

REPUBLIC OF MOLDOVA



APA CANAL CHISINAU

CHISINAU WATER SUPPLY & SEWAGE TREATMENT - FEASIBILITY STUDY

Contract No: C21156/ECWC-2010-01-01



Preliminary Engineering Design Drawings

August 2012



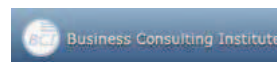
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and EU Neighbourhood Investment Facility

LIST OF DRAWINGS / LISTA DESENELOR

First Phase of Upgrading the Wastewater Treatment Plant / Prima etapă de modernizare a SEAU

Dwg. No / Nr. Desen	Description / Descrierea	Size / Format	Refer to Final Report / Ref. in Raportul Final
WWTP_01/SEAU_01	Technological Scheme / Schema tehnologică	A3	Chapter 3.2.3 /Cap 3.2.3
WWTP_02/SEAU_02	Non-constructible area / Zonă nonconstruibilă	A3	Chapter 3.2.2 /Cap 3.2.2
WWTP_03/SEAU_03	Works - to be rehabilitated / Lucrări - ce urmează a fi reabilitat	A3	Chapter 2.3 /Cap 2.3
WWTP_04/SEAU_04	Possible location of the works 1 / Posibila localizarea lucrărilor 1	A3	Chapter 3.2.2 /Cap 3.2.2
WWTP_05/SEAU_05	Possible location of the works 1 / Posibila localizarea lucrărilor 1	A3	Chapter 3.2.3 /Cap 3.2.3
WWTP_06/SEAU_06	New Inlet Chamber / Noua cameră de admisie	A3	Chapter 3.2.3 /Cap 3.2.3
WWTP_07/SEAU_07	Grit Chamber / Deznisipător	A3	Chapter 3.2.3 /Cap 3.2.3
WWTP_08/SEAU_08	Primary settling tanks / Decantoarele primare	A3	Chapter 3.2.3 /Cap 3.2.3
WWTP_09/SEAU_09	Secondary settling tanks Φ 40m / Decantoarele secundare Φ 40m	A3	Chapter 3.2.3 /Cap 3.2.3
WWTP_10/SEAU_10	Secondary settling tanks Φ 50m / Decantoarele secundare Φ 50m	A3	Chapter 3.2.3 /Cap 3.2.3
WWTP_11/SEAU_11	Aeration tanks / Bazne de aerare	A3	Chapter 3.2.3 /Cap 3.2.3
WWTP_12/SEAU_12	Belt Thickener / Îngroșător	A3	Chapter 3.2.3 /Cap 3.2.3
WWTP_13/SEAU_13	Digestors / Bayn de Fermentare	A3	Chapter 3.2.3 /Cap 3.2.3
WWTP_14/SEAU_14	Gas holder / Rezervor de stocare a gazelor	A3	Chapter 3.2.3 /Cap 3.2.3
WWTP_15/SEAU_15	2 different locations for primary settlers / 2 localizări diferite ale decantoarelor primare	A3	Chapter 3.2.3 /Cap 3.2.3
WWTP_16/SEAU_16	2 different locations for sludge treatment / 2 localizări diferite ale tratării nămolului	A3	Chapter 3.2.3 /Cap 3.2.3

New Water Treatment Plant / Noua Stație de Tratare a Apel

Dwg. No / Nr. Desen	Description / Descrierea	Size / Format	Refer to Final Report / Ref. in Raportul Final
WTP_01/STA_01	Balișevschi - Technological Scheme / Schema tehnologică - Balișevschi	A3	Chapter 4.1.2.1 /Cap 4.1.2.1
WTP_02/STA_02	Balișevschi - Treatment Building / Clădirea pentru Tratare - Balișevschi	A3	Chapter 4.1.2.3 /Cap 4.1.2.3
WTP_03/STA_03	Balișevschi - Location / Balișevschi - Locație	A3	Chapter 4.1.2.2 /Cap 4.1.2.2
WTP_04/STA_04	Balișevschi - Disinfection / Balișevschi - Dezinfecție	A3	Chapter 4.1.2.3 /Cap 4.1.2.3
WTP_05/STA_05	Ghidighici - Technological Scheme / Schema tehnologică - Ghidighici	A3	Chapter 4.1.2.2 /Cap 4.1.2.2
WTP_06/STA_06	Ghidighici - Treatment Building / Clădirea pentru Tratare - Ghidighici	A3	Chapter 4.1.2.3 /Cap 4.1.2.3
WTP_07/STA_07	Ghidighici - Location / Ghidighici - Locație	A3	Chapter 4.1.2.2 /Cap 4.1.2.2
WTP_08/STA_08	Ghidighici - Disinfection / Ghidighici - Dezinfecție	A3	Chapter 4.1.2.3 /Cap 4.1.2.3
WTP_09/STA_09	Ialoveni - Technological Scheme / Schema tehnologică - Ialoveni	A3	Chapter 4.1.2.1 /Cap 4.1.2.1
WTP_10/STA_10	Ialoveni - Treatment Building / Clădirea pentru Tratare - Ialoveni	A3	Chapter 4.1.2.3 /Cap 4.1.2.3
WTP_11/STA_11	Ialoveni - Location / Ialoveni - Locație	A3	Chapter 4.1.2.2 /Cap 4.1.2.2
WTP_12/STA_12	Ialoveni - Disinfection / Ialoveni - Dezinfecție	A3	Chapter 4.1.2.3 /Cap 4.1.2.3
WTP_13/STA_13	Petricani - Technological Scheme / Schema tehnologică - Petricani	A3	Chapter 4.1.2.1 /Cap 4.1.2.1
WTP_14/STA_14	Petricani - Treatment Building / Clădirea pentru Tratare - Petricani	A3	Chapter 4.1.2.3 /Cap 4.1.2.3
WTP_15/STA_15	Petricani - Location / Petricani - Locație	A3	Chapter 4.1.2.2 /Cap 4.1.2.2
WTP_16/STA_16	Petricani - Disinfection / Petricani - Dezinfecție	A3	Chapter 4.1.2.3 /Cap 4.1.2.3

Rehabilitation of Drinking Water Pumping Station / Reabilitarea Stației de Pompare - Apă Potabilă

Dwg. No / Nr. Desen	Description / Descrierea	Size / Format	Refer to Final Report / Ref. in Raportul Final
DW PS_01/SP AP_01	Balișevschi - Balișevschi	A3	Chapter 5.5.3.4 /Cap 5.5.3.4
DW PS_02/SP AP_02	Bulucani	A3	Chapter 5.5.3.2 /Cap 5.5.3.2
DW PS_03/SP AP_03	Ghidighici	A3	Chapter 5.5.4.4 /Cap 5.5.4.4
DW PS_04/SP AP_04	Ialoveni	A3	Chapter 5.5.4.3 /Cap 5.5.4.3
DW PS_05/SP AP_05	Independența	A3	Chapter 5.5.3.3 /Cap 5.5.3.3
DW PS_06/SP AP_06	Treapta II A	A3	Chapter 5.5.3.1 /Cap 5.5.3.1
DW PS_07/SP AP_07	Petricani	A3	Chapter 5.5.4.2 /Cap 5.5.4.2
DW PS_08/SP AP_08	Schinoasa	A3	Chapter 5.5.4.4 /Cap 5.5.4.4
DW PS_09/SP AP_09	Tohatin (old Pumping Station) / Tohatin (vechea Stație de Pompare)	A3	Chapter 5.5.2.2 /Cap 5.5.2.2
DW PS_10/SP AP_10	Tohatin (new Pumping Station) / Tohatin (noua Stație de Pompare)	A3	Chapter 5.5.2.2 /Cap 5.5.2.2

Rehabilitation of Wastewater Pumping Station / Reabilitarea Stației de Pompare - Ape Uzate

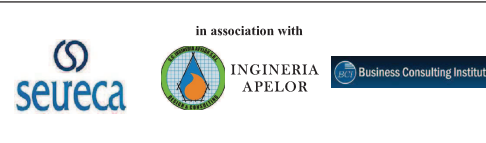
Dwg. No / Nr. Desen	Description / Descrierea	Size / Format	Refer to Final Report / Ref. in Raportul Final
WW PS_01/SP AU_01	Codru - existing situation / Codru - situația existentă	A3	Chapter 6.2.2 /Cap 6.2.2
WW PS_01/SP AU_01'	Codru - replacement of pumps/ Codru - înlocuirea pompelor	A3	Chapter 6.2.2 /Cap 6.2.2
WW PS_02/SP AU_02	V. Lupu - existing situation / V. Lupu - situația existentă	A3	Chapter 6.2.2 /Cap 6.2.2
WW PS_02/SP AU_02'	V. Lupu - replacement of pumps/ V. Lupu - înlocuirea pompelor	A3	Chapter 6.2.2 /Cap 6.2.2
WW PS_03/SP AU_03	Vatra - existing situation / Vatra - situația existentă	A3	Chapter 6.2.2 /Cap 6.2.2
WW PS_03/SP AU_03'	Vatra - replacement of pumps/ Vatra - înlocuirea pompelor	A3	Chapter 6.2.2 /Cap 6.2.2
WW PS_04/SP AU_04	Vieru - existing situation / Vieru - situația existentă	A3	Chapter 6.2.2 /Cap 6.2.2
WW PS_04/SP AU_04'	Vieru - replacement of pumps/ Vieru - înlocuirea pompelor	A3	Chapter 6.2.2 /Cap 6.2.2

Adjustment of the water distribution system to the new production scheme / Adaptarea sistemului de distribuție a apei la noul regim de producție

Dwg. No / Nr. Desen	Description / Descrierea	Size / Format	Refer to Final Report / Ref. in Raportul Final
NWNS-01	Diluare la SP Ghidighici	A3	Chapter 5.1.2 /Cap 5.1.2
NWNS-02	Diluare la SP Petricani	A3	Chapter 5.1.5 /Cap 5.1.5
NWNS-03	Noua organizare la SP Tohatin	A3	Chapter 5.1.3 /Cap 5.1.3
NWNS-04	Ocolirea instalațiilor existente la SAN Treapta II A	A3	Chapter 5.1.4 /Cap 5.1.4



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PROGRAMUL DE ALIMENTARE CU APĂ ȘI TRATARE A APELOR UZATE ÎN MUNICIPIUL CHIȘINĂU - STUDIU DE FEZABILITATE / CHISINAU WATER SUPPLY & SEWAGE TREATMENT - FEASIBILITY STUDY



Date	Rev.
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PROIECTARE PRELIMINARA

Lista desenelelor (1/2)

LIST OF DRAWINGS / LISTA DESENELOR

Rehabilitation of Ground Reservoirs / Reabilitarea Rezervoarelor

Dwg. No / Nr. Desen	Description / Descrierea	Size / Format	Refer to Final Report / Ref. in Raportul Final
R-01	Aeroport / Pipes and fittings rehabilitation / Reabilitarea conductelor și armăturilor	A3	Chapter 5.3 /Cap 5.3
R-02	Botanica / Pipes and fittings rehabilitation / Reabilitarea conductelor și armăturilor	A3	Chapter 5.3 /Cap 5.3
R-04	Buicani / Tank nr.2 rehabilitation V=5000 m3 / Reabilitarea rez. nr.2 V=5000 m3	A3	Chapter 5.3 /Cap 5.3
R-05	Buicani / Tank nr.3 rehabilitation V=6000 m3 / Reabilitarea rez. nr.3 V=6000 m3	A3	Chapter 5.3 /Cap 5.3
R-06	Buicani / Pipes and fittings rehabilitation / Reabilitarea conductelor și armăturilor	A3	Chapter 5.3 /Cap 5.3
R-07	Cartușa / Tanks nr 1 & 2 rehabilitation V=500 m3 / Reabilitarea rez. nr.1 și 2 V=500 m3	A3	Chapter 5.3 /Cap 5.3
R-08	Ciocana / Tanks nr 1 & 2 rehabilitation V=3000 m3 / Reabilitarea rez. nr.1 și 2 V=3000 m3	A3	Chapter 5.3 /Cap 5.3
R-09	Ciocana / Tank nr 3 rehabilitation V=10,000 m3 / Reabilitarea rez. nr.3 V=10,000 m3	A3	Chapter 5.3 /Cap 5.3
R-10	Ciocana / Pipes and fittings rehabilitation / Reabilitarea conductelor și armăturilor	A3	Chapter 5.3 /Cap 5.3
R-13	Colonița / Tank nr.2 rehabilitation V=500 m3 / Reabilitarea rez. nr.2 V=500 m3	A3	Chapter 5.3 /Cap 5.3
R-14	Colonița / Pipes and fittings rehabilitation / Reabilitarea conductelor și armăturilor	A3	Chapter 5.3 /Cap 5.3
R-15	Ghidighici / Tank nr.1 & 2 rehabilitation V=2000 m3 / Reabilitarea rez. nr.1 și 2 V=2000 m3	A3	Chapter 5.3 /Cap 5.3
R-16	Ghidighici / Pipes and fittings rehabilitation / Reabilitarea conductelor și armăturilor	A3	Chapter 5.3 /Cap 5.3
R-17	Ialoveni / Tank nr.1 & 2 rehabilitation V1000 m3 / Reabilitarea rez. nr.1 și 2 V=1000 m3	A3	Chapter 5.3 /Cap 5.3
R-18	Ialoveni / Pipes and fittings rehabilitation / Reabilitarea conductelor și armăturilor	A3	Chapter 5.3 /Cap 5.3
R-19	Schinoasa / Tank nr.1 rehabilitation V=6000 m3 / Reabilitarea rez. nr.1 V=6000 m3	A3	Chapter 5.3 /Cap 5.3
R-20	Stăuceni / Tank rehabilitation V= 3000 m3 / Reabilitarea rez. V=3000 m3	A3	Chapter 5.3 /Cap 5.3
R-21	Telecentru / Tank nr.1 rehabilitation V=5000 m3 / Reabilitarea rez. nr.1 V=5000 m3	A3	Chapter 5.3 /Cap 5.3
R-23	Telecentru / Pipes and fittings rehabilitation / Reabilitarea conductelor și armăturilor	A3	Chapter 5.3 /Cap 5.3
R-24	Tohatin / Tank nr.1 rehabilitation V=10,000 m3 / Reabilitarea rez. nr.1 V=10,000 m3	A3	Chapter 5.3 /Cap 5.3
R-25	Tohatin / Tank nr.2 & 3 rehabilitation V=3000m3 / Reabilitarea rez. nr.2 și 3 V=3000 m3	A3	Chapter 5.3 /Cap 5.3
R-26	Tohatin / Pipes and fittings rehabilitation / Reabilitarea conductelor și armăturilor	A3	Chapter 5.3 /Cap 5.3
R-27	Valea Dicescu / Tank nr.1 rehabilitation V=6000 m3 / Reabilitarea rez. nr.1 V=6000 m3	A3	Chapter 5.3 /Cap 5.3
R-28	Valea Dicescu / Tank nr.2 rehabilitation V=3000 m3 / Reabilitarea rez. nr.2 V=3000 m3	A3	Chapter 5.3 /Cap 5.3
R-29	Valea Dicescu / Tank nr.3 rehabilitation V=2000 m3 / Reabilitarea rez. nr.3 V=2000 m3	A3	Chapter 5.3 /Cap 5.3
R-30	Valea Dicescu / Pipes and fittings rehabilitation / Reabilitarea conductelor și armăturilor	A3	Chapter 5.3 /Cap 5.3
R-31	WTP (STA) Chișinău / Tank nr.1 rehabilitation V=5000 m3 / Reabilitarea rez. nr.1 V=5000 m3	A3	Chapter 5.3 /Cap 5.3
R-32	WTP (STA) Chișinău / Tank nr.2 rehabilitation V=5000 m3 / Reabilitarea rez. nr.2 V=5000 m3	A3	Chapter 5.3 /Cap 5.3
R-33	WTP (STA) Chișinău / Tank nr. 3 rehabilitation V=10,000 m3 / Reabilitarea rez. nr.3 V=10,000 m3	A3	Chapter 5.3 /Cap 5.3
R-34	WTP (STA) Chișinău / Tank nr. 4 rehabilitation V=10,000 m3 / Reabilitarea rez. nr.4 V=10,000 m3	A3	Chapter 5.3 /Cap 5.3
R-35	WTP (STA) Chișinău / Tank nr. 5 V=10,000m3 Existing situation / Rez. nr.5 V=10,000 m3	A3	Chapter 5.3 /Cap 5.3
R-36	WTP (STA) Chișinău / Tank nr. 5 V=10,000m3, rehabilitation actions / Rez. nr.5 V=10,000 m3 Măsuri de reabilitare	A3	Chapter 5.3 /Cap 5.3
R-37	WTP (STA) Chișinău / Pipes and fittings rehabilitation / Reabilitarea conductelor și armăturilor	A3	Chapter 5.3 /Cap 5.3
R-39	WTP (STA) Nistru treapta II / Lower tank rehabilitation V=1000 m3 / Reabilitarea rez. de jos V=1000 m3	A3	Chapter 5.3 /Cap 5.3
R-40	WTP (STA) Nistru treapta II / Pipes and fittings rehabilitation / Reabilitarea conductelor și armăturilor	A3	Chapter 5.3 /Cap 5.3
R-41	WTP (STA) Nistru treapta IIA / Upper tank rehabilitation V=1500 m3 / Reabilitarea rez. de sus V=1500 m3	A3	Chapter 5.3 /Cap 5.3
R-42	WTP (STA) Nistru treapta IIA / Pipes and fittings rehabilitation / Reabilitarea conductelor și armăturilor	A3	Chapter 5.3 /Cap 5.3

New Electrochlorination at the Water Treatment Plant / Noua instalație de electro-clorinare de la STA

Dwg. No / Nr. Desen	Description / Descrierea	Size / Format	Refer to Final Report / Ref. in Raportul Final
WTP (STA)_17	Possible location of the buildings / Posibilă locație a clădirilor	A3	Chapter 4.2 / Cap. 4.2
WTP (STA)_18	Possible location of the buildings / Posibilă locație a clădirilor	A3	Chapter 4.2 / Cap. 4.2



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Date

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PROIECTARE PRELIMINARA

Lista desenelor (2/2)

1

WASTEWATER TREATMENT PLANT STATIA DE EPURARE A APEI



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APELOR UZATE IN MUNICIPIUL CHISINAU - STUDIU DE
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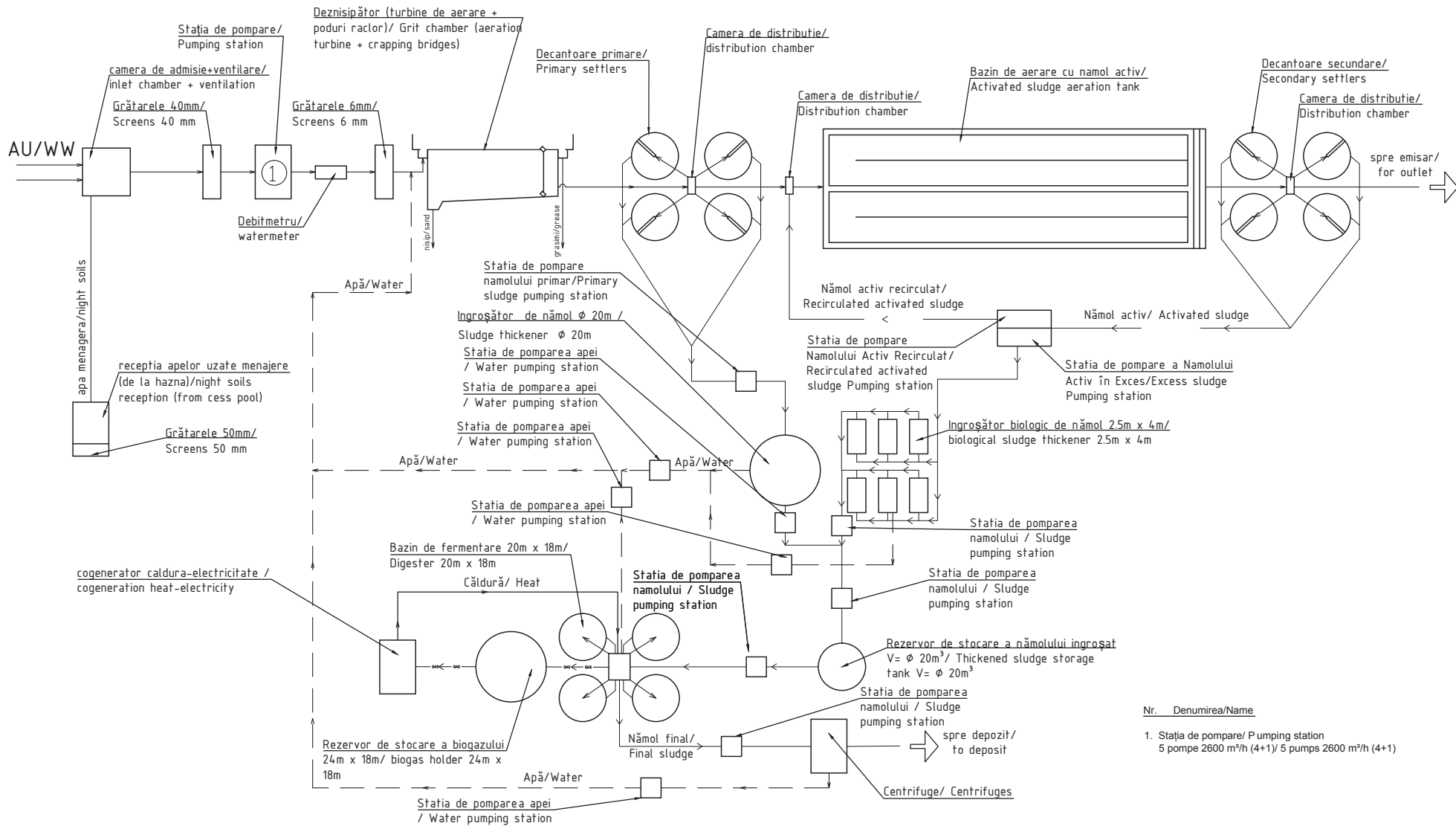
Date	Rev.
Aug12	01

PRELIMINARY DESIGN
Wastewater treatment plant
Statia de epurare a apei

No Scale

WWTP_0

Schema tehnologică de epurare a apelor uzate/ Technological scheme of the wastewater treatment



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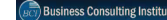
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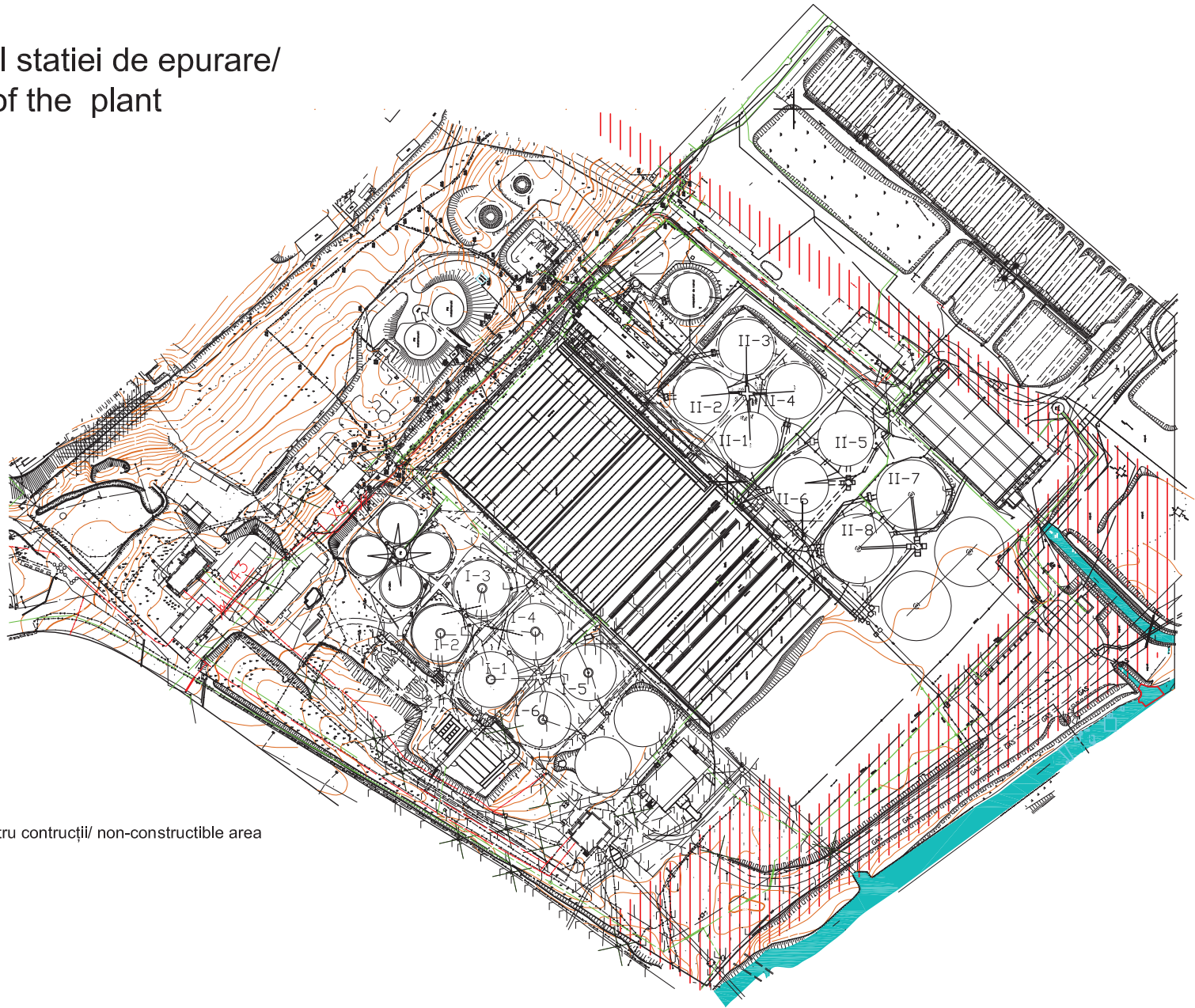
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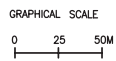
Schema tehnologică de
epurare al apelor uzate/
Technological scheme of
the wastewater treatment

Planul General al stației de epurare/ General Layout of the plant



Legenda/Legend

 - teren necorespunzător pentru construcții/ non-constructible area



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Date	Rev.
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Planul General al stației de
epurare/
General Layout of the plant

GRAPHICAL SCALE

WWTP_02

Planul General de reabilitare a stației de epurare/ General Layout of the rehabilitation of the WWTP


Nr. Denumirea/Name

1. Reabilitarea decantoarelor primare/ rehabilitation of the primary settling tanks
2. BANA - reabilitarea bazinului de aerare cu namol activ/ ASAT - rehabilitation of the activated sludge aeration tank
3. Reabilitarea decantoarelor secundare/ rehabilitation of the secondary settling tanks


Legenda/Legend

STAGE I / Faza I

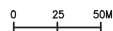
Variant I / Varianta I

 - Reabilitarea decantoarelor primare/ rehabilitation of the primary settling tanks;
Reabilitarea decantoarelor secundare/ rehabilitation of the secondary settling tanks;
BANA - reabilitarea bazinului de aerare cu namol activ/ ASAT - rehabilitation of the activated sludge aeration tank

Variant II / Varianta II

 - Reabilitarea decantoarelor primare/ rehabilitation of the primary settling tanks;
Reabilitarea decantoarelor secundare/ rehabilitation of the secondary settling tanks;
BANA - reabilitarea bazinului de aerare cu namol activ/ ASAT - rehabilitation of the activated sludge aeration tank

GRAPHICAL SCALE



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Planul General de reabilitare a
stației de epurare/ General Layout of
the rehabilitation of the WWTP

GRAPHICAL SCALE

WWTP_03

Planul general de amplasare a stației de epurare/ General layout of the WWTP emplacement

Nr. _____ Denumirea/ Name

1. Camera de admisie+ventilare/ Inlet chamber + ventilation; Gratarele 40mm/ Screens 40 mm; Stația de pompare/Pumping station
2. Gratarele 6mm/Screens 6 mm; Deznisipator (turbine de aerare + poduri raclor)/ Grit chamber (aeration turbine + crapping bridges)
3. Ingroșător de nămol Ø 20m / Sludge thickener Ø 20m
4. Rezervor de stocare a biogazului 24m x 18m/ Biogas holder 24m x 18m
5. Bazin de fermentare 20m x 15m/ Digester 20m x 15m
6. Rezervor de stocare a nămolului îngroșat V= Ø 20m³/ Thickened sludge storage tank V= Ø 20m³
7. Ingroșător biologic de nămol 2.5m x 4m/ Biological sludge thickener 2.5m x 4m
8. Centrifuge/ Centrifuges
9. Stația de pompare a Namolului Activ Redrculat/ Recirculated activated sludge P umping station
Stația de pompare a Namolului Activ În Exces/Excess sludge P umping station
10. Cogenerator caldura-electricitate / Cogeneration heat-electricity (existentă / existing)
11. Reabilitarea decantoarelor primare/ Rehabilitation of the primary settling tanks
Reabilitarea decantoarelor secundare/ Rehabilitation of the secondary settling tanks
BANA - reabilitarea bazinului de aerare cu namol activ/ ASAT - rehabilitation of the activated sludge aeration tank
12. BANA - bazinul de aerare cu namol activ 30600 m²/ ASAT - activated sludge aeration tank 30600 m²
13. Decantoare secundare Ø47000/ Secondary settling tanks Ø47000
14. Decantoare primare Ø37000/ Primary settling tanks Ø37000

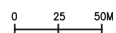
Legenda/Legend

STAGE I / Faza I

Variant I / Varianta I

- - Reabilitarea decantoarelor primare/ Rehabilitation of the primary settling tanks;
Reabilitarea decantoarelor secundare/ Rehabilitation of the secondary settling tanks;
BANA - reabilitarea bazinului de aerare cu namol activ/ ASAT - Rehabilitation of the activated sludge aeration tank
 - - Se va construi/ will be built:
Camera de admisie+ventilare/ Inlet chamber + ventilation;
Gratarele 40mm/ Screens 40 mm;
Stația de pompare/ Pumping station;
Gratarele 6mm/ Screens 6 mm;
Deznisipător (turbină de aerare + poduri raclor)/ Grit chamber (aeration turbine + crapping bridges);
Ingroșător de nămol Ø 20m / Sludge thickener Ø 20m;
Rezervor de stocare a biogazului 24m x 18m/ Biogas holder 24m x 18m;
Bazin de fermentare 20m x 15m/ Digester 20m x 15m;
Rezervor de stocare a nămolului îngroșat V= Ø 20m³/ Thickened sludge storage tank V= Ø 20m³;
Ingroșător biologic de nămol 2.5m x 4m/ biological sludge thickener 2.5m x 4m;
Centrifuge/ Centrifuges;
Stația de pompare a Namolului Activ Redrculat/ Redrculated activated sludge Pumping station;
Stația de pompare a Namolului Activ În Exces/ Excess sludge P umping station
- STAGE II
- - BANA - bazinul de aerare cu namol activ 30600 m²/ ASAT - activated sludge aeration tank 30600 m²
Decantoare secundare Ø47000/ Secondary settling tank Ø47000
Decantoare primare Ø37000/ Primary settling tank Ø37000

GRAPHICAL SCALE



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TRATARE A APELOR UZATE ÎN MUNICIPIUL
CHIȘINĂU - STUDIU DE FEZABILITATE /
CHIȘINĂU WATER SUPPLY & SEWAGE
TREATMENT - FEASIBILITY STUDY



in association with



INGINERIA
APELOR



Rev.
REV.

Planul general de amplasare a
stației de epurare/
General layout of the WWTP
emplacement

GRAPHICAL SCALE

WWTP_04

Planul general de amplasare a stației de epurare/ General layout of the WWTP emplacement

Nr. Denumirea/ Name

1. Camera de admitie+ventilare/ Inlet chamber + ventilation; Gratarele 40mm/ Screens 40 mm; Stația de pompare/ Pumping station
2. Grătarele 6mm/Screens 6 mm; Deznisipător (turbine de aerare + poduri raclor)/ Grit chamber (aeration turbine + crapping bridges)
3. Ingroșător de namol Ø 20m / Sludge thickener Ø 20m
4. Ingroșător biologic de namol 2,5m x 4m/ Biological sludge thickener 2,5m x 4m
5. Rezervor de stocare a namolului îngroșat V= Ø 20m³/ Thickened sludge storage tank V= Ø 20m³
6. Bazin de fermentare 20m x 15m/ Digester 20m x 15m
7. Rezervor de stocare a biogazului 24m x 18m/ Biogas holder 24m x 18m
8. Centrifuge/ Centrifuges
9. Stația de pompare a Namolului Activ Recirculat/ Recirculated activated sludge P umping station / Stația de pompare a Namolului Activ în Exces/ Excess sludge P umping station
10. Cogenerator caldura-electricitate / Cogeneration heat-electricity (existentă / existing)
11. Reabilitarea decantoarelor primare/ Rehabilitation of the primary settling tanks
Reabilitarea decantoarelor secundare/ Rehabilitation of the secondary settling tanks
BANA - reabilitarea bazinului de aerare cu namol activ/ ASAT - rehabilitation of the activated sludge aeration tank
12. BANA - bazinul de aerare cu namol activ 30600 m²/ ASAT - activated sludge aeration tank 30600 m²
13. Decantoare secundare Ø47000/ Secondary settling tanks Ø47000
14. Decantoare primare Ø37000/ Primary settling tanks Ø37000

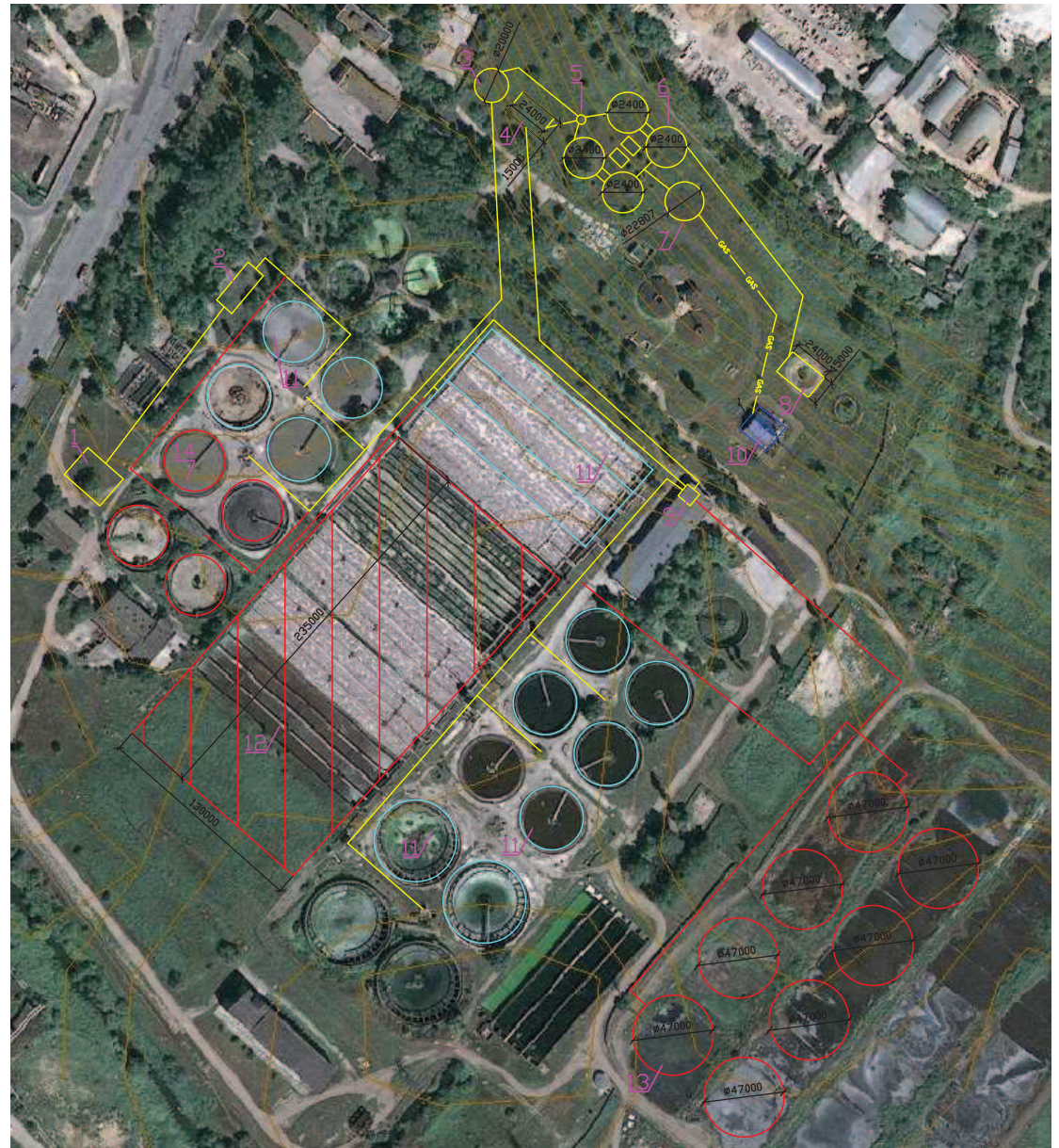
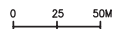
Legenda/Legend

STAGE I / Faza I

Variant II / Varianta II

- - Reabilitarea decantoarelor primare/ Rehabilitation of the primary settling tanks; Reabilitarea decantoarelor secundare/ Rehabilitation of the secondary settling tanks; BANA - reabilitarea bazinului de aerare cu namol activ/ ASAT - rehabilitation of the activated sludge aeration tank
- - Se va construi/ Will be build:
Camera de admitie+ventilare/ Inlet chamber + ventilation;
Grătare 40mm/ Screens 40 mm;
Stația de pompare/ Pumping station;
Grătare 6mm/ Screens 6 mm;
Deznisipător (turbine de aerare + poduri raclor)/ Grit chamber (aeration turbine + crapping bridges);
Ingroșător de namol Ø 20m / Sludge thickener Ø 20m;
Rezervor de stocare a biogazului 24m x 18m/ Biogas holder 24m x 18m;
Bazin de fermentare 20m x 15m/ Digester 20m x 15m;
Rezervor de stocare a namolului îngroșat V= Ø 20m³/ Thickened sludge storage tank V= Ø 20m³;
Ingroșător biologic de namol 2,5m x 4m/ Biological sludge thickener 2,5m x 4m;
Centrifuge/ Centrifuges;
Stația de pompare Namolului Activ Recirculat/ Recirculated activated sludge Pumping station;
Stația de pompare Namolului Activ în Exces/ Excess sludge Pumping station
- - BANA - bazinul de aerare cu namol activ 30600 m²/ ASAT - activated sludge aeration tank 30600 m²
Decantoare secundare Ø47000/ Secondary settling tank Ø47000
Decantoare primare Ø37000/ Primary settling tank Ø37000

GRAPHICAL SCALE



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in association with



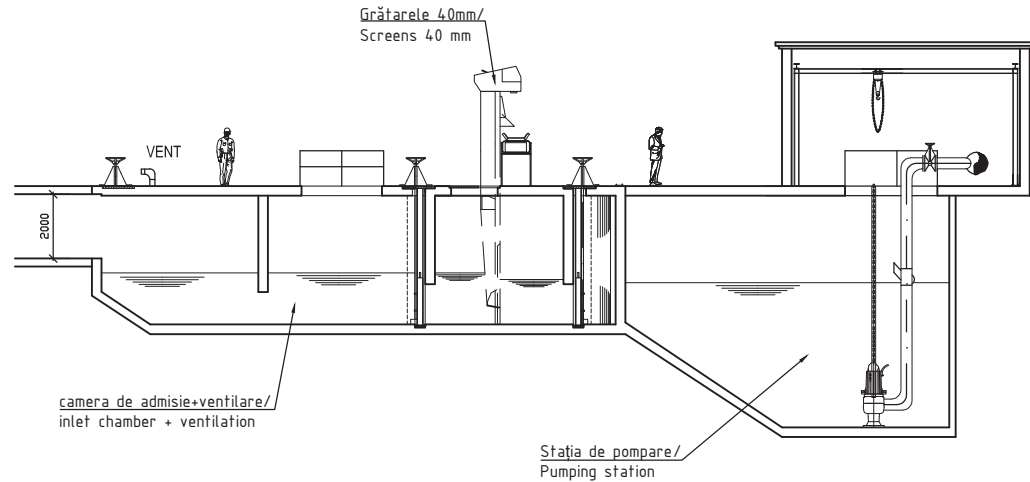
Rev.
REV.

Planul general de amplasare a stației de epurare/
General layout of the WWTP emplacement

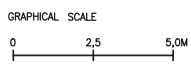
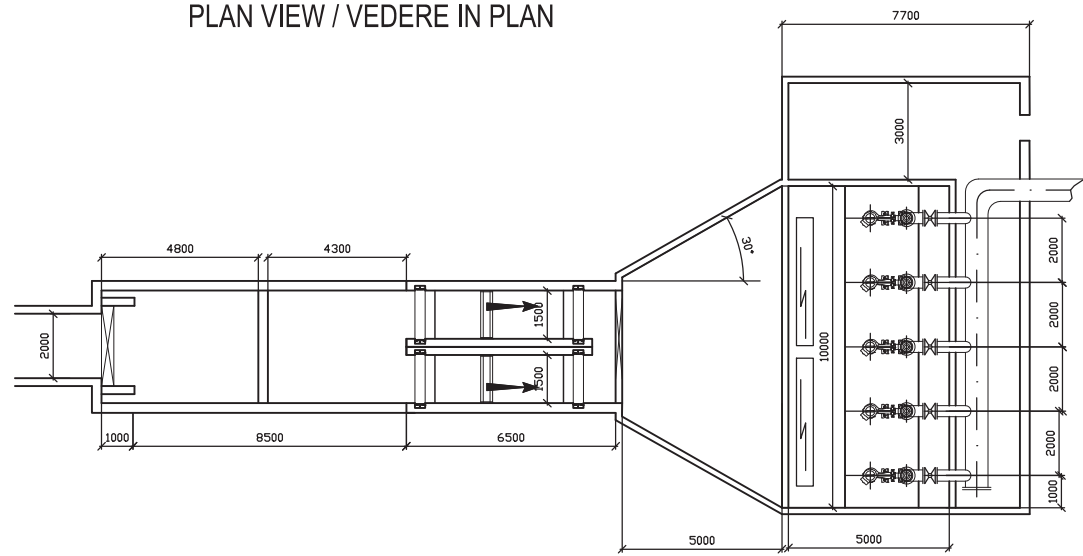
GRAPHICAL SCALE

WWTP_05

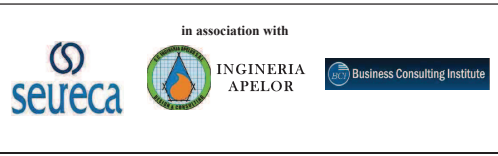
Camera de admisie+ventilare/ inlet chamber + ventilation Stația de pompare/ Pumping station



PLAN VIEW / VEDERE IN PLAN



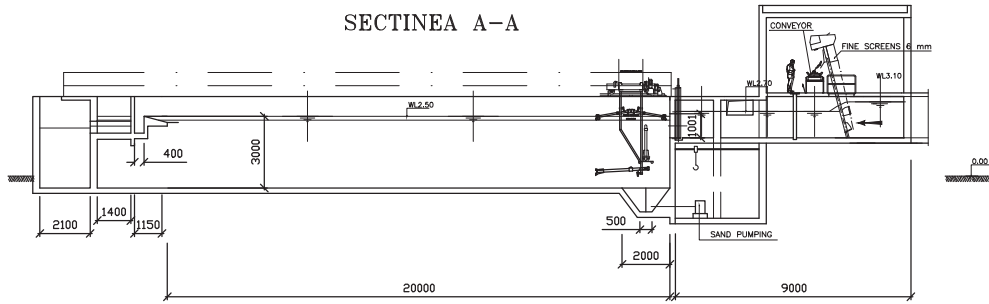
MOLDOVA
PROGRAMUL DE ALIMENTARE CU APĂ ȘI TRATARE A APELOR UZATE ÎN MUNICIPIUL CHIȘINĂU - STUDIU DE FEZABILITATE / CHISINAU WATER SUPPLY & SEWAGE TREATMENT - FEASIBILITY STUDY



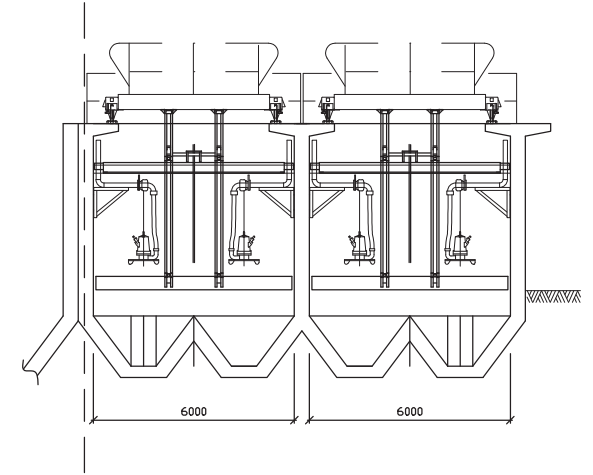
Rev.	Camera de admisie+ventilare/ inlet chamber + ventilation Stația de pompare/ Pumping station
REV.	
GRAPHICAL SCALE	WWTP_06

Deznisipător (turbine de aerare + poduri raclor)/ Grit chamber (aeration turbine + crapping bridges)

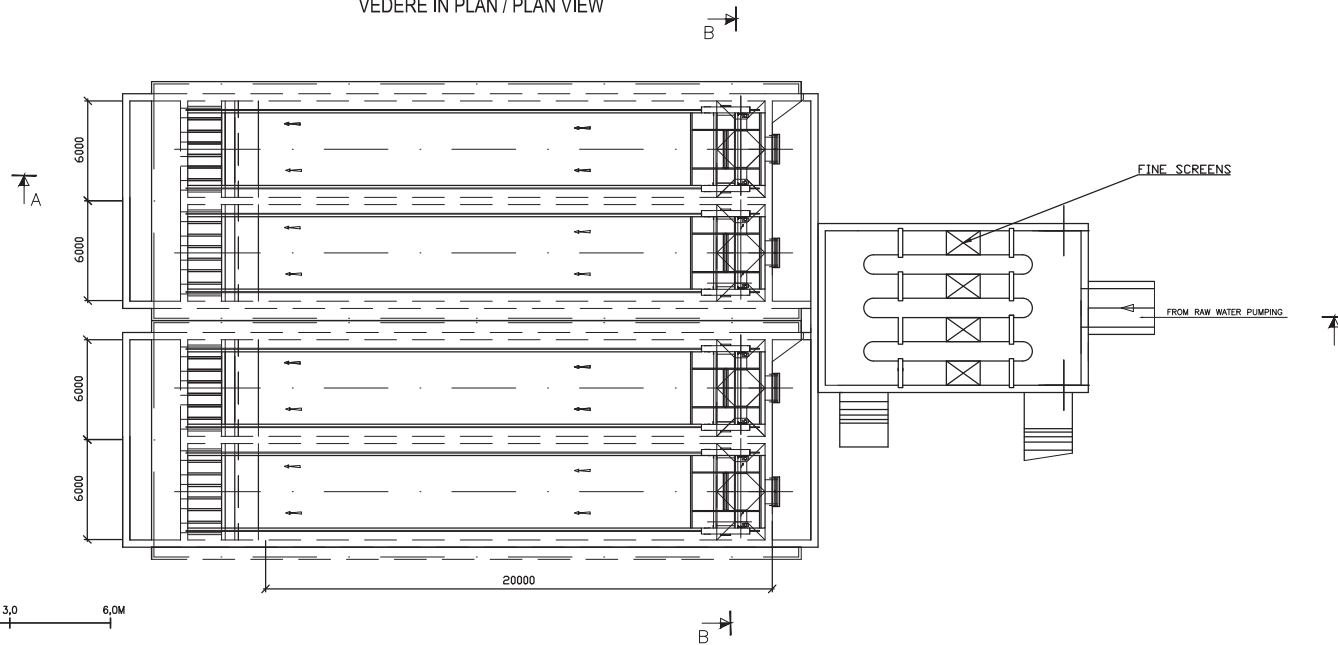
SECTINEA A-A



SECTINEA B-B



VEDERE IN PLAN / PLAN VIEW



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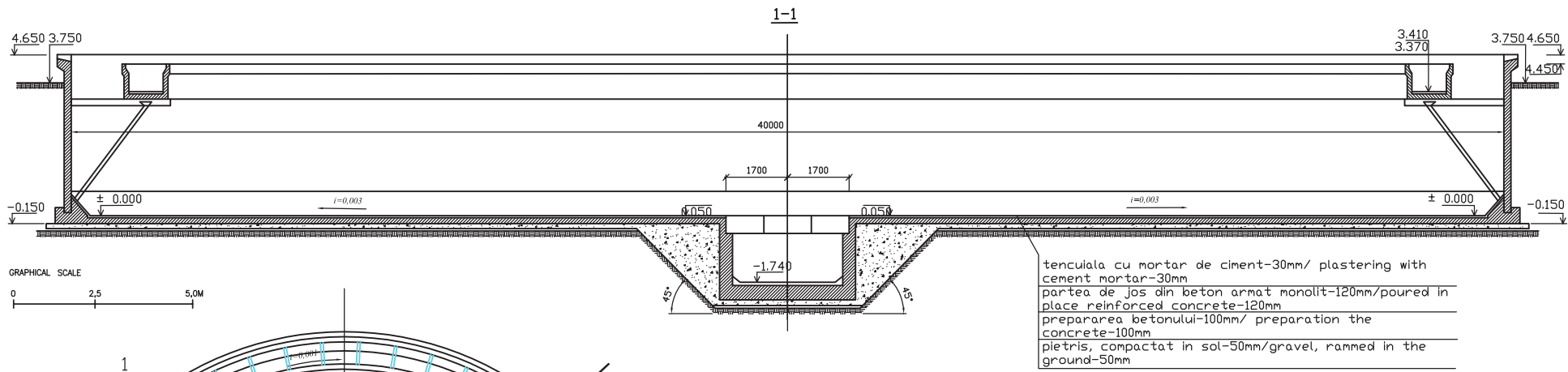


in association with INGINERIA APELOR

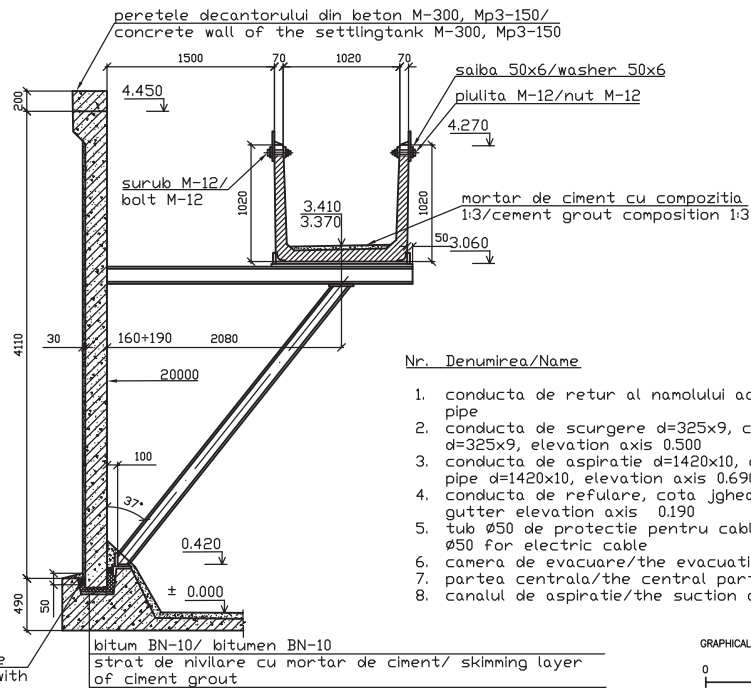
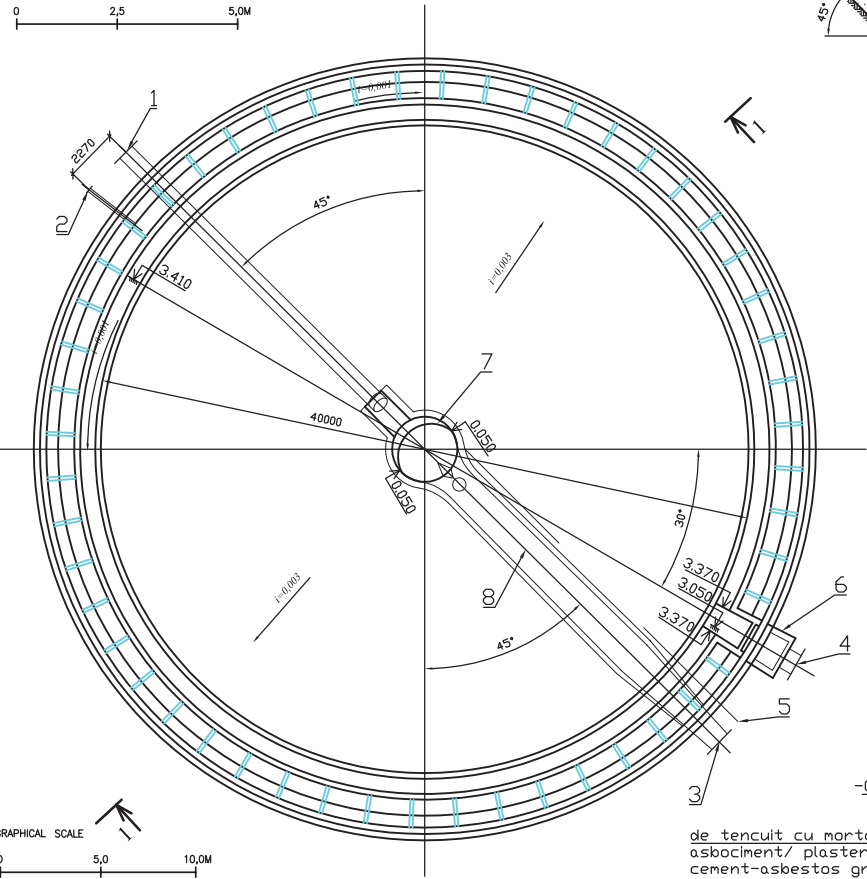


Date	Rev.	Deznisipător (turbine de aerare + poduri raclor)/ Grit chamber (aeration turbine + crapping bridges)
DATE	REV.	

Decantor primar/ secundar D 40000 cu pompe de n ămol / The primary/ secondary settling tank D40000 with activated sludge pumps

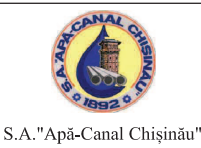


Reabilitarea decantorului/ rehabilitation of the settling tank



Nr. Denumirea/Name

1. conducta de retur al namolului activ/activated sludge return pipe
2. conducta de scurgere d=325x9, cota axei 0.500/discharge pipes d=325x9, elevation axis 0.500
3. conducta de aspiratie d=1420x10, cota jgheabului 0.690/aspiration pipe d=1420x10, elevation axis 0.690
4. conducta de refulare, cota jgheabului 0.190/discharge pipe gutter elevation axis 0.190
5. tub Ø50 de protectie pentru cablu electric/ protection tube Ø50 for electric cable
6. camera de evacuare/the evacuation chamber
7. partea centrala/the central part
8. canalul de aspiratie/the suction channel



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 CHIŞINĂU WATER SUPPLY & SEWAGE
 TREATMENT - FEASIBILITY STUDY

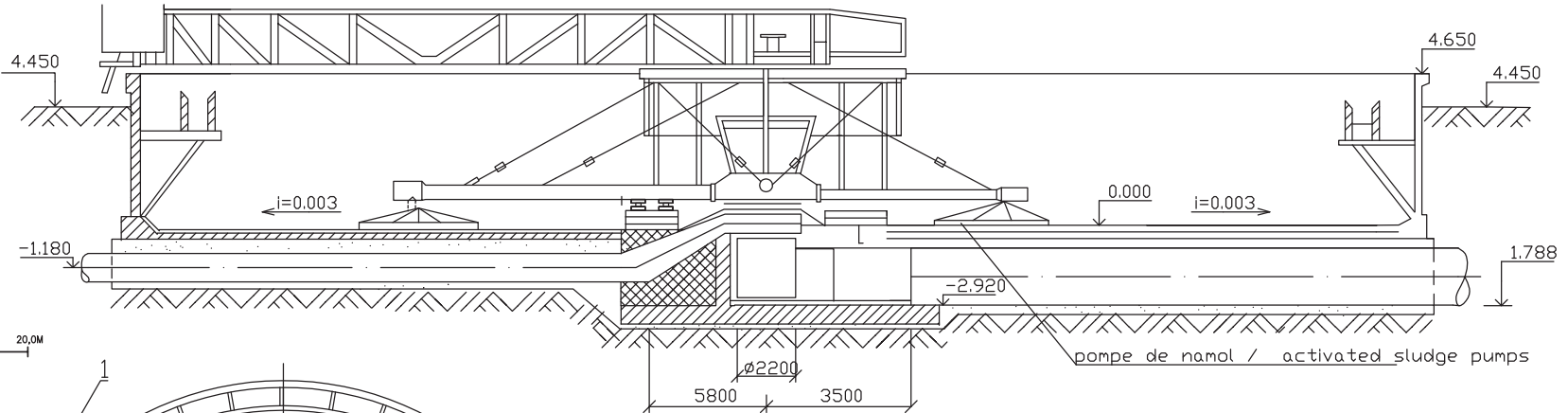


Date	Rev.	Decantor primar/ secundar D 40000 cu pompe de n ămol / The primary/ secondary settling tank D40000 with activated sludge pumps
DATE	REV.	

