

A: BILL OF QUANTITIES FOR CIVIL AND SPECIALIST'S WORKS

Note: Bidder shall price all items in the tender documentation excluding VAT.

No.	ITEM DESCRIPTION	UoM	Quantity	Unit price	Total:
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A	CIVIL AND SPECIALIST'S WORKS
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I	ASSEMBLY / DISASSEMBLY AND DEMOLITION
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1.1.	Careful dismantling of wooden windows and doors with wooden frames. Dismantled windows and doors shall be assembled, loaded on a truck and transported to the landfill or place designated by the Investor up to 10 km of distance. Calculation per piece.				
	up to 2,00 m ²	pcs	8		
	from 2,00 - 5,00 m ²	pcs	24		
1.2.	Stripping of existing vinyl flooring, including transport to the landfill, up to 10 km of distance. Calculation per m ² .				
	1. ground floor corridor	m ²	63,60		
	2. file room	m ²	13,00		
	5. emergency room	m ²	11,00		
	8. laboratory	m ²	12,00		
	15 first floor corridor	m ²	39,00		
	Total vinyl stripping:	m ²	138,60		
1.3.	Stripping of the damaged laminate flooring, including transport of debris to the landfill up to 10 km of distance. Calculation per m ² .				
	3. medical office	m ²	26,75		
	4. intervention	m ²	19,50		
	Total laminate stripping:	m ²	46,25		
1.4.	Stripping of wooden doorsteps, including disposal on the place designated by the Investor, or transport up to 10 km of distance.	pcs	18		
1.5.	Careful removal of gutters and downpipes, and wind strips from the roof. Removed sheet metal shall be packed, loaded into a truck and taken to a landfill or place designated by the Investor, up to 10 km of distance. Calculation per m ¹ .	m ¹	123,00		
1.6.	Dismantling of matchboarding sheeting from the eaves. Matchboarding shall be removed, packed, loaded onto a truck and taken to a landfill or the place designated by the Investor, up to 10 km of distance. Calculation per m ² .	m ²	59,00		
1.7.	Removal of the asbestos-cement corrugated sheet roofing in safe manner. Debris shall be collected, removed, loaded onto a truck and taken to a landfill or place designated by the Investor, up to 10 km of distance. Calculation per m ² .	m ²	405,00		
1.8.	Careful removal of roof laths. They shall be dismantled, stacked and taken to a landfill or place designated by the Investor, up to 10 km of distance. Calculation per m ² .	m ²	405,00		
1.9.	Careful cutting of grooves in brick walls for passing through of telephone and Internet cables on the front facade. Debris shall be collected, loaded onto a truck and taken to a landfill up to 10 km of distance. Calculation per m ¹ .	m ¹	28,00		

1.10.	Supply, transport and installation of concrete chimney caps. Calculation per piece.	pcs	8		
ASSEMBLY/ DISASSEMBLY AND DEMOLITION, TOTAL:					

II DRY WORKS					
2.1.	Supply and transport materials and construction of the partition wall for water filters, 80 mm thick, single-sided metal substructure lined with single moisture resistant plasterboards GKBI 12.5 mm, Knauf W111 on both sides. Non-bearing partition wall shall be made of galvanized sections CW 50, and will be covered with plaster boards, as instructed by the manufacturer. Joints shall be treated with trowelling plaster and bandage strips. The price includes working scaffolding. Calculation per m ² .	m ²	10,00		
2.2.	Supply and transport materials and construction of the ceiling above water filters with a metal substructure lined with single moisture resistant plasterboards GKBI 12.5 mm, Knauf D112. Ceiling shall be made of galvanized sections and will be covered with plaster boards, as instructed by the manufacturer. Joints shall be treated with trowelling plaster and bandage strips. The price includes working scaffolding. Calculation per m ² .	m ²	4,00		
2.3.	Supply and transport materials and construction of the suspended ceiling with a metal substructure, double lined with moisture resistant plasterboards GKBI 2x12.5 mm, Knauf D112 and Alu foil, vapour permeable and waterproof, 150g. Double substructure shall be made of supporting and prefabricated galvanized sections CD 60x27mm, attached by hangers to wooden supporting elements of wooden mezzanine structure and will be covered with plaster boards, as instructed by the manufacturer. Joints shall be treated with trowelling plaster and bandage strips. The price includes working scaffolding. Calculation per m ² .				
	14. stairs for apartment	m ²	17,50		
	16. gynaecological office	m ²	24,50		
2.3.	Supply and transport materials and covering of sewage pipes by moisture-resistant plasterboards GKBI 12.5 mm, including the construction of metal substructure attached to the wall, Knauf W623. Metal substructure shall be made of galvanized sections CD 60x27mm, and then place plaster boards, as instructed by the manufacturer. Joints shall be treated with trowelling plaster and bandage strips. The price includes working scaffolding. Calculation per m ² .				
	2. file room	m ²	0,70		
	9. boiler room	m ²	3,30		
	Total construction of masks:	m ²	4,00		
2.4.	Supply and transport materials and covering of chimney by fireproof plasterboards GKF 18 mm, including the construction of metal substructure attached to the wall, Knauf W623. Metal substructure shall be made of galvanized sections CD 60x27mm, and then place plaster boards, as instructed by the manufacturer. Joints shall be treated with trowelling plaster and bandage strips. The price includes working scaffolding. Calculation per m ² .	m ²	2,50		
DRY WORKS, TOTAL:					

