

GIBSON'S LANDING: A MARINE RECREATION SYSTEM PROPOSAL

by

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requirements for the degree of
Master of Landscape Architecture
in

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A practicum submitted to the Faculty of Graduate Studies
of the University of Manitoba in partial fulfillment of the
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MASTER OF LANDSCAPE ARCHITECTURE

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Rushed by the wall of sea wave
Bound by the song of sea wash
The fine edge of my soul
Dissolving.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS ii

PART I -- PROPOSAL

CONTEXT 2
 GOAL AND OBJECTIVES 2
 Goal 2
 Objectives 3
 PROCESS 4
 Data Collection and Analysis 4
 Physical Data 4
 Structure of the Community 4
 Existing Land Use 4
 Recreation 4
 Transportation 4
 Jurisdiction 5
 Research 5
 Water Resource Research 5
 Creation of Marine Imagery 5
 Synthesis: Opportunities and Constraints 5
 Design Development 6
 Review 6
 FORM OF SUBMISSION 6
 SCHEDULE 7
 FUNDING 7

PART II -- BACKGROUND DATA

<u>Chapter</u>	<u>page</u>
2. GENERAL DESCRIPTION	9
Impressions	9
Marine Imagery	10
3. SETTLEMENT	11
Water Access	11
Pre-Emption	12
Residential And Commercial Development	13
Expansion	14
The Community	15
The Municipality	16
Social Factors	17

4.	THE ECONOMY: FORESTRY AND FISHING	18
	The Forest Industry	18
	Commercial Fishing	19
5.	MARINE ACTIVITY	22
	Existing Facilities	22
	The New Marina	23
6.	TOURISM AND RECREATION	25
	Destination Resort Area	25
	Summer Residents	26
	Weekend Tourism	26
	Boating and Sports Fishing	27
	Tourism Development	27
7.	OPEN SPACE AREAS/PARKS	29
	Armour's Beach	29
	Memorial Park	30
	Holland Park	30
	Dougal Park	31
	The Marina Park	32
8.	TRANSPORTATION	33
	Sechelt Highway	33
	Density Traffic Study	33
	Parking	35
	Public Transit	36
	Horseshoe Bay/Langdale Ferry	36
	Water Taxi	37
9.	PHYSICAL SYSTEMS	38
	Oceanography	38
	The Marine Environment	38
	Tides	39
	Biotic Zones	40
	Wave Action	41
	The Climate	42
	Geology	44
	Hydrology	46
	Drainage	46
	Aquifer Basin	47
	Soils	48
	Vegetation	49
	Site 1 Gower Point Road	49
	Site 2 Old Field Near Bay	50
	Site 3 School Road	50

