

20. Re: Location of Meteorological Tower
Proposed Municipal Land Lease
(Item 23, Manager's Report No. 37, Council Mtg. May 25, 1971)

We have received a request from the Department of Transport to lease to it a site in the Still Creek area (at Oak and Still Creek Avenue) rent free or at a nominal annual rent, so that a 300-foot meteorological tower could be erected. The purpose of the tower is to measure temperature and wind variation between ground level and the top of the tower so that the D.O.T. can assess the ability of the atmosphere in our area to disperse the pollutants that gather in the lower levels.

Council approved that the Still Creek site be leased to the D.O.T. for this purpose for a 5-year period with an option to renew for a further 5 years, with an annual lease equivalent to \$5,158.00 plus a grant in lieu of taxes (\$1,825.00 - 1971), subject to a suitable standard of development being agreed upon between the Planning Department and the D.O.T.

The D.O.T. have counter-proposed in the attached letter that this tower will be of considerable value to Burnaby itself and that it would be prepared to pay a grant of approximately \$1,800.00 per annum in lieu of taxes.

We have met with the D.O.T. officials and it would appear from what we are told that 70% - 80% of the use of any data obtained would be solely for Burnaby's use. Because of the location of the tower, other Lower Mainland centers will not be able to make much use of the data obtained. Vancouver and Coquitlam would only be able to make limited use of it. The D.O.T. require a minimum of 3 years on one site and would negotiate to move after that time if it became absolutely necessary. It prefers a 5-year lease. At present we have no great demand for the site but we do not know what the future will bring.

The Department of Lands, Forests, and Water Resources of the Provincial Government have endorsed the D.O.T.'s proposal (see attached). We have reasonable assurances that air pollution monitoring equipment would also eventually be placed on the tower by Government agencies either at the Regional, Provincial or Federal level. Such equipment would assist us greatly in Burnaby in attempting to improve the air quality of our area. This matter has been discussed with Dr. McIntyre of the B.C. Research Council and he feels that a tower with air pollution monitoring equipment on it would be a great asset to our area.

Basically then, this tower could be of great assistance to Burnaby in its environmental control program. Since the information will be useful to mostly Burnaby, we are sympathetic to a reasonable lease rate.

RECOMMENDATION:

THAT the Still Creek site be leased to the D.O.T. for a 5-year period at an annual rent equal to the amount of the current taxes subject to:

- a) Cancellation on 90-days notice after a non-cancellable 3-year period, if the property is required by the Municipality. (The 3 years to begin on January 1, 1972.)
- b) The D.O.T. moving the tower at its expense if the lease is cancelled.
- c) The D.O.T. leaving the tower and operating it after the 5-year lease expires if requested to do so by the Municipality.
- d) The D.O.T. giving the Municipality the right of first refusal to acquire the tower for a reasonable amount in the event that the Department no longer requires the installation.
- e) The D.O.T. continuing to work with other government or educational agencies at the Municipal, Regional, Provincial and Federal levels to have and permit air pollution monitoring equipment on the tower with the results or readings being made available to the Municipality if so requested by it.
- f) A suitable standard of development being agreed upon between the Planning Department and the D.O.T.

ITEM 20
MANAGER'S REPORT NO. 51
COUNCIL MEETING Aug. 23/71

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YOUR FILE
VOTRE RÉF.

IN REPLY QUOTE 5964-5 (PMBS)
RÉF. À RAPPELER:

739 W. Hastings Street,
Vancouver 1, B.C.,
August 6, 1971.

666-1401

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AUG 10 1971

MUNICIPAL MANAGER'S
OFFICE

Mr. M. J. Shelley,
Municipal Manager,
Corporation of the District
of Burnaby,
4949 Canada Way,
BURNABY 2, B.C.

Dear Mr. Shelley:

Following our meeting of July 27th to discuss a proposal for erecting a meteorological tower in Burnaby, we have given considerable thought to the preparation of a new submission to Council. As indicated in our telephone call of August 5th, we feel that we cannot possibly be ready until the Council meeting of August 23rd. Hence we will plan for that date.

We have already supplied your departments with considerable data on the tower itself, its size and type of construction. We would like to re-emphasize its importance to the Municipality of Burnaby. Our primary purpose in erecting the tower is to obtain a measurement of both temperature and wind variation between ground level and the top of the tower. This information is essential for assessing the ability of the atmosphere to disperse the pollutants that gather in the lower levels. However the same data will be of great help for determining wind stresses and heating and cooling requirements for tall buildings that may in future be erected in the area.

