

# Quick Mount PV<sup>®</sup>

Your ***Solution*** in Mounting Products  
Solar • H<sub>2</sub>O • Conduit • HVAC • Custom

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National Sales & Training Manager



# Key Thought & Common Questions

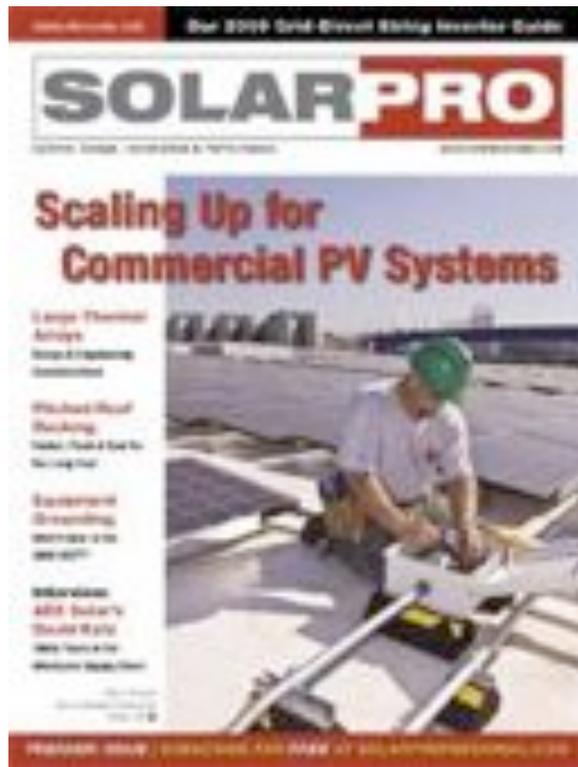
- ❑ We are all “Solar Installers” but when we step onto a roof with a drill and pull the trigger we become “Roofers” and we have to think like one!
- ❑ Wouldn't put a skylight or vent jack in without complete waterproof flashing
- ❑ How would a roofer approach mounting and affixing PV or Solar thermal panels to a customers roof?
- ❑ What is the “CODE” for a mount?

*Oops!*



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*“Instructions from roof manufacturers, guidelines and standards in the roofing industry, accepted best practices and building codes all require the use of flashed penetrations.”*

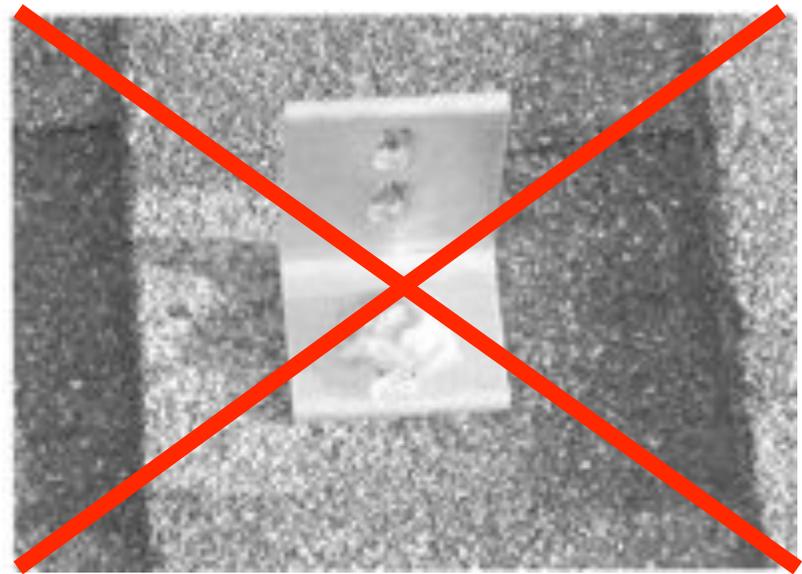
*“...80% of all construction related litigation stems from water intrusion.”*

