

**PRICED BILL OF QUANTITIES - AC WORK**  
with the Main Design for the construction of a ground floor family housing unit

**TYPE 100 - UP TO LEVEL 0,00**

<b>1,00 PREPARATORY AND FINISHING WORK</b>					
<b>No</b>	<b>DESCRIPTION</b>	<b>UoM</b>	<b>Quantity</b>	<b>Unit Price</b>	<b>TOTAL</b>
1,01	Construction site electricity connection fee. The written request with sketch shall be forwarded to the body authorized to approve electricity connections. The price shall include utilization fees throughout the course of the work and installation of the main construction cabinet with meter, fuses etc. Calculated in lump.	lump	1,00		
1,02	Mounting and dismounting of a temporary building for the placement of tools, materials and worker housing. The building shall be built of prefabricated elements or 1" boards over a wooden substructure. The building shall be covered with boards and tar paper or Salomite corrugated fibre cement sheets. Calculated per m2 of completed building. <i>Note: the building surface area shall be considered in lump and shall depend on the Contractor's set up and needs.</i>				
	Manufacture of canopies for work, wood processing etc. The working canopies shall be made of 5cm thick boards and scaffolding pipes or wood lumber. A layer of tar paper shall be placed over the working canopy and fixed with nails and battens. Calculated per m2 of delivered canopy. <i>Note: the canopy surface area shall be considered in lump and shall depend on the Contractor's set up and needs.</i>	m2	15,00		
1,04	Mounting and dismounting of the metal pipe façade scaffold, fully according to standing regulations and PP measures. The scaffold shall be structurally stable, anchored to the building and properly grounded. Working platforms made of 5cm boards shall be placed at every 2.00m of height. From the exterior, 5cm boards shall be placed vertically as guards. The entire surface of the scaffolding shall be covered with cloth of jute or PVC cover. The scaffold shall be handed over to the structural analyst who shall issue its usage permit via site diary. The scaffold shall be used throughout the duration of the work. Calculated per m2 of vertical projection of the assembled scaffold.	m2	242,33		
1,05	Mounting and dismounting of the protective 2m tall metal fence around the construction site, with a gate for the entrance of workers, vehicles and machinery. The gate shall be fitted with lock and key or padlock. The fence shall be properly anchored and strutted so as not to tip over. The fence shall be properly painted. It shall be used throughout the duration of the work and paid for only once, regardless of possible dismounting and re-mounting during work execution. The fence shall be fitted with warning signs for passers-by. Calculated per m2 of fence.	m2	10,00		
1,06	Manufacture and placement of a notification board informing about the execution of construction work, complete with basic building, Investor and Designer information. The board shall be 200x300cm. fully according to the "Rulebook on the appearance, contents and location of construction site notice boards", O. Gazette of the RS No 4/10, and after consulting the supervisor and Designer. Calculated per piece.				

	Manufacture and placement of boards and other warning signs, according to technical regulations. The board shall be 80x60cm. Calculated per piece.	pcs.	1,00		
1,08	Manufacture and placement of construction site signal lights. The lights shall be placed on the fence and/or scaffolding. The 12V-powered installation with wire mesh protected lights shall be placed in agreement with the Supervisor and fully according to regulation. Calculated in lump, completed.	lump	1,00		
1,09	Cleaning the building after the completion of all work. A thorough sweep of the entire construction site, washing of all glass surfaces and detailed washing of all indoor areas and outdoor surfaces shall be performed. The price shall include the 2m perimeter. Calculated per m2 of building floor surface area.	m2	114,00		
<b>1,00</b>	<b>PREPARATORY AND FINISHING WORK</b>				<b>TOTAL 1:</b>

<b>2,00 GROUND WORK</b>					
No	DESCRIPTION	UoM	Quantity	Unit Price	TOTAL
2,01	Cutting the existing undergrowth and shrubbery with terrain clearing prior to commencement of work. Cut vegetation, shrubbery and other waste material shall be collected, loaded onto a lorry and transported to the town landfill. Calculated per m2 of cleared terrain.				
		m2	150,00		
2,02	Mechanical excavation of 3rd category soil in a wide ditch, complete with transportation. The excavation shall be executed and levelled according to the design and provided elevation points. Excavated soil shall be loaded onto a lorry and transported to the town landfill. Calculated per m3 of soil, measured in autochthonous state.				
		m3	0,00		
2,03	Manual excavation of 3rd category soil for building foundations. The excavation shall be executed and levelled according to the design and provided elevation points. The sides shall be clean cut and the bottom levelled. Excavated soil shall be wheelbarrowed, poured and the terrain levelled or loaded onto a lorry and transported to the town landfill. Calculated per m3 of soil, measured in autochthonous state.				
	a. Excavation for foundation under the building		36,65		
	b. Excavation for foundation under the porch		1,32		
	c. Excavation for chimney foundation		0,48		
	d. Excavation for the staircase foundation beam		0,48		
	e. Excavation for sidewalk		5,40		
	f. Excavation for access path		0,40		
	<b>TOTAL:</b>	m3	44,33		
2,04	Filling the space next to the foundation wall and strip foundations with soil. The soil shall be poured in 20cm layers, wetted and compacted until required compaction. The soil disposed of during excavations shall be utilised for pouring. Calculated per m3 in compacted state.				
	Next to the foundation wall	m3	7,73		
	Under the slab on the ground	m3	36,46		
	Under the porch	m3	1,30		

2,05	Procurement and spreading of natural and washed river gravel in a 10cm thick layer as a buffer layer under the RS slab, with compacting and rolling until required compaction. The buffer layer shall be compacted and finely levelled with a height tolerance of +/-1cm. Calculated per m2 of compacted gravel.				
	Foundation	m2	35,58		
	Slab on the ground	m2	77,75		
	Under the sidewalk	m2	54,00		
	Under the access path	m2	4,00		
2,06	Soil levelling for the manufacture of the foundation bottom and floor slab. All surfaces shall be roughly and finely levelled with an accuracy of +/-2cm. The price shall include filling and compacting as well as stripping of soil and transportation to the town landfill. Calculated per m2 of levelled surface area.				
		m2	113,33		
<b>2,00</b>	<b>GROUND WORK</b>				<b>TOTAL 3:</b>

<b>4,00 CONCRETE AND REINFORCED CONCRETE WORK</b>					
<b>No</b>	<b>DESCRIPTION</b>	<b>UoM</b>	<b>Quantity</b>	<b>Unit Price</b>	<b>TOTAL</b>
4,01	Manufacture of reinforced concrete strip foundations mark MB20. The height of the foundations shall be 40cm. The foundations shall be reinforced according to the design, detail and structural analysis. Concreting shall be done over a 10cm layer of previously spread gravel. The concrete shall be poured and cared for according to regulations. The price shall include the gravel buffer layer with all required formwork. Calculated per m3 of foundations.				
	<i>a. 30cm wide foundation strip (staircase)</i>				
	0,3*0,5*2,23	m3	0,87		
	<i>b. 40 to 50cm wide foundation strips.</i>				
	(8,7*2+5,9*2)*0,5*0,4+(5,9+3,5+3,8)*0,4*0,4+(0,42+0,2+0,38)*(2*0,5+0,4)	m3	14,82		
	<b>TOTAL:</b>	<b>m3</b>	<b>15,69</b>		
4,02	Manufacture of reinforced concrete foundation walls of the entrance porch and staircase. Wall thickness shall be 20cm. The formwork shall be developed and reinforced according to the design, detail and structural analysis. The concrete shall be poured and cared for according to regulations. The price shall include formwork and gravel buffer. Calculated per m3.				
	<i>a. Foundation wall of the house:</i>				
	(8,5*2+6,1*2)*0,3*1,5+(6,1+3,7+4)*0,2*1,5+(0,75+0,19)*(4,05+1,75)	m3	18,24		
	<i>b. Foundation wall of the porch and staircase:</i>				
	1*0,5	m3	0,56		
		m3	18,80		
4,03	Manufacture of reinforced concrete basement walls MB 30. Wall thickness d=20 cm. The formwork shall be double-sided, reinforced according to the design, details and statical calculations. The concrete shall be poured and cared for according to regulations. The price shall include formwork, supports and scaffolding. Calculated per m3 of the wall.				
		m3	0,00		
4,15	Manufacture of lightly reinforced concrete pathway, 10 cm thick, mark MB30. The floor shall be reinforced using reinforcement mesh, according to the design and structural analysis. The reinforcement shall be calculated separately. The top surface shall be treated according to the supervisor's instructions and the concrete shall be cared for. Calculated per m2 of pathway.				
	Sidewalk	m2	54,00		
	Access path	m2	4,00		
<b>4,00</b>	<b>CONCRETE AND REINFORCED CONCRETE WORK</b>				<b>TOTAL 5:</b>

<b>5,00 REBAR WORK</b>					
<b>No</b>	<b>DESCRIPTION</b>	<b>UoM</b>	<b>Quantity</b>	<b>Unit Price</b>	<b>TOTAL</b>
5,01	Mechanical cutting and bending, manual placement and connecting of Ø4-12mm RCS reinforcement bars. Composed reinforcement bar structures shall be vertically transported by crane. Prior to utilisation all reinforcement bars shall be cleaned of grease, dust and peeling rust scale. Bending, cutting and mounting shall be executed according to detail based on the structural analysis. Reinforcement bars shall be calculated according to theoretical weight and lengths from the structural analysis. The price for 1kg of placed reinforcement bars shall include concrete steel with waste steel, reinforcement bar connecting wire, supports, working scaffolding. Calculated per kg of installed reinforcement bars.				
	a. MA 500/560		809,92		
	b. GA 240/360 and RA 400/500		914,42		
		UKUPNO: kg	1.724,34		
<b>5,00</b>	<b>REBAR WORK</b>				<b>TOTAL 6:</b>

<b>19,00 SUMMARY</b>
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1,00	PREPARATORY AND FINISHING WORK	TOTAL 1:
3,00	GROUND WORK	TOTAL 3:
4,00	BRICKLAYING WORK	TOTAL 4:
5,00	CONCRETE AND REINFORCED CONCRETE WORK	TOTAL 5:
6,00	REBAR WORK	TOTAL 6:
7,00	CARPENTRY WORK	TOTAL 7:
8,00	ROOFING WORK	TOTAL 8:
9,00	WEATHERPROOFING	TOTAL 9:
10,00	DOORS AND WINDOWS	TOTAL 10:
11,00	JOINERY WORK	TOTAL 11:
12,00	SHEET METAL WORK	TOTAL 12:
13,00	TILING WORK	TOTAL 13:
14,00	FLOORING WORK	TOTAL 14:
15,00	PAINT WORK	TOTAL 15:
16,00	FAÇADE WORK	TOTAL 16:
17,00	MISCELLANEOUS WORK	TOTAL 17:
18,00	DRY INSTALLATION WORKS	TOTAL 18:
<b>19,00</b>	<b>SUMMARY</b>	<b>TOTAL 19:</b>

<b>TOTAL</b>
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prices provided w/o VAT

**PRICED BILL OF QUANTITIES - AC WORK**  
with the Main Design for the construction of a ground floor family housing unit  
**TYPE 100 - ABOVE LEVEL 0,00**

