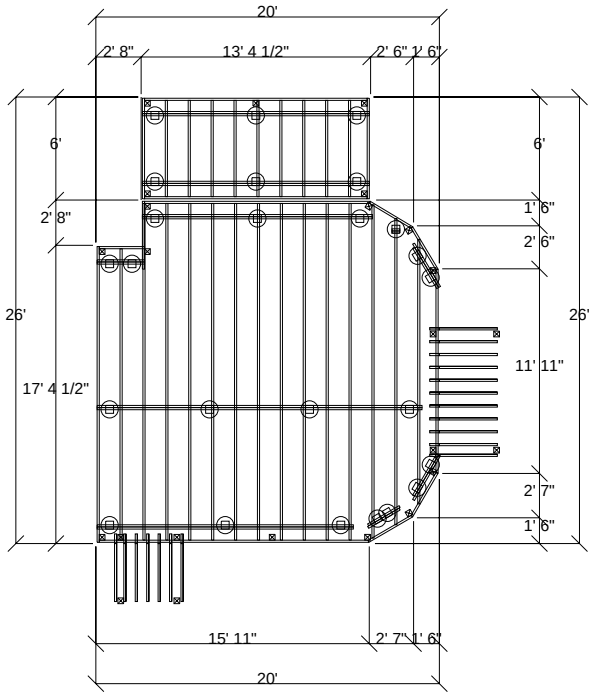
Deck Planner Software™ Report

Sample Trex Deck

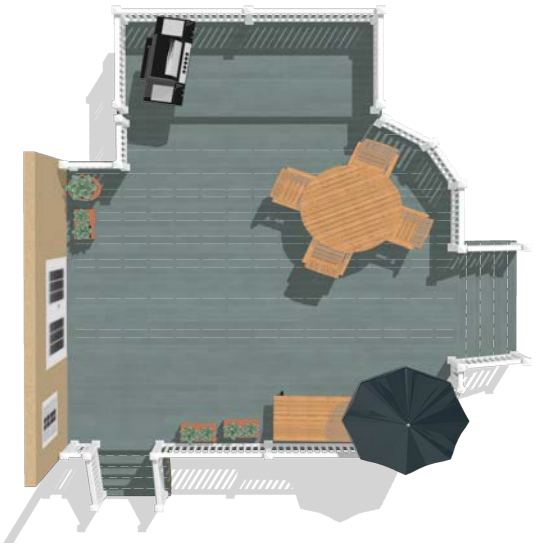
Deck Planner Software™ Report for
Deck Designer

