city of PALM COAST

Community Development Department
Building Services Division

160 Lake Avenue
Palm Coast, FL 32164
386-986-3780

Truss Submittal Requirements

Effective April 15, 2023

The Palm Coast Building Division will begin requiring truss plans by the truss design company to be submitted with an application for building permit for the following residential construction types:

- One- and two-family dwellings
- Additions to one- and two-family dwellings
- Town Houses
- Multi-Family (apartments, condominiums)

The purpose of this change is to ensure building structural plans coincide with engineered truss design insofar as various reactions and the design of related hold-downs, framing anchors and connectors are concerned.

The Building Division will accept truss plans in two options as outlined below.

Deferred submittals which were commenced last year as a result of supply chain issues and delays for contractors in receiving design information from the truss manufacturer to complete roof framing plans will be discontinued on implementation of this change. Option 2 below is intended to address elimination of deferred submittals and the occasional need for builders to provide a partial submittal as a result of delays in receiving full truss plan packets by allowing submission of a truss reaction summary page for each truss type.

Background

The City has historically required roof framing plans prepared by the design professional of record to be submitted with building plans at time of application for building permit but has not requested engineered truss plans including truss layout, truss reactions and individual truss profile plans to be included. Instead, engineered truss plans have been provided to building inspectors in the field at time of inspections. Over time, the Building Division has identified several problems with this arrangement including:

- Discrepancies between the building design professional of record's roof design loads and reactions and their selection of framing anchors, connectors and hold-downs in comparison to the truss engineer's truss reactions. In many cases, the truss engineer's reactions are significantly greater than the capacities of connectors specified by the building design professional and result in conflicts. In these cases, the truss engineer's design is controlling and supersedes the building design professional.

- Discrepancies are leading to significant corrections for home builders when they are discovered by building inspectors at time of inspections resulting in corrections.

- Corrections generally require engineered plan revisions, Building Division review and approval of changes, installation of additional connecting hardware and in some cases more complex installations to ensure additional connectors are compatible with existing connectors and together provide the necessary strength. All of this leads to lost time and productivity, unanticipated costs and may interfere with production schedules.

- These discrepancies should be solved at plan review, not at time of inspection.

To address these issues, and to improve processes for both contractors and inspectors, the Building Division will begin requesting the following to be submitted with applications for building permit.

Option 1 Complete Truss Plan Submittal Packet

Submittal must include the following:

- A complete truss plan packet, signed and sealed by a Florida licensed professional engineer (the truss design engineer)
- Truss layout / placement plan from truss manufacturer (see Example 1 below)
- Truss profile plan sheets for all trusses.
- Complete truss plan packet cover sheet or first page to include the design professional of record (building design engineer or architect) approval stamp indicating acceptance and approval of truss design (see Example 3 below)

Notes: *The City will accept complete truss packets uploaded as a single document. The City will accept complete truss packets with the truss manufacturer engineer's physical (not digital) signature and seal.* ***Design professional of record approval stamp must be present as noted above. Do not submit without it.***

Option 2 Partial Truss Plan Submittal Packet (may be used when delays prevent the contractor from receiving signed and sealed complete truss submittal packets)

