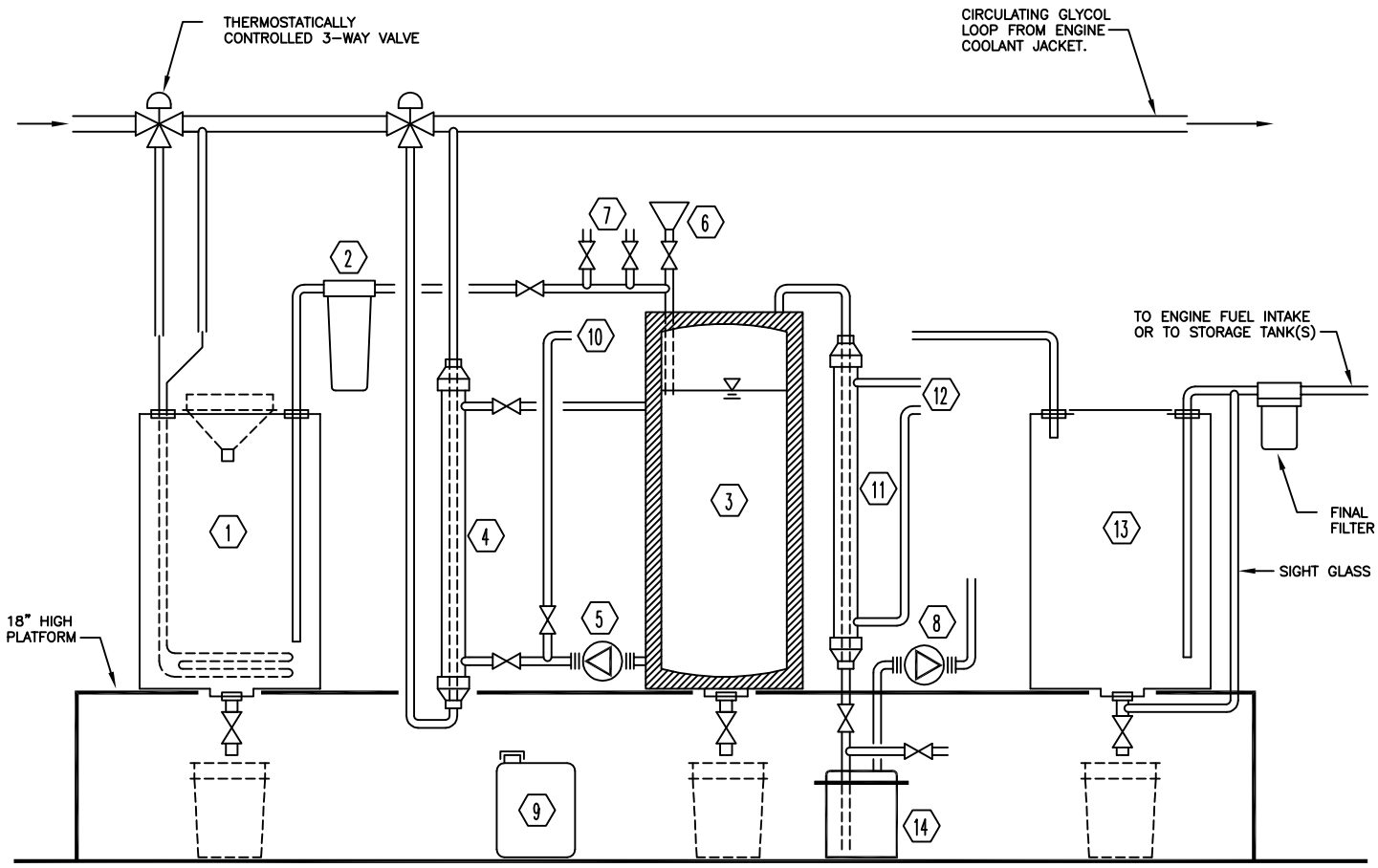

150 LITER (40 GALLON) BIODIESEL PRODUCTION SYSTEM SCHEMATIC

* APPROXIMATE COST OF MATERIALS: ~ $1,500
* PRODUCTION CAPACITY: > 4,000 GALLONS/YEAR
* APPROXIMATE COST OF PRODUCTION: $0.75/GAL

SYSTEM COMPONENTS

1. COLLECTION/STORAGE/DRYER TANK: OPEN-TOP 55 GALLON STEEL DRUM WITH FUNNEL, HEAT EXCHANGER.

2. IN-LINE FILTER, 1" PIPE SIZE, 20 MICRON

3. REACTOR: 50 GALLON ELECTRIC WATER HEATER, MODIFIED.

4. HEAT EXCHANGER 1: COUNTERFLOW STRAIGHT TUBE-AND-SHELL HEAT EXCHANGER: 1-1/2" DIA X 60" SHELL, 3/4" TYPE L COPPER TUBE.

5. REACTOR MIXING/CIRCULATION PUMP: 1/2 HP CENTRIFUGAL PUMP:

6. SULFURIC ACID FUNNEL.

7. METHANOL AND METHOXIDE PICKUP POINTS. HOSE THREAD VALVES CONNECT TO METHOXIDE MIXING CARBOY (STAGE __), AND TO METHANOL DRUM (STAGE __).

8. VACUUM PUMP: THOMAS INDUSTRIES, GRAINGER CATALOG # _____)

9. METHOXIDE MIXING TANK: HEAVY DUTY 5 GALLON HDPE CARBOY (U.S. PLASTICS FORT-PAK).

10. DISCHARGE LINE TO WASH TANK.

11. METHANOL CONDENSER. CONSTRUCTION SIMILAR TO HEAT EXCHANGER (ITEM 4).

12. PIPE CONNECTIONS TO COLD WATER SOURCE.

13. WASH TANK. 55 GALLON OPEN TOP STEEL DRUM WITH MODIFICATIONS SIMILAR TO WVO STORAGE/DRYING TANK.

14. PRESSURE POT: USED 5 GAL PAINT PRESSURE POT OR PRESSURE CANNER, MODIFIED.