



ТОВАРИСТВО З ОБМЕЖЕНОЮ  
ВІДПОВІДАЛЬНІСТЮ «ІНЖИНІРІНГОВАЯ  
КОМПАНІЯ ФОРТІС»  
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"Current repair of anti-radiation shelter № 52108 (group P-4) Ingul Lyceum of the Ingul Village Council, at the address:  
st. Sadova, 49, Ingulka village, Bashtanka district, Mykolaiv region"

Water supply and sewerage  
173-WP-2024-F-WS

Chief Project Engineer  
Qualification Certificate for Engineering and Construction Design AS  
№ 019809. Ministry of Regional Development, Construction, Housing  
and Communal Services of Ukraine. Attestation Architectural and  
Construction Commission.

Shelikhova V.

Inv. No. op.	Signature & Date	Deputy. Inv. №	Agreed:	

Agreed:

Deputy. Inv. №


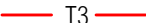
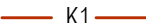
Signature & Date

Inv. No. op.

List of working drawings of the main set		
Arc.	Name	Notes
1	General data	
2	Plan of installation works of water supply and sewerage	
3	Basement installation plan diagram Water supply V1	
4	Basement installation plan diagram sewerage K1	

The main indicators of the VK network		
System names	Estimated expenditure	
	м³/day	м³/hour
Plumbing	5,36	0,223
Sewerage	5,36	0,223

List of documents referenced and attached.		
Denomination	Name	Notes
	Referenced documents	
DBN V.2.5-64:2012	Internal water supply and sewerage.	
	Documents to be attached	
173-WP-2024-F-WS.S	Specification of equipment, products and materials	3 sheets

Symbols, conditional, graphic		
Denomination graphic	Name	Denomination text
 V1	Water supply	V1
 T3	Hot Water Supply	T3
 K1	Drain	K1

General Guidelines






Water Supply and Sewerage Project, made on the basis of, architectural-construction section and technical inspection, applicable rules and regulations, DBN V. 2.5-64:2012 "Internal water supply and sewerage", DSTU B.AND. 2.4-32-2008, In this ob'(a) to the extent permitted by the provisions of this convention, the secretary-general of the scope of work:  
Basement, dismantling of existing bathroom and pipes, connection of sanitary appliances to existing networks.  
The shelter is designed for 134 people.

Water supply.

