

Spa Deck Designer Specification Kit



**Custom Designed For: Josh Christiansen
2006 Grandee**



Deck layout diagram



Top view without planks



Bottom view with planks



Top view with planks

It is recommended that you leave access to the equipment compartment for periodic spa care and maintenance. Please consult the Hot Spring Pre-Delivery Instructions and/or the authorized Hot Spring Spa dealer in your area for more information.



The Grandee, with its expansive, Barrier-Free design, provides plenty of room for a party of seven. Two Moto-Massage® DX jets let two people enjoy a terrific back massage at the same time. The SoothingStream® water feature adds to the overall ambiance, with a tranquil flow of backlit water.

Grandee Specifications	
Seating Capacity	7 adults
Dimensions	8' 4" x 7' 7" x 38"H/2.54m x 2.31m x .97m H
Water Capacity	500 gallons/1,893 litres
Weight	1,008 lbs./457 kg dry; 6,233 lbs./2,827 kg filled*
Spa Shell Colors	Corresponding Everwood® Cabinet
Azurite	Coastal Gray or Redwood
Pearl	Coastal Gray or Redwood
Sand	Coastal Gray or Redwood
Sterling Marble	Coastal Gray
Light (Extra Large)	Luminescence® multi-color LED lighting system
Music Option	SpAudio® music system
Jets (Total jets-39) (Stainless Steel Escutcheons)	2 Moto-Massage® DX Jets (4), 2 Soothing Seven® Jets, 3 JetStream® Jets, 2 Rotary Hydromassage Jets, 2 Directional Hydromassage Jets, 26 Directional Precision® Jets
Water Feature	SoothingStream™
Control System	IQ 2020™ 230v/50 amp, 60 Hz Includes G.F.C.I. protected subpanel
Heater	No-Fault®, 4000w/230v
Jet Pump 1	Wavemaster® 9000; One-speed, 2.5 HP Continuous Duty, 4.8 HP Breakdown Torque
Jet Pump 2	Wavemaster® 8000; One Speed, 2.0 HP Continuous Duty, 3.9 HP Breakdown Torque
Circulation Pump	SilentFlo 5000®
Ozone System	FreshWater® III Corona Discharge
Effective Filtration Area	325 sq. ft., top loading, 100% no-bypass filtration (Tri-X®)
Vinyl Cover	3.5" to 2.5" tapered, 2 lb. density foam core

* Includes water and 7 adults weighing 175 lbs. each

Also available in 230v, 50Hz, 1500w Heater.

Also available in the Classic® Series (with white Enduro® spa shell).

See your dealer for details.

Installation Guidelines

IMPORTANT:

CONSULT THE PRE-DELIVERY INSTRUCTIONS AND OWNERS MANUAL FOR THE PARTICULAR SPA MODEL YOU SELECTED FOUND ON WWW.HOTSPRING.COM, PRIOR TO STARTING ANY CONSTRUCTION OR PLANNING FOR YOUR SPA AND DECK INSTALLATION.

TO BE CERTAIN YOUR DECK CAN SUPPORT THE SPA, YOU MUST KNOW THE DECK'S MAXIMUM LOAD CAPACITY. CONSULT A QUALIFIED BUILDING CONTRACTOR OR STRUCTURAL ENGINEER BEFORE YOU PLACE THE SPA ON AN ELEVATED DECK.

IF YOU INSTALL THE SPA ON THE GROUND AS PART OF AN INSET DECK, A REINFORCED CONCRETE PAD AT LEAST 4 INCHES THICK IS REQUIRED. THE REINFORCING ROD OR MESH IN THE PAD SHOULD BE ATTACHED TO A BOND WIRE (SEE YOUR OWNERS MANUAL). CONSULT THE PRE-DELIVERY INSTRUCTIONS FOR OTHER APPROVED FOUNDATIONS.

IF YOU ARE PLACING YOUR HOT TUB INSET IN THE DECK. DO NOT BEGIN CONSTRUCTION OF THE DECK UNTIL YOU PHYSICALLY TAKE DELIVERY OF YOUR NEW SPA. YOU MUST TAKE EXACT MEASUREMENTS OF YOUR SPA IN ORDER TO HAVE THE RIGHT SIZE OPENING.

UNDER NO CIRCUMSTANCES PRE-CONSTRUCT OR PRE-CUT A HOLE BASED ON NOMINAL DIMENSIONS OBTAINED FROM THESE PLANS OR ANY OTHER SPECIFICATION. EACH SPA IS UNIQUE.