III MASONRY					
3.1.	Stripping of flexible mortar from interior walls and facade. Mortar shall be stripped and joints shall be cleaned by clamps to a depth of 2 cm, while brick surface shall be cleaned with a wire brush and walls washed with water. Debris shall be collected, removed, loaded onto a truck and transported to the landfill up to 10 km of distance. Calculation per m ² .				
	façade	m ²	64,00		
	9. boiler room	m ²	3,00		
	14. stairs for apartment	m ²	8,00		
	Total stripping:	m ²	75,00		
3.2.	Stripping of the residual cement mortar from 10% of stone plinths. Mortar shall be stripped and joints shall be cleaned by clamps to a depth of 2 cm. Stone surface shall be cleaned with a wire brush and washed with water. Debris shall be collected, loaded onto a truck and transported to the landfill up to 10 km of distance. Calculation per m ² .				
		m ²	45,00		
3.3.	Material supply and transport and plastering of stripped off walls with flexible mortar, ratio 1:3:9, in two layers. Prior to plastering, the surfaces shall be sprayed with cement slurry, ratio 1:1. Plastered surfaces must be flat, without curbs and waves, with sharp and straight edges. Mortar shall be wetted to prevent rapid drying and dusting. Calculation per m ² of plastered surface.				
	façade	m ²	64,00		
	terrace	m ²	7,70		
	9. boiler room	m ²	3,00		
	Total plastering:	m ²	74,70		
3.4.	Material supply and transport and waterproofing of concrete or stone plinths by Isolyte Penetrate YU "Dramin" Zemun, or similar. Water shall be gradually added to Isolyte Penetrate YU, single-component powder, and stirred until reaching the density of paste and let it sit for 5-10 minutes. Clean and dry wall shall be wetted with water and covered by paste with brush horizontally. The process shall be repeated with two more layers, both vertically and horizontally. The previous layer must be dry, where drying lasts 12-24 hours. Calculation per m ² of treated surface.				
		m ²	45,00		
3.5.	Material supply and transport and plastering of stripped off stone plinths with cement mortar, ratio 1:2 in two layers. Prior to plastering, the surfaces shall be sprayed with cement slurry, ratio 1:1. Plastered surfaces must be flat, without curbs and waves, with sharp and straight edges. Mortar shall be wetted to prevent rapid drying and dusting. Calculation per m ² of plastered surface..				
		m ²	45,00		
MASONRY TOTAL:					

IV PAINTING					
4.1.	Supply and transport of materials and skimming of plastered walls with dispersion putty. Surfaces shall be sanded, cleaned and neutralized. Skimming is done in two layers. Walls shall be thoroughly sanded. Calculation per m ² .				
	2. file room	m ²	17,00		
	3. medical office	m ²	0,70		
	9. boiler room	m ²	63,00		
	10. water filters	m ²	20,00		
	13. stairs for first floor	m ²	12,20		
	14. stairs for apartment	m ²	25,00		
	Total skimming:	m ²	137,90		
4.2.	Material supply and transport, and finish of jambs after windows and doors are installed. Jambs shall be finished with construction adhesive and trowelling plaster in two layers. Calculation per m ¹ .	m ¹	191,40		
4.3.	Material supply and transport, and painting of walls and ceilings. All surfaces shall be sanded, covered with gypsum, neutralized, waterproofed and painted in two layers with semi-dispersive paints, shade chosen by the Investor. Calculation per m ² of painted surface.				
	1. ground floor corridor	m ²	193,00		
	2. file room	m ²	58,60		
	3. medical office	m ²	88,85		
	4. intervention	m ²	72,90		
	5. emergency room	m ²	51,10		
	6. X-ray	m ²	82,80		
	7. store room	m ²	28,00		
	8. laboratory	m ²	54,00		
	9. boiler room	m ²	63,00		
	10. water filters	m ²	20,00		
	11. toilet for patients	m ²	18,50		
	12. toilet for medical staff	m ²	27,00		
	13. stairs for first floor	m ²	165,00		
	14. stairs for apartment	m ²	129,00		
	15. first floor corridor	m ²	135,00		
	16. gynaecological clinic	m ²	95,50		
	Total painting:	m ²	1.282,25		
4.4.	Material supply and transport, and painting of existing windows and doors, over existing paint, in white. Prior to painting, all surfaces shall be sanded, cleaned, while all damages and cracks shall be filled with putty. Surface shall be filled with oil putty, sanded and refilled. Apply oil paint, and after drying, sand and refill it with oil putty. thoroughly sand and paint it with enamel varnish. Calculation per piece.				
	200/290 light well at stairs	pcs	1		
	257/150 light well at stairs	pcs	1		
	70/70 cover for attic	pcs	1		
	160/185 triple windows in apartment, only externally	pcs	4		
	110/185 double windows in apartment, only externally	pcs	1		
	70/275 balcony doors in apartment, only externally	pcs	1		

