

A permit is required for a carport, attached or detached to a house.

4.14.22

10' separation between neighboring structures (5' & 5' at property) line or rated wall required.

Option #1: The Carport is Engineered

Plans are provided and stamped by a Colorado Licensed Structural Engineer or Architect.

Option #2: I am designing to code (current adopted International Residential Code)

I have used the code link below to design my plans per code to the best of my ability.

Plans that do not meet code, will need to be re-designed / re-submitted or engineered.

Will the carport be attached to the house or self-supported? (Cannot be attached to manufactured homes)

Carports must be open on at least two sides (otherwise considered a garage and must meet code for a garage).

Code Access (2018 IRC & local amendments)

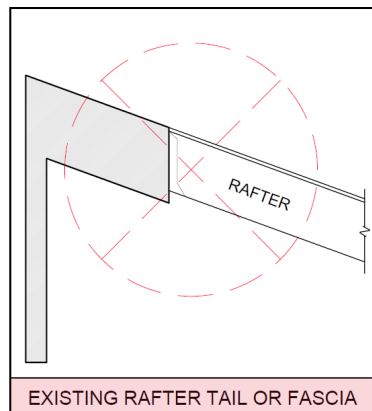
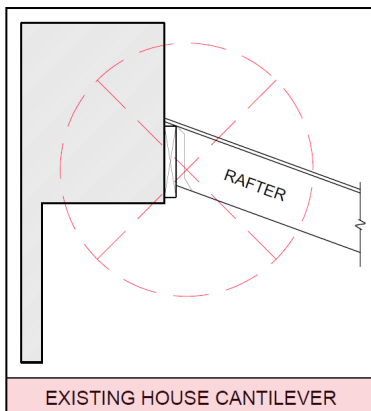
- <https://codes.iccsafe.org/content/IRC2018>
Chapter 3 - Section R309.2 Carports
- <https://www.fcgov.com/building/codes.php>

Submittal Checklist

- Permit Application
- Builder: Contractor or Homeowner Affidavit
- Carport guide filled out
- Site Plan
- Framing Plan
- Section view
- Connection details
- At least 1 *before* photo showing where the carport will be located.
- Payment (check, cash, credit card)

Engineered and stamped structural plans or letter is required for the following conditions:

1. Beam supported by hangers.
2. Ledger attached to a cantilever/overhang on the existing house such as a bay window.
3. Ledger attached to rafter tails or fascia board of an existing roof.
4. Carports attached to brick, masonry, or veneer.
5. Carport kits or pre-manufactured designs.
6. Steel design carports including the use of steel beams.



Required Inspections

1. Setbacks & Pier Footings
2. Framing & Final Inspection

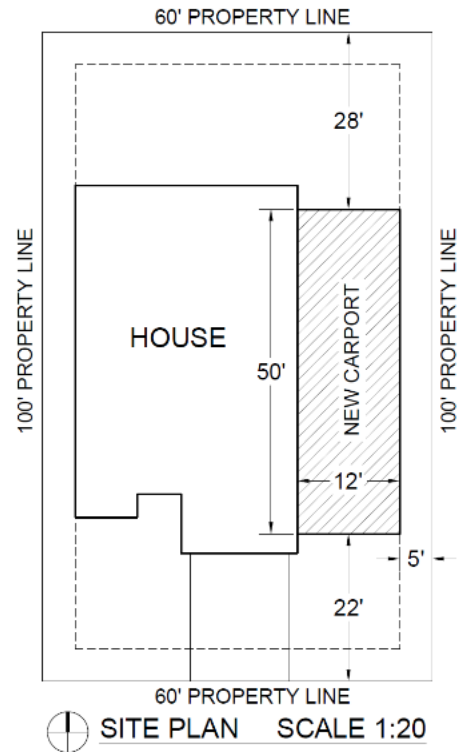
<https://www.fcgov.com/building/inspections.php>

Step A: Draw a site plan to scale (i.e.: 1"=20'-0")