We have chosen the Central Burnaby area for this initial construction for several reasons. It is in an area somewhat prone to industrial pollution and where natural ventilation is lacking during spells of weak atmospheric circulations. The central valley is not directly affected either by the cold water of English Bay, Burrard Inlet or the Fraser River or by the sharply sloping terrain of North or South Burnaby. The suggested location on Still Creek Avenue will permit an examination of the cbb and flow of pollutants across the Burnaby-Vancouver boundary. It is an ideal location for the purpose intended.

This tower is not the only meteorological installation in the area. The attached map shows the location of our climatological and wind measuring stations, active and inactive, in the Greater Vancouver district and suggests areas where more are required. We have also added the locations of a number of pollution monitoring stations that are known to us.

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As you can see the tower site is well located with regard to these other stations. Dr. Tim Cke, Professor of Geography at U.B.C., and an expert in urban climatology, is already cooperating with us in an urban climate study of the central valley in Burnaby to be used in our analysis of the tower data. By using instruments mounted on automobiles and helicopters he will be able to obtain basic data on the variations of temperature on the sides of the valley and around the periphery of Burnaby Lake.

While our objective will be to measure meteorological parameters at the tower, we will certainly make it available to those agencies who have the responsibility for sampling air quality. We presume this could be worked out between the Provincial Air Pollution Control Branch, the Greater Vancouver Regional District and the Municipality of Burnaby.

With this type of intensive survey of meteorological and pollution parameters, it will be possible to establish an accurate pollution climatology of the Burnaby central valley. This information will be primarily of importance to Burnaby itself, but will be useful as a first step in determining the complete picture for the whole Regional District. However before this larger study can be completed, ground level and upper air sensors will be required on Burrard Inlet near the Second Narrows Bridge, and on the Fraser, possibly in Queensborough or on Annacis Island.

Our data from the tower will be published along with meteorological data from our other sites and will therefore be available to all who have a need for it. Analyses of data will require time. Several years of data are needed before seasonal and diurnal variations show up. Hence we have requested a tenure of about five years at the site so that we can accumulate the necessary background information.

As outlined before, our need is for a piece of unused land for a period of five years. Should there be a demonstrated need for the property for commercial use three years after the tower has commenced operation, we would be prepared to renegotiate our lease so that the Municipality would not suffer any actual loss. On the other hand should there be a requirement by the Municipality for a continuing period of records beyond the five years, we would be willing to continue with the operation of the tower.

As it stands now your request for a lease rate plus taxes is more than we can handle. We are already committed to an investment of \$50,000 for erection of the tower and the purchase of instruments. On top of this will be the cost of the servicing of the instruments and the collection and analysis of data over the five years, followed by the removal of the tower when the project terminates. We are willing to consider a grant of approximately \$1800 per annum in lieu of taxes and we hope Council will be willing to agree to this.

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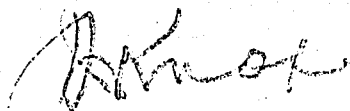
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To support our submission we have done as you suggested. We have spoken to Mr. Armson of your staff and he will be preparing a report and will be calling upon Dr. McIntyre of B.C. Research for support. We have discussed the problem with Mr. G. W. Carlisle of the Greater Vancouver Regional District, and requested his support. We are planning a meeting on Monday, August 16th, with Mr. V. Raudsepp, Deputy Minister of Water Resources and Chairman of the Pollution Control Board, to enlist his support and to obtain a commitment for the installation of pollution sensing equipment. We hope that you will hear from these people and that their statements will support our plea for reconsideration on the basis of a service to the community.

