



COMUNE DI MILANO

AREA DI LAMINAZIONE DEL TORRENTE SEVESO

Sistemazione idraulica del Torrente Seveso

PROGETTO ESECUTIVO

E' vietata la riproduzione di questo documento senza la preventiva autorizzazione di MM Spa

MM Spa

Via del Vecchio Politecnico, 8
20121 Milano



Società certificata Sistema Gestione
Qualità ISO 9001, Ambiente ISO 14001,
Energia Servizio Idrico ISO 50001

IL DIRETTORE TECNICO
DOTT. ING. FRANCESCO VENZA
Ordine degli Ingegneri Milano n° 14647



IL PROGETTISTA RESPONSABILE DELL'INTEGRAZIONE
FRA LE VARIE PRESTAZIONI SPECIALI
DOTT. ING. MATTEO GHIA
Ordine degli Ingegneri Pavia n° 2100



IL PROGETTISTA RESPONSABILE
DOTT. ING. MATTEO GHIA
Ordine degli Ingegneri Pavia n° 2100



Aggior.	Data	Descrizione	Disegnato	Progettato	Verificato	Acquisito	Approvato
13	APR.2019	PROGETTO ESECUTIVO - AGGIORNAM. PER VALIDAZIONE	S. Mongiardo	M. Ghia	M. Ghia	M. Ghia	M. Ghia
12	GEN.2019	PROGETTO ESECUTIVO	S. Mongiardo	S. Mongiardo	M. Ghia	M. Ghia	M. Ghia
10	LUG.2017	PROGETTO DEFINITIVO - AGGIORNAMENTO POST CDS	S. Mongiardo	S. Mongiardo	M. Ghia	M. Ghia	M. Ghia
8	DIC.2016	PROGETTO DEFINITIVO - AGGIORNAMENTO PER CDS	S. Mongiardo	S. Mongiardo	M. Ghia	M. Ghia	M. Ghia
4	NOV.2015	PROGETTO DEFINITIVO PER V.I.A.	S. Mongiardo	A. Negri	M. Ghia	M. Ghia	M. Recalcati
3	LUG.2015	PROGETTO DEFINITIVO - AGGIORNAMENTO	S. Mongiardo	A. Negri	M. Ghia	M. Ghia	M. Recalcati
0	22/06/2015	EMISSIONE	S. Mongiardo	A. Negri	M. Ghia	M. Ghia	M. Recalcati

Collaborazione alla progettazione

Rif.

Scala grafica



Titolo

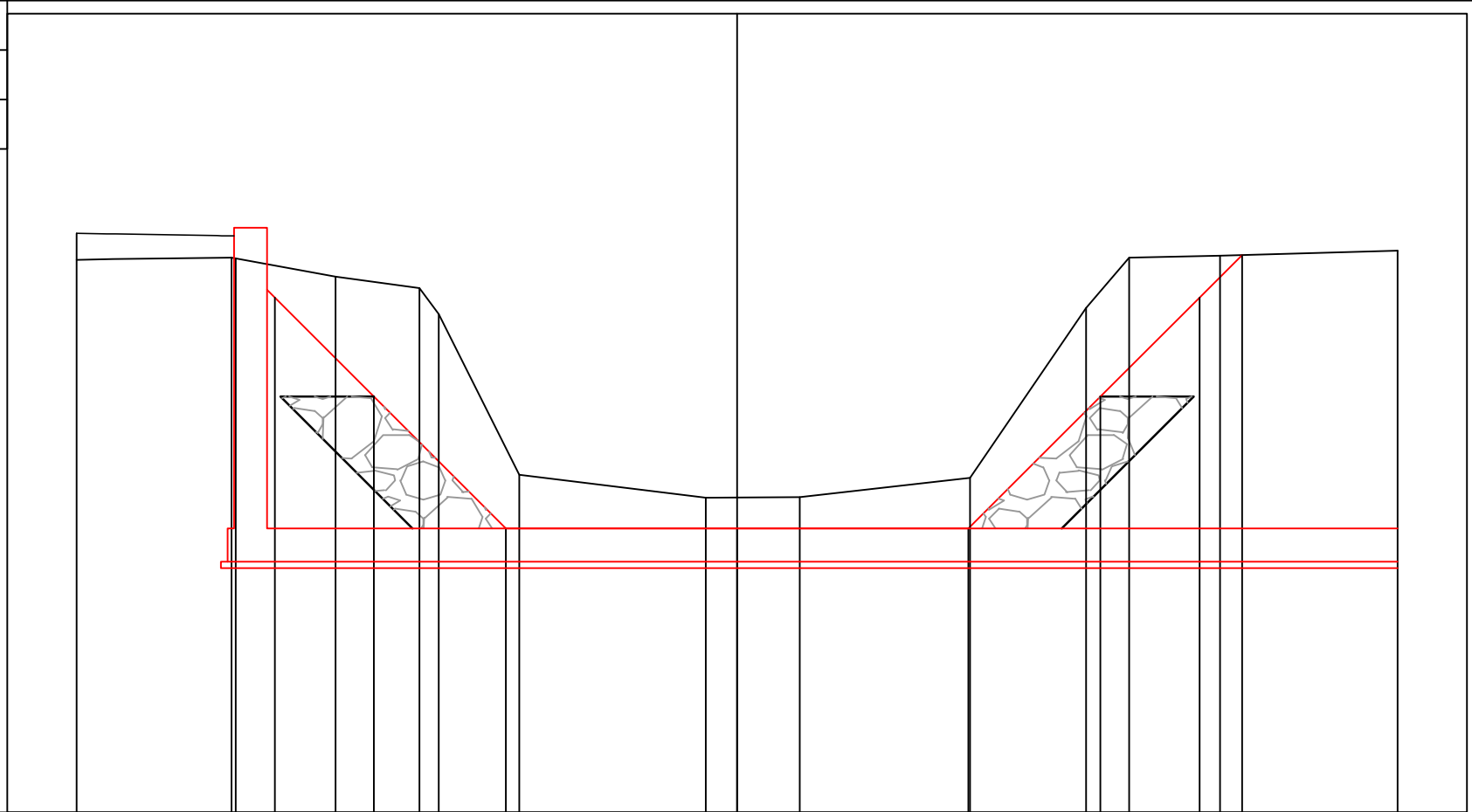
PROTEZIONI SPONDALI TORRENTE SEVESO SEZIONI TRASVERSALI

Sostituisce	Dimensioni (mm)	Scala		Commessa	Lotto	Fase	Cat.	Opera	Progressivo	Foglio
Sostituito da:	A4	1:100		CT000	0	E	P	00	0019	1/21

PROFILO SEVESO

SEZIONE 1

PROGRESSIVA 0.00



132

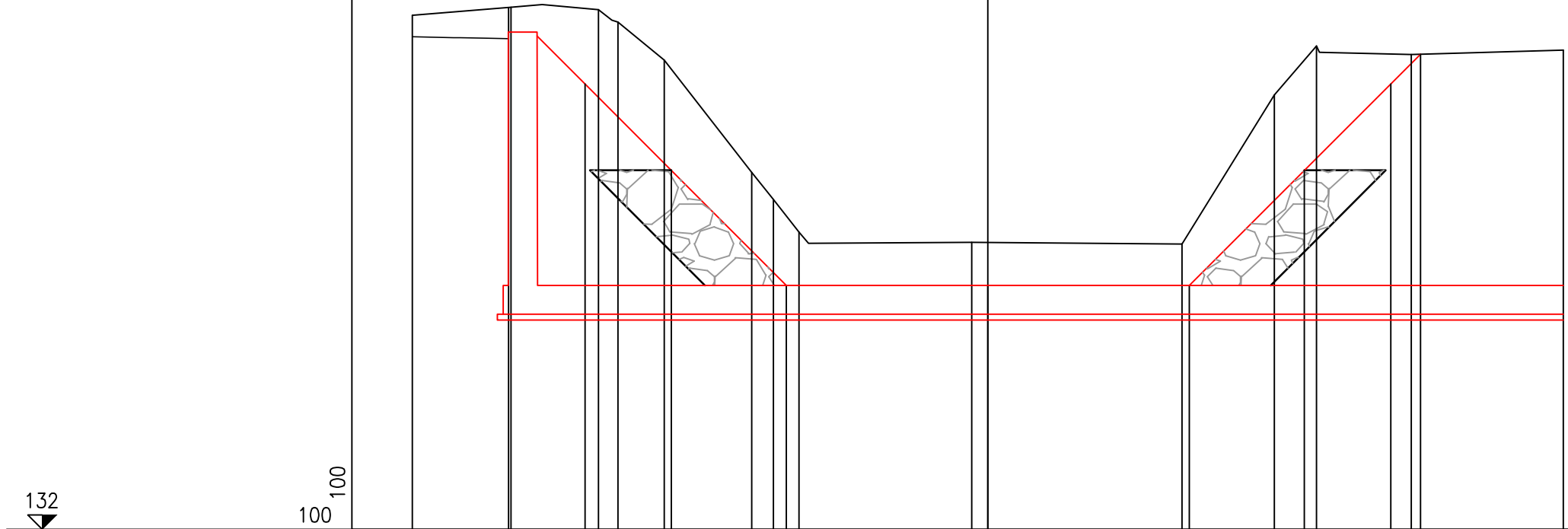
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PROGRESSIVE TERRENO	-10.00	-7.66	-6.08	-4.81	-4.52	-3.30	-0.48	0.95	3.53	5.28	5.94	7.31	10.00
PARZIALI TERRENO		2.34	1.58	1.27	0.29	1.22	2.82	1.43	2.58	1.75	0.66	1.37	2.69
QUOTE TERRENO	140.37	140.40	140.11	139.94	139.55	137.11	136.77	136.78	137.07	139.64	140.40	140.43	140.51
PROGRESSIVE PROGETTO	-10.00	-7.61	-7.00	-5.50	-3.50	0.00	3.50	5.50	7.00	7.64			
PARZIALI PROGETTO		2.38	0.61	1.50	2.00	3.50	3.50	2.00	1.50	0.64			
QUOTE PROGETTO	140.77	140.84	139.80	138.30	136.30	136.30	136.30	138.30	139.80	140.44			

