

## PRILOGA J: HIDRAVLIČNI IZRAČUNI ODVODNIH KANALOV

### Jarek J1

$$F = 0.031 \text{ km}^2 \quad Q_{100} = 0.4 \text{ m}^3/\text{s}$$

$$I_0 = 18 \%$$

$$n_G = 0.07$$

Izbrane dimenzije trapeznega prereza:

$$b = 0.6 \text{ m} \quad m_1 = 1.5$$

$$h = 0.4 \text{ m} \quad m_2 = 1.5$$

h	B	S	O	R	$R^{2/3}$	$\sqrt{I_0}$	v	Q
0.05	0.75	0.03	0.78	0.04	0.12	0.42	0.75	0.03
0.1	0.90	0.08	0.96	0.08	0.18	0.42	1.11	0.08
0.15	1.05	0.12	1.14	0.11	0.23	0.42	1.38	0.17
0.2	1.20	0.18	1.32	0.14	0.26	0.42	1.60	0.29
0.25	1.35	0.24	1.50	0.16	0.30	0.42	1.80	0.44
0.3	1.50	0.32	1.68	0.19	0.33	0.42	1.98	0.63
0.35	1.65	0.39	1.86	0.21	0.35	0.42	2.15	0.85
0.4	1.80	0.48	2.04	0.24	0.38	0.42	2.31	1.11

### Jarek J2

$$F = 0.043 \text{ km}^2 \quad Q_{100} = 0.6 \text{ m}^3/\text{s}$$

$$I_0 = 17 \%$$

$$n_G = 0.07$$

Izbrane dimenzije trapeznega prereza:

$$b = 0.6 \text{ m} \quad m_1 = 1.5$$

$$h = 0.4 \text{ m} \quad m_2 = 1.5$$

h	B	S	O	R	$R^{2/3}$	$\sqrt{I_0}$	v	Q
0.05	0.75	0.03	0.78	0.04	0.12	0.41	0.73	0.02
0.1	0.90	0.08	0.96	0.08	0.18	0.41	1.08	0.08
0.15	1.05	0.12	1.14	0.11	0.23	0.41	1.34	0.17
0.2	1.20	0.18	1.32	0.14	0.26	0.41	1.56	0.28
0.25	1.35	0.24	1.50	0.16	0.30	0.41	1.75	0.43
0.3	1.50	0.32	1.68	0.19	0.33	0.41	1.93	0.61
0.35	1.65	0.39	1.86	0.21	0.35	0.41	2.09	0.82
0.4	1.80	0.48	2.04	0.24	0.38	0.41	2.24	1.08

### Jarek J3 in jarek J4

$$F = 0.019 \text{ km}^2 \quad Q_{100} = 0.3 \text{ m}^3/\text{s}$$

$$I_0 = 28 \%$$

$$n_G = 0.07$$

Izbrane dimenzije trapeznega prereza:

$$b = 0.6 \text{ m} \quad m_1 = 1.5$$

$$h = 0.4 \text{ m} \quad m_2 = 1.5$$

h	B	S	O	R	$R^{2/3}$	$\sqrt{I_0}$	v	Q
0.05	0.75	0.03	0.78	0.04	0.12	0.53	0.93	0.03
0.1	0.90	0.08	0.96	0.08	0.18	0.53	1.38	0.10
0.15	1.05	0.12	1.14	0.11	0.23	0.53	1.72	0.21
0.2	1.20	0.18	1.32	0.14	0.26	0.53	2.00	0.36
0.25	1.35	0.24	1.50	0.16	0.30	0.53	2.25	0.55
0.3	1.50	0.32	1.68	0.19	0.33	0.53	2.47	0.78
0.35	1.65	0.39	1.86	0.21	0.35	0.53	2.68	1.06
0.4	1.80	0.48	2.04	0.24	0.38	0.53	2.88	1.38

### Kanal 3a

$$F = 0.07 \text{ km}^2 \quad (\text{P1}) \quad Q_{100} = 0.9 \text{ m}^3/\text{s}$$

$$I_0 = 20 \%$$

$$n_G = 0.07$$

Izbrane dimenzije trapeznega prereza:

$$b = 0.6 \text{ m} \quad m_1 = 1.5$$

$$h = 0.5 \text{ m} \quad m_2 = 1.5$$

h	B	S	O	R	$R^{2/3}$	$\sqrt{I_0}$	v	Q
0.05	0.75	0.03	0.78	0.04	0.12	0.45	0.79	0.03
0.1	0.90	0.08	0.96	0.08	0.18	0.45	1.17	0.09
0.15	1.05	0.12	1.14	0.11	0.23	0.45	1.45	0.18
0.2	1.20	0.18	1.32	0.14	0.26	0.45	1.69	0.30
0.25	1.35	0.24	1.50	0.16	0.30	0.45	1.90	0.46
0.3	1.50	0.32	1.68	0.19	0.33	0.45	2.09	0.66
0.35	1.65	0.39	1.86	0.21	0.35	0.45	2.27	0.89
0.4	1.80	0.48	2.04	0.24	0.38	0.45	2.43	1.17
0.45	1.95	0.57	2.22	0.26	0.41	0.45	2.59	1.49
0.5	2.10	0.68	2.40	0.28	0.43	0.45	2.74	1.85

