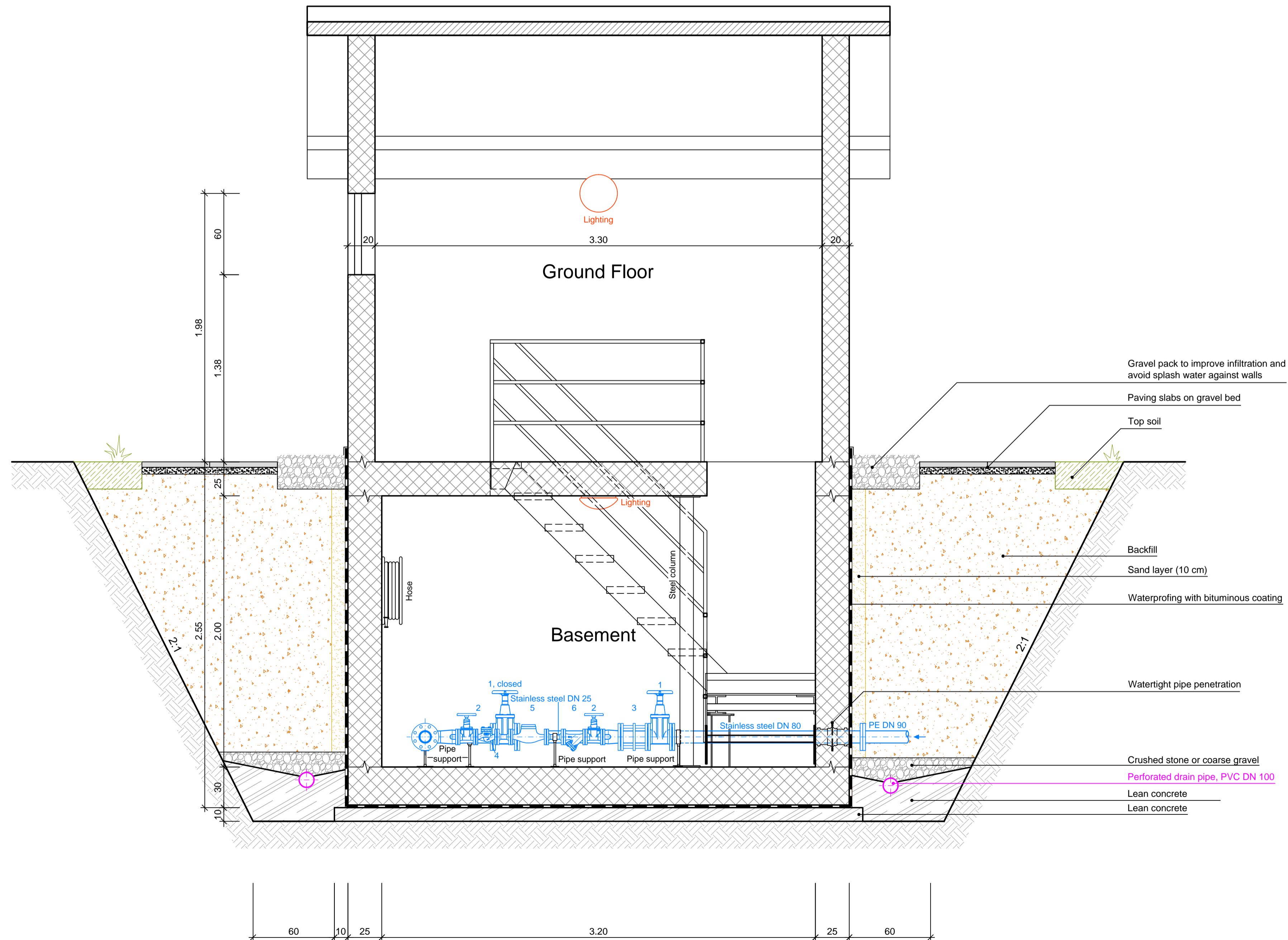


# Section A-A



**Legend**

- Water pipe
- Drain pipe
- Power supply and lighting
- Ventilation
- Bituminous coating
- Construction joint
- Reinforced concrete
- Wood
- Lean concrete
- Crushed stone 2 / 5 mm
- Top soil
- Backfill
- Sand
- Gravel 16 / 32 mm
- Natural soil (excavation)
- Concrete manhole rings

↕ 11 Indication of dimensions in cm  
↕ 1.00 Indication of dimensions in m  
DN, Ø All diameters in mm

No.	Valves and Accessories	DN / PN	Stk.
1	Gate valve with EPDM closing, epoxy painted	80 / 10	4
2	Gate valve with EPDM closing, epoxy painted	25 / 10	2
3	Dismantling piece	80 / 10	2
4	Check valve with ball, flanged	25 / 10	1
5	MULTICAL 62 ultrasonic flow sensor, flanged	25 / 10	1
6	Y-type strainer, ductile iron, epoxy painted, flanged	25 / 10	1
7	Ball valve with nipple (for water sampling and hose connection)	1/2" / 10	1

- Remarks**
1. Reference design consists of 6 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. If a different pumping system than a pressure booting system with integrated membrane vessel shall be used, a surge vessel has to be dimensioned according to the specific hydraulic conditions.
  9. Roof construction is indicative only and has to be designed to the specific requirements.
  10. Gate valves that are closed during normal operation must be opened in reasonable intervals to avoid stagnating water.
  11. Depending on local climate conditions a thermal insulation by XPS-panels (underground) and EPS-panels (over ground) is recommended.
  12. Instead of reinforced concrete, brickwork can be used for ground floor walls.

## ApaSan - Swiss Water and Sanitation Project Moldova

Reference Designs for Rural Water Supply Systems

Project Plan

### Pumping Station Section A-A

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