-1019.93	-1016.71	20.69	20.69	-34.04	

Position	Nr		Vs		min Mt	
	Nr	[kN]	Nr	[kN]	max Mt	[kNm]
S-44	-1014.82	1.80	-36.65	-36.65	25.71	
	-1128.88	1.09	1.09	1.09	38.72	



Balkenschnittgrößen

Normalkraft N in [kN]

lastkombinationsweise dargestellt
aus Lastkombination LK-2
Max = -1049, Min = -1226

FE-Mod. BR-TÜ-BZ1 Bauzustand-1

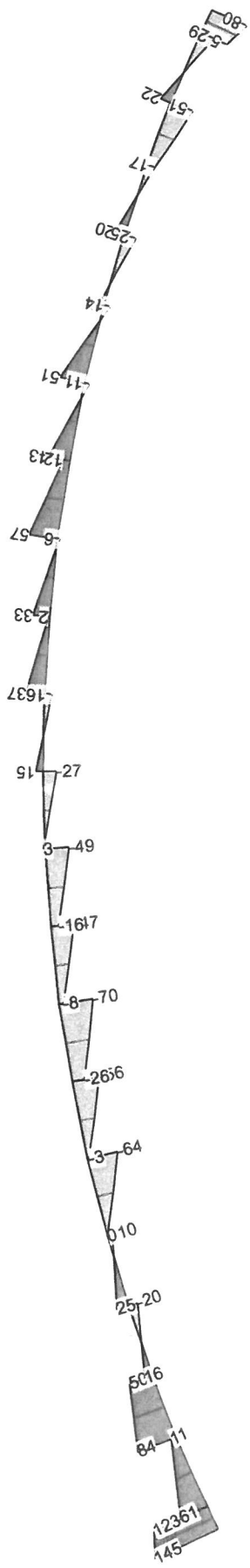
Bauvorhaben 22-078

Instandsetzung Fußgängerbrücke

Maßstab: 1:85

Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10

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Balkenschnittgrößen	Querkraft V in [kN]	FE-Mod. BR-TÜ-BZ1 Bauzustand-1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	Maßstab: 1:85
	lastkombinationsweise dargestellt aus Lastkombination LK-2 Max = 145, Min = -80	Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10	

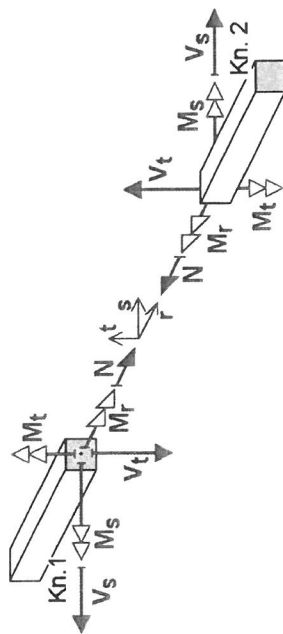
<div>Balkenschnittgrößen</div>	Moment M in [kNm]	FE-Mod. Bauvorhaben	BR-TÜ-BZ1 Bauzustand-1 22-078 Instandsetzung Fußgängerbrücke	Maßstab: 1:85
	<div>lastkombinationsweise dargestellt aus Lastkombination LK-2 Max = 143, Min = -44</div>			
<div>Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10</div>				Seite

Balkenschnittgr-Stb

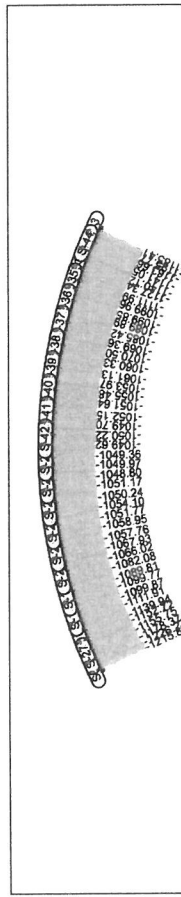
Schnittgrößen Stb-Stützen und 3D-Stäbe

Schnittgrößen

Schnittgrößen der Stützen und 3D-Stäbe



Normalkraft Nr. [kN]



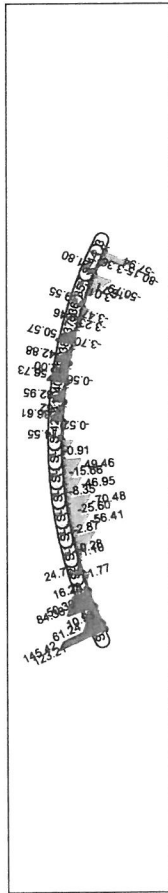
aus Lastkombination LK-2

Position	min Nr max Nr [kN]	Vs Vs [kN]	Mt Mt [kNm]
S-16	-1226.23 145.42	145.42	0.00
S-17	-1215.87 84.38	123.21	44.47
S-18	-1139.94 16.28	84.38	79.67
S-19	-1099.87 24.76	50.30	137.21
S-20	-1089.81 -9.73	137.21	137.21
S-21	-1066.02 -2.87	16.28	135.54
S-22	-1057.76 -25.60	24.76	135.54
S-23	-1051.77 -8.35	19.81	142.58
S-24	-1050.24 -15.66	24.76	142.58
S-25	-1048.80 -49.46	0.33	109.11
S-27	-1049.36 -27.43	-2.87	109.11
S-33	-1178.37 10.93	-56.41	78.39
	-1155.75 -80.15	-25.60	78.39
		-70.48	29.37
		-8.35	29.37
		-46.95	1.30
		-15.66	1.30
		-49.46	-31.52
		2.91	-31.52
		-27.43	-43.83
		61.24	44.47
		10.93	79.68
		-80.15	0.00

Position

Position	min Nr max Nr [kN]	Vs Vs [kN]	Mt Mt [kNm]
S-34	-1185.41 -1140.12	-57.94 -50.79	22.86 26.14
S-35	-1127.34 -1111.99	-16.71 -16.54	54.97 54.97
S-36	-1099.96 -1099.85	19.55 -25.02	53.54 53.54
S-37	-1089.89 -1085.42	9.46 -13.69	60.83 60.83
S-38	-1069.36 -1070.50	50.57 -10.66	41.14 41.14
S-39	-1060.33 -1061.13	42.88 12.00	24.19 24.19
S-40	-1053.97 -1055.48	56.73 -5.50	-10.98 -10.98
S-41	-1051.64 -1052.15	32.95 1.62	-25.05 -25.05
S-42	-1049.70 -1050.22	36.61 -15.78	-44.40 -44.40
S-44	-1049.62 -1163.66	14.55 -28.52	-43.83 22.86
	-1141.05	21.80	26.14

Querkraft Vs [kN]



aus Lastkombination LK-2

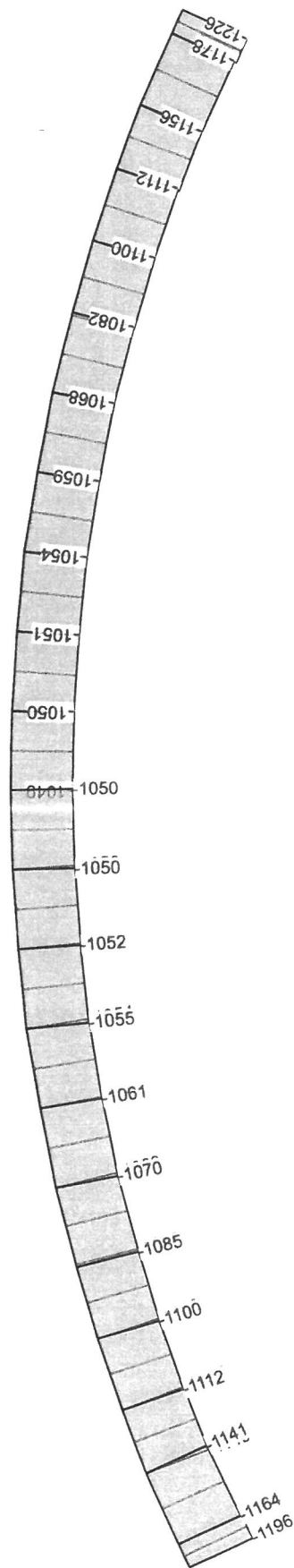
Position	Nr	Nr	min Vs	Mt
			max Vs	
			[kN]	[kNm]
S-16	-1215.87	123.21	44.47	0.00
S-17	-1226.23	145.42	0.00	137.21
S-18	-1139.94	50.30	84.38	79.67
S-19	-1152.72	137.21	135.54	135.54
S-20	-1099.87	16.28	137.21	142.58
S-21	-1111.91	16.28	137.21	135.54
S-22	-1089.81	-9.73	135.54	109.11
S-23	-1099.77	24.76	135.54	142.58
S-24	-1066.02	-63.93	109.11	78.39
S-25	-1082.08	0.33	142.58	109.11
S-26	-1057.76	-56.41	78.39	29.37
S-27	-1067.93	-2.87	109.11	78.39
S-28	-1051.77	-70.48	29.37	1.30
S-29	-1058.95	-25.60	78.39	29.37
S-30	-1050.24	-46.95	1.30	-31.52
S-31	-1054.10	-8.35	29.37	1.30
S-32	-1048.80	-49.46	-31.52	43.83
S-33	-1051.17	-15.66	1.30	79.68
S-34	-1049.36	-27.43	43.83	44.47
S-35	-1049.97	2.91	79.68	0.00
S-36	-1155.75	10.93	44.47	22.86
S-37	-1178.37	61.24	26.14	26.14
S-38	-1195.77	-80.15	54.97	54.97
S-39	-1185.41	-57.94	54.97	53.54
S-40	-1140.12	-50.79	53.54	53.54
S-41	-1127.34	-16.71	53.54	60.83
S-42	-1111.99	-16.54	60.83	41.14
S-43	-1099.96	19.55	41.14	41.14
S-44	-1099.85	-25.02	41.14	24.19
S-45	-1089.89	9.46	24.19	12.00
S-46	-1085.42	-13.69	12.00	-10.98
S-47	-1069.36	50.57	-10.98	-10.98
S-48	-1070.50	-10.66	32.95	-25.05
S-49	-1060.33	42.88	1.62	-25.05
S-50	-1061.13	12.00	36.61	-44.40
S-51	-1053.97	56.73	-15.78	
S-52	-1055.48	-5.50		
S-53	-1051.64	32.95		
S-54	-1052.15	1.62		
S-55	-1049.70	36.61		
S-56	-1050.22	-15.78		

Position	Nr	Vs [kN]	min Mt max Mt [kNm]
S-44	-1049.92	-0.52	-40.32
	-1163.66	-28.52	22.86
	-1149.53	2.93	30.66

Position	Nr	Vs [kN]	min Mt max Mt [kNm]
S-16	-1226.23	145.42	0.00
	-1215.87	123.21	44.47
	-1152.72	84.38	79.67
S-17	-1139.94	50.30	137.21
	-1099.87	-19.81	135.54
	-1105.89	-1.77	140.65
S-18	-1099.77	24.76	135.54
	-1092.30	-1.10	143.84
	-1066.02	-63.93	109.11
S-19	-1081.93	-0.28	142.58
	-1057.76	-56.41	78.39
	-1067.93	-2.87	109.11
S-20	-1051.77	-70.48	29.37
	-1058.95	-25.60	78.39
	-1050.24	-46.95	1.30
S-21	-1054.10	-8.35	29.37
	-1048.80	-49.46	-31.52
	-1051.17	-15.66	1.30
S-22	-1049.36	-27.43	-43.83
	-1049.89	-0.91	-31.39
	-1178.37	61.24	44.47
S-23	-1155.75	10.93	79.68
	-1195.77	-80.15	0.00
	-1185.41	-57.94	22.86
S-24	-1140.12	-50.79	26.14
	-1127.34	-16.71	54.97
	-1099.96	19.55	53.54
S-25	-1105.98	1.51	58.54
	-1099.85	-25.02	53.54
	-1092.38	0.84	62.04
S-26	-1069.36	50.57	41.14
	-1082.81	-3.23	62.18
	-1060.33	42.88	24.19
S-27	-1067.86	3.27	42.08
	-1053.97	56.73	-10.98
	-1061.13	12.00	24.19
S-28	-1051.64	32.95	-25.05
	-1054.99	-0.56	-10.60
	-1049.70	36.61	-44.40
S-29	-1052.15	1.62	-25.05
	-1050.22	-15.78	-44.40

aus Lastkombination LK-2

Position	Nr	Vs [kN]	min Mt max Mt [kNm]
S-16	-1226.23	145.42	0.00
	-1215.87	123.21	44.47
	-1152.72	84.38	79.67
S-17	-1139.94	50.30	137.21
	-1099.87	-19.81	135.54
	-1105.89	-1.77	140.65
S-18	-1099.77	24.76	135.54
	-1092.30	-1.10	143.84
	-1066.02	-63.93	109.11
S-19	-1081.93	-0.28	142.58
	-1057.76	-56.41	78.39
	-1067.93	-2.87	109.11
S-20	-1051.77	-70.48	29.37
	-1058.95	-25.60	78.39
	-1050.24	-46.95	1.30
S-21	-1054.10	-8.35	29.37
	-1048.80	-49.46	-31.52
	-1051.17	-15.66	1.30
S-22	-1049.36	-27.43	-43.83
	-1049.89	-0.91	-31.39
	-1178.37	61.24	44.47
S-23	-1155.75	10.93	79.68
	-1195.77	-80.15	0.00
	-1185.41	-57.94	22.86
S-24	-1140.12	-50.79	26.14
	-1127.34	-16.71	54.97
	-1099.96	19.55	53.54
S-25	-1105.98	1.51	58.54
	-1099.85	-25.02	53.54
	-1092.38	0.84	62.04
S-26	-1069.36	50.57	41.14
	-1082.81	-3.23	62.18
	-1060.33	42.88	24.19
S-27	-1067.86	3.27	42.08
	-1053.97	56.73	-10.98
	-1061.13	12.00	24.19
S-28	-1051.64	32.95	-25.05
	-1054.99	-0.56	-10.60
	-1049.70	36.61	-44.40
S-29	-1052.15	1.62	-25.05
	-1050.22	-15.78	-44.40



Balkenschnittgrößen

Normalkraft N in [kN]

lastkombinationsweise dargestellt
aus Lastkombination LK-3
Max = -1049, Min = -1226

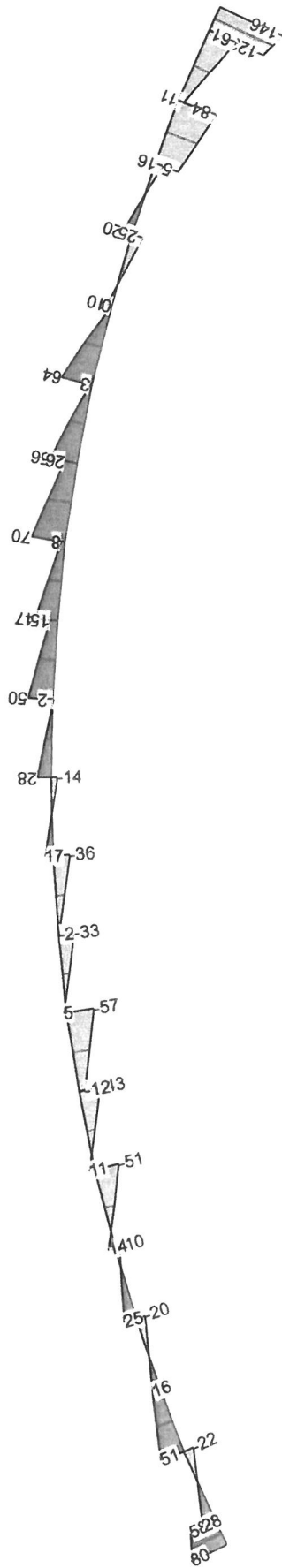
FE-Mod. BR-TÜ-BZ1 Bauzustand-1
Bauvorhaben 22-078

Instandsetzung Fußgängerbrücke

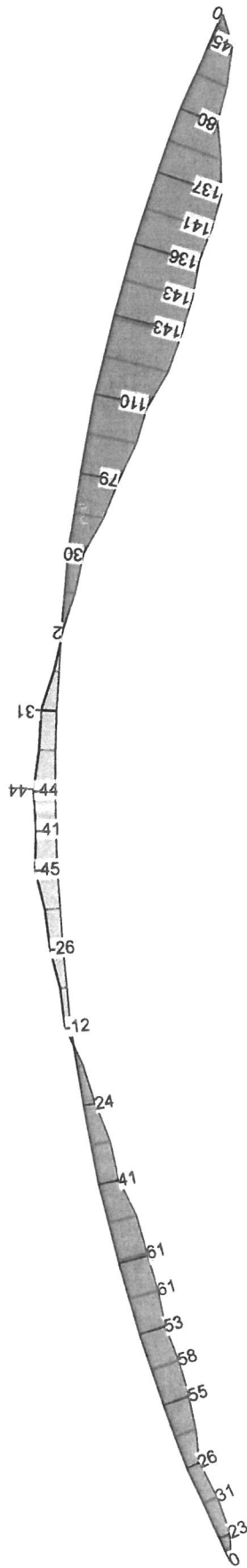
Maßstab: 1:85

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Seite

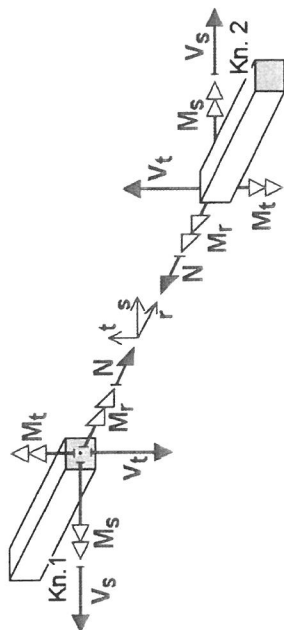


Balkenschnittgrößen		Querkraft V in [kN]	FE-Mod. BR-TÜ-BZ1 Bauzustand-1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke		Maßstab: 1:85
lastkombinationsweise dargestellt aus Lastkombination LK-3 Max = 80, Min = -146			Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10		
			Seite		

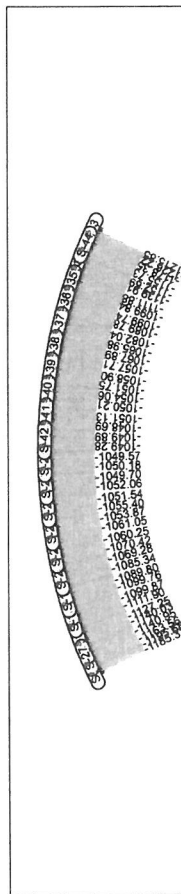


Balkenschnittgrößen	Moment M in [kNm]	FE-Mod. BR-TÜ-BZ1 Bauzustand-1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	Maßstab: 1:85
	lastkombinationsweise dargestellt aus Lastkombination LK-3 Max = 143, Min = -45	Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10	

Schnittgrößen der Stützen und 3D-Stäbe



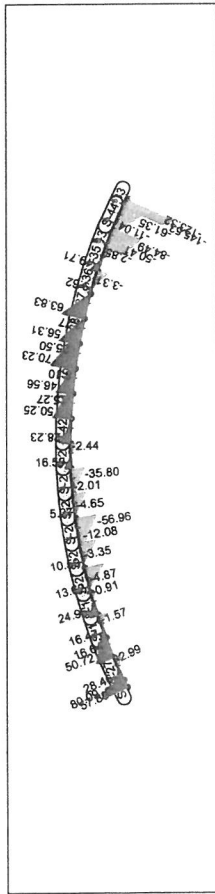
Normalkraft Nr [kN]



aus Lastkombination LK-3

[illegible]

Querkraft Vs [kN]



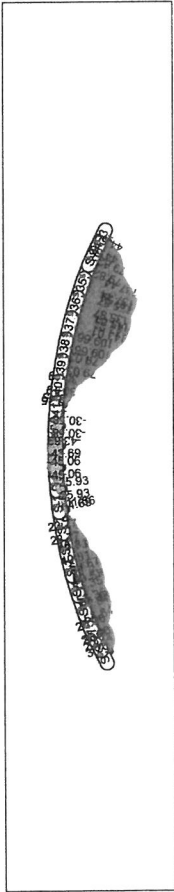
aus Lastkombination LK-3

Position	Nr	Nr [kN]	min Vs max Vs [kN]	Mt Mt [kNm]
S-16		-1185.32	57.89	22.84
S-17		-1195.68	80.09	0.00
S-18		-1127.25	16.64	54.84
S-19		-1140.03	50.72	26.06
S-20		-1099.87	-19.62	53.35
S-21		-1111.90	16.47	54.84
S-22		-1089.80	-9.53	60.57
S-23		-1099.76	24.95	53.35
S-24		-1069.28	-50.64	40.81
S-25		-1085.34	13.62	60.57
S-26		-1060.25	-42.96	23.77
S-27		-1070.42	10.59	40.81
S-28		-1053.87	-56.96	-11.56
S-29		-1061.05	-12.08	23.77
S-30		-1051.54	-33.33	-25.93
S-31		-1055.40	5.27	-11.56
S-32		-1049.70	-35.80	-45.06
S-33		-1052.06	-2.01	-25.93
S-34		-1049.57	-13.75	-43.69
S-35		-1050.18	16.59	-45.06
S-36		-1140.95	-21.85	26.06
S-37		-1163.56	28.46	22.84
S-38		-1226.22	-145.53	0.00
S-39		-1215.85	-123.32	44.50
S-40		-1152.69	-84.49	79.82
S-41		-1139.91	-50.41	137.44
S-42		-1111.88	-16.39	137.44
S-43		-1099.84	19.71	135.87
S-44		-1099.74	-24.86	135.87
S-45		-1089.78	9.62	143.01
S-46		-1082.04	-0.43	143.01
S-47		-1065.98	63.83	109.66
S-48		-1067.89	2.77	109.66
S-49		-1057.71	56.31	79.03
S-50		-1058.90	25.50	79.03
S-51		-1051.75	70.23	30.19
S-52		-1054.06	8.10	30.19
S-53		-1050.21	46.56	2.45
S-54		-1051.13	15.27	2.45

Position

Nr	min Vs max Vs [kN]	Mt Mt [kNm]
S-42	-1048.69 -1049.89	50.25 -2.10
S-44	-1049.28 -1178.35	28.23 -61.35
	-1155.73	-11.04

Moment Mt [kNm]

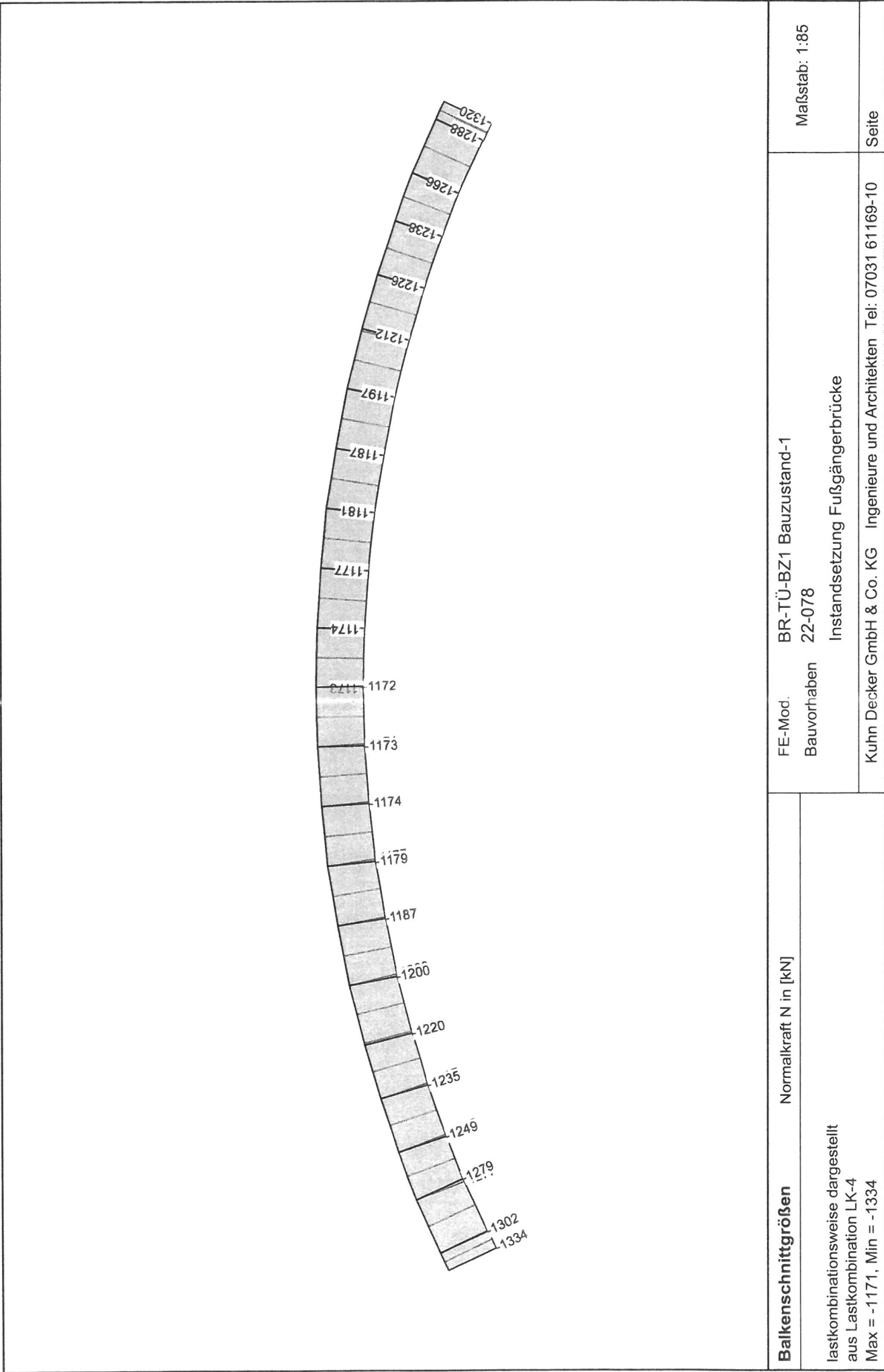


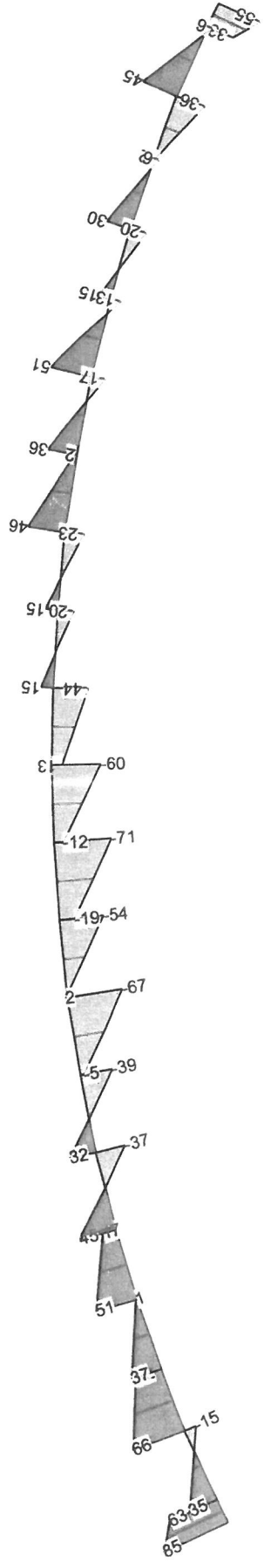
aus Lastkombination LK-3

Position	Nr Nr [kN]	Vs Vs [kN]	min Mt max Mt [kNm]
S-16	-1195.68	80.09	0.00
S-17	-1185.32	57.89	22.84
S-18	-1140.03	50.72	26.06
S-19	-1127.25	16.64	54.84
S-20	-1099.87	-19.62	53.35
S-21	-1105.89	-1.57	58.38
S-22	-1099.76	24.95	53.35
S-23	-1092.29	-0.91	61.79
S-24	-1069.28	-50.64	40.81
S-25	-1082.73	3.15	61.91
S-26	-1060.25	-42.96	23.77
S-27	-1067.78	-3.35	41.73
S-28	-1053.87	-56.96	-11.56
S-29	-1061.05	-12.08	23.77
S-30	-1051.54	-33.33	-25.93
S-31	-1054.90	0.31	-11.21
S-32	-1049.70	-35.80	-45.06
S-33	-1052.06	-2.01	-25.93
S-34	-1050.18	16.59	-45.06
S-35	-1049.87	1.33	-40.58
S-36	-1163.56	28.46	22.84
S-37	-1149.43	-2.99	30.61
S-38	-1226.22	-145.53	0.00
S-39	-1215.85	-123.32	44.50
S-40	-1152.69	-84.49	79.82
S-41	-1139.91	-50.41	137.44
S-42	-1099.84	19.71	135.87
S-43	-1105.86	1.66	140.94
S-44	-1099.74	-24.86	135.87
S-45	-1092.27	1.00	144.25
S-46	-1065.98	63.83	109.66
S-47	-1081.89	0.18	143.01
S-48	-1057.71	56.31	79.03
S-49	-1067.89	2.77	109.66
S-50	-1051.75	70.23	30.19
S-51	-1058.90	25.50	79.03
S-52	-1050.21	46.56	2.45
S-53	-1054.06	8.10	30.19
S-54	-1048.69	50.25	-30.58
S-55	-1051.13	15.27	2.45
S-56	-1049.28	28.23	-43.69

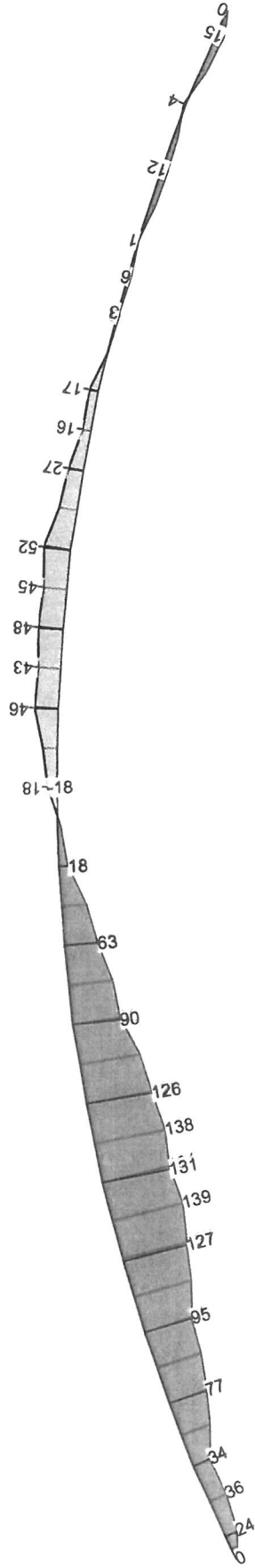
Position	Nr Nr [kN]	Vs Vs [kN]	min Mt max Mt [kNm]
S-44	-1049.81	1.71	-30.55
	-1178.35	-61.35	44.50
	-1155.73	-11.04	79.82

14.21





Balkenschnittgrößen	Querkraft V in [kN]	lastkombinationsweise dargestellt aus Lastkombination LK-4 Max = 85, Min = -71	FE-Mod. BR-TÜ-BZ1 Bauzustand-1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	Maßstab: 1:85
			Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10	
Seite				MicroFe 2018.051



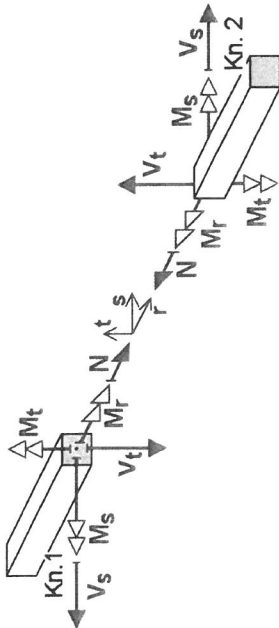
Balkenschnittgrößen		Moment M in [kNm]	FE-Mod. BR-TÜ-BZ1 Bauzustand-1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke		Maßstab: 1:85
lastkombinationsweise dargestellt aus Lastkombination LK-4 Max = 139, Min = -52			Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10		Seite
					MicroFe 2018.051

Balkenschnittgr-Stb

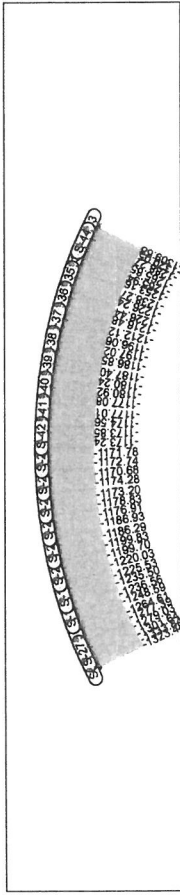
Schnittgrößen Stb-Stützen und 3D-Stäbe

Schnittgrößen

Schnittgrößen der Stützen und 3D-Stäbe



Normalkraft Nr [kN]