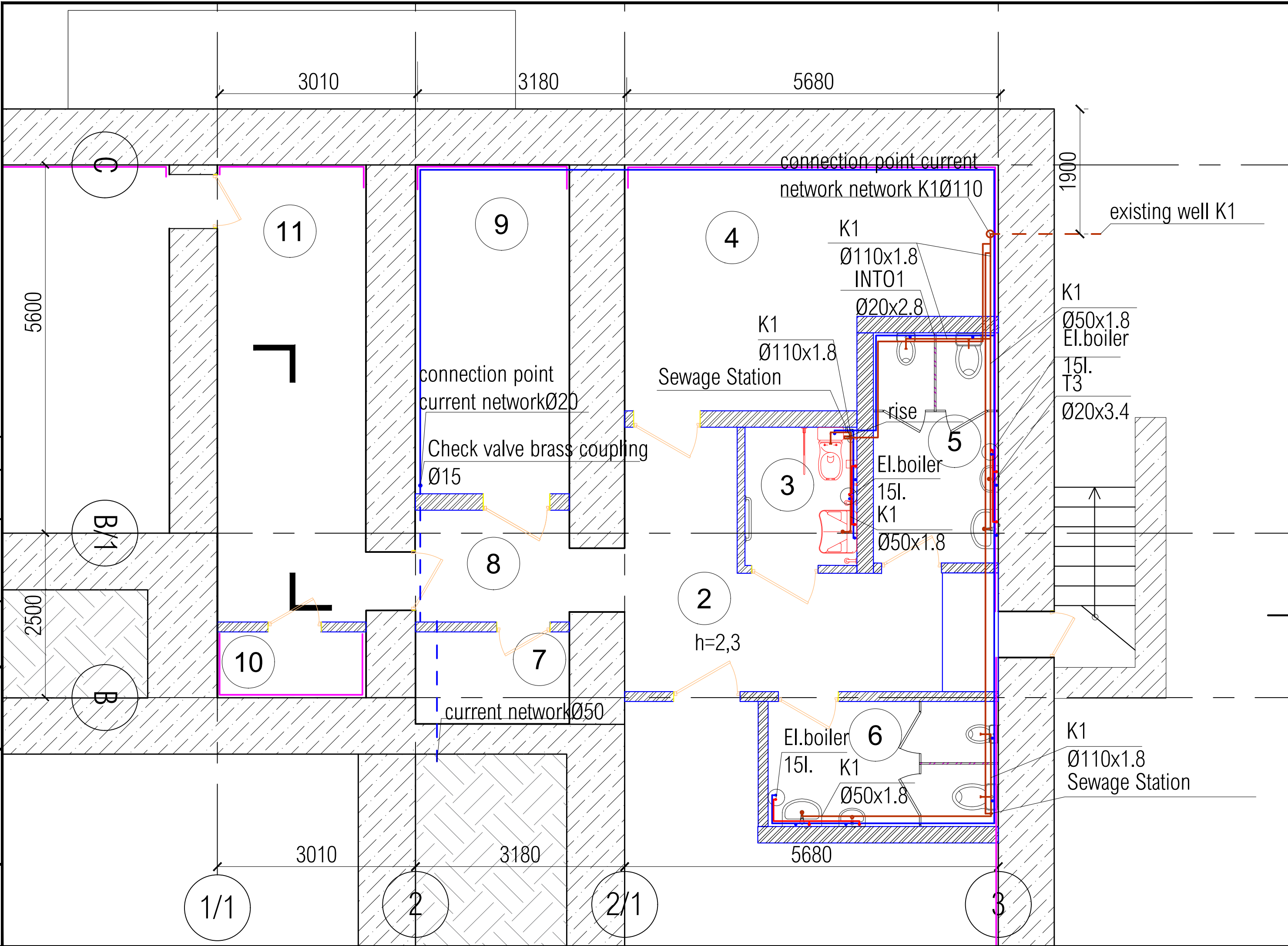
The project provides for the dismantling of the old water supply system and the installation of a new water supply system. Connect the cold water supply system from a water riser. Installation of a cold water supply system is provided under the ceiling - open, from polypropylene pipes PH16 Ø20x2.8. Connection to cold water supply devices is hidden in the groove, (aerated concrete walls) from polypropylene pipes of the PH brand16 Ø20x2.8. For water heating, the installation of electric water heaters is provided 15l. Installation of a hot water supply system provided under the ceiling - opened from polyethylene pipes of the PH brand20x3.4. Connection to hot water supply devices is provided hidden in the strobe, (aerated concrete walls) from polypropylene pipes of the PH brand20 Ø20x3.4.

Drain.

The project envisages the dismantling of the old sewage system, the installation of a new sewage system, for the drainage of sewage from sanitary appliances from polyethylene sewage pipes with a diameter of 110, 50, 40 mm. The outlet from the devices is laid with a slope in the direction of the drains. Connect the pipelines with the help of socket joints with the use of sealing rings with a polymer insert. The slope of the pipes is directed towards the drains.

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Sw.	Several.	Sheet	Dock.	Signature	Date	Water supply and sewerage	Stage	Sheet	Sheets
CPE		Shelikhova V.					WP	1	4
Developed		Khudashov L.							
Checked		Shelikhova V.				General data			
N.Kontr.		Pyrov Y.							

Agreed:  
Inv. No. op.  
Signature & Date  
Deputy. Inv. №



Room number	Name	Area, m <sup>2</sup>	
1	Premises for persons subject to shelter	39.28	
2	Corridor	14.03	
3	Universal sanitary and hygienic approx. for MGN	3.57	
4	Ventilation	18.15	
5	Women's bathroom	6.65	
6	Men's bathroom	6.65	
7	Premises for water conservation	3.28	
8	Corridor	3.98	
9	Premises for persons subject to shelter	11.70	
10	The premises of the switchboard	2.26	
11	Premises for persons subject to shelter	15.71	
12	The main room	129.25	
total area		255.21	

Legend:

- sink;
- toilet
- El.boiler 15l




NOTES:

