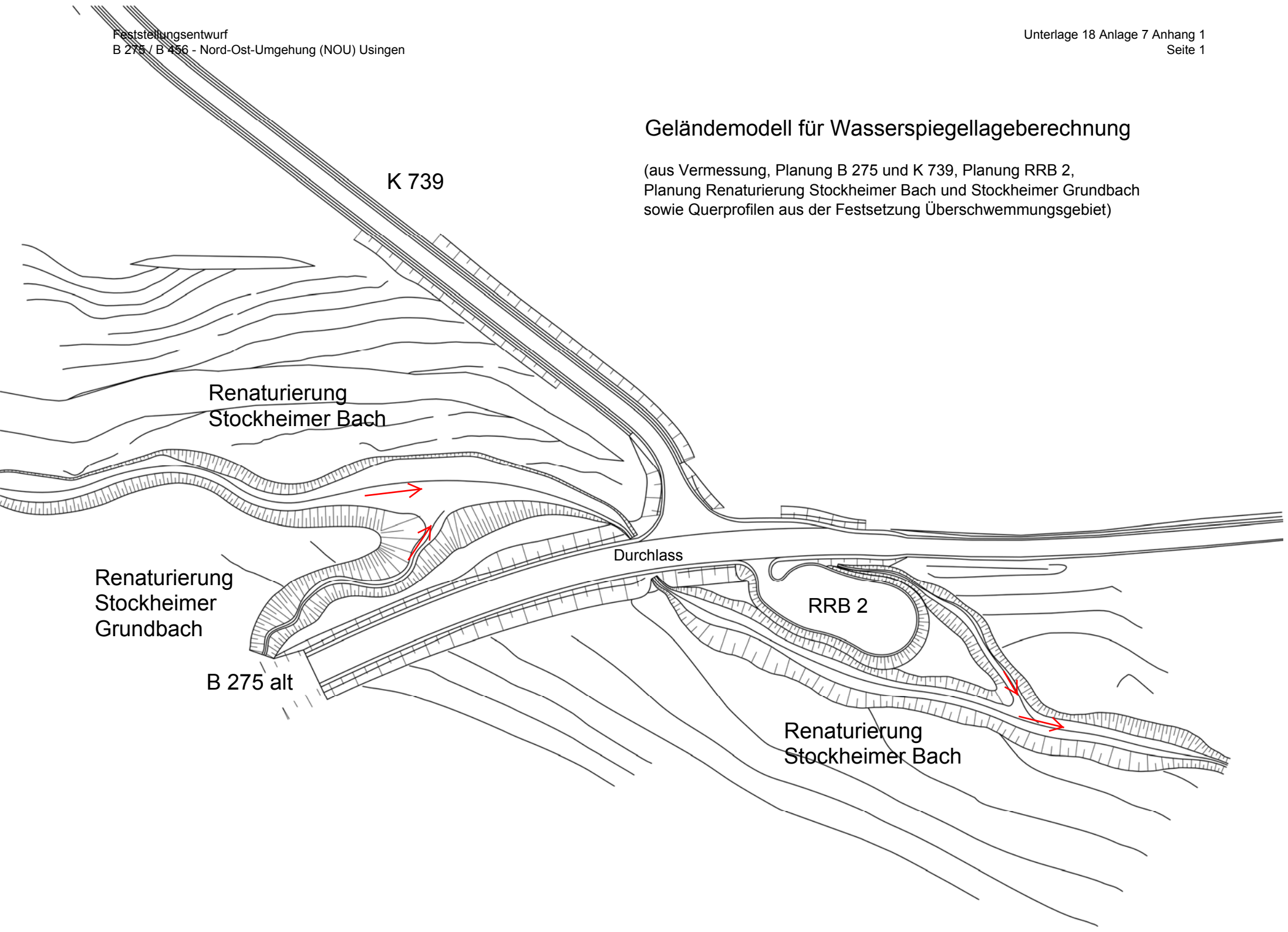
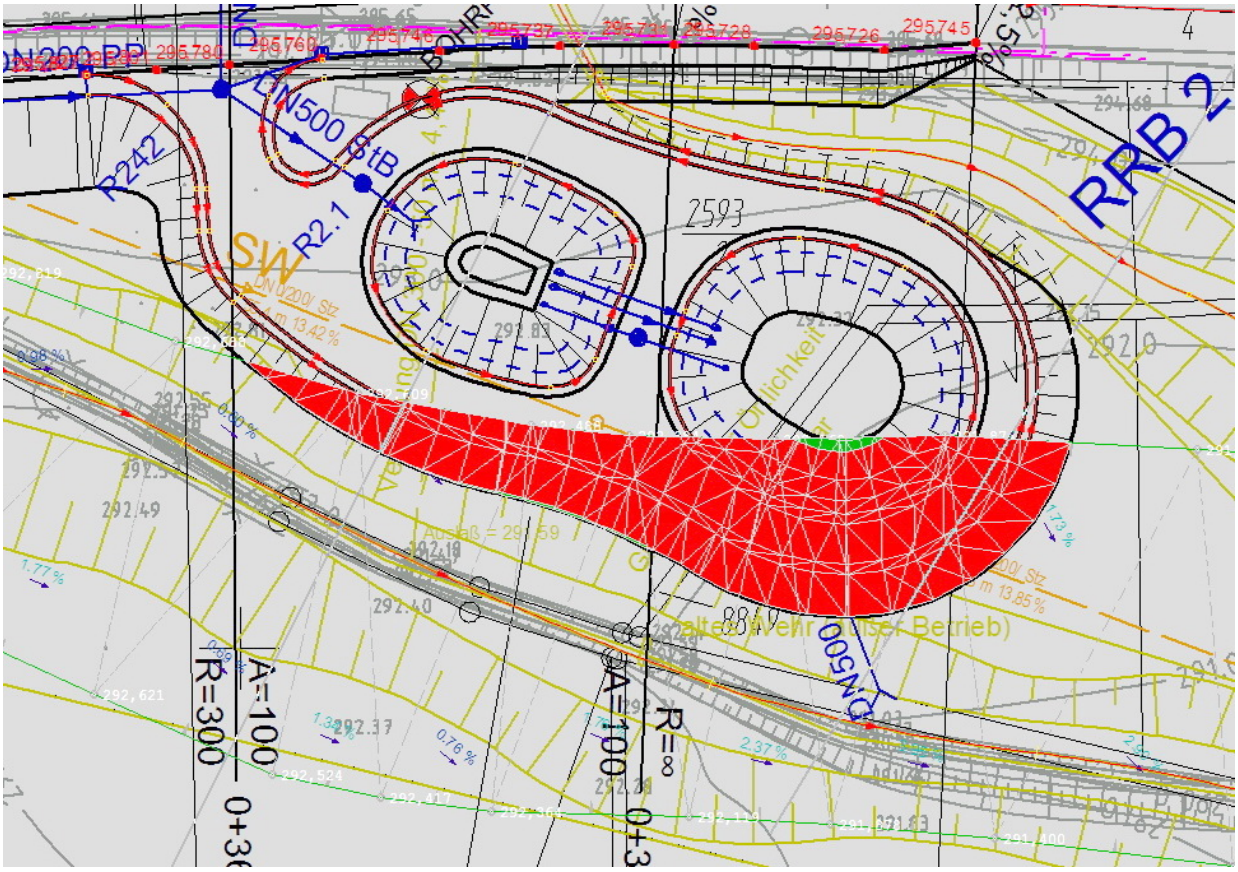
Geländemodell für Wasserspiegellageberechnung

