



City of North Miami Beach, Florida

BUILDING DEPARTMENT

FENCE PERMITS

CONSTRUCTION FOR MASONRY FENCES

- 1) If the prescriptive requirement of section 2121.8 of the Florida Building Code is used, provide the following details.
For up to 5' in height, provide 8" th. CMU wall with and 8" x 8" coping with 2 # 4 bars.
For greater than 5' but less than 6' in height, provide 8" th. wall with 8" x 12" tie beams and tie columns with 4#5 bars and #3 stirrups at 12" o.c. The c/c spacing of the tie columns shall not exceed 16' and the masonry panel between tie beams & tie columns shall not be greater than 240 sft.
- 2) Unless the prescriptive requirements of section 2121.8 of the Florida Building Code are complied with, masonry fences shall be designed for the wind loads as prescribed in the chapter 16 (HVHZ section) of the Florida Building Code.
- 3) If the height of the fence does not exceed 6', then use a wind speed of 90 mph (3-second gust) In accordance with section 1612.2.1 of the Florida Building Code.
- 4) If the height of the fence exceeds 6', then use a wind speed of 146 mph.
- 5) The following structural calculations shall be provided.

- a) Wind pressures
- b) Masonry Design
- c) Foundation Design

- 6) Foundation Design: The foundations shall be checked for the axial gravity load and moment due to wind at the bottom of the foundation. Use the stress equation:

$$f_{max}, f_{min} = \frac{P \pm M}{A \quad S}$$

f_{max} shall not exceed the assumed or calculated bearing capacity of the soil.

f_{min} shall not exceed the assumed or calculated bearing capacity of the soil AND shall not be a negative number (which indicates that the soil will be in tension)

If the calculated soil stress is a negative number, then perform iterations to satisfy the inequality. If it is not possible to satisfy the inequality, then use piles.

- 7) Pile Foundation Design: If piles are used, then provide a soil report. Calculate the tension and shear due to wind. Space the piles in such a manner that the piles are adequate to sustain the tension and shear due to wind. Perform pile cap calculations. Make sure top and bottom layers of steel is provided for pile caps being supported by piles.
- 8) The following structural notes shall be provided on the drawings.
 - a) Code references for FBC, Masonry & Concrete
 - b) Wind Load Parameters (V. I. Exposure Category)
 - c) Material strengths for steel, concrete & masonry
 - d) Soil Statement (if pad footing is used)
 - e) Reference to soil report with date and pile sizes & capacities (if piles are used)
 - f) Concrete covers to reinforcement
- 9) The following details shall be provided on the drawings.
 - a) Plan view showing the foundation and masonry
 - b) If piles are used, show the location and spacing of piles
 - c) If the code prescriptive design is used, also show the spacing of the tie columns on the plan.
 - d) If the code prescriptive design is used, provide the details of tie beams & tie columns
 - e) A wall section showing the masonry, coping and foundation details.
 - f) If piles are used, show the embedment of the piles in the pile cap
 - g) Specify the sizes of the masonry horizontal & vertical reinforcement and dowels.
 - h) Show the location of masonry reinforcement dowels.
 - i) Show the foundation and coping/tie beam reinforcement