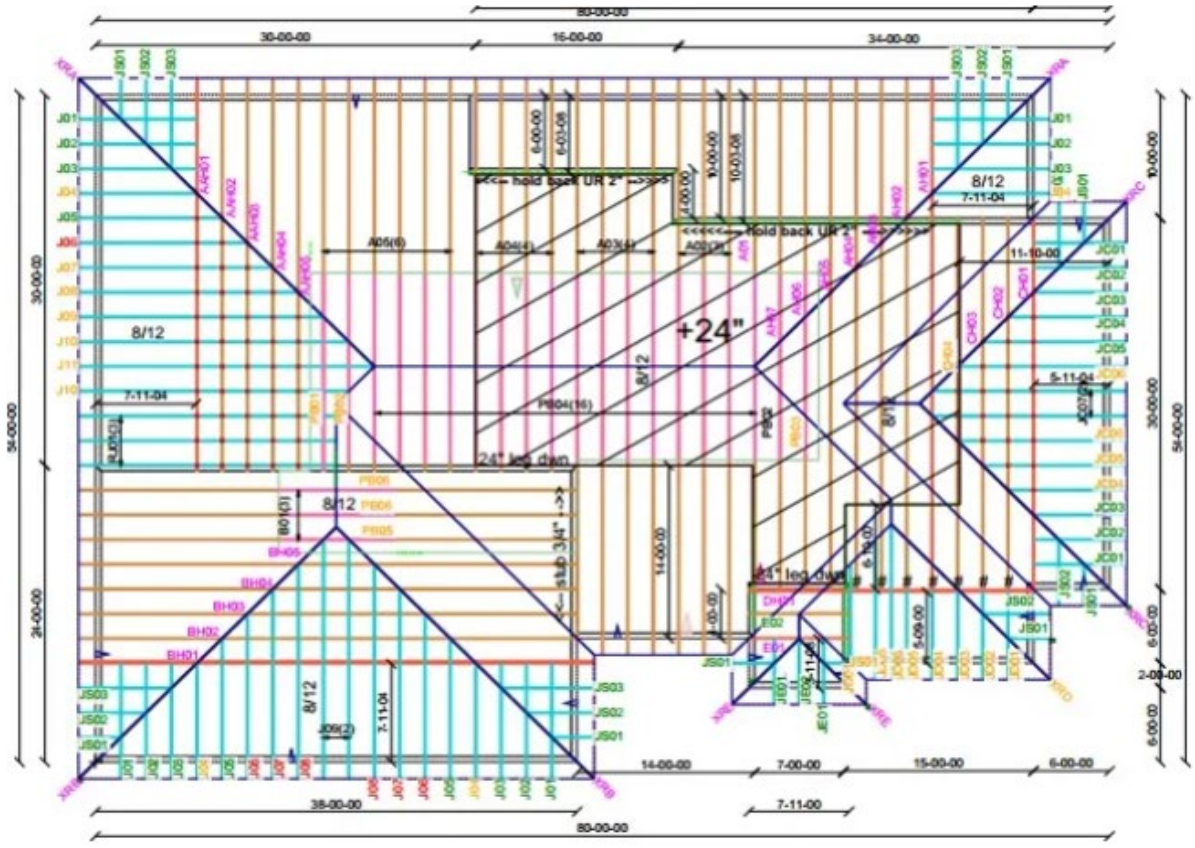
Submittal must include the following:

- Truss Placement / Layout Plan from truss manufacturer (see Example 1 below)
- Truss Reactions Summary Sheet for each truss profile type (see Example 2 below)
- Truss Reactions Summary Sheet to include the design professional of record (building design engineer or architect) approval stamp indicating acceptance and approval of truss design reactions (see Example 3 below)

Notes: *The City will accept partial truss packets uploaded as a single document. The City will accept partial truss plan packets with or without the truss manufacturer engineer's physical (not digital) signature and seal.* ***Design professional of record approval stamp must be present as noted above. Do not submit without it.***

Example 1 Roof Truss Placement / Layout Plan

Typical truss placement / layout plan. This plan may come in a variety of formats depending on the truss manufacturer's design program. Placement / layout plan must include the project address, and truss manufacturer's name and address.



Example 2 Truss Reactions Summary Sheet

Typical truss reaction summary sheet showing reactions for all truss types. This summary sheet is required to be submitted when a complete truss packet is not ready for submittal with application for building permit. BE SURE THESE ARE INCLUDED. MANY TIMES, THIS SHEET IS NOT PROVIDED. The building design professional of record shall place an approval stamp (see Example 3 below) on this sheet.

Reaction Summary

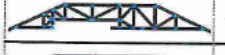
Job Number:
Quoted On:
Ordered On:
Scheduled Delivery On:
Product:

Customer Information
Address & Phone | Contact
Phone:

Job Information
Address | Lot | Sub-Division
Sales Person | Customer P.O. No.
Estimator | Designer

Loading				Building Code	Wind Design Method	Velocity	Exp Cat / Occ Cat	Wind Max	
TCLL	TCDL	BCLL	BCDL					TCDL	BCDL
20	7	0	10	FBC2020/TPI2014	MWFRS (Directional)/C-C hybrid Wind ASCE 7-16	140 mph	C / II	4.2	6