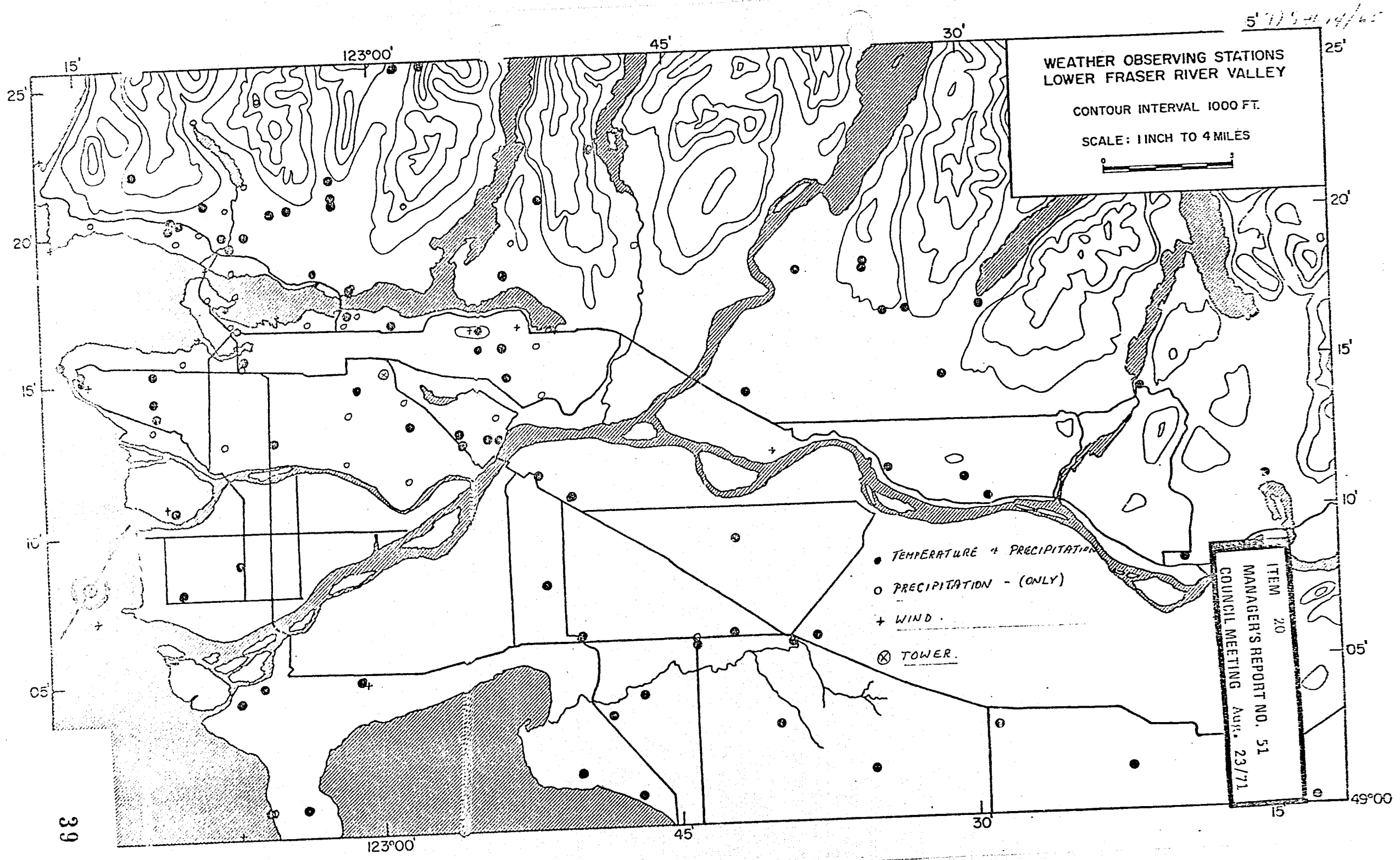
We will be in touch with you again prior to August 18th to discuss our submission. As indicated to you we are prepared to appear personally to put our case to Council if this is deemed advisable. In any case we trust that our arguments are sufficiently well supported to encourage Council to accept this modified agreement.

