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

TYPE III - UNTIL ELEVATION POINT 0.00
JANKOVIĆ SOFIJA

1.00	**PREPARATORY AND FINISHING WORK**				
No	**DESCRIPTION**	**UoM**	**Quantity**	**Unit Price**	**TOTAL**
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 Salonite corrugated fibre cement sheets. Calculated per m2 of completed building. *Note: the building surface area shall be considered in lump and shall depend on the Contractor's set up and needs.*				
	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. *Note: the canopy surface area shall be considered in lump and shall depend on the Contractor's set up and needs.*	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.	kom	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.	p	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.	m2	114.00		
1.00	**PREPARATORY AND FINISHING WORK**			**TOTAL 1:**	

2.00	GROUND WORK				
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.				
	0.00	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 strips under the building		47.85		
	b. Excavation for foundation strips under the access plateau		2.07		
	c. Excavation for chimney footing		0.48		
	d. Excavation for stairwell beam		0.48		
	e. Excavation for pavement around the building		4.60		
	TOTAL:	m3	55.48		
2.04	Filling the space under the ground floor RC slab, next to the foundation wall and under the porch 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 filling. Calculated per m3 in compacted state.				
	next to the foundation wall	m3	12.05		
	under the ground floor RC slab	m3	76.73		
	under the porch	m3	8.65		
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		
	floor slab	m2	84.01		
	under the pavement	m2	46.00		
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.				
	35,58+84,01	m2	119.59		
2.00	**GROUND WORK**			**TOTAL 3:**	

4.00	CONCRETE AND REINFORCED CONCRETE WORK				
No	**DESCRIPTION**	**UoM**	**Quantity**	**Unit Price**	**TOTAL**
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.				
	a. 30-35cm wide foundation strip (staircase)				
	(2,52+1,35)*0,35*0,3+0,3*0,9*1,7	m3	0.87		
	b. 40-50cm wide foundation strips.				
	(14,7*2+5,9*5+2,55*2+3,7+3,45)*0,5*0,4+0,64*0,38*0,4*2+0,33*0,5*0,4*10+0,47*0,5*0,4*10	m3	16.02		
	TOTAL:	m3	16.89		

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.				
	a. house foundation wall:				
	(14,5+0,97*2)*0,3*0,84+(14,5+0,82*2)*0,3*2,44+(14,5+2,73*3)*0,2*1,78++1,07*2*0,3*1,31+2,73*2*1,78*0,3+0,52*2*0,3*2,11+0,97*0,2*0,84*3+1,07*0,2*3*1,31+0,52*3*0,2*2,11	m3	30.44		
	b. entrance porch and staircase foundation wall:				
	(1,43+1,88)*2,45*0,2+(2,45*3,3)/2*0,2	m3	2.43		
		m3	32.87		
4.03	Manufacture of reinforced concrete foundation walls mark MB30. 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.				
		m3	0.00		
4.15	Manufacture of a path made of 10cm thick light reinforced concrete mark MB30. The path shall be reinforced with reinforcement wire mesh according to structural analysis and concreted. The top surface of the path shall be treated according to the Designer's instructions and the concrete shall be cared for. Reinforcement mesh shall be calculated separately. Calculated per m2 of path.				
		m2	46.00		
4.00	**CONCRETE AND REINFORCED CONCRETE WORK**			**TOTAL 5:**	

5.00	**REBAR WORK**				
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, scaffolding. Calculated per kg of installed reinforcement bars.				
	a. MA 500/560	kg	809.92		
	b. GA 240/360 and RA 400/500	kg	914.42		
	TOTAL:	kg	1,724.34		
5.00	**REBAR WORK**			**TOTAL 6:**	

18.00	**SUMMARY**

1.00	PREPARATORY AND FINISHING WORK	TOTAL 1:	
2.00	GROUND WORK	TOTAL 2:	
3.00	BRICKWORK	TOTAL 3:	
4.00	CONCRETE AND REINFORCED CONCRETE WORK	TOTAL 4:	
5.00	REBAR WORK	TOTAL 5:	
6.00	CARPENTRY WORK	TOTAL 6:	
7.00	ROOFING WORK	TOTAL 7:	
8.00	WEATHERPROOFING	TOTAL 8:	
9.00	DOORS AND WINDOWS	TOTAL 9:	
10.00	JOINERY WORK	TOTAL 10:	
11.00	SHEET METAL WORK	TOTAL 11:	
12.00	TILING WORK	TOTAL 12:	
13.00	FLOORING WORK	TOTAL 13:	
14.00	PAINT WORK	TOTAL 14:	
15.00	FAÇADE WORK	TOTAL 15:	
16.00	MISCELLANEOUS WORK	TOTAL 16:	
17.00	DRY MOUNT WORK	TOTAL 17:	
18.00	**SUMMARY**	**TOTAL 18:**	