**~ Rob Hernandez  
(Jim Whitten Roof Consultants)**

# *Other Common Mounting Methods*



# *Other Common Mounting Methods*



# *...Common Mounting Methods*



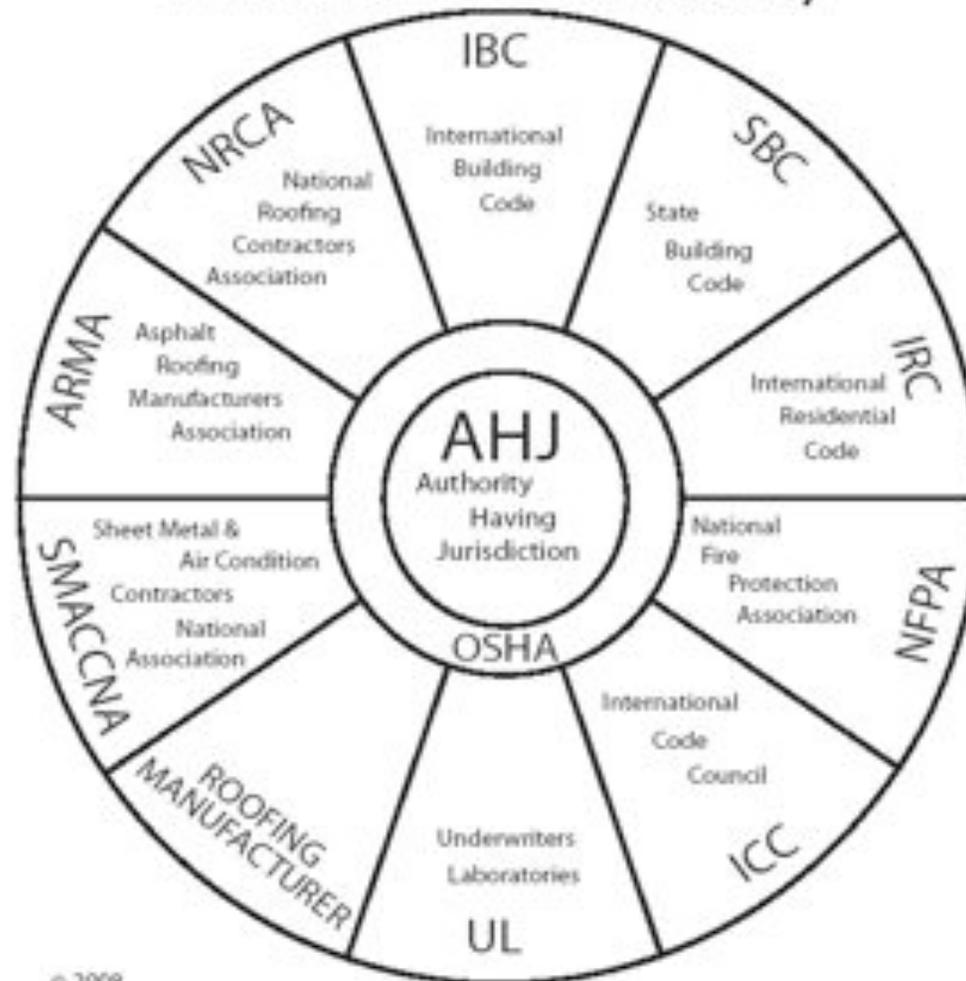
Leaks and corrosion found at point of penetration

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## Wheel of Accountability



# Code Compliance

**UBC & IBC** – flashing required at all roof openings

**NRCA: “Best Practices”** – no exposed fasteners

**ARMA:** must follow manufactures specs

**SMACNA:** galvanized – not for use on roofs  
exceeding 15 year lifespan

**Roofing Manufacturer:** must follow specs to  
maintain roof warranty

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## The ALL-IN-ONE

Waterproof Flashing & Mount

For Engineers, & Installers who DEMAND:

**NRCA'S Standards & Best Practices**

**Code Compliance**

**50 Year Lifespan**

**Labor Savings**

**No Roof Cutting**

**Works with all Racks**



[www.quickmountpv.com](http://www.quickmountpv.com)

## INSTALLATION INSTRUCTIONS

# Quick Mount PV®

(925) 687-6686  
www.quickmountpv.com

### TOOLS NEEDED

Measuring tape, roofer's flat bar, chalk line, stud finder, caulking gun with roofing sealant, drill with 1/4" long bit, drill with 1/2" deep socket.

### 1. LOCATE RAFTER

Using horizontal and vertical chalk lines to align hole for placement of each Quick Mount



### 2. DRILL PILOT HOLE

Using drill with 1/4" long bit, drill pilot hole through roof and rafter, taking care to drill square to the roof.



### 3. LIFT TILE

Lift composition roof tile with roofer's flat bar, just above placement of Quick Mount.

**4. SEAL HOLE** Using caulking gun with roofing sealant, squeeze a dab of roofing sealant into hole.



### 5. SLIDE QUICK MOUNT INTO PLACE

Lift comp tile and slide Quick Mount into place.



### 6. SET HANGER BOLT, SEALING WASHER & NUT

Using drill with 1/2" deep socket, set sealing washer with rubber side down, then nut, and tighten into place.