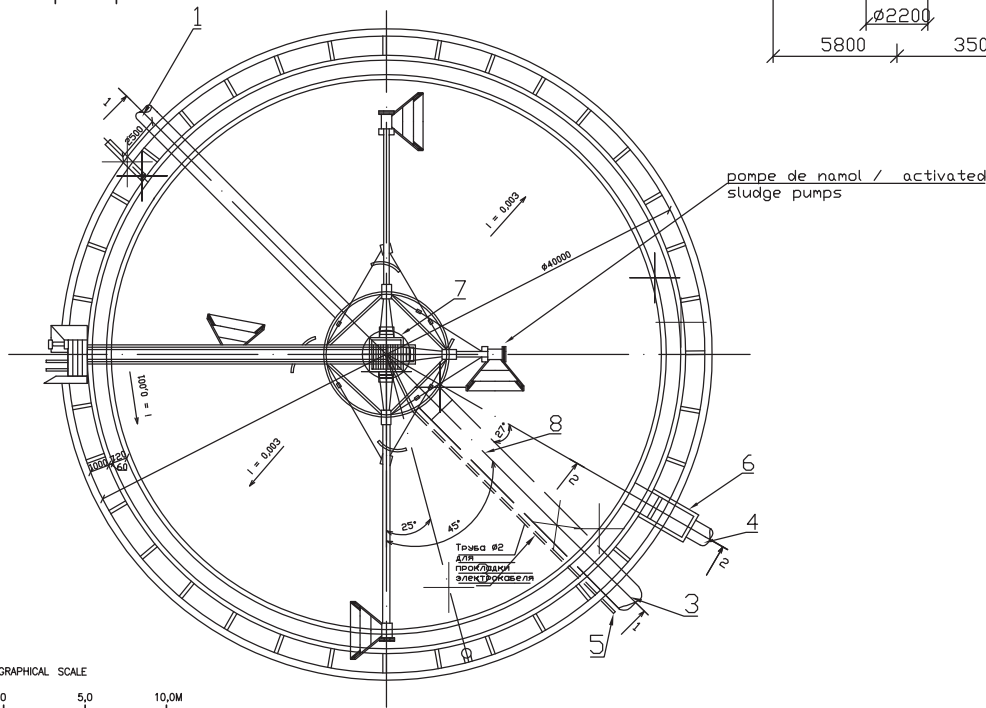
GRAPHICAL SCALE WWTP_08

Schema tehnologica/Technological scheme
 Decantor primar/secundar D 40000 cu pompe de namol / the primary/secondary settling tank
 D40000 with activated sludge pumps

1-1

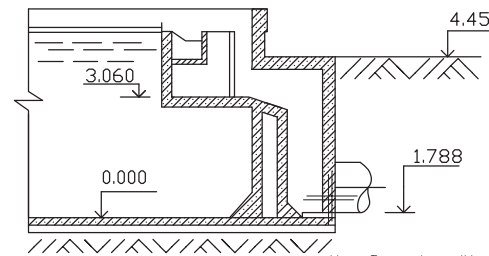


GRAPHICAL SCALE
 0 10,0 20,0M



GRAPHICAL SCALE
 0 5,0 10,0M

2-2



Nr. Denumirea/Name

1. conducta de retur al namolului activ/activated sludge return pipe
2. conducta de scurgere d=325x9, cota axei 0.500/discharge pipes d=325x9, elevation axis 0.500
3. conducta de aspiratie d=1420x10, cota jgheabului 0.690/aspiration pipe d=1420x10, elevation axis 0.690
4. conducta de refulare, cota jgheabului 0.190/discharge pipe gutter elevation axis 0.190
5. tub Ø50 de protectie pentru cablu electric/ protection tube Ø50 for electric cable
6. camera de evacuare/the evacuation chamber
7. partea centrala/the central part
8. canalul de aspiratie/the suction channel



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in association with



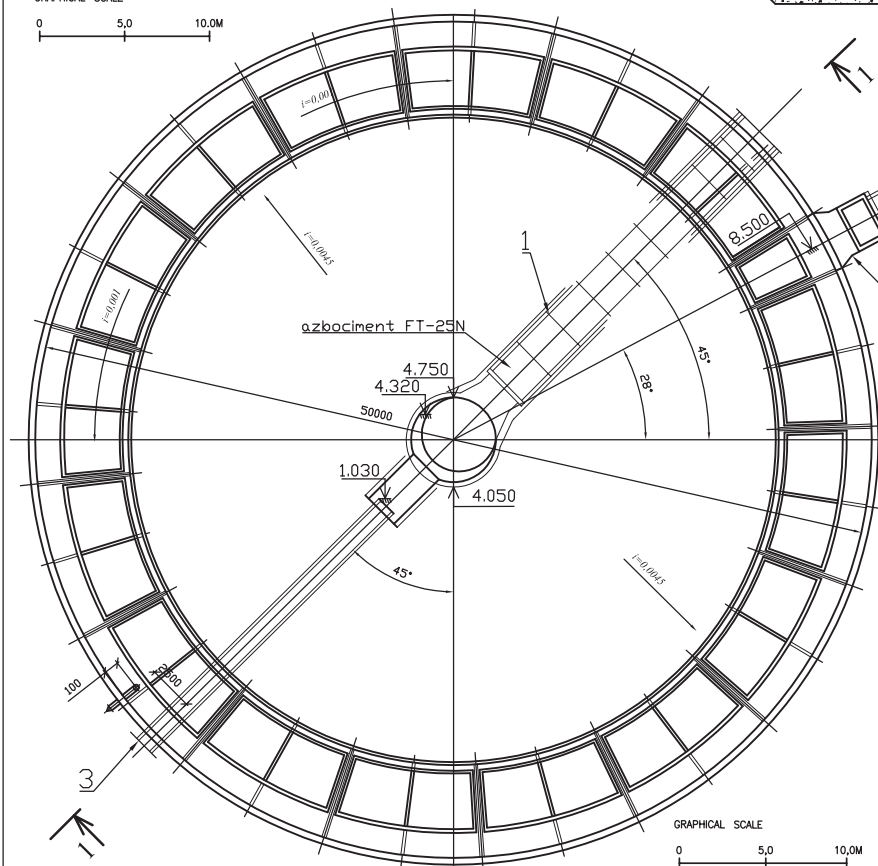
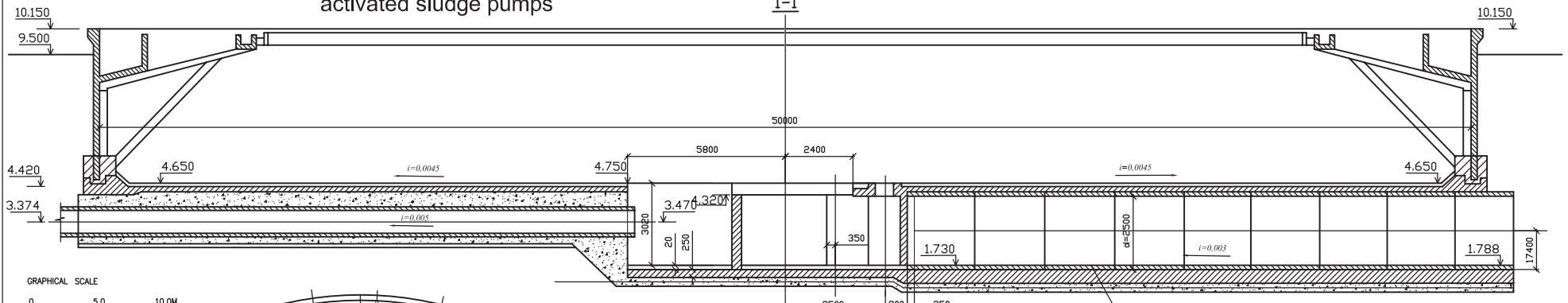
Date	Rev.
DATE	REV.

Decantor primar/secundar D 40000 cu pompe de nămol / the primary/secondary settling tank D40000 with activated sludge pumps

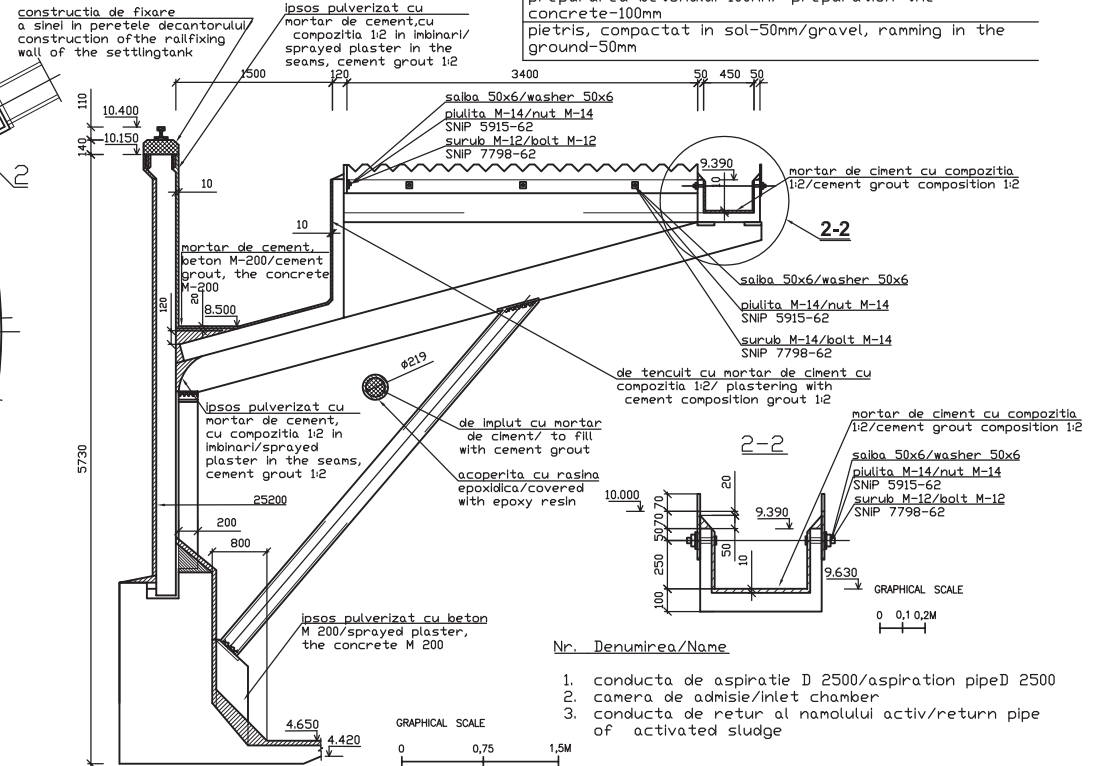
GRAPHICAL SCALE

WWTP_09

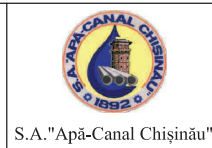
Decantor secundar D 50000 cu pompe de namol / the secondary settling tank D50000 with activated sludge pumps



Reabilitarea decantorului/
rehabilitation of the settling tank

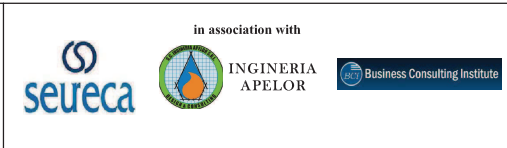


- Nr. Denumirea/Name
1. conducta de aspiratie D 2500/aspiration pipe D 2500
 2. camera de admisie/inlet chamber
 3. conducta de retur al namolului activ/return pipe of activated sludge



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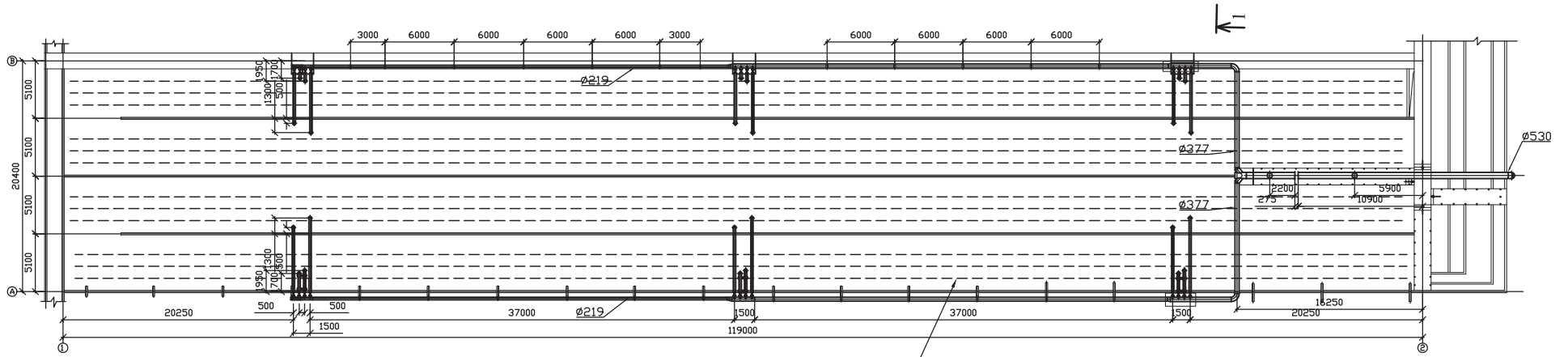
Date	Rev.
DATE	REV.

Decantor secundar D 50000 cu pompe de nămol / the secondary settling tank D50000 with activated sludge pumps

GRAPHICAL SCALE

WWTP_10

Bazin de aerare cu namol activ/ Activated sludge aeration tank

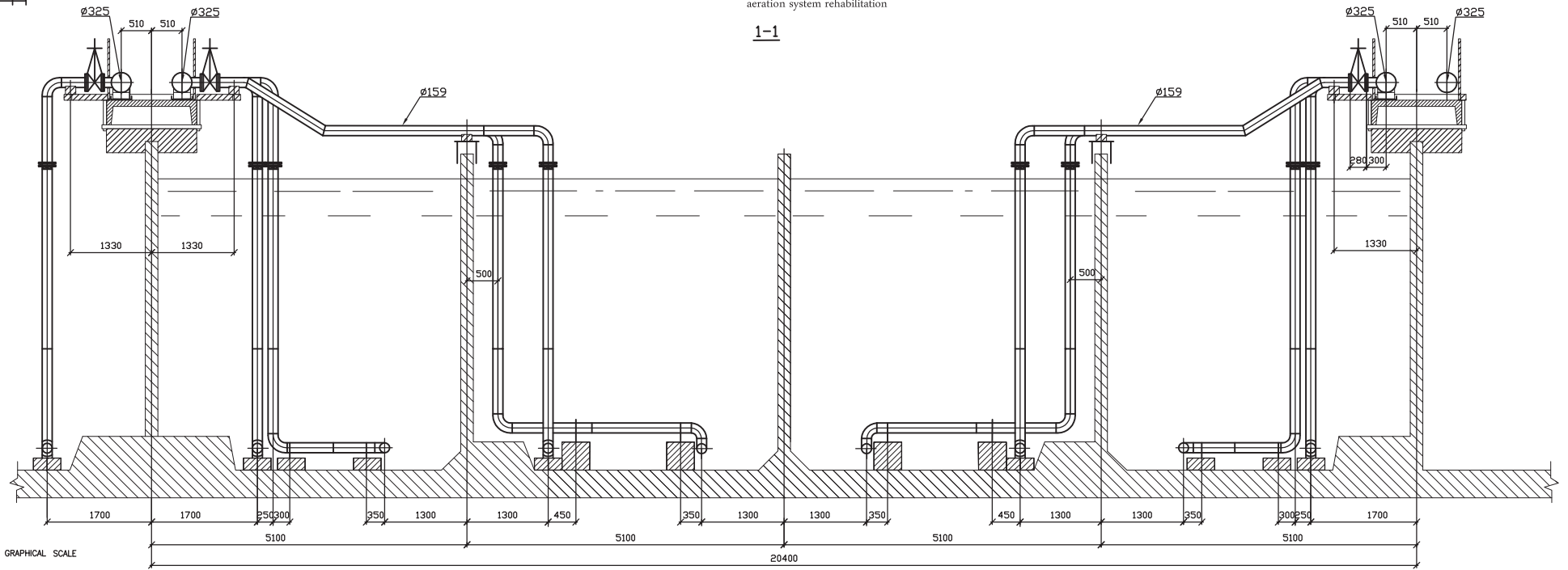


GRAPHICAL SCALE

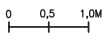


reabilitarea sistemului de aerare/
aeration system rehabilitation

1-1



GRAPHICAL SCALE



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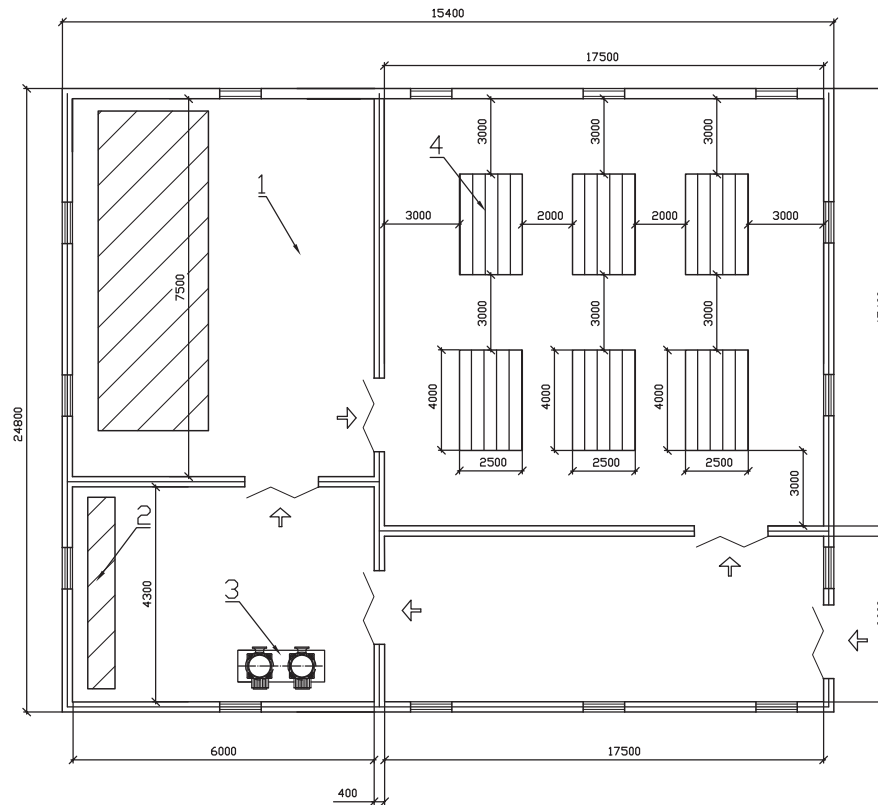
Date	Rev.

Bazin de aerare cu nămol activ/
Activated sludge aeration tank

GRAPHICAL SCALE

WWTP_11

Clădirea pentru îngroșarea nămolului/ Sludge thickening building



Nr. Denumirea/Name

1. Camera pentru prepararea polimerului/ Room for polymer preparation
2. Camera cu panouri electrice/ Rooms with electrical boards
3. Pompe de nămol/ Sludge pumping
4. Îngroșător biologic de nămol 2.5m x 4m/ biological sludge thickener 2.5m x 4m

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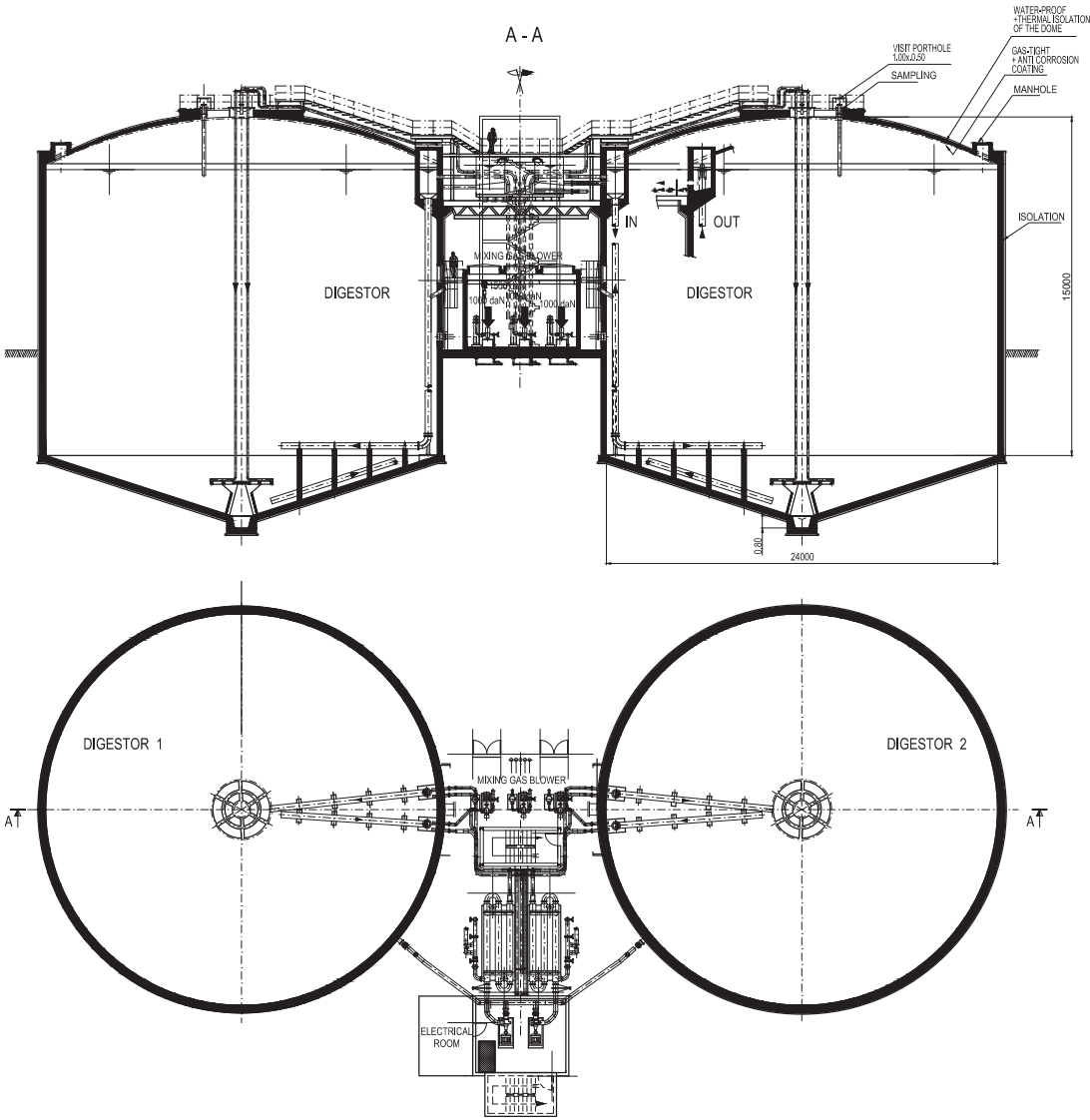
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Date	Rev.	Clădirea pentru îngroșarea nămolului/ Sludge thickener building
DATE	REV.	
SCALE:1:200		WWTP_12

Bazin de fermentare 20m x 15m/ Digester 20m x 15m



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Date	Rev.
DATE	REV.

Bazin de fermentare 20m x
15m/ Digester 20m x 15m

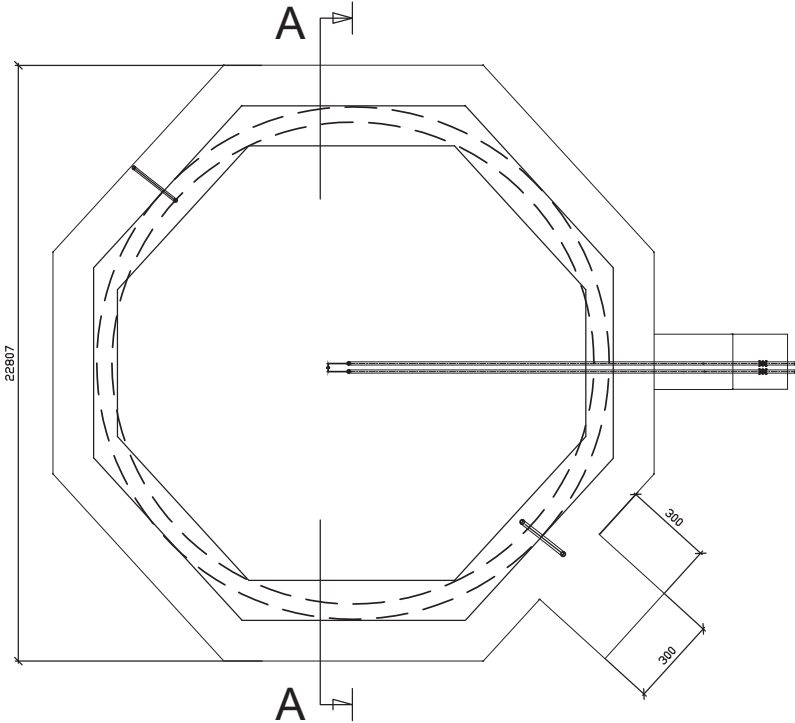
SCALE:1:200

WWTP_13

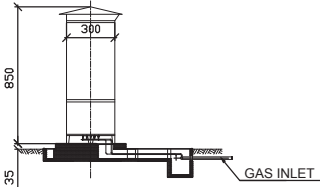
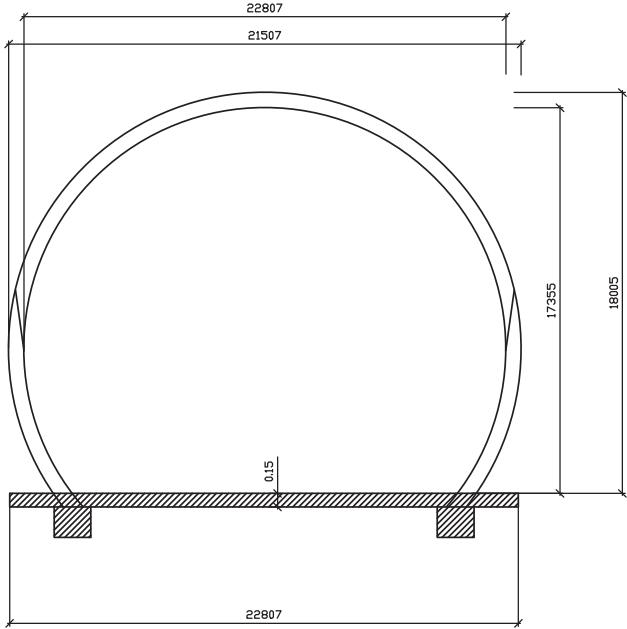
Rezervor de stocare a biogazului, arderea gazului/ Biogas holder, gas flare

GAS FLARE INCINERATOR

VEDERE IN PLAN / PLAN VIEW



A-A



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Rezervor de stocare a
biogazului, arderea gazului/
Biogas holder, gas flare

SCALE:1:200

WWTP_14

Planul General de amplasare a stației de epurare/ General Layout of the WWTP emplacement

Nr. Denumirea/Name

- Decantoarelor primare Ø37000/ Primary settling tank Ø37000

Legenda/Legend

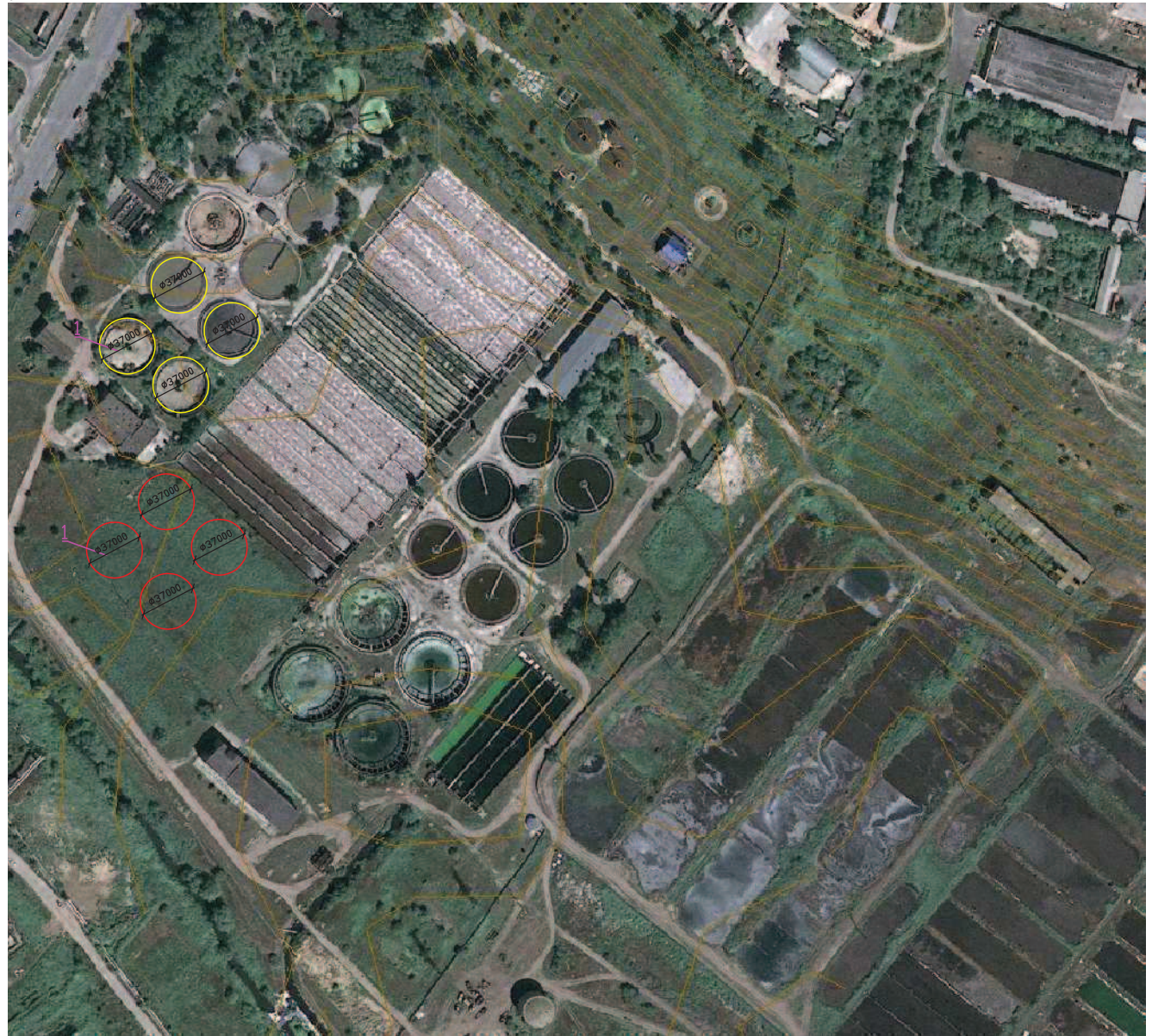
STAGE II

Varianta I

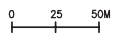
 - Decantoarelor primare Ø37000/ Primary settling tank Ø37000

Varianta II

 - Decantoarelor primare Ø37000/ Primary settling tank Ø37000



GRAPHICAL SCALE



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CHISINAU WATER SUPPLY & SEWAGE
TREATMENT - FEASIBILITY STUDY



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Planul General de amplasare a
stației de epurare/
General Layout of the WWTP
emplacement

GRAPHICAL SCALE

WWTP_15

Planul General de amplasare a stației de epurare/ General Layout of the WWTP emplacement

Nr. Denumirea/Name

1. Ingroșător de nămol Ø 20m / Sludge thickener Ø 20m
2. Ingroșător biologic de nămol 2,5m x 4m/ Biological sludge thickener 2,5m x 4m
3. Rezervor de stocare a nămolului îngroșat V= Ø 20m³/ Thickened sludge storage tank V= Ø 20m³
4. Fermentător 20m x 15m/ Digester 20m x 15m
5. Rezervor de stocare a biogazului 24m x 18m/ Biogas holder 24m x 18m
6. Centrifuge/ Centrifuges
7. Stația de pompare Nămolului Activ Recirculat/ Recirculated activated sludge P umping station
Stația de pompare Nămolului Activ în Exces/ Excess sludge P umping station

Legenda/Legend

STAGE I

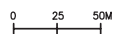
Variant I

- Se va construi/ Will be build;
Grătarele 6mm/ Screens 6 mm;
Desnispător (turbine de aerare + poduri raclor)/ Grit chamber (aeration turbine + crapping bridges);
Ingroșător de nămol Ø 20m/ Sludge thickener Ø 20m;
Rezervor de stocare a biogazului 24m x 18m/ Biogas holder 24m x 18m;
Fermentător 20m x 15m/ Digester 20m x 15m;
Rezervor de stocare a nămolului îngroșat V= Ø 20m³/ Thickened sludge storage tank V= Ø 20m³;
Ingroșător biologic de nămol 2,5m x 4m/ Biological sludge thickener 2,5m x 4m;
Centrifuge/ Centrifuges;
Stația de pompare Nămolului Activ Recirculat/ Recirculated activated sludge Pumping station;
Stația de pompare Nămolului Activ în Exces/ Excess sludge P umping station

Variant II

- Se va construi/ Will be build;
Grătarele 6mm/ Screens 6 mm;
Desnispător (turbine de aerare + poduri raclor)/ Grit chamber (aeration turbine + crapping bridges);
Ingroșător de nămol Ø 20m/ Sludge thickener Ø 20m;
Rezervor de stocare a biogazului 24m x 18m/ Biogas holder 24m x 18m;
Fermentător 20m x 15m/ Digester 20m x 15m;
Rezervor de stocare a nămolului îngroșat V= Ø 20m³/ Thickened sludge storage tank V= Ø 20m³;
Ingroșător biologic de nămol 2,5m x 4m/ Biological sludge thickener 2,5m x 4m;
Centrifuge/ Centrifuges;
Stația de pompare Nămolului Activ Recirculat/ Recirculated activated sludge Pumping station;
Stația de pompare Nămolului Activ în Exces/ Excess sludge P umping station

GRAPHICAL SCALE



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in association with

INGINERIA APELOR



Rev.

REV.

Planul General de amplasare a stației de epurare/
General Layout of the WWTP emplacement

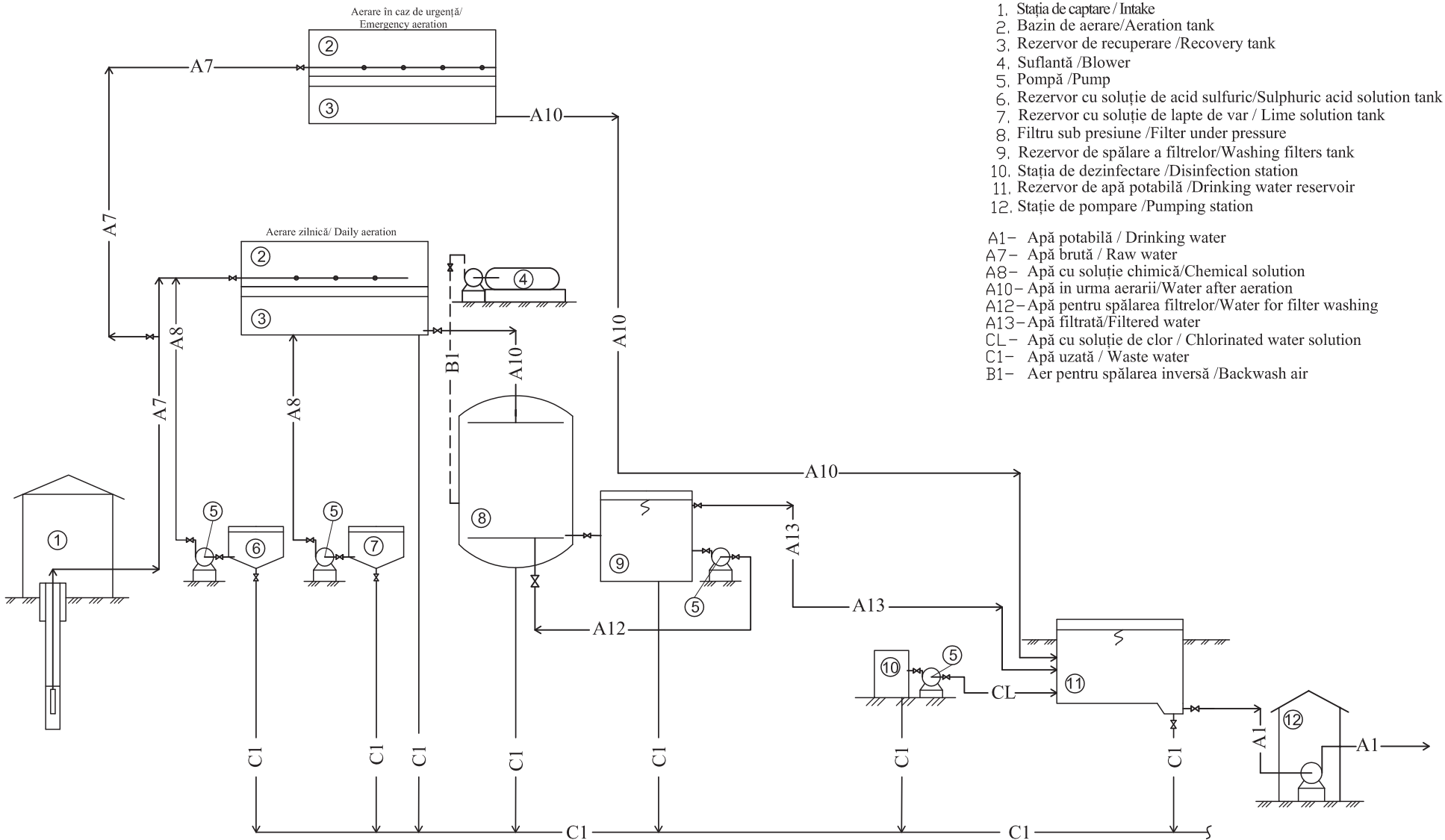
GRAPHICAL SCALE

WWTP_16

2

WATER TREATMENT PLANTS STATII DE TRATARE A APEI





1. Stația de captare / Intake
 2. Bazin de aerare/Aeration tank
 3. Rezervor de recuperare /Recovery tank
 4. Suflantă /Blower
 5. Pompă /Pump
 6. Rezervor cu soluție de acid sulfuric/Sulphuric acid solution tank
 7. Rezervor cu soluție de lapte de var / Lime solution tank
 8. Filtru sub presiune /Filter under pressure
 9. Rezervor de spălarea a filtrelor/Washing filters tank
 10. Stația de dezinfectare /Disinfection station
 11. Rezervor de apă potabilă /Drinking water reservoir
 12. Stație de pompare /Pumping station
- A1- Apă potabilă / Drinking water
A7- Apă brută / Raw water
A8- Apă cu soluție chimică/Chemical solution
A10- Apă în urma aerării/Water after aeration
A12- Apă pentru spălarea filtrelor/Water for filter washing
A13- Apă filtrată/Filtered water
CL- Apă cu soluție de clor / Chlorinated water solution
C1- Apă uzată / Waste water
B1- Aer pentru spălarea inversă /Backwash air



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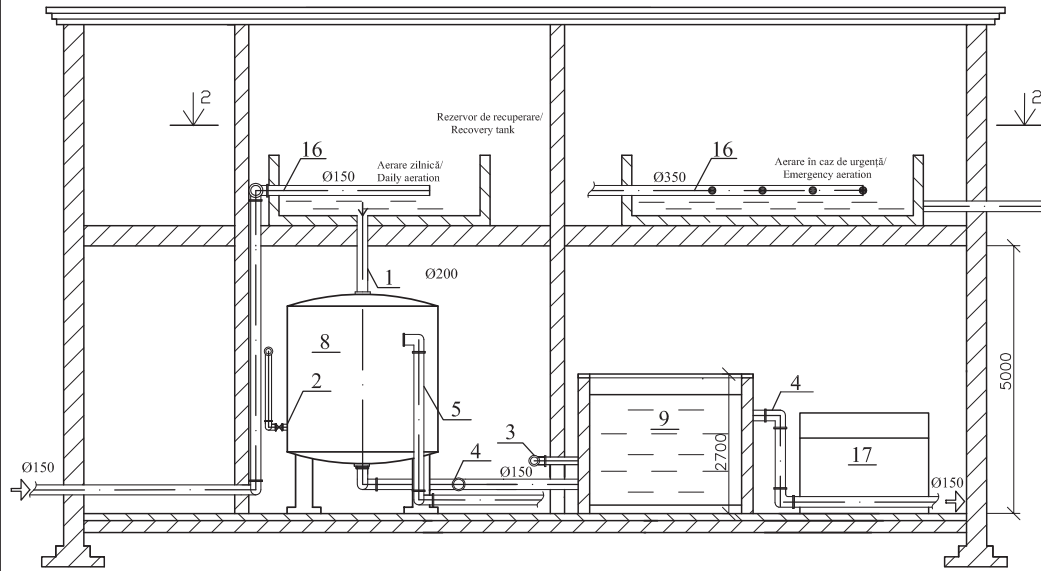
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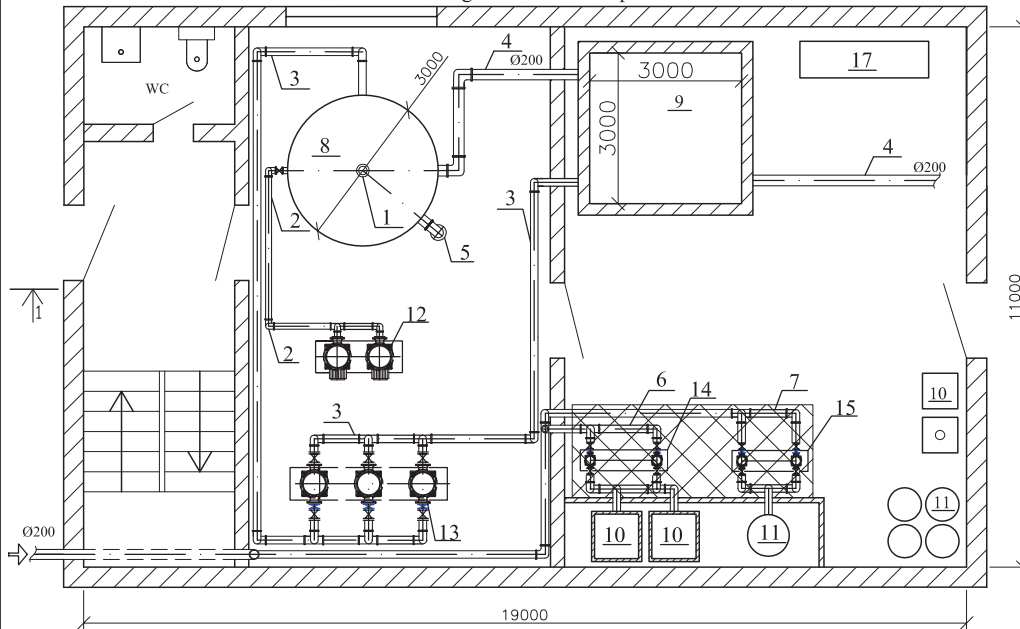
BALISEVSCHI
Schema tehnologică de tratare
a apei/ Tehnological scheme
of water treatment

WTP_01

Secțiunea 1-1/ Section 1-1

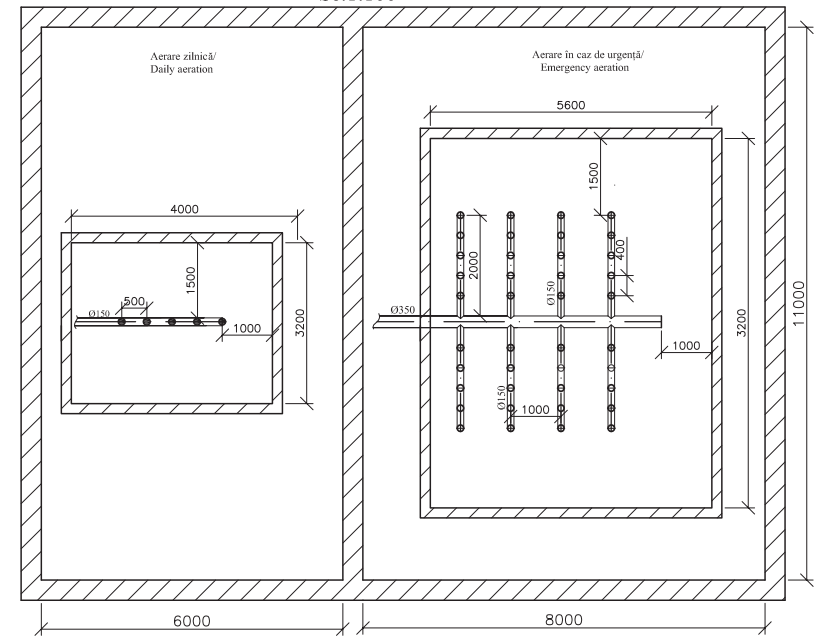


Plan general / General plan



Secțiunea 2-2/ Section 2-2

Sc.1:100



1. Conductă de apă în urma aerării/Water pipe after aeration
2. Conductă de aer sub presiune/Air pipe under pressure for filter washing
3. Conductă de apă pentru spălarea filtrelor/Water pipe for filter washing
4. Conductă de apă filtrată/Filtered water pipe
5. Conductă de apă rezultată în urma spălării filtrului/ Pipe of resulted water after filter washing
6. Conductă de apă cu soluție de lapte de var/Lime water solution pipe
7. Conductă de apă cu soluție de acid sulfuric/Sulfuric acid water solution pipe
8. Filtru sub presiune Ø3.0m/Filter under pressure Ø3.0m
9. Rezervor de spălare inversă V=25m³/ Washing filters tank V=25m³
10. Rezervor cu soluție de lapte de var V=1m³/ Lime solution tank V=1m³
11. Rezervor cu soluție de acid sulfuric V=200l/ Sulphuric acid solution tank V=200l
12. Suflante pentru spălare P=350mb Q=350Nm³/h/ Blowers for cleaning P=350mb Q=350Nm³/h
13. Pompe pentru spălare / Pumps for washing
14. Pompe pentru soluție de lapte de var/ Pumps for lime solution
15. Pompe pentru soluție de acid sulfuric/ Pumps for sulfuric acid solution
16. Conductă de apă brută/Raw water pipe
17. Bloc electric/ Electric block



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BALISEVSCHI

Casa filtrelor /
Filters building

SCALE:1:100

WTP_02

Planul de amplasare a Statiei de tratare Balisevschi/ Emplacement of Balisevschi Water Treatment plant



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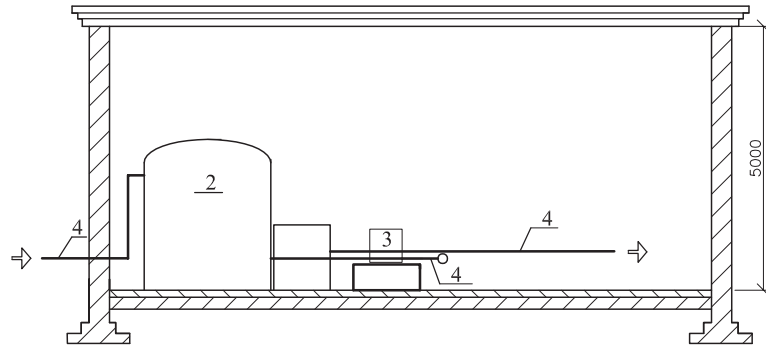
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DATE	REV.

BALISEVSCHI
Stația de tratare a apei /
Water Treatment plant

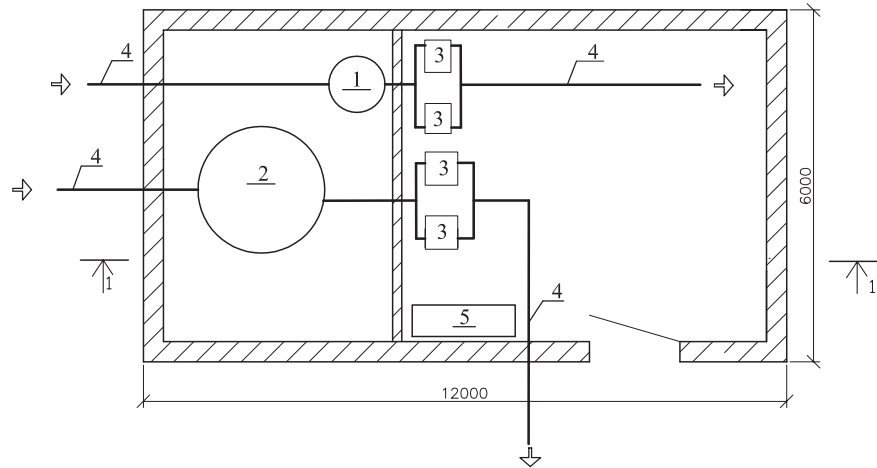
SCALE:1:50

WTP_03

Secțiunea 1-1/ Section 1-1



Plan general / General plan



1. Rezervor cu soluție de NaClO V=1m³/ Reservoir NaClO solution V=1m³
2. Rezervor cu soluție de NaClO V=15m³/ Reservoir NaClO solution V=15m³
3. Pompe pentru soluție de NaClO/ Pumps for NaClO solution
4. Conductă de apă cu soluție de NaClO/ NaClO water solution pipe
5. Bloc electric/ Electric block



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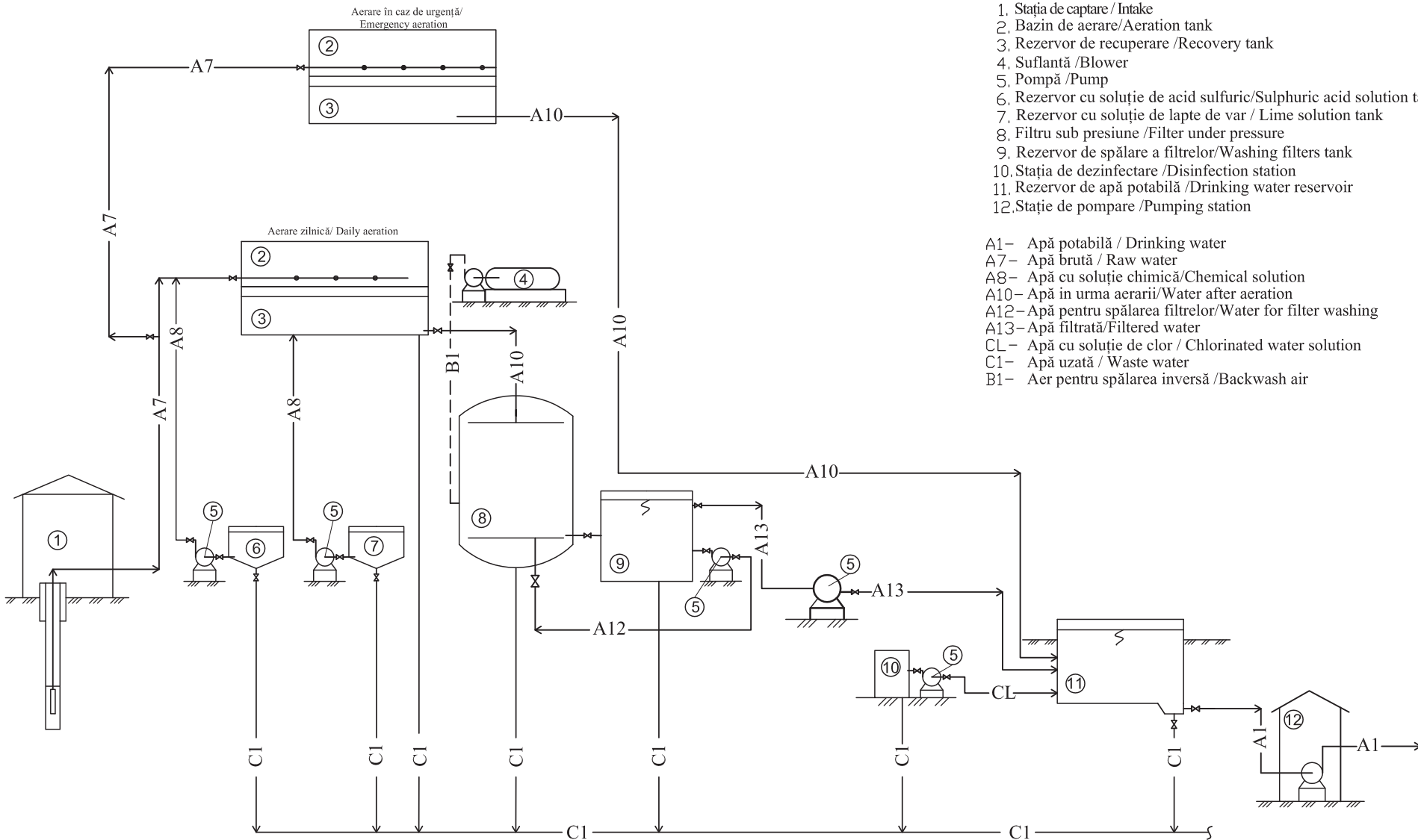
Date	Rev.
DATE	REV.

BALISEVSCHI

Stația de dezinfectare /
Disinfection station

SCALE1:100

WTP_04



- 1, Stația de captare / Intake
 - 2, Bazin de aerare/Aeration tank
 - 3, Rezervor de recuperare /Recovery tank
 - 4, Suflantă /Blower
 - 5, Pompă /Pump
 - 6, Rezervor cu soluție de acid sulfuric/Sulphuric acid solution tank
 - 7, Rezervor cu soluție de lapte de var / Lime solution tank
 - 8, Filtru sub presiune /Filter under pressure
 - 9, Rezervor de spălare a filtrelor/Washing filters tank
 - 10, Stația de dezinfectare /Disinfection station
 - 11, Rezervor de apă potabilă /Drinking water reservoir
 - 12, Stație de pompare /Pumping station
- A1- Apă potabilă / Drinking water
A7- Apă brută / Raw water
A8- Apă cu soluție chimică/Chemical solution
A10- Apă în urma aerării/Water after aeration
A12- Apă pentru spălarea filtrelor/Water for filter washing
A13- Apă filtrată/Filtered water
CL- Apă cu soluție de clor / Chlorinated water solution
C1- Apă uzată / Waste water
B1- Aer pentru spălarea inversă /Backwash air



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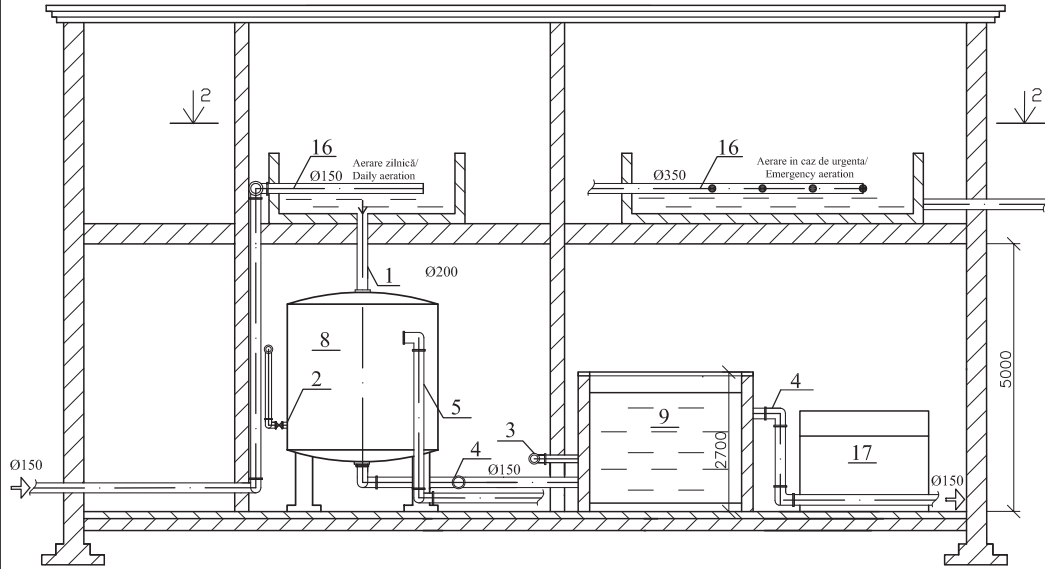
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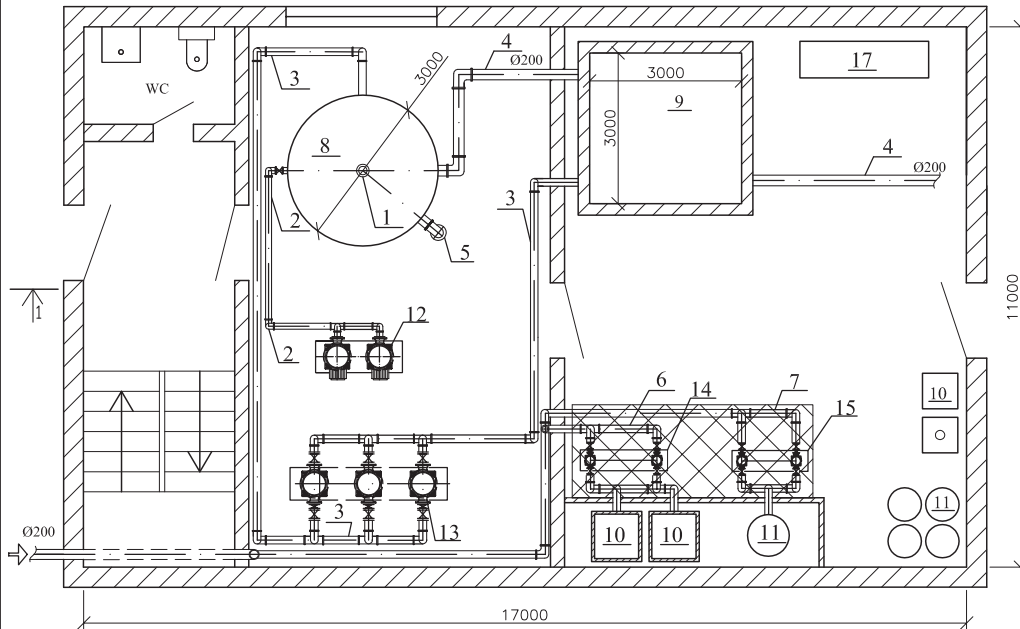
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GHIDIGHICI
Schema tehnologică de tratare
a apei/ Tehnological scheme
of water treatment

Secțiunea 1-1/ Section 1-1

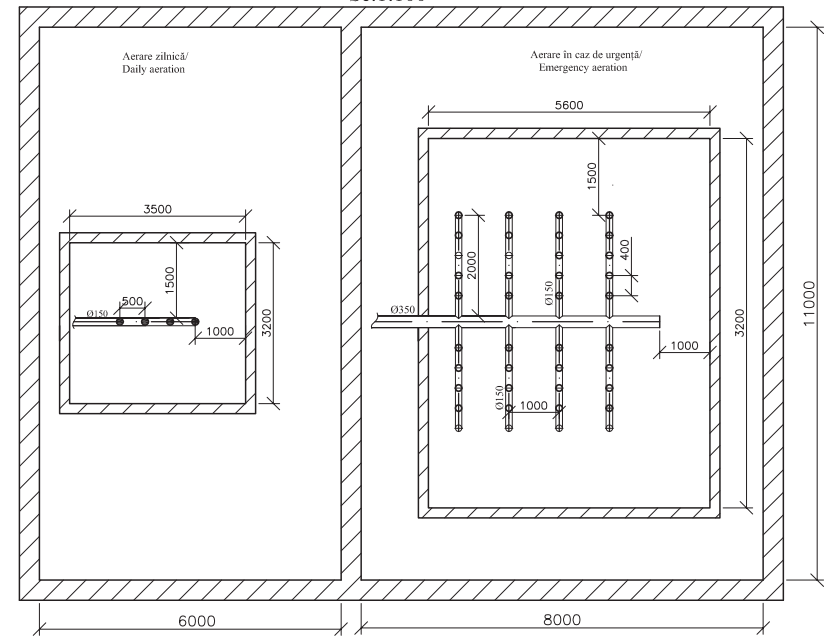


Plan general / General plan



Secțiunea 2-2/ Section 2-2

Sc.1:100



1. Conductă de apă în urma aerării/Water pipe after aeration
2. Conductă de aer sub presiune/Air pipe under pressure for filter washing
3. Conductă de apă pentru spălarea filtrelor/Water pipe for filter washing
4. Conductă de apă filtrată/Filtered water pipe
5. Conductă de apă rezultată în urma spălării filtrului/ Pipe of resulted water after filter washing
6. Conductă de apă cu soluție de lapte de var/Lime water solution pipe
7. Conductă de apă cu soluție de acid sulfuric/Sulfuric acid water solution pipe
8. Filtru sub presiune Ø3.0m/Filter under pressure Ø3.0m
9. Rezervor de spălare inversă V=25m³/ Washing filters tank V=25m³
10. Rezervor cu soluție de lapte de var V=1m³/ Lime solution tank V=1m³
11. Rezervor cu soluție de acid sulfuric V=200l/ Sulphuric acid solution tank V=200l
12. Suflante pentru spălare P=350mb Q=350Nm³/h/ Blowers for cleaning P=350mb Q=350Nm³/h
13. Pompe pentru spălare / Pumps for washing
14. Pompe pentru soluție de lapte de var/ Pumps for lime solution
15. Pompe pentru soluție de acid sulfuric/ Pumps for sulfuric acid solution
16. Conductă de apă brută/Raw water pipe
17. Bloc electric/Electric block



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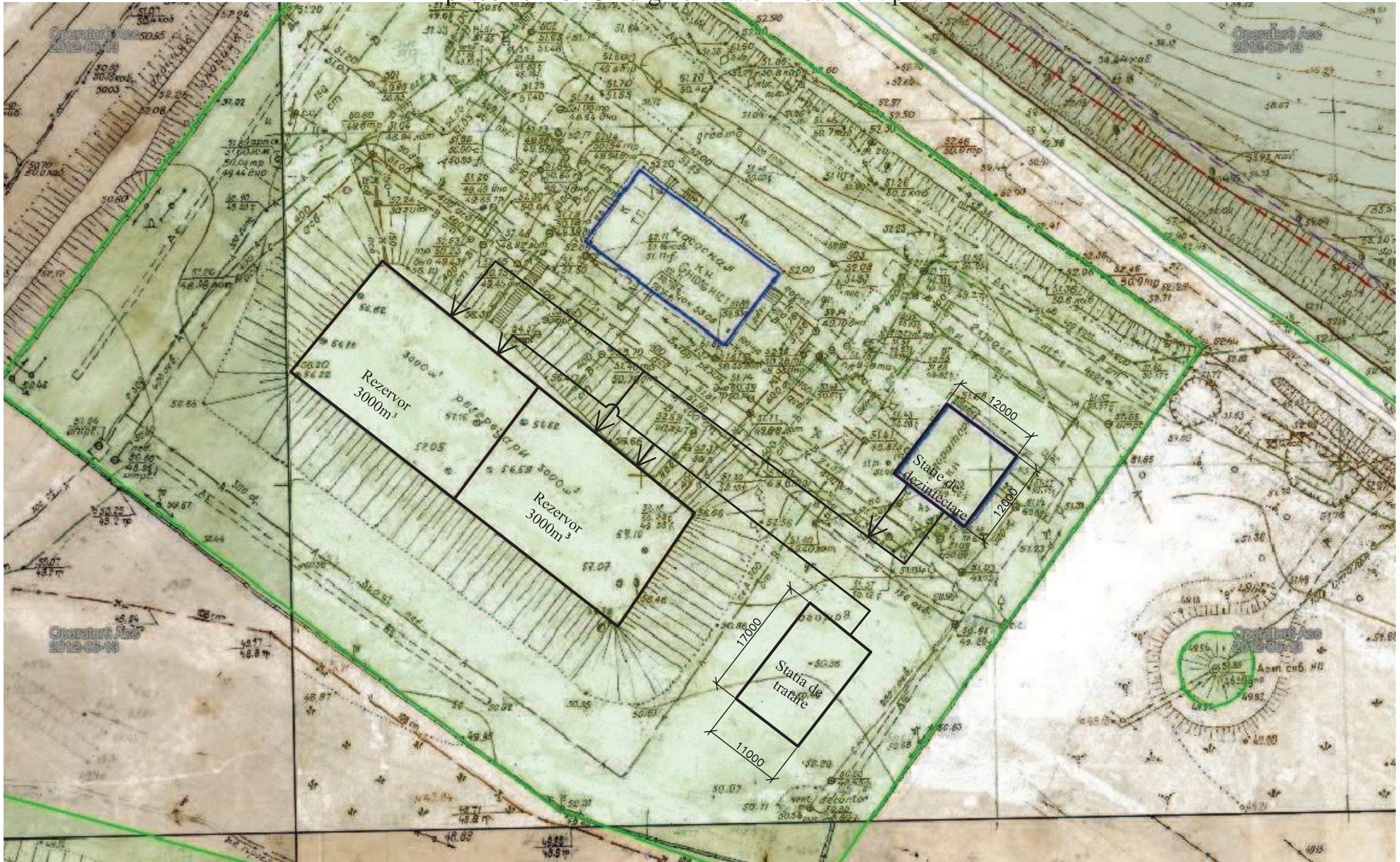
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DATE	REV.	
		Casa filtrelor / Filters building
		SCALE:1:100
		WTP_06

Planul de amplasare a Stației de tratare Ghidighici/ Emplacement of Ghidighici Water Treatment plant



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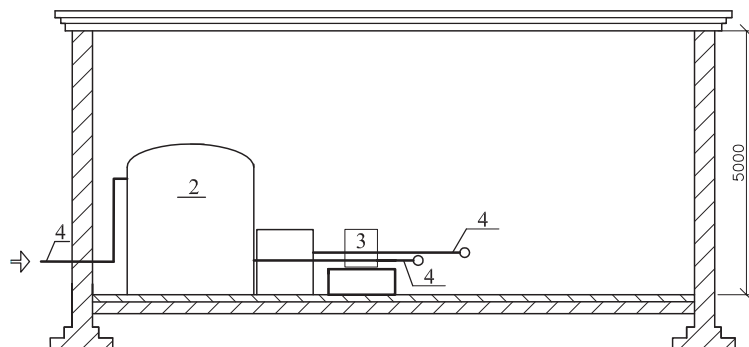
Date	Rev.
DATE	REV.

