

**\*\*\* REQUIRED SUBMITTAL INFORMATION \*\*\***

The following general information and certification is required for all PV Panel installations.

<b>BUILDING INFORMATION:</b>		
<b>BUILDING ADDRESS</b>		
<b>BUILDING HEIGHT</b>		<b>Not to exceed 55 feet to be considered within the Easy Permit Process.</b>
<b>BUILDING MAXIMUM LENGTH</b>		<b>The maximum plan dimension of the building.</b>
<b>BUILDING WIDTH</b>		<b>The minimum plan dimension of the building.</b>
<b>ROOF SLOPE</b>		<b>The slope must be 1.5:12 (7 degrees) or less to be considered flat. (0 degrees = flat.)</b>

We, as the Property Owner and General Contractor, certify that the information provided herein and the statements made are true, and understand that the Department of Buildings has the right to revocation and penalties (as listed in the Easy Permit Application certification statements) in the event that the statements made regarding this criteria information have been falsified or is determined to be inaccurate.

\_\_\_\_\_  
 Property Owner's Name

\_\_\_\_\_  
 Property Owner's Signature

\_\_\_\_\_  
 Date

\_\_\_\_\_  
 General Contractor's Name

\_\_\_\_\_  
 General Contractor Signature

\_\_\_\_\_  
 Date

**\*\*\* REQUIRED SUBMITTAL INFORMATION \*\*\***

**P**rovide the following zoning information for all PV Panel permit applications. The PV panel installation must comply with all of the zoning requirements to be accepted under the Easy Permit Process.

ZONING INFORMATION:			
CATEGORY	DATA		ZONING REQUIREMENTS
LANDMARK	<input type="checkbox"/> Yes <input type="checkbox"/> No		Is the building that the PV panel system to be mounted on a national or state landmark? (If yes, then the expedited process cannot be used.)
	<input type="checkbox"/> Yes <input type="checkbox"/> No		Is the building that the PV panel system to be mounted on a city designated landmark? (If yes, then the expedited process cannot be used.)
	<input type="checkbox"/> Yes <input type="checkbox"/> No		Is the building that the PV panel system to be mounted on located in a code orange or red landmark district? (If yes, then the expedited process cannot be used.)
LOCATION ON BUILDING			Define specifically, where on the building the PV panels are to be located. (PV panels must be installed on a defined, permitted rooftop. If in the residential zoning district, the PV panels must be located on the property's principal structure.)
TOP PANEL SURFACE ABOVE FLAT ROOF DECK	Upper or Top Edge		State the dimensions that the upper and lower edges of the sloped PV panel extend above the roof surface. (If installed on a flat rooftop, no part of the PV panel system may exceed 9 feet in overall height, or extend 5 feet above the building parapet, whichever is less.)
	Lower or Bottom Edge		
TOP PANEL SURFACE ABOVE SLOPED ROOF DECK			State the dimension between the top of the roof surface and the top of the PV panel. (If installed on an inclined or sloped roof, the PV panels must be attached to and mounted parallel with the roof. The top surface of the PV panels shall not be more than 12 inches from the roof deck at any point. No portion of the PV panels shall extend above the ridgeline of the roof at any point.)
POLICY COMPLIANCE	<input type="checkbox"/> Yes <input type="checkbox"/> No		Does the PV panel system adhere to all of the guidelines of the City of Chicago's Solar Zoning Policy?

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**P** Provide drawings below, or on a separate sheet, to clearly show the location of the PV panels. (See example.)

<b>BUILDING ADDRESS:</b>			
<b>OWNER:</b>			
<b>DRAWN BY:</b>		<b>DATE:</b>	

**Required Information:**

- Roof Plane with Overall Dimensions
- Location of Roof Plane on Building
- PV Panels (Show Individual Panels and Rows)
- Edge Distance Between PV Panels and Roof Edge
- End Distance Between PV Panels and Roof Edge
- Distance Between Rows of PV Panels
- Distance Between Adjacent PV Panels
- Side or End Elevation of Building Showing Roof Slope and PV Panel Locations
- Show North arrow

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Applications for all PV panel permits must include the following information and meet the listed electrical requirements.

