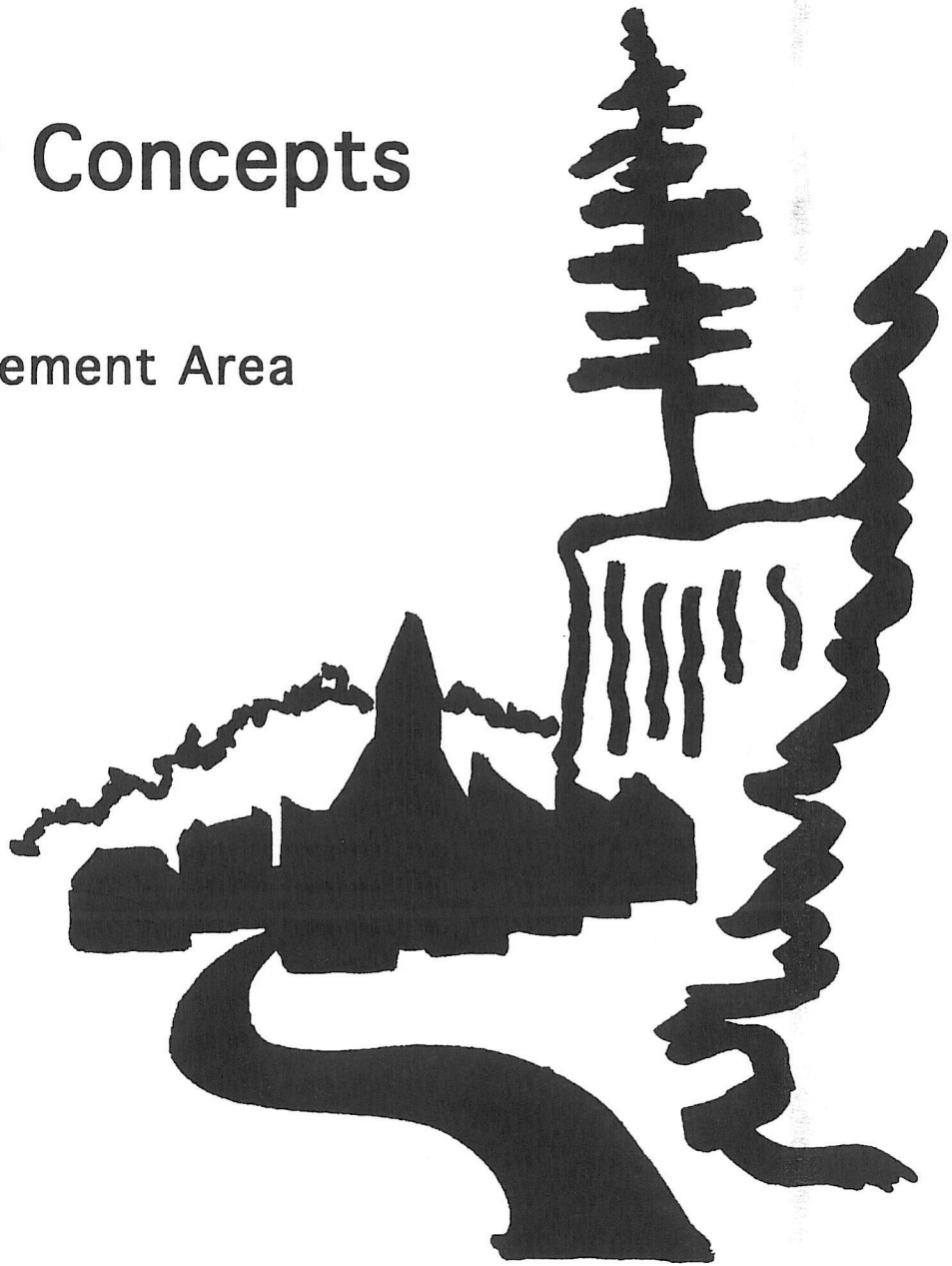
York River Corridor Concepts

for the

Bancroft Business Improvement Area

Mar, 1999



Abstract...

This document is a conceptual snapshot of the urban York River corridor based on the filters provided by the community during the recent Bancroft Design Dilaogue process. It is designed as a starting point for more specific design moves, to establish a loose framework with which to view the river corridor as an entire project area. Hinterland Community Planning & Design was retained to provide such a snapshot as a tool to assist those that are involved in decision-making within the corridor. A tool to work towards the larger vision articulated by the community of an accessible, walkable, naturally vegetated, and clean riverfront that fits into, and helps to define, the Town character.

Guiding Principles...

These river corridor concepts are guided by the general design goals defined by the Bancroft community through the Bancroft Design Dialogue.

These goals are...

- ☐ **Walkability**, " Bancroft should strive to make itself more walkable."
- ☐ **Rustic Village Character**, "Bancroft's rustic village character should be respected in its development."
- ☐ **Environmental Harmony**, "Bancroft's evolution should be balanced with the quality of its natural environment."
- ☐ **Human Scale**, "Bancroft should be human scale - in sign types, ground textures, building siting/size, etc..."
- ☐ **York River Valley**, " Bancroft should better respect the river as an important community asset."

