

3D view



Back Deck

Deck Planner Software™ Report

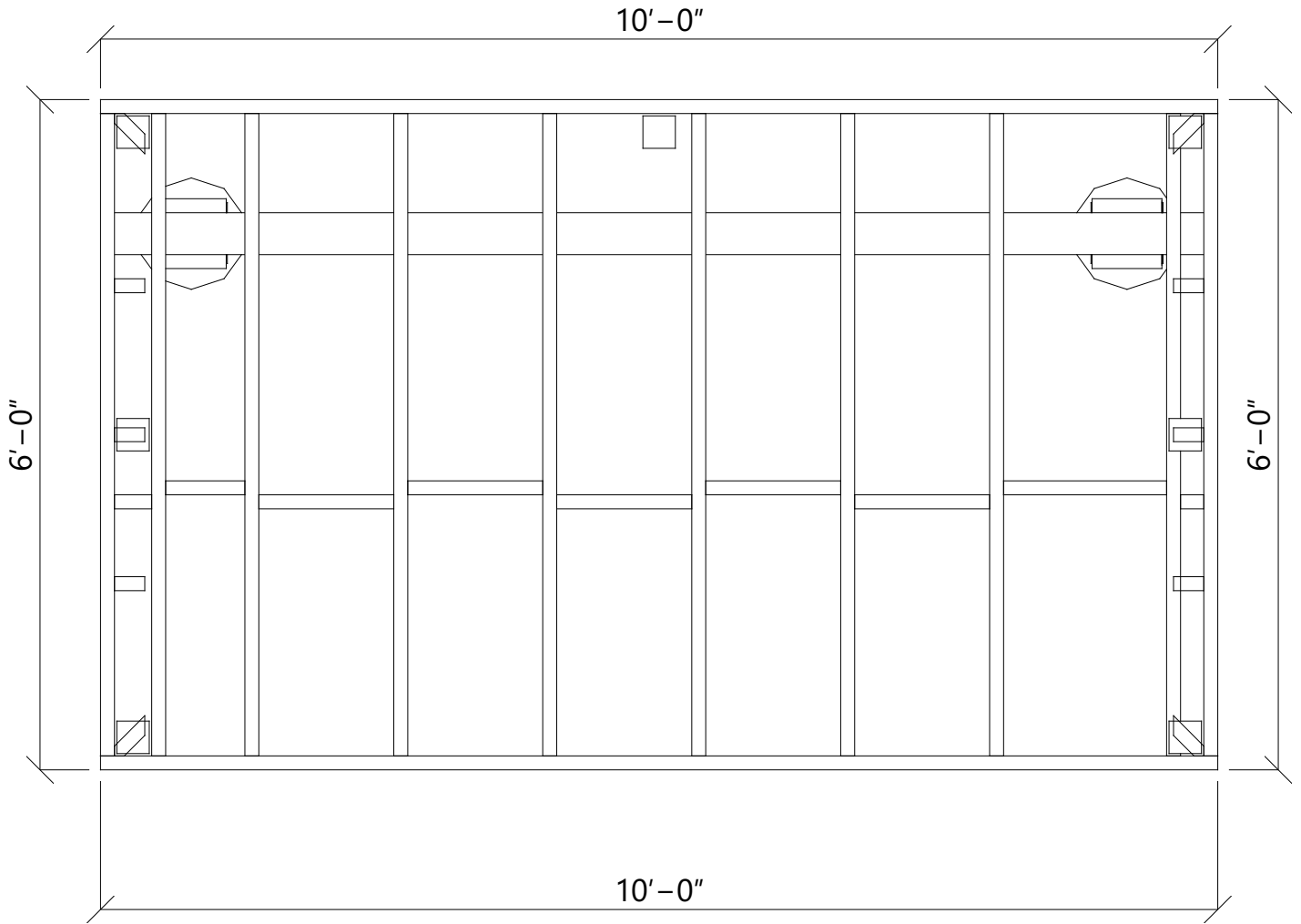
All lengths, areas, weights, masses and structural forces are expressed in U.S. Customary units unless otherwise specified.

