CORPORATION OF THE CITY OF PORT COQUITLAM

PARKS & RECREATION COMMITTEE

A meeting of the Parks & Recreation Committee was held in the Parks & Recreation Director's Office Tuesday, August 22, 1989 at 3:30 p.m.

In attendance were Alderman John Keryluk and Alderman George Laking.

Also in attendance was K. Janna Taylor, Parks & Recreation Director.

The committee reviewed the attached report from the Recreation Manager.

Recommendation:

That the recommendation outlined in the report be approved; and that the Parks & Recreation Director also write a letter thanking them for their contribution.

Carried

Item No. 2 Poco Figure Skating Club

The attached report was reviewed by the committee.

Recommendation:

That the report be received for information.

Carried

Item 3: SRI Chinmoy Peace Mile

The committee reviewed the attached letter and information on the peace mile. It was generally agreed that the concept was good. The committee at this time, was not prepared to discuss details until Council had an opportunity to discuss the concept.

Recommendation:

That the committee accepts in principle the concept of the peace mile and that this matter should go to Council for further discussion.

Item 4:

Nature Reserve

Earlier this year we had a request from a resident about the removal of some trees in the nature reserve. Due to the nature of the By-law for the "Reserve" a consultant was retained for appraisal and recommendation of the problem.

Attached to this agenda is the consultants report and a report from the Parks Superintendent.

There are a few alternatives that are available to committee.

- 1. Do nothing with the request.
- 2. Put the \$13,000 in the 1990 Provisional Budget.
- 3. That the work be done this year and the request for \$13,000 be sent to the Administration Committee.

Recommendation:

That this item be held over until the next committee meeting.

Item 5:

Park Property Behind Catholic Church.

Alderman Keryluk brought to the attention of the Committee the "mess" behind the Catholic Church on city property. There is a large amount of cement debris and other garbage that needs to be cleaned up.

Recommendation:

That this matter be brought to the attention of the Public Works Committee for discussion and action.

ADJOURNMENT:

The meeting adjourned at 4:30 p.m.

J. Keryluk, Chairman

anna Taylor, Secretary

THE CORPORATION OF THE CETY OF PORT COQUITLAM

MEMORANDUM

1989 08 14

TO:

K. Janna Taylor, Parks & Recreation Director

FROM:

Larry J. Wheeler, Recreation Manager

SUBJECT:

PORT COQUITLAM FIGURE SKATING CLUB - DONATION

Recommendation:

It is recommended that:

- the Port Coquitlam Figure Skating Club be sent a letter of thanks from the City of Port Coquitlam regarding their contribution of \$15,500 towards the purchase of a new ZAMBONI.
- 2. The cheque for \$15,500 be credited to the Parks and Recreation Equipment Reserve Account.

Purpose/Problem:

This report has been prepared to provide information and a recommendation for consideration by the Parks and Recreation Committee regarding handling of money received from the Port Coquitlam Figure Skating Club.

Discussion/Justification:

Several months ago, the Port Coquitlam Figure Skating Club approached the Parks and Recreation Department regarding potential projects that they might be able to get involved with. At that time, we were desperately searching for a way to replace an interest in helping out with this project.

. . . .

This kind of cooperation from community organizations is extremely valuable, and will become more valuable as the recreation environment becomes more complex and the number of demands being placed on the annual budget continues to increase. It is hoped that this kind of cooperation will also continue to grow over the next several years.

Larry J. Wheeler, Recreation Manager

LJW:mj

THE CORPORATION OF THE CITY OF PORT COQUITIAM

MEMORANDUM

1989 08 15

TO:

K. Janna Taylor, Parks and Recreation Director

FROM:

Larry J. Wheeler, Recreation Manager

SUBJECT:

Cooperation Received From Port Coquitlam Figure Skating

Club and Port Coquitlam Minor Hockey Association

Recommendation:

It is recommended that this report be accepted as information only.

Purpose/Problem:

The purpose of this report is to rovide information to the Parks and Recreation Committee regarding the excellent cooperation we received from the Port Coquitlam Figure Skating Club and the Port Coquitlam Minor Hockey Association.

Discussion:

As you are aware, we were concerned that if the Junior B Lacrosse season continued too late into August, we may have had a conflict with starting the installation of ice in the new arena for the previously scheduled hockey schools.

Without getting into the particulars, Bev Irvine and myself met with representatives of both organizations to discuss this challenge and the possible alternatives. Both representatives had lots of questions and we discussed various possible alternatives. The meeting was concluded with both representatives agreeing that they would do whatever it took to accommodate the needs of the Junior B Lacrosse team. They wanted to show that all three programs could be successfully run in the summer months.

As a matter of interest, this committment could have involved re-scheduling hundreds of participants, and shifting alot of the program to non-prime time (early mornings, late nights) and weekends. None of this would have been an easy task.

Although, none of these concerns materialized, a wonderful "spirit of cooperation" was displayed by these two organizations and I wanted to ensure that it was duly noted by yourself and the members of the Parks and Recreation Committee.

Report Writer Larry J. Wheeler

LJW:mj

SRI CHINMOY PEACE MILE

⁴ August 8th, 1989

Dear Mayor Traboulay,

I am writing to ask for your kind support in establishing a Sri Chinmoy Peace Mile in Port Coquitlam. This Peace Mile would be a precisely measured one mile running/jogging course in a town park area, street or walking trail dedicated to world peace. As a dynamic reminder of the need for world peace, this Peace Mile would be a way for Port Coquitlam citizens to actively promote not only their own sense of well-being through physical fitness, but also better relations and brotherhood among all peoples and countries of the world.

