City of Milwaukee | DEPARTMENT OF NEIGHBORHOOD SERVICES

Solar Permit
WKS1: Permit Worksheet
1 and 2 Family Residential

Site Plan

Provide site plan showing location of major component on the property. This drawing need not be exactly to scale but it should present relative location of components at site (see supplied example site plan). ***Explanation****: This is a simple diagram to show where the equipment is located on the property. This can be a zone-clearance plot plan with the equipment clearly shown and identified on the plan. If PV array is ground-mounted, clearly show that system will be mounted within allowable zoned setbacks. See site plan example for reference.*

☑ Completed site plan is attached. Project Address: 2107 East Kenilworth Place, Milwaukee, Wisconsin, 53202

Spec Sheets and Install Manuals

Specification sheets and installation manuals (if available) for all manufactured components included, but not limited to, PV or SHW modules, inverter(s), combiner box, disconnects, pump station, and mounting system. ***Explanation****: This is referring to the brief versions of manuals that are reviewed by the listing agency certifying the product.*

☑ Required spec sheets and manuals are attached. List all below:
Spec Sheets and manuals are attached to the completed site plan.

Roof Information

1)	Is the array to be mounted on a defined, permitted roof structure?	☑ Yes	☐ No
2)	Is the roofing type lightweight (*Yes* = composition, lightweight masonry, metal, wood shake, etc. *No* = heavy masonry, slate, etc.). If no, submit completed worksheet for roof structure *WKS2*.	☑ Yes	☐ No
3)	If a composition shingle roof, does the roof have a single roof covering?	☑ Yes	☐ No
4)	Does the structure have roof framing members spaced at 24 inches on center maximum?	☑ Yes	☐ No
5)	Provide method and type of weather proofing roof penetrations (e.g. flashing, caulk).	Flashing	

Mounting Information

Is the mounting structure an engineered product designed to mount modules with no more than 18" gap beneath solar electric modules, or solar hot water panels, and frames? *If no, provide details of structural attachment certified by design professional.* ☑ Yes ☐ No

For manufactured mounting systems, fill out information on the mounting system below:

a. Mounting System Manufacturer: Quick Mount

b. Product Name and Model #: L-Mount QMLM

c. Total Weight of PV Modules (or SHW panels) and Rails: 1115.54 lbs (include total weight of all hardware used along with module weight).

d. Total Number of Attachment Points: 46

e. Weight per Attachment Point (c÷d) 24.25. If greater than 45 lbs. will require plan review fee and submittal of additional materials for review.

f. Maximum Spacing between attachment points on rail: 48 inches (see product manual for maximum spacing allowed based on wind loading).

g. Total Surface Area of PV Modules (or SHW panels) (sq. ft.) 422.66 ft^2

h. Distributed Weight of PV Modules (or SHW panels) on Roof (c÷g) 2.64 lbs/ft^2. If distributed weight of the PV (or SHW) system is greater than 5 lbs/ft^2 will require plan review fee and submittal of additional materials for review.

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Solar Permit
WKS2: Structural Worksheet

(**ONLY** required when system exceeds 45 lb. limit at attachment points and/or distributed weight of system is greater than 5 lbs./ft2.)

If the array is roof mounted:

This section is for evaluating roof structural members that are site built. This includes rafter systems and site built trusses. Manufactured truss and roof joist systems, when installed with proper spacing, meet the roof structure requirements covered in item 2 below.

1. Roof construction: ☒ Rafters ☐ Trusses ☐ Other: _____
2. Describe site-built rafter or site-built truss system:
    a. Rafter Size: 2x4 inches
    b. Rafter Spacing: 24 inches
    c. Maximum unsupported span: 4 feet, 0 inches
    d. Are the rafters over-spanned? (See the IREC Span Tables document)

    ☐ Yes ■ No

    e. If **YES**, complete the rest of this section.
3. If the roof system has:
    a. over-spanned rafters or trusses,
    b. the array over 5 lbs./ft2 on any roof construction, or
    c. the attachments with a dead load exceeding 45 lbs. per attachment;

    Provide at least one of the following:

    (i) A framing plan that shows details for how you will strengthen the rafters using the supplied Span Tables document.

    (ii) Confirmation certified by a design professional that the roof structure will support the array.

If the array is ground mounted:

1. Show array supports, framing members, and foundation posts and footings.
2. Provide information on mounting structure(s) construction. If the mounting structure is unfamiliar to the local jurisdiction and is more than six (6) feet above grade, it may require engineering calculations certified by a design professional.
3. Show detail on module attachment method to mounting structure.
4. Ground mounted systems are subject to all applicable building codes.