(aus Vermessung, Planung B 275 und K 739, Planung RRB 2,
Planung Renaturierung Stockheimer Bach und Stockheimer Grundbach
sowie Querprofilen aus der Festsetzung Überschwemmungsgebiet)



Programmgestütze Ermittlung Retensionsraumverlust aus DGM-Massendifferenz

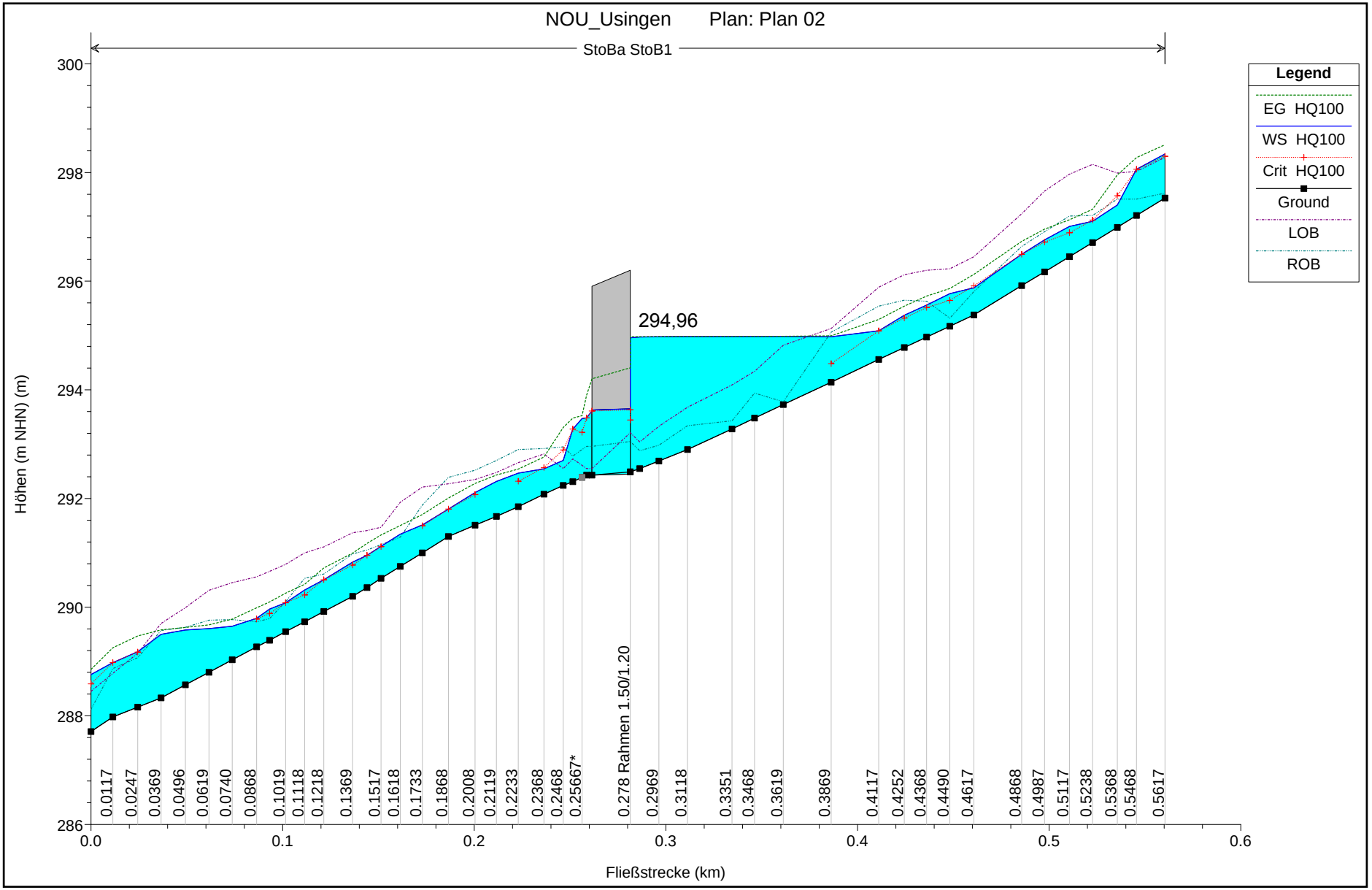


Massenermittlung aus Modellverschneidung

	Name	Bezeichnung	dz
DGM 1:	RRB2		0,000
DGM 2:	UESGStockheimerBach		0,000

Ergebnisse	Auftrag	Abtrag
Grundfläche:	7,543 m2	471,747 m2