### 7. ADD RUBBER GASKET

Push black gasket into place flush with top of Quick Mount block.

### 8. SECURE RACK INTO PLACE, WITH FLAT WASHER & NUT

Using drill with 1/2" deep socket, set up rack over bolt, with flat washer, then nut, and tighten into place.



## *One Minute Installation!!!*



**1. Lift composite tile and clear nails**



**2. Drill 1/4" pilot hole for lag bolt**



**3. Add roof sealant to pilot hole**



**4. Slide Quick Mount into place**

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## *One Minute Installation!!!*



**5. Drive lag bolt into rafter**



**6. Add EPDM rubber gasket to seal block**



**7. Attached rail of choice**



**8. Move onto the next...**

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Comp Mount with UniRac rail & L foot

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ProSolar Rail = low profile

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***Save time & money: cuts down on labor costs!***

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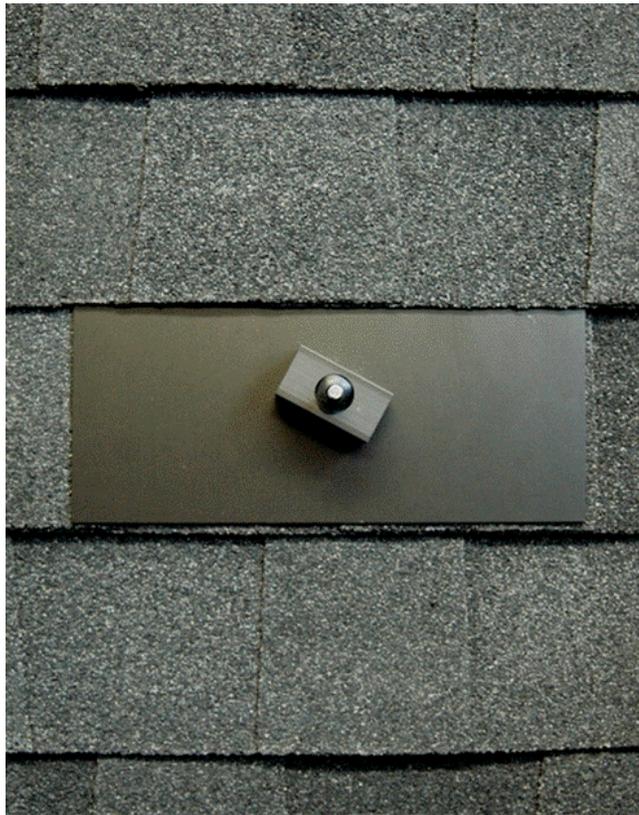
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Photo Courtesy of Abundant Solar

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*Anodized Bronze Comp Mount*

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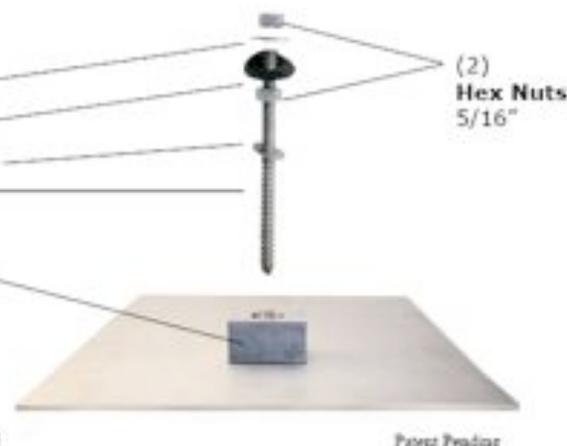
*Anodized Bronze Comp Mount*

# QuickMount PV™

## SPECIFICATION SHEET

QuickMount PV™ is an all-in-one waterproof flashing and mount to anchor photovoltaic racking systems to a new or existing roof. It is made in the USA of aluminum and includes stainless steel hardware. It works with all standard racks, installs seamlessly and is a better low-profile mount.

**Flat Washer (B)** 1" x 5/16"  
**Rubber Gasket** 60 Durometer EPDM  
**Sealing Washer (A)** 3/4" x 5/16"  
**Hanger Bolt** 5/16" x 6"  
 1-1/2" Machine, 1-1/2" Spacer, 3" Lag  
**Mount & Flashing** Aluminum  
 Mount 2-1/4" l x 1-1/4" w x 1-1/4" h  
 Flashing .05" thick. For standard composition roofs: flashing is 12" x 12", mount is attached 3" off center. For high definition cut composition, or shake roofs: flashing is 18" x 18", mount is attached 3" off center. For flat applied roofing during installation of roof: flashing is 18" x 18", mount is attached in the center.