<b>ELECTRICAL INFORMATION:</b>		
<b>REQUIRED INFORMATION</b>	<b>DATA</b>	<b>REQUIREMENTS</b>
<b>INVERTER TYPE</b>		Manufacturer and model number
<b>INVERTER OUTPUT</b>		System's inverter output is 13.44 kW or less (maximum size for 70-amp breaker) for Easy Permit Process
<b>PV PANEL TYPE</b>		Manufacturer and model number
<b>PV PANEL OUTPUT</b>		Maximum watt output per panel
<b>NUMBER OF PANELS</b>		Total number of panels in installation
<b>TOTAL PV PANEL OUTPUT</b>		Multiply the number of panels times the output per panel
<b>ELECTRICAL CONTRACTOR</b>		Must be a licensed electrician in good standing with the City of Chicago and has certified PV panel system installation.
<b>COMPONENT COMPLIANCE</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Do all electrical components comply with the Chicago Electrical Code (18-27, Article 690)? Yes/No.
	<input type="checkbox"/> Yes <input type="checkbox"/> No	Are all electrical components (or equipment), including panels and inverters, listed and labeled by a Nationally Recognized Testing Laboratory (as per 18-27-110.2) and have all components been installed as per the manufacturer's instructions? Yes/No.

Provide below, or on a separate sheet, a one line electrical diagram of PV panel electrical system.

Address:

Permit No.:

**\*\*\* REQUIRED SUBMITTAL INFORMATION \*\*\***

The Tables/Forms included on pages 14 through 24 of this Section must be completed for all PV panel permit application processes. The general information regarding the proposed PV panel installation is to be provided on this first Table/Form.

<b>PV PANEL &amp; SUPPORT FRAME:</b>				
<b>PV PANEL</b>	<b>DATA</b>			<b>REMARKS</b>
<b>MANUFACTURER</b>				Manufacturer and product number
<b>PANEL WATTAGE</b>				Maximum watt output per panel
<b>NUMBER OF PANELS</b>	<b>Number of Rows</b>	<b>Number per Row</b>		Number of panels per group or roof surface
<b>PANEL DIMENSIONS</b>	<b>Length</b>	<b>Width</b>	<b>Area</b>	Length & width (in.) and area (sq. ft.)
<b>PANEL WEIGHT</b>				Weight of individual panel (lbs)
<b>PANEL SPACING</b>	<b>Sides</b>	<b>Top</b>	<b>Bottom</b>	The side spacing is the space between adjacent panels in a row. The top and bottom spacing is the distance between rows of panels. If there is no row above or below, state not applicable (N/A).
<b>TYPE OF SUPPORT RAILS</b>				Manufacturer and part or model number
<b>ANCHOR BOLTS OR FASTENERS</b>				Type and size and/or manufacturer's part number
<b>SUPPORT RAIL OR PV PANEL ATTACHMENT SPACING</b>				Equal to multiple of joist, rafter or truss spacing
<b>ANGLE OF PANEL TO ROOF SURFACE</b>				Provide angle in degrees from the roof surface.
<b>BALLAST TYPE &amp; WEIGHT</b>				If PV panels & frames are to be ballasted, then provide total load per panel. If mechanically attached state 0 lbs.
<b>PANEL AND RAIL UNIFORM LOAD</b>				Uniform dead load of panel and panel support system, as determined by dividing the weight of the panel and support rails by the panel area, in pounds per square foot (psf)

\*\*\* REQUIRED SUBMITTAL INFORMATION \*\*\*

This second Table/Form is to be used to determine the required wind pressure on the PV panels. The dimensions of the building are those stated in the General Section of these Guidelines.