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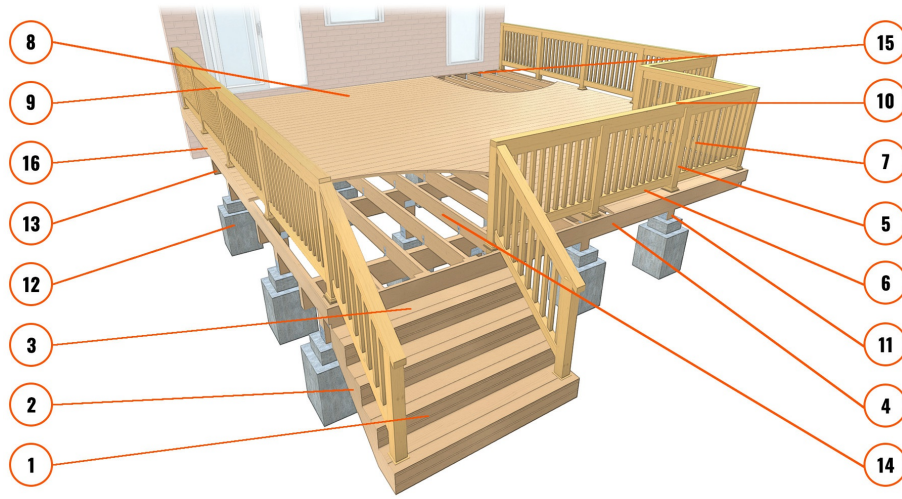
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Your Planned Deck Design

Plan view construction



Glossary of Decking Terms



1. Risers: The vertical boards attached to the stair stringers. Many localities require risers to prevent possible trip hazards.

2. Stringers: The structural support for stairs. They have limits on how much weight they can carry, so size and spacing are important considerations. Composite manufacturers provide recommended stringer spacing to support the tread material.

3. Treads: The horizontal stair surfaces on which deck users walk.

4. Rim Joist: Also known as edge bands, the rim joist wraps the deck and keeps the joists standing on edge, while also providing a solid surface for attaching railing posts. Proper attachment is critical to installing a safe railing.

5. Rail Post: Vertical lumber member that supports the handrail and resists the outward force of people leaning on the railings.

6. Bottom Rails: Lumber members that connect to the rail posts and provide a solid surface for securing the infills.

7. Infills: Also known as balusters or pickets, the infills are connected to the top and bottom rails and provide a barrier against falls.

8. Decking: When properly attached to each joist and rim joist, the decking surface (whether wood or composite material) helps unify the entire structure.

9. Rail Cap: Much like the decking, the rail cap unifies the railing system and provides a decorative feature.

10. Top Rails: These members have the same stabilizing function as the bottom rails.

11. Post: Vertical structural member that supports the beams and attaches the deck to the footings using a post base.

12. Footing: Concrete element that serves as the foundation of the deck.

13. Beams: Structural members that support the decking floor joists. Beams are made of doubling 2x material and can be installed as a laminate, sandwiched, or notched into the post.

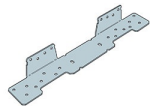
It is important to have a post of sufficient size and strength to support the beam. The beam should not be any wider than the thickness of the post, and should be secured with the correct post cap.

14. Joists: Wood members installed across the beams and spaced to accommodate the decking material. The joist spacing may depend on the angle at which the deck boards are applied.

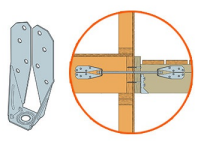
15. Ledger: The ledger is a crucial connection because it attaches the deck to the house. The material used to construct the house may determine the type of connection. Consult local building officials on the recommended connection.

16. Fascia: Vertical boards that face outwards from the edges of the deck, attached to the rim joists. Fascia boards typically consist of a lumber species that matches the appearance of the decking material.

