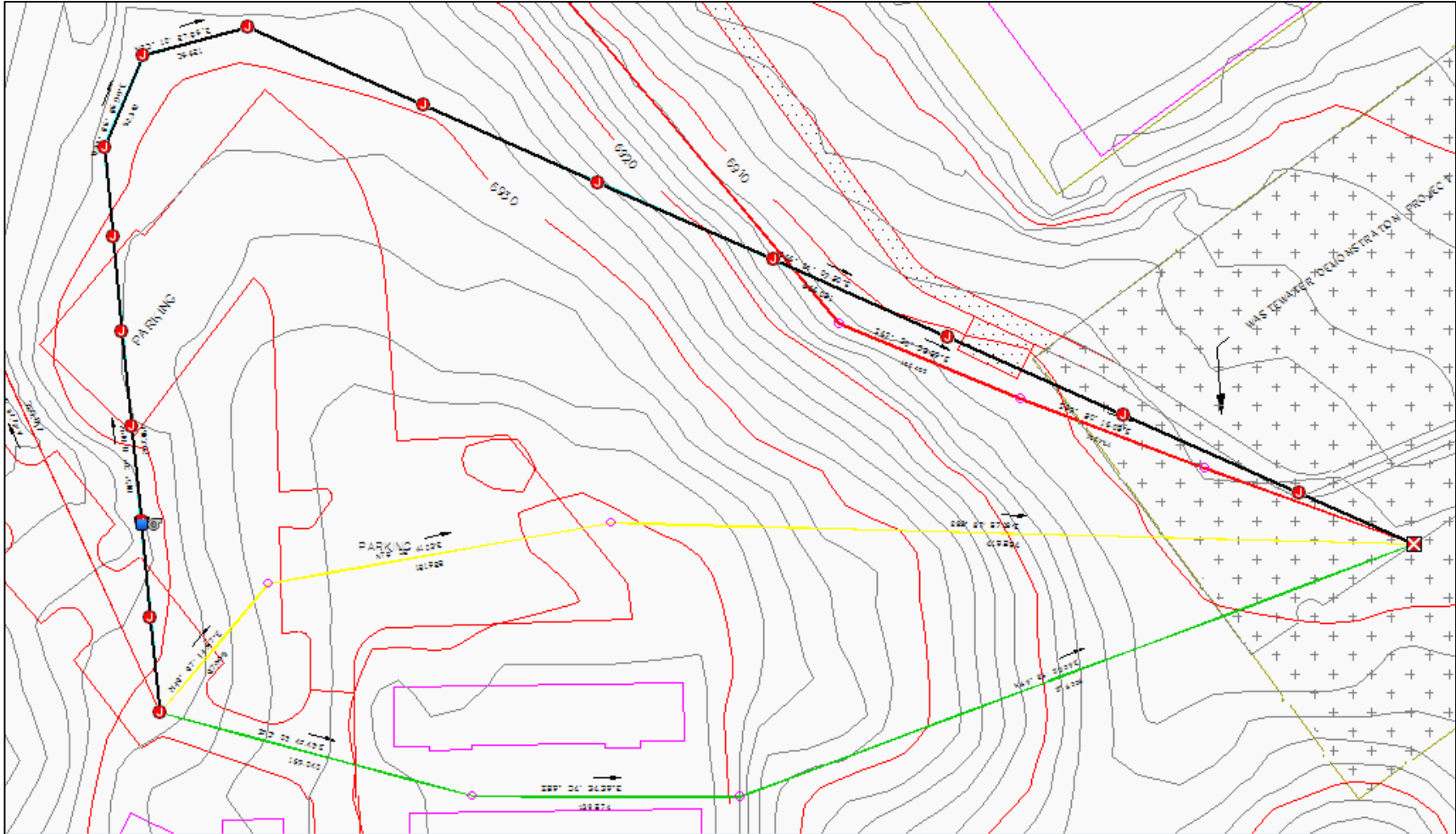


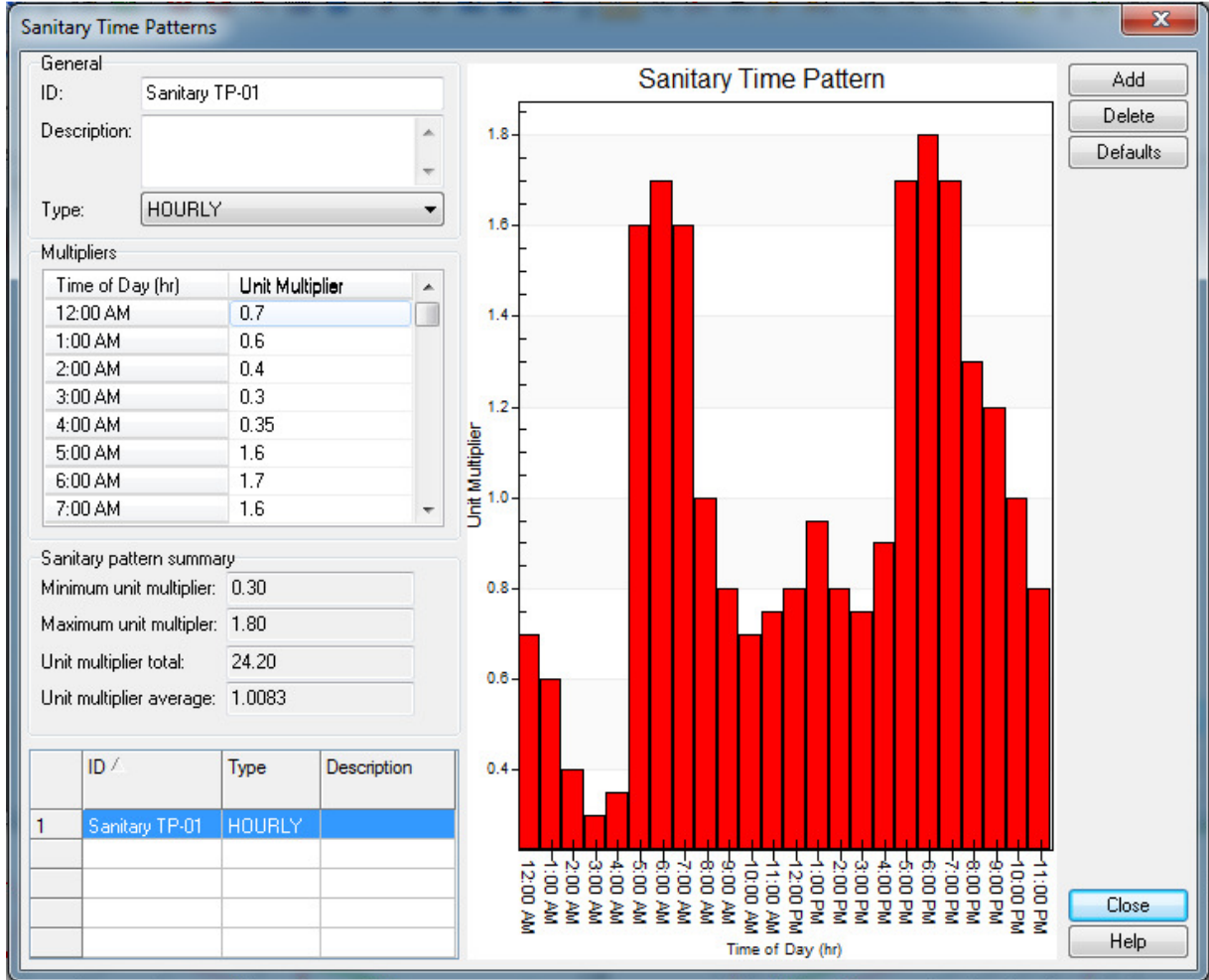
# Storm and Sanitary Analysis Software

## Plan View of Route 4



# Storm and Sanitary Analysis Software

## Inflow Time Variance Multipliers



# Storm and Sanitary Analysis Software

## Typical Pipe Input Settings

Conveyance Links
X

**General**

Link ID:

Description:

**Shape**

Open channel  
 Pipe  
 Culvert  
 Direct

**Properties**

Number of barrels:

Diameter:  in

**Physical properties**

Length:  ft

Inlet invert elevation:  ft

Outlet invert elevation:  ft

Manning's roughness:

Flap gate

**Flow properties**

Entrance losses:

Exit/bend losses:

Additional losses:

Initial flow:  gpm

Maximum flow:  gpm

**Analysis summary**

Constructed slope:  ft/ft

Design flow capacity:  gpm

Peak flow during analysis:  gpm

Additional flow capacity:  gpm

Max velocity attained:  ft/sec

Max/design flow ratio:

Max/total depth ratio:

Total time surcharged:  min

**Connectivity**

From (Inlet):

To (Outlet):

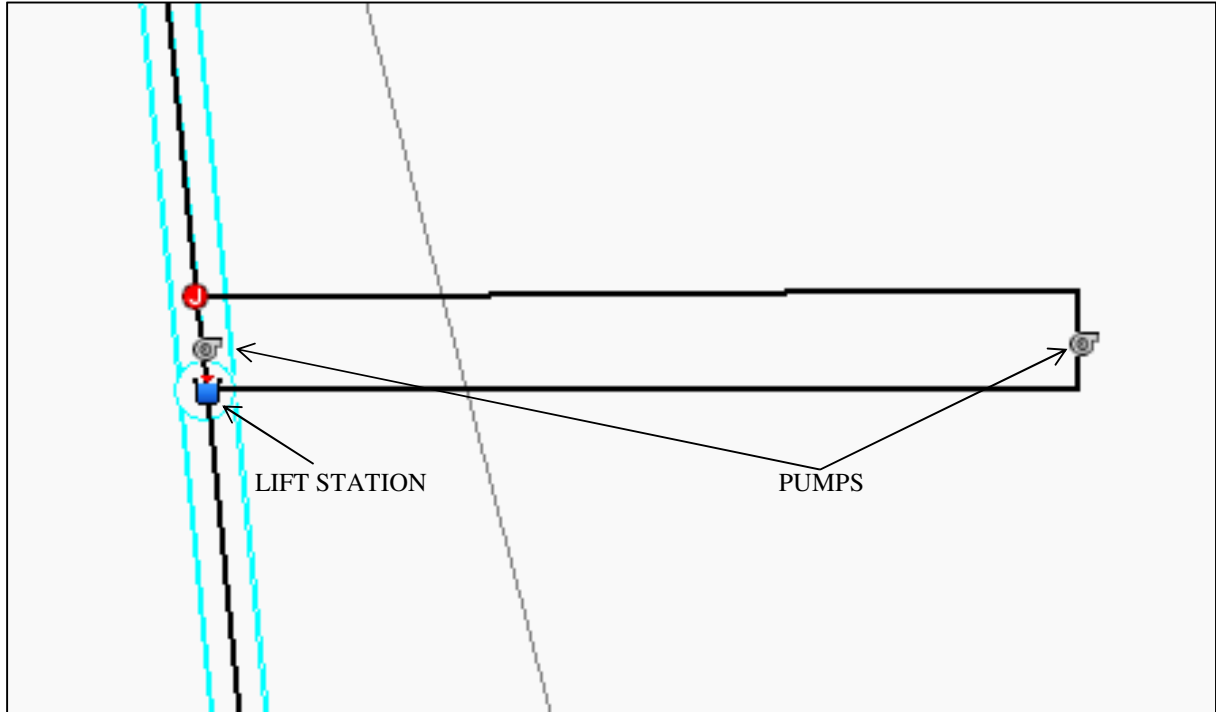
Invert elevation:  ft

Invert elevation:  ft

ID /	From Node	To Node	Shape	Length	Height/Diameter	Inlet Elev.	Outlet Elev.	Manning's Roughness	Entrance Losses	Exit/Bend	
1	Link-06	Structur	Structur	Circular	49.39	4.000	6923.41	6926.86	0.03	0.5	0.5
2	Pipe - (142)	Manhole	Structur	Circular	50	4.000	6928.36	6924.86	0.015	0.5	0.5
3	Pipe - (143)	Structur	SepticT	Circular	50.00	4.000	6924.86	6924	0.015	0.5	0.5
4	Pipe - (144)	SepticT	Structur	Circular	0.61	4.000	6923.36	6923.41	0.015	0.5	0.5
5	Pipe - (145)	Structur	Structur	Circular	50	4.000	6926.86	6928.86	0.015	0.5	0.5
6	Pipe - (146)	Structur	Structur	Circular	50	4.000	6928.86	6927.86	0.015	0.5	0.5

