Madani, Mo

From: DANIEL LAVRICH <dlavrich@aol.com>
Sent: Wednesday, July 12, 2023 1:20 PM
To: Madani, Mo
Cc: Ana Barbosa
Subject: Broward County Building Safety Insp Program
Attachments: BORA Policy 05-05.pdf

Mo,

Attached is a copy of the Broward County Building Safety Inspection Program. As discussed in our EBIWG meeting today, all of the information and requirements discussed relating to inspection requirements, time for inspections, time allocated to submit inspections, steps to take if inspections are not timely submitted, and more are contained in the Broward County Inspection Program. I suggest that you forward a copy of this to all of the committee members for their review and consideration. A considerable amount of time and effort went into the drafting of the Broward County Program. I believe that the issues discussed today, and the concerns raised are covered in the requirements set forth in our program.

I particularly call your attention to Section III.

Respectfully suggested,

Dan

https://www.broward.org/CodeAppeals/Documents/BORA%20Policy%2005-05.pdf

Sent from my iPad

DANIEL L. LAVRICH, P.E., S.I., F.ASCE, F.SEI

Lavrich & Associates, Inc.
Consulting Engineers
13500 SW 16 Ct
Davie, FL 33325

Cell Phone: 954-850-5679

Broward County Board of Rules and Appeals Policy # 05-05

Subject: Broward County Board of Rules and Appeals – Building Safety Inspection Program

I. GENERAL:

A. Section 110.15 of the Broward County Administrative Provisions of the Florida Building Code has established a **Building Safety Inspection Program.**

B. The procedures established herein are the basic guidelines for the Building Safety Inspection Program.

C. The following buildings or structures are **exempt** from this program:

1. U.S. Government buildings
2. State of Florida buildings
3. Buildings built on Native American Reservations
4. School buildings under the jurisdiction of the Broward County School Board
5. One- and two-family dwellings
6. "Fee Simple Townhouses" as defined in the Florida Building Code
7. "Minor Structures" are defined as buildings or structures in any occupancy group having a gross floor area of less than three thousand five hundred (3,500) square feet.

D. All buildings or structures that have performed a building safety inspection under the prior program ("40-Year Building Safety Inspection Program") are deemed compliant with F.S.553.899 and are now on the subsequent building safety inspections of every ten (10) year intervals from the year the initial building safety inspection was required.

E. Buildings or structures that must perform a phase one and/or phase two milestone inspection as defined under F.S. 553.899, this building safety inspection shall serve as compliance for both milestone inspection requirements.

F. The purpose of the Building Safety Inspection Program is not to determine if the condition of an existing building is in compliance with the current Florida Building Code.

II. DEFINITIONS:

A. "Threshold Building" shall be defined as any building which is greater than three stories or fifty (50) feet in height or which has an assembly occupancy classification as defined in the Florida Building Code which exceeds five thousand (5,000) square feet in area and an occupant content of greater than five hundred (500) persons, or as otherwise defined by F.S. 553.71, which may be amended from time to time.

B. "Minor Buildings or Structures" for the purpose of this program, shall be defined as buildings or structures in any occupancy group having a gross area of less than three thousand five hundred (3,500) square feet.

1. Any building or structure, regardless of size, which houses, covers, stores, or maintains any support features, materials, or equipment necessary for the operation of all or part of the primary structure, or operation of any feature located upon the real property, shall not be considered a minor building or structure and shall be subject to inspection as otherwise set forth herein.
2. Structures to be included in the safety inspection program are elevated decks, balconies, docks, and seawalls if attached to or supporting any structure. Parking garages, guardrails, and as such, are not exempt from this program.

C. "Building Safety Inspection" means a structural and electrical inspection of a building or structure by a Florida Licensed Professional authorized to practice in this state for the purposes of attesting to the life safety and adequacy

specializing in electrical design.

