



Built for superior performance!

# Custom High-Head Pumping Systems

## Sample Installation:

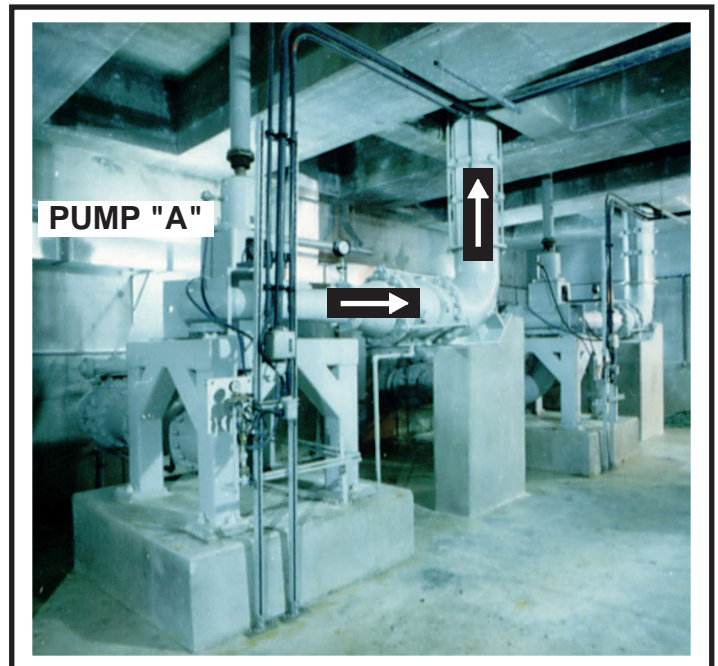
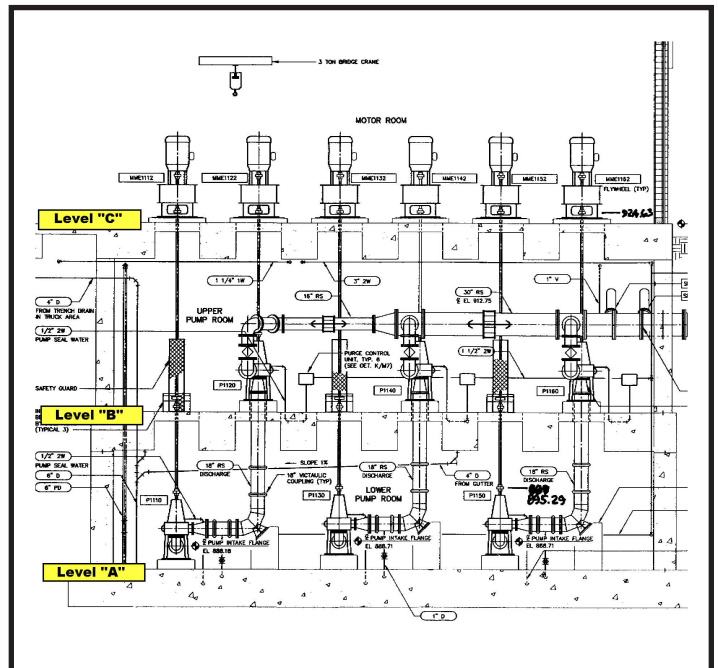
Project: Suwanee Creek Raw Water Pumping Station

Engineer: Brown & Caldwell, Atlanta, GA  
 Contractor: Ruby-Collins, Inc., Smyrna, GA  
 Owner: Gwinnett County, GA  
 Representative: GPM Environmental, Atlanta, GA  
 Station Size: 12.2 MGD  
 Wet-Well: Trench-Type, Self-Cleaning  
 Duty Point: 4,236 GPM at 345 ft. TDH

### Overview:

Three (3) pumps located on Level A are connected in series with three (3) pumps located on Level B.

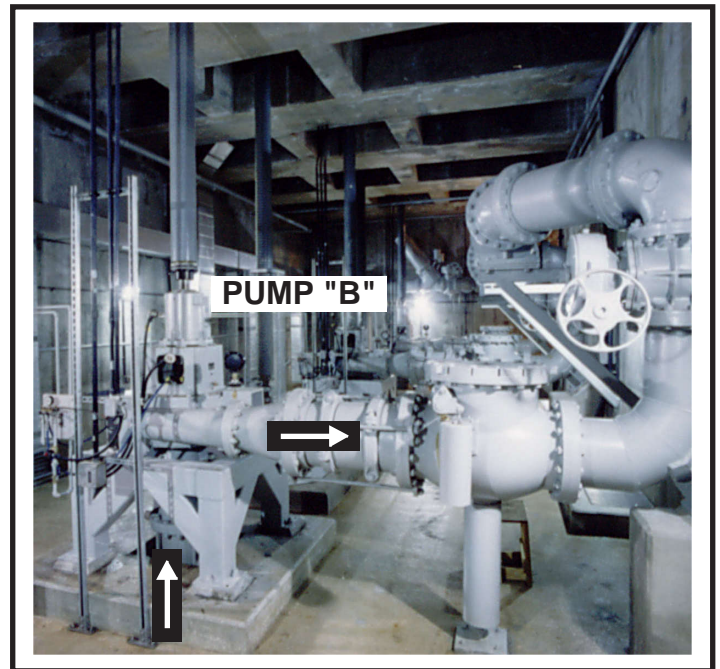
All six (6) motors complete with flywheels are located on Level C and are connected to the pumps with flexible intermediate lineshafts.



Pump "A" is located on the lower floor (Level A) and receives suction flow from the adjacent intake structure. The pump discharge line turns to the vertical position and the flow is directed upward to Level B.

Pump "B" is located on the middle level (Level B) and receives suction flow from the discharge of Pump "A".

This "series" arrangement produces a discharge pressure from Pump "B" of 2-times the single-pump design head.



All six (6) drive motors are located on the upper level (Level C) where they are protected from water damage due to the possibility of station flooding.

The motor assemblies are fitted with cast iron flywheels for backflow surge control upon pump shutdown. (The flywheels are located in the fabricated enclosures immediately below the motors.)

The flywheel output shafts are connected to the pump shafts with flexible intermediate lineshafts.



- Pumps:** S.O.# 9805630  
Qty-6 Morris Series 7100 NC, VOS  
Model 1012242V-3  
3 - Pump Sets, Vertical Two-Stage Pumping Systems  
Ductile Iron Casing, Covers and Suction Elbow  
Stainless Steel Impeller - CA-6NM  
John Crane 5620 Tandem Mechanical Seals
- Motors:** Reliance Electric, 300 HP, 1180 RPM, 460 Volts  
Inverter Duty, Premium Efficient
- Shafting:** Johnson Power  
First Stage Pumps: Two-Sections, Composite Carbon Fiber Tubing, 30.21' Long  
Second Stage Pumps: One Section, Composite Carbon Fiber Tubing, 14.55' Long
- Flywheel:** Ductile Cast Iron, 2,920 lb.. each (one per motor)
- VFD:** Toshiba, PWM, 600 HP (one per pump set)
- Complete Finite Element System Analysis Performed by Morris Pumps