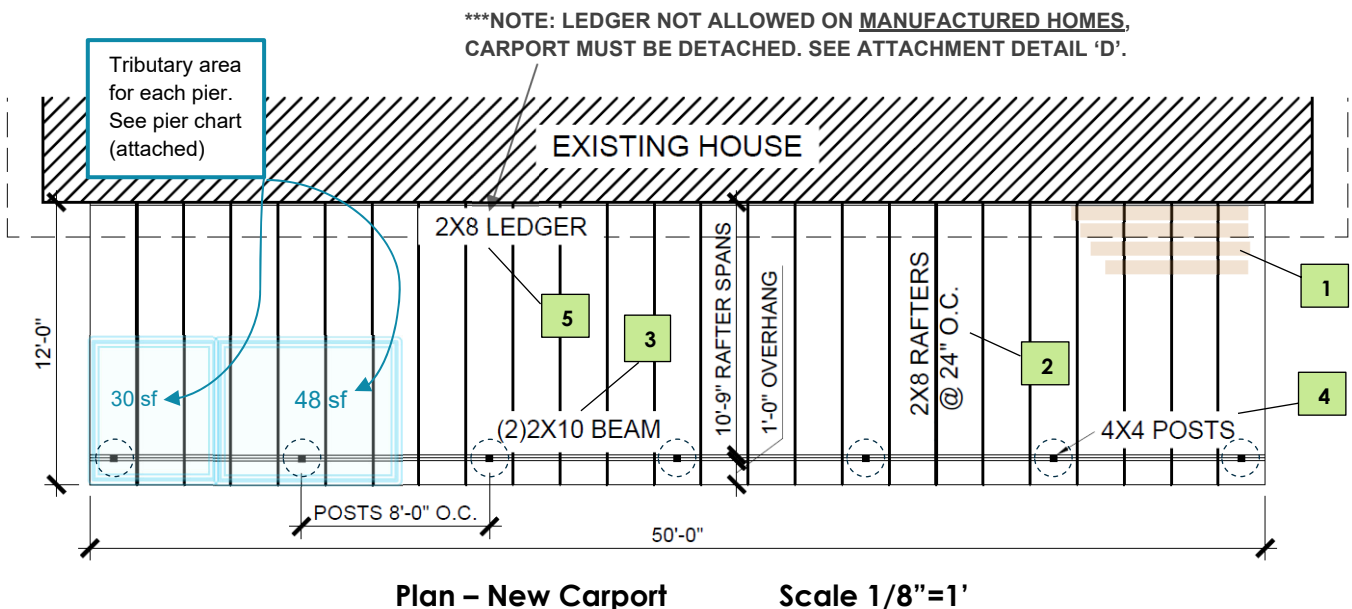
Site Plan Requirements:

- Show location of the new carport in relation to the house
- Show overall length and width of the new carport
- Provide measurements from the new carport to property lines including side property line
- Verify that the new carport is not within the 5' setback from property line (minimum of 10' separation from neighboring structures), or design with 1-hour rated wall and projections facing adjacent structure (IRC R302.1(1))
- 8.5x11 or 8.5x14 page size

Newer homes may have an existing site plan available through public records, which can be used to create the NEW site plan. <http://citydocs.fcgov.com/>