Your Planned Deck Design

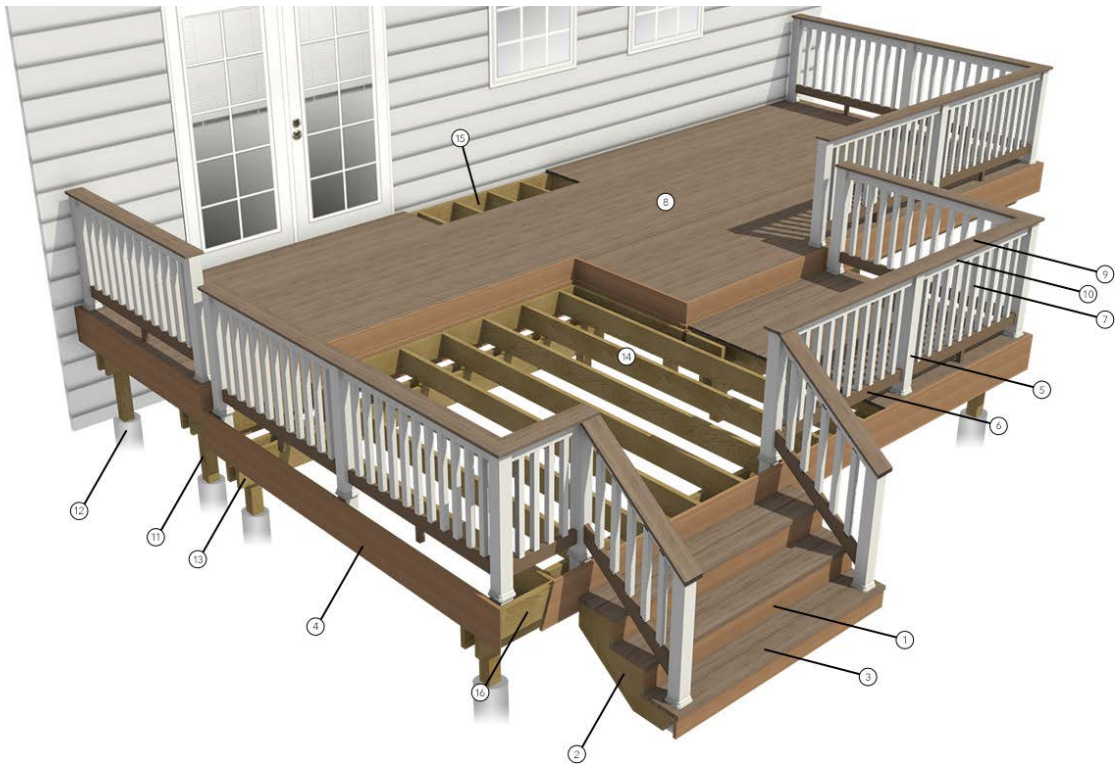
Plan View w/ Decking Removed



Plan View



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. 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.

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.

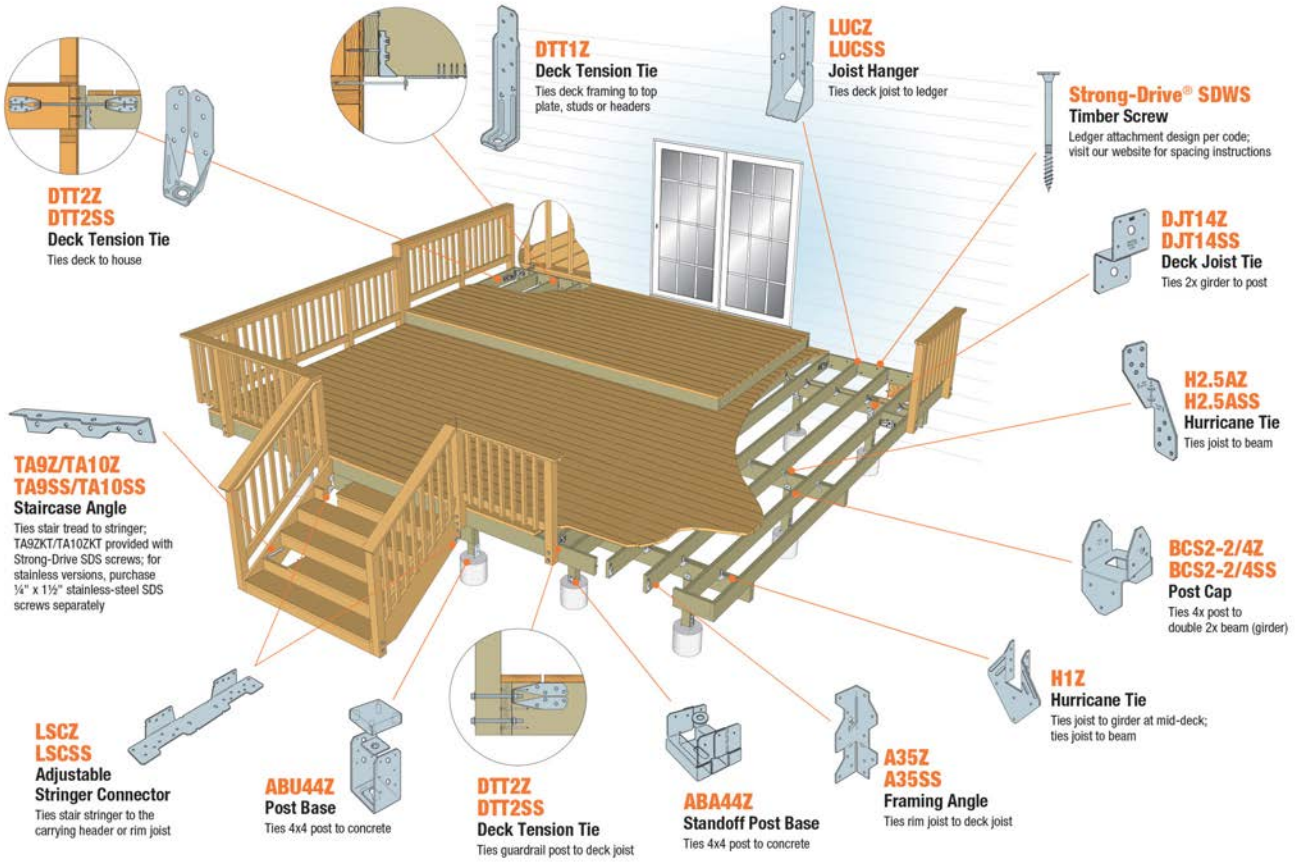
It is important to have a post of sufficient size and strength to support the beam. The beam should not be any wider than the thickness of the post, and should be secured with the correct post cap.