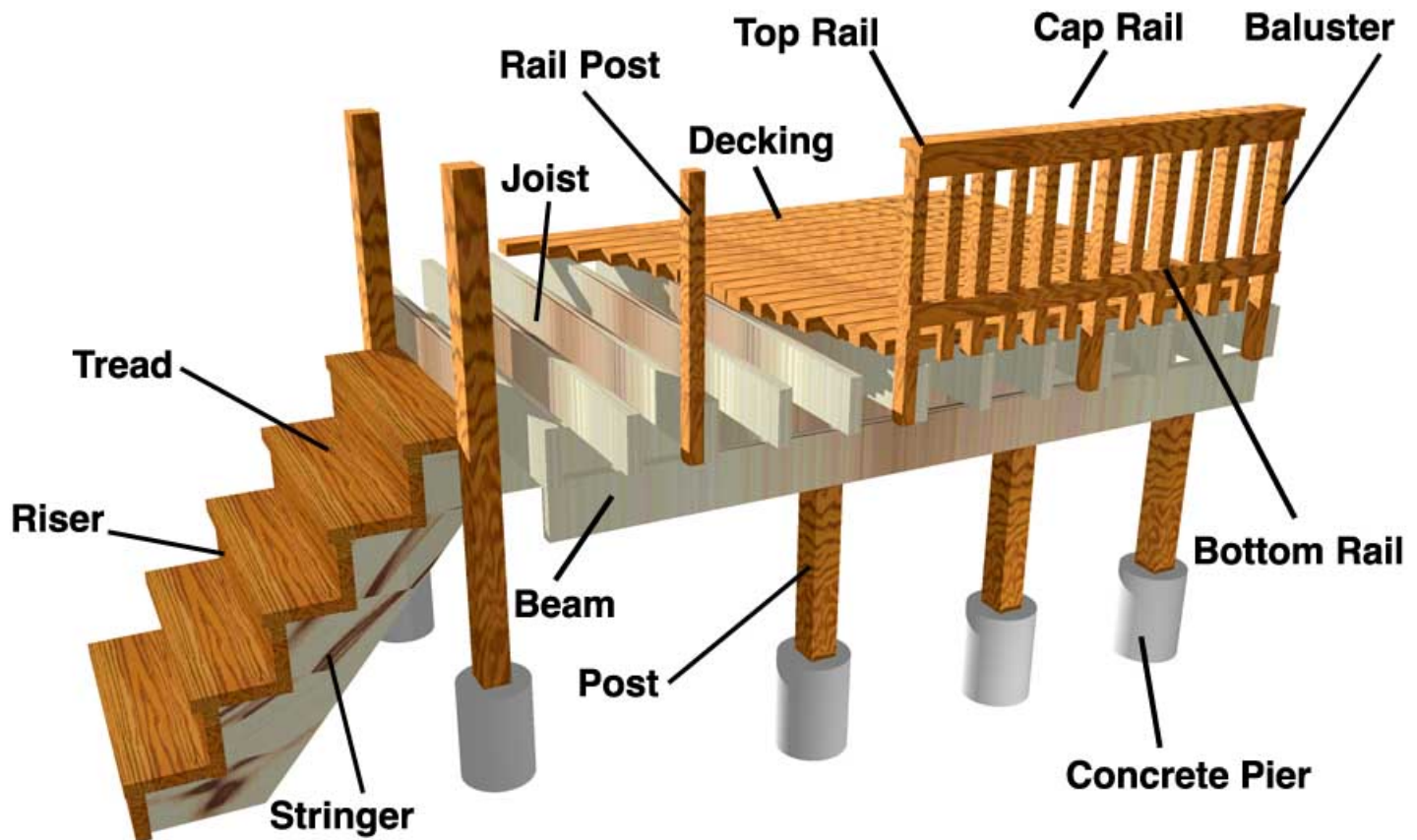
IF YOU INTEND ON HAVING YOUR SPA INSET TO THE DECK, WE REQUIRE THAT THE SPA BE PLACED ON THE CONCRETE PAD (AS DESCRIBED WITHIN YOUR OWNERS MANUAL), LEVELED AND ALL ELECTRICAL CONNECTIONS MADE PRIOR TO CONSTRUCTING YOUR DECK.

IF YOU INSTALL THE SPA ON THE GROUND AS PART OF AN INSET DECK, YOU MUST ALLOW FOR ACCESS FOR MAINTENANCE AND REPAIR. YOU MAY REMOVE DECK PLANKING OR PRE CUT A SECTION ADJACENT TO THE ACCESS PANEL.