This link between sports and world unity -- similar in spirit to the concept of the Olympics -- fired the imagination of the Greater London Council, which in 1985 set up the first Sri Chinmoy Peace Mile on the River Thames across from Parliament. As a poignant reminder of the needs for international brotherhood and understanding, a second Peace Mile was established in West Berlin directly in the shadow of the Berlin Wall. Peace Miles have also been established in Stockholm, Zurich, Geneva, and several other cities. Eight Peace Miles have been established in Puerto Rico and twenty one in the United States. In Canada, there are Peace Miles in Victoria, Halifax, Sudbury Winnipeg and Dieppe.

Sri Chinmoy has dedicated his life to physical fitness and the quest for world peace. Through sports and a multitude of humanitarian activities, Sri Chinmoy has inspired countless thousands to bring out the best in themselves. The Sri Chinmoy Marathon Team, founded in 1976, annually sponsors over 500 races world wide -ranging from thirteen-hundred mile ultramarathons to two-mile fun runs. In 1987 the marathon team sponsored a 27,000 mile, 55 nation relay for peace. In 1989, the relay reached 73 nations covering a distance of 31,000 miles.

Sri Chinmoy also follows his own philosophy of self-transcendence. He is well known and respected as a prolific author, poet, composer, and most recently as a weightlifter. He has won the admiration and respect of a diverse group of leaders and organizations, such as:

our Prime Minister Brian Mulroney, Olympic Gold Medalist Carl Lewis,
President of the AAU Physique Committee Cliff Sawyer, Muhammad Ali,

Clarence Clemons, Leonard Bernstein, Zubin Mehta, Karen Kain and many others;

- The Secretary-Generals and Ambassadors at the United Nations, where he has been conducting twice weekly Peace Meditations for world peace since 1970 for delegates and staff;
- Members of the United States Congress, where monthly Peace Meditations are held;
- The President's Council on Physical Fitness and Sports, which has twice commended Sri Chinmoy for his contributions to sports;
- The Governor of Puerto Rico who in 1986 declared Sri Chinmoy an official Ambassador of Peace;

A Sri Chinmoy Peace Mile dedicated to the Olympic spirit and the cause of world peace would be an inspiration to people of all ages.

I will be phoning your office to follow up on the Peace Mile. Thank you for you kind consideration.

Sincerely yours,

Orasanneta Runhel

Prasannata Runkel Project Coordinator

WHAT IS THE SRI CHINMOY PEACE MILE?

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A number of Sri Chinmoy Peace Miles have been established around the world encourage physical fitness and promote the cause of world peace. They are one- mile running courses or walking trails dedicated to the ideal of better relations among peoples and countries. They bring a new spirit of international understanding to the communities where they are located and serve as a reminder of the common bond all peoples share in their desire for global harmony.

This linkage between sports and peace--similar in spirit to the concept of the Olympics--fired the imagination of the Greater London Council, which set the first Sri Chinmoy Peace Mile along the River Thames across from Parliament in 1985. The second peace mile was established directly in the shadow of the Berlin Wall--a poignant reminder of the need to work for international understanding. Other Sri Chinmoy Peace Miles have been set up throughout North America, Europe and Australia. On November 20, 1986 the first Canadian Sri Chinmoy Peace Mile was inauguarated in Victoria, B.C. Other Canadian Peace Miles include Winnipeg, Sudbury, Halifax and Dieppe. In July 1986, the first American Sri Chinmoy Peace Mile was inaugurated in New Milford, Conneticut along the Hudson river. Other Peace Miles have been inaugurated in England, Australia, New Zealand, Washington State, etc.

These running courses are named after the man who has dedicated his life to sports and the effort for world peace. His Sri Chinmoy Marathon Team, founded in 1976, annually sponsors some 500 races--ranging from 1,300 mile ultramarathons to two-mile fun runs. Through sports and other activities, Sri Chinmoy has inspired countless people to bring out the best in themselves and has won the admiration of world-class athletes, such as Karen Kain, Carl Lewis, Donny Lalonde, Steve Scott and Egerton Marcus. Sri Chinmoy is highly respected at the United Nations, where he has been conducting meditations for world peace for the past 17 years. He also established the regular Peace Meditation at the U.S. Congress in Washington, D.C.

THE CORPORATION OF THE CITY OF PORT COQUITLAM

MEMO

fo : Janna Taylor, Parks and Recreation Director,

From : Bram Hoogendoorn, Pks Supt

Date : Aug 11, 1989

Re : Recommendations 1122 Juniper Ave

The forest edge behind this duplex is very close to property line. Back yards further down the street are not so shaded, because they benefit from the openess from surrounding yards, and also the woods are cleared further back.

In order to solve Mrs Davis problem, it has been recommended that an area of 25 meters will be selective thinned.

As this duplex is located in a corner of 2 streets, it is necessary to carry on with above mentioned operation to the west of the duplex also. Clearing and clean-up are almost impossible at this point, because there is no access to the side and rear unless a small trail is allowed to be build in from Hickory Street.

And with a trail , we open up the possibility for intruders to enter all of the properties undetected.

Timing of a project of above nature is also important.

If done in the wet season, a trail probably has to be dug and covered with gravel or hogfuel, in order that vehicles can travel to the back. If done before end of September, we probably don't need to go this route. It is eccential that dead material already there, and trees to be cut down,

are hauled out, as it looks pretty bad already now.
Estimated cost ,not taking in account purchase of hogfuel, etc.

Labour \$ 9672

Equipment \$ 3148, Total \$12820

The cost of a professional tree faller will be offset by the sale of valuable trees, that have to come down

Charles .

Mer 15/09

Alderman Laking,

I am writing to you in reference to a growing problem we're experiencing. I've talked with many on the subject and I've been referred to you.