TOTAL	

TYPE III - ABOVE ELEVATION POINT 0.00
JANKOVIĆ SOFIJA

3.00	**BRICKWORK**				
No	**DESCRIPTION**	**UoM**	**Quantity**	**Unit Price**	**TOTAL**
3.01	Building cellar wall waterproofing d=12cm using full brick in 1:2:6 lime mortar. Walls shall be built in a running bond. Prior to installation the blocks shall be wetted. Joints shall be cleaned to the depth of 2cm. The price shall include scaffolding. Calculated per m2 of wall.				
		m2	0.00		
3.02	Building a load bearing wall using 30cm thick 20cm tall YTONG blocks in YTONG thin layer plastering mortar. The first course of YTONG blocks shall be laid into a layer of mortar approximately 2cm thick. Load bearing wall connections shall be made by wall bond or vertical reinforced concrete ring beams. The price shall include the required number of shock proof YTONG blocks. Calculated per m3 of wall.				
	b. façade load bearing wall ground floor:				
	2*(4+3,7+1,8+4,1+2,8+2,8)*2,84*0,3-1,01*(2,05+0,2+0,2)*0,3- 2*0,7*1,2*0,3-5*1,4*1,8*0,3-0,7*1,0*0,3	m3	27.48		
	TOTAL:	m3	27.48		
3.03	Building a partition wall using 20cm thick and 20cm tall YTONG partition blocks in YTONG thin layer plastering mortar. The first course of YTONG blocks shall be laid into a layer of mortar approximately 2cm thick. The space fo 1-2cm in the conection of the partition wall with the load bearing structure shall be filled with polyurethane foam. 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 and on every other block in connection with the ceiling structure. Calculated per m2 of built partition wall.				
	c. indoor wall ground floor:				
	(4+0,64+1,8+4,1+1,8+2,8+4,1+0,6+2,8)*2,84*0,2- 3*0,91*(2,05+0,2+0,2)*0,2- 1,2*(2,05+0,2+0,2)*0,2+(6,5*3,27)*0,2*2	m3	19.44		
	TOTAL:	m3	19.44		
3.04	Building a partition wall using 12cm thick and 25cm tall YTONG partition blocks in YTONG thin layer plastering mortar. The first course of partition blocks shall be laid into a layer of mortar approximately 2cm thick. The space of 1-2cm in the conection of the partition wall with the load bearing structure shall be filled with polyurethane foam. 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 and on every other block in connection with the ceiling structure. Calculated per m2 of built partition wall.				
	(1,8+0,64+3,7+1,8)*2,84-2*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 door and window lintels in 30cm thick YTONG U wall elements formwork. Elements dimensions shall be 60x306x25cm. The finishing elements shall be cut according to the length of the beams. U profiles shall be glued together using YTONG thin coat plastering mortar. Overlay of the beam to the wall of min 20 cm outside the opening shall be provided for. Reinforcement bars and concrete shall be installed fully according to the item structual analysis. Reinforcement bars shall be calculated separately. Calculated per m1 of installed U profiles.				
	(0,7+0,2*2)*3+(1,4+0,2*2)*5+(1,0+0,2*2)	m1	13.70		0.00

3.06	Manufacture of reinforced concrete horizontal ring beams and facade walls in 30cm thick YTONG U wall elements formwork. Elements dimensions shall be 60x306x25cm. The finishing elements shall be cut according to the length of the ring beams. U profiles shall be glued together using YTONG thin coat plastering mortar. Overlay of the beam to the wall of min 20 cm outside the opening shall be provided for. Reinforcement bars and concrete shall be installed fully according to the item structual analysis. Reinforcement bars shall be calculated separately. Calculated per m1 of installed U profiles.				
	(14,62+6,82)*2	m1	42.88		
3.04	Building a d=12cm chimney 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)*5,64)*2	m3	2.30		
3.05	Plastering and skim coating of indoor walls with 3-6mm thick thin coat gypsum plaster Rimat 100 DLP or manufacturer with similar characteristics. Rimat 100 DLP gypsum plaster shall be applied to walls made of concrete, Ytong and other flat sublayers. The boase shall be clean and wetted. On occassion a ground coat shall be required: for smooth concrete (Ripcs. bi-Kontakt) and for aerated concrete (Ripcs. bi-Grund). Edge strips shall be used to safeguard edges. Minimum coat thickness for manual plasterins shall be 2mm and 4mm for mechanical plastering. The finished surface shall also be skim coated. Calculated per m2.				
	b. By YTONG blocks (ground floor):				
	(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+2,8+0,2+1,11+2*0,6+4,11+2*1,8+2*1,57+2*1,8+2,42+0,38+0,64+3,46+2,8+4,1+2*2,8+2*4,1)*2,84	m2	284.11		
3.00	**BRICKWORK**			**TOTAL 4:**	

4.00	**CONCRETE AND REINFORCED CONCRETE WORK**				
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.				
	a. floor slab:				
	((6,1*3+13,9)*0,2+(6,1*2+14,5*2)*0,3)*0,2	m3	3.76		
	b. above the ground floor:				
	(2*(14,4+6,2)+10,2+2*(4,1+1,8)+2,44)*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 reinforced concrete vertical ring beams mark MB30. The formwork shall be developed and ring beams 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.				
	16*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*3+(0,81+0,2+0,2)*0,12*2+(1,2+0,2)*0,2*2)*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.				
	0.00	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.				
	0.00	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 acording to regulations. The price shall include formwork. Calculated per m3.				
	5,18*1,63*0,10	m3	0.84	#REF!	#REF!
4.12	Manufacture of the 10cm thick concrete 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 in accordance with the structural analysis shall be caculated separately.** The top surface shall be floated and the concrete shall be cared for. Calculated per m2 of floor.				
	97.15	m2	97.15		
4.13	Manufacture of the reinforced and floated 4cm cement screed over thermal insulation as the sublayer for laminate/ceramic floor i.e. as the final floor in the attic. 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.				
	a. ground floor:				
	78.67	m2	78.67		
	TOTAL:		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.				
	5,18*1,63	m2	8.44		
4.00	**CONCRETE AND REINFORCED CONCRETE WORK**			**TOTAL 5:**	

5.00	**REBAR WORK**				
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, scaffolding. Calculated per kg of installed reinforcement bars.				
	a. MA 500/560	kg	539.94		
	b. GA 240/360 and RA 400/500	kg	609.61		
	TOTAL:	kg	1,149.55		
5.00	**REBAR WORK**			**TOTAL 6:**	

