

# LIFT STATION PRELIMINARY DESIGN

**FORCE MAIN:** Length: **972**  
 ID: **4" - phase 1**  
**New** Material: **DI class 51**

**JOB NAME: INLAND EMPIRE**  
**COMPANY:**  
**CONTACT:**

Change in Elevation:  
**FLOW:** Peak Flow: **325 @88.8FT** GPM  
 Pumping Rate: **325** GPM

BY:	AD	DATE:	12/2/2014	Rev. #	INI.
<b>TYPE:</b>	<b>Wastewater</b>	Revised Flow 12-10-14	<b>R1</b>	<b>AD</b>	
		Revised per comments 2-24-15	<b>R2</b>	<b>KAS &amp; AD</b>	
		Revised per comments 5-5-15	<b>R3</b>	<b>KAS</b>	
		Revised per comments 5-12-15	<b>R4</b>	<b>AD</b>	

**100GPM PHASE 1** Full build out 325@88.8ft

**ACTIVE VOLUME:**  
 Station Starts Per Hour: **10**  
 Pump Starts per hour: **5**  
 Cycle Time: **6.0**  
 Gallons: **487.5**  
 Well Diameter: **6**  
 Well Area: **28.27**  
 Depth Required: **2.31**  
 Set Depth: **3.00**

**PHYSICAL ELEVATIONS:**  
 Finish Grade: **988.60**  
 Wet Well Rim: **988.60**  
 Influent Invert: **974.28**  
 Influent Depth: **14.32**  
 Disch. Piping Elev: **985.10**  
 FM Discharge: **970.59**  
 FM High Point: **986.00**  
 Sump Depth: **2.73**  
 Sump Elevation: **967.87**

**WET WELL:** Diameter: **6**  
 Min. Barrels: **17.32**  
**Concrete** Barrels: **17.00**

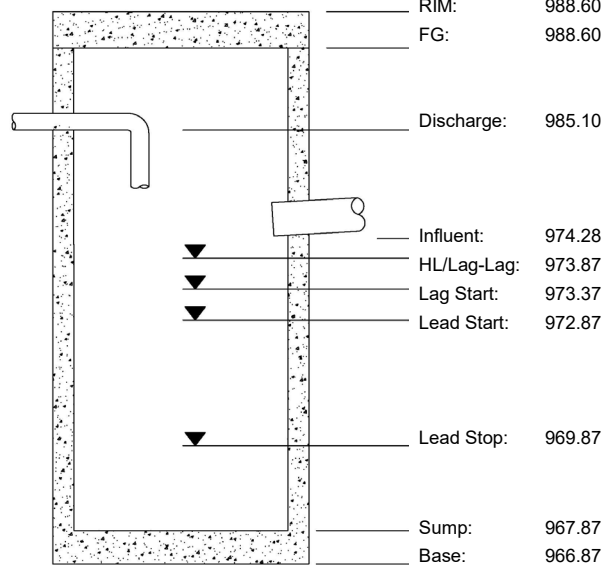
Base: **RU custom**  
 Discharge Outlet: **4" elbow**  
 RFC: **Yes**  
 Hatch: **Full Traffic**  
 Discharge Piping: **4" Ductile iron**  
 Discharge Piping Style: **Straight thru**  
 Crane: **5124**  
 Crane Base Style: **524F Socket base**  
 Crane Coating: **Std. Powder Coat**  
 Lining: **Unlined**  
 Deflector: **Panel**  
 Additional Options: **Mushroom cap vent**

**VALVE VAULT:** Valve Size: **4"**  
 Vault Model/Size: **687**  
 Hatch: **Full traffic**  
 Options: **Flow Meter**  
**Pumping Port**  
**Custom height**

**METER VAULT:** Valve Size: **N/A**  
 Vault Model/ Size:  
 Hatch:  
 Meter Model:  
 Options:

**CONTROLS:** Power: **480V / 3-Phase**  
 Controller: **MicroLogixs 1400**  
 Primary Sensor: **Pressure Transducer**  
 Back-up Sensor: **2 Floats**  
 Enclosure: **Arc Armor**  
 Options: **Color HMI**  
**Radio Modem**

**CNTRL BLDG:** Type: **N/A**  
 Size:



**SUGGESTED LEVEL ELEVATIONS:**

High Level:	<b>973.87</b>	Lead Stop:	<b>969.87</b>
Lag Start:	<b>973.37</b>		
Lead Start:	<b>972.87</b>		

**PUMP:**  
 Mfg: **Ebara**  
 Setup: **Duplex**  
 Model: **100DLMKFMU615**  
 Head: **5.87**  
 Horsepower: **3 HP**  
 Setup: **Future**  
 Model: **100DLMKFMU615**  
 Head: **-**  
 Impeller: **10.75**  
 Horsepower: **20 HP**  
 Power: **460V / 3-Phase**

**DUTY POINT:**  
 Static: **16.1**  
 TDH: **24.5**  
 Attachments:

**Offering: Complete System**  
**Equipment:**  
**Start-up: Mechanical & Electrical**

Mixer Valve: **N/A**  
**GENERATOR:**  
 Model: **N/A**  
 Enclosure:  
 Transfer Sw.:  
 Options:

Pumps running  
**NOTES:** Panel is to be designed for the future pumps.

Phase 1 pumping rate 100gpm @ 24.5ft by our calculation.