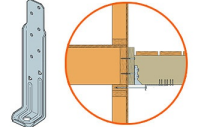
A Complete Connector System for Building Safer, Code-Compliant Decks



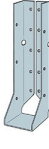
**LSCZ
LSCSS**
Adjustable Stringer Connector
Ties stair stringer to the carrying header or rim joist



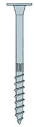
**DTT2Z
DTT2SS**
Deck Tension Tie
Ties deck to house




DTT1Z
Deck Tension Tie
Ties deck framing to top plate, studs or headers



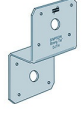
**LUCZ
LUCSS**
Joist Hanger
Ties deck joist to ledger



Strong-Drive® SDWS
Timber Screw
Ledger attachment design per code; visit our website for spacing instructions

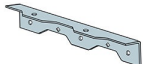


**H2.5AZ
H2.5ASS**
Hurricane Tie
Ties joist to beam




**DJT14Z
DJT14SS**
Deck Joist Tie
Ties 2x girder to post

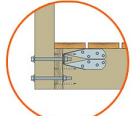
**TA9Z/TA10Z
TA9SS/TA10SS**
Staircase Angle
Ties stair tread to stringer; TA9ZKT/TA10ZKT provided with Strong-Drive SDS screws



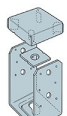
**A35Z
A35SS**
Framing Angle
Ties rim joist to deck joist



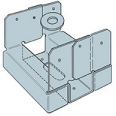
**DTT2Z
DTT2SS**
Deck Tension Tie
Ties gaurdrail post to deck joist



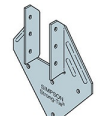
ABU44Z
Post Base
Ties 4x4 post to concrete



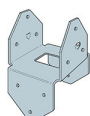
ABA44Z
Standoff Post Base
Ties 4x4 post to concrete



H1Z
Hurricane Tie
Ties joist to girder at mid-deck; ties joist to beam



**BCS2-2/4Z
BCS2-2/4SS**
Post Cap
Ties 4x post to double 2x beam girder



Installation Considerations

Building Code and Zoning Requirements

Check deed restrictions, building codes and zoning laws to make sure your deck complies. The local building jurisdiction will require a minimum setback from property lines. Check with local utility companies to make sure deck construction will not disturb underground piping or wiring (**dial 811 before you dig**).

A resource for general residential deck codes and building practices is the Prescriptive Residential Deck Construction Guide, by the American Wood Council (free download from www.awc.org).

The local building jurisdiction should be consulted to verify any building code requirements specific to the area.

Deck Function

While planning your deck, consider how it will be used. Sun/shade areas and possible views are common considerations.

Lumber

Pressure- or preservative-treated lumber, or lumber that is naturally decay resistant, should be used for durability. Cut edges should be field-treated with preservative.

Fasteners and Connectors

To resist corrosion, fasteners and connectors in contact with treated lumber should be ZMAX®, hot-dip galvanized (HDG) or made with stainless steel.

Consult with the building code, the preservative treatment manufacturer and strongtie.com to get recommendations for your conditions. Fasteners and connectors should be made of the same material (i.e. both of them galvanized, both of them HDG or both in stainless steel).

Ledger

Proper corrosion-resistant flashing should be installed between a deck ledger and the house. The ledger should be installed directly to the framing, with any siding removed.

Deck Area and Footing Layout

Batter boards (temporary wood supports, such as 2x4s), mason's string and a plumb bob can be used to lay out the deck area and footings. For a rectangular shape, the corners will be square when the lengths of the two diagonals are equal.

Footings

Holes for footings will need to be dug to a depth below the frost line.

Post Bracing

Diagonal bracing between posts and joists/beams should be installed according to the building code.

Posts and Beams

Allow an additional margin in length to the posts. Determine the desired deck floor height on the post and then cut to the appropriate length.

Attaching Joists

Attach joists to the ledger board with joist hangers.

Laying Decking

Drill pilot holes into the ends of boards to prevent splitting. Allow space between boards.

Guardrails

Guardrails must be adequately attached to the framing members of the deck. The building code has limits on the size of openings that are permitted in the guard system.

Stairs and Handrails

Stairs should be at least 36" wide. The building code has limits on the size of openings in a flight of stairs and specific directions for providing handrails.