Oberfläche DGM 1:	8,614 m2	522,325 m2
Oberfläche DGM 2:	7,544 m2	471,854 m2
Volumen:	1,017 m3	827,044 m3

Differenz Volumen (Massenbilanz):	-826,027 m3
Summe Volumen (bewegte Massen):	828,061 m3
Grundfläche identische Flächen:	0,000 m2
Oberfläche identische Flächen:	0,000 m2
Grundfläche DGM 1:	1894,152 m2
Grundfläche DGM 2:	6214,711 m2
Gemeinsame Schnittfläche der DGM:	479,289 m2



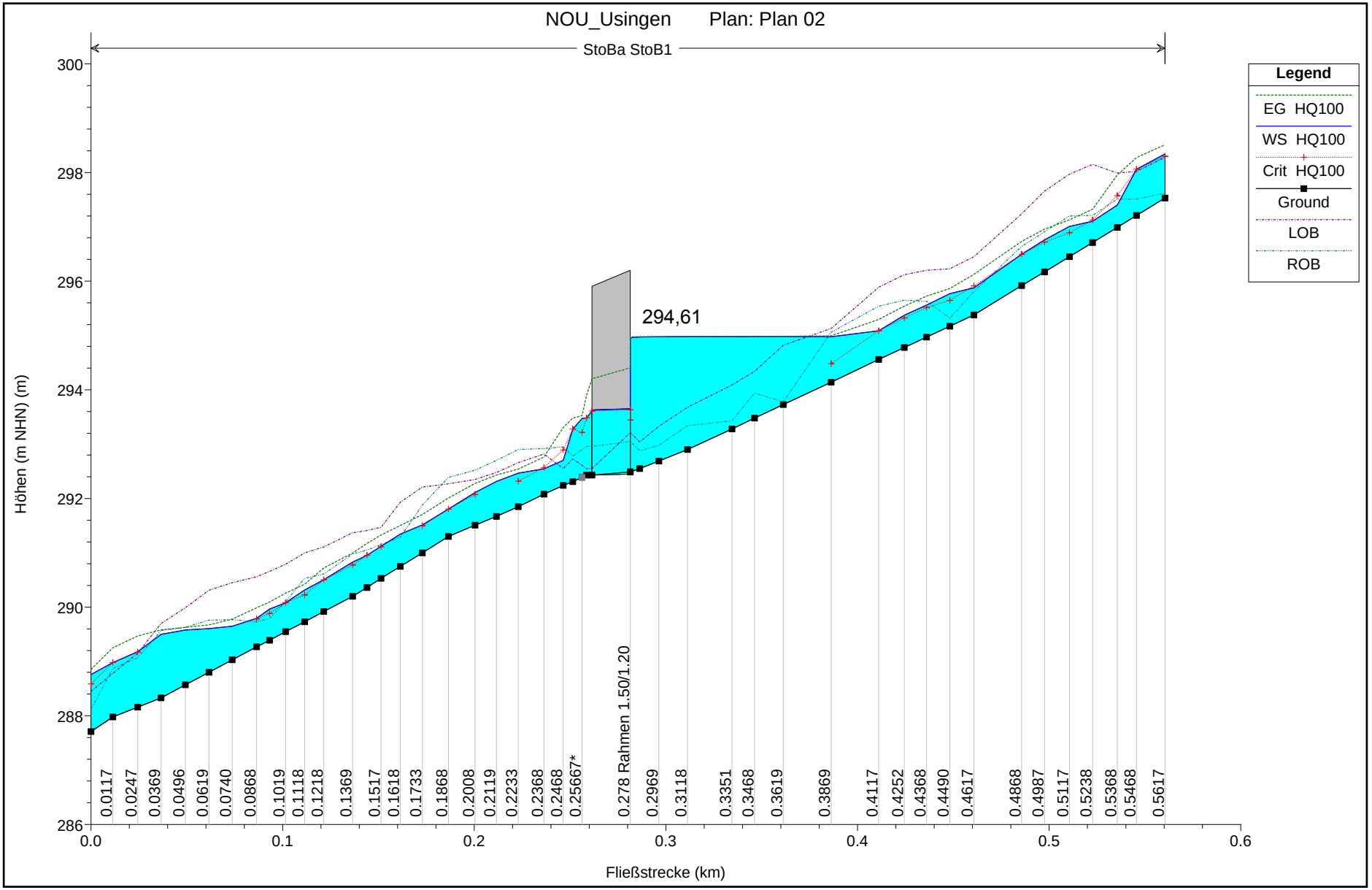
Längsschnitt Wasserspiegellagenberechnung mit Grundmodell