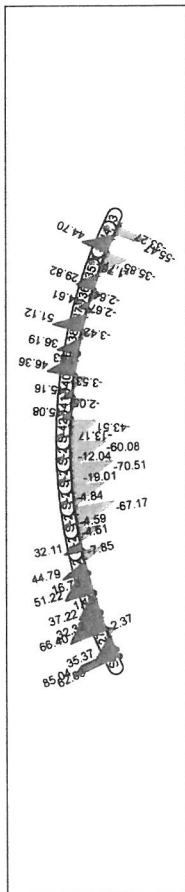
aus Lastkombination LK-4

Position	min Nr max Nr [kN]	Vs [kN]	Mt [kNm]
S-16	-1333.84 85.04	62.83	0.00
S-17	-1323.48 62.83	66.40	24.48
S-18	-1264.61 32.32	37.22	34.44
S-19	-1248.59 37.22	1.13	76.61
S-20	-1236.56 51.22	16.73	94.80
S-21	-1225.53 16.73	44.79	126.63
S-22	-1199.70 -36.55	32.11	130.50
S-23	-1199.83 -39.13	-67.17	126.37
S-24	-1186.93 -4.59	2.33	89.67
S-25	-1176.91 -67.17	-53.97	63.45
S-26	-1178.83 2.33	-19.01	63.45
S-27	-1173.20 -19.01	-70.51	18.40
S-28	-1170.68 -70.51	-12.04	18.40
S-29	-1172.74 -12.04	-60.08	-17.71
S-30	-1171.78 -60.08	35.37	24.48
S-31	-1301.64 -14.94	-55.47	0.00
S-32	-1279.03 -14.94		
S-33	-1320.05 -55.47		

Position

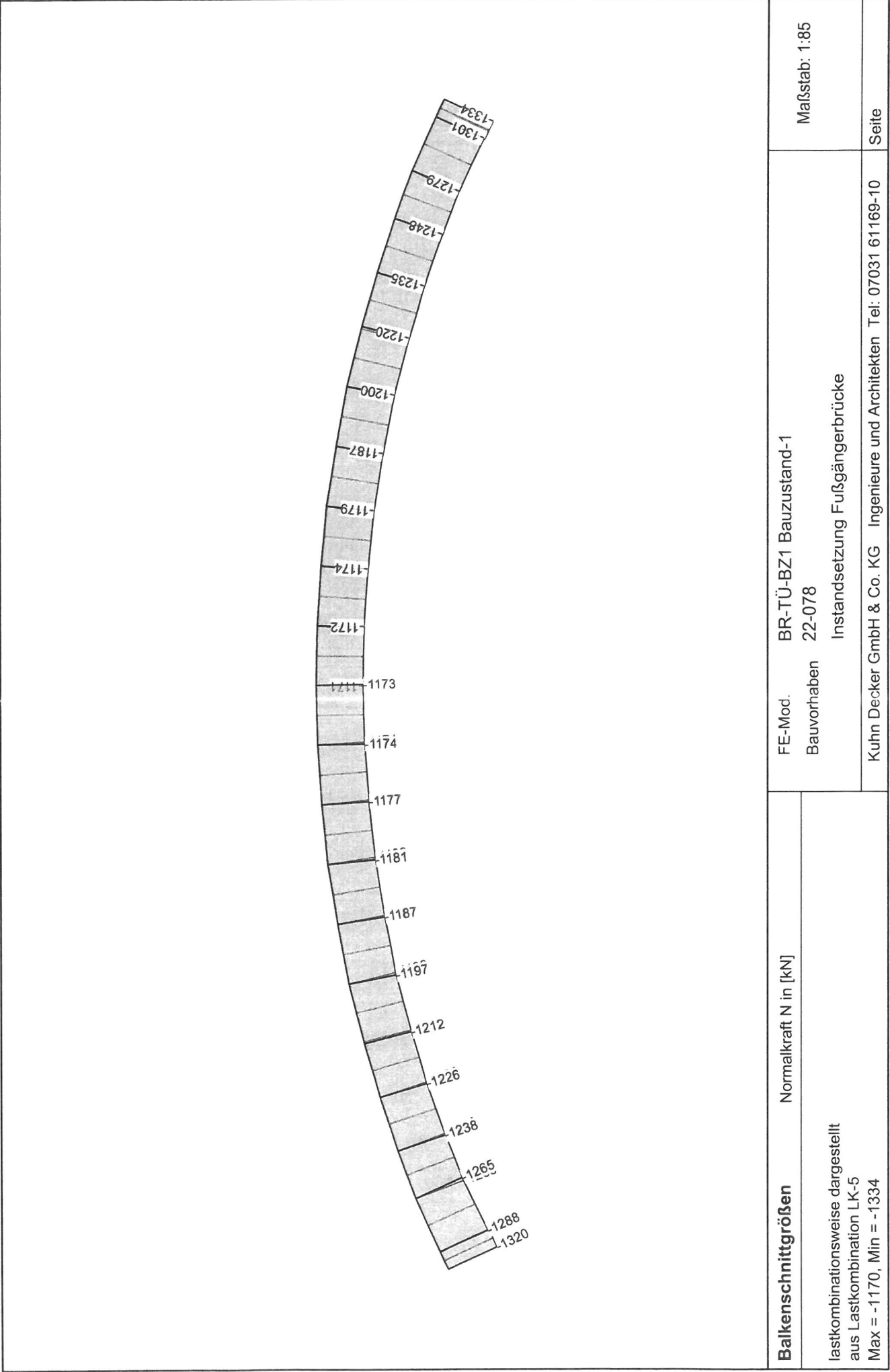
Position	min Nr max Nr [kN]	Vs [kN]	Mt [kNm]
S-34	-1309.68 -1265.94	-33.27 -35.85	14.69 -4.38
S-35	-1253.16 -1238.27	-1.77 -6.27	11.70 11.70
S-36	-1226.24 -1226.44	29.82 -19.88	0.53 0.53
S-37	-1216.48 -1212.12	14.61 -13.14	3.00 3.00
S-38	-1196.06 -1197.02	51.12 -17.36	-17.26 -17.26
S-39	-1186.85 -1187.40	36.19 1.63	-27.40 -27.40
S-40	-1180.24 -1180.92	46.36 -23.30	-52.07 -52.07
S-41	-1177.08 -1177.01	15.16 -19.90	-48.25 -48.25
S-42	-1174.56 -1173.85	15.08 -43.51	-46.01 -46.01
S-43	-1173.24 -1288.27	-13.17 -5.61	-17.71 14.69
S-44	-1265.65 -1265.65	44.70 44.70	-4.38 -4.38

Querkraft V_s [kN]



aus Lastkombination LK-4

Position	Nr	min Vs max Vs	Mt
	[kN]	[kN]	[kNm]
S-16	-1323.48	62.83	24.48
	-1333.84	85.04	0.00
S-17	-1264.61	32.32	76.61
	-1277.39	66.40	34.44
S-18	-1236.56	1.13	94.80
	-1248.59	37.22	76.61
S-19	-1225.53	16.73	126.63
	-1235.50	51.22	94.80
S-20	-1199.70	-36.55	130.50
	-1220.03	44.79	126.63
S-21	-1186.29	-39.13	126.37
	-1199.83	32.11	130.50
S-22	-1176.91	-67.17	89.67
	-1186.93	-4.59	126.37
S-23	-1173.20	-53.97	63.45
	-1178.83	2.33	89.67
S-24	-1170.68	-70.51	18.40
	-1174.28	-19.01	63.45
S-25	-1171.78	-60.08	-17.71
	-1172.74	-12.04	18.40
S-27	-1279.03	-14.94	34.44
	-1301.64	35.37	24.48
S-33	-1320.05	-55.47	0.00
	-1309.68	-33.27	14.69
S-34	-1265.94	-35.85	-4.38
	-1253.16	-1.77	11.70
S-35	-1238.27	-6.27	11.70
	-1226.24	29.82	0.53
S-36	-1226.44	-19.88	0.53
	-1216.48	14.61	3.00
S-37	-1212.12	-13.14	3.00
	-1196.06	51.12	-17.26
S-38	-1197.02	-17.36	-17.26
	-1186.85	36.19	-27.40
S-39	-1187.40	1.63	-27.40
	-1180.24	46.36	-52.07
S-40	-1180.92	-23.30	-52.07
	-1177.08	15.16	-48.25
S-41	-1177.01	-19.90	-48.25
	-1174.56	15.08	-46.01

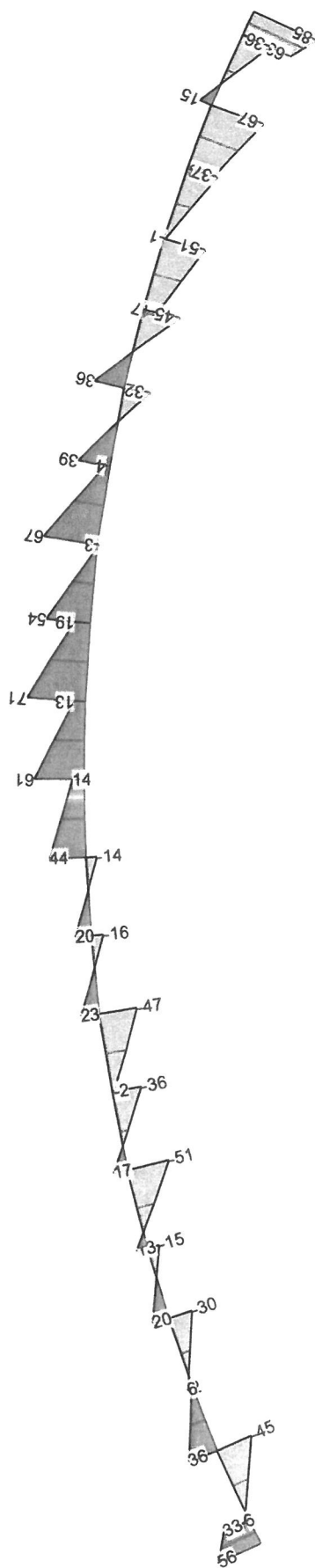


FE-Mod. BR-TÜ-BZ1 Bauzustand-1
Bauvorhaben 22-078
Instandsetzung Fußgängerbrücke

Maßstab: 1:85

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**Balkenschnittgrößen**

Querkraft V in [kN]

lastkombinationsweise dargestellt
aus Lastkombination LK-5
Max = 71, Min = -85

FE-Mod. BR-TÜ-BZ1 Bauzustand-1

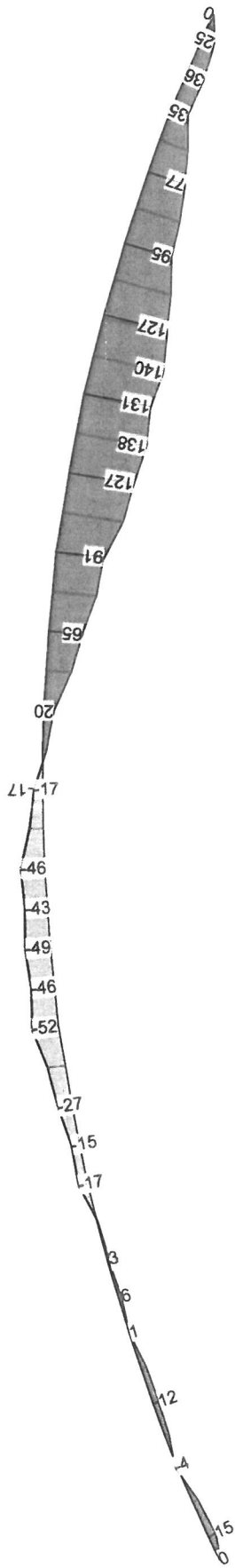
Bauvorhaben 22-078

Instandsetzung Fußgängerbrücke

Maßstab: 1:85

Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10

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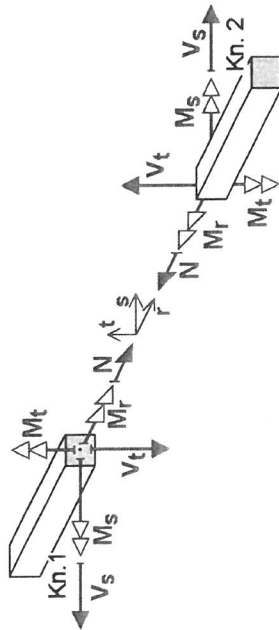
Balkenschnittgrößen		Moment M in [kNm]	FE-Mod.	BR-TÜ-BZ1 Bauzustand-1	Maßstab: 1:85
lastkombinationsweise dargestellt aus Lastkombination LK-5 Max = 140, Min = -52			Bauvorhaben	22-078 Instandsetzung Fußgängerbrücke	
			Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10		Seite

Balkenschnittgr-Stb

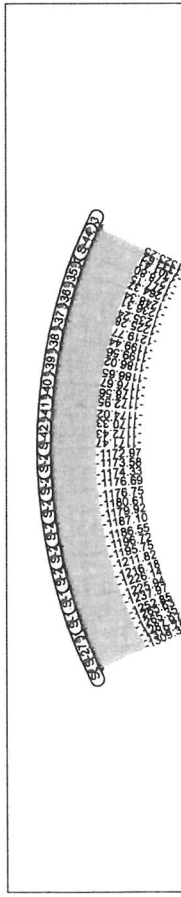
Schnittgrößen

Schnittgrößen Stb-Stützen und 3D-Stäbe

Schnittgrößen der Stützen und 3D-Stäbe



Normalkraft Nr [kN]



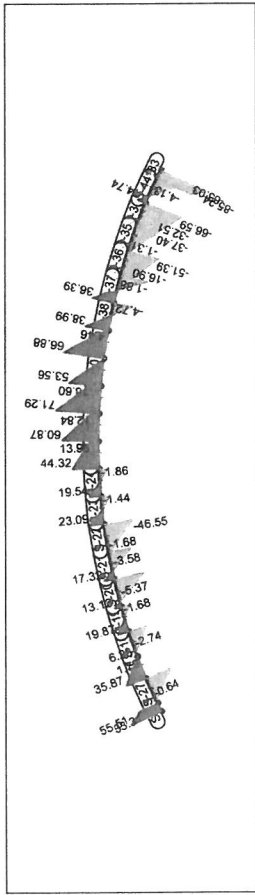
aus Lastkombination LK-5

Position	min Nr max Nr [kN]	Vs [kN]	Mt [kNm]
S-16	-1319.74 14.70	55.51	0.00
S-17	-1309.38 14.70	33.31	14.70
S-18	-1265.63 11.76	35.87	-4.33
S-19	-1252.85 11.76	1.79	11.76
S-20	-1237.97 0.59	6.28	11.76
S-21	-1225.94 0.59	-29.81	0.59
S-22	-1226.14 3.05	19.87	0.59
S-23	-1216.18 3.05	-14.61	3.05
S-24	-1211.82 -17.22	13.12	-17.22
S-25	-1195.75 -17.22	-51.14	-17.22
S-26	-1196.72 -27.40	17.32	-27.40
S-27	-1186.55 -27.40	-36.22	-27.40
S-28	-1187.10 -52.19	-1.68	-52.19
S-29	-1179.92 -52.19	-46.55	-52.19
S-30	-1180.61 -52.19	23.09	-52.19
S-31	-1176.75 -48.65	-15.51	-48.65
S-32	-1176.69 -48.65	19.54	-48.65
S-33	-1174.33 -46.19	-14.26	-46.19
S-34	-1173.58 -46.19	44.32	-46.19
S-35	-1172.97 -17.08	13.98	-17.08
S-36	-1287.97 14.70	5.65	14.70
S-37	-1265.35 -4.33	-44.66	-4.33
S-38	-1333.62 0.00	-85.24	0.00

Position

Position	min Nr max Nr [kN]	Vs [kN]	Mt [kNm]
S-34	-1323.25 -1277.15	-63.03 -66.59	24.54 34.71
S-35	-1264.37 -1248.34	-32.51 -37.40	77.04 77.04
S-36	-1236.31 -1235.24	-1.31 -51.39	95.40 95.40
S-37	-1225.28 -1219.77	-16.90 -44.95	127.38 127.38
S-38	-1199.44 -1199.56	36.39 -32.26	131.42 131.42
S-39	-1186.02 -1186.65	38.99 4.46	127.43 127.43
S-40	-1176.67 -1178.56	66.88 -2.60	90.94 90.94
S-41	-1172.95 -1174.02	53.56 18.60	65.07 65.07
S-42	-1170.33 -1172.43	71.29 12.84	19.83 19.83
S-43	-1171.47 -1301.41	60.87 -35.57	-17.08 24.54
S-44	-1278.80 -1278.80	14.74	34.71

Querkraft Vs [kN]

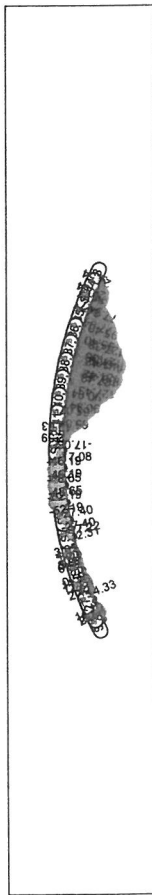


aus Lastkombination LK-5

Position	Nr	Nr	min Vs	Mt
		[kN]	max Vs	[kNm]
S-16	-1309.38	33.31	33.31	14.70
S-17	-1319.74	55.51	55.51	0.00
S-18	-1252.85	1.79	1.79	11.76
S-19	-1265.63	35.87	35.87	-4.33
S-20	-1225.94	-29.81	-29.81	0.59
S-21	-1237.97	6.28	6.28	11.76
S-22	-1216.18	-14.61	-14.61	3.05
S-23	-1226.14	19.87	19.87	0.59
S-24	-1195.75	-51.14	-51.14	-17.22
S-25	-1211.82	13.12	13.12	3.05
S-26	-1186.55	-36.22	-36.22	-27.40
S-27	-1196.72	17.32	17.32	-17.22
S-28	-1179.92	-46.55	-46.55	-52.19
S-29	-1187.10	-1.68	-1.68	-27.40
S-30	-1176.75	-15.51	-15.51	-48.65
S-31	-1180.61	23.09	23.09	-52.19
S-32	-1174.33	-14.26	-14.26	-46.19
S-33	-1176.69	19.54	19.54	-48.65
S-34	-1172.97	13.98	13.98	-17.08
S-35	-1173.58	44.32	44.32	-46.19
S-36	-1265.35	-44.66	-44.66	-4.33
S-37	-1287.97	5.65	5.65	14.70
S-38	-1333.62	-85.24	-85.24	0.00
S-39	-1323.25	-63.03	-63.03	24.54
S-40	-1277.15	-66.59	-66.59	34.71
S-41	-1264.37	-32.51	-32.51	77.04
S-42	-1248.34	-37.40	-37.40	77.04
S-43	-1236.31	-1.31	-1.31	95.40
S-44	-1235.24	-51.39	-51.39	95.40
S-45	-1225.28	-16.90	-16.90	127.38
S-46	-1219.77	-44.95	-44.95	127.38
S-47	-1199.44	36.39	36.39	131.42
S-48	-1199.56	-32.26	-32.26	131.42
S-49	-1186.02	38.99	38.99	127.43
S-50	-1186.65	4.46	4.46	127.43
S-51	-1176.67	66.88	66.88	90.94
S-52	-1178.56	-2.60	-2.60	90.94

Position	Nr	min Vs	Mt
	[kN]	max Vs	[kNm]
S-41	-1172.95	53.56	65.07
S-42	-1174.02	18.60	65.07
S-43	-1170.33	71.29	19.83
S-44	-1172.43	12.84	19.83
S-45	-1171.47	60.87	-17.08
S-46	-1301.41	-35.57	24.54
S-47	-1278.80	14.74	34.71

Moment M_t [kNm]



aus Lastkombination LK-5

Position	Nr	Vs	min Mt
	Nr	Vs	max Mt
	[kN]	[kN]	[kNm]
S-16	-1319.74	55.51	0.00
	-1309.38	33.31	14.70
S-17	-1265.63	35.87	-4.33
	-1252.85	1.79	11.76
S-18	-1225.94	-29.81	0.59
	-1236.46	1.77	12.23
S-19	-1226.14	19.87	0.59
	-1219.91	-1.68	5.92
S-20	-1195.75	-51.14	-17.22
	-1209.20	2.65	4.31
S-21	-1186.55	-36.22	-27.40
	-1194.07	3.39	-14.59
S-22	-1179.92	-46.55	-52.19
	-1187.10	-1.68	-27.40
S-23	-1180.61	23.09	-52.19
	-1178.16	-1.44	-45.46
S-24	-1176.69	19.54	-48.65
	-1175.19	-1.86	-43.16
S-25	-1173.58	44.32	-46.19
	-1172.97	13.98	-17.08
S-27	-1265.35	-44.66	-4.33
	-1285.14	-0.64	15.01
S-33	-1333.62	-85.24	0.00
	-1323.25	-63.03	24.54
S-34	-1277.15	-66.59	34.71
	-1264.37	-32.51	77.04
S-35	-1248.34	-37.40	77.04
	-1236.31	-1.31	95.40
S-36	-1235.24	-51.39	95.40
	-1225.28	-16.90	127.38
S-37	-1219.77	-44.95	127.38
	-1209.01	-1.88	140.00
S-38	-1186.02	38.99	127.43
	-1192.58	4.46	138.49
S-39	-1176.67	66.88	90.94
	-1186.65	4.46	127.43
S-40	-1172.95	53.56	65.07
	-1178.56	-2.60	90.94
S-41	-1170.33	71.29	19.83
	-1174.02	18.60	65.07
S-42	-1171.47	60.87	-17.08
	-1172.43	12.84	19.83



Balkenschnittgrößen

Normalkraft N in [kN]

lastkombinationsweise dargestellt
aus Lastkombination LK-6
Max = -1205, Min = -1399

FE-Mod. BR-TÜ-BZ1 Bauzustand-1

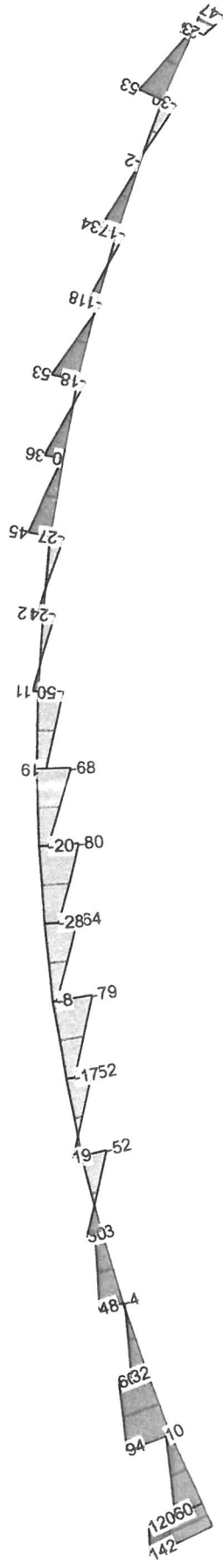
Bauvorhaben 22-078

Instandsetzung Fußgängerbrücke

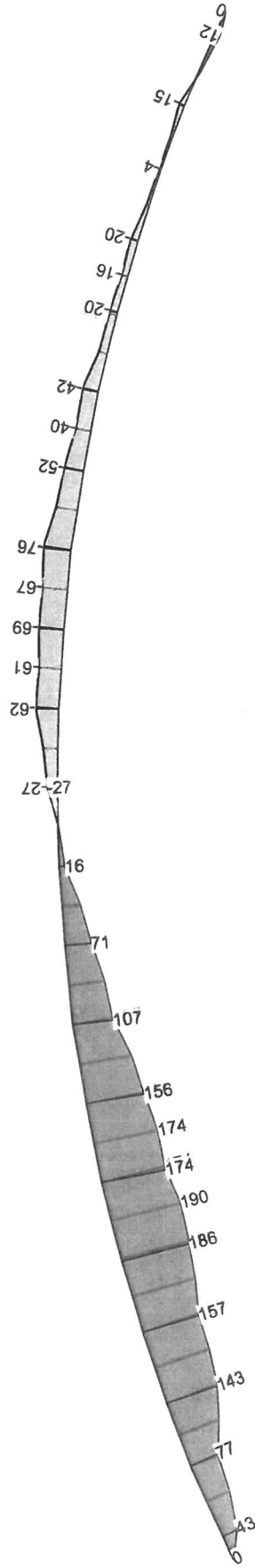
Maßstab: 1:85

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Balkenschnittgrößen	Querkraft V in [kN]	FE-Mod. BR-TÜ-BZ1 Bauzustand-1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	Maßstab: 1:85
Lastkombinationsweise dargestellt aus Lastkombination LK-6 Max = 142, Min = -80			
Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10		Seite	MicroFe 2018.051



Balkenschnittgrößen

Moment M in [kNm]

lastkombinationsweise dargestellt
aus Lastkombination LK-6
Max = 190, Min = -76

FE-Mod. BR-TÜ-BZ1 Bauzustand-1

Bauvorhaben 22-078

Instandsetzung Fußgängerbrücke

Maßstab: 1:85

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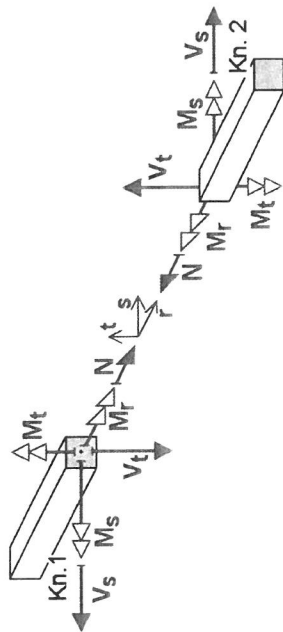
MicroFe 2018.051

Balkenschnittgr-Stb

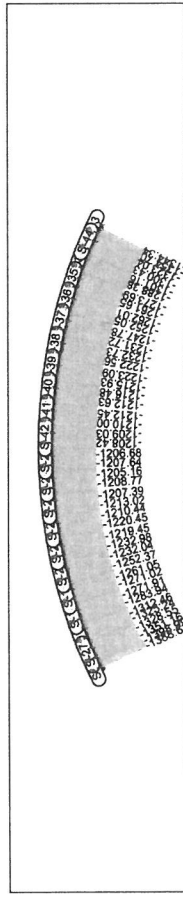
Schnittgrößen

Schnittgrößen Stb-Stützen und 3D-Stäbe

Schnittgrößen der Stützen und 3D-Stäbe



Normalkraft Nr [kN]



aus Lastkombination LK-6

Position	min Nr max Nr	Vs [kN]	Mt [kNm]
S-16	-1398.99 141.76	119.56	0.00
S-17	-1388.63 94.18	77.30	43.26
S-18	-1312.46 32.46	60.09	143.21
S-19	-1271.91 -3.64	156.88	156.88
S-20	-1261.05 29.65	185.58	185.58
S-21	-1232.04 18.85	173.85	173.85
S-22	-1219.45 -52.40	156.22	156.22
S-23	-1210.44 -79.46	107.07	107.07
S-24	-1207.39 -64.26	70.50	70.50
S-25	-1205.16 -79.78	16.16	16.16
S-27	-1206.68 -67.62	16.16	-27.49
S-33	-1351.16 -1328.55	60.05	43.26
	9.74	77.30	0.00

Position

Position	min Nr max Nr	Vs [kN]	Mt [kNm]
S-34	-1344.34 -1301.16	-29.95	11.83
S-35	-1288.38 -1273.69	4.13	-15.16
S-36	-1261.65 -1262.01	-16.72	-4.13
S-37	-1252.05 -1247.78	17.76	-19.66
S-38	-1231.72 -1232.73	-11.28	-20.15
S-39	-1222.56 -1223.09	52.99	-42.32
S-40	-1215.93 -1216.48	-17.54	-52.28
S-41	-1212.63 -1212.45	36.01	-52.28
S-42	-1210.00 -1209.03	0.41	-75.72
S-44	-1208.42 -1323.04	-26.62	-68.56
	-1300.43	-24.28	-61.94
		10.71	-27.49
		-49.65	11.83
		2.51	-15.16
		52.83	

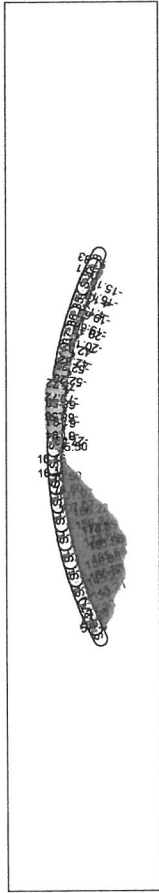
Position	Nr [kN]	min Vs max Vs [kN]	Mt [kNm]
S-16	-1388.63	119.56	43.26
S-17	-1398.99	141.76	0.00
S-18	-1312.46	60.09	143.21
S-19	-1325.24	94.18	77.30
S-20	-1271.91	-3.64	156.88
S-21	-1283.94	32.46	143.21
S-22	-1261.05	13.40	185.58
S-23	-1271.02	47.89	156.88
S-24	-1232.04	-51.69	173.85
S-25	-1252.37	29.65	185.58
S-26	-1219.45	-52.40	156.22
S-27	-1232.98	18.85	173.85
S-28	-1210.44	-79.46	107.07
S-29	-1220.45	-16.88	156.22
S-30	-1207.39	-64.26	70.50
S-31	-1213.02	-7.96	107.07
S-32	-1205.16	-79.78	16.16
S-33	-1208.77	-28.28	70.50
S-34	-1206.68	-67.62	-27.49
S-35	-1207.64	-19.58	16.16
S-36	-1328.55	9.74	77.30
S-37	-1351.16	60.05	43.26
S-38	-1354.70	-46.85	0.00
S-39	-1344.34	-24.64	11.83
S-40	-1301.16	-29.95	-15.16
S-41	-1288.38	4.13	-4.13
S-42	-1273.69	-1.68	-4.13
S-43	-1261.65	34.41	-19.66
S-44	-1262.01	-16.72	-19.66
S-45	-1252.05	17.76	-20.15
S-46	-1247.78	-11.28	-20.15
S-47	-1231.72	52.99	-42.32
S-48	-1232.73	-17.54	-42.32
S-49	-1222.56	36.01	-52.28
S-50	-1223.09	0.41	-52.28
S-51	-1215.93	45.14	-75.72
S-52	-1216.48	-26.62	-75.72
S-53	-1212.63	11.84	-68.56
S-54	-1212.45	-24.28	-68.56
S-55	-1210.00	10.71	-61.94
S-56	-1209.03	-49.65	-61.94
S-57	-1208.42	-19.31	-27.49

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14.38

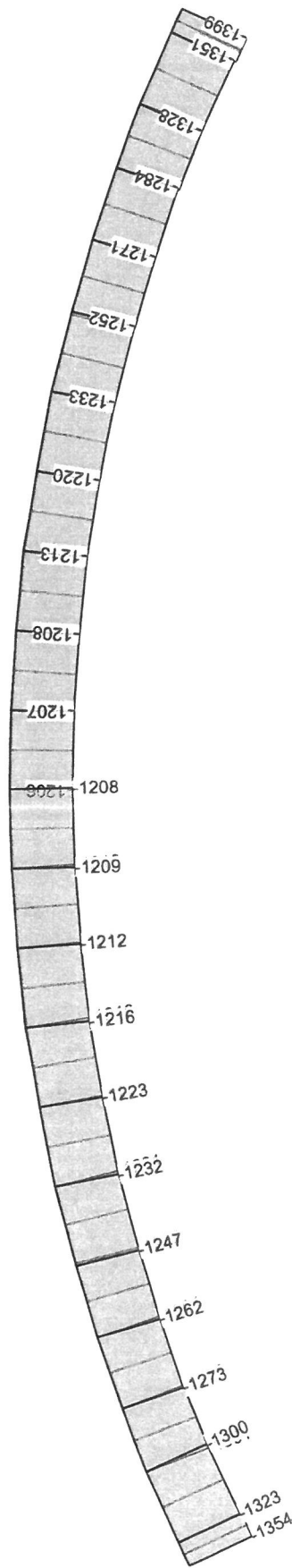
Moment Mt [kNm]