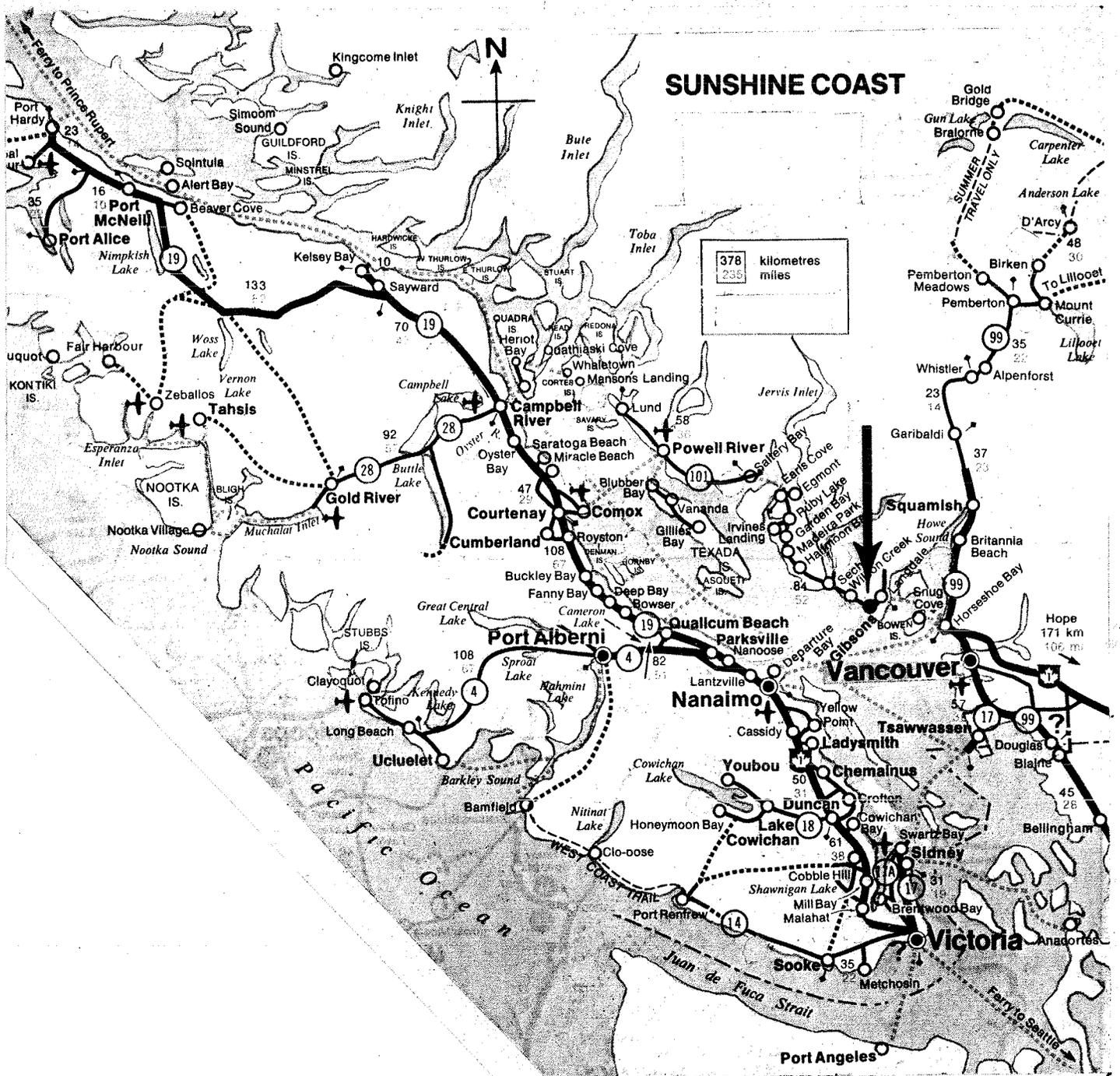
PART III -- SYNTHESIS, DESIGN AND IMPLEMENTATION FOR
PUBLIC OPEN SPACE

<u>Chapter</u>	<u>page</u>
10. SYNTHESIS APPROACH	53
11. IMPACTS OF REGIONAL SIGNIFICANCE	55
Transportation	55
Walkways and Trails	55
Bicycle Paths	56
12. PROPOSALS FOR PUBLIC OPEN SPACE/PARKS	57
Government Wharf and Memorial Park	57
Holland Park and Harbor Development	58
Armour's Beach	59
Dougal and Marina Parks	60
Harmony Hall Park	61
13. DESIGN APPROACH	62
Introduction	62
The Themes: Shelter and Sustenance	62
Principles of Open Space Design	63
Imagery of the Marine Landscape	63
Inherent Characteristics of the Marine Landscape	64
The Design	64
The Shoreline Terrace	64
Terraced Planting	65
Patterns of Light: the Background	66
The Foreground	66
Reflections	67
Fountains	67
Ponds	68
Night Lighting	68
Interpretation	69
14. THE DESIGN OF PUBLIC OPEN SPACE/PARK AREAS	70
Introduction: The Drawings	70
List of Drawings for Open Space Design	70
Memorial Park	71
Traffic Patterns	71
Park Design	71
Holland Park	72
Armour's Beach	73
Marina Park	73
Parking Lot	73
Marina Park and Offices	73
Dougal Park	74

15.	IMPLEMENTATION	75
	Design Approach and Implementation	75
	Opportunities for Public Involvement	75
	Implementation Program	76
	Development	76
	LIST OF REFERENCES	78

PART I
PROPOSAL

LOCATION MAP



SOURCE: TOURISM B.C. (GOV'T)

1. CONTEXT

The growing population of the Vancouver Metropolitan Area has placed pressure on surrounding rural communities to provide amenities for recreational use. Gibsons, a small coastal community one and a half hours journey from downtown Vancouver, provides opportunities for marine-oriented recreation development for residents of the town and surrounding region and for mainland visitors (see "Location Map", opposite)

The town is a composite of a lower village surrounding the bay, hereafter referred to as Gibson's Landing, and an upper townsite with regional shopping facilities, spanning the Sechelt Highway. Attempts to revitalize the Landing area include a marina and hotel development which will double the current docking facilities and provide visitor accommodation and convention facilities. Another hotel is in a preliminary stage of construction.

At the present time the town feels the problems of parking, waterfront access and public open space/park facilities should be addressed (Mayor Lorraine Goddard, interview, July 14, 1983). Parks within the Landing area are not well-developed nor are they well-utilized. As well, existing access to facility use is a problem which will be compounded by the impending development. Municipal planner Rob Buchan is concerned with the impact of the proposed marina and hotels, and the subsequent increase in traffic (interview July 11, 1983). It is appropriate that these issues be dealt with concurrently.