4.5.	Supply and transport of materials and painting of metal fence with paint for metal. Before painting, corrosion shall be removed from metal by chemical and physical means, then all surfaces shall be sanded and cleaned. Fence shall be waterproofed and primed, and then painted two times with paint for metal. Calculation per m ² of fence.				
	13. stairs for first floor	m ²	5,30		
	14. stairs for apartment	m ²	5,30		
	fence on apartment terrace	m ²	5,10		
4.6.	Supply and transport of materials, and painting of existing facade with plastic injection plaster. Any existing paint shall be removed from the facade, sand it and wash with water, and then prime in 1-2 coats. Plastic mortar shall be applied in 2-3 layers using a compressor and gun. After treatment, façade shall be protected at least 24 hours against weather conditions. Calculation per m ² of treated facade.	m ²	548,00		
PAINTING, TOTAL:					

V CARPENTRY WORKS					
5.1.	Supply and transport of materials and replacement of damaged parts of the roof structure and rafters (~ 10%). Calculation per m ³ of roofing material.	m ³	2,00		
5.2.	Supply and transport of materials and installation of OSB-3 panels, 15 mm thick, over existing roof rafters. Calculation per m ² of oblique roof projection.	m ²	405,00		
CARPENTRY WORKS, TOTAL:					

VI ROOFING					
6.1.	Supply and transport of materials and installation of Alu foil, vapour permeable and waterproof, 150g, over rafters, and under OSB panels, as instructed by manufacturer. Calculation per m ² of oblique roof projection.	m ²	405,00		
6.2.	Supply and transport of materials and installation of bituminous roof shingles, "Tegola Canadese" or equivalent. Shingles shall be attached to OSB panels, which is calculated separately, by stainless nails with a wide head or stainless couplings, all in accordance with the manufacturer's instructions. The price includes covering of valleys, hips, ridges, elements for ventilation, snow stops, etc. Calculation per m ² of covered area.	m ²	405,00		
ROOFING, TOTAL:					

VII FLOORING - VINYL					
7.1.	Cleaning, filling of expansion joints on cement screeds, with appropriate Mapei Epojet or equivalent resins for repair. Use of ecological materials. All necessary materials (supply and transport) are provided by the Contractor. Calculation per m ¹ .				
	3. medical office	m ¹	20,00		
	4. intervention	m ¹	50,00		
	8. laboratory	m ¹	30,00		

7.2.	Repairing of cracks in cement creed involves cutting through the cracks by grinder and cleaning by suction, and then cutting of grooves crosswise to the direction of crack, 20 cm long, at every 40 cm. Crack shall be coated with ecological injection resin Mapei Epojet or equivalent, reinforcing wire shall be installed (up to 4 mm thick) in the transverse grooves, and then filled with mixture of injectable resin and quartz sand, grain size 0.3 - 0.8 mm. All necessary materials (supply and transport) shall be provided by the Contractor. Calculation per m ¹ .				
	3. medical office	m ¹	80,00		
	4. intervention	m ¹	200,00		
	8. laboratory	m ¹	120,00		
7.3.	Application of ecological dispersive coating Mapei Ecoprim T or equivalent. After drying, ecological self-leveling, smoothing compound Mapei Ultraplan Eco or equivalent shall be applied not less than 3 mm. After smoothing compound is dried, it shall be thoroughly sanded, cleaned and vacuumed. All necessary materials (supply and transport) shall be provided by the Contractor. Calculation per m ² of levelled area.				
	3. medical office	m ²	26,75		
	4. intervention	m ²	19,50		
	8. laboratory	m ²	120,00		
7.4.	Supply and transport of materials and laying of homogeneous vinyl flooring, 2 mm thick, wear class P (according to EN 600 and 660), with PUR protection, fire resistance Bfl-s1 (according to EN 13501-1), and weighing up to 3300g/ m2, class 34-43 (EN 685), slip resistance R9, roll dimension 2x23m, not supporting mould and fungi growth, and on the previously prepared and leveled cement screed (max. humidity 2%). Mitred vinyl flooring in dry condition, sticking to the floor by dispersion ecological glue - with joints welded with electrode of colour matching the flooring. After welding, the joint shall be perfectly flush with the floor. The quality and type of flooring shall be of class manufacturer "TARKETT - Standard Plus" or equivalent (Besides his offer Bidder shall submit certificate of compliance/ certificates for materials proving they correspond to the technical requirements. Calculation per m ² of performed horizontal area of floor.				
	3. medical office	m ²	26,75		
	4. intervention	m ²	19,50		
	8. laboratory	m ²	120,00		
7.5.	Bonding of PVC final strip at the end of vinyl flooring at the edge with the wall. Bonding shall be performed with neoprene, ecological contact glue Mapei Adeslix VZ (does not contain toluene, high binding strength) or the like, on the previously levelled, clean and dry prepared surface. Type and dimension of PVC skirting according to details of the Final architectural design. All necessary materials (supply and transport) shall be provided by the Contractor. Calculation per m ¹ .				
	3. medical office	m ¹	18,90		
	4. intervention	m ¹	16,90		
	8. laboratory	m ¹	13,10		
FLOORING - VINYL, TOTAL:					