CHECK DEED RESTRICTIONS, BUILDING CODES AND/OR ZONING LAWS TO MAKE SURE YOUR DECK COMPLY WITH ALL LOCAL CODES.

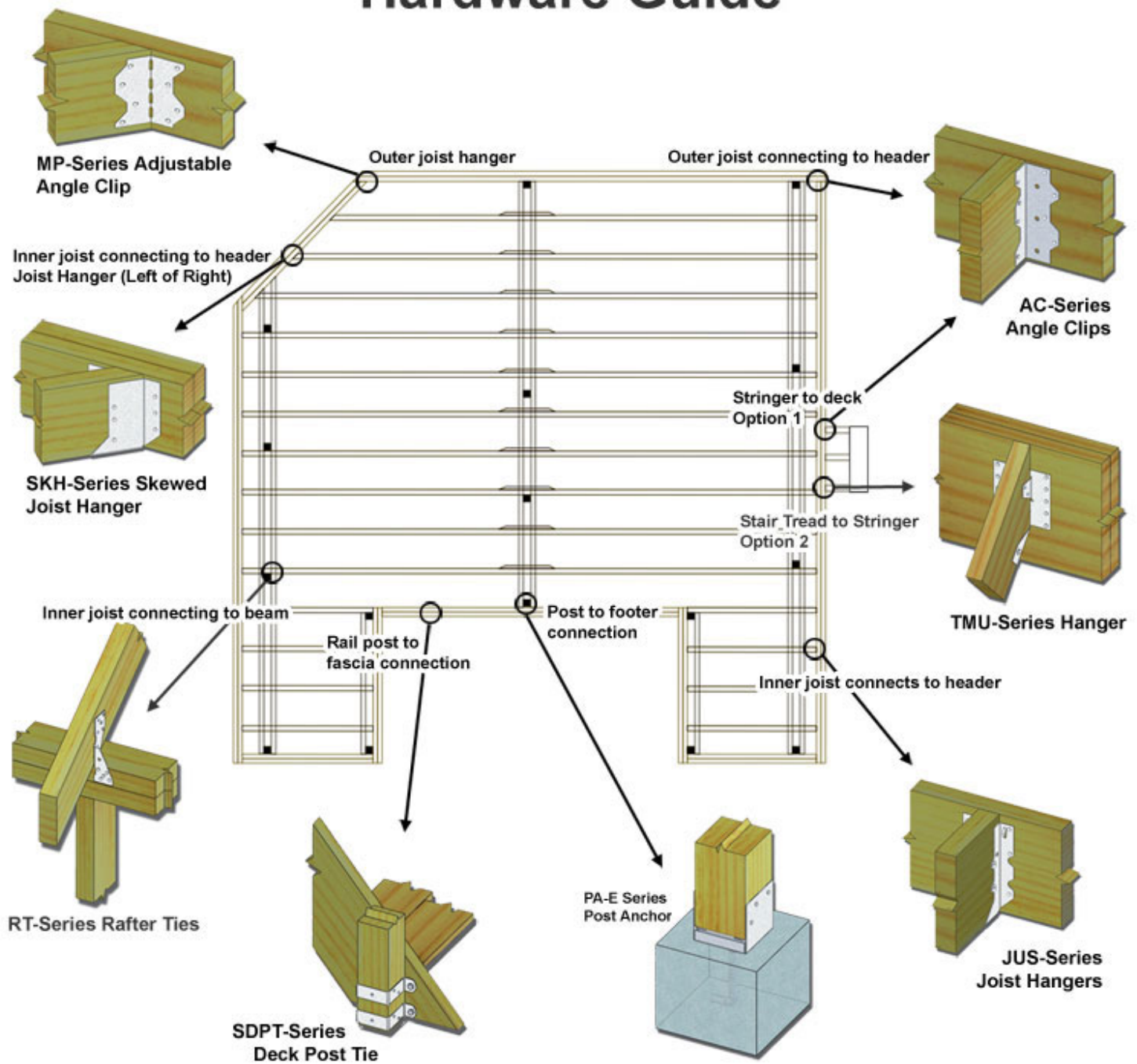
CHECK WITH LOCAL UTILITY COMPANIES TO MAKE SURE DECK CONSTRUCTION WILL NOT DISTURB PIPING OR WIRING.