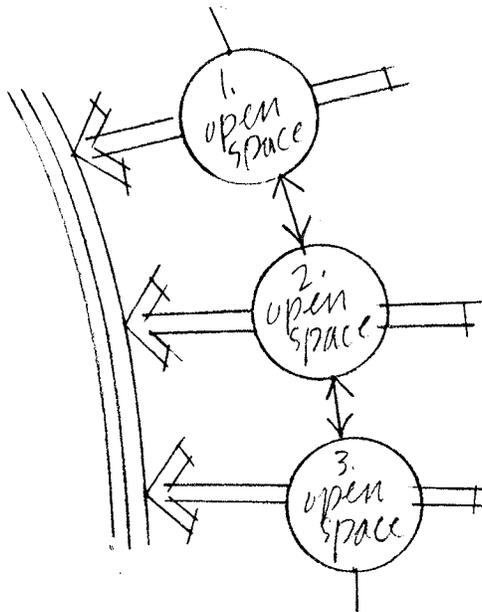
2. GOAL AND OBJECTIVES

2.1 Goal

The primary intent of this practicum is to present a marine recreation proposal for Gibson's Landing, to address current issues and to guide future recreation and open space development. Historically, it was the development of the marine resources which determined the existing settlement pattern and provided a sense of community identity. The marine orientation continues to be the impetus for change in Gibson's Landing. It is important to reinforce this aspect as it provides an opportunity to maintain the uniqueness with which the Landing is perceived.

2.2 Objectives

1. Each public designated open space, while reflecting an overall marine orientation, will have its own character and function as determined by the needs of the public. Existing open space/park area is to be designed for greater use.



2. Open space/park area is to become linked under an open space system by the use of visual elements (signage, common design components, walkways, etc.).
3. Water resources from both saltwater and freshwater sources (creeks and springs) are to be linked to the open space system.
4. Access to facility use is an important component of the recreation proposal and plans will include access for both the vehicular and pedestrian traffic.
5. It is implicit in the use of resources and the design of systems that cost-efficiency and self-maintenance are adhered to.
6. Design solutions for the sloping basin terrain can be prototypes for other marine communities.

3. PROCESS

3.1 Data Collection and Analysis

3.1.1 Physical Data

- climate (precipitation, temperature, insolation, wind)
 - surficial geology and soils
 - surficial hydrology (drainage, slope)
 - vegetation
 - ocean drift and tides
- Sources: reports, news files, interviews, maps

3.1.2 Structure of the Community

- settlement pattern
 - industry
 - needs and perceptions of the various groups
 - the municipality
- Sources: interviews, observations, town council, publications

3.1.3 Existing Land Use

- existing land use (map)
 - zoning and development design criteria
 - proposed development
- Sources: municipal plans, codes, reports, interviews

3.1.4 Recreation

- use and requirements for marine facilities (local, regional, mainland)
 - scenic and historic resources (map)
 - description of public use areas
- Source: reports, interviews, museum archives, government and town council

3.1.5 Transportation

- highway: proposed road layout
 - vehicular and pedestrian traffic counts
 - marine: sea plane, ferry, pleasure craft
- Sources: government departments, on-going study, observation, interviews

3.1.6 Jurisdiction

- water development (bay)
- shoreline
- subdivision approval
- road network

Source: government departments, town council, Sunshine Coast Regional District (S.C.R.D.)

3.2 Research

3.2.1 Water Resource Research

- marine recreation, moving water, tidal basins
- emphasis on drainage and containment

3.2.2 Creation of Marine Imagery

- quality of the environment:
 - character
 - focus
 - change

3.3 Synthesis: Opportunities and Constraints

The synthesis of data and research information will determine:

1. The opportunities for open space/park area recreation development based on the needs and perceptions of the public and the capability of the resource base, (what and where)
2. The opportunities for use of water resources in conjunction with the open space system,
3. The opportunities for linking historic and scenic resources within the open space system,
4. Traffic routes and parking required to access open space system and service facilities.

In addition, the compilation of elements for linking the open space system and for building a visual vocabulary of marine imagery will provide a reference for the design process.

3.4 Design Development

The three stages of design development include:

1. Overall concept plan showing the interrelationship of development proposals and schematics of each open space/park area (what, where and how)
2. A preliminary design with site specific drawings and details for prototypes. Model optional.
3. Final design and proposals for implementation. Model optional.

3.5 Review

Presentation of opportunities and constraints (synthesis stage), and of each stage of the design process will be made to the faculty advisory chairman and committee to review the process and provide comment (refer to schedule 5).

4. FORM OF SUBMISSION

1. Research dossier:
 - marine recreation water resource use
 - marine imagery
2. Background data file and synthesis
3. Concept plan with support data from file and dossier:
 - site plan (1:1200)
 - plot plans (1:500)
4. Design folio:
 - includes site specific layouts based on plot plans, and prototypical design details at an appropriate scale (1:200 or more). Model is optional.
5. Final report: a compilation of the design and analysis for the town of Gibsons.