<b>3,00 BRICKLAYING WORKS</b>					
<b>No</b>	<b>DESCRIPTION</b>	<b>UoM</b>	<b>Quantity</b>	<b>Unit Price</b>	<b>TOTAL</b>
3,01	Building protective waterproofing of the 12cm cellar walls in solid brick and 1:2:6 lime mortar. Prior to installation bricks shall be wetted. Walls shall be built in a regular bond. Joints shall be cleaned to the depth of 2 cm. The price shall include scaffolding. Calculated per m2 of wall.				
		m2	0,00		
3,02	Building of load bearing walls with YTONG blocks 30cm thick and 20cm high in YTONG thin-layer plaster. The first course of YTONG blocks shall be laid into a layer of mortar approximately 2cm thick. Load bearing walls shall be connected by the masonry bond or by connecting reinforced concrete columns. The price shall include the necessary quantity of YTONG anti-quake blocks. Calculated per m3 of wall.				
	<i>b. Load bearing facade:</i>				
	$2*(4+3,7+1,8+4,1)*2,84*0,3-1,01*(2,05+0,2+0,2)*0,3-2*0,7*1,2*0,3-3*1,4*1,8*0,3$			27,48	
	TOTAL:	m3	27,48		
3,03	Building of partition walls with YTONG blocks 20cm thick and 20cm high in YTONG thin-layer plaster. The first course of YTONG blocks shall be laid into a layer of mortar approximately 2cm thick. Gap 1-2cm wide onconnection of the partition wall and load bearing structure shall be filled with polyurethane foam. The first course of blocks shall be laid into a layer of mortar approximately 2cm thick. Connection with the load bearing structure shall be reinforced with anchors in the first and every third subsequent course throughout the height of the wall, as well as in every other block in the top-most course of blocks on the connection with the ceiling construction. Calculated per m2 of wall.				
	<i>c. Interior walls on the ground floor:</i>				
	$(4+0,64+1,8)*2,84*0,2-0,91*(2,05+0,2+0,2)*0,2$			19,44	
	TOTAL:	m3	19,44		
3,04	Building of partition walls with YTONG blocks 12cm thick and 25cm high in YTONG thin-layer plaster. The first course of YTONG blocks shall be laid into a layer of mortar approximately 2cm thick. Gap 1-2cm wide onconnection of the partition wall and load bearing structure shall be filled with polyurethane foam. The first course of blocks shall be laid into a layer of mortar approximately 2cm thick. Connection with the load bearing structure shall be reinforced with anchors in the first and every third subsequent course throughout the height of the wall, as well as in every other block in the top-most course of blocks on the connection with the ceiling construction. Calculated per m2 of wall.				
	$(1,8+0,64+3,7)*2,84-0,81*(2,05+0,2+0,2)-0,91*(2,05+0,2+0,2)$	m2	16,35		
3,05	Manufacture of reinforced concrete headrooms, door and window lintels in the formwork of YTONG U-elements for the wall of 30cm thickness. Dimensions of U-elements are 60x30x25cm. Finishing elements shall be cut with respect to the required length of the beam. U-elements shall be mutually glued with YTONG thin-layer plaster. Beams shall rest on the wall in length of at least 20cm. Reinforcement and concrete shall be installed according to the statical calculations. The reinforcement shall be calculated separately. Calculated per m1 of installed U-element.				
	$(0,7+0,2*2)*3+(1,4+0,2*2)*3+(1,0+0,2*2)$	m1	13,70		

3,06	Manufacture of reinforced concrete horizontal ring beams of facade walls in formwork of YTONG U-elements for the wall of 30cm thickness. Dimensions of U-elements are 60x30x25cm. Finishing elements shall be cut with respect to the required length of the beam. U-elements shall be mutually glued with YTONG thin-layer plaster. Beams shall rest on the wall in length of at least 20cm. Reinforcement and concrete shall be installed according to the statical calculations. The reinforcement shall be calculated separately. Calculated per m1 of installed U-element.				
	$(8,62+6,82)*2$	m1	42,88		
3,07	Building d=12cm chimneys with solid brick in 1:2:6 lime mortar. Prior to installation bricks shall be wetted. After bricklaying the joints shall be cleaned to the depth of 2cm. The interior side of the flue duct shall be adequately treated during bricklaying. At the top of the chimney bricks shall extend over the liner for the purpose of forming a crown. The price shall include scaffolding. Calculated per m3 of chimney.				
	$(0,38*0,64-2*0,14*0,14)*6,39$	m3	2,30		
3,08	Plastering of interior surfaces of walls of YTONG blocks with two coats of 1:2:6 lime plaster with prior spraying with cement mortar diluted in the proportion of 1:2. Prior to plastering all surfaces shall be cleaned and sprayed with grout. The first layer shall be delivered in 2cm thick lime mortar made of very coarse sand. The plaster shall be applied over a previously wetted surface. The second layer shall be made with small-grain clean sand 'Dunavac', with no presence of sludge and organic matter. Floating shall be done with wetting and small floats. Plastered surfaces shall be flat, with no waves and cracks and the edges shall be sharp and straight. The plaster shall be wetted to avoid quick drying and dusting. The price shall include: auxiliary scaffolding, galvanized steel sheet metal corner guards to prevent damage to the corners, and all required previous work and scaffolding. Holes shall be deducted as per norm. the price shall include plastering indoor jambs around windows and balcony doors. Calculated per m2.				
	<i>b. YTONG blocks (ground floor):</i>				
	$(2*2,3+2*1,8+2*3,7+2*2,52+3,46+7,9+4,1+1,58+0,12+1,92+4,28+3*0,64+2*1,58+2*1,8)*2,84$	m2	284,11		
<b>3,00</b>	<b>BRICKLAYING WORKS</b>			<b>TOTAL 3:</b>	

<b>4,00 CONCRETE AND REINFORCED CONCRETE WORK</b>					
No	DESCRIPTION	UoM	Quantity	Unit Price	TOTAL
4,04	Manufacture of reinforced concrete horizontal ring beams mark MB30. The formwork shall be developed and reinforced according to the design, detail and structural analysis. The concrete shall be poured and cared for according to regulations. The price shall include formwork and scaffolding. Calculated per m3 of ring beam.				
	<i>a. Slab on the ground:</i>				
	$2*(8,5+6,1)*0,3*0,2+(7,9+6,1)*0,2*0,2$	m3	3,76		
	<i>b. Above the ground floor:</i>				
	$(2*(8,5+6,1)+4,2+1,8)*0,2*0,2$	m3	2,63		
4,05	Manufacture of reinforced concrete beams mark MB30. The formwork shall be developed and reinforced according to the design, detail and structural analysis. The concrete shall be poured and cared for according to regulations. The price shall include formwork and scaffolding. Calculated per m3 of beam.				
	0,48	m3	0,48		

4,06	Manufacture of reinforced concrete girders mark MB30. The formwork shall be developed with supports and girders shall be reinforced according to the design, detail and structural analysis. The concrete shall be poured and cared for according to regulations. The price shall include formwork, supports and scaffolding. Calculated per m3 of girder.				
		m3			
4,07	Manufacture of connecting reinforced concrete columns mark MB30. The formwork shall be developed and columns shall be reinforced according to the design, detail and structural analysis. The concrete shall be poured and cared for according to regulations. The price shall include formwork and scaffolding. Calculated per m3 of ring beam.				
	9*0,2*0,2*2,84	m3	1,82		
4,08	Manufacture of reinforced concrete door lintels mark MB30. The formwork shall be developed and door lintels shall be reinforced according to detail and structural analysis. The concrete shall be poured and cared for according to regulations. The price shall include formwork, supports and scaffolding. Calculated per m3 of door lintel.				
	$((0,91+0,2+0,2)*0,12+(0,91+0,2+0,2)*0,2+(0,81+0,2+0,2)*0,12)*0,2$	m3	0,36		
4,09	Manufacture of reinforced concrete window lintels mark MB30. The formwork shall be developed and window lintels shall be reinforced according to detail and structural analysis. The concrete shall be poured and cared for according to regulations. The price shall include formwork, supports and scaffolding. Calculated per m3 of window lintel.				
		m3	0,00		
4,10	Manufacture of 16+4cm semi-prefabricated ceiling type 'Fert'. Furring strip supports shall be levelled with cement mortar. Each strip shall overlap with the support by a minimum of 5cm and the reinforcement bars shall overlap by additional 10cm. Joists shall be placed for spans greater than 3m. Joists shall be calculated separately. The slab and strips shall be reinforced according to the design and detail. The supports shall be washed prior to concreting. The floor/ceiling structure shall be concreted with concrete mark MB30 with simultaneous concreting of ring beams and hidden beams. The price shall include formwork, scaffolding, supports and reinforcement for FERT strips. Other required reinforcement bars in accordance with the structural analysis shall be calculated separately. Formwork must remain for a minimum of 14 days. Calculated per m2 of ceiling.				
		m2	0,00		
4,11	Manufacture of reinforced concrete inclined and flat stairwell slabs and 10cm stairs with mark MB30. The inclined slab and stair formwork shall be developed and reinforced according to the design, detail and structural analysis. The slab shall be concreted simultaneously with the stairs, over a layer of gravel. The upper surfaces shall be floated; the concrete shall be poured and cared for according to regulations. The price shall include forming the inclination, compacting with manual compactors and 10cm gravel buffer, as well as all formwork. Calculated per m3.				
	7*0.12	m3	0,84		

4,12	Manufacture of the 10cm thick floor mark MB20; the floor shall be reinforced and floated. He floor shall be reinforced using reinforcement mesh, according to the design and structural analysis. The reinforcement shall be calculated separately. The top surface shall be floated and the concrete shall be cared for. Calculated per m2 of floor.				
	48,19	m2	97,15		
4,13	Manufacture of the reinforced and floated 4cm cement screed over thermal insulation as the sublayer for laminate/ceramic floor. The floor shall be inclined in sanitation facilities. The base coat shall be cleaned prior to the application of the cement screed. The mortar for cement screed shall be made using sifted very coarse sand in 1:3 proportion. The mortar shall be reinforced using Ø 6 mm mesh with 15/15 cm loops, placed mid-layer. The top surface of the cement screed shall be floated flat and cared for until rigid. The price shall include reinforcement mesh. Calculated per m2.				
	<i>a. Ground floor:</i>				
	48,19		78,67		
	TOTAL:	m2	78,67		
4,14	Manufacture of the sloping layer on the porch made of reinforced and floated 4-7cm cement screed in a 1,5% slope as sublayer for ceramic tiles. The base coat shall be cleaned prior to the application of the cement screed. The mortar for cement screed shall be made using sifted very coarse sand in 1:3 proportion. The mortar shall be reinforced using Ø 6 mm mesh with 15/15 cm loops, placed mid-layer. The top surface of the cement screed shall be floated flat and cared for until rigid. The price shall include reinforcement mesh. Calculated per m2.				
		m2	4,51		
<b>4,00</b>	<b>CONCRETE AND REINFORCED CONCRETE WORK</b>			<b>TOTAL 4:</b>	

<b>5,00 REBAR WORK</b>					
No	DESCRIPTION	UoM	Quantity	Unit Price	TOTAL
5,01	Mechanical cutting and bending, manual placement and connecting of Ø4-12mm RCS reinforcement bars. Composed reinforcement bar structures shall be vertically transported by crane. Prior to utilisation all reinforcement bars shall be cleaned of grease, dust and peeling rust scale. Bending, cutting and mounting shall be executed according to detail based on the structural analysis. Reinforcement bars shall be calculated according to theoretical weight and lengths from the structural analysis. The price for 1kg of placed reinforcement bars shall include concrete steel with waste steel, reinforcement bar connecting wire, supports, working scaffolding. Calculated per kg of installed reinforcement bars.				
	a. MA 500/560		539,94		
	b. GA 240/360 and RA 400/500		609,61		
	TOTAL:	kg	1.149,55		
<b>5,00</b>	<b>REBAR WORK</b>			<b>TOTAL 5:</b>	