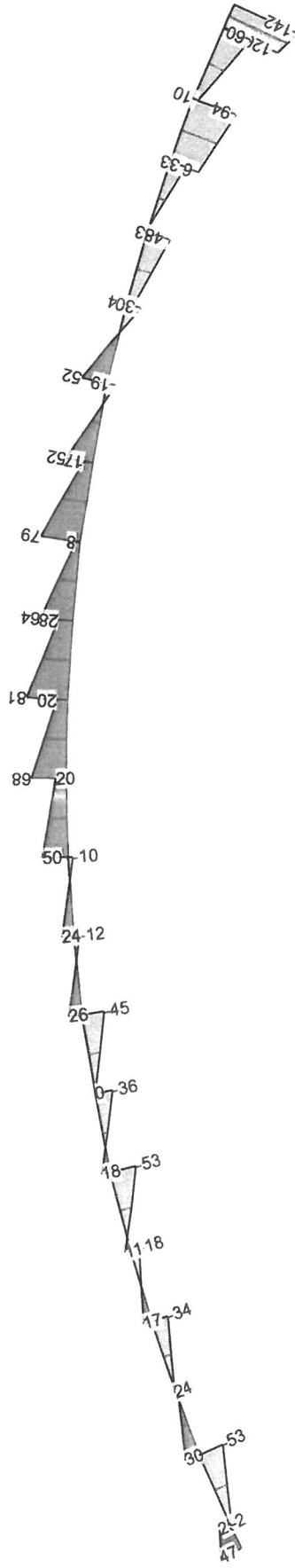
aus Lastkombination LK-6

Position	Nr	Nr	Vs	min Mt
S-16	-1398.99	Nr	Vs	max Mt
	-1388.63			
S-17	-1325.24			
	-1312.46			
S-18	-1283.94			
	-1273.42			
S-19	-1271.02			
	-1261.05			
S-20	-1232.04			
	-1244.15			
S-21	-1219.45			
	-1229.49			
S-22	-1210.44			
	-1220.45			
S-23	-1207.39			
	-1213.02			
S-24	-1205.16			
	-1208.77			
S-25	-1206.68			
	-1207.64			
S-27	-1351.16			
	-1328.55			
S-33	-1354.70			
	-1344.34			
S-34	-1301.16			
	-1289.97			
S-35	-1261.65			
	-1273.69			
S-36	-1252.05			
	-1257.03			
S-37	-1231.72			
	-1245.17			
S-38	-1222.56			
	-1228.76			
S-39	-1215.93			
	-1223.09			
S-40	-1216.48			
	-1214.04			
S-41	-1212.45			
	-1210.90			
S-42	-1209.03			
	-1208.42			

Position	Nr		Vs	min Mt
		[kN]		max Mt
S-44	-1300.43		52.83	-15.16
	-1323.04		2.51	11.83



Balkenschnittgrößen		Normalkraft N in [kN]
lastkombinationsweise dargestellt aus Lastkombination LK-7 Max = -1205, Min = -1399		
FE-Mod.	BR-TÜ-BZ1 Bauzustand-1	
Bauvorhaben	22-078 Instandsetzung Fußgängerbrücke	
Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10		Seite
Maßstab: 1:85		MicroFe 2018.051



Balkenschnittgrößen

Querkraft V in [kN]

lastkombinationsweise dargestellt
aus Lastkombination LK-7
Max = 81, Min = -142

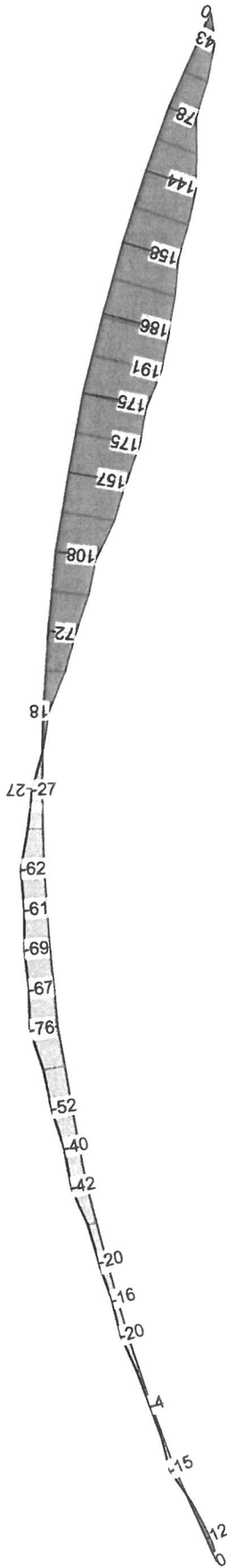
FE-Mod. BR-TÜ-BZ1 Bauzustand-1
Bauvorhaben 22-078

Instandsetzung Fußgängerbrücke

Maßstab: 1:85

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Seite



Balkenschnittgrößen

Moment M in [kNm]

lastkombinationsweise dargestellt

aus Lastkombination LK-7

Max = 191, Min = -76

FE-Mod. BR-TÜ-BZ1 Bauzustand-1

Bauvorhaben 22-078

Instandsetzung Fußgängerbrücke

Maßstab: 1:85

Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10

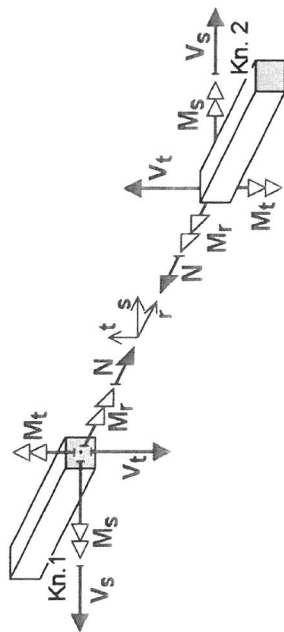
Seite

Balkenschnittgr-Stb

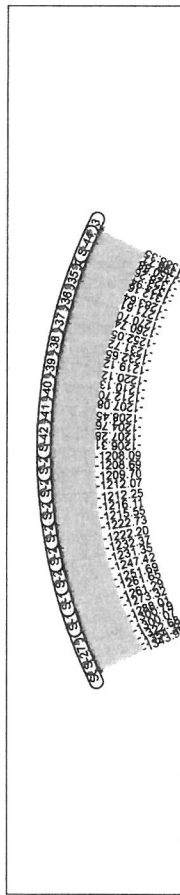
Schnittgrößen

Schnittgrößen Stb-Stützen und 3D-Stäbe

Schnittgrößen der Stützen und 3D-Stäbe



Normalkraft Nr [kN]



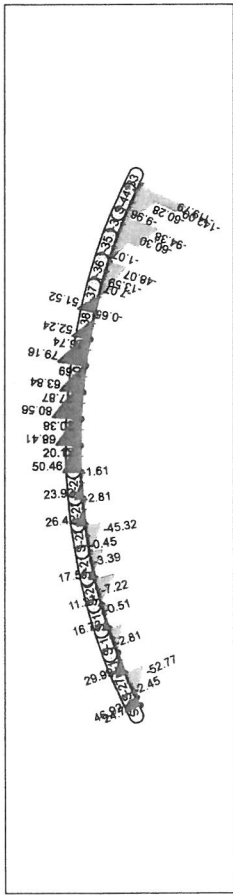
aus Lastkombination LK-7

Position	min Nr [kN]	max Nr [kN]	Vs [kN]	Mt [kNm]
S-16	-1354.34	46.92	46.92	0.00
S-17	-1343.98	24.71	29.99	11.86
S-18	-1300.79	29.99	-4.09	-15.08
S-19	-1288.01	1.70	-34.39	-4.02
S-20	-1261.29	16.73	-19.52	-19.52
S-21	-1261.65	17.51	-17.75	-19.52
S-22	-1251.69	11.27	-42.18	-20.00
S-23	-1247.42	-36.03	-52.99	-20.00
S-24	-1231.35	-45.32	-75.71	-42.18
S-25	-1222.20	-75.71	-68.83	-52.17
S-26	-1215.55	-12.19	-61.98	-75.71
S-27	-1212.25	23.92	-50.46	-68.83
S-28	-1212.07	23.92	-26.42	-61.98
S-29	-1209.70	9.88	-2.45	-52.77
S-30	-1208.69	50.46	-15.08	-42.18
S-31	-1208.09	20.12	-2.45	-20.00
S-32	-1322.68	-52.77	-11.86	-19.52
S-33	-1300.07	-142.00	0.00	0.00

Position

Position	min Nr [kN]	max Nr [kN]	Vs [kN]	Mt [kNm]
S-34	-1388.35	-1324.94	-119.79	43.33
S-35	-1312.16	-1283.64	-60.30	77.60
S-36	-1271.61	-1270.70	-32.65	143.68
S-37	-1260.74	-1252.05	3.44	157.54
S-38	-1231.72	-1232.65	-48.07	174.87
S-39	-1219.12	-1220.12	-13.59	174.87
S-40	-1210.13	-1210.13	-29.83	157.40
S-41	-1207.08	-1207.08	-19.00	157.40
S-42	-1204.76	-1207.28	7.69	108.47
S-43	-1206.31	-1206.31	63.84	72.25
S-44	-1350.88	-1328.26	27.87	72.25
S-45	-60.28	-9.96	80.56	17.72
S-46	-43.33	-43.33	20.38	17.72
S-47	-43.33	-43.33	68.41	-26.72
S-48	-43.33	-43.33	-60.28	43.33
S-49	-43.33	-43.33	-9.96	77.60

Querkraft Vs [kN]



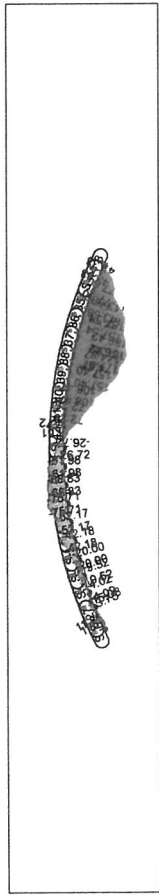
aus Lastkombination LK-7
Position

Position	Nr	Nr	min Vs	max Vs	Mt	Mt
S-16	-1343.98	24.71	11.86			
S-17	-1354.34	46.92	0.00			
S-18	-1288.01	-4.09	-4.02			
S-19	-1300.79	29.99	-15.08			
S-20	-1261.29	-34.39	-19.52			
S-21	-1273.32	1.70	-4.02			
S-22	-1251.69	-17.75	-20.00			
S-23	-1261.65	16.73	-19.52			
S-24	-1231.35	-52.99	-42.18			
S-25	-1247.42	11.27	-20.00			
S-26	-1222.20	-36.03	-52.17			
S-27	-1232.37	17.51	-42.18			
S-28	-1215.55	-45.32	-75.71			
S-29	-1222.73	-0.45	-52.17			
S-30	-1212.25	-12.19	-68.83			
S-31	-1216.11	26.42	-75.71			
S-32	-1209.70	-9.88	-61.98			
S-33	-1212.07	23.92	-68.83			
S-34	-1208.09	20.12	-26.72			
S-35	-1208.69	50.46	-61.98			
S-36	-1300.07	-52.77	-15.08			
S-37	-1322.68	-2.45	11.86			
S-38	-1398.71	-142.00	0.00			
S-39	-1388.35	-119.79	43.33			
S-40	-1324.94	-94.38	77.60			
S-41	-1312.16	-60.30	143.68			
S-42	-1283.64	-32.65	143.68			
S-43	-1271.61	3.44	157.54			
S-44	-1270.70	-48.07	157.54			
S-45	-1260.74	-13.59	186.42			
S-46	-1252.05	-29.83	186.42			
S-47	-1231.72	51.52	174.87			
S-48	-1232.65	-19.00	174.87			
S-49	-1219.12	52.24	157.40			
S-50	-1220.12	16.74	157.40			
S-51	-1210.13	79.16	108.47			
S-52	-1212.70	7.69	108.47			
S-53	-1207.08	63.84	72.25			

Position

Position	Nr	Nr	min Vs	max Vs	Mt	Mt
S-41	-1208.45	27.87	72.25			
S-42	-1204.76	80.56	17.72			
S-43	-1207.28	20.38	17.72			
S-44	-1206.31	68.41	-26.72			
S-45	-1350.88	-60.28	43.33			
S-46	-1328.26	-9.96	77.60			

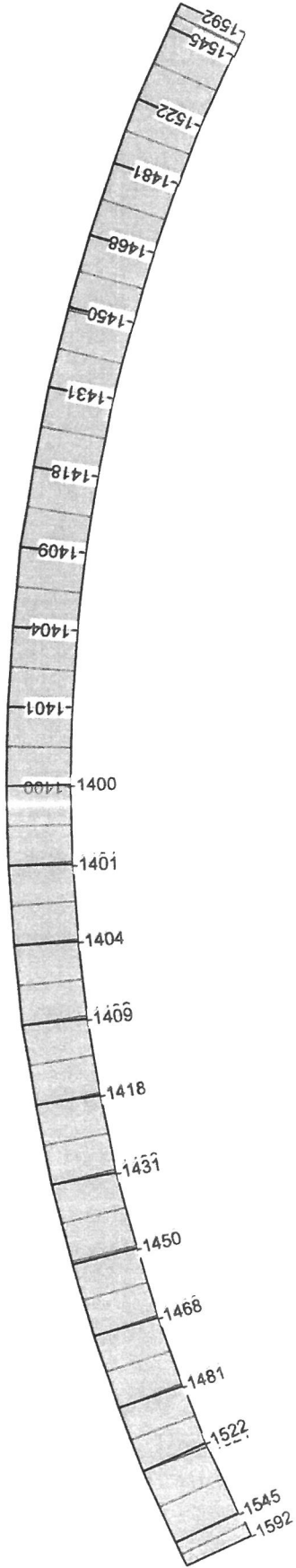
Moment Mt [kNm]



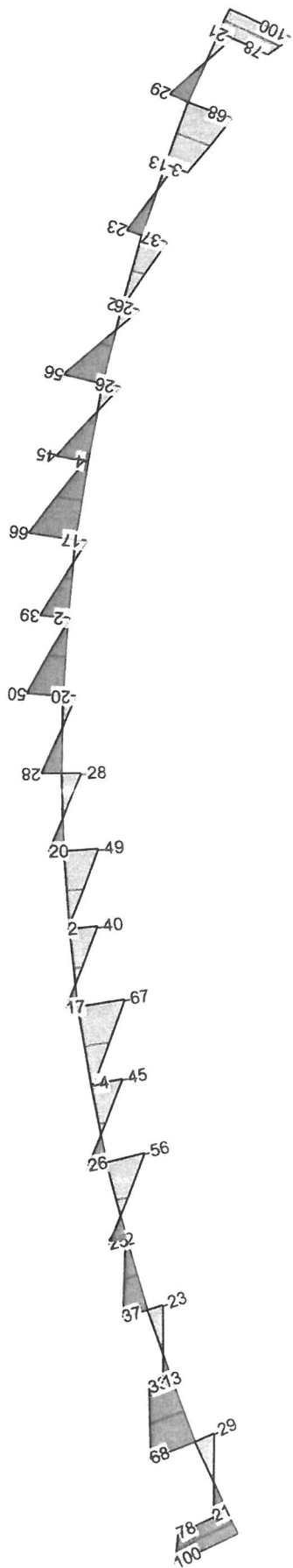
aus Lastkombination LK-7

Position	Nr Nr [kN]	Vs Vs [kN]	min Mt max Mt [kNm]
S-16	-1354.34	46.92	0.00
S-17	-1343.98	24.71	11.86
S-18	-1300.79	29.99	-15.08
S-19	-1289.61	0.17	-3.81
S-20	-1261.29	-34.39	-19.52
S-21	-1273.32	1.70	-4.02
S-22	-1251.69	-17.75	-20.00
S-23	-1256.67	-0.51	-15.72
S-24	-1231.35	-52.99	-42.18
S-25	-1244.80	0.81	-19.04
S-26	-1222.20	-36.03	-52.17
S-27	-1228.40	-3.39	-39.49
S-28	-1215.55	-45.32	-75.71
S-29	-1222.73	-0.45	-52.17
S-30	-1216.11	26.42	-75.71
S-31	-1213.65	1.88	-66.89
S-32	-1212.07	23.92	-68.83
S-33	-1210.28	-1.61	-60.54
S-34	-1208.69	50.46	-61.98
S-35	-1208.09	20.12	-26.72
S-36	-1300.07	-52.77	-15.08
S-37	-1322.68	-2.45	11.86
S-38	-1398.71	-142.00	0.00
S-39	-1388.35	-119.79	43.33
S-40	-1324.94	-94.38	77.60
S-41	-1312.16	-60.30	143.68
S-42	-1283.64	-32.65	143.68
S-43	-1273.11	-1.07	157.68
S-44	-1270.70	-48.07	157.54
S-45	-1260.74	-13.59	186.42
S-46	-1231.72	51.52	174.87
S-47	-1243.83	3.09	191.99
S-48	-1219.12	52.24	157.40
S-49	-1229.17	-0.65	177.37
S-50	-1210.13	79.16	108.47
S-51	-1220.12	16.74	157.40
S-52	-1207.08	63.84	72.25
S-53	-1212.70	7.69	108.47
S-54	-1204.76	80.56	17.72
S-55	-1208.45	27.87	72.25
S-56	-1206.31	68.41	-26.72
S-57	-1207.28	20.38	17.72

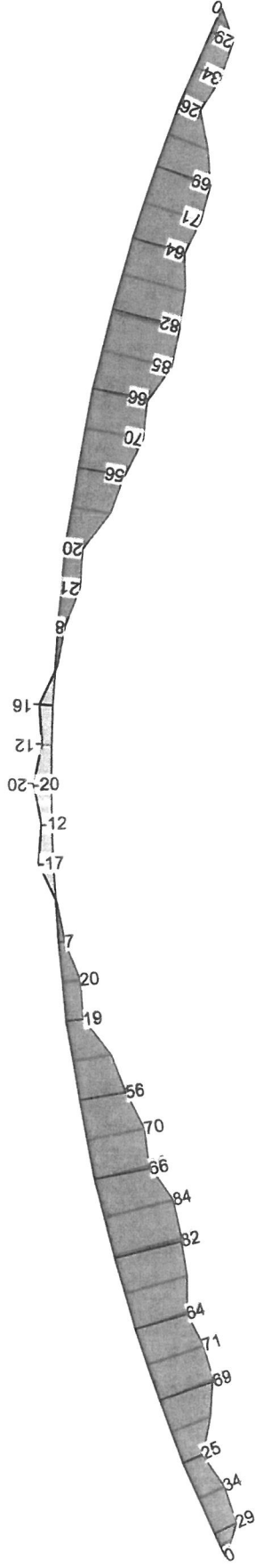
14.45



Balkenschnittgrößen		Normalkraft N in [kN]	FE-Mod: BR-TÜ-BZ1 Bauzustand-1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	Maßstab: 1:85
lastkombinationsweise dargestellt aus Lastkombination LK-8 Max = -1400, Min = -1592				
Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10				
			Seite	MicroFe 2018.0



Balkenschnittgrößen		Querkraft V in [kN]	FE-Mod. BR-TÜ-BZ1 Bauzustand-1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	Maßstab: 1:85
lastkombinationsweise dargestellt aus Lastkombination LK-8 Max = 100, Min = -100			Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10	Seite
				MicroFe 2018.051



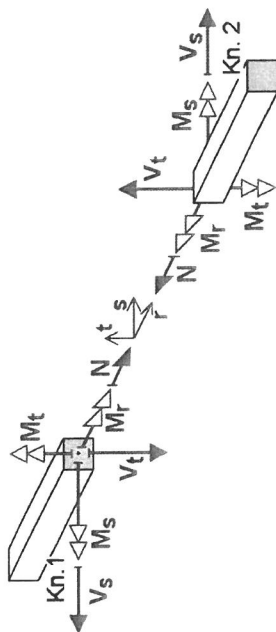
Balkenschnittgrößen		Moment M in [kNm]	FE-Mod. BR-TÜ-BZ1 Bauzustand-1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	Maßstab: 1:85
lastkombinationsweise dargestellt aus Lastkombination LK-8 Max = 85, Min = -20				
		Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10			Seite

Balkenschnittgr-Stb

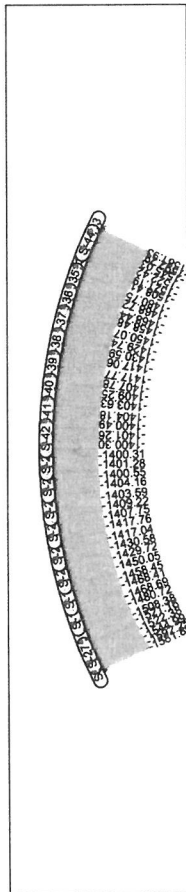
Schnittgrößen

Schnittgrößen Stb-Stützen und 3D-Stäbe

Schnittgrößen der Stützen und 3D-Stäbe



Normalkraft Nr [kN]



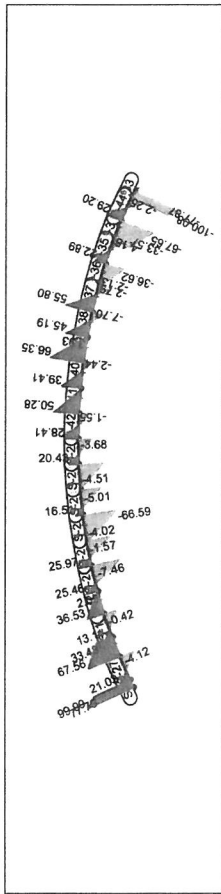
aus Lastkombination LK-8

Position	min Nr max Nr [kN]	Vs Vs [kN]	Mt Mt [kNm]
S-16	-1592.25 0.00	99.99 0.00	0.00 0.00
S-17	-1581.89 25.41	77.79 25.41	29.43 25.41
S-18	-1508.38 68.57	33.48 68.57	68.57 68.57
S-19	-1480.72 63.89	13.11 63.89	68.57 63.89
S-20	-1468.69 63.89	-22.98 63.89	63.89 63.89
S-21	-1468.41 81.96	36.53 81.96	63.89 81.96
S-22	-1458.45 81.96	2.05 81.96	81.96 81.96
S-23	-1450.05 65.90	25.46 65.90	81.96 65.90
S-24	-1429.72 65.90	-55.89 65.90	65.90 65.90
S-25	-1430.58 55.52	25.97 55.52	65.90 55.52
S-26	-1417.04 55.52	-45.28 55.52	55.52 55.52
S-27	-1417.76 19.39	-4.02 19.39	55.52 19.39
S-28	-1409.22 19.39	16.51 19.39	19.39 19.39
S-29	-1403.59 7.42	-39.79 7.42	7.42 7.42
S-30	-1404.16 7.42	2.02 7.42	7.42 7.42
S-31	-1400.55 -16.54	-49.47 -16.54	-16.54 -16.54
S-32	-1401.28 -16.54	20.43 -16.54	-16.54 -16.54
S-33	-1400.31 -20.18	-27.60 -20.18	-20.18 -20.18
S-34	-1544.99 29.43	21.03 29.43	29.43 29.43
S-35	-1522.38 25.41	-29.28 25.41	25.41 25.41
S-36	-1592.29 0.00	-100.08 0.00	0.00 0.00

Position

Position	min Nr max Nr [kN]	Vs Vs [kN]	Mt Mt [kNm]
S-34	-1581.93 -1521.19	-77.87 -67.65	29.46 25.51
S-35	-1508.41 -1480.75	-33.57 -13.20	68.75 68.75
S-36	-1468.72 -1468.44	22.89 -36.62	64.15 64.15
S-37	-1458.48 -1450.07	-2.13 -25.55	82.31 82.31
S-38	-1429.74 -1430.59	55.80 -26.06	66.34 66.34
S-39	-1417.06 -1417.77	45.19 3.93	56.05 56.05
S-40	-1407.78 -1409.25	66.35 -16.75	20.09 20.09
S-41	-1403.63 -1404.18	39.41 -2.41	8.43 8.44
S-42	-1400.49 -1401.26	50.28 -19.63	-15.74 -15.74
S-43	-1400.30 -1545.03	28.41 -21.12	-20.18 29.46
S-44	-1522.42	29.20	25.51

Querkraft Vs [kN]



aus Lastkombination LK-8

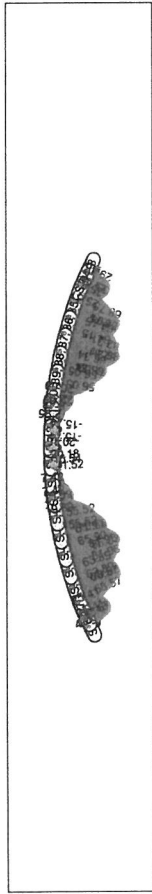
Position	Nr [kN]	min Vs max Vs [kN]	Mt [kNm]
S-16	-1581.89	77.79	29.43
S-17	-1592.25	99.99	0.00
S-18	-1508.38	33.48	68.57
S-19	-1521.16	67.56	25.41
S-20	-1468.69	-22.98	63.89
S-21	-1480.72	13.11	68.57
S-22	-1458.45	2.05	81.96
S-23	-1468.41	36.53	63.89
S-24	-1429.72	-55.89	65.90
S-25	-1450.05	25.46	81.96
S-26	-1417.04	-45.28	55.52
S-27	-1430.58	25.97	65.90
S-28	-1407.75	-66.59	19.39
S-29	-1417.76	-4.02	55.52
S-30	-1403.59	-39.79	7.42
S-31	-1409.22	16.51	19.39
S-32	-1400.55	-49.47	-16.54
S-33	-1404.16	2.02	7.42
S-34	-1400.31	-27.60	-20.18
S-35	-1401.28	20.43	-16.54
S-36	-1522.38	-29.28	25.41
S-37	-1544.99	21.03	29.43
S-38	-1592.29	-100.08	0.00
S-39	-1581.93	-77.87	29.46
S-40	-1521.19	-67.65	25.51
S-41	-1508.41	-33.57	68.75
S-42	-1480.75	-13.20	68.75
S-43	-1468.72	22.89	64.15
S-44	-1468.44	-36.62	64.15
S-45	-1458.48	-2.13	82.31
S-46	-1450.07	-25.55	82.31
S-47	-1429.74	55.80	66.34
S-48	-1430.59	-26.06	66.34
S-49	-1417.06	45.19	56.05
S-50	-1417.77	3.93	56.05
S-51	-1407.78	66.35	20.09
S-52	-1409.25	-16.75	20.09
S-53	-1403.63	39.41	8.43
S-54	-1404.18	-2.41	8.44

Position

Position	Nr [kN]	min Vs max Vs [kN]	Mt [kNm]
S-42	-1400.49	50.28	-15.74
S-44	-1401.26	-19.63	-15.74
S-46	-1400.30	28.41	-20.18
S-48	-1545.03	-21.12	29.46
S-50	-1522.42	29.20	25.51

14.50

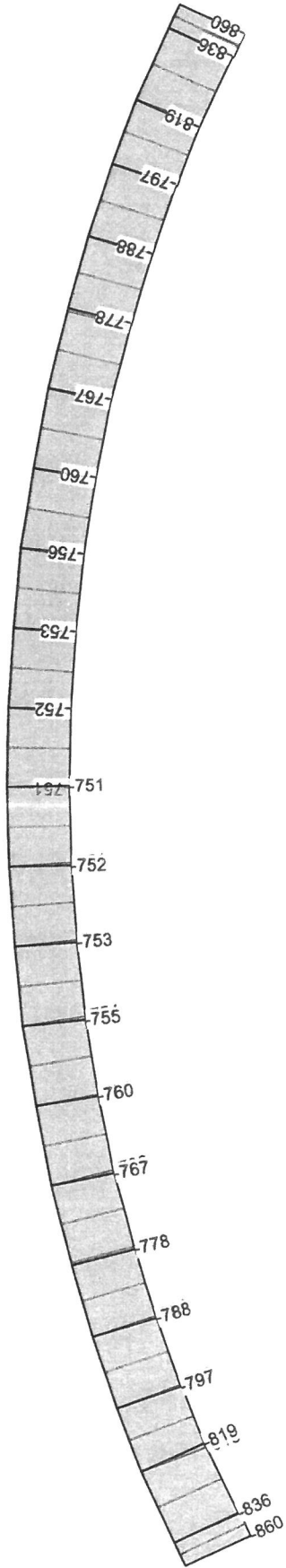
Moment Mt [kNm]



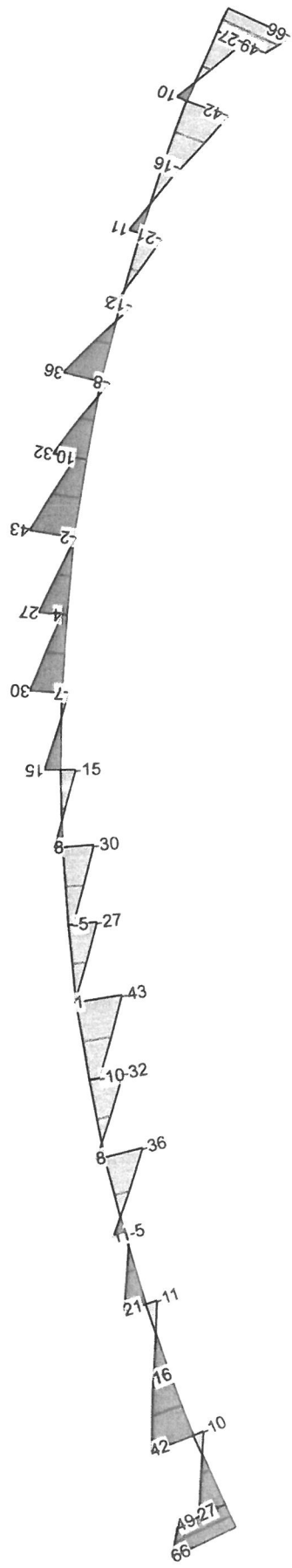
aus Lastkombination LK-8

Position	Nr		Vs		min Mt	
	Nr	[kN]	Nr	[kN]	max Mt	[kNm]
S-16	-1592.25	99.99	99.99	0.00		
S-17	-1581.89	77.79	77.79	29.43		
S-18	-1521.16	67.56	67.56	25.41		
S-19	-1508.38	33.48	33.48	68.57		
S-20	-1468.69	-22.98	63.89	63.89		
S-21	-1476.21	-0.42	70.83	70.83		
S-22	-1468.41	36.53	63.89	63.89		
S-23	-1458.45	2.05	81.96	81.96		
S-24	-1429.72	-55.89	65.90	65.90		
S-25	-1444.37	2.70	86.03	86.03		
S-26	-1417.04	-45.28	55.52	55.52		
S-27	-1425.34	-1.57	70.56	70.56		
S-28	-1407.75	-66.59	19.39	19.39		
S-29	-1417.76	-4.02	55.52	55.52		
S-30	-1403.59	-39.79	7.42	7.42		
S-31	-1407.79	2.17	21.74	21.74		
S-32	-1400.55	-49.47	-16.54	-16.54		
S-33	-1404.16	2.02	7.42	7.42		
S-34	-1400.31	-27.60	-20.18	-20.18		
S-35	-1400.91	2.35	-12.27	-12.27		
S-36	-1522.38	-29.28	25.41	25.41		
S-37	-1536.51	2.17	33.67	33.67		
S-38	-1592.29	-100.08	0.00	0.00		
S-39	-1581.93	-77.87	29.46	29.46		
S-40	-1521.19	-67.65	25.51	25.51		
S-41	-1508.41	-33.57	68.75	68.75		
S-42	-1468.72	22.89	64.15	64.15		
S-43	-1476.24	0.34	71.04	71.04		
S-44	-1468.44	-36.62	64.15	64.15		
S-45	-1458.48	-2.13	82.31	82.31		
S-46	-1429.74	55.80	66.34	66.34		
S-47	-1444.39	-2.79	86.41	86.41		
S-48	-1417.06	45.19	56.05	56.05		
S-49	-1425.36	1.48	71.03	71.03		
S-50	-1407.78	66.35	20.09	20.09		
S-51	-1417.77	3.93	56.05	56.05		
S-52	-1403.63	39.41	8.43	8.43		
S-53	-1407.82	-2.44	22.50	22.50		
S-54	-1400.49	50.28	-15.74	-15.74		
S-55	-1404.18	-2.41	8.44	8.44		
S-56	-1400.30	28.41	-20.18	-20.18		
S-57	-1400.90	-1.55	-11.77	-11.77		

