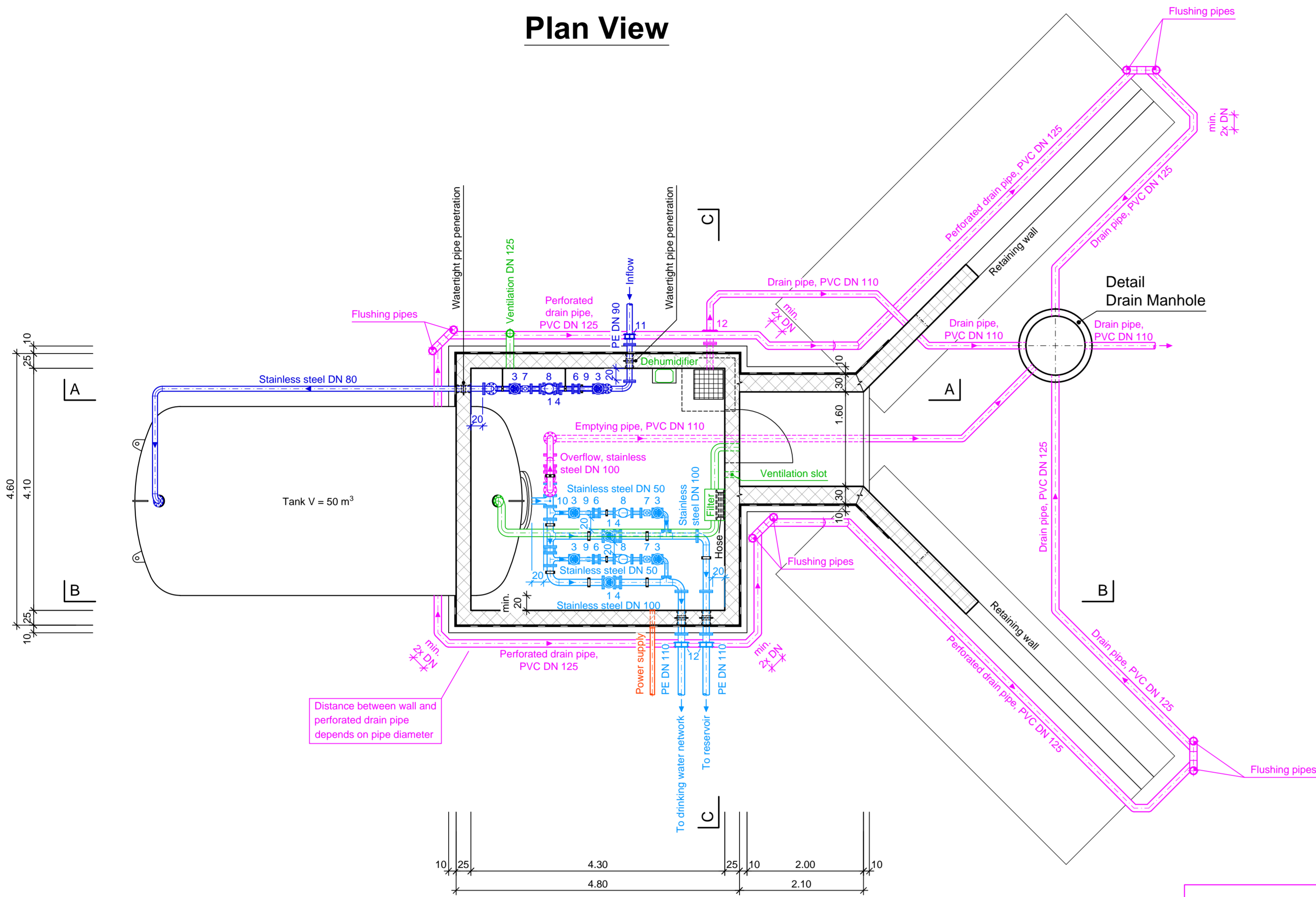