GHIDIGHICI
Stația de tratare a apei /
Water Treatment plant

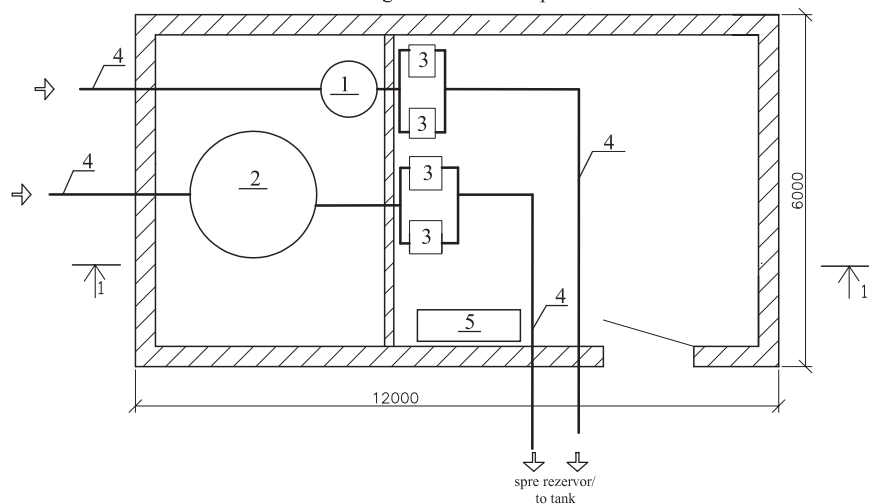
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WTP_07

Secțiunea 1-1/ Section 1-1



Plan general / General plan



1. Rezervor cu soluție de NaClO V=1m³/ Reservoir NaClO solution V=1m³
2. Rezervor cu soluție de NaClO V=15m³/ Reservoir NaClO solution V=15m³
3. Pompe pentru soluție de NaClO/ Pumps for NaClO solution
4. Conductă de apă cu soluție de NaClO/ NaClO water solution pipe
5. Bloc electric/ Electric block



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TREATMENT - FEASIBILITY STUDY



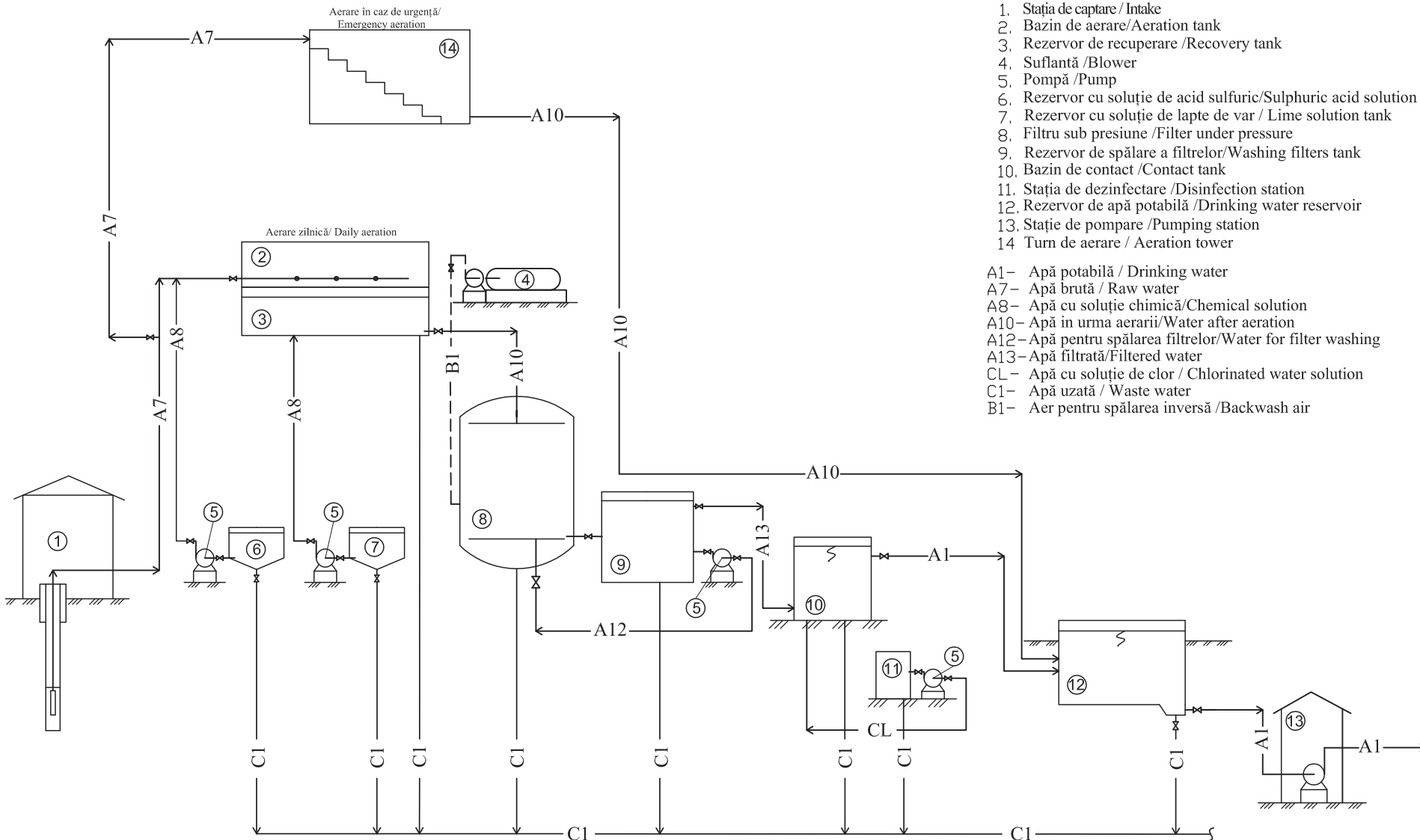
Date	Rev.
DATE	REV.

GHIDIGHICI

Stația de dezinfectare /
Disinfection station

SCALE1:100

WTP_08



1. Stația de captare / Intake
 2. Bazin de aerare/Aeration tank
 3. Rezervor de recuperare /Recovery tank
 4. Suflantă /Blower
 5. Pompă /Pump
 6. Rezervor cu soluție de acid sulfuric/Sulphuric acid solution tank
 7. Rezervor cu soluție de lapte de var / Lime solution tank
 8. Filtru sub presiune /Filter under pressure
 9. Rezervor de spălarea a filtrelor/Washing filters tank
 10. Bazin de contact /Contact tank
 11. Stația de dezinfectare /Disinfection station
 12. Rezervor de apă potabilă /Drinking water reservoir
 13. Stație de pompare /Pumping station
 14. Turn de aerare / Aeration tower
- A1- Apă potabilă / Drinking water
A7- Apă brută / Raw water
A8- Apă cu soluție chimică/Chemical solution
A10- Apă în urma aerării/Water after aeration
A12- Apă pentru spălarea filtrelor/Water for filter washing
A13- Apă filtrată/Filtered water
CL- Apă cu soluție de clor / Chlorinated water solution
C1- Apă uzată / Waste water
B1- Aer pentru spălarea inversă /Backwash air



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CHISINAU WATER SUPPLY & SEWAGE
TREATMENT - FEASIBILITY STUDY

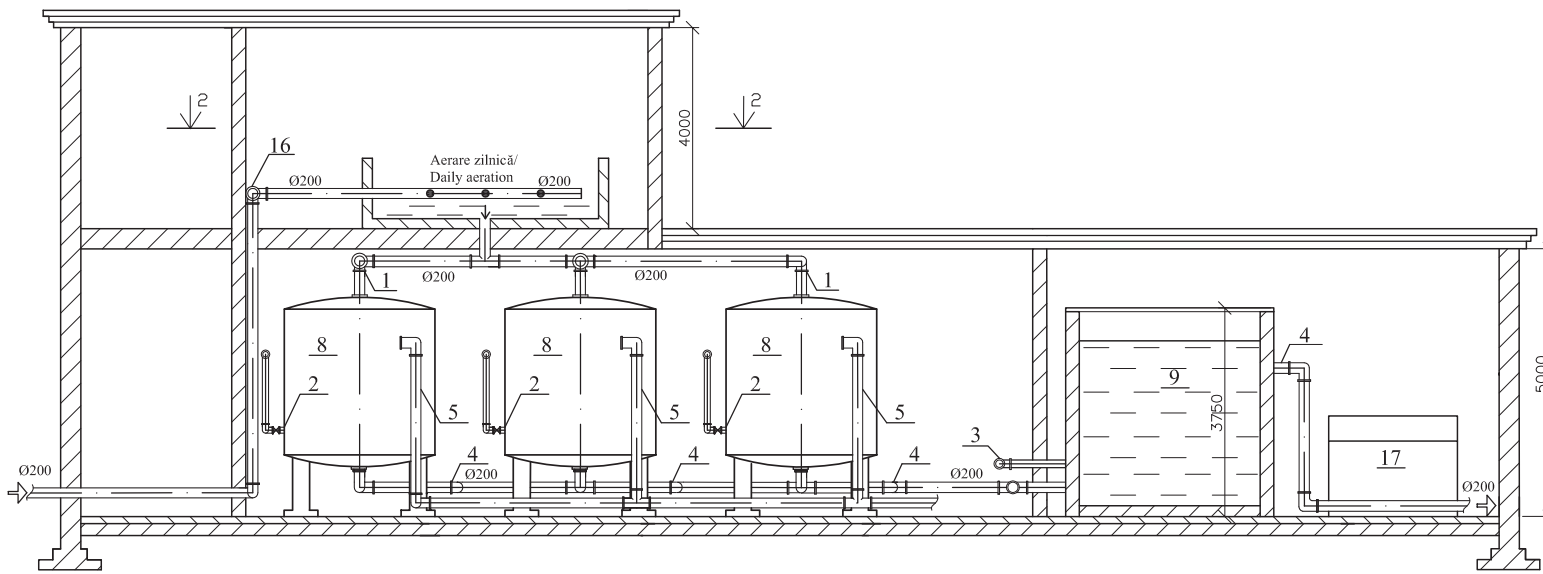


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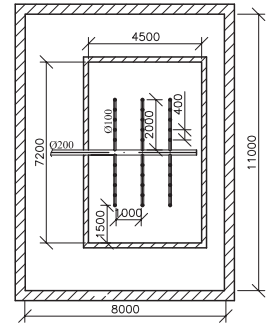
Date	Rev.
DATE	REV.

IALOVENI
Schema tehnologică de tratare
a apei/ Tehnological scheme
of water treatment
WTP_09

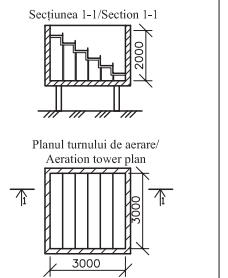
Secțiunea 1-1/ Section 1-1



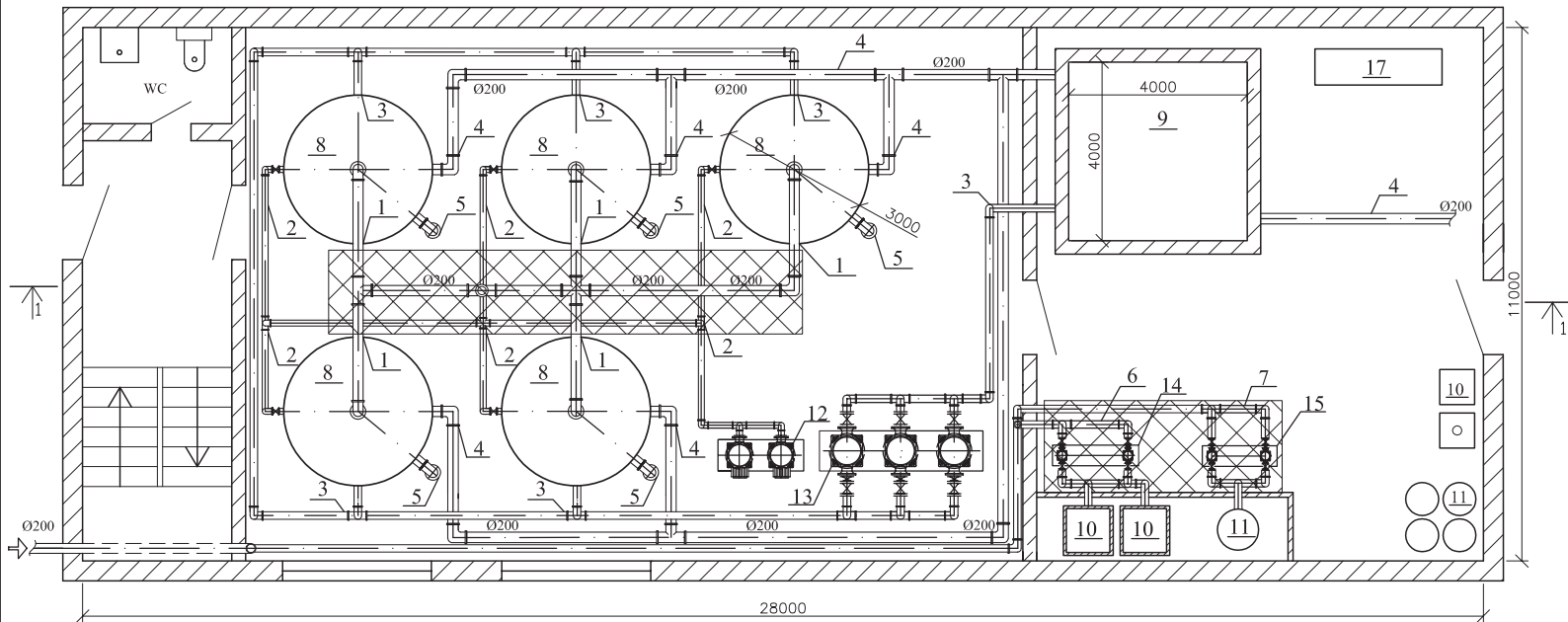
Secțiunea 2-2/ Section 2-2
Sc.1:200



Aerare în caz de urgență/
Emergency aeration
Sc.1:200



Plan general / General plan



1. Conductă de apă în urma aerării/Water pipe after aeration
2. Conductă de aer sub presiune/Air pipe under pressure
3. Conductă de apă pentru spălarea filtrelor/Water pipe for filter washing
4. Conductă de apă filtrată/Filtered water pipe
5. Conductă de apă rezultată în urma spălării filtrului/ Pipe of resulted water after filter washing
6. Conductă de apă cu soluție de lapte de var/Lime water solution pipe
7. Conductă de apă cu soluție de acid sulfuric/Sulfuric acid water solution pipe
8. Filtru sub presiune Ø3.0m/Filter under pressure Ø3.0m
9. Rezervor de spălare inversă V=60m³/ Washing filters tank V=60m³
10. Rezervor cu soluție de lapte de var V=1m³/ Lime solution tank V=1m³
11. Rezervor cu soluție de acid sulfuric V=200l/ Sulphuric acid solution tank V=200l
12. Sulfante pentru spălare P=350mb Q=350Nm³/h/ Blowers for cleaning P=350mb Q=350Nm³/h
13. Pompe pentru spălare Q=70m³/h P=7m/ Pumps for washing Q=70m³/h P=7m
14. Pompe pentru soluție de lapte de var/ Pumps for lime solution
15. Pompe pentru soluție de acid sulfuric/ Pumps for sulfuric acid solution
16. Conductă de apă brută/Raw water pipe
17. Bloc electric/ Electric block



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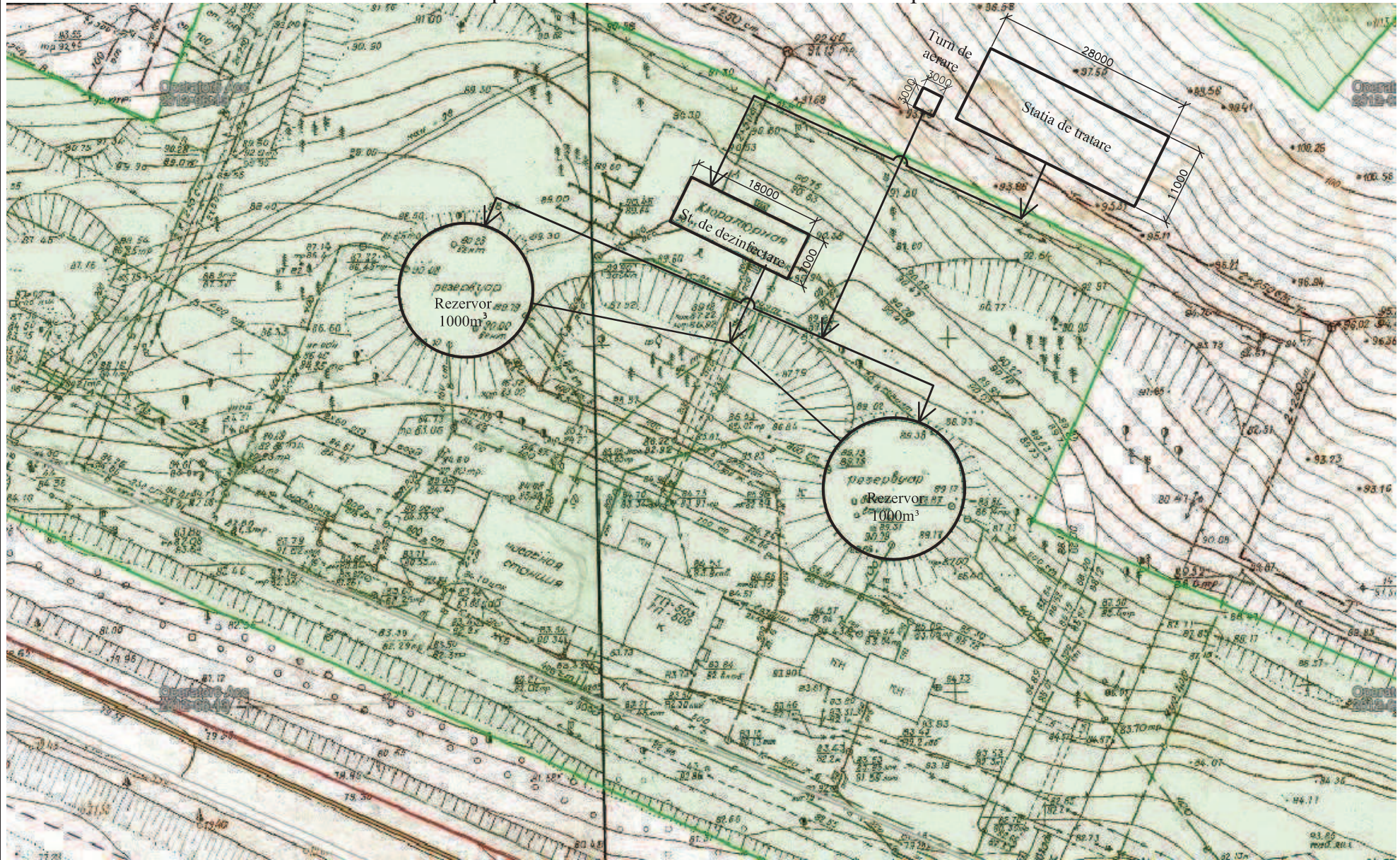
IALOVENI

Casa filtrelor /
Filters building

SCALE:1:100

WTP_10

Planul de amplasare a Stației de tratare Ialoveni/
Emplacement of Ialoveni Water Treatment plant



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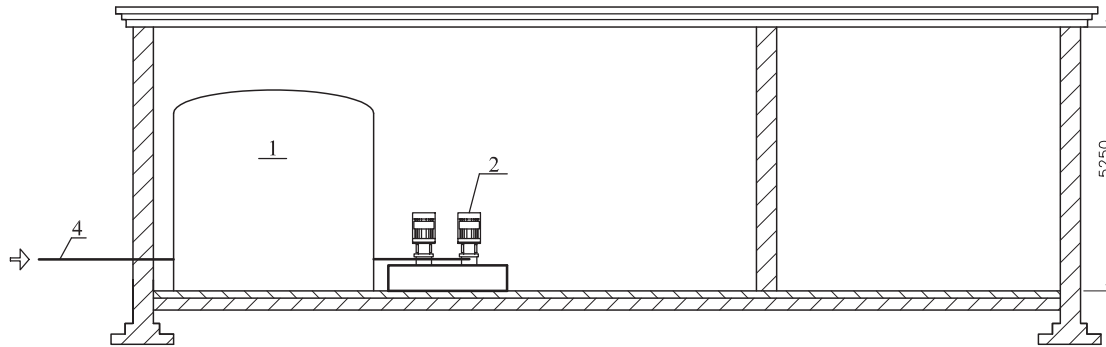
Date	Rev.
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IALOVENI
Stația de tratare a apei /
Water Treatment plant

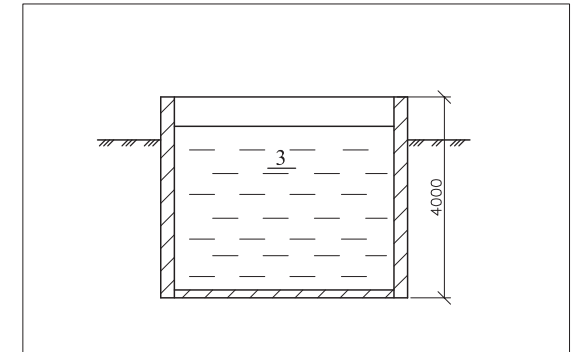
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WTP_11

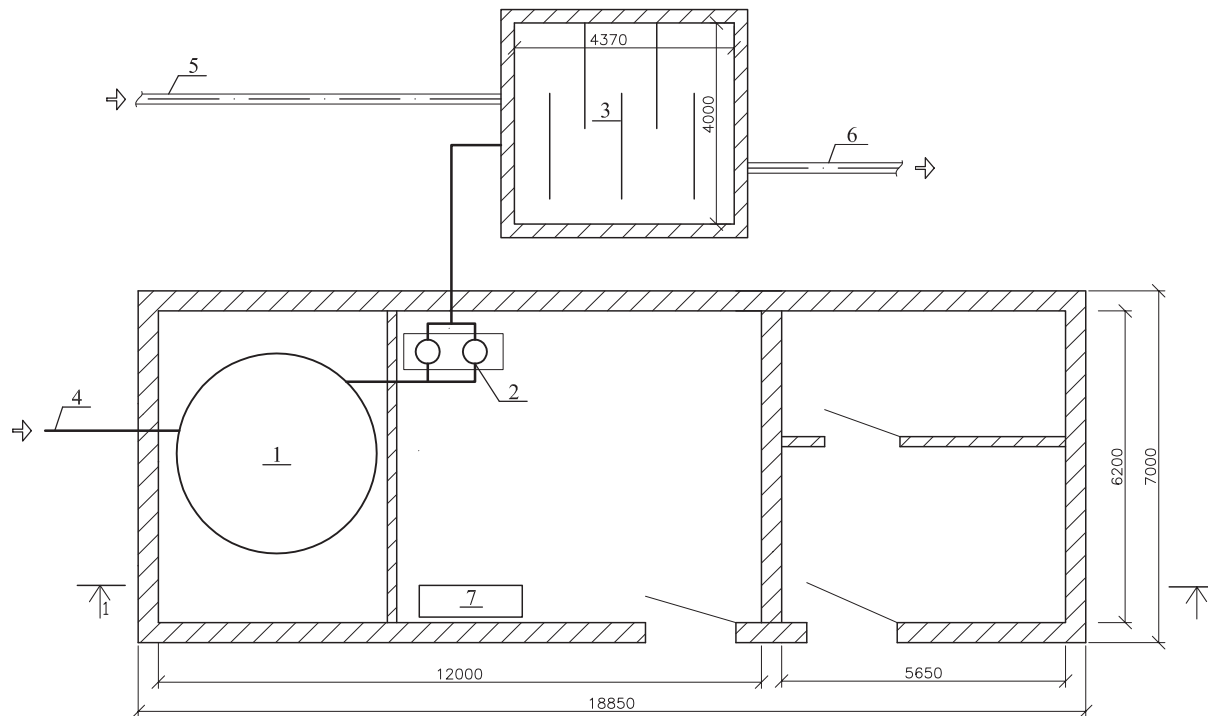
Secțiunea 1-1/ Section 1-1



Bazin de contact/ Contact tank



Plan general / General plan



1. Rezervor cu soluție de NaClO V=50m³/
Reservoir NaClO solution V=50m³
2. Pompe pentru soluție de NaClO/
Pumps for NaClO solution
3. Bazin de contact V=70m³/ Contact tank V=70m³
4. Conductă de apă cu soluție de NaClO/
NaClO water solution pipe
5. Conductă de apă filtrată/ Filtered water pipe
6. Conductă de apă dezinfectată/ Disinfection water pipe
7. Bloc electric/ Electric block



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TREATMENT - FEASIBILITY STUDY



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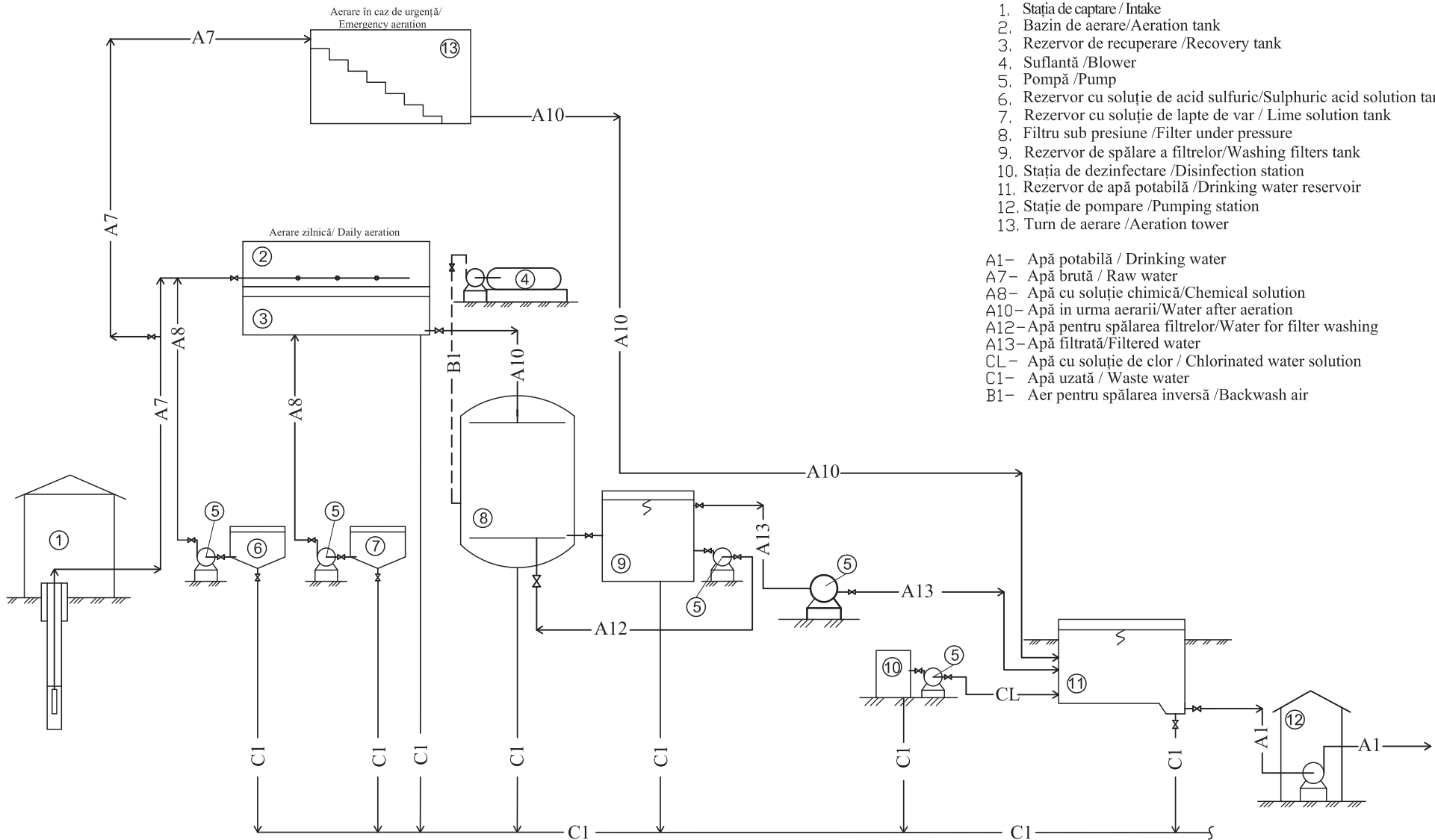
Date	Rev.
DATE	REV.

IALOVENI

Stația de dezinfectare /
Disinfection station

SCALE1:100

WTP_12



- 1. Stația de captare / Intake
 - 2. Bazin de aerare/Aeration tank
 - 3. Rezervor de recuperare /Recovery tank
 - 4. Suflantă /Blower
 - 5. Pompă /Pump
 - 6. Rezervor cu soluție de acid sulfuric/Sulphuric acid solution tank
 - 7. Rezervor cu soluție de lapte de var / Lime solution tank
 - 8. Filtru sub presiune /Filter under pressure
 - 9. Rezervor de spălarea a filtrelor/Washing filters tank
 - 10. Stația de dezinfectare /Disinfection station
 - 11. Rezervor de apă potabilă /Drinking water reservoir
 - 12. Stație de pompare /Pumping station
 - 13. Turn de aerare /Aeration tower
- A1- Apă potabilă / Drinking water
 - A7- Apă brută / Raw water
 - A8- Apă cu soluție chimică/Chemical solution
 - A10- Apă în urma aerării/Water after aeration
 - A12- Apă pentru spălarea filtrelor/Water for filter washing
 - A13- Apă filtrată/Filtered water
 - CL- Apă cu soluție de clor / Chlorinated water solution
 - C1- Apă uzată / Waste water
 - B1- Aer pentru spălarea inversă /Backwash air

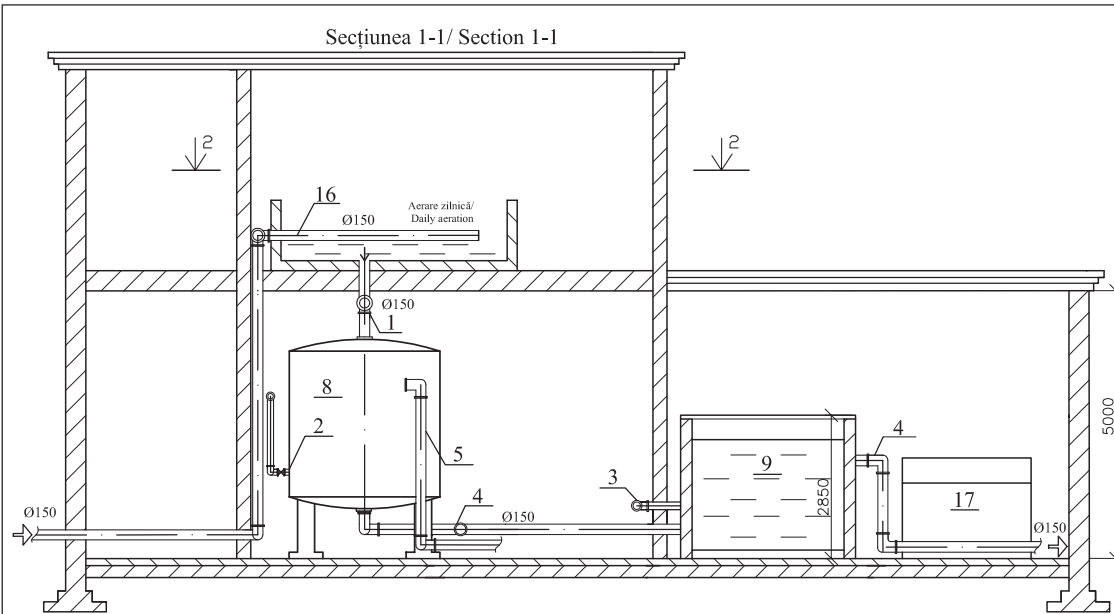


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TREATMENT - FEASIBILITY STUDY

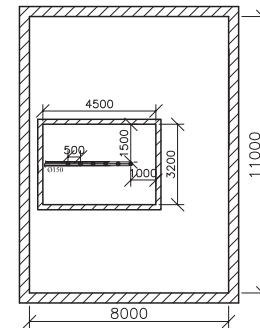


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PETRICANI
Schema tehnologică de tratare
a apei/ Tehnological scheme
of water treatment

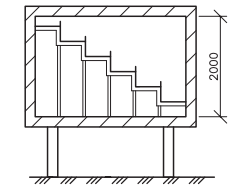


Secțiunea 2-2/ Section 2-2
Sc.1:200

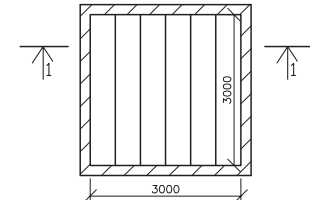


Aerare în caz de urgență/
Emergency aeration
Sc.1:100

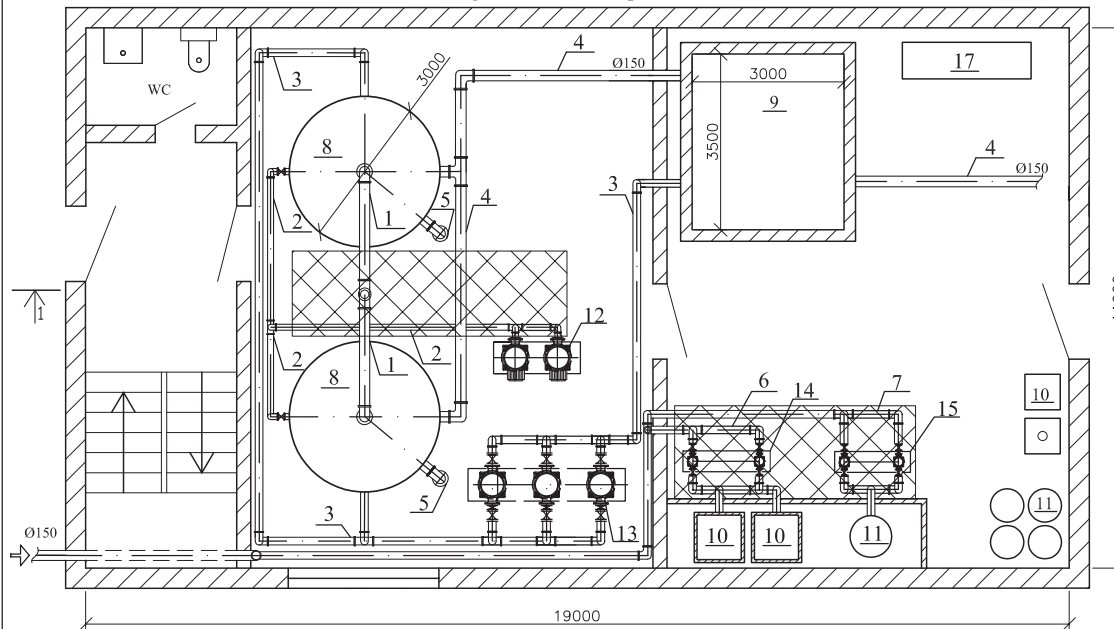
Secțiunea 1-1/Section 1-1



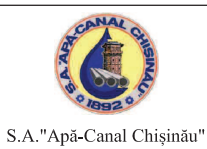
Planul turnului de aerare



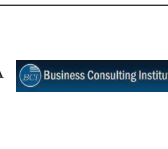
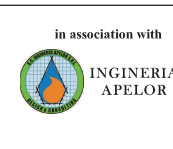
Plan general / General plan



1. Conductă de apă în urma aerării/Water pipe after aeration
2. Conductă de aer sub presiune/Air pipe under pressure
3. Conductă de apă pentru spălarea filtrelor/Water pipe for filter washing
4. Conductă de apă filtrată/Filtered water pipe
5. Conductă de apă rezultată în urma spălării filtrului/ Pipe of resulted water after filter washing
6. Conductă de apă cu soluție de lapte de var/Lime water solution pipe
7. Conductă de apă cu soluție de acid sulfuric/Sulfuric acid water solution pipe
8. Filtru sub presiune Ø3.0m/Filter under pressure Ø3.0m
9. Rezervor de spălare inversă V=30m³/ Washing filters tank V=30m³
10. Rezervor cu soluție de lapte de var V=1m³/ Lime solution tank V=1m³
11. Rezervor cu soluție de acid sulfuric V=200l/ Sulphuric acid solution tank V=200l
12. Suflante pentru spălare P=350mb Q=350Nm³/h/ Blowers for cleaning P=350mb Q=350Nm³/h
13. Pompe pentru spălare / Pumps for washing
14. Pompe pentru soluție de lapte de var/ Pumps for lime solution
15. Pompe pentru soluție de acid sulfuric/ Pumps for sulfuric acid solution
16. Conductă de apă brută/Raw water pipe
17. Bloc electric/ Electric block



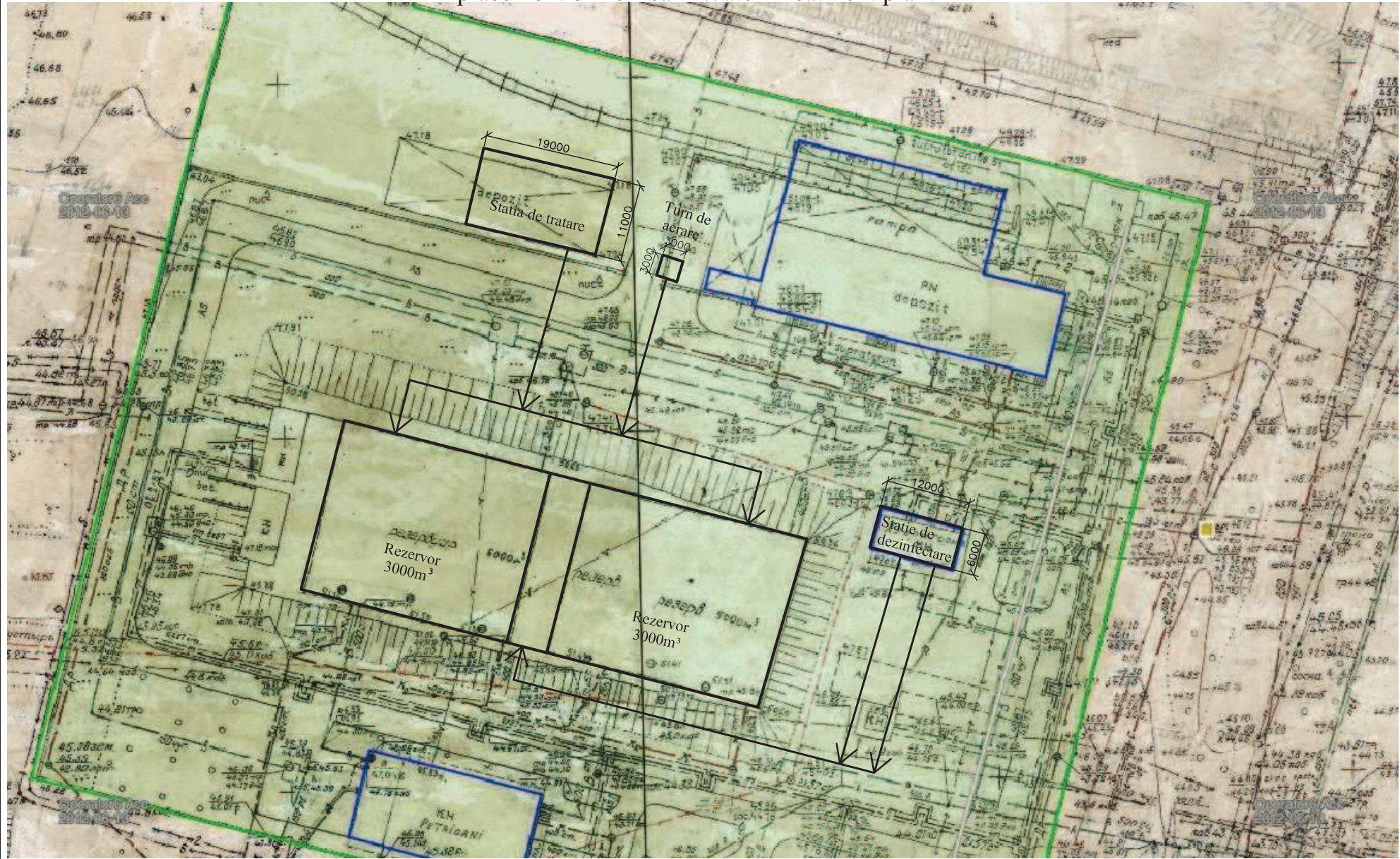
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TREATMENT - FEASIBILITY STUDY



Date	Rev.
DATE	REV.

PETRICANI
Casa filtrelor /
Filters building
SCALE:1:100 WTP_14

Planul de amplasare a Stației de tratare Petricani/ Emplacement of Petricani Water Treatment plant



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TREATMENT - FEASIBILITY STUDY



in association with

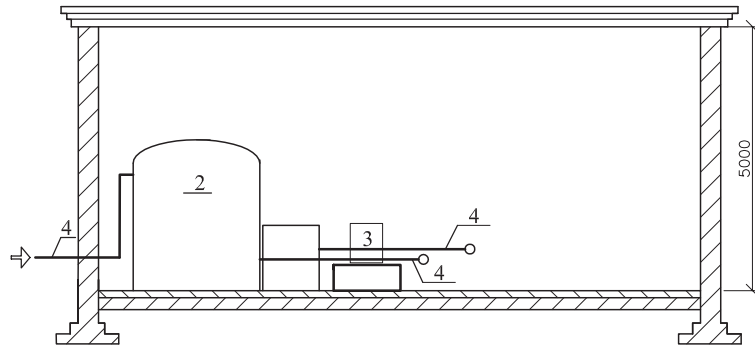


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APELOR

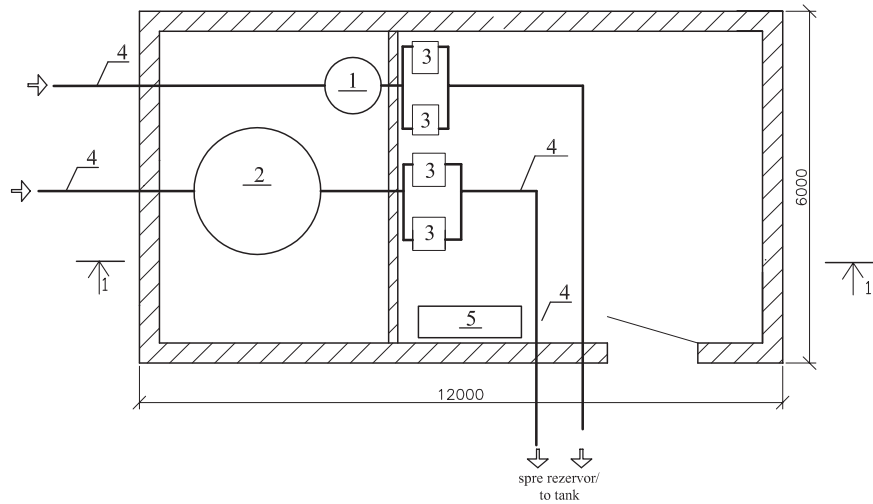


Date	Rev.	PETRICANI
DATE	REV.	
		Stația de tratare a apei / Water Treatment plant
		SCALE:1:50
		WTP_15

Secțiunea 1-1/ Section 1-1



Plan general / General plan



1. Rezervor cu soluție de NaClO V=1m³/ Reservoir NaClO solution V=1m³
2. Rezervor cu soluție de NaClO V=15m³/ Reservoir NaClO solution V=15m³
3. Pompe pentru soluție de NaClO/ Pumps for NaClO solution
4. Conductă de apă cu soluție de NaClO/ NaClO water solution pipe
5. Bloc electric/ Electric block



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TREATMENT - FEASIBILITY STUDY



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Date	Rev.
DATE	REV.

PETRICANI

Stația de dezinfectare /
Disinfection station

SCALE1:100

WTP_16

3

WATER PUMPING STATIONS STATII DE POMPARE APA



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PROGRAMUL DE ALIMENTARE CU APA SI TRATARE A
APELOR UZATE IN MUNICIPIUL CHISINAU - STUDIU DE
FEZABILITATE / CHISINAU WATER SUPPLY AND SEWAGE
TREATMENT - FEASIBILITY STUDY



in association with



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APELOR

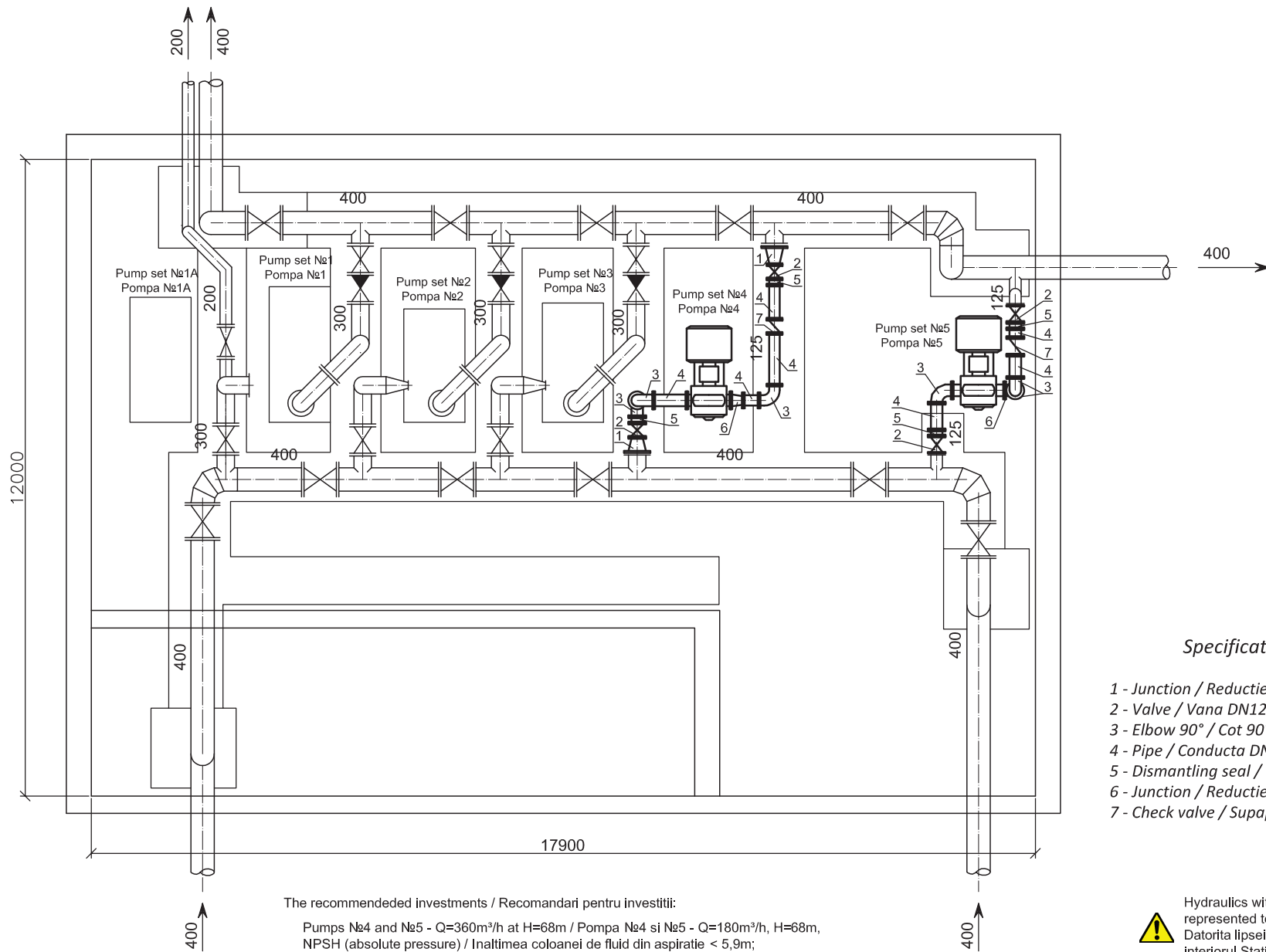


Date	Rev.
July 2010	01

PRELIMINARY DESIGN
Water pumping stations
Statii de pompare apa

No Scale

DW PS_01



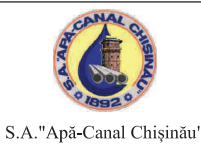
Specification / Specificatia

- 1 - Junction / Reductie DN300x125;
- 2 - Valve / Vana DN125;
- 3 - Elbow 90° / Cot 90° DN125;
- 4 - Pipe / Conducta DN125;
- 5 - Dismantling seal / Etansarea demontabila DN125;
- 6 - Junction / Reductie DN125x150;
- 7 - Check valve / Supapa de retinere DN 125;

The recommended investments / Recomandari pentru investiti:

Pumps №4 and №5 - Q=360m³/h at H=68m / Pompa №4 si №5 - Q=180m³/h, H=68m,
 NPSH (absolute pressure) / Inaltimea coloanei de fluid din aspiratie < 5,9m;
 Suction pressure (absolute pressure) / Presiunea de aspiratie (presiunea absoluta) > 10,09m

Hydraulics within the Pumping Station are not represented to scale due to a lack of information / Datorita lipsei informatiei suficiente, armatura in interiorul Statiei de Pompare nu este prezentata in scara



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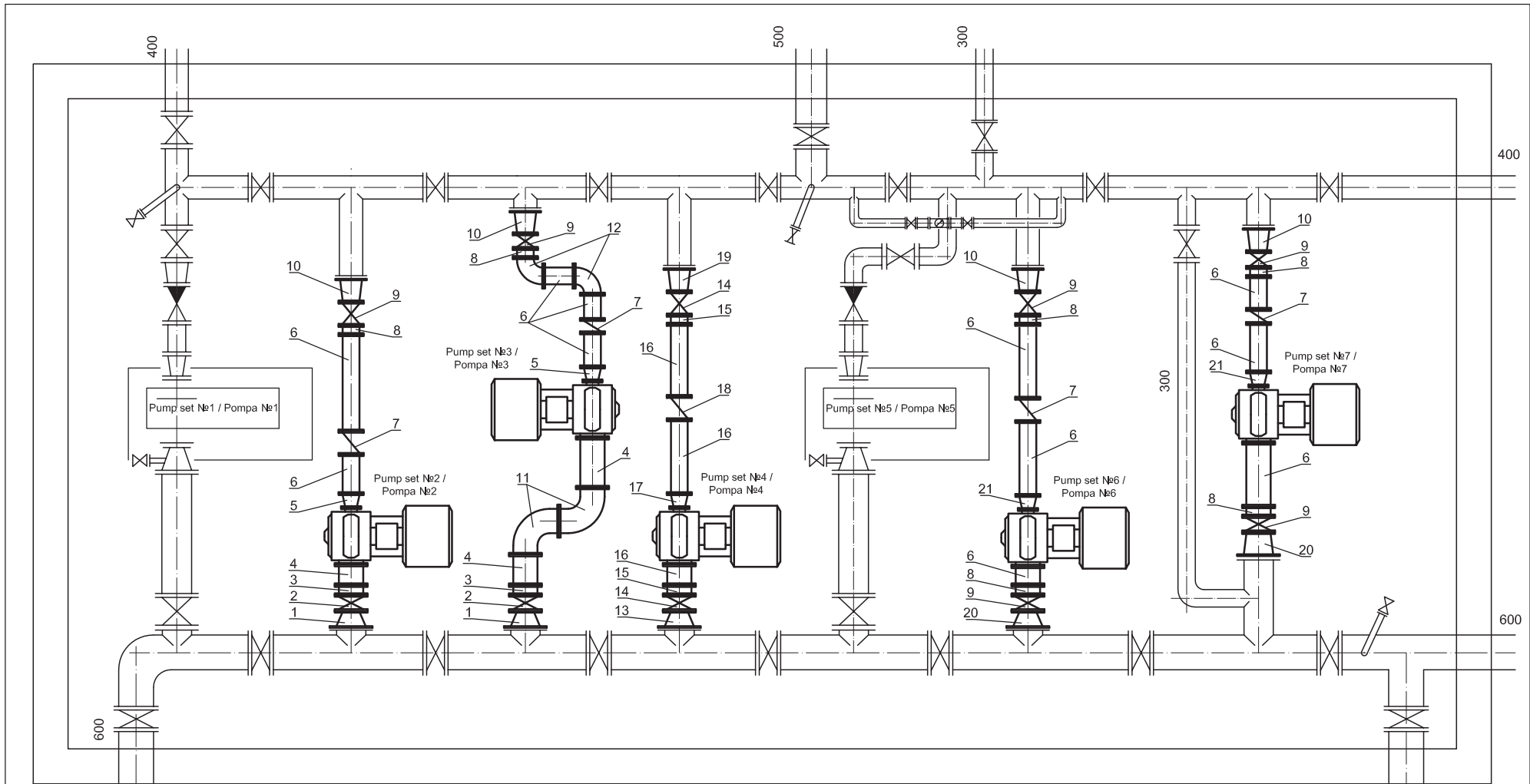


Date	Rev.
DATE	REV.