5. SCHEDULE

July 1- August 15, 1983	Preliminary investigation and data collection
August 15-September 1	Prepare practicum proposal
September 6	Submission of proposal to faculty
September 1-December 1	Compile background data Research water resources, marine imagery and recreation
December 11-January 7, 1984	Continue data collection (Gibsons) Submission of practicum proposal to town of Gibsons
January 7-31	Synthesis of research and data: opportunities and constraints
January 31	Presentation to advisory committee
February 1-28	Development of concept plan
February 28	Presentation to advisory committee Presentation of concept plan to Gibsons
March 1-31	Preliminary design
March 31	Presentation to advisory committee
April 1-30	Final design and proposals for implementation
April 30, 1984	Presentation to advisory committee for approval
May 1984	Presentation of final report to Gibsons town council and public.

6. FUNDING

Sources of funding to cover publication costs are being explored.

PART II
BACKGROUND DATA



PHOTO: IAN CORRANCE, COAST NEWS.

GIBSON'S LANDING...LOOKING TO BLUFF.

Chapter 2

GENERAL DESCRIPTION

2.1 IMPRESSIONS

My first view of Gibson's Landing was of a small sheltered bay surrounded by white cottages straddling a hillside, the ridge treed with cedar, fir and maple. A cluster of small shops bounded Marine Drive, the main highway which veered sharply up from the junction at the Government wharf to cross the steep incline of the hill. The highway continued past Gibson's Heights, past the schools and the major shopping center for the regional district.

On stopping in Gibson's Landing this summer (15 years after my first visit), I was one of the many visitors from the mainland to delight in the marine village atmosphere of the Landing.

The focus of activity is centered around the Government Wharf. Molly's Reach, at the wharfhead, is home to the famous CBC Beachcomber series. The wharf and rock breakwater provide shelter for boats of every kind and color: commercial fishing boats, tugs, motor boats and sailing vessels.

I enjoyed many long walks to the beaches: south on Gower Point Road, past the colorful small shops, KLD (grocery), and the Omega complex with the adjoining barren concrete base for future hotel development. Holland Park on the right is a sloping expanse of green grass studded with a few large cedar trees and gunnera plants. Civic buildings wearing pastel green with dark brown accents are perched on top of the slope and command the best view of the bay.

The outgoing tide reveals the mud flats stretching across the bay. "Unsightly" one resident labelled them and expects that the new marina to be located on them will be a necessary improvement. No shellfish are harvested here. Instead the fine silts and clays and the adjacent public ramp serve the residents who drive down to launch their boats.

The scale of the Landing, contained by the sloping hill wrapping around on the upper side and the bay on the lower, is such that most facilities are within a pleasurable walking distance for residents. In a sense it is the scale which



Summer '83 Gibsons
Arrows Beach Low Tide
RCB

provides an intimacy within the community and which many seek to maintain.

2.2 MARINE IMAGERY

There are clear days when sky and water are an intense blue and distant mountains form darkened spires peaked by ice caps. The waters are choppy, the gulls turning and crying in the wind. Enormous tree roots and trunks enough to appease artist and beachcomber are stranded on the rocks near Armour's Beach.

And there are days when mist fills the inlet, softening and screening all forms, sounds and motions. The calm water is a mirror for silvery bands of sunlight. All around are salty smells- rotting seaweed and sea creatures- orange brown and lime green over barnacled stones.

Tangled masses of berry bushes, grasses and salal climb the banks and openings of the forest canopy. Alder and maples inhabit the shoreline. Light penetrating the understory reflects the bright greens of ferns, ocean spray and elder, the latter with their profusion of flowers or berries depending on the season.

More often there is the monotony of a rainy day: rain glistening from leaves and grasses, giving rise to damp earth smells and darkened forest, and graying the sky and ocean. Water gushing downhill, torrents flowing into culverts, flowing into the bay. Rainy day silhouettes frame oranges, reds and blues against grays and browns; built forms and tree forms against ocean and sky.

The monotony is interrupted by a cafe or bar stop- coffee, newspapers, beer, conversation, gossip, companionship. It is an easy place to lose oneself, but there is no anonymity. Within a small town there is a high level of visibility. Every action has its witness, a factor often driving people to locate "on the land" on acreages outside the village boundary.

HOWE SOUND (SOUTHERN PORTION)