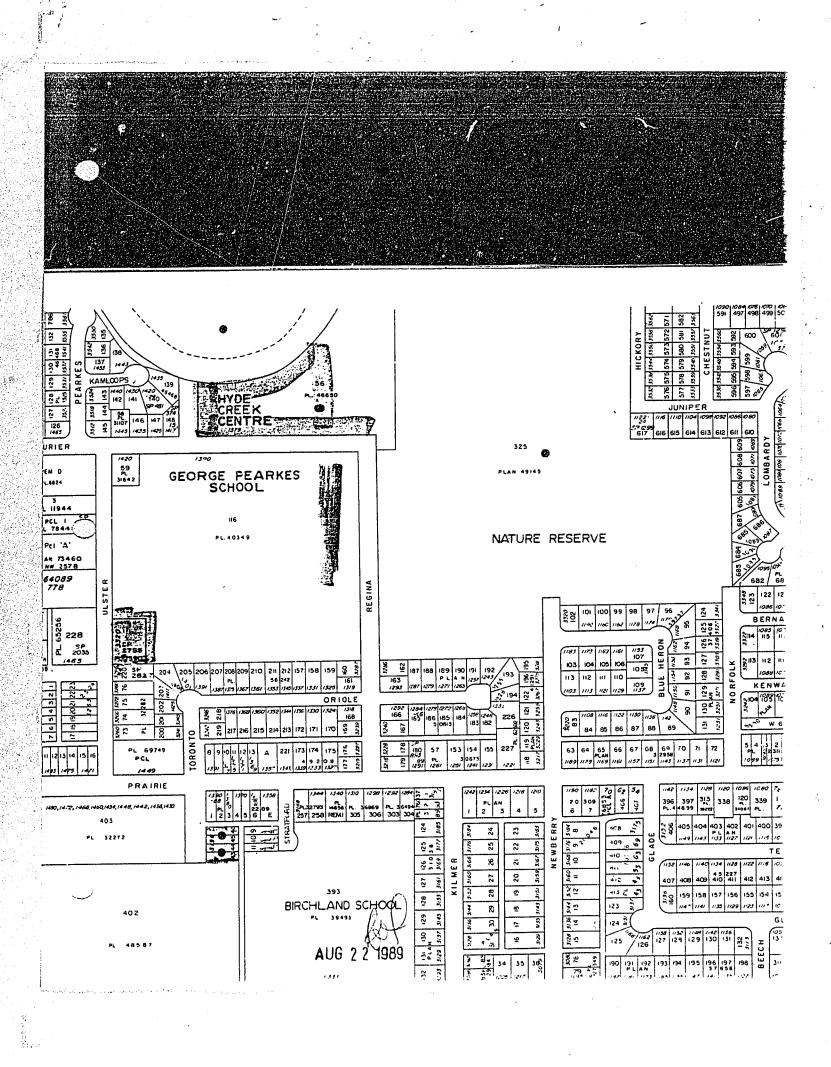
I live at 1122 Juniper Avenue in Port Coquitlam (Lincoln Park Addition). We are surrounded by the woods, and I mean the trees are growing right up against my cedar fence, practically "engulfing" our property. There is no sunshine whatsoever on our property or the neighbors. Even in the intense summer months we get nothing. Our yard everywhere is always moist, damp, and slimey. Because of the height and thickness of the trees it's very dark and moss covered. It's ruining my property and home because it's always wet and moss covered.

I have mold and mildew growing on my ceilings and walls along the back of my home inside. I wash them and inside of two weeks it's back again. Painting does not good either because we've tried. Even when it's hot in the summer, it's very cold and wet on our end of the street. Our yard in back is collapsing in areas where there's landscaping. My cedar fence is rotting and falling apart because it's always wet and damp. We feel if the sum could shine back there it would dry the ground and everywhere else up.

We aren't asking for the trees to be cut down. We would like them topped or trimmed so the sun can get through. We feel this will save us a lot of money on repairing the damages in the long run. Many trees back there are rotten and dead. It's not a pretty sight because people have been dumping their trash back there also.

Something need to be done because there is slime and mold growing everywhere. And we really don't feel it's too healthy to have children playing where there's fungus. I've talked with the neighbors and they feel the same as we'do. Please contact me on this matter, as it's very important to us that something is done. Thank you for your time and consideration.

Mrs. Karen Davis





- urban forestry
- arboriculture
- landscape management

*4956 Marine Drive, West Vancouver, British Columbia, Canada V7W 2P4 (604) 926-6268

Mr. A.B. Hoogendorn
Parks and Facilities Superintendent
City of Port Coquitlam
2253 Leigh Square
Port Coquitlam, B.C.
V3C 3B8

June 30, 1989 P.O No. 31632 Invoice:000104

PORT COQUITLAM NATURE RESERVE FOREST EDGE - RESIDENTIAL INFLUENCE ASSESSMENT

Dear Mr. Hoogendoorn,

I have enclosed my report in fulfillment of my agreement with you to undertake the analysis of forest management needs along the eastern edge of the Nature Reserve.

The specific problem that you wished to have assessed was the influence of the forest on residential enjoyment, namely light influences, and on safety.

I have provided management options for, and addressed the implications of providing for satisfactory levels of sunlight to nearby residences while maintaining or enhancing the essential characteristics of the natural area.

As the general appreciation for the forest edge is high in its present condition, only a limited program of enhancement for sunlight conditions is anticipated. More trees will require removal if other residents express similar concerns.

Detailed assessment for edge management on a broader scale was deferred as the result of our discussion June 30, pending agreement on management strategies by the City of Port Coquitlam and local residents alike.