**Reabilitarea Statiei de Pompare /
 Rehabilitation of the Pumping
 Station "Balisevchi"**

Dupa reabilitare / After rehabilitation

DW PS_01 Balisevchi



The recommended investments / Recomandari pentru investiti

For the Zone 3 / Pentru Zona 3

Pumps №6 and №7 - Q=296m³/h at H=22m / Pompa №6 si №7 - Q=296m³/h, H=22m, NPSH (absolute pressure) / Inaltimea coloanei de fluid din aspiratie < 3,80m; Suction pressure (absolute pressure) / Presiunea de aspiratie (presiunea absoluta) > 15,12m

For the Zone 4 / Pentru Zona 4

Pumps №2 and №3 - Q=285m³/h at H=97m / Pompa №2 si №3 - Q=285m³/h, H=97m, NPSH (absolute pressure) / Inaltimea coloanei de fluid din aspiratie < 7,70m; Suction pressure (absolute pressure) / Presiunea de aspiratie (presiunea absoluta) > 15,12m

Pump №4 - Q=400m³/h, H=60m / Pompa №4 - Q=400m³/h, H=60m, NPSH (absolute pressure) / Inaltimea coloanei de fluid din aspiratie < 7,10m; Suction pressure (absolute pressure) / Presiunea de aspiratie (presiunea absoluta) > 15,12m

Specification / Specificatia

- 1 - Junction / Reductie DN500x150;
- 2 - Valve / Vana DN150;
- 3 - Dismantling seal / Etansarea demontabila DN150;
- 4 - Pipe / Conducta DN150;
- 5 - Junction / Reductie DN200x125;
- 6 - Pipe / Conducta DN200;
- 7 - Check valve / Supapa de retinere DN 200;
- 8 - Dismantling seal / Etansarea demontabila DN200;
- 9 - Valve / Vana DN200;
- 10 - Junction / Reductie DN400x200;
- 11 - Elbow 90° / Cot 90° DN150;
- 12 - Elbow 90° / Cot 90° DN200;
- 13 - Junction / Reductie DN500x250;
- 14 - Valve / Vana DN250;
- 15 - Dismantling seal / Etansarea demontabila DN250;
- 16 - Pipe / Conducta DN250;
- 17 - Junction / Reductie DN250x200;
- 18 - Check valve / Supapa de retinere DN 250;
- 19 - Junction / Reductie DN400x250;
- 20 - Junction / Reductie DN500x200;
- 21 - Junction / Reductie DN200x150;

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CHISINAU WATER SUPPLY & SEWAGE
TREATMENT - FEASIBILITY STUDY

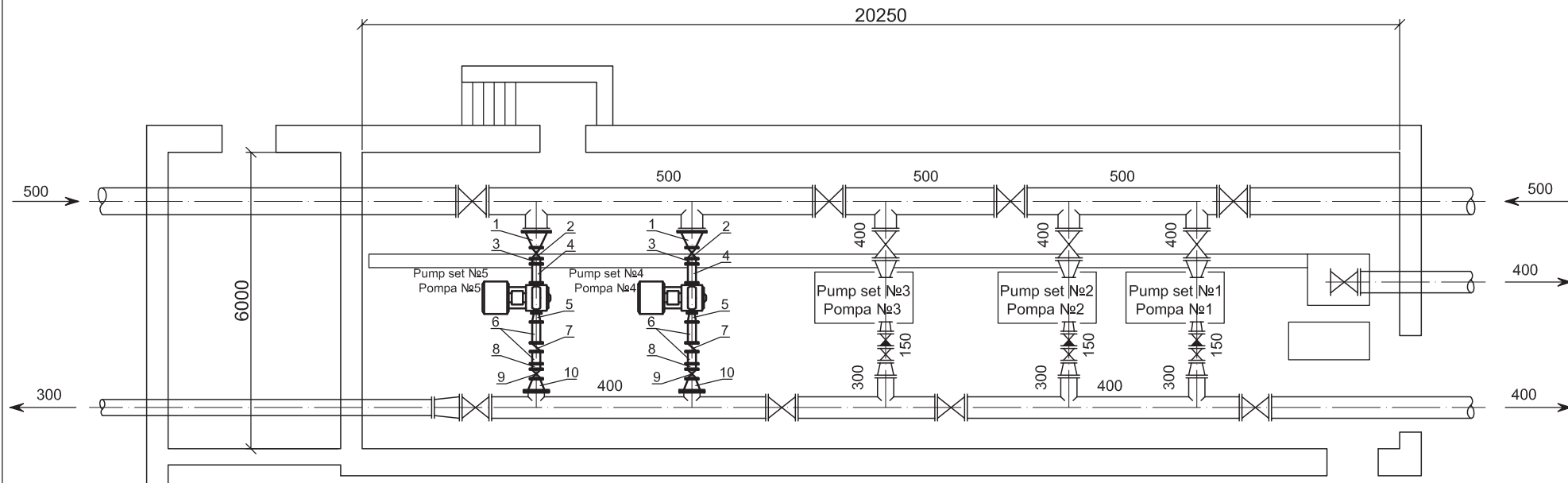


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Date	Rev.
DATE	REV.

Reabilitarea Statiei de Pompare /
Rehabilitation of the Pumping
Station "Buiucani"
Dupa reabilitare / After rehabilitation
DW P5_02 Buiucani



Specification / Specificatia

The recommended investments / Recomandari pentru investiti:

Pump №4 and №5 - $Q=165\text{m}^3/\text{h}$ at $H=54\text{m}$ / Pompa №4 si №5 - $Q=164\text{m}^3/\text{h}$, $H=55\text{m}$,
 NPSH (absolute pressure) / Inaltimea coloanei de fluid din aspiratie < 7,30m;
 Suction pressure (absolute pressure) / Presiunea de aspiratie (presiunea absoluta) > 10,1m

- 1 - Junction / Reductie DN400x100;
- 2 - Valve / Vana DN100;
- 3 - Dismantling seal / Etansarea demontabila DN100;
- 4 - Pipe / Conducta DN100;
- 5 - Junction / Reductie DN150x80;
- 6 - Pipe / Conducta DN150;
- 7 - Check valve / Supapa de retinere DN 150;
- 8 - Dismantling seal / Etansarea demontabila DN150;
- 9 - Valve / Vana DN150;
- 10 - Junction / Reductie DN300x150;



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CHISINAU WATER SUPPLY & SEWAGE
TREATMENT - FEASIBILITY STUDY

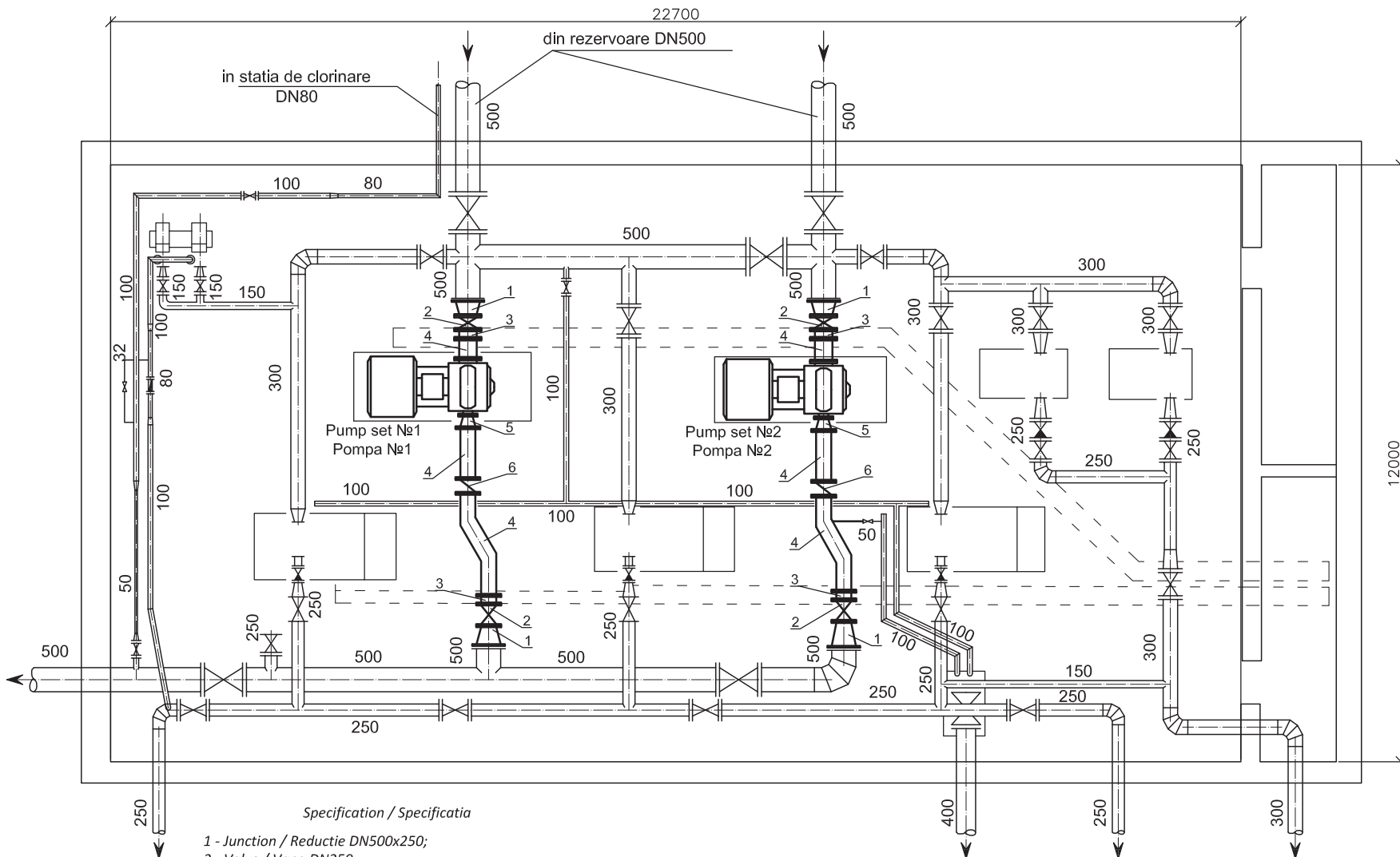


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APELOR



Date	Rev.	Reabilitarea Statiei de Pompare / Rehabilitation of the Pumping Station "Ghidighici"
DATE	REV.	
		Dupa reabilitare / After rehabilitation

DW PS_03 Ghidighici



Specification / Specificatia

- 1 - Junction / Reductie DN500x250;
- 2 - Valve / Vana DN250;
- 3 - Dismantling seal / Etansarea demontabila DN250;
- 4 - Pipe / Conducta DN250;
- 5 - Junction / Reductie DN200x250;
- 6 - Check valve / Supapa de retinere DN250;

The recommended investments / Recomandari pentru investiti:

Pump №1 and №2 - Q=421m³/h each at H=165m / Pompa №1 si №2 - Q=421m³/h, H=165m fiecare,
 NPSH (absolute pressure) / Inaltimea coloanei de fluid din aspiratie < ____ m;
 Suction pressure (absolute pressure) / Presiunea de aspiratie (presiunea absoluta) > 10,50m



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CHISINAU WATER SUPPLY & SEWAGE
TREATMENT - FEASIBILITY STUDY



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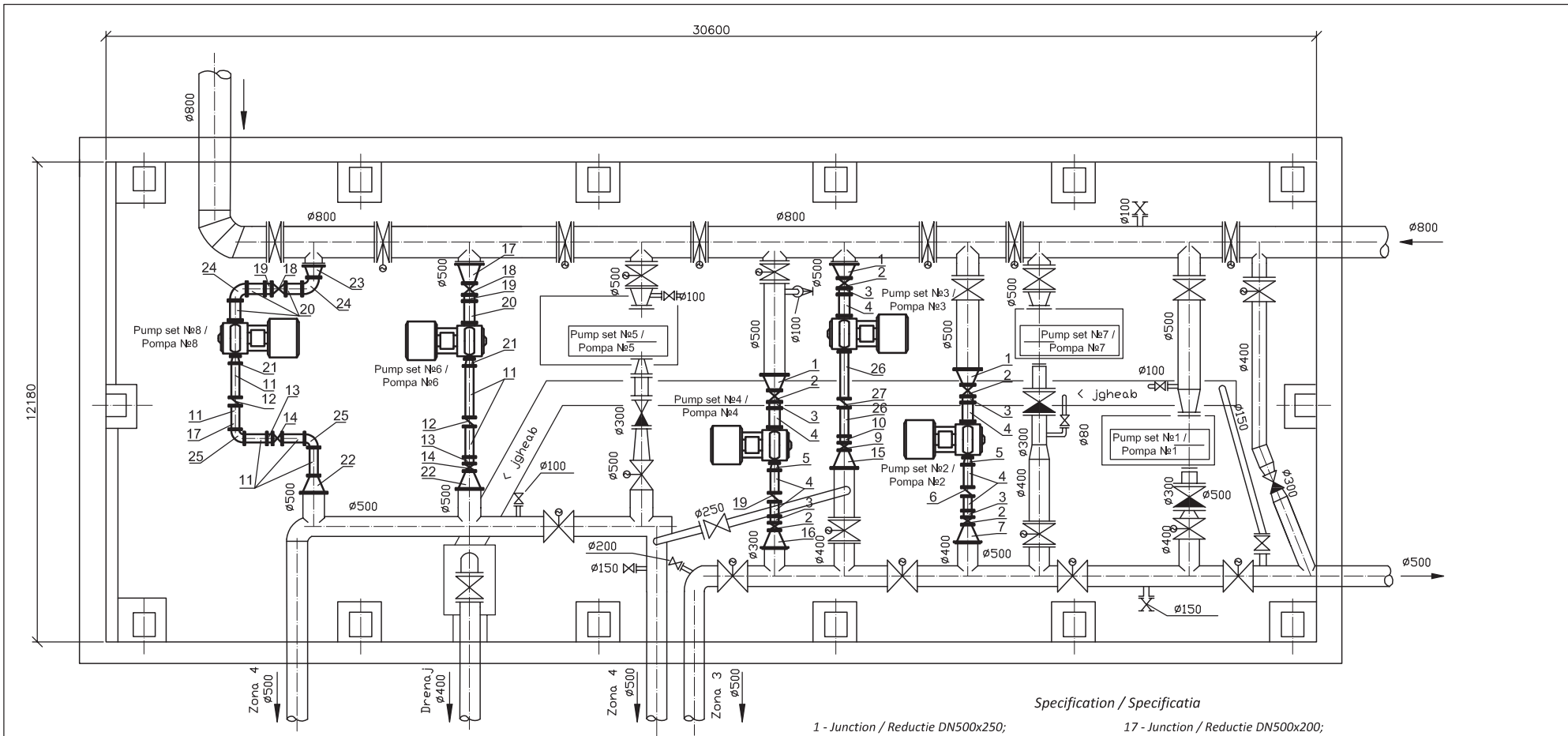


Date	Rev.
DATE	REV.

Reabilitarea Statiei de Pompare /
Rehabilitation of the Pumping
Station "Ialoveni"

Dupa reabilitare / After rehabilitation

DW_PS_04 Ialoveni



Specification / Specificatia

- 1 - Junction / Reductie DN500x250;
- 2 - Valve / Vana DN250;
- 3 - Dismantling seal / Etansarea demontabila DN250;
- 4 - Pipe / Conducta DN250;
- 5 - Junction / Reductie DN250x200;
- 6 - Check valve / Supapa de retinere DN 250;
- 7 - Junction / Reductie DN400x250;
- 8 - Junction / Reductie DN500x200;
- 9 - Valve / Vana DN200;
- 10 - Dismantling seal / Etansarea demontabila DN200;
- 11 - Pipe / Conducta DN150;
- 12 - Check valve / Supapa de retinere DN 150;
- 13 - Dismantling seal / Etansarea demontabila DN150;
- 14 - Valve / Vana DN150;
- 15 - Junction / Reductie DN400x200;
- 16 - Junction / Reductie DN300x250;
- 17 - Junction / Reductie DN500x200;
- 18 - Valve / Vana DN200;
- 19 - Dismantling seal / Etansarea demontabila DN200;
- 20 - Pipe / Conducta DN200;
- 21 - Junction / Reductie DN150x100;
- 22 - Junction / Reductie DN500x200;
- 23 - Junction / Reductie DN350x200;
- 24 - Elbow 90° / Cot 90° DN 125;
- 25 - Elbow 90° / Cot 90° DN 150;
- 26 - Pipe / Conducta DN200;
- 27 - Check valve / Supapa de retinere DN 200;



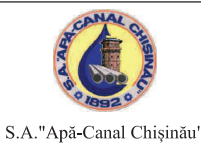
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The recommended investments / Recomandari pentru investitii:

For the Zone 3 / Pentru Zona 3:
 Pumps №2 and №4 - Q=568m³/h at H=47m / Pompa №2 si №4 - Q=568m³/h, H=47m,
 NPSH (absolute pressure) / Inaltimea coloanei de fluid din aspiratie < 4,20m;
 Suction pressure (absolute pressure) / Presiunea de aspiratie (presiunea absoluta) > 12,5m

For the Zone 4 / Pentru Zona 4:
 Pumps №6 and №8 - Q=360m³/h each at H=100m / Pompa №6 si №8 - Q=360m³/h, H=100m fiecare,
 NPSH (absolute pressure) / Inaltimea coloanei de fluid din aspiratie < 4,0m;
 Suction pressure (absolute pressure) / Presiunea de aspiratie (presiunea absoluta) > 12,5m

Pump №3 - Q=360m³/h, H=70m / Pompa №3 - Q=360m³/h, H=70m,
 NPSH (absolute pressure) / Inaltimea coloanei de fluid din aspiratie < 5,0m;
 Suction pressure (absolute pressure) / Presiunea de aspiratie (presiunea absoluta) > 12,5m

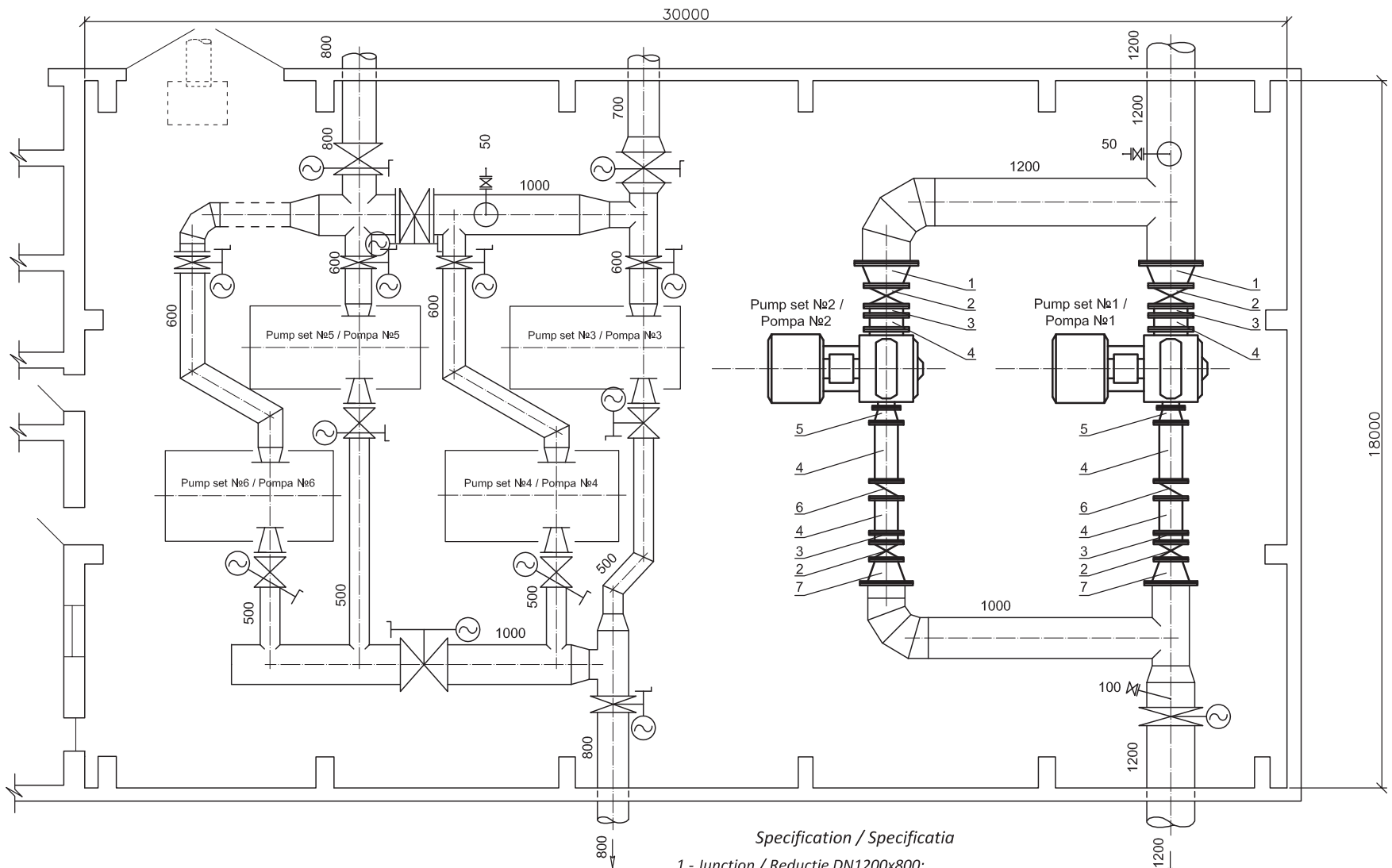


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Date	Rev.
DATE	REV.

Reabilitarea Statiei de Pompare / Rehabilitation of the Pumping Station "Independenta"
 Dupa reabilitare / After rehabilitation
 DW_PS_05 Independenta



The recommended investments / Recomandari pentru investiti:

For the row water / Pentru apa bruta:

Pumps №1 and №2 - $Q=5032\text{m}^3/\text{h}$ at $H=48\text{m}$ / Pompa №1 si №2 - $Q=5032\text{m}^3/\text{h}$, $H=48\text{m}$,
 NPSH (absolute pressure) / Inaltimea coloanei de fluid din aspiratie < ____ m;
 Suction pressure (absolute pressure) / Presiunea de aspiratie (presiunea absoluta) > 10,66m

Specification / Specificatia

- 1 - Junction / Reductie DN1200x800;
- 2 - Valve / Vana DN800;
- 3 - Dismantling seal / Etansarea demontabila DN800;
- 4 - Pipe / Conducta DN800;
- 5 - Junction / Reductie DN800x600;
- 6 - Check valve / Supapa de retinere DN800;
- 7 - Junction / Reductie DN1000x800;



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CHIŞINĂU - STUDIU DE FEZABILITATE /
CHISINAU WATER SUPPLY & SEWAGE
TREATMENT - FEASIBILITY STUDY



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APELOR

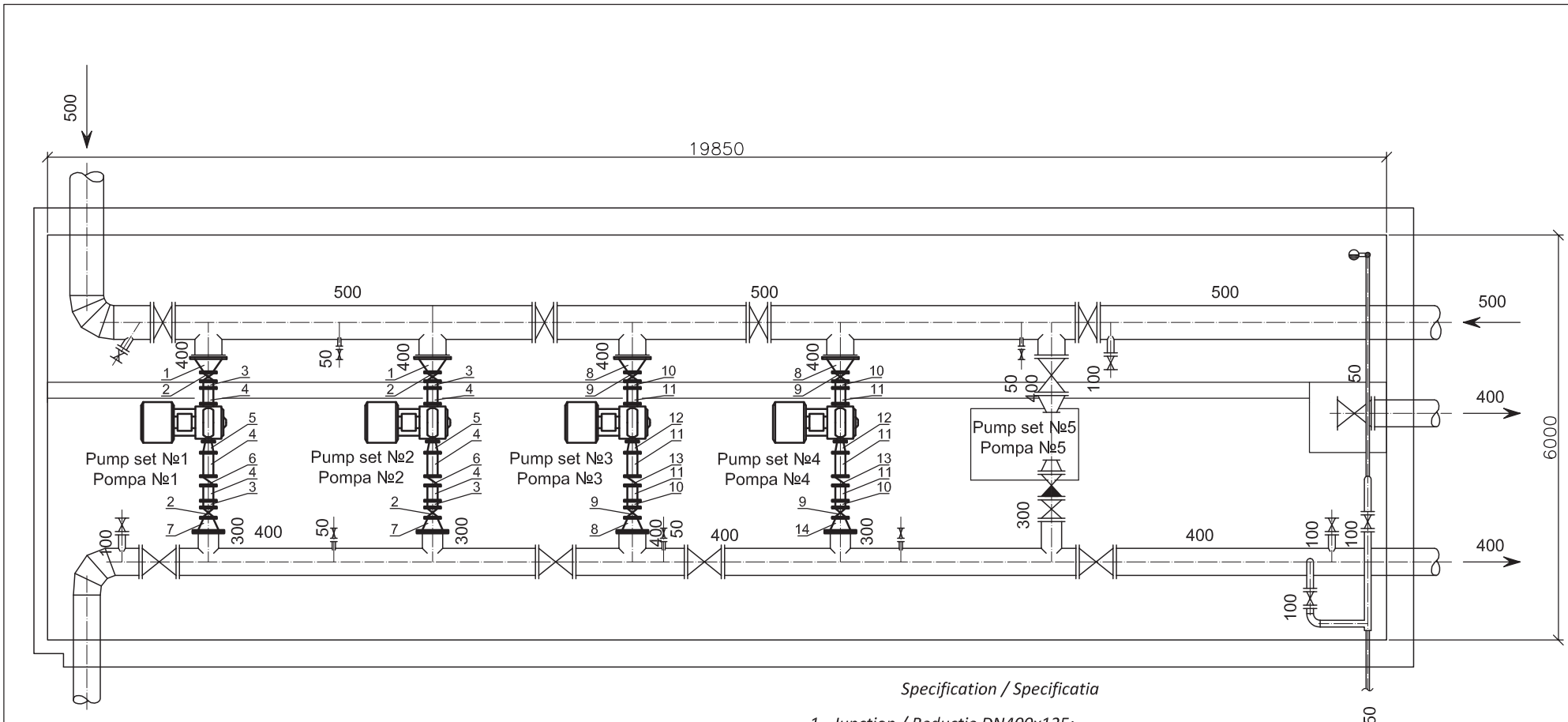


Date	Rev.
DATE	REV.

Reabilitarea Statiei de Pompare /
Rehabilitation of the Pumping
Station "Nistru"

Treapta IIA, apa bruta / Stage IIA, raw water
Dupa reabilitare / After rehabilitation

DW PS_06 Nistru



Specification / Specificatia

- 1 - Junction / Reductie DN400x125;
- 2 - Valve / Vana DN125;
- 3 - Dismantling seal / Etansarea demontabila DN125;
- 4 - Pipe / Conducta DN125;
- 5 - Junction / Reductie DN125x100;
- 6 - Check valve / Supapa de retinere DN125;
- 7 - Junction / Reductie DN300x125;
- 8 - Junction / Reductie DN400x200;
- 9 - Valve / Vana DN200;
- 10 - Dismantling seal / Etansarea demontabila DN200;
- 11 - Pipe / Conducta DN200;
- 12 - Junction / Reductie DN200x150;
- 13 - Check valve / Supapa de retinere DN200;
- 14 - Junction / Reductie DN300x200;

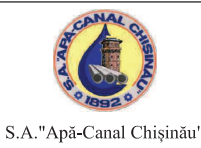
The recommended investments / Recomandari pentru investitii:

For the Zone 1 / Pentru Zona 1:
 Pump №1 and №2 - Q=140m³/h at H=55m / Pompa №1 si №2 - Q=140m³/h, H=55m,
 NPSH (absolute pressure) / I naltimea coloanei de fluid din aspiratie < 9,50m;
 Suction pressure (absolute pressure) / Presiunea de aspiratie (presiunea absoluta) > ____m

For the Zone 2 / Pentru Zona 2:
 Pump №3 and №4 - Q=200m³/h at H=120m / Pompa №3 si №4 - Q=200m³/h, H=120m,
 NPSH (absolute pressure) / I naltimea coloanei de fluid din aspiratie < 5,80m;
 Suction pressure (absolute pressure) / Presiunea de aspiratie (presiunea absoluta) > ____m



Hydraulics within the Pumping Station are not represented to scale due to a lack of information / Datorita lipsei informatiei suficiente, armatura in interiorul Statiei de Pompare nu este prezentata in scara



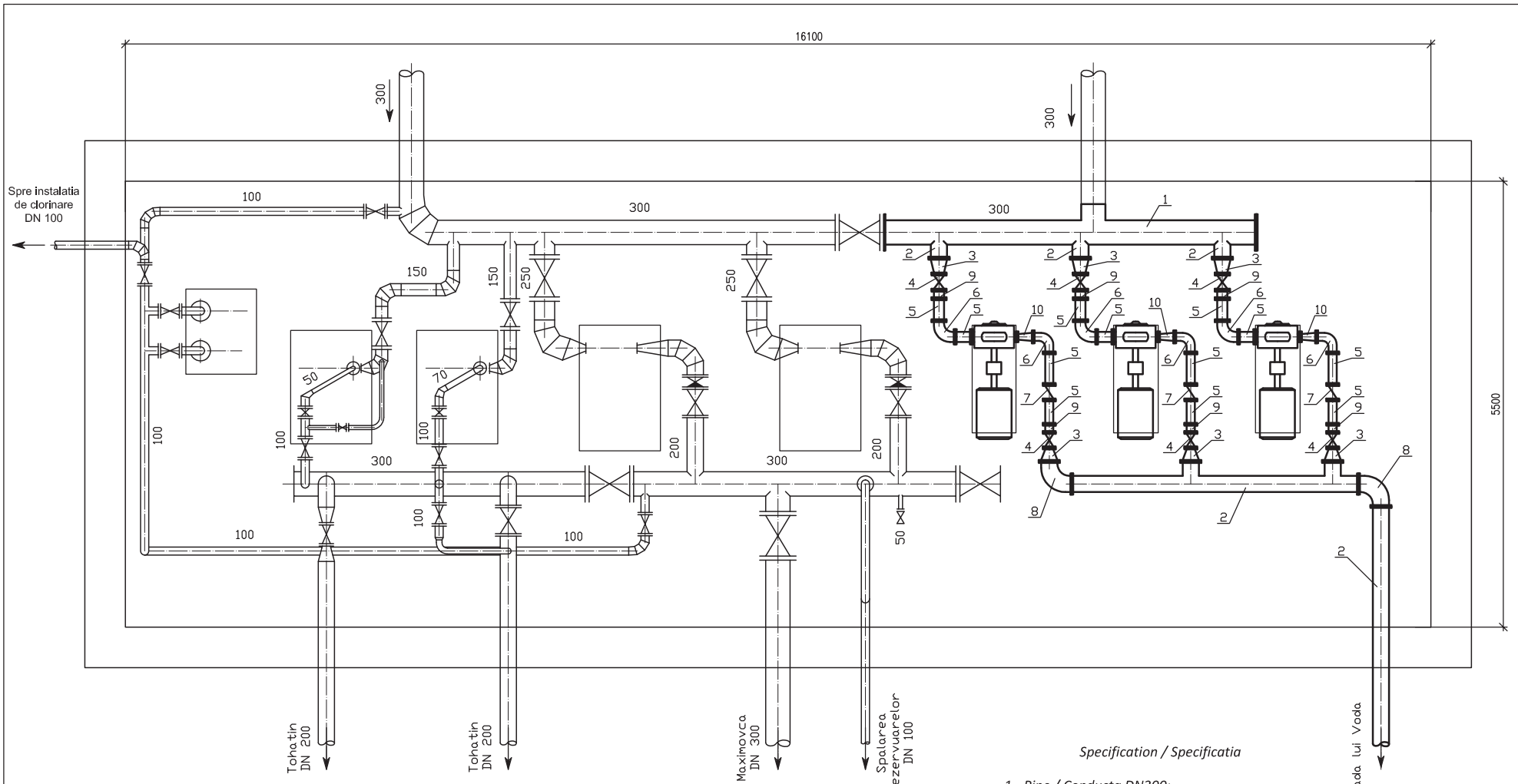
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 CHIŞINĂU - STUDIU DE FEZABILITATE /
 CHIŞINĂU WATER SUPPLY & SEWAGE
 TREATMENT - FEASIBILITY STUDY



Date	Rev.
DATE	REV.

Reabilitarea Statiei de Pompare /
 Rehabilitation of the Pumping
 Station "Petricani"
 Dupa reabilitare / After rehabilitation

DW PS_07 Petricani



The recommended investments / Recomandari pentru investitii:

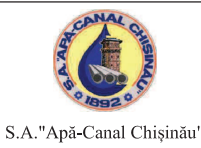
For Vada lui Voda / Pentru Vada lui Voda:

3 pumping groups of Q=182m³/h at H=25m / 3 pompe - Q=182m³/h, H=25m,
 NPSH (absolute pressure) / Inaltimea coloanei de fluid din aspiratie < 4,30m;
 Suction pressure (absolute pressure) / Presiunea de aspiratie (presiunea absoluta) > 10,6m

Hydraulics within the Pumping Station are not represented to scale due to a lack of information /
 Datorita lipsei informatiei suficiente, armatura in interiorul Statiei de Pompare nu este prezentata in scara

Specification / Specificatia

- 1 - Pipe / Conducta DN300;
- 2 - Pipe / Conducta DN200;
- 3 - Junction / Reductie DN200x150;
- 4 - Valve / Vana DN150;
- 5 - Pipe / Conducta DN150;
- 6 - Elbow 90° / Cot 90° DN150;
- 7 - Check valve / Supapa de retinere DN150;
- 8 - Elbow 90° / Cot 90° DN200;
- 9 - Dismantling seal / Etansarea demontabila DN150;
- 10 - Junction / Reductie DN150x125;



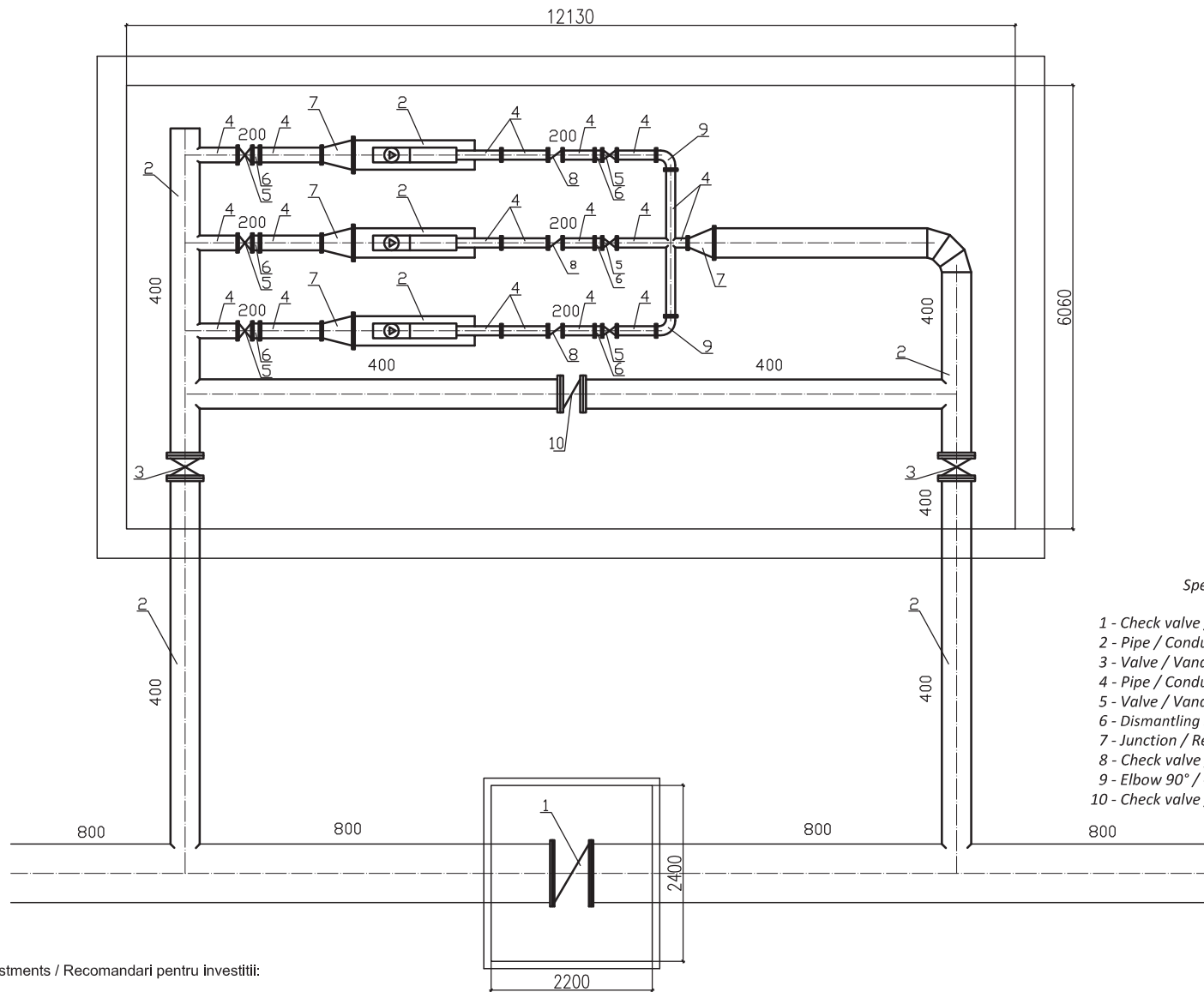
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 PROGRAMUL DE ALIMENTARE CU APĂ ŞI
 TRATARE A APELOR UZATE ÎN MUNICIPIUL
 CHIŞINĂU - STUDIU DE FEZABILITATE /
 CHISINAU WATER SUPPLY & SEWAGE
 TREATMENT - FEASIBILITY STUDY



Date	Rev.
DATE	REV.

Reabilitarea Statiei de Pompare /
 Rehabilitation of the Pumping
 Station "Tohatin"
 Dupa reabilitare / After rehabilitation

DW_PS_08 Tohatin (old PS)



Specification / Specificatia

- 1 - Check valve / Supapa de retinere DN800;
- 2 - Pipe / Conducta DN400;
- 3 - Valve / Vana DN400;
- 4 - Pipe / Conducta DN200;
- 5 - Valve / Vana DN200;
- 6 - Dismantling seal / Etansarea demontabila DN200;
- 7 - Junction / Reductie DN400x200;
- 8 - Check valve / Supapa de retinere DN200;
- 9 - Elbow 90° / Cot 90° DN200;
- 10 - Check valve / Supapa de retinere DN400

The recommended investments / Recomandari pentru investitii:

3 pumping groups of Q=169m³/h at H=10m / 3 pompe - Q=169m³/h, H=10m,
Suction pressure (absolute pressure) / Presiunea de aspiratie (presiunea absoluta) > 50m



Hydraulics within the Pumping Station are not represented to scale due to a lack of information /
Datorita lipsei informatiei suficiente, armatura in interiorul Statiei de Pompare nu este prezentata in scara



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CHISINAU WATER SUPPLY & SEWAGE
TREATMENT - FEASIBILITY STUDY



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Date	Rev.
DATE	REV.

Reabilitarea Statiei de Pompare /
Rehabilitation of the Pumping
Station "Tohatin"

Dupa reabilitare / After rehabilitation

DW_PS_09 Tohatin (new PS)

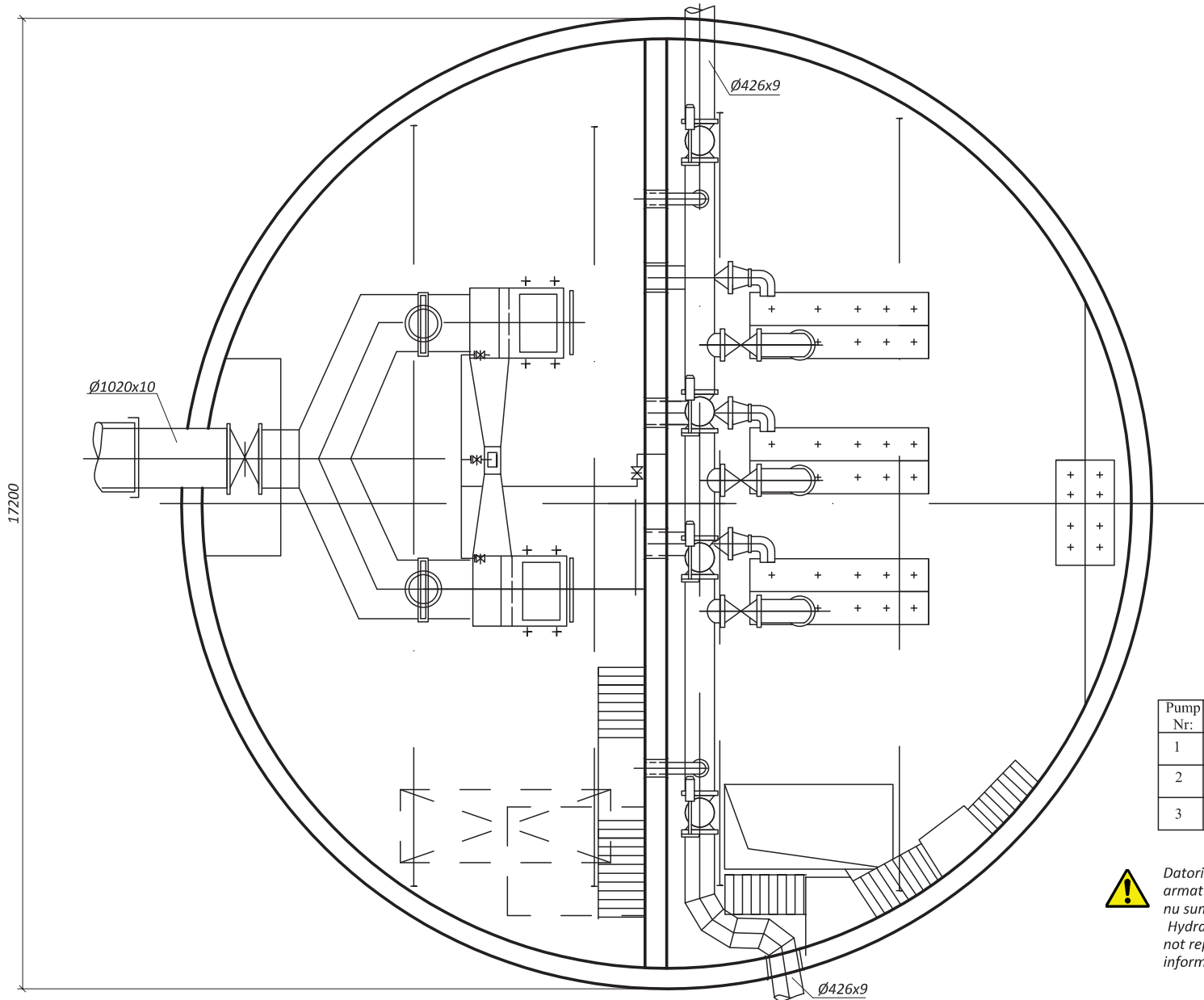
4

WASTEWATER PUMPING STATIONS STATII DE POMPARE APE UZATE



Date	Rev.
Aug12	01

Stația de pompare canalizare "Codru". Situația existentă / Sewerage pumping station "Codru". Existing situation



Specificație

Pump Nr:	Type	Q _{nom} , (m ³ /h)	H _{nom} , (m)
1	SM 250-200-400	800.0	50
2	SM 200-150-500	400.0	45
3	SM 200-150-500	400.0	45



Datorita lipsei informației suficiente, armaturile în interiorul stației de pompare nu sunt reprezentate în scara / Hydraulics within the pumping station are not represented to scale due to a lack of information



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CHISINAU WATER SUPPLY & SEWAGE
TREATMENT - FEASIBILITY STUDY

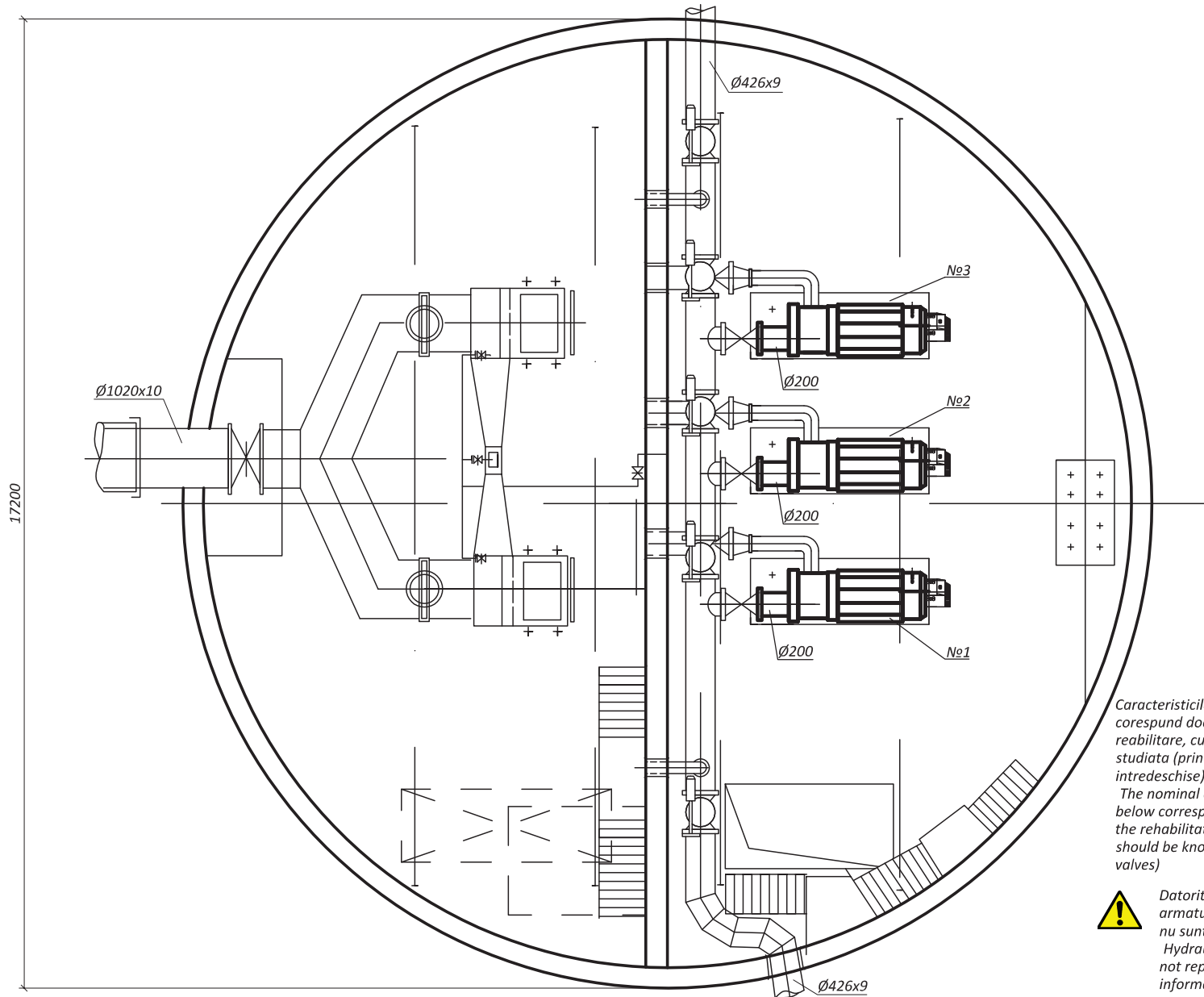


in association with
**INGINERIA
APELOR**



Date	Rev.	Reabilitarea pompelor, stația de pompare canalizare "Codru" / Rehabilitation of pumps, sewerage pumping station "Codru"
DATE	REV.	
		Situația existentă / Existing situation
		WW PS_01 Codru

Stația de pompare canalizare "Codru". Înlocuirea pompelor / Sewerage pumping station "Codru". Replacement of pumps



Specificatie

Pump Nr:	Q _{nom} , (m ³ /h)	H _{nom} , (m)
1	510	32
2	415	26
3	510	32

Caracteristicile nominale a pompelor de mai sus corespund doar unei prime estimari. Inainte de reabilitare, curba exacta a rețelei trebuie sa fie studiata (prin deschiderea tuturor vanelor întredeschise) / The nominal characteristics of the pumps given below correspond only to a first estimation. Before the rehabilitation, the exact curve of the network should be known (by opening all the throttled valves)



Datorita lipsei informatiei suficiente, armaturile in interiorul statiei de pompare nu sunt reprezentate in scara / Hydraulics within the pumping station are not represented to scale due to a lack of information



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CHISINAU WATER SUPPLY & SEWAGE
TREATMENT - FEASIBILITY STUDY



in association with



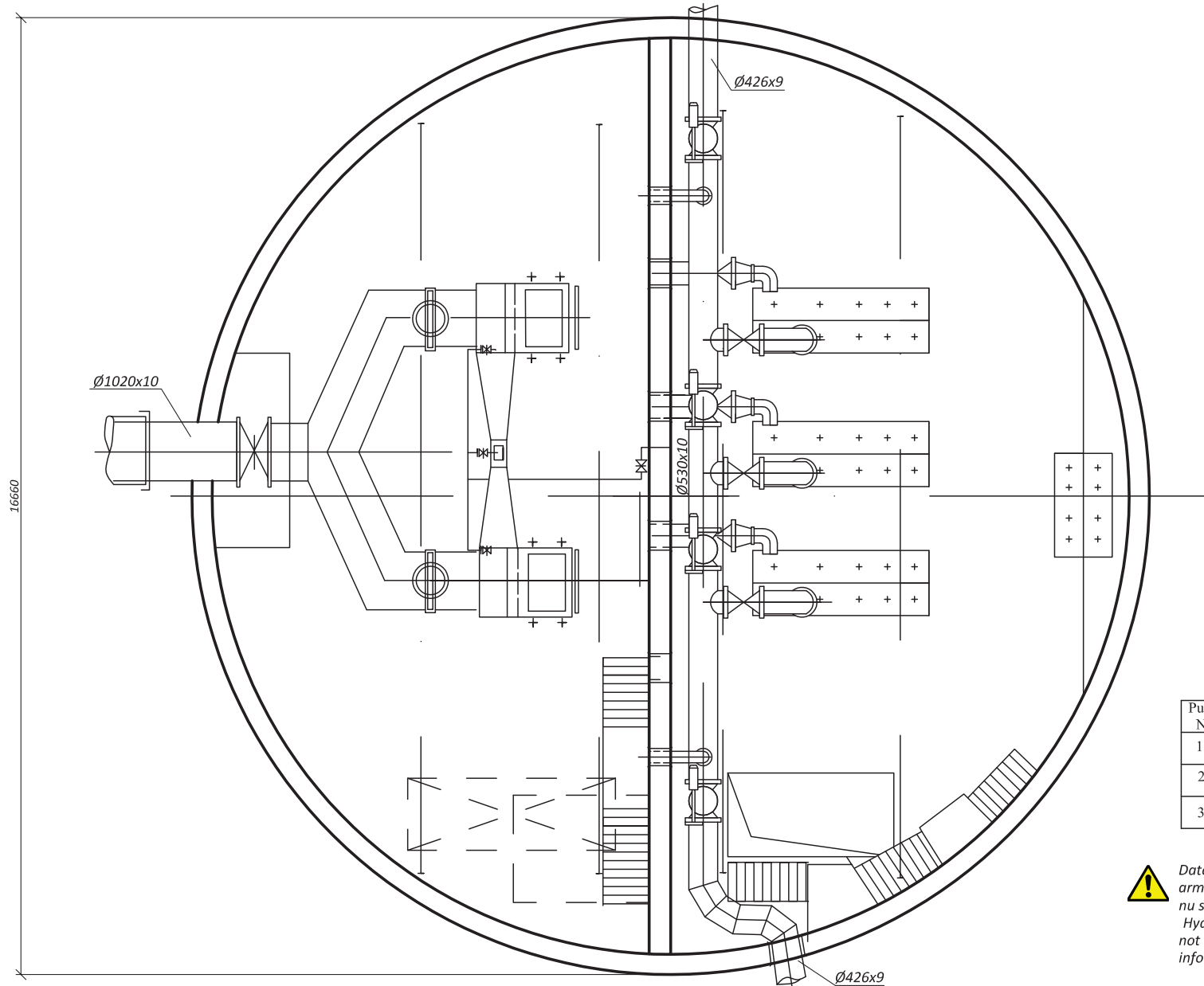
INGINERIA
APELOR



Date	Rev.	Reabilitarea pompelor, statia de pompare canalizare "Codru" / Rehabilitation of pumps, sewerage pumping station "Codru" / Înlocuirea pompelor / Replacement of pumps
DATE	REV.	

WW PS_01 Codru

Stația de pompare canalizare "Vatra". Situația existentă / Sewerage pumping station "Vatra". Existing situation



Specificatie

Pump Nr.	Type	Q _{nom.} (m ³ /h)	H _{nom.} (m)
1	SD 800-32	800.0	32
2	SD 800-32	800.0	32
3	SM 250-200-400	800.0	35



Datorita lipsei informatiei suficiente, armaturile in interiorul stației de pompare nu sunt reprezentate in scara / Hydraulics within the pumpig station are not represented to scale due to a lack of information



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CHISINAU WATER SUPPLY & SEWAGE
TREATMENT - FEASIBILITY STUDY



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APELOR

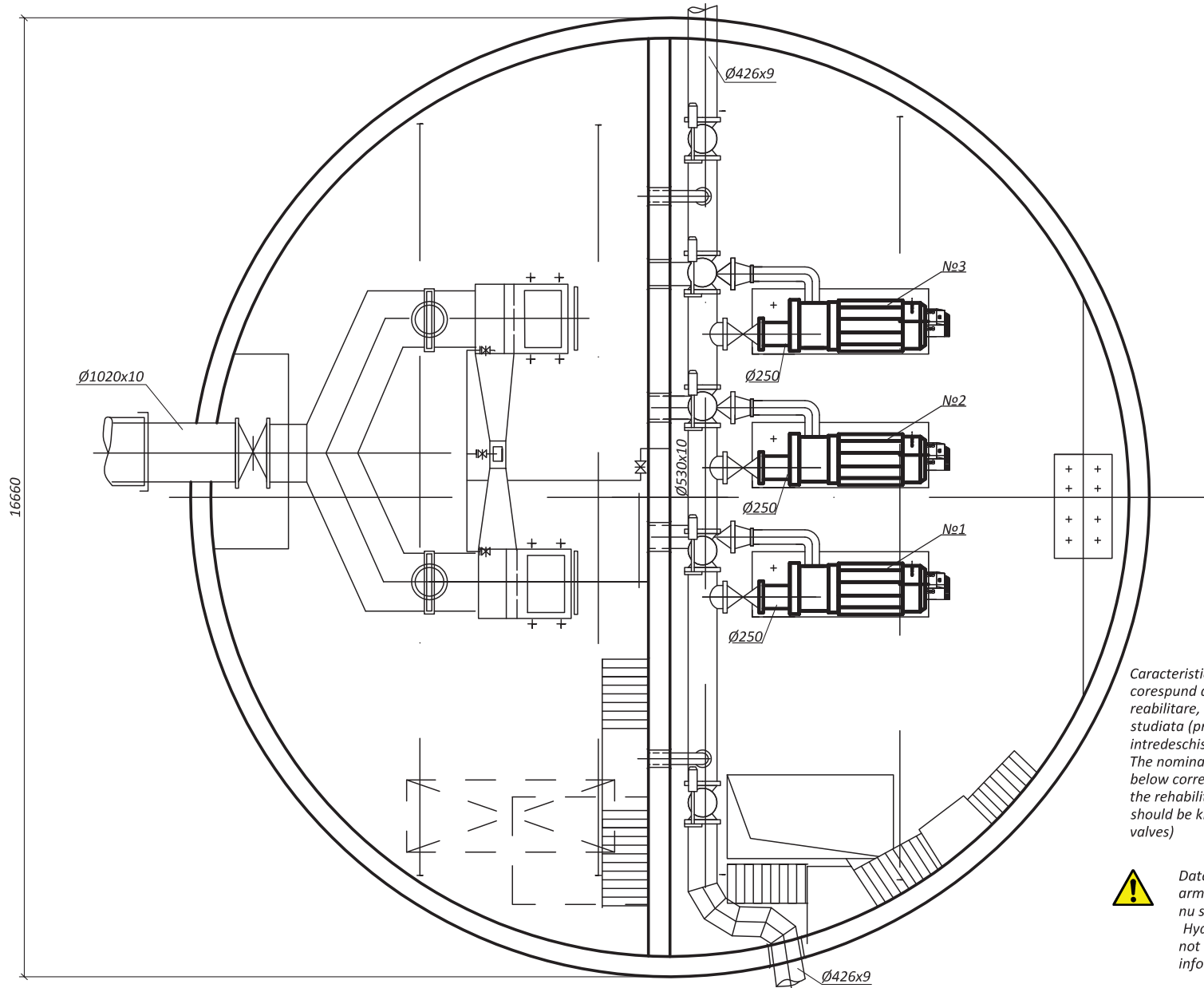


Date	Rev.
DATE	REV.