Roof Trusses

Label	Profile	Qty / Ply	Span / Height	TC Pitch / BC Pitch	TC / BC	Reactions
A01		1 2-ply	42-08-00 5-05-15	6 /12	2 x 4 2 x 6	Joint 2: 4137, -1501; Joint 10: 4137, -1501
A02		1 1-ply	42-08-00 6-05-15	6 /12	2 x 4 2 x 4	Joint 2: 1651, -513; Joint 9: 1651, -513
A03		1 1-ply	42-08-00 7-05-15	6 /12	2 x 4 2 x 4	Joint 2: 1924, -515; Joint 9: 1852, -439
A04		1 1-ply	42-08-00 8-05-15	6 /12 3 /12	2 x 4 2 x 4	Joint 2: 1957, -502; Joint 11: 1865, -435
A05		1 1-ply	42-08-00 9-05-15	6 /12 3 /12	2 x 4 2 x 4	Joint 2: 1921, -511; Joint 11: 1844, -437
A06		1 1-ply	42-08-00 10-05-15	6 /12 3 /12	2 x 4 2 x 4	Joint 2: 1940, -508; Joint 10: 1866, -436
A07		1 1-ply	42-08-00 11-05-15	6 /12 3 /12	2 x 4 2 x 4	Joint 2: 1425, -442; Joint 14: 35, -64; Joint 14: 35, -64; Joint 12: 121, -46; Joint 13: 51, -197; Joint 12: 121, -46
A08		1 1-ply	42-08-00 11-07-15	6 /12 3 /12	2 x 4 2 x 4	Joint 2: 1429, -442; Joint 14: 1753, -545; Joint 12: 120, -120
A09		2 1-ply	42-08-00 11-07-15	6 /12 3 /12	2 x 4 2 x 4	Joint 2: 1417, -451; Joint 14: 1722, -550; Joint 12: 129, -124
A10		1 1-ply	42-08-00 11-05-15	6 /12 3 /12	2 x 4 2 x 4	Joint 2: 1417, -455; Joint 14: 1769, -444; Joint 14: 1769, -444; Joint 12: 163, -63; Joint 13: 33, -122; Joint 12: 163, -63
A11		1 1-ply	42-08-00 10-05-15	6 /12 3 /12	2 x 4 2 x 4	Joint 2: 1661, -509; Joint 10: 1585, -435
A12		1 1-ply	42-08-00 9-05-15	6 /12 3 /12	2 x 4 2 x 4	Joint 2: 1931, -503; Joint 11: 1929, -501
A13		1 1-ply	42-08-00 8-05-15	6 /12 3 /12	2 x 4 2 x 4	Joint 2: 1688, -503; Joint 11: 1670, -501
A14		1 1-ply	42-08-00 7-05-15	6 /12	2 x 4 2 x 4	Joint 2: 105, -118; Joint 21: 1795, -417; Joint 22: 228, -59; Joint 2: 105, -118; Joint 21: 1795, -417; Joint 10: 1286, -410
A15		1 1-ply	42-08-00 6-05-15	6 /12	2 x 4 2 x 4	Joint 2: 15, -244; Joint 23: 2118, -636; Joint 11: 1249, -400
A16		1 2-ply	42-08-00 5-05-15	6 /12	2 x 6 2 x 6	Joint 2: 587, -1736; Joint 26: 6924, -2753; Joint 13: 2868, -1078
B01		1 1-ply	16-08-00 5-01-15	6 /12	2 x 4 2 x 4	Joint 2: 768, -245; Joint 15: 683, -245
B02		1 1-ply	16-08-00 5-01-15	6 /12	2 x 4 2 x 4	Joint 2: 689, -245; Joint 6: 689, -245
B03		1 1-ply	16-08-00 4-06-03	6 /12	2 x 4 2 x 6	Joint 1: 704, -232; Joint 5: 848, -326

Example 3 Design professional of record truss approval stamp.

This is an example of a design professional of record (building design engineer or architect) approval stamp for complete truss packets or partial truss packets. Approval stamp must appear on the cover sheet or first page of complete truss packets and on the truss reaction summary sheet or truss layout plan for partial truss plan packets Stamp may be in different formats and may include different language. The approval stamp must be signed and dated (but not necessarily sealed) by the design professional of record and includes the name, address, phone number, city, state and zip code of the design professional of record business name.

Inspection Notes:

The complete truss plan packet must be on site at time of inspections. If a partial truss plan submittal was made at time of permit application, both the complete truss plan packet and partial submittal documents must be on site at time of inspections.