VIII JOINERY					
8.1.	Fabrication, transport and installation of internal double, partially glazed doors, made of five-chamber hard PVC section, reinforced by stainless steel sections, filling and sealing system by EPDM rubber, with hardware, locks and three hinges, in white. Panel filled with highly resistant PVC. Parts of the door leaf shall be glazed by transparent float glass, thickness 6 mm. Calculation per piece.				
	dim. 155/235 - V - 1 - corridors on ground floor and first floor	pcs	2		
8.2.	Fabrication, transport and installation of internal single doors, made of five-chamber hard PVC section, reinforced by stainless steel sections, filling and sealing system by EPDM rubber, with hardware, locks and three hinges, in white. Calculation per piece.				
	dim. 90/205 - V - 2 - ground floor corridor	pcs	1		
	dim. 70/205 - V - 3 - water filters	pcs	1		
8.3.	Fabrication, transport and installation of windows made of highly resistant, hard, five-chamber PVC sections, reinforced with stainless steel sections, filling and sealing system by EPDM rubber, insulated glazing 4+12+4 mm. The price includes PVC windowsills. Calculation per piece.				
	dim. 160/185 - P - 1	pcs	20		
	dim. 155/160 - P - 2	pcs	2		
	dim. 75/90 - P - 3	pcs	6		
	dim. 90/100 - P - 4	pcs	1		
JOINERY TOTAL:					

IX SHEET METAL	
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9.1.	Supply and transport of materials and flashing of wall valley by plasticized sheet metal, including fastening of sheet against the wall with nails and mortar fillet, and making of standing groove at a distance of 8 cm from the edge of covering and wrapping of sheet edge. Calculation per covered area without creation of grooves, developed width of 40 cm. Calculation per m ¹ .	m ¹	12,00		
9.2.	Supply and transport of materials and flashing of the eaves by plasticized sheet, width of 80 cm. The fascia shall be performed 10 cm high, sheet shall be placed under the covering 10 cm, and the upper edge shall be bent in the circle. At the bottom of the fascia, holes shall be made for water passing. Stiffening shall be achieved by pyramidal supports made of sheet soldered to the fascia and flashing of eaves. Distance between supports 50 cm. Calculation per m ¹ .	m ¹	98,00		
9.3.	Supply and transport of materials and construction of gutters by plasticized sheet metal d=0.55 mm, on the hooks 30/6. Gutter is square section, developed width 50 cm, gutter is 15 cm wide. Calculation per m ¹ .	m ¹	52,00		
9.4.	Supply and transport of materials and construction of downpipes by plasticized sheet metal d=0.55 mm, on the hooks 30/6. Downpipe is square section 15/15 cm, developed width 50cm. Calculation per m ¹ .	m ¹	37,00		

9.5.	Supply and transport of materials and construction of wind strip made of plasticized sheet metal d=0.55 mm, developed width 40 cm. Calculation per m ¹ .	m ¹	46,00		
9.6.	Supply and transport of materials and flashing of chimneys by plasticized sheet metal d=0.55 mm. Calculation per piece.	pcs	8		
SHEET METAL TOTAL:					
X TILING WORKS					

10.1.	Supply and transport of materials and construction of leveling floor in the boiler room made of cement mortar, ratio 1:3, thickness up to 5 cm. Before screed is applied, the base shall be cleaned and washed. Screed shall be cured until it hardens. Calculation per m ² .	m ²	15,60		
10.2.	Supply and transport of materials and bonding of non-slip ceramic floor tiles, I class, on the layer of adhesive and grouting by Fugomal, butt joints, in colour chosen by the Investor. Calculation per m ² .				
	1. ground floor corridor	m ²	63,60		
	2. file room	m ²	13,00		
	5. emergency room	m ²	11,00		
	9. boiler room	m ²	15,60		
	11. toilet for patients	m ²	9,00		
	15. first floor corridor	m ²	39,00		
	floor tiles, total:	m ²	151,20		
10.3.	Supply and transport of materials and bonding of ceramic wall tiles, I class, on the layer of adhesive and grouting by Fugomal, butt joints, in colour chosen by the Investor. Calculation per m ² .				
	11. toilet for patients	m ²	39,00		
10.4.	Supply and transport of materials and placing of plinth made of ceramic floor tiles, I class, 10cm high, on the layer of adhesive and grouting by Fugomal, butt joints, in colour chosen by the Investor. Calculation per m ¹ .				
	1. ground floor corridor	m ¹	38,00		
	2. file room	m ¹	14,30		
	5. emergency room	m ¹	12,46		
	9. boiler room	m ¹	14,90		
	16. first floor corridor	m ¹	28,60		
	ceramic plinth, total:	m ¹	108,26		
10.5.	Supply and transport of materials and installation of corner T aluminum strips on thresholds. Calculation per m ¹ .	m ¹	17,10		
TILING WORKS, TOTAL:					