PROFILO SEVESO

SEZIONE 2

PROGRESSIVA 20.00



132

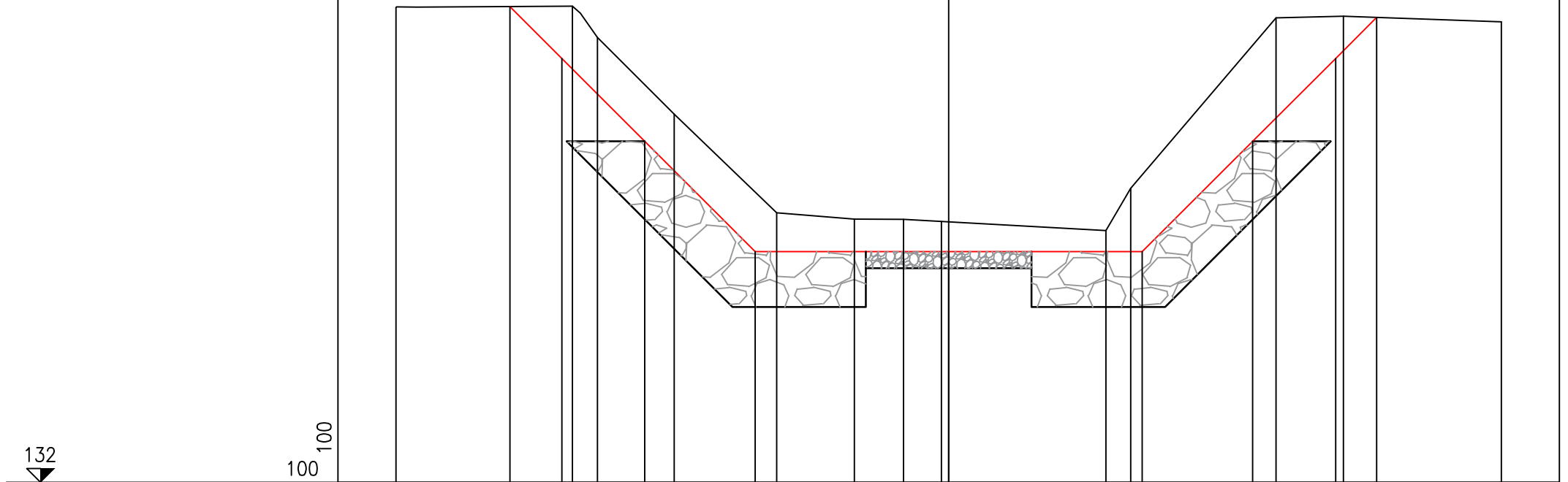
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PROGRESSIVE TERRENO		-10.00	-8.29	-6.77	-6.43	-5.62	-4.10	-3.73	-3.28	-0.28	3.37	4.98	5.71	7.36	10.00
PARZIALI TERRENO			1.71	1.52	0.34	0.81	1.52	0.37	0.45	3.00	3.65	1.61	0.73	1.65	2.64
QUOTE TERRENO		140.93	141.07	141.03	140.81	140.15	138.20	137.73	137.17	136.99	136.96	139.55	140.40	140.25	140.33
PROGRESSIVE PROGETTO		-10.00	-7.83	-7.00	-5.50	-3.50				0.00	3.50	5.50	7.00	7.52	
PARZIALI PROGETTO			2.17	0.83	1.50	2.00	3.50	3.50	2.00	1.50	0.52				
QUOTE PROGETTO		140.56	140.64	139.74	138.24	136.24	136.24	136.24	136.24	136.24	136.24	138.24	139.74	140.26	

PROFILO SEVESO

SEZIONE 3

PROGRESSIVA 40.00



132

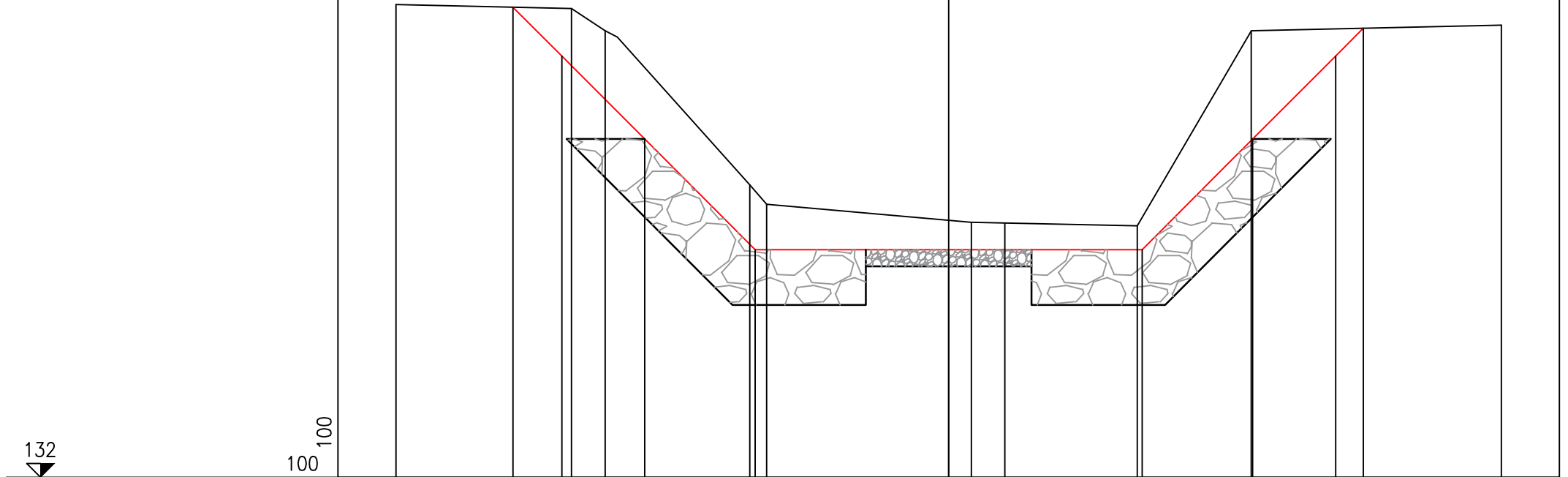
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PROGRESSIVE TERRENO		-10.00		-6.81	-6.35		-4.97		-3.11	-1.71	-0.82	-0.13		2.84	3.29		5.92	7.14		10.00
PARZIALI TERRENO			3.19	0.46	1.38		1.86	1.40	0.89	0.69		2.97	0.45	2.63		1.22	2.86			
QUOTE TERRENO		140.60		140.62	140.06		138.67		136.88	136.77	136.76	136.73		136.56	137.33		140.41	140.44		140.34
PROGRESSIVE PROGETTO			-7.94	-7.00		-5.50		-3.50				0.00		3.50		5.50	7.00	7.74		
PARZIALI PROGETTO			0.94	1.50		2.00		3.50			3.50		2.00	1.50	0.74					
QUOTE PROGETTO		140.62	139.68	138.18		136.18		136.18		136.18		136.18		138.18	139.68	140.42				