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. 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.

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



NOTE: *Illustration shows all available deck products. Actual products selected will depend upon application or construction method used for a particular deck. Check local building codes before you begin a project.*

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 at 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/products/deckcenter

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

CONCRETE LAYOUT
- Stakes or batter boards
- String
- Transit

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

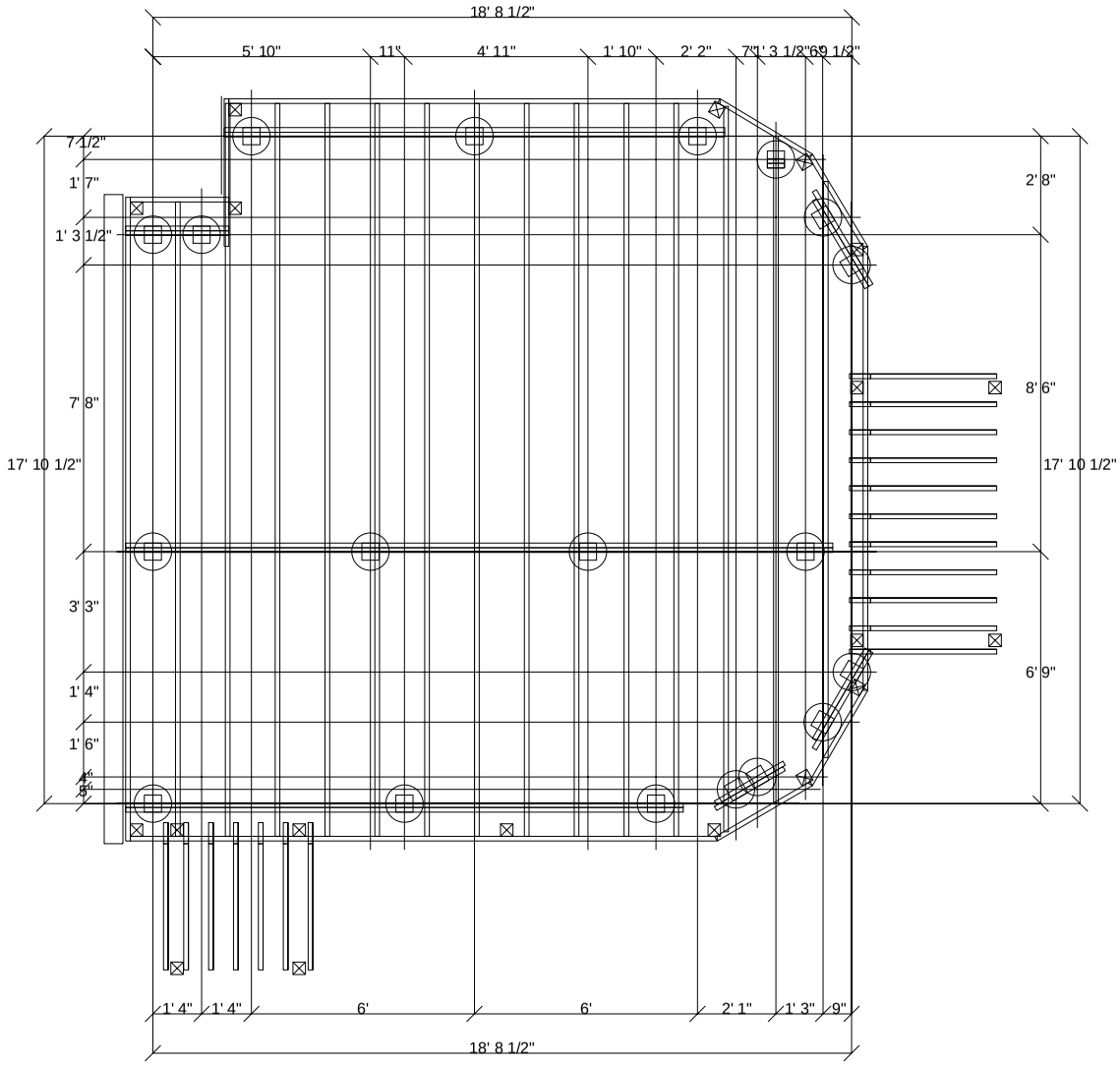
Wood Layout
- Tape measure
- Squares: Rafter/Speed, Framing
- Level/Levels
- Chalk line
- Pencils
- Plumb bob