Deck Part Identification



Baluster	The vertical pieces of a railing spaced at regular intervals between posts.
Beam	A horizontal framing piece, which rests on posts and supports joists.
Decking	The boards used to make the walking surface of the deck
Joist	A horizontal frame piece that supports the decking and spreads the weight over the beams
Ledger	A horizontal strip that connects the deck to the house.
Concrete Pier	A vertical piece of concrete, used as a footing to support a post.
Post	A vertical framing piece, used to support a beam or a joist.
Riser	The board attached to the vertical cut surface of a stair stringer.
Stringer	The diagonal board used to support treads and risers on a stairway.
Tread	The horizontal surface of a stair, perpendicular to the riser.
Bottom Rail	The lower horizontal piece that connects rail posts
Top Rail	The upper horizontal piece that connects rail posts
Cap Rail	The top horizontal trim on railing.
Rail Post	The vertical posts connected to the deck framing, to which railing is secured.

Structural Connector Hardware Guide





Installation Checklist

Pre-Delivery Instructions and Owners Manual

Consult the pre-delivery instructions found on www.hotspring.com prior to starting any construction or planning for your spa and deck installation.

Building code and zoning requirements

Check deed restrictions, building codes and/or zoning laws to make sure your deck complies.

Check with local utility companies to make sure deck construction will not disturb piping or wiring.

Deck function

While planning your deck, determine how it will be used.

Your climate

While planning your deck, consider local weather.

Take advantage of good views.

Install ledger

Install ledger to anchor deck to house.

Ledger placement determines the deck floor level, normally 2-4" below floor line.

If unsure about attaching a ledger board, consult a professional.

Use batterboards and mason's string to mark off deck area and locate footing.

Square with string

Attach string to ledger and/or batterboards.

Batterboards go just outside perimeter corners of the deck.

Use the 3-4-5 method to get a 90 degree angle in one corner.

Install posts

Footing/posthole depth is dictated by local codes.

Check with local utility companies to make sure deck construction will not disturb piping or wiring.



Installation Checklist

Post bracing

Brace posts as dictated by local codes.

Attach beams to posts

Determine the desired deck floor height on the posts.

Determine height for securing the top of the beam to the post.

Attach joists

Joists are attached to ledger board with joist hangers or by toenailing.

Determine where blocking will go and snap a chalk line, but make sure to stagger pieces for ease of nailing.

Lay decking

Attach boards "bark side up" to minimize cupping and warping.

The deck boards can be trimmed after they are installed.

Railings

Railings must be firmly attached to the framing members of the deck.

Check for local code restrictions on railings.

Stairs

Stairs should be at least 3' wide.

Check local codes on stair restrictions.

Measure the rise and run of the stairs.

Multi-level decks

When planning a multi-level deck, for aesthetics make one deck larger than the other.



Tools Required & Tips for Success

Tools Required:

Carpenter's level	Goggles	Rafter square
Carpenter's square	Hearing protection	Ruler
Chalk line	Hammer	Safety glasses
Chisel	Hand saw	Screwdrivers
Circular saw	Hoe and hose (to mix concrete)	Shims or spacers
Claw hammer	Ladder	Shovel
Combination square	Line	Socket wrench
Crescent wrench	Mallet	Stakes or batter boards
Drills and bits	Nail set	String
Dust mask	Pencils	Tamper
Extension cord	Pick	Tape measure
Framing square	Plumb bob	Transit
Gloves	Post hole digger	Tool belt

Tips for success:

1. When cutting or drilling wood, always wear eye protection to prevent injury from flying wood particles
2. When cutting lumber, a fabric breathing mask will help to avoid ingestion of the dust. Wear gloves as the surface is rough and can cause splinters.
3. For outdoor projects, nails and other hardware should be hot-dipped zinc-coated or equally well-protected material to keep them from rusting.
4. To help prevent splitting, drill pilot holes in each piece of lumber before nailing or screwing.
5. Make sure to treat your deck to prolong its lifespan.
6. Before you apply a finish on your deck, test for moisture by sprinkling the surface of a small area of the deck with water. If the droplets bead up, the wood is still wet. Wood that is dry enough for treatment will quickly soak up the water.
7. Deck finishes come in both water and oil based. While oil-based finishes penetrate deeper into the wood, water-based products are easier to clean up and are more forgiving in damp conditions.
8. When applying finish or cleaner to your deck, protect surrounding vegetation by wetting with a hose and covering with plastic.
9. Invest in a pair of kneepads if you are doing floor jobs or working on a deck.
10. Dispose of scraps in the regular trash or take to a landfill - never burn.