PROFILO SEVESO

SEZIONE 4

PROGRESSIVA 60.00



132

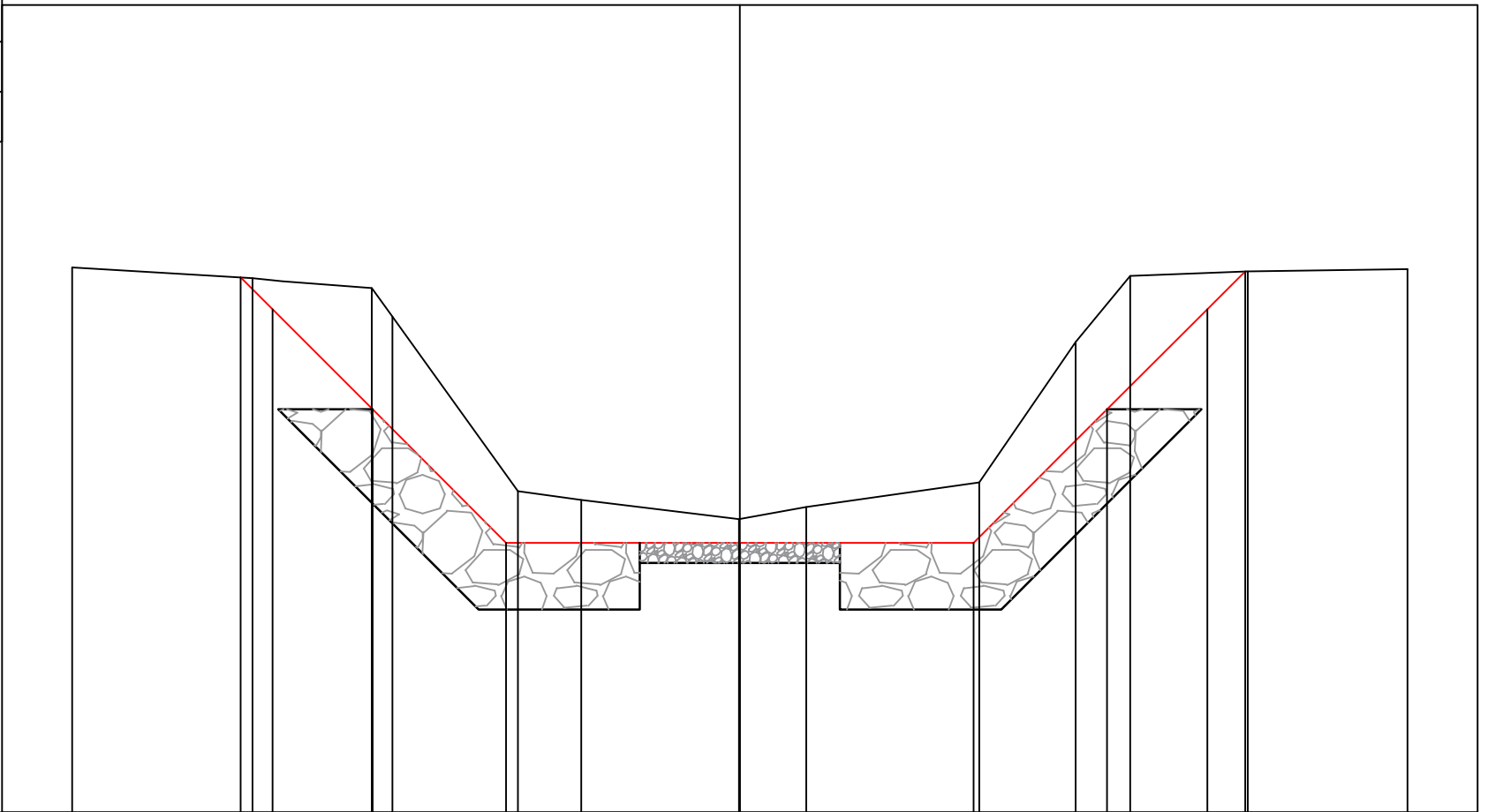
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PROGRESSIVE TERRENO		-10.00		-6.82	-6.22		-3.60	-3.29		0.41	1.02		3.41	5.47		10.00
PARZIALI TERRENO			3.18	0.60		2.62	0.31		3.70	0.61		2.39		2.06		4.53
QUOTE TERRENO		140.55		140.47	140.07		137.29	136.94		136.61	136.60		136.54	140.07		140.17
PROGRESSIVE PROGETTO			-7.88	-7.00		-5.50	-3.50		0.00				3.50	5.50		
PARZIALI PROGETTO			0.88	1.50		2.00			3.50			3.50		2.00	1.50	0.50
QUOTE PROGETTO		140.50	139.62	138.12		136.12			136.12			136.12	138.12	139.62	140.12	

PROFILO SEVESO

SEZIONE 5

PROGRESSIVA 80.00



132

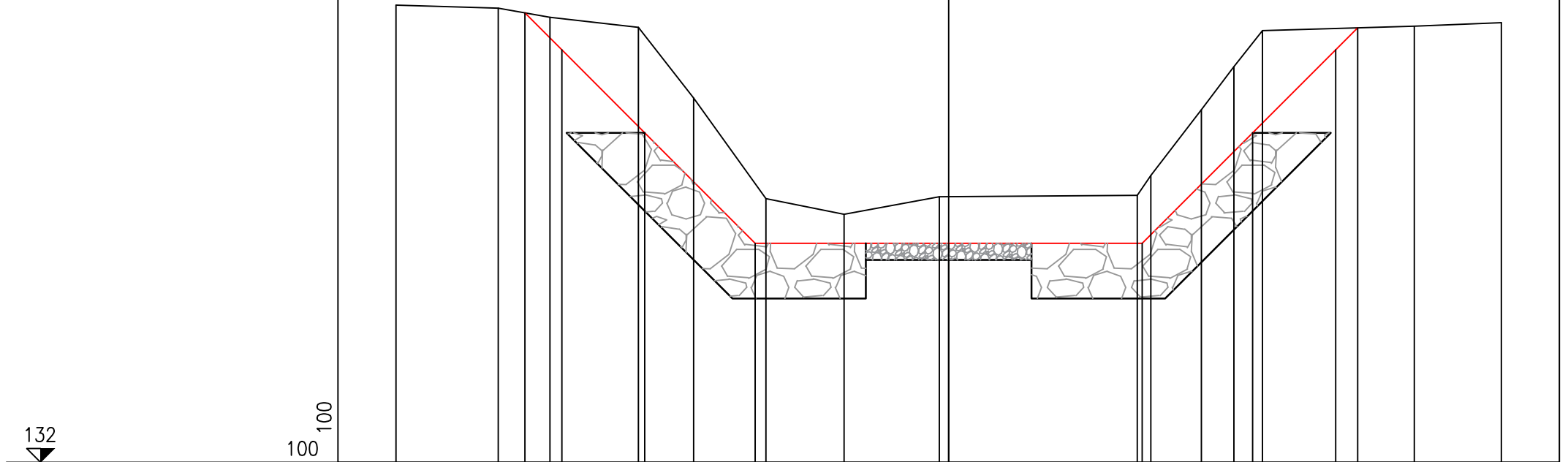
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PROGRESSIVE TERRENO		-10.00	-7.30	-5.51	-5.20	-3.32	-2.38	-0.01	1.00	3.59	5.03	5.85	7.61	10.00
PARZIALI TERRENO		2.70	1.79	0.31	1.88	0.94	2.37	1.01	2.59	1.44	0.82	1.76	2.39	
QUOTE TERRENO		140.17	140.01	139.86	139.43	136.81	136.68	136.39	136.57	136.94	139.05	140.04	140.11	140.14
PROGRESSIVE PROGETTO			-7.48	-7.00	-5.50	-3.50	0.00	3.50	5.50	7.00	7.57			
PARZIALI PROGETTO		0.48	1.50	2.00	3.50	3.50	2.00	1.50	0.57					
QUOTE PROGETTO		140.02	139.54	138.04	136.04	136.04	136.04	136.04	138.04	139.54	140.11			

