

NEW RULE CHAPTER 61G15-38
RESPONSIBILITY RULES OF PROFESSIONAL ENGINEERS CONCERNING THE
EVALUATION OF DAMAGED STRUCTURES

61G15-38.001 General Responsibility of Engineers Conducting Damage Evaluations

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61G15-38.001 General Responsibility of Engineers Conducting Damage Evaluations

- (1) Engineers are often called upon to provide damage evaluation for buildings, structures and sites that have been damaged related to a specific event. Engineers conducting damage evaluations and reports shall:
- (2) Comply with the requirements of the General Responsibility Rules, Chapter 61G15-30, F.A.C., and with the requirements of the more specific responsibility rules contained herein.
- (3) Conduct evaluations and procedures including inspection, testing, investigation and report format consistent with and in accordance with ASCE/SEI Standard 30-14, Guideline for Condition Assessment of the Building Envelope, which standard is incorporated herein by reference. The material incorporated is copyrighted material and may be ordered from the American Society of Civil Engineers, 1801 Alexander Bell Drive, Reston, VA 20191-4400; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308.
- (4) Conduct evaluations and procedures including investigations, inspections, testing and reporting consistent with and in accordance with ASCE/SEI Standard 11-99, Guideline for Structural Condition Assessment of Existing Buildings, which standard is incorporated herein by reference. The material incorporated is copyrighted material and may be ordered from the American Society of Civil Engineers, 1801 Alexander Bell Drive, Reston, VA 20191-4400; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308.

61G15-38.002 Specific Responsibility of Engineers Providing Damage Evaluations

Engineers who provide Damage Evaluations shall:

- (1) Only engage in damage assessments if their education, expertise, experience, and specific knowledge is relevant in the type of damage involved in the evaluation;
- (2) Possess the technical qualifications to provide professional judgement on the issues of a report including conclusions and recommendations;
- (3) Identify the mechanism of failure, causation and document the actual condition of damaged components being evaluated;
- (4) Be responsible for all aspects of a signed and sealed damage report;
- (5) identify parts of a report referred or assigned to a delegated engineer;
- (6) Review the documents of the delegated engineer for conformance with Rule 61G15-30.005, F.A.C.;
- (7) Verify accuracy of Information recorded by the engineer's authorized representative and/or the delegated engineer from a site visit that is part of the engineer's deliverable documentation.

61G15-38.003 General Requirements for Damage Evaluation Reports

All Damage Evaluation Reports shall:

- (1) Comply with the specific provisions of Chapter 5 Report of the Condition Assessment of ASCE/SEI Standard 30-14, Guideline for Condition Assessment of the Building Envelope. The material incorporated is copyrighted material and may be ordered from the American Society of Civil Engineers, 1801 Alexander Bell Drive, Reston, VA 20191-4400; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308;
- (2) Be signed and sealed by the Engineer who prepared the Report;
- (3) Include a resume or c.v. of the Engineer's experience, qualifications and training.
- (4) If applicable to the particular Damage Evaluation, contain the following information:
 - (a) Name and date of weather or damage event the Report is to address;
 - (b) The date(s) of on-site inspection(s);
 - (c) Identification of the individual(s) performing inspections;
 - (d) Identification of references, tests, publications, applicable building codes, industry standards and specific chapter(s) or sections that the Report is intended to rely on;
 - (e) Documentation of all observed and recorded damage;
 - (f) Documentation of any destructive or selective demolition performed.
- (5) Include weather assessment documentation by a qualified meteorologists for a site- specific survey, and meteorologist report.

61G15-38.004 Damage Evaluation Reports for Roof Covering Systems

(1) General Requirements for All Roofing Covering System Damage Evaluation Reports. In addition to complying with 61G15-38.003 General Requirements for Damage Evaluation Reports, Damage Evaluation Report of a Roofing Covering System shall at a minimum, indicate:

- (a) the type or kind of covering;
- (b) age of roof covering system;
- (c) the building code and industry standards that apply;
- (d) the method of attachment;
- (e) the orientation, height, slope, geometry, shape and configuration of the roof structure the System is attached to;
- (f) the name of the manufacturer and notice of acceptance (NOA), if available;
- (g) The approved building permit for the roof covering, if available;
- (h) Building Code Roofing Standards that were required to be utilized at time of original construction;
- (i) A detailed description of the damage that has occurred as a result of the specific event that is the subject of the Report;
- (j) The mechanism of failure or causation of the described damage;
- (k) A roof plan showing damaged areas and detailed locations of damage;
- (l) Photographs of damaged roof areas;
- (m) A description of the specific weather event with meteorologist documentation that is relevant; and
- (n) information from persons familiar with the roof history such as owners, contractors, or other individuals who were interviewed.

