

DeckFrame framing plan

CHECK

Sample - 12x16 attached deck

16' x 13'-6" attached deck

Review scope

Edition: 2021 IRC R507 method with NDS sawn-lumber design values.

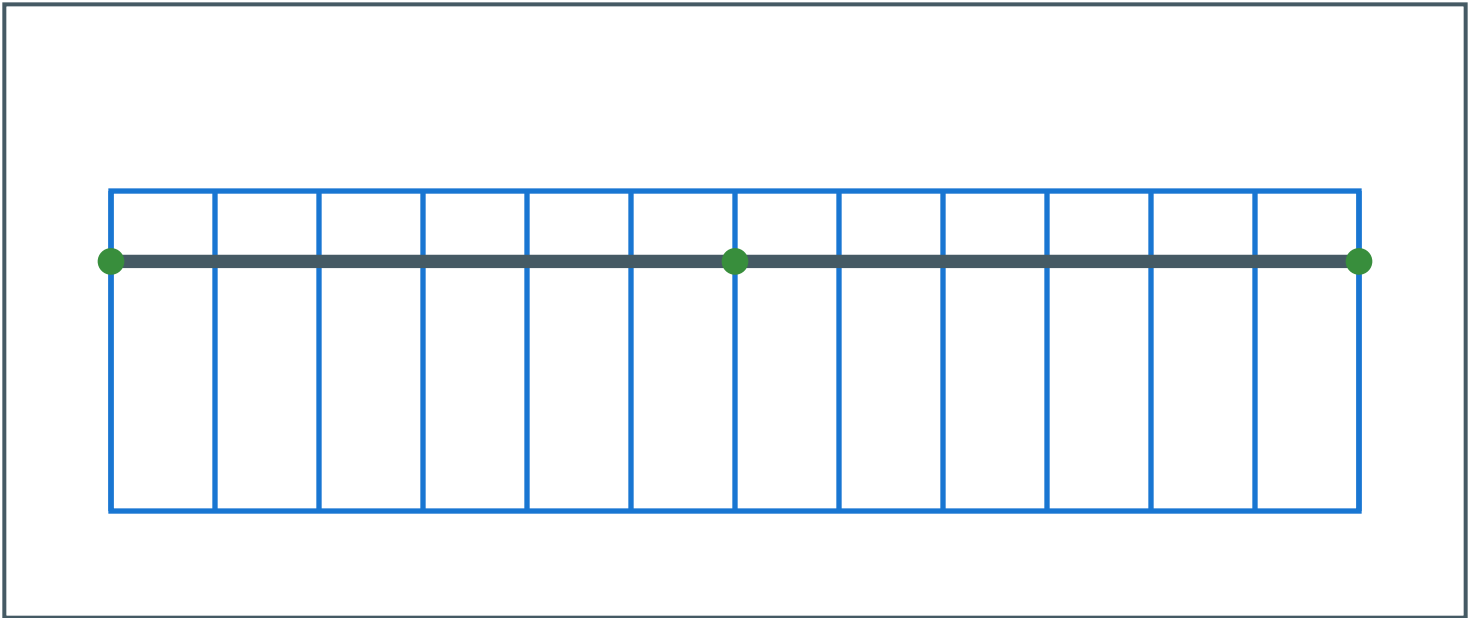
Inputs: 16' by 13'-6", Southern Pine No.2, 16" o.c., 40 psf ground snow, 1500 psf soil, 36" frost depth.

Jurisdiction/region note: Default 36" frost.

Status: CHECK. Unsupported rows route to engineer required; this packet does not replace local code review.