<b>WIND LOADS:</b>			
<b>BUILDING CODE SECTION</b>	<b>CODE PROVISION</b>		<b>WIND PRESSURE</b>
For PV panels mounted flat to the roof surface, the provisions of CBC Section 13-52-310(b) may be used for the determination of the wind load on the panels even though reference is made to "roof framing." The wind load provisions of ASCE 7 for Components and Cladding provide more appropriate loads for PV panels mounted flat to the roof surface and should be used.			
CBC Table 13-52-310	Table 13-52-310 Column A: For buildings of 200 feet or less the design wind pressure is 20 psf		
CBC Section 13-52-310(b)	(b) Roof Structures Over Enclosed Building Or Other Structures. All main roof framing structures shall be designed and constructed for the following pressures:	1. Flat roofs: an outward pressure acting normal to the surface equal to 75 percent of those established in Table 13-52-310, Column (A) for the corresponding mean height of the roof and applied to the entire roof area.	
		2. Sloped roof, slope equal to or less than 30 degrees: an outward pressure acting normal to the surface equal to 100 percent on the windward side and 75 percent on the leeward side of those established in Table 13-52-310, Column (A) for the corresponding mean height of the roof.	
		3. Sloped roofs, slope greater than 30 degrees: an inward pressure acting normal to the surface equal to 100 percent on the windward side and an outward pressure acting normal to the surface equal to 75 percent on the leeward side of those established in Table 13-52-310, Column (A) for the corresponding mean height of the roof.	
		5. Roofing sheathing and membranes: an outward pressure acting normal to the surface equal to the pressures set forth in Section 13-52-310b.1, b.2 and b.3 except within an area at the edge of the roof equal to ten percent of the width of the structure parallel to the wind direction being considered, outward pressure equal to 200 percent of those established in Table 13-52-310, Column (A) as set out in this section, for the corresponding mean height of the roof.	
ASCE 7-05 Section Figure 6-11B	Roof edge zone is 10% of the least horizontal dimension or 0.4h, whichever is smaller but not less than either 4% of least horizontal dimension or 3 ft. where h is the mean height of the building		
ASCE 7-05 Section 6.5.6	Wind Exposure B for majority of the City except Exposure D within 600 feet (or 20 times the building height) of Lake Michigan		
ASCE 7-05 Section 6.5.10	The wind velocity pressure is based upon the expression $q_h = 0.00256K_zK_{zt}K_dV^2I$ , where:		
	Basic Wind Speed:	From Figure 6-1, $V =$	90 mph
	Structure Classification:	From Table 1-1, the structure is classified as Category:	II
	Importance Factor:	From Table 6-1, $I =$	1.0

For PV panels mounted parallel to a flat or sloped roof.



	Wind Directionality Factor:	From Table 6-4, $K_d =$	0.85		
	Exposure Category:	From Section 6.5.6, the exposure category is:			
	Topographical Effect:	From Section 6.5.7, $K_{zt} =$	1.0		
	Velocity Pressure Coefficient:	From Section 6.5.6.4 and Table 6-3 for a height of <input type="text"/> ft. and exposure <input type="text"/> , $K_z =$			
	Wind Velocity Pressure	$q_h = 0.00256K_zK_{zt}K_dV^2 =$			
ASCE 7-05 Section 6.5.12.4	The design wind pressure on components and cladding is based upon the expression $p = q_h [(GC_p) - (GC_{pi})]$ , where:				
	Internal Pressure Coefficient:	From Figure 6-5 $GC_{pi} =$	+/-0.18		
	Gust Effect Factor:	The gust effect factor for components and cladding $GC_p$ is determined from Figures 6-11B through 6-17 for the applicable roof type and slope (where $\theta$ is the angle of the roof from the horizontal.)			
	For a Gable Roof	From Figure 6-11B for a building less than 60 ft. high	For PV panels located away from the edge of a gable roof surface where $\theta < 7^\circ$ and a tributary area of <input type="text"/> ft <sup>2</sup> , $GC_p =$		
			For PV panels located within the edge of a gable roof surface where $\theta < 7^\circ$ and a tributary area of <input type="text"/> ft <sup>2</sup> , $GC_p =$		
		From Figure 6-11C for a building less than 60 ft. high	For PV panels located away from the edge of a gable roof surface where $7^\circ < \theta < 27^\circ$ and a tributary area of <input type="text"/> ft <sup>2</sup> , $GC_p =$		
			For PV panels located within the edge of a gable roof surface where $7^\circ < \theta < 27^\circ$ and a tributary area of <input type="text"/> ft <sup>2</sup> , $GC_p =$		
		From Figure 6-11D for a building less than 60 ft. high	For PV panels located away from the edge of a gable roof surface where $27^\circ < \theta < 45^\circ$ and a tributary area of <input type="text"/> ft <sup>2</sup> , $GC_p =$		
			For PV panels located within the edge of a gable roof surface where $27^\circ < \theta < 45^\circ$ and a tributary area of <input type="text"/> ft <sup>2</sup> , $GC_p =$		
	For Other Roof Configuration	From Figure <input type="text"/>	For PV panels located away from the edge of roof surface and a tributary area of <input type="text"/> ft <sup>2</sup> , $GC_p =$		
For PV panels located within the edge of roof surface and a tributary area of <input type="text"/> ft <sup>2</sup> , $GC_p =$					