Polyconic Projection

Finisterra I.A. Lat. $49^{\circ}25'05''$ N., Long. $123^{\circ}14'26''$ W

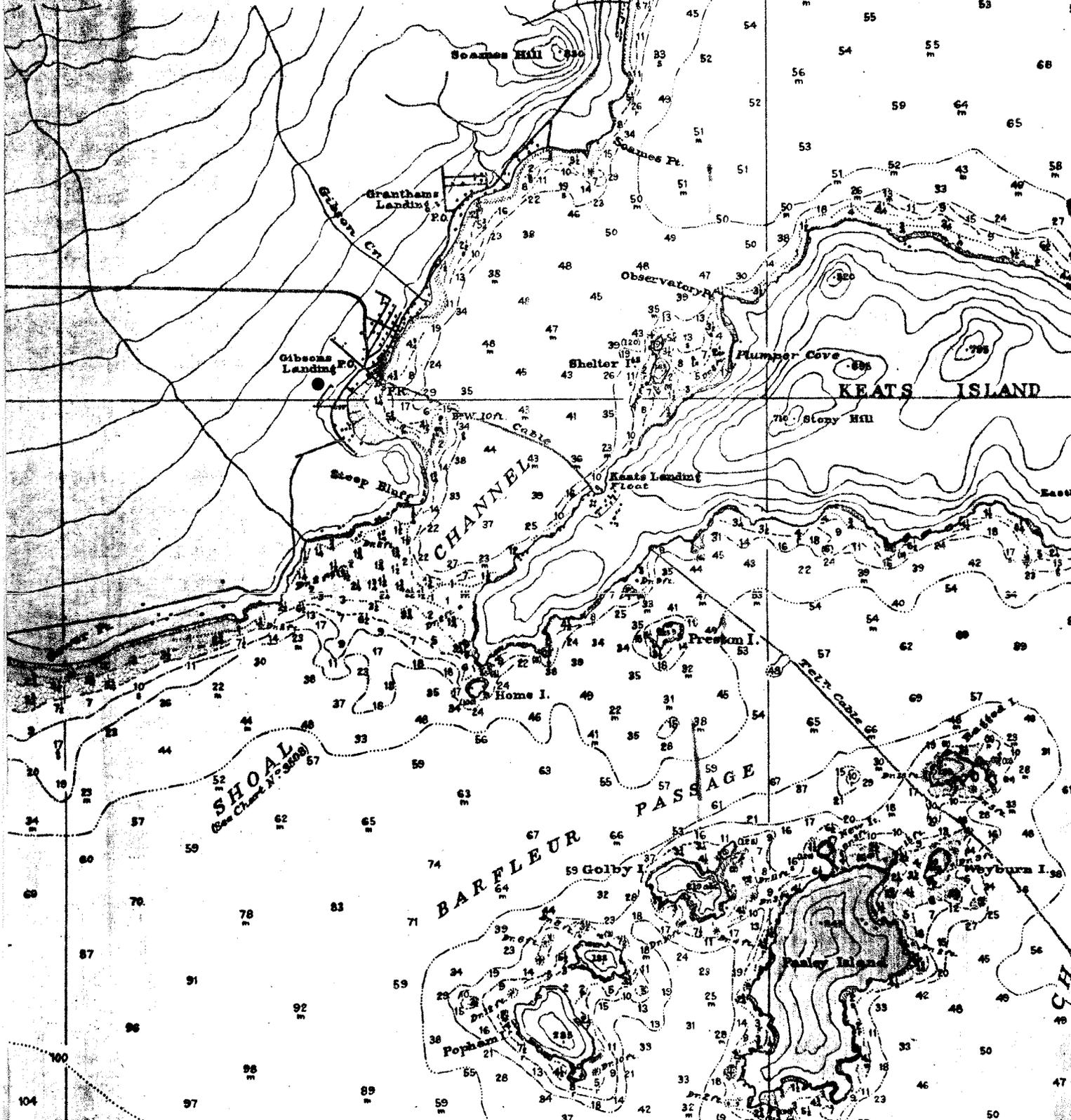
All bearings are true, thus $295^{\circ}15'$ and are given from seaward

SOUNDINGS IN FATHOMS

reduced to Lowest Normal Tides

Natural Scale $\frac{1}{56,400}$

The Catalogue of Nautical Charts, Sailing Directions, Tidal Information and other Canadian Government Publications of interest to Mariners, may be obtained on application to the Hydrographic and Map Service, Department of Mines and Resources, Ottawa.



Chapter 3

SETTLEMENT

3.1 WATER ACCESS

Gibson's Landing has relied on water transportation since its inception. Lester Peterson has written about the importance of this mode of transport to the town.

First regular contact between this area and the cities of Vancouver and New Westminster was maintained by tug boats. These coal- or wood- burning vessels transported loggers to and from camps scattered along the shoreline, and because these camps generally lacked docks, towed supplies behind them on scows. Groceries and mail for the men, hay and grain for horses and oxen, iron for the blacksmith, boom chains, and other general supplies could be unloaded against a beach in calm weather on a rising tide without injury to this all-purpose craft. Long after the Gibson homesite had a wharf, absence of roads forced settlers whose homes were up the Sound or along Gower Point coast to continue to make use of this means of transportation.¹

In 1889 the Union Steamship Company with a small fleet began making runs to the Landing. The SS Comox (1891) and the first and second Capilano steamships stopped at George Gibson's dock. Towing and log salvaging boats, larger tugs trailing log booms, passenger ships and freighters were plying the waters of Howe Sound and the Sunshine Coast, many of them making regular stops at the Government wharf. There was some ship building of smaller vessels.

In 1946 the first ferry service between Gibson's Landing and Fisherman's Cove was started, using a small cabin cruiser. In 1948 it was run between the Landing and Horseshoe Bay, where a public dock had been built. In 1951 the Black Ball Line started running the MV Quillayute, a 48 car ferry on this route. Service was relocated in 1958 from the

¹ Lester R. Peterson The Gibson's Landing Story Toronto: P. Martin Books, 1962 p. 71

Landing to a new terminal on Langdale Creek, its present location (a 10 minute drive from Gibsons). The B.C. government has been the corporate owner since 1961.