(2) Additional Requirements for Damage Evaluation Reports regarding **Steep Slope Tile Roofing Systems - Concrete or Clay Tile**. Damage Evaluation Reports regarding concrete or clay tile roofing systems shall, in addition to the general requirements for all Damage Evaluation Reports state, provide and/or note the following information as appropriate for the particular system being evaluated:

- (a) Type of roof tile, the manufacturer, dimensions, shape or profile of tile, strength of tile (compressive and tensile), density or weight;
- (b) Characteristics of roof structure such as: slope, gable end, hip end, skylights, penetrations including flashing, valley gutters, soil stacks, vent pipes, chimneys, metal accessories, ridge ventilation, rake ends and roofing sections;
- (c) Requirements of the NOA as published by the tile manufacturer, if available;
- (d) Note the type of damage at specific locations (uplift, cracks, pull off, hail, etc.) identified on a roof plan;
- (e) The type of fastening system utilized. (mechanical, adhesive, mortar, etc.);
- (f) Hurricane clips and fasteners utilized such as roofing screws or coated galvanized ring shank nails;
- (g) Overlapping of field, ridge, and rake tiles;

- (h) Age of the roofing and previous permits information on the past applications of the roofing system if available;
- (i) Known or observed exposure to the underlayment;
- (j) Type of underlayment installed if observable;
- (k) Known or observed water damage (leaks) on the interior of the building;
- (l) Research, reports or references published in the industry which were relied upon;
- (m) Tests that were performed such as Florida Building Code Standards Test procedure of static uplift resistance of Mechanically attached Rigid Roof Systems;
- (n) Rational engineering calculations as required in Testing Application Standard (“TAS”) 108 as specified in the Florida Building Code, Test Protocols for High-Velocity Hurricane Zones, which is incorporated by reference in subsection 61G15-18.011(6), F.A.C., that were performed;
- (o) Evaluation of the moment of resistance and minimum characteristic resistance load in accordance with Roofing Application Standard (“RAS”) 127 as specified in the Florida Building Code, Test Protocols for High-Velocity Hurricane Zones, which is incorporated by reference in subsection 61G15-18.011(6), F.A.C., that were performed;
- (p) State how the roofing system has been installed in accordance with RAS No. 118, Installation of Mechanically Fastened Roof Tile Systems; RAS No. 119, Installation of Mechanically Fastened Roof Tile Systems; or RAS No. 120, Mortar and Adhesive Set Tile Application;
- (q) Roof structure materials that make up the roof sheathing such as OSB Oriented Strand Board , plank or Plywood;
- (r) Roof plan indicating the square footage, pitch, sections, valley gutters, adjacent walls and type of flashing observed;
- (s) Photographs of all of the damaged tile and or underlayment and identification as to where the photographs were taken on the roof plan;
- (t) Estimate of the percentage of roof area or tiles that were damaged;
- (u) Statements from property owner or other persons with respect to knowledge of individuals who have been on the roof prior to the Engineer’s inspection, who were involved in activities such as pressure cleaning, temporary covering of tarpaulins , applications of caulking , or tile replacement;
- (v) Engineering principles and/or calculations that support the findings or recommendations of the report;
- (w) Additional Recommended Standards or data that should be incorporated in roof concrete or clay tile Reports, if utilized.
 - i. Wind uplift calculations-roofing system per standard ASCE/SEI Standard 7-22, Minimum Design Loads and Associated Criteria for Buildings and Other Structures. The material incorporated is copyrighted material and may be ordered from the American Society of Civil Engineers, 1801 Alexander Bell Drive, Reston, VA 20191-4400; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308;

