

SUBMITTAL REQUIREMENTS FOR RESIDENTIAL SOLAR PANEL PROJECTS

When submitting your application for Solar Panels please include the following:

1. Completed Building Permit Application.
2. Two (2) sets of drawings for your building project.
3. One (1) site plan on 8 ½" x 11" sheet of paper.
4. Your contractor's workers compensation and liability insurance. If you are not using a contractor or your contractor does not have workers compensation insurance, please complete a Workman's Compensation form and have it notarized. This form is available in the Code Department.
5. \$25.00 non-refundable application fee.
6. \$25.00 non-refundable minimum zoning review fee if applicable. If required, additional zoning fees will be included with cost of permit.
7. Please make checks payable to **BOROUGH OF INDIANA**.

Borough of Indiana

Departments of Planning, Code & Zoning
80 North 8th Street
Indiana, PA 15701

Office (724) 465-6543 * Fax (724) 717-1074

FOR OFFICE USE ONLY

Permit # _____

Date: _____

Residential

Building Permit Application – Solar Panels

Site Address _____

City Indiana State PA Zip 15701

Estimated cost of the project: \$ _____

PLEASE PROVIDE A TAX PARCEL
NUMBER FOR THE PROPERTY AT THE
SITE ADDRESS LISTED ABOVE.

Tax Parcel # _____

Owner's Name: _____

Current Mailing Address (If different from site address) _____

City _____ State _____ Zip _____

Phone Number _____ Cell Phone _____

E-mail Address: _____

Contractor: _____

Address _____

City _____ State _____ Zip _____

Phone _____ Fax _____ Cell Phone _____

E-mail Address: _____

Signature

Date

Building Type:

Single-Family Dwelling _____ Duplex _____ Townhouse _____

Total square feet of finished living space _____

Sprinkler system to be installed: (Check one) Yes _____ No _____

Building Dimensions

Existing Building Area _____ sq. ft. Number of Stories _____ sq. ft.

Proposed Building Area _____ sq. ft. Height Above Grade _____ sq. ft.

Total Building Area _____ sq. ft. Area of Largest Floor _____ sq. ft.

Floodplain Information

Is this site located within an identified flood plan area? (Check one) Yes ___ No ___

Note: All proposed development shall be in accordance with the requirements of the National Flood Insurance Program and the Pennsylvania Flood Plain Management Act.

The applicant certifies that all information on this application is correct and the work will be completed in accordance with the “approved” construction documents and PA Act 45 – Uniform Construction Code and any additional approved building code requirements adopted by the Borough of Indiana. The property owner and applicant assumes the responsibility of locating all property lines, setback lines, easement, right of ways, flood areas, etc. Issuance of a permit and approval of construction documents shall not be construed as authority to violate, cancel or set aside any provisions of the codes or ordinances of the Municipality or any other governing body. The applicant hereby certifies he/she understands all applicable codes, ordinances and regulations.

Application for a permit shall be made by the **owner or lessee of the building or structure, or authorized agent of either, or by the authorized registered Design Professional** employed in connection with the proposed work.

I certify that the Code Administrator or the Code Administrator’s authorized representative shall have the authority to enter areas covered by such permit at any reasonable hour to enforce the provisions of the applicable codes to such permit.

