

1. A packaged duplex station with each pump capable of 100% of design flow or a triplex station capable of 150% design flow. All internal equipment factory installed and factory tested.
2. Two or three vertical, close coupled, non-clog sewage pumps. Mechanical seals.
3. Pump chamber in two sections: (1) chamber, and (2) access tube (44" I.D.) welded together at site. Vertical cylinder of $\frac{1}{4}$ " steel plate. Pump floor to have 8" I-beams (minimum 18.4 lbs/ft.).
4. Lifting loop over each pump/motor.
5. Opening of each hatch to activate lights. Hatch to be above flood plain. Keyed to City master.
6. Cathodic protection with magnesium anode packs to be supplied. Size of anodes and location to be approved by the City Engineer.
7. Motors to be 1200 rpm, 3 phase, 60 cycle, 230/460 volts. Shaft size and horsepower selected based on operating conditions.
8. NEMA outdoor enclosures for controls. Electric power via underground conduit to service pedestal.
9. Controls to be solid state programmable controller such as Tesco Liquidtronics III Model 36-633 (or equal). A Multi-Trode 10-sensor level input probe or approved equal shall be provided. Time delay before re-start to be 5 minutes.
10. Standby battery and charger to be supplied. Battery is to be able to operate controller for two weeks with external power source removed. Alarms to include power failure, low water and high water. All alarms to be telemetered to the location specified by the City Engineer.
11. Use humidifier and vent blower. Size to be determined on case by case basis.
12. Sump pump with discharge to lift station wet well.
13. Each pump to have gate valve and check valve on discharge piping. Dual pressure mains required where feasible. Length of discharge pipe will be considered. Final determination will be made by the City Engineer.
14. All wiring to be to applicable Electrical Codes.
15. Exposed metal piping in contact with earth and above ground portions to be protected and to be painted. No bare, unprotected metal will be allowed anywhere within or outside system.
16. Three copies of operation/maintenance manual.
17. One-year warranty following Notice of Completion.

NOTE: For wet well depths greater than 20 feet, a pump station with duplex submersible pumps may be considered, subject to approval of the City Engineer.

"THIS STANDARD SUPERCEDED"

ENGINEERING DEPARTMENT		CITY OF MERCED, CA.	
SEWER PUMP STATION - GENERAL REQUIREMENTS			S-13
DRAWN: KGE	APPROVED BY:	DATE	
DATE: 12/05	<i>David L. Tucker</i>	3/17/08	
REVISED: 3/17/08	CITY ENGINEER		
		SHEET	OF