Hot Spring Spa Pre-Delivery Instruction and Owners Manual Download Information

If you have not already downloaded the "Hot Spring Spas' Pre Delivery Instructions and Owners Manual," they are available at www.hotspring.com. Select the Customer Corner section, then select the "Pre-Delivery Instructions" section and download the Instructions and Owners Manual.



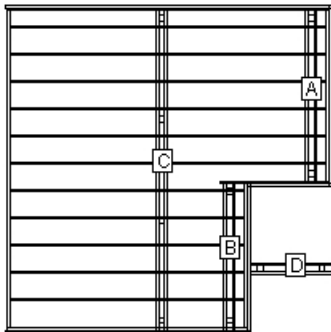
**Below are the Specifications And Materials
that you have selected for your deck.**

Overview	Number of Levels: 1 Total Square Feet: 228	Footer Depth: 24" Live Load: 77 psf Dead Load: 20 psf
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Component	Size	Wood Type
Joists	2 x 10	Treated
Beams	2 x 10	Treated
Posts	4 x 4	Treated
Decking	5/4 x 6	Cedar
Railing		Treated
Bench		None
Lattice		None

FooterDepth	24"	Live Load	77 psf
		Dead Load	20 psf

Permit Page: Level 1



LOAD AND SUPPORT:

Your deck will support a 77 PSF live load.
 Posts have 24" below ground support.

DECK AND POST HEIGHT:

You selected a height of 72" from the top of the decking to the ground level. The top of the deck support posts will therefore be 61.25" above ground level.

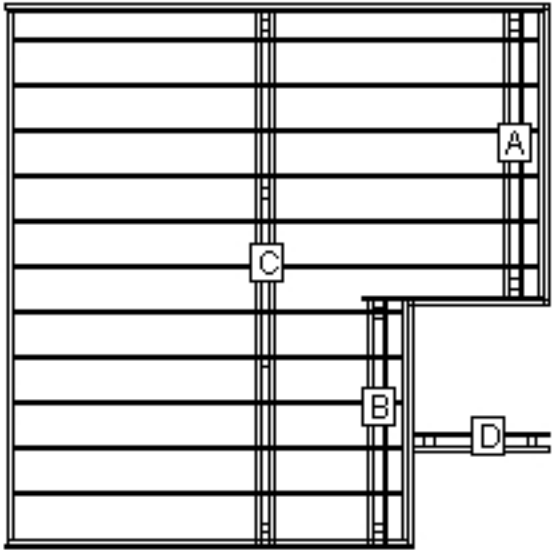
Joists:

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

Stress Analysis: Level 1

Component	PSF
Joist Deflection	845
Joist Bending	147
Joist Shear	172
Joist Compression	243
Beam Deflection	111
Beam Bending	111
Beam Shear	96
Bolt Shear	105
Post Stability	178

Beam Layout Level 1



BEAM LABEL	BEAM LENGTH	POST COUNT	POST SPACING
A	8' 7"	2	7' 7 1/2"
B	7' 3 1/2"	2	6' 4"
C	15' 9"	4	4' 11 1/4"
D	4'	2	3' 1/2"



Component Descriptions

Spa

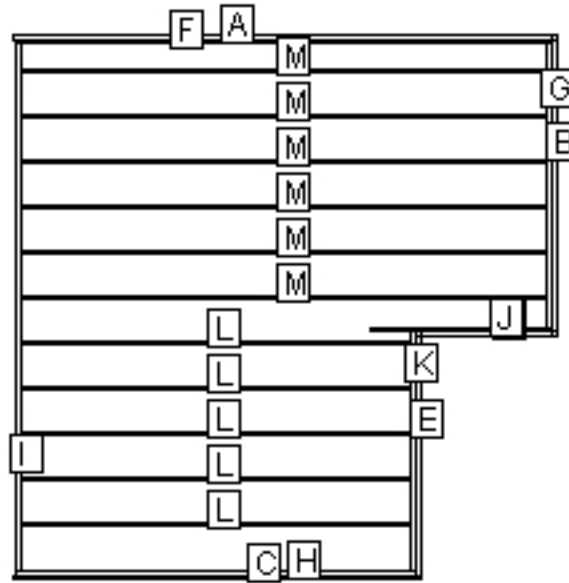
2006 Grandee - To find your local dealer, visit www.hotspring.com