For PV panels mounted parallel to a flat or sloped roof.

For PV panels mounted at an angle to a flat roof, the Wind Velocity Pressure must be determined from Section 6.5.10 of ASCE 7 and the appropriate factors and coefficients must be obtained from SEAOC PV2-2012, as listed below, to obtain the Design Wind Pressure.

SEAOC PV2-2012	The width of the edge zone is defined as $2a_{pv}$ . $a_{pv}$ is defined as $0.5(hW_L)^{0.5}$ but need not exceed $h$ . Where, $h$ = the mean roof height of the building and $W_L$ = longest plan dimension of the building.		
	From Figure 29.9-1, the net pressure normal to the surface of the PV panel is based upon the expression $p = q_h(\gamma_p\gamma_c(GC_m)_{nom})E$ , where:		
	Velocity Pressure:	From ASCE 7-05 Section 6-5-10, $q_h =$	
	Angle of Panel to Roof Surface	As illustrated in Figure 29.9-1, the angle of the panel to the roof surface is:	
	Parapet Height Factor:	From Figure 29.9-1 for a parapet height of <input type="text"/> , $\gamma_p =$	
	Panel Chord Length Factor:	From Figure 29.9-1 for a panel angle of <input type="text"/> , $\gamma_c =$	
	Characteristic Height	From Figure 29.9-1 $h_c = \min(h_1, 1ft) + l_p \sin(\omega) =$	
	Ratio of Edge Distance to Characteristic Height	Controlling ratio of panel - roof edge distance to panel characteristic height, $d_x/h_c =$	
	Location of Panel Being Considered	Row of the array that the panel is located (i.e. North, South, or Interior)	
		Location of panel within row (i.e. East end, West end, or Interior)	
	Array Edge Factor	From Figure 29.9-1, for the location of the panel within the array, $E =$	
	Roof Zone:	From Figure 29.9-1, the roof zone for the panels is:	
	Building Coefficient	From Figure 29.9-1, $a_{pv} =$	
	Effective Wind Area:	From Figure 29.9-1, the effective wind area for the structural element <input type="text"/> being designed is:	
	Normalized Wind Area:	From Figure 29.9-1, the normalized wind area $A_n =$	
Nominal Pressure Coefficient:	From Figure 29.9-1, the nominal net pressure coefficient $(GC_m)_{nom} =$		
Design Wind Pressure:	$p = q_h(\gamma_p\gamma_c(GC_m)_{nom})E =$		

For PV panels mounted at an angle to a flat roof.

- Notes:
- 1) For the calculation of  $q_h$ , some of the factors are listed. These factors should apply to most building in the Chicago area, but may need to be changed for specific structures.
  - 2) From SEAOC PV2-2012 Figure 29.9.1, Note 2: "There shall be a minimum air gap around the perimeter of each solar module of 0.5 inches or between rows of panels of 1 inch to allow pressure equalization above and below panels."
  - 3) From SEAOC PV2-2012 Figure 29.9.1 Note 4: "Array should not be closer than  $2(h_2 - h_{pt})$  or 4 feet, whichever is greater from roof edge. Where  $h_2$  is the distance from the roof to the raised edge of the panel and  $h_{pt}$  is the mean parapet height above the adjacent roof surface.