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

Tips For The DIYer

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

Plan View with Dimensions



SIMPSON Strong-Tie

NOTES FROM CUSTOMER

DESIGN TITLE: Sample Trex Deck

CUSTOMER NAME: Deck Designer

CUSTOMER EMAIL ADDRESS: deckdesign@gmail.com

CUSTOMER PHONE NUMBER

DRAWING

SCALE: NOT TO SCALE

CHECKED BY

DATE

CHECK DATE

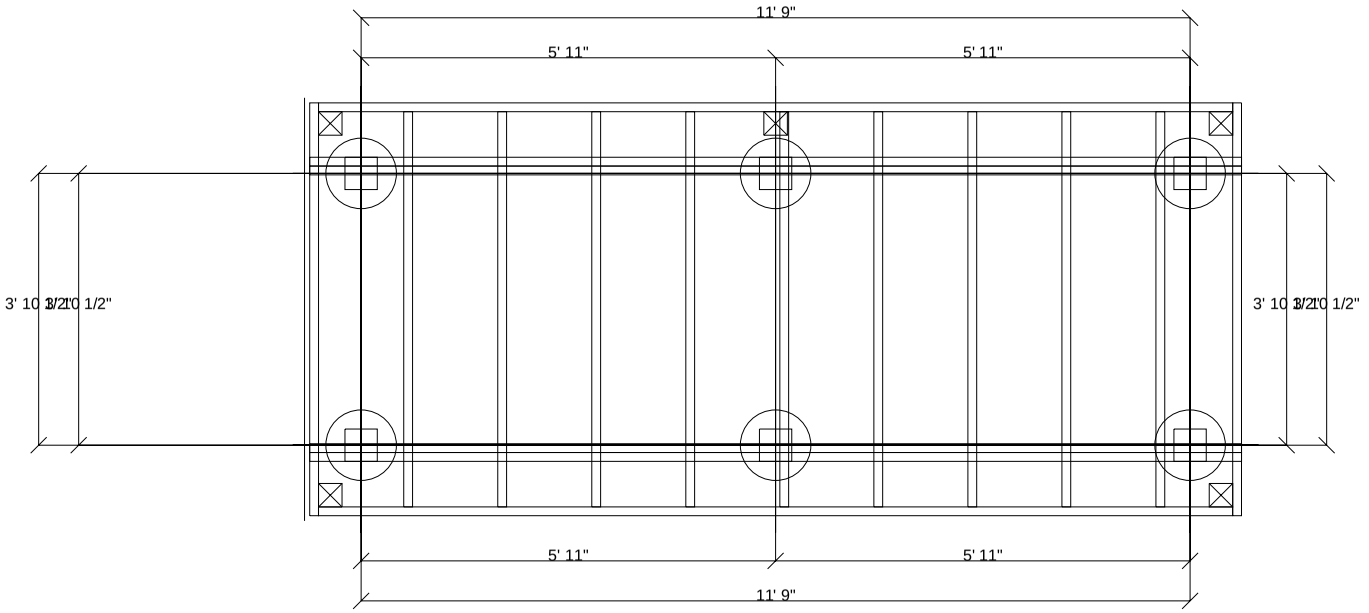
CREATED BY: Simpson Strong-Tie

NOTES FROM CUSTOMER

JOB NO

PAGE

Plan View with Dimensions