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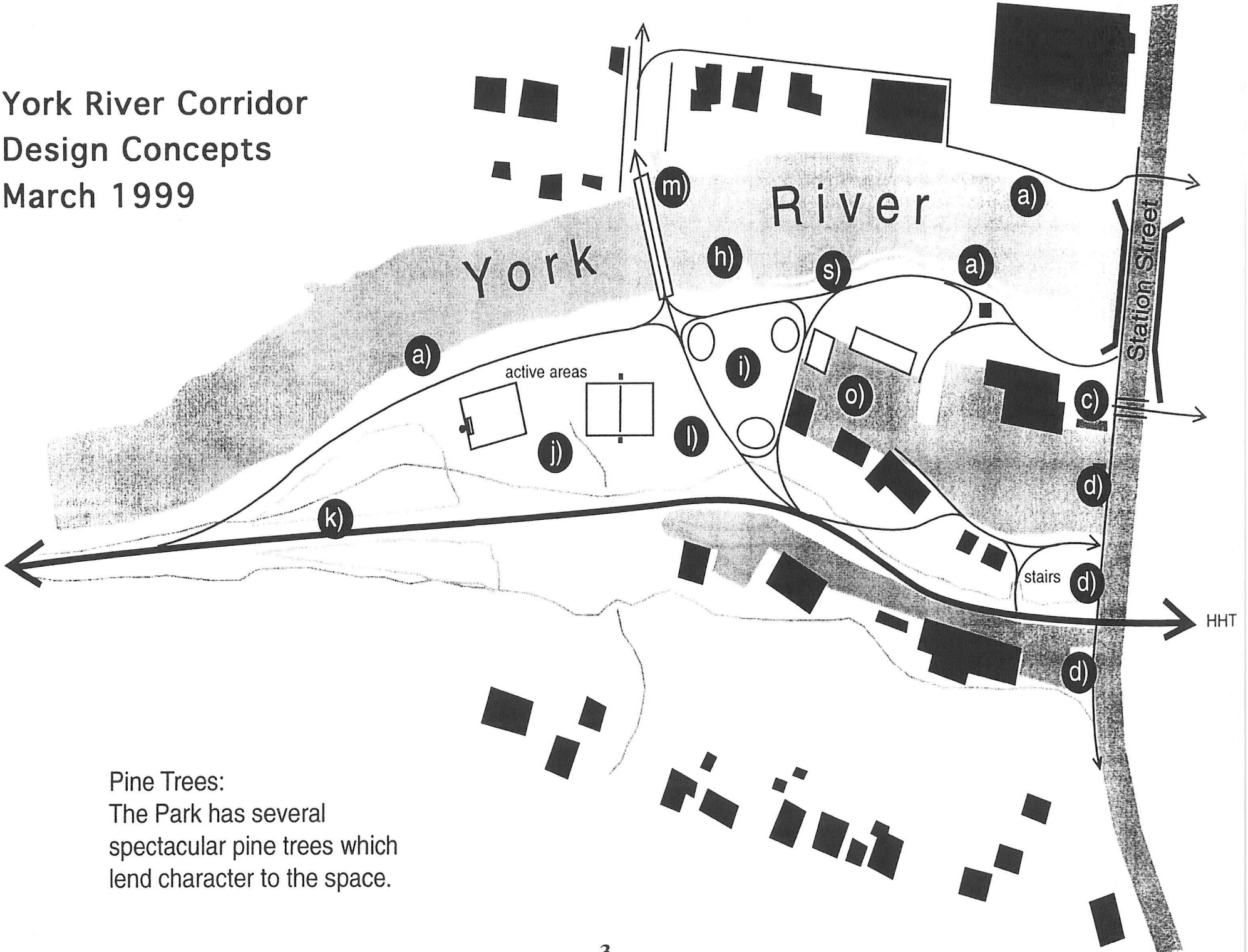
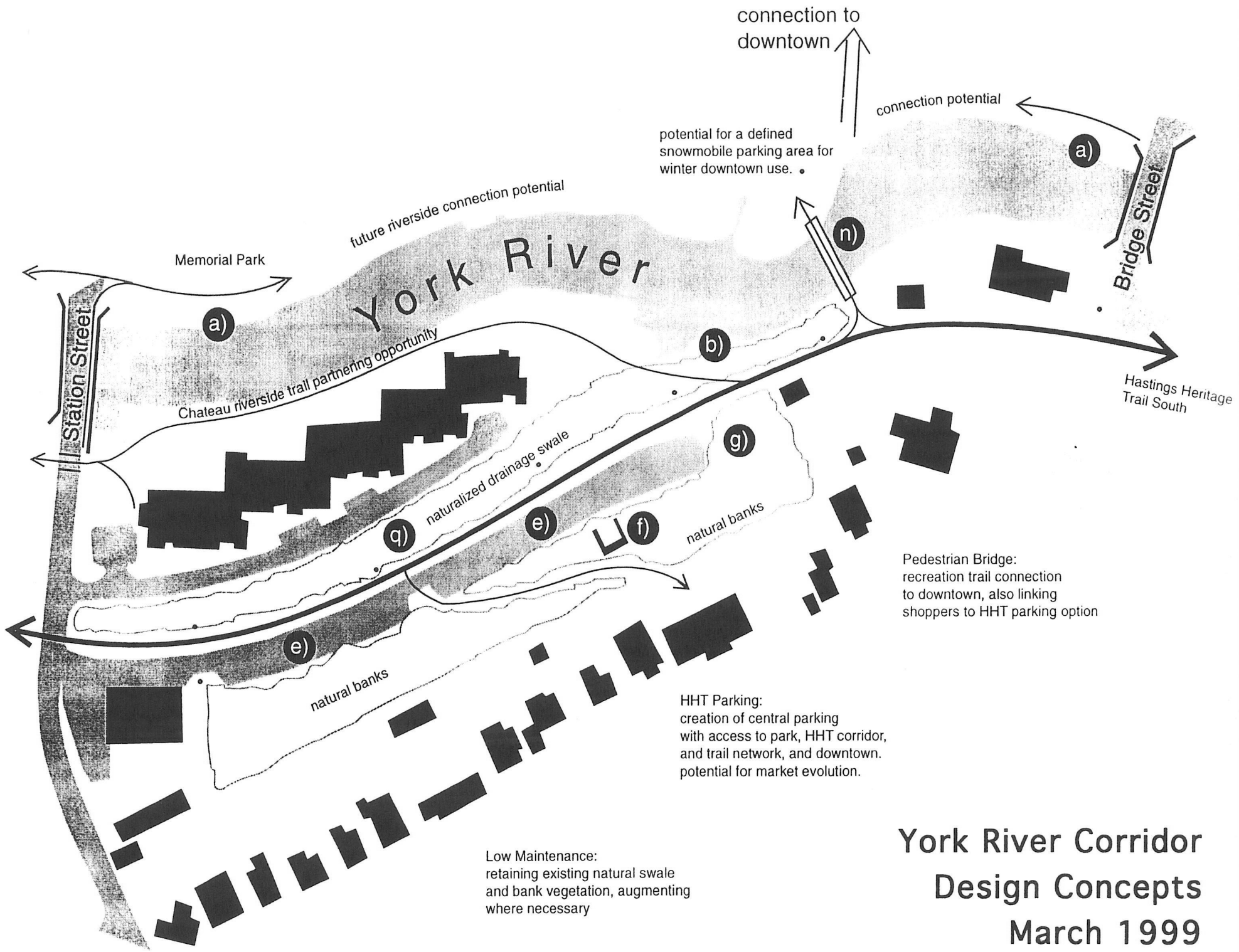


Pine Trees:
The Park has several spectacular pine trees which lend character to the space.



York River Corridor Design Concepts March 1999

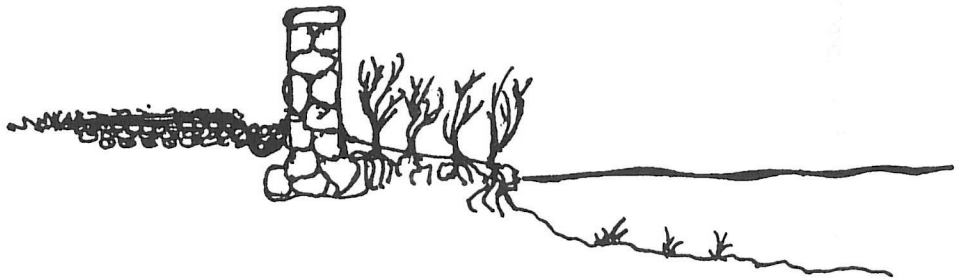
Concepts Key...

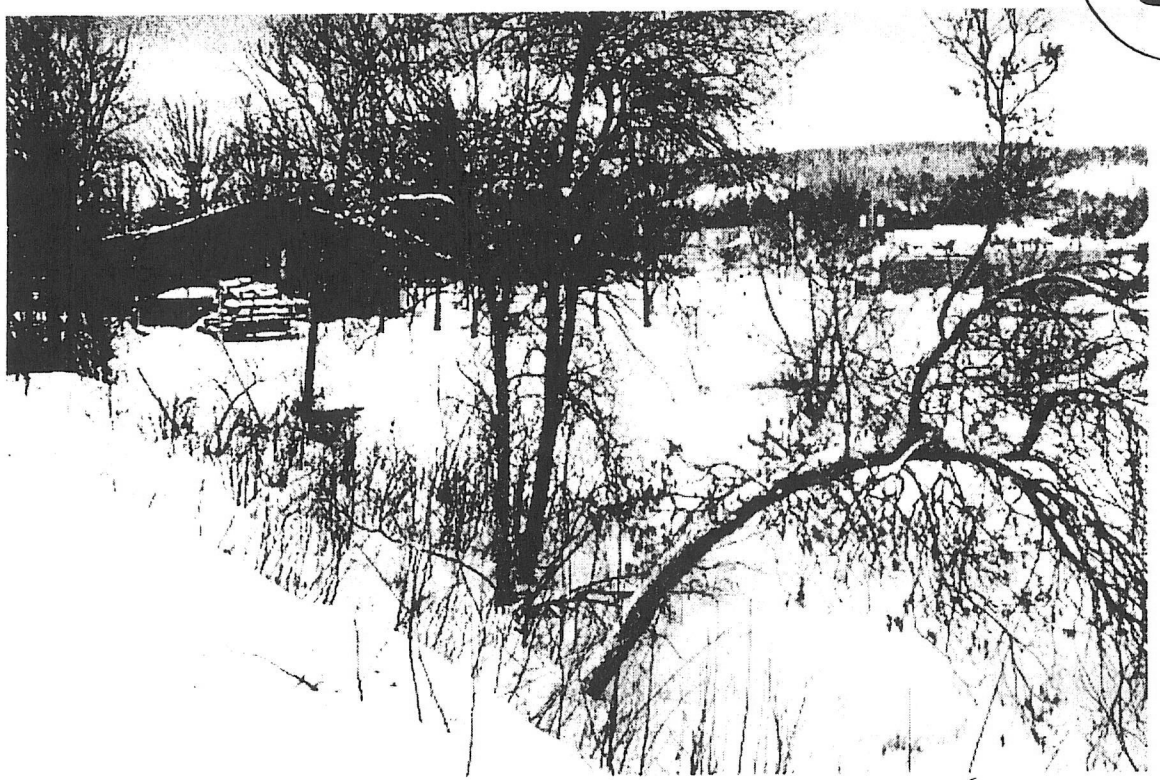
a) Riverwall Shoreline Improvement Opportunities;
b) Shoreline Demonstration Site(s)
c) Post Office Plaza
d) Park Edge Features
e) HHT parking area
f) Old Foundation
g) Quartz Pile
h) Town Docks
i) Organized Play Area
j) Active Area
k) Naturalized Gateway
l) Tree Replacement Programme
m) Madawaska Street Pedestrian Bridge
n) Flint Street Pedestrian Bridge
o) Market Square
p) Flexible Space
q) Naturalized Drainage Swale
r) Naturalized Shores
s) Passive Riverfront Area

Some Concept Details...

a) Riverwall Shoreline Improvement

Important to plant the remnant bank strips between the rivers edge and the existing rock walls. This will prevent erosion, help to filter runoff water, improve the river aesthetic, and contribute to the viability of fish habitat. It will also reduce the costs of wall maintenance and bank trimming once established. Because of the limited space available, shrubs and/or vines would be the vegetation of choice for this area. Shrub species should be selected based on the soil conditions, hardiness of the shrub, and their tolerance to flooding. Such species will likely include Red-osier dogwood, Sweet-gale, Willow, Meadowsweet, and Virginia Creeper. Hints on planting have been attached for reference as Appendix #1 (extracted from "Planting Shoreline Vegetation", Tree Plan Canada).