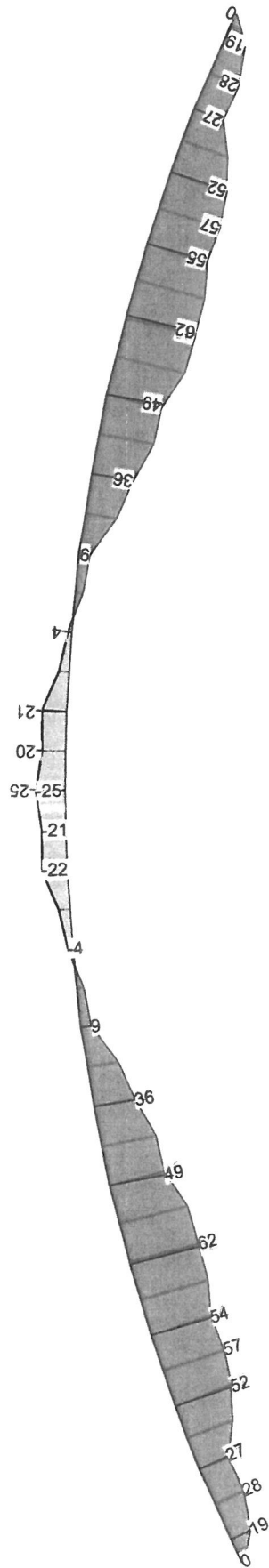
Position	Nr		Vs		min Mt	
	Nr	[kN]	Nr	[kN]	max Mt	[kNm]
S-44	-1522.42	29.20	25.51	25.51		
	-1536.55	-2.25	33.73	33.73		



Balkenschnittgrößen		Normalkraft N in [kN]	FE-Mod. BR-TÜ-BZ1 Bauzustand-1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	Maßstab: 1:85
lastkombinationsweise dargestellt aus Lastkombination LK-9 Max = -751, Min = -860				
Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10					Seite



Balkenschnittgrößen		Querlast V in [kN]	FE-Mod. BR-TÜ-BZ1 Bauzustand-1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	Maßstab: 1:85
lastkombinationsweise dargestellt aus Lastkombination LK-9 Max = 66, Min = -66				
			Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10	Seite



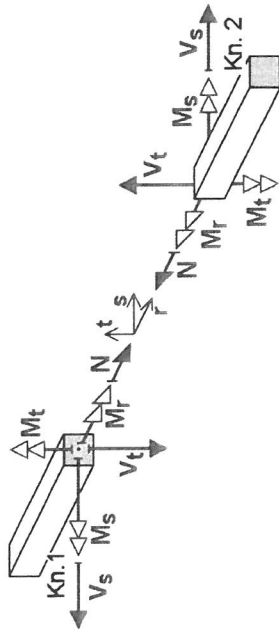
Balkenschnittgrößen		Moment M in [kNm]	FE-Mod. BR-TÜ-BZ1 Bauzustand-1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke		Maßstab: 1:85
lastkombinationsweise dargestellt aus Lastkombination LK-9 Max = 63, Min = -25			Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10		
			Seite		

Balkenschnittgr-Stb

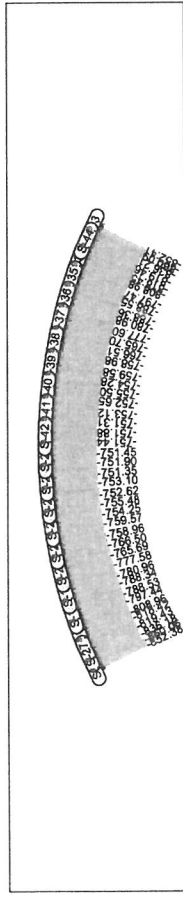
Schnittgrößen

Schnittgrößen Stb-Stützen und 3D-Stäbe

Schnittgrößen der Stützen und 3D-Stäbe



Normalkraft Nr [kN]



aus Lastkombination LK-9

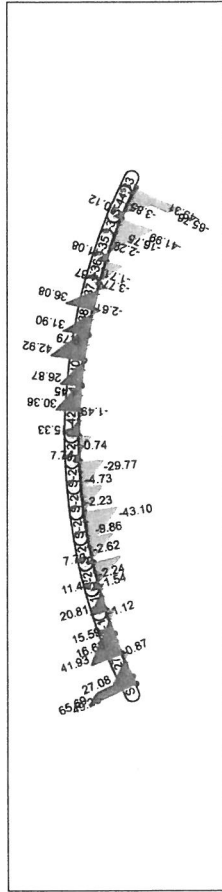
Position	min Nr max Nr	Nr [kN]	Vs [kN]	Mt [kNm]
S-16	-860.06 -852.38	65.69 19.03	0.00 19.03	0.00
S-17	-818.42 -808.96	49.25 16.68	41.93 52.31	27.27
S-18	-797.44 -788.53	15.59 -11.14	52.31 54.42	52.31
S-19	-788.34 -780.96	20.81 -4.74	54.42 61.94	54.42
S-20	-777.58 -765.69	11.46 -36.15	61.94 48.72	61.94
S-21	-766.50 -758.96	7.70 -31.96	48.72 35.95	48.72
S-22	-759.57 -754.25	-9.86 -43.10	35.95 8.86	35.95
S-23	-755.48 -752.62	1.44 -27.16	8.86 -4.26	8.86
S-24	-753.10 -751.35	-4.73 -29.77	-4.26 -21.69	-4.26
S-25	-751.90 -751.45	7.74 -14.73	-21.69 -25.22	-21.69
S-27	-836.18 -819.43	27.08 -10.19	-25.22 19.03	-25.22
S-33	-860.09 -860.09	-65.76 0.00	19.03 27.27	0.00

Position

Position	min Nr max Nr	Nr [kN]	Vs [kN]	Mt [kNm]
S-34	-852.41 -818.45	-49.31 -41.99	19.05 27.35	19.05
S-35	-808.98 -797.47	-16.75 -15.66	52.44 54.61	52.44
S-36	-788.55 -788.36	11.08 -20.87	54.61 42.92	54.61
S-37	-780.98 -777.60	4.67 -11.52	42.92 26.87	42.92
S-38	-765.70 -766.51	36.08 -7.77	26.87 4.45	36.08
S-39	-758.98 -759.58	31.90 9.79	4.45 30.36	31.90
S-40	-754.28 -755.50	9.38 -1.62	30.36 -7.14	9.38
S-41	-752.65 -753.12	26.87 4.45	-7.14 15.33	26.87
S-42	-751.31 -751.88	-3.51 -21.09	15.33 -27.14	-3.51
S-44	-836.21 -819.46	-27.14 10.12	19.05 27.35	-27.14

14.55

Querkraft V_s [kN]

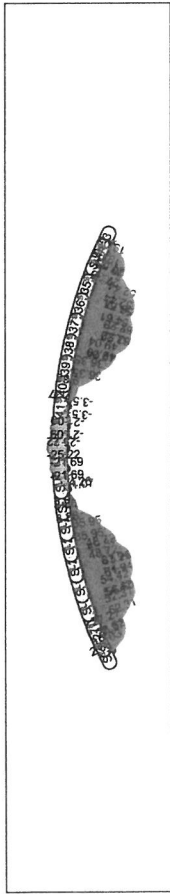


aus Lastkombination LK-9

Position	Nr	min Vs max Vs	Mt	Mt
	[kN]	[kN]	[kNm]	[kNm]
S-16	-852.38	49.25	19.03	19.03
	-860.06	65.69	0.00	0.00
S-17	-808.96	16.68	52.31	52.31
	-818.42	41.93	27.27	27.27
S-18	-788.53	-11.14	54.42	54.42
	-797.44	15.59	52.31	52.31
S-19	-780.96	-4.74	61.94	61.94
	-788.34	20.81	54.42	54.42
S-20	-765.69	-36.15	48.72	48.72
	-777.58	11.46	61.94	61.94
S-21	-758.96	-31.96	35.95	35.95
	-766.50	7.70	48.72	48.72
S-22	-754.25	-43.10	8.86	8.86
	-759.57	-9.86	35.95	35.95
S-23	-752.62	-27.16	4.26	4.26
	-755.48	1.44	8.86	8.86
S-24	-751.35	-29.77	-21.69	-21.69
	-753.10	-4.73	-4.26	-4.26
S-25	-751.45	-14.73	-25.22	-25.22
	-751.90	7.74	-21.69	-21.69
S-27	-819.43	-10.19	27.27	27.27
	-836.18	27.08	19.03	19.03
S-33	-860.09	-65.76	0.00	0.00
	-852.41	49.31	19.05	19.05
S-34	-818.45	-41.99	27.35	27.35
	-808.98	-16.75	52.44	52.44
S-35	-797.47	-15.66	52.44	52.44
	-788.55	11.08	54.61	54.61
S-36	-788.36	-20.87	54.61	54.61
	-780.98	4.67	62.20	62.20
S-37	-777.60	-11.52	62.20	62.20
	-765.70	36.08	49.04	49.04
S-38	-766.51	-7.77	49.04	49.04
	-758.98	31.90	36.35	36.35
S-39	-759.58	9.79	36.35	36.35
	-754.28	42.92	9.38	9.38
S-40	-755.50	-1.62	9.38	9.38
	-752.65	26.87	-3.51	-3.51
S-41	-753.12	4.45	-3.51	-3.51

14.56

Moment Mt [kNm]



aus Lastkombination LK-9

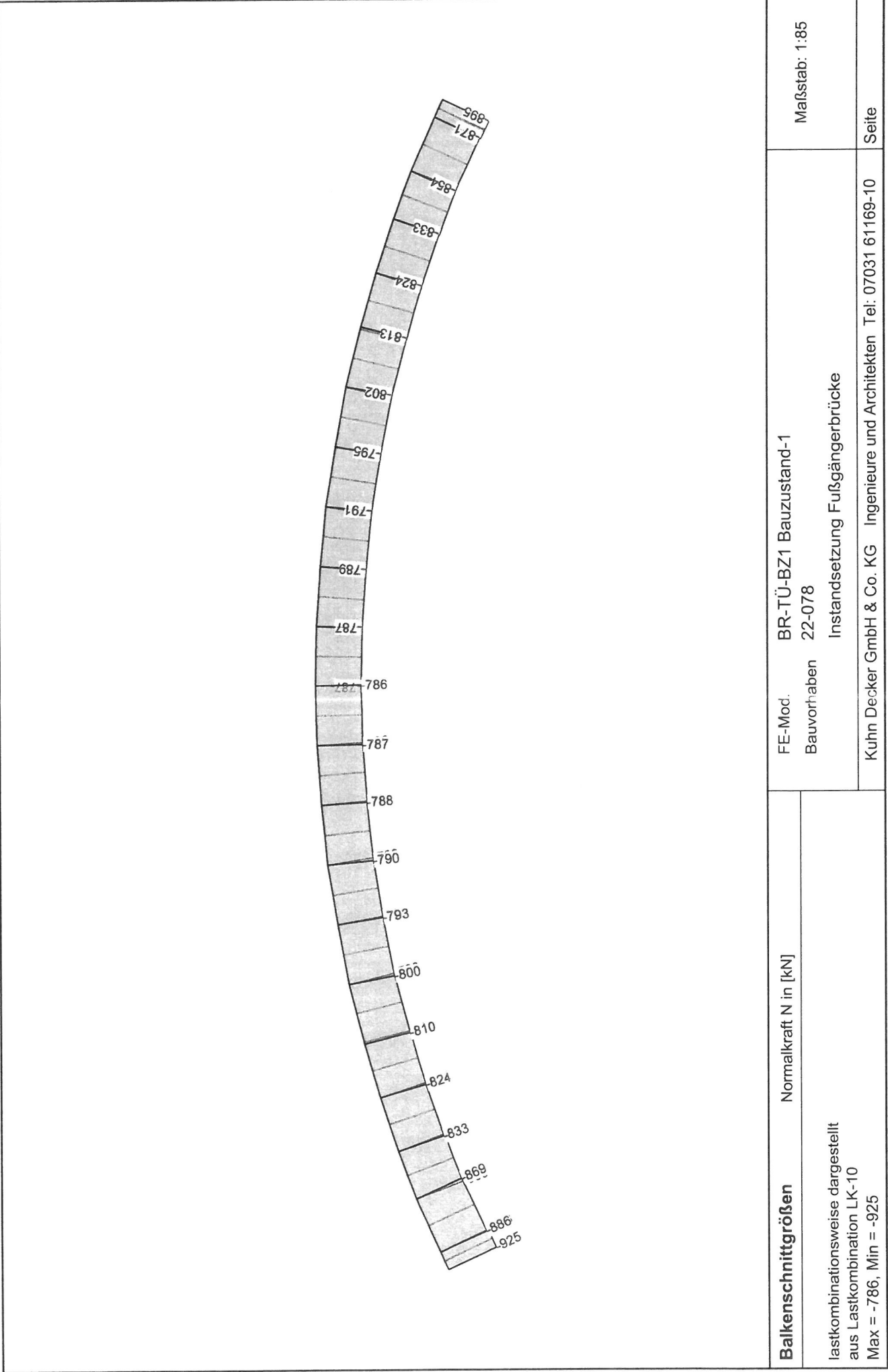
Position	Nr [kN]	Vs [kN]	min Mt max Mt [kNm]
S-16	-860.06	65.69	0.00
S-17	-852.38	49.25	19.03
S-18	-818.42	41.93	27.27
S-19	-808.96	16.68	52.31
S-20	-797.44	15.59	52.31
S-21	-791.87	-1.12	56.60
S-22	-788.34	20.81	54.42
S-23	-781.88	-1.54	62.31
S-24	-765.69	-36.15	48.72
S-25	-774.16	-2.24	63.25
S-26	-758.96	-31.96	35.95
S-27	-765.52	2.54	49.37
S-28	-754.25	-43.10	8.86
S-29	-759.57	-9.86	35.95
S-30	-752.62	-27.16	-4.26
S-31	-755.48	1.44	8.86
S-32	-751.35	-29.77	-21.69
S-33	-753.10	-4.73	-4.26
S-34	-751.45	-14.73	-25.22
S-35	-751.73	-0.74	-20.37
S-36	-836.18	27.08	19.03
S-37	-823.62	-0.87	28.62
S-38	-860.09	-65.76	0.00
S-39	-852.41	-49.31	19.05
S-40	-818.45	-41.99	27.35
S-41	-808.98	-16.75	52.44
S-42	-797.47	-15.66	52.44
S-43	-791.90	1.05	56.77
S-44	-788.36	-20.87	54.61
S-45	-781.90	1.48	62.56
S-46	-765.70	36.08	49.04
S-47	-774.18	2.17	63.52
S-48	-758.98	31.90	36.35
S-49	-764.55	2.55	49.70
S-50	-754.28	42.92	9.38
S-51	-759.58	9.79	36.35
S-52	-752.65	26.87	-3.51
S-53	-755.50	-1.62	9.38
S-54	-751.31	30.36	-21.09
S-55	-753.12	4.45	-3.51
S-56	-751.44	15.33	-25.22

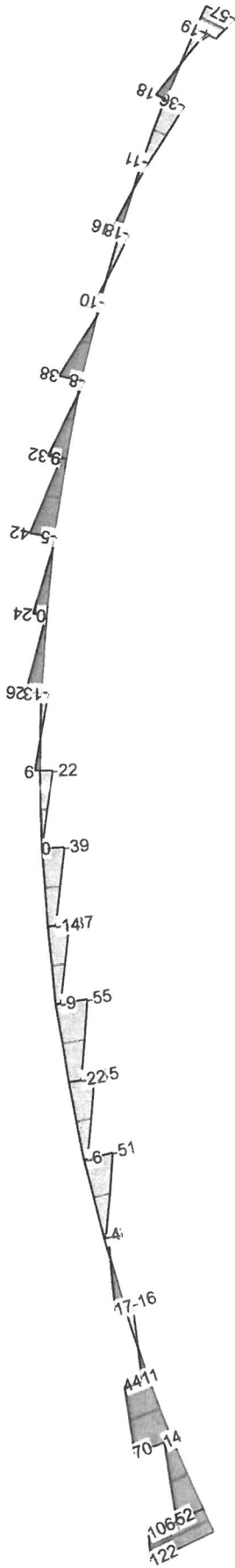
Position

Nr [kN]	Vs [kN]	min Mt max Mt [kNm]
-751.71	1.33	-20.00
-836.21	-27.14	19.05
-823.65	0.81	28.68

S-44

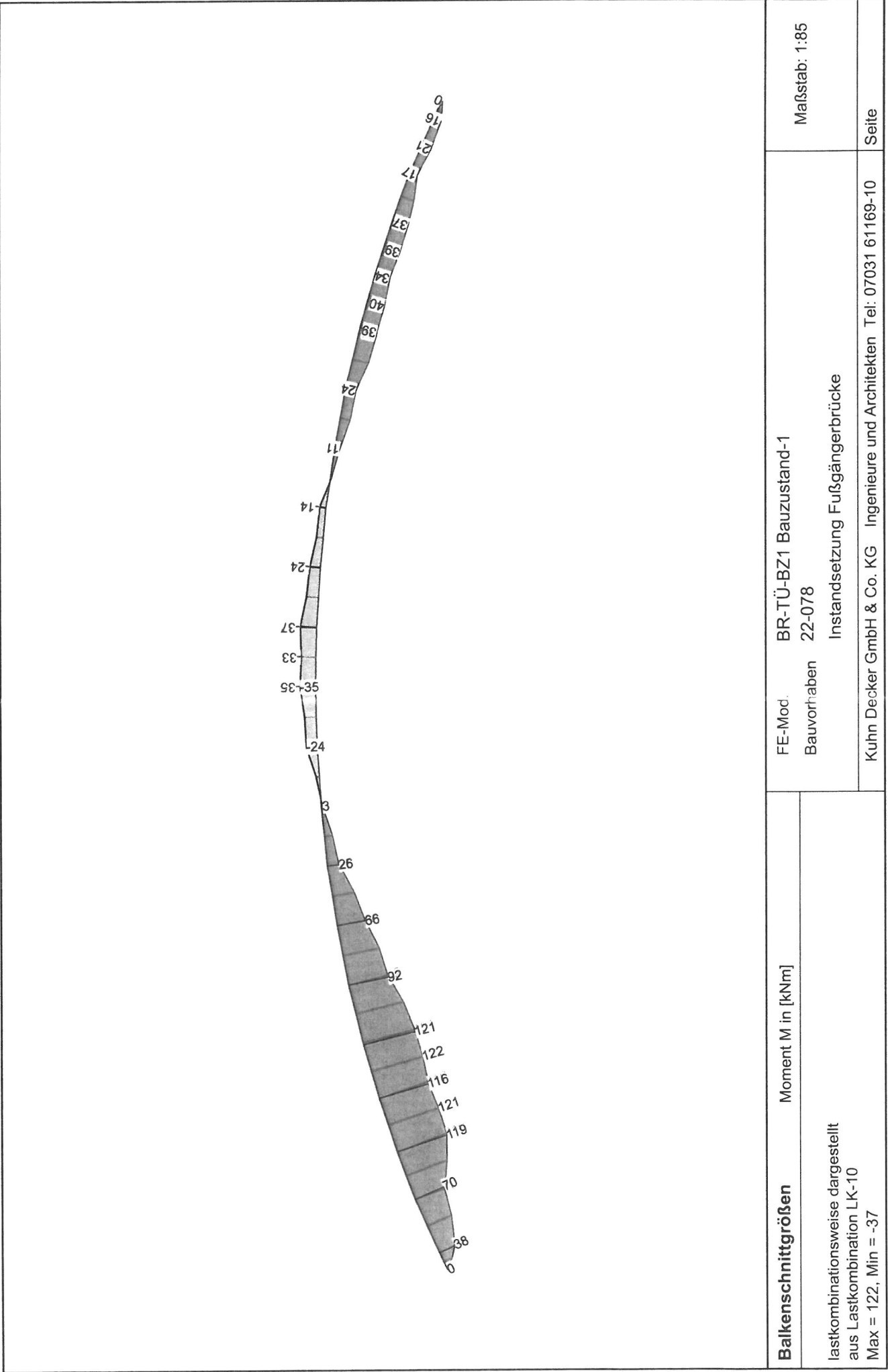
14.57



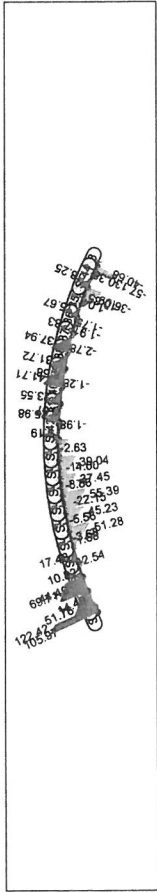


14.59

Balkenschnittgrößen		FE-Mod.	BR-TÜ-BZ1 Bauzustand-1	Maßstab: 1:85
lastkombinationsweise dargestellt aus Lastkombination LK-10 Max = 122, Min = -57		Querkraft V in [kN]	Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	
			Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10	Seite



Querkraft Vs [kN]

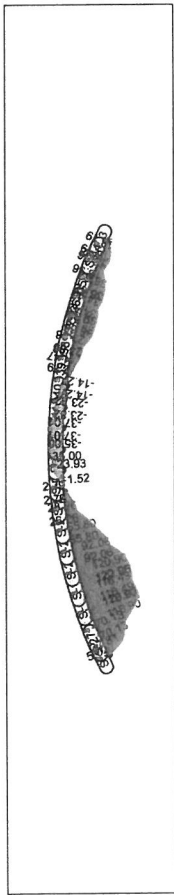


aus Lastkombination LK-10

Position	Nr	Nr	min Vs	Mt
			max Vs	
			[kN]	[kNm]
S-16	-917.54	105.97	37.81	
S-17	-925.21	122.42	0.00	
S-18	-856.81	44.46	118.90	
S-19	-866.27	69.71	70.13	
S-20	-823.89	-15.91	116.49	
S-21	-832.80	10.82	118.90	
S-22	-816.48	-8.07	120.90	
S-23	-823.86	17.48	116.49	
S-24	-798.03	-51.28	92.06	
S-25	-809.93	-3.68	120.90	
S-26	-792.12	-45.23	65.80	
S-27	-799.66	-5.56	92.06	
S-28	-787.78	-55.39	26.26	
S-29	-793.10	-22.15	65.80	
S-30	-786.82	-37.45	2.79	
S-31	-789.68	-8.86	26.26	
S-32	-785.83	-39.04	-23.93	
S-33	-787.59	-14.00	2.79	
S-34	-786.35	-22.27	-35.00	
S-35	-786.80	0.20	-23.93	
S-36	-868.95	14.49	70.13	
S-37	-885.70	51.76	37.81	
S-38	-894.74	-57.13	0.00	
S-39	-887.07	-40.68	16.19	
S-40	-853.67	-36.09	16.56	
S-41	-844.20	-10.85	36.62	
S-42	-832.88	-11.06	36.62	
S-43	-823.97	15.67	34.43	
S-44	-823.93	-17.72	34.43	
S-45	-816.55	7.83	39.06	
S-46	-813.26	-9.66	39.06	
S-47	-801.36	37.94	23.98	
S-48	-802.22	-7.95	23.98	
S-49	-794.69	31.72	11.47	
S-50	-795.27	8.58	11.47	
S-51	-789.97	41.71	-14.27	
S-52	-791.06	-4.94	-14.27	
S-53	-788.21	23.55	-23.82	
S-54	-788.56	0.07	-23.82	
S-55	-786.75	25.98	-37.01	
S-56	-787.06	-13.28	-37.01	
S-57	-786.61	9.19	-35.00	

Position	Nr	min Vs	Mt
		max Vs	
		[kN]	[kNm]
S-44	-870.98	-19.02	16.19
	-854.23	18.25	16.56

Moment Mt [kNm]



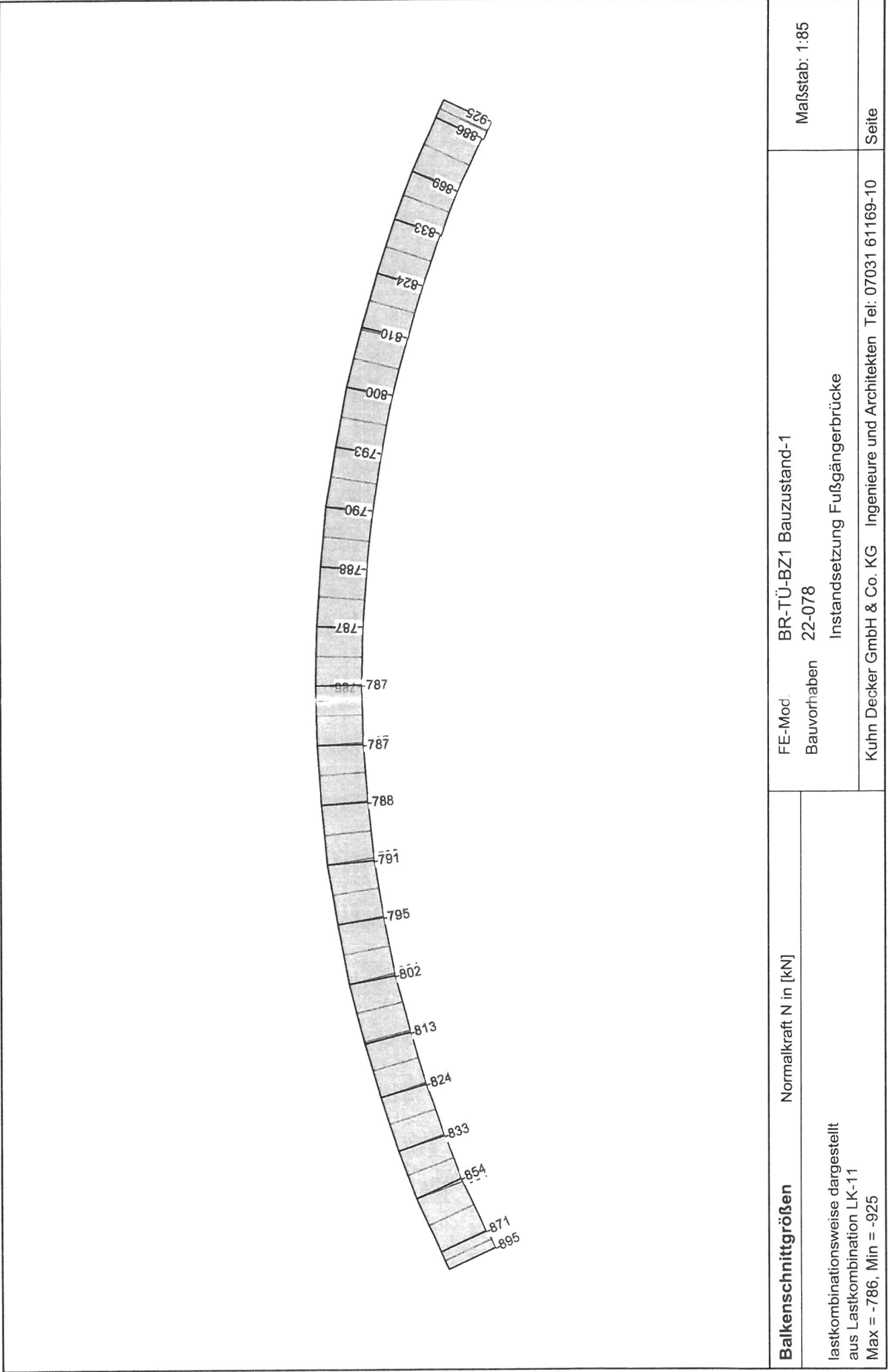
aus Lastkombination LK-10

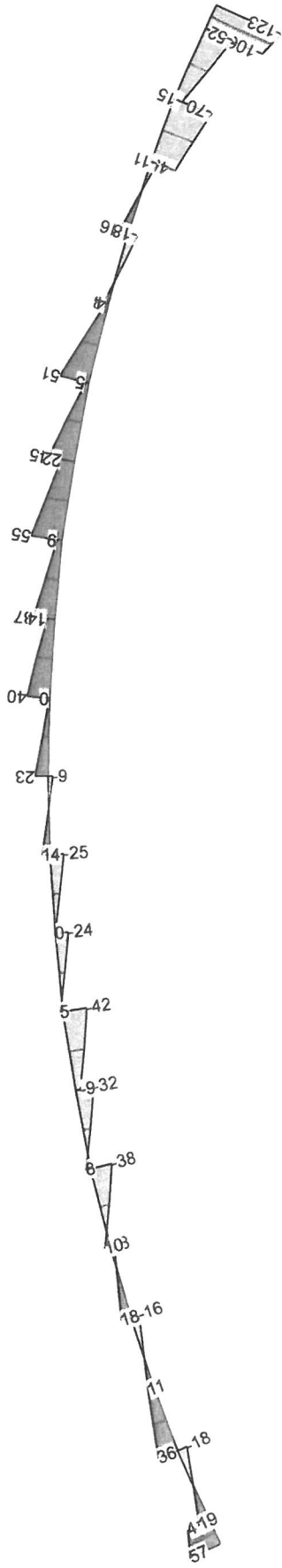
Position	Nr [kN]	Vs [kN]	min Mt max Mt [kNm]
S-16	-925.21	122.42	0.00
S-17	-917.54	105.97	37.81
S-18	-866.27	69.71	70.13
S-19	-856.81	44.46	118.90
S-20	-823.89	-15.91	116.49
S-21	-829.46	0.80	120.97
S-22	-823.86	17.48	116.49
S-23	-819.24	1.51	122.05
S-24	-798.03	-51.28	92.06
S-25	-809.93	-3.68	120.90
S-26	-792.12	-45.23	65.80
S-27	-799.66	-5.56	92.06
S-28	-787.78	-55.39	26.26
S-29	-793.10	-22.15	65.80
S-30	-786.82	-37.45	2.79
S-31	-789.68	-8.86	26.26
S-32	-785.83	-39.04	-23.93
S-33	-787.59	-14.00	2.79
S-34	-786.35	-22.27	-35.00
S-35	-786.80	0.20	-23.93
S-36	-885.70	51.76	37.81
S-37	-868.95	14.49	70.13
S-38	-894.74	-57.13	0.00
S-39	-887.07	-40.68	16.19
S-40	-853.67	-36.09	16.56
S-41	-844.20	-10.85	36.62
S-42	-823.97	15.67	34.43
S-43	-829.54	-1.04	38.77
S-44	-823.93	-17.72	34.43
S-45	-818.39	1.44	40.15
S-46	-801.36	37.94	23.98
S-47	-811.33	-1.91	39.98
S-48	-794.69	31.72	11.47
S-49	-800.26	2.38	24.69
S-50	-789.97	41.71	-14.27
S-51	-795.27	8.58	11.47
S-52	-788.21	23.55	-23.82
S-53	-790.69	-1.28	-13.88
S-54	-786.75	25.98	-37.01
S-55	-788.56	0.07	-23.82
S-56	-787.06	-13.28	-37.01

Position

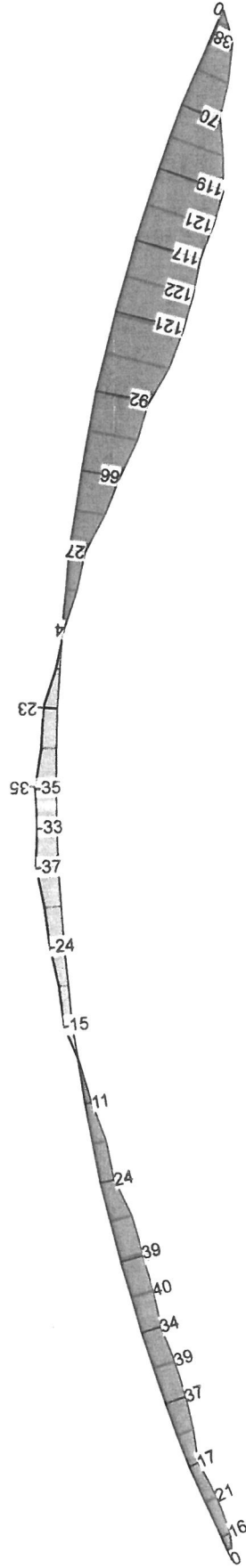
S-44

Nr	Vs	min Mt
Nr	Vs	max Mt
[kN]	[kN]	[kNm]
-786.78	0.81	-33.12
-870.98	-19.02	16.19
-862.61	-0.38	20.92





Balkenschnittgrößen	Querkraft V in [kN]	FE-Mod. BR-TÜ-BZ1 Bauzustand-1	Maßstab: 1:85
	lastkombinationsweise dargestellt aus Lastkombination LK-11 Max = 57, Min = -123	Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	
		Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10		Seite