HEC-RAS Plan: Plan 02 River: StoBa Reach: StoB1 Profile: HQ100

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Shear Chan	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(N/m2)	(m/s)	(m2)	(m)	
StoB1	0.5617	HQ100	9.25	297.53	298.34	298.30	298.51	0.015809	97.03	2.30	5.78	14.32	0.87
StoB1	0.5468	HQ100	9.25	297.21	298.06	298.06	298.27	0.015255	96.56	2.31	5.28	13.31	0.89
StoB1	0.5368	HQ100	9.25	296.99	297.40	297.57	297.96	0.068264	239.83	3.29	2.81	7.63	1.73
StoB1	0.5238	HQ100	9.25	296.71	297.10	297.13	297.32	0.027373	96.21	2.09	4.43	12.18	1.10
StoB1	0.5117	HQ100	9.25	296.45	297.01	296.89	297.13	0.009973	47.84	1.55	5.97	11.91	0.70
StoB1	0.4987	HQ100	9.25	296.17	296.76	296.72	296.96	0.016535	78.14	1.98	4.68	9.43	0.90
StoB1	0.4868	HQ100	9.25	295.92	296.50	296.50	296.73	0.021136	94.62	2.15	4.29	9.18	1.01
StoB1	0.4617	HQ100	9.25	295.38	295.88	295.92	296.13	0.028307	105.26	2.20	4.22	11.62	1.14
StoB1	0.4490	HQ100	9.25	295.17	295.77	295.64	295.86	0.007882	39.10	1.41	7.22	17.21	0.63
StoB1	0.4368	HQ100	9.25	294.97	295.56	295.52	295.72	0.016057	67.17	1.80	5.15	11.95	0.87
StoB1	0.4252	HQ100	9.25	294.78	295.37	295.32	295.54	0.015419	67.98	1.82	5.08	11.15	0.86
StoB1	0.4117	HQ100	9.25	294.56	295.09	295.09	295.30	0.021591	86.84	2.03	4.56	11.00	1.01
StoB1	0.3869	HQ100	9.25	294.14	294.98	294.48	295.00	0.000968	6.14	0.58	15.91	24.47	0.23
StoB1	0.3619	HQ100	10.06	293.73	294.98		294.99	0.000106	0.90	0.23	45.13	55.39	0.08
StoB1	0.3468	HQ100	10.06	293.48	294.98		294.98	0.000044	0.57	0.20	53.82	48.43	0.06
StoB1	0.3351	HQ100	10.06	293.28	294.98		294.98	0.000038	0.58	0.21	54.18	43.88	0.05
StoB1	0.3118	HQ100	10.06	292.90	294.98		294.98	0.000051	0.96	0.28	46.19	36.14	0.06
StoB1	0.2969	HQ100	10.06	292.69	294.98		294.98	0.000062	1.31	0.33	42.79	32.01	0.07
StoB1	0.2869	HQ100	10.06	292.55	294.97		294.98	0.000109	2.42	0.45	32.24	23.78	0.09
StoB1	0.2820	HQ100	10.06	292.49	294.96	293.44	294.98	0.000298	6.16	0.71	19.06	13.77	0.15
StoB1	0.278		Culvert										
StoB1	0.2591	HQ100	10.06	292.43	293.48	293.48	293.90	0.017543	155.45	3.09	3.98	5.91	0.99
StoB1	0.25667*	HQ100	10.06	292.39	293.47	293.22	293.53	0.003537	32.11	1.41	11.86	24.37	0.45
StoB1	0.2518	HQ100	10.06	292.31	293.28	293.28	293.48	0.012320	94.54	2.36	6.48	16.90	0.83