6.00	**CARPENTRY WORK**				
No	**DESCRIPTION**	**UoM**	**Quantity**	**Unit Price**	**TOTAL**
6.01	Manufacture of a gable roof structure made of dry fir lumber. The roof shall be constructed fully in accordance with the design and detail. 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 grille roof carriers.				
	133.54	m2	133.54		
6.02	Batenning the roof with 24/48 mm battens spaced 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.				
	133,54/cos27	m2	149.88		
6.03	Battenning 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.				
	133,54/cos27	m2	149.88		
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.				
	133,54/cos27	m2	149.88		
6.00	**CARPENTRY WORK**			**TOTAL 7:**	

7.00	ROOFING WORK				
No	**DESCRIPTION**	**UoM**	**Quantity**	**Unit Price**	**TOTAL**
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 per m2 of mounted surface.				
	133,54/cos27	m2	149.88		
7.00	**ROOFING WORK**			**TOTAL 8:**	

8.00	WEATHERPROOFING				
No	**DESCRIPTION**	**UoM**	**Quantity**	**Unit Price**	**TOTAL**
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. Kodorfleks V3 with two coats of bitumen. Waterproofing shall be done in the following layers: - Cold coat of bitulit 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.				
	97.15	m2	97.15		
8.02	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. Kodorfleks V3 with two coats of bitumen. Waterproofing shall be done in the following layers: - Cold coat of bitulit A - Hot coat of bitumen MTH - Kondorfleks V3, glued to the surface - hot coat of bitumen MTH Calculated per m2.				

8.03	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. Calculated per m2.				
	2,3*1,8+2*(2,3+1,8)*0,2+1,57*1,8+2*(1,57+1,8)*0,2	m2	9.95		
8.04	Procurement and manufacture of vertical stiff waterproofing in sanitation blocks to the height of 200cm around the shower enclosure. 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. Calculated per m2.	m2			
	(1,0+1,0)*2,0	m2	4.00		
8.05	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.				
	a. Ground floor:				
	d= 15 cm				
	1,58*1,8+2,3*1,8+3,7*2,52+7,9*3,46+1,58*0,64+1,92*0,64+4,11*1,8-0,2*0,6+1,57*1,8+2,8*4,1-0,38*0,64+2,8*4,1+1,01*0,2+3*0,91*0,2+0,91*0,12+2*0,81*0,12+1,2*0,2	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.				
	a. Ground floor:				
	1,58*1,8+2,3*1,8+3,7*2,52+7,9*3,46+1,58*0,64+1,92*0,64+4,11*1,8-0,2*0,6+1,57*1,8+2,8*4,1-0,38*0,64+2,8*4,1+1,01*0,2+3*0,91*0,2+0,91*0,12+2*0,81*0,12+1,2*0,2	m2	79.99		
	b. Attic:				
	14,3*6,5	m2	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*2*(0,64+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 wth 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 a product from another manufacturer with equivalent characteristics. Calculated per m2.				
	133,54/cos27	m2	149.88		
8.09	Procurement and mounting of panels made of soft self-supporting 260mm thick rock mineral wool. Rock mineral wool panels shall be placed on the gypsum board ceiling structure (suspended ceiling) as thermal insulation of the loft. Rock mineral wool panels "KNAUF Insulation KR S", self-support or a product from another manufacturer with equivalent characteristics: thermal conductivity according to EN 12667, SRPS U.A2.020, SRPS U.M9.015; flammability class A1 according to EN ISO 1182 and SRPS U.J1.050. Rock mineral wool panels must be mounted 'tight', with no air space. Calculated per m2 of delivered insulation.	m2			
	b. Attic:				
	d= 26 cm				
	14,10*6,70+0,26*6,7*2*10	m2	129.31		
	d= 3 cm (above the top plate)				
	2*(14,3+6,5)*0,14	m2	5.82		
8.10	Procurement and mounting of thermal insulation panels on the facade. Styrofoam, self-extinguishing, thickness 10cm, mass 16-20kg/m3 with preparation for the manufacture of a thermal facade. Styrofoam panels shall be set in construction adhesive as facade thermal insulation and soundproofing, and anchored with special anchors. A layer of construction adhesive shall be applied over the panels, the entire surface shall be treated with glass mesh and the finishing coat of construction adhesive shall be applied then, according to detail and the Designer's instructions. The price shall include jamb treatment with 2cm thick Styrofoam. All openings etc shall be protected with foil and included in the price; opening shall not be deducted from the surface area of the facade. Calculated per m2 of the orthogonal facade surface area.				
	d=12cm:				
	TOTAL:	m2	146.00		
8.00	**WEATHERPROOFING**			**TOTAL 8:**	

9.00	DOORS AND WINDOWS				
No	**DESCRIPTION**	**UoM**	**Quantity**	**Unit Price**	**TOTAL**
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 fitting s 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-emmissivity 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, 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	pcs.	4.00		
	Item II dim. 71/205	pcs.	2.00		
9.00	**DOORS AND WINDOWS**			**TOTAL 9:**	

10.00	JOINERY WORK				
No	**DESCRIPTION**	**UoM**	**Quantity**	**Unit Price**	**TOTAL**
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 theDesigner's instructions. Calculated per m1 of railing.				
	1,46+2,70	m1	4.16		
10.00	**JOINERY WORK**			**TOTAL 10:**	

11.00	SHEET METAL WORK				
No	**DESCRIPTION**	**UoM**	**Quantity**	**Unit Price**	**TOTAL**
11.01	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		
11.02	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		
11.03	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.				
	4,63*2+3,0*2+3,98	m1	19.24		
11.04	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.				
	3*0,61+5*1,31	m1	8.38		
11.05	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			
		m1	18.00		
11.06	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)*2	m1	4.88		
11.00	**SHEET METAL WORK**			**TOTAL 11:**	