I will be pleased to accompany you to the site to discuss more fully the recommendations for the initial project.

Yours very truly,

Ken Fairhurst, R.P.F.

Urbanforest Consultants Ltd.



prbanforest consultants Itd.

- urban forestry
- arboriculture
- landscape management

4956 Marine Drive, West Vancouver, British Columbia, Canada V7W 2P4 (604) 926-6268

Accounts Payable Parks and Recreation City of Port Coquitlam 2253 Leigh Square Port Coquitlam, B.C. V3C 3B8 June 30, 1989 P.O No. 31632 Invoice:000104

INVOICE

PORT COQUITLAM NATURE RESERVE FOREST EDGE - RESIDENTIAL INFLUENCE ASSESSMENT

For Professional Services Rendered:

Field Assessment
Discussions with 3 Households
Report Preparation
Future Field Review with A.B. Hoogendoorn

Five days @ \$375.00 per day

\$1875.00

Disbursements:

Photocopying, Photographic Processing Report Delivery via Courier

57.95 14.00

Total Disbursements

\$71.95

Total

\$1946.95 ======

per Kenneth B. Fairhurst. R.P.F.

urbanforest consultants

PORT COQUITLAM NATURE RESERVE FOREST EDGE - RESIDENTIAL INFLUENCE ASSESSMENT

> Prepared for Port Coquitlam Parks and Recreation

> > by

Kenneth B. Fairhurst, R.P.F.

Urbanforest Consultants Ltd.

June, 1989

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1.0 INTRODUCTION

The purpose of the Nature Reserve when it was set aside was for the protection of habitat (great blue heron), to provide a breathing space amidst intensive residential development, and for the passive use and enjoyment of the public. The Nature Reserve offers a natural backdrop, solitude, trails, a creek, birds and animal life. Overall, it provides a unique visual and recreational experience for residents bordering the Reserve and for others in the community.

The forest in the Reserve is a young, second-growth, mixed stand which established following logging and land clearing earlier this century. The forest is generally in good health.

The understory is in a state of decline that has resulted from an overly dense forest stand, reducing the overall vigour and healthful appearance of the forest.

The management objective has been, for the most part, to maintain a "hands-off", nature-directed woodland preserve. The productivity of the forest site has provided for dense forest growth and a tangle of undergrowth with fairly restricted physical and visual accessibility. Trail grading has provided several access corridors, though little else has occurred in the forest stand.

The forest at the perimeter of the Reserve has been modified as the result of residential development. The straight, unnatural edge condition influences the stability and vitality of the forest itself and the safety and enjoyment of adjacent residents.

AUG 2 2 1989

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2.0 PROBLEM STATEMENT

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The condition and influence of the forest at the residential interface presents a need for more intensive management of that portion of the Nature Reserve. The current study was undertaken along the eastern edge of the Nature Reserve in response to a resident's request to the Parks and Facilities Superintendent, Mr. A.B. Hoogendoorn, to address the following concerns:

- safety from falling trees,
- nearly perpetual shade conditions from the forest,
- and personal security from the limited ability to monitor human activities within in the dense forest.

As the result of initial discussions with Mr. Hoogendoorn, the visual and recreational qualities of the forest edge became were additional considerations to be investigated.

This report assesses the general problems and offers opportunities for their resolution. Detailed field assessment and implementation of management requirements would follow confirmation of the level of management intent and adoption of appropriate management strategies by the City of Port Coquitlam.

An initial project is described in Appendix 1, having the objective of resolving the concerns of a particular resident within the context of necessary management of the Nature Reserve.

3.0 ANALYSIS OF CONDITIONS AND RECOMMENDATIONS FOR TREATMENT

The zone of principle study was the forest edge which directly influences residential properties on the eastern side of the Nature Reserve, namely properties on Lombardy, Juniper and Hickory Streets.

The concerns and opportunities described in the problem statement were examined during field visits and discussions with several adjacent residents during the month of June.

At the outset of the study it was identified that the variety of concerns respecting the forest edge were interrelated. Actions to control or improve one factor could benefit or detract from another. While the factors and options for their management are discussed separately in this section, final management decisions require a comprehensive understanding of those relationships.

3.1 Hazard Trees

In 1983 a consultant was requested to provide a plan for the control of hazard trees along the eastern edge of the reserve. The recommendations from that study were for the topping of 45 trees and the removal of 35 trees, most of which was carried out in the subsequent year.

The forest edge consists primarily of shallow rooted redcedars, western hemlock, and scattered pines. Although the stand is is good health, the pines are in decline, and the suppressed understory is dying out.

4

A zone of risk exists along the perimeter of the Nature Reserve, approximately one tree height in width from adjacent properties (a width of 25 metres, approximately).

Although the prevailing winds are from the southwest, storm events can focus on the northeast edges and concentrate at the enclosed corners such as at the corner of Juniper and Hickory Streets.

Detailed risk assessment was not a specific objective of the current study, having been the objective of the earlier study. Windthrow along the edge has been stabilized by the earlier management efforts. Some risk potential will continue as trees grow older and larger, and storm events restructure the forest edge.

Recommendations for Treatment - Hazard Trees

Risk-free status for the forest edge can only be achieved by removal of large trees which are within a tree height distance from dwellings (i.e. within 20 to 30 metres). One hundred per cent risk elimination could require the removal of dozens of trees along the perimeter.

As the aesthetic enjoyment afforded by the forest edge expressed by all residents spoken to during the study exceeds the perceived risk, and most likely the real risk, full control through elimination of all trees capable of reaching dwellings is considered neither a desirable nor a necessary action.

randigning the following properties; it is not be sufficient to a residence the refliciency by the construction

Manageable risk status can be achieved by removal of obvious risk trees which display poor health or form, have disturbed or raised roots, or which lean towards dwellings. The control of risk trees along the eastern edge of the Nature Reserve was conducted in 1983.