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The third and fourth Tales/Forms are to be used to determine/check the required bolt attachment or amount of ballast.

The following table applies only to mechanically attached panels and support frames. Using this table, the adequacy of the mechanical attachment of the PV panel rails to the roof is determined.

<b>PV PANEL ATTACHMENT:</b>		
<b>REQUIRED INFORMATION</b>	<b>DATA</b>	<b>REMARKS</b>
<b>TRIBUTARY AREA PER ATTACHMENT BOLT (ft<sup>2</sup>/bolt)</b>		Number of panels in a row x panel area / number of bolts
<b>UPLIFT FORCE PER BOLT (lbs)</b>		Tributary area per bolt x wind uplift pressure
<b>BOLT PULLOUT CAPACITY (lbs)</b>		Pullout strength for wood construction is based upon the National Design Specification, manufacturer's literature and species of wood joist, rafter or truss top chord. For concrete or steel construction, the attachment of the frame must comply with the applicable standards for those materials. (An increase in allowable stress or capacity of 1.33 for transient wind loads is not allowed. Anchorage capacity must include a factor of safety of 1.5 as discussed above.)
<b>BOLT PULLOUT CAPACITY GREATER THAN WIND UPLIFT</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Yes or no. If no, revise bolt size and or spacing.

The following table only applies to ballasted PV panels and frames. Using this table, the amount of ballast is determined or listed.

<b>PV PANEL BALLAST:</b>		
<b>REQUIRED INFORMATION</b>	<b>DATA</b>	<b>REMARKS</b>
<b>TRIBUTARY AREA PER PANEL</b>		Surface area of panel that is subject to wind load (sq. ft.)
<b>UPLIFT WIND PRESSURE</b>		Obtained from Wind Load Table (psf)
<b>TOTAL BALLAST LOAD PER PANEL</b>		Panel surface area times the wind load less the panel dead load times a factor of safety of 1.5 required to resist uplift, overturning and sliding (lbs) (See Factor of Safety discussion above.)
<b>UNIFORM PROJECTION OF BALLAST LOAD ON ROOF</b>		Ballast load divided by horizontal projection of ballast support frame or area covered by ballast. (psf)

**\*\*\* REQUIRED SUBMITTAL INFORMATION \*\*\***

**R**oof framing information is required to determine whether the existing structure is adequate to resist or carry the additional gravity load of the new PV panels. For concrete and structural steel roof structures, evaluation of the structural capacity must be performed by a licensed architect or licensed structural engineer. For wood framed roof structures, the Span Tables included in Appendix 1 may be used if the parameters are correct. Where the wood roof structure includes the use of trusses, the adequacy of the structure must be evaluated by a licensed architect or licensed structural engineer.

Complete the following tables/forms for concrete, structural steel or wood construction, as appropriate, and submit the information with the permit application. At least one of these tables must be completed for all of the permit processes.

<b>EXISTING CONCRETE ROOF CONSTRUCTION:</b>			
<b>ROOF FRAMING TYPE</b>			Flat slab, slab and beam or joists
<b>SLAB THICKNESS OR JOIST DEPTH</b>			
<b>JOIST/BEAM WIDTH</b>			
<b>JOIST/BEAM SPACING (in.)</b>			
<b>SPAN (ft.)</b>			For two-way slab, list span in both directions
		<b>WEIGHT (psf)</b>	
<b>STRUCTURE</b>			Concrete structure dead load
<b>ROOFING</b>	<b>TYPE</b>		Total roofing load
	<b>NUMBER OF LAYERS</b>		
<b>CEILING</b>			
<b>INSULATION</b>			
<b>OTHER</b>			Mechanical and electrical equipment
<b>BALLAST</b>			Ballast to resist wind loads on PV panel system, if used
		<b>DEAD LOAD SUBTOTAL</b>	
<b>SNOW</b>			Minimum snow load of 25 psf required by the CBC, plus drifting as defined in ASCE 7-05. (See Note 1.)
		<b>TOTAL</b>	Total dead and live load to be supported by existing structure
<b>EXISTING STRUCTURAL LOAD CAPACITY (psf)</b>			Dead and live load capacity of the concrete structural slab or joist system must be determined by a qualified licensed architect or licensed structural engineer
<b>IS THE EXISTING CONCRETE STRUCTURE ADEQUATE TO SUPPORT THE ADDITIONAL LOAD DUE TO THE NEW PV PANEL SYSTEM?</b>		<input type="checkbox"/> Yes <input type="checkbox"/> No	
		If the structure is not adequate to support the additional load, then provide drawings and calculations to show how the structure is to be reinforced	

