



**NASSAU COUNTY BOARD OF COUNTY COMMISSIONERS
NASSAU COUNTY FIRE RESCUE DEPARTMENT
FIRE PREVENTION**

**96160 Nassau Place, Yulee, Florida 32097
(904) 491-7525 Fax (904) 321-5748**



Nassau County Fire Rescue Site Plan Checklist

General Information:

1. Provide the owners name, address and phone number on the plan
2. Provide engineers name, address, phone and fax number on plan
3. Indicate the number of structures on site (new and existing)
4. Provide construction type for each structure, include truss and frame type
5. Indicate number of floors per building
6. Provide square footage per building per floor
7. Provide proposed building and eave height
8. Indicate the address for each existing structure
9. *Place the minimum required fire flow upon the proposed site plan, use FFPC 1-18.3 and Table 18.4.5.1.2 include specific construction type..*

Provide the following comments

10.
 - A) Landscaping, or any other obstructions shall not be located within 7.5 feet to the front or sides or 4.5 feet to the rear of any fire hydrant or fire department connection
 - B) Water for fire fighting purposes shall be indicated with a blue roadway reflector placed one foot off the center line of the road facing the fire hydrant. This includes new AND existing sources (NFPA 1: 18.5.7.1)
 - C) Water for fire fighting purposes shall be available at the time combustibles are brought on site
 - D) New fire hydrants shall be positioned not more than 8 feet nor less than 6 feet off the edge of pavement. The center line of the steamer connection (4") shall be positioned between 18"-24" above finish grade (IE sodded or mulched). Also, all hydrants shall be readily accessible without the need to transverse swales, ditches ect.

Building Access

11. Provide the following notation:

Access shall be provided by an unobstructed, 20 foot wide, all weather driving surface capable of supporting a 32 -ton emergency vehicle. The driving surface shall be maintained during all phases of construction.

12. As far as fire rescue, a minimum roadway radii on a county maintained road shall be no less than 25 feet
13. As far as fire rescue, a minimum roadway radii on a state maintained roadway shall be no less than 35 feet
14. The AHJ shall have the authority to require an access box(es) to be installed in accessible location where access to or within a structure or area is difficult because of security. (NFPA 1: 18.2.2.1, 2009 Edition) When a fire alarm, sprinkler system or because the owner requires it, and access box shall be required.
15. The AHJ shall have the authority to require fire department access be provided to gated subdivisions or developments through the use of an approved device or system. (NFPA 1: 18.2.2.2, 2009 Edition) When gates are installed to the entrance of a subdivision or development an access key switch shall be required. NCFR uses Knox Box and they can provide the switches by ordering.
16. Any dead end roads, over 150 feet in length, shall have a turnaround approved by the fire marshal
17. A cul-de-sac shall have a minimum radius of 50 feet depending on ordinance.
18. Gates shall have a minimum clear width of 20 feet (NFPA 1: 18.2.3.4.1.1)
19. Fire lanes shall be marked with a freestanding signs with the wording, "NO PARKING FIRE LANE BY ORDER OF THE FIRE DEPARTMENT". Sign shall be 12 in. by 18 in. with white background and red lettering and shall be a maximum of seven feet in height from the roadway to the bottom part of the sign. The signs shall be within sight of traffic flow and be a maximum of 60 feet apart (NFPA 1 FL: 18.2.3.5.3 2009 Edition)
20. A fire department access road shall extend to within 50 feet of at least one side hinged, swinging type egress exterior door that can be opened from the outside and that provides access to the interior of the building. This provision does not apply to any buildings or structures not required a side hinged swinging type egress. (NFPA FL 1: 18.2.3.2.1, 2009 Edition)
21. Fire department access roads shall be provided such that any portion of the facility or portion of an exterior wall of the first story of the building is located not more than 150 feet from fire department access roads as measured by an approved route around the exterior of the building (NFPA 1: 18.2.3.2.2, 2009 edition)

22. Vehicle load limits shall be posted at both entrances to bridges, ramps, and elevated roadways where required by the AHJ (NFPA 1: 18.2.3.4.5.3, 2009 edition)
23. The angle of approach and departure for any means of fire department access road shall not exceed 1 ft drop in 20 ft or the design limitations of the fire apparatus of the fire department, and shall be subject to approval by the AHJ (NFPA 1: 18.2.3.4.6.2, 2009 edition)