Reabilitarea pompelor, stația de pompare
canalizare "Vatra" / Rehabilitation
of pumps, sewerage pumping station
"Vatra"
Situația existentă / Existing situation

WW PS_02 Vatra

Stația de pompare canalizare "Vatra". Înlocuirea pompelor / Sewerage pumping station "Vatra". Replacement of pumps



Specificatie

Pump Nr:	Q _{nom} , (m ³ /h)	H _{nom} , (m)
1	790	20
2	800	24
3	700	22

Caracteristicile nominale a pompelor de mai sus corespund doar unei prime estimari. Inainte de reabilitare, curba exacta a rețelei trebuie sa fie studiata (prin deschiderea tuturor vanelor întredeschise) / The nominal characteristics of the pumps given below correspond only to a first estimation. Before the rehabilitation, the exact curve of the network should be known (by opening all the throttled valves)



Datorita lipsei informatiei suficiente, armaturile in interiorul statiei de pompare nu sunt reprezentate in scara / Hydraulics within the pumpig station are not represented to scale due to a lack of information



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TREATMENT - FEASIBILITY STUDY

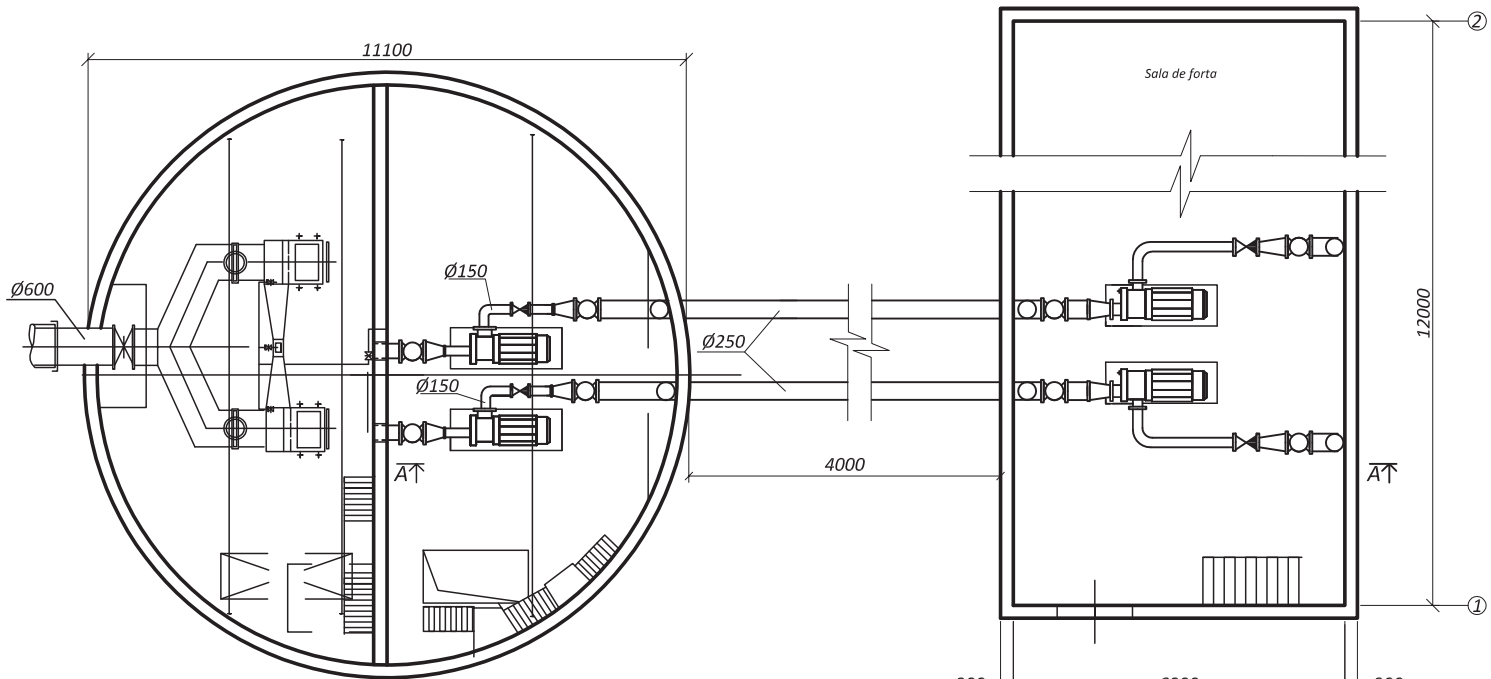


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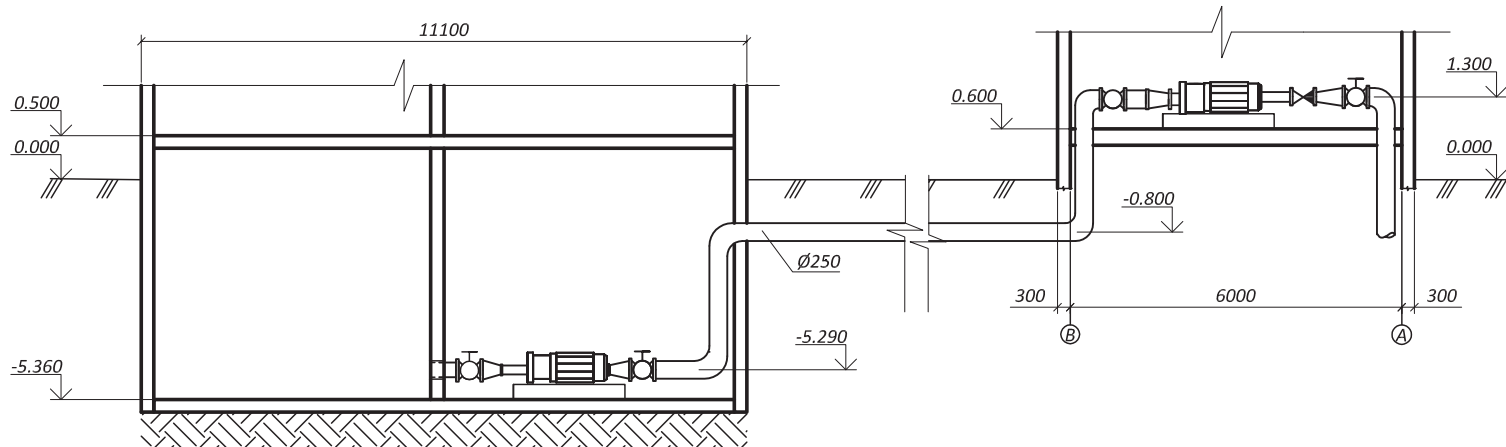


Date	Rev.	Reabilitarea pompelor, statia de pompare canalizare "Vatra" / Rehabilitation of pumps sewerage pumping station "Vatra"
DATE	REV.	
		Inlocuirea pompelor / Replacement of pumps
		WW PS_02 Vatra

Stația de pompare canalizare "Vieru". Situația existentă / Sewerage pumping station "Vieru". Existing situation



Secțiunea A-A / Section A-A



Specificație

Pump Nr:	Type	Qnom, (m ³ /h)	Hnom, (m)
1	SD160x45(x2)	165	44
2	SD160x45(x2)	165	44
3	SD160x45(x2)	164	44
4	SD160x45(x2)	164	44



Datorită lipsei informației suficiente, armaturile în interiorul stației de pompare nu sunt reprezentate în scară / Hydraulics within the pumping station are not represented to scale due to a lack of information

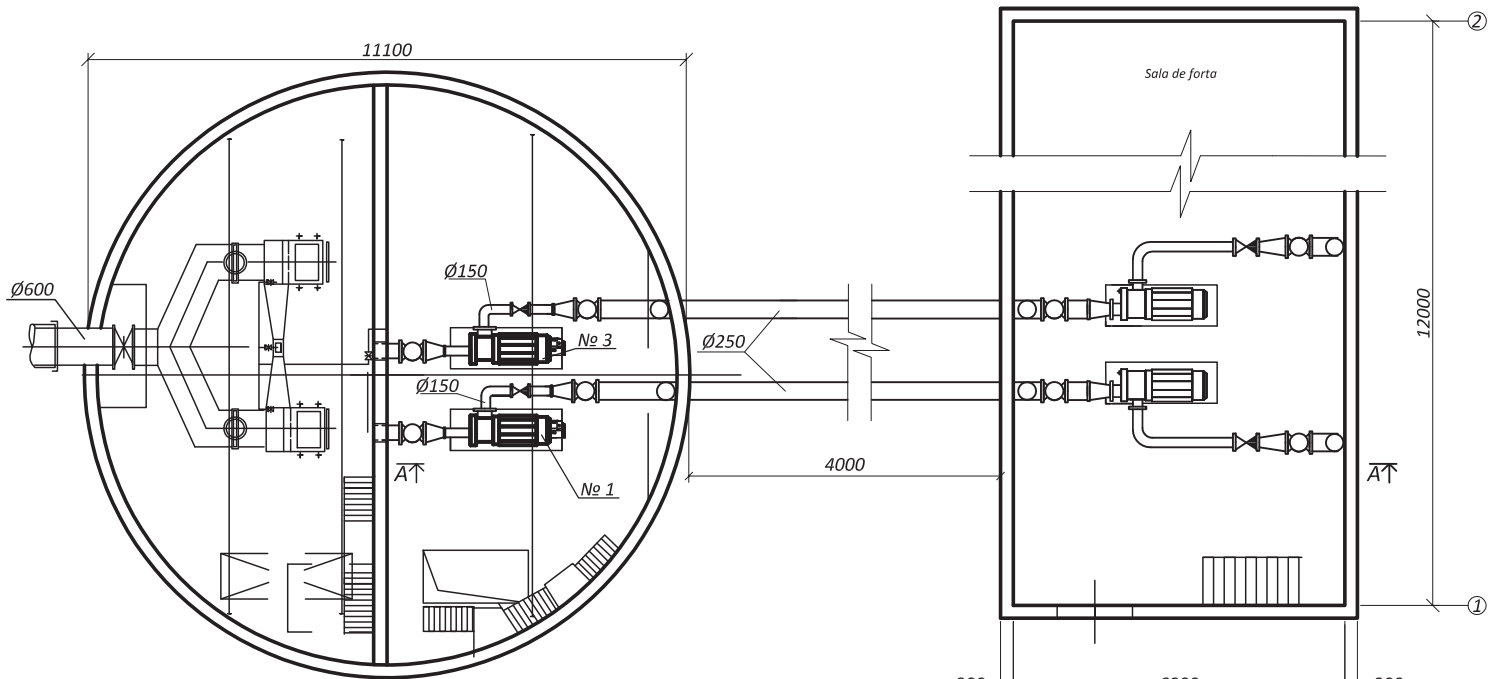


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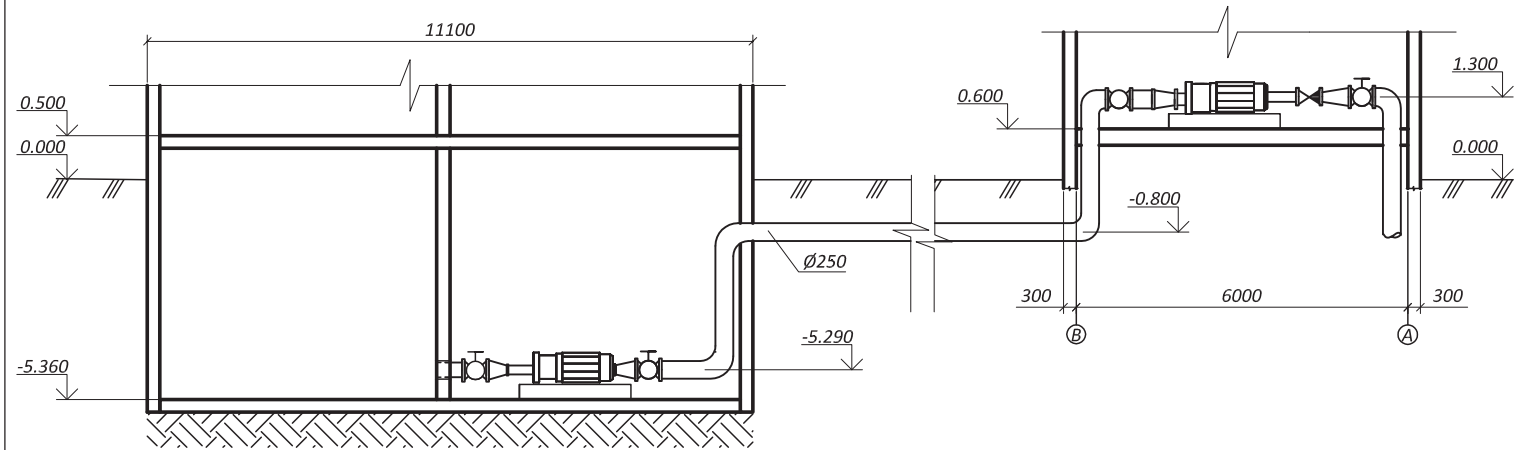


Date	Rev.	Reabilitarea pompelor, stația de pompare canalizare "Vieru" / Rehabilitation of pumps, sewerage pumping station "Vieru" Situația existentă / Existing situation
DATE	REV.	

Stația de pompare canalizare "Vieru". Înlocuirea pompelor / Sewerage pumping station "Vieru". Replacement of pumps




Secțiunea A-A / Section A-A

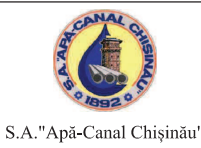


Specificatie

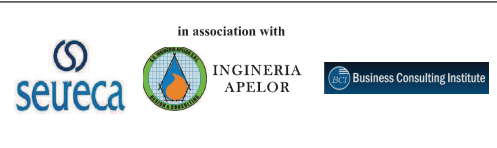
Pump Nr:	Qnom, (m³/h)	Hnom, (m)
1	136	40
3	136	38

Caracteristicile nominale a pompelor de mai sus corespund doar unei prime estimari. Inainte de reabilitare, curba exacta a rețelei trebuie sa fie studiata (prin deschiderea tuturor vanelor întredeschise) / The nominal characteristics of the pumps given below correspond only to a first estimation. Before the rehabilitation, the exact curve of the network should be known (by opening all the throttled valves)

 Datorita lipsei informatiei suficiente, armaturile in interiorul statiei de pompare nu sunt reprezentate in scara / Hydraulics within the pumpig station are not represented to scale due to a lack of information



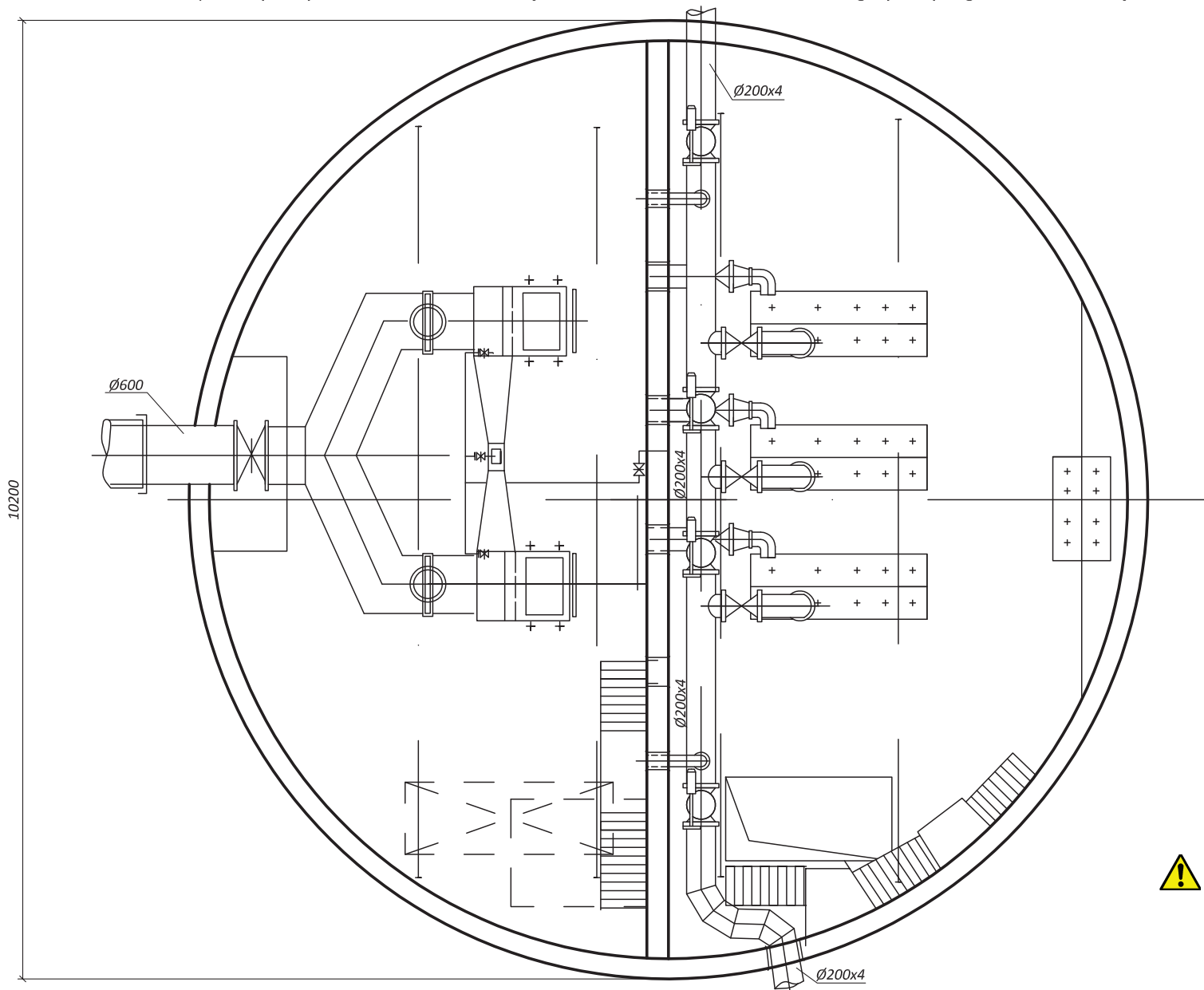
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Date	Rev.	Reabilitarea pompelor, statia de pompare canalizare "Vieru" / Rehabilitation of pumps, sewerage pumping station "Vieru" Inlocuirea pompelor / Replacement of pumps
DATE	REV.	

WW PS_03 Vieru

Stația de pompare canalizare "V. Lupu". Situația existentă / Sewerage pumping station "V. Lupu". Existing situation



Specificatie

Pump Nr:	Type	Q _{nom} , (m ³ /h)	H _{nom} , (m)
1	FG 216-24	217.0	20
2	FG 216-24	186.0	18
3	FG 216-24	207.0	18



Datorita lipsei informatiei suficiente, armaturile in interiorul stației de pompare nu sunt reprezentate in scara / Hydraulics within the pumpig station are not represented to scale due to a lack of information



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TREATMENT - FEASIBILITY STUDY



in association with

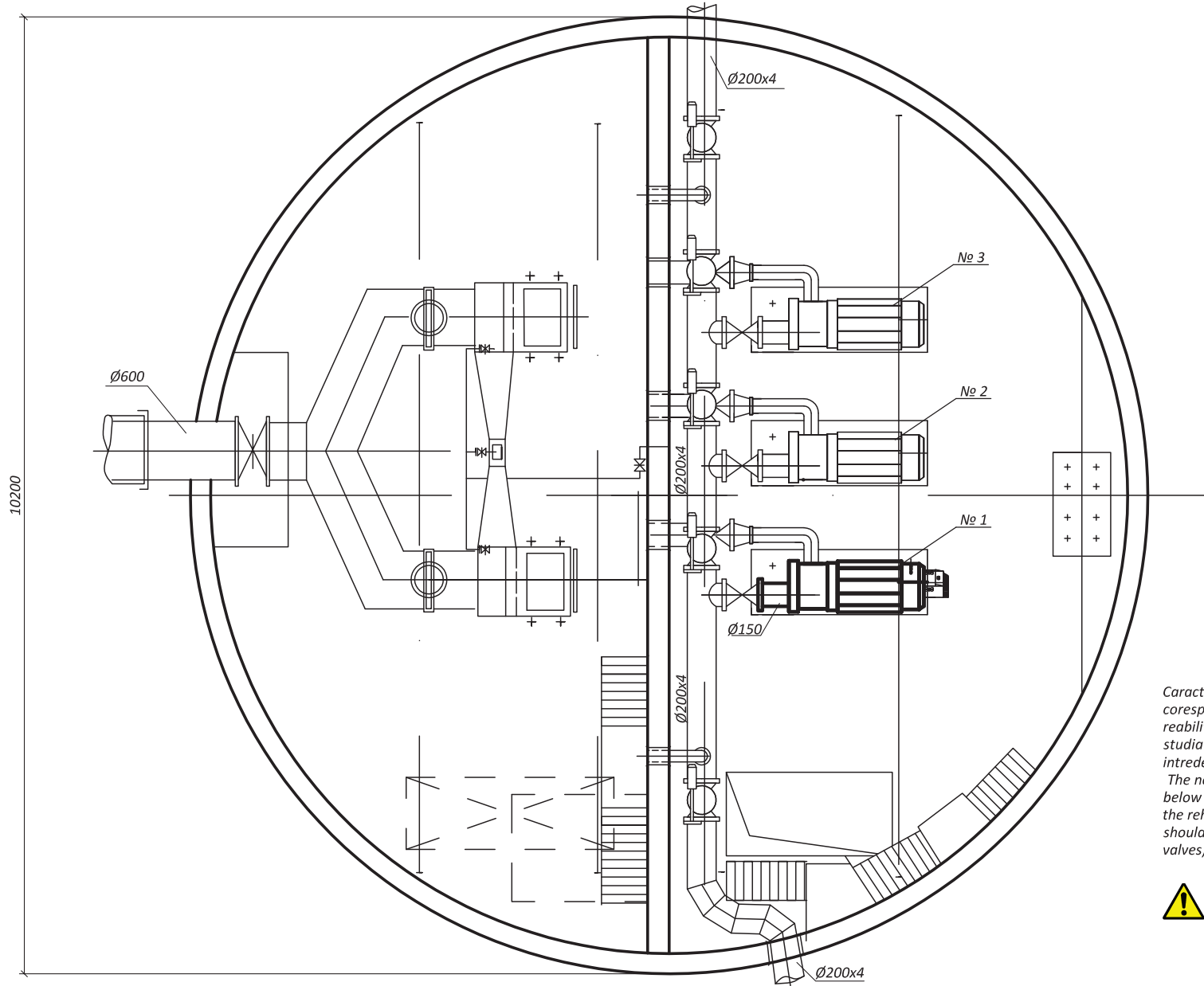


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Date	Rev.	Reabilitarea pompelor, stația de pompare canalizare "V.Lupu" / Rehabilitation of pumps, sewerage pumping station "V. Lupu" Situația existentă / Existing situation WW PS_04 V.Lupu
DATE	REV.	

Stația de pompare canalizare "V. Lupu". Înlocuirea pompelor / Sewerage pumping station "V. Lupu". Replacemet of pumps



Specificatie

Pump Nr:	Q _{nom} , (m ³ /h)	H _{nom} , (m)
1	160	16

Caracteristicile nominale a pompelor de mai sus corespund doar unei prime estimari. Inainte de reabilitare, curba exacta a rețelei trebuie sa fie studiata (prin deschiderea tuturor vanelor intredeschise) /

The nominal characteristics of the pumps given below correspond only to a first estimation. Before the rehabilitation, the exact curve of the network should be known (by opening all the throttled valves)



Datorita lipsei informatiei suficiente, armaturile in interiorul statiei de pompare nu sunt reprezentate in scara / Hydraulics within the pumpig station are not represented to scale due to a lack of information



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CHISINAU WATER SUPPLY & SEWAGE
TREATMENT - FEASIBILITY STUDY



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APELOR



Date	Rev.	Reabilitarea pompelor, statia de pompare canalizare "V. Lupu" / Rehabilitation of pumps, sewerage pumping station "V. Lupu"
DATE	REV.	
		Inlocuirea pompelor / Replacement of pumps

WWW_PS_04_V.Lupu

5

NEW WATER SYSTEM ORGANISATION NOUA ORGANIZARE A SISTEMULUI DE APA



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APELOR UZATE ÎN MUNICIPIUL CHISINAU – STUDIU DE
FEZABILITATE / CHISINAU WATER SUPPLY AND SEWAGE
TREATMENT – FEASIBILITY STUDY



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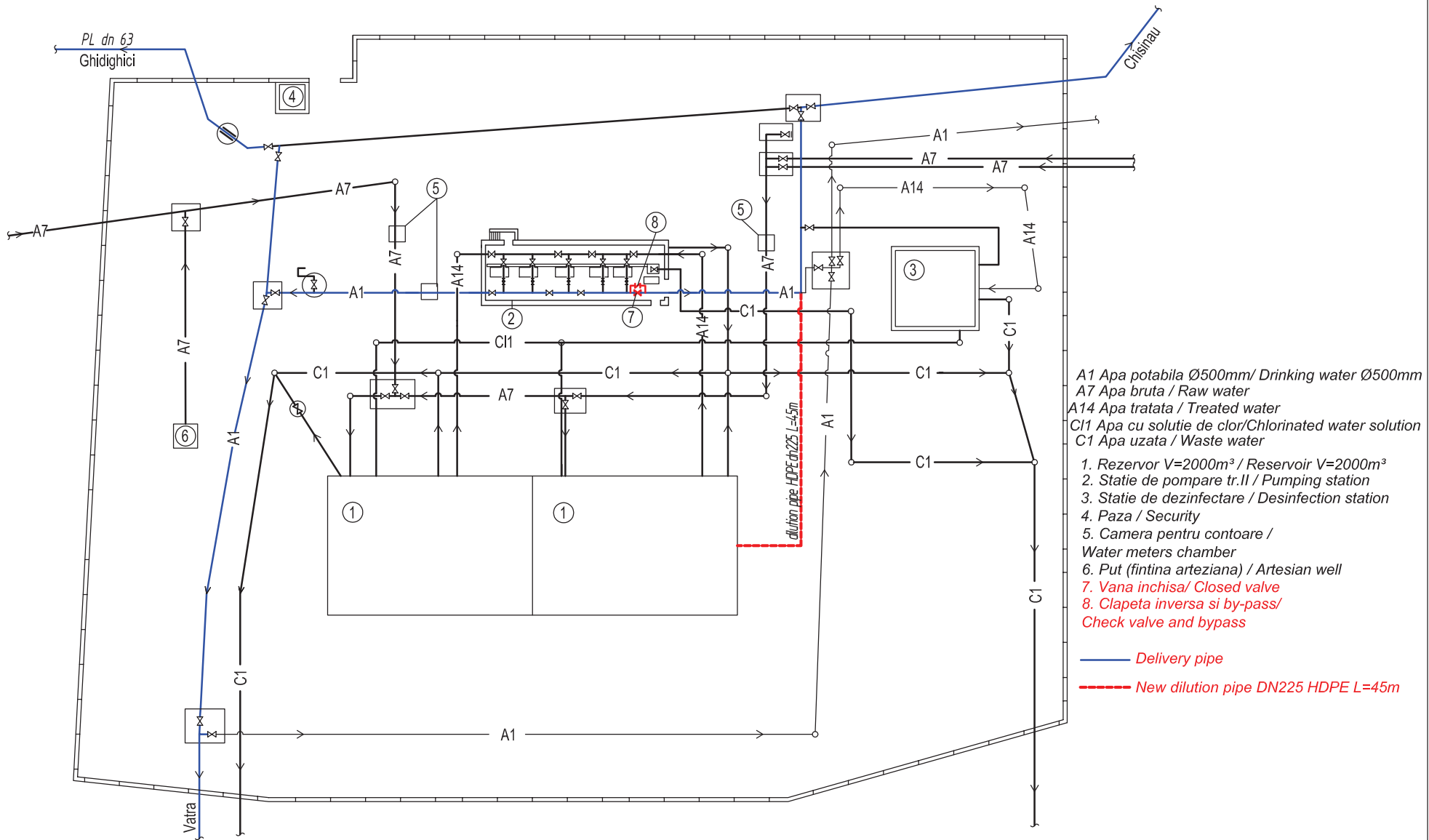
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APELOR



Date	Rev.
Aug12	01

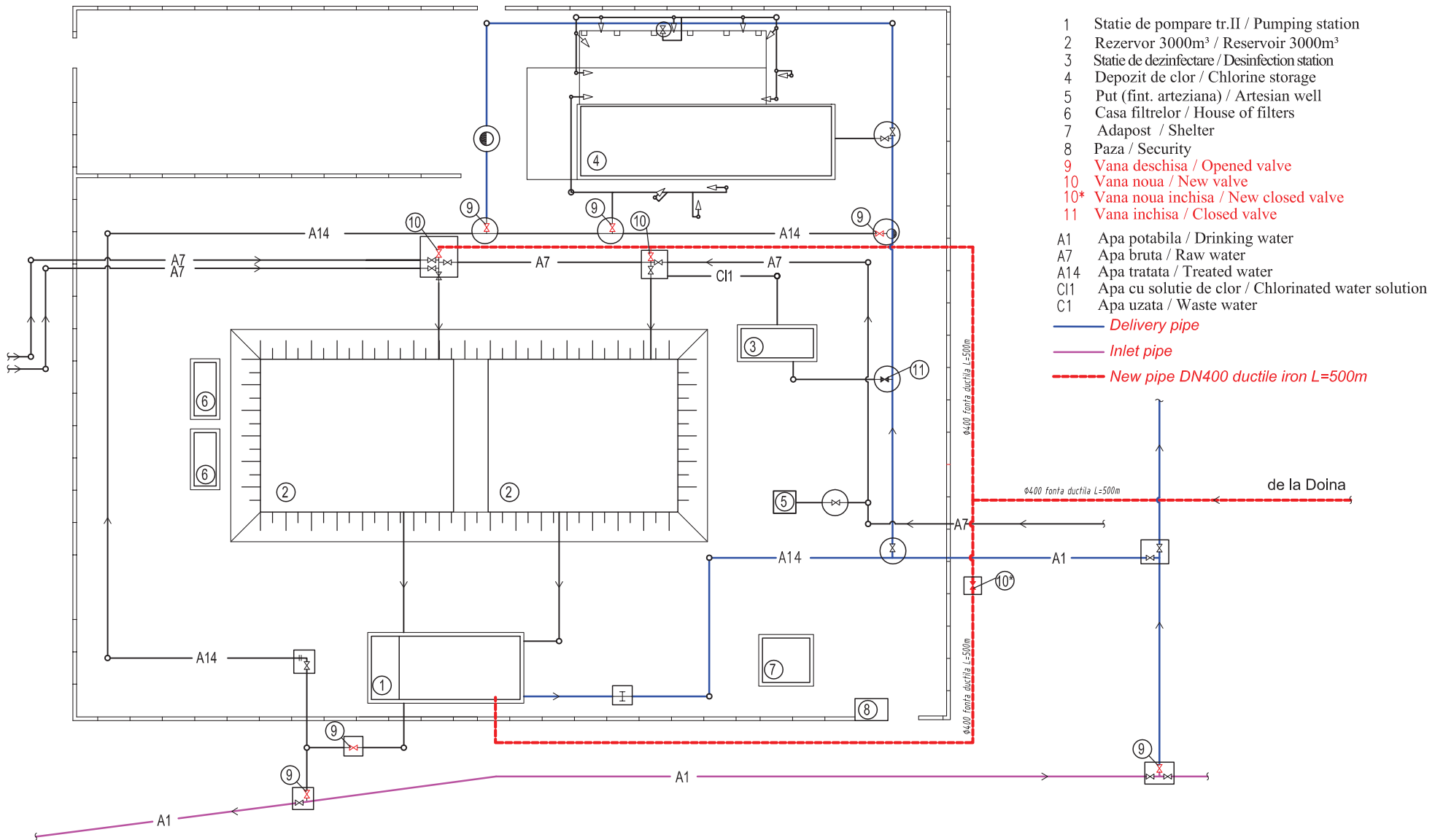
PRELIMINARY DESIGN
New water system organization
Noua organizare a
sistemului de apa

New organization in Ghidighici Pumping Station/ Noua organizare la Statia de Pompare Ghidighici



- A1 Apa potabila Ø500mm/ Drinking water Ø500mm
 - A7 Apa bruta / Raw water
 - A14 Apa tratata / Treated water
 - C11 Apa cu solutie de clor/Chlorinated water solution
 - C1 Apa uzata / Waste water
1. Rezervor V=2000m³ / Reservoir V=2000m³
 2. Statie de pompare tr.II / Pumping station
 3. Statie de dezinfectare / Disinfection station
 4. Paza / Security
 5. Camera pentru contoare / Water meters chamber
 6. Put (fintina arteziana) / Artesian well
 7. Vana inchisa/ Closed valve
 8. Clapeta inversa si by-pass/ Check valve and bypass
- Delivery pipe
- - - New dilution pipe DN225 HDPE L=45m

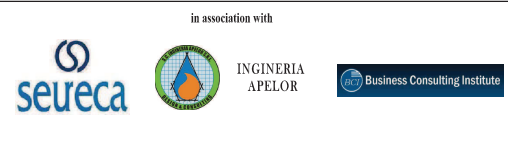
New organization in Petricani pumping station Noua organizare la Statia de Pompare Petricani



- 1 Statie de pompare tr.II / Pumping station
 - 2 Rezervor 3000m³ / Reservoir 3000m³
 - 3 Statie de dezinfectare / Desinfection station
 - 4 Depozit de clor / Chlorine storage
 - 5 Put (fint. arteziana) / Artesian well
 - 6 Casa filtrelor / House of filters
 - 7 Adapost / Shelter
 - 8 Paza / Security
 - 9 Vana deschisa / Opened valve
 - 10 Vana noua / New valve
 - 10* Vana noua inchisa / New closed valve
 - 11 Vana inchisa / Closed valve
- A1 Apa potabila / Drinking water
 - A7 Apa bruta / Raw water
 - A14 Apa tratata / Treated water
 - C1 Apa cu solutie de clor / Chlorinated water solution
 - C1 Apa uzata / Waste water
- Delivery pipe
 - Inlet pipe
 - New pipe DN400 ductile iron L=500m



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FEASIBILITY STUDY

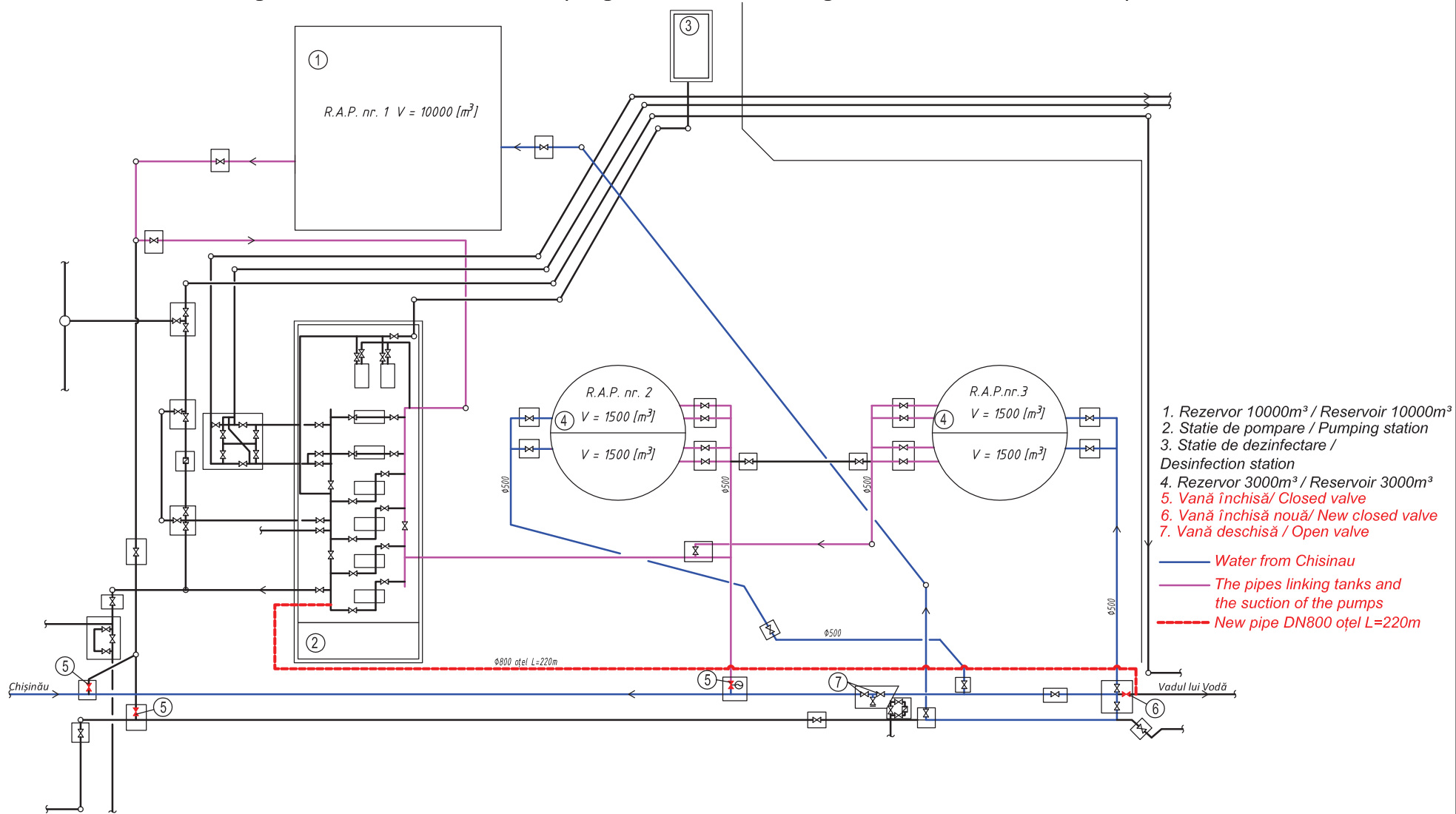


Date	Rev.
DATE	REV.

New organization in
Petricani pumping station
Noua organizare la Statia de
Pompare Petricani

NWNS_02_PETRICANI

New organization in Tohatin Pumping Station/ Noua organizare la Statia de Pompare Tohatin



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 CHIȘINĂU WATER SUPPLY & SEWAGE TREATMENT
 - FEASIBILITY STUDY



in association with



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APELOR

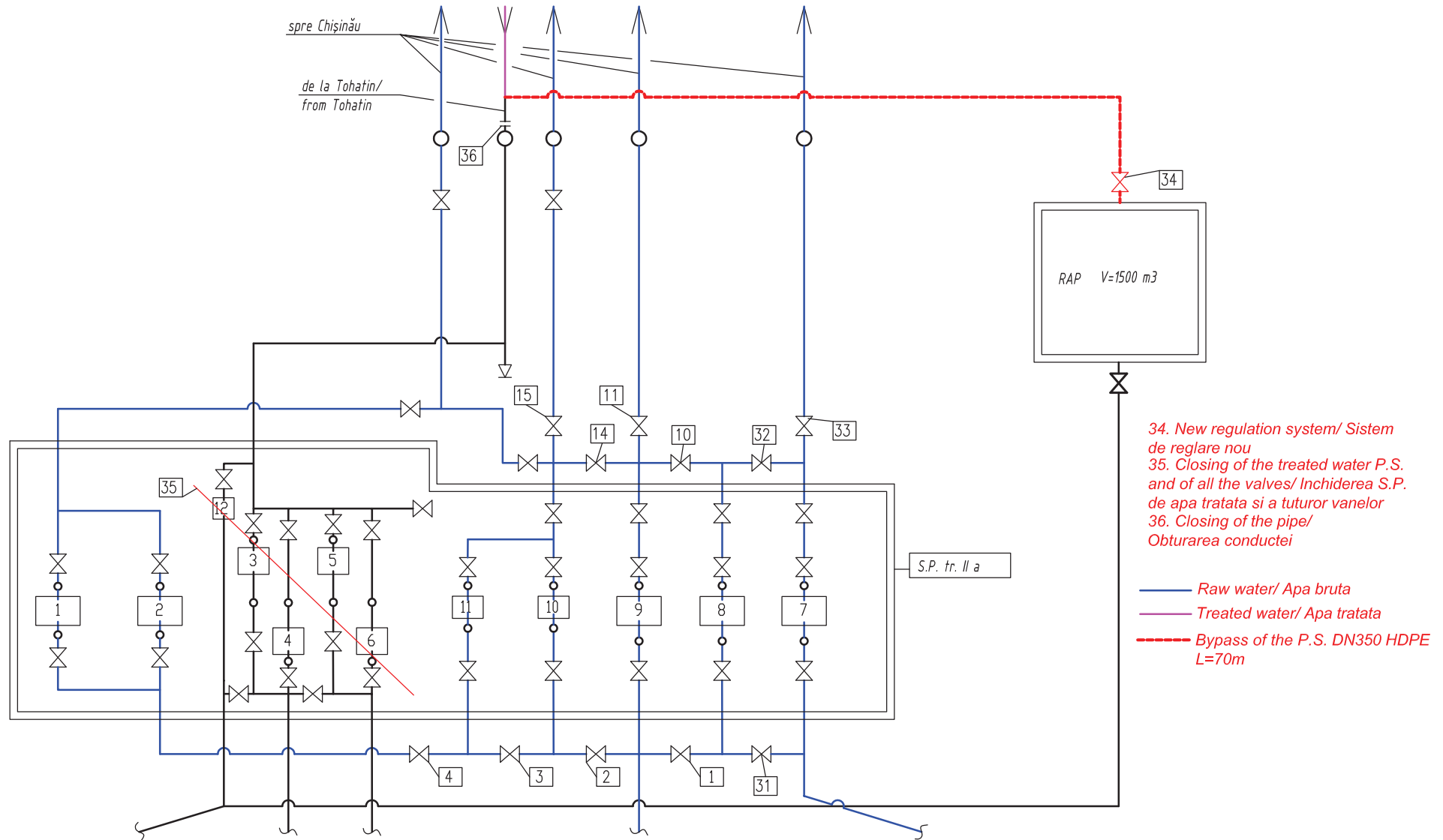


Date	Rev.
DATE	REV.

New organization in
 Tohatin Pumping Station/
 Noua organizare la Statia
 de Pompare Tohatin

NWNS_03_TOHATIN

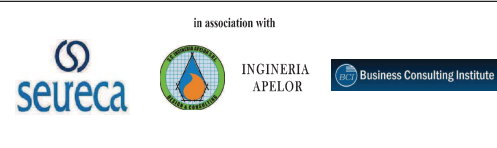
New organization in Nistru treapta II A W.T.P.



- 34. New regulation system/ Sistem de reglare nou
 - 35. Closing of the treated water P.S. and of all the valves/ Inchiderea S.P. de apa tratata si a tuturor vanelor
 - 36. Closing of the pipe/ Obturarea conductei
- Raw water/ Apa bruta
 — Treated water/ Apa tratata
 - - - Bypass of the P.S. DN350 HDPE L=70m



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 CHISINAU WATER SUPPLY & SEWAGE TREATMENT
 - FEASIBILITY STUDY



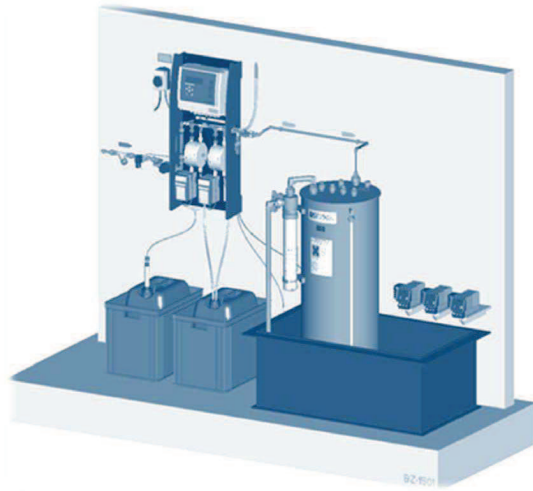
Date	Rev.
DATE	REV.

New organization in
Nistru treapta II A W. T. P.

NWNS_04_NISTRU

6

ELECTROCHLORINATION PLANT STATIA DE ELECTRO-CLORINARE



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APELOR UZATE IN MUNICIPIUL CHISINAU - STUDIU DE
FEZABILITATE / CHISINAU WATER SUPPLY AND SEWAGE
TREATMENT - FEASIBILITY STUDY



in association with



INGINERIA
APELOR



Date	Rev.
Aug12	01

PRELIMINARY DESIGN Electrochlorination Plant Statia de electro-clorinare	
No Scale	WTP_0

Planul de amplasare a stației de dezinfectare cu electroliză la STA/
 Emplacement of the electrolysis disinfection station at WTP



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 CHISINAU WATER SUPPLY & SEWAGE
 TREATMENT - FEASIBILITY STUDY



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 INGINERIA
 APELOR



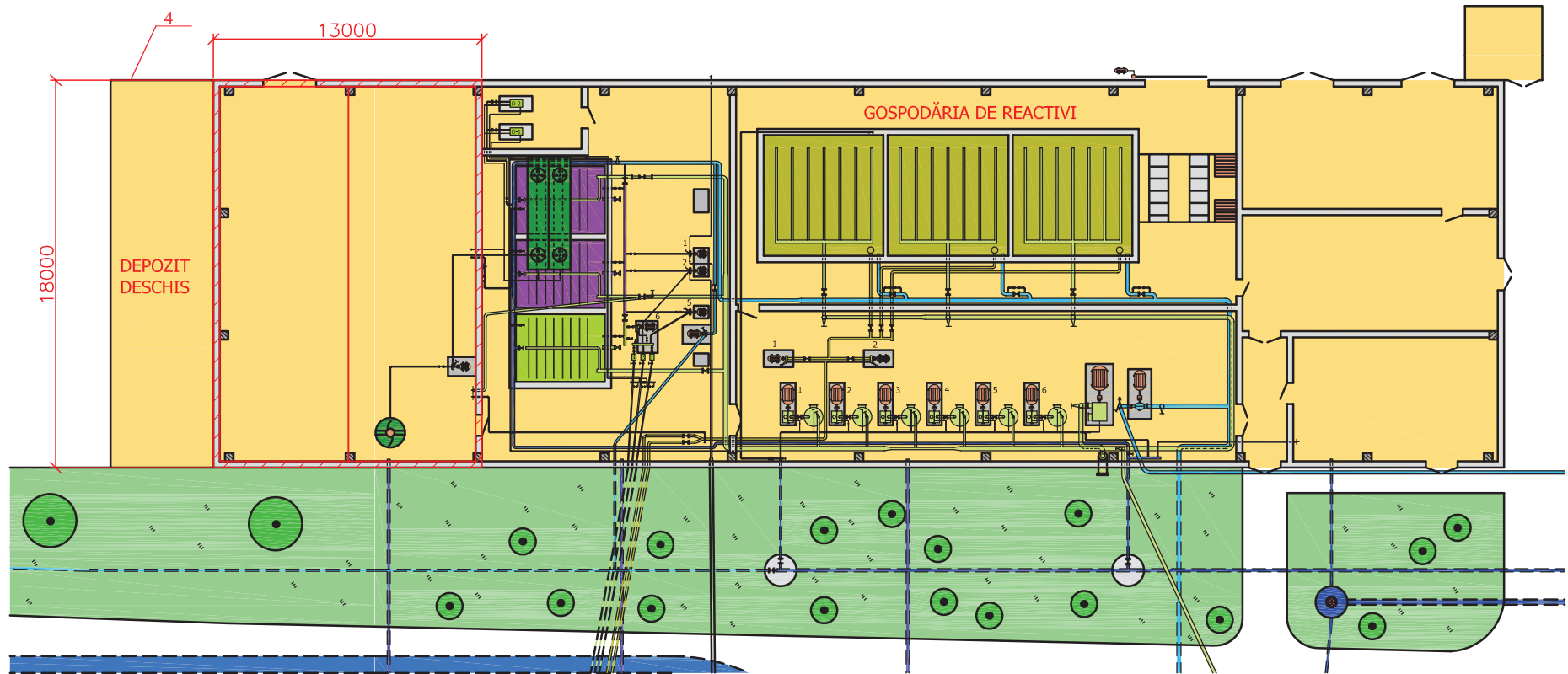
Date	Rev.
DATE	REV.

STA
 Stația de dezinfectare cu electroliză /
 electro disinfection station

SCALE1:100

WTP_17

Amplasarea statiei de dezinfectare cu electroliză în clădirea existentă la STA/
 Emplacement of electrolysis disinfection station in the existing building of WTP



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 CHIȘINAU WATER SUPPLY & SEWAGE
 TREATMENT - FEASIBILITY STUDY



in association with



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 APELOR



Date	Rev.
DATE	REV.

STA

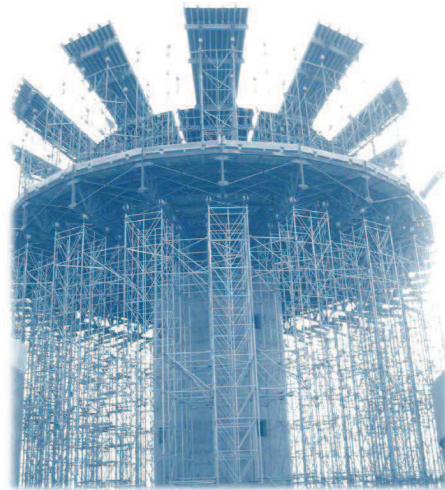
Stația de dezinfectare cu electroliză /
 Electrolysis disinfection station

SCALE1:200

WTP_18

7

DRINKING WATER RESEVOIRS REZERVOARE DE APA POTABILA



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APELOR UZATE IN MUNICIPIUL CHISINAU - STUDIU DE
FEZABILITATE / CHISINAU WATER SUPPLY AND SEWAGE
TREATMENT - FEASIBILITY STUDY



in association with



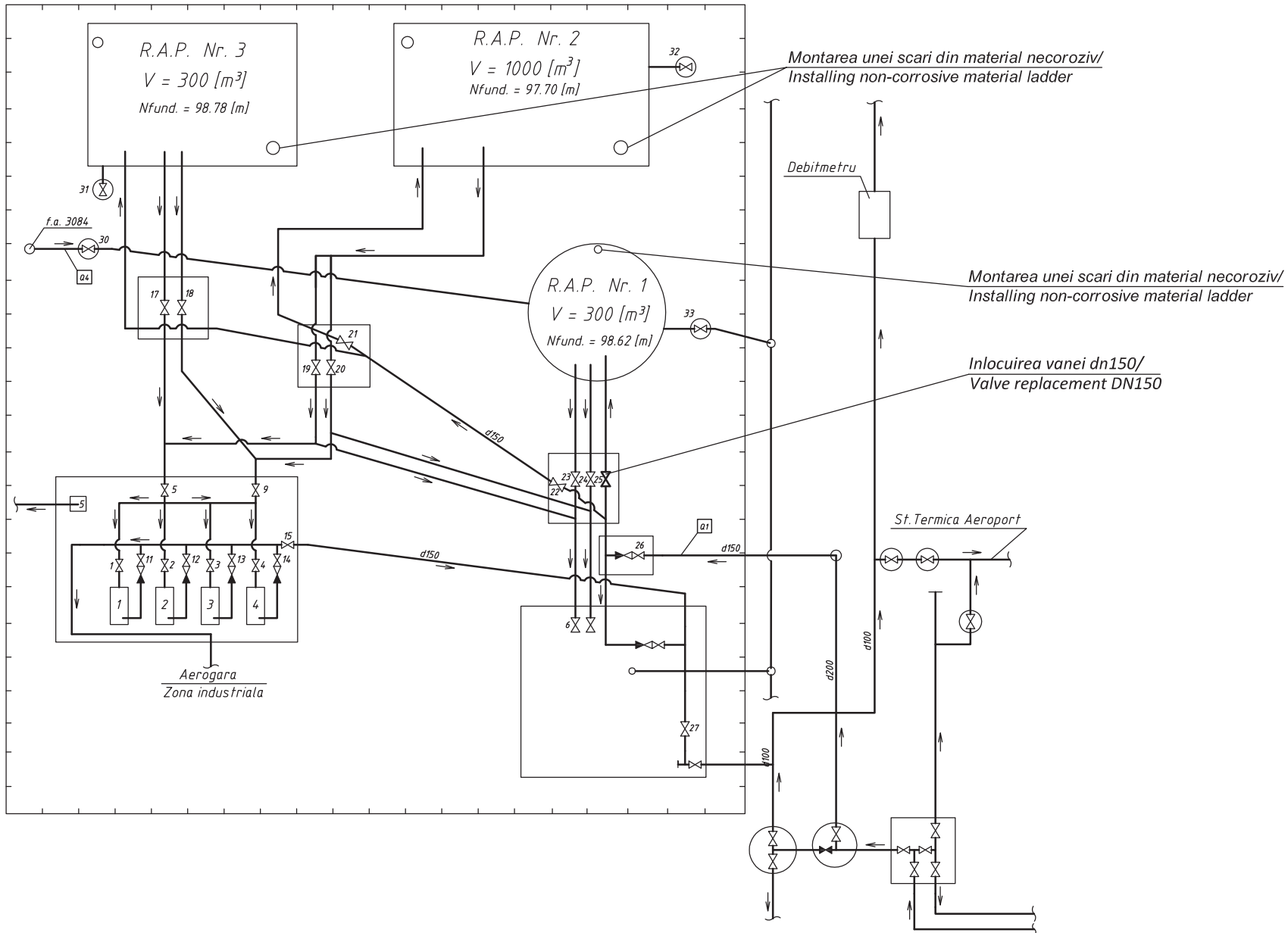
INGINERIA
APELOR



Date	Rev.
Aug12	01

PRELIMINARY DESIGN	
Drinking water reservoirs Rezervoare de apa potabila	
No Scale	R-0

Reabilitarea armaturilor si conductelor S.P. Aeroport/ Pipes and fittings rehabilitation Aeroport P.S.



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CHIŞINĂU - STUDIU DE FEZABILITATE /
CHISINAU WATER SUPPLY & SEWAGE TREATMENT
- FEASIBILITY STUDY

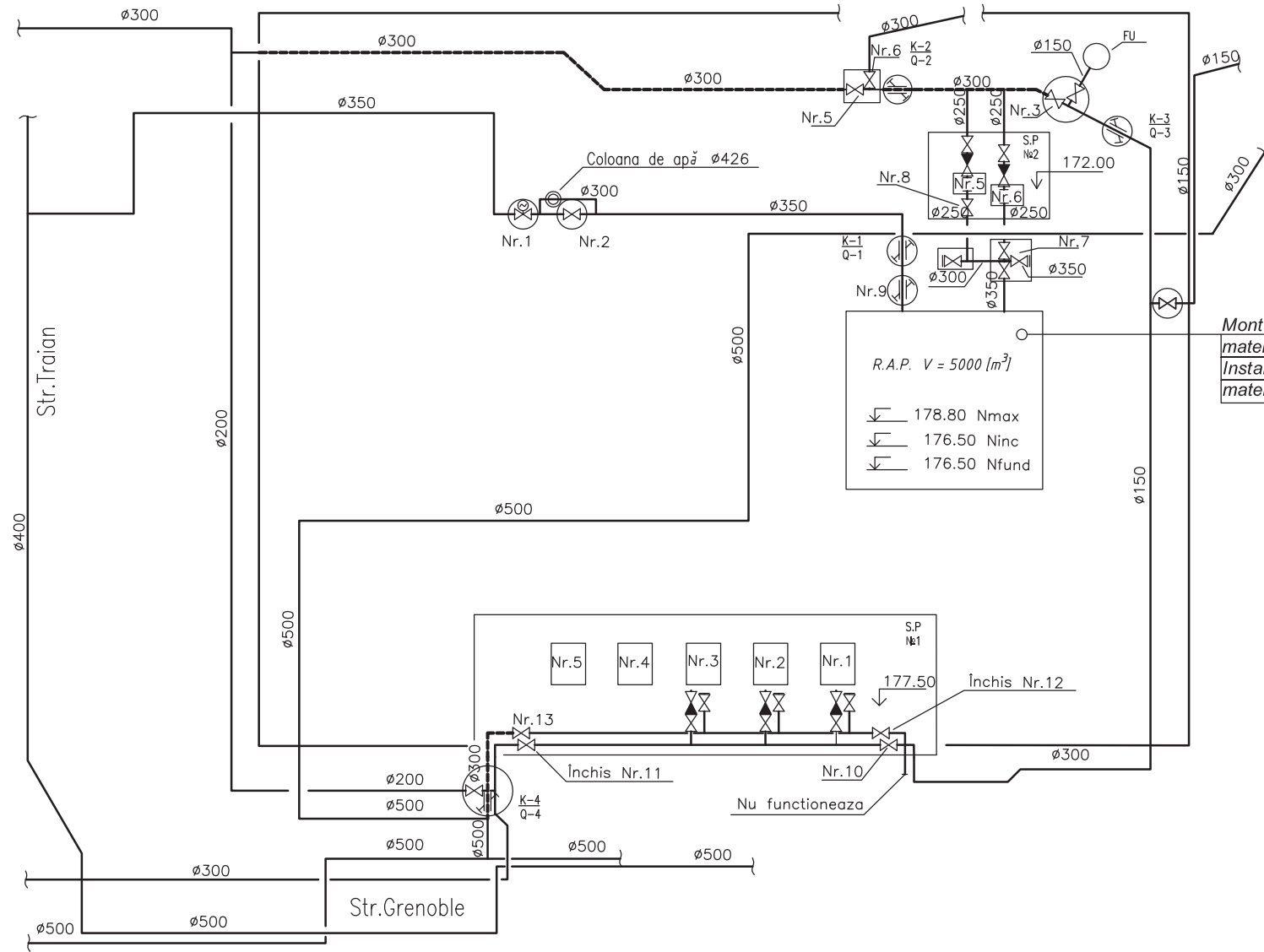


Date	Rev.
DATE	REV.

Reabilitarea armaturilor și conductelor
S.P. Aeroport/
Pipes and fittings rehabilitation
Aeroport P.S.

R-01

Reabilitarea armaturilor si conductelor S.P. Botanica/ Pipes and fittings rehabilitation Botanica P.S.



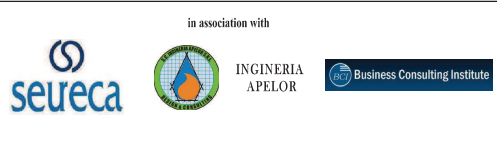
Montarea scarilor din material necoroziv-2 bucati/ Installing non-corrosive material ladders - 2 pieces

— Conducta existenta/ Existing pipe
 - - - Conducta proiectata spre inlocuire/ Designed pipe to be replaced

-Inlocuirea conductei dn 300 L=80m/
 Pipe replacement DN 300 L=80m
 -Inlocuirea conductei dn 300 L=20m/
 Pipe replacement DN 300 L=20m

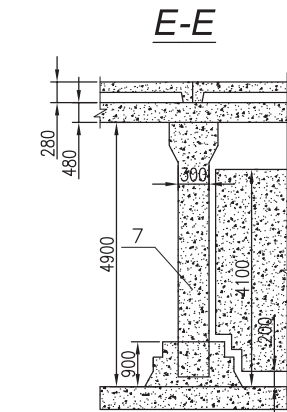
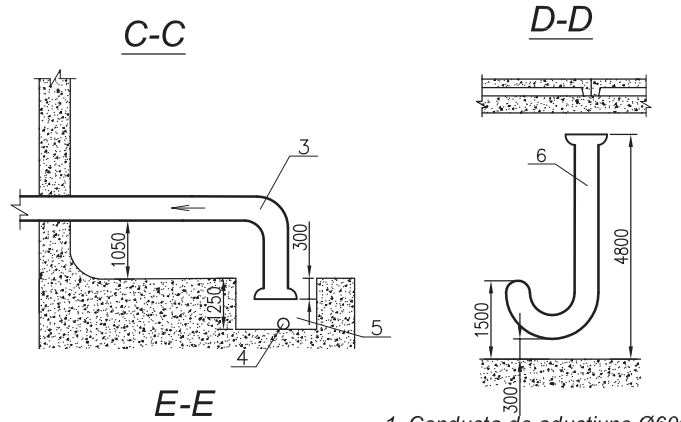
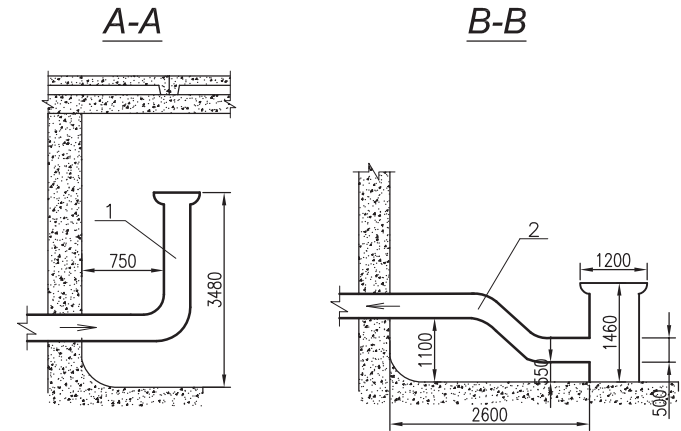
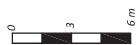
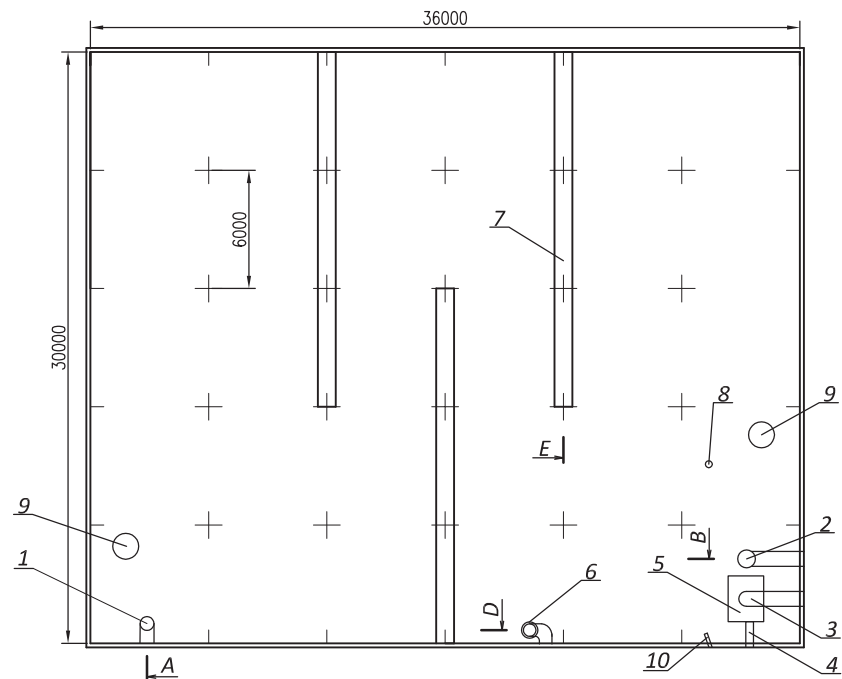
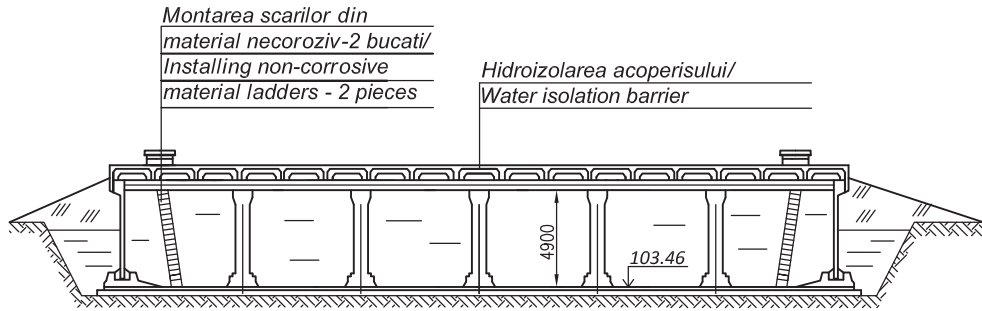


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 - FEASIBILITY STUDY



Data	Rev.	
DATE	REV.	
		Reabilitarea armaturilor și conductelor S.P. Botanica/ Pipes and fittings rehabilitation Botanica P.S.

