

1. BILL OF QUANTITIES FOR ANTI-EROSION WORKS - RASKA RIVER

Bill of Quantities for barrier from stone surrounded by concrete Hk=2.5 m Jusuf stream

No	Description	Unit	Qty	Unit price RSD	Total
I PRELIMINARY WORKS					
1	Providing space for construction site in approved site (auxiliary buildings, parking space for construction equipment and warehouses). In price is included: - the costs of marking and securing construction sites and work zone, - costs of temporary possession of space and use for site. - costs for returning of used spaces in its original state. The contractor is responsible for all damage caused non-compliance with standard precautions.	lump sum			
1	Cut down softwood trees using motor saw, shorten trunks to a defined length, cut branches and pull trees out to a distance up to 20 meters.				
2a	Ø 10-30cm	pcs	6	0.00	0.00
2b	Ø30-50cm	pcs	12	0.00	0.00
3	Clear the ground of twigs, branches, piled up rubble, as well as sludge, including load-on and transport to a distance of up to 1 km.	m ²	350	0.00	0.00
4	Geodetic marking of structures in the field (barrier).	lump sum	1	0.00	0.00
5	Construction of access points to deliver the material for the construction of barriers.	lump sum	1	0.00	0.00
6	Repairing of existing road for furnishing of construction materials, a length of 300 m . In price is also included: - Backfilling and gritting 6-12 cm. With dozer at least three times over for compacting. d=10 cm.	m ³	112.5		
7	Temporary land possession.	lump sum	1	0.00	0.00
TOTAL PRELIMINARY WORKS					0.00
II EARTH WORKS					
8	Excavate earth for foundation and barrier wings, cut-off and stilling pool in the ground III, IV and V cat. Witt the get out to the side. Calculation per m3 excavated earth.				
	<i>Excavation for wings and body barrier.</i>	m ³	38	0.00	0.00
	<i>Excavation for foundation of barrier.</i>	m ³	30.2	0.00	0.00
	<i>Excavation for stilling pool (with bank walls)</i>	m ³	110	0.00	0.00
	<i>Excavation for cut-off (with foundation)</i>	m ³	18.3	0.00	0.00
9	Build embankment behind of bank walls from excavated earth III and IV cat. Filling should be done in layers d=30 cm. With mechanical compacting and trimming in slope 1:0.5.Calculation per m3	m ³	65.5	0.00	0.00
10	Transport excess excavated earth to forest roads and spread it evenly using bulldozer, at least three times over for compacting. Max. transport distance is about 1000 meters. Calculation per m ³ of transported, spread and compacted earth.	m ³	131	0.00	0.00
11	Grading surrounding surfaces after finishing works. Calculation per m2 surfaces.	m ²	220	0.00	0.00
12	Pump water out of the foundation pit or drain water in some other way in order to enable works to proceed.	lump sum			0.00
TOTAL EARTH WORKS					0.00

III STONE AND CONCRETE WORKS					
13	Purchase, transport and construct gravel bedding d=10 cm. under the foundation. Calculation per m ³ of bedding installed.	m ³	8.86	0.00	0.00
14	Grouting of barrier overflow with concrete MB20 in layer d=20 cm. Calculation per m ³ .	m ³	1.08	0.00	0.00
15	Construct barrier , bank walls, stilling pool and cut-off from stone surrounded with concrete. Minimum stone size shall be 25 cm. Payment per m ³ of purchased and filled in stone.				0.00
15.1	Stone surrounded with concrete for foundation and barrier.	m ³	95.00	0.00	0.00
15.2	Stone surrounded with concrete for bank walls of stilling pool.	m ³	4.14	0.00	0.00
15.3	Stone surrounded with concrete for pavement of stilling pool.	m ³	28.00	0.00	0.00
15.4	Stone surrounded with concrete for cut-off structure.	m ³	7.54	0.00	0.00
16	Build the rock fill from upstream of barrier. Minimum stone size shall be 25 cm. Payment per m ³ of purchased and filled in stone.	m ³	23.00	0.00	0.00
17	Purchase, transport and construct stone stilling pool downstream from cut-off structure, d=50 cm. Payment per m ³ .	m ³	37.00	0.00	0.00
18	Supply and install the PVC piping Ø 110 mm length 0,6m for drainage in the stone wall	m ³	12.00	0.00	0.00
TOTAL STONE AND CONCRETE WORKS					0.00
IV ADITIONAL WORKS					
19	Supply, transport ,pouring of concrete and care of compacted concrete MB 20 for making concrete base under pipe. All according designee and standards. Payment per m ³ poured concrete.	m ³	2.10	0.00	0.00
20	Supply, transport and installing reinforced concrete tubes Ø1600 (must meet standards presented in technical conditions Main Designee, and at list resistance to crown pressure 85 kN/m) all according designee and current regulations for this type of works. Calculation per m constructed main drain.	m ³	6.00	0.00	0.00
21	Purchase, transport and construct gravel for constructing of cut-off trench and base from gravel for concrete buildings and pipes, d=10 cm.. Calculation per m ³ .	m ³	1.05	0.00	0.00
22	Making ramps crossing over the creek. In price is included supplying and spreading of stone 24-32 cm. gradation. Filling is doing to fulfill profile.				0.00
TOTAL ADITIONAL WORKS					0.00
REKAPITULATION					
I	PRELIMINARY WORKS				0.00
II	EARTH WORKS				0.00
III	STONE AND CONCRETE WORKS				0.00
IV	ADITIONAL WORKS				0.00
TOTAL					0.00