- ii. Wind building frame pressure calculations;
- iii. Notice of Acceptance (NOA) requirements;
- iv. Fastener Rupture and Tear Resistance of Roofing per standard ASTM D4932, Standard Test Method for Fastener Rupture and Tear Resistance of Roofing and Waterproofing Sheets, Roll Roofing, and Shingles; the material incorporated is copyrighted material and may be ordered from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308.
- v. Tile Roofing Industry Alliance Technical Brief #2021 Evaluation of Roofs After High Wind Events;
- vi. Tile Roofing Institute Technical Brief #99-002 Chipped Tile;
- vii. ICC-ES ESR-2015P - Evaluation of Concrete and Clay Roof Tile Installation Manual for Moderate Climate Regions;
- viii. Application standards including TAS 108, Test Procedure for Wind Tunnel Testing of Air Permeable, Rigid, Discontinuous Roof Systems;
- ix. RAS 127, Standard Procedure of Determining Applicability of Tile System Installation;
- x. RAS 118, Installation of Mechanically Fastened roof Tile System; Specification including approved Underlayment Assemblies and standard Flashing Details(Counter Batten and Direct Nail Applications;
- xi. RAS 119 System #1Model Nail-On Tile Specification;
- xii. TAS 106 Standard Procedure for Field Verification of The Bonding of Mortar or Adhesive Set Tile Systems and Mechanically Attached, Rigid, Discontinuous Roof Systems;
- xiii. Redland Technology published reports;
- xiv. Chapter 15 Roof Assemblies and Rooftop Structures FBC;

(3) Additional Requirements for Damage Evaluation Reports regarding Steep Slope-Asphaltic or Fiberglass Shingle Roofing Systems.

Damage Evaluation Reports regarding asphaltic or fiberglass steep slope shingle roofing systems shall, in addition to the general requirements for Damage Evaluation Reports state or note the following information as relevant to the particular system being evaluated:

- (a) Type of roof, shingle manufacturer, dimensions, shape or profile of shingle, number of tabs, weight of shingle, mineral granules, layout pattern, sealant strip and head lap or exposure;
- (b) Water-shedding underlayment in place under the primary roof covering;
- (c) Characteristics and geometry the of roof structural system such as slope, gable end, hip end, valley gutters, skylights, penetrations, soil stacks, vent pipes, chimneys including flashing, metal accessories and roofing sections;
- (d) Requirements of the NOA as published by the shingle manufacturer;

- (e) The type of damage at specific locations (uplift, cracking, pull off, tear off, hail) including the type of failure such as adhesive in the sealant strip, identified on a roof plan;
- (f) Type of mechanical fastening system utilized, including gauge, type, number of nails and location of nails on tabs, etc.);
- (g) Age of the roof and previous permits information on the last application of the roofing system;
- (h) Previous repairs or shingle replacement if known;
- (i) Known or observed exposure to the underlayment;
- (j) Known or observed water damage (leaks) on the interior of the building;
- (k) Research, reports or references published in the industry which were relied upon;
- (l) Tests that were performed including Florida Building Code Standards such as Test procedure of Static Uplift Resistance of Mechanically attached Roof Systems or ASTM D228 Standard Test Methods for Sampling, Testing and Analysis of Asphalt Roll Roofing, Cap Sheets and Shingles Used in Roofing and Waterproofing; the material incorporated is copyrighted material and may be ordered from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308;
- (m) State if the Roofing system has been installed in accordance with RAS 115 and FBC section 1507.2, Asphalt Shingles;
- (n) Roof structure materials that make up the sheathing such as OSB Oriented Strand Board , plank or Plywood;
- (o) Roof plan indicating the square footage, the sections, valley gutters, adjacent walls and type of flashing observed;
- (p) Location of damaged shingles and the type of damage at the specific locations
- (q) Photographs of all of the damaged shingles and or underlayment and identification as to where the photographs were taken on the roof plan;
- (r) Statements from property owner with respect to knowledge of individuals who have been on the roof prior to the Engineer's inspection, such as pressure cleaning contractors, temporary covering of tarpaulins or materials, applications of caulking , shingle replacement activities;
- (s) Engineering principles and/or calculations that support the findings or recommendations of the report;
- (t) Recommended Standards or data that should be incorporated in shingle reports, if utilized.
 - i. Wind uplift calculations-roofing per standard ASCE 7;
 - ii. Wind building frame pressure calculations;
 - iii. Design of shingle roofing and contractual specifications;
 - iv. Notice of Acceptance requirements;
 - v. Testing of shingle manufacture's systems (laboratory and field);
 - vi. mechanical fastening applications;
 - vii. materials, including asphaltic felts and fiberglass, characteristics;

