To: The Richmond Hill Council and Committee

Re: Item 13.11 SRCS.21.17 - Noise By-law Amendment - (Proposed By-law 148-21 and 149-21)
Discussion #3 - The Amendment of By-law 43-20 Addressing Air Conditioners

From: Craig Streicher & Sheri Sweetland
48 Sunnyside Drive, Richmond Hill

Date: November 24, 2021

Dear Honourable Council Members,

We would like to address council regarding the proposed amendment of By-law 43-20 addressing air conditioners. Based on our personal experience, discussions with our longstanding a/c technician and our own research, the current by-law and proposed amendment addressing air conditioner db levels is not reasonable to attain and could cause undue conflict and issues for residents of our community. In addition, the point of reception for measuring the sound produced by an air conditioner should be addressed in a pragmatic sense, where and how the a/c unit noise would be mostly heard relative to another residence.

This summer when replacing our central a/c unit, we conducted extensive research regarding the db levels of central air conditioning units. We noted that the quietest central a/c units ranged from 54db-76db and that many units were affected by supply chain issues due to Covid. Some reference links are below:

Top 8 Quietest Central Air Conditioner 2021
https://www.pickhvac.com/central-air-conditioner/quietest/

Canada's 10 Best Air Conditioner Brands & Models Reviewed in 2021
https://canadaenergysolution.ca/canadas-best-10-air-conditioner-brands-models-reviewed-in-2021/

A Quiet Air Conditioner To Make Your Neighbours Happy
https://www.airzonehvac.ca/a-quiet-air-conditioner-to-make-your-neighbours-happy/

The db levels of these quiet central a/c units in the reference sources are above range from 54db-76db, and not 50db as currently proposed. We also noted the quieter the unit, generally the more expensive. We decided upon the Keeprite NH4A4 Performance 14 Compact Central Air Conditioner, rated "quiet performance" at 66db, which was the second quietest unit in their lineup ranging from 56db – 76d – see

the following link @ https://www.keeprite.com/en/us/products/air-conditioners/performance-14-compact-central-air-conditioner/

This unit was more expensive than a conventional unit ($4,180.00 plus tax for the unit and installation). We also added sound proofing insulation in the unit to bring the level to 63db at the unit source (our own sound meter measurement) – see below Image 1A.

Image 1A


At the unit source, our quiet rated a/c unit is above the 50db threshold. In fact, our unit was measured at 59db outside our neighbour's kitchen window by The City of Richmond Hill on October 20, 2021. This is despite that fact the unit is within the proper setbacks (4.5 feet from the property line) and approximately 12 feet from our neighbour's kitchen window. The unit was also measured at 50db on October 13, 2021, 10 feet from the unit, in the front yard by The City of Richmond Hill. See chart below as provided by the city - Chart 1A.

Chart 1A

| Measurement Date | Point of Reception | DBA | LEQ | Final Reading |
|---|---|---|---|---|
| Oct 13th 10 a.m. | 48 & 50 Sunnyside Front yard – 10 Ft from Unit | 52 | 47 | 50 dba |
| Oct 20th 11 a.m. | 50 Sunnyside - Window Sill | 60 | 52 | 59 dba |

I wanted to highlight that the way in which most of the homes are built in our neighbourhood, being in such close proximity to each other (see attached property survey on the last page – we are Lot 58), it would be unreasonable to impose a sound restriction of 50db as it pertains to central a/c units, since a/c units on the market are not able to accommodate these guidelines in the way that our subdivision is built, and the average distance between residences. I have personally walked around our neighbourhood and measured sound levels from the street. These levels were considerably higher than that of our new and quiet rated a/c unit.

Regarding the interpretation of the point of reception. Citing our example, we feel it is not reasonable to measure the noise of an a/c unit from an outside point where no individual would be reasonably spending time – ie an outside window sill on a walkway – see Image 2A

Image 2A


Noise should be measured as it relates to the normal enjoyment of one's property and where that individual would be impacted on an ongoing basis from any such noise such as inside their home – a kitchen, bedroom etc. It also is reasonable to assume that if an a/c unit is running, it is hot enough outside that the neighbouring windows would be closed to accommodate their own a/c unit.

I hope this adds to your decision regarding this matter. From our experience, research and the proximity of the homes in our subdivision, if a brand new, quiet rated a/c unit is not in compliance with the current 50db by-law, then most of our neighbours would have related issues, especially considering their a/c units are considerably louder at the source than ours.