PROFILO SEVESO

SEZIONE 6

PROGRESSIVA 100.00

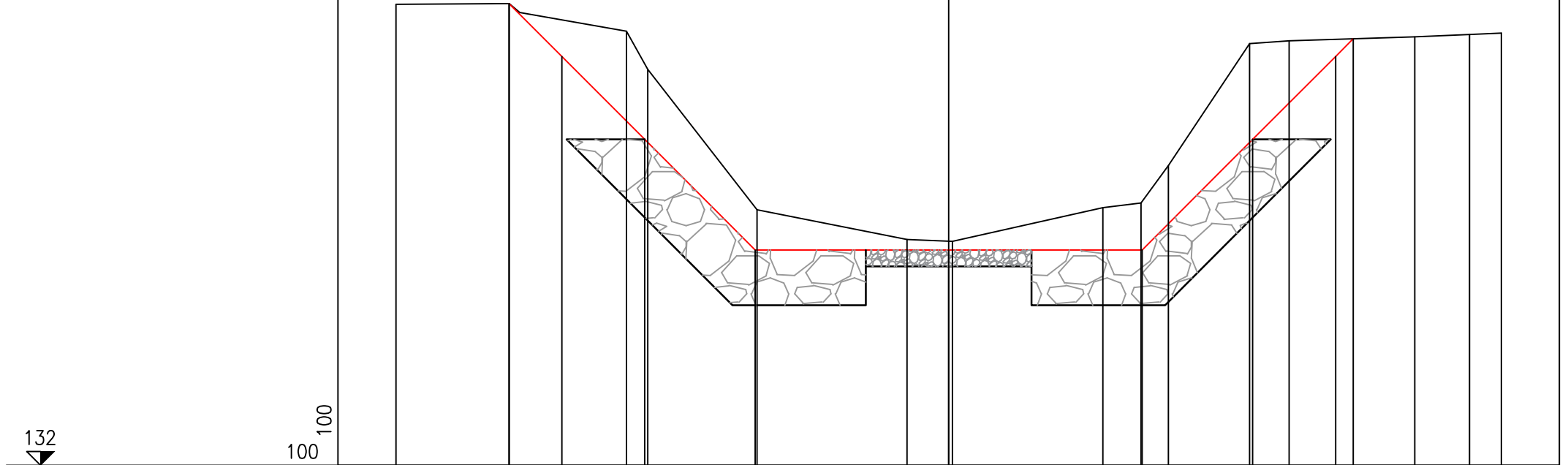


PROGRESSIVE TERRENO		-10.00	-8.15	-7.22	-5.61	-4.62	-3.31	-1.89	-0.17		3.41	3.66	4.57	5.16	5.68		8.42	10.00
PARZIALI TERRENO			1.85	0.93	1.61	0.99	1.31	1.42	1.72		3.58	0.25	0.91	0.59	0.52		2.74	1.58
QUOTE TERRENO		140.27	140.22	140.05	139.87	138.59	136.77	136.49	136.81		136.83	137.19	138.38	139.16	139.81		139.89	139.95
PROGRESSIVE PROGETTO				-7.67	-7.00	-5.50	-3.50		0.00			3.50		5.50			7.00	7.40
PARZIALI PROGETTO				0.67	1.50	2.00		3.50		3.50		2.00		1.50			0.40	
QUOTE PROGETTO			140.13	139.46	137.96	135.96		135.96		135.96		135.96		137.96			139.46	139.86

PROFILO SEVESO

SEZIONE 7

PROGRESSIVA 120.00



132

100 100

PROGRESSIVE TERRENO	-10.00	-7.95	-5.83	-5.44	-3.47	-0.76	0.07	2.79	3.48	3.98	5.44	6.16	8.43	9.42	10.00
PARZIALI TERRENO		2.05	2.12	0.39	1.97	2.71	0.83	2.72	0.69	0.50	1.46	0.72	2.27	0.99	0.58
QUOTE TERRENO	140.34	140.35	139.85	139.16	136.62	136.08	136.05	136.66	136.75	137.42	139.63	139.68	139.75	139.79	139.82
PROGRESSIVE PROGETTO		-7.95	-7.00	-5.50	-3.50	0.00	3.50	5.50	7.00	7.32					
PARZIALI PROGETTO		0.95	1.50	2.00	3.50	3.50	2.00	1.50	0.32						
QUOTE PROGETTO		140.35	139.40	137.90	135.90	135.90	135.90	135.90	137.90	139.72					

PROFILO SEVESO

SEZIONE 8

PROGRESSIVA 140.00



132

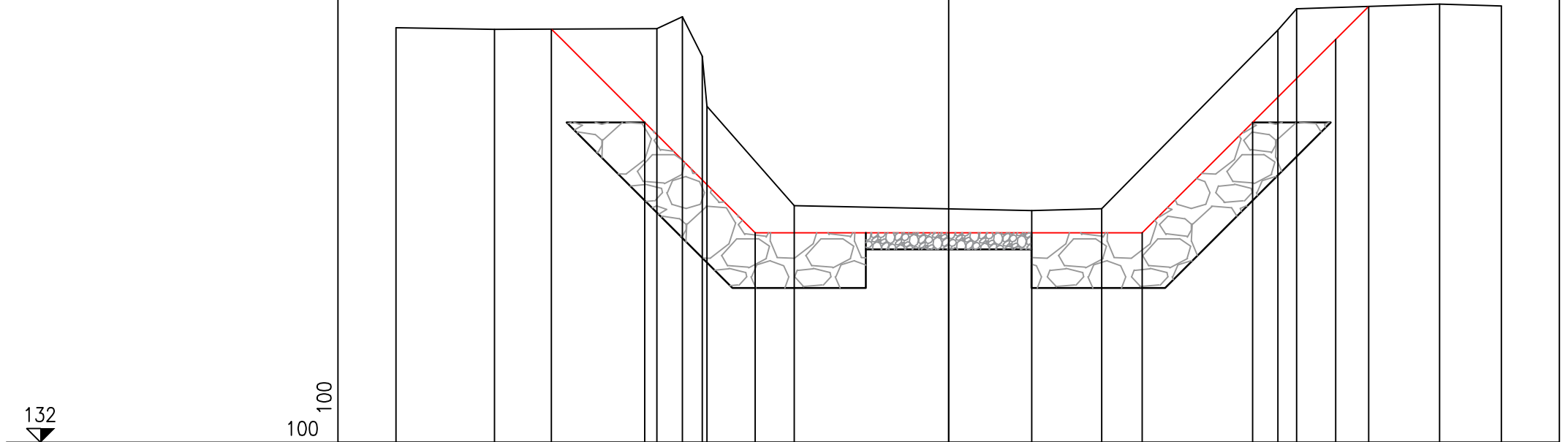
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PROGRESSIVE TERRENO		-10.00		-6.45	-5.66	-4.98	-4.65	-4.40		-3.13	-2.25	-1.26			3.19	4.66	5.75	6.90		9.12	10.00
PARZIALI TERRENO			3.55	0.79	0.68	0.33	0.25	1.27	0.88	0.99			4.45	1.47	1.09	1.15	2.22	0.88			
QUOTE TERRENO		139.75		140.21	140.22	139.65	139.31	138.86		136.26	136.23	136.33			136.44	138.17	139.65	139.81		139.98	139.96
PROGRESSIVE PROGETTO			-7.68	-7.00	-5.50					-3.50			0.00		3.50	5.50	7.00	7.51			
PARZIALI PROGETTO			0.68	1.50	2.00				3.50			3.50		2.00	1.50	0.51					
QUOTE PROGETTO			140.03	139.34	137.84				135.84			135.84		135.84	137.84	139.34	139.85				