### Glavni odvodni jarek - obstoječi

$$F = 0.222 \text{ km}^2 \text{ (P4)} \quad Q_{100} = 2.7 \text{ m}^3/\text{s}$$

$$I_0 = 28 \%$$

$$n_G = 0.07$$

Obstoječe dimenzije trapeznega prereza:

$$b = 1 \text{ m} \quad m_1 = 1.5$$

$$h = 0.5 \text{ m} \quad m_2 = 1.5$$

h	B	S	O	R	$R^{2/3}$	$\sqrt{I_0}$	v	Q
0.05	1.15	0.05	1.18	0.05	0.13	0.53	0.96	0.05
0.1	1.30	0.12	1.36	0.08	0.19	0.53	1.46	0.17
0.15	1.45	0.18	1.54	0.12	0.24	0.53	1.83	0.34
0.2	1.60	0.26	1.72	0.15	0.28	0.53	2.14	0.56
0.25	1.75	0.34	1.90	0.18	0.32	0.53	2.42	0.83
0.3	1.90	0.44	2.08	0.21	0.35	0.53	2.66	1.16
0.35	2.05	0.53	2.26	0.24	0.38	0.53	2.89	1.54
0.4	2.20	0.64	2.44	0.26	0.41	0.53	3.10	1.98
0.45	2.35	0.75	2.62	0.29	0.44	0.53	3.29	2.48
0.5	2.50	0.88	2.80	0.31	0.46	0.53	3.48	3.04
0.55	2.65	1.00	2.98	0.34	0.48	0.53	3.66	3.67
0.6	2.80	1.14	3.16	0.36	0.51	0.53	3.83	4.36

### Kanal 2 – obstoječi

$$F = 0.093 \text{ km}^2 \text{ (P2+P1)} \quad Q_{100} = 1.2 \text{ m}^3/\text{s}$$

$$I_0 = 27 \%$$

$$n_G = 0.07$$

Obstoječe dimenzije trapeznega prereza:

$$b = 1 \text{ m} \quad m_1 = 1.5$$

$$h = 0.5 \text{ m} \quad m_2 = 1.5$$

h	B	S	O	R	$R^{2/3}$	$\sqrt{I_0}$	v	Q
0.05	1.15	0.05	1.18	0.05	0.13	0.5196	0.95	0.05
0.1	1.30	0.12	1.36	0.08	0.19	0.5196	1.43	0.16
0.15	1.45	0.18	1.54	0.12	0.24	0.5196	1.80	0.33
0.2	1.60	0.26	1.72	0.15	0.28	0.5196	2.11	0.55
0.25	1.75	0.34	1.90	0.18	0.32	0.5196	2.37	0.82
0.3	1.90	0.44	2.08	0.21	0.35	0.5196	2.61	1.14
0.35	2.05	0.53	2.26	0.24	0.38	0.5196	2.83	1.51
0.4	2.20	0.64	2.44	0.26	0.41	0.5196	3.04	1.95
0.45	2.35	0.75	2.62	0.29	0.44	0.5196	3.23	2.44
0.5	2.50	0.88	2.80	0.31	0.46	0.5196	3.42	2.99

### Obcestni jarek - obstoječi

$$F = 0.31 \text{ km}^2 \quad (P7) \quad Q_{100} = 3.7 \text{ m}^3/\text{s}$$

$$I_0 = 17 \%$$

$$n_G = 0.07$$

Obstoječe dimenzije trapeznega prereza:

$$b = 0.6 \text{ m} \quad m_1 = 1$$

$$h = 0.5 \text{ m} \quad m_2 = 1$$

h	B	S	O	R	$R^{2/3}$	$\sqrt{I_0}$	v	Q
0.05	0.70	0.03	0.74	0.04	0.12	0.41	0.73	0.02
0.1	0.80	0.07	0.88	0.08	0.18	0.41	1.09	0.08
0.15	0.90	0.11	1.02	0.11	0.23	0.41	1.35	0.15
0.2	1.00	0.16	1.17	0.14	0.27	0.41	1.57	0.25
0.25	1.10	0.21	1.31	0.16	0.30	0.41	1.75	0.37
0.3	1.20	0.27	1.45	0.19	0.33	0.41	1.92	0.52
0.35	1.30	0.33	1.59	0.21	0.35	0.41	2.08	0.69
0.4	1.40	0.40	1.73	0.23	0.38	0.41	2.22	0.89
0.45	1.50	0.47	1.87	0.25	0.40	0.41	2.35	1.11
0.5	1.60	0.55	2.01	0.27	0.42	0.41	2.48	1.36