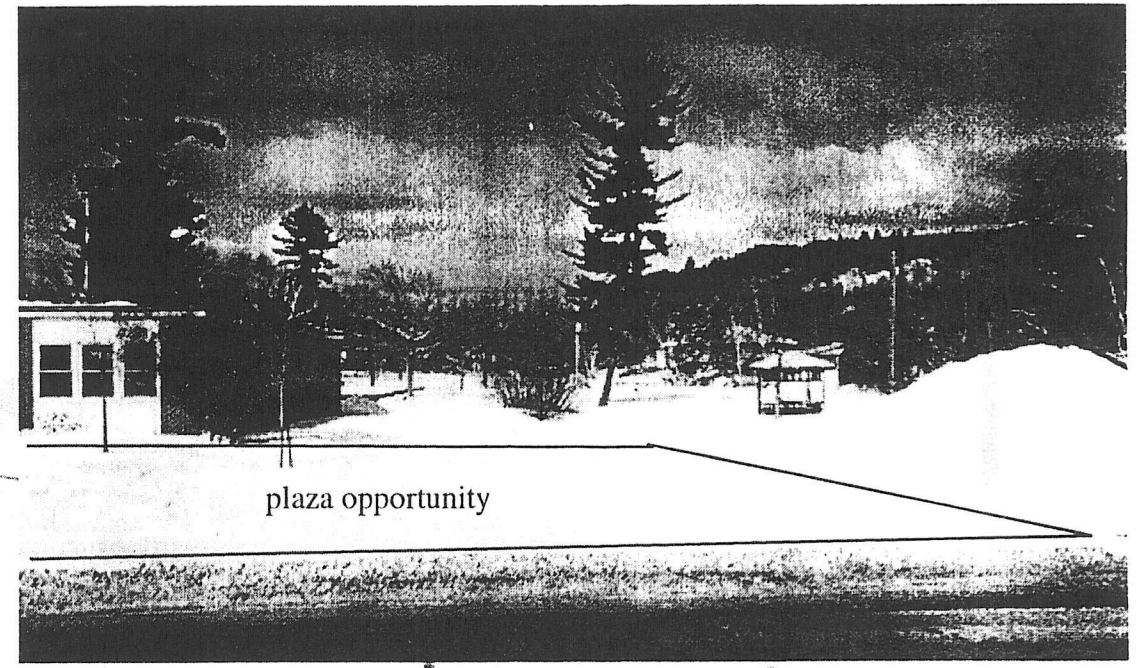
Additional financial and technical support may be found from Tree Plan Canada, Natural Resources Canada, Canadian Forest Service Quebec Region, 1055 du P.E.P.S. P.O. Box 3800, Sainte-Foy, Quebec G1V 4C7.

b) Shoreline Vegetation Demonstration Site

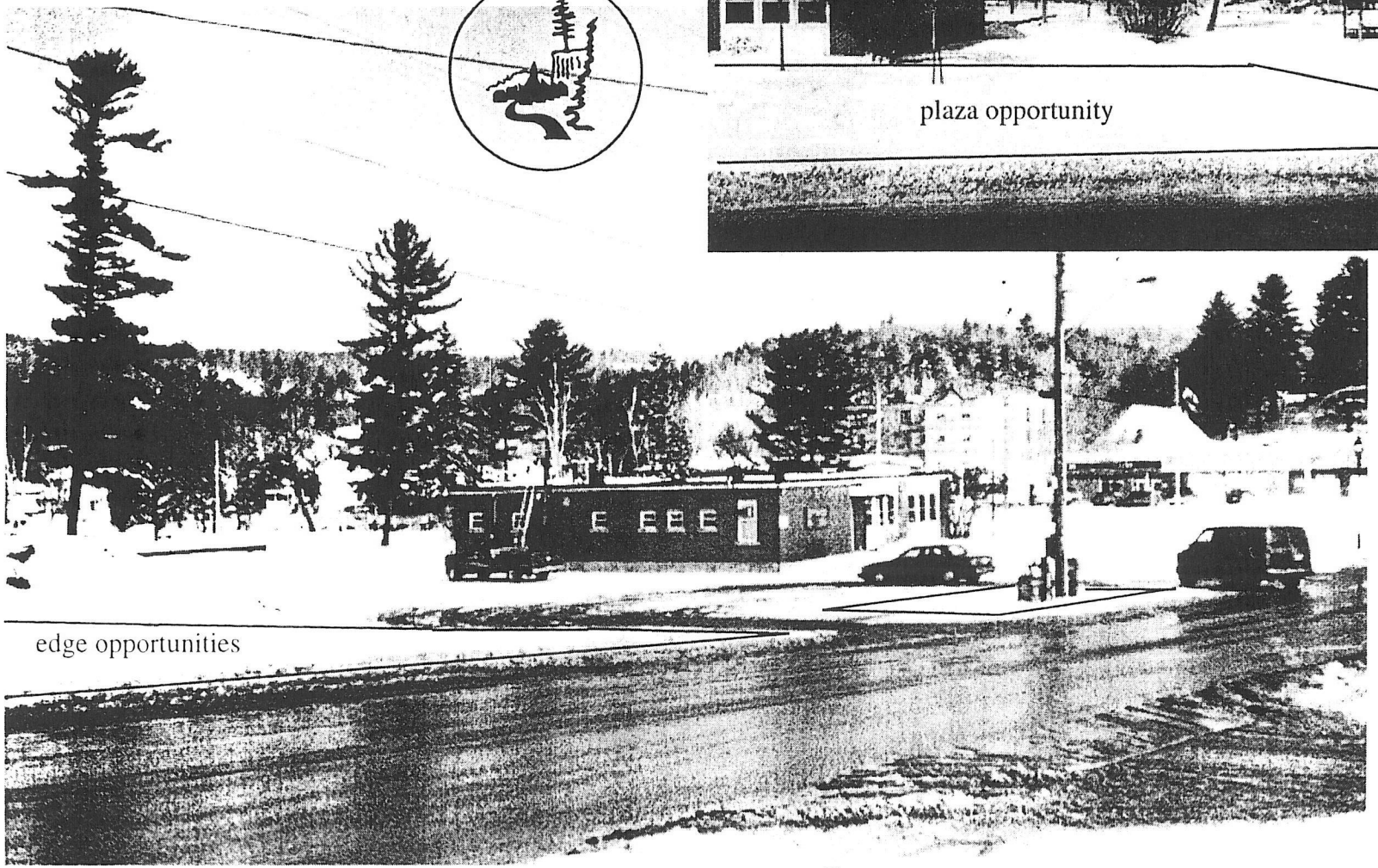
In addition to helping to improve the quality of the river in urban Bancroft, utilizing portions of riverfront as a maintenance-free, shoreline planting demonstration sites would be valuable and interesting to the multitude of area lakeshore property owners who pass through Bancroft each year. See appendix #1 for planting guidelines.

c) Post Office Plaza

Because the Post Office is located at a key focus point of the community it should be celebrated as a merging point for pedestrian, trail, vehicle, and mail traffic; as a gateway to Centennial Park; and as a meeting place. the open space between building and street could be better designed as a small public plaza with flag standards, seating, accent vegetation, and perhaps a ground-plane paving design that reflects Bancroft.