<b>6,00 CARPENTRY WORK</b>					
<b>No</b>	<b>DESCRIPTION</b>	<b>UoM</b>	<b>Quantity</b>	<b>Unit Price</b>	<b>TOTAL</b>
6,01	Procurement, transportation, manufacture and installation of two sided roof structure made of dry fir lumber. The roof shall be constructed fully in accordance with the design and details. A layer of Kraberoid shall be placed in places of contact between wooden beams and walls and the beams shall be anchored. Deliver all regulated carpentry connections of roofing elements and braces made of flat iron bars, anchors, screws, clamps etc. calculated per m2 of horizontal roof projection.				
	Roof with latticed girders				
	75,00	m2	113,93		
6,02	Batening the roof with 24/48 mm battens spaced at 32cm for clay pantiles. Battening shall be done with dry, straight, high-quality fir battens of optimum length. Calculated per m2 measured along the roof slope.				
	75/cos27	m2	127,87		
6,03	Batening the roof with 24/48 mm battens parallel with rafters, over the wooden cladding, to create airing under the roofing cover. Battens shall be spaced by 40cm. Battening shall be done with dry, straight, high-quality fir battens of optimum length. Calculated per m2 measured along the roof slope.				
		m2	127,87		
6,04	Procurement and placement of board cladding over the roof structure. 24Mm thick boards made of dry, straight, high-quality fir boards of optimum length, placed upon contact and hammered into place. Calculated per m2 of boarded surface.				
	75/cos27	m2	127,87		
<b>6,00</b>	<b>CARPENTRY WORK</b>			<b>TOTAL 7:</b>	

<b>7,00 ROOFING WORK</b>					
<b>No</b>	<b>DESCRIPTION</b>	<b>UoM</b>	<b>Quantity</b>	<b>Unit Price</b>	<b>TOTAL</b>
7,01	Procurement and placement of clay pantiles. The pantiles shall be flat, undamaged and of high quality. The price shall include placement of the ridge and hip made of ridge pieces in lime mortar. Calculated per m2 of mounted surface. The tiles shall be placed fully according to the manufacturer's instructions. Calculated				
	75/cos27	m2	127,87		
<b>7,00</b>	<b>ROOFING WORK</b>			<b>TOTAL 8:</b>	

<b>8,00 WEATHERPROOFING</b>					
<b>No</b>	<b>DESCRIPTION</b>	<b>UoM</b>	<b>Quantity</b>	<b>Unit Price</b>	<b>TOTAL</b>
8,01	Procurement of materials, transportation and manufacture of waterproofing over the concrete base on the ground. Waterproofing shall be done over a completely dry and clean surface. Cold coat bitulit 'A' shall be applied with brush or by spraying at a temperature higher than 10 degrees. The bitumen mass shall be heated to no more than 180 degrees, constantly stirred and applied hot in a 2-3mm layer. Bitumen strips shall be glued immediately with a 15cm overlap. Kondorfleks V3 with two coats of bitumen. Waterproofing shall be done in the following layers: - Cold coat of bitumen A - Hot coat of bitumen MBH - Kondorfleks V3, glued to the surface - hot coat of bitumen MBH - two layers of polyethylene foil URSA SECO 500 Calculated per m2.				
	8,3*6,5+2*(8,3+6,5)*0,62	m2	97,15		

8,02	<p>Watertproofing of foundation walls. Waterproofing shall be done over a completely dry and clean surface. Cold coat bitulit 'A' shall be applied with brush or by spraying at a temperature higher than 10 degrees. The bitumen mass shall be heated to no more than 180 degrees, constantly stirred and applied hot in a 2-3mm layer. Bitumen strips shall be glued immediately with a 15cm overlap.</p> <p>Kondorfleks V3 with two coats of bitumen.</p> <p>Hidroizolaciju izvesti od sledećih slojeva:- Cold coat of bitumen A</p> <ul style="list-style-type: none"> <li>- Hot coat of bitumen MTH</li> <li>- Kondorfleks V3, glued to the surface</li> <li>- hot coat of bitumen MTH</li> </ul> <p>Calculated per m2.</p>				
8,03	<p>Procurement, transportation and manufacture of horizontal stiff waterproofing of floors in sanitation blocks, over the levelled concrete sublayer. Waterproofing shall be 'SikaTopSeal107' – two-component watertight polymer modified cement mortar, or a product from another manufacture but with equivalent characteristics. Waterproofing shall be applied by brush or trowel in 2-3 layers applied in perpendicular directions. Waterproofing shall be applied up the walls to the height of 20-30cm and the walls shall be pointed to this height. The price shall include all required material according to detail and manufacturer's technical sheets. Everything shall be done in accordance with the approval by Supervision and the Designer.</p> <p>Calculated per m2.</p>				
	2,3*1,8+2*(2,3+1,8)*0,2	m2	9,95		
8,04	<p>Procurement and manufacture of vertical stiff waterproofing in sanitation blocks to the height of 200cm around the shower cubicle. Waterproofing shall be 'SikaTopSeal107' – two-component watertight polymer modified cement mortar, or a product from another manufacture but with equivalent characteristics. Waterproofing shall be applied by brush or trowel in 2-3 layers applied in perpendicular directions. The walls shall be pointed to the height of 200cm around the shower cubicle. The price shall include all required material according to detail and manufacturer's technical sheets. Everything shall be done in accordance with the approval by Supervision and the Designer.</p> <p>Calculated per m2.</p>				
	1,0*1,0*2,0	m2	4,00		
8,05	<p>Procurement and placement of floor thermal insulation panels. Styrofoam, self-extinguishing and elasticized, thickness d=15cm, weight 25 kg/m3. Styrofoam panels shall be placed as floor thermal insulation, according to detail and the Designer's instructions. Calculated per m2 of floor.</p>				
	<i>a. Prizemlje:</i>				
	<i>d= 15 cm</i>				
	1,58*1,8+2,3*1,8+3,7*2,52+7,9*3,46+1,58*0,64+1,92*0,64+1,01*0,2+0,91*0,2+0,91*0,12+0,81*0,12	m2	79,99		

8,06	Procurement and placement of a single layer of polyethylene foil. The foil shall be placed with 20cm overlaps. Calculated per m2.				
	<i>a. Ground floor:</i>				
	1,58*1,8+2,3*1,8+3,7*2,52+7,9*3,46+1,58*0,64+1,92*0,64+1,01*0,2+0,91*0,2+0,91*0,12+0,81*0,12		79,99		
	<i>b. Attic:</i>				
	8,3*6,5		92,95		
	TOTAL:	m2	172,94		
8,07	Procurement and placement of rock wool in the form of 5cm thick solid panels of 120 kg/m3 density. Rock wool shall be placed as thermal insulation, soundproofing and chimney fire protection, according to detail and the Designer's instructions. Calculated per m2 of installed insulation.				
	2*(0,74+0,38)*3,22	m2	13,14		
8,08	Procurement and placement of a layer of vapour permeable and watertight foil with adhesive overlaps, URSA SECO PRO 0.04. Material: 3-ply (PP)-Vinyl with PP film. Mn value: 0.04 Thickness: 0.8mm Flammability class: B2 E Rain drop proofing: rain proof Thermal stability: from -40 to +80 degrees C Direct exposure to weather: 3 (UV stabilised) months Water breach resistance: Class W1, 3000mm water Specific weight: 175 gr/m2 The foil shall be placed and all connections glued together in accordance with the manufacturer's instructions, or provide a product from another manufacturer with equivalent characteristics. Calculated per m2.				
	75/cos27	m2	127,87		
8,09	Procurement and placement of lightweight self-bearing rock wool in the form of 150mm thick panels. Rock wool panels shall be placed above the suspended ceiling of gypsum-cardboard panels as thermal insulation of the attic. Panels shall be those of rock wool "KNAUF Insulation KR S" self-bearing, or different product with equivalent characteristics: thermal conductivity according to EN 12667, SRPS U.A2.020, SRPS U.M9.015; combustibility class A1 according to EN ISO 1182 i SRPS U.J1.050. Rock wool must be installed tightly, without any air gaps. Calculated per m2 of installed insulation.				
	<i>b. Attic:</i>				
	<i>d= 15 cm</i>				
	8,02*6,22	m2	129,31		
	<i>d= 3 cm (above the wooden beam on the wall)</i>				
	2*(8,3+6,5)*0,14	m2	5,82		
<b>8,00</b>	<b>WEATHERPROOFING</b>				<b>TOTAL 9:</b>

<b>9,00 DOORS AND WINDOWS</b>					
<b>No</b>	<b>DESCRIPTION</b>	<b>UoM</b>	<b>Quantity</b>	<b>Unit Price</b>	<b>TOTAL</b>
9,01	Manufacture and installation of glazed PVC windows. The windows shall be made of highly resistant PVC with multiple chamber profile system, with reinforced stainless steel profiles, according to the joinery sketch and detail. The windows shall be sealed with permanently elastic EPDM rubber, vulcanized in all corners. The fittings and colour shall be selected by the Designer. The window panes shall be glazed with Flot argon-filled thermal glass d=4+16+4mm and low-emissivity glass Uw=1.5W/m2K for the whole window. Provide for all accompanying kits and sealants (finishing sheet metal, plinth in contact with the floor etc) as well as cladding for outdoor and indoor walls. Windows shall be fitted with exterior PVC shutters. Develop precise installation detail for all items, based on provided sketches and layout of the building. Calculated per piece of completely installed window with shutters installed according to the design, frames and window sills.				
	Item 1 dim. 70/100	pcs	2,00		
	Item 2 dim. 140/160	pcs	5,00		
	Item 3 dim. 70/80	pcs	1,00		
9,02	Manufacture and installation of PVC entrance doors. The doors shall be made of highly resistant PVC with multiple chamber profile system, with reinforced stainless steel profiles, filling and EPDM rubber sealing system, according to the joinery sketch and detail. Fittings, lock with cylinder and three keys, three hinges and door colour shall be selected by the Designer. The door shall be glazed with single 5mm thick ornament glass and sealed with permanently elastic EPDM rubber. Calculated per piece.				
	Item A dim. 101/205	pcs	1,00		
9,03	Manufacture and installation of a single door plywood coated on both sides. The door shall be made of 1st class fir and spruce lumber, and the frame with honeycomb filling shall be coated on both sides with 4mm plywood according to joinery sketches and detail. The door post shall be made according to the width of the wall and wainscoted with door post strips. Anodized aluminium fittings shall be placed: mortise lock with two keys, three mortise hinges per door, as selected by the Designer. The door shall be protected with a colourless impregnation coat. The rubber door stop shall be fitted on the floor. The threshold shall be varnished with three coats of two-component parquet lacquer. Calculated per installed door with finishing and all required equipment and fittings.				
	Item I dim. 81/205	kom	4,00		
	Item II dim. 71/205	kom	2,00		
<b>9,00</b>	<b>DOORS AND WINDOWS</b>				<b>TOTAL 10:</b>