Tools Required

The checklist provided should be used as a quick guide only,
and we highly recommend consulting some additional resources listed here:

www.strongtie.com/solutions/deckcenter

Concrete Work

- Pick
- Post hole digger
- Shovel
- Wheelbarrow
- Hoe and hose (to mix concrete)
- Tamper

Concrete Layout

- Stakes or batter boards
- String
- Transit

Safety

- Eye Protection
- Hearing protection
- Dust mask
- Gloves
- Kneepads

Wood Work

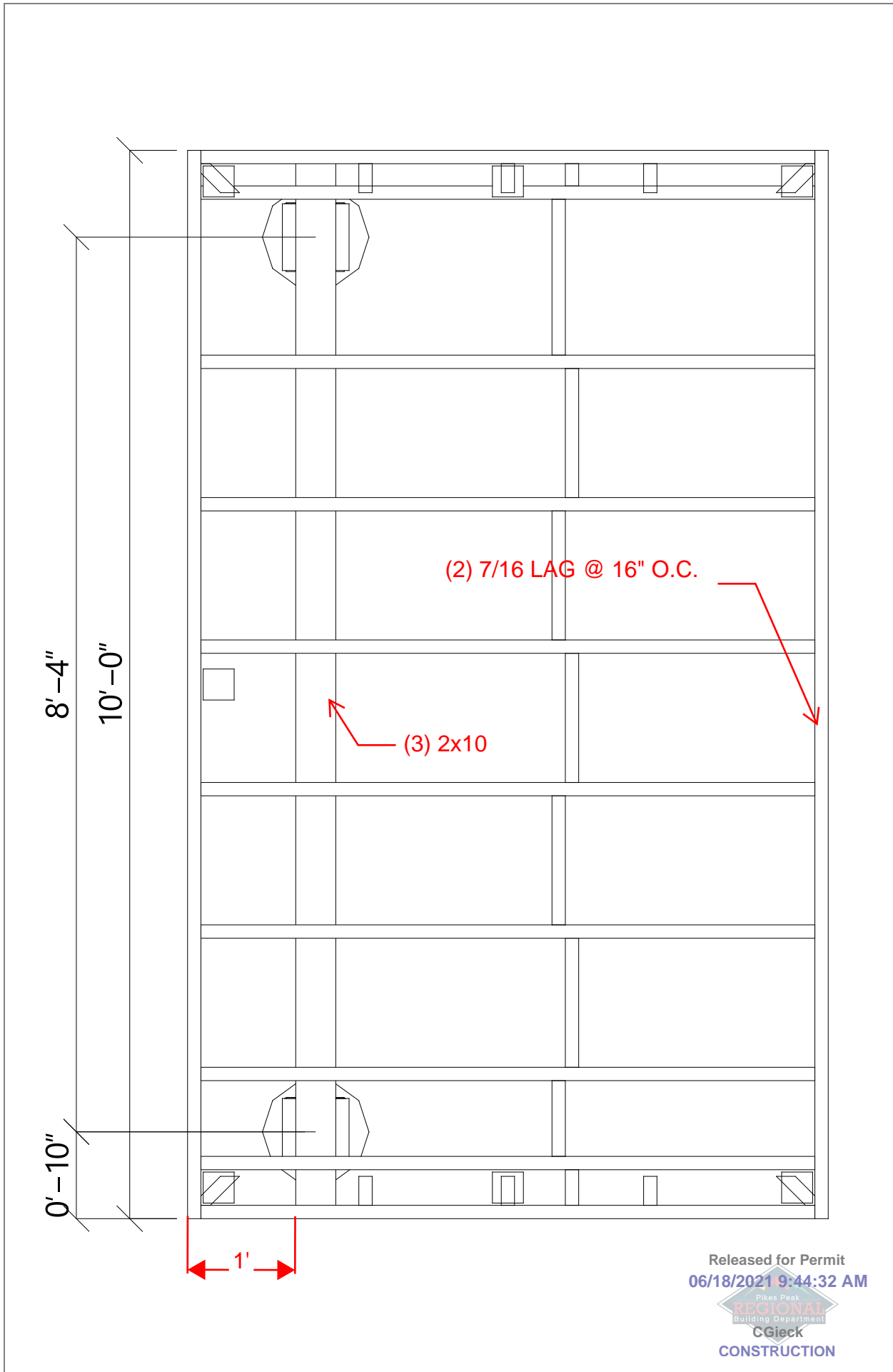
- Extension cord
- Circular saw
- Drills and bits
- Hammer
- Nail set
- Chisel
- Handsaw
- Ladder
- Mallet
- Tool belt

