

Project Title: Sample Project

Project ID: 3467

Project Manger: J.T.

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Sheet: 1 of 1

Checked By: D.W.

Date: 8/20/15

CHW DISTRIBUTION SYSTEM CALCULATIONS

Notes:

Bldg 121 CHW System

CHW FLOW CALCULATION				
	Existing	Proposed		Remarks
Cooling Load (Tons)	120	120	Tons	
CHW Supply Temperature	45	45	F	
CHW Return Temperature	55	55	F	
Required CHW flow (GPM) =	288.0	288.0	GPM	

FRICTION LOST ESTIMATE				
	Existing	Proposed		Remarks
Piping Linear Feet:	110	110	ft	2 story building
Piping Pressure Drop:	5	5	ft per 100 ft	Assumed x ft of loss per 100 ft of piping
	5.5	5.5	ft	
Fitting Pressure Drop:	0.5	0.5	times	Assumed fitting loss is 0.5 x piping loss
	2.8	2.8	ft	
Equipment Pressure Drop:	30	30	ft	Chiller: 20 ft + Miscell.
Total Pump Head =	38.3	38.3	ft	

PUMP SIZE				
	Existing	Proposed		Remarks
CHW Flow =	288.0	288.0	GPM	From above calc.
TDH =	38.3	38.3	ft	From above calc.
Water HP =	2.8	2.8	HP	
Pump Efficiency	80%	80%		From Manufacturer
Brake HP =	3.5	3.5	BHP	
Annual Operation	1,700	1,700	hrs	6 months, 24/7
Energy Cost	\$0.13	\$0.13	\$/kW hr	
Annual Pumping Energy Cost =	\$573	\$573	Dollars	

REMARKS:

Your Notes Here.