This management strategy requires periodic assessment of stand condition, approximately in five to ten year intervals, and response to unpredicted changes in risk tree status brought to the Park Superintendent's attention by residents.

The tree topping program, also initiated in 1983, provided a less drastic form of control of tree hazards. This form of arboriculture should be used sparingly as it causes the growth of multiple leaders and side-leaders which are weaker. Exposed tops can allow the introduction of decay producing organisms. Topped trees and the resulting new growth forms are also less attractive, and unnatural, particularly in a Nature Reserve.

Suppressed understory trees will continue to die out and fall. Though these smaller trees present less hazard to property or safety, they have caused damage to fences, and contribute to the tangle of undergrowth which limits physical and visual access into the forest.

3.2 Shade Conditions

The orientation and proximity of residential lots to the forest edge, and the variation in heights, density, and species composition of that forest edge, result in a highly varied influence on individual residences and entire blocks.

urbanforest consultants

The degree of influence is greatest for those properties directly north of the forest edge, and diminishes greatly for those residences east and west of the forest which receive substantial duration of sunshine from other directions even though the forest creates shading during certain parts of the day.

The forest edge produces less shade influence on those properties separated by roadways from the forest except during low sun-angle periods of the day or year. Those properties located south of the forest edge receive the least influence.

The greatest influence of the forest edge is on those properties edged by the forest on the south and west sides together. This situation occurs most notably at the corner of Juniper and Hickory Streets. No road allowance separates the properties from the forest.

A similar influence of the forest edge occurs in the Ambleside Close area though street ends along the east and Western edges increase the sunshine potential.

The accompanying solar charts and graphs were used to determine the length of shadows created by the forest. The sun angles at noon standard time on June 21 (the highest angle of the year) and on December 21 (the lowest angle) were examined.

The graph reveals that at the sun's highest point, 12 metres of shade is created by a 30 metre tree, and 8 metres shade from a 20 metre tree, both of which are common along the forest edge. This depth of shade represents all or the majority of the standard depth of rear yards along the northeastern edge of the Reserve.

The sun angle is lower at all other times of the day resulting in greater depths of shade when the forest edge intervenes.

In winter (December 21), the lowest sun angle is recorded. The same trees create 70 metres and 48 metres of shade respectively when the sun is at its highest at noon during that time of the year.

Some properties to the north of the reserve are influenced year round by the deep shade from the forest edge, as evidenced by photographs taken June 25 with the sun at its highest. Photographs from residences along the eastern edge reveal full sunshine in that same time period.

While the solar charts are useful to determine the shade effects of the forest through the year, one resident living against a northeast corner of the forest edge has provided an interpretation of the impact of that shade on the property, structure, and personal enjoyment as "dark, cold, wet, and slimy". The property in question is virtually in perpetual shade from the trees to the south and to the west.

The forested quality of the Nature Reserve preceded residential construction and re-sale of houses over the years. Its presence would likely have been seen as an asset and possibly a deciding factor for property purchasers.

The forested character of the Nature Reserve is of great appeal to all residents talked to during the study, including those with the greatest shade problem. Despite the appeals of the natural setting, there exists an expectation for attaining some direct sunlight in backyards and within houses. As trees continue to grow in height at approximately 0.5m per year, the depth of shade will also increase.

In response to the shading influence of the forest, some tree clearing and topping, with and without approval of the Parks Superintendent, has occurred. The 1983 tree topping and clearing program has also increased the amount of direct sunshine reaching some residences.

Recommendations for Treatment - Shade Conditions

The overall management strategy should ensure that the essential character of the forest is maintained as a primary objective. However, it should also be able to recognize and control, within the limits of natural character, the non-desirable, non-beneficial influences on adjacent human habitats.

A 25 metre zone along the eastern perimeter of the Nature Reserve was identified as having an influence on the amount of sunlight received in adjacent properties. This is the same zone (representing an average tree height) described in the risk tree section of this study.

The outer edge (the first 12 metres) of this zone contains the majority of the trees which could potentially be a risk to adjacent properties if any should fall. It also is the visual edge which creates the forested character of the neighbourhood.

Due to the height of the forest along the edge, this zone is responsible for the greatest intervention of direct sunlight throughout the year, including the summertime, depending on orientation and proximity of residences.

0

The remaining 13 metres completes the rear portion of the 25 metre interface zone. This zone is rarely used, rarely seen, but by its tree heights and density, has an influence on sunlight, particularly in seasons and times during the day with low sun angles.

The flatness of the topography of the nature reserve limits the effectiveness of selective opening up of the stand in the outer zone only. Management of both zones may be required though with different strategies.

Through selective thinning of outer edge trees, the result would be a feathered or undulating forest edge of smaller windfirm trees and tree groups, together with windfirm larger specimen trees.

With consideration of tree position and sun-angles, selective removal could enable intermittant sunlight to reach residential properties during a longer period of the day and year than occurs presently.

Stand density could be reduced in the outer band, increasing towards the inner edge, which would then become the primary forest edge. Trees in the outer zone should have 10 to 20 metre spacing, selecting the trees of best form, windfirmness, quality and colour (e.g. redcedar is preferred over hemlock for its gentler growth habit and visual character).

Spacing would be closer in stands of smaller trees although some thinning is desirable to reduce competition and allow for the healthier growth of individual trees.

9

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Spacing would be closer in stands of smaller trees although some thinning is desirable to reduce competition and allow for the healthier growth of individual trees.