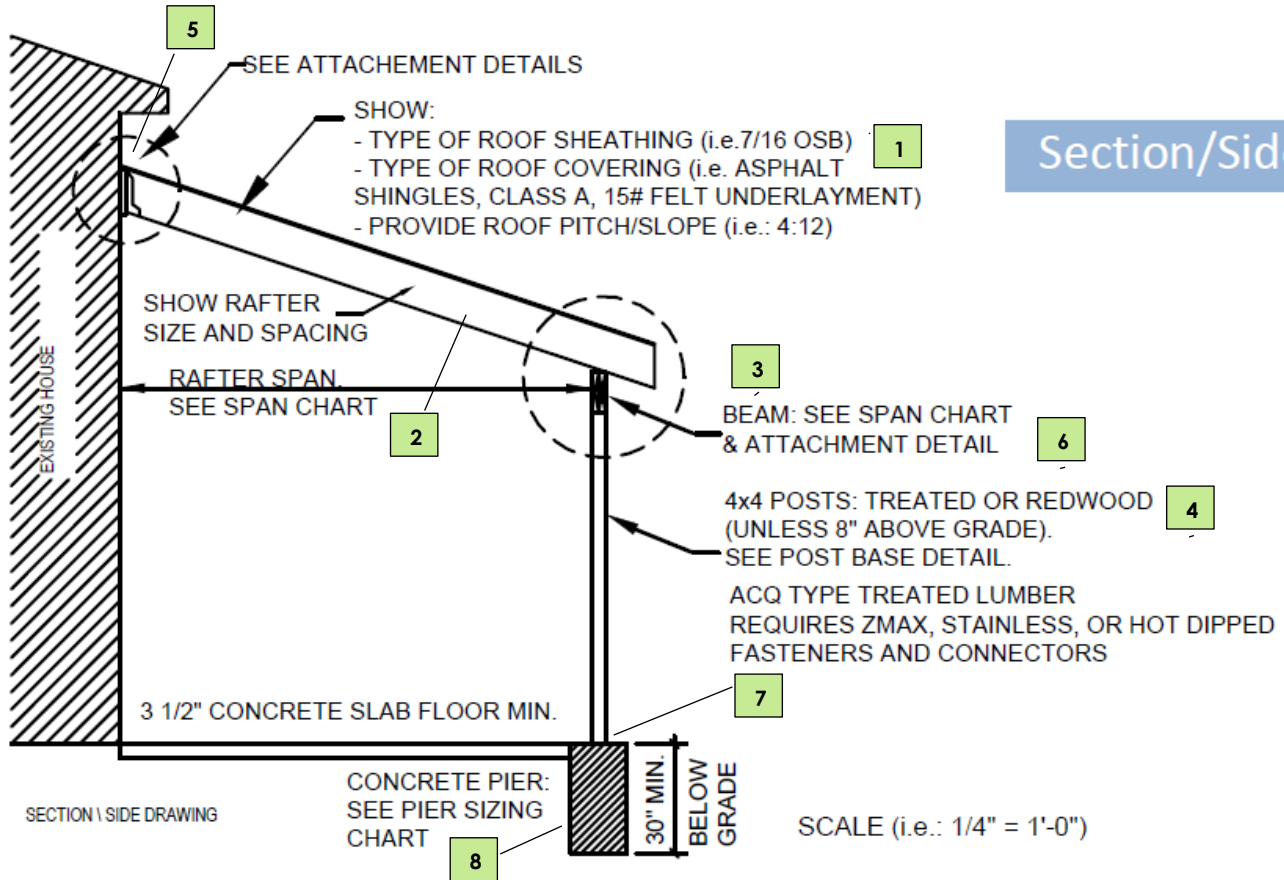


Step B: Draw a framing plan as if looking down from above. Show all dimensions and callouts.

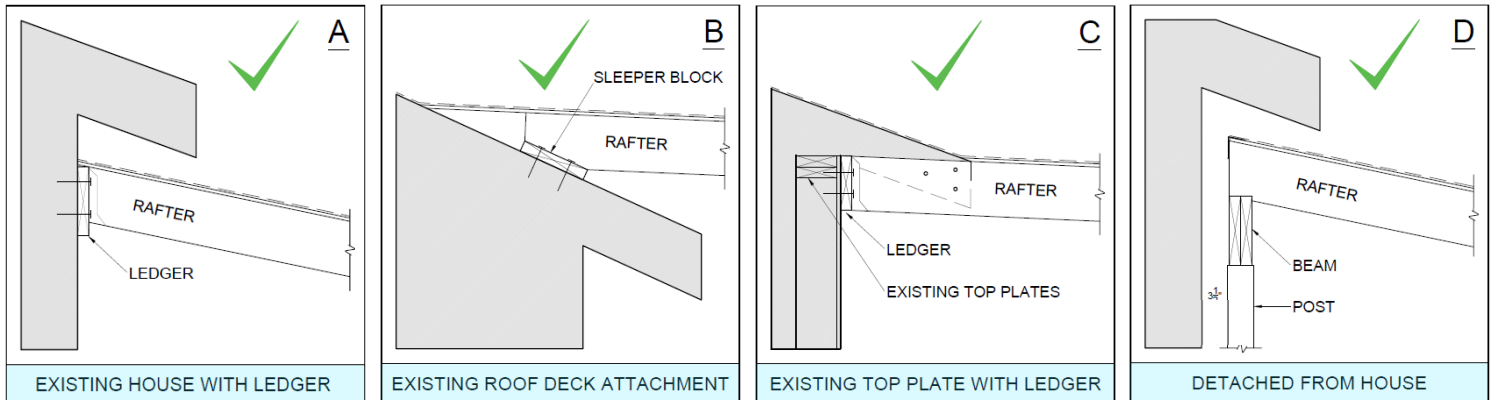


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Step C: Draw a Section or Side View