Lag pull-out (withdrawal) capacities (lbs) in typical lumber:

	Specific gravity	Lag screw specifications	
		5/16" shaft* 3" thread depth	5/16" shaft* per 1" thread depth
Douglas Fir, Larch	.50	798	266
Douglas Fir, South	.46	705	235
Engelmann Spruce, Lodgepole Pine (MSR 1650 f & higher)	.46	705	235
Hem, Fir	.43	636	212
Hem, Fir, (North)	.46	705	235
Southern Pine	.55	921	307
Spruce, Pine, Fir	.42	615	205
Spruce, Pine, Fir (E of 2 million psi and higher grades of MSR and MEL)	.50	798	266

Sources: Uniform Building Code; American Wood Council

Notes: 1) Thread must be embedded in a rafter or other structural roof member.

2) Pull-out values incorporate a 1.6 safety factor recommended by the American Wood Council.

3) See UBC for required edge distances.

\*Use flat washers with lag screws.

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**18x18**  
**Quick Mount**  
**For**  
**Shake Roofs!**

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- The Only Mount Designed Specifically for Shake Roofs!
- Quick and Easy Install

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## TILE MOUNTS



**Curved Tile Mount**



**Flat Concrete Tile Mount**

## Things to consider before installing on tile roof:

- ❑ What is the best way to attach to the roof?
  - rafters, plywood, blocks between rafters
- ❑ What is under the tiles?
  - plywood, OSB, skip sheeting, felt paper
- ❑ Condition of subroof
- ❑ Wind & Load Calculations

***INSTALLER MUST DO THEIR RESEARCH!***

## Making a Secure Connection



Lag bolts into the deck must go into **plywood** thicker than 1/2"



1/2 OSB calls for toggler bolts or putting in blocks for lags

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## FLAT TILE "RAFTERLESS" MOUNTING INSTRUCTIONS



Remove Tile at location of Mount. Measure up 6 5/8" to center of mount. Mark paper, then measure 5 1/2" from exposed edge of adjoining right tile to center of mount, and mark paper.



Use the Mounting Base as a template to mark the drilling of the 4 each 1/4" holes. Use a screw driver to break out the sealed portion.



Drive Lags into substrate. Clean paper really well.



Apply peel and stick flashing over mount and up and under paper \*



With wedge still in place on the leading edge of tiles above, lift left side tile and set aluminum flashing into place.



Insert post through flashing and secure to base threads.



Apply a bead of sealant to post - flashing connection



Apply rail of choice

You are now ready for the rack of your choice. Follow all of the directions of the rack manufacturer as well as the module manufacturer.

All roofing manufacturers written instructions must also be followed by anyone modifying a roof system. Please consult the roof manufacturers specs and instructions prior to touching the roof.

\* Make sure the Peel and stick is firmly adhered and that all air bubbles are pushed out.

For Questions Call 925-687-6686

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## FLAT TILE "RAFTERLESS" MOUNTING INSTRUCTIONS



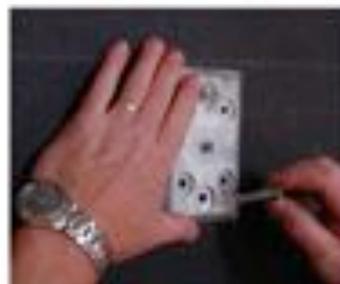
Remove Tile at location of Mount. Measure up 6 5/8" to center of mount. Mark paper, then measure 5 1/2" from exposed edge of adjoining right tile to center of mount, and mark paper.



Use the Mounting Base as a template to mark the drilling of the top and bottom holes.



Remove Plate, drill 3/4" hole through deck. Insert toggler bolts per Toggles Instructions.



Insert machine bolt under plate in hex slot so threads point upward. Place mount over toggles and secure with 2 ea 5/16" x 1 1/2" mach bolts into toggles.



Press peel and stick firmly around base and paper. \*



With wedge still in place on the leading edge of tiles above, lift left side tile and set aluminum flashing into place.



Insert post through flashing and secure to base threads.



Apply a bead of sealant to post - flashing connection

You are now ready for the rack of your choice. Follow all of the directions of the rack manufacturer as well as the module manufacturer.