Reabilitarea rezervorului nr.2 V=5000m³ S.P. Buiucani/ Tank nr.2 rehabilitation V=5000m³ Buiucani P.S.



1. Conducta de aductiune Ø600/
Inlet pipe Ø600
2. Conducta de aspiratie Ø600mm/
Suction pipe Ø600mm
3. Conducta de aspiratie Ø500mm/
Suction pipe Ø500mm
4. Conducta de canalizare Ø250mm/
Sewerage pipe Ø250mm
5. Groapa de descarcare 225x225cm/
Discharge pit 225x225cm
6. Conducta de preaplin Ø500/
Overflow pipe Ø500
7. Coloana/ Column
8. Indicator de nivel/ Level indicator
9. Gura de acces / Manhole cover
10. Conductă cu clor Ø50mm /
The pipe with chlorine Ø50mm

Details and hydraulics are not to scale



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CHISINAU WATER SUPPLY & SEWAGE TREATMENT
- FEASIBILITY STUDY



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APELOR



in association with

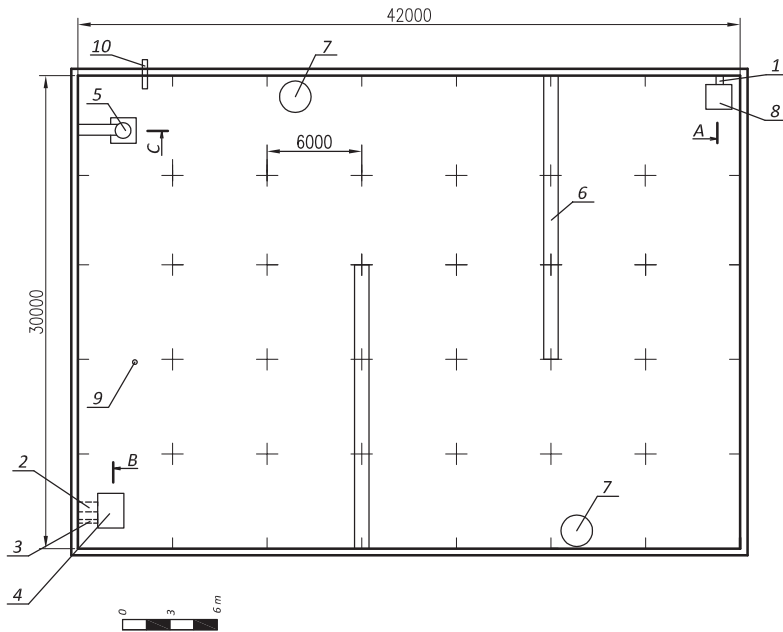
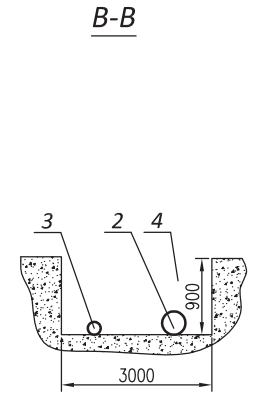
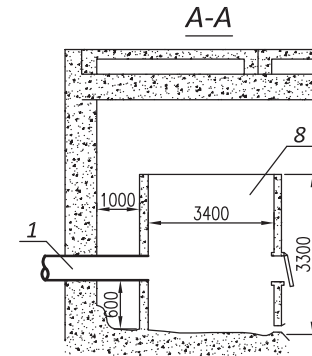
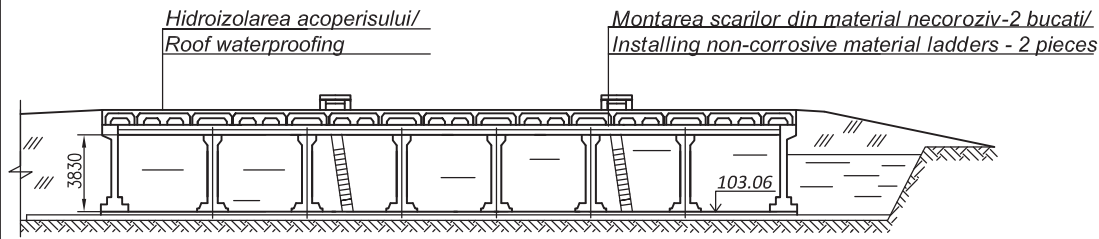
Date	Rev.
DATE	REV.

Reabilitarea rezervorului nr.2
V=5000m³ S.P. Buiucani/
Tank nr.2 rehabilitation
V=5000m³ Buiucani P.S.

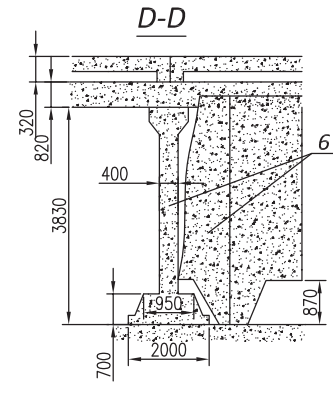
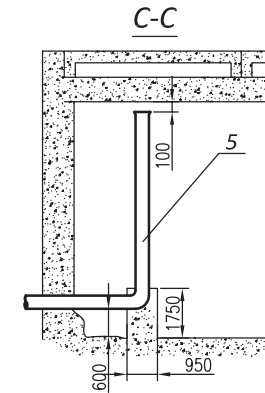
Graphical scale

R-04

Reabilitarea rezervorului nr.3 V=6000m³ S.P. Buiucani/ Tank nr.3 rehabilitation V=6000m³ Buiucani P.S.



1. Conducta de aductiune Ø500/
Inlet pipe Ø500
2. Conducta de aspiratie Ø500mm/
Suction pipe Ø500mm
3. Conducta de canalizare Ø150mm/
Sewerage pipe Ø150mm
4. Groapa de descarcare 300x290mm/
Discharge pit 300x290mm
5. Conducta de preaplin Ø500/
Overflow pipe Ø500
6. Coloana cu planseu / Column with slab
7. Gura de acces cu scara 600x49cm/
Manhole cover with ladder 600x49cm
8. Camera de aductiune / Inlet room
9. Indicator de nivel/ Level indicator
10. Conductă cu clor Ø50mm /
The pipe with chlorine Ø50mm



Details and hydraulics are not to scale



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CHISINAU WATER SUPPLY & SEWAGE TREATMENT
- FEASIBILITY STUDY



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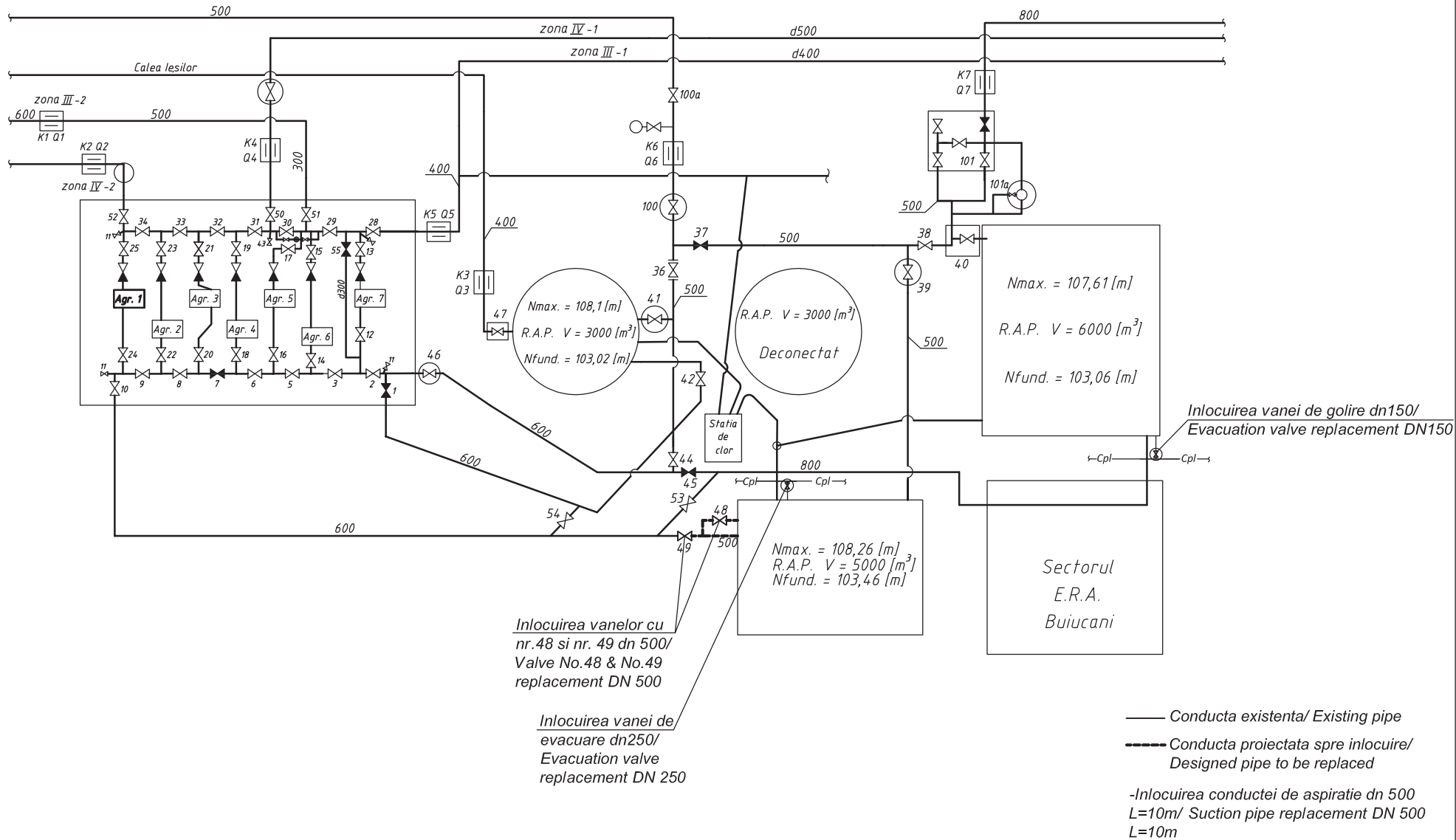
Date	Rev.
DATE	REV.

Reabilitarea rezervorului nr.3
V=6000m³ S.P. Buiucani/
Tank nr.3 rehabilitation
V=6000m³ Buiucani P.S.

Graphical scale

R-05

Reabilitarea armaturilor si conductelor S.P. Buiucani/ Pipes and fittings rehabilitation Buiucani P.S.



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CHISINAU WATER SUPPLY & SEWAGE TREATMENT
- FEASIBILITY STUDY



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APELOR



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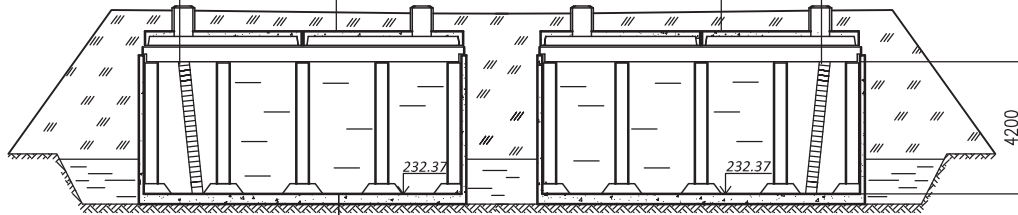
Date	Rev.	Reabilitarea armaturilor și conductelor S.P. Buiucani/ Pipes and fittings rehabilitation Buiucani P.S.
DATE	REV.	

Reabilitarea rezervorelor nr.1 si nr.2 V=500m³ S.P. Cartusa/ Tanks nr.1 & nr.2 rehabilitation V=500m³ Cartusa P.S.

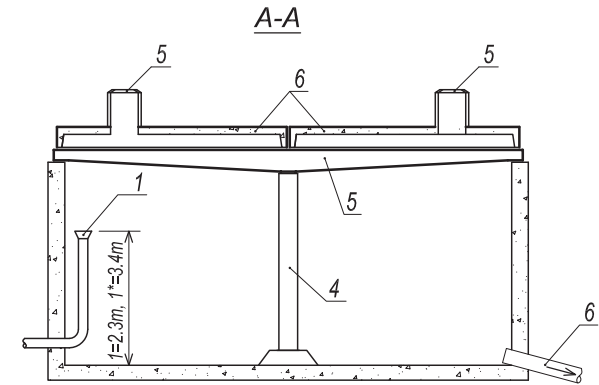
Montarea unei scari din material necoroziv / Installing non-corrosive material ladder

Rambleu-strat de sol/ Backfill-layer of soil
Hidroizolarea acoperisului/ Roof waterproofing

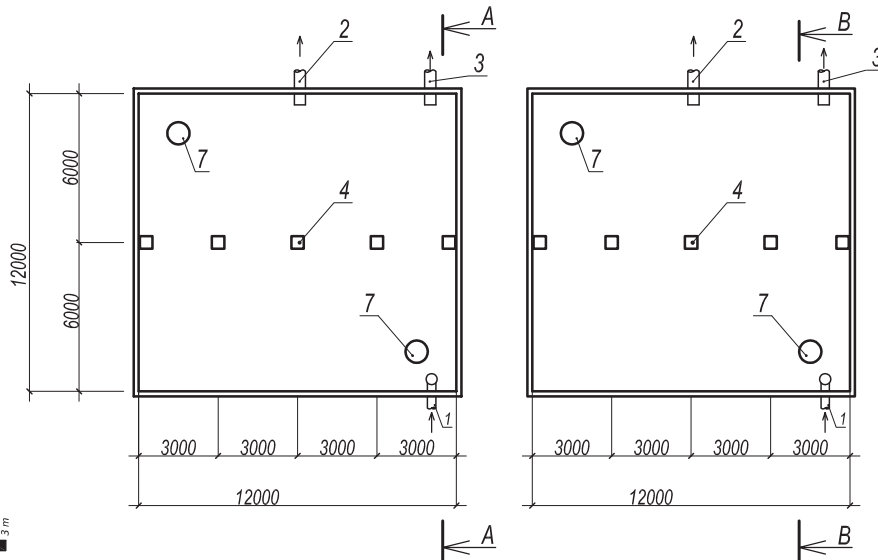
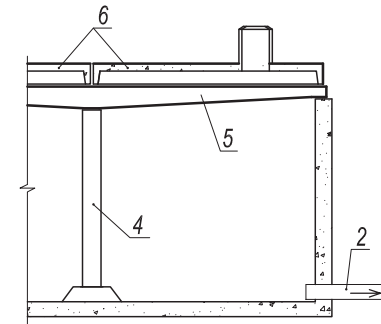
Montarea unei scari din material necoroziv / Installing non-corrosive material ladder



Restabilirea stratului radier a fundului rezervorului 288m² / Restoring the raft layer of tank bottom 288m²



B-B



1. Conducta de aducțiune Ø150mm / Inlet pipe Ø150mm;
2. Conducta de aspirație Ø200mm / Suction pipe Ø200mm;
3. Conducta de evacuare Ø200mm / Evacuation pipe Ø200mm;
4. Coloana / Column

5. Grindă de beton armat / Reinforced concrete beam;
6. Placă de acoperire / Cover plate;
7. Gură de acces / Manhole cover;

Details and hydraulics are not to scale



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CHISINAU WATER SUPPLY & SEWAGE TREATMENT
- FEASIBILITY STUDY



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APELOR

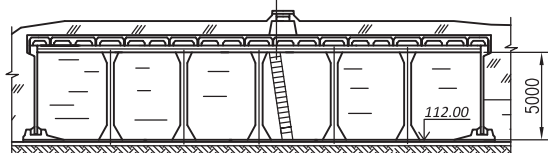
Business Consulting Institute

Date	Rev.	Reabilitarea rezervorelor nr.1si nr.2 V=500m ³ S.P. Cartusa/ Tanks nr.1& nr.2 rehabilitation V=500m ³ Cartusa P.S.
DATE	REV.	

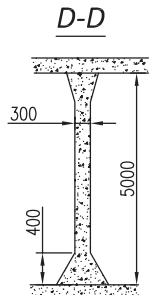
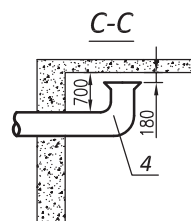
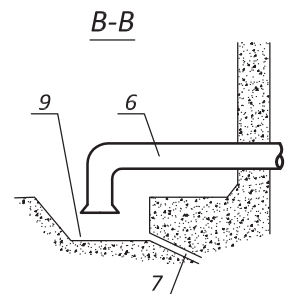
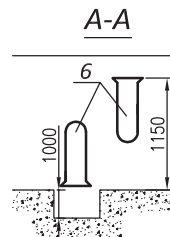
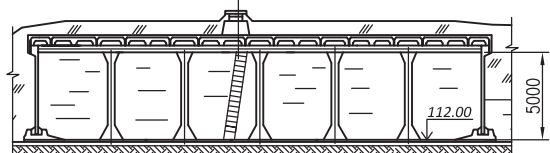
Graphical scale R-07

Reabilitarea rezervoarelor nr.1 si nr.2 V=3000m³ S.P. Ciocana/ Tanks nr.1 & nr.2 rehabilitation V=3000m³ Ciocana P.S.

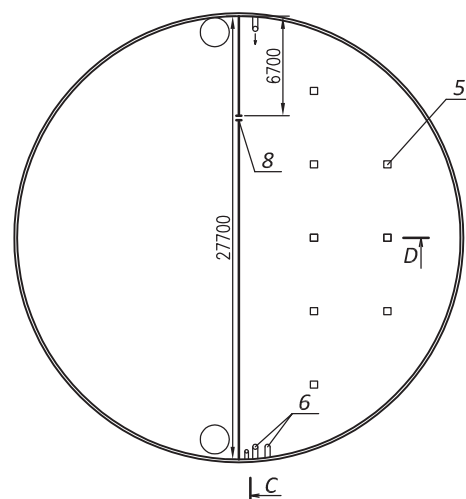
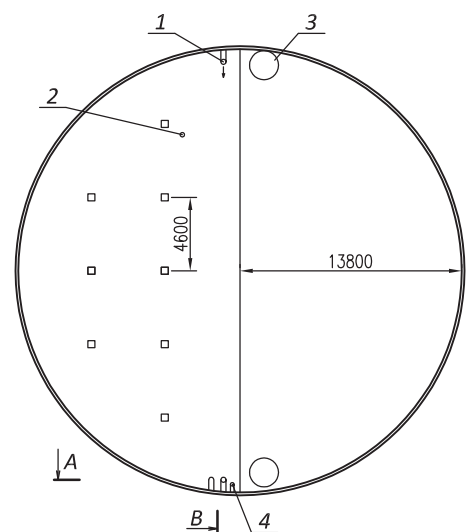
Montarea scarilor din
material necoroziv-2 bucati/
Installing non-corrosive
material ladders - 2 pieces



Montarea scarilor din
material necoroziv-2 bucati/
Installing non-corrosive
material ladders - 2 pieces



1. Conducta de aductiune Ø250mm/
Inlet pipe Ø250mm
2. Indicator de nivel/ Level indicator
3. Gura de acces Ø500mm/ Manhole cover Ø500mm
4. Conducta de preaplin Ø250/
Overflow pipe Ø250
5. Coloana / Column
6. Conducta de aspiratie Ø250mm/
Suction pipe Ø250mm
7. Conducta de canalizare / Sewerage pipe
8. Teava de comunicare Ø200/
Communication pipe Ø200
9. Groapa de descarcare 150x130cm /
Discharge pit 150x130cm



Details and hydraulics are not to scale



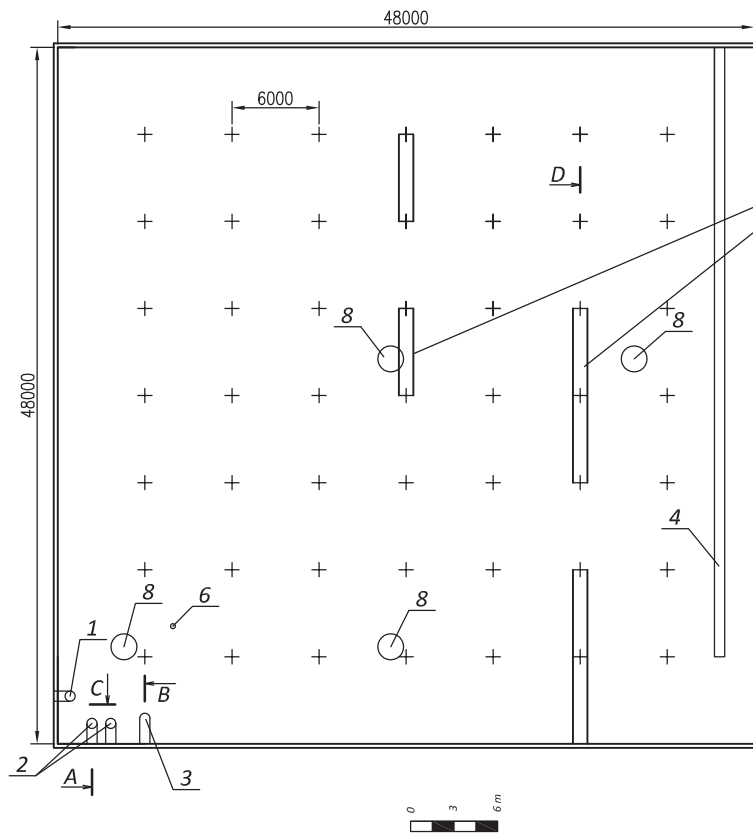
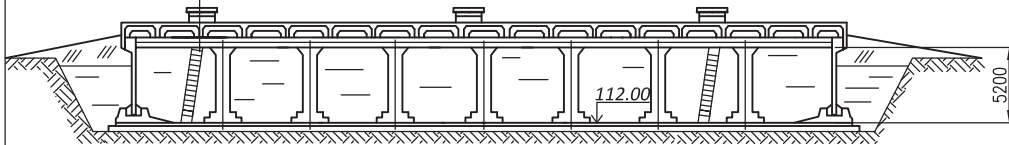
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TRATARE A APELOR UZATE ÎN MUNICIPIUL
CHIŞINĂU - STUDIU DE FEZABILITATE /
CHISINAU WATER SUPPLY & SEWAGE TREATMENT
- FEASIBILITY STUDY



Date	Rev.	Reabilitarea rezervoarelor nr.1 si nr.2 V=3000m ³ S.P. Ciocana/ Tanks nr.1 & nr.2 rehabilitation V=3000m ³ Ciocana P.S.
DATE	REV.	

Reabilitarea rezervorului nr.3 V=10000m³ S.P. Ciocana/ Tank nr.3 rehabilitation V=10000m³ Ciocana P.S.

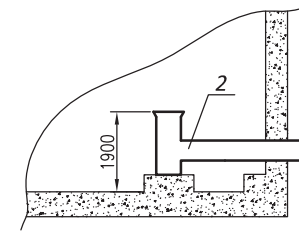
Montarea scarilor din material necoroziv-2 bucati/
Installing non-corrosive material ladders - 2 pieces



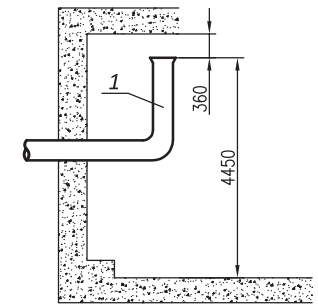
Reparatia peretilor despartitori
(6sectii 600x400) / Repair of partition
walls (6 sections 600x400)

1. Conducta de preaplin Ø600/
Overflow pipe Ø600
2. Conducta de aspiratie Ø800mm/
Suction pipe Ø800mm
3. Conducta de aspiratie Ø400mm/
Suction pipe Ø400mm
4. Conducta de aductiune Ø600mm/
Inlet pipe Ø600mm
5. Conducta de canalizare /
Sewerage pipe
6. Indicator de nivel/ Level indicator
7. Groapa de descarcare /
Discharge pit
8. Gura de acces / Manhole cover

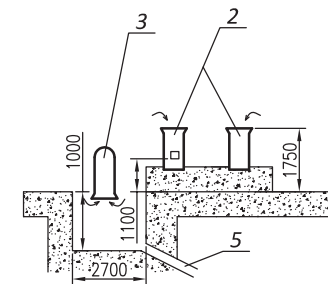
A-A



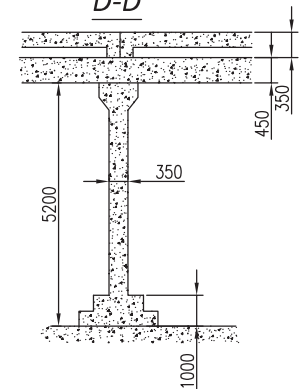
B-B



C-C



D-D



Details and hydraulics are not to scale



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CHISINAU WATER SUPPLY & SEWAGE TREATMENT
- FEASIBILITY STUDY



in association with



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APELOR

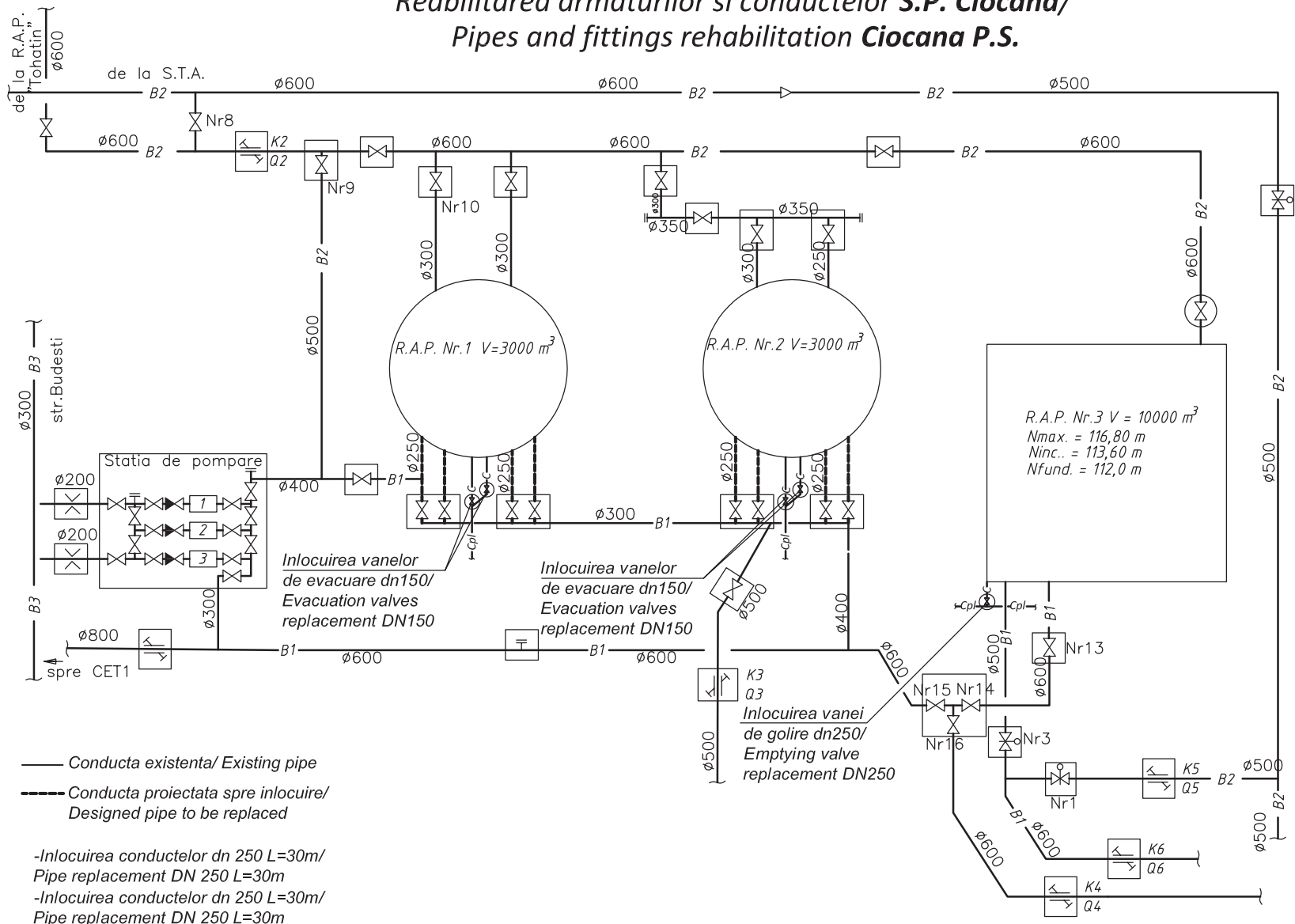


Date	Rev.	Reabilitarea rezervoarelor nr.1 si nr.2 V=3000m ³ S.P. Ciocana/ Tanks nr.1 & nr.2 rehabilitation V=3000m ³ Ciocana P.S.
DATE	REV.	

Graphical scale

R-09

Reabilitarea armaturilor si conductelor S.P. Ciocana/ Pipes and fittings rehabilitation Ciocana P.S.



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CHISINAU WATER SUPPLY & SEWAGE TREATMENT
- FEASIBILITY STUDY



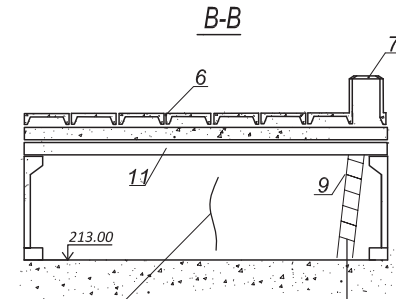
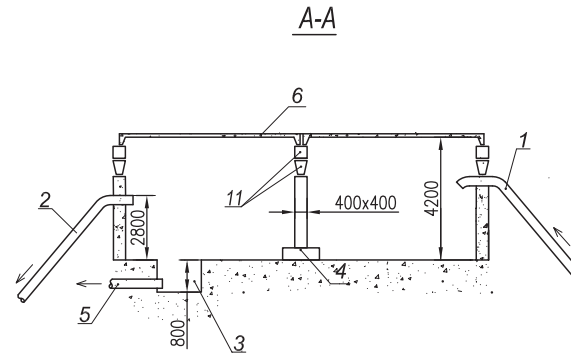
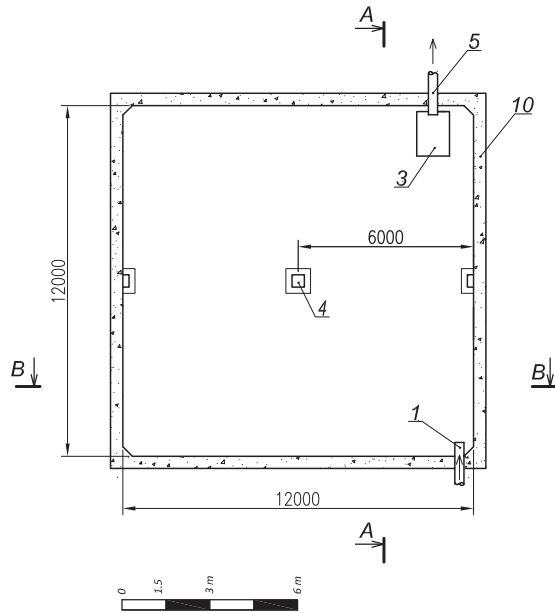
in association with
INGERIA APELOR



Date	Rev.
DATE	REV.

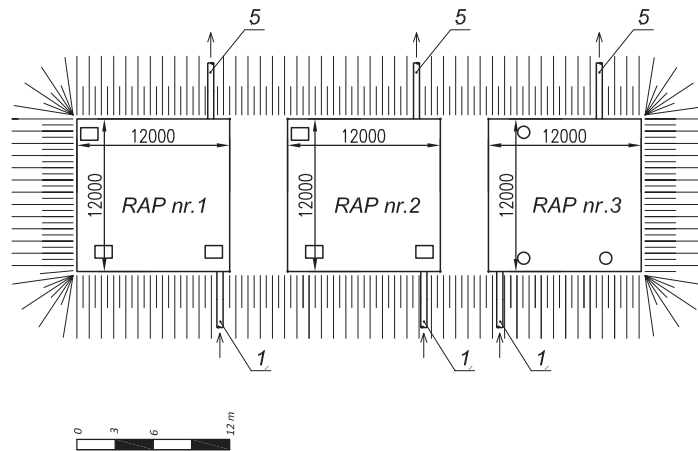
Reabilitarea armaturilor si conductelor
S.P. Ciocana/
Pipes and fittings rehabilitation
Ciocana P.S.

Reabilitarea rezervorului nr.2 V=500m³ S.P. Colonita/ Tank nr.2 rehabilitation V=500m³ Colonita P.S.



*Reparatia fisurii din perete/
Repair of fissure in the wall*

*Montarea unei scari din
material necoroziv/
Installing non-corrosive
material ladder*



1. Conducta de aducțiunea Ø200mm/ Inlet pipe Ø200mm
2. Conducta de preaplin Ø200mm/ Overflow pipe Ø200mm
3. Groapa de acumulare/ Discharge pit
4. Coloana/ Column
5. Conducta de aspiratie Ø200mm/ Suction pipe Ø200mm

6. Placă de acoperire/ Cover slab
7. Gură de acces/ Manhole cover
8. Indicator de nivel/ Level indicator
9. Scară/ Ladder
10. Peretele rezervorului/ Tank wall
11. Grindă de reazem/ Bearing beam

Details and hydraulics are not to scale



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TRATARE A APELOR UZATE ÎN MUNICIPIUL
CHIȘINĂU - STUDIU DE FEZABILITATE /
CHISINAU WATER SUPPLY & SEWAGE TREATMENT
- FEASIBILITY STUDY



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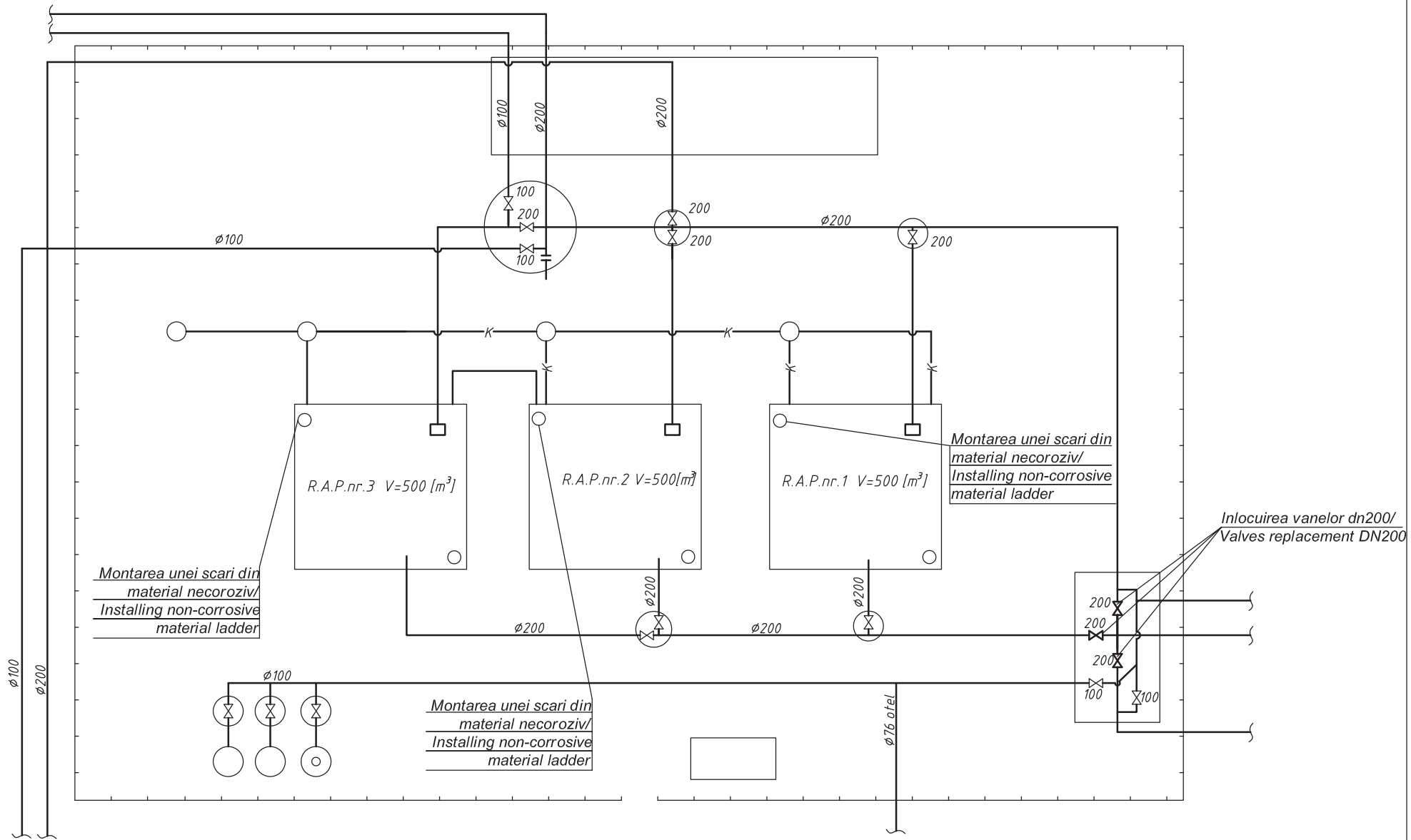
INGINERIA
APELOR



Business Consulting Institute

Date	Rev.	Reabilitarea rezervorului nr.2 V=500m ³ S.P. Colonita/ Tank nr.2 rehabilitation V=500m ³ Colonita P.S.
DATE	REV.	
Graphical scale		R-13

Reabilitarea armaturilor si conductelor S.P. Colonita/ Pipes and fittings rehabilitation Colonita P.S.



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TRATARE A APELOR UZATE ÎN MUNICIPIUL
CHIȘINĂU - STUDIU DE FEZABILITATE /
CHISINAU WATER SUPPLY & SEWAGE TREATMENT
- FEASIBILITY STUDY



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APELOR



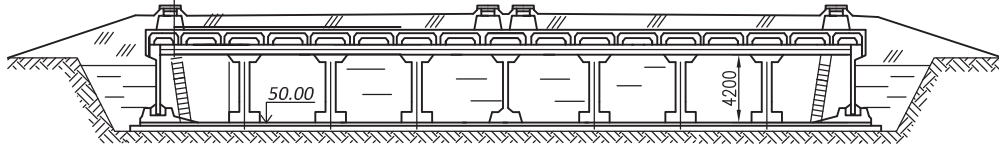
in association with

Date	Rev.
DATE	REV.

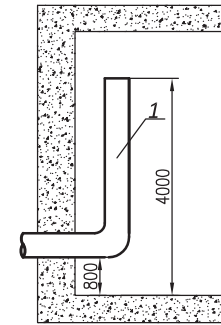
Reabilitarea armaturilor si conductelor
S.P. Colonita/
Pipes and fittings rehabilitation
Colonita P.S.

Reabilitarea rezervoarelor nr.1 si nr.2 V=2000m³ S.P. Ghidighici/ Tanks nr.1 & nr.2 rehabilitation V=2000m³ Ghidighici P.S.

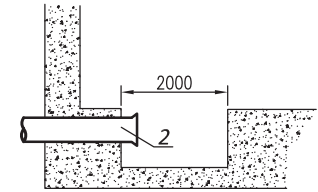
Montarea scarilor din material necoroziv-2 bucati/
Installing non-corrosive material ladders - 2 pieces



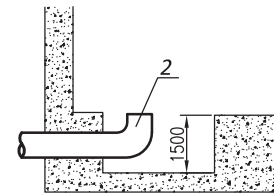
A-A



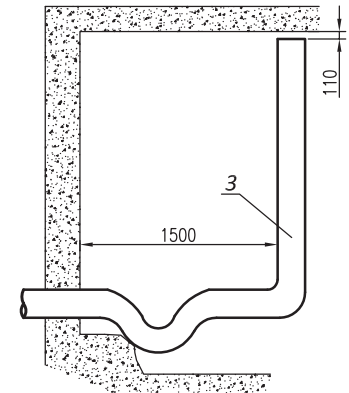
B-B



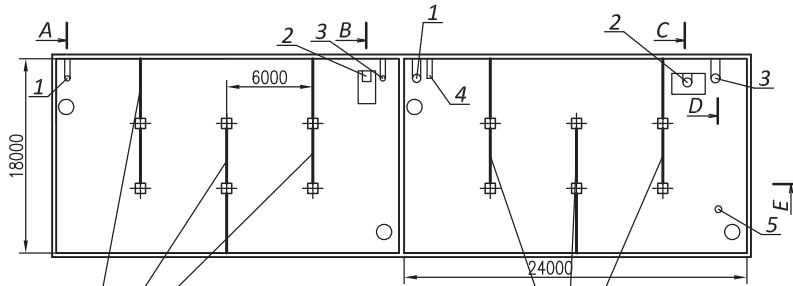
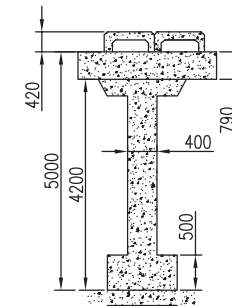
C-C



D-D



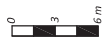
E-E



Construcția peretilor despartitori pentru
majorarea timpului de contact al apei cu clor/
Construction of partition walls in order to
increase water contact time with chlorine

Construcția peretilor despartitori pentru
majorarea timpului de contact al apei cu clor/
Construction of partition walls in order to
increase water contact time with chlorine

1. Conducta de aductiune Ø400mm / Inlet pipe Ø400mm
 2. Conducta de aspiratie Ø500mm / Suction pipe Ø500mm
 3. Conducta de preaplin Ø400/ Overflow pipe Ø400
 4. Conductă cu clor Ø50mm / The pipe with chlorine Ø50mm
 5. Indicator de nivel / Level indicator
- * Canalizarea lipseste / Lacking sewerage



Details and hydraulics are not to scale



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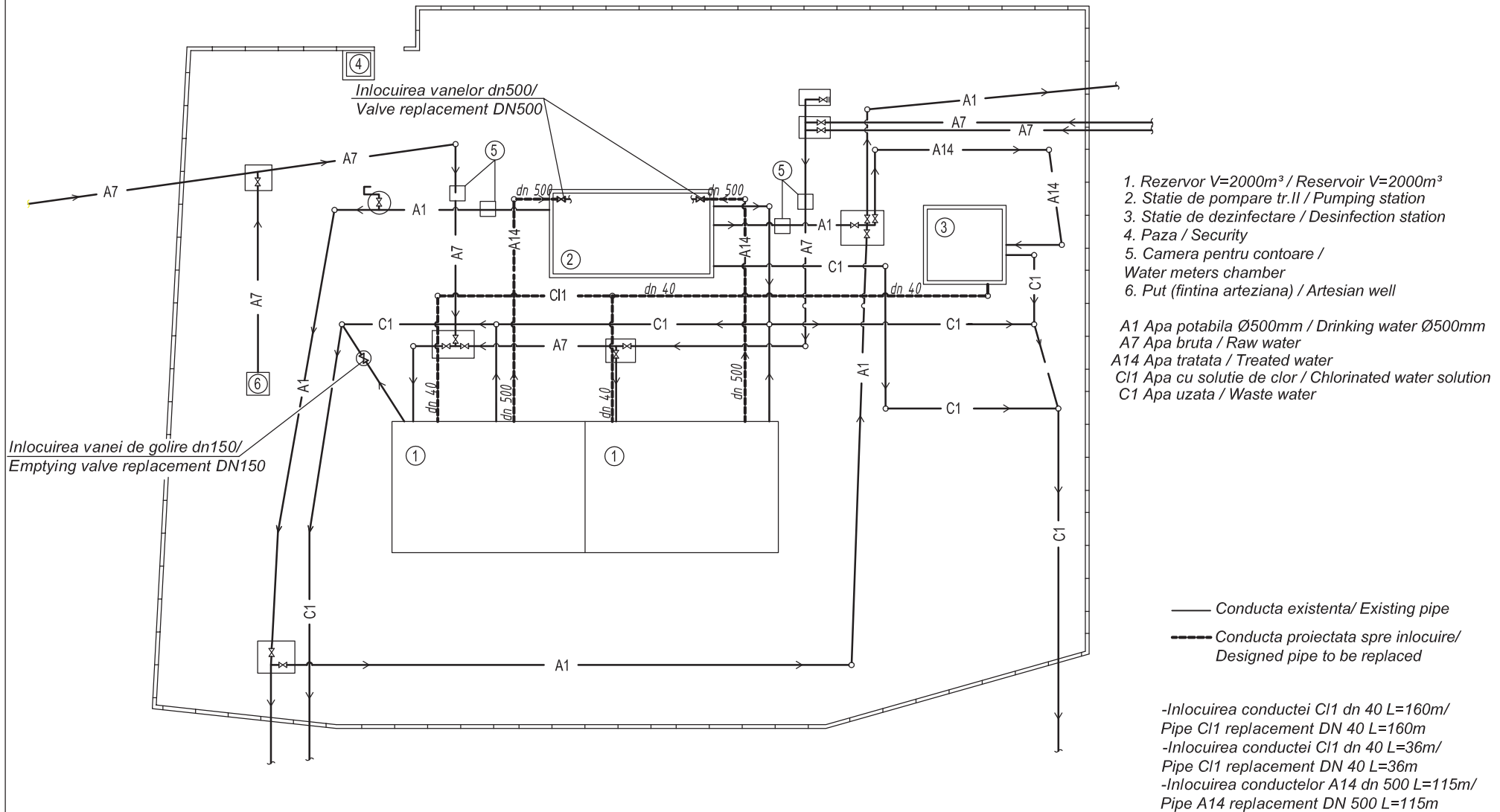
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INGINERIA
APELOR



Date	Rev.	Reabilitarea rezervoarelor nr.1 si nr.2 V=2000m ³ S.P. Ghidighici/ Tanks nr.1 & nr.2 rehabilitation V=2000m ³ Ghidighici P.S.	
DATE	REV.		

Graphical scale R-15

Reabilitarea armaturilor si conductelor S.P. Ghidighici/ Pipes and fittings rehabilitation Ghidighici P.S.



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- FEASIBILITY STUDY

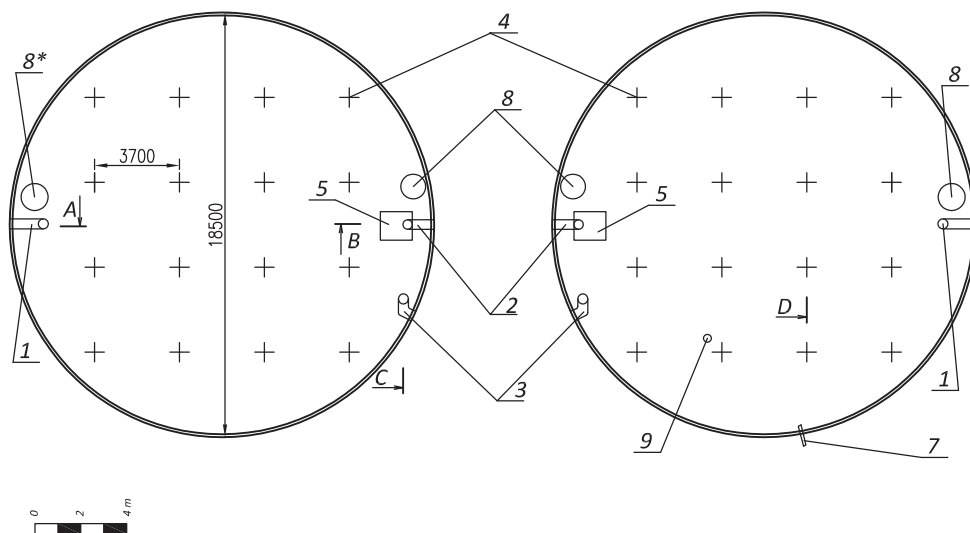
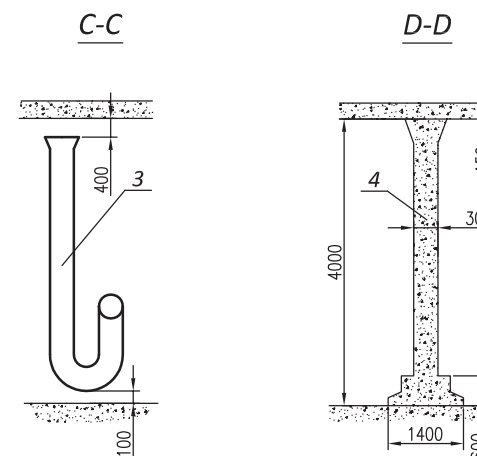
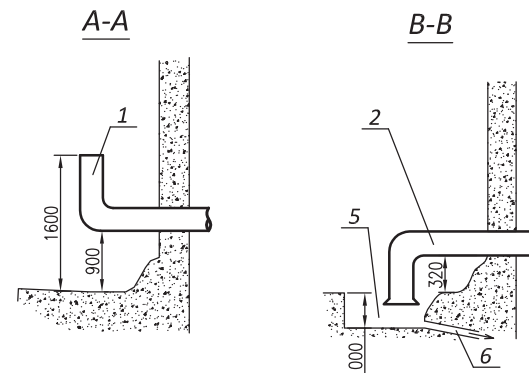
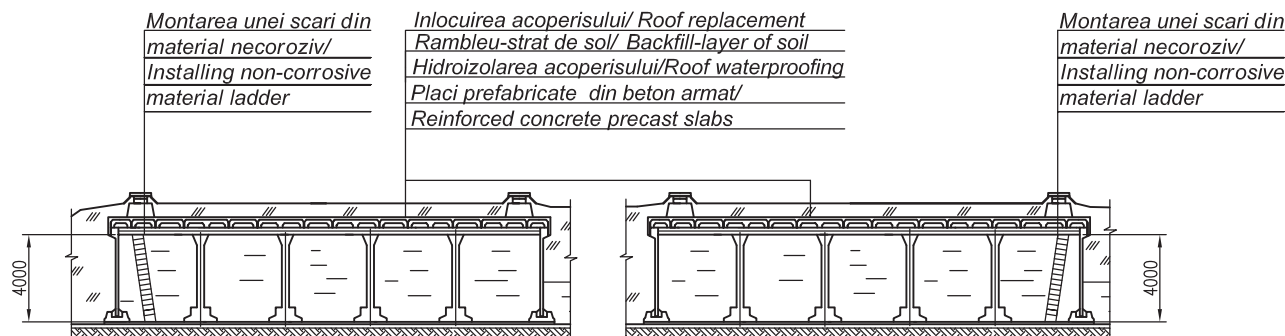


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Date	Rev.	Reabilitarea armaturilor și conductelor S.P. Ghidighici/ Pipes and fittings rehabilitation Ghidighici P.S.
DATE	REV.	

Reabilitarea rezervoarelor nr.1 si nr.2 V=1000m³ S.P Ialoveni/ Tanks nr.1 & nr.2 rehabilitation V=1000m³ Ialoveni P.S.



- | | |
|---|--|
| <p>1. Conducta de aductiune Ø400mm/
Inlet pipe Ø400mm</p> <p>2. Conducta de aspiratie Ø500mm/
Suction pipe Ø500mm</p> <p>3. Conducta de preaplin Ø500/
Overflow pipe Ø500</p> <p>4. Coloana/ Column</p> <p>5. Groapa de descarcare 160x108cm/
Discharge pit 160x108cm</p> | <p>6. Conducta de canalizare Ø150mm/
Sewerage pipe Ø150mm</p> <p>7. Conductă cu clor Ø13mm /
The pipe with chlorine Ø13mm</p> <p>8. Gura de acces/ Manhole cover</p> <p>9. Indicator de nivel/ Level indicator</p> |
|---|--|

Details and hydraulics are not to scale



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- FEASIBILITY STUDY



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APELOR



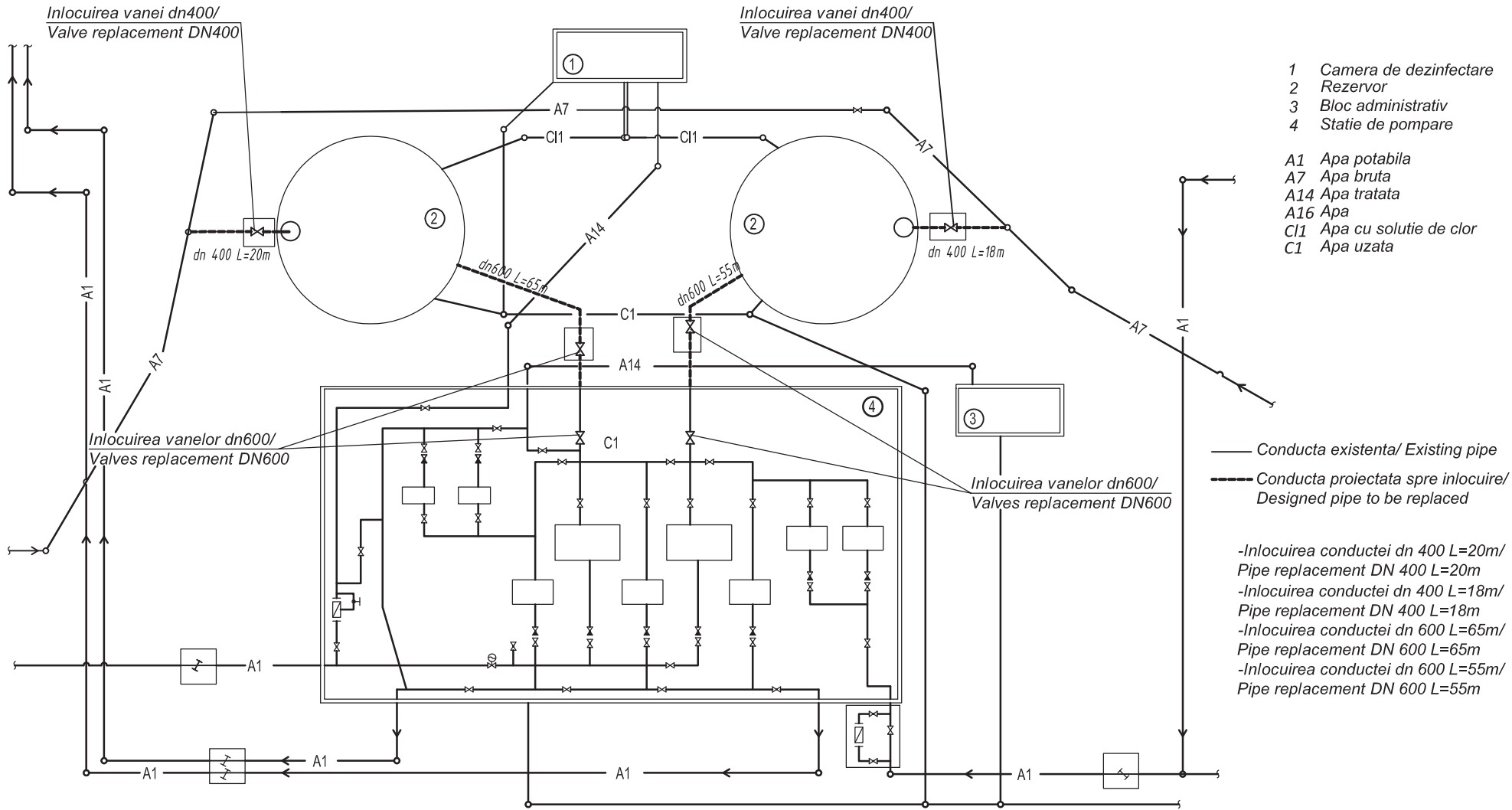
Date	Rev.
DATE	REV.

Reabilitarea rezervoarelor nr.1 si nr.2
V=1000m³ S.P. Ialoveni/
Tanks nr.1 & nr.2 rehabilitation
V=1000m³ Ialoveni P.S.

Graphical scale

R-17

Reabilitarea armaturilor si conductelor S.P. Ialoveni/ Pipes and fittings rehabilitation Ialoveni P.S.



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- FEASIBILITY STUDY



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APELOR

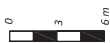
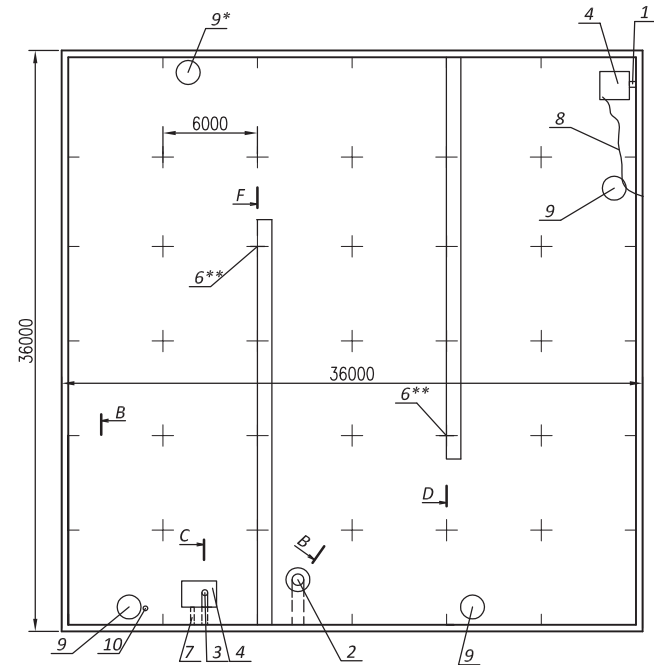
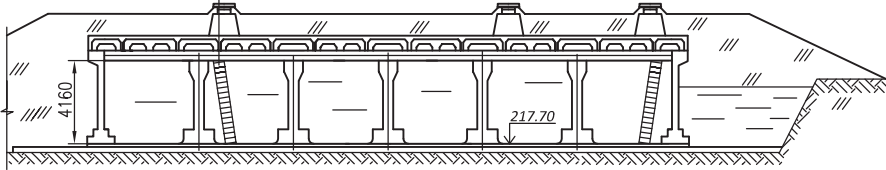


Business Consulting Institute

Date	Rev.	Reabilitarea armaturilor si conductelor S.P. Ialoveni/ Pipes and fittings rehabilitation Ialoveni P.S.	
DATE	REV.		