Balkenschnittgrößen

Moment M in [kNm]

lastkombinationsweise dargestellt
aus Lastkombination LK-11
Max = 122, Min = -37

FE-Mod. BR-TÜ-BZ1 Bauzustand-1

Bauvorhaben 22-078

Instandsetzung Fußgängerbrücke

Maßstab: 1:85

Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10

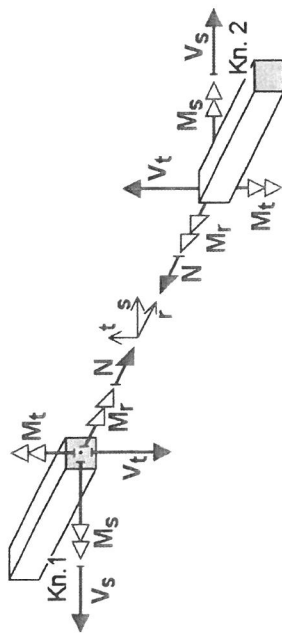
Seite

Balkenschnittgr-Stb

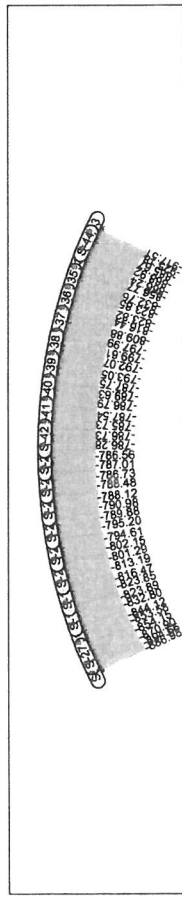
Schnittgrößen Stb-Stützen und 3D-Stäbe

Schnittgrößen

Schnittgrößen der Stützen und 3D-Stäbe



Normalkraft Nr [kN]



aus Lastkombination LK-11

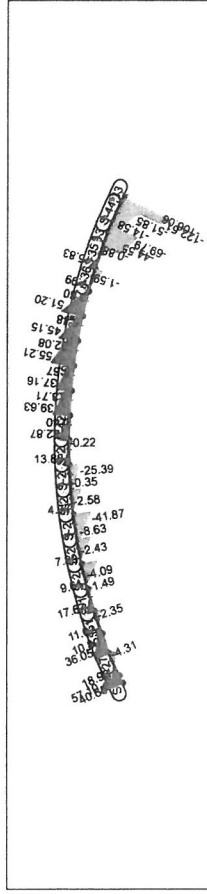
Position	min Nr max Nr [kN]	Vs [kN]	Mt [kNm]
S-16	-894.66 0.00	57.10 0.00	0.00 0.00
S-17	-886.98 16.18	40.65 16.18	16.18 16.18
S-18	-853.58 16.52	36.05 16.52	16.52 16.52
S-19	-844.12 10.80	11.02 10.80	36.53 36.53
S-20	-823.89 15.72	-15.72 34.30	34.30 34.30
S-21	-823.85 17.67	17.67 38.89	38.89 38.89
S-22	-816.47 9.61	-7.88 9.61	38.89 38.89
S-23	-813.19 -37.99	9.61 -37.99	23.76 23.76
S-24	-802.15 -31.77	7.89 -31.77	23.76 23.76
S-25	-794.61 -8.63	-31.77 -8.63	11.19 11.19
S-26	-795.20 -789.88	-8.63 -41.87	11.19 -14.66
S-27	-790.98 -788.12	4.77 -23.83	-14.66 -14.66
S-28	-788.48 -25.39	-23.83 -25.39	-24.44 -24.44
S-29	-786.73 -787.01	-0.35 13.88	-24.44 -37.47
S-30	-786.56 -870.90	-37.47 18.98	-37.47 16.18
S-31	-786.56 -854.15	-8.59 -18.29	-34.86 16.52
S-32	-870.90 -925.18	18.98 -122.51	16.18 0.00

Position

Position	min Nr max Nr [kN]	Vs [kN]	Mt [kNm]
S-34	-917.51 -866.24	-106.06 -69.79	37.84 70.24
S-35	-856.77 -832.76	-44.55 -10.91	119.09 119.09
S-36	-823.85 -823.82	15.83 -17.56	116.76 116.76
S-37	-816.44 -809.88	7.99 3.60	121.24 121.24
S-38	-797.99 -799.61	51.20 5.48	92.49 92.49
S-39	-792.07 -793.05	45.15 22.08	66.31 66.31
S-40	-787.75 -789.63	55.21 8.67	26.90 26.90
S-41	-786.79 -787.54	37.16 13.71	3.67 3.67
S-42	-785.73 -786.73	39.63 0.40	-23.20 -23.20
S-44	-786.28 -885.67	22.87 -51.85	-34.86 37.84
	-868.92	-14.58	70.25

14.67

Querkraft V_s [kN]

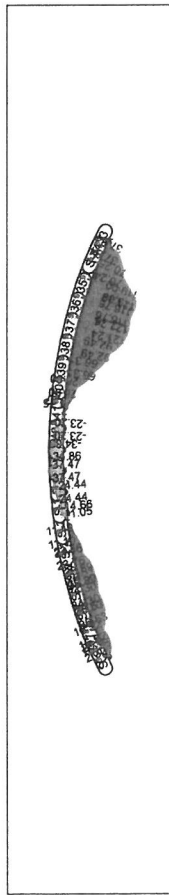


aus Lastkombination LK-11

Position	Nr	min Vs		Mt
		Nr	[kN]		[kNm]
S-16	-886.98	40.65	16.18	
	-894.66	57.10	0.00	
S-17	-844.12	10.80	36.53	
	-853.58	36.05	16.52	
S-18	-823.89	-15.72	34.30	
	-832.80	11.02	36.53	
S-19	-816.47	-7.88	38.89	
	-823.85	17.67	34.30	
S-20	-801.29	-37.99	23.76	
	-813.19	9.61	38.89	
S-21	-794.61	-31.77	11.19	
	-802.15	7.89	23.76	
S-22	-789.88	-41.87	-14.66	
	-795.20	-8.63	11.19	
S-23	-788.12	-23.83	-24.44	
	-790.98	4.77	-14.66	
S-24	-786.73	-25.39	-37.47	
	-788.48	-0.35	-24.44	
S-25	-786.56	-8.59	-34.86	
	-787.01	13.88	-37.47	
S-27	-854.15	-18.29	16.52	
	-870.90	18.98	16.18	
S-33	-925.18	-122.51	0.00	
	-917.51	-106.06	37.84	
S-34	-866.24	-69.79	70.24	
	-856.77	-44.55	119.09	
S-35	-832.76	-10.91	119.09	
	-823.85	15.83	116.76	
S-36	-823.82	-17.56	116.76	
	-816.44	7.99	121.24	
S-37	-809.88	3.60	121.24	
	-797.99	51.20	92.49	
S-38	-799.61	5.48	92.49	
	-792.07	45.15	66.31	
S-39	-793.05	22.08	66.31	
	-787.75	55.21	26.90	
S-40	-789.63	8.67	26.90	
	-786.79	37.16	3.67	
S-41	-787.54	13.71	3.67	

74.68

Moment Mt [kNm]



aus Lastkombination LK-11

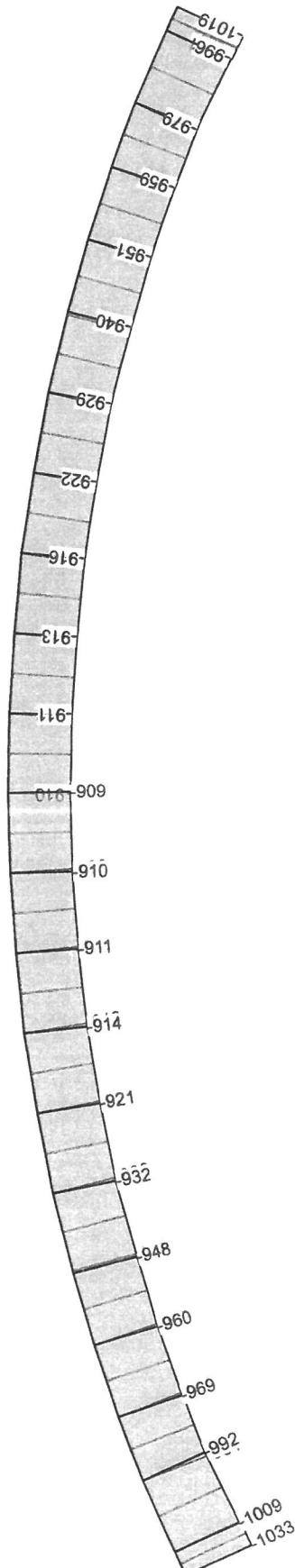
Position	Nr Nr [kN]	Vs Vs [kN]	min Mt max Mt [kNm]
S-16	-894.66	57.10	0.00
S-17	-886.98	40.65	16.18
S-18	-853.58	36.05	16.52
S-19	-844.12	10.80	36.53
S-20	-823.89	-15.72	34.30
S-21	-829.46	0.99	38.67
S-22	-823.85	17.67	34.30
S-23	-818.31	-1.49	39.99
S-24	-801.29	-37.99	23.76
S-25	-811.25	1.86	39.81
S-26	-794.61	-31.77	11.19
S-27	-800.19	-2.43	24.45
S-28	-789.88	-41.87	-14.66
S-29	-795.20	-8.63	11.19
S-30	-788.12	-23.83	-24.44
S-31	-790.61	1.09	-14.29
S-32	-786.73	-25.39	-37.47
S-33	-788.48	-0.35	-24.44
S-34	-787.01	13.88	-37.47
S-35	-786.73	-0.22	-33.21
S-36	-870.90	18.98	16.18
S-37	-862.52	0.35	20.89
S-38	-925.18	-122.51	0.00
S-39	-917.51	-106.06	37.84
S-40	-866.24	-69.79	70.24
S-41	-856.77	-44.55	119.09
S-42	-823.85	15.83	116.76
S-43	-829.42	-0.88	121.19
S-44	-823.82	-17.56	116.76
S-45	-819.20	-1.59	122.36
S-46	-797.99	51.20	92.49
S-47	-809.88	3.60	121.24
S-48	-792.07	45.15	66.31
S-49	-799.61	5.48	92.49
S-50	-787.75	55.21	26.90
S-51	-793.05	22.08	66.31
S-52	-786.79	37.16	3.67
S-53	-789.63	8.67	26.90
S-54	-785.73	39.63	-23.20
S-55	-787.54	13.71	3.67
S-56	-786.28	22.87	-34.86

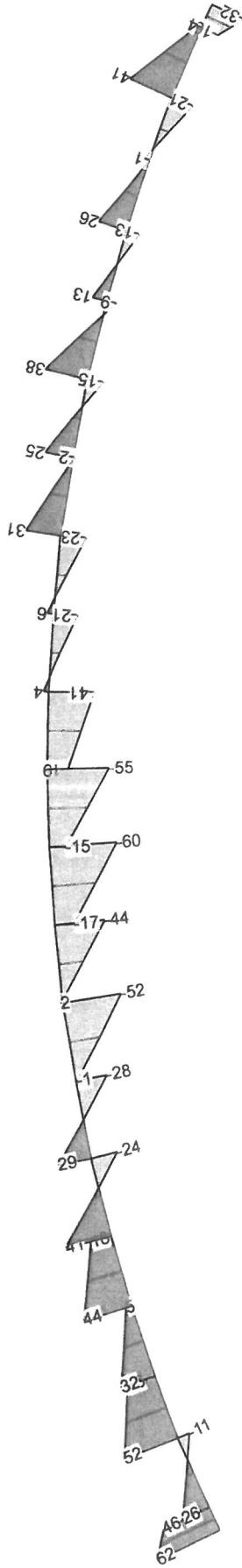
Position

S-44

Nr	Vs	min Mt
Nr	Vs	max Mt
[kN]	[kN]	[kNm]
-786.73	0.40	-23.20
-885.67	-51.85	37.84
-868.92	-14.58	70.25

14.69

		Balkenschnittgrößen		Normalkraft N in [kN]	FE-Mod. BR-TÜ-BZ1 Bauzustand-1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	Maßstab: 1:85		
lastkombinationsweise dargestellt aus Lastkombination LK-12 Max = -908, Min = -1033								
		Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10				Seite		



Balkenschnittgrößen

Querkraft V in [kN]

lastkombinationsweise dargestellt
aus Lastkombination LK-12
Max = 62, Min = -60

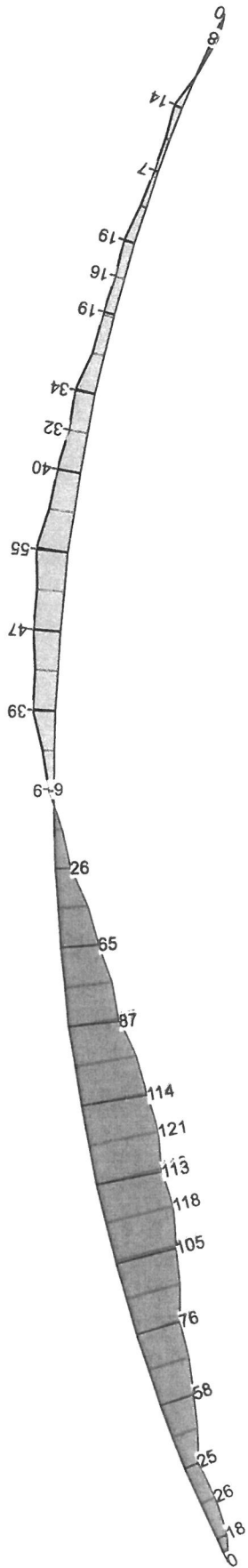
FE-Mod. BR-TÜ-BZ1 Bauzustand-1
Bauvorhaben 22-078

Instandsetzung Fußgängerbrücke

Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10

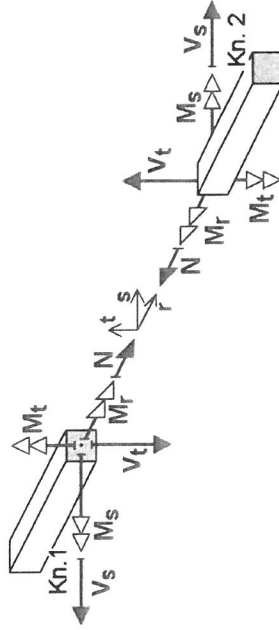
Maßstab: 1:85

Seite

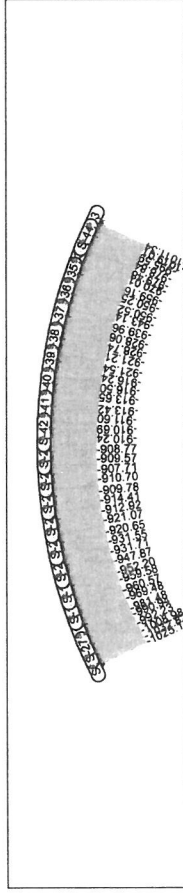


Balkenschnittgrößen		Moment M in [kNm]	FE-Mod. BR-TÜ-BZ1 Bauzustand-1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	Maßstab: 1:85
lastkombinationsweise dargestellt aus Lastkombination LK-12 Max = 121, Min = -55				
		Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10			Seite

Schnittgrößen der Stützen und 3D-Stäbe



Normalkraft Nr [kN]

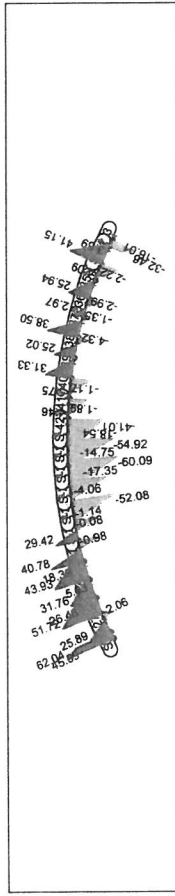


aus Lastkombination LK-12

Position	min Nr	Nr	Vs [kN]	Mt [kNm]
S-16	-1032.82	62.04	45.59	17.82
S-17	-1025.14	51.72	26.48	24.90
S-18	-981.48	31.76	5.03	58.31
S-19	-960.57	43.93	18.39	75.76
S-20	-952.20	40.78	23.90	104.95
S-21	-931.71	29.42	-27.95	113.45
S-22	-920.65	-1.14	-52.08	113.79
S-23	-912.92	1.83	44.47	86.57
S-24	-909.78	-17.35	60.09	64.94
S-25	-907.71	-14.75	-54.92	25.99
S-27	-909.57	-8.88	25.89	25.99
S-33	-1008.98	-11.38	-32.46	17.82
	-992.23			24.90
	-1019.01			0.00

14.73

Querkraft Vs [kN]



aus Lastkombination LK-12

Position	Nr	Nr	min Vs	Mt
			max Vs	Mt
			[kN]	[kNm]
S-16	-1025.14	45.59	62.04	17.82
S-17	-1032.82	62.04	0.00	0.00
S-18	-981.48	26.48	58.31	58.31
S-19	-990.94	51.72	24.90	24.90
S-20	-960.57	5.03	75.76	75.76
S-21	-969.48	31.76	58.31	58.31
S-22	-952.20	18.39	104.95	104.95
S-23	-959.58	43.93	75.76	75.76
S-24	-931.71	-23.90	113.45	113.45
S-25	-947.87	40.78	104.95	104.95
S-26	-920.65	-27.95	113.79	113.79
S-27	-931.55	29.42	113.45	113.45
S-28	-912.92	-52.08	86.57	86.57
S-29	-921.07	-1.14	113.79	113.79
S-30	-909.78	-44.47	64.94	64.94
S-31	-914.41	1.83	86.57	86.57
S-32	-907.71	-60.09	25.99	25.99
S-33	-910.70	-17.35	64.94	64.94
S-34	-908.77	-54.92	-8.88	-8.88
S-35	-909.57	-14.75	25.99	25.99
S-36	-992.23	-11.38	24.90	24.90
S-37	-1008.98	25.89	17.82	17.82
S-38	-1019.01	-32.46	0.00	0.00
S-39	-1011.34	-16.01	8.02	8.02
S-40	-979.48	-21.16	-13.95	-13.95
S-41	-970.01	4.09	-6.66	-6.66
S-42	-959.16	-0.79	-6.66	-6.66
S-43	-950.25	25.94	-18.59	-18.59
S-44	-950.52	-12.57	-18.59	-18.59
S-45	-943.14	12.97	-18.77	-18.77
S-46	-939.96	-9.11	-18.77	-18.77
S-47	-928.06	38.50	-34.43	-34.43
S-48	-928.74	-14.64	-34.43	-34.43
S-49	-921.21	25.02	-40.12	-40.12
S-50	-921.54	-1.80	-40.12	-40.12
S-51	-916.24	31.33	-55.35	-55.35
S-52	-916.50	-22.74	-55.35	-55.35
S-53	-913.65	5.75	-47.02	-47.02
S-54	-913.42	-21.46	-47.02	-47.02
S-55	-911.60	4.46	-38.63	-38.63
S-56	-910.69	-41.01	-38.63	-38.63

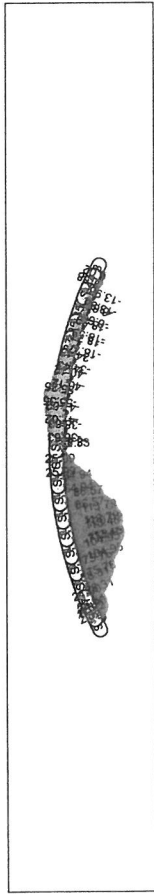
Position

S-44

Nr	min Vs	Mt
	max Vs	
	[kN]	[kNm]
-910.24	-18.54	-8.88
-995.59	3.89	8.02
-978.84	41.15	-13.95

14.74

Moment Mt [kNm]



aus Lastkombination LK-12

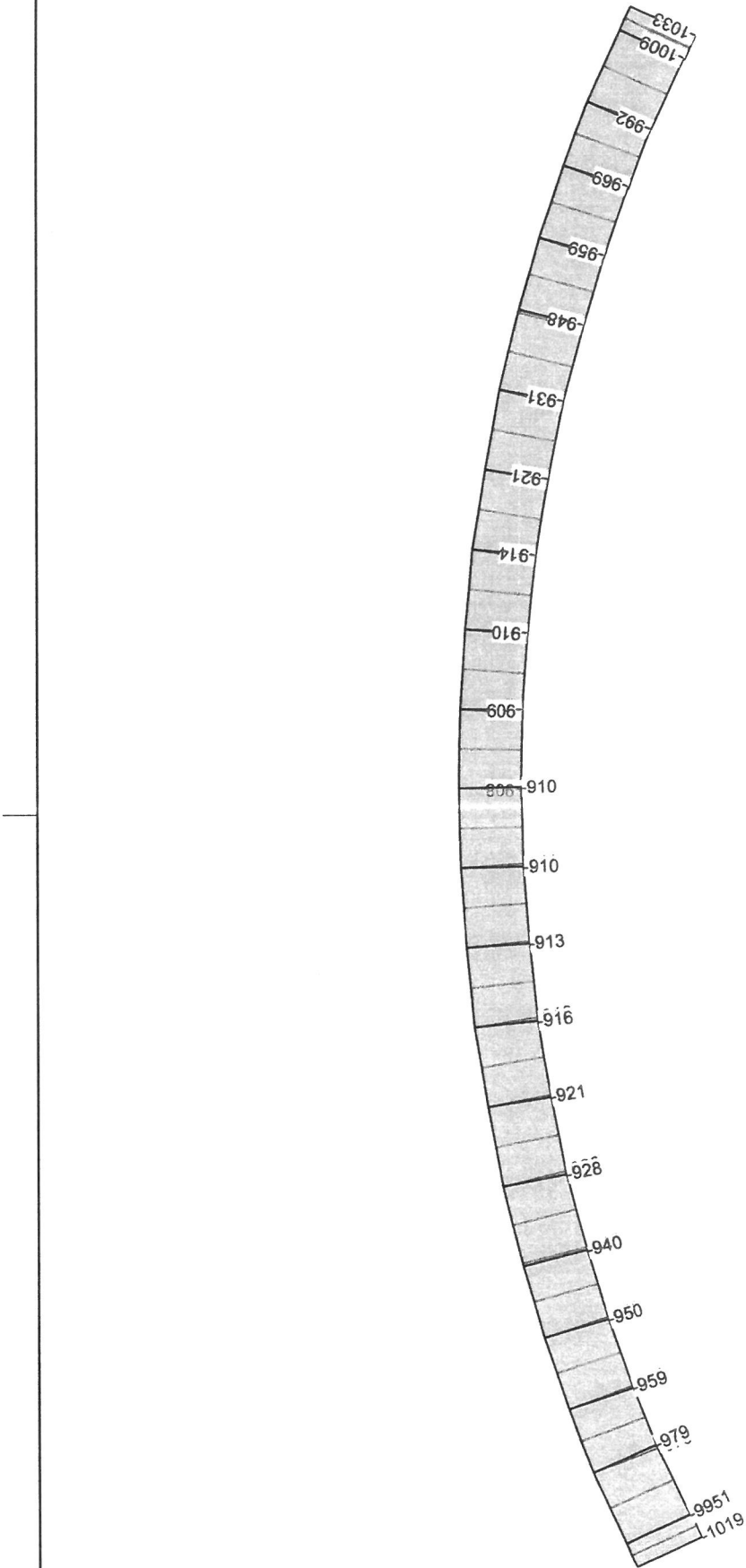
Position	Nr		Vs		min Mt	
	Nr	[kN]	Nr	[kN]	max Mt	[kNm]
S-16	-1032.82		62.04		0.00	
S-17	-1025.14		45.59		17.82	
S-18	-990.94		51.72		24.90	
S-19	-981.48		26.48		58.31	
S-20	-969.48		31.76		58.31	
S-21	-960.57		5.03		75.76	
S-22	-959.58		43.93		75.76	
S-23	-952.20		18.39		104.95	
S-24	-947.87		40.78		104.95	
S-25	-937.44		-0.98		118.09	
S-26	-931.55		29.42		113.45	
S-27	-925.95		-0.08		120.92	
S-28	-912.92		-52.08		86.57	
S-29	-921.07		-1.14		113.79	
S-30	-909.78		-44.47		64.94	
S-31	-914.41		1.83		86.57	
S-32	-907.71		-60.09		25.99	
S-33	-910.70		-17.35		64.94	
S-34	-908.77		-54.92		-8.88	
S-35	-909.57		-14.75		25.99	
S-36	-1008.98		25.89		17.82	
S-37	-996.41		-2.06		26.54	
S-38	-1019.01		-32.46		0.00	
S-39	-1011.34		-16.01		8.02	
S-40	-979.48		-21.16		-13.95	
S-41	-971.20		0.93		-6.39	
S-42	-950.25		25.94		-18.59	
S-43	-959.16		-0.79		-6.66	
S-44	-943.14		12.97		-18.77	
S-45	-946.83		0.20		-15.69	
S-46	-928.06		38.50		-34.43	
S-47	-938.02		-1.35		-17.94	
S-48	-921.21		25.02		-40.12	
S-49	-925.80		0.84		-31.79	
S-50	-916.24		31.33		-55.35	
S-51	-921.54		-1.80		-40.12	
S-52	-916.50		-22.74		-55.35	
S-53	-914.34		-1.17		-46.44	
S-54	-913.42		-21.46		-47.02	
S-55	-911.82		1.28		-38.27	
S-56	-910.69		-41.01		-38.63	
S-57	-910.24		-18.54		-8.88	

Position

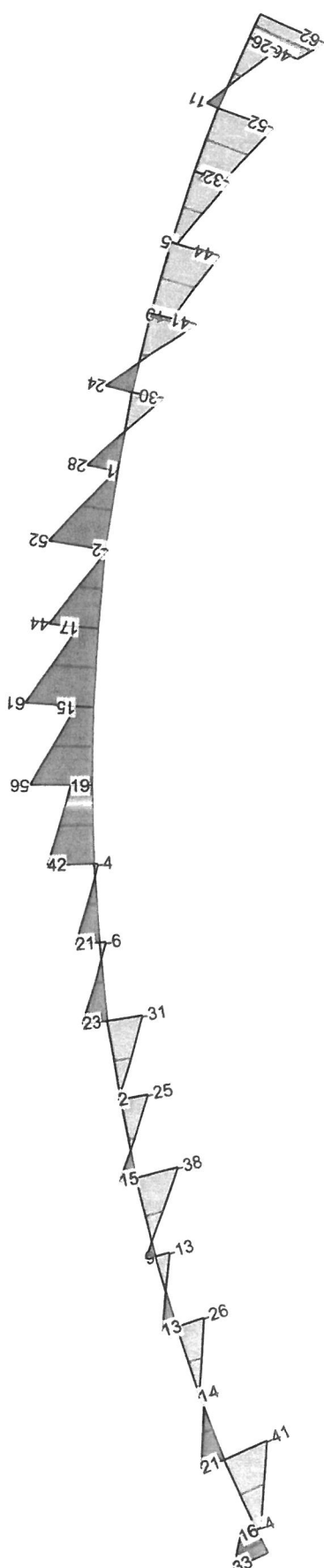
S-44

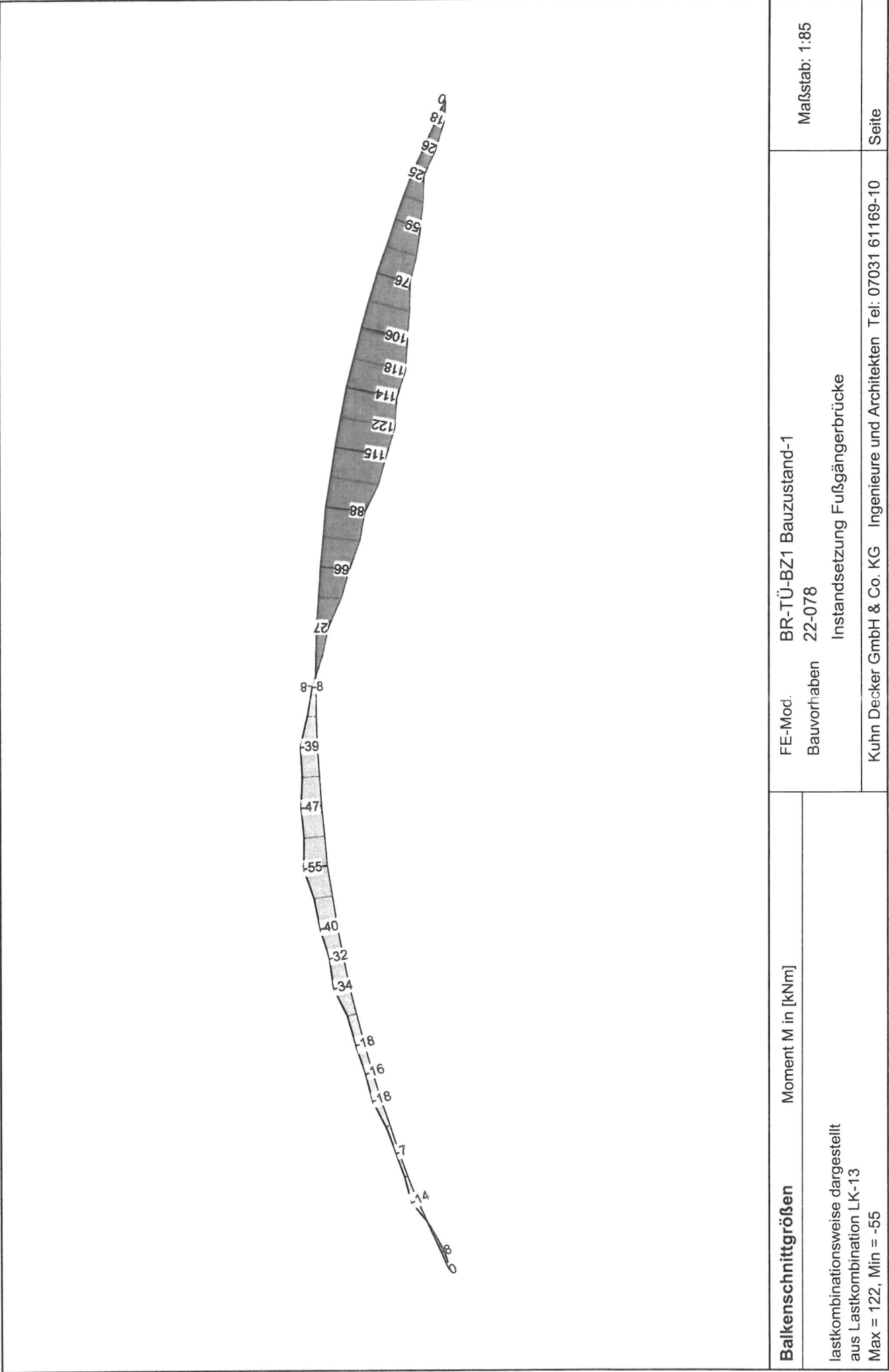
Nr		Vs		min Mt	
Nr	[kN]	Nr	[kN]	max Mt	[kNm]
-978.84		41.15		-13.95	
-995.59		3.89		8.02	

14.75



Balkenschnittgrößen	Normalkraft N in [kN]	FE-Mod.: BR-TÜ-BZ1 Bauzustand-1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	Maßstab: 1:85	
	lastkombinationsweise dargestellt aus Lastkombination LK-13 Max = -907, Min = -1033			
	Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10			
			Seite	

		Balkenschnittgrößen Querkraft V in [kN]		lastkombinationsweise dargestellt aus Lastkombination LK-13 Max = 61, Min = -62	FE-Mod. BR-TÜ-BZ1 Bauzustand-1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	Maßstab: 1:85	
Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10					Seite	MicroFe 2018.051	

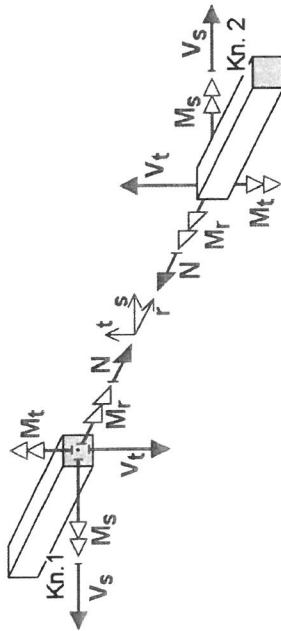


Balkenschnittgr-Stb

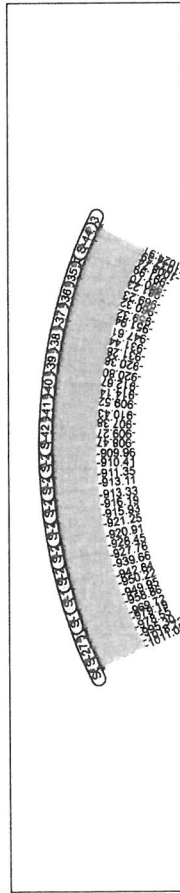
Schnittgrößen Stb-Sützen und 3D-Stäbe

Schnittgrößen

Schnittgrößen der Sützen und 3D-Stäbe



Normalkraft Nr [kN]

