



PLANNING AND DEVELOPMENT SERVICES

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Commercial Photovoltaic and Solar Thermal Systems Submittal Checklist.

Case #: _____

Date: _____ Project Name: _____

Site Address: _____

Application Submittal

Building permit applications and plans can be submitted to the City by two methods. *This checklist must be completed no matter which method is used.*

1. Electronic Submittal

Our PDS Online | ePlanReview system lets you submit documents and plans electronically for review. Go to www.cityofboise.org/pds for more information.

2. Paper Submittal

Paper plans must be reviewed at a plan intake meeting where staff will verify that the project submittals are complete. The meeting is not a "plan review" for code compliance. The applicant is responsible for contacting staff members if additional consultation is required.

Intake meetings can occur any time between 8:00 am – 3:30 pm Monday through Friday. Please check in at the Permit Counter and a staff member will conduct the intake meeting with you. All zoning approvals must be completed prior to your meeting time.

Application Acceptance

- Incomplete submittals will not be accepted. Applicants with incomplete submittals must upload additional documents (electronic submission) or schedule another plan intake meeting with the same staff member (paper submission).
- Plans must be accepted as complete and all review fees must be paid before review can begin.

Instructions

- Checklist must be completed by the project's Idaho-licensed design professional of record (or applicant if design professional not required) and submitted with the application (paper), or uploaded with the plans and documents (ePlanReview).
- The checklist is not complete unless all information is filled out, all appropriate boxes are checked and all plan page numbers are listed.

Note: If using ePlanReview to submit electronic files, only one (1) copy of each document is required. Paper submittals require additional copies as noted.

Documents Provided

Yes N/A

- Application #520- Major Tenant Improvement Application** (*2 paper copies*)- All Pages.
- Form #304-Registered Design Professional Form** (*2 paper copies*)
- Building Plans** (*2 complete paper sets*) Drawn to scale on 18"x24" minimum size plan sheets. Any civil, structural, electrical, mechanical & plumbing plans to be stamped and signed by Idaho licensed engineers. Electrical engineer required for pieced out component system. **Note:** Electrical Engineer not required if the entire PV system is listed, labeled and tested as a complete unit or where under 100 kW. **Note:** If the system is not permitted separately and is included as part of an overall project that requires an Idaho licensed architect, architectural plans are then required.
- Planning & Zoning letter(s) of Approval** (*2 paper copies*) – i.e. Conditional Use Permit (CUP), Design Review Permit (DRH) and/or other approval documents. If project is in an historic district, provide a copy of the "Certificate of Appropriateness" issued by the Planning Division with the permit application.
- Erosion and Sediment Control (ESC) Letter** (*2 paper copies*)– Such as ground installations. Plan Waiver Request Letter in lieu of an Erosion & Sediment Control plan if applicable. See form #707 – ESC Requirements for Tenant Improvements.
- Floodplain Elevation Certificate or Letter of Map Revision (LOMR)** (*1 paper copy for both ePlan and paper submittals*) Elevation certificate stamped and signed by licensed surveyor. If LOMR to be submitted, complete FEMA approved document to be submitted.

Building Code Requirements

Yes N/A

- ICC Evaluation Services (ES) Report** (*2 paper copies*) For mounting brackets used to attach the panels to the roof structure.
- ICC Evaluation Services (ES) Report** (*2 paper copies*) If the photovoltaic system is used as the roof covering. The report will show how the system complies as a photovoltaic system/roof covering.
- Structural Calculations** (*2 paper copies*) Stamped and signed by an Idaho licensed engineer to include:
 - Structural design showing connections and that the system complies with IBC Chapter 16 for wind resistance.
 - Structural design showing that the existing roof structure can support the additional gravity/dead load. If adding the new system increases the design gravity load more than 5% structurally, provide engineered plans and calculations for new elements that will strengthen, supplement, or replace existing load-carrying members as needed.
- Structural plans and Details** [Page(s) _____]
- Manufacturer Installation Instructions** (*2 paper copies*)
- Manufacturer Specification Documents** (*2 paper copies*) Showing panels and modules as listed and labeled in accordance with UL 1703, racks, combiner boxes, DC disconnects, inverters and any other associated PV equipment.
- Manufacturer Specification Documents** (*2 paper copies*) Showing the system complies with the fire classification of the roof system it will be installed on. (Meets class A, B or C roof covering classification)
- Roof Plan** (roof mounts) with dimensioned array layout indicating firefighter rooftop access points, access pathways, distances of arrays from roof ridge and perimeter edges, and any smoke ventilation. (In accordance with the *International Fire Code*) [Page(s)_____]