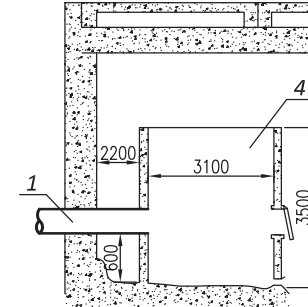
Reabilitarea rezervorului nr.1 V=6000m³ S.P. Schinoasa/ Tank nr.1 rehabilitation V=6000m³ Schinoasa P.S.

Montarea scarilor din material necoroziv-2 bucati/
Installing non-corrosive material ladders - 2 pieces

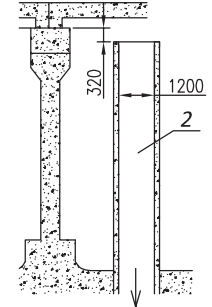


1. Conducta de aductiune Ø500/
Inlet pipe Ø500
 2. Conducta de preaplin Ø1200/
Overflow pipe Ø1200
 3. Conducta de aspiratie Ø500mm/
Suction pipe Ø500mm
 4. Camera de aductiune 328x140cm/
Inlet room 328x140cm
 5. Groapa de descarcare 260x265mm/
Discharge pit 260x265mm
 6. Coloana cu planseu / Column with slab
 7. Conducta de canalizare Ø200mm/
Sewerage pipe Ø200mm
 8. Conductă cu clor Ø40mm /
The pipe with chlorine Ø40mm
 9. Gura de acces/ Manhole cover
 10. Indicator de nivel/ Level indicator
- * Scara/ Ladder
** Planseu despartitor de 2 tipuri:
planseu cu deschideri si planseu instalat pe
pedestale de beton /
Two types of separating slab:
slab with openings and slab installed on
concrete pedestals

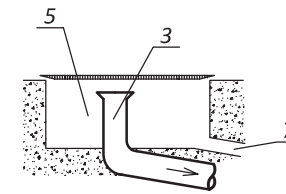
A-A



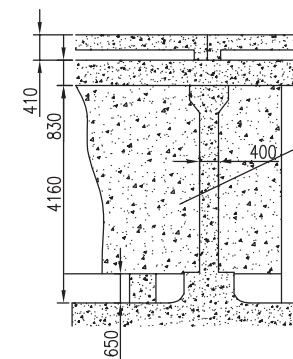
B-B



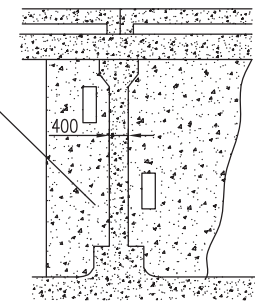
C-C



D-D



F-F



Details and hydraulics are not to scale



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- FEASIBILITY STUDY



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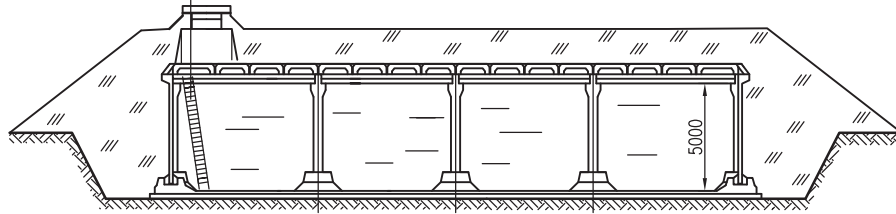


Date	Rev.	Reabilitarea rezervorului nr.1 V=6000m ³ S.P. Schinoasa/ Tank nr.1 rehabilitation V=6000m ³ Schinoasa P.S.
DATE	REV.	

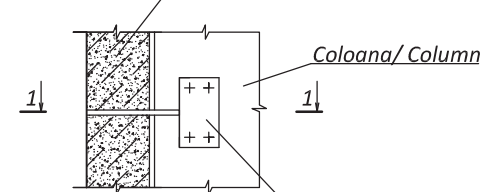
Graphical scale

Reabilitarea rezervorului V=3000m³ S.P. Stauceni/ Tank rehabilitation V=3000m³ Stauceni P.S.

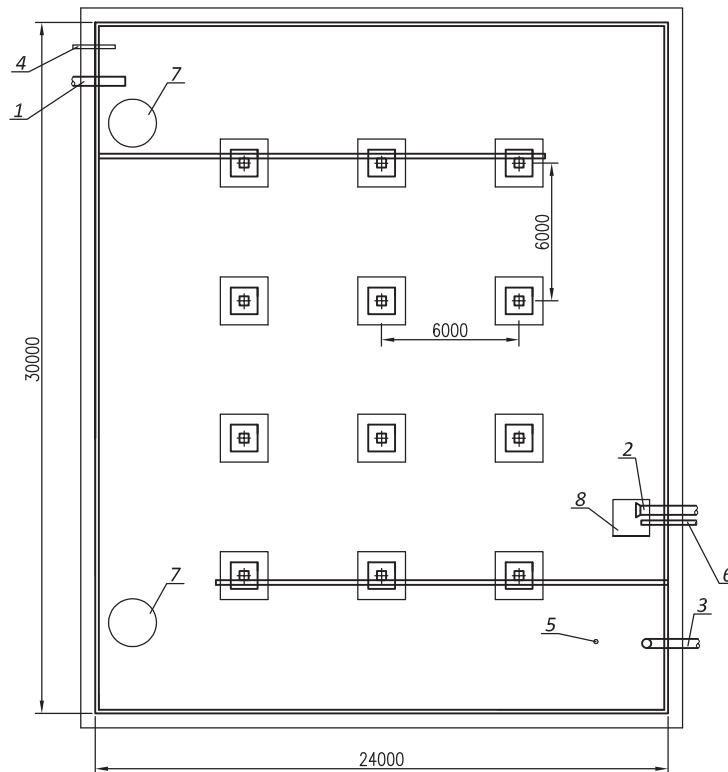
Montarea scarilor din material necoroziv-2 bucati/
Installing non-corrosive material ladders - 2 pieces



Placa din beton (perete despartitor)/
Concrete slab (partition wall)

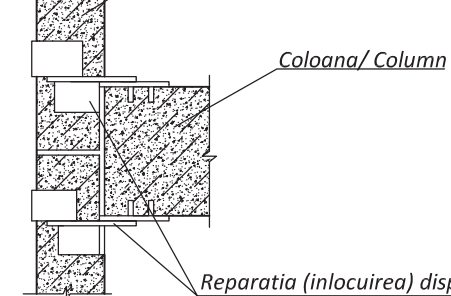


Reparatia (inlocuirea) dispozitivelor de
fixare a placilor din beton cu coloanele/
Repair (replacement) the fastenings of
concrete slabs with columns



1 - 1

Placa din beton (perete despartitor)/
Concrete slab (partition wall)



Reparatia (inlocuirea) dispozitivelor de
fixare a placilor din beton cu coloanele/
Repair (replacement) the fastenings of
concrete slabs with columns

1. Conducta de aductiune Ø400mm /
Inlet pipe Ø400mm
2. Conducta de aspiratie Ø400mm /
Suction pipe Ø400mm
3. Conducta de preaplin Ø400/
Overflow pipe Ø400

4. Conductă cu clor Ø50mm /
The pipe with chlorine Ø50mm
5. Indicator de nivel / Level indicator
6. Conducta de canalizarea Ø150 /
Sewerage pipe Ø150
7. Gura de acces/ Manhole cover
8. Groapa de descarcare / Discharge pit

Details and hydraulics are not to scale



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APELOR



Date	Rev.
DATE	REV.

Reabilitarea rezervorului
V=3000m³ S.P. Stauceni/
Tank rehabilitation
V=3000m³ Stauceni P.S.

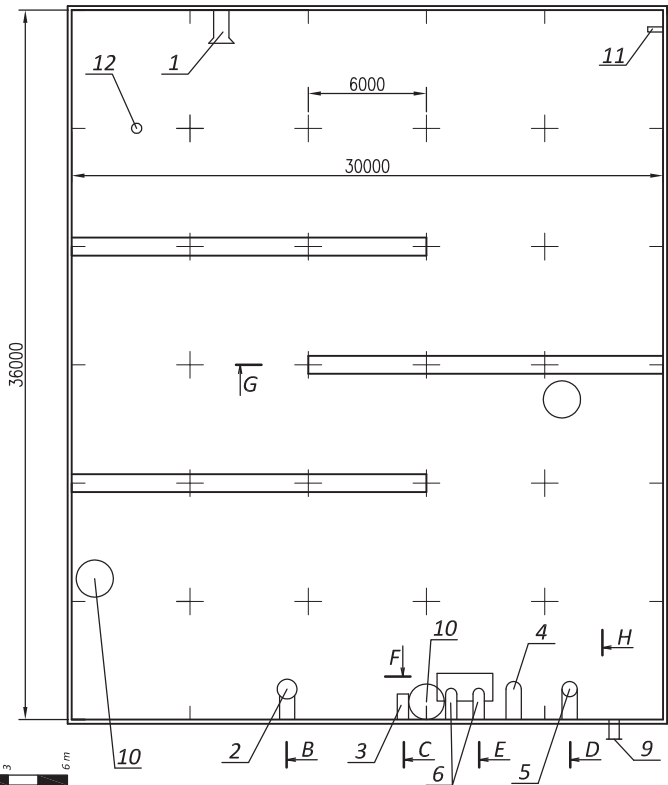
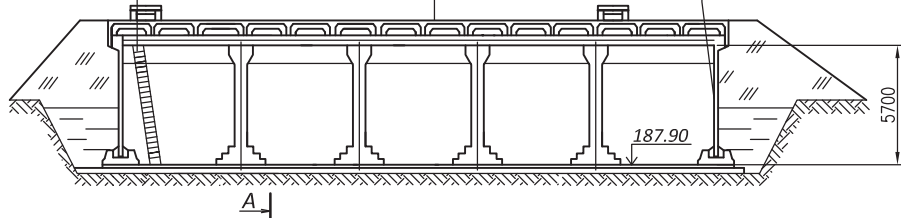
Graphical scale

R-20

Reabilitarea rezervorului nr.1 V=5000m³ S.P. Telecentru/ Tank nr.1 rehabilitation V=5000m³ Telecentru P.S.

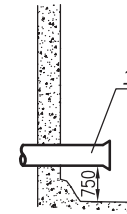
Montarea scarilor din
material necoroziv-2 bucati/
Installing non-corrosive
material ladders - 2 pieces

Hidroizolarea acoperisului / Torcretarea peretilor interni 580m²/
Roof waterproofing / Spraying of the interior walls 580m²

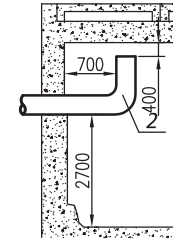


1. Conducta de aductiune Ø500mm/
Inlet pipe Ø500mm
2. Conducta de preaplin Ø500/
Overflow pipe Ø500
3. Conducta de aductiune Ø400mm/
Inlet pipe Ø400mm
4. Conducta de aspiratie Ø500mm/
Suction pipe Ø500mm
5. Conducta de aductiune Ø400mm/
Inlet pipe Ø400mm
6. Conducta de aspiratie Ø400mm/
Suction pipe Ø400mm
7. Conducta de canalizare Ø300mm/
Sewerage pipe Ø300mm; Groapa de
descarcare 250x200cm, H=155cm/
Discharge pit 250x200cm, H=155cm
8. Coloana cu panou / Column with panel
9. Flansa oarba / Blind flange
10. Gura de acces/ Manhole cover
11. Conductă cu clor Ø50mm /
The pipe with chlorine Ø50mm
12. Indicator de nivel/ Level indicator

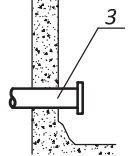
A-A



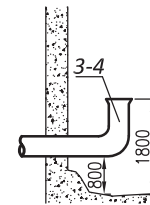
B-B



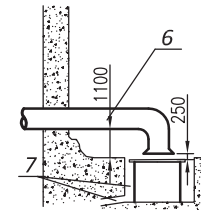
C-C



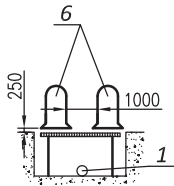
D-D



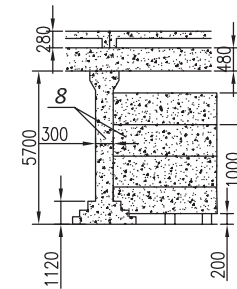
E-E



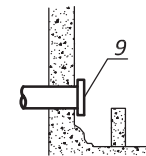
F-F



G-G



H-H



Details and hydraulics are not to scale



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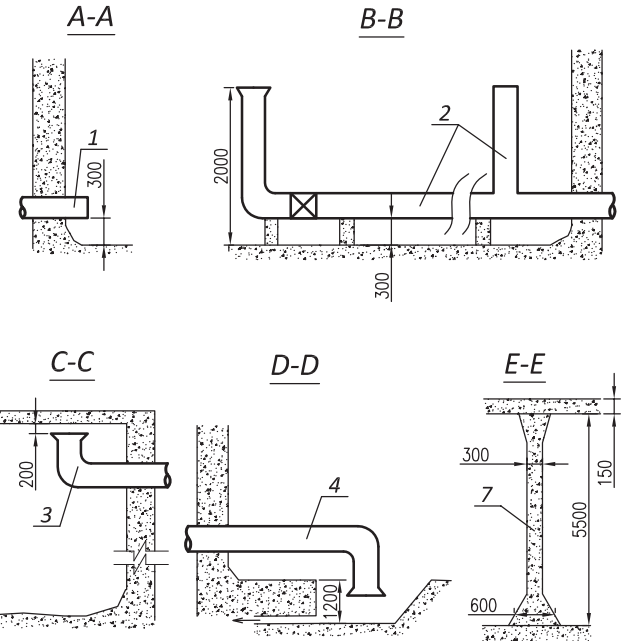
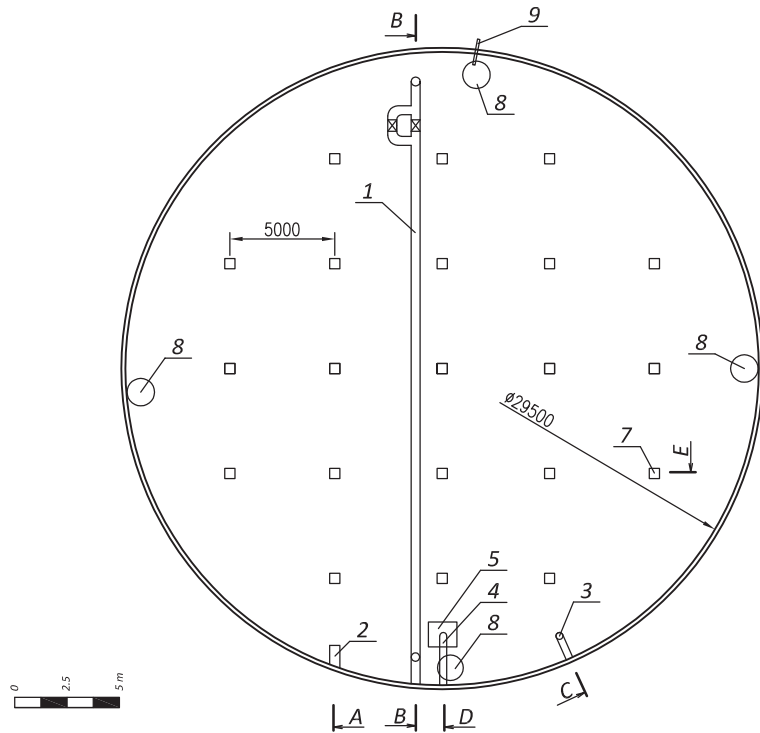
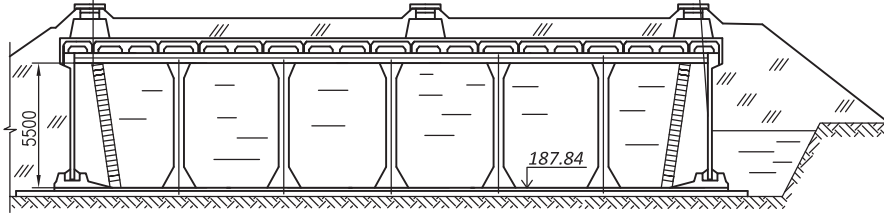
Date	Rev.	Reabilitarea rezervorului nr.1 V=5000m ³ S.P. Telecentru/ Tank nr.1 rehabilitation V=5000m ³ Telecentru P.S.
DATE	REV.	

Graphical scale

Reabilitarea rezervorului nr.2 V=3000m³ S.P. Telecentru/ Tank nr.2 rehabilitation V=3000m³ Telecentru P.S.

Montarea scarilor din
material necoroziv-2 bucati/
Installing non-corrosive
material ladders - 2 pieces

Torcretarea peretilor 1240m²/
Spraying of the walls 1240m²



1. Conducta de aductiune Ø300mm/
Inlet pipe Ø300mm
2. Conducta de aspiratie Ø400mm/
Suction pipe Ø400mm
3. Conducta de preaplin Ø600/
Overflow pipe Ø600
4. Conducta de aspiratie Ø400mm/
Suction pipe Ø400mm
5. Groapa de descarcare 180x100cm /
Discharge pit 180x100cm
6. Conducta de canalizare / Sewerage pipe
7. Coloana / Column
8. Gura de acces/ Manhole cover
9. Conductă cu clor Ø50mm /
The pipe with chlorine Ø50mm

Details and hydraulics are not to scale



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- FEASIBILITY STUDY



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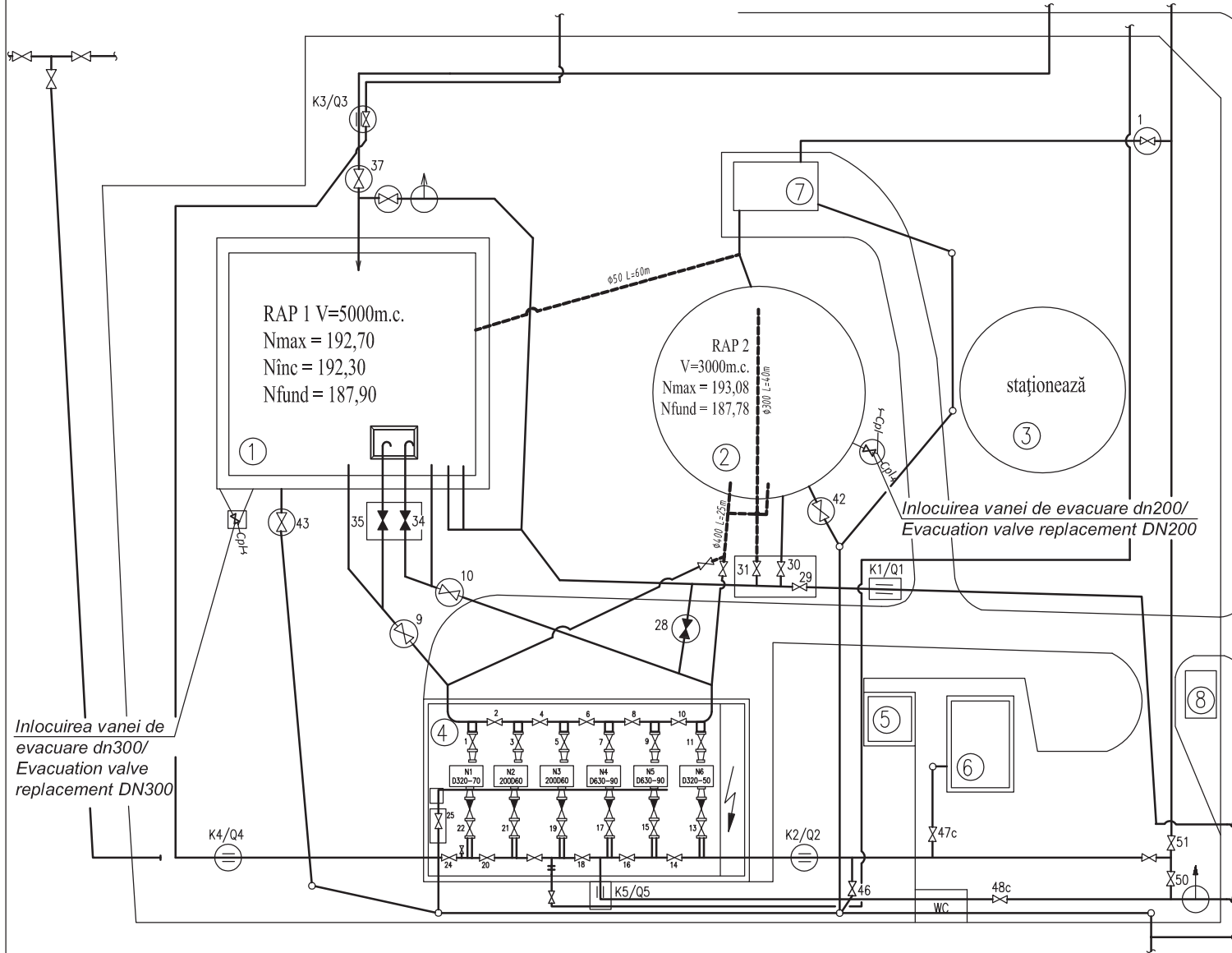
in association with

Date	Rev.	Reabilitarea rezervorului nr.2 V=3000m ³ S.P. Telecentru/ Tank nr.2 rehabilitation V=3000m ³ Telecentru P.S.	
DATE	REV.		

Graphical scale

R-22

Reabilitarea armaturilor si conductelor S.P. Telecentru/ Pipes and fittings rehabilitation Telecentru P.S.



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- FEASIBILITY STUDY



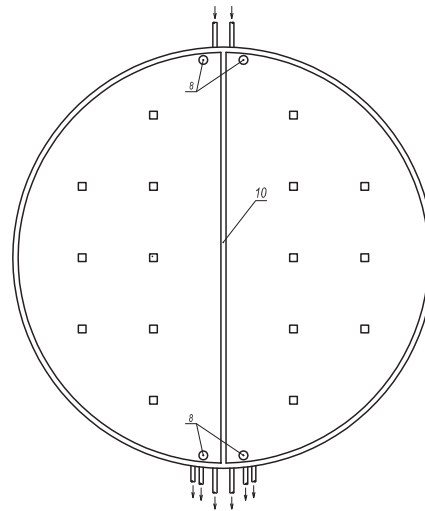
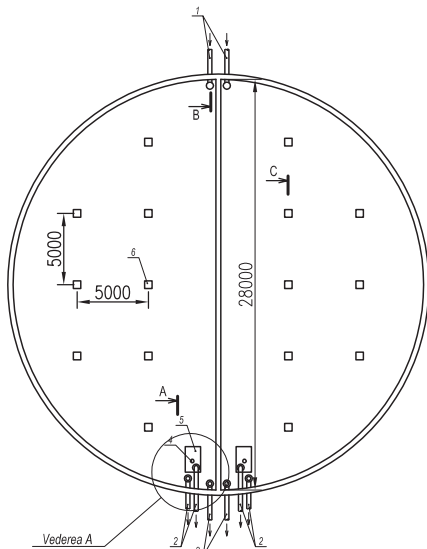
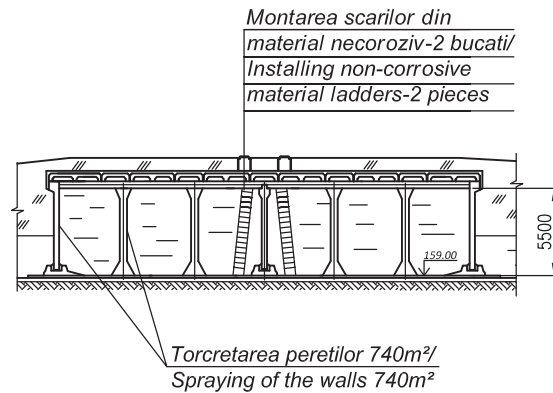
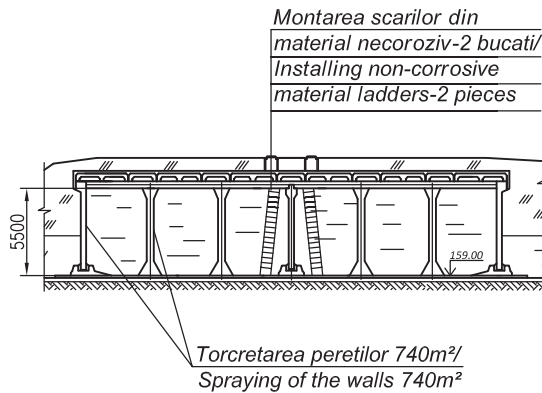
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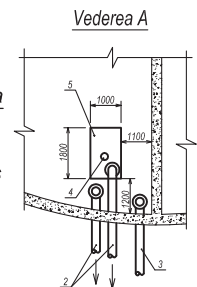
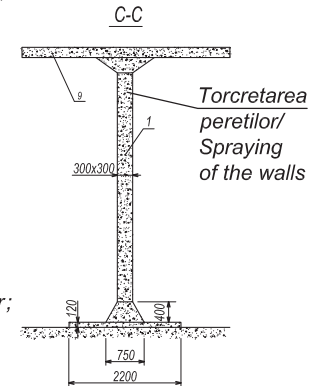
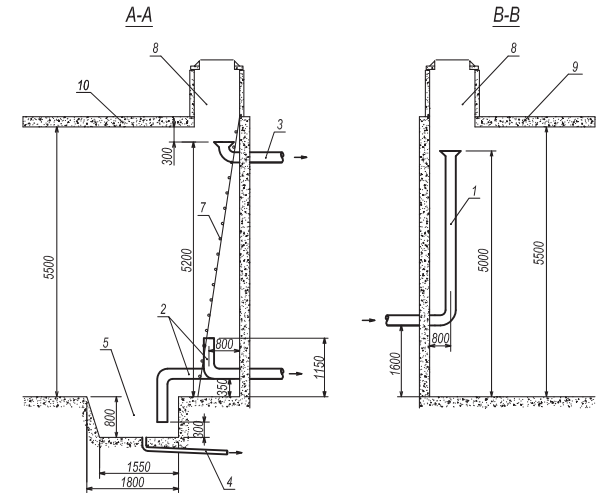
in association with

DATE	REV.	Reabilitarea armaturilor si conductelor S.P. Telecentru/ Pipes and fittings rehabilitation Telecentru P.S.

Reabilitarea rezervoarelor nr.2 si nr.3 V=3000m³ S.P. Tohatin/ Tanks nr.2 & nr.3 rehabilitation V=3000m³ Tohatin P.S.



1. Conducta de aducțiune Ø300mm/ Inlet pipe Ø300mm;
2. Conducta de aspirație Ø300mm/ Suction pipe Ø300mm;
3. Conducta preaplin Ø300mm/ Overflow pipe Ø300mm;
4. Conducta de evacuare Ø150mm/ Evacuation pipe Ø150mm;
5. Groapa de descarcare 100x180(cm)/ Discharge pit 100x180(cm);
6. Coloana/ Column;
7. Scara de urcare-coborire B=40cm/ Ladder B=40cm;
8. Gură de acces/ Manhole cover;
9. Placă de acoperire/ Cover plate;
10. Peretele despărțitor/ Partition wall;



Details and hydraulics are not to scale



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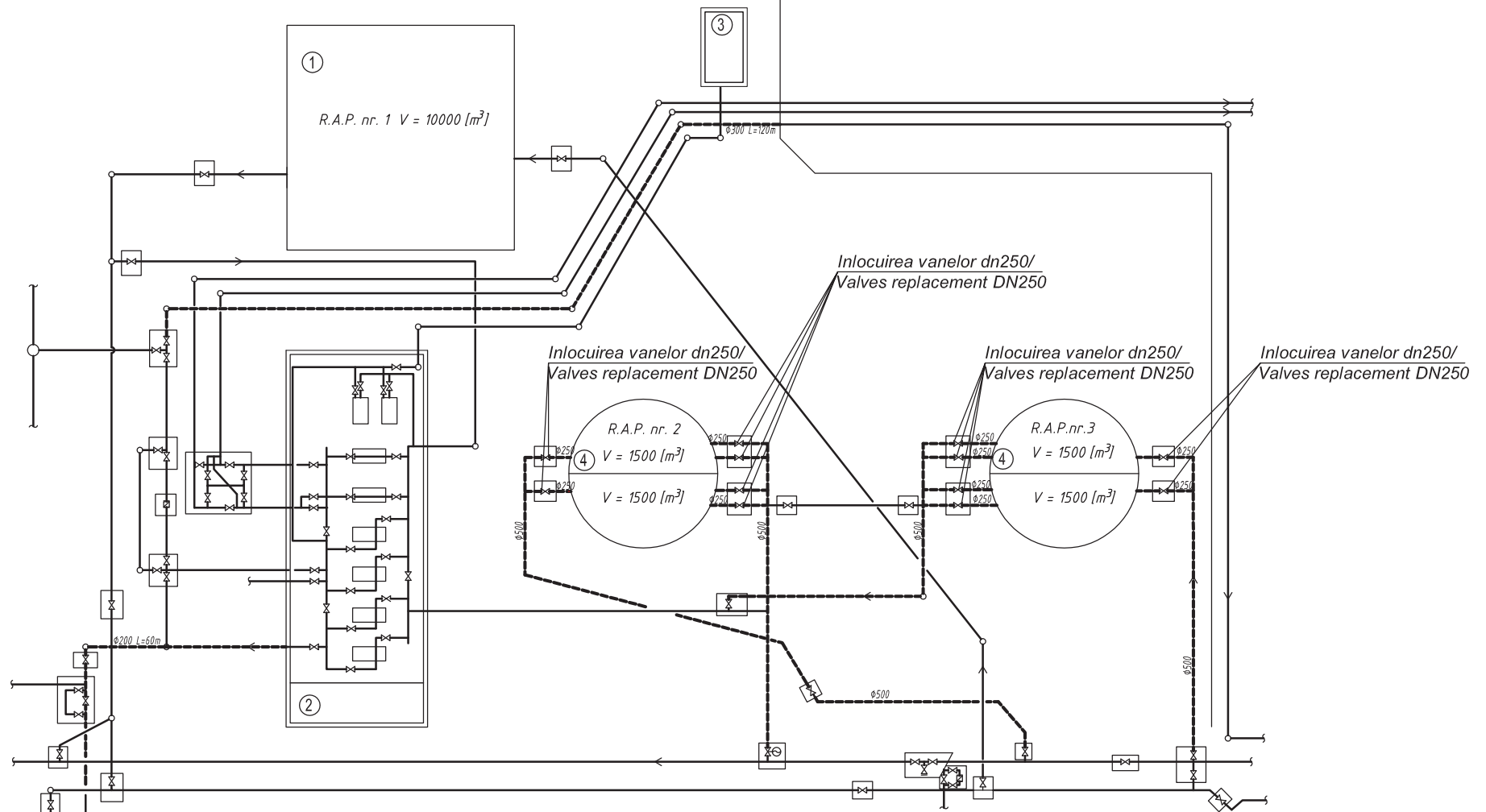
Date	Rev.
DATE	REV.

Reabilitarea rezervoarelor nr.2 si nr.3
V=3000m³ S.P. Tohatin/
Tanks nr.2 & nr.3 rehabilitation
V=3000m³ Tohatin P.S.

Graphical scale

R-25

Reabilitarea armaturilor si conductelor S.P. Tohatin/ Pipes and fittings rehabilitation Tohatin P.S.



1. Rezervor 10000m³ / Reservoir 10000m³
2. Statie de pompare / Pumping station
3. Statie de dezinfectare / Desinfection station
4. Rezervor 3000m³ / Reservoir 3000m³

- Conducta existenta/ Existing pipe
- - - Conducta proiectata spre inlocuire/ Designed pipe to be replaced

- Inlocuirea conductei dn 250 L=115m/ Pipe replacement DN 250 L=115m
- Inlocuirea conductei dn 500 L=445m/ Pipe replacement DN 500 L=445m
- Inlocuirea conductei dn 300 L=120m/ Pipe replacement DN 300 L=120m
- Inlocuirea conductei dn 200 L=60m/ Pipe replacement DN 200 L=60m



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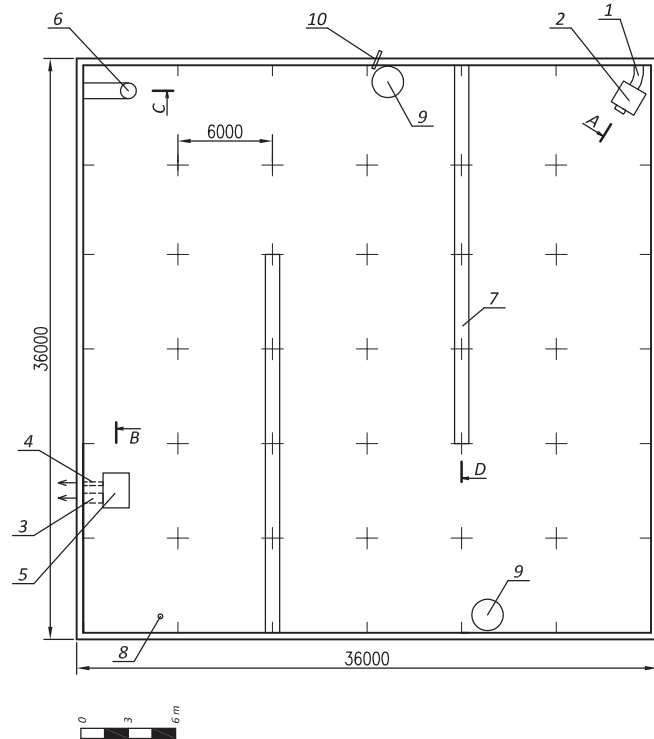
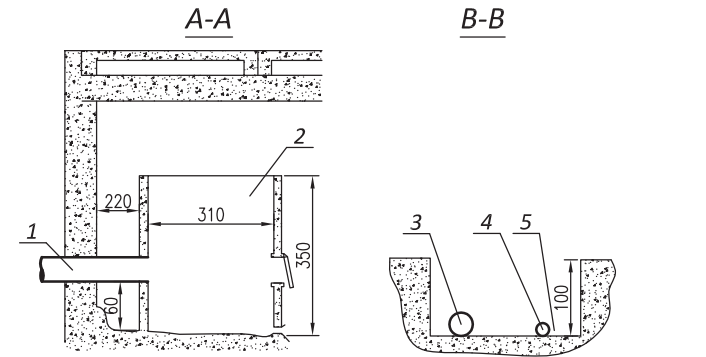
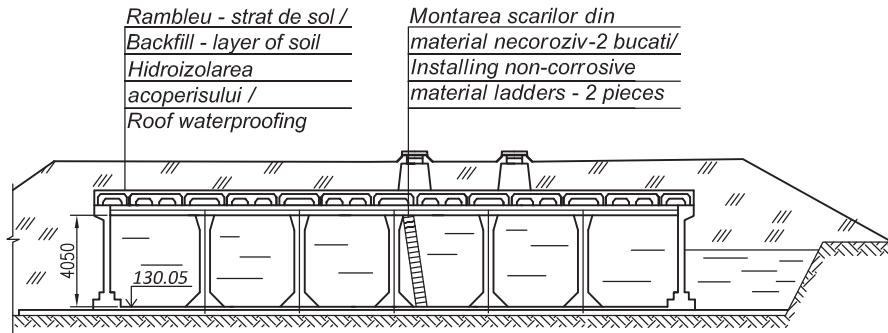
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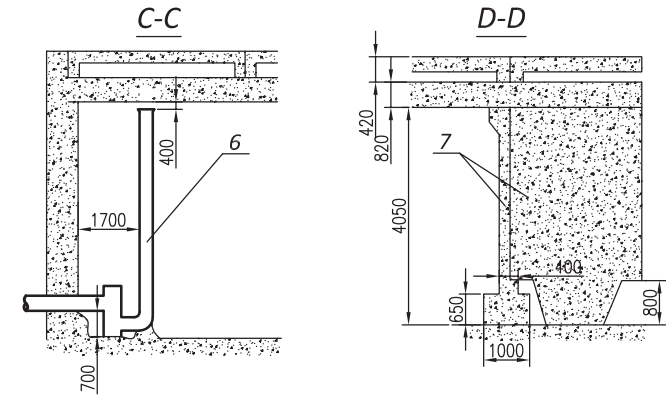
in association with

Date	Rev.	Reabilitarea armaturilor si conductelor S.P. Tohatin/ Pipes and fittings rehabilitation Tohatin P.S.
DATE	REV.	

Reabilitarea rezervorului nr.1 V=6000m³ S.P. Valea Dicescu/ Tank nr.1 rehabilitation V=6000m³ Valea Dicescu P.S.



1. Conducta de aductiune Ø500/
Inlet pipe Ø500
2. Camera de aductiune 310x150cm/
Inlet room 310x150cm
3. Conducta de aspiratie Ø500mm/
Suction pipe Ø500mm
4. Conducta de canalizare Ø200mm/
Sewerage pipe Ø200mm
5. Groapa de descarcare 180x100mm/
Discharge pit 180x100mm
6. Conducta de preaplin Ø400/
Overflow pipe Ø400
7. Coloana cu planseu / Column with slab
8. Indicator de nivel/ Level indicator
9. Gura de acces/ Manhole cover
10. Conductă cu clor Ø50mm /
The pipe with chlorine Ø50mm



Details and hydraulics are not to scale



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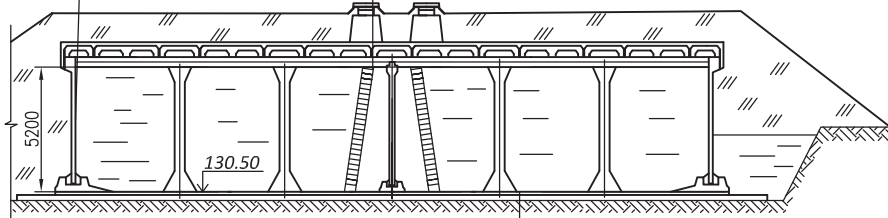
Date	Rev.	Reabilitarea rezervorului nr.1 V=6000m ³ S.P. Valea Dicescu/ Tank nr.1 rehabilitation V=6000m ³ Valea Dicescu P.S.
DATE	REV.	

Graphical scale R-27

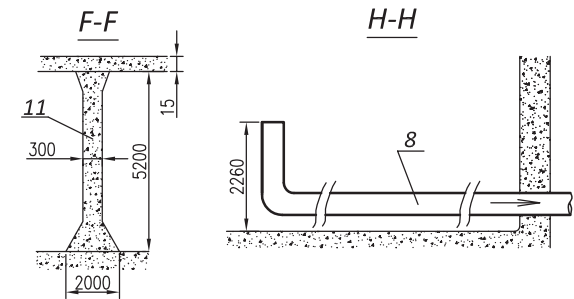
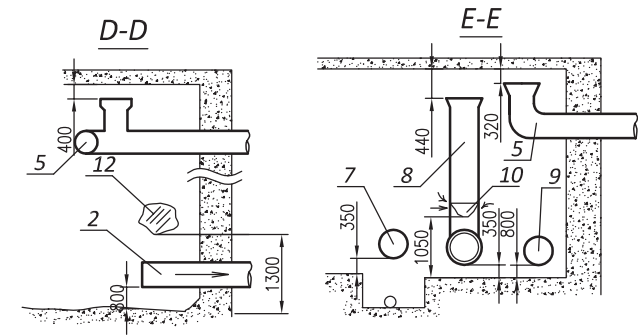
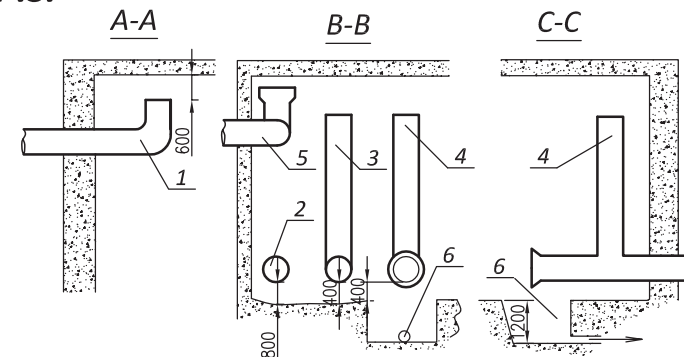
Reabilitarea rezervorului nr.2 V=3000m³ S.P. Valea Dicescu/ Tank nr.2 rehabilitation V=3000m³ Valea Dicescu P.S.

Torcretarea peretilor 1500m² /
Spraying of the walls 1500m²

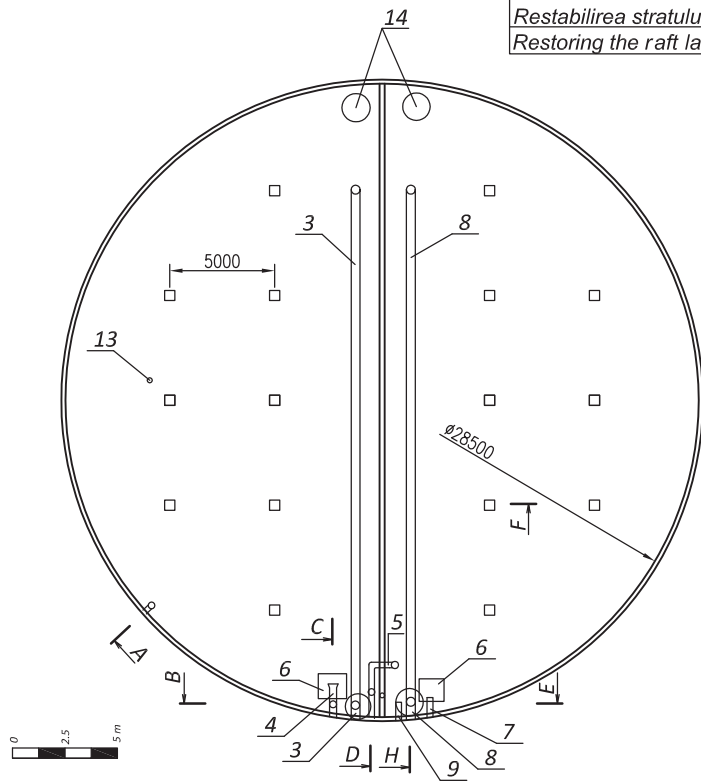
Montarea scarilor din
material necoroziv-2 bucati/
Installing non-corrosive
material ladders - 2 pieces



Restabilirea stratului radier a pardoselei rezervorului/
Restoring the raft layer of tank floor



1. Conducta de aductiune Ø600/ Inlet pipe Ø600
 2. Conducta de aspiratie Ø250mm/ Suction pipe Ø250mm
 3. Conducta de aspiratie Ø250mm/ Suction pipe Ø250mm
 4. Conducta de aspiratie Ø250mm/ Suction pipe Ø250mm
 5. Conducta de preaplin Ø250/ Overflow pipe Ø250
 6. Conducta de analizare Ø100;Ø80mm; groapa de descarcare 180x100cm/ Sewerage pipe Ø100mm;Ø80mm; discharge pit 180x100cm
 7. Conducta de aspiratie Ø250mm/ Suction pipe Ø250mm
 8. Conducta de aspiratie Ø250mm/ Suction pipe Ø250mm
 9. Conducta de aspiratie Ø200mm/ Suction pipe Ø200mm
 10. Orificiu de aspiratie/ Suction opening
 11. Coloana/ Column
 12. Orificiu de comunicare între rezervoare Ø300/
Communication opening between tanks Ø300
 13. Indicator de nivel/ Level indicator
 14. Gura de acces/ Manhole cover
- * Conductă cu clor Ø50mm iese in prima parte a rezervorului la aspiratie / The pipe with chlorine Ø 50mm comes in the first part of the tank on suction



Details and hydraulics are not to scale



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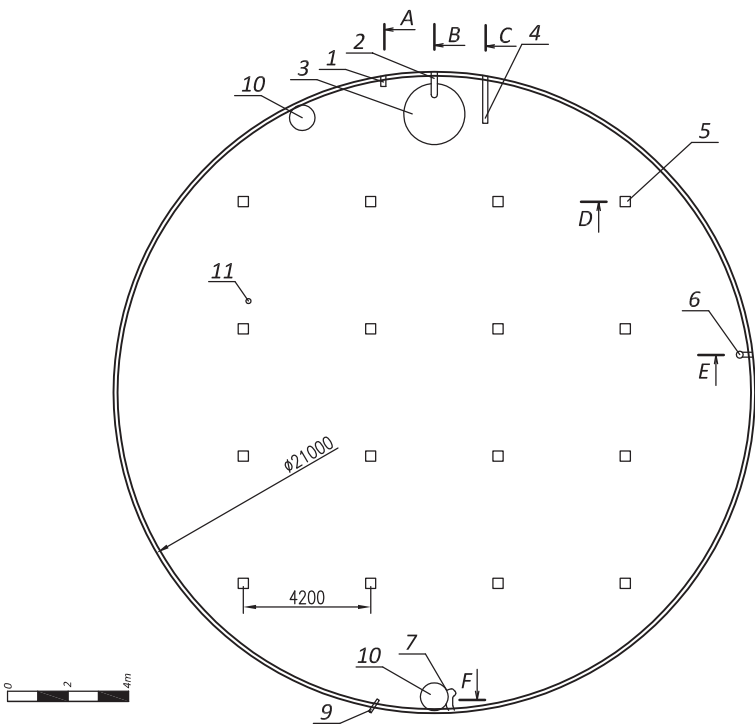
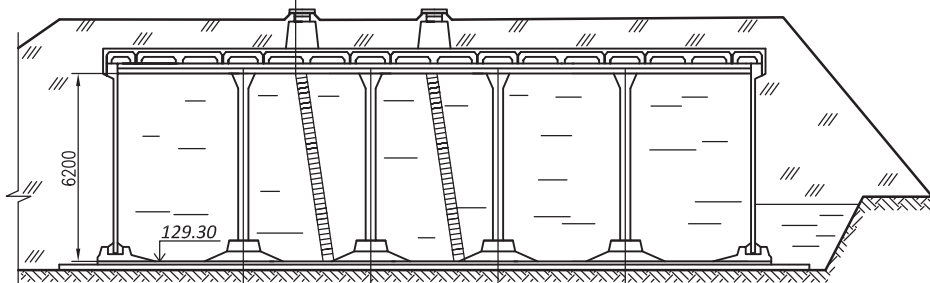


Date	Rev.	Reabilitarea rezervorului nr.2 V=3000m ³ S.P. Valea Dicescu/ Tank nr.2 rehabilitation V=3000m ³ Valea Dicescu P.S.
DATE	REV.	

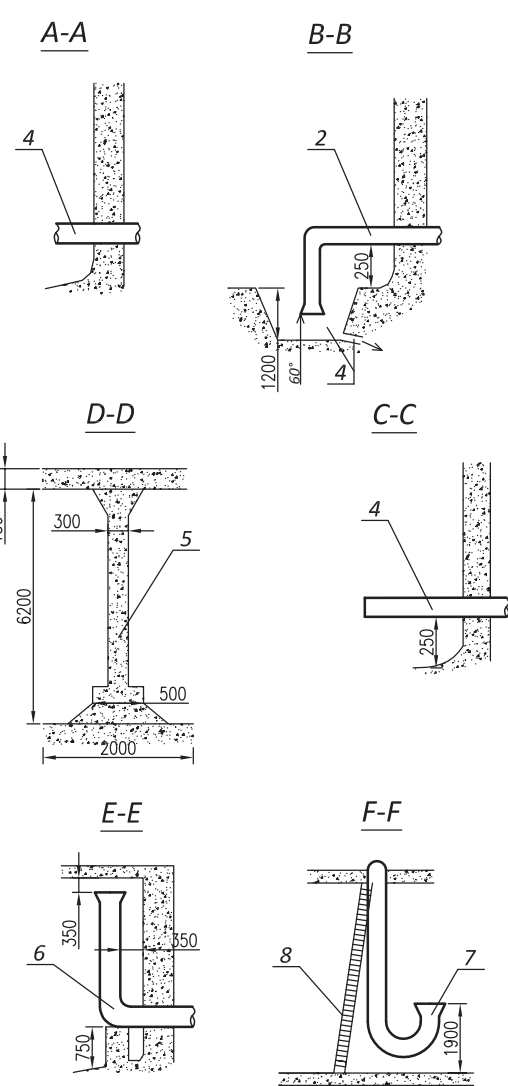
Graphical scale

Reabilitarea rezervorului nr.3 V=2000m³ S.P. Valea Dicescu/ Tank nr.3 rehabilitation V=2000m³ Valea Dicescu P.S.

Montarea scarilor din material necoroziv-2 bucati/
Installing non-corrosive material ladders - 2 pieces



1. Conducta de aspiratie Ø200mm/
Suction pipe Ø200mm
2. Conducta de aspiratie Ø300mm/
Suction pipe Ø300mm
3. Conducta de canalizare Ø150mm, groapa
de descarcare Ø230mm/ Sewerage pipe
Ø150mm, discharge pit Ø230mm
4. Conducta de aspiratie Ø300mm/
Suction pipe Ø300mm
5. Coloana/ Column
6. Conducta de preaplin Ø300/
Overflow pipe Ø300
7. Conducta de aductiune Ø500/
Inlet pipe Ø500
8. Scară / Ladder
9. Conductă cu clor /
The pipe with chlorine
10. Gura de acces/ Manhole cover
11. Indicator de nivel/ Level indicator



Details and hydraulics are not to scale



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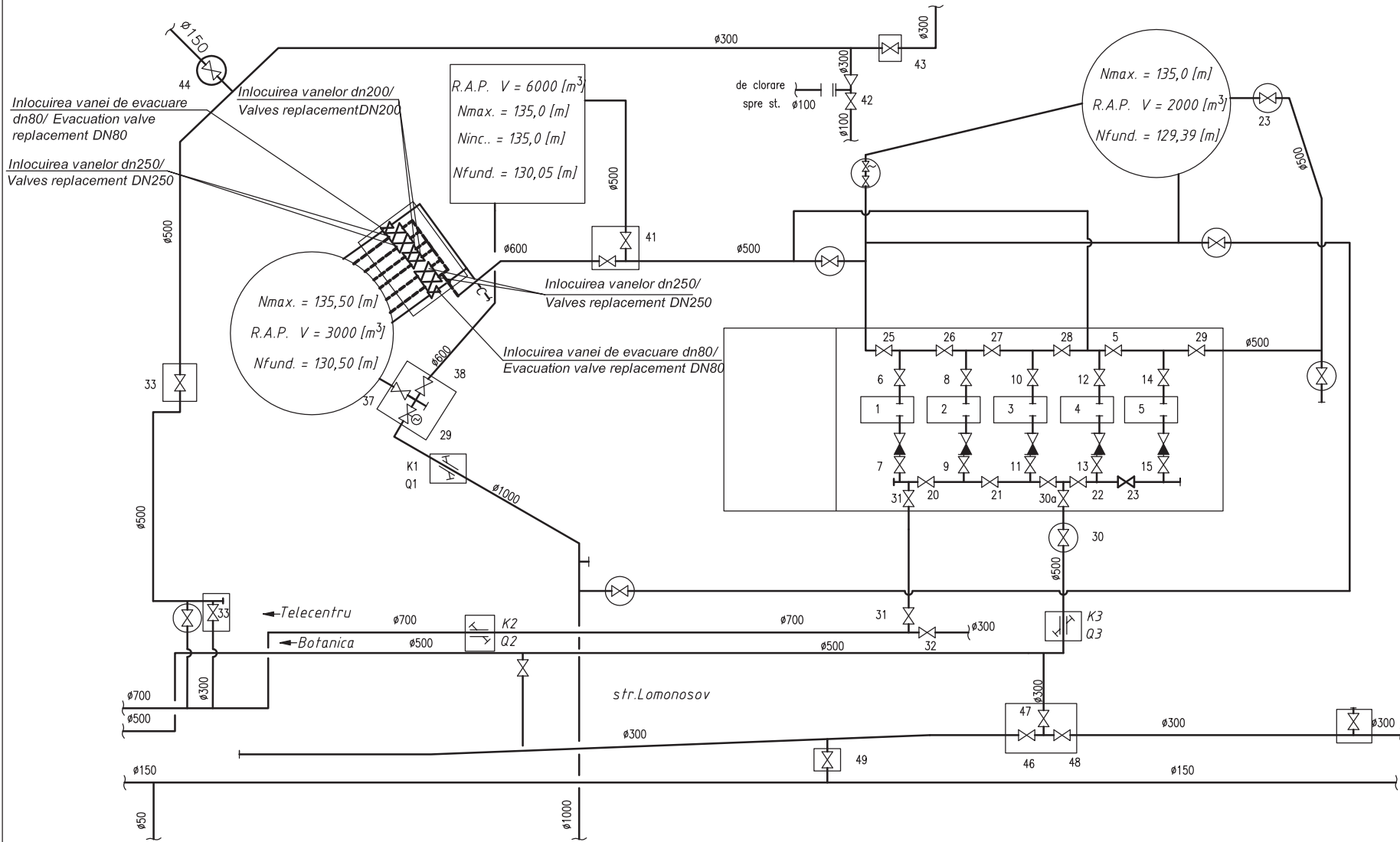


Date	Rev.
DATE	REV.

Reabilitarea rezervorului nr.3
V=2000m³ S.P. Valea Dicescu/
Tank nr.3 rehabilitation
V=2000m³ Valea Dicescu P.S.

Graphical scale R-29

Reabilitarea armaturilor si conductelor S.P. Valea Dicescu/ Pipes and fittings rehabilitation Valea Dicescu P.S.



— Conducta existenta/ Existing pipe
 - - - Conducta proiectata spre inlocuire/
 Designed pipe to be replaced

-Inlocuirea nodului din camera de aspiratie dn500 L=12m; dn250 L=40m; dn200 L=10m/
 Replacing the pipes of the node in the suction chamber DN500 L=12m; DN250 L=40m; DN200 L=10m.



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Date	Rev.
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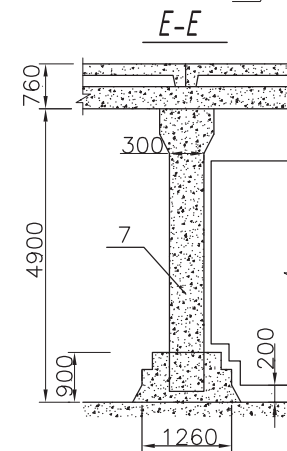
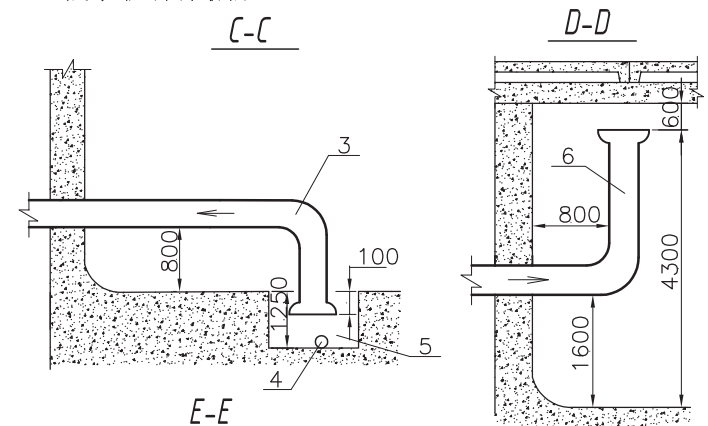
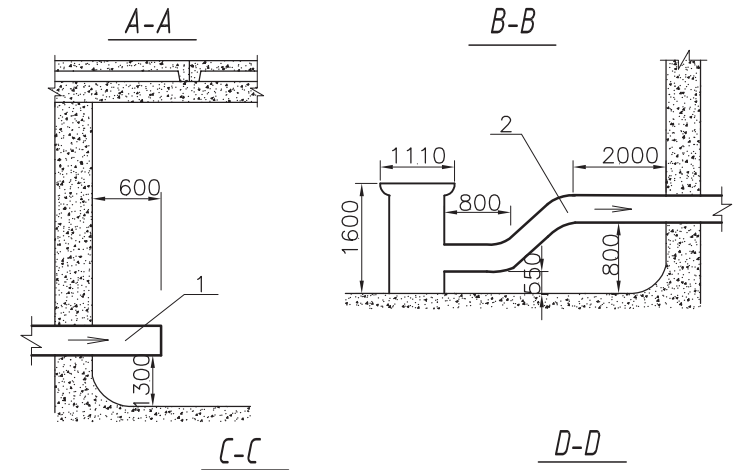
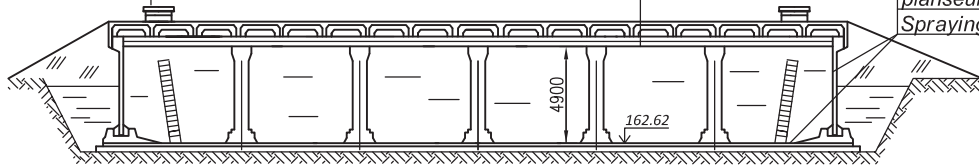
Reabilitarea armaturilor si conductelor
 S.P. Valea Dicescu/
 Pipes and fittings rehabilitation
 Valea Dicescu P.S.