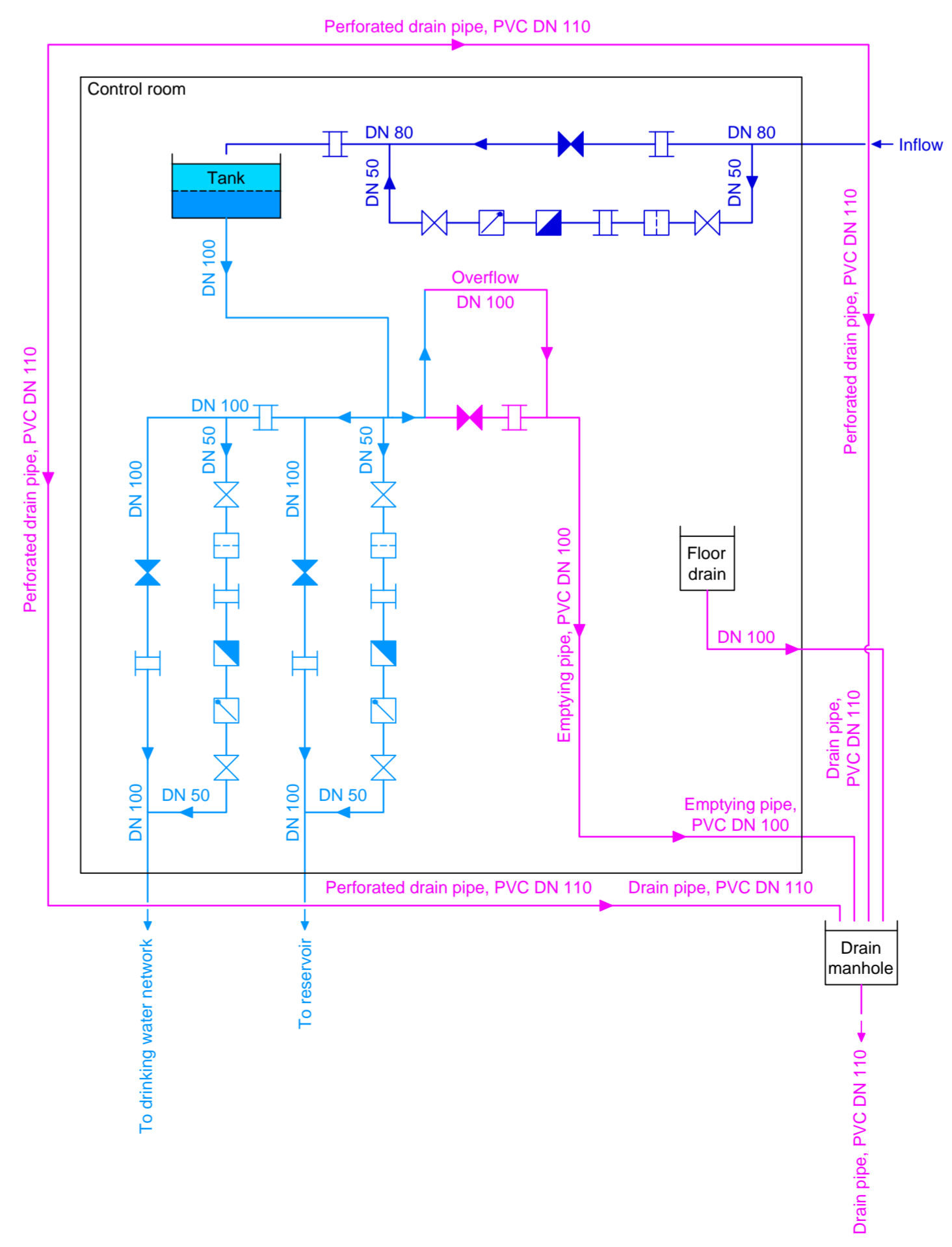