**\*\*\* REQUIRED SUBMITTAL INFORMATION \*\*\***

The evaluation of the roof framing in this table is based upon the PV panel support rails being oriented perpendicular to the joists, rafters or trusses. For other configurations, separate calculations must be submitted.

<b>EXISTING STRUCTURAL STEEL ROOF CONSTRUCTION:</b>			
ROOF FLAT OR SLOPED			Provide roof slope (in./12 in.) and degrees or 0 if none or flat  $\alpha = \text{atan}(\text{rise/run})$ and is the angle of the roof plane from the horizontal
FRAMING TYPE			Joists, trusses or beams
DECK TYPE			Concrete and/or metal deck
JOIST, TRUSS OR BEAM SPACING (in.)			
SPAN (ft.)			Joist, rafter or truss span. (Horizontal projection)
		<b>WEIGHT (psf)</b>	
STRUCTURAL STEEL			Steel framing dead load
METAL DECK			
CONCRETE			If a concrete deck or fill is not used, list 0 or none
ROOFING	TYPE		Total roofing load
	NUMBER OF LAYERS		
CEILING			
INSULATION			
OTHER			Mechanical and electrical equipment
PV PANEL			
BALLAST			Ballast to resist win loads on PV panel system, if used.
		<b>DEAD LOAD SUBTOTAL</b>	
SNOW			Minimum snow load of 25 psf required by the CBC, plus drifting as defined in ASCE 7-05. (See Note 1.)
		<b>TOTAL</b>	Total dead and live load to be supported by existing structure
LIVE LOAD TIMES MEMBER SPACING			Live or snow load per lineal foot of member (plf)
HORIZONTAL PROJECTION OF DEAD LOAD TIMES MEMBER SPACING			

<p><b>HORIZONTAL PROJECTION OF PV PANEL DEAD LOAD TIMES SUPPORT SPACING</b></p>			<p>Uniform load of PV panel times support spacing and divided by the cosine of the roof angle (The PV panel load is assumed over full length of member.) (plf)</p>
<p><b>TOTAL PROJECTED DEAD, PV PANEL &amp; LIVE LOAD SUPPORTED BY MEMBER</b></p>			<p>Sum of dead, PV panel and live loads (plf)</p>
<p><b>STRUCTURAL LOAD CAPACITY</b></p>			<p>Dead and live load capacity of the structural steel system must be determined by a qualified licensed architect or licensed structural engineer.</p>
<p><b>IS THE EXISTING STEEL STRUCTURE ADEQUATE TO SUPPORT THE ADDITIONAL LOAD DUE TO THE NEW PV PANEL SYSTEM?</b></p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>		<p>If the structure is not adequate to support the additional load, then provide drawings and calculations to show how the structure is to be reinforced.</p>

1. For roofs with slopes in excess of 30 degrees from the horizontal, snow loads may be reduced in accordance with CBC Section 13-52-280(b). However, all roof snow loads must be determined with consideration of drifting that can occur due to parapets, roof top equipment, penthouses and adjacent higher buildings.

**\*\*\* REQUIRED SUBMITTAL INFORMATION \*\*\***

The evaluation of the roof framing in this table is based upon the PV panel support rails being oriented perpendicular to the joists, rafters or trusses. For other configurations, separate calculations must be submitted.