Signature of Owner or Authorized Agent Date

Print Name of Owner or Authorized Agent Date

OFFICE USE ONLY below

Permit Fee \$ _____

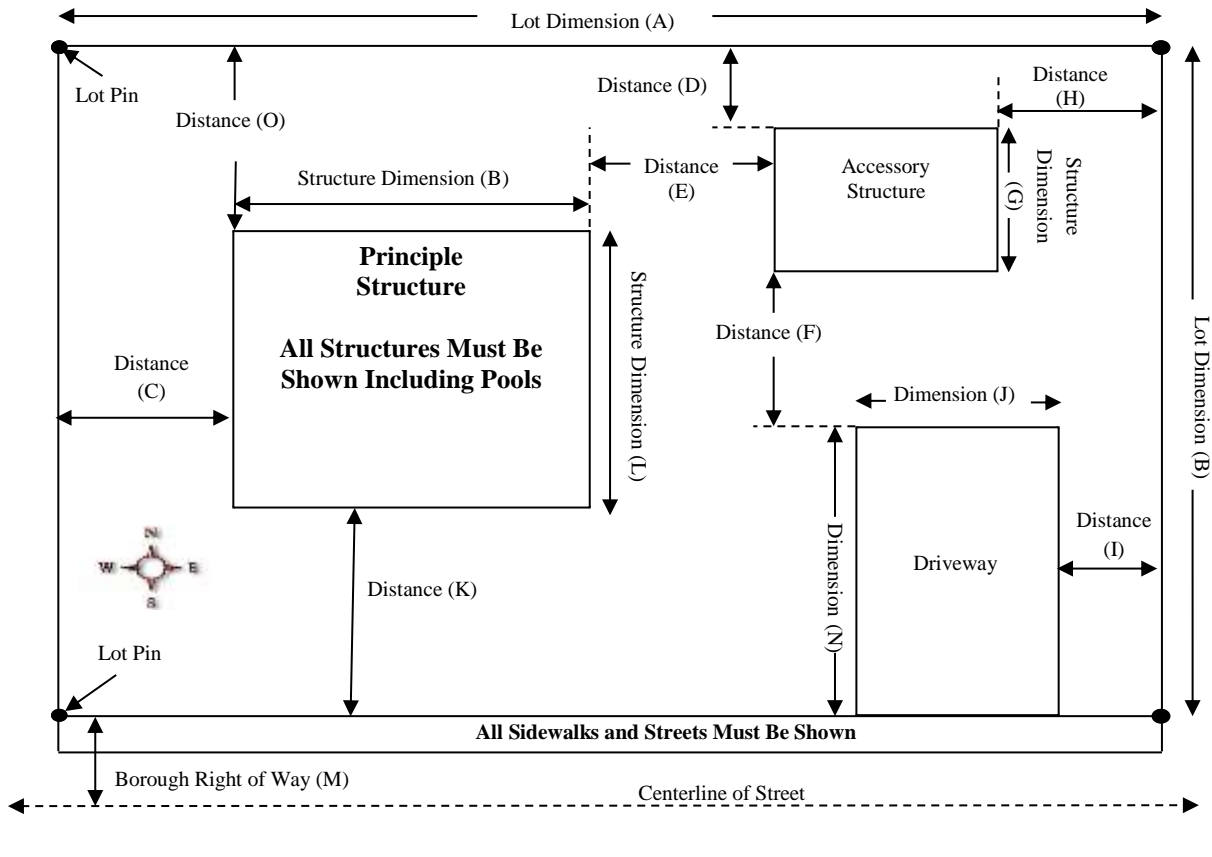
Plan Review Approval Date: _____

SITE PLAN REQUIREMENTS FOR RESIDENTIAL PROJECTS

The Site Plan drawings must be on 8 1/2 x 11 paper submitted and shall include:

- Distance from property lines and roadway and any adjacent structures (setbacks).
- Show the outside dimensions of the proposed dwelling.
- All utility layouts (including sewage, electric and water).
- Show all existing and proposed driveway layouts and specifics.
- If constructing a fence, show the height and location of the fence.

EXAMPLE DRAWING ONLY
PLEASE SUBMIT ON 8 1/2" X 11" SEPARATE SHEET
(CAN BE HAND WRITTEN)



Municipal Approval Checklist

Name of Applicant _____

Address of Project _____ Parcel# _____ - _____ - _____

To be completed by the Authorized Municipal Representative

Is this project site located in a Flood Area? (Check one) yes _____ no _____

Description of work: _____

Zoning or Land Use Permit Approved _____ Not applicable _____

Stormwater Management Approved _____ Not applicable _____

Street Cut/Driveway Approved _____ Not applicable _____

Sewage/On-lot Permit Approved _____ Not applicable _____

PennDot Highway Occupancy Approved _____ Not applicable _____

Floodplain Permit Approved _____ Not applicable _____

Other _____ Approved _____ Not applicable _____

I certify that all required Municipal Codes, Ordinances and Regulations have been met and approval thereby is granted to issue the requested permit.