Lumber Materials			
COMPONENT	QTY	DESCRIPTION	WOOD TYPE
Rim Joist	6	2x10x12 Treated	Treated
Internal Joist	14	2x10x16 Treated	Treated
Beam	2	2x10x10 Treated	Treated
Beam	5	2x10x8 Treated	Treated
Top Rail	1	2x6x8 Treated	Treated
Top Rail	3	2x6x10 Treated	Treated
Top Rail	1	2x6x14 Treated	Treated
Top Rail	1	2x6x18 Treated	Treated
Railing Post	1	4x4x12 Treated	Treated
Railing Post	5	4x4x16 Treated	Treated
Hand Rail	1	2x4x10 Treated	Treated
Hand Rail	3	2x4x18 Treated	Treated
Spindle	59	2x2x10 Treated	Treated
Cladding	1	2X10X10 TOP CHOICE SPF facia_1	Treated
Deck Planking	8	5/4x6x10 Cedar	Cedar
Deck Planking	31	5/4x6x16 Cedar	Cedar
Post	8	4x4x8 Treated	Treated

Other Materials

Qty	Description
10	4x4 TRIPLE ZINC DECK POST ANCHOR PA44E-TZ
10	80 L.B. BASIC CONCRETE MIX
1	60 L.B. BASIC CONCRETE MIX
1	10 LB. BASIC CONCRETE MIX
5	8" X 48" CONCRETE FORM TUBE
10	ANCHOR BOLT AB128
1	5 LB. 10D HOT-DIP GALVINIZED NAIL
40	1/2 X 8" GALVANIZED CARRIAGE BOLT
80	1/2 GALVANIZED FLAT WASHER
2	1/2 GALVANIZED HEX NUT
44	TRIPLE ZINC RAFTER TIE RT7-TZ
3	1LB. 8D GALVANIZED COMMON NAIL
2	1 LB. 1-1/2" JOIST HANGER NAIL
12	TRIPLE ZINC RAFTER TIE RT7-TZ
22	2x10-12" TRIPLE ZINC JOIST HANGER JUS210-TZ
1	5 LB. 10D X1 1/2" NAIL
6	7" TRIPLE ZINC ANGLE CLIP AC7-TZ
1	5 LB. 8X2 1/2" PHILIPS HEAD STAINLESS DECK SCREWS
2	1 LB. 8X2 1/2" PHILIPS HEAD STAINLESS DECK SCREWS
5	7" TRIPLE ZINC ANGLE CLIP AC7-TZ
46	4x4 TRIPLE ZINC DECK POST TIE SDPT7-TZ
184	3/8 GALVANIZED HEX NUT
184	3/8 GALVANIZED FLAT WASHER
92	3/8 X 8" GALVANIZED CARRIAGE BOLT
1	5LB 16D GALVANIZED COMMON NAIL
32	1/2 X 6" GALVANIZED LAG SCREW

Materials Cut List: Level 1



LABEL	NAME	QTY	LENGTH	BEVELS	LABEL	NAME	QTY	LENGTH	BEVELS
A	Fascia	1	16'	F45 S45	H	Outer Joist	1	11' 9"	
B	Fascia	1	8' 10"	F45 S45	I	Header	1	15' 6"	
C	Fascia	1	12'	F45 S45	J	Outer Joist	1	5' 3 3/4"	
D	Fascia	1	4' 1 1/2"	F45 S45	K	Header	1	7' 2"	
E	Fascia	1	7' 3 1/2"	F45 S45	L	Joist	5	11' 6"	
F	Outer Joist	1	15' 9"		M	Joist	6	15' 6"	
G	Header	1	8' 4"						

Cut Angles: L=Left, R=Right, F=Front, S=Side



Disclaimer: We want you to have fun using our software and building your deck however, we care about your safety. Carefully read the following **Disclaimer and Disclosure**. You may proceed only if you have read this information and agree to the terms.

The suggested design is a construction guide and is NOT a finished building plan. It is your responsibility to verify its accuracy, completeness, suitability for your particular site conditions, and compliance with local building codes and practices.

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Be sure to follow the deck construction and guidelines carefully. You are responsible ensuring that all measurements are correct. Due to size, shape, location or other considerations, your design may require supporting structures, such as knee braces and bridging between joists, that are not included on the materials list and other information provided. **YOU ARE RESPONSIBLE FOR ENSURING THAT YOUR DESIGN 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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You understand that it is your responsibility to check any and all codes associated with deck construction. It is also your responsibility to obtain any deck construction permits as required by city, county, or state agencies.

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Note: It is recommended that joist that meet on top of beams should be spliced with gussets.