Reabilitarea rezervorului nr.1 V=5000m³ Statia de Tratare a Apei/ Tank nr.1 rehabilitation V=5000m³ Water Treatment Plant

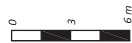
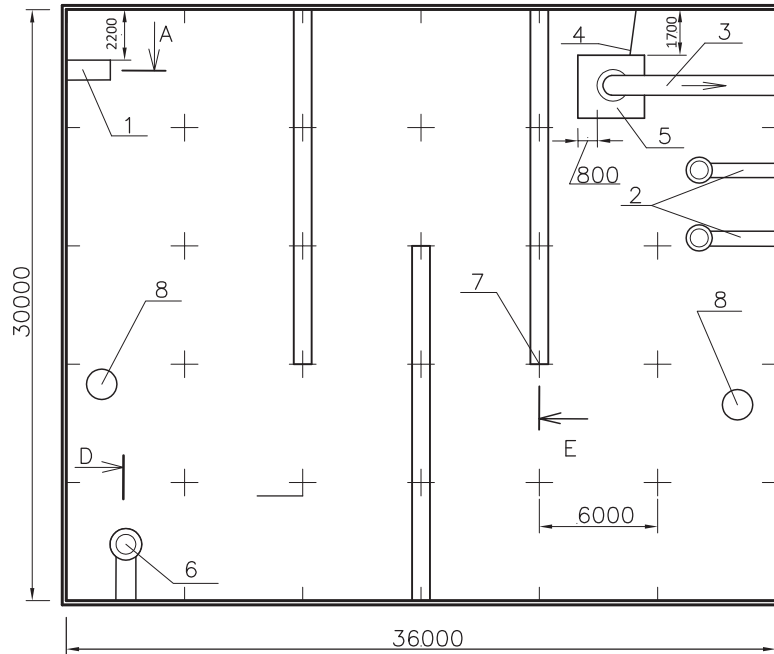
Reparatia fixarilor capacelor de acces/
Repair works of the manholes covers fixtures
Montarea scarilor din material necoroziv-2 bucati/
Installing non-corrosive material ladders - 2 pieces

Hidroizolarea acoperisului/ Water insulation of the roof
Acoperirea armaturilor dezgolite in tavan/
Covering the bare reinforcements on the ceiling

Torcretarea peretilor si
planseului/
Spraying of walls and floor



1. Conducta de aductiune Ø700/
Inlet pipe Ø700
2. Conducta de aspiratie Ø500mm/
Suction pipe Ø500mm
3. Conducta de aspiratie Ø1200mm/
Suction pipe Ø1200mm
4. Conducta de canalizare Ø300mm/
Sewerage pipe Ø300mm
5. Groapa de descarcare 330x330cm/
Discharge pit 330x330cm
6. Conducta de preaplin Ø700/
Overflow pipe Ø700
7. Coloana/ Column
8. Gura de acces/ Manhole cover



Details and hydraulics are not to scale



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Reabilitarea rezervorului nr.1
V=5000m³ Statia de Tratare a Apei/
Tank nr.1 rehabilitation
V=5000m³ Water Treatment Plant

Graphical scale

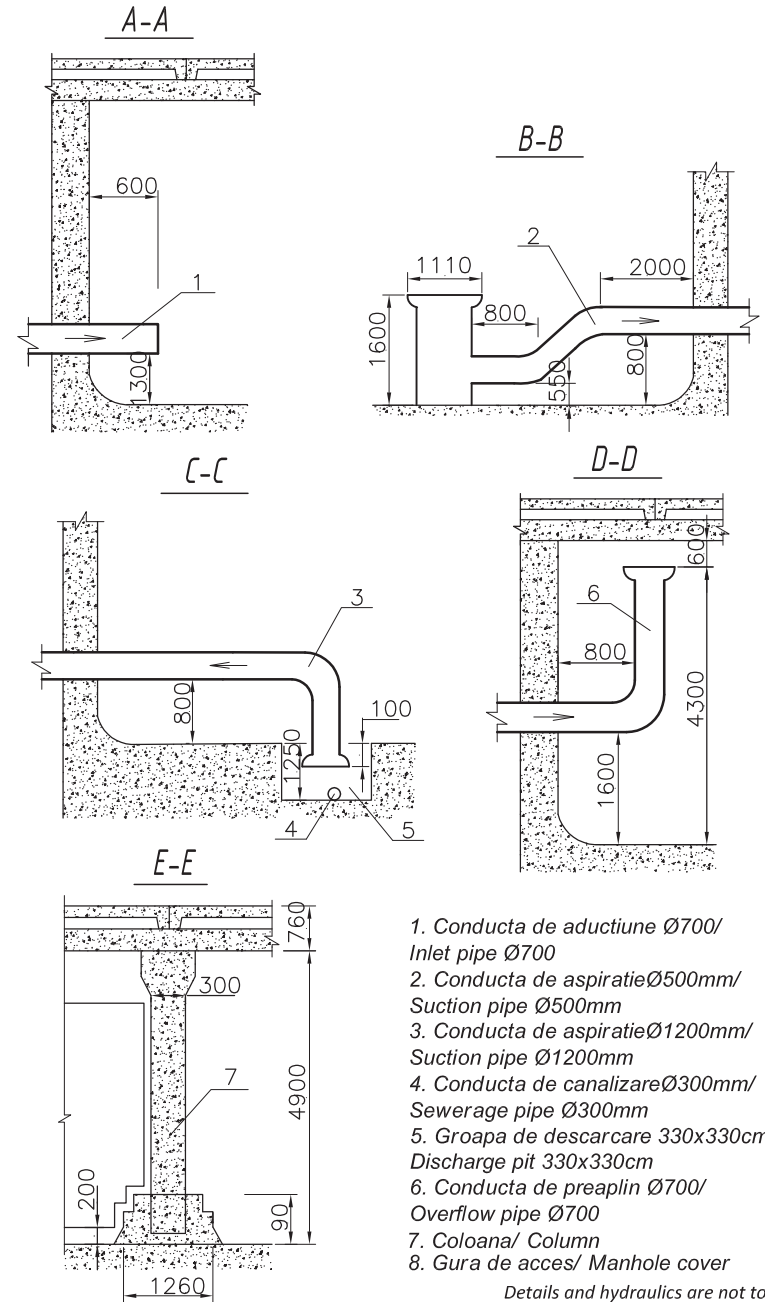
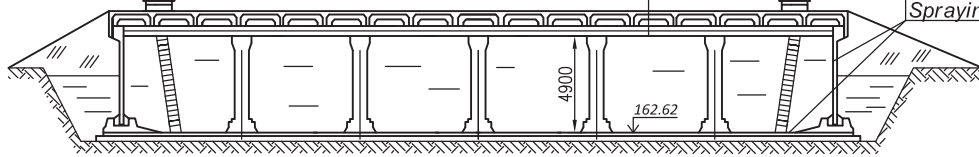
R-31

Reabilitarea rezervorului nr.2 V=5000m³ Statia de Tratare a Apei/ Tank nr.2 rehabilitation V=5000m³ Water Treatment Plant

Reparatia fixarilor capacelor de acces/
Repair works of the manholes covers fixtures
Montarea scarilor din material necoroziv-2 bucati/
Installing non-corrosive material ladders - 2 pieces

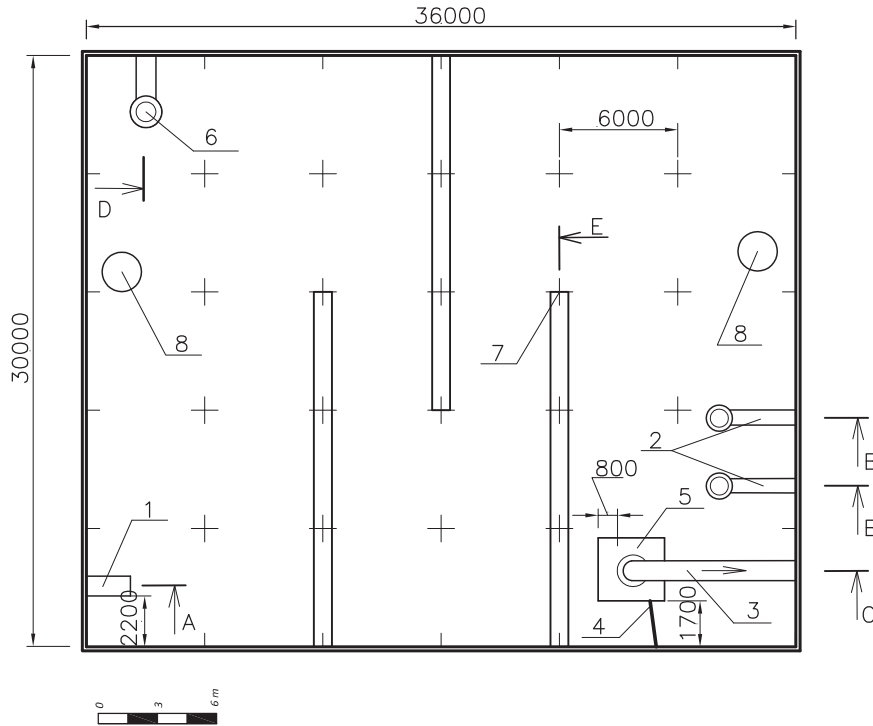
Acoperirea armaturilor dezgolite in tavan/
Covering the bare reinforcements on the ceiling

Torcretarea peretilor si
planseului/
Spraying of walls and floor



1. Conducta de aductiune Ø700/
Inlet pipe Ø700
2. Conducta de aspiratie Ø500mm/
Suction pipe Ø500mm
3. Conducta de aspiratie Ø1200mm/
Suction pipe Ø1200mm
4. Conducta de canalizare Ø300mm/
Sewerage pipe Ø300mm
5. Groapa de descarcare 330x330cm/
Discharge pit 330x330cm
6. Conducta de preaplin Ø700/
Overflow pipe Ø700
7. Coloana/ Column
8. Gura de acces/ Manhole cover

Details and hydraulics are not to scale



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- FEASIBILITY STUDY



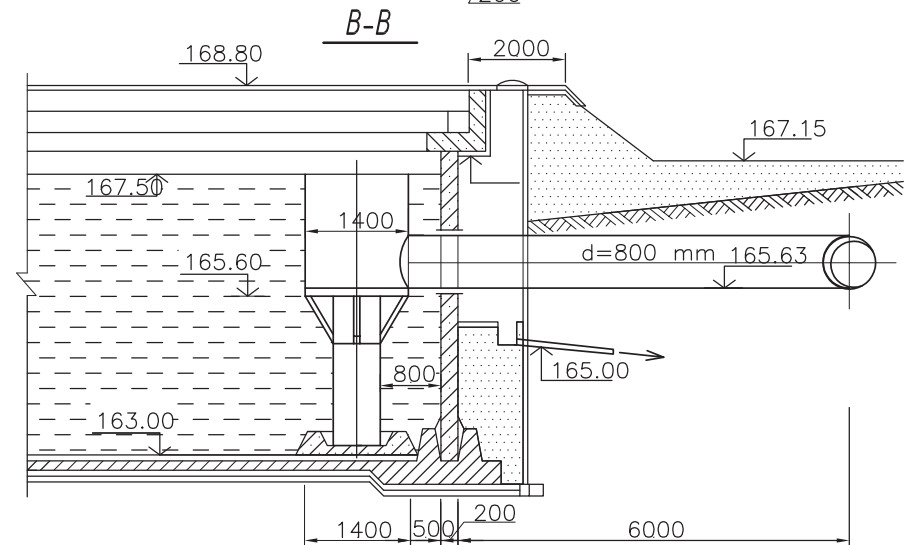
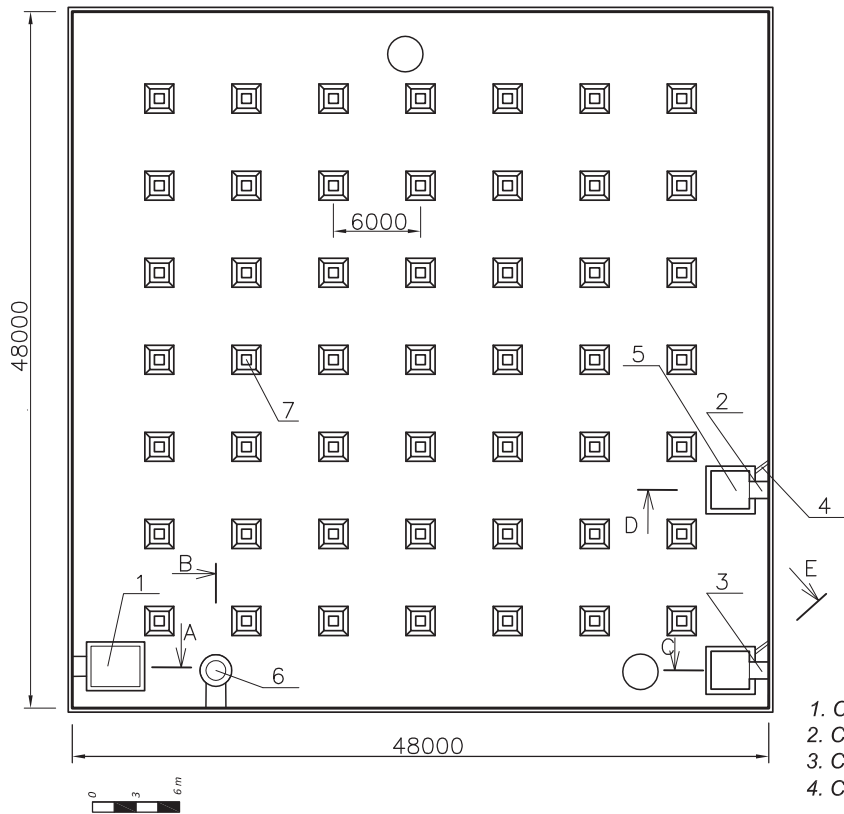
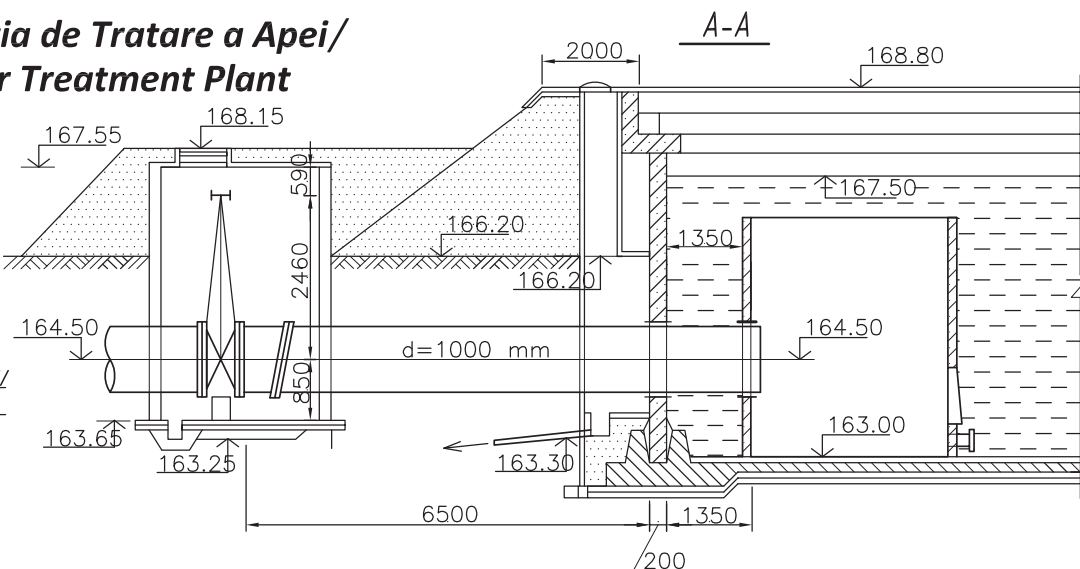
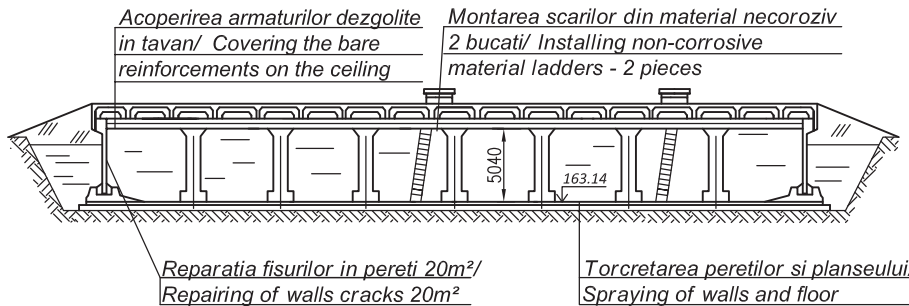
Date	Rev.
DATE	REV.

Reabilitarea rezervorului nr.2
V=5000m³ Statia de Tratare a Apei/
Tank nr.2 rehabilitation
V=5000m³ Water Treatment Plant

Graphical scale

R-32

Reabilitarea rezervorului nr.3 V=10000m³ Statia de Tratare a Apei/ Tank nr.3 rehabilitation V=10000m³ Water Treatment Plant

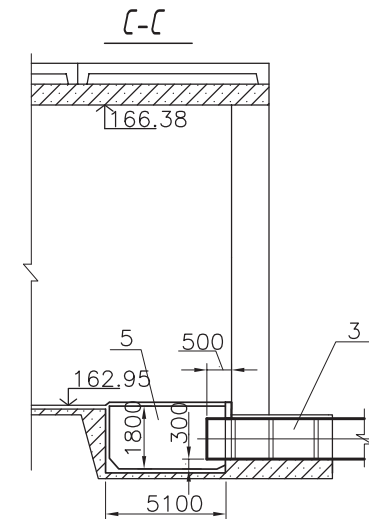
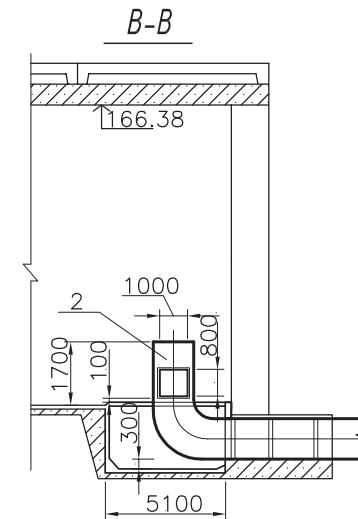
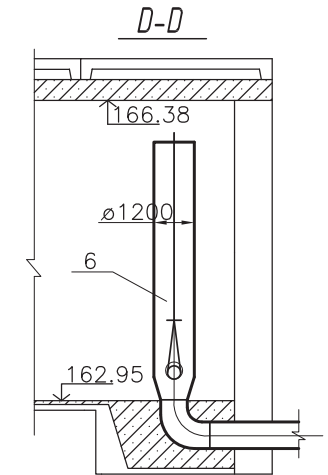
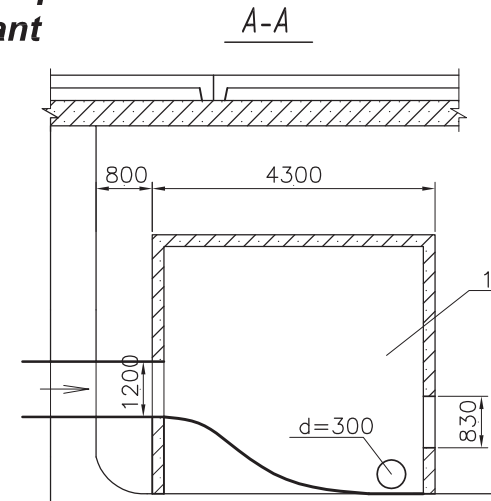
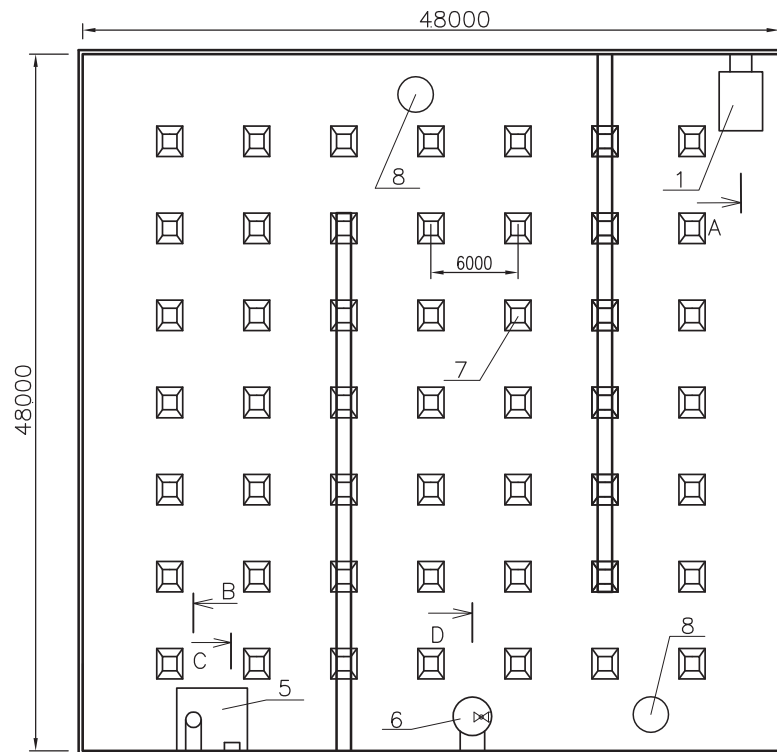
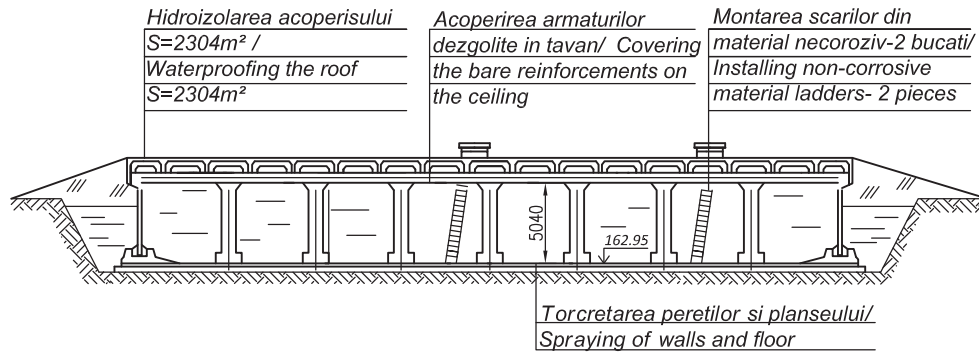


1. Camera de aductiune / Inlet room
2. Conducta de aspiratie Ø1000mm/ Suction pipe Ø1000mm
3. Conducta de aspiratie Ø1200mm/ Suction pipe Ø1200mm
4. Conducta de canalizare Ø300mm/ Sewerage pipe Ø300mm
5. Groapa de descarcare 300x300cm/ Discharge pit 300x300cm
6. Conducta de preaplin Ø700mm/ Overflow pipe Ø700mm
7. Coloana din beton armat/ Reinforced concrete column

Details and hydraulics are not to scale

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					<p>Graphical scale</p>	<p>R-33</p>	

Reabilitarea rezervorului nr.4 V=10000m³ Statia de Tratare a Apei/ Tank nr.4 rehabilitation V=10000m³ Water Treatment Plant



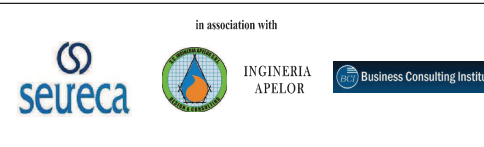
1. Camera de aductiune 430x140/ Inlet room 430x140
2. Conducta de aspiratie Ø1200mm/ Suction pipe Ø1200mm
3. Conducta de aspiratie Ø1200mm/ Suction pipe Ø1200mm
4. Conducta de canalizare Ø300mm/ Sewerage pipe Ø300mm
5. Groapa de descarcare 520x510cm/ Discharge pit 520x510cm

6. Conducta de preaplin Ø1200mm/ Overflow pipe Ø1200mm
7. Coloana/ Column
8. Gura de acces/ Manhole cover

Details and hydraulics are not to scale



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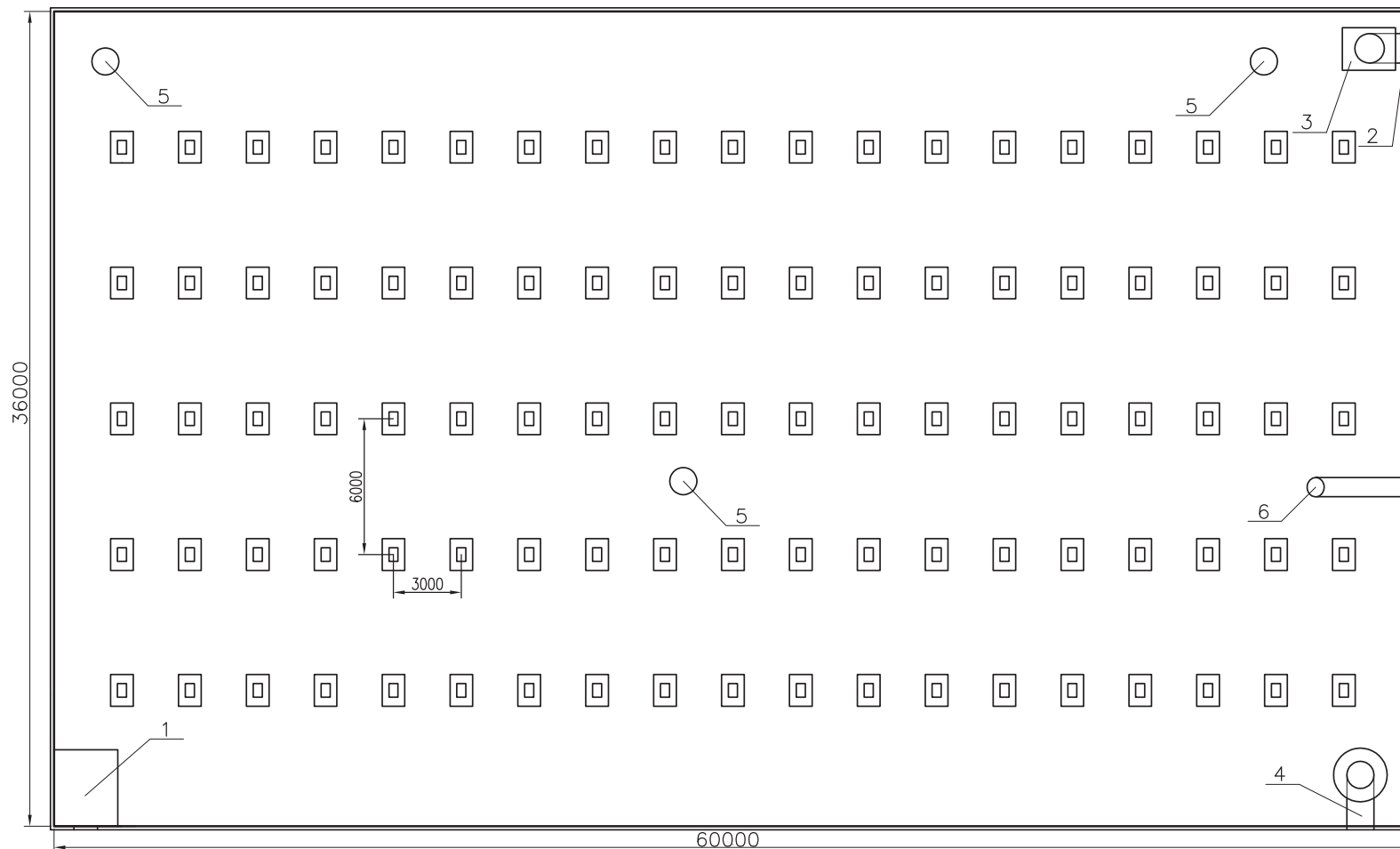
Date	Rev.
DATE	REV.

Reabilitarea rezervorului nr.4
V=10000m³ Statia de Tratare a Apei/
Tank nr.4 rehabilitation
V=10000m³ Water Treatment Plant

Graphical scale

R-34

Reabilitarea rezervorului nr.5 $V=10000m^3$ Statia de Tratare a Apei - situatia existenta/
 Drinking water tank Nr.5 $V=10000m^3$ Water Treatment Plant - the existing situation



1. Camera de aduciune/ Inlet room
2. Conducta de aspiratie $\varnothing 1000mm$ / Suction pipe $\varnothing 1000mm$
3. Groapa de descarcare $330 \times 330cm$ / Discharge pit $330 \times 330cm$
4. Conducta de preaplin $\varnothing 700mm$ / Overflow pipe $\varnothing 700mm$
5. Gura de acces/ Manhole cover
6. Conducta de canalizare $\varnothing 300mm$ / Sewerage pipe $\varnothing 300mm$



Details and hydraulics are not to scale



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Date	Rev.
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Reabilitarea rezervorului nr.5,
 $V=10000m^3$ Statia de Tratare a Apei -
 situatia existenta/
 Drinking water tank Nr.5,
 $V=10000m^3$ Water Treatment Plant-
 the existing situation

Graphical scale

R-35

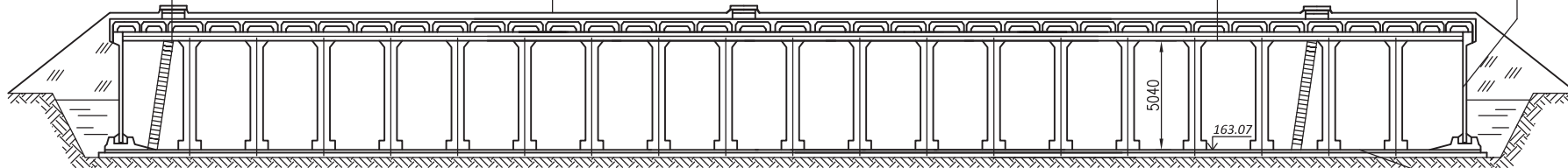
Rezervor de apa potabila nr.5 **Statia de Tratare a Apei - masuri de reabilitare/Drinking water tank Nr.5 V=10000m³Water Treatment Plant - rehabilitation actions**

Montarea scarilor din material necoroziv-2 bucati/ Installing non-corrosive material ladders-2 pieces

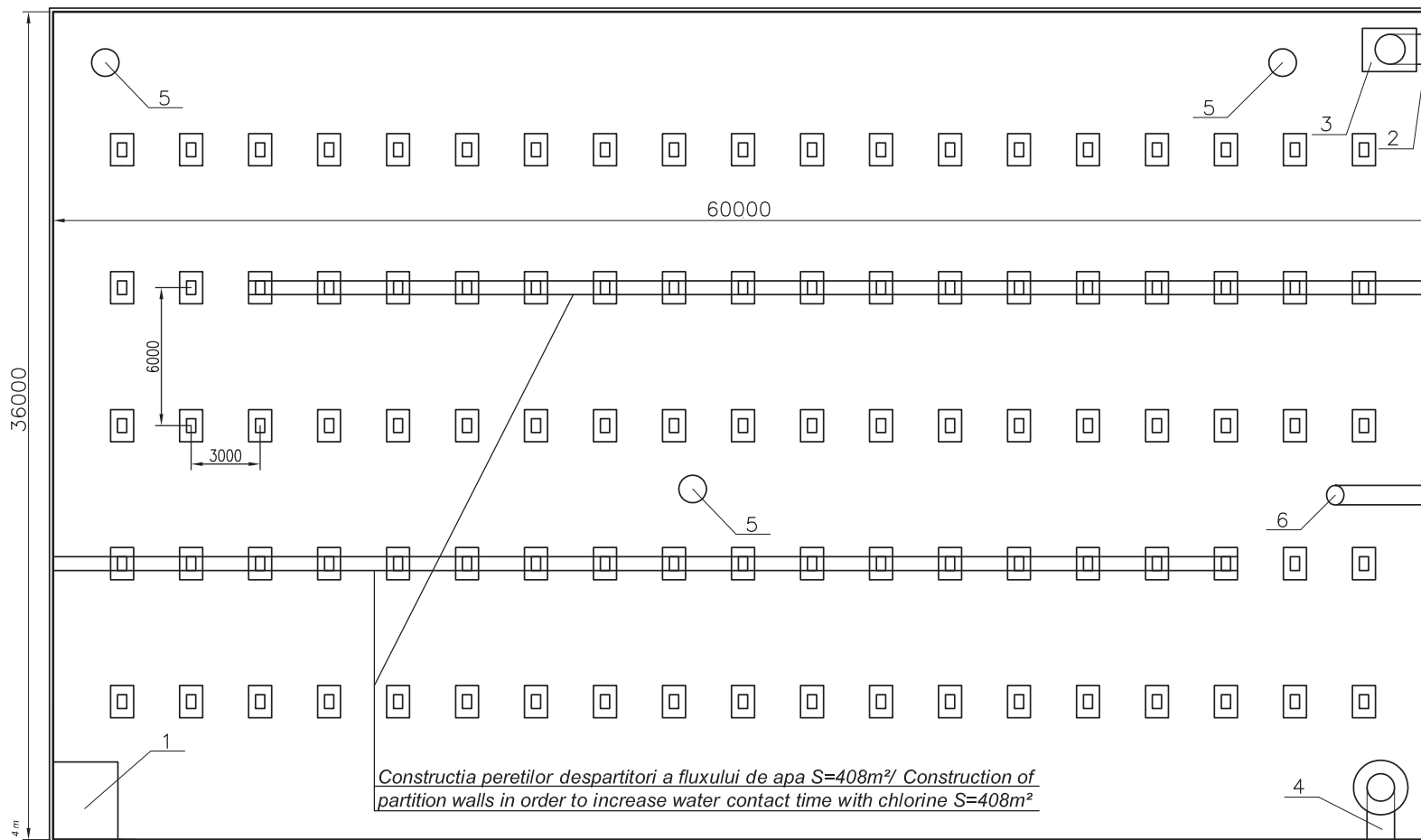
Lucrari de etansare a acoperisului S=2160m²/ Roof insulation works S=2160m². Lucrari de expertiza privind rezistenta, inlocuirea acoperisului/ Expertise on resistance, replacement of the roof

Acoperirea armaturilor dezgolite in tavan/ Covering the bare reinforcements on the ceiling

Torcretarea peretilor S=3231m²/ Spraying of walls S=3231m²



Lucrari de egalizare a pantei fundului, lichidarea fisurilor in fundul rezervorului S=2304m²/ Works to equalize the bottom slope, cracks settlement in the bottom of the tank S=2304m²



Construcția peretilor despartitori a fluxului de apa S=408m²/ Construction of partition walls in order to increase water contact time with chlorine S=408m²

Details and hydraulics are not to scale



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CHISINAU WATER SUPPLY & SEWAGE TREATMENT
- FEASIBILITY STUDY



INGINERIA APELOR



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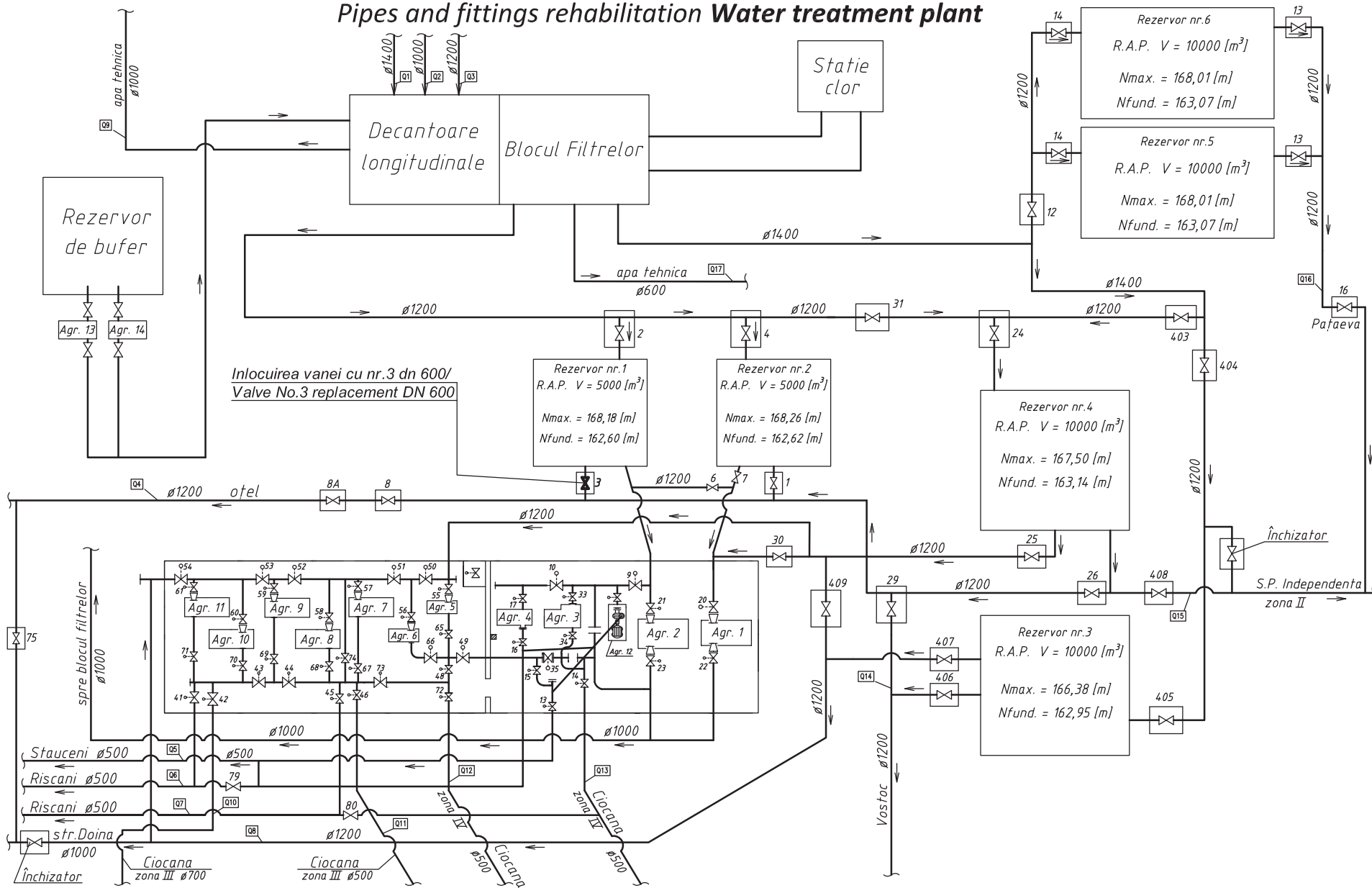
Date	Rev.
DATE	REV.

Rezervor de apa potabila nr.5
V=10000m³ Statia de Tratare a Apei -
masuri de reabilitare/
Drinking water tank Nr.5
V=10000m³ Water Treatment Plant -
rehabilitation actions

Graphical scale

R-36

Reabilitarea armaturilor si conductelor Statia de tratare a apei/ Pipes and fittings rehabilitation Water treatment plant



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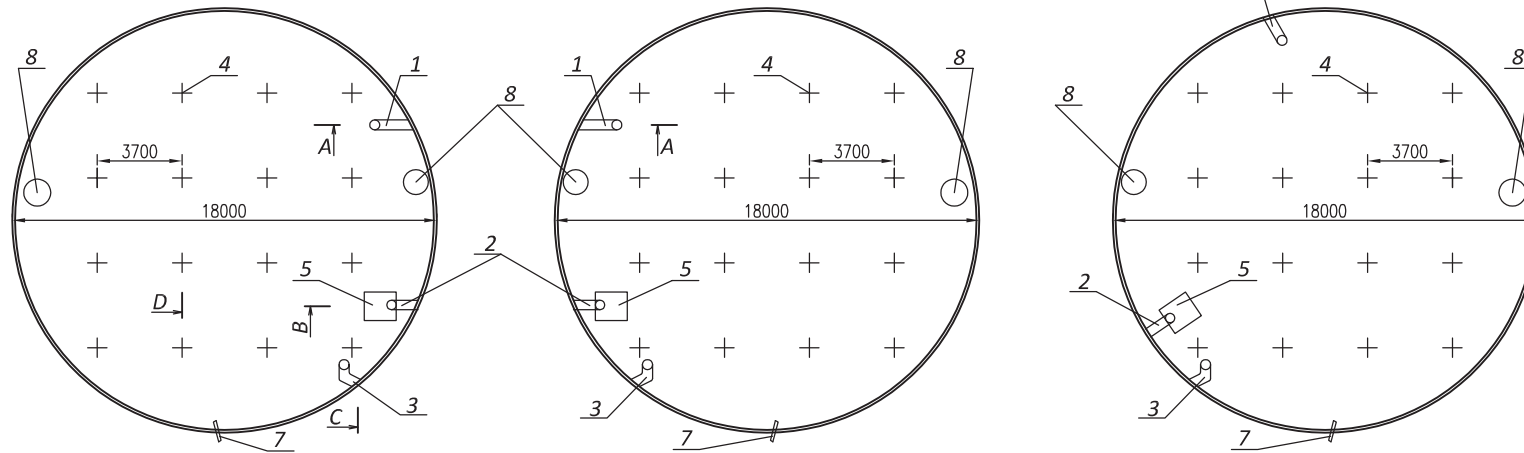
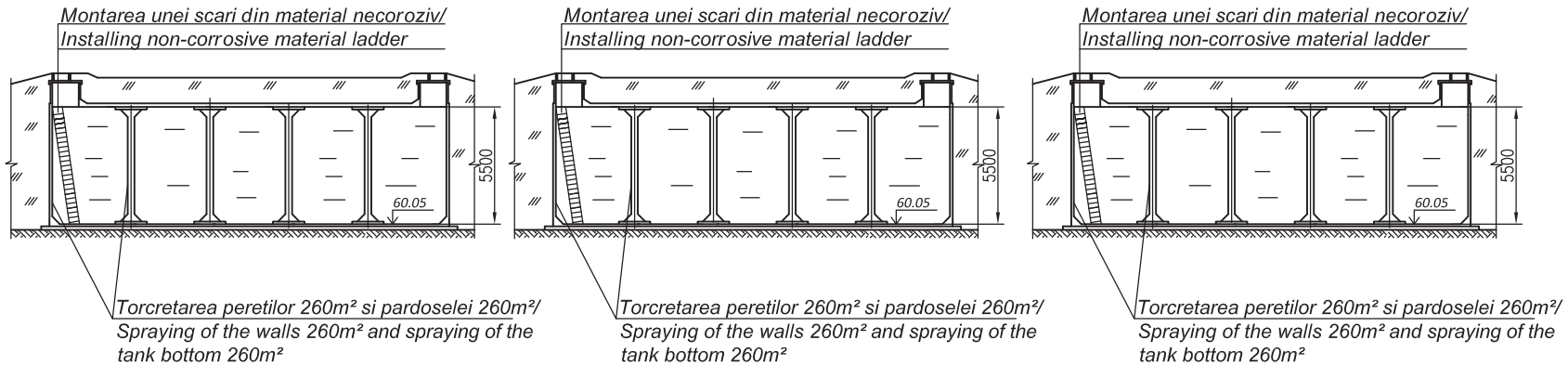


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Date	Rev.
DATE	REV.

Reabilitarea armaturilor si conductelor
Statia de tratare a apei/
Pipes and fittings rehabilitation
Water treatment plant

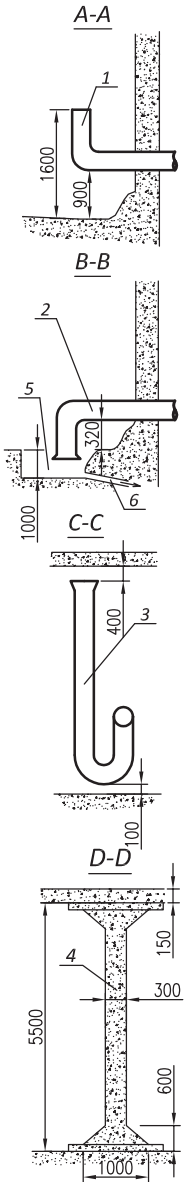
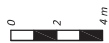
Reabilitarea rezervoarelor nr.1, nr.2 si nr.3 V=1000m³ S.T.A. Nistru treapta II/ Tanks nr.1, nr.2 & nr.3 rehabilitation V=1000m³ Nistru treapta II W.T.P.



- 1. Conducta de aductiune Ø500mm/
Inlet pipe Ø500mm
- 2. Conducta de aspiratie Ø600mm/
Suction pipe Ø600mm
- 3. Conducta de preaplin Ø500/
Overflow pipe Ø500

- 4. Coloana/ Column
- 5. Groapa de descarcare 160x108cm/
Discharge pit 160x108cm
- 6. Conducta de canalizare Ø150mm/
Sewerage pipe Ø150mm

- 7. Conductă cu clor Ø13mm /
The pipe with chlorine Ø13mm
- 8. Gura de acces/
Manhole cover
- 9. Indicator de nivel/ Level indicator



Details and hydraulics are not to scale



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Date	Rev.
DATE	REV.

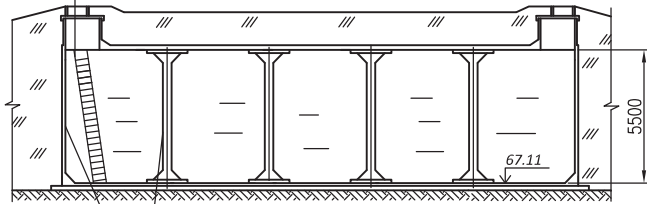
Reabilitarea rezervoarelor nr.1, nr.2 si nr.3
V=1000m³ S.T.A. Nistru treapta II/
Tanks nr.1, nr.2 & nr.3 rehabilitation
V=1000m³ W.T.P. Nistru treapta II

Graphical scale

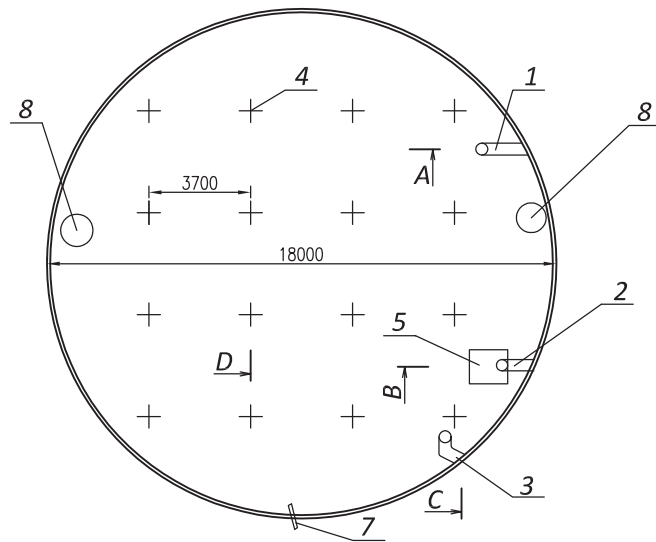
R-38

Reabilitarea rezervorului V=1000m³ S.T.A. Nistru treapta II/ Lower Tank rehabilitation V=1000m³ Nistru treapta II W.T.P.

Montarea unei scari din material necoroziv/
Installing non-corrosive material ladder

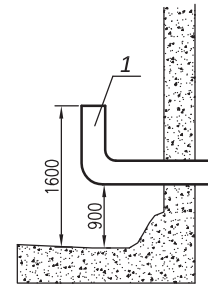


Torcretarea peretilor 260m²/
Spraying of the walls 260m²

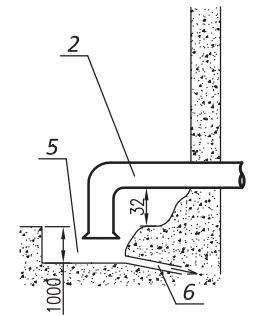


1. Conducta de aductiune Ø500mm/
Inlet pipe Ø500mm
2. Conducta de aspiratie Ø600mm/
Suction pipe Ø600mm
3. Conducta de preaplin Ø500/
Overflow pipe Ø500
4. Coloana/ Column
5. Groapa de descarcare 160x108cm/
Discharge pit 160x108cm
6. Conducta de canalizare Ø150mm/
Sewerage pipe Ø150mm
7. Conductă cu clor Ø13mm /
The pipe with chlorine Ø13mm
8. Gura de acces/ Manhole cover
9. Indicator de nivel/ Level indicator

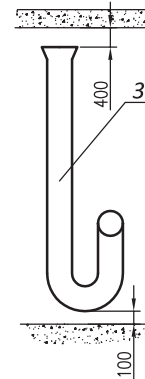
A-A



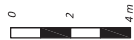
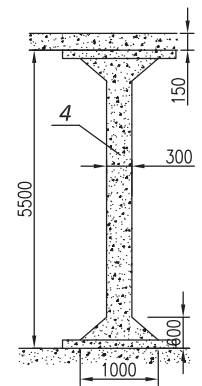
B-B



C-C



D-D



Details and hydraulics are not to scale



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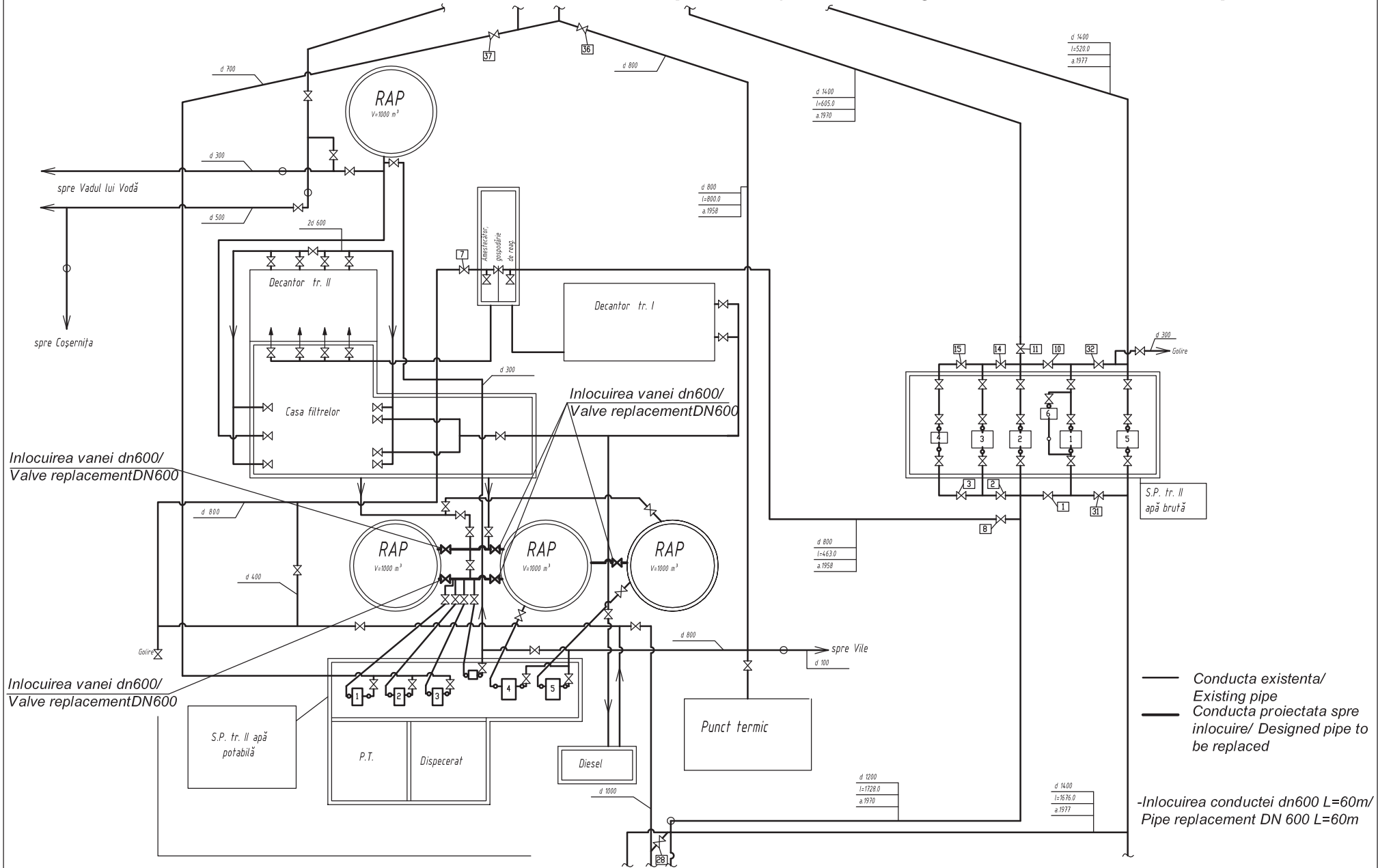
Date	Rev.
DATE	REV.

Reabilitarea rezervorului
V=1000m³ S.T.A. Nistru treapta II/
Lower Tank rehabilitation
V=1000m³ Nistru treapta II W.T.P.

Graphical scale

R-39

Reabilitarea armaturilor si conductelor S.T.A. Nistru treapta II / Pipes and fittings rehabilitation Nistru treapta II W.T.P.



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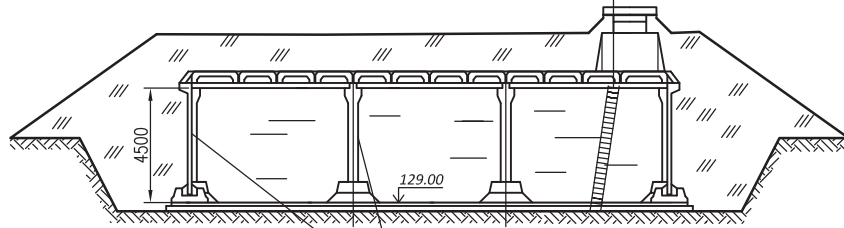
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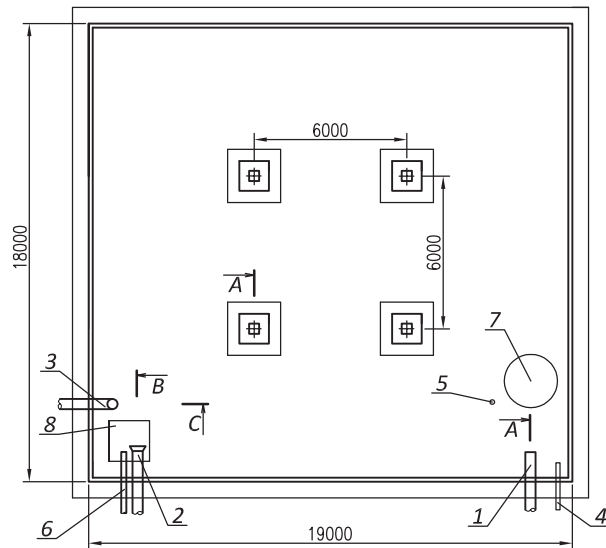
Date	Rev.	Reabilitarea armaturilor si conductelor S.T.A. Nistru treapta II / Pipes and fittings rehabilitation Nistru treapta II W.T.P.
DATE	REV.	

Reabilitarea rezervorului V=1500m³ S.T.A. Nistru treapta II A/ Upper tank rehabilitation V=1500m³ Nistru treapta II A W.T.P.

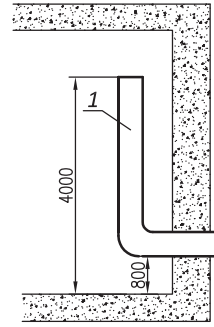
Montarea unei scari din material necoroziv/
Installing non-corrosive material ladder



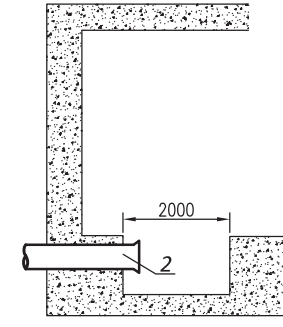
Torcretarea peretilor 260m²/
Spraying of the walls 260m²



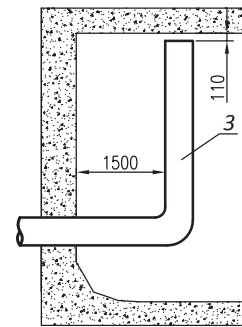
A-A



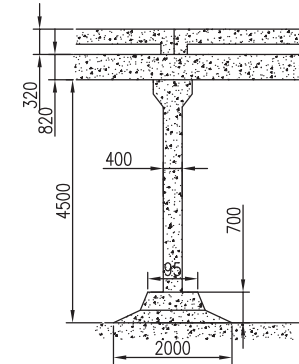
B-B



C-C



D-D



1. Conductă de aducțiune Ø500mm / Inlet pipe Ø500mm
2. Conductă de aspiratie Ø500mm / Suction pipe Ø500mm
3. Conductă de preaplin Ø400/ Overflow pipe Ø400

4. Conductă cu clor Ø50mm / The pipe with chlorine Ø50mm
5. Indicator de nivel / Level indicator
6. Conductă de canalizarea Ø150 / Sewerage pipe Ø150
7. Gura de acces/ Manhole cover
8. Groapa de descarcare / Discharge pit

Details and hydraulics are not to scale



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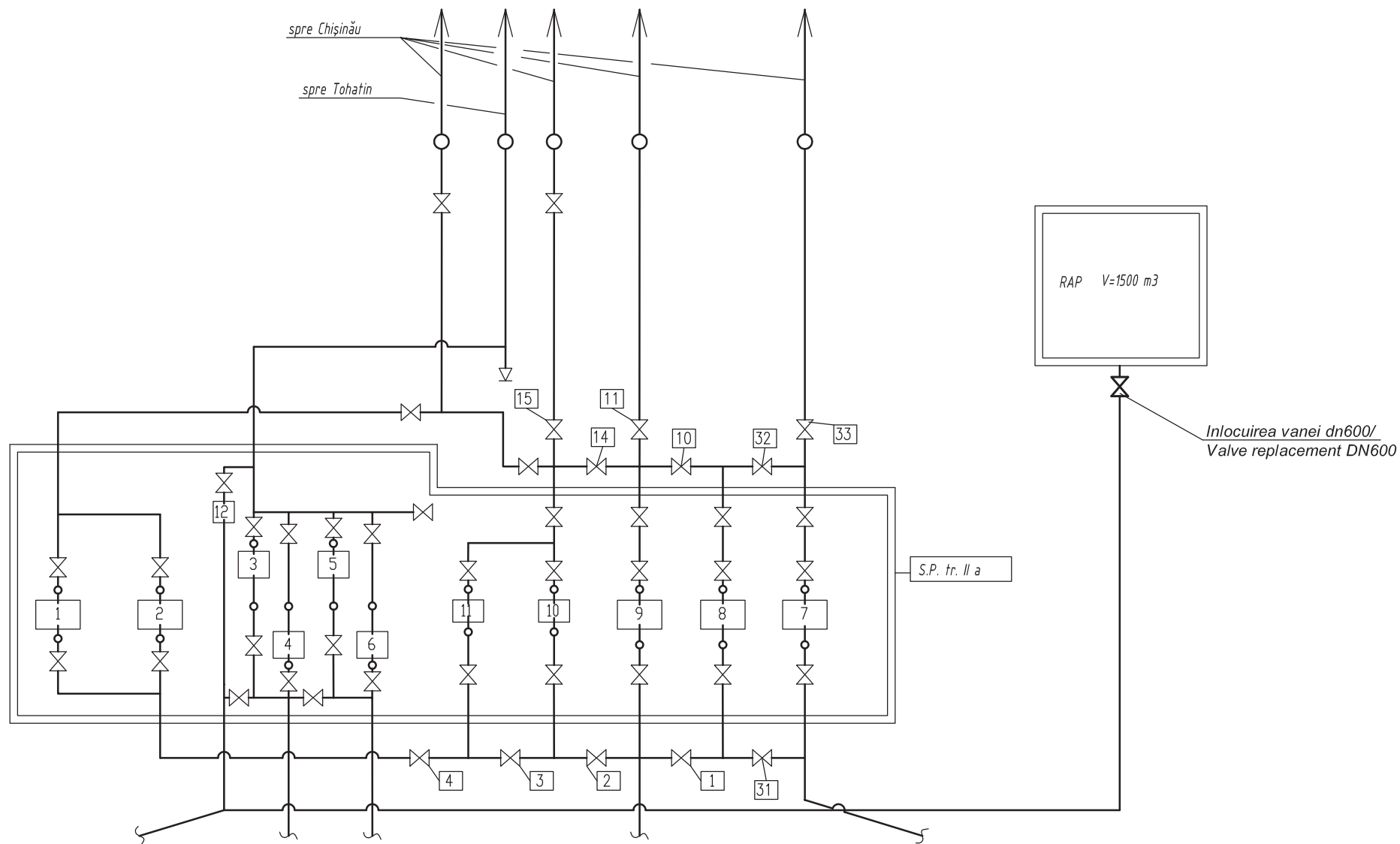
Date	Rev.
DATE	REV.

Reabilitarea rezervorului
V=1500m³ S.T.A. Nistru treapta II A/
Upper tank rehabilitation
V=1500m³ Nistru treapta II A W.T.P.

Graphical scale

R-41

Reabilitarea armaturilor si conductelor **S.T.A. Nistru treapta II A** / Pipes and fittings rehabilitation **Nistru treapta II A W.T.P.**



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Date	Rev.
DATE	REV.

Reabilitarea armaturilor si conductelor
S.T.A. Nistru treapta II A /
Pipes and fittings rehabilitation
Nistru treapta II A W.T.P.