Authorized Municipal Representative Signature

Date

SOLAR PANEL SUBMITTAL AND CHECKLIST

Uniform Construction Code (UCC)

_____ System Description

_____ Type of PV and Inverter

_____ How is it wired?

_____ How is it mounted?

_____ Specification sheets for all equipment

_____ PV module

_____ Inverter

_____ PV mounting system

_____ AC & DC disconnect

_____ Combiner box

_____ Battery

_____ Charge controller

_____ Mechanical drawings

_____ Electrical drawings

_____ Wind loading calculations

_____ Weight of array

_____ Structural information about roof

_____ PV layout on roof

_____ Rack drawing from manufacturer

_____ Attachment plan

_____ Attachment detail (if attaching to a truss it requires approval of a registered design professional)

_____ Electrical 3-line diagram

Is the array to be mounted on a defined, permitted roof structure? Yes No

If No due to non-compliant roof or a ground mount, submit completed worksheet for structure.

Roof Information:

1. Is the roof type lightweight (Yes = composition, lightweight, masonry, metal, etc.) Yes No

If No, submit completed worksheet for roof structure (No = heavy masonry, slate, etc.)

2. Does the roof have a single roof covering? Yes No

If No, submit completed worksheet for roof structure

3. Provide method and type of weatherproofing roof penetrations (flashing, caulk) _____

Mounting System Information:

1. Is the mounting structure an engineered product designed to mount PV modules? Yes No
If No, provide details of structural attachment certified by a design professional.

2. For manufactured mountings systems, fill out information on the mounting system below:
 - a. Mounting System Manufacturer _____ Product Name and Model # _____
 - b. Total Weight of PV Modules and Rails _____ lbs.
 - c. Total Number of Attachment Points _____
 - d. Weight per Attachment Point (b/c) _____ lbs. (if greater than 45 lbs. see worksheet)
 - e. Maximum Spacing Between Attachment Points on a Rail _____ inches (see product manual for maximum spacing allowed based on maximum design wind speed)
 - f. Total Surface Area of PV Modules (square feet) _____ ft²
 - g. Distributed Weight of PV Module on Roof (b/c) _____ lbs./ft²
If distributed weight of the PV system is greater than 5 lbs./ft², see worksheet.

Ground Mounts:

- _____ PA One Call
- _____ Find customer-owned underground utilities, septic, phone, electric wiring, (yard lights, pool etc.), pool plumbing
- _____ Rack manufacturer can supply footer designs based on your soil conditions and wind zone
- _____ For multiple ground-mounts, space them far enough apart to avoid shading each other

PV ARRAY INFORMATION (Guide Sec. 6)
 NUMBER OF MODULES IN SERIES _____
 NUMBER OF PARALLEL CIRCUITS _____
 LOWEST EXPECTED AMBIENT TEMP _____ °C
 HIGHEST CONTINUOUS TEMPERATURE _____ °C

MODULES IN SERIES SOURCE-CIRCUIT _____
 MODULES IN SERIES SOURCE-CIRCUIT _____
 MODULES IN SERIES SOURCE-CIRCUIT _____
 MODULES IN SERIES SOURCE-CIRCUIT _____

FOR UNUSED SERIES STRINGS PUT "N/A" IN BLANK ABOVE
 SEE GUIDE SECTION 10 FOR INFORMATION ON MODULE AND ARRAY GROUNDING

PV MODULE RATINGS @ STC (Guide Sec. 5)
 MODULE MANUFACTURER _____
 MODULE MODEL # _____
 MAX POWER-POINT CURRENT (Imp) = _____ A
 MAX POWER-POINT VOLTAGE (Vmp) = _____ V
 OPEN-CIRCUIT VOLTAGE (Voc) = _____ V
 SHORT-CIRCUIT CURRENT (Isc) = _____ A
 MAX SERIES FUSE (OCPD) = _____ A
 MAXIMUM POWER (Pmax) = _____ W
 MAX SYSTEM VOLTAGE (typ 600Vdc) = _____ V
 Voc TEMP COEFF = _____ mV/°C or %/°C
 (IF SUPPLIED, CIRCLE TYPE OF COEFF)

OCPD = OVERCURRENT PROTECTION DEVICE (IF NO OCPD-PUT "N/A" IN RELEVANT BLANKS)
 NATIONAL ELECTRICAL CODE® REFERENCES SHOWN AS (NEC XXX.XX)