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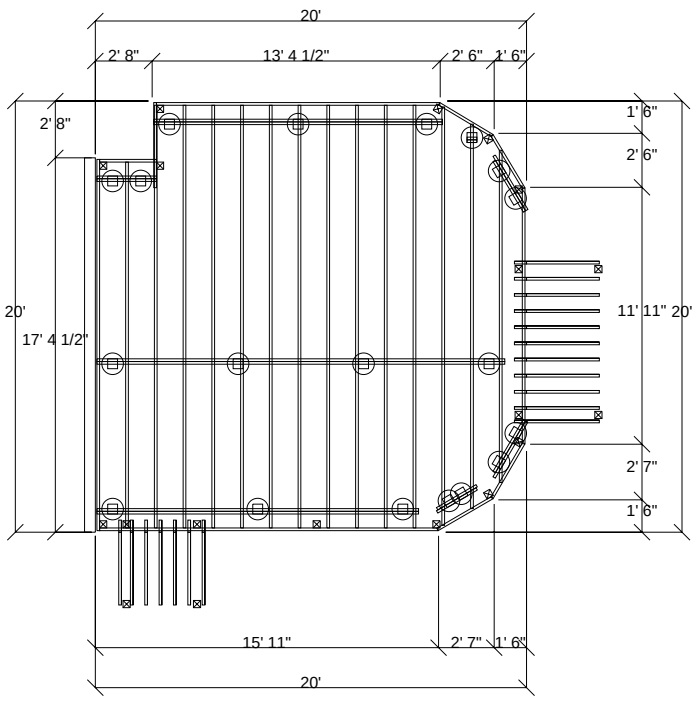
Permit Page

LEVEL 1



STRUCTURAL INFORMATION: LEVEL 1

Height of level (top of decking)	36"
Max joist span	93"
Max joist cantilever	6"
Max beam span	81"
Max beam cantilever	6"
Footing depth	30"

Deck and Post Height

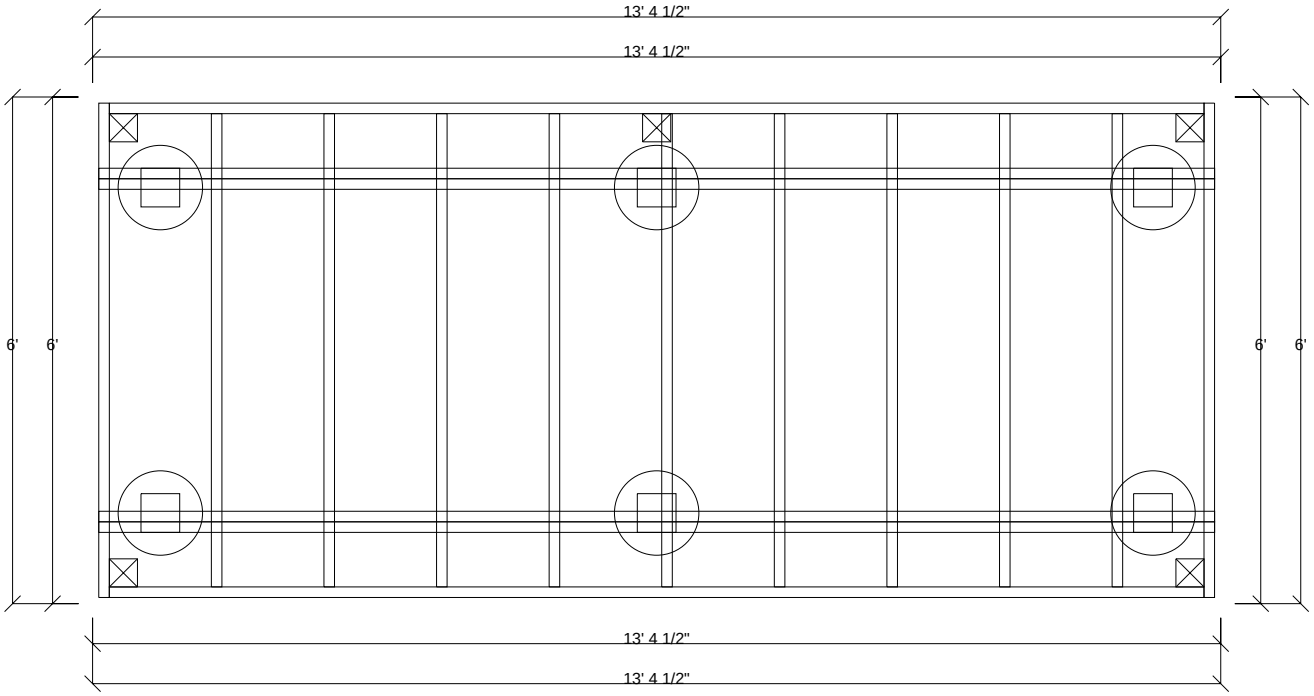
You selected a height of 36" from the top of the decking to the ground level. The top of the deck support posts will therefore be 25" above ground level.