StoB1	0.2468	HQ100	10.06	292.24	292.70	292.89	293.31	0.079824	271.13	3.48	3.04	10.91	1.88
StoB1	0.2368	HQ100	10.06	292.08	292.55	292.57	292.76	0.026418	93.37	2.06	4.89	13.49	1.09
StoB1	0.2233	HQ100	10.06	291.85	292.47	292.32	292.54	0.007553	30.47	1.20	8.37	20.29	0.60
StoB1	0.2119	HQ100	10.06	291.67	292.31		292.43	0.011220	48.14	1.53	6.59	14.95	0.73
StoB1	0.2008	HQ100	10.06	291.51	292.11	292.07	292.28	0.016886	68.53	1.80	5.58	13.36	0.89
StoB1	0.1868	HQ100	10.06	291.30	291.81	291.81	292.01	0.021602	84.23	1.99	5.06	12.63	1.00
StoB1	0.1733	HQ100	10.06	291.00	291.51	291.50	291.70	0.019343	78.40	1.93	5.21	12.49	0.95
StoB1	0.1618	HQ100	10.28	290.75	291.34		291.50	0.014505	64.51	1.78	5.80	13.20	0.84
StoB1	0.1517	HQ100	10.28	290.53	291.12	291.11	291.33	0.020279	84.61	2.01	5.10	11.89	0.98
StoB1	0.1444	HQ100	10.28	290.36	290.95	290.95	291.17	0.021277	89.65	2.08	4.95	11.41	1.01
StoB1	0.1369	HQ100	10.28	290.20	290.83	290.78	291.00	0.015168	66.74	1.80	5.70	12.58	0.86
StoB1	0.1218	HQ100	10.28	289.92	290.50	290.50	290.72	0.021269	88.97	2.07	4.98	11.55	1.01
StoB1	0.1118	HQ100	10.28	289.73	290.31	290.23	290.42	0.011749	45.12	1.45	7.09	18.01	0.74

HEC-RAS Plan: Plan 02 River: StoBa Reach: StoB1 Profile: HQ100 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Shear Chan	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(N/m2)	(m/s)	(m2)	(m)	
StoB1	0.1019	HQ100	10.28	289.55	290.08	290.08	290.26	0.022706	76.91	1.85	5.54	15.98	1.01
StoB1	0.0935	HQ100	10.28	289.39	289.96	289.88	290.10	0.011616	52.80	1.61	6.57	16.61	0.75
StoB1	0.0868	HQ100	10.28	289.27	289.79	289.78	289.99	0.019335	79.99	1.96	5.28	13.35	0.96
StoB1	0.0740	HQ100	10.28	289.03	289.65		289.78	0.011918	52.19	1.59	6.45	14.34	0.76
StoB1	0.0619	HQ100	10.28	288.80	289.60		289.67	0.004753	26.00	1.17	8.80	15.63	0.50
StoB1	0.0496	HQ100	10.28	288.57	289.58		289.63	0.002474	16.52	0.96	10.68	15.47	0.37
StoB1	0.0369	HQ100	10.28	288.33	289.50		289.58	0.004150	28.82	1.28	8.03	10.98	0.48
StoB1	0.0247	HQ100	10.28	288.16	289.18	289.17	289.47	0.017312	105.29	2.39	4.40	9.08	0.94
StoB1	0.0117	HQ100	10.28	287.98	288.98	288.98	289.25	0.015572	99.09	2.34	4.72	11.35	0.91
StoB1	0.0003	HQ100	10.28	287.71	288.76	288.59	288.85	0.005279	40.21	1.53	9.13	21.59	0.55