PROFILO SEVESO

SEZIONE 9

PROGRESSIVA 160.00



132

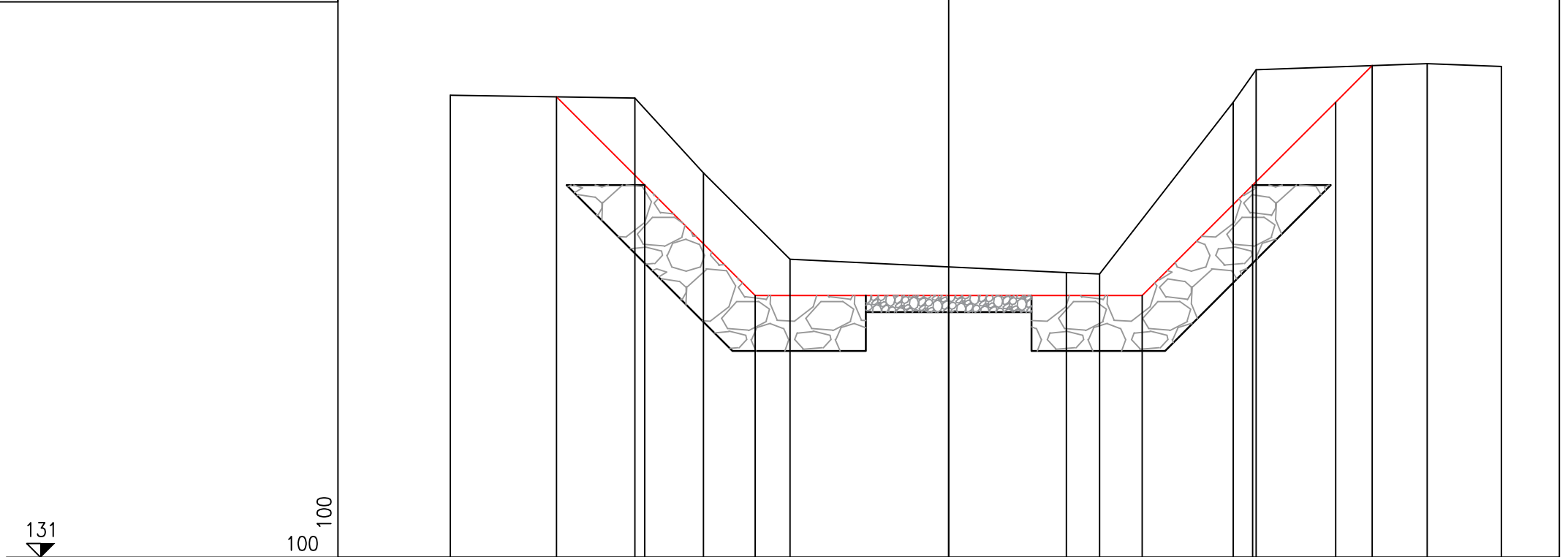
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PROGRESSIVE TERRENO	-10.00	-8.22	-5.28	-4.82	-4.46	-4.37	-2.79	1.50	2.77	5.96	6.30	8.88	10.00
PARZIALI TERRENO	1.78	2.94	0.46	0.36	0.09	1.58	4.29	1.27	3.19	0.34	2.58	1.12	
QUOTE TERRENO	139.50	139.48	139.49	139.71	138.99	138.08	136.29	136.20	136.23	139.46	139.85	139.93	139.90
PROGRESSIVE PROGETTO		-7.19	-5.50			-3.50	0.00		3.50	5.50	7.00	7.60	
PARZIALI PROGETTO		1.69	2.00			3.50	3.50		2.00	1.50	0.60		
QUOTE PROGETTO		139.48	137.79			135.79	135.79		135.79	137.79	139.29	139.89	

PROFILO SEVESO

SEZIONE 10

PROGRESSIVA 180.00



131

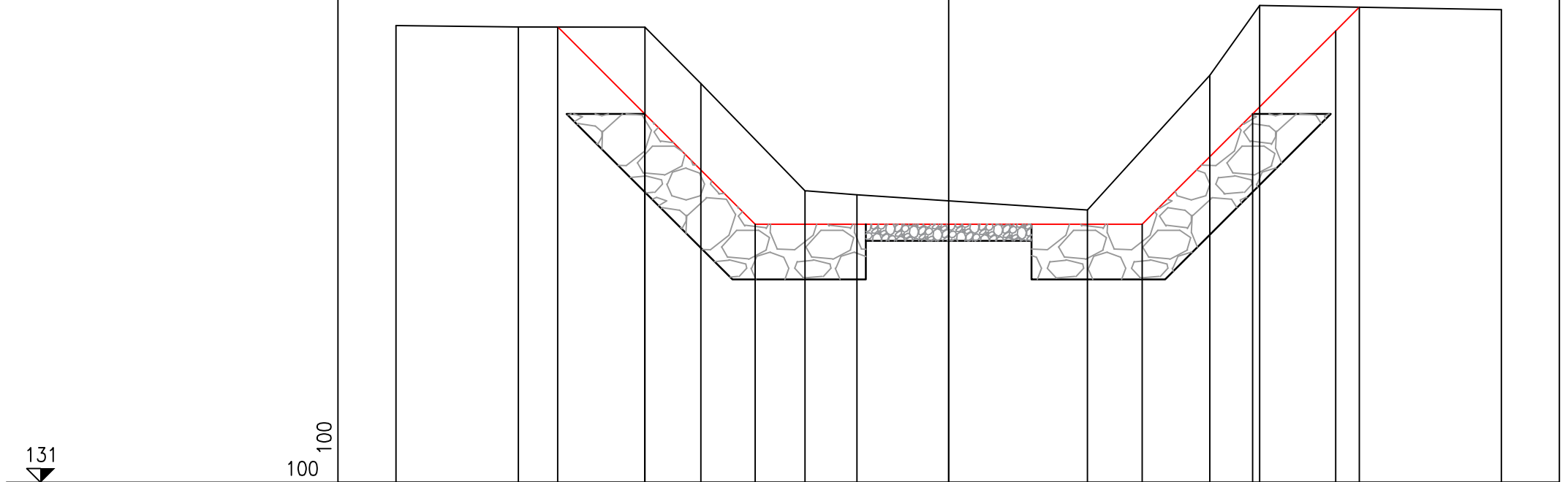
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PROGRESSIVE TERRENO	-9.02	-5.68	-4.44	-2.87		2.13	2.73	5.15	5.56	8.66	10.00
PARZIALI TERRENO	3.34	1.24	1.57	5.00	0.60	2.42	0.41	3.10	1.34		
QUOTE TERRENO	139.36	139.31	137.95	136.39		136.15	136.13	139.23	139.82	139.93	139.88
PROGRESSIVE PROGETTO	-7.10	-5.50	-3.50	0.00		3.50	5.50	7.00	7.66		
PARZIALI PROGETTO	1.60	2.00	3.50	3.50	2.00	1.50	0.66				
QUOTE PROGETTO	139.33	137.74	135.74	135.74	135.74	135.74	137.74	139.24	139.90		

PROFILO SEVESO

SEZIONE 11

PROGRESSIVA 200.00



131

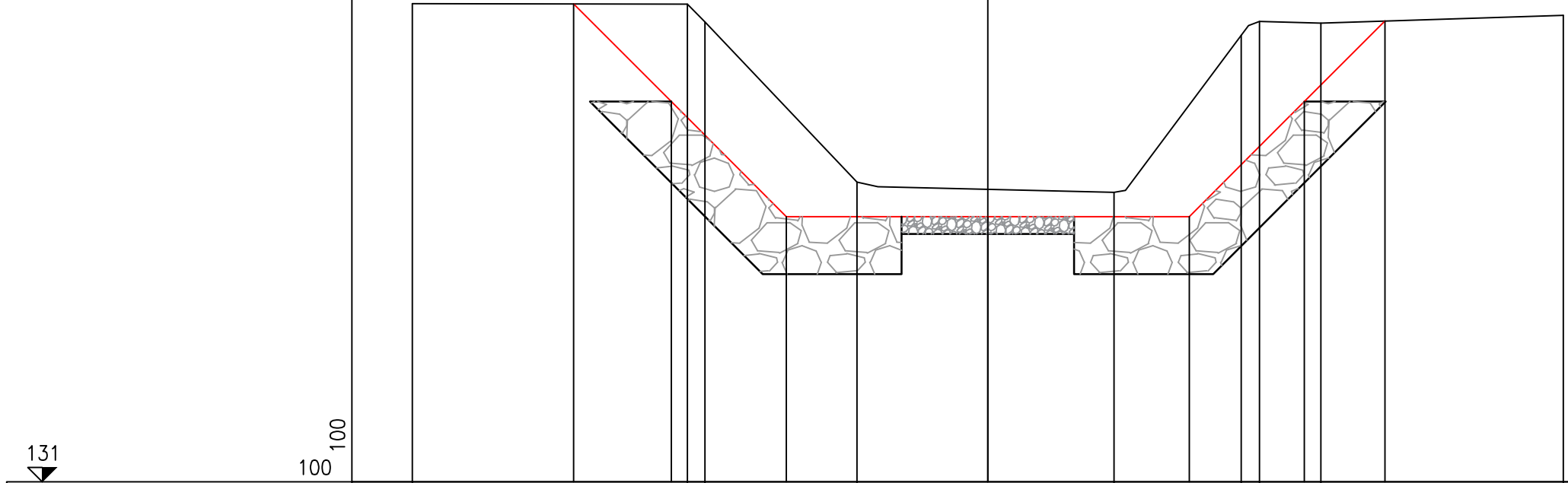
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PROGRESSIVE TERRENO		-10.00	-7.79	-5.50	-4.48	-2.60	-1.66		2.51	4.72	5.63		10.00
PARZIALI TERRENO			2.21	2.29	1.02	1.88	0.94		4.17	2.21	0.91		4.37
QUOTE TERRENO		139.27	139.25	139.24	138.22	136.28	136.21		135.93	138.37	139.64		139.56
PROGRESSIVE PROGETTO			-7.07	-5.50	-3.50			0.00		3.50	5.50	7.00	7.43
PARZIALI PROGETTO				1.57	2.00		3.50		3.50	2.00	1.50	0.43	
QUOTE PROGETTO			139.25	137.67	135.67			135.67		135.67	137.67	139.17	139.60

