The Pumping Station discharge piping should be a combination of the following elements:

- Pipe
- Stop/check valves
- Flap gates/valves
- Air valves
- Elbows
- Manifolds
- Tee's
- Reducers / Expanders
- Brackets, bolts and other fixtures

The following discharge line recommendations in Table 6-4 shall be considered by the Consultant:

Discharge Line Design Considerations	
Discharge line should be kept as short and simple as possible	
Simplest configuration with pump has its own independent discharge line	
The elbow of the vertical riser from the pump should be set higher than the discharge line with a slope down to the discharge end	To minimise the volume of back flow when the pumps switch off
The centreline of each discharge pipe should be placed higher than the design backwater elevation	Where it is practicable
A flap gate shall be placed at the end of each discharge line	To prevent back flow if the centreline elevation at the end of the discharge pipe is below the design backwater elevation in the receiving structure
Connect the individual pump discharges into a common discharge header sized to direct the combined flow at an acceptable velocity in pumping main	Where excessive length and cost makes individual discharge lines impracticable
Each pump discharge line must include a check valve	to prevent recirculation of flow and applicable piping arrangement
Discharge pipe should be at least as large as the pump discharge diameter	discharge velocity range from 1.5 to 2.5 m/s
Piping Materials	See Section 7.2
Valve types	See Section 7.5 (Applicable for dry installed pumps)

Table 6-4 – Discharge Line Design Considerations

Example lifting pumping station pumping to discharge chamber is shown in Figure 6-4.