



Recommendations to Reduce Light Pollution and Energy Costs on the Campus of Bishop's University

BU DarkSky Initiative

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¹ More information is available by consulting the PDF files: Lighting Project Linked PDF (BUILDING LIGHTS).pdf and Lighting Project Linked PDF (STREET LIGHTS).pdf

² More information is available by consulting the PDF file: Effect on Observatory Linked PDF.pdf

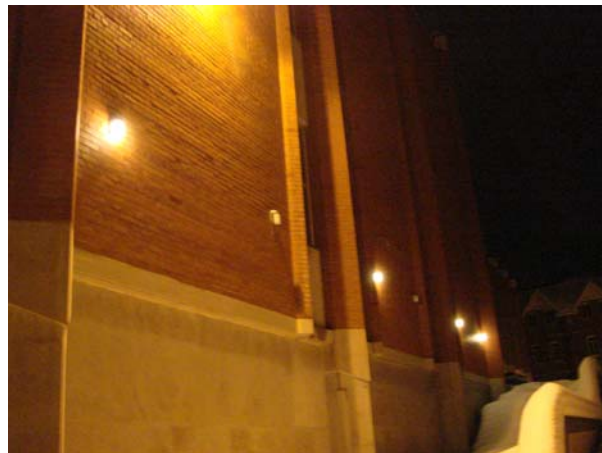
Campus Lighting Efficiency

Recommendations

I. Cost Effective within 1 Year

The following recommendations should be carried out within the next year. The cost effectiveness is listed in order of efficiency.

- Permanently disable small “cylindrical lights” on the front side of the Nicholls building (6 in total – NIC08(A-F)_CL15). The steps will be lit by the large light on the side of the wall:



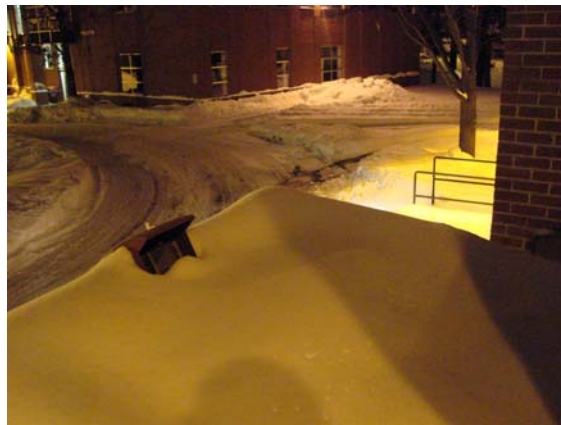
- Permanently disable large light on rear roof ledge of library (LIB06_CL12). It is pretty much useless since it only illuminates the lawn:



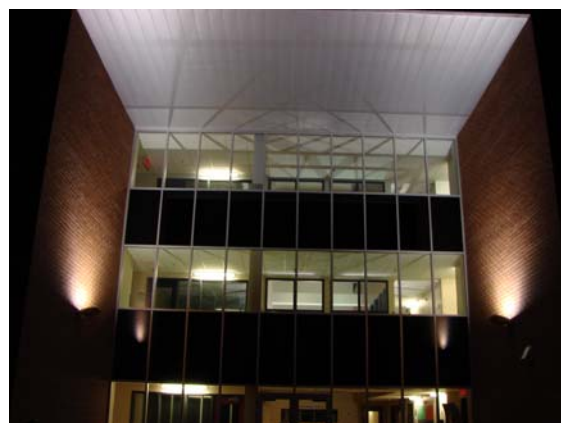
- Install a timer on the inside of the chapel that controls the two floodlights illuminating the stained glass windows from the outside (MCGR18, MCGR19 - CL10). Or have a switch inside the chapel that can be turned on when parishioners want to see the lit stained glass:



- Install timer for the plaque lighting on Centennial Hall's main entrance, or use a more efficient fixture/bulb combination (rack lighting pointing down from above the plaques:



- Turn the Paterson wall lights upside down and potentially replace bulb with lower wattage ones (PAT18, PAT19, PAT27, PAT28, PAT29 - CL14):



- Change class #15, and class #20, incandescent bulbs with exterior fluorescent bulbs:



- Change class #18 incandescent flood-light bulbs with fluorescent flood-light bulbs:



- Replace class #17 bulbs with lower wattage ones, especially MH(01-06)_CL17:



II. Cost Effective within 10 Years

The following recommendations apply to medium-term solutions (listed in order of priority):

- Replace class #09 “wall pack” lights with a more focused and efficient fixture and bulb (NP05_CL09 & JHN10_CL09):



- Replace FRM01_CL08 (only class #08 light) with a more efficient fixture and bulb:



- Install user controlled timers on tennis courts, with 15min pre-shutoff buzzers:



III. Cost Effective after 10 Years

The following recommendations apply to long-term planning (over a decade or longer), again listed in order of priority:

- Replace class #9 lighting fixtures with more energy efficient and focused fixtures/bulbs. The current design blocks the light in the downwards direction, and thus is functionally flawed:



- Replace class #10 street light heads with class #6 heads, and straighten one pole:



- Replace “cobra” heads on class #8 street lights with class #7 (full cut-off) fixtures:

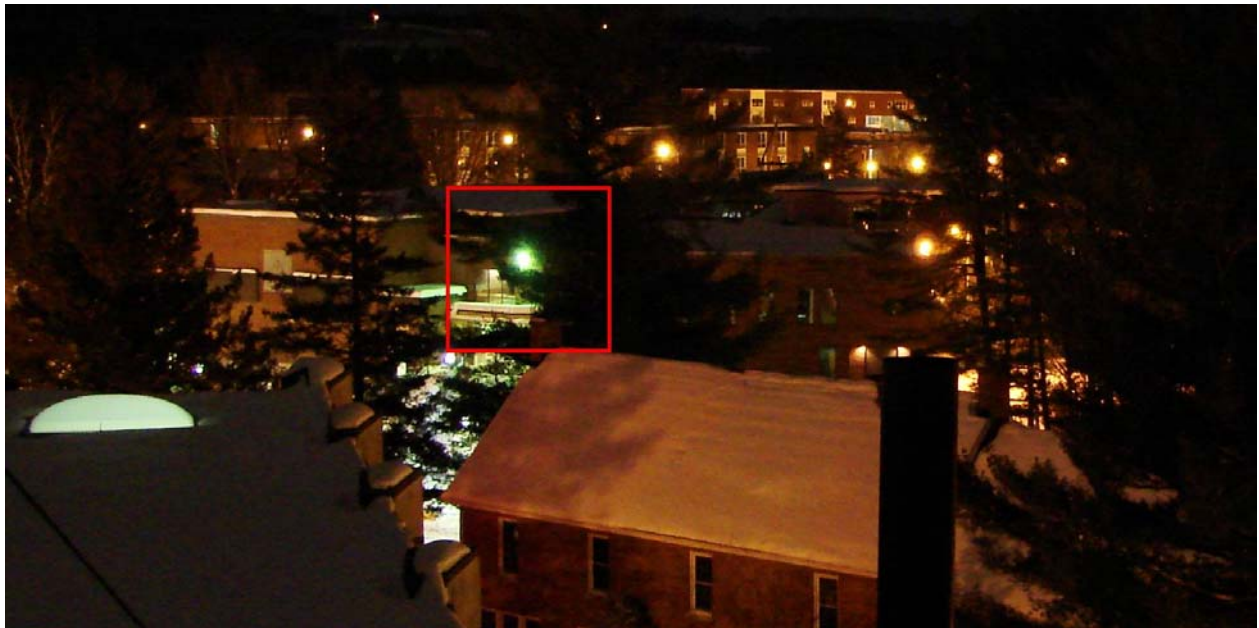


Lighting that is Detrimental to the
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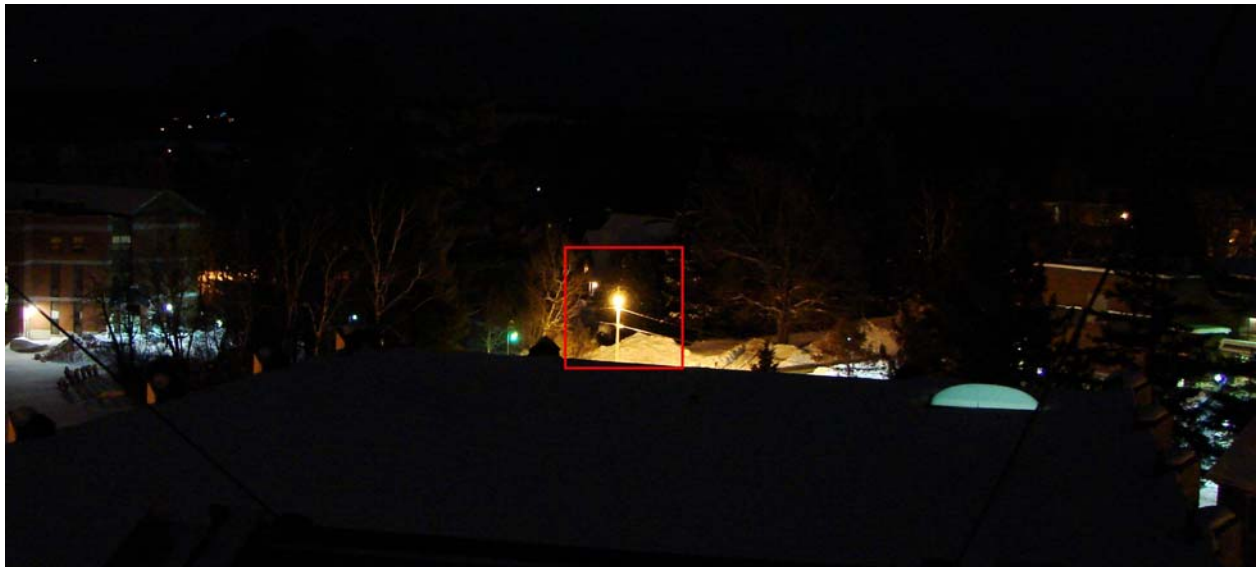
I. Bishop's University Campus Lighting