Joists

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

Permit Page

LEVEL 2



STRUCTURAL INFORMATION: LEVEL 2

Height of level (top of decking)	43"
Max joist span	49"
Max joist cantilever	6"
Max beam span	71"
Max beam cantilever	6"
Footing depth	30"

Deck and Post Height

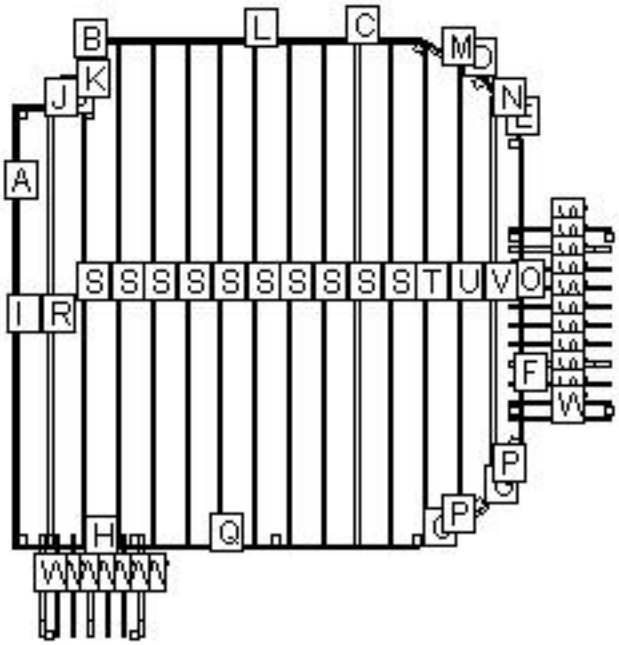
You selected a height of 43" from the top of the decking to the ground level. The top of the deck support posts will therefore be 25" above ground level.