plaza opportunity



edge opportunities

d) Park Edge Features

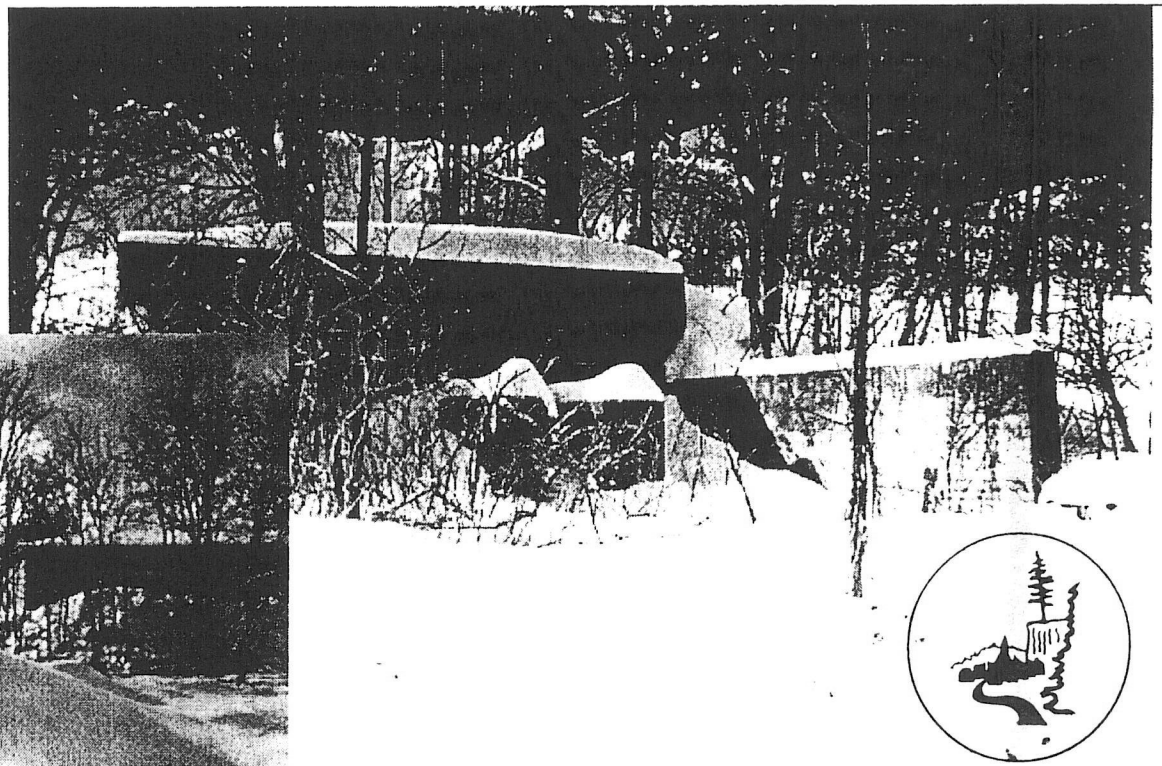
It could lead-into a series of design moves along the Station Street side of the entire Park to provide a sense of gateway into the Park itself as a "place". These moves do not have to be complex, but they should work together.

e) HHT Parking

This linear parking lot will provide additional parking capacity to the Downtown, via a pedestrian bridge, for snowmobile loading/offloading, and for Park events. Accessed off of Station Street, the area should provide one aisle of perpendicular parking, nose-in to the vegetated bank. This bank vegetation will help provide shade comfort to the lot, and clearly define its limit. Because of the packed, level nature of the existing surface, some simple surface material such as limestone screenings could be expected to service fairly well, without great expense. The aisle could extend from the Harvest Moon building, to the area now occupied by the quartz aggregate pile, with the HHT proper being directed along the drainage swale to the East.

f) Old Foundation

This foundation may offer a historical or interest feature to the corridor, cleaned up and accessed from the parking lot. History, integrity, and safety would be issues around such a use.

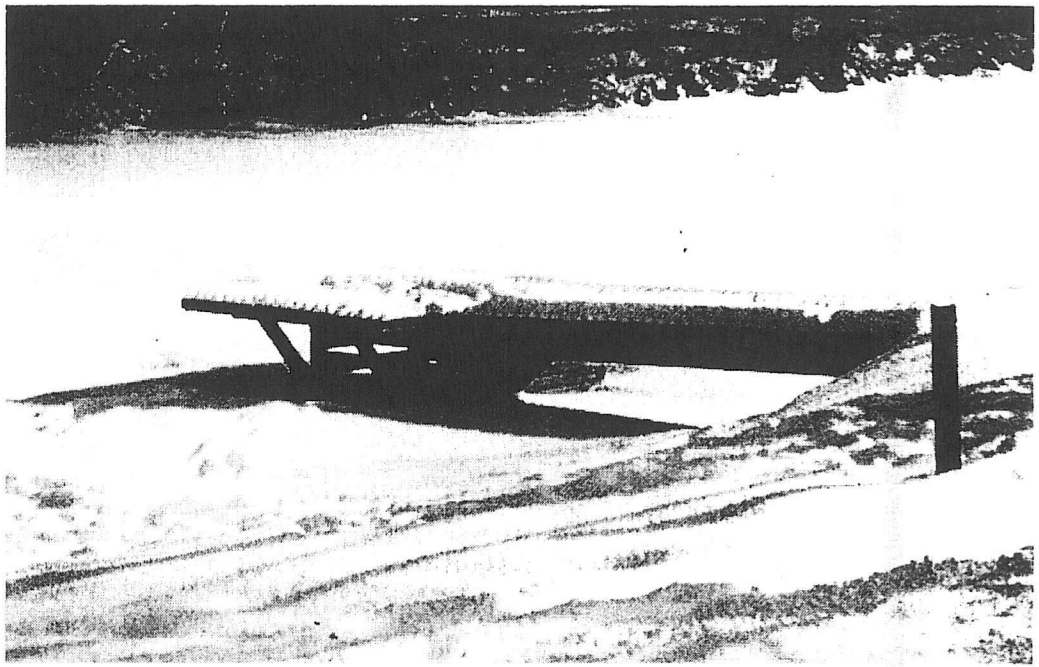


g) Quartz Pile

This pile of material offers potential as an available aggregate material for pathways, drainage, and accent throughout the corridor. It would need to be screened to its various component sizes before being utilized. Once used the area could be added to the parking aisle and vegetation planted where appropriate.

h) Town Docks

The opportunity for through-paddling canoeists and upriver landowners to dock their craft should be made available. The current structure may need to be retrofitted to serve these needs adequately during various river levels. A larger floating platform may be considered, doubling as a platform for fish derbys and other river-focused events. A possible location downstream may also lend itself to water access and event celebration for the Town.

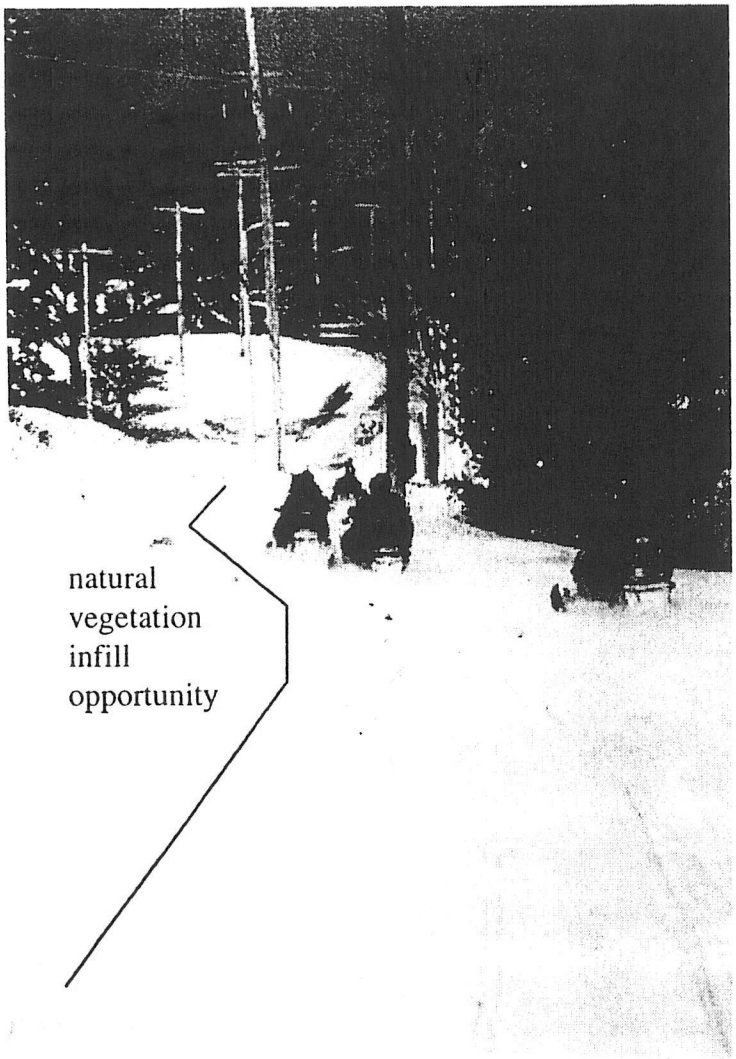


i) Organized Play Area

Providing a clearly defined area for smaller children to play with peripheral seating for gaurdians would augment a long tradition of Park use as a playground. Such an area could be defined by perimeter pathways leading to other areas of the Park, corner group plantings, and a consistant surface material ammenable to the 'crash landings' of children using the facility. Existing equipment should be carefully audited for safety and integrity before being reused; and low-risk additions be considered to be added as feasible. The area should provide scattered, low-risk, diverse opportunities for a relatively young audience to play on, with a possible intermediate playstructure as a focal point.

