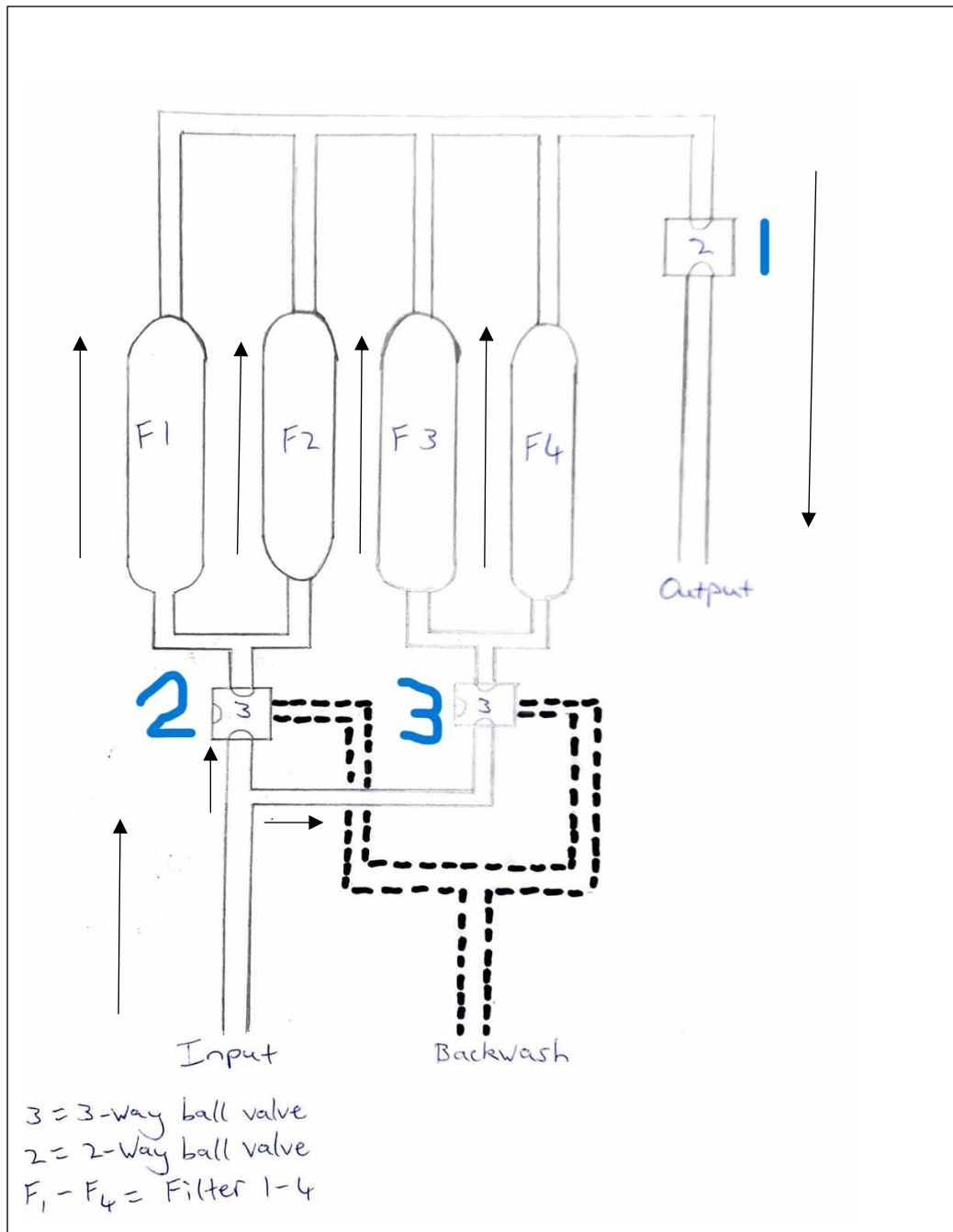


## Safi unit sequence of events document

Figure 1: Diagram indicating regular filtering of water (no backwash)



**Arrows indicate water flow.**

#### Sequence 1:

- Actuator 1,2,3 all allow input water to flow through filters and into home (no backwashing).
- See figure 1 of positioning of the openings of the ball valves for direction of water flow.

#### Sequence 2:

- Actuator 1 closes ball valve to prevent water from flowing at output.
- (See figure 2 for display of ball valve behaviour)

#### Sequence 3:

- Actuator 2 maintains 3-way ball valve at current position. Actuator 3 switches ball valve to allow opening at backwash pipe and at filter end only (Input end is closed).
- 1<sup>st</sup> backwash performed for 30 seconds.
- (See figure 2 for display of behaviour.)