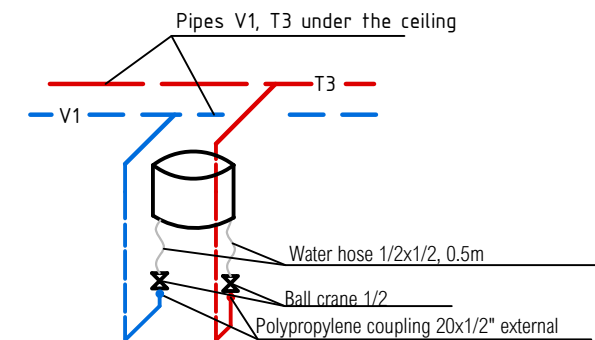
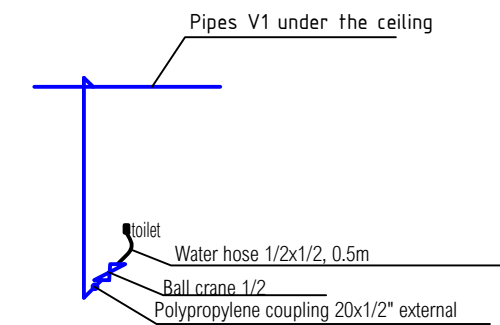
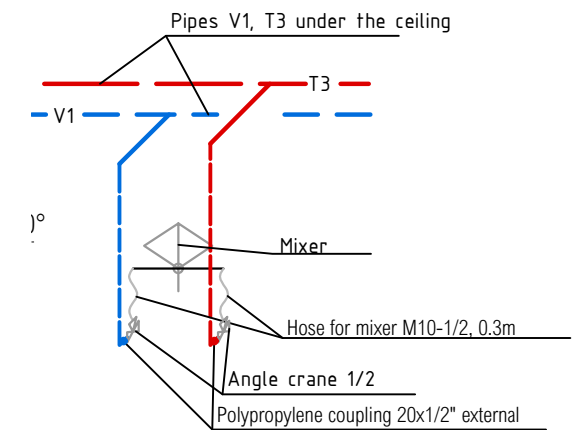
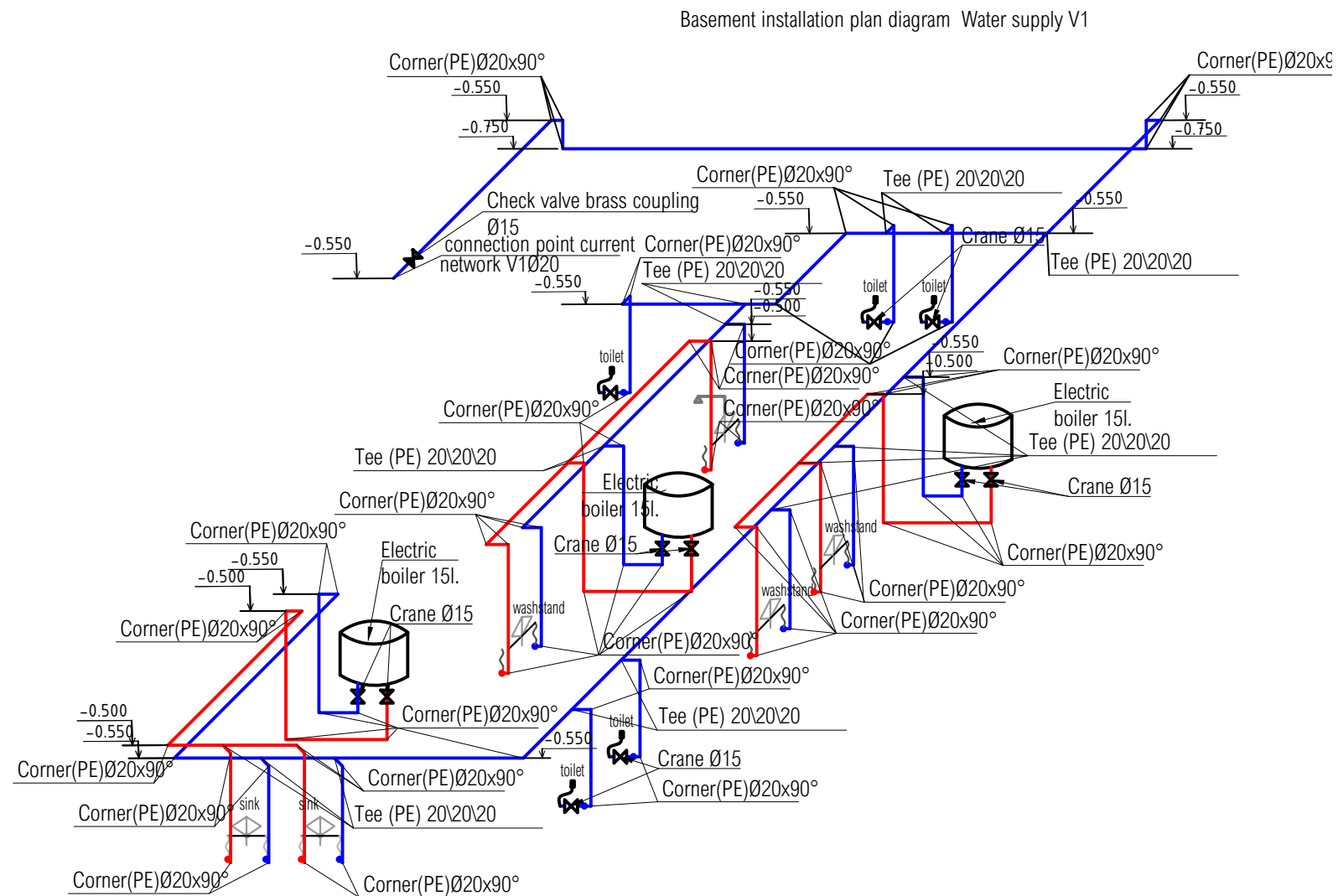
The height of the installation of sink for students in grades 1-2 is 0.5 m, in grades 3-11 - 0.7 m Hygienic shower installation height 0.6 m