PROFILO SEVESO

SEZIONE 12

PROGRESSIVA 220.00

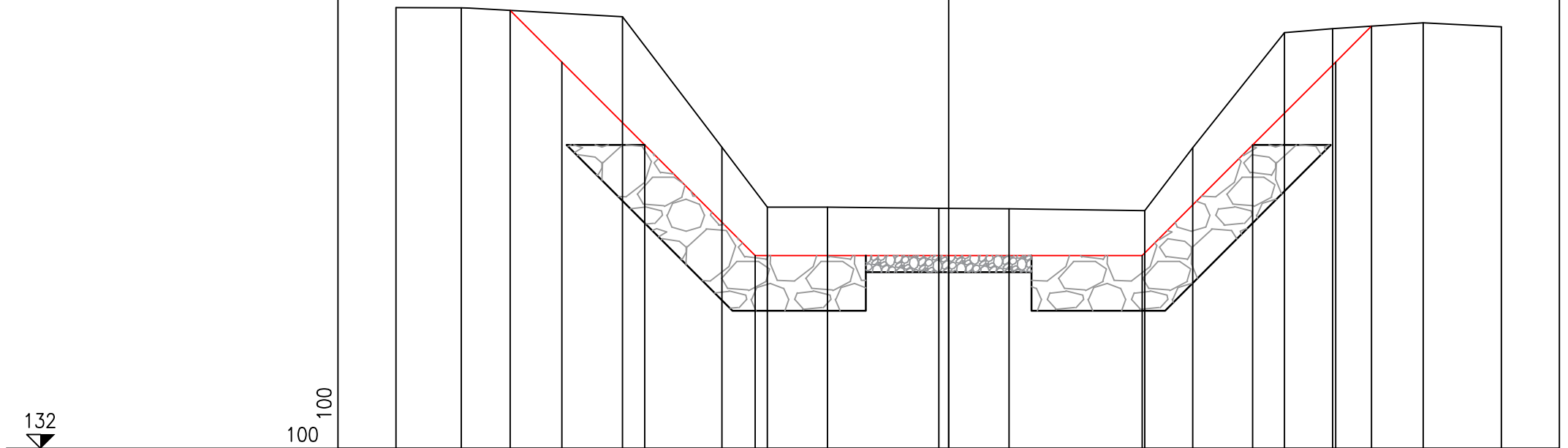


PROGRESSIVE TERRENO		-10.00		-5.22	-4.91		-2.27		2.19		4.40	4.72	5.79		10.00
PARZIALI TERRENO			4.78		0.31		2.64		4.46		2.21	0.32	1.07		4.21
QUOTE TERRENO		139.32		139.31	139.00		136.21		136.03		138.76	139.00	138.98		139.11
PROGRESSIVE PROGETTO			-7.20		-5.50		-3.50		0.00		3.50		5.50		6.90
PARZIALI PROGETTO				1.70		2.00		3.50		3.50		2.00	1.40		
QUOTE PROGETTO			139.31		137.61		135.61		135.61		135.61		137.61		139.01

PROFILO SEVESO

SEZIONE 14

PROGRESSIVA 260.00



132

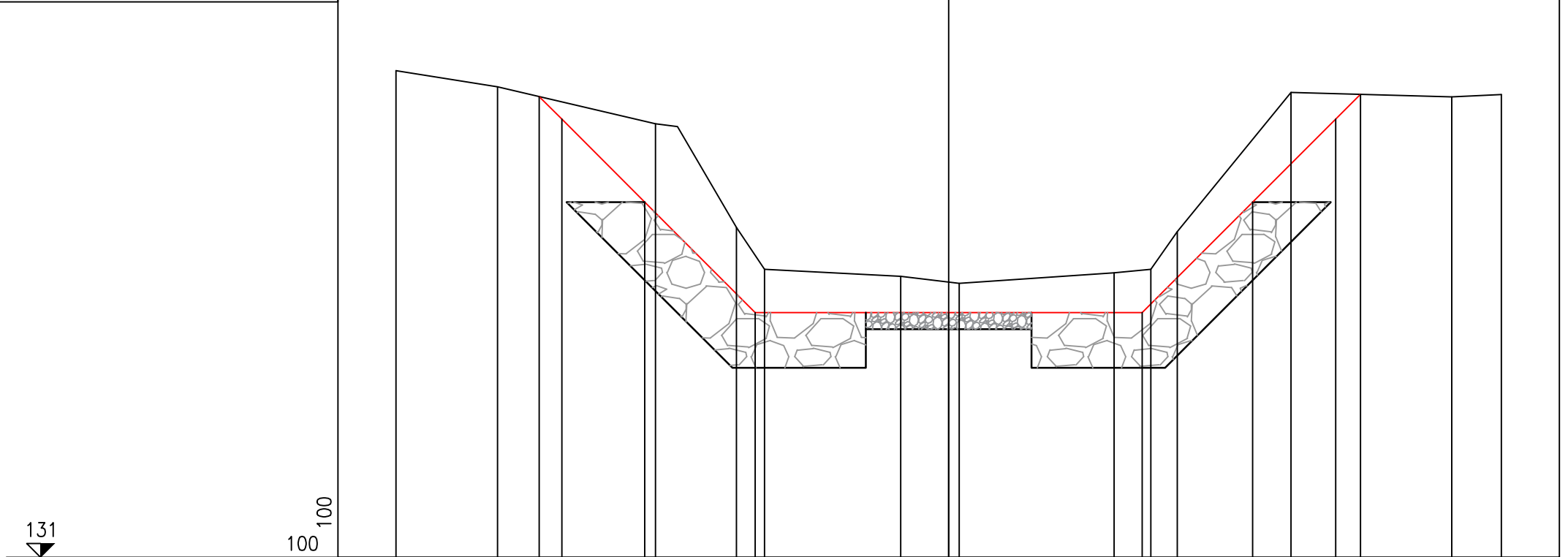
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PROGRESSIVE TERRENO	-10.00	-8.82	-7.94	-7.00	-5.90	-4.10	-3.28	-2.19	-0.18	1.09	3.55	4.41	6.08	6.94	8.58	10.00
PARZIALI TERRENO		1.18	2.92		1.80	0.82	1.09	2.01	1.27	2.46	0.86	1.67	0.86	1.64	1.42	
QUOTE TERRENO	139.98	139.97			139.81	137.45	136.36	136.36	136.34	136.33	136.30	137.44	139.52	139.59	139.70	139.63
PROGRESSIVE PROGETTO			-7.94	-7.00	-5.50	-3.50			0.00		3.50		5.50	7.00	7.65	
PARZIALI PROGETTO			0.94	1.50	2.00		3.50		3.50		2.00	1.50	0.65			
QUOTE PROGETTO			139.92	138.99	137.49	135.49			135.49		135.49		137.49	138.99	139.64	