Längsschnitt Wasserspiegellagenberechnung mit ergänzten/erweiterten Grundmodell

HEC-RAS Plan:

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Shear Chan	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(N/m2)	(m/s)	(m2)	(m)	
StoB1	0.5617	HQ100	9.25	297.53	298.36	298.26	298.48	0.013258	83.01	1.71	5.98	14.38	0.64
StoB1	0.5468	HQ100	9.25	297.21	298.03	298.03	298.22	0.021988	133.00	2.15	4.94	13.00	0.85
StoB1	0.5368	HQ100	9.25	296.99	297.48	297.58	297.86	0.059830	243.92	2.72	3.39	7.92	1.33
StoB1	0.5238	HQ100	9.25	296.71	297.21	297.12	297.34	0.017740	78.89	1.57	5.88	12.79	0.74
StoB1	0.5117	HQ100	9.25	296.45	297.07		297.17	0.011002	57.81	1.38	6.68	12.15	0.60
StoB1	0.4987	HQ100	9.25	296.17	296.84		296.99	0.016436	86.60	1.69	5.46	9.83	0.73
StoB1	0.4868	HQ100	9.25	295.92	296.53	296.50	296.74	0.026602	125.39	2.00	4.62	9.37	0.91
StoB1	0.4617	HQ100	9.25	295.38	295.97	295.92	296.13	0.021334	96.29	1.74	5.38	12.78	0.82
StoB1	0.4490	HQ100	9.25	295.17	295.82		295.92	0.011597	58.80	1.39	6.81	14.35	0.61
StoB1	0.4368	HQ100	9.25	294.97	295.64		295.75	0.015327	71.53	1.51	6.13	12.82	0.69
StoB1	0.4252	HQ100	9.25	294.78	295.47	295.32	295.58	0.014056	69.84	1.51	6.14	11.95	0.67
StoB1	0.4117	HQ100	9.25	294.56	295.09	295.09	295.30	0.033800	135.79	2.03	4.56	11.01	1.01
StoB1	0.3869	HQ100	9.25	294.14	294.70	294.48	294.75	0.006657	29.88	0.97	9.54	20.76	0.46
StoB1	0.3619	HQ100	10.06	293.73	294.70		294.70	0.000495	3.21	0.34	29.88	46.35	0.13
StoB1	0.3468	HQ100	10.06	293.48	294.70		294.70	0.000165	1.64	0.26	39.86	45.41	0.08
StoB1	0.3351	HQ100	10.06	293.28	294.70		294.70	0.000100	1.22	0.23	46.19	46.91	0.07
StoB1	0.3118	HQ100	10.06	292.90	294.69		294.70	0.000089	1.43	0.26	43.42	41.14	0.07
StoB1	0.2969	HQ100	10.06	292.69	294.69		294.69	0.000089	1.64	0.29	40.14	33.73	0.07
StoB1	0.2869	HQ100	10.06	292.55	294.69		294.69	0.000152	2.96	0.39	30.78	26.39	0.09
StoB1	0.2820	HQ100	10.06	292.49	294.68		294.69	0.000202	3.69	0.43	26.26	21.20	0.10
StoB1	0.2776	HQ100	10.06	292.45	294.61	293.51	294.68	0.002179	31.91	1.22	8.96	6.20	0.27
StoB1	0.277		Culvert										
StoB1	0.2591	HQ100	10.06	292.43	293.49	293.49	293.89	0.024889	221.27	2.96	3.71	5.52	0.94
StoB1	0.2518	HQ100	10.06	292.31	292.95	293.12	293.56	0.107512	491.32	3.94	3.21	14.15	1.80
StoB1	0.2468	HQ100	10.06	292.24	292.80	292.89	293.11	0.048877	206.57	2.52	4.25	13.03	1.22
StoB1	0.2368	HQ100	10.06	292.08	292.66	292.57	292.78	0.017729	75.68	1.53	6.58	15.01	0.74
StoB1	0.2233	HQ100	10.06	291.85	292.52		292.59	0.010034	45.12	1.19	8.44	18.33	0.56
StoB1	0.2119	HQ100	10.06	291.67	292.38		292.47	0.012029	55.78	1.33	7.56	15.85	0.62
StoB1	0.2008	HQ100	10.06	291.50	292.18		292.30	0.017836	78.31	1.56	6.44	14.24	0.74
StoB1	0.1868	HQ100	10.06	291.30	291.86		292.01	0.023787	100.47	1.76	5.72	13.17	0.85
StoB1	0.1733	HQ100	10.06	291.00	291.59		291.72	0.018593	84.46	1.63	6.16	13.16	0.76
StoB1	0.1618	HQ100	10.28	290.75	291.40		291.52	0.015904	77.76	1.59	6.49	13.05	0.71
StoB1	0.1517	HQ100	10.28	290.53	291.19		291.34	0.019767	92.33	1.71	6.01	13.32	0.79
StoB1	0.1444	HQ100	10.28	290.36	291.00	290.95	291.18	0.024279	109.66	1.86	5.53	11.88	0.87
StoB1	0.1369	HQ100	10.28	290.20	290.88	290.78	291.01	0.018108	84.65	1.64	6.26	13.01	0.76
StoB1	0.1218	HQ100	10.28	289.92	290.52	290.52	290.68	0.026385	112.48	1.86	5.86	17.55	0.90
StoB1	0.1118	HQ100	10.28	289.73	290.36	290.19	290.43	0.009070	39.97	1.12	9.20	20.36	0.53