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## CURVED TILE MOUNTING INSTRUCTIONS RAFTER INSTALLATION



Select location of Mount



Remove Tile at Location of Mount Installation. Locate center of rafter and mark with a sharp pen



Use a straight edge and measure up 6 5/8" from bottom of tiles to center of the post, over the center of rafter.



Remove protective paper from bottom of post base and place onto centermarks.



Drill 1/4" pilot holes for 2 each lag bolts. Drive lags into holes until secure



Remove post from plate, install "peel and stick flashing" over plate with stud protruding through hole



Re-install post onto stud. Make sure peel and stick slides under existing building paper



Place Aluminum Flashing into position over post and bend to the contour of tiles



Install sealant around cone to post

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## TILE MOUNTS



**Curved Tile Mount**



**Flat Concrete Tile Mount**

# CONDUIT MOUNT



The Conduit Mount kills three birds with one stone

It handles the code required structural attachment at 10'-0" O.C.

It handles the waterproofing of the penetration

It lifts the conduit off the roof to allow airflow around the conduit

relieving the direct heat conduction build up from contact with the roof.

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## Accessories



Height extensions are available in 2 1/2", 3 1/4", and 4". These are normally used with Pro Solar or Uni-Strut Rails



**Stainless Steel Hanger Bolts** come with each unit in a 6" length. Optional hardware is available in; 8", 10", and 12" lengths to accommodate the variety of insulations found on a typical roof.

The Roofers Bar simplifies the installation



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Height Extensions available in:  
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## CODE COMPLIANCE AND INDUSTRY ACCEPTANCE COMPARISON

Building Authority / Quality	Quick Mount PV	Uni-Rac L-Foot Over Comp No Flashing	Uni-Rac 2 piece alum w/ Alum Flashing	Uni-Rac 1 piece Galv w/ Galv Overlay Flashing	Pro-Solar tile track over comp No Flashing	Pro-Solar Fast Jack w/ Alum Flashing	Pro-Solar Fast Jack w/ Overlay Flashing	TTI Flat Jack
Meets UBC Uniform Building Code - Structural	YES	NO	YES	YES	NO	YES	YES	NO
Meets UBC Uniform Building Code - Flashing	YES	NO	YES	NO	NO	YES	NO	NO
Meets IBC International Building Code - Structural	YES	NO	YES	YES	NO	YES	YES	NO
Meets IBC International Building Code - Flashing	YES	NO	YES	NO	NO	YES	NO	NO
Meets IRC International Residential Code	YES	NO	YES	YES	NO	YES	YES	NO
Meets "Best Practices" Guidelines of NRCA	YES	NO	YES	YES	NO	YES	YES	NO
Meets Specifications of ARMA manual	YES	NO	YES	YES	NO	YES	YES	NO
Meets flashing specs of SMACNA	YES	NO	YES	YES	NO	YES	YES	NO
Lifespan in years	50	-	25	15	-	15	15	15
Maintains Valid Roofing Warranty	YES	NO	YES <sup>*</sup>	NO <sup>*</sup>	NO	YES <sup>*</sup>	NO <sup>*</sup>	NO
Easily Retrofittable	YES	YES	NO	NO	YES	NO	NO	YES
Made in USA	YES	YES	YES	YES	YES	YES	YES	NO
All Fasteners Stainless Steel	YES	NO	NO	NO	YES	YES	YES	NO
All hardware and flashing included	YES	NO	NO	NO	NO	NO	NO	NO

\* 2 Only Maintains warranty if flashing is set to roof with ASTM D4586 roofing cement, and cut shingles around flashing is set to flashing with ASTM D4586 roofing cement. (Per ARMA)

\* 3 Galvanized Flashings Not for use on roofs with lifespan greater than 15 Years. (Per SMACNA)