Yours very truly,

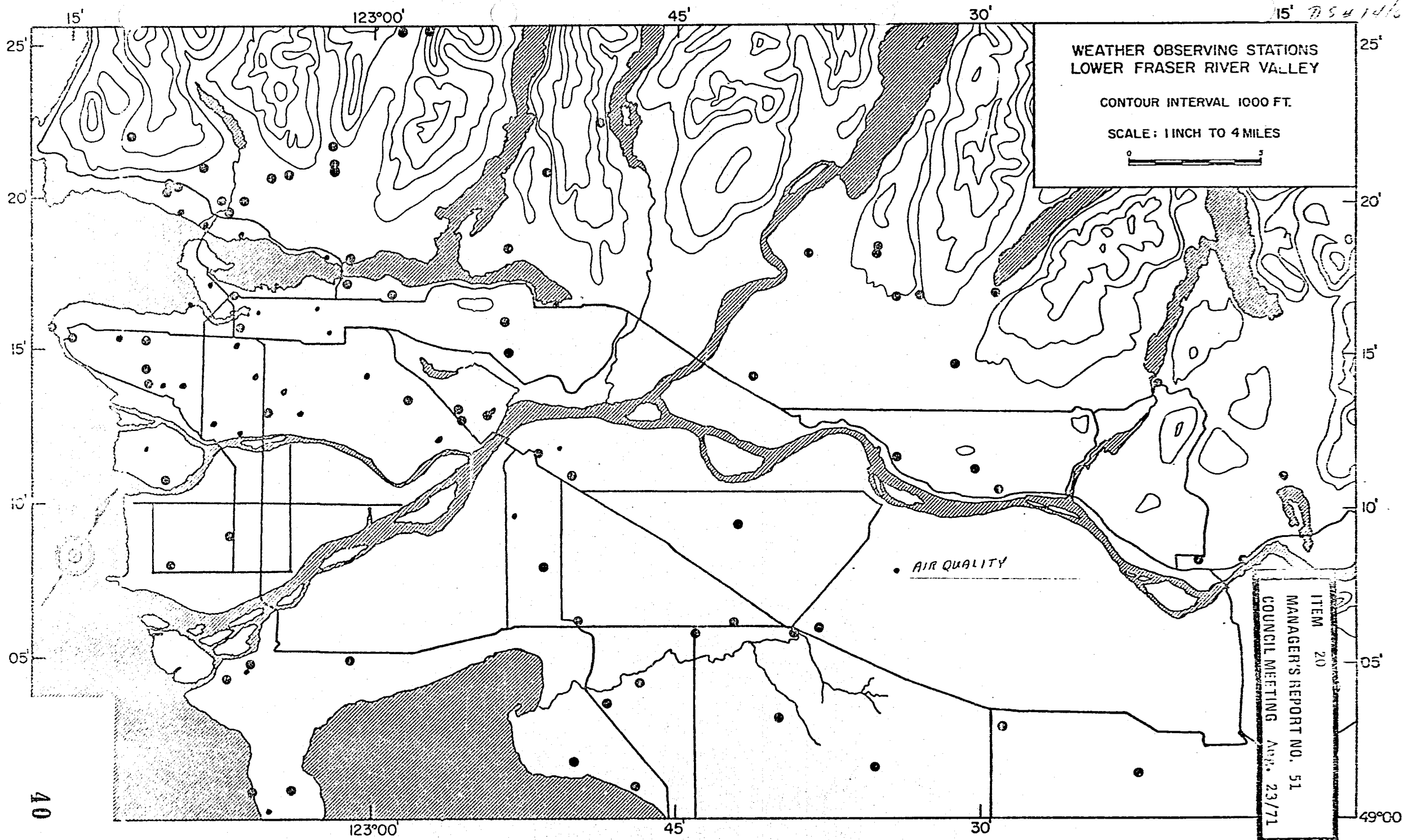


J.L. Knox,
Regional Meteorologist.

Att.



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ITEM 20
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COUNCIL MEETING Aug. 23/71



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MUNICIPAL MANAGERS
OFFICE

DEPARTMENT OF LANDS, FORESTS, AND WATER RESOURCES
OFFICE OF
THE DEPUTY MINISTER OF WATER RESOURCES
VICTORIA, B.C.

August 17th, 1971

File: 0290952

Mr. M. J. Shelley,
Municipal Manager,
District of Burnaby,
4949 Canada Way,
Burnaby 2, British Columbia

Dear Sir:

It is understood that Mr. J. L. Knox, B.C. Regional Director of the Atmospheric Environment Service, Canada Department of the Environment, has requested the District of Burnaby to permit the construction of a meteorological observation tower on a tract of unused land on Still Creek Avenue for a period of five years.

The proposed meteorological tower would allow for the collection of important meteorological and air pollution observation data which would be of direct benefit also to your municipality. Its proposed location is believed to be very significant geographically as well as meteorologically.

In the circumstances, this Department sincerely hopes that the District of Burnaby will give favourable consideration to this request.

Yours very truly,

A handwritten signature in cursive script, appearing to read "V. Raudsepp".

V. Raudsepp
Deputy Minister

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