### Obcestni jarek - predlog

$$F = 0.31 \text{ km}^2 \quad (P7) \quad Q_{100} = 3.7 \text{ m}^3/\text{s}$$

$$I_0 = 17 \%$$

$$n_G = 0.07$$

Izbrane dimenzije trapeznega prereza:

$$b = 1 \text{ m} \quad m_1 = 1.5$$

$$h = 0.8 \text{ m} \quad m_2 = 1.5$$

h	B	S	O	R	$R^{2/3}$	$\sqrt{I_0}$	v	Q
0.1	1.30	0.12	1.36	0.08	0.19	0.41	1.13	0.13
0.2	1.60	0.26	1.72	0.15	0.28	0.41	1.67	0.43
0.3	1.90	0.44	2.08	0.21	0.35	0.41	2.07	0.90
0.4	2.20	0.64	2.44	0.26	0.41	0.41	2.41	1.54
0.5	2.50	0.88	2.80	0.31	0.46	0.41	2.71	2.37
0.6	2.80	1.14	3.16	0.36	0.51	0.41	2.98	3.40
0.65	2.95	1.28	3.34	0.38	0.53	0.41	3.11	3.99
0.7	3.10	1.44	3.52	0.41	0.55	0.41	3.24	4.64
0.75	3.25	1.59	3.70	0.43	0.57	0.41	3.36	5.35
0.8	3.40	1.76	3.88	0.45	0.59	0.41	3.47	6.12

### Stara struga Grajščka

$$F = 0.33 \text{ km}^2 \quad (\text{P8}) \quad Q_{100} = 4 \text{ m}^3/\text{s}$$

$$I_0 = 32 \%$$

$$n_G = 0.07$$

Izbrane dimenzije trapeznega prereza:

$$b = 1.1 \text{ m} \quad m_1 = 1.5$$

$$h = 0.7 \text{ m} \quad m_2 = 1.5$$

h	B	S	O	R	$R^{2/3}$	$\sqrt{I_0}$	v	Q
0.1	1.40	0.13	1.46	0.09	0.19	0.57	1.57	0.20
0.2	1.70	0.28	1.82	0.15	0.29	0.57	2.32	0.65
0.25	1.85	0.37	2.00	0.18	0.32	0.57	2.62	0.96
0.3	2.00	0.47	2.18	0.21	0.36	0.57	2.88	1.34
0.35	2.15	0.57	2.36	0.24	0.39	0.57	3.13	1.78
0.4	2.30	0.68	2.54	0.27	0.42	0.57	3.35	2.28
0.45	2.45	0.80	2.72	0.29	0.44	0.57	3.57	2.85
0.5	2.60	0.93	2.90	0.32	0.47	0.57	3.77	3.49
0.55	2.75	1.06	3.08	0.34	0.49	0.57	3.96	4.20
0.6	2.90	1.20	3.26	0.37	0.51	0.57	4.15	4.98
0.65	3.05	1.35	3.44	0.39	0.54	0.57	4.33	5.83
0.7	3.20	1.51	3.62	0.42	0.56	0.57	4.50	6.77
0.75	3.35	1.67	3.80	0.44	0.58	0.57	4.67	7.79
0.8	3.50	1.84	3.98	0.46	0.60	0.57	4.83	8.88

### Osrednji jarek 1

$$F = 0.026 \text{ km}^2 \quad (\text{P9}) \quad Q_{100} = 0.4 \text{ m}^3/\text{s}$$

$$I_0 = 24 \%$$

$$n_G = 0.07$$

Izbrane dimenzije trapeznega prereza:

$$b = 0.6 \text{ m} \quad m_1 = 1.5$$

$$h = 0.4 \text{ m} \quad m_2 = 1.5$$

h	B	S	O	R	$R^{2/3}$	$\sqrt{I_0}$	v	Q
0.05	0.75	0.03	0.78	0.04	0.12	0.49	0.86	0.03
0.1	0.90	0.08	0.96	0.08	0.18	0.49	1.28	0.10
0.15	1.05	0.12	1.14	0.11	0.23	0.49	1.59	0.20
0.2	1.20	0.18	1.32	0.14	0.26	0.49	1.85	0.33
0.25	1.35	0.24	1.50	0.16	0.30	0.49	2.08	0.51
0.3	1.50	0.32	1.68	0.19	0.33	0.49	2.29	0.72
0.35	1.65	0.39	1.86	0.21	0.35	0.49	2.48	0.98
0.4	1.80	0.48	2.04	0.24	0.38	0.49	2.67	1.28