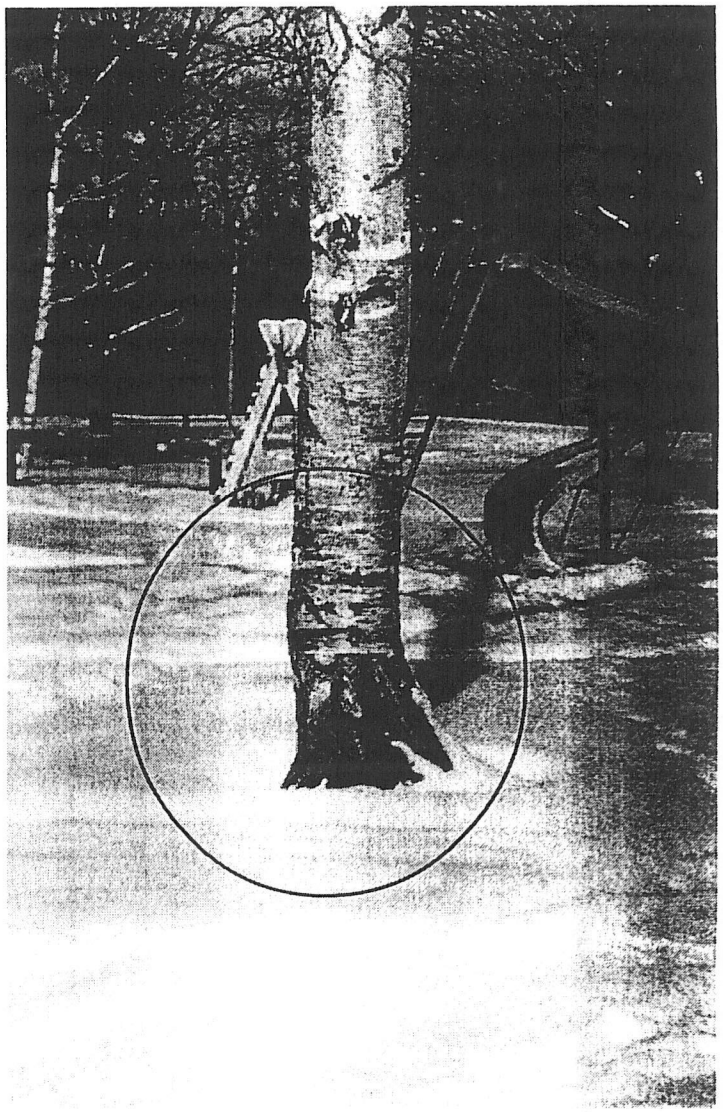
j) Active Area

The existing basketball court needs immediate upgrading of its hoop, backboard and post, and ongoing monitoring of the condition of its surface. Consideration of a second pad in the future may be a good idea. Grouping the volleyball court, the basketball court, and any future courts together as an 'active area' will provide an organized area for older children and young adults to recreate. Maintenance of shade trees around all courts, provision of several benchs, and possible tie-in to the 'Switchyard' would be appropriate measures also.



k) Naturalized Bank

Portions of this bank could be left to grow naturally for aesthetic contrast and to channel the HHT to form a 'gateway' into and out of the Park. A more formal gateway could also be considered (ie. two rock pillars or sculptures flanking the Trail).

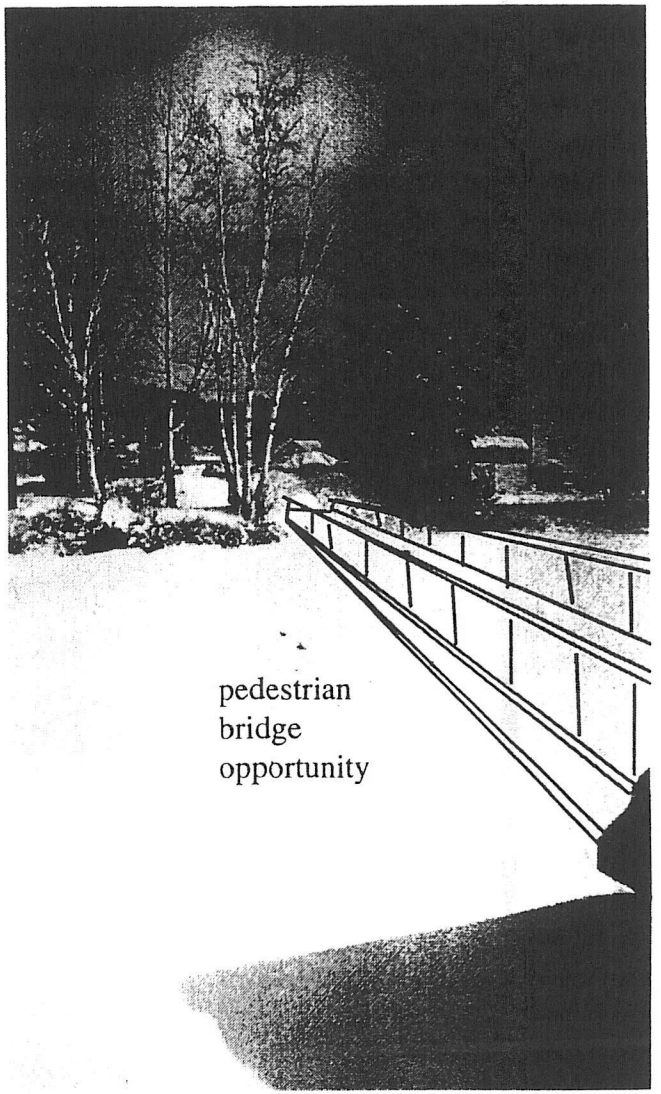


l) Tree Replacement

Many trees located in the Park are aging and/or being subjected to root compaction, bark damage and other stresses. An ongoing programme of tree replacement will be necessary to maintain the tree canopy within the Park. Leaving uncut 'rough' zones like golfcourses often do around tree groupings can save maintenance time, improve the contrast of cut to uncut areas, and lengthen the lives of existing specimens.

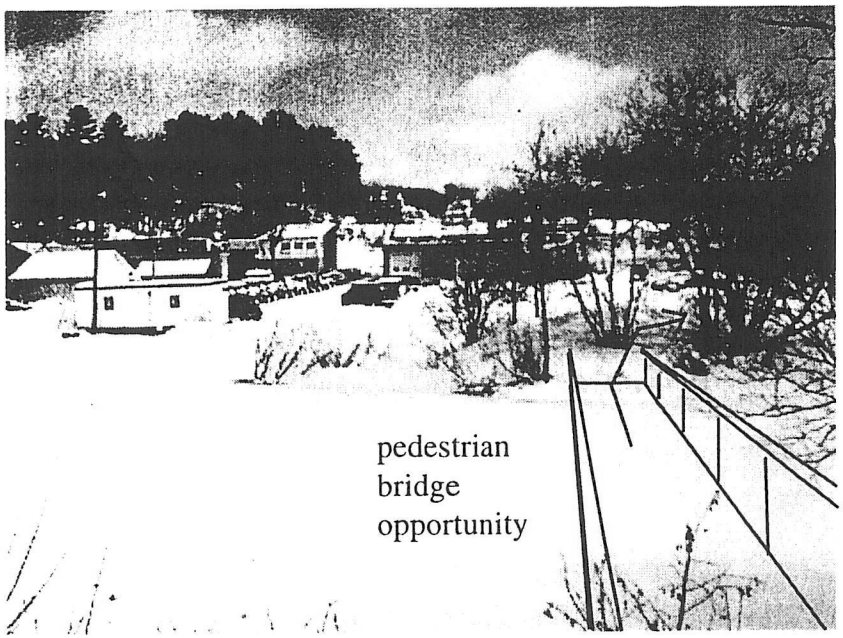
m) Madawaska Street Pedestrian Bridge

This crossing opportunity offers a more direct Park connection for Alice Street residents and other north end neighbourhoods. It also can form an integral component of a possible network of pedestrian loops that improve the walkability of the community. Old streetlights could be re-used to light this connection.