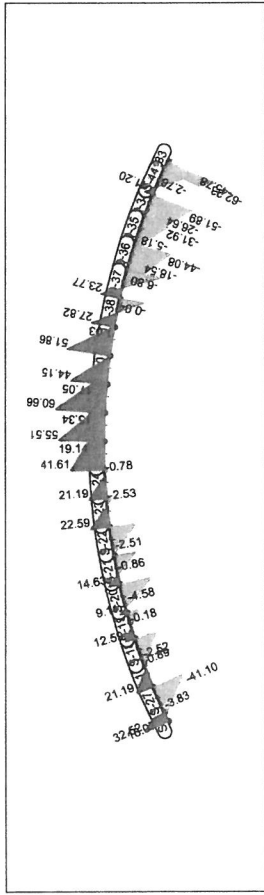


aus Lastkombination LK-13

Position	min Nr max Nr [kN]	Vs [kN]	Mt [kNm]
S-16	-1018.72 0.00	32.52 8.04	0.00 8.04
S-17	-1011.05 -979.19	16.07 21.19	8.04 -13.88
S-18	-969.72 -958.86	4.05 0.82	-6.55 -6.55
S-19	-949.95 -950.22	-25.91 12.59	-18.45 -18.45
S-20	-927.76 -939.66	-38.49 9.11	-18.63 -18.63
S-21	-928.45 -920.91	14.63 -25.04	-34.27 -39.98
S-22	-921.25 -915.93	1.78 -31.46	-39.98 -55.29
S-23	-916.19 -913.33	22.59 -6.01	-55.29 -47.16
S-24	-913.11 -911.35	21.19 -3.84	-47.16 -38.60
S-25	-910.41 -909.96	41.61 19.14	-38.60 -8.25
S-27	-995.30 -978.55	-3.83 -41.10	8.04 -13.88
S-33	-1032.59 0.00	-62.23 0.00	0.00 0.00

Position	min Nr max Nr [kN]	Vs [kN]	Mt [kNm]
S-34	-1024.91 -990.70	-45.78 -51.89	17.88 25.13
S-35	-981.23 -969.23	-26.64 -31.92	58.68 58.68
S-36	-960.32 -959.32	-5.18 -44.08	76.28 76.28
S-37	-951.94 -947.61	-18.54 -40.91	105.61 105.61
S-38	-931.44 -931.28	23.77 -29.54	114.25 114.25
S-39	-920.80 -912.67	1.03 51.86	114.71 87.66
S-40	-914.14 -909.52	-2.04 44.15	87.66 66.30
S-41	-910.43 -907.38	17.05 60.66	66.30 27.21
S-42	-909.27 -908.47	15.34 55.51	27.21 -8.25
S-44	-1008.74 -991.99	-26.07 11.20	17.88 25.13

Querkraft Vs [kN]



aus Lastkombination LK-13

Position	Nr [kN]	min Vs max Vs [kN]	Mt [kNm]
S-16	-1011.05	16.07	8.04
S-17	-1018.72	32.52	0.00
S-18	-969.72	-4.05	-6.55
S-19	-979.19	21.19	-13.88
S-20	-949.95	-25.91	-18.45
S-21	-958.86	0.82	-6.55
S-22	-942.84	-12.96	-18.63
S-23	-950.22	12.59	-18.45
S-24	-927.76	-38.49	-34.27
S-25	-939.66	9.11	-18.63
S-26	-920.91	-25.04	-39.98
S-27	-928.45	14.63	-34.27
S-28	-915.93	-31.46	-55.29
S-29	-921.25	1.78	-39.98
S-30	-913.33	-6.01	-47.16
S-31	-916.19	22.59	-55.29
S-32	-911.35	-3.84	-38.60
S-33	-913.11	21.19	-47.16
S-34	-909.96	19.14	-8.25
S-35	-910.41	41.61	-38.60
S-36	-978.55	-41.10	-13.88
S-37	-995.30	-3.83	8.04
S-38	-1032.59	-62.23	0.00
S-39	-1024.91	-45.78	17.88
S-40	-990.70	-51.89	25.13
S-41	-981.23	-26.64	58.68
S-42	-969.23	-31.92	58.68
S-43	-960.32	-5.18	76.28
S-44	-959.32	-44.08	76.28
S-45	-951.94	-18.54	105.61
S-46	-947.61	-40.91	105.61
S-47	-931.44	23.77	114.25
S-48	-931.28	-29.54	114.25
S-49	-920.38	27.82	114.71
S-50	-920.80	1.03	114.71
S-51	-912.67	51.86	87.66
S-52	-914.14	-2.04	87.66

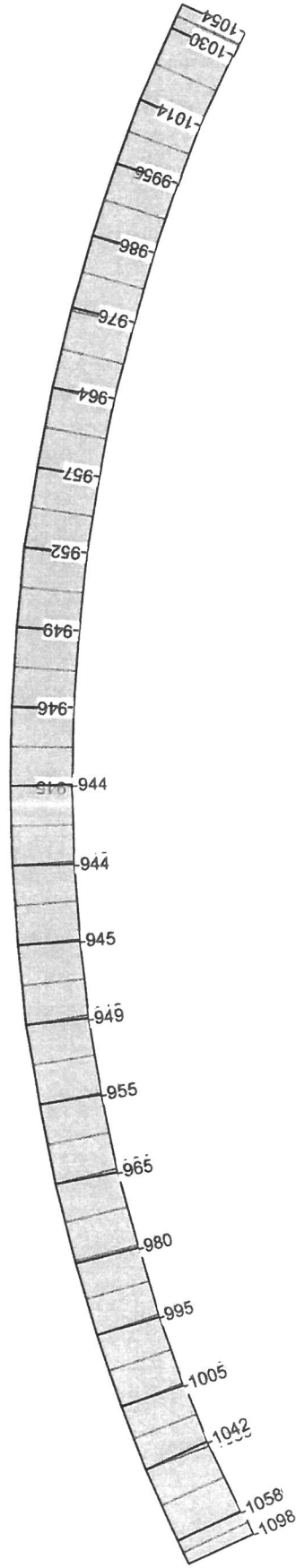
14.80

Moment Mt [kNm]



aus Lastkombination LK-13

Position	Nr Nr [kN]	Vs Vs [kN]	min Mt max Mt [kNm]
S-16	-1018.72	32.52	0.00
S-17	-1011.05	16.07	8.04
S-18	-979.19	21.19	-13.88
S-19	-970.90	-0.89	-6.29
S-20	-949.95	-25.91	-18.45
S-21	-958.86	0.82	-6.55
S-22	-942.84	-12.96	-18.63
S-23	-946.53	-0.18	-15.55
S-24	-927.76	-38.49	-34.27
S-25	-937.73	1.36	-17.79
S-26	-920.91	-25.04	-39.98
S-27	-925.50	-0.86	-31.65
S-28	-915.93	-31.46	-55.29
S-29	-921.25	1.78	-39.98
S-30	-916.19	22.59	-55.29
S-31	-914.03	0.94	-46.52
S-32	-913.11	21.19	-47.16
S-33	-911.57	-0.78	-38.31
S-34	-910.41	41.61	-38.60
S-35	-909.96	19.14	-8.25
S-36	-978.55	-41.10	-13.88
S-37	-995.30	-3.83	8.04
S-38	-1032.59	-62.23	0.00
S-39	-1024.91	-45.78	17.88
S-40	-990.70	-51.89	25.13
S-41	-981.23	-26.64	58.68
S-42	-969.23	-31.92	58.68
S-43	-960.32	-5.18	76.28
S-44	-959.32	-44.08	76.28
S-45	-951.94	-18.54	105.61
S-46	-947.61	-40.91	105.61
S-47	-937.17	0.85	118.84
S-48	-931.28	-29.54	114.25
S-49	-925.68	-0.04	121.78
S-50	-912.67	51.86	87.66
S-51	-920.80	1.03	114.71
S-52	-909.52	44.15	66.30
S-53	-914.14	-2.04	87.66
S-54	-907.38	60.66	27.21
S-55	-910.43	17.05	66.30
S-56	-908.47	55.51	-8.25
S-57	-909.27	15.34	27.21



Balkenschnittgrößen

Normalkraft N in [kN]

lastkombinationsweise dargestellt
aus Lastkombination LK-14
Max = -942, Min = -1098

FE-Mod. BR-TÜ-BZ1 Bauzustand-1
Bauvorhaben 22-078

Instandsetzung Fußgängerbrücke

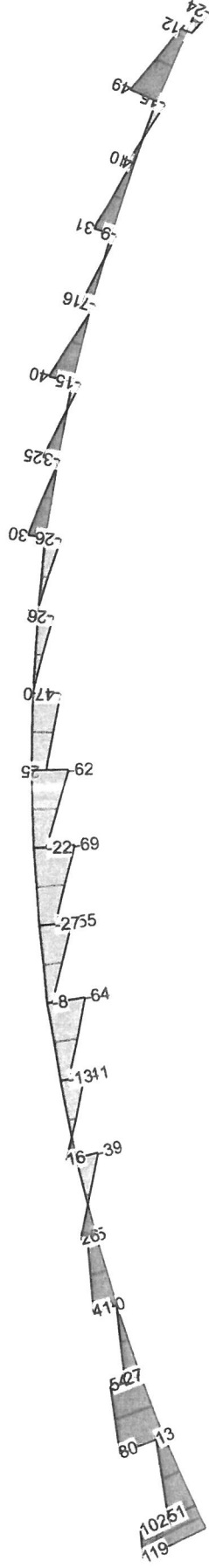
Maßstab: 1:85

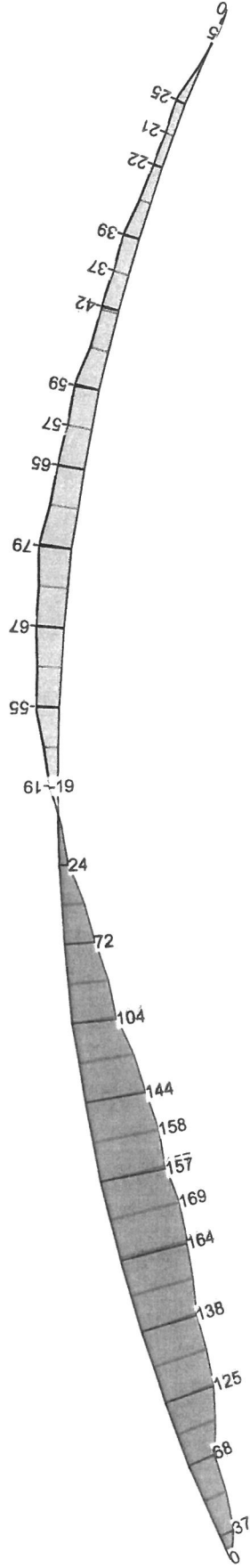
Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10

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MicroFe 2018.051

14.82

		FE-Mod. BR-TÜ-BZ1 Bauzustand-1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke		Maßstab: 1:85
Balkenschnittgrößen		Querkraft V in [kN]		Seite
lastkombinationsweise dargestellt aus Lastkombination LK-14 Max = 119, Min = -69		Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10		



Balkenschnittgrößen

Moment M in [kNm]

lastkombinationsweise dargestellt
aus Lastkombination LK-14
Max = 169, Min = -79

FE-Mod. BR-TÜ-BZ1 Bauzustand-1

Bauvorhaben 22-078

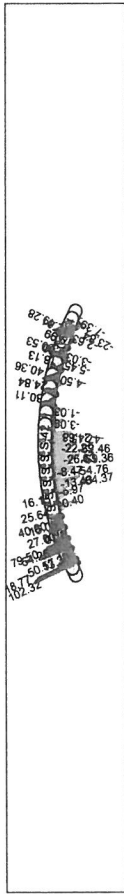
Instandsetzung Fußgängerbrücke

Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10

Maßstab: 1:85

Seite

Querkraft Vs [kN]



aus Lastkombination LK-14

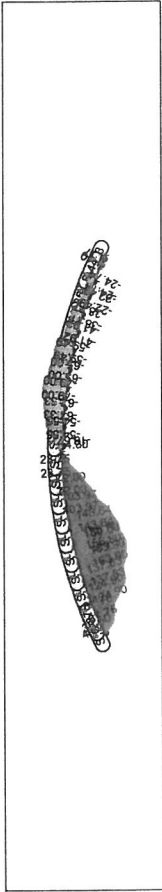
Position	Nr [kN]	min Vs [kN]	max Vs [kN]	Mt [kNm]
S-16	-1090.29	102.32	36.60	36.60
S-17	-1097.97	118.77	0.00	0.00
S-18	-1029.32	54.26	124.90	124.90
S-19	-1038.79	79.50	67.76	67.76
S-20	-995.10	27.00	137.83	137.83
S-21	-987.72	15.06	124.90	124.90
S-22	-995.10	40.60	163.90	163.90
S-23	-964.05	39.04	137.83	137.83
S-24	-980.22	25.64	156.80	156.80
S-25	-953.81	-41.21	143.64	143.64
S-26	-964.71	16.15	103.97	103.97
S-27	-946.45	-64.37	143.64	143.64
S-28	-954.60	-13.43	72.00	72.00
S-29	-943.97	-54.76	103.97	103.97
S-30	-948.60	-8.47	23.75	23.75
S-31	-942.19	-69.36	72.00	72.00
S-32	-945.18	-26.63	18.67	18.67
S-33	-943.68	-62.46	23.75	23.75
S-34	-944.48	-22.29	67.76	67.76
S-35	-1041.74	13.30	36.60	36.60
S-36	-1058.49	50.57	0.00	0.00
S-37	-1053.67	-23.84	5.17	5.17
S-38	-1045.99	-7.39	-24.74	-24.74
S-39	-1014.70	-15.26	-22.49	-22.49
S-40	-1005.23	9.99	-22.49	-22.49
S-41	-994.57	3.80	-38.77	-38.77
S-42	-985.66	30.53	-38.77	-38.77
S-43	-986.09	-9.42	-41.92	-41.92
S-44	-978.71	16.13	-59.49	-59.49
S-45	-975.62	-7.24	-65.00	-65.00
S-46	-963.72	40.36	-65.00	-65.00
S-47	-964.45	-14.82	-79.00	-79.00
S-48	-956.92	24.84	-67.33	-67.33
S-49	-957.23	-3.02	-67.33	-67.33
S-50	-951.93	30.11	-54.55	-54.55
S-51	-952.05	-26.06	-54.55	-54.55
S-52	-949.20	2.43	-24.68	-24.68
S-53	-948.86	-25.84	5.17	5.17
S-54	-947.04	0.08		
S-55	-945.87	-47.15		
S-56	-945.42	-24.68		
S-57	-1030.37	12.01		

Position

Nr	min Vs	Mt
Nr	max Vs	Mt
[kN]	[kN]	[kNm]
-1013.62	49.28	-24.74

14.86

Moment Mt [kNm]



aus Lastkombination LK-14
Position

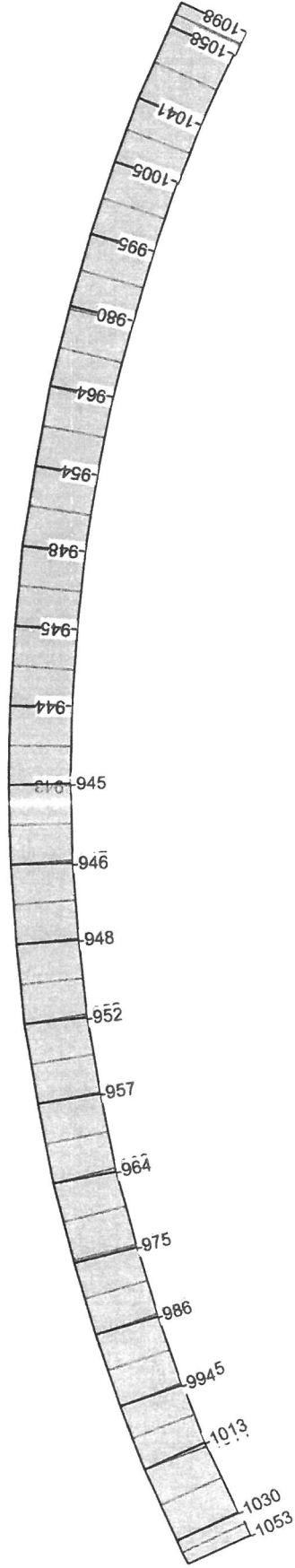
	Nr	Nr	Vs	min Mt	max Mt
		[kN]	[kN]	[kNm]	[kNm]
S-16	-1097.97	118.77	0.00	0.00	36.60
S-17	-1090.29	102.32	79.50	67.76	124.90
S-18	-1038.79	54.26	27.00	124.90	137.83
S-19	-1029.32	0.26	40.60	137.83	163.90
S-20	-1004.84	0.26	15.06	163.90	156.80
S-21	-995.93	0.26	-39.04	156.80	169.17
S-22	-995.10	40.60	-0.40	169.17	143.64
S-23	-987.72	15.06	-41.21	143.64	72.00
S-24	-964.05	-39.04	1.41	159.04	103.97
S-25	-973.71	-0.40	-64.37	103.97	143.64
S-26	-953.81	-41.21	-13.43	143.64	72.00
S-27	-961.90	1.41	-54.76	72.00	103.97
S-28	-946.45	-64.37	-8.47	103.97	23.75
S-29	-954.60	-13.43	-69.36	23.75	72.00
S-30	-943.97	-54.76	-26.63	72.00	-18.67
S-31	-948.60	-8.47	-62.46	-18.67	23.75
S-32	-942.19	-69.36	-22.29	23.75	36.60
S-33	-945.18	-26.63	50.57	36.60	67.76
S-34	-943.68	-62.46	13.30	67.76	0.00
S-35	-944.48	-22.29	-23.84	0.00	5.17
S-36	-1058.49	50.57	-7.39	5.17	-24.74
S-37	-1041.74	13.30	-15.26	-24.74	-20.80
S-38	-1053.67	-23.84	0.52	-20.80	-38.77
S-39	-1045.99	-7.39	30.53	-38.77	-22.49
S-40	-1014.70	-15.26	3.80	-22.49	-41.92
S-41	-1008.78	0.52	16.13	-41.92	-37.15
S-42	-985.66	30.53	40.36	-59.49	-41.38
	-994.57	3.80	24.84	-65.00	-56.79
	-978.71	16.13	0.66	-56.79	-79.00
	-983.32	0.16	30.11	-79.00	-64.89
	-963.72	40.36	1.26	-64.89	-79.00
	-973.68	0.51	-26.06	-79.00	-67.24
	-956.92	24.84	-1.03	-67.24	-67.33
	-961.51	0.66	-25.84	-67.33	-54.55
	-951.93	30.11	0.08	-54.55	-47.15
	-956.55	1.26	-47.15	-47.15	-54.55
	-952.05	-26.06	-24.68	-24.68	-18.67
	-949.55	-1.03			
	-948.86	-25.84			
	-947.04	0.08			
	-945.87	-47.15			
	-945.42	-24.68			

Position

S-44

Nr	Vs	min Mt
Nr	Vs	max Mt
[kN]	[kN]	[kNm]
-1013.62	49.28	-24.74
-1030.37	12.01	5.17

14.87



Balkenschnittgrößen

Normalkraft N in [kN]

lastkombinationsweise dargestellt
aus Lastkombination LK-15
Max = -942, Min = -1098

FE-Mod. BR-TÜ-BZ1 Bauzustand-1

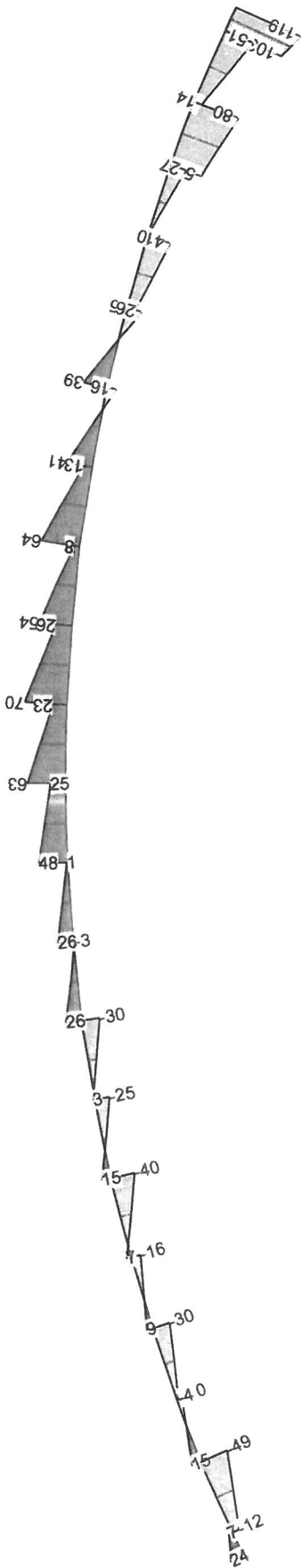
Bauvorhaben 22-078

Instandsetzung Fußgängerbrücke

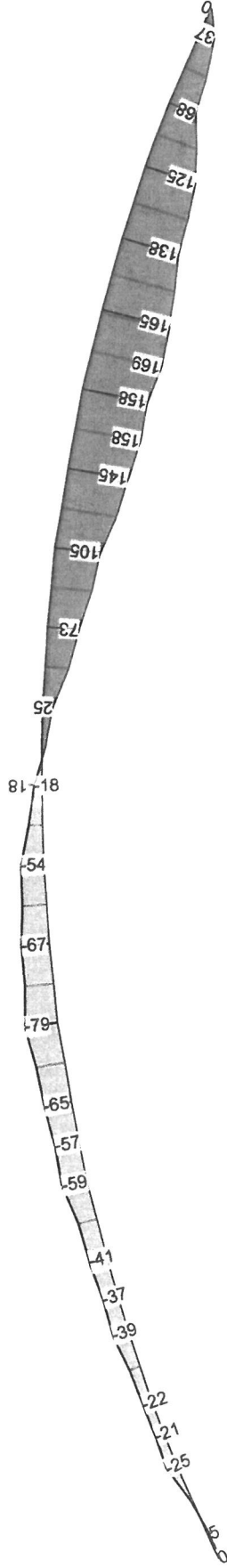
Maßstab: 1:85

Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10

Seite



Balkenschnittgrößen	FE-Mod. BR-TÜ-BZ1 Bauzustand-1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	Maßstab: 1:85
lastkombinationsweise dargestellt aus Lastkombination LK-15 Max = 70, Min = -119	Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10	Seite



Balkenschnittgrößen

Moment M in [kNm]

lastkombinationsweise dargestellt
aus Lastkombination LK-15
Max = 169, Min = -79

FE-Mod. BR-TÜ-BZ1 Bauzustand-1

Bauvorhaben 22-078

Instandsetzung Fußgängerbrücke

Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10

Maßstab: 1:85

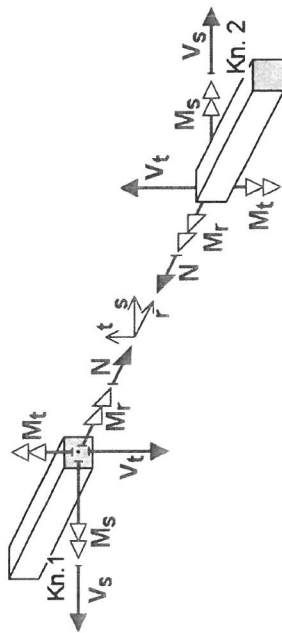
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Balkenschnittgr-Stb

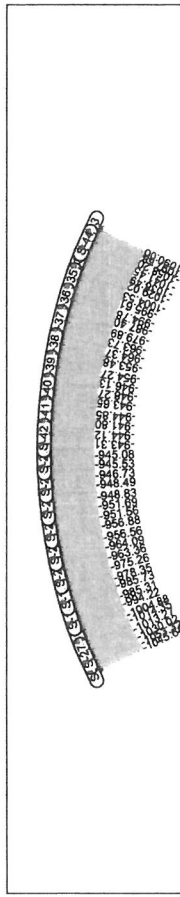
Schnittgrößen Stb-Stützen und 3D-Stäbe

Schnittgrößen

Schnittgrößen der Stützen und 3D-Stäbe



Normalkraft Nr [kN]



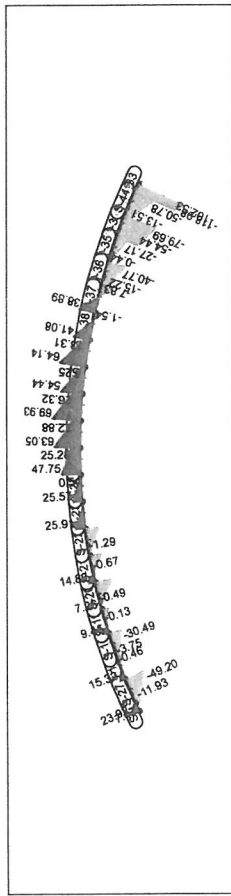
aus Lastkombination LK-15

Position	min Nr max Nr [kN]	Vs [kN]	Mt [kNm]
S-16	-1053.32 -1045.64	23.92 7.47	0.00 5.20
S-17	-1014.35 -1004.88	15.32 -9.93	-24.63 -22.33
S-18	-994.22 -985.31	-3.75 -30.49	-22.33 -38.57
S-19	-985.73 -978.35	9.45 -16.09	-38.57 -41.68
S-20	-975.26 -963.36	7.26 -40.34	-41.68 -59.23
S-21	-964.09 -956.56	14.82 -24.85	-59.23 -64.75
S-22	-956.88 -951.56	3.00 -30.24	-64.75 -78.81
S-23	-951.69 -948.83	25.91 -2.68	-78.81 -67.34
S-24	-948.49 -946.73	25.57 0.54	-67.34 -54.39
S-25	-945.53 -945.08	47.75 25.28	-54.39 -17.90
S-27	-1030.02 -1013.27	-11.93 -49.20	5.20 -24.63
S-33	-1097.68 -1118.98	-118.98 0.00	0.00 0.00

Position

Position	min Nr max Nr [kN]	Vs [kN]	Mt [kNm]
S-34	-1090.00 -1038.49	-102.53 -79.69	36.67 68.03
S-35	-1029.02 -1004.53	-54.44 -27.17	125.33 125.33
S-36	-995.61 -994.78	-0.44 -40.77	138.43 138.43
S-37	-987.40 -979.89	-15.22 -25.79	164.65 164.65
S-38	-963.73 -964.37	38.89 -16.29	157.71 157.71
S-39	-953.48 -954.27	41.08 13.31	144.68 144.68
S-40	-946.13 -948.27	64.14 8.25	105.18 105.18
S-41	-943.65 -944.85	54.44 26.32	73.48 73.48
S-42	-941.80 -944.12	69.93 22.88	25.11 25.11
S-44	-943.31 -1058.20	63.05 -50.78	-17.90 36.67
	-1041.45	-13.51	68.03

Querkraft Vs [kN]



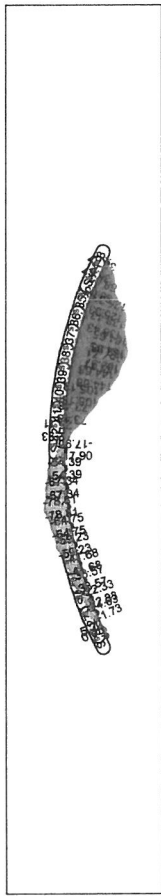
aus Lastkombination LK-15

Position	Nr	Nr [kN]	min Vs max Vs [kN]	Mt Mt [kNm]
S-16		-1045.64	7.47	5.20
S-17		-1053.32	23.92	0.00
S-18		-1004.88	-9.93	-22.33
S-19		-1014.35	15.32	-24.63
S-20		-985.31	-30.49	-38.57
S-21		-994.22	-3.75	-22.33
S-22		-978.35	-16.09	-41.68
S-23		-985.73	9.45	-38.57
S-24		-963.36	-40.34	-59.23
S-25		-975.26	7.26	-41.68
S-26		-956.56	-24.85	-64.75
S-27		-964.09	14.82	-59.23
S-28		-951.56	-30.24	-78.81
S-29		-956.88	3.00	-64.75
S-30		-948.83	-2.68	-67.34
S-31		-951.69	25.91	-78.81
S-32		-946.73	0.54	-54.39
S-33		-948.49	25.57	-67.34
S-34		-945.08	25.28	-17.90
S-35		-945.53	47.75	-54.39
S-36		-1013.27	-49.20	-24.63
S-37		-1030.02	-11.93	5.20
S-38		-1097.68	-118.98	0.00
S-39		-1090.00	-102.53	36.67
S-40		-1038.49	-79.69	68.03
S-41		-1029.02	-54.44	125.33
S-42		-1004.53	-27.17	125.33
S-43		-995.61	-0.44	138.43
S-44		-994.78	-40.77	138.43
S-45		-987.40	-15.22	164.65
S-46		-979.89	-25.79	164.65
S-47		-963.73	38.89	157.71
S-48		-964.37	-16.29	157.71
S-49		-953.48	41.08	144.68
S-50		-954.27	13.31	144.68
S-51		-946.13	64.14	105.18
S-52		-948.27	8.25	105.18
S-53		-943.65	54.44	73.48

Position

Position	Nr	Nr [kN]	min Vs max Vs [kN]	Mt Mt [kNm]
S-41		-944.85	26.32	73.48
S-42		-941.80	69.93	25.11
S-43		-944.12	22.88	25.11
S-44		-943.31	63.05	-17.90
S-45		-1058.20	-50.78	36.67
S-46		-1041.45	-13.51	68.03

Moment Mt [kNm]



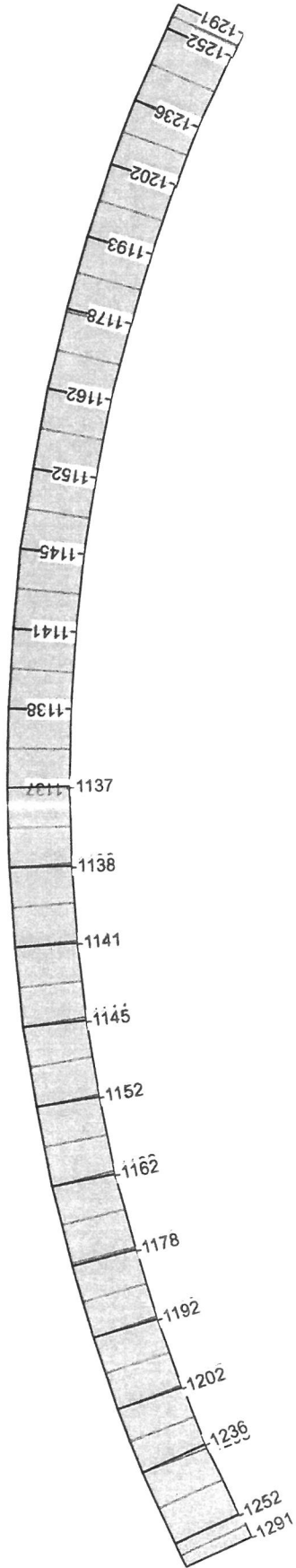
aus Lastkombination LK-15

Position	Nr [kN]	Vs [kN]	min Mt max Mt [kNm]
S-16	-1053.32	23.92	0.00
S-17	-1045.64	7.47	5.20
S-18	-1014.35	15.32	-24.63
S-19	-1008.43	-0.46	-20.66
S-20	-985.31	-30.49	-38.57
S-21	-994.22	-3.75	-22.33
S-22	-978.35	-16.09	-41.88
S-23	-982.97	-0.13	-36.93
S-24	-963.36	-40.34	-59.23
S-25	-973.33	-0.49	-41.14
S-26	-956.56	-24.85	-64.75
S-27	-961.15	-0.67	-56.53
S-28	-951.56	-30.24	-78.81
S-29	-956.19	-1.29	-64.64
S-30	-951.69	25.91	-78.81
S-31	-949.17	0.79	-67.22
S-32	-948.49	25.57	-67.34
S-33	-946.73	0.54	-54.39
S-34	-945.53	47.75	-54.39
S-35	-945.08	25.28	-17.90
S-36	-1013.27	-49.20	-24.63
S-37	-1030.02	-11.93	5.20
S-38	-1097.68	-118.98	0.00
S-39	-1090.00	-102.53	36.67
S-40	-1038.49	-79.69	68.03
S-41	-1029.02	-54.44	125.33
S-42	-1004.53	-27.17	125.33
S-43	-995.61	-0.44	138.43
S-44	-994.78	-40.77	138.43
S-45	-987.40	-15.22	164.65
S-46	-963.73	38.89	157.71
S-47	-973.39	0.25	169.98
S-48	-953.48	41.08	144.68
S-49	-961.57	-1.54	159.97
S-50	-946.13	64.14	105.18
S-51	-954.27	13.31	144.68
S-52	-943.65	54.44	73.48
S-53	-948.27	8.25	105.18
S-54	-941.80	69.93	25.11
S-55	-944.85	26.32	73.48
S-56	-943.31	63.05	-17.90
S-57	-944.12	22.88	25.11