Joists

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

Materials Cut List

LEVEL 1



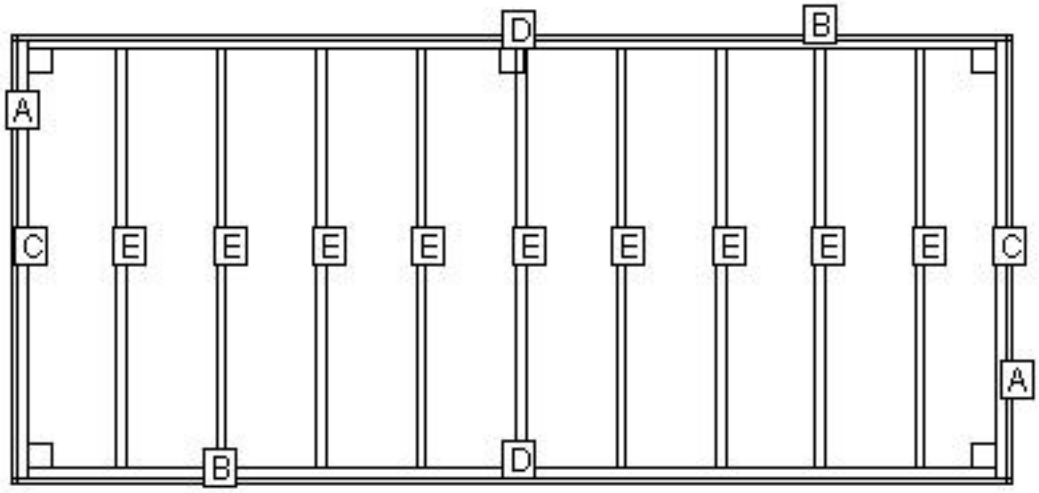
Materials Cut List

LEVEL 1

Label	Name	Qty.	Length	Bevels
A	Fascia	1	17' 4 1/4"	45,45
B	Fascia	2	2' 8 1/2"	45,45
C	Fascia	1	13' 4 1/4"	75,45
D	Fascia	1	2' 11"	76,75
E	Fascia	1	2' 11"	75,76
F	Fascia	1	11' 11"	75,75
G	Fascia	2	3'	75,75
H	Fascia	1	15' 11"	45,75
I	Outer Joist	1	17' 2 1/2"	
J	Header	1	2' 7 3/4"	
K	Outer Joist	1	3' 11 1/2"	
L	Header	1	13' 1 3/4"	
M	Header	1	2' 10 1/2"	
N	Header	1	2' 10 1/2"	
O	Outer Joist	1	11' 10 1/2"	
P	Header	2	2' 11 1/4"	
Q	Header	1	15' 8 1/2"	
R	Internal Joist	1	16' 11 1/2"	
S	Internal Joist	10	19' 7 1/4"	
T	Internal Joist	1	19' 5"	
U	Internal Joist	1	17' 10"	
V	Internal Joist	1	15' 5"	
W	Stringer	18	4' 2 1/2"	

Materials Cut List

LEVEL 2



Materials Cut List

LEVEL 2

Label	Name	Qty.	Length	Bevels
A	Fascia	2	6'	45,45
B	Fascia	2	13' 4 1/4"	45,45
C	Outer Joist	2	5' 10 1/4"	
D	Header	2	12' 11 1/2"	
E	Internal Joist	9	5' 7 1/4"	

Estimated Material List

Lumber Materials

Item	Qty.	Description	Type
RailPost	6	4x4-16' Pressure Treated	Pressure Treated
Outer Joist	1	2x8-8' Pressure Treated	Pressure Treated
Outer Joist	1	2x8-16' Pressure Treated	Pressure Treated
Outer Joist	4	2x8-18' Pressure Treated	Pressure Treated
Header	1	2x8-8' Pressure Treated	Pressure Treated
Header	1	2x8-16' Pressure Treated	Pressure Treated
Header	3	2x8-18' Pressure Treated	Pressure Treated
Beam	4	2x10-14' Pressure Treated	Pressure Treated
Beam	1	2x10-16' Pressure Treated	Pressure Treated
Beam	5	2x10-18' Pressure Treated	Pressure Treated
Post	5	6x6-10' Pressure Treated	Pressure Treated
Internal Joist	11	2x8-8' Pressure Treated	Pressure Treated
Internal Joist	2	2x8-12' Pressure Treated	Pressure Treated
Internal Joist	1	2x8-16' Pressure Treated	Pressure Treated
Internal Joist	11	2x8-18' Pressure Treated	Pressure Treated
Stringer	1	2x12-10' Pressure Treated	Pressure Treated
Stringer	4	2x12-18' Pressure Treated	Pressure Treated