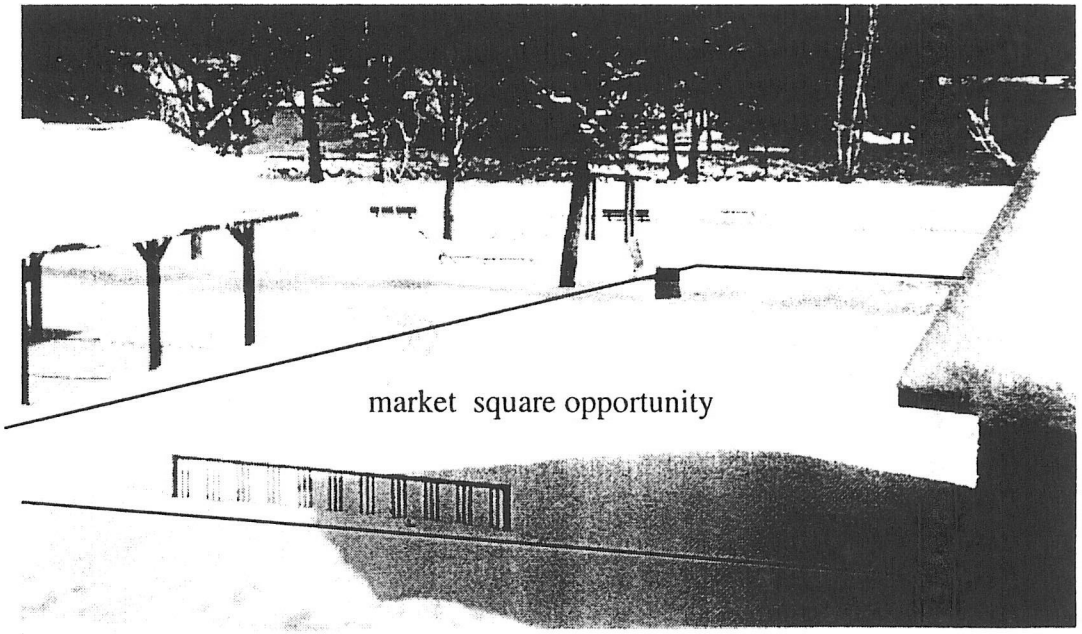
n) Flint Street Pedestrian Bridge

Similarily, the Town access lane alongside the Dairy Queen can connect the proposed parking area directly to the Downtown to relieve strained downtown parking. Potential for snow machines to park on the East side of the river could be an opportunity to bring sledders into the retail district. Old streetlights could be re-used to light this connection.



o) Market Square

Anticipating the success of the evolving Bancroft outdoor market; the current area used for a skating rink in the winter is an opportunity for a larger, potentially covered marketplace and festival centre with peripheral shelters building on the existing shelter available. This offers growth potential, Park focus, and reduces egress pressures on the Post Office parking lot.



p) Flexible Space

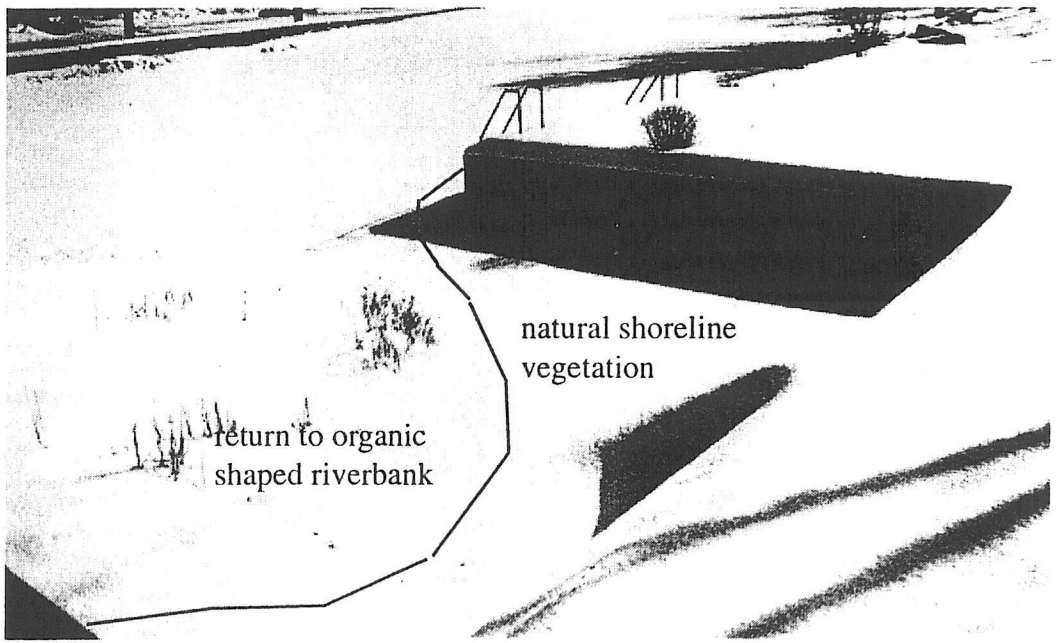
Festival organizer parking, snowmobile trail users vehicle parking, etc. are uses that this well packed level surface could be used for.

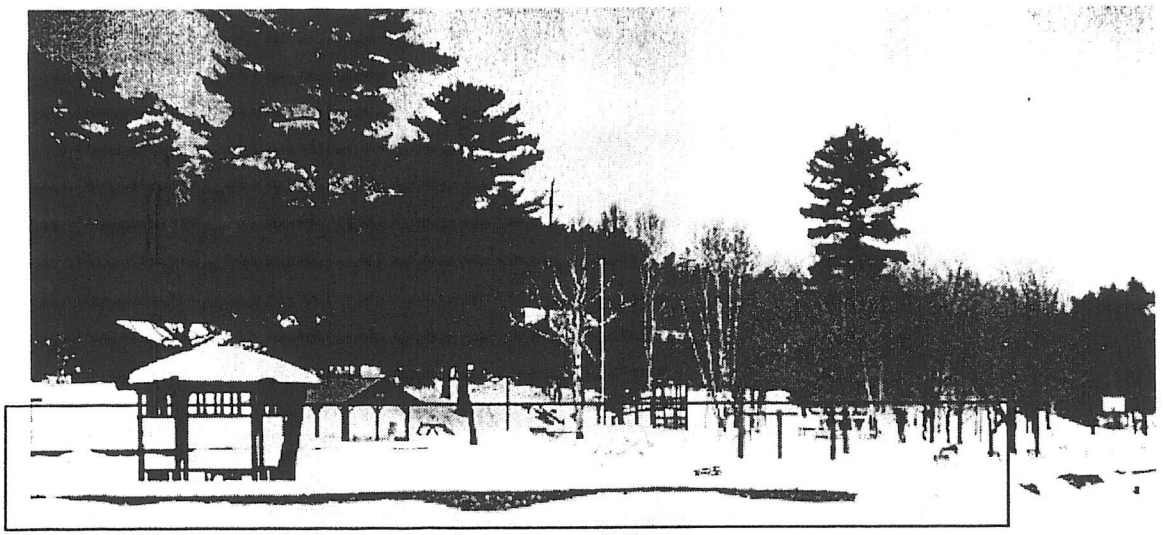
q) Naturalized Drainage Swale

Vegetated strip between the Chateau and the Trail can be intensified with a variety of vegetation to provide a thick, healthy greenstrip to the River. This serves to provide drainage, and to filter and cool the water entering the River.

r) Naturalized Shores

Historically hardened shores such as the old swimming hole offer opportunities to recreate healthy shorelines for aesthetic appeal, river quality and habitat opportunities for river fisheries. See appendix #1 for shoreline vegetation planting information.





s) Passive Riverfront Area

This area of the Park is already established with seating opportunities and the riverbank wall. By adding the erosion prevention vegetation on the riverside, and a colonnade of well-sited shade trees along the proposed riverside trail, a comfortable, scenic place is created with many people watching opportunities. This is an important role for the Park, suiting its older visitors, watching parents, teenagers, and couples alike.

Final thoughts...

Maintenance practices: to help achieve the goals of the Design Dialogue, some important gains can be made through improving basic maintenance practices. Such things as dumping of contaminated snow into the River and weed-whacking shoreline vegetation to the dirt are examples of practices that can have immediate impacts on the health of the River. Trying to mow all possible grass instead of leaving certain buffer areas where the grass doesn't grow well is another example. Typically, improving these practices is a sure guarantee to improve the aesthetic at the same time.

Year Round Users: because of the importance of winter traffic to the economy of Bancroft, it is important to provide a snowmobiler and skier friendly community wherever possible. We want Bancroft to be a winter wonderland for our visitors to explore.

Appendix #1

PLANTING SHORELINE VEGETATION

THE RESTORATION OF SHORELINES

There are many more opportunities for planting trees and shrubs along shorelines than most people would think. Rivers, lakes, streams and other riparian environments abound in our country and people are drawn to these areas to engage in a wide range of activities.