Wood Layout

- Tape measure
- Squares: Rafter/Speed, Framing
- Level/Levels
- Chalk line
- Pencils
- Plumb bob

Tips for the DIYer

- When cutting or drilling wood, always wear eye protection to prevent injury from flying wood particles.
- If cutting pressure treated material, wearing a fabric breathing mask will help to avoid ingestion of the dust.
- Wear gloves to protect from splinters.
- Invest in a pair of kneepads if you are doing floor jobs or working on a deck.
- Dispose of scraps in the regular trash or take to a landfill - do not burn pressure treated materials.

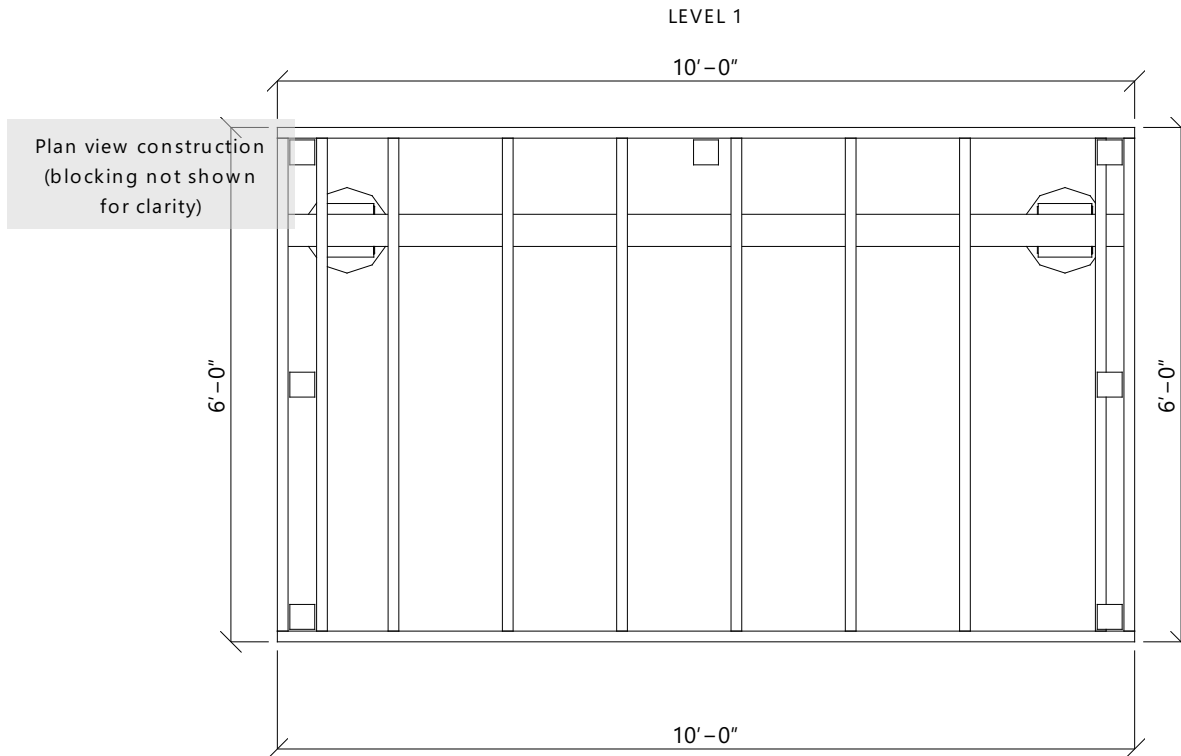


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NOTES FROM THE CUSTOMER	DESIGN TITLE	BACK DECK	DRAWING	PLAN VIEW DRAWING, LEVEL 1		JOB ID
	CUSTOMER NAME	Dave Thompson	SCALE	NOT TO SCALE	CHECKED BY	PAGE
THIS DRAWING WAS GENERATED BY DECK PLANNER SOFTWARE™	CUSTOMER EMAIL ADDRESS	dv_thompson@hotmail.com	DATE	6/14/2021 2:02 PM	CHECK DATE	7
	CUSTOMER PHONE NUMBER		CREATED BY			STORE



