

# Building Department Requirements for Solar Panels Mounted to Buildings or Structures

The Municipality of Strathroy-Caradoc requires a permit be obtained for any solar panel system with a face area over 5 sq. m. that is mounted to a building or structure.

Existing buildings must be evaluated for additional loading that the solar panels may apply to the roof assembly. Solar panels may not only add dead loads to the structure, but they can also cause live loads (snow accumulation due to placement of panels). Also, the transfer of loads through the panel mounting systems may cause a relocation of how and where the loads are applied to the roof assembly (uniform and/or point loads).

Even if the structural support system has some amount of additional capacity, a review is necessary to determine the amount of that additional capacity compared to all loads being applied with the installation of panels. Trusses are typically designed to meet the minimum design loads as specified in the Ontario Building Code for the specific building they are to be installed on. Any additional loads could exceed the structural capacity of these trusses.

If insufficient capacity is identified systems would have to be strengthened. Some building owners may be tempted to install a system without proper review however proper steps must be taken to ensure the protection of your building and the safety of its occupants.

Engineering review is required for: fastening details, loading of existing structural systems and the addition of bracing/support.

## **Fastening System Info:**

- 1) Panel mounting detail
- 2) Spacing of fasteners/rails/supports
- 3) Location of panels on existing structure along with corresponding location of supporting elements in these areas

## **Building System Review:**

- 1) Identify existing structural system including sizes and spacing
- 2) Provide loading diagram for structural elements (live and/or dead loads and identify all point loads created by panel mounting system)
- 3) Ensure review of loads due to snow and rain as outlined in 4.1.6 values for these loads should be included in loading.

## **Supplementary Construction:**

- 1) Identify size and location of any supports or bracing to be provided to existing systems
- 2) Prescribe size and location of all new supports
- 3) Confirm all loads are sufficiently transferred to footings

## **PERMIT FEE:**

***Minimum: \$150.00***