173-WP-2024-F-WS					
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Sw.	Several.	Sheet	Dock.	Signature	Date
CPE		Shelikhova V.			
Developed		Khudashov L.			
Checked		Shelikhova V.			
N.Kontr.		Pyrov Y.			
Water supply and sewerage				Stage	Sheet
				WP	2
Plan of installation works of water supply and sewerage				Sheets	
				4	



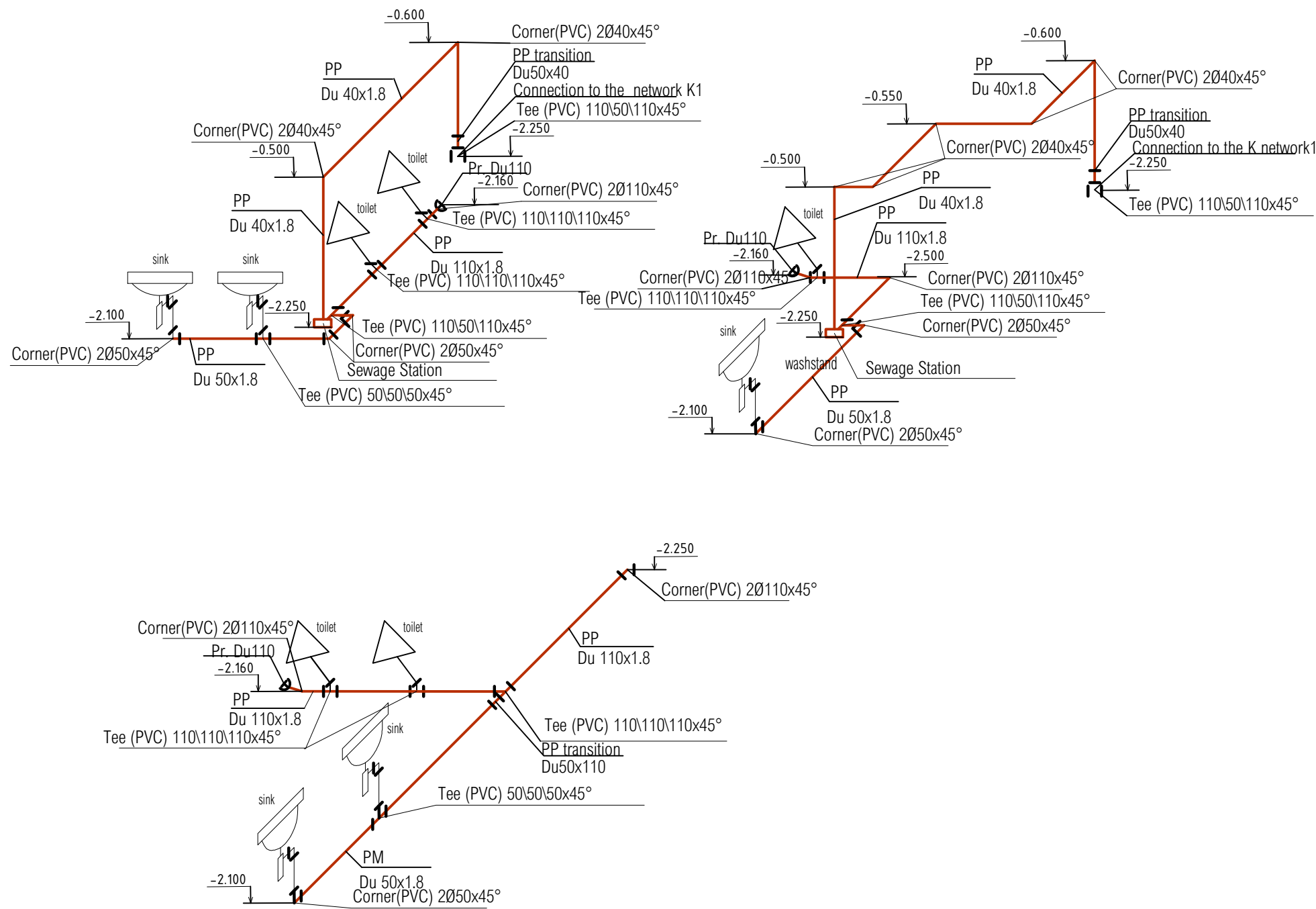
Agreed:					
Signature & Date	Deputy. Inv. №				
Inv. No. op.					