### Urejena struga Grajščka - obstoječi

$F = 0.376 \text{ km}^2$  (P11)  $Q_{100} = 4.5 \text{ m}^3/\text{s}$

$I_0 = 23 \%$

$n_G = 0.07$

Izbrane dimenzije trapeznega prereza:

$b = 1.1 \text{ m}$   $m_1 = 1$

$h = 1 \text{ m}$   $m_2 = 1$

h	B	S	O	R	$R^{2/3}$	$\sqrt{I_0}$	v	Q
0.1	1.30	0.12	1.38	0.09	0.20	0.48	1.34	0.16
0.2	1.50	0.26	1.67	0.16	0.29	0.48	1.99	0.52
0.3	1.70	0.42	1.95	0.22	0.36	0.48	2.46	1.03
0.4	1.90	0.60	2.23	0.27	0.42	0.48	2.85	1.71
0.5	2.10	0.80	2.51	0.32	0.47	0.48	3.19	2.55
0.6	2.30	1.02	2.80	0.36	0.51	0.48	3.50	3.57
0.7	2.50	1.26	3.08	0.41	0.55	0.48	3.78	4.76
0.8	2.70	1.52	3.36	0.45	0.59	0.48	4.04	6.13
0.9	2.90	1.80	3.65	0.49	0.62	0.48	4.28	7.70
1	3.10	2.10	3.93	0.53	0.66	0.48	4.51	9.48

### Osrednji jarek 3

$F = 0.017 \text{ km}^2$  (P12)  $Q_{100} = 0.2 \text{ m}^3/\text{s}$

$I_0 = 23 \%$

$n_G = 0.07$

Izbrane dimenzije trapeznega prereza:

$b = 0.6 \text{ m}$   $m_1 = 1.5$

$h = 0.4 \text{ m}$   $m_2 = 1.5$

h	B	S	O	R	$R^{2/3}$	$\sqrt{I_0}$	v	Q
0.05	0.75	0.03	0.78	0.04	0.12	0.48	0.84	0.03
0.1	0.90	0.08	0.96	0.08	0.18	0.48	1.25	0.09
0.15	1.05	0.12	1.14	0.11	0.23	0.48	1.56	0.19
0.2	1.20	0.18	1.32	0.14	0.26	0.48	1.81	0.33
0.25	1.35	0.24	1.50	0.16	0.30	0.48	2.04	0.50
0.3	1.50	0.32	1.68	0.19	0.33	0.48	2.24	0.71
0.35	1.65	0.39	1.86	0.21	0.35	0.48	2.43	0.96
0.4	1.80	0.48	2.04	0.24	0.38	0.48	2.61	1.25

## Levi pritok

$F = 0.123 \text{ km}^2$  (P13)  $Q_{100} = 1.6 \text{ m}^3/\text{s}$

$I_0 = 10 \%$

$n_G = 0.07$

Izbrane dimenzije trapeznega prereza:

$b = 1 \text{ m}$   $m_1 = 1.5$

$h = 0.6 \text{ m}$   $m_2 = 1.5$

h	B	S	O	R	$R^{2/3}$	$\sqrt{I_0}$	v	Q
0.05	1.15	0.05	1.18	0.05	0.13	0.32	0.58	0.03
0.1	1.30	0.12	1.36	0.08	0.19	0.32	0.87	0.10
0.15	1.45	0.18	1.54	0.12	0.24	0.32	1.09	0.20
0.2	1.60	0.26	1.72	0.15	0.28	0.32	1.28	0.33
0.25	1.75	0.34	1.90	0.18	0.32	0.32	1.44	0.50
0.3	1.90	0.44	2.08	0.21	0.35	0.32	1.59	0.69
0.35	2.05	0.53	2.26	0.24	0.38	0.32	1.73	0.92
0.4	2.20	0.64	2.44	0.26	0.41	0.32	1.85	1.18
0.45	2.35	0.75	2.62	0.29	0.44	0.32	1.97	1.48
0.5	2.50	0.88	2.80	0.31	0.46	0.32	2.08	1.82
0.55	2.65	1.00	2.98	0.34	0.48	0.32	2.19	2.19
0.6	2.80	1.14	3.16	0.36	0.51	0.32	2.29	2.61

## PRILOGA K: HIDRAVLICNI IZRAČUNI PRELIVNIH SEKCIJ PREGRAD

### Pregrada A

$F = 0.222 \text{ km}^2$  (P4)  $Q_{100} = 2.7 \text{ m}^3/\text{s}$

$\mu = 0.49$

Izbrane dimenzije trapeznega preliva:

$b = 2 \text{ m}$

$h = 1.3 \text{ m}$

H	$v = 2/3 * \mu * \sqrt{(2 * g * H)}$	Q	$v^2/2g$	$H + v^2/2g$
0	0.00	0.0	0.00	0.00
0.1	0.46	0.1	0.01	0.11
0.2	0.65	0.3	0.02	0.22
0.3	0.79	0.5	0.03	0.33
0.4	0.92	0.7	0.04	0.44
0.5	1.02	1.0	0.05	0.55
0.6	1.12	1.3	0.06	0.66
0.7	1.21	1.7	0.07	0.77
0.8	1.29	2.1	0.09	0.89
0.9	1.37	2.5	0.10	1.00
1	1.45	2.9	0.11	1.11
1.1	1.52	3.3	0.12	1.22
1.2	1.59	3.8	0.13	1.33
1.3	1.65	4.3	0.14	1.44

### Pregrada B

$F = 0.026 \text{ km}^2$  (P9)  $Q_{100} = 0.4 \text{ m}^3/\text{s}$

$\mu = 0.49$

Izbrane dimenzije trapeznega preliva:

$b = 1 \text{ m}$

$h = 0.7 \text{ m}$

H	$v = 2/3 * \mu * \sqrt{(2 * g * H)}$	Q	$v^2/2g$	$H + v^2/2g$
0	0.00	0.0	0.00	0.00
0.1	0.46	0.0	0.01	0.11
0.2	0.65	0.1	0.02	0.22
0.3	0.79	0.2	0.03	0.33
0.4	0.92	0.4	0.04	0.44
0.5	1.02	0.5	0.05	0.55
0.6	1.12	0.7	0.06	0.66
0.7	1.21	0.8	0.07	0.77



### Pregrada C

$$F = 0.008 \text{ km}^2 \text{ (P9)} \quad Q_{100} = 0.1 \text{ m}^3/\text{s}$$

$$\mu = 0.49$$

Izbrane dimenzije trapeznega preliva:

$$b = 1 \text{ m}$$

$$h = 0.5 \text{ m}$$

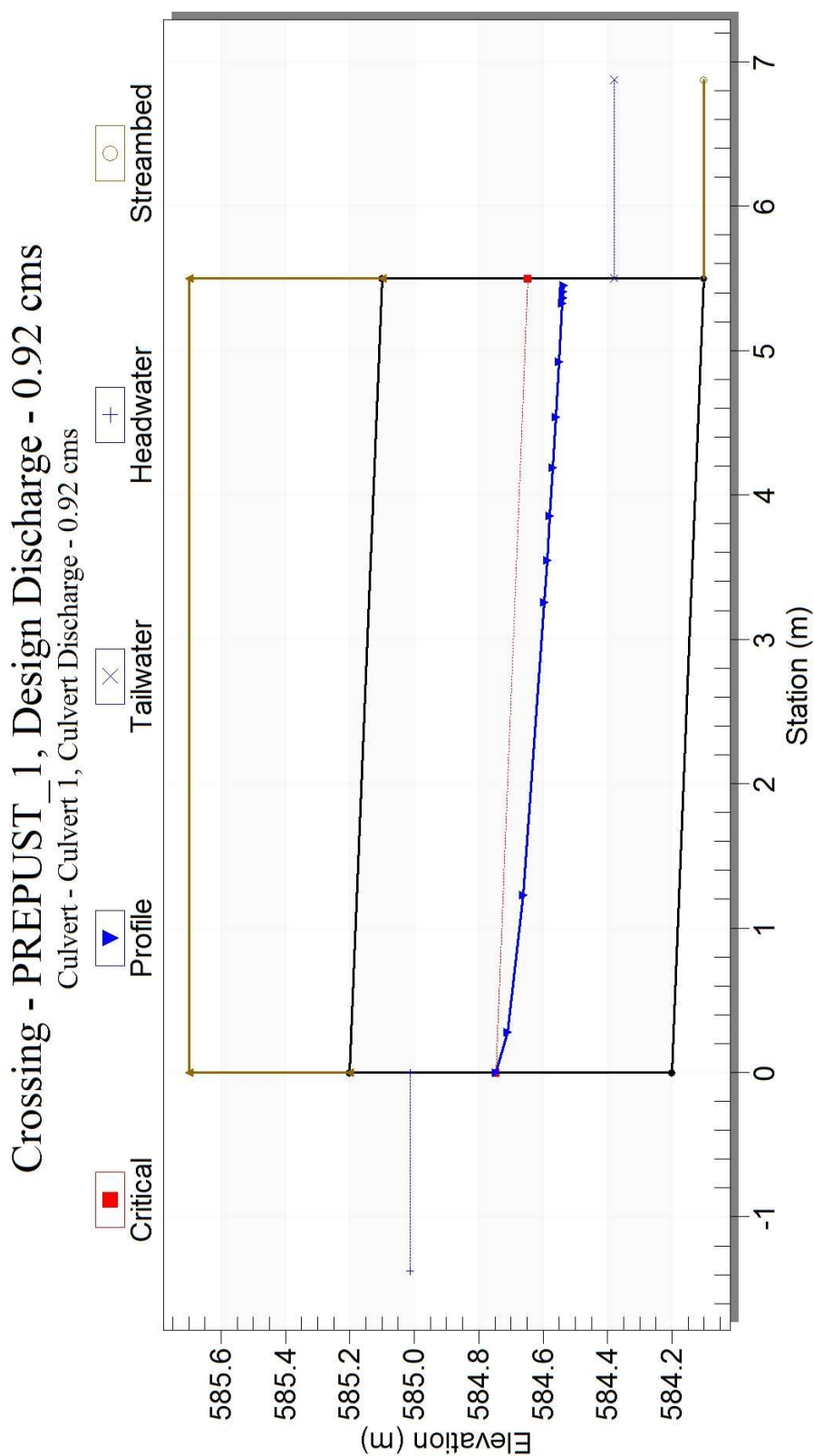
H	$v = 2/3 \cdot \mu \cdot \sqrt{2 \cdot g \cdot H}$	Q	$v^2/2g$	$H + v^2/2g$
0	0.00	0.000	0.00	0.00
0.1	0.46	0.046	0.01	0.11
0.2	0.65	0.129	0.02	0.22
0.3	0.79	0.238	0.03	0.33
0.4	0.92	0.366	0.04	0.44
0.5	1.02	0.512	0.05	0.55

