CALCULATION OF TOTAL DYNAMIC HEAD

Booster DRAIN PIPING

INCLUDE ALL PIPE, FITTINGS, AND VALVES FROM THE MAIN DRAIN TO THE PUMP MANIFOLD

	EQUIV. LIN. FT.	**FT. OF HEAD**

_____ lineal feet of _____ inch diameter pipe………………………………………………………._____

_____ ell(s) 45 _____ inch, each equivalent to _____ feet of straight pipe – total……………………_____

_____ ell(s) 90 _____ inch, each equivalent to _____ feet of straight pipe – total………..…………_____

_____ tee(s) _____ inch, each equivalent to _____ feet of straight pipe – total……………..…………_____

_____ adapter(s) _____ inch, each equivalent to _____ feet of straight pipe – total……………........_____

_____ reduction(s) _____ inch to _____ inch-loss in feet of head………………………………………........._____

_____ enlargement(s) _____ inch to _____ inch-loss in feet of head………………………………………………._____

_____ _____ valve(s) _____ inch, each equivalent to _____ feet of straight pipe – total……........._____

_____ _____ _____ inch, each equivalent to _____ feet of straight pipe – total…………………..….._____

_____ main drain(s) _____ inch outlet—loss in feet of head…………………………………………………………._____

Equivalent length of main drain piping—total (add all equivalent lineal feet for this section)…..………………_____

Loss in feet of head due to friction in _____ feet of _____ inch pipe at _____ gpm…………………………………………._____

Velocity through booster drain piping _____ feet/sec.

Booster drain grate/cover open area _____ sq. in.

Velocity through booster drain grate or antivortex cover _____ feet/sec.

NOTES:

1. Use the flow from step 12 as the gpm for this section.

2. Feet of head = <u>total equivalent lineal feet</u> x loss in feet (from charts in **HYDRAULICS CALCULATION GUIDE**).
   100

3. Obtain velocity from charts in **HYDRAULICS CALCULATION GUIDE**.

4. Grate or antivortex velocity = <u>.321 x flow in gpm</u>.
   Open area in sq. in.

5. Velocity through suction piping and antivortex cover shall not exceed 6 feet per second.

6. Velocity through grate shall not exceed 1.5 feet per second.