

RE: ELECTRICAL SERVICE FOR BARNET MARINE PARK
(ITEM 5, REPORT NO. 51, 1980 JUNE 02)

On 1980 June 02, Council received a letter from the Chairman of the Parks and Recreation Commission and a report from staff on the provision of electrical service to Barnet Marine Park. Following is the motion that was adopted in connection with this matter on that occasion:

"THAT the question of supplying power to Barnet Beach Park be referred to the Municipal Engineer to find the most economical, legal, conforming way to deliver power to Barnet Beach Park."

Following is a report from the Municipal Engineer on this matter.

RECOMMENDATION:

1. THAT the recommendation of the Municipal Engineer be adopted.

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TO: MUNICIPAL MANAGER 80 07 02
FROM: MUNICIPAL ENGINEER
SUBJECT: ELECTRICAL SERVICE FOR BARNET MARINE PARK

RECOMMENDATION:

THAT Barnet Marine Park be served by an underground power service as was originally intended and reflected in the design produced by the Parks Department's electrical consultant.

REPORT

At the meeting of Council of 80 06 02, the Municipal Engineer was directed to report to the Manager on "...the most economical, legal, conforming way to deliver power to Barnet Beach Park."

Previous investigation by the Parks Department had established an estimated cost for an underground duct system in the amount of \$117,000 and a length of some 200 metres. At Council's direction, the Parks Department later obtained an estimate of \$18,000 for an overhead service on a pole line between Barnet Highway and the new Parks building.

In response to Council's direction to this Department, discussions have been held with B.C. Hydro concerning possible alternative sources of power. Existing electrical facilities in the general area are as follows (see attached sketch):

- (1) Allied Chemical Canada Ltd. - B.C. Hydro services this Company through a privately-owned, metered service which could not be made available as a source of power for the Parks. In any case, the distance involved and terrain conditions between the chemical plant and the park site would render this underground alternative (800 metres long) much more costly than an underground line direct from Barnet Highway (the original \$117,000 proposal, about 200 metres long).
- (2) Bestwood Shingle Co. - Service from this source is considered impracticable for the same reasons as mentioned above, with the distance to construct an underground service being virtually the same as for Allied Chemical.

- (3) Texaco Oil Company - An existing three-phase primary pole line is located on Texaco Drive between Barnet Highway and the Texaco Oil Company property on Inlet. This line supplies power of the type required at the Park but, at its closest point, it is some 400 metres away from the Park facility. A crossing of the railway would still be required and there would be the further complication of obtaining an easement over Texaco property. The distance of underground service required (400 metres) would still be double that of a direct underground service from Barnet Highway (the original \$117,000 proposal, about 200 metres long).
- (4) Navigation Beacon on Burrard Inlet - There is an existing pole line on an unopened road allowance (Takeda Drive) that provides power from Barnet Highway to operate a beacon located on the Inlet, not far from the new Park building. However, this pole line is not part of B.C. Hydro's overhead distribution system and the existing poles are adequate only for the secondary service they currently bear. The three-wire primary service required by the Park would necessitate a completely rebuilt power line, incorporating higher poles to provide adequate separation from the existing secondary service.

Under the terms of Burnaby Electrical Connection Regulation Bylaw 1973 (Bylaw 6336), an electrical service connection is to be underground from the point of connection to the B.C. Hydro distribution line. B.C. Hydro distribution lines are permitted to be constructed by that Utility Company in any dedicated road allowance because, as a Public Utility Company, they are not regulated by Burnaby's Bylaw.

Bearing in mind the foregoing discussion of alternative means of servicing and the requirements of the Bylaw as outlined above, there are two basic options:

1. To provide an underground electrical service connection from the Barnet Highway to the park facilities as originally intended. In this instance, the cost has been estimated to be \$117,000, and of all the legal alternatives examined, this proposal is the least costly.
2. To provide an underground electrical service connection from the north end of Takeda Drive discussed in (4) above, provided that B.C. Hydro are prepared to initiate at their cost the construction of the necessary distribution line within the Takeda Drive road allowance. B.C. Hydro advises that there would be a charge of \$2,000 to \$3,000 to upgrade the present secondary power line on Takeda Drive to a primary power line. This charge is in accordance with normal B.C. Hydro policy when upgrading power lines to charge the party causing the upgrading to pay the difference between the cost of the new line and the depreciated value of the old line. The new power line would be a part of B.C. Hydro's public distribution system and would be owned by B.C. Hydro.

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2. (cont'd)

A further requirement of B.C. Hydro is that a portion of the road allowance be cleared and prepared to a standard suitable for access for pole trucks and construction equipment. The existing access road on Takeda Drive may or may not be suitable for this purpose.

The savings to be realized from the approach outlined above would, in essence, be the costs saved by not having to auger under Barnet Highway. This amount is estimated to be \$25,000.

The Director of Planning advises as follows:

"The unopened Takeda Drive road allowance lies within the boundaries of the Barnet Marine Park and is proposed for abandonment and property consolidation as part of the major public park site in the near future. The creation of a new overhead power distribution line, with poles, primary and secondary wiring, switch gear, etc. would be clearly unwelcome in the natural park setting that is envisioned in the adopted development plan for this, one of Burnaby's premier natural public park sites. As a result, it could not be recommended that the Municipality encourage construction of an overhead distribution system at this location.