Water Supply, Water Mains, Fire Hydrants and Fire Department Connections

24. Water supply for fire protection and fire hydrant locations and distribution shall be in accordance with Annex I of the National Fire Protection Association (NFPA 1), of the "Florida Fire Prevention Code". Distance measured, as a fire truck would lay a hose along a road or driveway. Existing public hydrants may be used to meet some or all of the fire flow requirements.
25. Indicate on and off site water main sizes supplying the fire protection systems. (IE fire hydrants, sprinkler and standpipe systems)
26. Indicate proposed and existing fire hydrants within the required travel distance to the most remote accessible point of the structure. (Per code, the maximum travel distance is 500 feet)
27. Fire hydrants shall be located within 100 feet of any fire department connection
28. Indicate location of all fire department connections. *FDCs shall be grouped together and shall not be located on any building*
29. Fire department located within 50 feet of each other shall be marked as to which system/building each FDC serves
30. Indicate backflow and double detector check devices
31. Indicate the point of service where the water main is used strictly for fire suppression activities.
32. Fire Department Connections (FDC) shall also be identified by a sign that states "NO PARKING FDC" Or "FDC" this shall be on a white sign with 6" red letters
33. All FDC's will have locking FDC caps.

NOTE:

Water models may be required for a large fire flow requirements, systems that have long pipe runs, unusual or questionable layouts or as deemed necessary by this office. To help expedite your plans, engineers are encouraged to submit water models before formal requests are made by the fire marshal.

BASIC REQUIREMENTS FOR DETERMINING MINIMUM FIRE FLOW

Table 18.4.5.1.2 Minimum Required Fire Flow and Flow Duration for Buildings

Fire Flow Area ft ² (x 0.0929 for m ²)					Fire Flow gpm [†] (x 3.785 for L/min)	Flow Duration (hours)
I(443), I(332), II(222)*	II(111), III(211)*	IV(2HH), V(111)*	II(000), III(200)*	V(000)*		
0-22,700	0-12,700	0-8200	0-5900	0-3600	1500	2
22,701-30,200	12,701-17,000	8201-10,900	5901-7900	3601-4800	1750	
30,201-38,700	17,001-21,800	10,901-12,900	7901-9800	4801-6200	2000	
38,701-48,300	21,801-24,200	12,901-17,400	9801-12,600	6201-7700	2250	
48,301-58,000	24,201-33,200	17,401-21,300	12,601-15,400	7701-9400	2500	
58,001-70,900	33,201-39,700	21,301-25,500	15,401-18,400	9401-11,800	2750	
70,901-83,700	39,701-47,100	25,501-30,100	18,401-21,800	11,801-13,400	3000	3
83,701-97,700	47,101-54,900	30,101-35,200	21,801-25,900	13,401-15,600	3250	
97,701-112,700	54,901-63,400	35,201-40,600	25,901-29,300	15,601-18,000	3500	
112,701-128,700	63,401-72,400	40,601-46,400	29,301-33,500	18,001-20,600	3750	
128,701-145,900	72,401-82,100	46,401-52,500	33,501-37,900	20,601-23,300	4000	
145,901-164,200	82,101-92,400	52,501-59,100	37,901-42,700	23,301-26,300	4250	
164,201-193,400	92,401-103,100	59,101-66,000	42,701-47,700	26,301-29,300	4500	4
193,401-203,700	103,101-114,600	66,001-73,300	47,701-53,000	29,301-32,600	4750	
203,701-225,200	114,601-126,700	73,301-81,100	53,001-58,600	32,601-36,000	5000	
225,201-247,700	126,701-139,400	81,101-89,200	58,601-65,400	36,001-39,600	5250	
247,701-271,200	139,401-152,600	89,201-97,700	65,401-70,600	39,601-43,400	5500	
271,201-295,900	152,601-166,500	97,701-106,500	70,601-77,600	43,401-47,400	5750	
Greater than 295,900	Greater than 166,500	106,501-115,800	77,001-83,700	47,401-51,500	6000	
		115,801-125,500	83,701-90,600	51,501-55,700	6250	
		125,501-135,500	90,601-97,900	55,701-60,200	6500	
		135,501-145,800	97,901-106,800	60,201-64,800	6750	
		145,801-156,700	106,801-113,200	64,801-69,600	7000	
		156,701-167,900	113,201-121,300	69,601-74,600	7250	
		167,901-179,400	121,301-129,600	74,601-79,800	7500	
179,401-191,400	129,601-138,300	79,801-85,100	7750			
		Greater than 191,400	Greater than 133,300	Greater than 85,100	8000	

*Types of construction are based on NFPA 220.
 †Measured at 20 psi (139.9 kPa).

NFPA 220 Table A.4.1.1 provides a comparison of similar types of construction for various model building codes.**

Table A.4.1.1 Cross-Reference of Building Construction Types

NFPA 220 (NFPA 5000)	I(442)	I(332)	II(222)	II(111)	II(000)	III(211)	III(200)	IV(2HH)	V(111)	V(000)
IBC	—	IA	IB	IIA	IIB	IIIA	IIIB	IV	VA	VB

IBC: International Building Code

NFPA 5000: Table A.7.2.1.1

** This table has been edited to exclude codes not adopted by the State.

See 2010 FFPC 1-18.4 for additional information/requirements for water for firefighting.