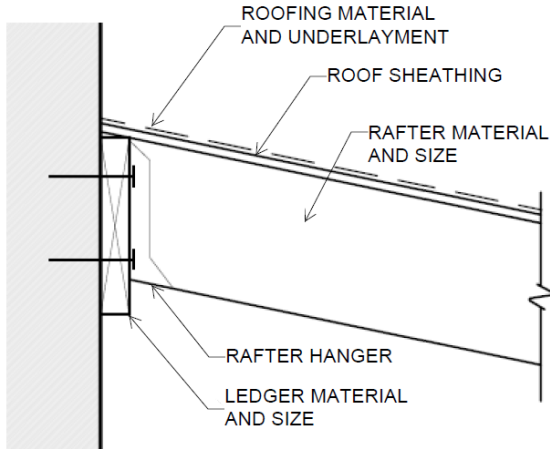
Possible ATTACHEMENT DETAILS at existing structure (**manufactured homes use Option D**).



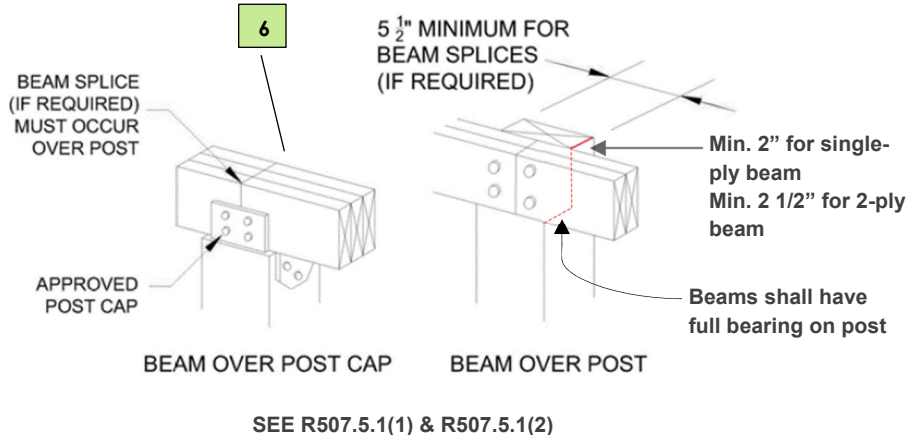
FOR MANUFACTURED HOMES

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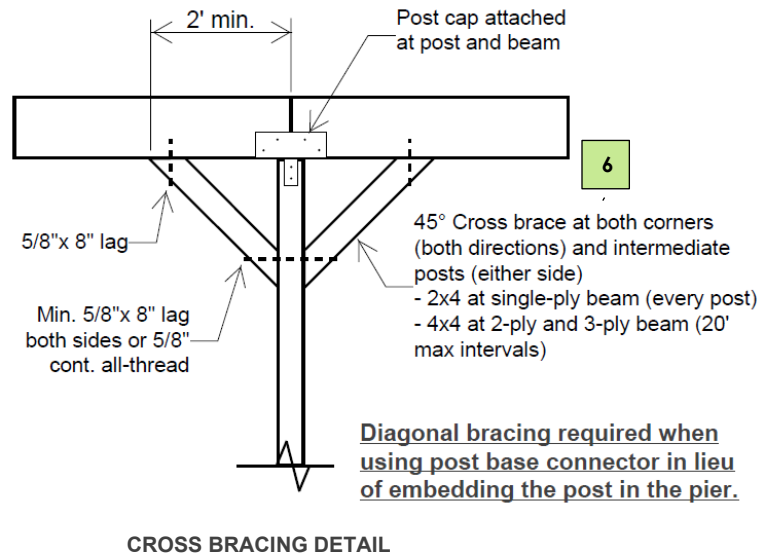
Step D: Draw connection details showing how beams, joists, posts, and piers are connected (see IRC section 507 for code sections and similar examples)