It is not recommended that the power line on Takeda Drive be upgraded to provide primary power for the following reasons:

- a) The cost saving is minimal.
- b) The road allowance is to be closed and to become part of the public park in the near future.
- c) It is not aesthetically desirable to install poles, overhead wires and other affiliated equipment overhead in public parks.
- d) Concern for public safety within public parks dictates that overhead primary service connections should be avoided.
- e) The Municipality should be scrupulous on the matter of acting as we expect private developers to act, and should not treat ourselves differently under the Municipality's by-laws and policies.

It is therefore recommended that the current proposal to service Barnet Marine Park with an underground electrical service connection as originally intended be endorsed and that authorization be granted for the work to proceed."

The Parks Department has advised that its electrical consultant, while engaged in designing the power requirements for the Parks building and the underground power service from Barnet Highway, took into account in his design the future demands of additional parks facilities as these are known at the present time. Future heavy point load requirements such as a possible marina would, in all likelihood, be able to justify, on an economic basis, separate individual services from Barnet Highway as opposed to longer runs of power service along the Inlet.

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SUMMARY

An underground service from either Allied Chemical or from Bestwood Shingle would be about four times as long as an underground service from the Barnet Highway. An underground service from Texaco Drive would be about twice the length of the underground service directly from the Barnet Highway. An existing pole line on Takeda Drive could be upgraded to accommodate the required three-phase primary service required to serve the Park but the savings would be only \$25,000 and the pole line would be incompatible with proposed abandonment of the Takeda Drive road allowance.

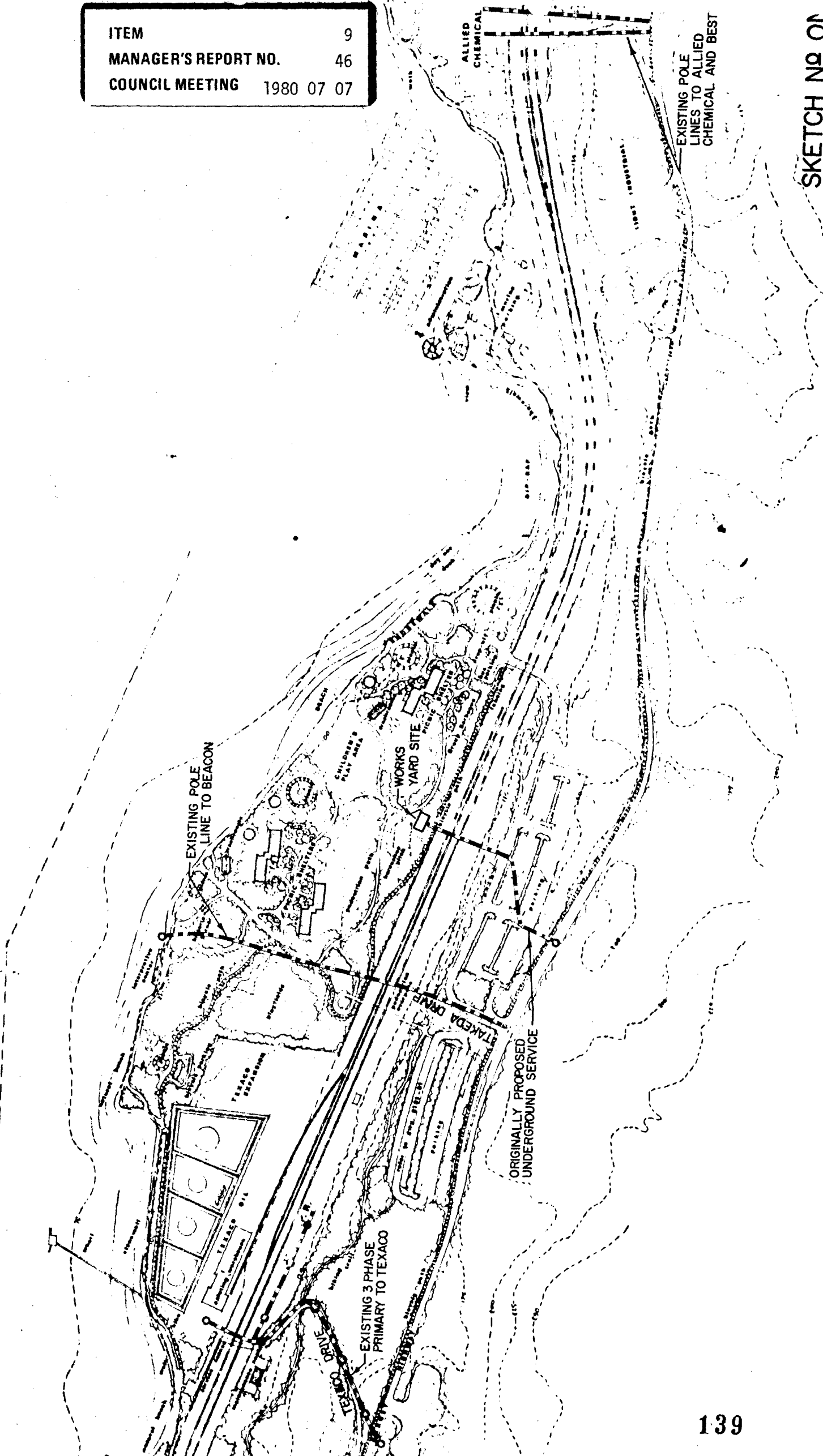
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MUNICIPAL ENGINEER

EEO:sp
Attach.

CC: Director of Planning
Parks & Recreation Administrator
Municipal Solicitor

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SKETCH NO 01