SOURCE-CIRCUIT COMBINER RATINGS (IF USED)
 MAX OCPD RATING = _____ A
 OCPD AMP RATING = _____ A
 OCPD VOLT RATING = _____ V

DC DISCONNECT RATINGS (See Guide Appendix B)
 DISCO AMP RATING = _____ A
 DISCO VOLT RATING = _____ V

INVERTER RATINGS (Guide Sec. 4)
 INVERTER MAKE _____
 INVERTER MODEL # _____
 MAX DC VOLT RATING = _____ V
 MAX POWER @ 40°C = _____ W
 NOMINAL AC VOLTAGE = _____ V
 MAX AC CURRENT = _____ A
 MAX OCPD RATING = _____ A

SEE NOTE 3 FOR INVERTER CIRCUITS (Guide Sec. 8—disregard if integral with inverter)
 CONDUIT TYPE _____
 CONDUIT SIZE _____
 CONDUCTOR TYPE _____
 CONDUCTOR SIZE _____ AWG
 NUMBER OF CONDUCTORS _____
 (____ Red, ____ White, 1 Green)
 EGC SIZE _____ AWG (NEC 250.122)

SEE NOTES FOR ARRAY CIRCUIT WIRING (Guide Sec. 8)
 CONDUIT TYPE _____
 CONDUIT SIZE _____
 CONDUCTOR TYPE (SEE BELOW)
 CONDUCTOR SIZE _____ AWG
 NUMBER OF CONDUCTORS _____
 (____ Red, ____ White, 1 Green)
 EGC SIZE _____ AWG (NEC 250.122)

ROOFTOP JUNCTION BOX
 NEMA 3R MINIMUM REQUIRED WITH WATERPROOF SPLICES OR OTHER APPROVED TERMINATION METHOD (NEC 110.14; 300.6; 314)

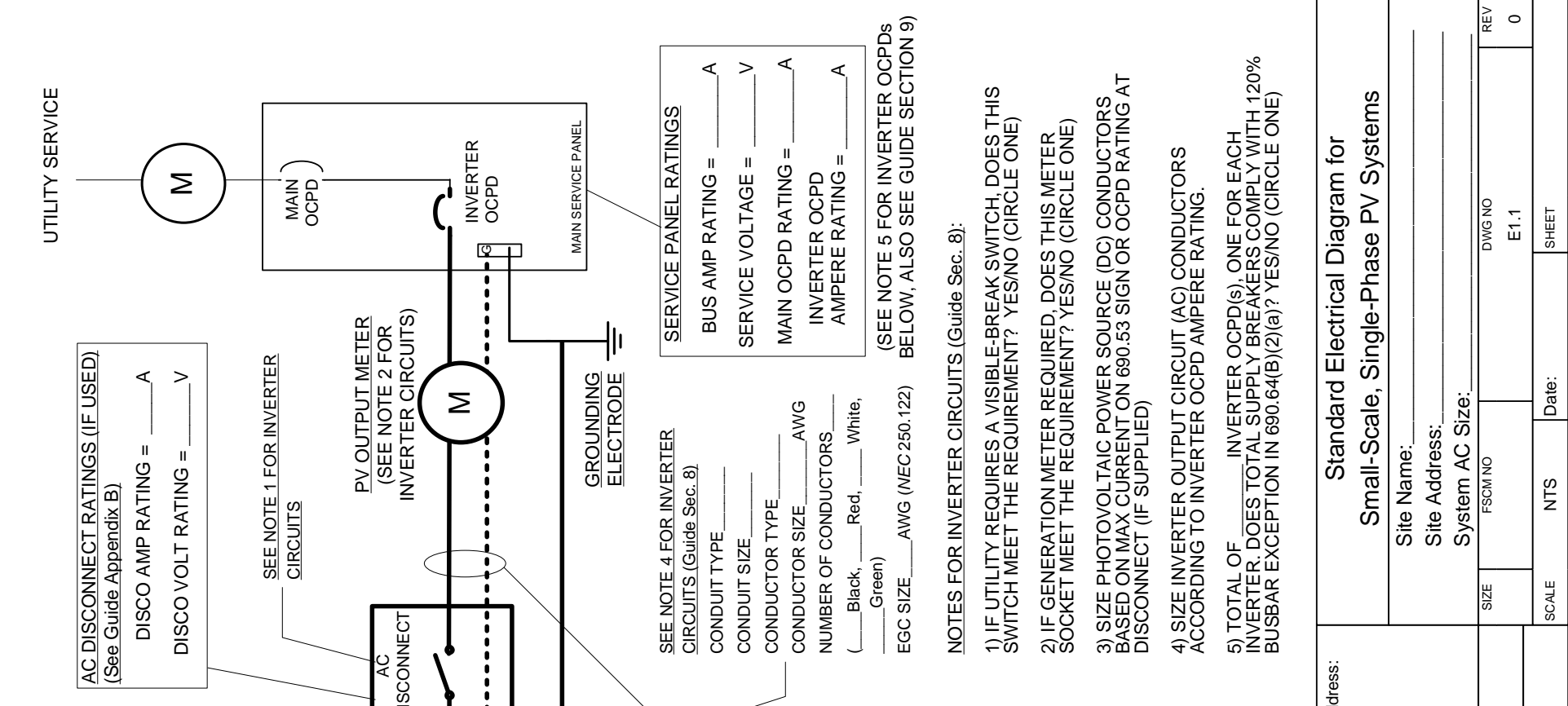
SOURCE-CIRCUIT CONDUCTORS
 OUTSIDE CONDUIT—MINIMUM 12 AWG AND TWO TYPE OPTIONS—(CIRCLE ONE)
 USE-2; PV WIRE/CABLE

