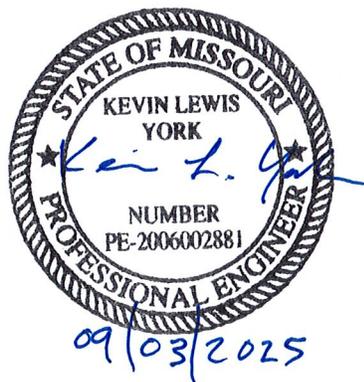Cornerstone at Bailey Farms 2nd Plat With Fire Flow at Maximum Day Demand

| | ID | Static Demand (gpm) | Static Pressure (psi) | Static Head (ft) | Fire-Flow Demand (gpm) | Residual Pressure (psi) |
|---|---|---|---|---|---|---|
| 1 | 6359 | 0.00 | 73.72 | 1,201.13 | 1,000.00 | 71.87 |
| 2 | 6360 | 0.00 | 75.02 | 1,201.13 | 1,000.00 | 72.28 |
| 3 | 6374 | 0.00 | 80.22 | 1,201.13 | 1,000.00 | 77.10 |
| 4 | 6375 | 0.00 | 80.22 | 1,201.13 | 1,000.00 | 77.24 |
| 5 | 6387 | 16.99 | 77.62 | 1,201.13 | 1,000.00 | 74.75 |
| 6 | 6388 | 15.41 | 76.75 | 1,201.13 | 1,000.00 | 73.60 |

STATE OF MISSOURI
KEVIN LEWIS
YORK
NUMBER
PE-2006002881
PROFESSIONAL ENGINEER

09/03/2025

Cornerstone at Bailey Farms 2nd Plat With No Fire Flow at Peak Hour Flow

| | | ID | Static Demand (gpm) | Static Pressure (psi) | Static Head (ft) | Fire-Flow Demand (gpm) | Residual Pressure (psi) |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 6359 | 0.00 | 67.06 | 1,185.76 | 0.00 | 67.06 |
| 2 | ☐ | 6360 | 0.00 | 68.37 | 1,185.78 | 0.00 | 68.37 |
| 3 | ☐ | 6374 | 0.00 | 73.57 | 1,185.78 | 0.00 | 73.57 |
| 4 | ☐ | 6375 | 0.00 | 73.57 | 1,185.78 | 0.00 | 73.57 |
| 5 | ☐ | 6387 | 33.98 | 70.96 | 1,185.76 | 0.00 | 70.96 |
| 6 | ☐ | 6388 | 30.81 | 70.10 | 1,185.78 | 0.00 | 70.10 |

| Water Demand and Fire Flow Requirements | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | |
| Node 6387 | | 17.0 | gpm Max Day Demand for 32 dewlling units | | | |
| | | 34.0 | gpm Peak Hour Demand for 32 dwelling units | | | |
| | | | | | | |
| Node 6388 | | 15.4 | gpm Max Day Demand for 32 dewlling units | | | |
| | | 30.8 | gpm Peak Hour Demand for 32 dwelling units | | | |
| | | | | | | |
| Average day demand (gpm) based on 2.78 people/dwelling unit with 125 gallons/person ÷ 1440 | | | | | | |
| Maximum day water demand (gpm)  = 2.2 X average day demand | | | | | | |
| Peak hour demand = 2 X maximum day demand | | | | | | |
| | | | | | | |
| All nodes | | 1000.0 | gpm for fire flow | | | |