Furthermore, over the last ten years, an increasing effort has been made to protect and restore our shorelines for environmental, economic and other reasons. The public has become more aware of the importance of shorelines for flora, fauna and water quality and, as a result, has become more involved in shoreline rehabilitation projects.

Planting trees and shrubs in riparian habitats has numerous advantages, from which all waterfront property owners, cottagers, farmers and other users will benefit.

This document provides information to help you plan and carry out shoreline planting projects. However, since each situation is different, do not hesitate to consult a specialist for advice.

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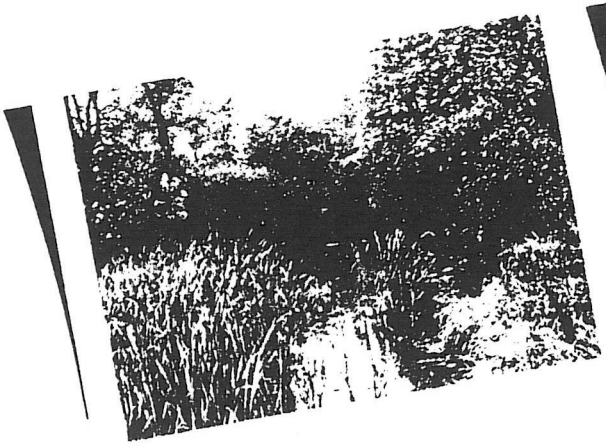

SHORELINE ECOLOGY

Shorelines, which act as a bridge between the land and water, provide prime wildlife habitats. The life cycles of innumerable insects, mammals, birds, reptiles and amphibians are enacted here. Riparian environments are very diverse and may be found along lakes, rivers, streams, wetlands and floodlands, as well as along irrigation and drainage canals on agricultural and forest land.

Some human activities that severely modify riparian vegetation may destabilize the shoreline. This, in turn, damages nearby areas, causing significant environmental impacts such as bank erosion, the destruction of wildlife habitats and algal growth.

In many cases, protection or restoration measures are required. Reestablishing the plant cover on the shoreline helps to stem water and wind erosion, improves water quality and wildlife habitats and restores normal flow and runoff patterns.

1.1 THE IMPORTANCE OF RIPARIAN VEGETATION

Riparian vegetation plays a crucial role in stream and river ecology, promoting a greater diversity of land and aquatic plants and animals. Such vegetation also helps improve water quality by reducing water temperatures, trapping fine soil particles that would otherwise be swept away by runoff and filtering out fertilizers and pesticides before they reach the water. Shoreline vegetation has a stabilizing effect on the soil, mitigating the destructive effects of erosion on the shoreline. It enhances the natural beauty of the landscape by framing the body of water with greenery *(Figure 1)*.

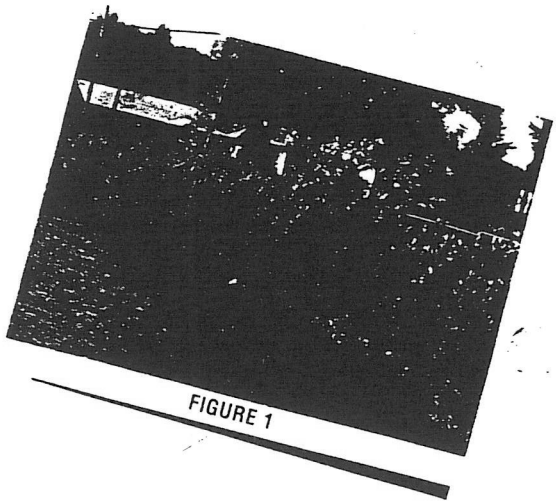
FIGURE 1

In addition, riparian vegetation provides many other benefits.

It promotes :

- the creation or restoration of edge habitats between aquatic and land ecosystems;
- the establishment of a continuous travel corridor for wildlife, allowing them to move safely from the shelter of wooded areas to the water to drink.

It reduces :

- the silting of lakes and watercourses, which disturbs their natural flow patterns and beds, discouraging fish and other aquatic animals;
- the risks of destructive flooding, owing to its retention and transpiration capacities, which mitigate the effects of snowmelt and freeze-thaw cycles.

1.2 PROTECTION STANDARDS

Before undertaking any work affecting the bank or shoreline of a body of water, consult the Quebec ministère de l'Environnement et de la Faune and your municipal representatives to obtain information on the relevant regulations and to obtain the required authorization.

Since the end of the 1980s, municipal bylaws on shoreline areas have been based on the minimum provincial standards presented in the policy on protecting lakeshores, river banks, littoral zones and floodplains (Politique de protection des rives, du littoral et des plaines inondables). This policy, an offshoot of the Environmental Quality Act and the Act respecting land use planning and development, covers urban and resort areas as well as forest and agricultural lands.

According to the policy, the extent of the area along the shoreline, or riparian corridor, to be left intact depends on the type of environment to be protected. To prevent damage to this corridor, the policy also recommends that vegetation be encouraged to grow in the prescribed area *(Figure 2)*.

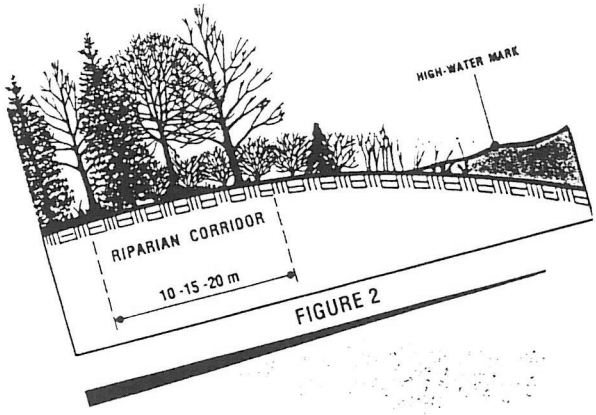

FIGURE 2

HINTS ON PLANTING, MAINTENANCE AND PROTECTION

3.1 PLANTING

The desired plants should be reserved in advance from the nursery. Proper storage is essential to prevent desiccation, or drying out. When the plants arrive, they should be placed in a cool, shady place. Keep the roots damp, regardless of what type of container they arrive in, until the seedlings are ready to be planted.

Planting strategy

Shrubs should be planted in groups of five, with one plant on each of the four corners and one in the middle. The seedlings should be spaced at least 60 cm apart—but no more than 1 m apart—from one another on all sides. This method provides regular rows that increase resistance to stress *(Figure 17)*.

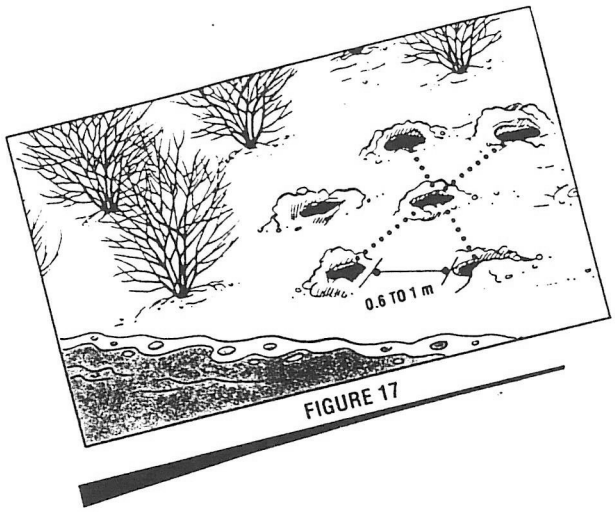

FIGURE 17

Planting the seedlings

- Dig a hole two to three times the size of the root ball or the spread of the roots. We also recommend that you loosen an additional 20 cm of soil at the bottom and sides of the hole. (A hole that is too small will limit root growth, causing dieback in a few years.)
- If you are using container-grown plants, untangle the roots if necessary and cut off any damaged roots. Note: handle the roots of these plants carefully as they are more fragile;
- Place the plant upright in the centre of the hole, with the collar (junction of the roots and stem) at soil level;
- Spread out the roots;
- Back-fill the hole with the soil you have removed (in poor soil, replace 25% of the soil with sphagnum moss or potting soil);
- Ensure that the roots are properly buried;
- When the hole is two-thirds full, pack down the soil and add water to the hole to remove any air pockets;
- Fill up the rest of the hole with soil;
- Water again if necessary;
- Cut off any dead or broken branches if required.

When planting bareroot seedlings, soak the roots in a slurry or root-dipping solution containing clay or a moisture-retaining agent while you are preparing the hole. This gelatinous substance will protect the roots from the sun and wind, which can dry them out in less than a minute *(Figure 18)*.