PROFILO SEVESO

SEZIONE 15

PROGRESSIVA 280.00



131

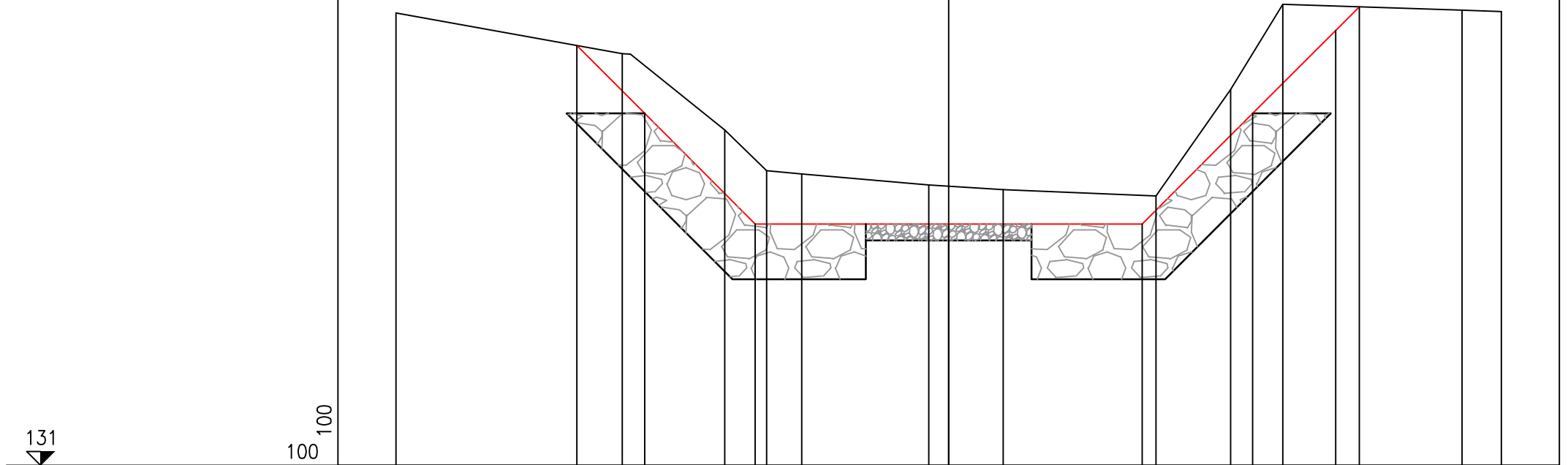
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PROGRESSIVE TERRENO	-10.00	-8.16		-5.30	-3.84	-3.33		-0.87	0.19		2.99	3.66	4.13		6.19		9.10	10.00
PARZIALI TERRENO		1.84		2.86	1.46	0.51		2.46	1.06		2.80	0.67	0.47		2.06		2.91	0.90
QUOTE TERRENO	139.80	139.51		138.84	136.97	136.21		136.08	135.96		136.15	136.21	136.89		139.41		139.33	139.37
PROGRESSIVE PROGETTO			-7.41	-7.00	-5.50	-3.50		0.00			3.50			5.50		7.00	7.45	
PARZIALI PROGETTO			0.41	1.50	2.00			3.50			3.50		2.00		1.50		0.45	
QUOTE PROGETTO			139.34	138.93	137.43	135.43		135.43			135.43			137.43		138.93	139.38	

PROFILO SEVESO

SEZIONE 16

PROGRESSIVA 300.00

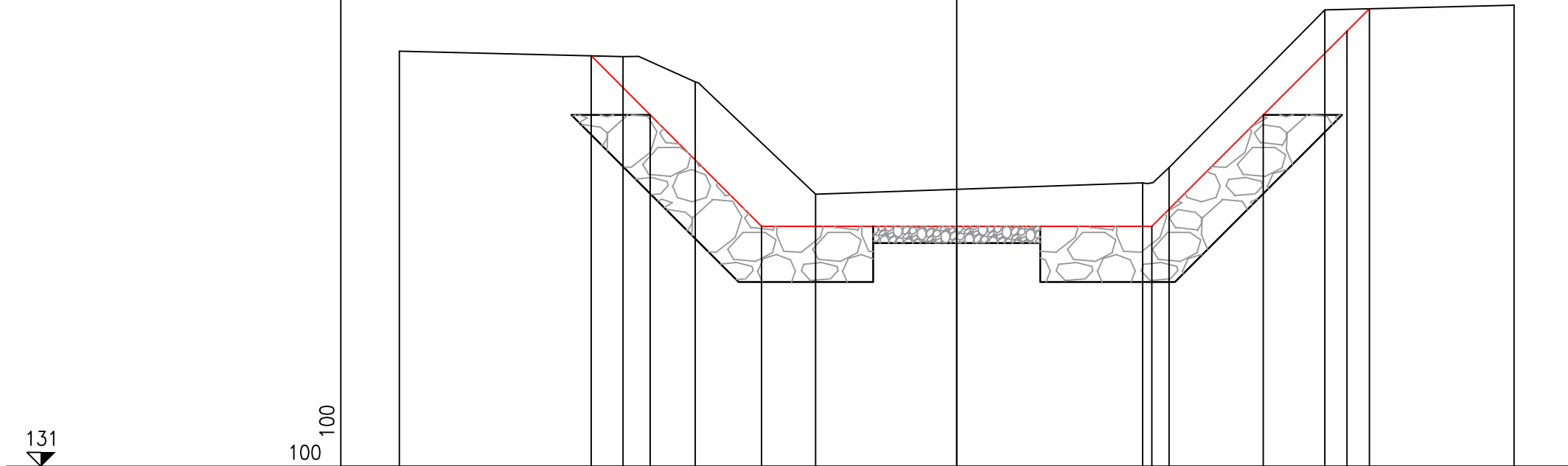


PROGRESSIVE TERRENO	-10.00	-5.91	-4.05	-3.29	-2.66	-0.36	0.99	3.75	5.10	6.04	9.29	10.00
PARZIALI TERRENO	4.09	1.86	0.76	0.63	2.30	1.35	2.76	1.35	0.94	3.25	0.71	
QUOTE TERRENO	139.18	138.45	137.07	136.33	136.27	136.07	135.99	135.87	137.80	139.34	139.23	139.21
PROGRESSIVE PROGETTO		-6.73	-5.50	-3.50		0.00		3.50	5.50		7.00	7.43
PARZIALI PROGETTO		1.23	2.00		3.50		3.50	2.00	1.50		0.43	
QUOTE PROGETTO		138.59	137.37	135.37		135.37		135.37	137.37		138.87	139.29

PROFILO SEVESO

SEZIONE 17

PROGRESSIVA 320.00

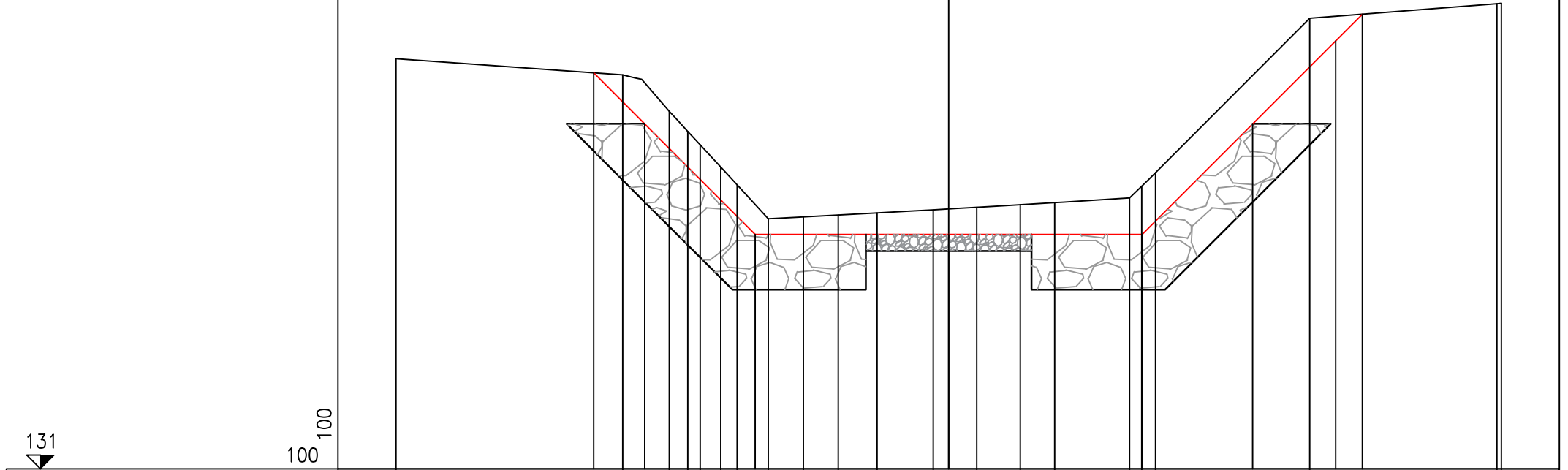


PROGRESSIVE TERRENO		10.00		5.99		4.69		2.53		3.33		3.81		6.60		10.00	
PARZIALI TERRENO			4.01		1.30		2.16		5.86		0.48		2.79		3.40		
QUOTE TERRENO		138.45		138.35		137.89		135.88		136.08		136.36		139.19		139.27	
PROGRESSIVE PROGETTO			-6.56		-5.50		-3.50		0.00		3.50		5.50		7.00		7.40
PARZIALI PROGETTO				1.06		2.00		3.50		3.50		2.00		1.50		0.40	
QUOTE PROGETTO			138.36		137.30		135.30		135.30		135.30		137.30		138.80		139.21