E. Reporting Procedures:

1. Within ninety (90) days of receiving the **Notice of Required Building Safety Inspection**, the owner or association must complete the building safety inspection. The Florida Licensed Professional shall issue a written report, including the BORA structural and electrical safety inspection report forms, to the Building Official and the owner or association. The report will state that each such building or structure is structurally and electrically safe, or has been made structurally and electrically safe, for the specified use for continued occupancy, in conformity with the minimum inspection procedural guidelines as issued by the BORA or will indicate the types of repairs necessary to be undertaken.
2. The inspection report shall, at a minimum, meet all the following criteria:
   a. Bear the seal and signature, or the electronic signature, of the licensed engineer or architect who performed the inspection.
   b. In addition to a detailed written narrative report, the completed BORA structural and electrical safety inspection report forms shall be submitted as part of the report.
   c. Color photos with sufficient resolution shall be included with the reports to adequately convey typical conditions observed, particularly where defects have been found.
   d. Indicate the manner and type of inspection forming the basis for the inspection report.
   e. Identify any substantial structural deterioration or electrical deficiencies within a reasonable professional probability based on the scope of the inspection, describe the extent of such deterioration and/or deficiencies, and identify any recommended repairs for such issues.
   f. State whether any unsafe or dangerous conditions, as those terms are defined in the Florida Building Code, were observed.
   g. Recommend any remedial or preventive repair for any items that are damaged but are not substantial structural deterioration and/or deficiencies.
   h. Identify and describe any items requiring further inspection.
3. If the building inspected is a condominium or cooperative, the association must distribute a copy of the inspector-prepared summary of the inspection report to each condominium unit owner or cooperative unit owner, regardless of the findings or recommendations in the report, by United States mail or personal delivery and by electronic transmission to unit owners who previously consented to receive notice by electronic transmission; must post a copy of the inspector-prepared summary in a conspicuous place on the condominium or cooperative property; and must publish the full report and inspector-prepared summary on the association's website, if the association is required to have a website.
4. A local enforcement agency may prescribe timelines and penalties with respect to compliance with this section.

F. Duty to Report: Any Florida Licensed Professional who performs an inspection of an existing building or structure has a duty to report to the owner, association, and the building official any findings that, if left unaddressed, would endanger life or property, no later than ten (10) days after informing the appropriate parties of such findings. However, if such professional finds that there are conditions in the building or structure causing an actual or immediate danger of the failure or collapse of the building or structure or if there is a health hazard, windstorm hazard, fire hazard, or any other life safety hazard, such professional shall report such conditions **immediately** to the building owner or association, and to the building official within twenty-four (24) hours of the time of discovery. In addition to assessing any fines or penalties provided by Broward County or the municipality, the Building Official shall report any violations of this provision to the appropriate licensing agency, regulatory board, and professional organization of such engineer or architect.

G. Required Repairs or Modifications:

1. In the event that repairs or modifications are found to be necessary as a result of the building safety inspection, the owner shall have a total of 180 days from the date of the building safety inspection report, unless otherwise specified by the Building Official in accordance with Florida Building Code, Section 110.15 (Florida Building Code, Broward County Amendments), in which to complete required repairs and correct the structural and electrical deficiencies. All applicable building code requirements shall be followed with all applicable permits obtained. The existing Florida Building Code will specify whether the repairs or modifications can be made under the code in effect when the building was originally permitted, or the code currently in effect. If an owner

General Considerations & Guidelines for Building Safety Inspections Part of Broward County BORA Policy #05-05

I. SCOPE OF STRUCTURAL INSPECTION

The **fundamental purpose** of the required building safety inspection and report is to confirm in a reasonable fashion that the building or structure under consideration is safe for continued use under its present occupancy. As implied by the title of this document, this is a recommended procedure, and under no circumstances are these minimum recommendations intended to supplant proper professional judgment.

Such inspection shall be for the purpose of determining the general structural condition of the building or structure to the extent reasonably possible of any part, material, or assembly of a building or structure which affects the safety of such building or structure and/or which supports any dead, live, or wind or other loads.