Permit Info



Structural Information: Level 1

Height of level (top of decking)	119 1/4"
Max. joist span	56 1/8"
Max. joist cantilever	12 7/8"
Max. beam span	100 1/2"
Max. beam cantilever	6"
Footing depth	36"
Footing area (ea.)	9 1/2" ft ²
Designed live load	60 lb/ft ²
Designed dead load	10 lb/ft ²

Deck and Post Height

Your design height is 119 1/4" from the top of the decking to the ground level. The top of the deck support posts will therefore be 100 1/2" above ground level.

Joists

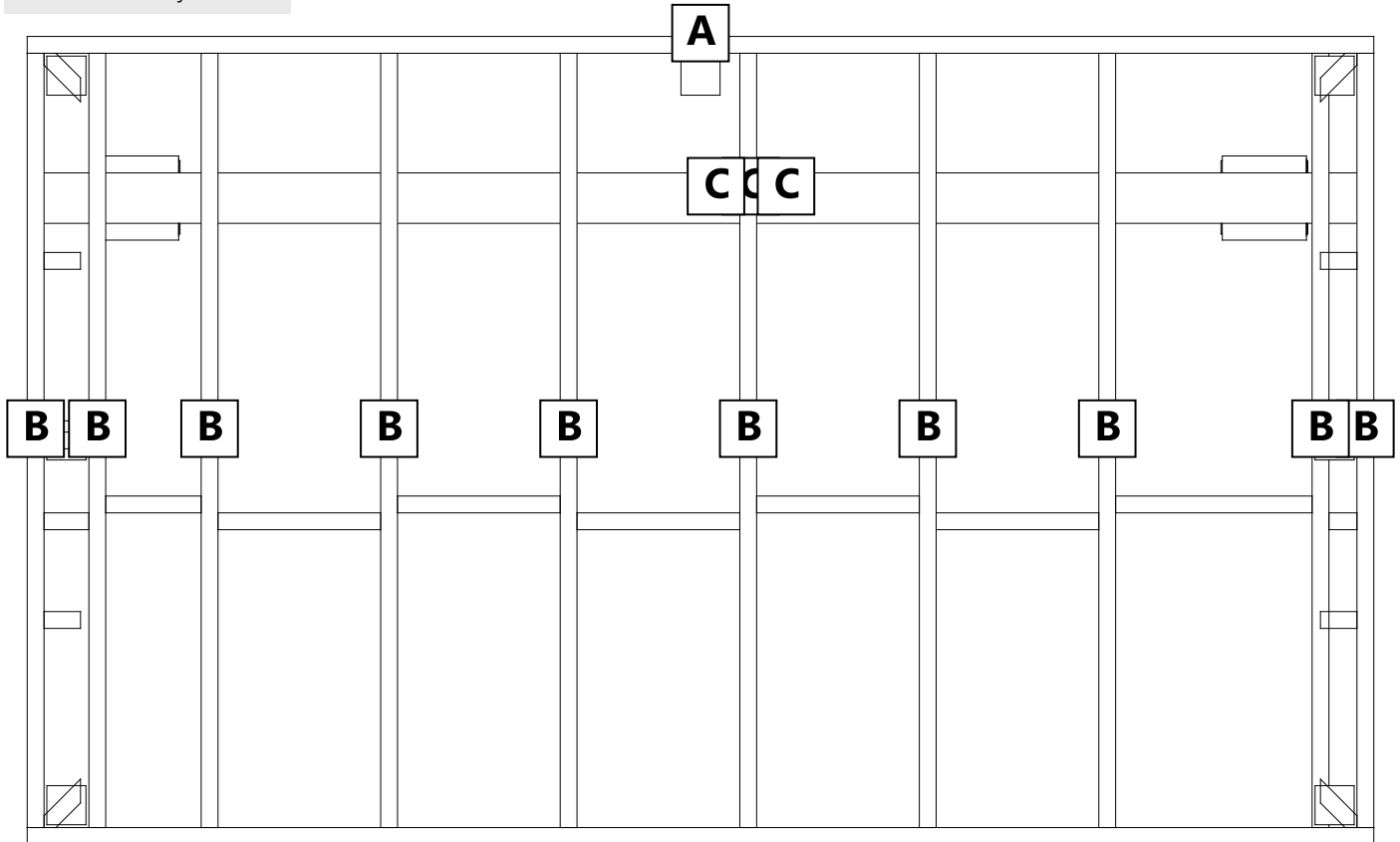
Set joists on top of beams, 16" center-to-center.