The following list of building and street lights are the largest contributors to light pollution at the Bishop's University Observatory from campus light sources. They are listed in descending order from the most detrimental light sources.

- MH22_CL01:



- STR71_CL02:



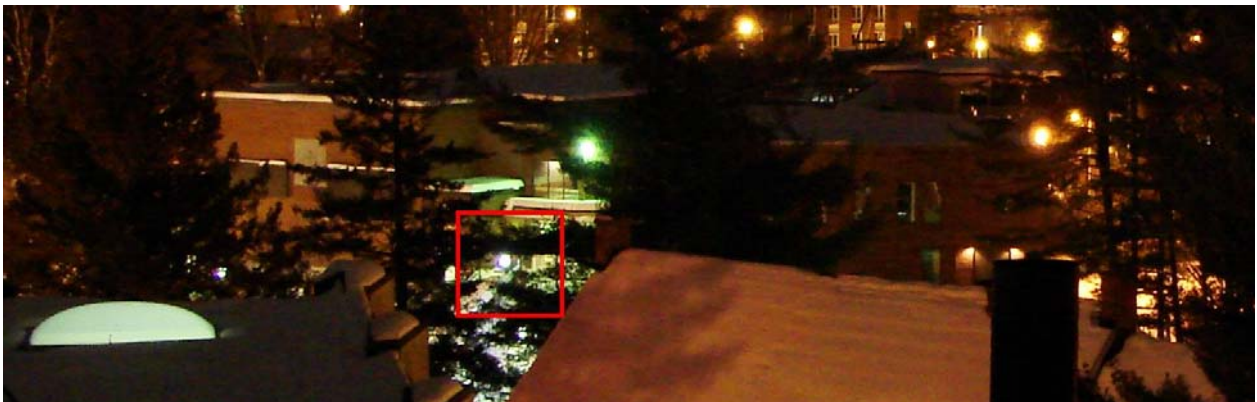
- MH25_CL12:



- MH31a_CL12:



- STR82_CL05:



II. Champlain Regional College Lighting

The following list of building and street lights are the largest contributors to light pollution at the Bishop's University Observatory from Champlain Regional College. They are listed in descending order from the most detrimental light sources.

- CHM01:



- CHM02:



- STR76_CL05:



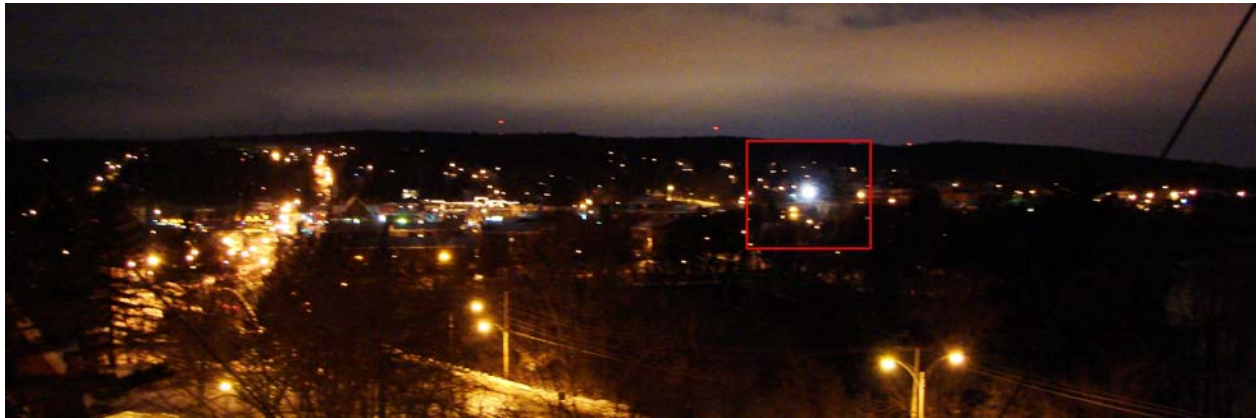
- STR74_CL05:



III. Municipal Lighting

The following list of building and street lights are the largest contributors to light pollution at the Bishop's University Observatory from the surrounding highway, bridge, and town. They are listed in descending order from the most detrimental light sources.

- LEN01:



- BRIDGE:



- HWY108 (College St.):



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