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Significant tree clumps, ground cover and healthy mid-story vegetation should be retained where possible. Suppressed mid story trees showing obvious stress and decline should be removed at the time of thinning operations.

The inner zone will require appraisal of condition, selecting only those trees for removal which would be a serious interference to the effectiveness of outer zone management (i.e. still creating full shade).

Tree topping is an alternative that can be effective in allowing more sunshine through to adjacent residences. This practice is not recommended as the standard means of control of the height of the forest edge of the Nature Reserve as it creates an unnatural appearance, generates a weakened growth habit and allows for entrance of decay producing organisms.

Some properties have large trees within their boundaries which increase the depth or duration of shade. These trees, may eliminate any benefit of adjacent tree removal within the Nature Reserve and should be considered in the overall plan.

Through-the-stand lighting and viewing can be accomplished with branch pruning and crown thinning. This procedure is more time consuming and its effects will be shorter lived than selective tree removal, as branch growth will tend to fill in the spaces that pruning created.

Selective removal should be carried out by qualified arborists to minimize disturbance to soils and remaining vegetation and to ensure that trees to be retained are healthy and not suppressed.

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Natural brushing-in will introduce salmonberry and other species in the shrub layer, and will also limit physical access which could cause undesirable compaction of forest soils. In-fill with deciduous species such as vine maple will afford variety and colour, as well as winter daylighting.

Coniferous forest species will grow rapidly and will present future management concerns. A mix of smaller deciduous trees such as vine maples will control the height and variety in the forest buffer.

If more control is desired for the final composition, a reforestation program could be instituted. The prevalence of brush would require hand cleaning until seedlings grow above the brush competition.

The log value of the second growth timber in a large operation could subsidize the costs of selective clearing, cleanup and rehabilitation. However, limited access, small tree size, the limited number of trees in need of removal, and the sensitivity of the Reserve to public concern suggests there will be no recoverable economic value.

Any sizeable material should be bucked into short lengths for removal by residents for use as firewood.

If conducted in the rainy season, branches should be piled and burned in areas a safe distance from houses and remaining trees. Cleanup and rehabilitation requires only a minimum of effort as the natural forest species and brush species will quickly invade.

12

3.3 Forest Amenity and Public Security

Visual and physical access is restricted by underbrush, dead and down trees, and by the general density and darkness of the forest stand. Garden debris piles further restrict access and add to the unkempt appearance. The dense forest reportedly also affords cover to some undesirable human activities, including theft of property.

Recommendations for Treatment - Amenity and Security

Visual access provides for enhanced enjoyment of the forest. Sight lines can be created through the selective removal of trees, branches, understory vegetation, and downed trees. This procedure will benefit the amount of light reaching adjacent residences. Visual access into the forest and reduction in the density of ground cover also will increase property security (and the perception of security) day and night.

Recreational access should be limited along the forest edge to maintain privacy in the back yards of adjacent residences.

Clearing of underbrush and downed debris can enhance informal walking experience without the need of trail construction. Formal trail construction should fit the management strategy for the Nature Reserve overall.

4.0 RESIDENT INFORMATION AND PARTICIPATION

Forest management of the buffer zone can result in short term deterioration of aesthetic quality. Even limited tree felling operations will cause noise disturbance and a degree of misunderstanding. Protective concern can be expected to be expressed by the public.

Recommendations - Resident Information and Participation

The program to manage the edge effect of the Nature Reserve should be preceded by an information/involvement program.

The concept of perimeter zone management of the Nature Reserve, its purposes and the recommended courses of action requires resident information and participation in the development of the plan.

Any changes to the Nature Reserve forest edge should reflect established priorities for control of risk trees, excessive shade, residential security and recreational amenity, and be based on public input. Consensus may be difficult to achieve. Dispute resolution should give priority to those most directly impacted.

While a management program may open the door for requests and complaints regarding buffer strip management, a clear set of guidelines will limit the ad hoc approach such as is now occurring. Site-specific decisions should ultimately be the responsibility of the Parks and Facilities Superintendent.

A Nature Reserve brochure could be prepared for the dual purpose of providing information on the residential buffer strip management project, and to further awareness, use and appreciation of the Reserve. The brochure would build on the concept of the Reserve as an entity with an important purpose, not as abandoned or undeveloped "bush" available for dumping and unplanned tree removal.

5.0 SUMMARY OF CONDITIONS AND RECOMMENDATIONS

A periodic stand maintenance regimen is recommended to guide enhancement and restoration of natural conditions, to protect against hazardous conditions, to improve amenity values and foster respect and appreciation for the Nature Reserve.

The straight forest edge is the unnatural result of land clearing a decade or so ago. Windthrow and breakage can and do occur in storm events as the edge stabilizes. To bring the forest edge into a more natural, durable, and less shade producing configuration, where such conditions are severe, feathering of the forest edge is recommended.

A program of selective thinning, topping, pruning and cleanup is recommended for the forest edge.

Specific operations should be tied to a comprehensive management strategy and plan to ensure that any alteration is necessary, that wishes of individuals are respected, yet the benefits accrue to common good of the neighbourhood and to the Nature Reserve.

Development and enhancement of protective appreciation by nearby residents for the forest will assist in preventing and forwarning of any deterioration of the biophysical and aesthetic qualities of the Reserve.

Limited enhancement of recreational and visual accessibility is required to improve the feeling of personal security and afford increased useability and enjoyment of the Nature Reserve.

Resident information and review of the purposes and plans for edge management are necessary for the success of the program.

A general information brochure will enhance knowledge and use of the Nature Reserve while providing understanding about necessary management processes.

