

## COMPUTING WORKSHEET

### Summary of required Fire Flow

#### 1. Site Data

Structure	Bldg Floor Area	Fire Flow Area
<b>Building A</b>		
Residential	69,756 SF	27,324 SF (Max. with 1 hr rated fire wall separation)
<b>Building B</b>		
Residential	63,966 SF	27,414 SF (Max. with 1 hr rated fire wall separation)
<b>Building C</b>		
Residential	55,839 SF	23,931 SF (Max. with 1 hr rated fire wall separation)
<b>Building D</b>		
Residential	63,693 SF	27,297 SF (Max. with 1 hr rated fire wall separation)
<b>Parking Garage</b>		
Parking	125,265 SF	125,265 SF (Max. with 1 hr rated fire wall separation)

#### Building A, B, C, & D

Type of Construction - II(222) - from NFPA 220; Fire-Resistive Non-Combustible

#### Parking Garage

Type of Construction - II(000) - from NFPA 220; Unprotected Non-Combustible

#### 2. Determine Required Fire Flow per Florida Fire Prevention Code (NFPA 1 as amended) (Unsprinkled Building)

##### Building A

Required Fire Flow (RFF) = 1,750 gpm @ 20 PSI per NFPA 1 Ch 18 table 18.4.5.1.2

Duration = 2 Hours

##### Building B

Required Fire Flow (RFF) = 1,750 gpm @ 20 PSI per NFPA 1 Ch 18 table 18.4.5.1.2

Duration = 2 Hours

##### Building C

Required Fire Flow (RFF) = 1,750 gpm @ 20 PSI per NFPA 1 Ch 18 table 18.4.5.1.2

Duration = 2 Hours

##### Building D

Required Fire Flow (RFF) = 1,750 gpm @ 20 PSI per NFPA 1 Ch 18 table 18.4.5.1.2

Duration = 2 Hours

##### Garage

Required Fire Flow (RFF) = 7,500 gpm @ 20 PSI per NFPA 1 Ch 18 table 18.4.5.1.2

Duration = 4 Hours

#### 3. Determine Required Fire Flow per Florida Fire Prevention Code (NFPA 1 as amended) (For NFPA compliant Automatic Sprinkled Building)

##### Building A

Sprinkled Bldg Required Fire Flow reduce RFFby 75% = 437.5 gpm @ 20 PSI

Minimum Required Flow for Sprinkled Bldg = 1000 gpm @ 20 PSI USE 1000 gpm

Minimum Required Flow for Quick Response Heads = 600 gpm @ 20 PSI USE 1000 gpm

##### Building B

Sprinkled Bldg Required Fire Flow reduce RFFby 75% = 437.5 gpm @ 20 PSI

Minimum Required Flow for Sprinkled Bldg = 1000 gpm @ 20 PSI USE 1000 gpm

Minimum Required Flow for Quick Response Heads = 600 gpm @ 20 PSI USE 1000 gpm

##### Building C

Sprinkled Bldg Required Fire Flow reduce RFFby 75% = 437.5 gpm @ 20 PSI

Minimum Required Flow for Sprinkled Bldg = 1000 gpm @ 20 PSI USE 1000 gpm

Minimum Required Flow for Quick Response Heads = 600 gpm @ 20 PSI USE 1000 gpm

##### Building D

Sprinkled Bldg Required Fire Flow reduce RFFby 75% = 437.5 gpm @ 20 PSI

Minimum Required Flow for Sprinkled Bldg = 1000 gpm @ 20 PSI USE 1000 gpm

Minimum Required Flow for Quick Response Heads = 600 gpm @ 20 PSI USE 1000 gpm

##### Parking Garage

Sprinkled Bldg Required Fire Flow reduce RFFby 75% = 1875 gpm @ 20 PSI

Minimum Required Flow for Sprinkled Bldg = 1000 gpm @ 20 PSI USE 1875 gpm

Minimum Required Flow for Quick Response Heads = 600 gpm @ 20 PSI USE 1875 gpm

Maximum Required Fire Flow 1875 gpm

#### 4. Determine Available Flow from Flow Test

Total Flow at 20 psi using test data Residual Pressure

FH 3,259 gpm

Total Available Flow @Test Static (74 psi) 3,259 gpm

Available flow exceeds Required Fire Flow unsprinkled building

Total Flow at 20 psi with Design System Residual Pressure Adjusted to 50 psi

FH 2,372 gpm

Total Available Flow @ 50 psi Static 2,372 gpm

Available flow exceeds Required Fire Flow for sprinkled Building