- viii. mechanically attached underlayment per ASTM D8257, Standard Specification for Mechanically Attached Polymeric Roof Underlayment Used in Steep Slope Roofing; ; the material incorporated is copyrighted material and may be ordered from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308.
- ix. ASTM D 6381 Standard Test Method for Measurement of Asphalt Shingle Mechanical Uplift Resistance; ; the material incorporated is copyrighted material and may be ordered from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308.
- x. ASTM D7158 Standard Test Method for Wind Resistance of Asphalt Shingles (Uplift Force/Uplift Resistance Method); ; the material incorporated is copyrighted material and may be ordered from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308.
- xi. ASTM D3462 Standard Specification for Asphalt Shingles made From Glass Felt and Surfaced with Mineral Granules; ; the material incorporated is copyrighted material and may be ordered from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308.
- xii. ASTM D 3462 Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral granules; ; the material incorporated is copyrighted material and may be ordered from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308.
- xiii. RAS No. 115 Standard Procedures for Asphaltic Shingle Installation;
- xiv. aerodynamics above a roof plane;
- xv. Damage documentation;
- xvi. Florida Building Code Chapter 15 - Repair vs Replacement;
- xvii. Weather assessment – documentation.

(4) Additional Requirements for Damage Evaluation Reports for Low Slope Roof Covering Systems. Low Slope Roof Covering Systems may consist of BUR, TPO, Single Ply, Foam, Modified Bituminous, concrete pavers, and similar materials. Damage Evaluation Reports regarding Low Slope Roof Covering Systems shall, in addition to the general requirements for Damage Evaluation Reports include the following:

- (a) Type and materials of a roofing system such as BUR, gravel topping, coating, SPF, TPO, SBS, APP, EPDM, single or multiple-ply, organic felt, asphalt-coated glass fiber base sheet, insulation, manufacturer, dimensions, and strength of low slope materials;
- (b) Characteristics of roof such as pitch, skylights and penetrations including flashing and sections., expansion joints, parapet wall, crickets, overflow scuppers and roof drains;
- (c) Equipment on roof such as Air Conditioning compressors, cooling towers, standpipes, ventilators, ventilation stacks, exhaust fans, electrical conduit, antenna fixtures, railings, walking pads, etc.;
- (d) Requirements of the NOA as published by the manufacturer;
- (e) Type of damage at specific locations (uplift, cracks, pull off, blisters, fish mouths, seam separation, scour, hail) identified on a roof plan;
- (f) Type of fastening system utilized.(mechanical, adhesive, asphalt, etc.);
- (g) Existing system including insulation components, piles of roofing felt, interplay layers of bituminous material, top coating and surfacing;
- (h) Age of the roof and previous permits information on the last application of the roofing system or previous repairs or go-over systems;
- (i) Known or observed exposure to the underlayment;
- (j) Type of underlayment and or insulation provided;
- (k) Known or observed water damage (leaks) on the interior of the building;
- (l) Methods utilized for detecting and locating leaks in the waterproof membranes such as ASTM D7877, Standard Guide for Electronic Methods for Detecting and Locating Leaks in Roofing and Waterproofing Membranes and/or ASTM D7053, Standard Guide for Determining and Evaluating Causes of Water Leakage of Low-Sloped Roofs; the material incorporated is copyrighted material and may be ordered from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308.
- (m) Research, reports or references published in the industry which were relied upon including the NOA;
- (n) Tests that were performed including Florida Building Code Standards Test Procedure of static uplift resistance of Mechanically or fully adhered attached Low Slope Roof Systems;
- (o) Moisture surveys and coring tests;
- (p) Roof plan indicating the square footage, the sections, adjacent walls, roof drains, roof drain, overflow drains, pitch and type of flashing observed;
- (q) Location of damaged membrane and the type of damage at the specific locations;
- (r) Photographs of all of the damaged cap sheets and/or underlayment;
- (s) Identification as to where the photographs were taken on a roof plan;