- Legend:
-  sink ;
  -  toilet
  -  El.boiler 15l








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Sw.	Several.	Sheet	Dock.	Signature	Date	Water supply and sewerage	Stage	Sheet	Sheets	
CPE		Shelikhova V.					WP	3	4	
Developed		Khudashov L.								
Checked		Shelikhova V.				Basement installation plan diagram Water supply V1				
N.Kontr.		Pyrov Y.								

Basement installation plan diagram sewerage K1



- Legend:
- sink;
  - toilet
  - El.boiler 15l

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Sw.	Several.	Sheet	Dock.	Signature	Date	Water supply and sewerage			Stage	Sheet	Sheets
CPE		Shelikhova V.							WP	4	4
Developed		Khudashov L.									
Checked		Shelikhova V.				Basement installation plan diagram sewerage K1					
N.Kontr.		Pyrov Y.									

Agreed:					
Deputy. Inv. №					
Signature & Date					
Inv. No. op.					

Agreed	In return. Inv. №	Subpara. and date	Inv. No. Podl.	Position	Name and technical characteristics	Type, brand, designation of the document, questionnaire	Equipment, product, material code	Factory-manufacturer	Unit of measure	Quantity	Unit weight, kg	Note											
				1	2	3	4	5	6	7	8	9											
					Water supply B1 and T3																		
				1	CERSANIT PRESIDENT sink 45cm							kit	2										
				2	Sink CERSANIT PRESIDENT 60 cm							kit	2										
				3	Sink JIKA Mio 64 cm (for mgn)							kit	1										
				4	Attaching the Sink to the wall M10×120 mm.							piece.	5										
				5	Push-on batch mixer for sink							piece.	5										
				6	Faucet with hygienic shower							piece.	1										
				7	VIEGA sink siphon 103927							piece.	5										
				8	Boiler ATLANTIC O'PRO Compact PC 15 SB							piece.	3										
				9	Automatic Air Release Valve Ø15							piece.	3										
				10	Ball crane 1/2							piece.	11										
				11	Angle crane 1/2							piece.	12										
				12	Brass coupling check crane Ø15							piece.	1										
				13	Polypropylene pipe dn20x3.4 PH 20							m	20										
				14	Polypropylene pipe dn20x2.8 PH 16							m	60										
				15	Rubber insulation for K-FLEX pipes 06x022-2 ST							m	80										
				16	Polypropylene tee 20x20x20							piece.	16										
				17	Polypropylene elbow Ø20 90°							piece.	72										
				18	Clamp with rubber gasket for dn 20 and screw 7x70 (step 1m.)							piece.	80										
				19	Hose for mixer M10-1½, 0.3m							piece.	12										
				20	Polypropylene coupling 20x1/2" external							piece.	11 / 12 / 1 / 1		for a ball crane 11piece. for a corner crane 12piece.for Check crane 1pc. for 1pc inset.								
21	Polypropylene coupling 20x1/2" internal							piece.	1		by check crane 1pc.												
22	Fireproof coupling PPM-20 (for 20 mm pipes)							piece.	1														
<div>*The draft allows for the replacement of the specifications of equipment and materials for similar according to its technical parameters.</div>												173-WP-2024-F-WS.S											
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												Developed		Khudashov L.									
												Checked		Shelikhova V.				Specification of equipment, products and materials					
												N.Kontr.		Pyrov Y.									





Agreed		
Inv. No. Podl.		
Subpara. and date		
In return. Inv. No		

Position	Name and technical characteristics	Type, brand, designation of the document, questionnaire	Equipment, product, material code	Factory-manufacturer	Unit of measure	Quantity	Unit weight, kg	Note
1	2	3	4	5	6	7	8	9
	Dismantling of equipment							
1	Ceramic toilet				piece.	1		
2	Sink				piece.	1		
3	Polypropylene pipe dn20x2.8 PH 16				m	19		
4	Polyvinyl chloride (PVC) pipe Ø110x1.8 1.0 m				piece.	1		

\*The draft allows for the replacement of the specifications of equipment and materials for similar according to its technical parameters.

						173-WP-2024-F-WS.S	Sheet
							3
Sw.	Several.	Sheet	Dock.	Signature	Date		