PROFILO SEVESO

SEZIONE 18

PROGRESSIVA 340.00

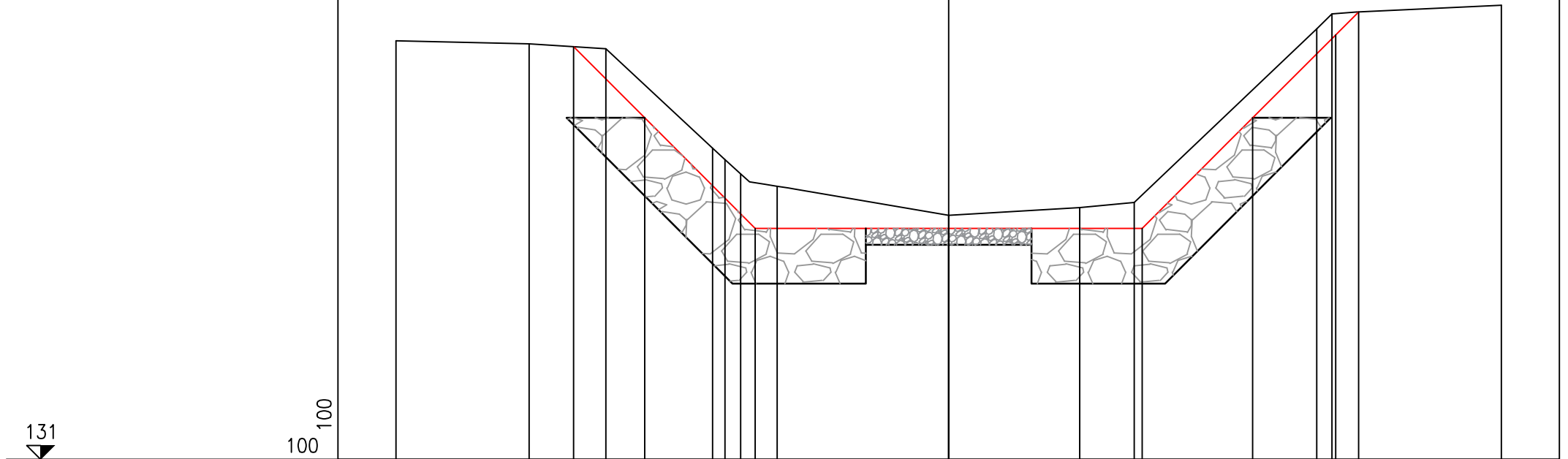


PROGRESSIVE TERRENO	-10.00	-5.90	-5.05	-4.72	-4.50	-4.13	-3.83	-3.26	-2.63	-2.00	-1.30	-0.28	0.51	1.29	1.92	3.27	3.49	3.74	6.53	9.92	10.00
PARZIALI TERRENO	4.10	0.85	0.33	0.22	0.37	0.30	0.57	0.63	0.63	0.70	1.02	0.79	0.78	0.63	1.35	0.22	0.25	2.79	3.39	0.08	0.00
QUOTE TERRENO	138.42	138.13	137.47	137.11	136.87	136.46	136.14	135.53	135.56	135.59	135.63	135.69	135.73	135.78	135.82	135.90	136.11	136.36	139.15	139.42	139.42
PROGRESSIVE PROGETTO		-6.42	-5.50				-3.50					0.00				3.50			5.50	7.00	7.48
PARZIALI PROGETTO		0.92	2.00				3.50							3.50		2.00			1.50	0.48	
QUOTE PROGETTO		138.17	137.24				135.24					135.24				135.24			137.24	138.74	139.23

PROFILO SEVESO

SEZIONE 19

PROGRESSIVA 360.00



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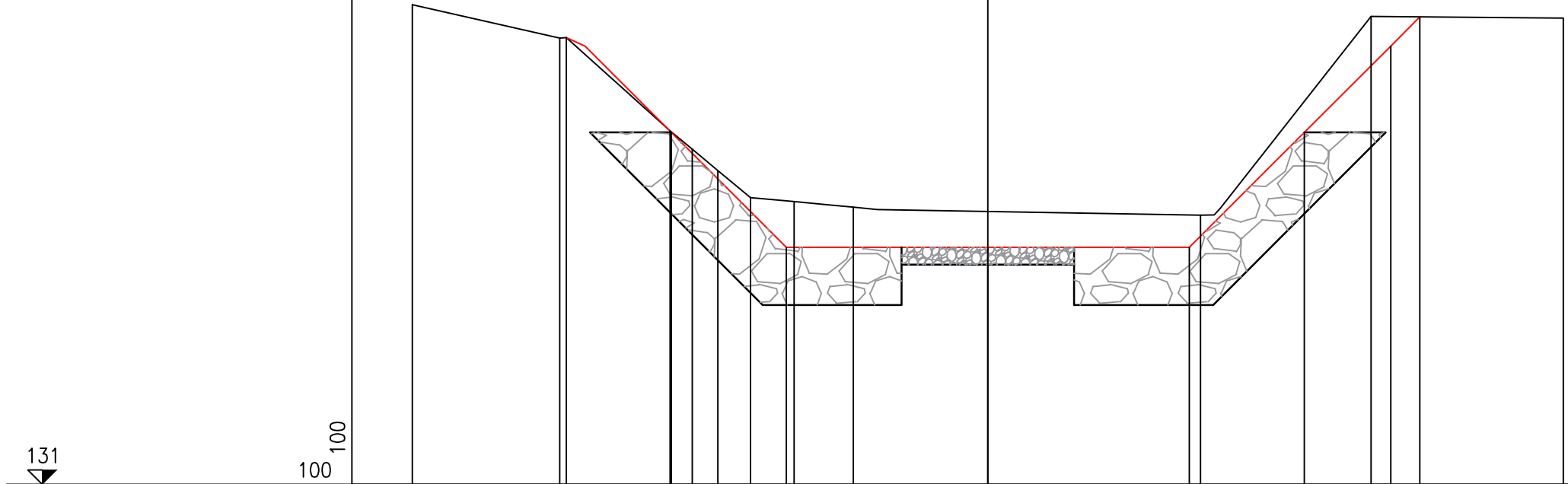
100
100

PROGRESSIVE TERRENO	-10.00	-7.59	-6.20	-4.27	-4.05	-3.77	-3.10	0.00	2.37	3.36	6.66	6.93	10.00
PARZIALI TERRENO		2.41	1.39	1.93	0.22	0.28	0.67	3.10	2.37	0.99	3.30	0.27	3.07
QUOTE TERRENO	138.57	138.52	138.43	136.63	136.42	136.17	135.94	135.41	135.55	135.65	136.79	139.06	139.22
PROGRESSIVE PROGETTO		-6.79	-5.50	-3.50				0.00		3.50	5.50	7.00	7.42
PARZIALI PROGETTO			1.29	2.00			3.50		3.50		2.00	1.50	0.42
QUOTE PROGETTO		138.47	137.18	135.18				135.18		135.18	137.18	138.68	139.10

PROFILO SEVESO

SEZIONE 20

PROGRESSIVA 379.80



PROGRESSIVE TERRENO	-10.00	-7.44	-5.52	-5.14	-4.69	-4.13	-3.36	-2.34		3.69	6.66	10.00	
PARZIALI TERRENO		2.56	1.92	0.38	0.45	0.56	0.77	1.02		6.03	2.97	3.34	
QUOTE TERRENO	139.33	138.76	137.14	136.82	136.45	135.98	135.91	135.82		135.68	139.13	139.10	
PROGRESSIVE PROGETTO		-7.32	-5.50				-3.50		0.00	3.50	5.50	7.00	7.51
PARZIALI PROGETTO			1.82		2.00			3.50		3.50	2.00	1.50	0.51
QUOTE PROGETTO		138.76	137.12				135.12		135.12	135.12	137.12	138.62	139.12