<b>10,00 JOINERY WORK</b>					
<b>No</b>	<b>DESCRIPTION</b>	<b>UoM</b>	<b>Quantity</b>	<b>Unit Price</b>	<b>TOTAL</b>
10,01	Manufacture and installation of staircase railing and pine lumber landing. The railing with hand grip shall be made of 1st class dry pine wood. Pillars, filling and hand grips shall be processed and placed according to detail and the Designer's instructions. Calculated per m1 of railing.				
	2+1,26+1,33	m1	3,51		
<b>11,00</b>	<b>JOINERY WORK</b>				<b>TOTAL 11:</b>

<b>12,00 SHEET METAL WORK</b>					
<b>No</b>	<b>DESCRIPTION</b>	<b>UoM</b>	<b>Quantity</b>	<b>Unit Price</b>	<b>TOTAL</b>
12,01	Procurement and mounting of hanging semicircular gutters made of plasticized sheet metal, 25cm spread width; gutter width shall be 10cm; thickness shall be 0.60mm; the colour shall be brown. Gutters shall be connected with a single line of rivets with maximum spacing of 3cm and soldered with minimum 40% lead solder bar. Hanging gutter carriers shall be made of 25x5mm galvanized flat iron bars and riveted from the front of the gutters with 4mm rivets spaced at 80cm. During mounting the gutters shall be lined with apron flashing connected to the gutters by a double interlock system and soldered with tin. The price shall include all required connectors and seams. Calculated per m1.	m1	30,20		
12,02	Procurement and mounting of apron flashing above the hanging gutter, spread width 25cm; thickness shall be 0.60mm; the colour shall be brown. The apron flashing shall be connected to the gutters by a double interlock system and soldered with tin. Calculated per m1.	m1	30,20		
12,03	Procurement and mounting of spouts made of plasticized sheet metal, 33cm spread width (SW), ø 10 cm; thickness shall be 0.60mm; the colour shall be brown. Parts of spout pipes shall overlap by a minimum of 50cm and shall be soldered with minimum 60% lead solder bar. Clamps with carriers shall be spaced at 2.00m. The spouts shall be removed from the wall by a minimum of 20mm. The price shall include all required connectors and seams. Calculated per m1.				
	3*3,5	m1	16,52		
12,04	Flashing window sills with plasticized sheet metal, spread width (SW) up to 33cm; thickness shall be 0.70mm. The sides of the sill against the wall and window frame shall be raised by 25mm and riveted into the window post at a spacing of 50-80mm. The front side of the sill shall be fixed by wooden bits or similar. A layer of tar paper shall be placed under the sheet metal, to be included in the price. Calculated per m1 of sill.				
	2*0,61+3*1,31	m1	8,38		
12,05	Flashing the roof edges and fascia with plasticized sheet metal, spread width (SW) 25cm; thickness shall be 0.60mm. Flashing shall be done in accordance with the design, detail and manufacturer's instructions. Calculated per m1 of roof edge.				
		m1	18,00		
12,06	Flashing the chimney with plasticized sheet metal, spread width 40cm; thickness shall be 0.70mm. The sheet metal shall be raised against the chimney walls by at least 20cm. The edge of the sheet metal shall be inserted into the brick joints. Chimney flashing shall be done in accordance with the detail and manufacturer's instructions. Calculated per m1 of outer chimney edge.				
	2*(0,48+0,74)	m1	4,88		
<b>12,00</b>	<b>SHEET METAL WORK</b>			<b>TOTAL 12:</b>	

<b>13,00 TILING WORK</b>					
<b>No</b>	<b>DESCRIPTION</b>	<b>UoM</b>	<b>Quantity</b>	<b>Unit Price</b>	<b>TOTAL</b>
13,01	Tile the staircase platform, bathrooms and kitchens and other rooms provided for in the design with 1st class floor ceramic tiles; the manufacturer, tone and dimensions shall be selected by the Designer. The tiles shall be set in adhesive, with no visible joints, edge to edge. The adhesive shall be appropriate for the type of applied waterproofing. The bathroom floors shall be inclined by 0.5% towards the gutters, in places specified in the design. Tiles shall be grouted with grouting compound in the tone of the tiles, with water-tightness additive. Simultaneously, 10cm plinth shall be installed along the circumference of rooms where walls shall not be tiled. Calculated per m2 of set tiles with all required labour and material.				
	<i>a. Ground floor anteroom:</i>				
	1,58*1,8		2,84		
	<i>a. Kitchen:</i>				
	3,62*1,0+1,58*3,1+0,91*0,2-0,12*0,64		8,62		
	<i>b. Bathroom:</i>				
	2,3*1,8		6,97		
	TOTAL:	m2	18,43		
13,02	Tile the walls of rooms provided for in the design with 1st class floor ceramic tiles; the manufacturer, tone and dimensions shall be selected by the Designer. Tiles shall be grouted with grouting compound. Tiling height in bathrooms shall be the full height of the rooms h=2.64m; kitchens shall be tiled up to 1.5m. All corners, edges around windows and top edges of tiles in kitchens shall be treated with profiled semi-rounded PVC strips. Calculated per m2 of set tiles with all required labour and material.				
	<i>a. Kitchen:</i>				
	(0,8+4,1+0,63+0,64+1,92+0,64)*1,5		13,10		
	<i>b. Bathroom:</i>				
	2*(2,3+1,8)*2,64-0,81*2,05-0,7*1,0		36,95		
	TOTAL:	m2	50,05		
13,03	Manufacture of plinth in floors tiled with 1st class ceramic tiles with matt glazing. The tiles, types, sizes and colours shall be selected by the Designer. Tile setting shall be done over a coat of tiling adhesive, edge to edge. Calculated per m1.				
	2*(1,58+1,8)+2*0,1-1,01-0,91-0,81	m1	3,03		
13,04	Tiling the risers and treads in the outdoor staircase as well as the porch with 1st class ceramic tiles with matt glazing. Ceramic tiles shall be anti-slip and outdoor use, size and colour as selected by the Designer. Tile setting shall be done over a coat of tiling adhesive, edge to edge. Calculated per m2.				
	(5,99+4*1,55)*2	m2	5,54		
<b>13,00</b>	<b>TILING WORK</b>			<b>TOTAL 13:</b>	

14,00 FLOORING WORK					
No	DESCRIPTION	UoM	Quantity	Unit Price	TOTAL
14,01	Procurement and placement of <b>8 mm thick (class 32)</b> click laminate flooring as selected by the Designer. Laminate flooring shall be laid as a floating floor. The laminate shall be strong, durable and highly pressed, and the plate carrier shall be high density HDF with impregnated edges and with a tongue and groove system. The flooring shall be taken in, unpacked and left for 24 hours to adjust to room temperature. Felt and foil shall be placed over the prepared subfloor. Provide for 10mm expansion joints along the walls. The interlocking system shall be dry mount. The floor cover shall be carefully placed and 'click' assembled. Place appropriate skirting along the walls and fix the skirting to the wall at 80cm apart. All connections shall be trimmed.  Calculated per m2 of flooring <b><u>with accompanying skirting and underlaying layer of felt. The price shall include transition strips and thresholds.</u></b>				
	6,32*3,1+4,28*0,36+0,91*0,12+3,7*2,52	m2	61,16		
<b>14,00</b>	<b>FLOORING WORK</b>			<b>TOTAL 14:</b>	

15,00 PAINT WORK					
No	DESCRIPTION	UoM	Quantity	Unit Price	TOTAL
15,01	Painting the walls in emulsion paint. All surfaces shall be sanded, cleaned and prepared for painting. Smaller damaged areas shall be checked and puttied. Impregnate and coat with emulsion putty three times. All surfaces shall be sanded, impregnated and smaller damaged areas shall be puttied. Paint over and correct with toned emulsion putty and then paint in two coats of emulsion paint. The paint shall be applied completely evenly and in the same intensity of tone in all surfaces. Colour and tone as selected by the Designer. Calculated per m2 of painted surface area. Holes up to 3.0m2 shall not be deducted during calculation.				
	2*(1,58+1,8)*2,64+2*(3,7+2,52)*2,64+(7,9+4,1+1,58+0,64+0,12+0,64+1,92+0,64+4,28+3,46)*2,64-(0,8+4,1+0,63+0,64+1,92+0,64)*1,5+2*(1,49+1,8)*2,64+2*(2,8+4,1)*2,64	m2	223,483		
15,02	Painting the ceiling in emulsion paint. All surfaces shall be sanded, cleaned and prepared for painting. Smaller damaged areas and cracks shall be checked and puttied. Impregnate and coat with emulsion putty three times. All surfaces shall be sanded, impregnated and smaller damaged areas shall be puttied. Paint over and correct with toned emulsion putty and then paint in two coats of emulsion paint. The paint shall be applied completely evenly and in the same intensity of tone in all surfaces. Colour and tone as selected by the Designer. Calculated per m2 of painted surface area.				
	1,58*1,8+2,3*1,8+3,7*2,52+7,9*3,46+1,58*0,64+1,92*0,64	m2	78,67		
<b>15,00</b>	<b>PAINT WORK</b>			<b>TOTAL 15:</b>	

16,00 FAÇADE WORK					
No	DESCRIPTION	UoM	Quantity	Unit Price	TOTAL
16,01	Plastering of facade walls of YTONG blocks with with two coats of lime plaster. Prior to plastering all surfaces shall be cleaned, washed and sprayed with grout. The first layer shall be delivered in 2cm thick lime mortar made of very coarse sand. The plaster shall be applied over a previously wetted surface. The second layer shall be made with small-grain clean sand 'Dunavac', with no presence of sludge and organic matter. Floating shall be done with wetting and small floats. Plastered surfaces shall be flat, with no waves and cracks and the edges shall be sharp and straight. The plaster shall be wetted to avoid quick drying and dusting. Calculated per m2.				
	<i>a. Around the windows and entrance door:</i>				
	<i>Ground floor</i>				
	$(2*0,15*2,05+0,93*0,15)+2*(2*0,21*1,0+2*0,21*0,62)+3*(2*0,21*1,6+2*0,21*1,32)+15$		0,00		
	<i>b. Facade Wall:</i>				
	<i>ground floor</i>				
	$2*(8,6+6,5)*3,86-1,01*2,05-2*0,7*1,0-3*1,4*1,6-(3,61*0,57+0,3*0,42+0,3*0,26+0,3*0,11)$		146,44		
	<i>Skirtings:</i>				
			31,44		
	TOTAL:	m2	177,88		
16,02	Treatment of the facade with plastic mortar with floating. The type and colours as selected by the Designer. The facade sublayer shall be healthy and dry. The sublayer shall be cleaned and impregnated with insulation compound for better adhesion. Apply one coat with a brush and if the sublayer is soaking up too much compound, apply in two coats. Mortar, pre-fixed and well mixed so as to obtain a uniform and consistent mass, shall be applied to the dried sublayer. Prepared material shall be applied with a plastering trowel in coat thickness corresponding to maximum grain size. Mortar structure shall be created by circular floating with a rubber plastering trowel or by vertical and horizontal floating with Styrofoam. Openings etc shall be protected with PVC foil, which shall be included in the price, but the openings shall not be deducted from the facade surface area. Calculated per m2 of the orthogonal facade surface area.				
		m2	146,44		
16,03	Installation of facade skirting with "Kulir Plast" decorative, plastic, smoothened plaster on the basis of marble grains, innatural colour and size up to 2.2mm. Type and colour as selected by the Designer. Facade surfaces shall be sandpapered and swept. Basis of the facade must be sound and dry. Item includes surface preparation and all material, work, tools and scaffoldings. Calculated per m2.				
		m2	31,44		
16,03	Manufacture of the chimney facade made of acrylic mortar over the mesh with the base of hard pressed rock wool, self-supporting, non-flammable. Calculated per m2 of executed insulation and chimney facade with all required corner, starting and transitional profiles and drip caps. Calculated per m2.				
	$2*(0,48+0,74)*3,35$	m2	5,56		
<b>16,00 FAÇADE WORK</b>				<b>TOTAL 16:</b>	