In general, unless there is obvious overloading or significant deterioration of important structural elements, there is little need to verify the original design. It is obvious that this has been time-tested if still offering satisfactory performance. Rather, it is important that the effects of time with respect to the degradation of the original construction materials be evaluated. It will rarely be possible to visually examine all concealed construction, nor should such be generally necessary. However, a sufficient number of typical structural members should be examined to permit reasonable conclusions to be drawn.

Visual Examination will, in most cases, be considered adequate when executed systematically. The visual examination must be conducted throughout all habitable and non-habitable areas of the building, as deemed necessary, by the inspecting professional to establish compliance. Surface imperfections such as cracks, distortion, sagging, excessive deflections, significant misalignment, signs of leakage, and peeling of finishes should be viewed critically as indications of possible difficulty.

Testing Procedures and quantitative analysis will not generally be required for structural members or systems except for such cases where visual examination has revealed such need or where apparent loading conditions may be critical.

Manual Procedures such as chipping small areas of concrete and surface finishes for closer examinations are encouraged in preference to sampling and/or testing where visual examination alone is deemed insufficient. Generally, unfinished areas of buildings, such as utility spaces, maintenance areas, stairwells, and elevator shafts, should be utilized for such purposes. In some cases, to be held to a minimum, ceilings or other construction finishes may have to be opened for selective examination of critical structural elements. In that event, such locations should be carefully located to be least disruptive, most easily repaired, and held to a minimum. In any event, a sufficient number of structural members must be examined to afford reasonable assurances that such are representative of the total structure.

Evaluating an existing structure for the effects of time must take into account two basic considerations; movement of structural components with respect to each other and deterioration of materials.

With respect to the former, volume change considerations, principally from ambient temperature changes and possibly long-time deflections, are likely to be the most significant. Foundation movements will frequently be of importance, usually settlement, although upward movement due to expansive soils may occur, although infrequently in this area. Older buildings on spread footings may exhibit continual, even recent settlements if founded on deep unconsolidated fine-grained or cohesive coils or from subterraneous losses or movements from several possible causes.

With very little qualifications, such as rather rare chemically reactive conditions, deterioration of building materials can only occur in the presence of moisture, largely related to metals and their natural tendency to return to the oxide state in the corrosive process. In this marine climate, highly aggressive conditions exist year-round. For most of the year, outside relative humidity may frequently be about 90% or 95%, while within the air-conditioned building, relative humidity will normally be about 55% to 60%. Under these conditions, moisture vapor pressures ranging from about ⅓ to ½ pounds per

Masonry Bearing Walls
Random cracking, or if discernible, definitive patterns of cracking, will, of course, be of interest. Bulging, sagging, or other signs of misalignment may also indicate related problems in other structural elements. Masonry walls, commonly constructed of either concrete masonry units or terra-cotta blocks, may have been constructed with either reinforced concrete columns and tie beams or lintels.

Of most probable importance will be the vertical and horizontal cracks where masonry units abut tie columns or other frame elements such as floor slabs. Of interest here is the observation that although the raw materials of which these masonry materials are made may have much the same mechanical properties as the reinforced concrete framing, their actual behavior in the structure, however, is likely to differ with respect to volume change resulting from moisture content, and variations in ambient thermal conditions.

Moisture vapor penetration, sometimes abetted by salt-laden aggregate and corroding rebars, will usually be the most common cause of deterioration. Tie columns are rarely structurally sensitive, and a fair amount of deterioration may be tolerated before structural; impairment becomes important. Cosmetic-type repair involving cleaning, and parching to effectively seal the member, may often suffice. A similar approach may not be unreasonable for tie beams, provided they are not also serving as lintels. In that event, a rudimentary analysis of load capability using the remaining actual rebar area may be required.

Floor and Roof Systems
Cast-in-place reinforced concrete slabs and/or beams and joists may often show problems due to corroding rebars resulting from cracks or merely inadequate protection cover of concrete. Patching procedures will usually suffice where such damage has not been extensive. Where corrosion and spalling have been extensive in structurally critical areas, competent analysis with respect to remaining structural capacity relative to the actual supported loads will be necessary. The type and extent of repair will be dependent upon the results of such investigation.