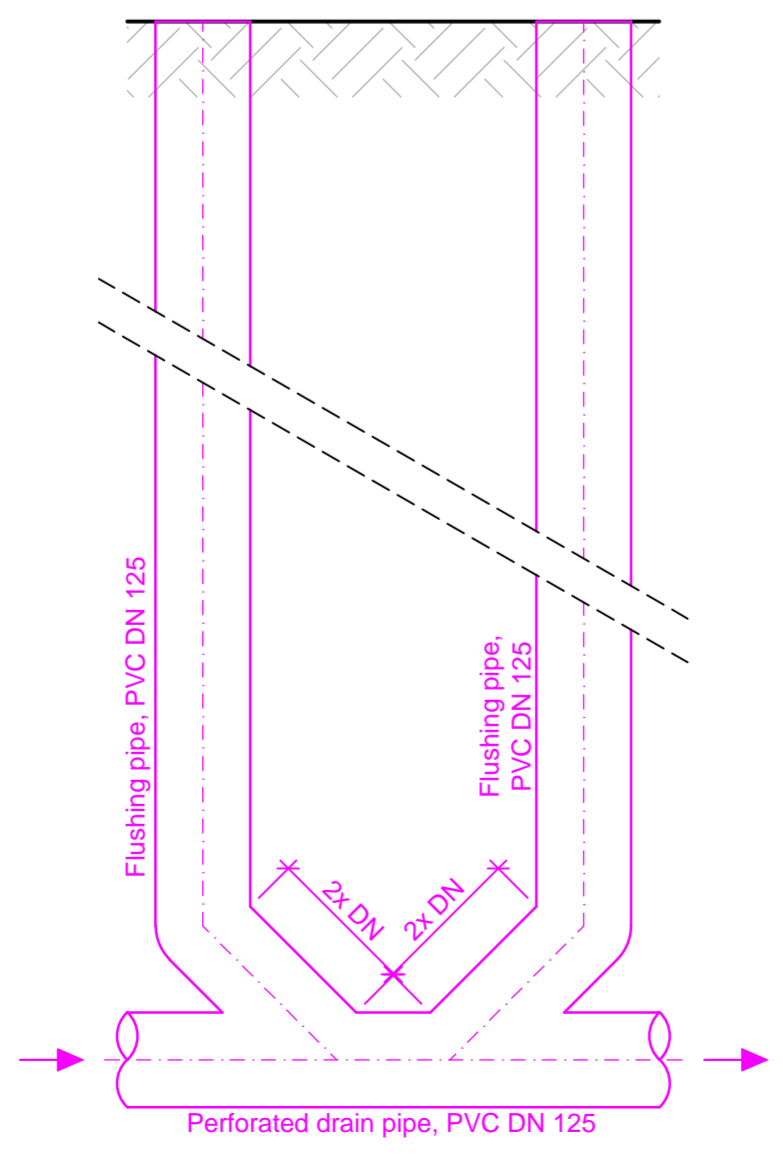
Plan View



P&ID not to scale



Detail flushing pipe 1:10



Legend

- Water pipe (inflow)
- Water pipe (outflow)
- Drain pipe
- Power supply and lighting
- Air conditioning / ventilation
- Bituminous coating
- Construction joint
- Projected terrain
- Existing terrain
- Reinforced concrete
- Non-shrink mortar
- Lean concrete
- Top soil
- Backfill
- Sand
- Gravel 16 / 32 mm
- Natural soil (excavation)
- Mortar
- Concrete and manhole rings

Symbols P&ID

- Gate valve open
- Gate valve closed
- Check valve
- Y-type strainer
- Flow meter
- Dismantling piece
- Flow direction
- Tank
- Shaft

Valves and Accessories			DN / PN	Quantity
1	Gate valve with EPDM closing, epoxy painted		100 / 10	3
2	Gate valve with EPDM closing, epoxy painted		80 / 10	1
3	Gate valve with EPDM closing, epoxy painted		50 / 10	6
4	Dismantling piece		100 / 10	4
5	Dismantling piece		80 / 10	2
6	Dismantling piece		50 / 10	3
7	Check valve with ball, flanged		50 / 10	3
8	MULTICAL 62 ultrasonic flow sensor or mechanical water meter		50 / 10	3
9	Y-type strainer, ductile iron, epoxy painted, flanged		50 / 10	3
10	Ball valve with nipple (for water sampling and hose connection)		1/2" / 10	1
11	Multijoint, stainless steel to PE		80 / 10	1
12	Multijoint, stainless steel to PE / PVC		100 / 10	4

- #### Remarks
1. Reference design consists of 4 different drawings. "Legend", list of "valves and accessories" and "remarks" apply to the entire set of drawings.
 2. Building type, materials and final dimensions of the entire building or parts of it, depend on the specific application and its static requirements.
 3. Structural analysis has to be carried out in each specific case.
 4. Backfill and layer of top soil must be compacted in layers of 30 - 50 cm depending on local soil conditions.
 5. Drain pipe must be directed into a stream or discharge channel. The pipe end must be protected from small animals with grating.
 6. Pipe installations inside the building can be carried out in stainless steel or polyethylene.
 7. All pipe penetrations in floors and walls must be water tight.
 8. Gate valves which are closed during normal operation must be opened in reasonable intervals to avoid stagnating water.
 9. All pipes need to be fixed by metal pipe supports to the building structure like floors, walls and ceiling.
 10. Vestibule with a second door can be added to minimize humidity problems inside the building.
 11. Slope stabilization (type, materials and final dimension) depend on local soil conditions.
 12. Plexiglas tubes are only applicable for non-pressurized systems.
 13. The building should be connected to power supply if possible.
 14. Geometry of the retaining wall depends on the soil type and building dimension.

ApaSan - Swiss Water and Sanitation Project Moldova

Reference Designs for Rural Water Supply Systems

Project Plan

Drinking Water Reservoir, V = 50 m³

Plan View + P&ID

CSDENGINEERS+ <small>INDEPENDENT BY NATURE</small> CSD Ingénieurs SA Chantemerle 37 - Granges-Paccot CP 384, CH-1701 Fribourg T 031 460 74 74 F 026 460 74 79 e fibourg@csl.ch www.csl.ch	Scale	1:50
	Drawn	APR/24.06.2015
	Checked	APS/24.06.2015
	Revision No.	-
Format [cm]	E0X84	
Project No.	Phase	Plan - No.
EX00118	02	05
Index	1/4	
file: EX00118_05_02_Reservoir.dwg		