- Site Plan** (ground mounts) with dimensioned array layout, access pathways, structures on site.
[Page(s) _____]

Electrical Plan Requirements

Yes N/A

- Photovoltaic System Type** – Specify (Stand-alone, Grid-tied, or Hybrid System)
[Page(s) _____]
- Site Plan** - show location of existing meter, existing grounding system, existing site transformer
[Page(s) _____]
- Main Electrical System** show location of
[Page(s) _____]
- Disconnects** - show location of [Page(s) _____]
- Rapid Shutdown** - show location of [Page(s) _____]
- Arrays/Modules** – show location of [Page(s) _____]
- Batteries** if stored - show location of [Page(s) _____]
- Inverters** – show location of [Page(s) _____]
- Combiner Junction Box** (type and size) - show location of
[Page(s) _____]
- Grounding Electrode Conductors** – show location and connection of
[Page(s) _____]
- Clearances** around all new and existing equipment. [Page(s) _____]
- Dimensions** between equipment and structures
[Page(s) _____]
- One-Line Diagram** that is specific to the project and includes the following Information:
 - Conductor sizes (AC and DC).
 - Conductor insulation types, (AC and DC) rated 90C, listed for use on PV arrays.
 - Conductor material (copper/aluminum) (AC and DC).
 - Conduit sizes.
 - Conduit material (non-metallic, EMT, etc.).
 - Over current device ratings.
 - Existing and new panel amperage ratings.
 - Series and parallel configuration of the module connections.
 - Wiring diagram including wire size and type showing the connection of the supply from the solar array to the point of connection.
 - Listed rapid shutdown function of PV system on buildings.
 - Calculations demonstrating that the existing bus capacity and main disconnect will not be overloaded by the additional solar photovoltaic supply. [Page(s)_____]
- Identify Wiring** whether run on interior or exterior of building. [Pages(s)_____]
- Number of Arrays** [Page(s) _____]
- Number of Modules** [Page(s) _____]
- Wattage of Modules** [Page(s) _____]
- Module Series Fuse Ratings** [Page(s) _____]
- Inverter Output Circuit Current Rating** [Page(s) _____]
- Method of Grounding and Bonding of Modules and Arrays** per manufacturer’s specifications.
[Page(s) _____]

Ground Fault Protection Devices [Page(s) _____]

Solar Thermal Water Heating Plan Requirements

Yes N/A

Mechanical Engineered Piping Diagram & Design [Page(s) _____]

System Description [Page(s) _____]

Over Temperature Device [Page(s) _____]

Over Pressure Device [Page(s) _____]

Cross Connection Protection [Page(s) _____]

Freeze Protection Method [Page(s) _____]

Manufacturer Specification Documents for Panels (2 paper copies)

Manufacturer Specification Documents for Heat Exchanger (2 paper copies)

Signature of Applicant

I, the undersigned, have completed the above checklist noting all pages and supporting documents for the project.

Signature of Applicant or
Submitting Design Professional of Record

Date

For Staff Use

Accepted
 Not Accepted _____ by _____
Date Staff Member Conducting the Intake

Accepted
 Not Accepted _____ by _____
Date Staff Member Conducting the Intake