

COMPUTING WORKSHEET

Summary of required Fire Flow

1. Site Data

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