## PRILOGA L: PREVERBA PREVODNOSTI CEVNIH PREPUSTOV

### Prepust 1

$F = 0.07 \text{ km}^2$  (P1)  $Q_{100} = 0.9 \text{ m}^3/\text{s}$

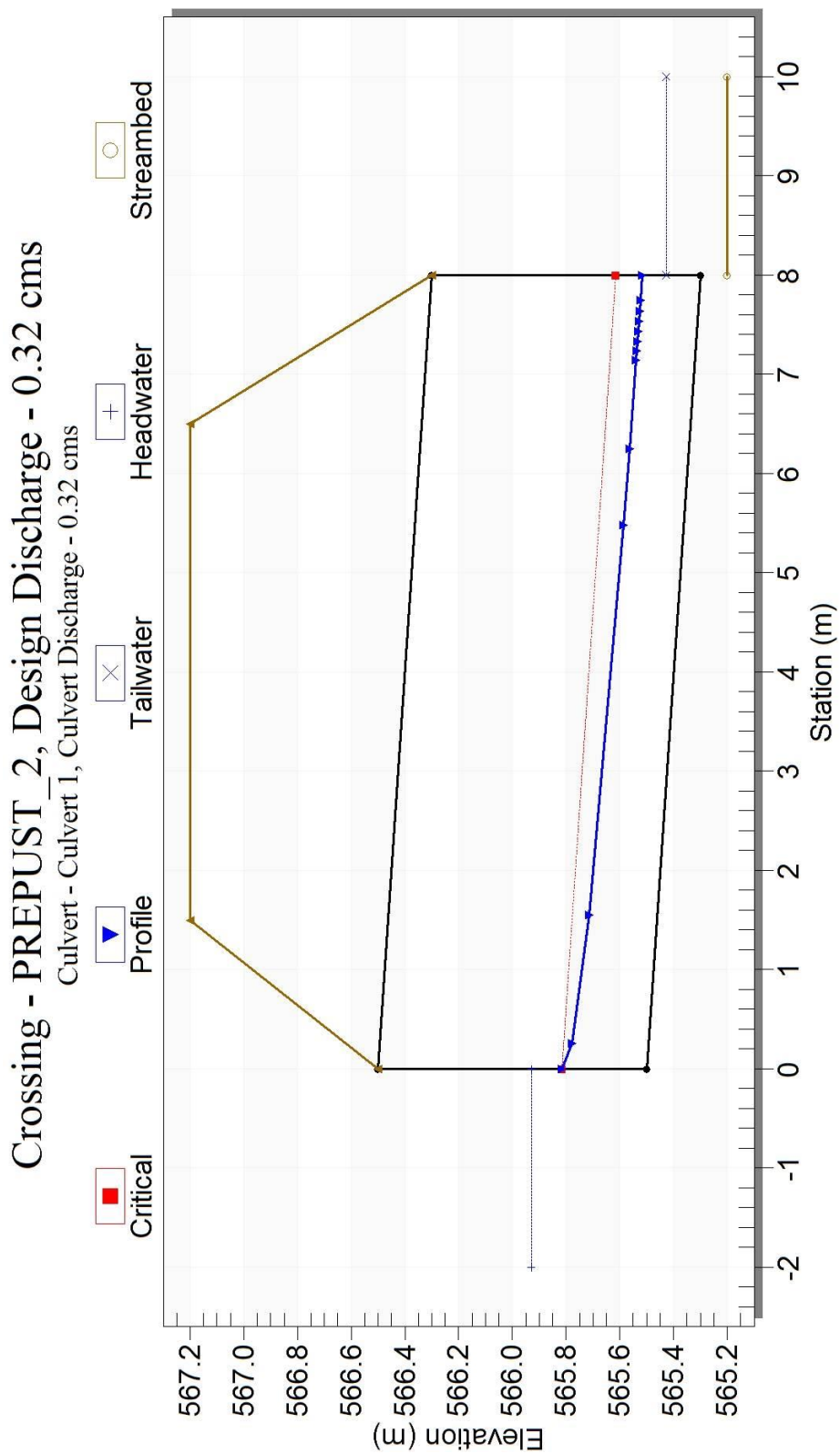
$\phi = 100 \text{ cm}$



## Prepust 2

$F = 0.023 \text{ km}^2$  (P2)  $Q_{100} = 0.3 \text{ m}^3/\text{s}$

