



Botek Thurlow Engineering, Inc.

Civil Engineers

Celebrating 15 Years 2006-2021

DRC

PZ24-12000003

08/21/2024

November 21, 2022

RE: 580 Briny, Pompano Beach, FL

Required Fire Flow Calculation

The following equation was used to calculate the fire flow:

$$NFF = (C)(O)[1.0 + (X + P)]$$

NFF = the needed fire flow in gallons per minute (gpm)

C = a factor related to the type of construction (gpm) – Non Combustible = 0.75

O = a factor related to the type of occupancy

X = a factor related to the exposure buildings

P = a factor related to the communication between buildings

$$C = 18F(A)^{0.5}$$

F = 0.8 for Construction Class 3 (noncombustible construction)

A = effective area

The effective area is the sum of the square footage of the largest floor in the building and ½ the area of the other floors:

Level 01 = 8,702 sq. ft.

Level 02-09 = 45,064 sq. ft. (total)

Level 10-11 = 10,156 sq. ft. (total)

Effective Area = 63,922 sq. ft.

$$C = 18 F (A)^{0.5} = 18 \times 0.8 \times 63,922^{0.5} = 3640$$

$$NFF = (C)(O)[1.0 + (X + P)]$$

$$NFF = (3640)(0.75)[1.0 + 0.0]$$

$$\mathbf{NFF = 2730\ GPM}$$

Sincerely,

BOTEK THURLOW ENGINEERING, INC.

Stephen F. Botek, P.E.

Fla. Registration #55335

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05/15/2024