XI SANITARY WARE					
11.1.	Careful removal of the wall-mounted PE water supply pipes, Fi 20 and Fi 25. Pipes shall be collected, arranged, loaded onto a truck and taken to a landfill or place designated by the Investor, up to 10 km of distance. Calculation per m ¹ .	m ¹	80,00		

11.2.	Supply, transport and installation of plumbing PVC pipes, including fittings and material for joining. The item includes chiselling for installation and passage of pipes and plastering of chisels. Debris shall be removed, loaded onto a truck and taken to a landfill or place designated by the Investor, up to 10 km of distance. Calculation per m ¹ .				
	∅ 20	m ¹	30,00		
	∅ 25	m ¹	50,00		
11.3.	Careful disassembly of wash basins, with trap and taps. Carefully disassembly, loading to a truck and transport to the landfill or place specified by the Investor up to 10km. Calculation per piece.				
	3. medical office	pcs	1		
	8. laboratory	pcs	1		
	11. toilet for patients	pcs	2		
11.4.	Careful removal of ceramic WC pan - squatting closet, cistern and pipes. Careful removal, loading to a truck and transport to a landfill or place designated by the Investor, up to 10 km of distance. Calculation per piece.	pcs	2		
11.5.	Supply, transport and installation of a set of ceramic wash basin, 60x40 cm, domestic manufacturer, I class. Wash basin shall be fixed to the wall by adequate plugs and brass screws, over washers with rubber. Wash basin shall be connected to drain by chrome trap, diameter 5/4", with a rosette, plug and chain. Beside wash basin, installation of shelf, soap and towel holder. The price includes valves, as well as possible replacement of damaged water supply and sewage pipes. Calculation per piece of wash basin, the entire set.				
	3. medical office	pcs	1		
	8. laboratory	pcs	1		
	11. toilet for patients	pcs	2		
11.6.	Supply, transport and installation of WC pan, domestic manufacturer, I class, with enameled water cistern, seat, connecting and flushing pipes, and valves. Calculation per piece, the entire set.				
	11. toilet for patients	pcs	2		
11.7.	Supply, transport and installation of chrome wall-mounted tap for wash basin for hot and cold water. Rozette shall be between the wall and the tap. Calculation per piece.				
	3. medical office	pcs	1		
	8. laboratory	pcs	1		
11.8.	Supply and installation of chrome wall-mounted tap for wash basin for cold water. Rozette shall be between the wall and the tap. Calculation per piece.				
	11. toilet for patients	pcs	2		
11.9.	Supply, transport and installation of a set of instantaneous water heater, capacity 5 l, with pipes and all necessary fitting. Electric water heater shall be installed and connected to electrical outlet. Calculation per piece, complete.				
	3. medical office	pcs	1		
	8. laboratory	pcs	1		
SANITARY WARE, TOTAL:					

XII SUNDRIES					
12.1.	As-built design in five printed copies in digital format, on at least two CDs, submitted to the Investor for maintenance purposes and one set to the Funding body. Contracted Bill of Quantities, technical description and graphical data from the tender can be used as the basis for the preparation of the design, along with a check of all the measures, dimensions and areas. This design should include the following parts:				
	- general documentation: information about the company that developed the design, the decision on appointing responsible designers, statements and other attachments according to the Rules on the content, manner and process of making and ways of checking the technical documentation according to the class and purpose of facility (Official Gazette of RS 23/2015)				
	- technical description				
	- data with indicated changes (floors, joinery, sanitary ware, heating, lightning rod).				
	- at least one characteristic cross-section with marked changes (new layers of the roof, compartments for water valves, suspended ceilings, etc).				
	- front and rear elevation				
	- diagrams of joinery.				
	- Contractor's contracted BoQ				
	- all other attachments needed to display the executed works and future actions on capital maintenance of facility	pcs	1,00		
SUNDRIES, TOTAL:					