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Materials Drawing

LEVEL 1

Plan view,
beams and joists



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Materials Cut List

LEVEL 1

Label	Description	Qty	Length	Usage
A	2" x 10" x 10'- Wood DF/HF/SPF (Square)	1	10' 0"	Rim Joists
B	2" x 10" x 12'- Wood DF/HF/SPF (Square)	10	5' 9"	Joists
C	2" x 10" x 10'- Wood DF/HF/SPF (Square)	3	10' 0"	Beams

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Railing Kit List

All Materials

Usage	Sub Product	Qty	SKU	Description
Stick Built Items				
	Rail Caps	6/6		Cocktail Rail Cap 6ft - Fire Pit
	Railing Posts	7/7		Post Skirt 4in - Charcoal Black
	Railing Posts	7/7		Post Sleeve 4 x 36 - Charcoal Black
	Top Rails	6/6		Transcend Top Rail 6ft - Charcoal Black
	Bottom Rails	6/6		Bottom Railing 6ft - Charcoal Black
	Infill	40/40		Square Baluster 36in - Charcoal Black
	Railing Posts	1/1		4 x 4 x 16 - Treated Cedar
	Railing Posts	1/1		4 x 4 x 12 - Treated Cedar
	Railing Posts	7/7	DTT2Z	DTT2Z Connector (ZMAX®)(Fasteners and Washers included)

Estimated Materials List

All Materials

Usage	Qty	SKU	Description	Type
Decking	13		TimberTech AZEK Arbor 16-ft Autumn Chestnut PVC Deck Board ADB15516CT	Lumber
Fascia	3		TimberTech AZEK Arbor 14-ft Autumn Chestnut PVC Fascia Deck Board ADR5117512CT	Lumber
Rim Joists	1		2" x 10" x 10'- Wood DF/HF/SPF (Square)	Lumber
Ledgers	1		2" x 10" x 10'- Wood DF/HF/SPF (Square)	Lumber
Joists	5		2" x 10" x 12'- Wood DF/HF/SPF (Square)	Lumber
Blocking	1		2" x 10" x 12'- Wood DF/HF/SPF (Square)	Lumber
Beams	3		2" x 10" x 10'- Wood DF/HF/SPF (Square)	Lumber
Posts/Footings	2		8" x 8" x 10'- Wood DF/HF/SPF	Lumber
Bracing	1		8" x 8" x 10'- Wood DF/HF/SPF	Lumber
Joists	10	H2.5AZ	H2.5AZ Hurricane Tie (ZMAX®)	Connector
Joists	12	LUS28Z	LUS28Z Joist Hanger with Double-Shear Nailing (ZMAX®)	Connector
Joists	8	LS50Z	LS50Z Skewable Angle (ZMAX®)	Connector
Joists	4	DTT2Z	DTT2Z Connector (ZMAX®)(Fasteners and Washers included)	Connector
Posts/Footings	2	CCQ4.62X HDG	CCQ4.62X HDG Column Cap (Hot-Dip Galvanized)	Connector
Posts/Footings	2	ABU88Z	ABU88Z Adjustable Post Base with Standoff (ZMAX®)	Connector
Bracing	4	KBS1Z	KBS1Z 4x4 Kneebrace connections	Connector
Posts/Footings	1		5/8" Diameter Straight Shank Carbide Drill Bit for Concrete & Masonry	Concrete
Posts/Footings	26		80lbs Bag (0.60 CF) Concrete Mix	Concrete
Posts/Footings	1		12" x 10' Construction Tube	Construction Tube
Decking	1	EB332WDR175	175 CT EB332 W/305SS 2-1/4IN T15 SCREWS	Fastener
Decking	1	EB332WDR100	100 CT EB332 W/305SS 2-1/4IN T15 SCREWS	Fastener
Fascia	1	T08175FS75BR01	#8X1.75 316SS FASCIA SCREW T20 BR01 75CT	Fastener
Fasteners	1	fsbit	FASCIA SCREW COUNTERSINK BIT	Fastener
Rim Joists	1	SDWS16300QR75	3 IN SDWS Framing Screw 75ct	Fastener