<b>17,00 MISCELLANEOUS WORK</b>					
No	DESCRIPTION	UoM	Quantity	Unit Price	TOTAL
17,01	Procurement and placement of door mats in front of the main entrance and in the windbreak, made of coconut fibre or other material, dimensions 80x100cm. Door mat dimensions, material and appearance shall be decided through consultations with the Investor. Calculated per piece.	pcs	1,00		
17,02	Procurement and mounting of outdoor post box. The 270x390x100mm metal box shall be mounted, finished and fitted with lock and key. Calculated per piece.	pcs	1,00		
17,03	Procurement and facade mounting of the house number of the shape and dimensions fully according to detail and the Designer's instructions. The house number shall be screwed in with stainless steel screws with covered caps and anchors. Calculated per piece of completely mounted house number.	pcs	1,00		
<b>17,00 MISCELLANEOUS WORK</b>				<b>TOTAL 17:</b>	

<b>18,00 DRY INSTALLATION WORKS</b>					
No	DESCRIPTION	UoM	Quantity	Unit Price	TOTAL
18,01	SPL2: D112 Supply, transportation and installation of suspended ceiling with with horizontal continuous soffit and hidden grid of galvanized steel carrying and mounting profiles (CD 60/27), attached by vernier suspenders and steel bolt to the roof construction. Lowering at 35-40 cm. Panelling consists of a single layer of GKB (standard) gypsum-cardboard 12.5mm thick, all according to the manufacturer's technical details. Connection of the ceiling and the wall shall be treated with putty and dividing strip/Trenn fix. Joint filling: Uniflot without the use of bandage tape (except at butt joints) or Fugen Filler with the use of bandage tape (paper, mesh or glass fiber). Calculated per m2.	m2	78,70		
<b>18,00 DRY INSTALLATION WORKS</b>				<b>TOTAL 17:</b>	

<b>19,00 SUMMARY</b>
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1,00	PREPARATORY AND FINISHING WORK	TOTAL 1:
2,00	GROUND WORK	TOTAL 3:
3,00	BRICKLAYING WORK	TOTAL 4:
4,00	CONCRETE AND REINFORCED CONCRETE WORK	TOTAL 5:
5,00	REBAR WORK	TOTAL 6:
6,00	CARPENTRY WORK	TOTAL 7:
7,00	ROOFING WORK	TOTAL 8:
8,00	WEATHERPROOFING	TOTAL 9:
9,00	DOORS AND WINDOWS	TOTAL 10:
10,00	JOINERY WORK	TOTAL 11:
11,00	SHEET METAL WORK	TOTAL 12:
12,00	TILING WORK	TOTAL 13:
13,00	FLOORING WORK	TOTAL 14:
14,00	PAINT WORK	TOTAL 15:
15,00	FAÇADE WORK	TOTAL 16:
16,00	MISCELLANEOUS WORK	TOTAL 17:
17,00	DRY INSTALLATION WORKS	TOTAL 18:
<b>18,00</b>	<b>TOTAL</b>	<b>TOTAL 19:</b>

<b>TOTAL</b>
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prices provided w/o VAT

**PRICED BILL OF QUANTITIES - Water Line and Sanitary Sewer Installation**

Item	Description	UoM	Quantity	Unit Price	Total
<b>I CONSTRUCTION WORK</b>					
2	Mechanical excavation of soil for canal ditches of the water or sewer grid, water manholes and inspection manholes in 3 <sup>rd</sup> category terrain with precise cutting of lateral sides and rough levelling of the bottom of the ditches according to designed spot levels and inclinations. Excavated soil shall be cast to one side of the ditch, at least 1.0m from the edge of the ditch and secured against collapse, in accordance with regulations for this type of excavation. Unit price shall include pumping of possible underground waters and all required strutting and planking according to regulations. Strutting and planking detail shall be provided by the Contractor, depending on the manner of excavations, according to the structural analysis and technical regulations for the required canal ditch depth. Calculated per m <sup>3</sup> of excavated ditches.				
	- water grid	m <sup>3</sup>	24		
	- sewer grid	m <sup>3</sup>	17		
3	Fine leveling of the bottom of the trench in required slope for Laying of water or sewer pipes, before inserting of sand into trench. Calculated per m <sup>2</sup> of leveled surface				
	- water grid	m <sup>2</sup>	16		
	- sewer grid	m <sup>2</sup>	11		
4	Procurement, transportation and filling the ditches with sand to make lining for water or sewer pipes and burying the pipes in a layer of minimum depth 10+D+10cm. Prior to pipe laying the sand shall be spread out in a 10cm thick layer and levelled. After laying and testing the pipes, the pipes shall be buried under sand with compaction around the pipes. The remaining sand shall be spread out above the pipes in a layer of 10cm. Maximum sand grain size shall be 3-4mm. Calculated per m <sup>3</sup> of used sand.				
	- water grid	m <sup>3</sup>	4		
	- sewer grid	m <sup>3</sup>	2		

5	<p>Filling the canal ditch using the excavated materials, after mounting and testing of the manufactured water or sewer grids and burying under sand. Filling shall be performed after the approval from the Supervisor i.e. the Investor's representative and compiled records on performed testing of the water or sewer grid. When filling, care shall be taken to use small grain soil for the first layer, with no large bits or stones that might damage the pipes. When filling, the soil shall be compacted in layers of 10-20cm until required compaction, taking care not to damage the pipes.</p> <p>Calculated per m<sup>3</sup> of buried ditch.</p>		
	- water grid	m <sup>3</sup>	15
	- sewer grid	m <sup>3</sup>	19
6	<p>Loading and transportation of the excavated material to a landfill up to 10km away with rough levelling at the landfill. Calculated per m<sup>3</sup>.</p>		
	- water grid	m <sup>3</sup>	3
	- sewer grid	m <sup>3</sup>	5
7	<p>Procurement of special materials and manufacture of a reinforced concrete manhole made of concrete mark MB20 with 20cm thick reinforced concrete walls. The bottom of the manhole shall be made of 12cm thick unreinforced concrete MB20. The 15cm thick top manhole plate with an access opening and placement of the framed cast iron cover for heavy traffic.</p> <p>Calculated per piece of manufactured manholes, fully according to the details in the design, depending on manhole dimensions.</p>		
	Manhole of interior dimensions 150x80x160cm	pcs.	1
8	<p>Procurement of required materials and manufacture of reinforced concrete access ladders with light opening of 1000mm made of prefabricated concrete elements with manufacture of the concrete bottom complete with half-round gutter made of MB20 concrete. The price shall include procurement and transportation of required materials, manufacture and treatment of the half-round gutter, all required fittings, as well as finishing interior walls with cement mortar.</p> <p>Calculated per m' of manufactured access point, measured from the bottom of the half-round gutter to the top of the cover.</p>		
		m'	5
9	<p>Manufacture and installation of 60cm diameter cast iron cover with frame for the manhole. The cover shall be placed at terrain level. Calculated per piece.</p>		
	54kg cover for the pedestrian and closed roads.	pcs.	3

**CONSTRUCTION WORK TOTAL:**

## II WATER LINE INSTALLATION

1	<p>Procurement of the required materials and connecting the building water grid to the public grid.            Calculated per piece of delivered connection depending on pipe diameter.            PP-R Ø 32 mm to the public grid.</p>	pcs.	1
2	<p>Procurement, transportation and mounting of an oval shutter.            Calculated per piece of oval shutter.            DN 32</p>	pcs.	1
3	<p>Procurement of the required materials and mounting of the complete multijet water meter MN QN 2.5 XN, Qn=2.5m<sup>3</sup>/h manufactured by JORDAN YU d.o.o. Belgrade, <b>with a remote reading device</b> or a water meter from another manufacturer with identical characteristics and the following elements:</p> <ul style="list-style-type: none"> <li>- dry mechanism water meter</li> <li>- straight stop valve with butterfly collar,</li> <li>- straight stop valve with butterfly collar and discharge tap,</li> <li>- Y-type strainer</li> <li>- check valve,</li> <li>- other required connection materials.</li> </ul> <p>Completely installed paid per piece.</p>	pcs.	1
	Ø 3/4" (19 mm) water meter set		
4	<p>Procurement of pipes, transportation of pipes and mounting of the PP-R PN16 water pipes pipeline for operating pressure of 16 bar, complete with appropriate fittings and with required certifications. Price includes pressure testing and certification. Calculated per m' of mounted pipeline depending on pipe diameter.</p>		
	PP-R D25 mm (Ø 3/4")	m'	2,50
	PP-R D32 mm (Ø 1")	m'	19,00
5	<p>Procurement of required materials and manufacture of the PP-R PN10 water pipes for operating pressure of 16 bar with required connection fittings. The valve rosettas must be even with finished wall surface. If required, the thermal and acoustic insulation of the pipes must be performed according to the detail. Finished grid must be tested on pressure - testing and certification and all insulations included in price. Manufacturer "PEŠTAN" or similar. Calculated per m' of delivered grid measured according to pipe axis together with fittings.</p>		
	PP-R D20 mm (Ø 1/2")	m'	24
	PP-R D25 mm (Ø 3/4")	m'	10
	PP-R D32 mm (Ø 1")	m'	11
6	<p>Procurement and mounting of brass straight stop valve with nickel plated cap and fixing bracket. Calculated per piece.</p>		
	Ø 25 mm	pcs.	1
	Ø 20 mm	pcs.	2

	Ø 15 mm	pcs.	8
7	Procurement and mounting of angle stop valve with nickel plated handle and fixing bracket. Calculated per piece.		
	Ø 1/2" - 3/8" – (washbasin) mixer tap	pcs.	4
	Ø 1/2" - 3/8" – (kitchen sink) connection	pcs.	2
	Ø 1/2" - 3/8" – (toilet) connection	pcs.	2
	Ø 1/2" - 1/2" – (dishwasher) connection	pcs.	1
	Ø 1/2" - 1/2" – (washing machine) connection	pcs.	1
8	Water grid testing in sections and as a whole after the rough mountwork has been completed and prior to placement of the protective coat; testing shall be done at the hydraulic pressure that should amount to a minimum of 12bar at the lowest place. Calculated per m of tested grid.	m1	45,00
9	Flushing and disinfection of the entire water grid in accordance with standing regulations and acquisition of the grid water quality certificate from the institute competent for this type of work. Calculated per m of flushed and disinfected grid.	m1	45,00

#### WATER LINE INSTALLATION TOTAL:

### III SANITARY SEWER INSTALLATION

1	Procurement of required materials, execution of all preparatory work and manufacturing of the building sewer grid connection to the septic tank. Calculated per piece of manufactured connection. Ø160 to the septic tank	pcs.	1
2	Procurement of required materials and manufacture of the sewer grid from sewer pipes made of hard PVC for street sewer systems, for SN4 load class, with all required fittings and sealants. The price of one metre of sewer grid shall include all required fittings for pipe connections and pipes with inspection chambers. Calculated per longitudinal metre of manufactured grid.		
	Ø 110 mm	m'	8
	Ø 160 mm	m'	15
3	Procurement of required materials and manufacture of the sewer grid from sewer pipes made of hard PVC for household sewer systems, with all required fittings and sealants. The price of one metre of sewer grid shall include all required fittings for pipe connections and pipes with inspection chambers. Calculated per longitudinal metre of manufactured grid.		
	Ø 50 mm	m'	12
	Ø 75 mm	m'	6
	Ø 110 mm	m'	5