## Storm and Sanitary Analysis Software

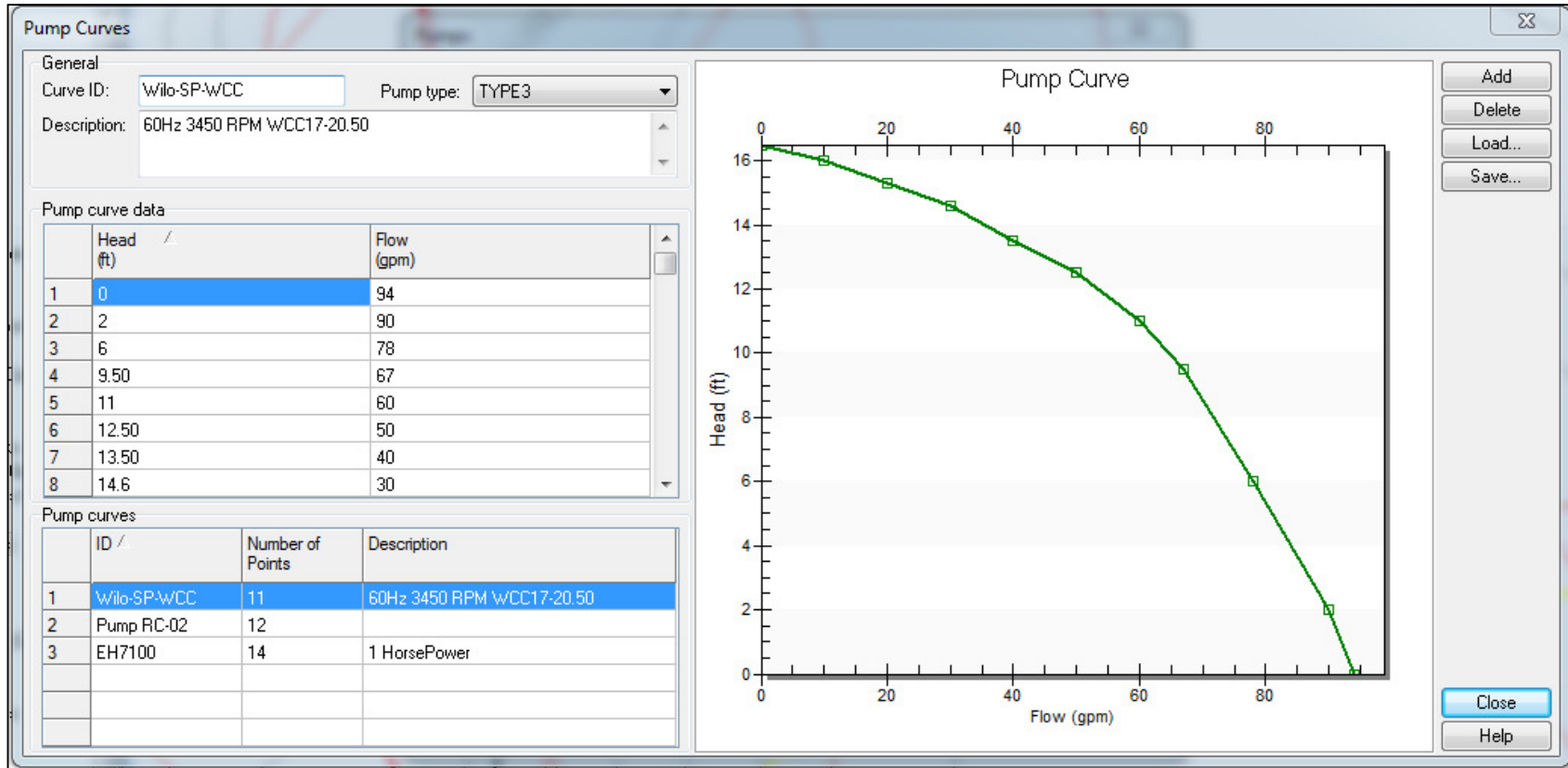
### Plan View of Lift Station Configuration



The lift station configuration in SSA utilized the reservoir node and pump conveyance links. The reservoir node represents the 750 gallon Jensen Precast septic tank to be used as a pump chamber. The node following the reservoir is set-up shortly after the reservoir node in order for the software to accurately portray the visual representation of the hydraulic head being increased at the lift station node. The two pumps are set-up in parallel to increase the flow capabilities of the system in case the inflow is high and the system is in threat of being flooded. The second pump will turn on based on a set float level elevation. The system has a third back-up pump for emergency water levels.