- (t) If performed, a roof moisture survey by an independent laboratory as per standard ASTM D 7954, Standard Practice for Moisture Surveying of Roofing and Waterproofing Systems Using Nondestructive Electrical Impedance Scanners; ; the material incorporated is copyrighted material and may be ordered from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308.
- (u) Statements from property owner with respect to knowledge of individuals who have been on the roof prior to the Engineer's inspection, such as pressure cleaning contractors, temporary covering of tarpaulins or materials, applications of caulking , or roof membrane replacement activities;
- (v) Engineering principles and calculations that support the findings or recommendations of the report;
- (w) The following information if available and when relevant to the particular system being evaluated:
 - (i) Wind uplift calculations -roofing, per standard ASCE 7;
 - (ii) Wind building frame pressure calculations;
 - (iii) Design of low slope roofing and contractual specifications;
 - (iv) Inspections of roofing installations for permit approval;
 - (v) Notice of Acceptance (NOA) requirements;
 - (vi) Testing of low slope manufacture's systems (laboratory and field);
 - (vii) ASTM Standards for Low slope applications;
 - (viii) Adhesive foam applications;
 - (ix) Mechanical fastening applications;
 - (x) Materials (BUR, TPO, coatings) characteristics;
 - (xi) Underlayment types;
 - (xii) Insulation types;
 - (xiii) Roof drainage requirements;
 - (xiv) Florida Building Code Chapter 15 – Repair vs Replacement;
 - (xv) Weather assessment – documentation;

(5) Additional Requirements for Damage Evaluation Reports regarding Steep Slope -_Metal Roof Covering Systems

Metal Roof Covering Systems include such materials as Standing Seam, V-Crimped, and Non-Structural. All Damage Evaluation Reports regarding Metal Roof covering systems shall, in addition to the general requirements for all Damage Evaluation Reports; state, provide or note the following information relevant to the particular system being evaluated:

- (a) Type and materials of a roofing system such as Vertical Standing Seam, V Crimp materials, panel thickness, panel width, gauge, sealants, panel clips, aluminum, zinc coated steel, copper, painted steel, tin, Corrugated, ribs, 5V crimp, Flat pan, weight, and manufacturer;
- (b) Characteristics of roof such as slope, skylights and penetrations including flashing and sections., expansion joints, laps, sealants, soldering;

- (c) Requirements of the NOA as published by the manufacturer;
- (d) Type of damage at specific locations (uplift, cracks, warping , pull off, joint and seam separation, panel clip failure, hail, finish corrosion) identified on a roof plan;
- (e) Type of fastening system utilized.(mechanical, metal clips anchor clips or direct fastening , etc.);
- (f) Age of the roof and previous permits information on the last application of the roofing system or previous repairs;
- (g) Known or observed exposure to the underlayment;
- (h) Type of underlayment and or insulation provided;
- (i) Known or observed water damage (leaks) on the interior of the building;
- (j) Research, reports or references published in the industry which were relied upon including the NOA;
- (k) Tests that were performed including Florida Building Code Standard Test procedure of static uplift resistance of Mechanically attached;
- (l) Roof structure materials that make up the Roof Assembly such as concrete, OSB Oriented Strand Board, plank or Plywood, steel frame, metal joists, purlins;
- (m) Roof plan indicating the square footage, the sections, valley gutters, adjacent walls, roof drains, roof drain, overflow drains, slope and type of flashing observed;
- (n) Location of damaged panels and the type of damage at the specific locations;
- (o) Photographs of all of the damaged areas and identification as to where the photographs were taken on a roof plan;
- (p) Statements from property owner with respect to knowledge of individuals who have been on the roof prior to the Engineer's inspection, such as pressure cleaning contractors, temporary covering of tarpaulins, applications of caulking , sheet metal replacement activities;
- (q) Engineering principles and calculations that support the findings or recommendations of the report.
- (r) If relevant to the particular report, provide the following information:
 - i. Wind uplift calculations-roofing ASCE 7;
 - ii. Wind building frame pressure calculations;
 - iii. Design of metal roofing and contractual specifications;
 - iv. Inspections of roofing installations for permit approval;
 - v. Notice of Acceptance (NOA) requirements;
 - vi. Testing of metal manufacture's systems (laboratory and field);
 - vii. ASTM Standard D3161/D3161M-20, Standard Test Method for Wind Resistance of Steep Slope Roofing Products (Fan-Induced Method)s for Metal Roof applications; ; the material incorporated is copyrighted material and may be ordered from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308.

- viii. Metal Roofing Systems Performance Guide Specification by the Metal Building Manufacturers Association, which is incorporated herein by reference and which may be obtained at [https://mbma.com/sites/default/files/2024-08/Stand Alone Guide Specification.docx](https://mbma.com/sites/default/files/2024-08/Stand_Alone_Guide_Specification.docx);
- ix. ASTM E 1514 Standard Specification for Structural Standing Seam Steel Roof Panel Systems; ; the material incorporated is copyrighted material and may be ordered from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308.
- x. Standing Seam specifications;
- xi. Florida Building Code – Repair vs Replacement;

61G15-38.005 Damage Evaluation Reports for Wall Opening Systems and Fenestration Products.