4	Procurement of required materials, manufacture and mounting of the ventilation head made of galvanized sheet metal d=6mm, with all required flashing of the breach through the roof cover. Calculated per piece.		
	Ø 75 mm	pcs.	2
5	Procurement and mounting of cast iron drain with a built in siphon and floor grid made of stainless sheet metal. Calculated per piece.		
	Ø 50 mm - vertical	pcs.	2
6	Procurement of required material, execution of all preparatory work and testing the sewer grid. Testing shall be performed by filling all sewer lines with water. All pipe connections shall be checked on the occasion as well. In vertical lines the connections inside the pipes shall be checked by passing a wooden ball whose diameter is 10mm smaller than the pipe diameter through the pipes. Calculated per m' of tested grid, measured according to the pipe axis for all diameters from Ø50 to Ø160mm.		
		m'	56

#### SANITARY SEWER INSTALLATION TOTAL:

#### IV SANITARY WARE AND ACCESSORIES

1	Procurement and mounting of ceramic washbasin, series Ines, dimensions 58x46cm, made by 'Keramika' Mladenovac or a similar product from another manufacturer, with the following elements: - ceramic washbasin of the dimensions 58x46cm with a mixer tap hole, - screws with anchors, - outlet valve with metal siphon and fixing bracket, - required connection and sealant materials. Calculated per piece, completely mounted.	pcs.	2
2	Procurement and mounting of a single cabinet kitchen sink with Inox top. The sink shall be delivered with a grease trap that shall also be installed. The sink shall be selected by the designer. Calculated per piece of kitchen sink.		
	Single cabinet kitchen sink, 80 cm long	pcs.	1

- 3 Procurement and mounting of a ceramic toilet type simplon, model Ines, made by 'Keramika' Mladenovac. The toilet connection shall be done with a toilet connector and adequate putty to provide a 100% seal. The toilet shall be fastened with brass screws over rubber mats. The water tank shall be selected by the designer. The connection to the water grid shall be made by a chrome plated valve and high quality hose, and the connection to the toilet shall be made by a pipe and rubber cuff. A toilet seat cover made of durable PVC shall be placed. The toilet and equipment shall be ordered according to the designer's choice.  
Calculated per piece of toilet, completed. pcs. 2
- 4 Procurement and mounting of complete acrylic shower enclosure, dimensions 90x90cm, 1<sup>st</sup> class, locally manufactured. The shower enclosure shall be mounted and connected to the 5/4" outlet siphon with plug and chain.  
Calculated and paid per piece of mounted enclosure. pcs. 1
- 5 Procurement and mounting of universal corner shower stall, dimensions 90x90cm, Kolpa san. The shower stall shall be made of white aluminium profiles and tempered glass. Sliding doors, double and a magnetic closing mechanism. Stall height shall be 180cm.  
Calculated per piece of shower stall. pcs. 1
- 6 Procurement and mounting of an vertical wall mount electrical boiler. The price shall include chrome plated pipes connecting the boiler to the water grid with fixing brackets and a safety valve. Completely mounted, connected to the power line, including a two-year warranty.  
Calculated per piece, completely mounted.  
80l boiler, heater power 2000W. pcs. 1
- 7 Procurement and mounting of a complete under sink water heater. The price shall include chrome plated flexible pipes to connect to the mixer tap and a two-year warranty.  
Calculated per piece.  
5l hot water heater, heater power 2000 W pcs. 1
- 8 Procurement and mounting of a standing single lever washbasin mixer tap with a connection to angle valves, aerarator, chrome plated handle and fixing bracket, with a movable hot and cold water discharge unit, manufactured by 'Rosan' – KING-QUADRO collection, or similar product from another manufacturer.  
Calculated per piece. pcs. 2

9	Procurement and mounting of standing single lever kitchen sink hot and cold water mixer tap, with a movable 220mm discharge unit, connected to angle valves, with an aerator, chrome plated handle and fixing bracket, manufactured by 'Rosan' – KING-QUADRO collection, or similar product from another manufacturer. Calculated per piece.	pcs.	1
10	Procurement and mounting of single lever wall mount mixer tap for the shower enclosure, complete with wall mount rod, hose, shower handle and fixing brackets, manufactured by 'Rosan' – KING-QUADRO collection, or similar product from another manufacturer. Calculated per piece.	pcs.	1
11	Procurement and mounting in sanitation blocks of 4mm glass mirrors with smooth edges. The price shall include all required connection materials. Measures shall be taken on site in agreement with the Supervisor. Approximate dimensions of the mirror shall be 75x90cm. Calculated per piece.	pcs.	2
12	Procurement, transportation and mounting of a ceramic shelf above the washbasin. Calculated and paid per mounted piece.	pcs.	2
13	Procurement and mounting of a wall mount inox liquid soap unit by the washbasin, as selected by the designer of the architectural portion of the design and the Investor. Calculated per piece.	pcs.	2
14	Procurement and mounting of a wall mount towel rack by the washbasin for the hand towel, as selected by the designer of the architectural portion and the Investor. Calculated per piece.	pcs.	2
15	Procurement, transportation and mounting above the shower bath of a nickel plated wire soap dish. Calculated per piece, completely mounted.	pcs.	1
16	Procurement, transportation and mounting of a large towel rack mounted next to the shower enclosure. Calculated and paid per mounted piece.	pcs.	1
17	Procurement and mounting of a toilet paper roll holder on the wall by the toilet, as selected by the designer of the architectural study and the Investor. Calculated per piece.	pcs.	2

18 Manufacture and installation of a wall mount toilet brush holder with brush, as selected by the designer of the architectural study and the Investor.  
Calculated per piece.

pcs. 2

**SANITARY WARE AND ACCESSORIES TOTAL:**

**SUMMARY**

- I CONSTRUCTION WORK
- II WATER LINE INSTALLATION:
- III SANITARY SEWER INSTALLATION:
- IV SANITARY WARE AND ACCESSORIES:

**SUMMARY**

Prices are VAT excluded

## PRICED BILL OF QUANTITIES - STANDARDISED SEPTIC TANK 16m3

Item	Description	UoM	Quantity	Unit Price	Total
<b>I GROUND WORK</b>					
I-1	Mechanical excavation of soil for the septic tank in 3 <sup>rd</sup> category terrain in a wide ditch, with disposal. Excavations shall be done according to the design and provided spot levels. Sides shall be clean cut and the bottom levelled. Excavated soil shall be transported and disposed of at the construction landfill. Calculated per m3 of soil, measured in autochthonous state. - septic tank	m <sup>3</sup>	71,61		
I-2	Supply, hand spreading and compacting natural mixture of gravel under the foundation in a layer thickness of 15 cm. The buffer layer shall be compacted and finely levelled. Calculated per m2 of compacted gravel.	m <sup>3</sup>	1,37		
I-3	Manually filling and compacting soil around the septic tank and above the upper panel septic tank in a layer of 30 cm, weight 10 kg beater, until the required density. Calculated per m3 in compacted state.	m <sup>3</sup>	38,76		
I-4	Loading and transportation of the remaining excavated material to a landfill up to 3 km away with levelling at the landfill. Calculated per m <sup>3</sup> .	m <sup>3</sup>	32,85		
<b>I GROUND WORK TOTAL</b>					
<b>II BRICKLAYING WORK</b>					
II-1	Manufacture and installation of 60cm diameter, for load of 30 kg, cast iron cover with frame for the manhole. Calculated per piece.	pieces	1,00		
II-2	Manufacture and installation of climbers made of rebar diameter 18 mm, width 30 cm spaced at a distance of 30 cm. Calculated per piece.	pieces	9,00		
<b>II BRICKLAYING WORK TOTAL</b>					

### III CONCRETE AND REINFORCED CONCRETE WORK

III-1	Manufacture of the reinforced concrete watertight septic tank with concrete mark MB25. The formwork shall be made and pit reinforced according to detail and structural analysis. Provide for an opening and mount the tank cover. Concrete shall be poured and cared for according to regulations. The price shall include formwork, reinforcement bars, climbers and auxiliary scaffolding. Fully in accordance with the design documents or a prefabricated tank of identical characteristics with volume up to 25m3. Calculated per m3 of tank walls.	m3	13,20
III-2	Manufacture of floated cement screed 3cm thick. The base coat shall be cleaned prior to the application of the cement screed. The mortar for cement screed shall be made using sifted very coarse sand in 1:3 proportion. The top surface of the cement screed shall be floated flat and cared for until rigid. Calculated per m2	m2	6,00
III-3	Plastering of interior surfaces of septic tank walls with cement plaster with waterproofing additives. Prior to plastering all surfaces shall be cleaned and sprayed with grout. Plaster shall be applied in two layers with additives. The first layer shall be made of very coarse sand and the second layer shall be made with small-grain clean sand 'Dunavac', with no presence of sludge and organic matter. Floating shall be done with wetting and small floats. Calculated per m2	m2	30,00

### III CONCRETE AND REINFORCED CONCRETE WORK TOTAL

R. br.	Opis	Total
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#### IV SUMMARY

- I GROUND WORK
- II BRICKLAYING WORK
- III CONCRETE AND REINFORCED CONCRETE WORK

#### IV TOTAL SEPTIC TANK

**ELECTRICAL INSTALLATIONS PRICED BILL OF QUANTITIES FOR THE  
TYPICAL HOUSE OF TOTAL SURFACE AREA OF P=100m<sup>2</sup>**

No	Item Name	UoM	Quan	Price	Total
<b>A. POWER LINES:</b>					
1	Procurement, installation and connection of installation cable type: <b>PP-Y-5x6mm<sup>2</sup>+PP- 2x1,5mm<sup>2</sup>,1kV,Cu</b> starting from the Metering and Distribution Cabinet ( <b>MDC</b> ) located on the building facade and arriving at the Consumer Unit ( <b>CU</b> ) on the ground floor. Total length of the connection cable shall be approximately <b>L=10m</b> . The item shall include cable procurement, installation and connection on both ends, amounting to:	pcs.	1		
2	Procurement, installation and connection of installation cable type: <b>PP-Y-3x1,5mm<sup>2</sup>,1kV,Cu</b> for ground floor lighting fixtures, wall mounted under the plastering. Lighting fixture installation cables shall be powered from the ground floor Consumer Unit ( <b>CU</b> ). Average length of lighting fixture installation cables shall be <b>8m</b> as a norm which, with installation and connection at both ends, shall amount to:	pcs.	12		
3	Procurement, installation and connection of installation cable type: <b>PP-Y-3x1,5mm<sup>2</sup>,1kV,Cu</b> for powering the electric bell with bell button, placed next to the building entrance. Installation cables shall be wall mounted under the plastering. Installation cables shall be powered from the electric bell placed at the building ground floor Consumer Unit ( <b>CU</b> ). Average length of bell installation cables shall be <b>10m</b> which, with installation and connection at both ends, shall amount to:	pcs.	1		
4	Procurement, installation and connection of installation cable type: <b>PP-Y-3x2,5mm<sup>2</sup>,1kV,Cu</b> for single phase sockets and single phase sockets on the ground floor, wall mounted under the plastering. Installation cables shall be powered from the building ground floor Consumer Unit ( <b>CU</b> ). Average length of the single phase socket installation cables shall be approximately <b>10m</b> which, with installation and connection at both ends, shall amount to:	pcs.	23		