12.00	TILING WORK				
No	**DESCRIPTION**	**UoM**	**Quantity**	**Unit Price**	**TOTAL**
12.01	Tile the platform staircase, 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.				
	a. Anteroom:				
	1,58*1,8	m2	2.84		
	a. Kitchen:				
	3,62*1,0+1,58*3,1+0,91*0,2-0,12*0,64	m2	8.62		
	b. Bathroom:				
	2,3*1,8+1,57*1,8	m2	6.97		
	TOTAL:	m2	18.43		
12.02	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 rounded PVC strips. Calculated per m2 of set tiles with all required labour and material.				
	a. Kitchen:				
	(0,8+4,1+0,63+0,64+1,92+0,64)*1,5	m2	13.10		
	b. Bathroom:				
	2*(2,3+1,8)*2,78-0,81*2,05-0,7*1,0+2*(1,57+1,8)*2,78-0,81*2,05-0,7*0,8	m2	36.95		
	TOTAL:	m2	50.05		
12.03	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.	m1			
	Ground floor 2*(1,58+1,8)+2*0,1-1,01-0,91-0,81-1,2	m1	3.03		
12.04	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.	m2			
	(2,75+4*0,155)*1,51	m2	5.09		
12.00	**TILING WORK**			**TOTAL 12:**	

13.00	FLOORING WORK				
No	**DESCRIPTION**	**UoM**	**Quantity**	**Unit Price**	**TOTAL**
13.01	Procurement and placement of **8 mm thick (class 32)** 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 **with accompanying skirting and underlaying layer of felt. The price shall include transition strips and thresholds.**	m2			
	6,32*3,1+4,28*0,36+0,91*0,12+3,7*2,52+4,11*1,8+1,2*0,2-0,6*0,2+2*2,8*4,1-0,64*0,38+2*0,91*0,2	m2	61.16		
13.00	**FLOORING WORK**			**TOTAL 13:**	

14.00	PAINTWORK				
No	**DESCRIPTION**	**UoM**	**Quantity**	**Unit Price**	**TOTAL**
14.01	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.	m2			
	2*(1,58+1,8)*2,78+2*(3,7+2,52)*2,78+(7,9+4,1+1,58+0,64+0,12+0,64+1,92+0,64+4,28+3,46)*2,78-(0,8+4,1+0,63+0,64+1,92+0,64)*1,5+2*(4,11+1,8)*2,78+(0,6+0,6)*2,78+2*2*(2,8+4,1)*2,78	m2	223.483		
14.02	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.				
		m2	78.67		
14.00	**PAINTWORK**			**TOTAL 14:**	

15.00	FAÇADE WORK				
No	**DESCRIPTION**	**UoM**	**Quantity**	**Unit Price**	**TOTAL**
15.01	Plastering outdoor walls with 20mm of thin-coat lime-cement plaster Rimat 650 ZKA or a manufacturer with similar characteristics. RIMAT 650 ZKA is a lime-cement mplaster applied to walls made of concrete, Ytong blocks and other flat sublayers. The sublayer shall be clean and wetted. On occassion a ground coat shall be required: for smooth concrete (Ripcs. bi-Kontakt) and for aerated concrete (Ripcs. bi-Grund). Edge strips shall be used to safeguard edges. Minimum coat thickness shall be 8mm. The finished surface shall also be skim coated. Calculated per m2.				
	a. (around the windows and front door):				
	Ground floor:				
		m2	0.00		
	b. FAÇADE WALL:				
	Ground floor:				
	0.00	m2	0.00		
	Plinth:				
	0.00	m2	0.00		
	TOTAL:	m2	0.00		
15.02	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.				
	2*(14,5+6,7)*3,1+15	m2	146.44		

15.03	Manufacture of the plinth using Kulir Plast decorative, plastic, floated plaster based on marble grains of natural colour and size up to 2.2mm. Type and colours as selected by the Designer. Facade surfaces shall be sanded and dusted. The facade sublayer shall be healthy and dry. The item shall include preparation of the surface and all required materials, labour, tools and scaffolding.				
	5,0+28,7+10,99+7,98	m2	52.67		
15.04	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.	m2			
	2*(0,48+0,74)*1,14*2	m2	5.56		
15.00	**FAÇADE WORK**			**TOTAL 15:**	

16.00	**MISCELLANEOUS WORK**				
No	**DESCRIPTION**	**UoM**	**Quantity**	**Unit Price**	**TOTAL**
16.01	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		
16.02	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		
16.03	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		
16.00	**MISCELLANEOUS WORK**			**TOTAL 16:**	

17.00	**DRY MOUNT WORK**				
No	**DESCRIPTION**	**UoM**	**Quantity**	**Unit Price**	**TOTAL**
17.01	SPL2: D112 Procurement, transportation and mounting of suspended ceiling with horizontal continuous soffit, with a covered substructure made of galvanized steel profiles (CD 60/27) as load bearing and prefabricated profiles, fastened by nonius hangers and steel anchor nails for suspended ceilings. Suspension height shall be 35-40cm. Cladding shall be one coat of 12.5mm GC (standard) gypsum-cardboard panels. Fully according to manufacturer's technical detail. The connection between the ceiling and the walls shall be made with skim coating mass + separation strip?Trenn fix. Joint filling: Uniflot with no joint tape (except in butt joints) or Fugen Filler with joint tape (paper, mesh or galss fibre). Calculated per m2.				
		m2	78.70		
17.00	**DRY MOUNT WORK**			**TOTAL 17:**	