Operations should be carried out with care to limit damage to adjacent trees and the forest site. Clearing practices should be mindful of the final visual result and the physical quality of the trees retained.

APPENDICES

Initial Project for Reduction of Shade Depth and Duration
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 Photographic Record 21

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APPENDIX 1

INITIAL PROJECT FOR REDUCTION OF SHADE DEPTH AND DURATION

Juniper Street Forest Edge

An immediate program of limited selective tree removal should be initiated for those few residences severely impacted by shade from the forest edge over long periods of the day.

The forest edge requiring manipulation for shade effect is at the rear of houses on Juniper Street, with the greatest influence being on the corner houses nearest the intersection with Hickory Street.

A limited selective clearing program is recommended at that corner to relieve that near perpetual shade experienced as the result of the proximity of dense, tall forest growth.

Some clearing has occurred to the rear of 1104 Juniper that already provides a significant improvement in available sunlight to that residence and to adjacent residences.

Houses further east are least influenced and receive more early morning sun.

The interaction of sun angles with tree height and proximity to residences could require the removal of dozens of trees up to 25 metres from the fence line if the objective was to achieve sunlight throughout the year.

An initial action to remove a minimum of four trees directly behind the rear fence at 1122 Juniper would be considered to be a satisfactory improvement to those residents.

Cleanup of dead and down debris is recommended at the time of the operation to improve the visual appearance, and visual and physical access.

Thinning of dense groups of suppressed understory trees would also be advised at that time to improve the overall health of the stand, visibility, and light penetration.

Pruning of dead branches will improve visual appearance.

Consideration might be given to pruning of live branches of those trees retained in the foreground but which create dense shade.

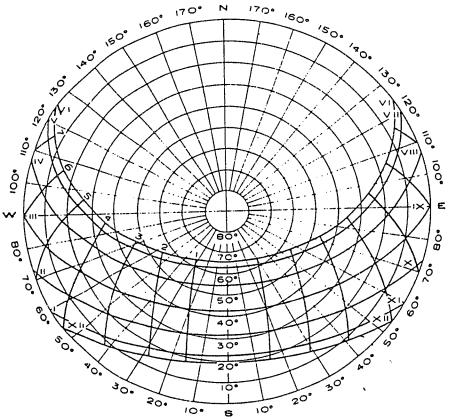
The two trees within the property at 1122 Juniper will likely be felled by the residents.

Debris should be piled and burned at a safe time of year.

The proximity and density of forest growth along the western edge of 1124 Juniper would suggest some manipulation of that edge will be necessary, and would also benefit residents at 1122 Juniper.

No contact was made with the resident to discuss the situation. A gap in the trees in the south allows sunlight to reach the house for a short mid-day period.

APPENDIX 2 - SUN ANGLES BY TIME OF DAY AND YEAR



48°N LATITUDE

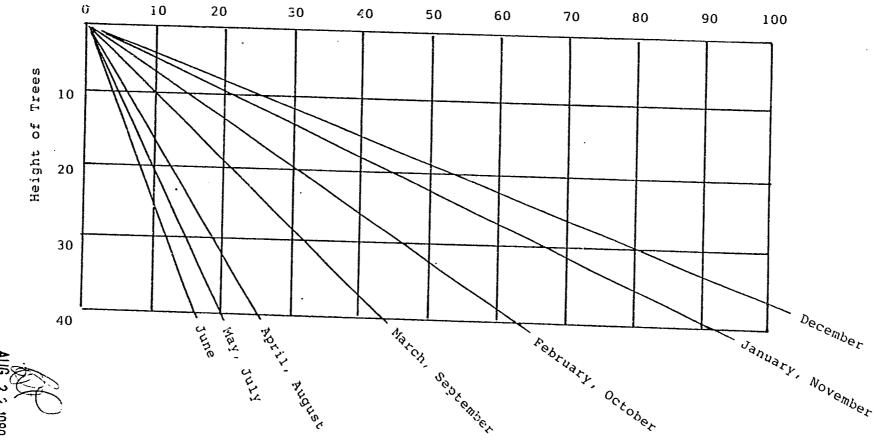
Victor Olgyay, AIA; Associate Professor; School of Architecture, Princeton University; Princeton, New Jersey