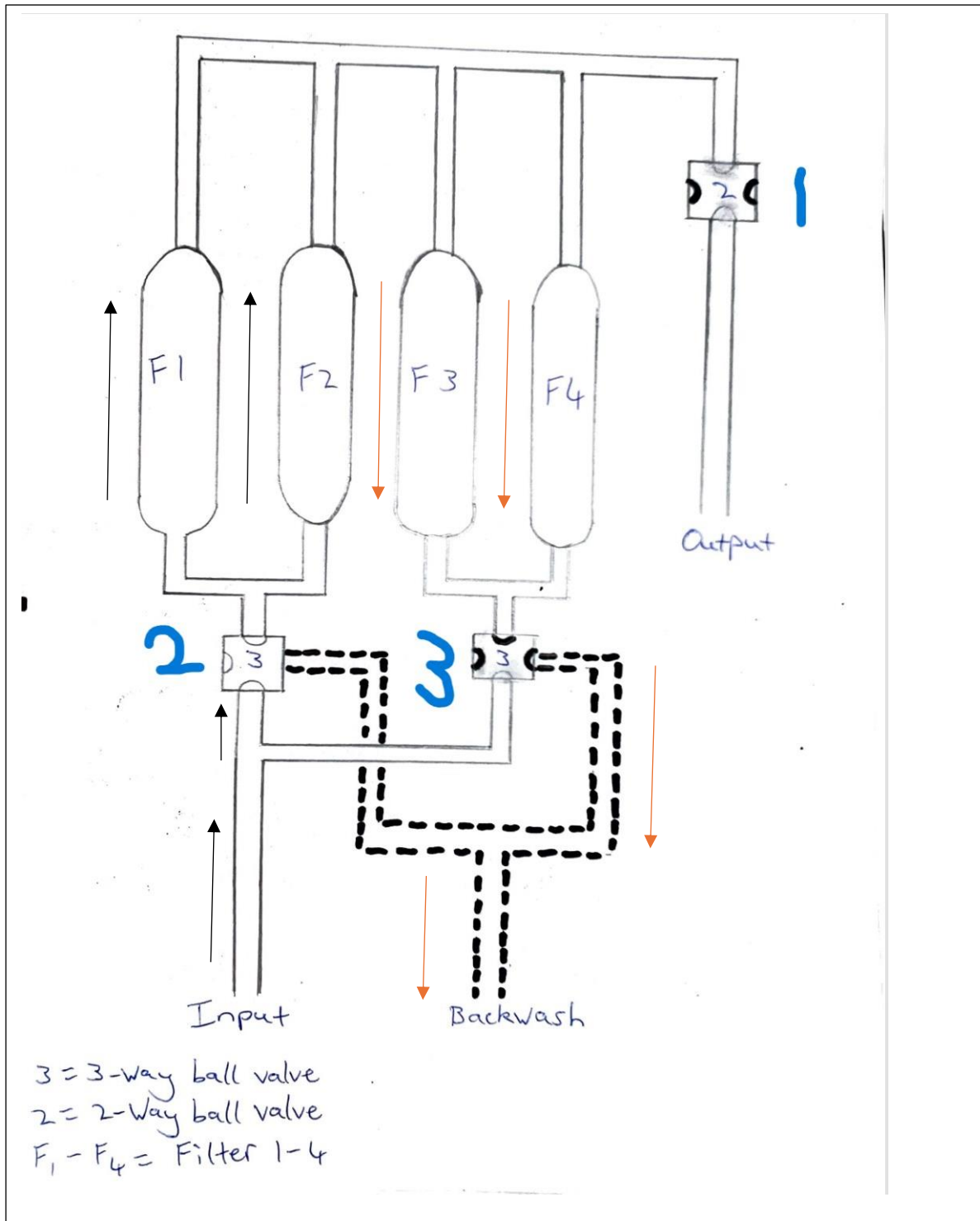
#### Sequence 4:

- Actuator 3 returns valve to original opening as seen in figure 1.
- Actuator 2 switches ball valve to allow opening at backwash pipe and at filter end only (Input end is closed).
- (Identical process from sequence 3, now on ball valve connected to actuator 2).
- 2<sup>nd</sup> backwash performed for 30 seconds.

#### Sequence 5:

- Actuator 2 returned to original position. (As seen in figure 1)
- Actuator 1 returns ball valve to open position to allow water flow once more. (As in figure 1)
- Actuator 1,2,3 all allow input water to flow through filters and into home (no backwashing). (Repeat of sequence 1)

Figure 2: Diagram displaying backwash behaviour.



**Arrows indicate water flow.**

**Red arrows show backwash path.**