5	Procurement, installation and connection of installation cable type: <b>PP-Y-5x2,5mm<sup>2</sup> ,1kV,Cu</b> for the three-phase socket in the ground floor kitchen, wall mounted under the plastering. Installation cables shall be powered from the building ground floor Consumer Unit ( <b>CU</b> ). Average length of the three-phase socket installation cables shall be approximately <b>12m</b> as a norm which, with installation and connection at both ends, shall amount to:	pcs.	1		
<b>A. POWER LINES TOTAL:</b>					

<b>B. DISTRIBUTION CABINET AND CONSUMER UNIT:</b>					
1	Delivery, mounting, equipment installation and connection of the metering and distribution cabinet ( <b>MDC</b> ), type equivalent to <b>MDC-1</b> manufactured by ' <b>FEMAN</b> ' Jagodina, to be placed at the most appropriate location on the facade. The metering and distribution cabinet shall have the following basic dimensions: <b>(320x665x235)mm</b> , with glazed openings on the door against the meter counter. The cabinet shall be made of hard polyester in mechanical protection <b>IP54</b> , fitted with a lock and key and grounding bridge and equipped with the following:				
	<ul style="list-style-type: none"> <li>- polyester cabinet <b>(320x665x235)mm</b> 1pc</li> <li>- pertinax plate <b>(220x400x5)mm</b> 1pc</li> <li>- three-phase double tariff meter type: <b>DB2 'ENEL' 3x220/380 V, 50 Hz, 10-40 A kl. 1</b> 1pc</li> <li>- automatic fuses type: <b>C16A, 3P</b> (limiters) 1pc</li> <li>- automatic fuses type: <b>B16A, 3P</b> 1pc</li> <li>- busbars, insulators and all other required electrical materials (connection lines, screws, crimping lugs etc) as needed</li> </ul> Complete wiring and connection of the metering and distribution cabinet ( <b>MDC</b> ) amounts to the total of:	pcs.	1		
2	Procurement, delivery, mounting and wiring of a standard floor double tier <b>PVC</b> consumer unit ( <b>CU</b> ) with protective lid for he needs of the ground floor installation, to be wall mounted on the ground floor at the specified height according to the scheme provided in the annex to graphic documents. The item shall include mounting and connection of the complete planned equipment in the consumer unit, which amounts to the total of:				

<ul style="list-style-type: none"> <li>- automatic fuses type: <b>B6A</b>, single pole 1pc</li> <li>- automatic fuses type: <b>B10A</b>, single pole 1pcs</li> <li>- automatic fuses type: <b>B16A</b>, single pole 15pcs</li> <li>- automatic fuses type: <b>B6A</b>, 3-pole 1pc</li> <li>- protecting differential switch <b>FID-25/0.03A</b>, 4-pole 1pc</li> <li>- electric bell 1pc</li> <li>- signal light mounted at the bottom of the cover, red 1pc</li> </ul>				
<p><b>NOTE:</b> This item shall include all required connection materials and other petty materials with connection to the installation. Provide for <b>20%</b> reserve in the consumer unit for the possibility of expansion.</p>	pcs.	1		
<b>B. DISTRIBUTION CABINET AND CONSUMER UNIT TOTAL:</b>				

<b>C. LIGHTING FIXTURES</b>				
<p>1 Delivery, mounting and connection of ceiling lights equivalent to type: "<b>BIN-40/100W/IP40</b>" manufactured by '<b>BUCK</b>' Belgrade, with a white opal diffuser. Lights shall be mounted on the ceiling throughout the building according to the scheme provided in the annex to graphic documents, and they shall be connected by the installation cable <b>PP-Y-3x1,5mm<sup>2</sup>, 1kV,Cu</b>, wall mounted under the plaster. The item shall include complete set up and connection of the lights, which shall amount to the total of:</p>	pcs.	8		
<p>2 Delivery, mounting and connection of the ceiling light equivalent to type: "<b>BIN-42/100W/IP44</b>" manufactured by '<b>BUCK</b>' Belgrade, with a white opal diffuser. The light shall be mounted on the ground floor bathroom ceiling according to the scheme provided in the annex to graphic documents, and they shall be connected by the installation cable <b>PP-Y-3x1,5mm<sup>2</sup>, 1kV,Cu</b>, wall mounted under the plaster. The item shall include complete set up and connection of the lights, which shall amount to the total of:</p>	pcs.	2		
<p>3 Delivery, mounting, and connection of wall light equivalent to type: "<b>BIN-ZA/100W/IP44</b>" manufactured by '<b>BUCK</b>' Belgrade, with a white opal diffuser. The light shall be mounted on the bathroom wall according to the scheme provided in the annex to graphic documents, and they shall be connected by the installation cable <b>PP-Y-3x1,5mm<sup>2</sup>, 1kV,Cu</b>, wall mounted under the plaster. The item shall include complete set up and connection of the lights, which shall amount to the total of:</p>	pcs.	1		

4	Delivery, mounting, and connection of wall light equivalent to type: <b>"BIN-44/100W/IP65"</b> manufactured by <b>'BUCK'</b> Belgrade, with a white opal diffuser. The light shall be mounted on the wall above the entrance door according to the scheme provided in the annex to graphic documents, and they shall be connected by the installation cable <b>PP-Y-3x1,5mm<sup>2</sup>, 1kV,Cu</b> , wall mounted under the plaster. The item shall include complete set up and connection of the lights, which shall amount to the total of:	pcs.	1		
<b>C. LIGHTING FIXTURES TOTAL:</b>					

<b>D. SWITCHES AND SOCKETS:</b>					
1	Delivery, procurement and mounting of ordinary single phase sockets equivalent to type <b>'KAPTIKA'</b> – Legrand, <b>2P+E, 10/16A, 250V</b> , in white. The single phase sockets shall be wall mounted on the ground floor at the specified height, according to the scheme provided in the graphic documents and shall be connected by the installation cable <b>PP-Y-3x2,5mm<sup>2</sup>, 1kV,Cu</b> , wall mounted under the plaster. The item shall include: <b>PVC Ø60mm</b> mount boxes, terminal strips and other necessary mounting materials which shall amount to the total of:	pcs.	19		
2	Delivery, procurement and mounting of a double single phase sockets equivalent to type <b>'KAPTIKA'</b> – Legrand, <b>2P+E, 10/16A, 250V</b> , in white. The double single phase sockets shall be wall mounted in the ground floor living room at the specified height, according to the scheme provided in the graphic documents and shall be connected by the installation cable <b>PP-Y-3x2,5mm<sup>2</sup>, 1kV,Cu</b> , wall mounted under the plaster. The item shall include: <b>PVC Ø60mm</b> mount boxes, terminal strips and other necessary mounting materials which shall amount to the total of:	pcs.	1		
3	Delivery, procurement and mounting of sealed single phase <b>'OG'</b> sockets with protective lid equivalent to type <b>'PLEXO'</b> – Legrand, <b>2P+E, 10/16A, 250V</b> , in white. The single phase <b>'OG'</b> sockets shall be wall mounted in the ground floor bathroom at the specified height, according to the scheme provided in the graphic documents. The single phase <b>'OG'</b> sockets shall be connected by the installation cable <b>PP-Y-3x2,5mm<sup>2</sup>, 1kV,Cu</b> , wall mounted under the plaster, and in the cellar the single phase <b>'OG'</b> sockets shall be connected by the installation cable <b>PP00-Y-3x2,5mm<sup>2</sup>, 1kV,Cu</b> , wall mounted on clamps for <b>'OG'</b> installations. The item shall include: all necessary mounting materials which shall amount to the total of:	pcs.	2		

4	Delivery, procurement and mounting of an ordinary three-phase socket equivalent to type ' <b>KAPTIKA</b> ' – Legrand, <b>3P+E, 10/16A, 250V</b> , in white. The three-phase socket shall be wall mounted in the ground floor kitchen at the specified height, according to the scheme provided in the graphic documents and shall be connected by the installation cable <b>PP-Y-5x2,5mm<sup>2</sup>, 1kV,Cu</b> , wall mounted under the plaster. The item shall include: <b>PVC</b> mount boxes, terminal strips and other necessary mounting materials which shall amount to the total of:	pcs.	1		
5	Delivery, procurement and mounting of ordinary single pole switches equivalent to type ' <b>KAPTIKA</b> ' – Legrand, <b>10AX, 6A, 250V</b> , in white. Installation switches shall be wall mounted on the ground floor at the specified height, according to the scheme provided in the graphic documents and shall be connected by the installation cable <b>PP-Y-3x1,5mm<sup>2</sup>,1kV,Cu</b> , wall mounted under the plaster. The item shall include: <b>PVC Ø60mm</b> mount boxes, terminal strips and other necessary mounting materials which shall amount to the total of:	pcs.	10		
6	Delivery, procurement and mounting of an installation bell button equivalent to type ' <b>KAPTIKA</b> ' – Legrand, <b>6A, 250V</b> , in white. Installation bell button shall be wall mounted next to the ground floor entrance door at the specified height, according to the scheme provided in the graphic documents and shall be connected with the electric bell placed in the consumer unit ( <b>CU</b> ) by the installation cable <b>PP-Y-3x1,5mm<sup>2</sup>,1kV,Cu</b> , wall mounted under the plaster. The item shall include: <b>PVC Ø60mm</b> mount boxes, terminal strips and other necessary mounting materials which shall amount to the total of:	pcs.	1		
7	Delivery, procurement and mounting of an installation ' <b>KIP</b> ' switch equivalent to type ' <b>KAPTIKA</b> ' – Legrand, <b>16A, 250V</b> , in white. The ' <b>KIP</b> ' switch shall be wall mounted in the ground floor kitchen for the needs of the small water heater at the specified height, according to the scheme provided in the graphic documents and shall be connected by the installation cable <b>PP-Y-3x2,5mm<sup>2</sup>,1kV,Cu</b> , wall mounted under the plaster. The item shall include: <b>PVC Ø60mm</b> mount boxes, terminal strips and other necessary mounting materials which shall amount to the total of:	pcs.	1		

8	Delivery, procurement and mounting of an <b>INDICATOR'</b> bathroom switch equivalent to type ' <b>KAPTIKA</b> ' – Legrand, <b>16A, 250V</b> , in white. The Indicator switch shall be wall mounted next to the ground floor bathroom door for the needs of the small water heater at the specified height, according to the scheme provided in the graphic documents and shall be connected by the installation cable <b>PP-Y-3x2,5mm<sup>2</sup>,1kV,Cu</b> , wall mounted under the plaster. The item shall include: <b>PVC</b> mount boxes, terminal strips and other necessary mounting materials which shall amount to the total of:	
9	Delivery, procurement and mounting of installation wall mount <b>PVC Ø78mm</b> and <b>(100x100)mm</b> junction boxes for the needs of completing the building installation. Junction boxes shall be mounted in the plastering according to the scheme provided in the graphic documents. The item shall include procurement and placement of: <b>PVC</b> junction boxes whose quantity shall be taken in lump and shall amount to:	
	pcs. 1	
	lump 20	
<b>D. SWITCHES AND SOCKETS TOTAL:</b>		