<b>EXISTING WOOD ROOF CONSTRUCTION:</b>			
ROOF FLAT OR SLOPED			Provide roof slope (in./12 in.) and degrees or 0 if none or flat $\alpha = \text{atan}(\text{rise/run})$ and is the angle of the roof plane from the horizontal
FRAMING TYPE			Joists/rafters or trusses
WOOD SPECIES AND GRADE			If unknown, use SPF No. 2
JOIST/RAFTER OR TRUSS SPACING			Units = inches (in.)
SPAN (ft.)			Joist, rafter or truss span. (Horizontal projection)
		<b>WEIGHT (psf)</b>	
JOIST/RAFTER OR TOP CHORD SIZE.			Size of lumber
SHEATHING TYPE			Plywood or lumber
ROOFING	TYPE		Total roofing load
	NUMBER OF LAYERS		
CEILING			
INSULATION			
OTHER			Other materials including mechanical and electrical equipment
BALLAST			Ballast to resist wind loads on PV panel system, if used
		<b>DEAD LOAD SUBTOTAL</b>	Dead load per square foot of roof surface
SNOW			Minimum snow load of 25 psf required by the CBC, plus drifting as defined in ASCE 7-05. (See Noe 1.)
		<b>TOTAL DEAD &amp; LIVE LOAD</b>	Total dead and live load to be supported by existing structure along length of member
LIVE LOAD TIMES MEMBER SPACING			Live or snow load per lineal foot of member (plf)
HORIZONTAL PROJECTION OF DEAD LOAD TIMES MEMBER SPACING			Uniform dead load times support spacing and divided by the cosine of the roof angle
HORIZONTAL PROJECTION OF PV PANEL DEAD LOAD TIMES SUPPORT SPACING			Uniform load of PV panel times support spacing and divided by the cosine of the roof angle (The PV panel load is assumed over full length of member.) (plf)
TOTAL PROJECTED DEAD AND PV PANEL LOAD AND LIVE LOAD SUPPORTED BY MEMBER			Sum of dead, PV panel and live loads (plf)

<b>STRUCTURAL LOAD CAPACITY</b>		<b>Maximum load capacity of the wood roof rafters, joists or trusses calculated separately (plf)</b>
<b>ALTERNATE – USE TABLES TO DETERMINE MAXIMUM SPAN</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<b>State whether tables are being used and provide the maximum span listed in tables. (ft.)</b>
<b>IS THE EXISTING WOOD STRUCTURE ADEQUATE TO SUPPORT THE ADDITIONAL LOAD DUE TO THE NEW PV PANEL SYSTEM?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<b>If the structure is not adequate to support the additional load, then provide drawings and calculations to show how the structure is to be reinforced.</b>

1. For roofs with slopes in excess of 30 degrees from the horizontal, snow loads may be reduced in accordance with CBC Section 13-52-280(b). However, all roof snow loads must be determined with consideration of drifting that can occur due to parapets, roof top equipment, penthouses and adjacent higher buildings.

\*\*\* REQUIRED SUBMITTAL INFORMATION \*\*\*

## PV Panel Easy Permit Process Professional of Record Certification Statement

Application Number: \_\_\_\_\_

Project Address: \_\_\_\_\_

I hereby certify that: (1) information and assertions made on this Permit Application are true and correct, (2) the attached Application, calculations and each page of the plans that I have stamped were personally prepared by me and submitted herewith are complete and in accordance with all applicable provisions of the Municipal Code of Chicago and any applicable state or federal laws, as of this date. I further state that I have exercised a professional standard of care in the preparation, completion and submission of these documents and am aware that the Commissioner of the Department of Buildings (DOB) will rely upon the truth and accuracy of this statement as the basis for issuance of a building permit. If it is determined by DOB that the submitted plans do not conform to all such laws, I agree to immediately take all remedial measures within my control, to meet the DOB's requirements. I also agree that if I become aware of any false or inaccurate statements made in any document provided to DOB, (whether such misrepresentations are made by agents, my employees or by me) I will immediately take all necessary measures to correct such statements. I realize that failure to take any such corrective action may result in termination of my participation in the DOB PV Panel Easy Permit Process and notification to the Illinois Department of Professional Regulation.

**ARCHITECT:**

Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Address: \_\_\_\_\_

Dated: \_\_\_\_\_

**STRUCTURAL ENGINEER:**

Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Address: \_\_\_\_\_

Dated: \_\_\_\_\_