18.00	**SUMMARY**		

1.00	PREPARATORY AND FINISHING WORK	TOTAL 1:	
2.00	GROUND WORK	TOTAL 2:	
3.00	BRICKWORK	TOTAL 3:	
4.00	CONCRETE AND REINFORCED CONCRETE WORK	TOTAL 4:	
5.00	REBAR WORK	TOTAL 5:	
6.00	CARPENTRY WORK	TOTAL 6:	
7.00	ROOFING WORK	TOTAL 7:	
8.00	WEATHERPROOFING	TOTAL 8:	
9.00	DOORS AND WINDOWS	TOTAL 9:	
10.00	JOINERY WORK	TOTAL 10:	
11.00	SHEET METAL WORK	TOTAL 11:	
12.00	TILING WORK	TOTAL 12:	
13.00	FLOORING WORK	TOTAL 13:	
14.00	PAINT WORK	TOTAL 14:	
15.00	FAÇADE WORK	TOTAL 15:	
16.00	MISCELLANEOUS WORK	TOTAL 16:	
17.00	DRY MOUNT WORK	TOTAL 17:	
18.00	**SUMMARY**	**TOTAL 18:**	

TOTAL	

Designed by:
Sandra Gušić, AE

PRICED BILL OF QUANTITIES - Water Line and Sanitary Sewer Installation

Item	Description	UoM	Quantity	Unit Price	Total
I	**CONSTRUCTION WORK**				
1	Mechanical excavation of soil for canal ditches of the water or sewer grid, water manholes and inspection manholes in 3rd 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^3 of excavated ditches.				
	- water grid	m^3	29		
	- sewer grid	m^3	15		
2	Fine levelling of the bottom of the ditch in an appopriate slope for lazing water and sewer pipes, prior to filloing the ditch with sand and manufacture of the lining. Calculated per m^2 of levelled ditch.				
	- water grid	m^2	19		
	- sewer grid	m^2	9		
3	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^3 of used sand.				
	- water grid	m^3	5		
	- sewer grid	m^3	1		

4	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. Calculated per m^3 of buried ditch.		
	- water grid	m^3	24
	- sewer grid	m^3	14
5	Loading and transportation of the excavated material to a landfill up to 10km away with rough levelling at the landfill. Calculated per m^3.		
	- water grid	m^3	5
	- sewer grid	m^3	1
6	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. Calculated per piece of manufactured manholes, fully according to the details in the design, depending on manhole dimensions.		
	Manhole of interior dimensions 150x80x160cm	kom	1
7	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. Calculated per m' of manufactured access point, measured from the bottom of the half-round gutter to the top of the cover.		
		m'	5
8	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.		
	54kg cover for the pedestrian and closed roads.	kom	4
	CONSTRUCTION WORK TOTAL:		

II INSTALACIJE VODOVODA

1	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. PE (Ø 3/4") to the public grid	kom	1
2	Procurement, transportation and mounting of an oval shutter. Calculated per piece of oval shutter. Ø 3/4"	kom	1
3	Procurement of the required materials and mounting of the complete multijet water meter MN QN 2.5 XN, Qn=2.5m3/h manufactured by JORDAN YU d.o.o. Belgrade or a water meter from another manufacturer with identical characteristics and the following elements: - dry mechanism water meter - straight stop valve with butterfly collar, - straight stop valve with butterfly collar and discharge tap, - Y-type strainer - check valve, - other required connection materials. Completely installed paid per piece. Ø 3/4" (19 mm) water meter set	kom	1
4	Procurement and mounting of PPR-PN10 water pipes, ditch mount, together with special fittings and connecting materials. Only working and certified pipes for operating pressure of up to 10 bar shall be used. After mounting the water grid shall be pressure tested and all records duly made. The price shall include grid testing. Calculated per m' of mounted pipeline depending on pipe diameter. PPR D25 (Ø3/4")	m'	30.00
5	Procurement of required materials and manufacture of the water grid of steel galvanized threaded water pipes with required connection fittings. The price shall include required scaffolding to mount the water grid under the ceiling structure, materials required to hang the pipes on the ceiling structure and anchor them to the walls, as well as required Dekorodal tape to cot the pipes prior to walling in. Calculated per m' of delivered grid measured according to pipe axis together with fittings. POC Ø 1/2" (13 mm) POC Ø 3/4" (19 mm)	m' m'	7 20
6	Procurement and mounting of brass straight stop valve with nickel plated cap and fixing bracket. Calculated per piece. Ø 19 mm Ø 13 mm	kom kom	3 2

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	kom	3
	Ø 1/2" - 3/8" – (kitchen sink) connection	kom	2
	Ø 1/2" - 3/8" – (toilet) connection	kom	2
	Ø 1/2" - 1/2" – (dishwasher) connection	kom	1
	Ø 1/2" - 1/2" - (washing machine) connection	kom	1
8	Procurement and mounting by glueing of insulation onto visible hydrant grid pipes; insulation shall be made of 'Armaflex' insulation shell or insulation material by another manufacturer of identical or similar characteristics. The insulation shell shall not be vapour permeable and the thickness of the shell wall shall be not smaller than 13mm. After finishing the insulation all connections and joints shall be sealed with adhesive tape. Calculated per metre of insulated pipe.	m'	27.00
9	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	57.00
10	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	57.00
	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	kom.	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'	4
	Ø 160 mm	m'	20

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	kom.	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	kom	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'	47
	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 by 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.	kom.	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	kom.	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.	kom.	2
4	Procurement and mounting of complete acrylic shower enclosure, dimensions 90x90cm, 1st 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.	kom.	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.	kom.	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.	kom	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	kom	1
8	Procurement and mounting of a standing single lever washbasin mixer tap with a connection to angle valves, aererator, 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.	kom	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.	kom	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.	kom	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.	kom	2
12	Procurement, transportation and mounting of a ceramic shelf above the washbasin. Calculated and paid per mounted piece.	kom.	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.	kom	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.	kom	2
15	Procurement, transportation and mounting above the shower bath of a nickel plated wire soap dish. Calculated per piece, completely mounted.	kom	1

16	Procurement, transportation and mounting of a large towel rack mounted next to the shower enclosure. Calculated and paid per mounted piece.	kom.	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.	kom	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.	kom	2