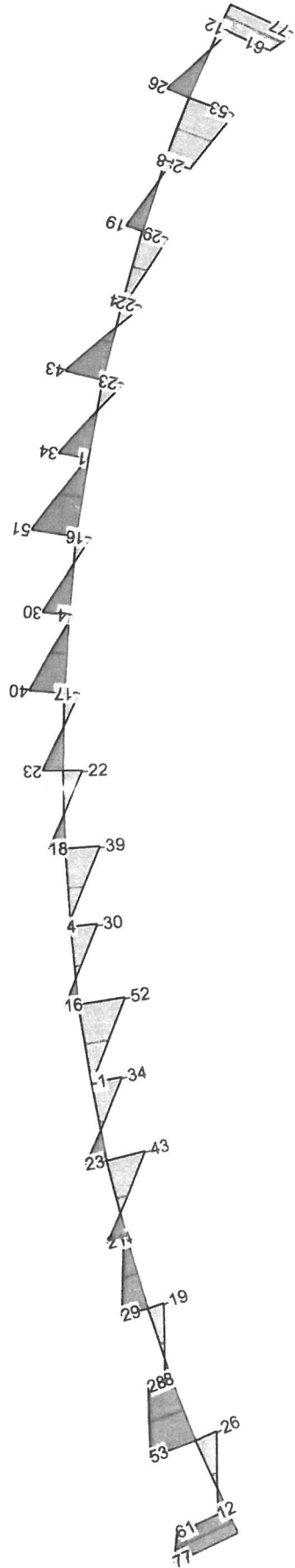
Position

S-44

Nr	Vs	min Mt
Nr	Vs	max Mt
[kN]	[kN]	[kNm]
-1058.20	-50.78	36.67
-1041.45	-13.51	68.03



Balkenschnittgrößen		Normalkraft N in [kN]	FE-Mod.	BR-TÜ-BZ1 Bauzustand-1	Maßstab: 1:85
lastkombinationsweise dargestellt aus Lastkombination LK-16 Max = -1137, Min = -1291			Bauvorhaben	22-078	
			Instandsetzung Fußgängerbrücke		
			Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10		Seite



Balkenschnittgrößen

Querkraft V in [kN]

lastkombinationsweise dargestellt
aus Lastkombination LK-16
Max = 77, Min = -77

FE-Mod. BR-TÜ-BZ1 Bauzustand-1

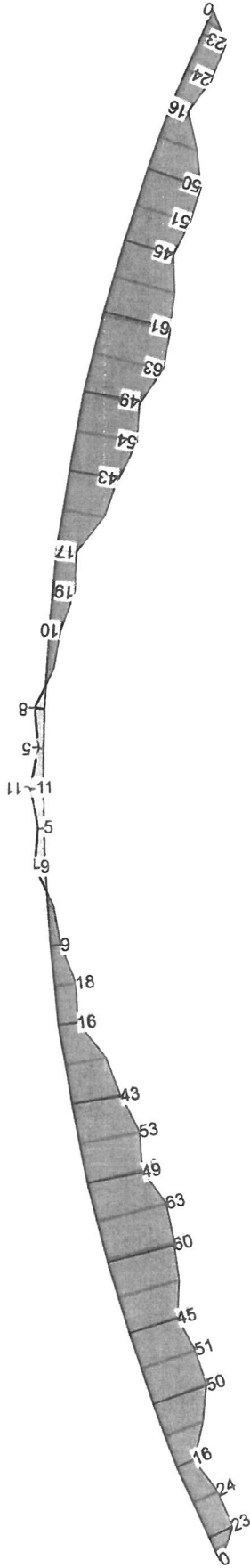
Bauvorhaben 22-078

Instandsetzung Fußgängerbrücke

Maßstab: 1:85

Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10

Seite



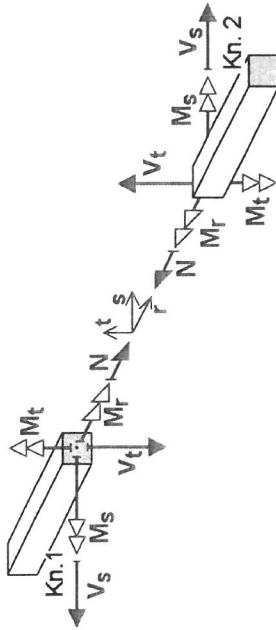
Balkenschnittgrößen		Moment M in [kNm]
lastkombinationsweise dargestellt aus Lastkombination LK-16 Max = 63, Min = -11		
FE-Mod.	BR-TÜ-BZ1 Bauzustand-1	
Bauvorhaben	22-078	
	Instandsetzung Fußgängerbrücke	
Kuhn Decker GmbH & Co. KG		Ingenieure und Architekten Tel: 07031 61169-10
Maßstab: 1:85		Seite

Balkenschnittgr-Stb

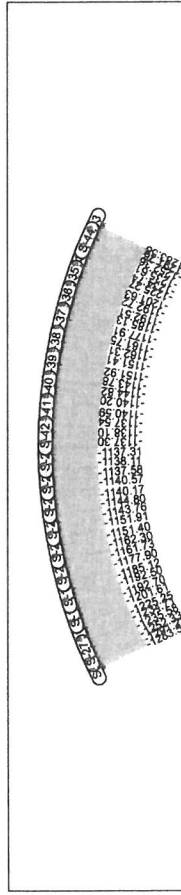
Schnittgrößen Stb-Stützen und 3D-Stäbe

Schnittgrößen

Schnittgrößen der Stützen und 3D-Stäbe



Normalkraft Nr [kN]

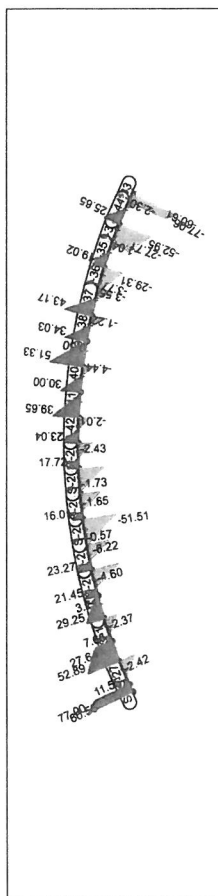


aus Lastkombination LK-16

Position	min Nr max Nr [kN]	Vs [kN]	Mt [kNm]
S-16	-1291.23 77.00	60.55	0.00
S-17	-1283.55 -1234.71	27.64	22.77
S-18	-1225.25 -1201.61	7.66	15.86
S-19	-1192.70 -1192.50	-19.08	50.26
S-20	-1185.12 -1177.90	29.25	44.84
S-21	-1161.73 -1162.30	3.71	60.28
S-22	-1151.40 -1151.91	21.45	48.85
S-23	-1143.76 -1144.80	-43.23	42.93
S-24	-1140.17 -1140.57	-0.57	42.93
S-25	-1137.58 -1138.11	-51.51	16.29
S-27	-1137.31 -1252.33	16.01	16.29
S-33	-1235.58 -1291.26	-30.29	8.91
		3.68	8.91
		-39.06	-8.95
		17.72	-8.95
		-22.45	-11.35
		11.55	22.77
		-25.71	15.86
		-77.06	0.00

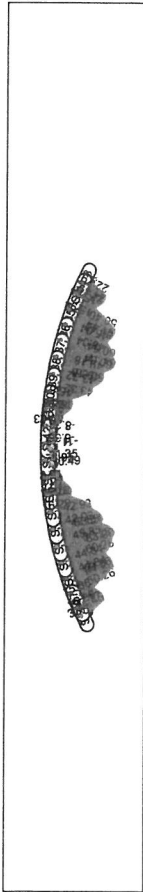
Position

Position	min Nr max Nr [kN]	Vs [kN]	Mt [kNm]
S-34	-1283.58 -1234.74	-60.61	22.79
S-35	-1225.27 -1201.63	-52.95	15.94
S-36	-1192.72 -1192.51	-27.71	50.40
S-37	-1185.13 -1177.91	-7.72	45.04
S-38	-1161.75 -1162.31	-29.31	60.54
S-39	-1151.41 -1151.92	-3.77	49.18
S-40	-1143.78 -1144.82	-21.52	43.32
S-41	-1140.59 -1137.54	43.17	16.81
S-42	-1138.10 -1137.30	-16.19	9.66
S-44	-1252.36 -1235.61	-3.97	9.66
		39.65	-8.36
		-17.13	-8.36
		23.04	-11.35
		-11.62	22.79
		25.65	15.94



Position	Nr [kN]	min Vs max Vs [kN]	Mt [kNm]
S-16	-1283.55	60.55	22.77
S-17	-1291.23	77.00	0.00
S-18	-1225.25	27.64	50.26
S-19	-1234.71	52.89	15.86
S-20	-1192.70	-19.08	44.84
S-21	-1201.61	7.66	50.26
S-22	-1185.12	3.71	60.28
S-23	-1192.50	29.25	44.84
S-24	-1161.73	-43.23	48.85
S-25	-1177.90	21.45	60.28
S-26	-1151.40	-34.09	42.93
S-27	-1162.30	23.27	48.85
S-28	-1143.76	-51.51	16.29
S-29	-1151.91	-0.57	42.93
S-30	-1140.17	8.91	16.29
S-31	-1144.80	16.01	-8.95
S-32	-1137.58	-39.06	8.91
S-33	-1140.57	3.68	-11.35
S-34	-1137.31	-22.45	-8.95
S-35	-1138.11	17.72	15.86
S-36	-1235.58	-25.71	22.77
S-37	-1252.33	11.55	0.00
S-38	-1291.26	-77.06	22.79
S-39	-1233.58	-60.61	15.94
S-40	-1234.74	-52.95	50.40
S-41	-1225.27	-27.71	50.40
S-42	-1201.63	-7.72	50.40
S-43	-1192.72	19.02	45.04
S-44	-1192.51	-29.31	45.04
S-45	-1185.13	-3.77	60.54
S-46	-1177.91	-21.52	60.54
S-47	-1161.75	43.17	49.18
S-48	-1162.31	-23.34	49.18
S-49	-1151.41	34.03	43.32
S-50	-1151.92	0.50	43.32
S-51	-1143.78	51.33	16.81
S-52	-1144.82	-16.19	16.81
S-53	-1140.20	30.00	9.66
S-54	-1140.59	-3.97	9.66

Moment Mt [kNm]



aus Lastkombination LK-16

Position	Nr Nr	Nr [kN]	Vs Vs [kN]	min Mt max Mt [kNm]
S-16	-1291.23	77.00	0.00	22.77
S-17	-1283.55	60.55	15.86	50.26
S-18	-1234.71	52.89	27.64	44.84
S-19	-1225.25	27.64	-19.08	51.29
S-20	-1192.70	0.97	29.25	44.84
S-21	-1199.38	0.97	29.25	44.84
S-22	-1192.50	3.71	3.71	60.28
S-23	-1185.12	3.71	3.71	60.28
S-24	-1161.73	-43.23	-43.23	48.85
S-25	-1173.41	3.48	3.48	63.90
S-26	-1151.40	-34.09	-34.09	42.93
S-27	-1158.10	1.15	1.15	53.51
S-28	-1143.76	-51.51	-51.51	16.29
S-29	-1151.91	-0.57	-0.57	42.93
S-30	-1140.17	-30.29	-30.29	8.91
S-31	-1143.04	-1.65	-1.65	19.00
S-32	-1137.58	-39.06	-39.06	-8.95
S-33	-1140.19	-1.73	-1.73	9.04
S-34	-1137.31	-22.45	-22.45	-11.35
S-35	-1137.71	-2.43	-2.43	-5.13
S-36	-1235.58	-25.71	-25.71	15.86
S-37	-1248.14	2.24	2.24	24.45
S-38	-1291.26	-77.06	-77.06	0.00
S-39	-1283.58	-60.61	-60.61	22.79
S-40	-1234.74	-52.95	-52.95	15.94
S-41	-1225.27	-27.71	-27.71	50.40
S-42	-1192.72	19.02	19.02	45.04
S-43	-1199.41	-1.04	-1.04	51.44
S-44	-1192.51	-29.31	-29.31	45.04
S-45	-1185.13	-3.77	-3.77	60.54
S-46	-1161.75	43.17	43.17	49.18
S-47	-1173.43	-3.55	-3.55	64.17
S-48	-1151.41	34.03	34.03	43.32
S-49	-1158.11	-1.22	-1.22	53.86
S-50	-1143.78	51.33	51.33	16.81
S-51	-1151.92	0.50	0.50	43.32
S-52	-1140.20	30.00	30.00	9.66
S-53	-1143.06	1.43	1.43	19.59
S-54	-1137.54	39.65	39.65	-8.36
S-55	-1140.20	1.55	1.55	9.81
S-56	-1137.30	23.04	23.04	-11.35
S-57	-1137.80	-2.01	-2.01	-4.77

Position

S-44

Nr	Nr	Vs	min Mt
[kN]	[kN]	[kN]	max Mt
-1235.61	-1235.61	25.65	15.94
-1248.17	-1248.17	-2.30	24.49

BemerkungAufgeständerte Platte

Die Belastung ist geringer als im Endzustand \Rightarrow keine weitere Bemessung / Bemerkung erforderlich.

Vor Abbruch des als Auflager dienenden Widerlagers (Mechanism) ist eine Unterstützung errichten.

Die Unterstützung ist für folgende Lasten zu dimensionieren (S. S. 2.3)

$$G_K = (10 + 4,5 + 1,4 + 3,8) = 19,7 \text{ kN}$$

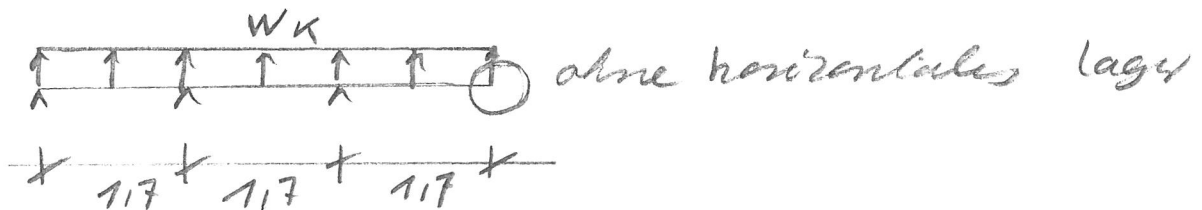
$$Q_K = 9 \text{ kN}$$

Die Unterstützung darf erst 28 Tage nach Betonieren des neuen Widerlagers einseitig bzw. vollständig an die aufgeständerte Platte entfernt werden.

Stützweiler der aufgestellten Platte

Nachweis als unbewehrtes Druckglied
siehe Endzustand.

Vergleich der Maxlast BZ1 mit der
des Endzustandes.

Stat. System BZ1

$$W_K \sim (0,8 + 0,275 + 1,112) \times 1,64 = 2,25 \text{ kN/m}$$

$$\text{no } H_{w,d} = 1,5 \times 7,65 = 11,5 \text{ kN}^d < 22,8 \text{ kN}^d$$

$$G_K = 27,6 \text{ kN} \quad (5 \cdot 2,3)$$

$$\text{no } Z^d = \frac{11,5 \times 1,5}{1,9} - \frac{27,6}{2} = -4,7$$

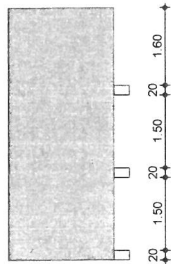
Kann Zugbewehrung erforderlich

Pos. Platte-BZ1-W

Aufgeständerte Platte - Windbelastung

System
M 1:105
Mehrfeldträger mit Auskrantung
System

Ansicht



Abmessungen Mat./Querschnitt	Feld	I [m]	Material	b/h [cm]
	1-Kr	1.70	C 20/25	27.5/215.0
Auflager	Lager	x [m]	b [cm]	Art
	A	0.00	20.0	Beton
	B	1.70	20.0	Beton
	C	3.40	20.0	Beton

**** WARNING ****
Anwendungsgrenzen überschritten, da im Feld 1, Feld 2 und Kragarm rechts wandartiger Träger vorliegt.

Belastungen
Belastungen auf das System

Grafik
Belastungsgrafiken (einwirkungsbezogen)

Einwirkungen
Qk, W



Struckenlasten
in z-Richtung

Einw. Qk, W

Bem.-schnittgrößen

Grafik

Kombinationen

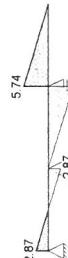
Gleichlasten Feld Komm.	a [m]	s [m]	q _{II} [kN/m]	q _{re} [kN/m]
1	0.00	5.10	2.25	2.25

Bemessungsschnittgrößen

Schnittgrößen (Umhüllende)

Moment M_{y,d}[kNm]

Querkraft V_{z,d}[kN]



Auflagerkräfte
Char. Auflagerkr.

Auflagerkräfte Träger
charakteristische Auflagerkräfte (je Einwirkung)
Aufl.

Einw. Qk, W

	F _{z,k,min} [kN]	F _{z,k,max} [kN]
A	1.91	1.91
B	1.91	1.91
C	7.65	7.65

Bemessungsoptione

Ausgabeoption

Option für den Bemessungsverlauf

- erforderliche Bewehrung, samt allen Einzelergebnissen

Liefert zusätzliche Informationen über die erforderlichen Bewehrungsmengen aus den einzelnen Nachweisschritten.

Ausgabeoption

Option für die Ausgabe der zugrunde liegenden Kombinationen

- tabellarische Ausgabe auf Einwirkungsniveau

Je Lastfallkombination werden alle Einwirkungen mit ihrem Einwirkungsfaktor und ihrer Einwirkungstypnummer tabellarisch aufgelistet. Welche Lastfälle innerhalb einer Einwirkung beteiligt sind, wird nicht dokumentiert.

Manuelle-Komb. Einwirkungsmuster

Manuell definierte Kombinationen für die Bemessung Einwirkungsmuster dienen zur Definition, welche Einwirkungen miteinander zu kombinieren bzw. nicht zu kombinieren sind. Die Ermittlung der Kombinationen erfolgt unter Berücksichtigung der Einwirkungstypisierung und Lastgruppendefinition weiterhin automatisch.

Einwirkung	Gk	Qk.N	Qk.S	Qk.W
EM-1	X	X	.	X
Einwirkung	AEd	Pk	Qk.T	Gk.E
EM-1	.	.	.	.
Einwirkung	Gk.H	Qk.K	Qk.M	Qk.KL
EM-1	.	.	.	.
Einwirkung	Qk.HL			
EM-1	.			

Lastfallkombinationen

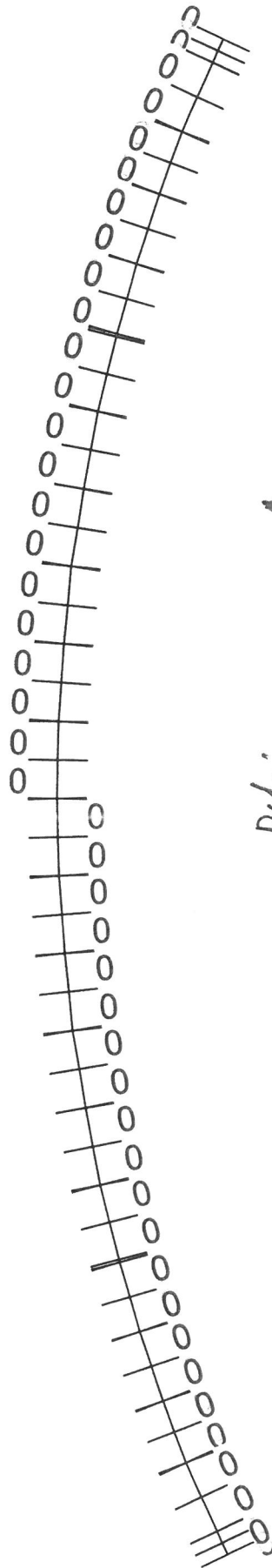
Alle Faktoren innerhalb der Lastfallkombinationen wurden manuell definiert. Die Definition von Einwirkungen und Lastgruppen hat hier keine Bedeutung.

G	Grundkombination
A	Außergewöhnliche Kombination
E	Kombination für Erdbebennachweis
fi	Kombination für Brandnachweis
S	Seltene Kombination
H	Häufige Kombination
Q	Quasi-ständige Kombination
N	Nicht-häufige Kombination
si	Seltene Kombination für Nachweis der elastischen Anfangsdurchbiegung
sf	Seltene Kombination für Nachweis der Enddurchbiegung
qf	Quasi-ständige Kombination für Nachweis des Durchhangs

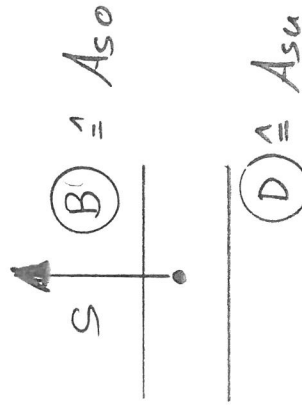
Lastfall		LF-1	LF-2	LF-3
Lastgruppe		.	.	LG-1
LK-1_1	G	1.35	.	.
LK-2	G	1.35	1.00	1.00
LK-3	G	1.35	.	.
LK-4	G	1.35	.	.
LK-5	G	1.35	.	.
LK-6	G	1.35	.	.
LK-7	G	1.35	.	.
LK-8	G	1.35	.	.
LK-9	G	1.00	.	.
LK-10	G	1.00	.	.
LK-11	G	1.00	.	.
LK-12	G	1.00	.	.
LK-13	G	1.00	.	.
LK-14	G	1.00	.	.
LK-15	G	1.00	.	.
LK-16	G	1.00	.	.
Lastfall		LF-4	LF-5	LF-6
Lastgruppe		.	.	.
LK-1_1	G	1.35	1.35	1.35
LK-2	G	1.35	1.35	1.35
LK-3	G	1.35	1.35	1.35
LK-4	G	1.35	1.35	1.35
LK-5	G	1.35	1.35	1.35
LK-6	G	1.35	1.35	1.35
LK-7	G	1.35	1.35	1.35
LK-8	G	1.35	1.35	1.35
LK-9	G	1.00	1.00	1.00
LK-10	G	1.00	1.00	1.00
LK-11	G	1.00	1.00	1.00
LK-12	G	1.00	1.00	1.00
LK-13	G	1.00	1.00	1.00
LK-14	G	1.00	1.00	1.00
LK-15	G	1.00	1.00	1.00
LK-16	G	1.00	1.00	1.00
Lastfall		LF-7	LF-8	LF-9
Lastgruppe		.	.	.
LK-1_1	G	.	.	.
LK-2	G	1.50	1.50	1.50
LK-3	G	.	.	.
LK-4	G	.	.	.
LK-5	G	.	.	.
LK-6	G	1.50	1.50	1.50
LK-7	G	.	.	.
LK-8	G	1.50	1.50	1.50
LK-9	G	.	.	.
LK-10	G	1.50	1.50	1.50
LK-11	G	.	.	.
LK-12	G	.	.	.
LK-13	G	.	.	.
LK-14	G	1.50	1.50	1.50
LK-15	G	.	.	.

Lastfall		LF-7	LF-8	LF-9
Lastgruppe		.	.	.
LK-16	G	1.50	1.50	1.50
Lastfall		LF-10	LF-11	LF-12
Lastgruppe		.	.	.
LK-1_1	G	.	.	.
LK-2	G	.	.	.
LK-3	G	.	.	.
LK-4	G	1.50	1.50	1.50
LK-5	G	.	.	.
LK-6	G	1.50	1.50	1.50
LK-7	G	.	.	.
LK-8	G	1.50	1.50	1.50
LK-9	G	.	.	.
LK-10	G	.	.	.
LK-11	G	.	.	.
LK-12	G	1.50	1.50	1.50
LK-13	G	.	.	.
LK-14	G	1.50	1.50	1.50
LK-15	G	.	.	.
LK-16	G	1.50	1.50	1.50
Lastfall		LF-13	LF-14	LF-15
Lastgruppe		.	.	.
LK-1_1	G	.	.	.
LK-2	G	.	.	.
LK-3	G	1.50	1.50	1.50
LK-4	G	.	.	.
LK-5	G	.	.	.
LK-6	G	.	.	.
LK-7	G	1.50	1.50	1.50
LK-8	G	1.50	1.50	1.50
LK-9	G	.	.	.
LK-10	G	.	.	.
LK-11	G	1.50	1.50	1.50
LK-12	G	.	.	.
LK-13	G	.	.	.
LK-14	G	.	.	.
LK-15	G	1.50	1.50	1.50
LK-16	G	1.50	1.50	1.50
Lastfall		LF-16	LF-17	LF-18
Lastgruppe		.	.	.
LK-1_1	G	.	.	.
LK-2	G	.	.	.
LK-3	G	.	.	.
LK-4	G	.	.	.
LK-5	G	1.50	1.50	1.50
LK-6	G	.	.	.
LK-7	G	1.50	1.50	1.50
LK-8	G	1.50	1.50	1.50
LK-9	G	.	.	.
LK-10	G	.	.	.
LK-11	G	.	.	.
LK-12	G	.	.	.

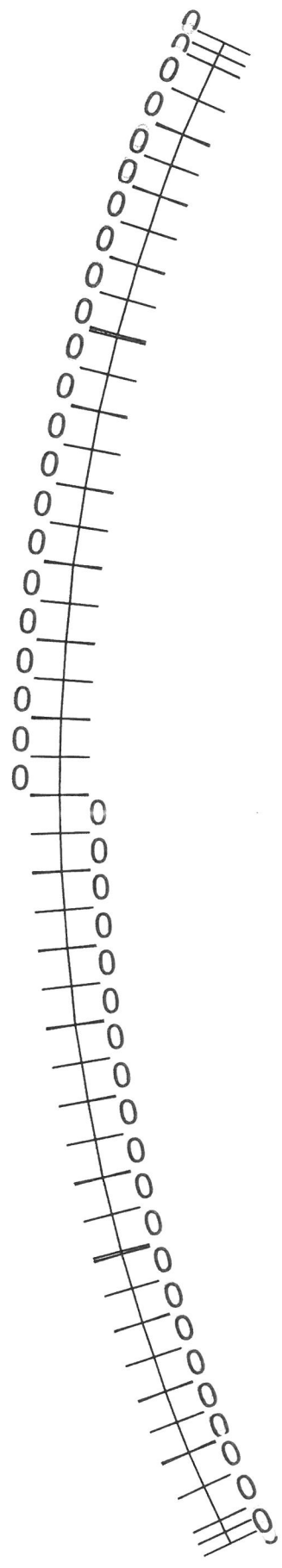
Lastfall		LF-16	LF-17	LF-18
Lastgruppe		.	.	.
LK-13	G	1.50	1.50	1.50
LK-14	G	.	.	.
LK-15	G	1.50	1.50	1.50
LK-16	G	1.50	1.50	1.50
Lastfall		TEMP-1	VOR-1	
Lastgruppe		.	.	
LK-1_1	G	.	.	
LK-2	G	1.00	1.00	
LK-3	G	.	.	
LK-4	G	.	.	
LK-5	G	.	.	
LK-6	G	.	.	
LK-7	G	.	.	
LK-8	G	.	.	
LK-9	G	.	.	
LK-10	G	.	.	
LK-11	G	.	.	
LK-12	G	.	.	
LK-13	G	.	.	
LK-14	G	.	.	
LK-15	G	.	.	
LK-16	G	.	.	



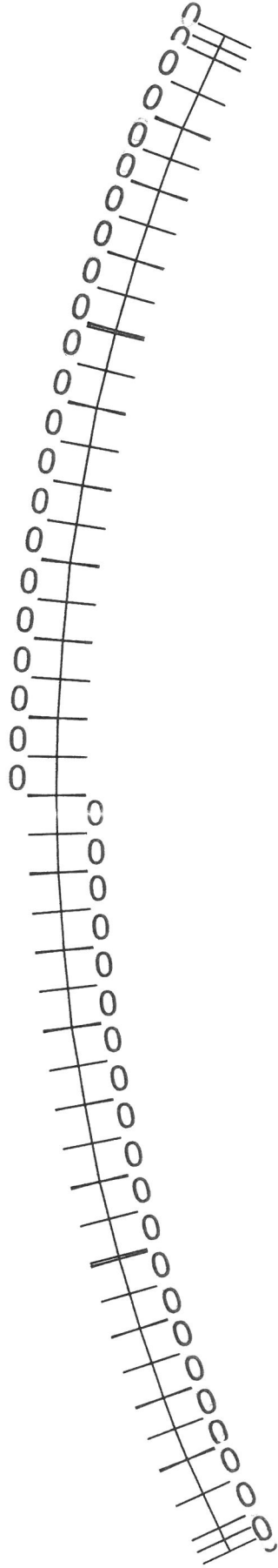
Def.:



Bemessung Stb-Stab	Erf. Längsbewehrung As	FE-Mod.	BR-TÜ-BZ1 Bauzustand-1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	Maßstab: 1:85
aus allen Nachweisen in Seite B in [cm ²] Max = 0, Min = 0		Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10		
			Seite	



Bemessung Stb-Stab aus allen Nachweisen in Seite D in [cm ²] Max = 0, Min = 0	Erf. Längsbewehrung As	FE-Mod. BR-TÜ-BZ1 Bauzustand-1 Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	Maßstab: 1:85
		Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10	Seite



Bemessung Stb-Stab Erf. Bügelbewehrung Asw/sw

aus allen Nachweisen in [cm²/m]
Max = 0, Min = 0

FE-Mod. BR-TÜ-BZ1 Bauzustand-1
Bauvorhaben 22-078
Instandsetzung Fußgängerbrücke

Maßstab: 1:85

Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10

Seite

Übergang Bogen - Widerlager

$$\text{Max } N_{E,d} = -1592 \text{ kN (LK8)} \sim \sigma < \sigma_{zul} \quad (\text{S. S. 5.16})$$

$$\text{Max } V_{E,d} = 145 \text{ kN}^d \text{ (LK213)} < 274 \text{ kN}^d$$

$$\text{Zug } N_{E,d} = 1200 \text{ kN} \quad (\text{S. S. 5.17})$$

Benennung unter Berücksichtigung der
Windlast (siehe auch S. 5.22)Übergang Bogen / Widerlager

$$M_{E,w,d} = 116 \text{ kNm} (\gamma = 1,5)$$

$$N_{E,d} = 860 \text{ kN} (\gamma = 1,0)$$

$$b/d = 50/250 \text{ (siehe Seite)}$$

$$e = \frac{116}{860} = 0,13 \text{ m} \sim \text{Querschnitt überdeckt} \\ < 2,5/6$$

Feldmitte

$$M_{E,w,d} = 51 \text{ kNm} (\gamma = 1,5)$$

$$N_{E,d} = 750 \text{ kN (LK9, } \gamma = 1,0)$$

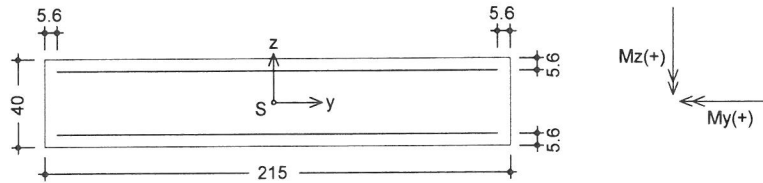
$$M_{E,d} = 191 \text{ kNm (LK7, } \gamma = 1,5)$$

Pos. BEM-1-BZ1

Bemessung im Feld mit Windlast

System
 M 1:35

Rechteckquerschnitt



Breite	b =	215.0	cm
Höhe	h =	40.0	cm
Bewehrungsanordnung		unten und oben je Asu	

Belastungen

gemäß DIN EN 1990

Einw. **Gk**

Normalkraft
 Biegemoment

$N_{x,k}$	=	750.00	kN
$M_{y,k}$	=	0.00	kNm
$M_{z,k}$	=	0.00	kNm

Einw. **Qk.N**

Normalkraft
 Biegemoment

$N_{x,k}$	=	0.00	kN
$M_{y,k}$	=	190.00	kNm
$M_{z,k}$	=	51.00	kNm

Kombinationen

Manuelle Kombinationsbildung (1 Kombinationen)

Grundkombination E_d
 Gl.(6.10)

Ek	$\Sigma (\gamma \cdot \psi \cdot EW)$
1	1.00 * Gk + 1.00 * Qk.N

Manuelle Komb.