<b>E. TELEPHONE INSTALLATION:</b>		
1	Procurement, delivery and mounting of a connection telephone pole <b>PS-6</b> with a specified number of multiple connectors mounted on the space provided on the building facade. The procurement, delivery and mounting of the connecting <b>PTT-PS</b> pole shall amount to the total of:	
2	Delivery of materials and installation of the telephone by way of laying telephone installation cables <b>IY(St)Y-2x2x0,8mm</b> in a <b>PVC</b> flexible hose under the plastering. The telephone installation cable shall start at the <b>PTT-PS</b> pole placed on the building facade and arrive at the telephone connection socket in the ground floor living room. The total length of the telephone installation cable shall be approximately <b>12m</b> , which, together with the mounting and connecting at both ends shall amount to the total of:	
3	Delivery, procurement and mounting of ordinary telephone connection socket equivalent to type " <b>KAPTIKA</b> " - Legrand, <b>RJ 11</b> , in white. The telephone connection socket shall wall mounted in the ground floor living room at the specified height according to the scheme provided in the annex to graphic documents and shall be connected by a telephone installation cable <b>IY(St)Y-2x2x0,8mm<sup>2</sup></b> placed in a <b>PVC</b> flexible hose under the plaster. The item shall include: <b>Ø60mm PVC</b> mount box, terminal strips and other necessary mounting materials which shall amount to the total of:	
	pcs. 1	
<b>E. TELEPHONE INSTALLATION TOTAL:</b>		

<b>F</b>	<b>TV NETWORK INSTALLATION:</b>				
1	Procurement, delivery and mounting of connectible <b>TV</b> aerial as selected by the Investor, to be mounted on the roof of the building. The item of mounting the <b>TV</b> aerial shall be specified on site during work execution, which shall amount to the total of:	pcs.	1		
2	Procurement, delivery and <b>TV</b> installation with the <b>RF75-5-2F/V</b> cable placed inside a <b>Ø16mm PVC</b> flexible hose. The <b>TV</b> installation cable shall start from the <b>TV</b> aerial placed at the roof of the building. Average length of <b>TV</b> installation cable shall be <b>12m</b> as a norm which, together with mounting and connection at both ends, shall amount to the total of:	pcs.	1		
3	Delivery, procurement and mounting of an ordinary <b>TV</b> connection socket equivalent to type " <b>KAPTIKA</b> " - Legrand, in white. The <b>TV</b> connection socket shall be wall mounted in the ground floor living room at the specified height according to the scheme provided in the annex to graphic documents and shall be connected by a aerial cable <b>RF75-5-2F/V</b> placed in a <b>PVC</b> flexible hose under the plaster. The item shall include: <b>Ø60mm PVC</b> mount box, terminal strips and other necessary mounting materials which shall amount to the total of:	pcs.	1		
<b>F</b>	<b>TV NETWORK INSTALLATION TOTAL:</b>				

<b>G.</b>	<b>FINISHING WORK AND CERTIFICATES OF COMPLIANCE:</b>				
1	Grounding of the metering and distribution cabinet and the building electricity installation shall be performed by way of placing a vertical rod-type earthing strip in the ground. The strip shall be made of galvanized pipe <b>Fe/Zn-Ø60mm, L=3m</b> . The connection between the earthing strip and metering and distribution cabinet shall be made by galvanized strip <b>Fe/Zn-25x4mm</b> or yellow-green conductor <b>P-1x16mm<sup>2</sup>, 1kV,Cu</b> , which shall amount to the total lump sum of:	lump	1		
2	After completing all work, repairs, gypsum plastering and plastering of holes and walls damaged during the mounting of electricity installation lines shall be performed and the rubble transported away from the construction site up to <b>100m</b> , which shall amount to the total of:	pcs.	1		
3	Cadastral survey of the mounted electricity and telephone cables in the ditch prior to filling and recording the new cable routes in the underground installations cadastre.	lump			

4	Testing the completed electricity installation and measuring the resistance from power cables and the foundation earthing strip performed by an authorised institute and the issue of required certificates of compliance, which shall amount to the total of:	pcs.	1		
G.	<b>FINISHING WORK AND CERTIFICATES OF COMPLIANCE TOTAL:</b>				

	<b>SUMMARY:</b>				
	<b>A. POWER LINES TOTAL:</b> <b>B. DISTRIBUTION CABINET AND CONSUMER UNIT TOTAL:</b> <b>C. LIGHTING FIXTURES TOTAL:</b> <b>D. SWITCHES AND SOCKETS TOTAL:</b> <b>E. TELEPHONE INSTALLATION TOTAL:</b> <b>F. TV NETWORK INSTALLATION TOTAL:</b> <b>G. FINISHING WORK AND CERTIFICATES OF COMPLIANCE TOTAL:</b>				
	<b>ELECTRICAL INSTALLATION TOTAL:</b>				

prices provided w/o VAT

<b>Note:</b>	The Priced Bill of Quantities does not include the type and total length of the main connecting power line and telephone cord that shall be specified when connecting the building to the existing infrastructure.				
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**PRICED BILL OF QUANTITIES**

**OF THE WORK, EQUIPMENT AND MATERIALS FOR THE INSTALLATION OF CENTRAL HEATING – 100m2 FAMILY HOUSING UNIT**

Item	UoM	Q	Price	Total
<b>A BOILER ROOM INSTALLATION</b>				
<i>(includes procurement, delivery and mounting)</i>				
1				
Solid fuel furnace for the home heating system of the following technical characteristics:				
dimensions of the furnace (mm) - 890x455x440				
dimensions of the burner (mm) - 420x213x334				
nominal power (kW) – wood/coal - 8/11				
utilisation level (%) - wood/coal - 83/82				
heating power transmitted to water (kW) - wood/coal - 6.5/9				
heating power transmitted to the environment (kW) - wood/coal - 1.5/2				
water amount in boiler (lit) - 41				
furnace weight (kg) - 95				
flue duct – central				
flue duct diameter (mm) - 120				
water connections - 1"				
recommended fuel - wood/coal				
maximum operating pressure (bar) - 2				
combustion temperature regulator				
colour as selected from the manufacturer's catalogue				
type: Thermo Vest , man. "Milan Blagojević" or similar.				
	pcs.	1 x	=	
2				
Flue pipe DN120x500mm, workshop made, same colour as boiler				
	pcs.	3 x	=	
3				
Flue pipe bend 90°, diameter DN120mm , with cleaning cap, workshop made, same colour as boiler.				
	pcs.	1 x	=	
4				
Expansion vessel with membrane, volume 12 liters, type ERP 320, complete with safety valve (2x1/2") and connection kit				
	pcs.	1 x	=	
5				
Circulation heating circulation pump, complete with connection material, dimensions:				
type: "Wilco" Star RS 25/4, or similar				
	compl.	1 x	=	
6				
Contact thermostat 0-90°C				
	pcs.	1 x	=	
7				
Thermo-manometer 0-4bar, 0-120°C , Ø1/2"				
	pcs.	1 x	=	
8				
Ball valve with thread, union flat joint and butterfly handle, dimensions:				
Ø3/4"-DN20				
	pcs.	2 x	=	
9				
Copper pipe grid connecting the equipment with water splitter. The pipes shall be of the following dimensions:				
Cu-Ø15x1mm				
	m <sup>1</sup>	1 x	=	
Cu-Ø18x1mm				
	m <sup>1</sup>	5 x	=	
Cu-Ø22x1mm				
	m <sup>1</sup>	3 x	=	

10	For the external and connecting material: fittings, holders, pipe hangers, connecting energy etc. Materials required to connect and lay pipe grid shall be provided at 80% from the previous item.	0,8	x	=
11	Uninterruptible power supply device with AQ battery, type MC 200B or similar, with power of 100W, voltage 12V/220V, frequency 50Hz and accumulating battery of 18Ah. Device must provide uninterruptible power supply in period of 4-5 hours.	pcs.	1	x =

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**TOTAL A :**

**B** ***INSTALLATION OF PANEL AND TUBE RADIATORS***  
*(includes procurement, delivery and mounting)*

1	Jugoterm or similar panel radiators, complete with masks and holders, of the following dimensions :			
	type 11-600/400	pcs.	1	x =
	type 11-600/600	pcs.	3	x =
	type 11-600/700	pcs.	2	x =
	type 11-600/800	pcs.	1	x =
2	Carriers of steel radiators with required anchoring kit (pcs), type: H=600mm	pcs.	14	x =
3	Jugoterm or similar bathroom pipe radiators, complete with masks and holders, of the following dimensions: type crl-750x500	pcs.	1	x =
4	Radiator valves with riser pipe, floor connections for two pipe systems consisting of the following elements: * manual valve with compression fitting, compression shrink disc and bend (upper part)  * splitter valve with compression fitting (cone shrink disc and external nut) for the floor connection, with shutter and external thread R 1/2" (lower part) , compression fitting for Ø16 aluplast pipes * 650mm, Ø15mm connecting pipe	compl.	7	x =
5	Radiator valve with manual regulation for fitting in sanitation facilities, dimensions: DN15, with compression half coupling for Ø16x2 aluplast pipes	pcs.	1	x =
6	Radiator screws for the following dimensions: DN15, with compression half coupling for Ø16x2 Alupast pipes	pcs.	1	x =
7	MS water splitter with valves and coupling for Φ16mm alupex pipes. Splitter dimensions shall be: - Ø1" with eight 1/2" holes	pcs.	2	x =
8	MS finishing 'T' piece (F) with a desludging tap and automatic vent valve, dimensions: R1" x 1/2" x 3/8"	pcs.	2	x =

9	Wall mount sheet metal cabinets for housing unit wall mounting, dimensions: 450x800x170 mm (for 8 connections and circulation pump mount)	pcs.	1	x	=
10	"Alupex" pipes, dimensions: Ø16/12	m <sup>1</sup>	140	x	=
11	Protective flexible pipe for laying Ø16 mm alupex pipes into concrete Ø23 mm	m <sup>1</sup>	140	x	=
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<b>TOTAL B :</b>					

**C OTHER WORK**

1	Preparatory work of familiarizing with the building with the aim of executing the installation as designed, sorting delivered materials in construction site storage, marking out the entire installation and introduction of teams into work. Transportation of materials and tools	lump	1	x	=
2	Construction work on pipe laying, digging distribution cabinets and pipes in walls and repairs of walls and openings.	lump	1	x	=
3	Design technical conditions installation cold water pressure testing, pipe network adjustments during hot testing, taking all required records, development of as-built design and building handover to the Investor.	lump	1	x	=
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<b>TOTAL C:</b>					

**SUMMARY:**

- A. *BOILER ROOM INSTALLATION*
- B. *RADIATOR HEATING INSTALLATION*
- C. *OTHER WORK*

*TOTAL A+B+C :* 

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**TOTAL :** 

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prices provided w/o VAT

## SUM TOTAL

with the Main Design for the construction of a ground floor family housing unit of 100 m2

I	ARCHITECTURAL-CONSTRUCTION WORKS		
	Up to level 0,00		
	Above level 0,00		
II	WATER AND SEWAGE INSTALLATIONS		
III	SEPTIC TANK		
IV	ELECTRICAL INSTALLATIONS		
V	CENTRAL HEATING INSTALLATIONS		
VI	<b>SUMMARY</b>		

**TOTAL**

prices provided w/o VAT