HEC-RAS Plan: (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Shear Chan	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(N/m2)	(m/s)	(m2)	(m)	
StoB1	0.1019	HQ100	10.28	289.55	290.13	290.10	290.27	0.026695	96.51	1.68	6.13	17.43	0.88
StoB1	0.0935	HQ100	10.28	289.39	290.01		290.11	0.013170	64.24	1.44	7.47	19.29	0.65
StoB1	0.0868	HQ100	10.28	289.27	289.89		290.01	0.015763	76.82	1.58	6.72	16.79	0.71
StoB1	0.0740	HQ100	10.28	289.03	289.76		289.84	0.009868	49.49	1.27	8.09	15.70	0.57
StoB1	0.0619	HQ100	10.28	288.80	289.70		289.75	0.004676	28.16	0.99	10.40	16.78	0.40
StoB1	0.0496	HQ100	10.28	288.57	289.67		289.71	0.002680	19.51	0.85	12.12	16.98	0.31
StoB1	0.0369	HQ100	10.28	288.33	289.59		289.66	0.004959	36.22	1.16	8.89	12.30	0.42
StoB1	0.0247	HQ100	10.28	288.26	289.36	289.25	289.55	0.014275	103.54	1.95	5.71	13.25	0.71
StoB1	0.0117	HQ100	10.28	287.97	288.97	288.97	289.28	0.029128	175.82	2.47	4.20	7.49	0.98
StoB1	0.0003	HQ100	10.28	287.70	288.76	288.65	288.95	0.014634	106.55	1.98	5.50	9.64	0.72