A: SUMMARY OF CIVIL AND SPECIALIST'S WORKS

I	ASSEMBLY / DISASSEMBLY AND DEMOLITION	
II	DRY WORKS	
III	MASONRY	
IV	PAINTING	
V	CARPENTRY WORKS	
VI	ROOFING	
VII	FLOORING - VINYL	
VIII	JOINERY	
IX	SHEET METAL	
X	TILING	
XI	SANITARY WARE	
XII	SUNDRIES	
CIVIL AND SPECIALIST'S WORKS TOTAL:		

B: BILL OF QUANTITIES FOR RECONSTRUCTION OF EXTERNAL WATER SUPPLY SYSTEM**Note: Bidder shall price all items in the tender documentation excluding VAT.**

No.	ITEM DESCRIPTION	UoM	Quantity	Unit price	Total
B EXTERNAL WATER SUPPLY SYSTEM					
I EARTHWORKS					

1.1.	Mechanical excavation of trench for a new water inlet PE pipe, including dismantling of existing pipe and removal of excavated material to the trench side. Calculation per m ³ , measured overgrown.				
	150mx,08mx1,2m	m ³	144,00		
1.2.	Supply, transport and spreading of sand on the bottom of the trench around the pipe and above the pipe intersection point in a layer of 20 cm. Calculation per m ³ of compacted gravel.				
	(150-18)mx0,15m ³ /m ¹	m ³	22,50		
1.3.	Backfilling of the trench with excavated material, including compaction in layers of 30 cm. Calculation per m ³ .				
		m ³	151,88		
EARTHWORKS					

II INSTALLATION WORKS

2.1.	Supply, transport and installation of U sections to the bridge carrier (under the bridge pedestrian walkways) along the entire length of the bridge at a distance of 2 m for placing of protection pipes, all in accordance with the attached details. Calculation per piece.				
	U section 80/80 mm length 3x40cm	pcs	10,00		
2.2.	Supply, transport and installation of protective pipe Ø160 mm through U sections for the passage of water pipe Ø25, all in accordance with the attached details. Calculation per m ¹ .				
	- PVC pipe Ø 160mm	m ¹	18,00		
2.3.	Supply, transport and installation of insulation around the inlet water supply PE pipe along the protective pipe on the bridge, all in accordance with the attached details. Calculation per m ¹ .				
	insulation d= 5 cm	m ¹	18,00		
2.4.	Supply, transport and installation of the inlet water supply PE pipe Ø 25 on sand bedding in the trench and through protective pipe on the bridge, all in accordance with the attached details.				
	Calculation per m ¹ .	m ¹	150,00		
INSTALLATION WORKS					

B: SUMMARY - EXTERNAL WATER SUPPLY SYSTEM

I	EARTHWORKS	
II	INSTALLATION WORKS	
EXTERNAL WATER SUPPLY SYSTEM TOTAL:		

C: BILL OF QUANTITIES FOR LIGHTNING PROTECTION SYSTEM

Note: Bidder shall price all items in the tender documentation excluding VAT.

	All the material used should be of first class quality and conform to the standards. All works must be carried out by qualified labor. Mentioned types and manufacturers of certain pieces of equipment or installation materials are not mandatory. The Contractor may install any other equipment, or material, provided it has the same characteristics, as previously confirmed and approved by an expert.				
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No.	ITEM DESCRIPTION	UoM	Qty.	Unit price	Total
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C LIGHTNING PROTECTION SYSTEM

I RECEPTION SYSTEM

1.1.	Supply and installation of the conductor for reception system, type AH2 90200 (Hermit), made of aluminum Ø10mm solid cross-section. Mounted on typical carriers. Calculation per m ¹ .	m ¹	85,00		
1.2.	Supply, transport and installation of bracket for shingle, type SON14 1423 (Hermit) made of stainless steel. Calculation per piece.	pcs	77		
1.3.	Supply, transport and installation of wall bracket type ZON03 20322, (Hermit) made of stainless steel, complete with plug. Calculation per piece.	pcs	8		
1.4.	Supply, transport and installation of the contact element type KON04A 50522, (Hermit) made of stainless steel for interconnecting the conductors of the reception system. Calculation per piece.	pcs	10		
1.5.	Supply, transport and installation of the contact elements to connect the receiving conductor to gutter, type KON06 60122 (Hermit), made of stainless steel. The tightening is carried out with screws. Calculation per piece.	pcs	6		
1.6.	Supply, transport and installation of the contact element for connecting metal compounds, type KON05 80518 (Hermit), made of stainless steel. Calculation per piece.	pcs	12		

RECEPTION SYSTEM, TOTAL

II DESCENDING CONDUCTORS

2.1.	Supply, transport and installation of descending conductors, type AH2 90200 (Hermit), made of aluminum Ø10mm solid cross-section. Mounted on typical carriers. Calculation per m ¹ .	m ¹	25,00		
2.2.	Supply, transport and installation of wall brackets, type ZON03 20322 (Hermit), made of stainless steel, complete with plug. Calculation per piece.	pcs	21		