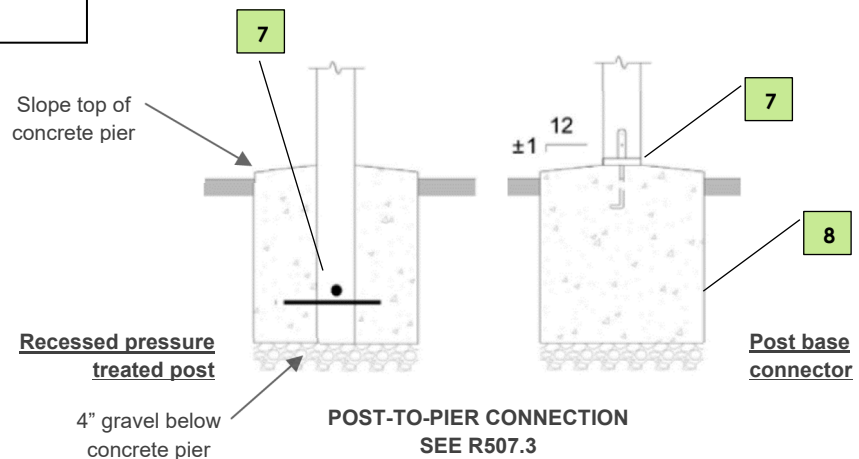
ROOF LEDGER ATTACHMENT DETAIL



- Details to include with your plans:**
1. Carport-to-house Attachment Detail (A, B, C, or D) – see also previous page
 2. Beam-To-Post Detail
 3. Cross bracing (if using the surface mounted post-to-pier connection)
 4. Post-to-pier connection



CROSS BRACING DETAIL



POST-TO-PIER CONNECTION SEE R507.3

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Step E: Size all members using code **(All blanks must be filled in and noted on plans)**

Topic	Code Section	Fill in the blank
1 Roofing Material		
Shingles, Metal Panels, Rolled Roofing	Table R905.1.1(2)	
2 Rafters (See Step B & C)		
Species, size, spacing, and span of rafters.	See Rafter Chart (attached)	
3 Beams (See Step B)		
Span and size of beam.	Beam Chart (attached)	
4 Posts (See Step C)		
Height of carport posts from top of pier to top of post.	Post Chart (attached) Show heights	
5 Ledger /Band joist Connection (See Step B)		
Ledger size. Ledger-to-joists connection.	See Attachment Details and Section	
6 Beam to post connections (See Step D)		
Draw connection detail with fasteners	R507.5.1(1) & R507.5.1(2)	Show on Plans
Cross bracing at beam to post connection allowed as an alternate to sinking posts in concrete footing	See cross brace detail (if required)	Show on Plans
7 Post to pier/footing connections (See Step D)		
Show connection details on plans and callout connectors	R507.3 & R507.4.1	Show on plans
When using manufactured post connector, top of posts must be cross braced to beam at both corners and at a maximum spacing of 20' at sides	See Cross Brace detail (attached)	Show on plans
8 Pier/Footing size (See Step D)		
Required 30" min deep below grade	Local Frost Depth	30" min depth
Type of footing/piers	Text R507.3 & Figure R507.3 (similar)	Show on plans
Size of footing/piers per tributary area (square feet)	Pier Size Chart (attached)	Show on plans

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Determine Rafter Sizes and Layout, Beam Spans & Sizes, and Pier Sizes using the Charts below

PIER SIZE CHART	
Min. Pier Diameter (Inches)	Maximum Tributary area (SQ. FT.)
10 in	41
11 in	49
12 in	59
13 in	69
14 in	80
15 in	92
16 in	105
17 in	118
18 in	133
19 in	148
20 in	164
21 in	180
22 in	198
23 in	216
24 in	236

POSTS
Post must be large enough to support the beam size (full
4x4 min. not to exceed 14'-6" in

BEAM SIZE CHART *				
Maximum Beam Span For: Doug fir, Hem-fir, Southern Pine, Spruce-pine-fir (in feet & inches) Interpolated 35psf ground snow load, IRC table R602.7(3)				
BEAM SIZE	Rafter Span (in feet)			
	8	10	12	14
2-2X6	7'-2"	6'-7"	6'-0"	5'-5"
2-2X8	9'-7"	8'-10"	8'-0"	7'-3"
2-2X10	11'-9"	10'-10"	9'-10"	8'-11"
2-2X12	13'-8"	12'-7"	11'-5"	10'-4"

RAFTER SIZE CHART *			
Maximum Rafter Span for Hem Fir #2 (in feet & inches) R802.4.1(3) Interpolated for 35psf snow load 10psf dead, L-240, CEILING ATTACHED TO RAFTERS			
RAFTER SIZE	Rafter Spacing (center to center - Inches)		
	12"	16"	24"
2X4	7'-8"	7'-0"	6'-1"
2X6	12'-1"	10'-11"	9'-2"
2X8	15'-11"	14'-3"	11'-7"
2X10	20'-0"	17'-4"	14'-2"
2X12	23'-3"	20'-1"	16'-5"

2021 IRC code and City of Fort Collins Amendments are available at the links below.

<https://codes.iccsafe.org/content/IRC2021P1> and <https://www.fcgov.com/building/codes.php>

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