

Addendum to COA Application

Full text of Project Description from Application for COA

Address: 2581 N Terrace Ave

Applicant: Susan A. LaBudde

1. **Application.** I am seeking an application for a COA retroactively for a sola-tube project, due to inadvertently missing that this project was covered by the HPC application process, oversight and regulations.
2. **Roof Sola-Tube Project** consists of: 4 Sola-tubes that are 14 inches in diameter (with internal passive solar collectors, to provide light at night and thus eligible for federal tax credit) in a residential condo second story unit, about 1600 sf including entry space (where one of the sola tubes is located).
3. **Context & Timing of Application.** My sincere apologies for completely missing that my new residence (built in 1971) is covered by the Historic Preservation Commission as a historic district. I just didn't put together "1971 construction" and "historic preservation" in my mind (although now I understand the designation is by district, not per house), especially given the notable variety of housing styles/ ages on my block. (For example, immediately to the south on our side of the block are the following: a french colonial style house rotated 90 degrees so entrance faces north (with a rear skylight); then a (rundown) yellow Victorian "painted lady", then a sort of squat brick house with tile roof, and then a Georgian style with semi-mansard roof, and so on.)
4. **My oversight was purely inadvertent.** My condo association consists of 4 units and I obtained unanimous approval from my neighbor/ association members prior to having the sola-tubes installed. I bought the unit in April, 2018 and moved here from Bayside in early June. Although my fellow members had to obtain HPC approval and a COA for a roof in 2011, none of them remembered this requirement when they approved my sola-tubes. The installer, Brighter Concepts, also did not mention this requirement (even though I understand the owner apparently lives in the neighborhood.) None of the foregoing excuses my failure to obtain a COA, just provides context for how this happened. I made a mistake.
5. **Description of my residence and immediate neighborhood.** My residence is the second floor of a square, 2 story building. It has a brown brick exterior and a very shallow roof line. It is difficult to see the roof, and the sola-tubes, where applicable, from most street-level locations except from across the street, due to the location and proximity of buildings around it. The west/kitchen sola tube can be glimpsed from the

parking lot to the west (that serves the 2 apartment buildings on Bellevue just west of our property). (See annotated photos).

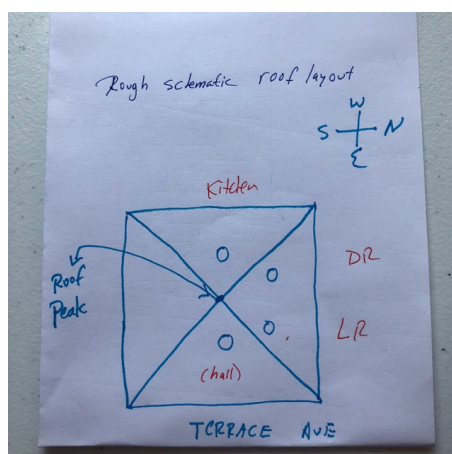
The 4 sola-tubes are each 14 inches in diameter, on a roof that I am estimating is between 1600-2000 square feet in area. The original condo documents describe the living space on each floor as about 1900 square feet; but assessment records have the units at 1526 sf, not including front and back entry halls. Also, the roof eaves extend over / beyond the building itself by about 2 feet around the entire perimeter.

6. **Limited visibility of sola tubes from street level.** An attached diagram shows my residence in context with the buildings around it. Because of geography and location, it is possible to see the East and NE roof area from the ground level only from across the street on Terrace and the corner of Bellevue & Terrace, and partially from Bellevue. The north side of my building is bounded by a shared driveway with the other 2 story condo in our Association. The downstairs neighbor cannot see my roof at all from his unit; the upstairs neighbors across the way can see my roof if they stand at their window and look up. From the parking lot to the west, the west sola-tube is visible, although it is greatly obscured by tall bushes and a stand of mature trees that extend higher than the adjacent 4 story apartment building. It is comparable in visibility ( or slightly less visible) than the rear skylight next door, 2571 N. Terrace.