3.2 PRE-EMPTION

George Gibson laid claim in 1886 to District Lot 686, a 160 acre plot which was to become Gibson's Landing. Upon "proving-up" the claim and receiving his Crown Grant title, he was then free to subdivide.

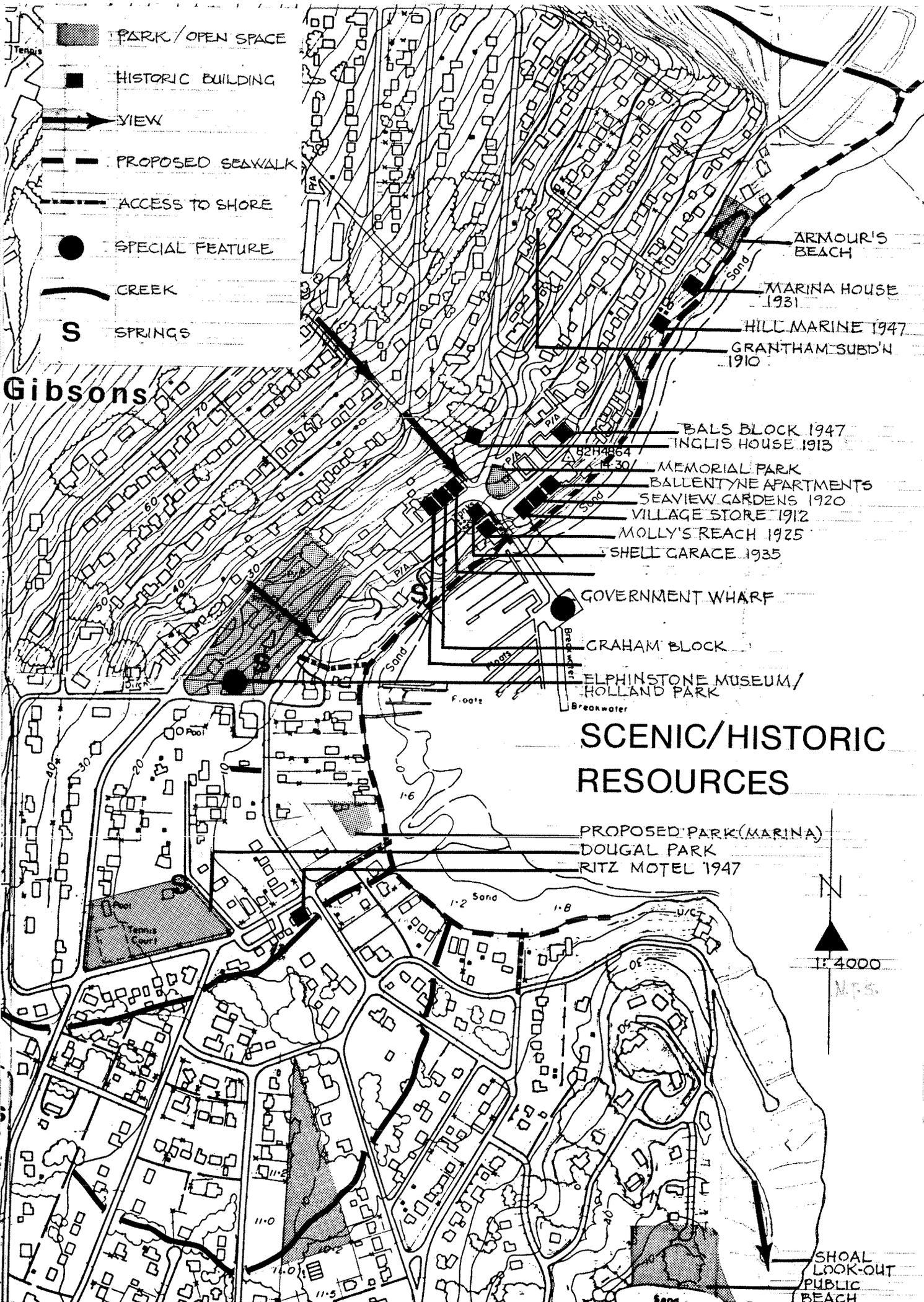
The Winegardens, Steinbrunners, Chamberlins, Chasters, Hopkins, Soames, Glassfords, Granthams -some of the families prominent in local history- had arrived by the 1900's to settle this stretch of the coast. They took work logging, shingle-bolting and fishing. Some worked in the city.

By 1905, when a group of Finnish settlers arrived, all the accessible land had been pre-empted and could now be obtained only through purchase of subdivided parcels. The Finnish families farmed on the plateau, "Gibson's Heights", where a store and post office were soon established. Their influence on the community has been widespread especially through the cooperative organizations and the social activities they promoted.