SANITARY WARE AND ACCESSORIES TOTAL:

No	Description	Total
V	**SUMMARY**	
I	CONSTRUCTION WORK:	
II	WATER LINE INSTALLATION:	
III	SEWER INSTALLATION:	
IV	SANITARY WARE:	
V	**SUMMARY**	

PRICED BILL OF QUANTITIES - Typical 16m3 septic tank

Item	Description	UoM	Quantity	Unit Price	Total
I	**GROUND WORK**				
I-1	Mechanical excavation of soil for the septic tank in 3rd 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^3	71.61		
I-2	Procurement, manual spreding and compacting natural gravel mix under the foundations in a 15cm thick layer. Calculated per m3.	m^3	1.37		
I-3	Manual spreading and compacting soil around the septic tank and above the septic tank top slab in a 30cm thick layer, with a 10gk compactor to required compaction. Calculated per m3.	m^3	38.76		
I-4	Transportation of remaining soil. After filling the ditch, remaining soil shall be transported to a landfill designated by the Supervisor, up to 3km away. Unit price shall include loading, unloading and spreading on the landfill. Calculated per m3.	m^3	32.85		
I	**GROUND WORK TOTAL**				
II	**BRICK WORK**				
II-1	Mounting iron frames for manhole covers with weight up to 30kg and mounting cast covers. D=60 cm G=30 kg Calculated per piece.	kom	1.00		
II-2	Procurement and installation of manhole climbers. Climbers shall be made of rebar iron d=18 mm, 30cm wide and spaced at 30cm. Calculated per piece.	kom	9.00		
II	**BRICK WORK TOTAL**				

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 and slab.	m3	13.20
III-2	Manufacture of a floated 3cm thick cement screed. Prior to application of the screed the sublayer shall be cleaned and washed. Mortar for the screed shall be made with sifted very coarse sand in proportion of 1:3. Top surface of the screed shall be floated to a black sheen and cared for until rigid. Calculated per m2 of screed.	m2	6.00
III-3	Plastering the septic tank walls using cement mortar with added waterproofing additive. Wall surfaces shall be thoroughly cleaned and dusted. Prior to mortaring the walls shall be sprayed with grout. Two coats of mortar shall be applied with added additive. The first coat shall be done with sifted very coarse sand and the second with fine sand and floated until a black sheen. Calculated per m2 of plastered surfaces.	m2	30.00
III	**CONCRETE AND REINFORCED CONCRETE WORK TOTAL**		

No	Description	Total
IV	**SUMMARY**	
I	GROUND WORK:	
II	BRICK WORK:	
III	CONCRETE AND REINFORCED CONCRETE WORK:	
IV	**SUMMARY**	

ELECTRICAL INSTALLATIONS PRICED BILL OF QUANTITIES

No	Item Name	UoM	Quant	Price	Total
A.	**POWER LINES:**				
1	Procurement, installation and connection of main power line type: **PP-Y-5x6mm²+PP- 2x1,5mm²,1kV,Cu** starting from the metering and sitribution cabinet **(MDC)** located on the building facade and coming to the Consumer Unit **(CU)** in the building ground floor. Total length of the installation cable was taken to be approximately **L=10m** The item shall include cable procurement, installation and connection at both ends, which shall amount to the total of:	pcs.	1		
2	Procurement, installation and connection of installation cable type: **PP-Y-3x1,5mm²,1kV,Cu** for ground floor lighting fixtures, wall mounted under the plastering. Lighting fixture installation cables shall be powered from the ground floor Consumer Unit **(CU)**. Average length of lighting fixture installation cables shall be **8m** 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: **PP-Y-3x1,5mm²,1kV,Cu** 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 **(CU)**. Average length of bell installation cables shall be **10m** which, with installation and connection at both ends, shall amount to:	pcs.	1		
4	Procurement, installation and connection of installation cable type: **PP-Y-3x2,5mm²,1kV,Cu** 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 **(CU)**. Average length of the single phase socket installation cables shall be approximately **10m** which, with installation and connection at both ends, shall amount to:	pcs.	23		
5	Procurement, installation and connection of installation cable type: **PP-Y-5x2,5mm² ,1kV,Cu** 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 **(CU)**. Average length of the three-phase socket installation cables shall be approximately **12m** as a norm which, with installation and connection at both ends, shall amount to:	pcs.	1		
A.	**POWER LINES TOTAL:**				

B.	**DISTRIBUTION CABINET AND CONSUMER UNIT**				
1	Delivery, mounting, equipment installation and connection of the metering and distribution cabinet **(MDC)**, type equivalent to **MDC-1** manufactured by **'FEMAN'** Jagodina, to be placed at the most appropriate location on the facade. The metering and distribution cabinet shall have the following basic dimensions: **(320x665x235)mm**, with glazed openings on the door against the meter counter. The cabinet shall be made of hard polyester in mechanical protection **IP54**, fitted with a lock and key and grounding bridge and equipped with the following:				
	- polyester cabinet **(320x665x235)mm** 1pc - pertinax plate **(220x400x5)mm** 1pc - three-phase double tariff meter type: **DB2 'ENEL' 3x220/380 V, 50 Hz, 10-40 A kl. 1** 1pc - automatic fuses type: **C16A, 3P** (limiters) 1pc - automatic fuses type: **B16A, 3P** 1pc - busbars, insulators and all other required electrical materials (connection lines, screws, crimping lugs etc) as needed Complete wiring and connection of the metering and distribution cabinet **(MDC)** amounts to the total of:	pcs.	1		
2	Procurement, delivery, mounting and wiring of a standard floor double tier **PVC** consumer unit **(CU)** 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:				
	- automatic fuses type: **B6A**, single pole 1pc - automatic fuses type: **B10A**, single pole 1pcs - automatic fuses type: **B16A**, single pole 15pcs - automatic fuses type: **B16A**, single pole 1pc - protecting differential switch **FID-25/0.03A**, 4-pole 1pc - electric bell 1pc - signal light mounted at the bottom of the cover, red 1pc				
	NOTE: This item shall include all required connection materials and other petty materials with connection to the installation. Provide for **20%** reserve in the consumer unit for the possibility of expansion.	pcs.	1		
B.	**DISTRIBUTION CABINET AND CONSUMER UNIT**				