2.3.	Supply, transport and installation of contact element - test joint, type KON02 40122 (Hermi), made of stainless steel for interconnection of descending conductor and grounding conductor strip Rf 30x4mm. Calculation per piece.	pcs	4		
2.4.	Supply, transport and installation of mechanical protection carrier, type VZ carrier 03 303 (Hermi), made of stainless steel, complete with screw, length 50mm and plug. Calculation per piece.	pcs	8		
2.5.	Supply, transport and installation of mechanical protection, type VZ 10 (Hermi), made of stainless steel, length 1,5m, complete with screw, length 50mm and plug. Calculation per piece.	pcs	4		
2.6.	Supply, transport and installation of clip Ø120 for connecting grounding conductor to downpipe, type KON 10A 700358 (Hermi), made of stainless steel. Calculation per piece.	pcs	6		
2.7.	Supply, transport and installation of contact element, type KON08 50111 (Hermi), made of stainless steel for interconnection of descending and receiving conductor. Calculation per piece.	pcs	4		
DESCENDING CONDUCTORS, TOTAL					
III MAIN DISTRIBUTION CABINET- MEASURING AND DISTRIBUTION CABINET, PROTECTION LEVEL I (TYPE 1)-lightning arrester					
3.1.	Supply, transport and installation of surge protection, class 1, type PZH I V/275/12,5 7710006 (Hermi), Un=230V, Uc=275V, Iimp=12,5kA (10/350 µs/µs), Q=6,25As, W/R=39kJ/Ω, Up=1,2kV, TA< 25ns, IP20. Mounted in DC on DIN rail 35mm. Connection between a phase conductor and a neutral conductor. Calculation per piece.	pcs	3		
3.2.	Supply, transport and installation of surge protection, class 1, type PZH I B/255/80 N/PE 7710080 (Hermi), Uc=255V, Iimp=80kA (10/350), Q=40As, W/R 1600 kJ. Mounted in DC on DIN rail. Connection between a neutral conductor and a protective conductor. Calculation per piece.	pcs	1		
MDC-M&DC PROTECTION LEVEL, TOTAL					
IV DP/DC PROTECTION LEVEL II (TYPE 2)-surge arrester- CABINET FOR ONE DISTRIBUTION PANEL					
4.1.	Supply, transport and installation of surge protection, class 2, type PZH II V/275/50 7724001 (Hermi), In=20kA (8/20). Mounted in distribution panel (DP) or in distribution cabinet (DC). Connection between a phase conductor and a neutral conductor. Calculation per piece.	pcs	3		

4.2.	Supply, transport and installation of surge protection, class 2, type PZH II B/255/50 7730022 (Hermi), Iimp=20kA (10/350). Mounted in distribution panel (DP) or in distribution cabinet (DC). Connection between a neutral conductor and protective conductor. Calculation per piece.	pcs	1		
		DP/DC PROTECTION LEVEL, TOTAL			

C: SUMMARY - LIGHTNING PROTECTION SYSTEM		
I	Reception system	
II	Descending conductors	
III	MDC-M&DC PROTECTION LEVEL I (TYPE 1)-lightning arrester	
IV	DP/DC PROTECTION LEVEL II (TYPE 2)-surge arrester- CABINET FOR ONE DISTRIBUTION PANEL	
LIGHTNING PROTECTION SYSTEM TOTAL:		

D: BILL OF QUANTITIES FOR CENTRAL HEATING SYSTEM					
Note: Bidder shall price all items in the tender documentation excluding VAT.					
No.	ITEM DESCRIPTION	UoM	Qty	Unit price	Total
D CENTRAL HEATING SYSTEM					
	General note: All the material used should be of first class quality and conform to the standards. All works must be carried out by qualified labor. Mentioned types and manufacturers of certain pieces of equipment or installation materials are not mandatory. The Contractor may install any other equipment, or material, provided it has the same characteristics, as previously confirmed and approved by an expert. The offered price includes the price of all associated works: chiselling, patching of holes after completing installations, removal of debris to landfill up to 10 km of distance.				
I BOILER ROOM					
1.1.	Supply, transport and installation of hot water boiler for combustion of wood pellets, such as Alfa Plam model Grande or the like.				
	The required characteristics of the boiler are:				
	rated power: 30 kW,				
	ability to modulate power: 10 - 30 kW				
	operating pressure up to 3 bar,				
	tank capacity for pellets: 100 kg				
	The cost of supply and installation of the boiler should also include supply and installation of reinforcement needed to perform separable connection between boiler and pipeline, filling and draining and venting of the boiler. The price of the boiler also includes the cost of the arrival of the official service provider to adjust the parameters, verification of guarantees and commissioning. Calculation per piece, a complete set.	pcs	1		
1.2.	Supply, transport and installation of the sealed flue pipeline made of sheet steel with, diameter Ø 80 mm, 1 mm thick, composed of:				
	flueway pipe ø80x250 mm,	pcs	1		
	flueway pipe ø80x500 mm,	pcs	1		
	flueway pipe ø80x1000 mm,	pcs	1		
	flueway arch ø80/90°,	pcs	1		
	flueway T piece for removal of condensation,	pcs	1		
	flueway chimney plug ø80	pcs	1		

