

**Submission by Toomas Karmo
for Town of Richmond Hill
Committee of the Whole
Meeting of 2017-11-06:
Comments on SREIS.17.021
(Staff Report on DDO Maintenance),
for Inclusion in the Public Record**

1. Preamble

The staff report SREIS.17.021 is available from the <http://www.richmondhill.ca> meetings calendar, as a document for the Town of Richmond Hill Committee of the Whole meeting of 2017-11-06.

SREIS.17.021 gives useful guidance on what might be considered half of the current DDO heritage-conservation problem, namely the infrastructure framework of the observatory. The other half, concerning the three telescopes themselves (a 1.88 m reflector in the Great Dome, a 0.6 m reflector in the central dome of the Administration Building, and a 0.4 m reflector in the south dome of the Administration Building) falls outside the scope of SREIS.17.021. This second half will have to be the subject of ongoing scrutiny by the heritage-engaged and astrophysics-engaged taxpaying publics.

Such taxpayers will be above all seeking to monitor ongoing maintenance of the 1.88 m reflector. Is, for example, the necessary periodic lubrication continuing, at a minimum of once in six months, on a properly formal schedule which such taxpayers can in due course monitor – in the final resort making, should other legal avenues fail for them, a request for current DDO work orders, or similar current papers, under Freedom of Information legislation?

Such taxpayers will also be paying due regard to the status of the three Administration Building domes – noting not only the deterioration of their exterior paintwork since 2008, but also raising questions regarding their contents. Such taxpayers will take an interest not only in the south and centre domes, with their respective telescopes (one functional, another possibly needing repairs to its declination motor and its RA readout) but in the north, currently empty, dome. Taxpayers will note that this dome was wired in the 2009-through-2016 era, very likely by the Royal Astronomical Society of Canada, for current-day astronomy. The wiring comprised good quality, current-day, conduits for power, for coaxial cable (as appropriate for a video feed), and for T100-or-similar Ethernet. They will then ask: What can now be done to bring the northern dome into astronomical service, so that the current recent investment in good-quality cabling is not left sitting idle?

2. Factual Errors in SREIS.17.021

Before the Town of Richmond Hill can formally accept SREIS.17.021, three errors must be corrected. Failure to make corrections, as preparation for the Town Council meeting of 2017-11-13 to which this present 2017-11-06 Committee of the Whole is a preliminary, leaves the Town perhaps not duly diligent, and therefore potentially exposed to the potential taxpayer grievance processes detailed at <https://www.ombudsman.on.ca>.

(A) SREIS.17.021 erroneously asserts that the Great Dome was completed in 1939.

The report uses the misleading, arbitrarily neologistic, terminology “Observatory Building”. The phrase “Great Dome” was current in the 1930s. In later years, “Observatory Building” was never applied to the “Great Dome”. But perhaps “main dome” would now do, as an alternative to the cumbersome, archaic-sounding “Great Dome” - “main dome” in the revised report, to distinguish this structure clearly from the three domes on the Administration Building. It has already been noted in this communication that of those three, two currently contain telescopes (making the use of “Observatory Building” for the main dome misleading, as conveying the false suggestion that DDO has just one telescope).

But my formal, potentially Ombudsman, concern here is not with the neologism, but with the error in history. The main dome was completed not, as SREIS.17.021 asserts, in 1939. Rather, it was completed in the couple of years leading up to 1935. In repairing SREIS.17.021, it would be sufficient to mention the date of the ceremonial opening of DDO (main dome included), namely 1935-05-24, and to add that astrophysical observations from the main dome started in the following month, in 1935 June.

(B) The Radio Shack dates not, as SREIS.17.021 asserts, from 1950, but from World War 2. Mayor and Council should today note that the Shack was used by the Canadian defence authorities, not for radio but for wartime naval researches into magnetism; that the Shack acquired a new lease on life in the late 1950s or early 1960s, when it was repurposed for radio astronomy; and that the Shack served a third purpose in the 1980s (perhaps also 1970s), as the home of station VE9LHM, licensed under the “Experimental” provisions of Canadian radio-transmitter law for operations on 20.5665 Mhz and 14.6555 Mhz, as a voice link to the DDO outstation which was the “University of Toronto Southern Observatory” (UTSO) at Las Campanas in the Chilean Andes.

VE9LHM was in particular instrumental in conveying news of Supernova “SN1987A” monitoring from UTSO to DDO. This supernova remains the most intensely observed supernova in astronomical history, being the most visible since the Tycho Brahe supernova of 1572 and the Johannes Kepler supernova of 1604. Its discovery was due to DDO-and-UTSO staffer Mr (later Dr) Ian Shelton.

Due consideration for the role of DDO in Canadian science would lead to the eventual erection of a tablet at the replicated Radio Shack, remarking not only on the well known 1960s-era Radio Shack work on the incoming ergs-per-second-per-square-centimetre measurement of radio source Cas A, but on its role in SN1987A.

For the purpose of repairing SREIS.17.021, on the other hand, it would suffice to sketch just some of this Radio Shack history, lightly, in just a sentence or two, taking care above all to correct the erroneous reference to 1950.

(C) SREIS.17.021 is correct in drawing attention to the inaccessibility of washroom facilities in the Administration Building. SREIS.17.021 errs, however, in writing (on page 9 of the *.pdf file) that there is just one washroom in the building, “on the basement level”. There are in fact three.

On the upper floor is a ladies’ washroom, communicating through a door with the small ladies’ anteroom on whose north wall is a full-length mirror. Access to the washroom is from the corridor east wall, eastward through the anteroom.

On the basement level, near the foot of a basement staircase, is a large gentlemen’s washroom. It is this that is the object of the SREIS.17.021 incomplete reference.

Also on the basement level, as a small room communicating through a door with the furnace room (in other words, reachable from the basement corridor by first entering the furnace room), is a further, until the 2008 DDO sale formally unisex, toilet-or-washroom.

[End of communication.]