Manuell vorgegebene Kombinationen

Vorgabe **$\Sigma (\gamma \cdot \psi \cdot EW)$**

ständig/vorüberg.

1	1.00 * Gk	+ 1.00 * Qk.N
---	-----------	---------------

Bem.-schnittgrößen

Nr.	$N_{x,d}$[kN]	$M_{y,d}$[kNm]	$M_{z,d}$[kNm]
1	750.000	190.000	51.000

Bemessung (GZT)

gemäß DIN EN 1992-1-1, 3.1.5, 3.1.6, 3.1.7, 3.2.7, 6.1

Normalbeton

C 20/25

Betonstahl

B 500SA

Diagramm für Beton

Parabel-Rechteck

Bewehrungsgrad

ρ_{min}	=	0.00	%
ρ_{max}	=	8.00	%

Expositionsklasse(n): **XC1**

Mindestbetondeckung

c_{min}	=	25	mm
-----------	---	----	----

Vorhaltemaß der Betondeckung

Δc	=	15	mm
------------	---	----	----

Durchmesser Querbewehrung

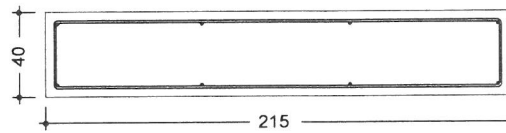
d_s	=	10	mm
-------	---	----	----

Bewehrungsabstand

d'	=	5.60	cm
------	---	------	----

erf. Bewehrung	Stahlfläche	unten und oben je	$A_{su} =$	3.70	cm^2
	gesamte Stahlfläche		$A_s =$	7.41	cm^2
	Bewehrungsgrad		$\rho =$	0.09	%
Bewehrungswahl	minimaler Durchmesser	$d_{min} =$		12	mm
	maximaler Durchmesser	$d_{max} =$		28	mm
	maximale Stabanzahl	$n_{max} =$		10	-
Bewehrungsstäbe	Lage	Anzahl	ds [mm]	As [cm²]	
	je Ecke	1	12	1.13	
	je b-Seite	2	12	2.26	
	gesamte Stabanzahl		$n =$	8	-
	Betondeckung Bügel		$c_{nom} =$	40	mm
gew. Bewehrung	gesamte Stahlfläche		$A_s =$	9.05	cm^2
	Bewehrungsgrad		$\rho =$	0.11	%

M 1:35



Längsstäbe: 8 $\varnothing 12$
 Bügel: $\varnothing 10$
 Betondeckung:
 $c_{nom} = 40 \text{ mm}$

Nachweis	Nu [kN]	Myu [kNm]	Mzu [kNm]	v [-]	η [-]
	859.1	217.6	58.4	1.00	0.873

vorh 11 $\varnothing 12$ u. + 0. ✓

22-078

Projekt Nr.

15.14

Position

Seite


KUHN | DECKER
 INGENIEURE UND ARCHITEKTEN

 Kuhn Decker GmbH & Co. KG
 Ingenieure und Architekten

Stabilitätsnachweis Bogen

(s. auch S. 5.25)

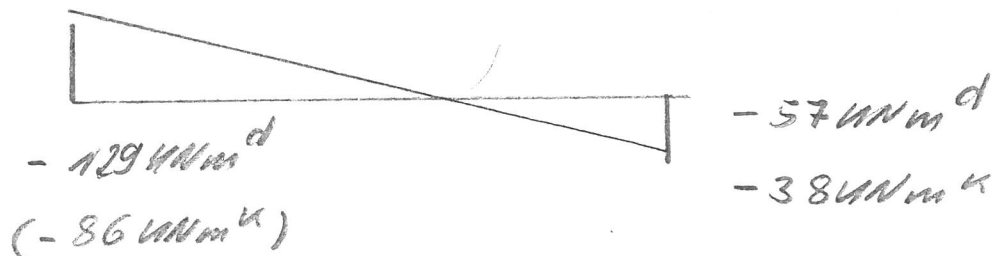
Belastung:

$$\text{Max } N_{E,d} \text{ (LKB)} = -1600 \text{ kN}$$

$$\text{Max } M_{E,d} \text{ (LH7)} = 191 \text{ kNm} \sim \bar{q} = 14,6 \frac{\text{kN}}{\text{m}}$$

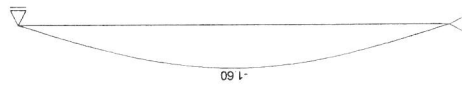
$$860 \sqrt{1288}^q$$

M_{E,d}:



Punktlasten in x-Richtung	Einw. Gk Einw. Qk.N	Ges.	Komm.	Ort	a [m]	F _x [kN]	e _y [cm]	e _z [cm]
Punktlasten in y-Richtung	Einw. Qk.W	Ges.	Komm.	Ort	a [m]	F _y [kN]	M _z [kNm]	
Streckenlasten in z-Richtung	Einw. Qk.N	Ges.	Komm.	Ort	a [m]	s [m]	q _u [kN/m]	q _o [kN/m]
Imperfektionen		Ges.	Komm.	Ort	a [m]	s [m]	q _u [kN/m]	q _o [kN/m]

Figur 10 w_y[cm]



Figur 10 w_z[cm]

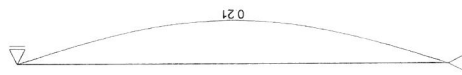


Tabelle Figur 10	EG	x [m]	w _{yu} [cm]	w _{yk} [cm]	w _{zu} [cm]	w _{zk} [cm]	Richtung [-]	β [-]	x [m]	leil [cm]
		10.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		5.10	-1.60 *	0.00 *	0.00 *	0.21 *	0.00 *	0.00 *	0.00 *	0.00 *
		0.00	0.00 *	0.00 *	0.00 *	0.00 *	0.00 *	0.00 *	0.00 *	0.00 *

Ungewollte Ausmitte affin zur Knickfigur aufgebracht.

Figur	[-]	y	x
10	1.00	5.08	1.60

Kombinationen

Kombinationsbildung nach DIN EN 1990
Darstellung der maßgebenden Kombinationen

- Die Lasten der Einwirkung Qk.N werden in ungünstiger Laststellung angesetzt

Ek	Imp.	Σ (γ*ψ*EW)
10	10	1.35*Gk
23	7	1.35*Gk
		+1.50*Qk.N
		(2)*
		+1.50*Qk.N
		(1,2)*
		+0.90*Qk.W

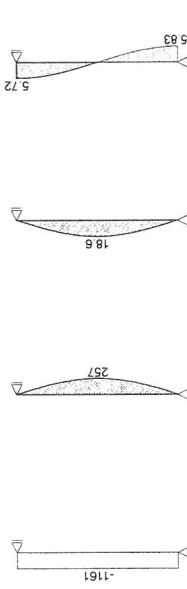
*: entspricht dem Ort des Lastangriffs. Siehe Kapitel 'Belastungen'.

Bem.-schnittgrößen

nach Th. II. Ordnung
nichtlineare Berechnung nach Th. II. Ordnung

Schnittgrößen (je Kombination)

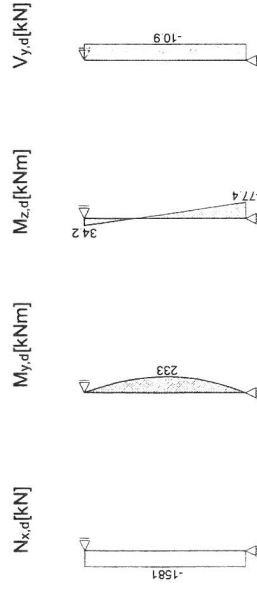
Komb. 10



V_{zd}[kN]



Komb. 23



V_{z,d}[kN]



Tabelle Schnittgrößen (je Kombination)

Gesch.	x [m]	N _{z,d} [kN]	M _{y,d} [kNm]	V _{z,d} [kN]	M _{z,d} [kNm]	V _{y,d} [kN]
Komb. 10	EG	10.20	-1161	0.00	-90.25 *	5.72 *
	5.10	-1161	257.50 *	0.02	18.64 *	0.00
	0.00	-1161 *	0.00	90.21 *	0.00	-5.83 *
Komb. 23	10.20	-1581	0.00	-86.15 *	34.20 *	-10.94 *
	5.10	-1581	233.36 *	0.00	-21.60	-10.94 *
	0.00	-1581 *	0.00	86.01 *	-77.40 *	-10.94 *

Bem.-verformungen

nach Th. II. Ordnung

nichtlineare Berechnung nach Th. II. Ordnung

Tabelle Verformungen (je Kombination)

Gesch.	x [m]	w _{z,d} [cm]	ϕ _{y,d} [mrad]	w _{y,d} [cm]	ϕ _{z,d} [mrad]
Komb. 10	EG	10.20	0.00	-13.81 *	4.93 *
	5.10	5.65 *	0.03	-1.60 *	0.00
	0.00	0.00	13.80 *	0.00	-5.02 *
Komb. 23	10.20	0.00	-7.56 *	0.00	0.00
	5.10	2.50 *	0.00	0.00	0.00
	0.00	0.00	7.47 *	0.00	0.00

Mat./Querschnitt

Q	Typ	Bewehr.-anordnung	b/D	h/D ₁	d'
1	Recht	Asu=Aso	230.0	45.0	5.0
Q	Beton	Betonstahl	ρ _{max} [%]	φ	V
1	C 20/25	B 500SB	9.00	2.50	25.0

Bemessung (GZT) gemäß DIN EN 1992-1-1, 3.1, 3.2, 5.4, 5.7, 5.8

Bruchschnittgrößen

Komb. 10	x [m]	N _u [kN]	M _{yu} [kNm]	M _{zu} [kNm]	ε _s [‰]	ε _c [‰]	η
	10.20	11730.0	0.0	0.0	-2.00	-2.00	0.10
	5.10	2824.1	477.8	45.4	6.76	-3.50	0.41
	0.00	11730.0	0.0	0.0	-2.00	-2.00	0.10
Komb. 23	x [m]	N _u [kN]	M _{yu} [kNm]	M _{zu} [kNm]	ε _s [‰]	ε _c [‰]	η
	10.20	11429.0	0.0	247.2	-1.29	-2.55	0.14
	5.10	4131.9	592.3	-56.5	3.59	-3.50	0.38
	0.00	11070.2	0.0	-542.0	-0.95	-2.82	0.14

Bruchschnittgrößen

Komb. 10	x [m]	N _u [kN]	M _{yu} [kNm]	M _{zu} [kNm]	ε _s [‰]	ε _c [‰]	η
	10.20	11845.1	0.0	0.0	-2.00	-2.00	0.10
	5.10	1161.0	257.5	18.6	20.17	-3.50	1.00
	0.00	11845.1	0.0	0.0	-2.00	-2.00	0.10
Komb. 23	x [m]	N _u [kN]	M _{yu} [kNm]	M _{zu} [kNm]	ε _s [‰]	ε _c [‰]	η
	10.20	11429.0	0.0	247.2	-1.29	-2.55	0.14
	5.00	3919.6	578.3	-56.3	3.97	-3.50	0.40
	0.00	11070.2	0.0	-542.0	-0.95	-2.82	0.14

Knicklastfaktoren und Schlankheiten

Komb.	V _y	V _z	λ _y	λ _z
10	42.81	1118.42	15.36	78.52
23	31.44	821.30	15.36	78.52

Erforderliche Bewehrung

von x [m]	bis x [m]	Q Typ	Bew.Art	d' [cm]	A _{s,ges} [cm ²]	ρ [%]
0.00	10.20	1 R	Asu=Aso	5.0	0.00	0.00

Nachweise (GZT) Querkraftbemessung

x [m]	V _{ed,y} [kN]	V _{ed,z} [kN]	V _{rd,max,y} [kN]	V _{rd,max,z} [kN]	N _x [kN]	θ	z erf asw [cm]
10.2	10.94	980.89	2323.7	1581.0	18.4	203	0.00
0.00	86.15	980.89	2111.4	1581.0	18.4	36.0	0.00
	10.94	980.89	2323.7	1581.0	18.4	203	0.00
	86.01	980.89	2111.4	1581.0	18.4	36.0	0.00

Auflagerkräfte

K	A _d [kN]	M _{yd} [kNm]	M _{zd} [kNm]	H _{yd} [kN]	H _{zd} [kN]
1	1581.0	0.0	0.0	0.0	0.0
2	1581.0	0.0	0.0	0.0	0.0
3	1581.0	0.0	0.0	0.0	0.0
4	1581.0	0.0	0.0	0.0	0.0
5	1581.0	0.0	0.0	0.0	74.2

K	Ad [kN]	Myd [kNm]	Mzd [kNm]	Hyd [kN]	Hzd [kN]
6	1581.0	0.0	0.0	0.0	74.2
7	1581.0	0.0	0.0	0.0	74.2
8	1581.0	0.0	0.0	0.0	74.2
9	1161.0	0.0	0.0	0.0	74.2
10	1161.0	0.0	0.0	0.0	74.2
11	1161.0	0.0	0.0	0.0	74.2
12	1161.0	0.0	0.0	0.0	74.2
13	1161.0	0.0	0.0	-18.2	0.0
14	1161.0	0.0	0.0	-18.2	0.0
15	1161.0	0.0	0.0	-18.2	0.0
16	1161.0	0.0	0.0	-18.2	0.0
17	1581.0	0.0	0.0	-10.9	0.0
18	1581.0	0.0	0.0	-10.9	0.0
19	1581.0	0.0	0.0	-10.9	0.0
20	1581.0	0.0	0.0	-10.9	0.0
21	1581.0	0.0	0.0	-10.9	74.2
22	1581.0	0.0	0.0	-10.9	74.2
23	1581.0	0.0	0.0	-10.9	74.2
24	1581.0	0.0	0.0	-10.9	74.2

Charakteristische Werte

Einw	Ak,min [kN]	Myk,min [kNm]	Mzk,min [kNm]	Hyk,min [kN]	Hzk,min [kN]
Gk	860.0	0.0	0.0	0.0	0.0
Qk.N	280.0	0.0	0.0	0.0	0.0
Qk.W	0.0	0.0	0.0	-12.2	49.5

Anteile aus Th. II Ordnung

Einw	ΔMyk,min [kNm]	ΔMzk,min [kNm]	ΔHyk,min [kN]	ΔHzk,min [kN]
Gk	0.0	0.0	0.0	0.0
Qk.N	0.0	0.0	0.0	0.0
Qk.W	0.0	0.0	0.0	0.0

Auflagergrößen
B; x = 10.20 m

K	Ad [kN]	Myd [kNm]	Mzd [kNm]	Hyd [kN]	Hzd [kN]
1	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	74.2
6	0.0	0.0	0.0	0.0	74.2
7	0.0	0.0	0.0	0.0	74.2
8	0.0	0.0	0.0	0.0	74.2
9	0.0	0.0	0.0	0.0	74.2
10	0.0	0.0	0.0	0.0	74.2
11	0.0	0.0	0.0	0.0	74.2
12	0.0	0.0	0.0	0.0	74.2
13	0.0	0.0	0.0	18.2	0.0
14	0.0	0.0	0.0	18.2	0.0
15	0.0	0.0	0.0	18.2	0.0

K	Ad [kN]	Myd [kNm]	Mzd [kNm]	Hyd [kN]	Hzd [kN]
16	0.0	0.0	0.0	18.2	0.0
17	0.0	0.0	0.0	10.9	0.0
18	0.0	0.0	0.0	10.9	0.0
19	0.0	0.0	0.0	10.9	0.0
20	0.0	0.0	0.0	10.9	0.0
21	0.0	0.0	0.0	10.9	74.2
22	0.0	0.0	0.0	10.9	74.2
23	0.0	0.0	0.0	10.9	74.2
24	0.0	0.0	0.0	10.9	74.2

Charakteristische Werte

Einw	Ak,min [kN]	Myk,min [kNm]	Mzk,min [kNm]	Hyk,min [kN]	Hzk,min [kN]
Gk	0.0	0.0	0.0	0.0	0.0
Qk.N	0.0	0.0	0.0	0.0	0.0
Qk.W	0.0	0.0	0.0	0.0	49.5

Zusammenfassung

Zusammenfassung der Nachweise

Nachweise (GZT)

Nachweise im Grenzzustand der Tragfähigkeit

Nachweis

Stabilität
Bruchschnittgrößen
Querkraftbemessung

OK
OK
OK

η
[-]

1.00

Horizontallasten

In Plattenebene sind folgende Horizontal-lasten anzusetzen:

$$H_{\text{H}} = r_e = 0,1 \times 5 \text{ kN/m}^2 \times 2,15 \text{ m} \times 11,4 \text{ m} \\ = 12,2 \text{ kN/Seite}$$

$$\text{zug } N_K = 27,6 \text{ kN}^K \text{ (s. S. 2.3.)}$$

Bemessung des Pfeilers in Richtung
Schwerpunkt für die H-Kraft. (d/h = 215/20)

$$M_{E,d} = 1,5 \times 12,2 \times 0,8 \text{ m} = 14,7 \text{ kNm}^d$$

$$\approx \text{erf } A_s = \frac{2,24 \times 16,1}{15} - \frac{27,6}{4315} = 1,77 \text{ cm}^2 \text{ (B500B)} \\ 3,53 \text{ cm}^2 \text{ (BSt. II)}$$

$$\text{erf } 2,5 \text{ cm}^2 \text{ (5 } \phi 8)$$

~ die restliche Last wird über
den höheren Pfeiler über Biegung ab-
getragen.

$$\Delta H_K = 12,2 \times \frac{1,0}{3,5} = 3,5 \text{ kN} \sim M_{E,d} = 3,5 \times 1,5 \times 1,3 \\ = 6,8 \text{ kNm}$$

$$\text{zug } N_K = 27,6 \text{ kN}^K$$

$$\approx \text{erf } A_s \sim \frac{6,8}{1417} \times 3,5 = 1,6 \text{ cm}^2 \text{ (BSt II)} \checkmark$$

22-07B

Projekt Nr.

15.20

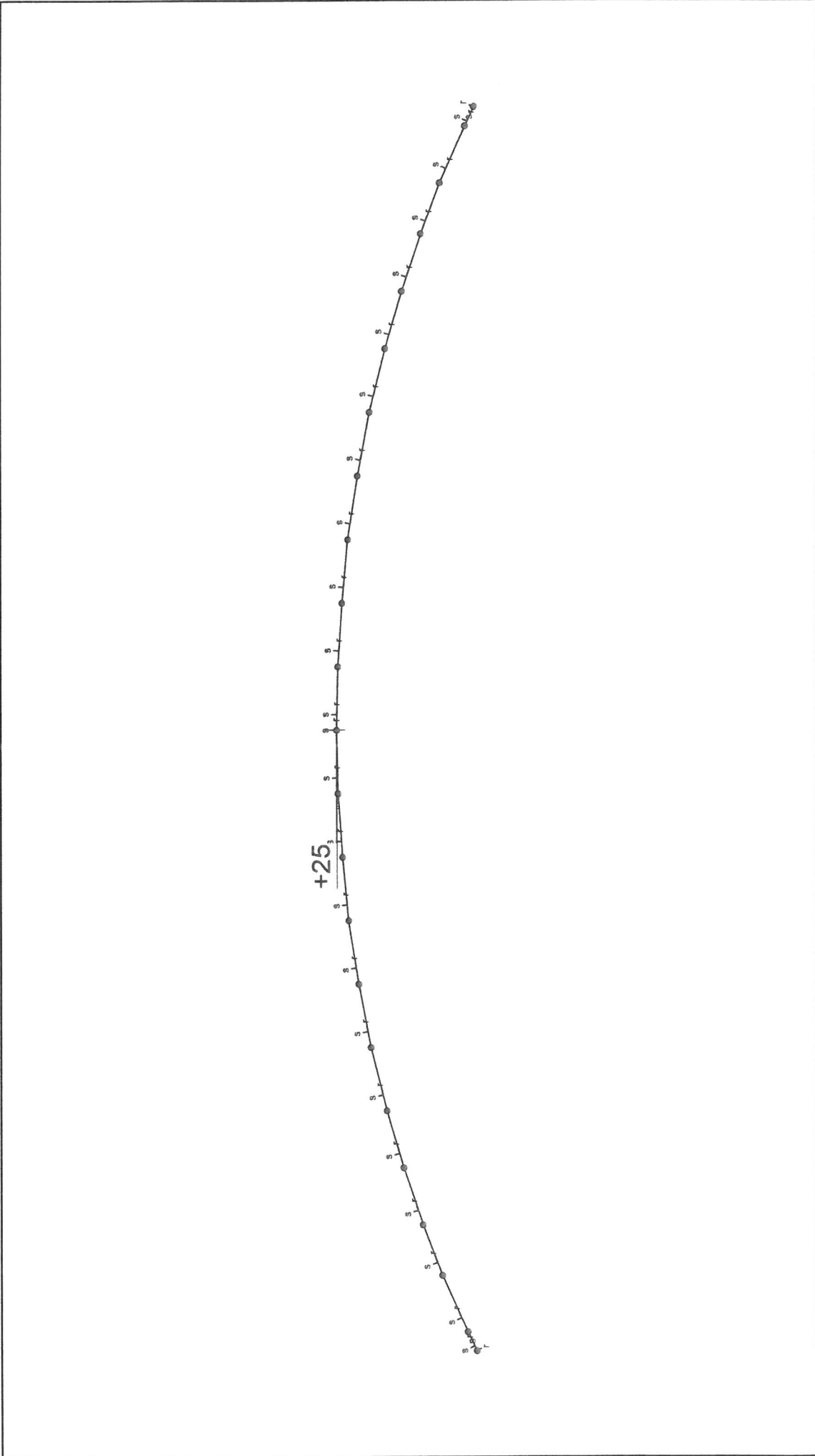
Position

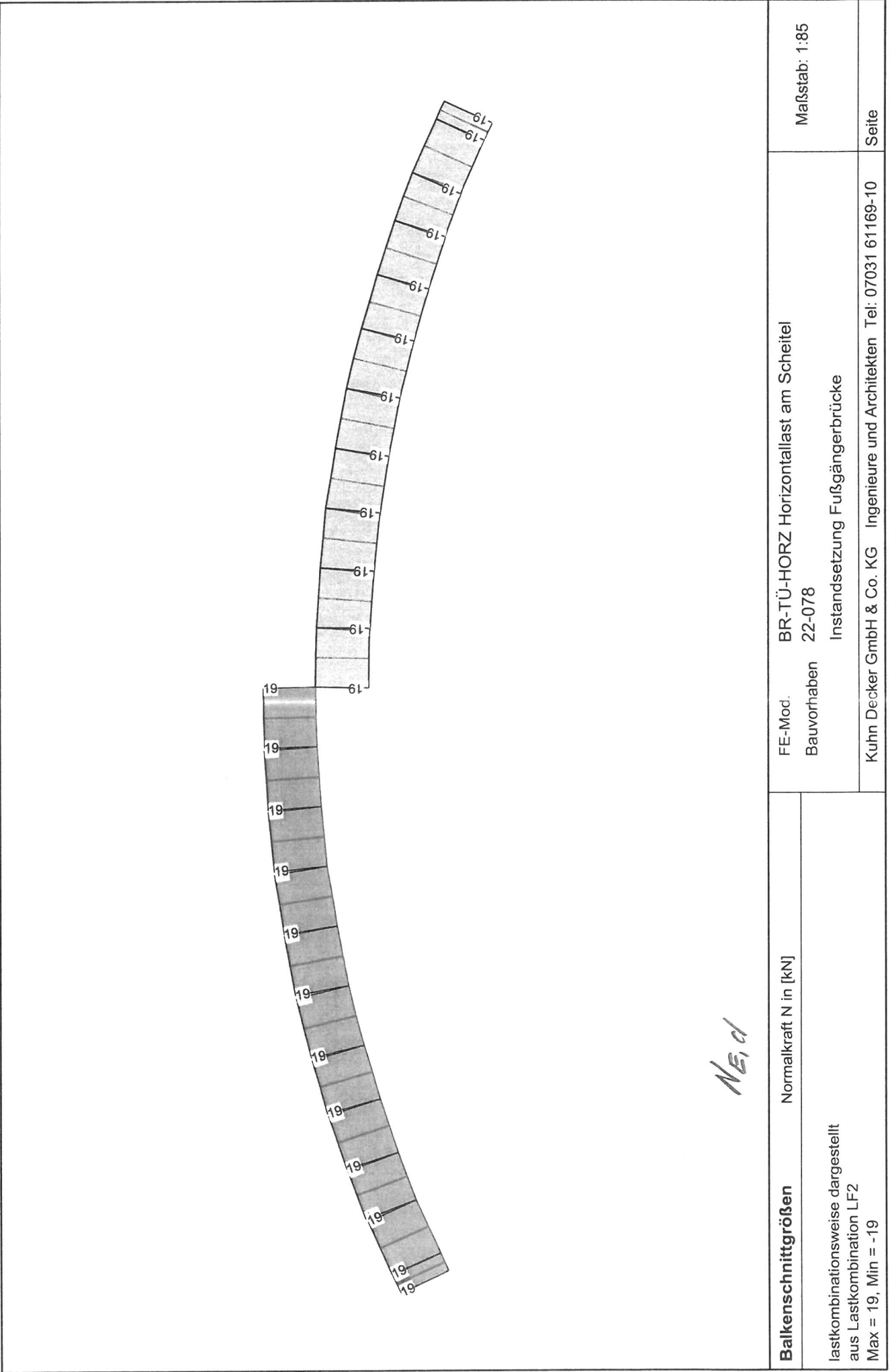
Seite

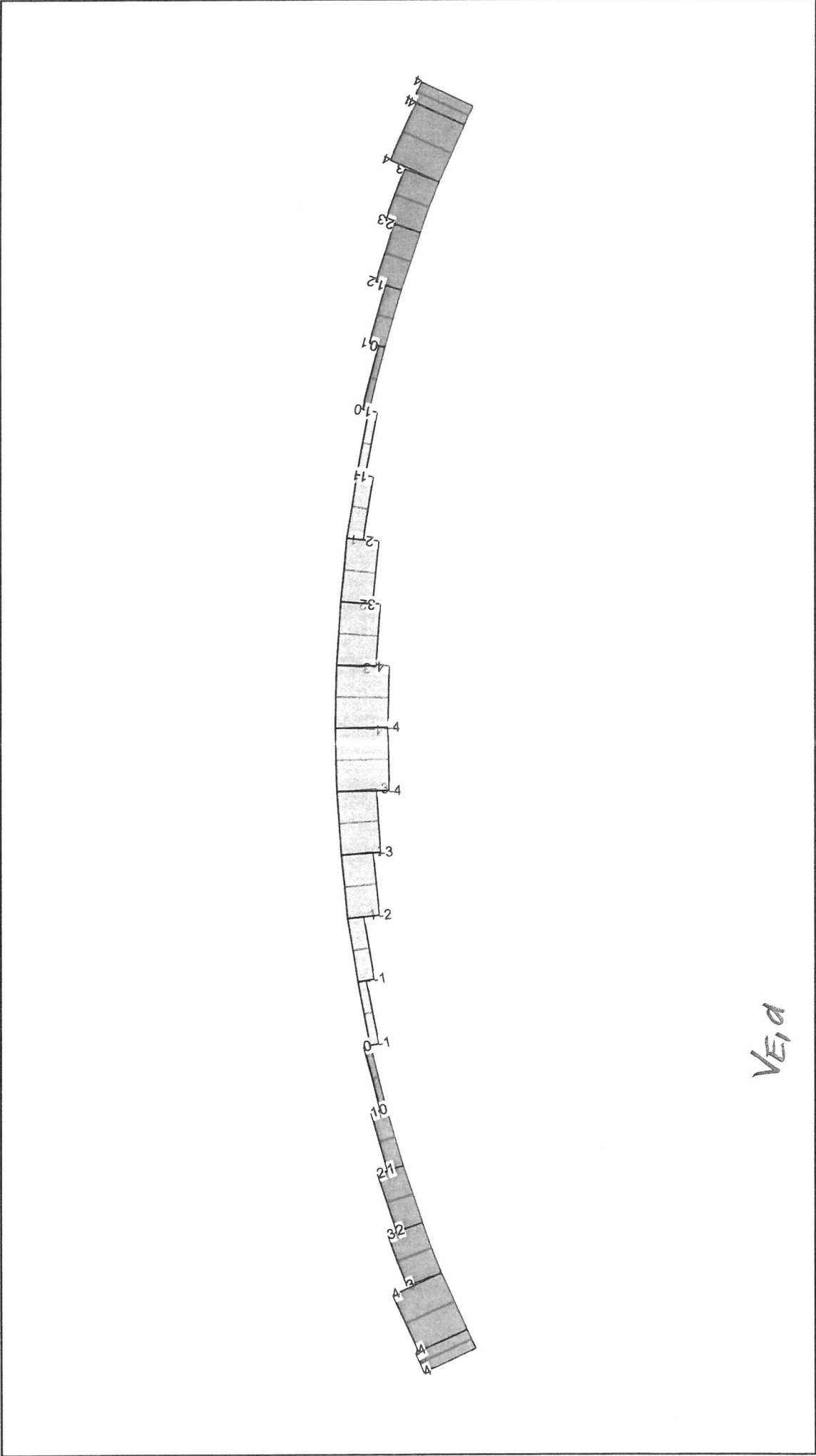
**KUHN | DECKER**
INGENIEURE UND ARCHITEKTENKuhn Decker GmbH & Co. KG
Ingenieure und Architekten

Horizontallasten können auch über
den Bogen abgetragen werden.

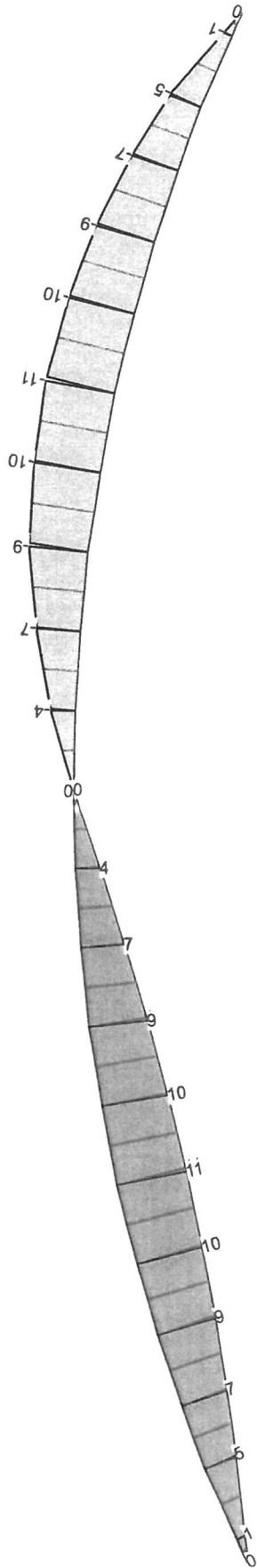
Die Ergebnisse (siehe folgende Seiten)
zeigen, dass die Zusatzbelastung
infolge der Gesamthorizontallast
(am Scheitel angesetzt) vernachlässigbar
ist.

		BR-TÜ-HORZ Horizontallast am Scheitel 22-078 Instandsetzung Fußgängerbrücke	Maßstab: 1:85	
lastfallweise dargestellt aus Lastfall LF-2 (Horizontallast am Scheitel)				Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10
			Seite	MicroFe 2018.051





Balkenschnittgrößen		Querkraft V in [kN]	FE-Mod. BR-TÜ-HORZ Horizontallast am Scheitel Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	Maßstab: 1:85
lastkombinationsweise dargestellt aus Lastkombination LF2 Max = 4, Min = -4				
			Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10	Seite



ME, d

Balkenschnittgrößen		Moment M in [kNm]	FE-Mod. BR-TÜ-HORZ Horizontallast am Scheitel Bauvorhaben 22-078 Instandsetzung Fußgängerbrücke	Maßstab: 1:85
lastkombinationsweise dargestellt aus Lastkombination LF2 Max = 11, Min = -11				
			Kuhn Decker GmbH & Co. KG Ingenieure und Architekten Tel: 07031 61169-10	Seite

Arbeitsraum

Teile des Widerlagers Neckarinsel sollen
im Zuge der Sanierung abgebrochen
und anschließend neu gebaut werden.

Bei der Bauausführung ist darauf
zu achten, dass die Unterkante des
Arbeitsraums oberhalb der Kote
317,40 m NN liegt und der Böschungswinkel, unter Berücksichtigung der
Angaben des Baugrundgutachtens,
möglichst steil ausgeführt wird.
(siehe Skizze S. 16.2)

22-078

16.2

Schnitt I-I

Bestehender Teil