One of the big changes to the 2010 edition Florida Fire Prevention Code is changes to the Fire Flow requirements for buildings. Below is the language for the new code.

18.4 Fire Flow Calculations for buildings.

18.4.1*scope.

A.18.4.1 Section 18.4 and the associated tables are only applicable for determining minimum water supplies for manual fire suppression efforts. Water supplies for fire protection systems are not addressed by this section. It is not the intent to add the minimum fire protection water supplies, such as for a fire sprinkler system, to the minimum fire flow for manual fire suppression purposes required by this section.

18.4.1.1* The procedure determining fire flow requirements for buildings hereafter constructed shall be in accordance with section 18.4.

A.18.4.1.1 For the purposes of this section, a building subdivided by firewalls constructed in accordance with the building code is considered to be a separate building.

18.4.1.2 Section 18.4 does not apply to structures other than buildings.

18.4.2 Definitions. See definitions 3.3.13.6 (Fire Flow Area) and 3.3.108 (Fire Flow).

3.3.13.6 Fire Flow Area. The floor area, in square feet, used to determine the required fire flow.

3.3.108 Fire Flow. The flow rate of a water supply, measured at 20psi (137.9 kPa) residual pressure, that is available for fire fighting.

18.4.3 Modifications

18.4.3.1 Decreases. Fire Flow requirements shall be permitted to be modified downward by the AHJ for isolated buildings or a group of buildings in rural areas or small communities where the development of full fire flow requirements is impractical.

18.4.3.2 Increases. Fire flow shall be the total floor area of all floor levels of a building except as modified in 18.4.4.1.1.

18.4.4 Fire Flow Area.

18.4.4 General. The fire flow area shall be the total floor area of all floor levels of a building except as modified in 18.4.4.1.1.

18.4.4.1.1 Type I (443), Type I (332), and Type II (222) Construction. The fire flow area of a building constructed of Type I (443), Type I (332), and Type II (222) construction shall be the area of the three largest successive floors.

18.4.5 Fire Flow Requirements for Buildings.

18.4.5.1 One and Two Family Dwellings.

18.4.5.1.1 The minimum fire flow and flow duration requirements for one and two family dwellings having a fire flow area that does not exceed 5000 square feet shall be 1000 gpm for 1 hour.

18.4.5.1.1.1 A reduction in required fire flow of 50 percent shall be permitted when the building is provided with an approved automatic sprinkler system.

18.4.5.1.1.2 A reduction in the required fire flow of 25 percent shall be permitted when the building is separated from other buildings by a minimum of 30 feet.

18.4.5.1.1.3 The reduction in 18.4.5.1.1.1 and 18.4.5.1.1.2 shall not reduce the required fire flow to less than 500 gpm.

18.4.5.1.2 Fire flow and flow duration for dwellings having a fire flow area in excess of 5000 square feet shall not be less than that specified in table 18.4.5.1.2.

18.4.5.1.2.1 A reduction in required fire flow of 50 percent shall be permitted when the building is provided with an approved automatic sprinkler system.

18.4.5.2 Buildings Other Than One and Two Family Dwellings. The minimum fire flow and flow duration for buildings other than one and two family dwellings shall be as specified in Table 18.4.5.1.2. (See below).

18.4.5.2.1 A reduction in required fire flow of 75 percent shall be permitted when the building is protected throughout by an approved automatic sprinkler system. The resulting fire flow may not be less than 1000 gpm.

18.4.5.2.2 A reduction in required fire flow of 75 percent shall be permitted when the building is protected throughout by an approved automatic sprinkler system which utilizes quick response sprinklers throughout. The resulting fire flow shall not be less than 600 gpm.

EXPOSURES: DISTANCES

(ANY BUILDING WITHIN 150 FEET IS CONSIDERED AN EXPOSURE)

HAZARD CHARGE

- 0 – 10' = +25%**
- 11 – 30' = +20%**
- 31 – 60' = +15%**
- 61 – 100' = +10%**
- 101 – 150' = + 5%**

NORTH	_____	FT. ADD	_____	%
EAST	_____	FT. ADD	_____	%
SOUTH	_____	FT. ADD	_____	%
WEST	_____	FT. ADD	_____	%
		TOTAL	_____	%

Hazard Charge= Fire Flow using table 18.4.5.1.2 X Total Percentage

Minimum Fire Flow = Fire Flow using table 18.4.5.1.2 + Hazard Charge