Since our unit measured 50db from the front of our property as measured by the city on October 13th (Chart 1A), perhaps it makes senses to confirm the a/c sound levels around our neighbourhood from the same point, relative to their respective a/c units. This would give definitive data on the actual a/c sound levels for our subdivision, and considering, as I understand it, the current 50db threshold was not derived from our municipality. A proper a/c sound level threshold should be based on rationalized data, that takes into account the proximity of the homes in Richmond Hill, our/future subdivisions as well as the db levels of the available a/c units on the market.

Thank you for your attention.

Craig Streicher and Sheri Sweetland
48 Sunnyside Drive, Richmond Hill

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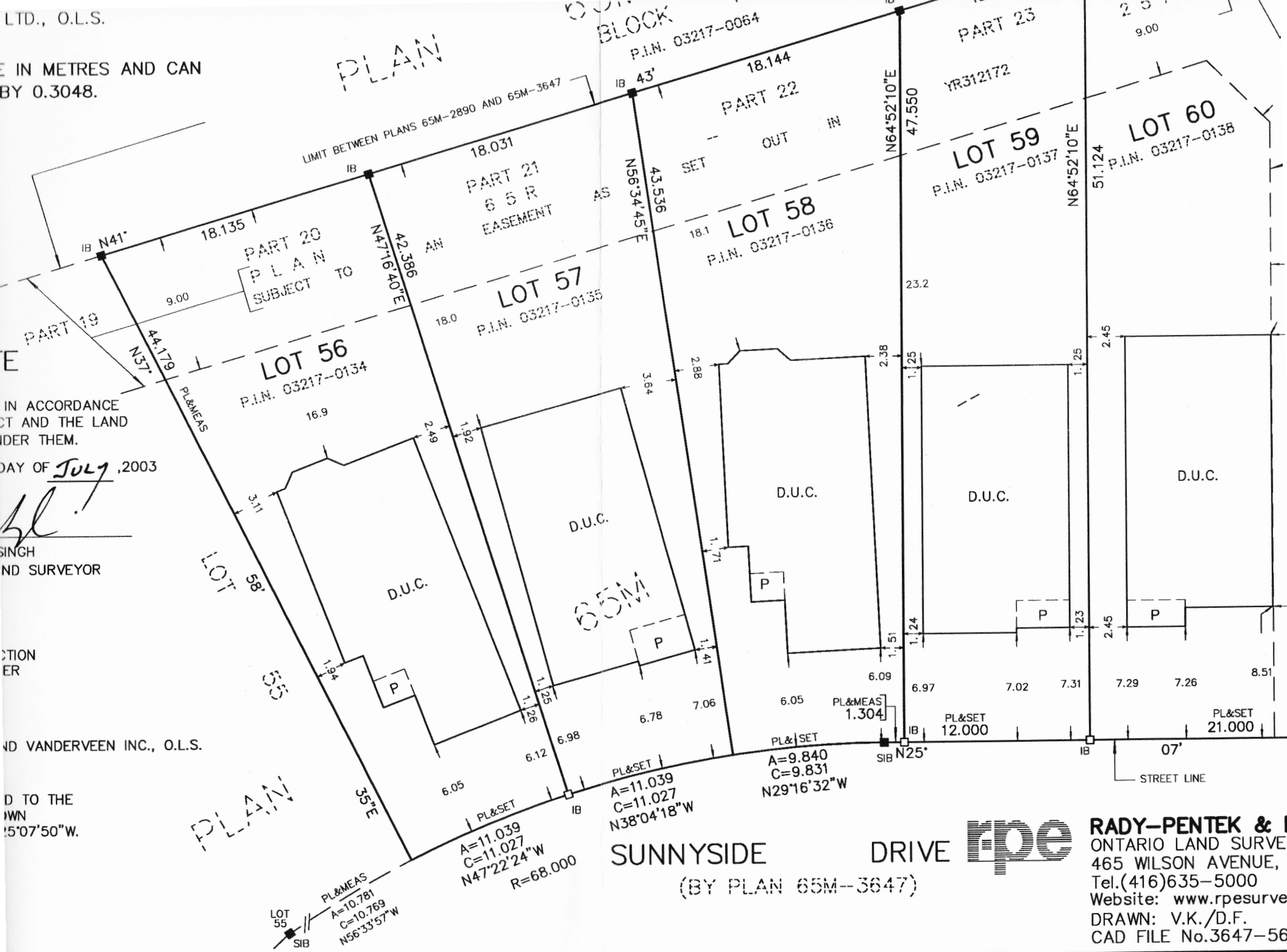


SUNNYSIDE DRIVE
(BY PLAN 65M--3647)


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