# Quick Mount PV®

## Retail Comparison of Mounts – Installation on an existing composition roof

based on 12 or 18 pack purchase

Product	Quick Mount PV Aluminum	UniRac Aluminum	UniRac Galvanized Steel	Pro Solar – Fast Jack Aluminum	TTI – Flat Jack Galvanized Steel
cost of product	\$21.00	\$10.50	\$15.00	\$6.50	\$15.00
Additional cost of flashing	\$0.00	\$14.66	\$6.29	\$6.75	\$0.00
Additional cost of bolt	\$0.00	\$0.00	\$0.00	\$0.00	\$1.50
Total material cost	\$21.00	\$25.16	\$21.29	\$13.25	\$16.50
materials	All Aluminum with stainless hardware	2-pc. Aluminum Mount and Smaller Aluminum Flashing w/ Zinc Legs	1-pc. Zinc plated Steel mount and smaller Galvanized Steel Flashing	Aluminum Stand Off w/ Galvanized Overlay Flashing	thin Galvanized Steel Flashing with Aluminum and Stainless Steel mount
need to purchase	Included	Flashing	Flashing	Flashing	Lag Bolt
installation time (app.)	1 Minute	15 minutes	30 minutes	15 minutes	8 minutes
Cost of Labor at \$65.00 per hour	\$1.08	\$16.25	\$32.50	\$16.25	\$8.64
Total cost installed material and labor	\$22.08	\$41.41	\$53.79	\$29.50	\$25.14
Expected Lifespan	50 years	25 years	15 years	15 years	15 years
Cost per year	<b>\$0.44</b>	<b>\$1.66</b>	<b>\$3.59</b>	<b>\$1.97</b>	<b>\$1.68</b>

Additional discount may be taken when purchased in pallet quantity

## Recap...

- Waterproofing roof penetrations is one of the most important aspects of installations but it is often given little attention.
- Following the proper code compliance can protect roof warranties and installer's liability.
- “Wheel of Accountability” good place to start

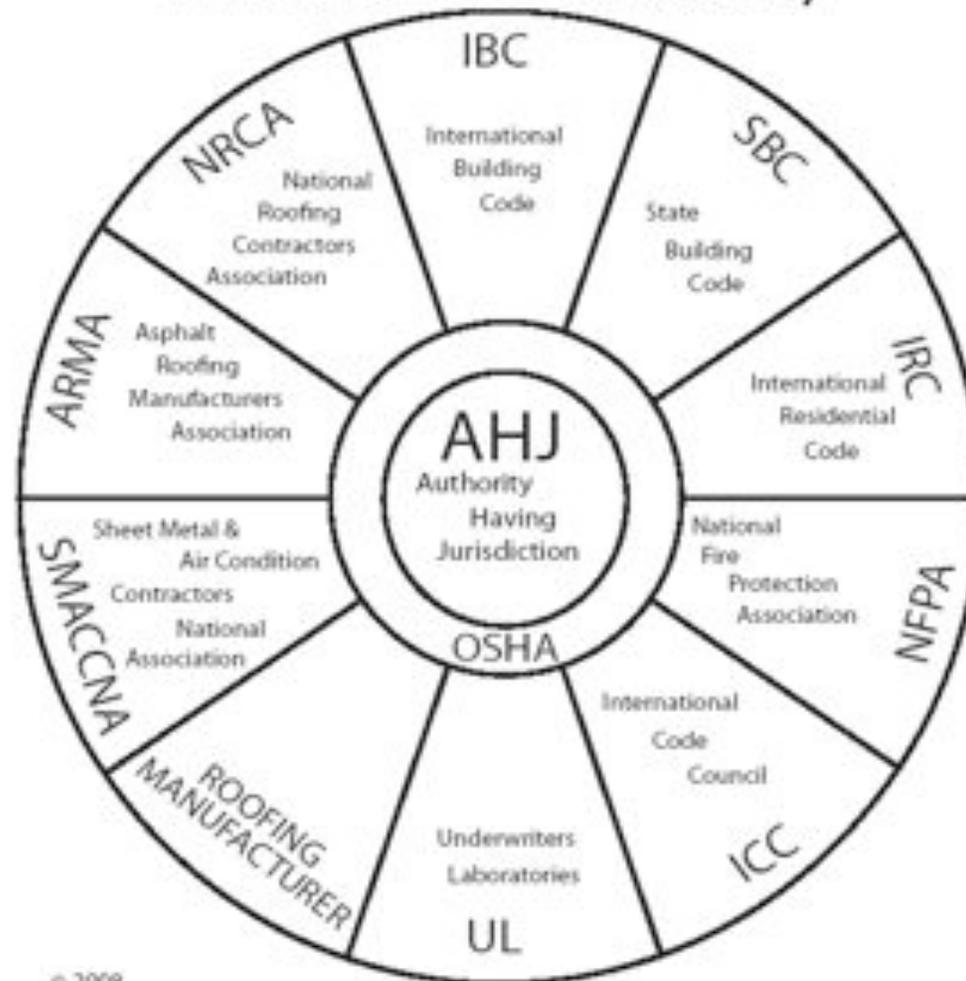
*“In a competitive bid situation, Quick Mount PV is an integral part of our value added proposition” - Phillipe Hartley (Phat Solar)*

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## Wheel of Accountability



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***THANK YOU!***

More info, specs/instructions, pictures, and videos at:

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