**CMGT 235 – Electrical and Mechanical Systems**

Department of Construction Management 🏵 California State University, Chico

Homework #15– Plumbing Systems

Points: 20

Due: 10/8/2022

Solution

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

**Directions**

Bathroom Groups:

1. Determine the total DFU for the Bathrroms for the two-story house plan used for In Class Activity #3.  
   (a) As individual fixtures using Table 702.1 and  
   (b) as bathroom groups using Appendix C.   
    SHOW ALL WORK FOR FULL CREDIT

BG 1, 2, and 3 9.0

SHW 2.0

WC 3.0

BIDET 2.0

BG 4, 5, and 6 3.0

½ BG 0.5

19.5

**BG #1**

**Appendix C**

**TOTAL DFU = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**BG #2**

**½ BG #1**

**BG #6**

**BG #5**

**BG #4**

**BG #3**

|  |  |  |  |
| --- | --- | --- | --- |
| Fixture | # of Fix. | DFU | |
| EACH | THIS JOB |
| MSTR BATH | | | |
| WC | 1 | 3.0 | 3.0 |
| LAV | 2 | 1.0 | 2.0 |
| BT | 1 | 2.0 | 2.0 |
| SHW | 1 | 2.0 | 2.0 |
| WC | 1 | 3.0 | 3.0 |
| BIDET (1 ½”) | 1 | 2.0 | 2.0 |
| B2 | | | |
| WC | 1 | 3.0 | 3.0 |
| LAV | 1 | 1.0 | 1.0 |
| BT | 1 | 2.0 | 2.0 |
| B3 | | | |
| WC | 1 | 3.0 | 3.0 |
| LAV | 1 | 1.0 | 1.0 |
| BT/SHW | 1 | 2.0 | 2.0 |
| B4 | | | |
| WC | 1 | 3.0 | 3.0 |
| LAV | 1 | 1.0 | 1.0 |
| SHW | 1 | 2.0 | 2.0 |
| B5 | | | |
| WC | 1 | 3.0 | 3.0 |
| LAV | 1 | 1.0 | 1.0 |
| BT/SHW | 1 | 2.0 | 2.0 |
| B6 | | | |
| WC | 1 | 3.0 | 3.0 |
| LAV | 1 | 1.0 | 1.0 |
| SHW | 1 | 2.0 | 2.0 |
| PW | | | |
| WC | 1 | 3.0 | 3.0 |
| LAV | 1 | 1.0 | 1.0 |
| TOTAL | |  | 48.0 |

Continued on back

1. Size the Building Drain and Sewer

|  |  |  |
| --- | --- | --- |
| **Code** | **Size of Building Drain and Sewer** | **Slope** |
| Table 703.2 | 4” | ¼ inch per foot |
| Table C 304.2 | 3” | 1/8 inch per foot |
| Table C 304.2 | 4” | ¼ inch per foot |