## Storm and Sanitary Analysis Software

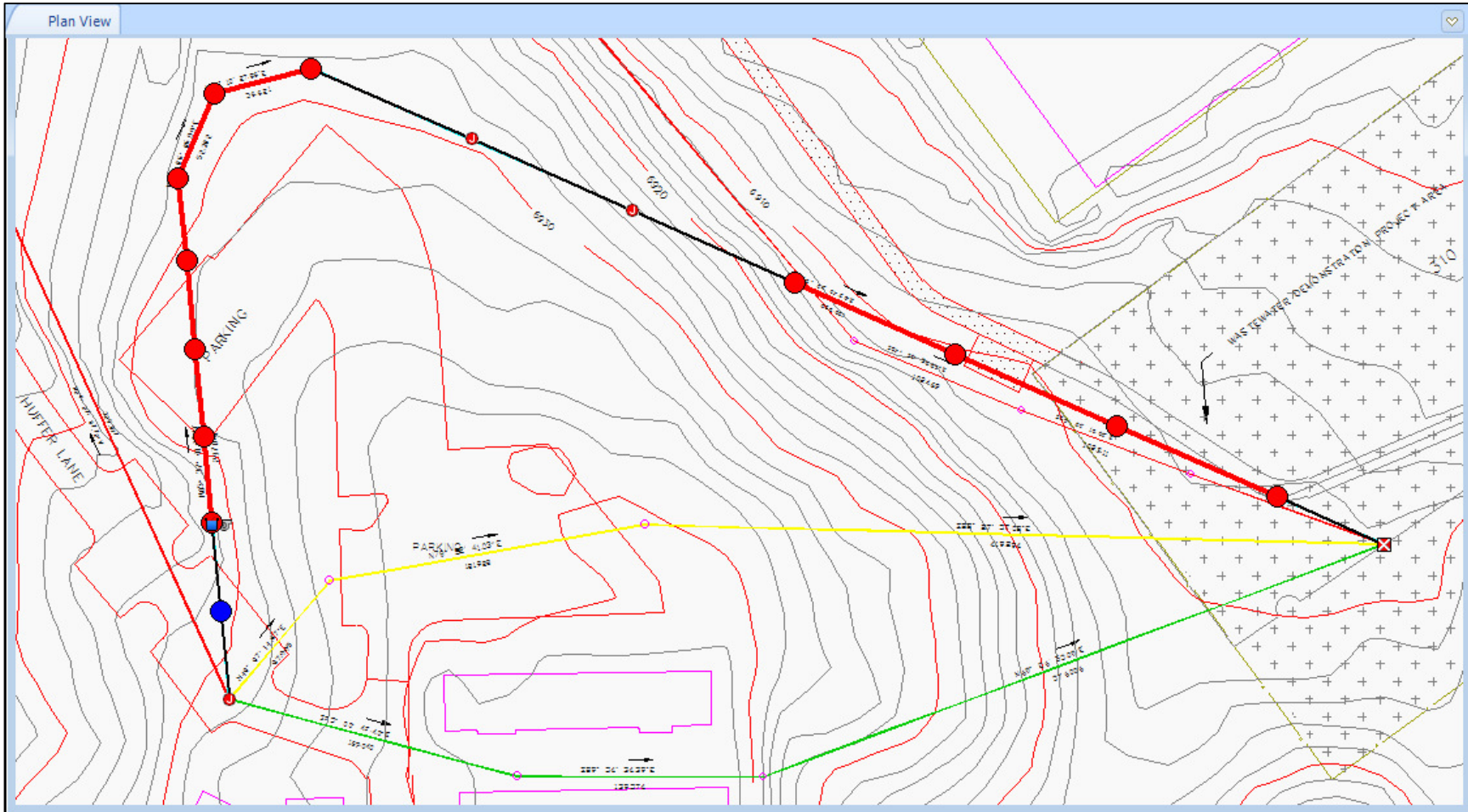
### Pump Curve Manual Input Method



The pump curve is attained from a pump vendor called Wilo Pumps. The pump curve is manually entered into the software as seen. Various other models of pumps were tested for use in the model to no avail.

## Storm and Sanitary Analysis Software

### Plan View of Surcharged or Pressurized Pipes



The model displays in red any pipe lengths and nodes which are surcharged or pressurized. The pressurized sections show that the pumps are working and pressurizing the water to overcome the static head in the route.

# Storm and Sanitary Analysis Software

## Uphill Junction Calculation Check in Excel

