**CMGT 235 – Electrical and Mechanical Systems**

Department of Construction Management 🏵 California State University, Chico

Homework #11 – Plumbing Systems

Points: 20

Due: 9/29/2022

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. The local municipal water service has a MDSSPA of 80 psi. For the house plan used in homework #10 the highest fixture is a showerhead that is 14 ft above the source of the supply. Assume a water meter pressure loss of 5 psi and a water softener pressure loss of 9 psi. Calculate the Available Water Pressure.
2. Complete the table below for the home plan used for homework #10. There are four ¾” hose bibbs outside around the perimeter of the home and one laundry machine.  
   See: <https://www.engineeringtoolbox.com/fixture-water-capacity-d_755.html>

|  |  |
| --- | --- |
| Fixture | Minimum Supply Pressure (psi) |
| Water Closet |  |
| LAV |  |
| Tub/Shower |  |
| Tub |  |
| Shower |  |
| Kitchen Sink |  |
| Dishwasher |  |
| Laundry Machine |  |
| Laundry Sink |  |
| ¾” Hose Bibb |  |

1. If every fixture in the home was used simultaneously what would be the total pressure demand?

|  |  |  |
| --- | --- | --- |
| Fixture | Number of Fixtures | Total Pressure (psi) |
| Water Closet |  |  |
| LAV |  |  |
| Tub/Shower |  |  |
| Tub |  |  |
| Shower |  |  |
| Kitchen Sink |  |  |
| Dishwasher |  |  |
| Laundry Machine |  |  |
| Laundry Sink |  |  |
| ¾” Hose Bibb |  |  |
| Total Pressure Demand | |  |