General Requirements for Wall Opening Systems and Fenestration Products Damage Evaluation Reports. In addition to complying with 61G15-38.003 General Requirements for Damage Evaluation Reports, Damage Evaluations Regarding damage to Wall Opening Systems and Fenestration Products. shall, at a minimum, include the following:

- (1) Type of wall opening system, sliding doors, swing doors, single hung, casement, project-out, windows and/or window walls and curtain walls.
- (2) Type of glass such as:
 - (a) Annealed (or plate) glass
 - (b) Tempered safety glass
 - (c) Insulated glass
 - (d) Laminated glass
- (3) Characteristics of the system from the NOA and requirements of the NOA as published by the manufacturer.
- (4) Type of damage at specific locations such as:
 - (a) Framing joints
 - (b) Glass to frame interfaces
 - (c) Gaskets
 - (d) Connections to the structure
 - (e) Seals
 - (f) Water damage
 - (g) Frame movement
 - (h) Insulated glass
 - (i) Glass stop damage on Aluminum window;
 - (j) Glass stop damage on Vinyl window;
 - (k) Corrosion of aluminum sills, jambs and frames.
- (5) Type of structural wall fastening system utilized;
- (6) Age of the wall-opening system and previous permits that were obtained if available;
- (7) Repairs including recaulking contacts previously undertaken if available;
- (8) Complete structural configuration and loading requirements of the wall opening system including: member sizes, location of wall opening assemblies (in plans and elevation), magnitude of all imposed weather forces, and assumptions. Documents shall also show all required reinforcing steel including size, spacing, and lengths required for the original wall opening system;
- (9) If the Engineer elects to delegate the responsibility for preparation of the Report and calculations to a delegated engineer, the Engineer shall require the submission of installation observations for review;
- (10) When relevant to the particular system being evaluated, provide the following information if available:
 - (a) American Architectural Manufacturers Association (AAMA) Standards for Windows and Doors;

- (b) Wind calculations per standard ASCE 7;
- (c) Wind building frame pressure calculations;
- (d) Previous Inspections of window, door and wall opening installations for permit approval;
- (e) Notice of Acceptance requirements;
- (f) Testing of water intrusion such as:
 - (i) ASTM E576 Standard Test Method for Frost/Dew Point of Sealed Insulating Glass Units; ; the material incorporated is copyrighted material and may be ordered from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308.
 - (ii) ASTM E2128 Standard Guide for Evaluating Water Leakage of Building Walls; ; the material incorporated is copyrighted material and may be ordered from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308.
 - (iii) ASTM E1105 Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors and Curtain walls by Uniform or Cyclic Static Air Pressure Difference; ; the material incorporated is copyrighted material and may be ordered from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308.
 - (iv) AAMA 511 Voluntary Guideline for Forensic Water Penetration Testing of Fenestration Products; ; the material incorporated is copyrighted material and may be ordered from FGIA, 1900 E Golf Road, Suite 1250, Schaumburg, IL, USA 60173; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308.
 - (v) Testing of air infiltration.

61G15-38.006 Damage Evaluation Reports for Exterior Wall Cladding

- (1) General Requirements for Wall Cladding Damage Evaluation Reports. In addition to complying with 61G15-38.003 General Requirements for Damage Evaluation Reports, Damage Evaluation Report regarding wall cladding shall, at a minimum state, provide and/or furnish:
 - (a) The description and configuration of wall cladding components including details of supports, adhesion, anchors and connections for those components;
 - (b) Identification of preformed manufactured siding systems;
 - (c) Component details; and fabrications, installation industry standards and building code requirements;
- (2) Additional Requirements for Damage Evaluation Reports regarding **Stucco Wall Cladding**. Damage Evaluation Reports regarding Stucco wall covering systems shall, in addition to the general requirements for Damage Evaluation Reports, include the following:
 - (a) Description of any evaluation performed pursuant to standard ASTM E2266, Standard Guide for Design and Construction of Low-Rise Frame Building Wall Systems to Resist Water Intrusion ; the material incorporated is copyrighted material and may be ordered from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308.
 - (b) Description of any evaluation performed pursuant to standard ASTM C926 Standard Specification for Application of Portland Cement -Based Plaster; the material incorporated is copyrighted material and may be ordered from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308.
 - (c) Description of any evaluation performed pursuant to standard ASTM C1063 Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster; the material incorporated is copyrighted material and may be ordered from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308.
 - (d) PCA Portland Cement Association standards;