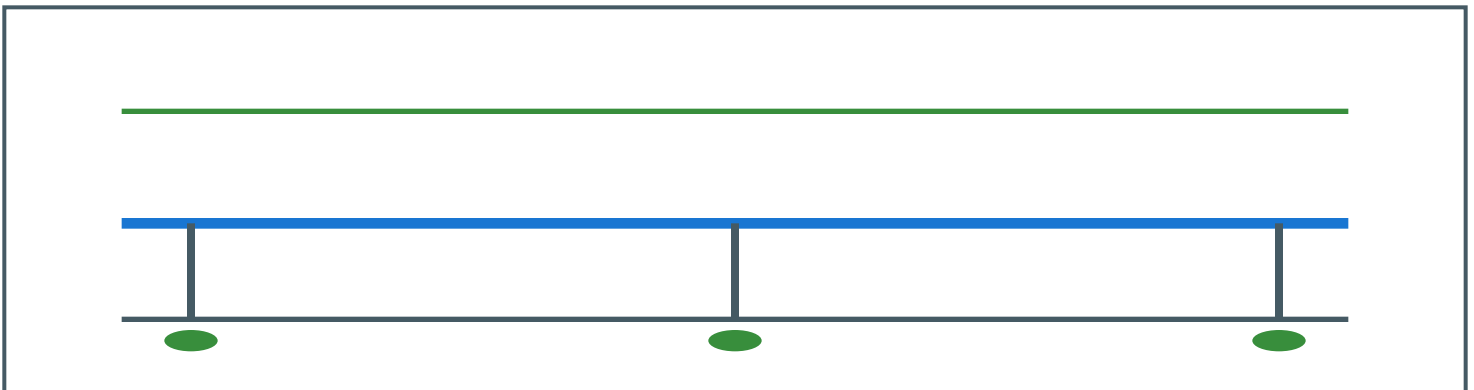
Included pages: framing plan, member schedule with citations, ledger/footing/guard details, and bill of materials.

Framing plan



Callout	Value	Citation
Joists	2x10 @ 16" o.c.	2021 IRC R507.6
Beam	1 line of double 2x10; posts \leq 8'-2"	2021 IRC R507.5
Footings	3 total, 20" dia x 36" embedment	2021 IRC R507.3 / R403.1
Ledger	1/2" lag screw @ 13" o.c.	IRC R507.9.1.3(1)

Side elevation



Elevation callout: 20" footing, 36" embedment, 36" guard height.

Member schedule and details

Member	Result	Citation
Joists	2x10 SP No.2 @ 16" o.c. - allowable 14'-0"	2021 IRC R507.6
Beam	Double 2x10, posts at most 8'-2" apart	2021 IRC R507.5
Posts & footings	20" footing, 36" deep	2021 IRC R507.3 / R403.1
Ledger	1/2" lag screw at 13" o.c.	IRC R507.9.1.3(1)
Lateral ties	2 hold-down devices at 1,500 lb each	IRC R507.9.2
Guard	200 lb guard load path passes	IRC R312.1 / R311.7.8 / R507.10

Ledger fastener detail

Item	Schedule
Fastener	1/2" lag screw
Spacing	13" o.c.
Rows	Two staggered rows
Edge distances	2" top/bottom edges; 5" minimum row spacing
Predrill	1/2" through ledger; 5/16"-3/8" into band joist
Lateral ties	2 hold-down devices at 1,500 lb each

Footing schedule

Footing	Diameter	Embedment	Design load
Typical interior	20"	36" below grade/frost	2860 lb at 1500 psf soil
Total count	3	1 support line	3 per support line

Guard detail

Guard: 200 lb guard load path passes.

Height 36", post spacing 72", connection Hold-down tension tie.

Check path: 200 lb concentrated top-rail load transferred through post, rim, blocking, and approved hardware.

Moment check: 600 ft-lb demand vs 1500 ft-lb recorded connector capacity.

Bill of materials

Qty	Item	Note
13	2x10 joists	13'-6" cut length, 16" o.c.
2	2x10 beam plies	16 ft x 1 support line, posts <= 8'-2"
3	6x6 posts and 20" footings	3 per support line; 36" below grade minimum
30	1/2" lag screw	13" o.c., two staggered rows
9	Hold-down tension tie guard post hardware	Posts <= 6'-0"; 1500 ft-lb connection capacity
2	Hold-down lateral ties	DTT2Z-equivalent or accepted local alternative