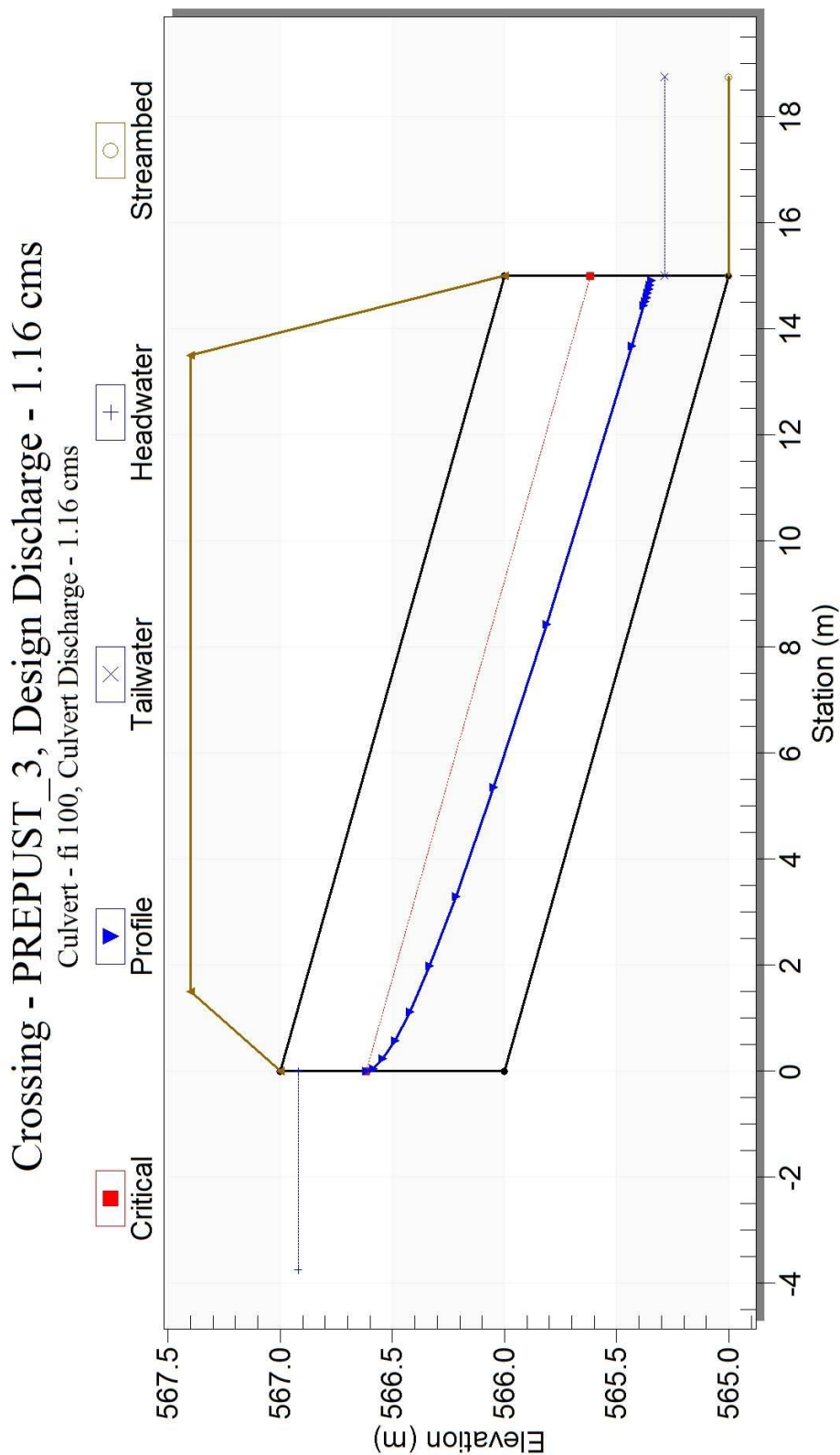
$\phi = 100 \text{ cm}$



### Prepust 3 – obstoječi

$F = 0.091 \text{ km}^2$  (P3)  $Q_{100} = 1.2 \text{ m}^3/\text{s}$

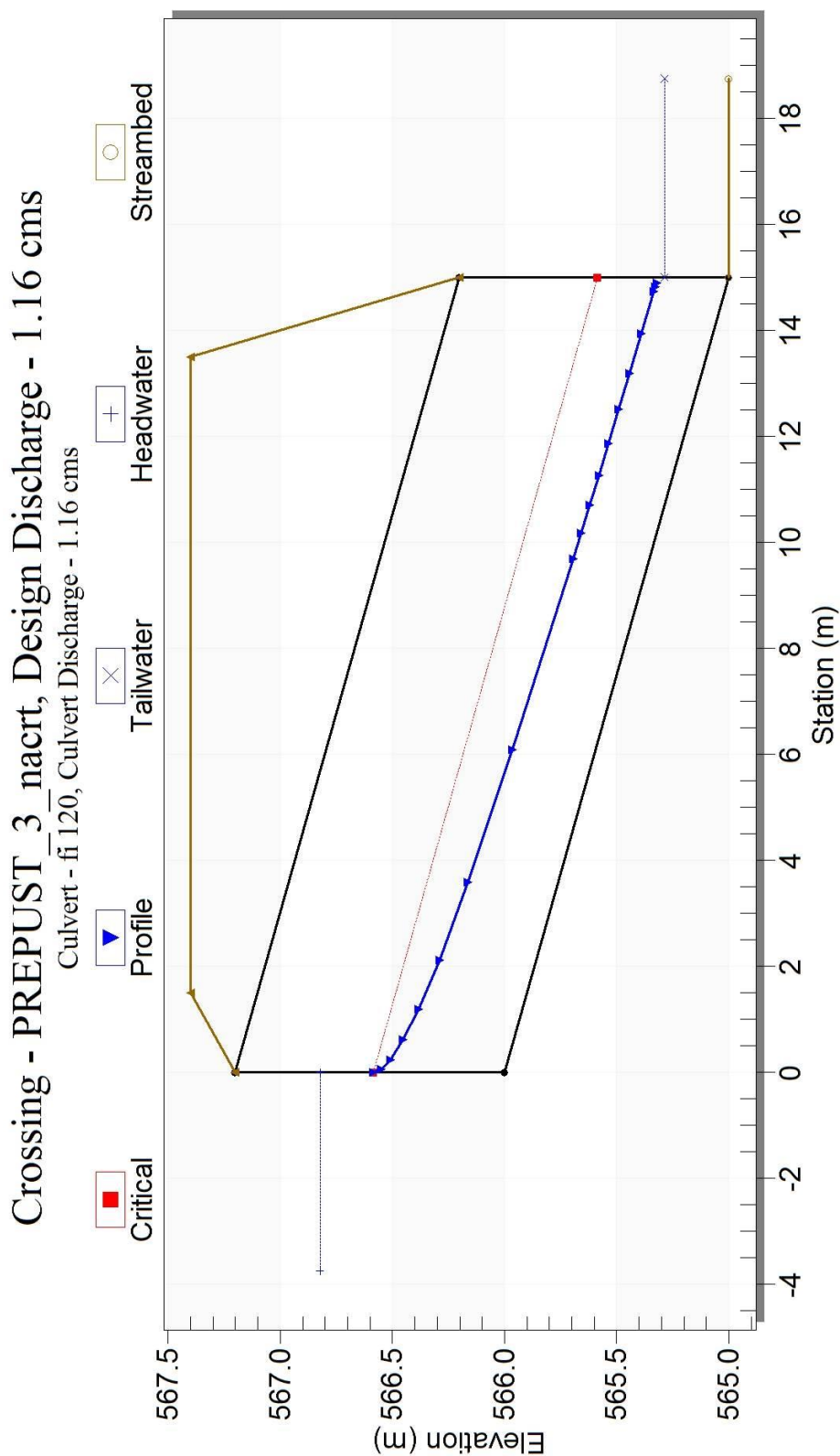
$\phi = 100 \text{ cm}$



### Prepust 3 – zamenjava

$F = 0.091 \text{ km}^2$  (P3)  $Q_{100} = 1.2 \text{ m}^3/\text{s}$

$\phi = 120 \text{ cm}$



## Prepust 12– predlog

$F = 0.14 \text{ km}^2$  (P12+P13)  $Q_{100} = 1.76 \text{ m}^3/\text{s}$

$\phi = 120 \text{ cm}$