FIGURE 18

Planting cuttings or slips

Deciduous species like willows, cottonwood and balsam poplar lend themselves particularly well to this type of propagation. However, we recommend that you consult a specialist first. A specialist can tell you which species are best suited to a planting of cuttings along the shoreline or slips in floodlands.

Although this method of propagation has its advantages, it also has its drawbacks, such as the limited period during which cuttings can be made and the need to store them until they are planted.

Planting period

Planting should ideally be done in spring, as soon as the water has returned to normal levels. This will give the roots a full season to get established before they have to deal with the inevitable floods and ice drift of spring. However, fall planting can also be undertaken.

Bareroot seedlings should be planted before the leaf buds appear in spring or in late autumn when the leaves have fallen. Container-grown plants can be planted up to mid-June and in autumn as late as mid-September.

Planting should be done in the early morning or evening, preferably on a cool, cloudy day to avoid desiccation.

Equipment required

- shovel, pick and dibble;
- cord for measuring spacing;
- container with water for moving seedlings or cuttings;
- solution for dressing bareroot seedlings (slurry or root-dipping solution);
- plenty of water for moistening the soil and packing it down *(Figure 19)*.

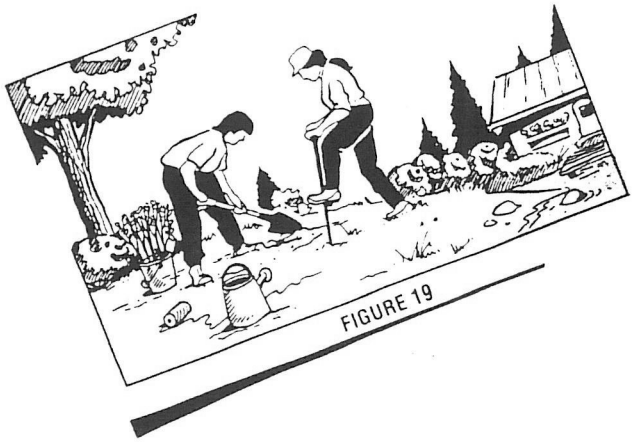

FIGURE 19

3.2 MAINTENANCE AND PROTECTION

Cultivation activities involving heavy equipment such as ploughing and mowing should be banned from the area. These activities compact the soil and may modify the natural drainage pattern, thwarting your efforts to stabilize the bank. Needless to say, fertilizers, pesticides and manure should never be used in a riparian corridor.

Generally, the vegetation will become established on its own. In agricultural areas, the following minimum care is recommended :

- remove deadfalls obstructing the water;
- prune branches that droop into the water to allow the free movement of ice in spring;
- remove shoots that invade fields under cultivation or that threaten to block the outfalls of drainage canals.

In addition, the following activities should be done in all types of plantings :

- control of undesirable weeds;
- protection from rodents and grazing animals;
- control of diseases and insects;
- protection from the wind and winter cold;
- replacement of dead seedlings and replanting of uprooted plants;
- pruning of plants that are not doing well to induce growth;
- identification of plantings.

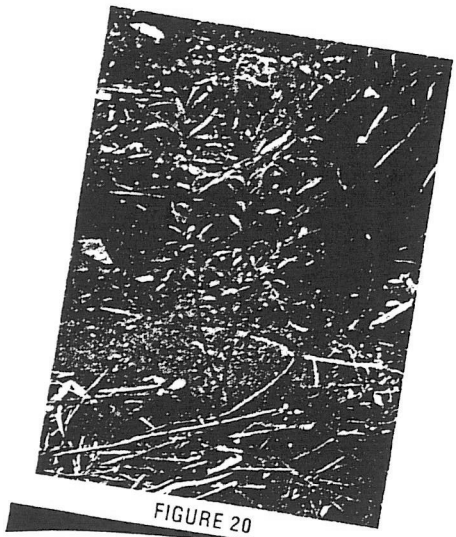

FIGURE 20

Control of undesirable weeds

Weeding to eliminate herbaceous competition is rarely done in riparian plantings because of the vigour of the plants used. However, you should ensure that plants are not choked by dense weeds.

Protection from rodents

To keep rodents away from plants, particularly more vulnerable ones such as fruit trees and shrubs, mow any grass or weeds within a 1/2 m radius of the plant. This discourages rodents from leaving nearby protective cover to gnaw at the tender bark of young plants.

A rodent repellent can also be applied in autumn to prevent serious damage. Laying a synthetic mulch around the plant (in areas not subject to flooding) and keeping the planting neat will discourage rodents from building their nests near plants *(Figure 20)*.

For plants over 1 m high, you can cover the stems with a wrap-around plastic spiral, agricultural drain, wire mesh or plastic tree shelter. These devices also act as a tree prop, stimulating growth *(Figure 21)*.

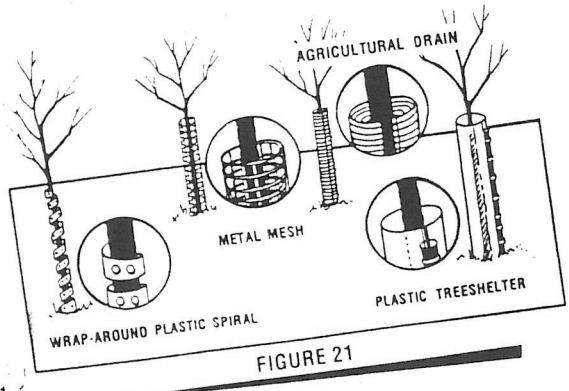

FIGURE 21

Control of diseases and insects

Carefully inspect the leaves of plants for early signs of insect pests and diseases (brown spots, yellowing, holes, rolled-up edges, etc.) If a major infestation seems likely, biological controls can be used, in consultation with a specialist and in accordance with the manufacturer's recommendations. However, minor infestations will not require treatment, since the insects will be eaten by other animals.

Protection from the wind and winter cold

Allowing the snow to accumulate naturally around the plants provides the best protection in winter, protecting the buds from the cold and preventing conifer needles from drying out.

However, plants that are exposed to the wind may be protected by erecting a burlap shelter or tying the branches up with string to protect against breakage. However, these measures are rarely needed in a natural setting *(Figure 22)*.

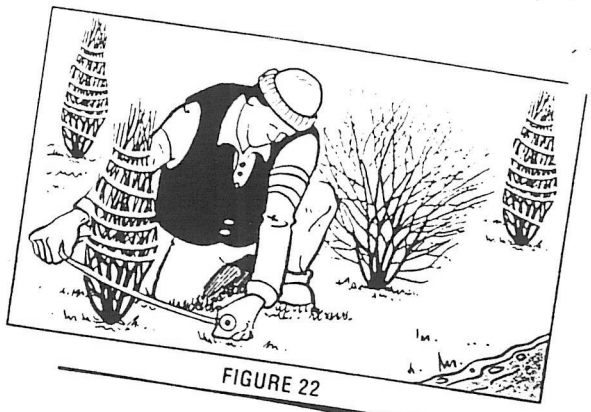

FIGURE 22

Replacement of dead seedlings and replanting of uprooted plants

In spring, inspect the planting as soon as you can. Plants uprooted by freeze-thaw cycles or spring floods are the main problems in riparian plantings. The solution is to put the plant securely back in its hole. Dead plants should be removed and replaced to maintain the planting's stabilizing properties.

Identification of plantings

Put up posters or signs to identify plantations and indicate their location to snowmobilers and drivers of all-terrain vehicles *(Figure 23)*.

FIGURE 23

Summary

In summary, it is important to provide care and protection for the young seedlings for at least three years after planting, and five years would be even better.

First year : weeding, watering in case of drought and pruning to preserve the plant's original shape if required.

Second year : inspection of the plantings in early spring to replant uprooted seedlings, observation of the seedlings to detect early signs of disease or insect infestation (if treatments are required, use only ecologically sound and environmentally friendly products). First year's activities should be continued.

Third and subsequent years : repeat what was done in the second year; maintenance pruning may be required for some plants.

Tree Plan Canada encourages the planting of trees by offering financial and technical assistance to various project proponents.

You can obtain information on the program, technical guides and an application form from :

TREE PLAN CANADA
Natural Resources Canada
Canadian Forest Service
Quebec Region
1055 du P.E.P.S., P.O. Box 3800
Sainte-Foy, Québec G1V 4C7
(418) 648-5699

or call toll-free :
1 800 563-0202

For information on preserving wildlife habitats, contact the :

Canadian Wildlife Service
1141 de l'Église
P.O. Box 10100, 9th floor
Sainte-Foy, Québec
G1V 4H5
(418) 648-7225

FURTHER READING

Beaupré et associés. 1992. Guide d'aménagement et de renaturalisation des berges. Conf. municipale sur les bois, les berges, les îles et les rivières, ville de Laval.

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