7. **Other Roof-Located Light Admitting Apertures in Immediate Neighborhood.** A quick informal survey turns up 3 houses with skylights:

- 2571 N. Terrace, immediately to the south of the subject property, has a rear skylight visible from the parking lot on Lake Drive.
- 2604 N. Lake (on the NE corner of Lake 7 Bellevue) has 2 skylights on the south wing of the house, one that faces west/Lake Drive and one that faces east (parallel to Bellevue).
- 2729 E Bradford ( larger skylight that faces east/to the front/ front door on Terrace and is visible from both Terrace and Bradford).

8. **Materials relating to the sola-tubes are attached to this application.** The sola-tubes provide bright, direct, but filtered light to darker areas that have northern exposures or are otherwise poor lighting. One is installed in the front 2-story stairwell I share with my neighbor (lit by small north-facing window). One is installed in my kitchen (faces West, but small window), and one each in the dining (north window) and living room (north & east window). See attached brochure from Brighter Concepts.



**Roof layout showing peak of roof and location of sola-tubes.**

The sola tubes contain optional, removable passive solar collectors and thus emit a faint glow at night, at about the brightness of a dim nightlight. The light collector qualifies the project for a federal tax credit.

9. **Technical Specifications.** The sola tubes are 14 inches in diameter and come with a minimum 10 year warranty against leaks and water infiltration. Above the roof line is a translucent cap that collects light (which is reflected down the tube, made of a flexible reflective silver material). The cap is designed to shed snow, water, leaves and debris, unlike a skylight (which often collect dirt and smudge and need cleaning). The design of the sola tube and the use of a diffuser at the ceiling level provides for intense but an even, diffuse light, unlike the migrating glare of a skylight.

A brochure provided by the installer, Brighter Concept, is attached to this application. Additional info is available at:

<http://brighterconceptsLtd.com/brighter-concepts-ltd/solatube-vs-skylights>

<http://brighterconceptsLtd.com>

10. **Some information in hands of HPC.** The enforcement inspector stopped by my residence on July 17th and made an inspection of the sola-tubes and collected interior and exterior photos.

11. **Brief, Anecdotal History of Roof-Located Light-Admitting Apertures.** The use of windows/skylights in roof structures is not a recent architecture phenomenon, but had been long used both in Europe and the United States. Europe has, naturally, a longer history of the use of roof-located light-admitting apertures, especially in more 'historic' housing.

They are common in northern European climates, to let in daylight during long dark winters. (For example, in Milwaukee, the shortest day of the year provides about 9 hours of daylight. By comparison, in Edinburgh, Scotland, the shortest day of the year provides just 7 hours of daylight, because it is further north. In central Edinburgh city's urban center, my twin lives in a town house that has a large central skylight over a 3 story stairwell; her house dates from the 19th century and the skylight was original to the house. (Unfortunately, I do not have a photo to share, as she is traveling). Most of the houses in her neighborhood and throughout Edinburgh city have similar features.

In Copenhagen, Denmark, (from which I just returned), which is located further north than Edinburgh, the multi-story residential buildings in the historic district often contain skylights. I am attaching a sample photo of Danish skylights.

In America, skylights and sola-tubes appear to have moved in and out of fashion over the years. In 1950's and 1960's construction, they are common. (I just moved to the East side from Bayside; my observations of Bayside and Fox Point over the last 2 years is that sola tubes and skylights were commonly incorporated into residences, both originally and as add-ons. It is not surprising that Milwaukee area buildings incorporate skylights and sola-tubes, given our long, dark winters.

Locally on the East Side: As noted above, 3 houses have 4 skylights within a stone's throw of the Subject Property.

**12. Other Materials Included with this Application.**

Also attached to this application are:

- Annotated photos of exterior of my building from as many sides as possible, including from East, SE, West, North
- Skylights in Copenhagen, Denmark
- Schematic drawing of Subject Property and neighborhood/ location of other houses with skylights
- Brochure with technical information about Sola-tubes from the installer, Brighter Concepts.