C.	LIGHTING FIXTURES				
1	Delivery, mounting and connection of ceiling lights equivalent to type: **"BIN-40/100W/IP40"** manufactured by **'BUCK'** 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 **PP-Y-3x1,5mm², 1kV,Cu,** 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.	8		
2	Delivery, mounting, and connection of wall light equivalent to type: **"BIN-42/100W/IP44"** manufactured by **'BUCK'** Belgrade, with a white opal diffuser. The light shall be mounted on the bathroom wall and ceiling according to the scheme provided in the annex to graphic documents, and they shall be connected by the installation cable **PP-Y-3x1,5mm², 1kV,Cu,** 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.	2		
3	Delivery, mounting, and connection of wall light equivalent to type: **"BIN-ZA/100W/IP44"** manufactured by **'BUCK'** 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 **PP-Y-3x1,5mm², 1kV,Cu,** 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		
4	Delivery, mounting, and connection of wall light equivalent to type: **"BIN-44/100W/IP65"** manufactured by **'BUCK'** 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 **PP-Y-3x1,5mm², 1kV,Cu,** 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		
C.	**LIGHTING FIXTURES TOTAL:**				

D.	SWITCHES AND SOCKETS:				
1	Delivery, procurement and mounting of ordinary single phase sockets equivalent to type **'KAPTIKA'** – Legrand, **2P+E, 10/16A, 250V**, 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 **PP-Y-3x2,5mm², 1kV,Cu,** wall mounted under the plaster. The item shall include: **PVC Ø60mm** 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 **'KAPTIKA'** – Legrand, **2P+E, 10/16A, 250V**, 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 **PP-Y-3x2,5mm², 1kV,Cu,** wall mounted under the plaster. The item shall include: **PVC Ø60mm** 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 **'OG'** sockets with protective lid equivalent to type **'PLEXO'** – Legrand, **2P+E, 10/16A, 250V,** in white. The single phase **'OG'** 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 **'OG'** sockets shall be connected by the installation cable **PP-Y-3x2,5mm², 1kV,Cu,** wall mounted under the plaster. 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 **'KAPTIKA'** – Legrand, 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 **PP-Y-5x2,5mm², 1kV,Cu,** wall mounted under the plaster. The item shall include: **PVC** 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 **'KAPTIKA'** – Legrand, **10AX, 6A, 250V**, 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 **PP-Y-3x1,5mm²,1kV,Cu,** wall mounted under the plaster. The item shall include: **PVC Ø60mm** 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 **'KAPTIKA'** – Legrand, **6A, 250V**, 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 **(CU)** by the installation cable **PP-Y-3x1,5mm²,1kV,Cu,** wall mounted under the plaster. The item shall include: **PVC Ø60mm** 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 **'KIP'** switch equivalent to type **'KAPTIKA'** – Legrand, **16A, 250V**, in white. The **'KIP'** 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 **PP-Y-3x2,5mm²,1kV,Cu,** wall mounted under the plaster. The item shall include: **PVC Ø60mm** 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 **ÍNDICATOR'** bathroom switch equivalent to type **'KAPTIKA'** – Legrand, **16A, 250V**, 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 **PP-Y-3x2,5mm²,1kV,Cu,** wall mounted under the plaster. The item shall include: **PVC** mount boxes, terminal strips and other necessary mounting materials	pcs.	1		
9	Delivery, procurement and mounting of installation wall mount **PVC Ø78mm** and **(100x100)mm** 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: **PVC** junction boxes whose quantity shall be taken in lump and shall	lump.	20		
D.	**SWITCHES AND SOCKETS TOTAL:**				

E.	TELEPHONE INSTALLATION:				
1	Procurement, delivery and mounting of a connection telephone pole **PS-6** with a specified number of multiple connectors mounted on the space provided on the building facade. The procurement, delivery and mounting of the connecting **PTT-PS** pole shall amount to the total of:	pcs.	1		
2	Delivery of materials and installation of the telephone by way of laying telephone installation cables **IY(St)Y-2x2x0,8mm** in a **PVC** flexible hose under the plastering. The telephone installation cable shall start at the **PTT-PS** 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 **12m**, which, together with the mounting and connecting at both ends shall amount to the total of:	pcs.	1		
3	Delivery, procurement and mounting of ordinary telephone connection socket equivalent to type **"KAPTIKA"** - Legrand, **RJ 11**, 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 **IY(St)Y-2x2x0,8mm²** placed in a **PVC** flexible hose under the plaster. The item shall include: **Ø60mm PVC** mount box, terminal strips and other necessary mounting materials which shall amount to the total of:	pcs.	1		
E.	TELEPHONE INSTALLATION TOTAL:				

F	TV NETWORK INSTALLATION:				
1	Procurement, delivery and mounting of connectible **TV** aerial as selected by the Investor, to be mounted on the roof of the building. The item of mounting the **TV** aerial shall be specified on site during work execution, which shall amount to the total of:	pcs.	1		
2	Procurement, delivery and **TV** installation with the **RF75-5-2F/V** cable placed inside a **Ø16mm PVC** flexible hose. The **TV** installation cable shall start from the **TV** aerial placed at the roof of the building. Average length of **TV** installation cable shall be **12m** 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 **TV** connection socket equivalent to type **"KAPTIKA"** - Legrand, in white. The **TV** 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 **RF75-5-2F/V** placed in a **PVC** flexible hose under the plaster. The item shall include: **Ø60mm PVC** mount box, terminal strips and other necessary mounting materials which shall amount to the total of:	pcs.	1		
F	TV NETWORK INSTALLATION TOTAL:				