SIMPSON STRONG-TIE® CONNECTORS

Qty.	Description	Type
24	DTT2Z Galvanized Deck Tension Tie 2	Galvanized
5	RFB Retrofit Bolt, Galvanized, 1/2" x 7", (RFB#4x7HDG - 10 ct)	Galvanized
7	LS50Z - Galvanized Skewable Joist Hanger	Galvanized
35	SDWH19400DB Structural Wood Screw	Galvanized
39	LUS28Z - Galvanized Joist Hanger, 2x8	Galvanized
2	HU28X - Galvanized Skewable Joist Hanger, 2x8 (59° Right)	Galvanized
2	HU28X - Galvanized Skewable Joist Hanger, 2x8 (60° Right)	Galvanized
2	LS50Z - Galvanized Skewable Joist Hanger	Galvanized
6	MTS12Z - Galvanized Twist Straps	Galvanized
56	H1Z - Galvanized Hurricane Tie	Galvanized
9	H2.5AZ - Galvanized Hurricane Tie	Galvanized
25	ABA66Z - Galvanized Adjustable / Standoff Post Base, 6x6	Galvanized
25	PAB 5/8" x 12" Pre-Assembled Anchor Bolt (PAB5-12)	Galvanized
50	LPC6Z - Galvanized Post Cap, 6x6	Galvanized
18	LSCZ - Galvanized Adjustable Stringer Connector	Galvanized
4	Strong-Drive® SCN 3" x .148", 9 gauge, Smooth-Shank Connector Nail, Hot Dip Galvanized (10D5HDG - 5 LB)	Galvanized
4	Strong-Drive® SCN 1 1/2" x .148", 9 gauge, Smooth-Shank Connector Nail, Hot Dip Galvanized (N10DHDG - 1 LB)	Galvanized
1	Strong-Drive® SCN 3 1/2" x .162", 8 gauge, Smooth-Shank Connector Nail, Hot Dip Galvanized (16DHDG - 1 LB)	Galvanized
1	Strong-Drive® SCN 3 1/2" x .162", 8 gauge, Smooth-Shank Connector Nail, Hot Dip Galvanized (16D5HDG - 5 LB)	Galvanized
4	Strong-Drive® SCN 1 1/2" x .131", 10 gauge, Smooth-Shank Connector Nail, Hot Dip Galvanized (N8DHDG - 1 LB)	Galvanized

Qty.	Description	Type
8	EB-TY® Hidden Deck Fasteners - (175-EBTYLC - 175ct)	Stainless Steel
1	Deck-Drive™ DCU #10 Composite Screws, Gray (DCU234P305GR - 350ct)	Stainless Steel

DECKING AND RAILING MATERIALS

Qty.	Description
24	Trex Transcend - White - 4'X4'X39" Post Sleeve
24	Trex Transcend - White - 4"X4" Post Skirt
24	Trex Transcend - White - 4"X4" Pyramid Post Cap
2	Trex Transcend - White - Universal Top/Bottom Rail - 6'
6	Trex Transcend - White - Universal Top/Bottom Rail - 8'
11	Trex Transcend - White - Square Baluster - 16 Pack - 36"
1	Trex Transcend - White - Crown Top Rail - 6'
9	Trex Transcend - White - Crown Top Rail - 8'
10	Trex Select Pebble Grey 1"X12"X12' Fascia/Trim
18	Trex Select 1"X5.5" Grooved Pebble Grey 16' Decking
38	Trex Select 1"X5.5" Grooved Pebble Grey 20' Decking
4	Trex Select Pebble Grey 1"X12"X12' Fascia/Trim
6	Trex Select 1"X5.5" Pebble Grey 16' Decking
4	Trex Transcend - White - Universal Top/Bottom Rail - 6'

Estimated Material List

Other Materials

Qty.	Description
1	Trex Transcend 45 Degree Birdmouth Gasket 12 Pack - White
3	Trex Transcend Mounting Hardware for Cut Rails 12 Pack - White
1	Trex Composite Footblock 50 Pack - White
25	5/8 Galvanized Hex Nut
25	5/8 Galvanized Flat Washer
16	12" X 48" Concrete Form Tube
1	Trex Transcend Mounting Hardware for Cut Rails 12 Pack - White
3	8D Common Nail - Galvanized - 1 LB
1	8D Common Nail - Galvanized - 5 LB
76	80 L.B. Basic Concrete Mix

Legal Disclaimer

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This Deck Planner Software™ Report (your "Design Kit") is a construction guide and is NOT a finished building plan. The App is not designed to perform any of the engineering calculations or structural design required for building construction. It is your responsibility to verify your Design Kit's accuracy, completeness, suitability for your particular site conditions, and compliance with local building codes and practices. Please consult your local building codes for any applicable requirements, including requirements for deck lighting. Any use of your Design Kit is at your own risk.

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You are responsible for ensuring that all measurements are correct. Due to the size, shape, location or other considerations, your Design Kit may require supporting structures, such as knee braces and bridging between joists and posts and are not included on the materials list and other information provided. YOU ARE RESPONSIBLE FOR ENSURING THAT YOUR DESIGN KIT IS SAFE AND STRUCTURALLY SOUND FOR ITS SIZE, LOCATION AND ANTICIPATED USE. You are also responsible for verifying that the design and any substitutions or modifications you make meet all local building codes and regulations.

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