1.3.	Supply, transport and installation of a wireless digital room thermostat with a programmable number of programs during one day for 7 days. The cost of supply and installation of thermostat includes the required electrical material. Calculation per piece, complete set.	pcs	1		
1.4.	Supply, transport and installation of a 4-way Mixing Valve with brass body, such as ESBE VRG141 or the like. R5/4 ". Calculation per piece.	pcs	1		
1.5.	Supply, transport and installation of circulation pump such as Grundfos UPS 25/60 model or the like.				
	Pump shall be delivered and installed with galvanized union couplings for separating the rest of the installation R1". Calculation per piece, complete set.	pcs	1		
1.6.	Supply, transport and installation of the check valve with brass casing R1". Calculation per piece.	pcs	1		
1.7.	Supply, transport and installation of safety valves with brass body, such as Kalefi from Italy or the like. R1/2 ", P=3 bar. Calculation per piece.	pcs	1		
1.8.	Supply, transport and installation of the oblique strainer with brass body R1". Calculation per piece.	pcs	1		
1.9.	Supply, transport and installation of pressure vessels such as Imera from Italy or the like, with the following characteristics:				
	capacity: 50 L				
	pressure of the previous charge: 1,5 bar				
	temperature operating range: 10 - 110°C				
	Vessel shall be delivered and installed with:				
	galvanized union fitting for separating the rest of the installation R3/4", and the holder.				
	Calculation per piece, complete set	pcs	1		
1.10.	Supply, transport and installation of shut-off ball valves. Calculation per piece.				
	R1" FF	pcs	2		
	R1" MF	pcs	2		
	R1/2" FF	pcs	1		
1.11.	Supply, transport and installation of pressure gauge, 0 - 120°C, 0 - 6 bar, DN50. Calculation per piece.	pcs	1		
1.12.	Supply, transport and installation of thermometer, 0 - 120°S, DN40. Calculation per piece.	pcs	2		
1.13.	Supply, transport and installation of automatic air vent R1/2". Calculation per piece, complete set.	pcs	6		
	BOILER ROOM, TOTAL:				

II SPACE HEATERS AND EQUIPMENT					
2.1.	Supply, transport and installation of space heaters made of aluminum elements - aluminum radiators, such as Fondital model Kalidor S4 or the like.				
	Radiators shall be delivered along with: radiator holders and mounts, radiator caps and reduction, manual air taps and filling/discharging taps, fittings and gaskets. All completed, equipped and hung on the wall.				
	Calculation per specified set, completed.				
	20h600/2480W	pcs	2		
	16h600/2272W	pcs	2		
	14h600/1988W	pcs	1		
	13h600/1846W	pcs	2		
	12h600/1704W	pcs	1		
	9h600/1278W	pcs	2		
	8h600/1136W	pcs	1		
	5h600/710W	pcs	1		
2.2.	Supply, transport and installation of the corner radiator valves with thermostatic option, such as Giachini or the like. Calculation per piece, completed.				
	R1/2"	pcs	12		
2.3.	Supply, transport and installation of the angle unions with thermostat option, such as Giachini or the like. Calculation per piece, completed.	pcs	12		
2.4.	Supply, transport and installation of thermostat heads, such as Giachini or the like. Calculation per piece, completed.	pcs	8		
SPACE HEATERS AND EQUIPMENT, TOTAL:					
III PIPELINE AND COMPONENTS					
3.1.	Supply, transport and installation of copper pipes, of the following dimensions:				
	ø28x1,0	m ¹	50,00		
	ø22x0,9	m ¹	48,00		
	ø18x0,9	m ¹	25,00		
	ø15x0,9	m ¹	40,00		
3.2.	Supply, transport and installation of copper and brass fittings, welding wires and paste, filling welding cylinders, clamps, clamps and the like, is 50% of the value of the item for pipes.		0,5		
3.3.	Supply, transport and installation of foam pipe insulation. Calculation per m ¹ .				
	ø 28x9	m ¹	10,00		
PIPELINE AND COMPONENTS, TOTAL:					

D: SUMMARY - CENTRAL HEATING SYSTEM		
I	BOILER ROOM	
II	SPACE HEATERS AND EQUIPMENT	
III	PIPELINE AND COMPONENTS	
	CENTRAL HEATING SYSTEM, TOTAL:	

GRAND SUMMARY		
A	CIVIL AND SPECIALIST'S WORKS	
B	EXTERNAL WATER SUPPLY SYSTEM	
C	LIGHTNING PROTECTION SYSTEM	
D	CENTRAL HEATING SYSTEM	
		TOTAL:
		TOTAL AMOUNT CALCULATED WITHOUT VAT