Usage	Qty	SKU	Description	Type
Beams, Ledgers	3	SDWS22400DB-RC12	SDWS22400DB Structural Wood Screw (12)	Fastener
Joists	1	N10DHDG	Strong-Drive® SCN 1 1/2" x .148", 9 gauge, Smooth-Shank Connector Nail, Hot Dip Galvanized - 1 LB	Fastener
Joists	1	10DHDG	Strong-Drive® SCN 3" x .148", 9 gauge, Smooth-Shank Connector Nail, Hot Dip Galvanized - 1 LB	Fastener
Joists	4	1/2 MBHDGH	1/2" diameter HDG Machine Bolts: length calculated (1)	Fastener
Joists	4	NUT-1/2 MBHDG	Nut for 1/2" Bolt, Oversized Threads (Hot-Dip Galvanized) (1)	Fastener
Posts/Footings	4	THDB62600H4SSF1	5/8" x 6" Type 304 Stainless Steel Titen HD® Heavy-Duty Screw Anchor	Fastener
Bracing	1	N8DHDG	Strong-Drive® SCN 1 1/2" x .131", 10 gauge, Smooth-Shank Connector Nail, Hot Dip Galvanized - 1 LB	Fastener

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Dealer Locations

Approved dealers local to your ZIP code.

Dealer Name	Address	Phone
HOME DEPOT #1541 (MONUMENT)	15888 Jackson Creek Pkwy, Monument, 80132-8520, US	(719) 484-0900
Northgate Ace Hardware	13355 Northgate Parkway, Colorado Springs, 80921, US	(719) 487-3043
LOWE'S #2578 (COLORADO SPRINGS)	4252 Royal Pine Dr, Colorado Springs, 80920-2824, US	(719) 799-1400
HOME DEPOT #1510 (COLORADO SPRINGS)	7120 N Academy Blvd, Colorado Springs, 80920-3185, US	(719) 531-6400
HOME DEPOT #1538 (COLORADO SPRINGS)	5660 E Woodmen Rd, Colorado Springs, 80920-5257, US	(719) 266-5165

Please re-enter your ZIP code in the user settings of Deck planner and re publish a report if the results are not desirable.

Legal Disclaimer

Effective Date: June 14, 2021

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The App is not designed to perform any of the engineering calculations or structural design required for building construction. Due to the size, shape, location or other considerations, the design set forth in the Report may require supporting structures (such as knee braces and bridging between joists and posts) that are not included in the Report. The App and Report are intended to be used only in conjunction with Simpson Strong-Tie® products. Before beginning any project, you should review all of the information about the Simpson Strong-Tie® products that is available on www.strongtie.com. Any use of the App or the Report is at your own risk.

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You should consult with local authorities to ensure that your project complies with all applicable zoning and building codes, requirements and practices, which vary greatly depending on your location. You are responsible for ensuring that the project (including the design set forth in the Report and any substitutions or modifications you make) complies with all applicable zoning and building codes, requirements and practices (including requirements for lighting).

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