Pre-cast concrete members may present similar deterioration conditions. End support conditions may also be important. Adequacy of bearing, indications of end shear problems, and restraint conditions are important, and should be evaluated in at least a few typical locations.

Steel Framing System
Corrosion, obviously enough, will be the determining factor in the deterioration of structural steel. Most likely, suspect areas will be fasteners, welds, and the interface area where bearings are embedded in masonry. Column bases may often be suspect in areas where flooding has been experienced, especially if salt water has been involved. Concrete fireproofing will, if it exists, be the best clue indicating the condition of the steel.

Concrete Framing Systems
Concrete deterioration will, in most cases, similarly be related to rebar corrosion. In this respect, honeycomb areas may contribute adversely to the rate of deterioration. Columns are frequently the most suspect. Extensive honeycombing is most prevalent at the base of columns, where fresh concrete was permitted to segregate, dropping into forms. This type of problem has been known to be compounded in areas where flooding has occurred, especially involving salt water.

Thin cracks usually indicate only minor corrosion, requiring minor patching only. Extensive spalling may indicate a much more serious condition requiring further investigation.

In spall areas, chipping away a few small loose samples of concrete may be very revealing, especially since loose material will have to be removed even for cosmetic-type repairs, anyway. Fairly reliable quantitative conclusions may be drawn with respect to the quality of the concrete. Even though cement and local aggregate is essentially derived from the same sources, cement will have a characteristically dark grayish-brown color in contrast to the almost white aggregate. A typically white, almost alabaster-like coloration will usually indicate reasonably good overall strength.

Windows and Doors
Window and door condition is of considerable importance with respect to two considerations. Continued leakage may have resulted in other adjacent damage, and deteriorating anchorage may result in the loss of the entire unit in severe windstorms

III. HISTORICAL DOCUMENTS, PERMITTING, REPAIRS, AND REPORTS

An attempt shall be made by the condominium or cooperative to investigate the existence of documents with the local jurisdiction to assist with the overall inspection of the building.

Understanding the structural system, building components, and intended design may guide the design professional to investigate certain critical areas of the structure.

Violations through the code compliance division of the local jurisdiction should be investigated. Cases on file may lead to issues pre-existing with the building, especially any unsafe structure determinations. Depending on the nature of the violation, building safety inspections may be affected.

Unpermitted activities may also affect the outcome of a building safety inspection, especially with unpermitted additions to the building. The building safety inspection of a building is conducted on the entire structure, including the original construction and any subsequent permitted addition. Unpermitted additions found by the building safety inspection process present an unsafe situation and shall be identified in the report, even if found to be properly built. Like a repair process identified by the report, legalizing an unpermitted addition would be a prerequisite to the completion of a successful building safety inspection report. Examples of unpermitted work that may affect building safety inspections include but are not limited to additions, alterations, balcony enclosures, etc.

Repairs identified in the building safety inspection report will most likely require permits. Once the initial report is completed, it should be immediately submitted to the local jurisdiction for processing. Do not proceed to conduct repairs without permits. Some repairs, for example, changing a bulb in an exit sign, may not require a permit, but most other work will require permits. Proceeding without obtaining repair permits may lead to a violation of the code. Additionally, repairs being conducted under a permit will afford additional time to comply with a complete building safety inspection report.

Completing the reports is vital to the overall understanding of the conditions of the building and the successful completion of the building safety inspection process. The approved report forms provided herein shall be used. Proprietary forms will not be accepted. Such approved forms are to be considered supplemental to and in addition to a detailed written report. Sufficient photos shall be included to adequately convey typical conditions observed, particularly where defects are found. Where provided, photos shall be in color and with sufficient resolution to detail the conditions being shown. Building safety inspection reports may be audited, and the subject building may be inspected at the discretion of the Building Official. The Building Official reserves the right to rescind or revoke an approved building safety inspection report.

The **Code in Effect** at the time of the original construction is the baseline for the building safety inspections. Subsequent improvements to the original building should be inspected based on the code at the time of permitting. It is not the intent of the building safety inspection that buildings must be brought into compliance with current codes.