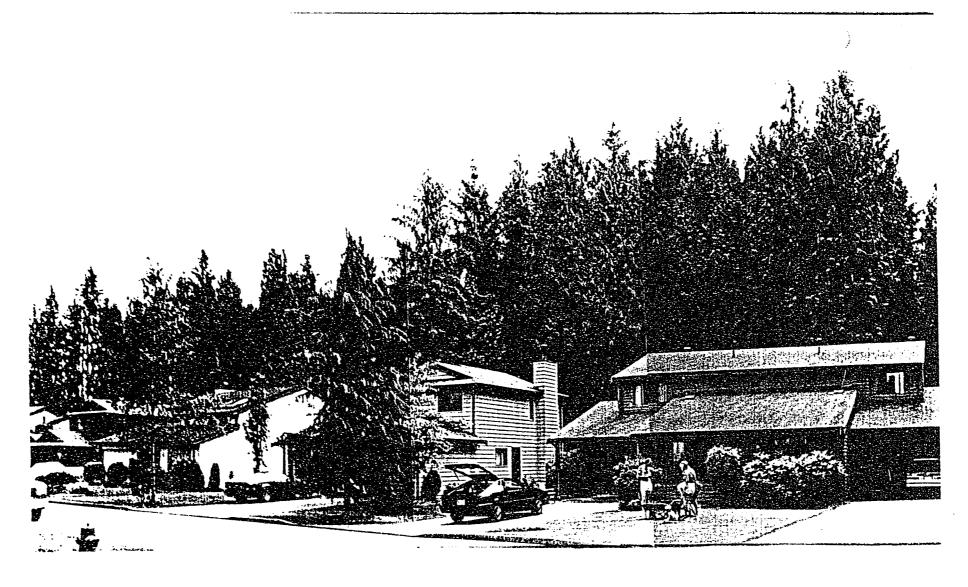
APPENDIX 2

DEPTH OF SHADE BY TREE HEIGHT AND SUN ANGLE ON THE 21st DAY OF EACH MONTH

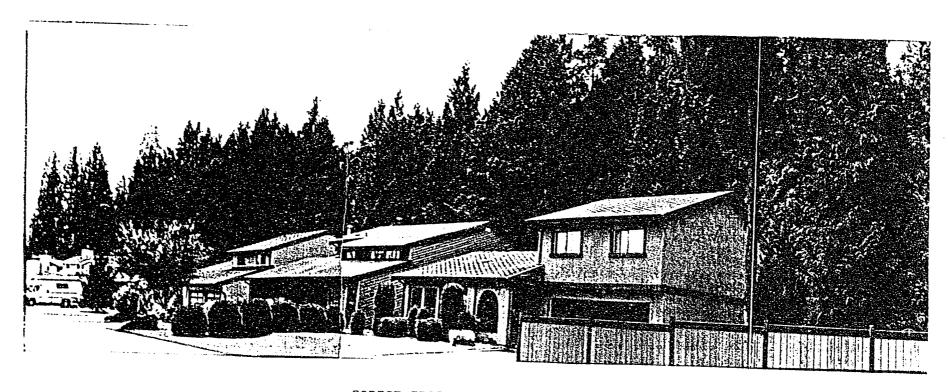
12 O'Clock NOON STANDARD TIME

Depth of Shadow





FOREST EDGE - JUNIPER AVENUE



FOREST EDGE - LOMBARDY STREET

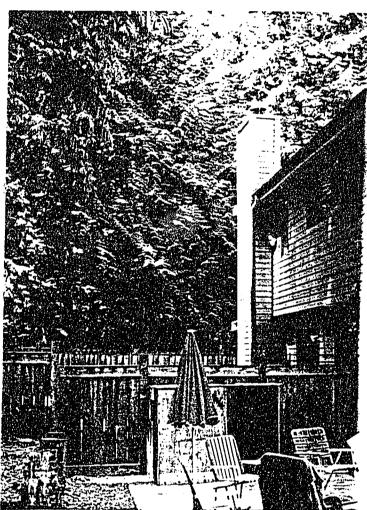




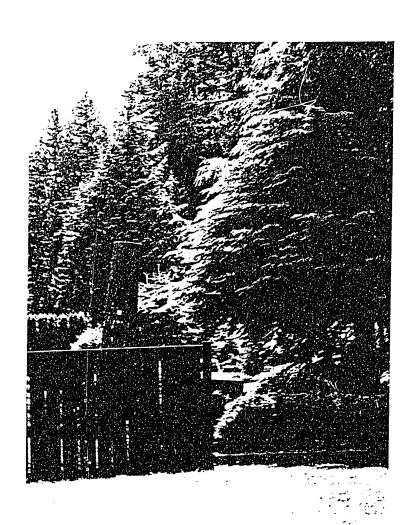
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FOREST EDGE - HICKORY STREET



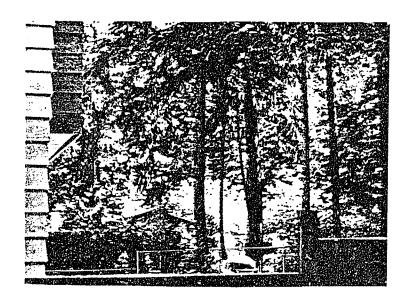


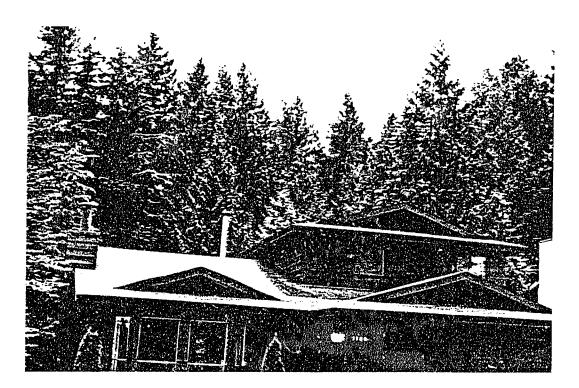
FOREST EDGE - 1122-1124 JUNIPER



NOONTIME SUNSHINE - LOMBARDY STREET BACKYARDS

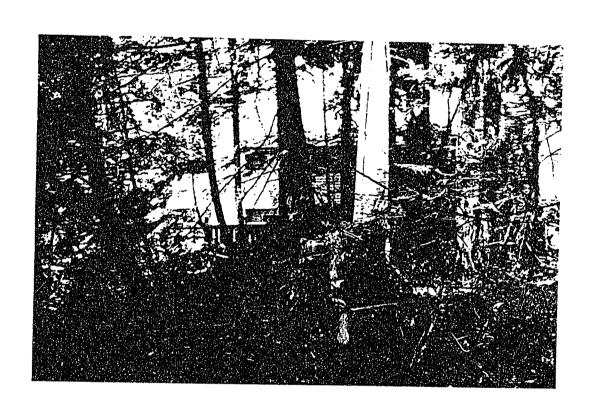
Z(.+ AUG 2 2 1989





NOONTIME SUNSHINE - SMALL CLEARING, 1104 JUNIPER

AUG 2.2 1089



FOREST CONDITION - rear 1122-1124 JUNIPER