The country was criss-crossed with skid roads, first for logging fir, then for shingle-bolts. Some farms had cattle, sheep and chickens. Grouse, venison and salted salmon were part of the basic table fare. In the 1920's a cooperative jam cannery on the Heights was processing the profusion of berries harvested from the farms and hillsides. The plant operated for over twenty years. Products were marketed through W.H. Malkin Ltd., the company which supplied the former cooperative store at the Landing.

Commercial hand-trolling became established as a particular type of fishery during the years immediately following World War 1... A special type of boat, double-ended and narrow and deep for carrying into seas at an even rate between oar-strokes, was needed for the job. Fred Fisher and Roy Malyea perfected designs which met this requirement and which rowed easily.

..Between 1935 and 1950 almost every large fish company had a camp in Gibson's bay during the fall season, but gradually with the yield of Howe Sound lessening each year, most former gill-netters have left the seasonal occupation provided by fishing



■ PARK / OPEN SPACE

■ HISTORIC BUILDING

➔ VIEW

--- PROPOSED SEAWALK

--- ACCESS TO SHORE

● SPECIAL FEATURE

~ CREEK

S SPRINGS

Gibsons

ARMOUR'S BEACH

MARINA HOUSE 1931

HILL MARINE 1947

GRANTHAM SUBD'N 1910

BALS BLOCK 1947

INGLIS HOUSE 1913

MEMORIAL PARK

BALLENTYNE APARTMENTS

SEAVIEW GARDENS 1920

VILLAGE STORE 1912

MOLLY'S REACH 1925

SHELL GARAGE 1935

● GOVERNMENT WHARF

GRAHAM BLOCK

ELPHINSTONE MUSEUM/
HOLLAND PARK

SCENIC/HISTORIC RESOURCES

PROPOSED PARK (MARINA)

DOUGAL PARK

RITZ MOTEL 1947

N

1:4000

N.P.S.

SHOAL LOOK-OUT
PUBLIC BEACH

for more continuous employment.²

3.3 RESIDENTIAL AND COMMERCIAL DEVELOPMENT

The pattern of settlement at the Landing and many of the buildings to-day attest to its past history as a small coastal village spreading out from the main wharf. The richness of the history is shown in the "Scenic and Historic Resources Map" (opposite leaf). Kevin Ryan, a local architect, mentions in his thesis "The prevailing pattern being older homes on larger parcels of land sub-dividing with 2 or 3 new homes being built in close proximity."³ Single family homes predominate south of School Road. To the north side in the 12 acre plot subdivided by F.C. Grantham in 1910, most of the housing dates back from W.W.1. This pattern is changing as the older housing is being replaced by 3-storey apartment blocks. It is the cottage character of the older homes, however, which enhances the village atmosphere of the Landing.

The bluff and the hillside above the bay area are gradually being subdivided and built upon. The new homes in these locations tend to be higher-priced larger residences, reflecting the higher incomes of their owners. Development of the bluff has been frozen until such time as the town can provide adequate water and sewage facilities to the area. Development costs are prohibitive because of the bedrock base.

Commercial development continues to spin out around the bay from the Government wharf, along Marine Drive and Gower Point Road. Shops are generally small in scale and owner occupied. The potential for commercial expansion exists south along Gower Point Road towards the new marina development.

There are concerns among the business owners that with the continued expansion of the business district in Gibson's Heights, business at the Landing will stagnate unless some major development such as the proposed marina/hotel comes on stream.⁴ Tourism in the summer, especially on weekends, is a

² Peterson[1962:p.p.86-87]

³ Kevin Ryan, Thesis University of Edinburgh 1978 Part 1, p.14

⁴ The municipality has applied to the Department of Municipal Affairs for approval to expand its boundaries in the area of the industrial park on the Heights. The land is currently in the Agriculture Land Reserve.

major growth market for the Landing.

The town council has approved a set of design guidelines for developers to follow and for the town to assess projects.⁵ There is concern that developers, either local people or entrepreneurs from the mainland, "are out for the bucks and don't care about value."

3.4 EXPANSION

The growth rate of Gibson's Landing remained fairly stable until after 1945 when it began to increase. A recent article in the local newspaper stated "An interim population count released by Census Canada... shows that the Sunshine Coast may be the fifth fastest growing area in Canada...Gibsons has grown 23% to 2,562 (since the last census)."⁶

The nature of this growth appears to be founded on the discovery of the Sunshine Coast as a desirable place to live, within proximity to the city. Since employment is limited in the fishing and forest industries and the government/service sector, people who come into the community must have independent incomes or must have lower expectations and be prepared to be more resourceful.

An editorial in the Coast News of 11 September 1952 entitled "The Other Side" is enlightening. "Most of our residents here on the Peninsula have come here to escape the high taxation of Vancouver and District, 'to settle on small company pensions and army pensions'". The article expressed concern over the need of Gibsons' town council to increase the mill rate, which could hurt people on fixed incomes. Census figures at that time indicated Gibsons had a 'growing' population of 722.