SIGNS—SEE GUIDE SECTION 7

SIGN FOR DC DISCONNECT	SIGN FOR AC DISCONNECT (if used)
PHOTOVOLTAIC POWER SOURCE	SOLAR AC DISCONNECT
RATED MPP CURRENT = _____ A	AC OUTPUT CURRENT = _____ A
RATED MPP VOLTAGE = _____ V	NOMINAL AC VOLTAGE = _____ V
MAX SYSTEM VOLTAGE = _____ V	SIGN FOR INVERTER OCPD
MAX CIRCUIT CURRENT = _____ A	AC POINT OF CONNECTION
WARNING: ELECTRICAL SHOCK HAZARD—LINE AND LOAD MAY BE ENERGIZED IN OPEN POSITION	AC OUTPUT CURRENT = _____ A
	NOMINAL AC VOLTAGE = _____ V

NOTES FOR ARRAY CIRCUIT WIRING (Guide Sec. 8):

- THREE OPTIONS FOR SOURCE CIRCUIT CONDUCTOR TYPE (INSIDE CONDUIT—CIRCLE ONE)
 THWN-2; XHHW-2; RHW-2
- 2005 ASHRAE FUNDAMENTALS 2% DESIGN TEMPERATURES DO NOT EXCEED 47°C IN THE UNITED STATES (PALM SPRINGS, CA IS 44.1°C). FOR LESS THAN 9 CURRENT-CARRYING CONDUCTORS IN ROOF-MOUNTED SUNLIT CONDUIT AT LEAST 0.5" ABOVE ROOF AND USING THE OUTDOOR DESIGN TEMPERATURE OF 47°C OR LESS (ALL OF UNITED STATES).
 a) 12 AWG, 90°C CONDUCTORS ARE GENERALLY ACCEPTABLE FOR MODULES WITH Isc OF 7.68 AMPS OR LESS WHEN PROTECTED BY A 12-AMP OR SMALLER FUSE.
 b) 10 AWG, 90°C CONDUCTORS ARE GENERALLY ACCEPTABLE FOR MODULES WITH Isc OF 9.6 AMPS OR LESS WHEN PROTECTED BY A 15-AMP OR SMALLER FUSE.



Contractor Name and Address:		Standard Electrical Diagram for	
		Small-Scale, Single-Phase PV Systems	
Site Name: _____		FSCM NO _____	
Site Address: _____		DWG NO E1.1	
System AC Size: _____		REV 0	
SIZE	FSCM NO	DWG NO	REV
SCALE	NTS	Date:	SHEET
Drawn By:	Checked By:		