- (3) Additional Requirements for Damage Evaluation Reports regarding **Fiber Cement Wall Cladding**. All Damage Evaluation Reports regarding fiber cement wall covering systems shall, in addition to the general requirements for all Damage Evaluation Reports, include the following:
- (a) Identification of siding manufacturer;
 - (b) Identification of type of siding such as Lap, Panel, Shingle;
 - (c) Identification of building wall construction;
 - (d) Identification of the presence of building wrap and/or water proofing membrane;
 - (e) Description of construction elements including horizontal flashing, window flashing, butt joints, reveal (overlap), nailing pattern (blind vs. Face);
- (4) Additional Requirements for Damage Evaluation Reports regarding **Wood Siding**. All Damage Evaluation Reports regarding wooden siding wall covering systems shall, in addition to the general requirements for all Damage Assessment Reports, include the following:
- (a) Identification of siding manufacturer;
 - (b) Identification of type of siding such as Lap, Panel, Shingle;
 - (c) Identification of building wall construction;
 - (d) Identification of the presence of building wrap and/or water proofing membrane;
 - (e) Description of construction elements including horizontal flashing, window flashing, butt joints, reveal (overlap), nailing pattern (blind vs. Face);
- (5) Additional Requirements for Damage Evaluation Reports regarding **Exterior Insulation and Finish System (“EIFS”) Wall Cladding**. All Damage Evaluation Reports regarding EIFS wall cladding systems shall, in addition to the general requirements for all Damage Evaluation Reports, include the following:
- (a) Identification EIFS siding manufacturer;
 - (b) Identification of thickness of EIFS and bonding agent;
 - (c) Identification of building wall construction;
 - (d) Identification of the presence of building wrap and/or water proofing membrane;
 - (e) Description of construction elements including horizontal flashing, window flashing;
- (6) Additional Requirements for Damage Assessment Reports regarding **Vinyl Plank Wall Cladding**. All Damage Assessment Reports regarding vinyl plank wall cladding systems shall, in addition to the general requirements for all Damage Assessment Reports, include the following:
- (a) Identification of siding manufacturer;
 - (b) Identification of type of siding such as Lap, Panel;
 - (c) Identification of building wall construction;
 - (d) Identification of the presence of building wrap and/or water proofing membrane;
 - (e) Description of construction elements including horizontal flashing, window flashing, butt joints, reveal (overlap), nailing pattern (blind vs. Face);

- (f) Reference as to compliance with ASTM D4756 Practice for the installation of Rigid Polyvinyl Chloride (PVC) Siding and Soffit; the material incorporated is copyrighted material and may be ordered from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308.
 - (g) Reference compliance to ASTM D 3679, Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Siding; the material incorporated is copyrighted material and may be ordered from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428; it is also available for public inspection and examination, but may not be copied, at the Department of State, Administrative Code and Register Section, Room 701, The Capitol, Tallahassee, Florida 32399-0250, and at the Board office, 2400 Mahan Drive, FL 32308..
- (7) Additional Requirements for Damage Assessment Reports regarding **Aluminum Wall Cladding**. All Damage Assessment Reports regarding Aluminum Wall Cladding systems shall, in addition to the general requirements for all Damage Assessment Reports, include the following:
- (a) Identification of siding manufacturer.
 - (b) Identification of type of siding such as Lap, Panel, Shingle.
 - (c) Identification of building wall construction.
 - (d) Identification of the presence of building wrap and/or water proofing membrane
 - (e) Description of construction elements including horizontal flashing, window flashing, butt joints, reveal (overlap), nailing pattern (blind vs. Face)
- (8) Additional Requirements for Damage Assessment Reports regarding **Curtain Wall Cladding**
- (a) Identification of manufacturer.
 - (b) Identification of type of framing
 - (c) Identification of building wall construction.
 - (d) Identification of shop drawings
 - (e) Description of construction elements including horizontal flashing, window jamb flashing, raised curb, weep holes,