G.	FINISHING WORK AND CERTIFICATES OF				
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 **Fe/Zn-Ø60mm, L=3m**. The connection between the earthing strip and metering and distribution cabinet shall be made by galvanized strip **Fe/Zn-25x4mm** or yellow-green conductor **P-1x16mm², 1kV,Cu**, 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 **100m**, 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.	**FINISHING WORK AND CERTIFICATES OF COMPLIANCE TOTAL:**				

	SUMMARY:	
	A. NAPOJNI VODOVI UKUPNO:	
	B. RAZVODNI ORMAN I POTABLA UKUPNO:	
	C. SVETILJKE UKUPNO:	
	D. PREKIDAČI I PRIKLJUČNICE UKUPNO:	
	E. INSTALACIJA TELEFONA UKUPNO:	
	F. INSTALACIJA TV - MREŽE UKUPNO:	
	G. ZAVRŠNI RADOVI I ATESTI UKUPNO:	
	ELECTRICAL INSTALLATION TOTAL:	

prices provided w/o VAT

	Note: The Priced Bill of Quantities does not include the type and total length of the main connection power and telephone lines which will be defined when connecting the building to the existing infrastructure.				

PRICED BILL OF QUANTITIES

OF THE WORK, EQUIPMENT AND MATERIALS FOR THE INSTALLATION OF CENTRAL HEATING – 100m^2 FAMILY HOUSING UNIT

Item		UoM	Q	Price	Total
A	***BOILER ROOM INSTALLATION (includes procurement, delivery and mounting)***				
1	Solid fuel furnace for the home heating system of he following technical characteristics: dimenions of the furnace (mm) - 890x455x440 dimenions 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		
2	Flue pipe DN120x500mm, workshop made, same colour as boiler	pcs.	3		
3	flue pipe bend 90°, diameter DN120mm , with cleaning cap, workshop made, same colour as boiler.	pcs.	1		
4	Expansion vessel with membrane, volume 12 lit, type ERP 320, complete with safety valve 1/2 and connection kit	pcs.	1		
5	Circulation heating circulation pump, complete with connection material, dimensions: type: "Wilo" Star RS 25/6, or similar	compl.	1		
6	Contact thermostat 0-90˚C	pcs.	1		
7	Ball valve with thread, union flat joint and butterfly handle, dimensions: Ø3/4"-DN20	pcs.	1		
8		pcs.	2		

9	Copper pipe grid connecting the equipment with water splitter. The pipes shall be of the following dimensions:		
	Cu-Ø15x1mm	m^1	1
	Cu-Ø18x1mm	m^1	5
	Cu-Ø22x1mm	m^1	3
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
11	Dry cell Uninterrupted Power Supply (UPS) device with the following characteristics: 400-*499VA (for the circulation pump of up to 70W), complete with electric cables. The device shall provide for uninterrupted power supply in the timeframe up to 4-5 hours.	pcs.	1
		TOTAL A :	
	INSTALLATION OF PANEL AND TUBE RADIATORS (includes procurement, delivery and mounting)		
B			
	Jugoterm or similar panel radiators, complete with masks and holders, of the following dimensions :		
1	type 11-600/400		
	type 11-600/600	pcs.	1
	type 11-600/700	pcs.	3
	type 11-600/800	pcs.	2
		pcs.	1
	carriers of steel radiators with required anchoring kit (pcs),		
2	H=600mm		
		pcs.	14
	Jugoterm or similar bathroom pipe radiators, complete with masks and holders, of the following dimensions:		
3	type crl-750x500		
		pcs.	1
4	Radiator valves with riser pipe, floor connections for * manual valve with compression fitting, compression shrink disc and bend (upper part) * splitter valve with complression 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
	Radiator valve with manual regulation for fitting in sanitation facilities, dimensions:		
5	DN15, with compression half coupling for Ø16x2 aluplast pipes	pcs.	1

6	Radiator screws for the following dimensions: DN15, with compression half coupling for Ø16x2 Alupast pipes	pcs.	1
7	MS water splitter with valves and coupling for Φ16mm alupex pipes. Splitter dimensions shall be: - Ø1" with eight 1/2" holes	pcs.	2
8	MS finishing '**T'** piece (F) with a desludging tap and automatic vent valve, dimensions: R1" x 1/2" x 3/8''	pcs.	2
9	Wall mount sheet metal cabinets for housing unit wall mounting, dimensions: 450x700x170 mm (for 8 connections and circulation pump mount)	pcs.	1
10	"Alupex" pipes, dimensions: Ø16/12	m^1	140
11	Protective flexible pipe for laying Ø16 mm alupex pipes into concrete Ø23 mm	m^1	140

TOTAL 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
2	Construction work on pipe laying, digging distribution cabinets and pipes in walls, fixing all hoes and breaches.	lump	1
3	Design technical conditions installation cold water pressure testing, pipe network adjustems during hot testing, taking all required records, development of as-built design and building handover to the Investor.	lump	1

TOTAL C:

SUMMARY:

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

TOTAL A+B+C :

SUMMARY OF ALL STAGES OF THE DESIGN

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

TYPE III

JANKOVIĆ SOFIJA

I	ARCHITECTURAL & CONSTRUCTION WORK		
	Until elevation point 0.00		
	Above the elevation point 0.00		
II	WATER, HYDRANT AND SEWER GRIDS		
III	SEPTIC		
IV	ELECTRICAL INSTALLATION		
V	MECHANICAL INSTALLATION		
VI	**SUMMARY**		

TOTAL