



STANDARD OPERATING PROCEDURES

Construction Services Division

Subject: Shipping Container Buildings

Last Updated: 09/18/2018

Purpose: To establish procedural guidelines in regard to plan review submittal requirements and inspection requirements for shipping containers intended to be used in residential or commercial construction. Key terms are provided at the end of this document for reference.

Legal Authority: FBC Existing Building 907.4.1; FBC 1703; F.S. 553.36; FAC 61-41; ICC AC462

Procedure

Plan Review Submittal Requirements for Shipping Container Buildings

For shipping containers to be considered for construction purposes, a plan package must be submitted to Construction Services for review by staff. Depending on whether the building is considered modular/ "closed construction" or non-modular/ "open construction" (see Definitions section at the end of the document) the plan package must include the following items:

If considered modular or "closed construction" as defined in F.S. 553.36 and FAC 61-41

- Building plan package (on minimum plan size 18" x 24" if submitting paper) that includes the following:
 - Site plan to conform to City of Tampa requirements.
 - Mechanical, electrical, and plumbing drawings (on commercial projects only) showing site related utilities such as electrical riser diagrams, connections to water supply and waste water lines, kitchen equipment, etc.
 - Structural drawings of all items requiring completion at the job site, such as foundations, connections between units, tie downs, etc.
 - Life safety plan (on commercial projects only) for review by Fire only.
- Copy of DBPR approved plans, along with the plan tracking number, showing complete container assembly. This requirement is only applicable on projects in which the container modifications are done completely off site or use construction methods deemed as "closed construction."

If considered non-modular or "open construction" as defined in F.S. 553.36 and FAC 61-41

- Building plan package (on minimum plan size 18" x 24" if submitting paper) that includes the following:
 - Building plans, signed and sealed by a professional engineer in accordance with FBC Chapter 22 for steel construction, to include, but not be limited to:
 - Structural steel framing notes.

- Decking requirements for container roofs, which must meet the roof live load criteria of FBC Table 1607.1 and the uplift wind criteria per FBC 1603.1.4. Minimum roof slope requirements in FBC 1507 are also applicable. Product approval listing may also dictate minimum decking requirements.
 - Detailed plan page identifying each shipping container unit involved in construction.
 - Pictures of the CSC data plate number of each container involved in construction.
 - A structural inspection plan identifying the container elements requiring inspection. The inspection plan must be developed by the Engineer of Record (EOR) and reviewed/approved by a third-party structural engineer. A signed and notarized statement from the Owner identifying the third-party structural inspector is also required.
 - Special inspection plans for steel construction developed in accordance with the AISC-360 Specification for Structural Steel Buildings or AISI-S100 North American Specification for the Design of Cold-formed Steel Structural Members referenced in the current version of the Florida Building Code.
- Mechanical, electrical, and plumbing drawings (on commercial projects only) showing all MEP's in the interior or the building as well as site related utilities such as electrical riser diagrams, connections to water supply and waste water lines, kitchen equipment, etc.
 - Structural drawings of all items requiring completion at the job site, such as foundations, connections between units, tie downs, etc.
 - Life safety plan (on commercial projects only) for review by both Building and Fire.
 - Drawings (either from the original manufacturer or as-built drawings) depicting the containers in their original, unaltered state, prior to proposed modifications. Drawings must include but not be limited to: Container dimensions, loading capacity, volume capacity, self-weight, container member structural properties and section properties, material quality, performance specifications for strength, welding requirements, protocols used for testing material strength of containers, etc.
 - Supporting documents to include the following:
 - Letter from a Florida licensed structural engineer detailing all structural evaluations (similar to the requirements of FBC Existing Building 907.4.1) performed on the shipping containers prior to their modification, for purposes of establishing the containers to be used are suitable for modification. This letter must identify each container by CSC plate number.

Note: On projects involving container buildings that are considered "open construction" or non-modular, depending on the complexity of the project a structural analysis of the complete container structure may be required at time of permitting. The analysis should include information regarding container to container connections that may be necessary for adequate transfer of uplift and lateral wind loads.

Inspection Requirements for Shipping Container Buildings

The following inspection requirements shall be observed on projects that involve shipping containers repurposed for use in building construction. Inspections vary based on whether the container building is pre-fabricated off-site (“closed construction”) or constructed on site (“open construction”). For your reference and convenience, definitions of “closed” and “open” construction are provided at the end of this document.

- For shipping container structures manufactured off-site (closed construction), the following inspections are required. This list is not exhaustive, as additional inspections may be deemed necessary by Inspections Supervisor staff. At a minimum, the following are required:
 - BLD-Pre-Construction Inspection
 - MEC, ELE, and PLB Final inspections (verified via engineer letter uploaded to record)
 - Fire-Final (commercial only)
 - BLD-Final (verified via engineer letter uploaded to record)

Note: If a container building is manufactured off-site (closed construction; see definition on last page) but the construction plans are not yet certified by the State, the structure cannot be looked at as a Manufactured Building/Modular Building/Factory-Built Building as defined in F.S. 553.36/FAC 61-41 and therefore all new construction inspections shall apply. Work cannot be covered up until the appropriate inspection(s) are scheduled and receive approval.

- For shipping container buildings manufactured on the job site (open construction), all inspections required during the normal course of residential or commercial new construction shall apply, including but not limited to pre-construction inspections, rough-in inspections, framing, insulation, etc.

Definitions (as defined in F.S. 553.36 and FAC 61-41)

Closed Construction

A building, component, assembly, subassembly, or system manufactured in such a manner that all portions cannot be readily inspected at the installation site without disassembly or destruction thereof.

Manufactured Building, Modular Building, or Factory-Built Building

A closed structure, building assembly, or system of subassemblies, which may include structural, electrical, plumbing, heating, ventilating, or other service systems manufactured in manufacturing facilities for installation or erection as a finished building or as part of a finished building, which shall include but not be limited to residential, commercial, institutional, storage, and industrial structures. The term includes buildings not intended for human habitation such as lawn storage buildings and storage sheds manufactured and assembled offsite by a certified manufacturer.

Open Construction

Any manufactured building, building component, assembly or system manufactured in such a manner that all parts or processes of manufacture can be readily inspected at the installation site without disassembly, damage to or destruction thereof.