Information being presented in the data base study compiled by planner Rob Buchan indicates a continuation of these trends. Buchan found that Gibsons had a greater proportion of both low income and high income population than the rest of B.C., but a lesser proportion of middle income population. "The retired population of residents over 55 years of age is 27%, compared to 17% in B.C. generally. This creates a larger demand for medical services, health care

⁵ Architectural Services. "Gibson's Landing Downtown Revitalization" in consultation with Rob Buchan Assoc. and the Pacific Landplan Collaborative Ltd. Village of Gibsons, 1982.

⁶ Sunshine Coast (B.C.) News 8 February 1982

facilities and public transportation."7 Buchan used the population estimate of 2,599 suggested by an Urban Transit Authority study. He figured Gibsons has a trading area of 8,300 counting residents from Roberts Creek to Port Mellon.

3.5 THE COMMUNITY

Most of the homes in Gibson's Landing are occupied by long term residents who have maintained their property and who take pride in their community. There is a high level of social commitment. These people wish to preserve the fishing village atmosphere of the area and do not want to see large scale projects for profit-taking ring the bay. Income levels appear to be lower than those for people who live in the newly developing suburbs around Gibson's Heights, which is middle income family-oriented. The people on the Heights generally do not have much to do with those in the Landing. This is noticeable also by the bars to which residents gravitate -the Cedars for the upper settlement and Gramma's for the Landing area.

The Landing is home to approximately 30 staff of the CBC Beachcomber series, which projects an image of folksy, small town soap box drama. The Landing has also become home to many artists and craftsmen and hippies, "the funky types" as one resident has characterized them. They are drawn to the atmosphere of the Landing, which can provide cheaper accommodation than elsewhere, and often temporary work on the Beachcomber set or in restaurants. They contribute to the large transient population which is in flux between the city and the peninsula and are generally renters as opposed to home owners. People always return I was assured by one interviewee.

There is little mixing among the three dominant groups in town, the millworkers, the "funky types" and the civil servants, though occasionally a hippy will find work in the resource sector. The civil servants and to some extent the millworkers have more stable incomes, but they also suffer the effects of a recession more as they have a higher standard of living to support.

Two other groups comprise the community. The senior citizens who have just moved into their new hall on Harmony Lane, are actively engaged in many community functions and issues involving the town. The business/ service sector is organized through the Board of Trade and the Chamber of Commerce. The focus is, essentially, the promotion of tourism

7 Coast News 25 January 1982.

in the area. Expansion of tourism will create a larger service sector which will be drawn from the Landing people.

The comments of one long time resident Wiljoe Wiren on the present trends reflect the changes Gibsons has undergone, "Nobody is making a living off the land [now]. What do people do for a living? They wait on one another."

3.6 THE MUNICIPALITY

Four aldermen are elected for a three year period to form a decision-making body for the town, presided over by a duly elected mayor. A town manager and a municipal planner advise council on matters relating to their respective areas of jurisdiction. The town manager of the past ten years, Jack Copland, resigned in September to join another municipality. His high profile in influencing past decisions has resulted in mixed reactions from the public. Recently Lorraine Goddard stepped aside as mayor to fill this vacancy, and Larry Labonte, a Gibson alderman, was elected mayor (November 1983).

The subdivision approval process within Gibsons' boundaries is carried out by the town, who must then refer any projects of regional significance to the appropriate provincial authorities. The Department of Highways is the collection house for subdivision approvals regionally. These applications are sent to Burnaby, the central office of the Lower Mainland, for approval.

There has been some concern that the town's enforcement of bylaws and the bylaws themselves are more lenient than those of the Highways Department.

The B.C. Land Use Act drew fire from the community when it was proposed. "Of major concern is the power provided the Minister of Municipal Affairs of more than 50 ways to overturn municipal decisions, and the near absolute authority being given to the Cabinet's Environmental Land Use Committee (ELUC) to handle regional planning matters... Municipal planner Buchan's comment was 'This is a potent piece of legislation and could result in a very serious loss of local control over planning functions.'"⁸

One of the on-going problems is the monitoring of the foreshore which the municipality as lessee and tenant must be responsible for. No dredging or construction is permitted without prior consent of the Minister of Lands, Parks and

⁸ Coast News 1 March 1982

Housing. There have been a few cases in the past year of people constructing seawalls along the foreshore to protect against erosion, to the consternation of the province.

3.7 SOCIAL FACTORS

At a workshop on problem solving led by Joan Cowderoy and Gloria Lifton,⁹ problems in the community requiring top priority were designated as follows:

1. inadequate cultural and recreational facilities of all kinds,
2. isolation, lack of mobility, problems of accessing goods and services for non-driving groups (seniors, handicapped people, youth),
3. lack of services for people in crisis,
4. teenage vandalism, alcohol and drug-related problems.

Although there are other problems cited, it is important to discuss some of the points mentioned. The need for cultural and recreation facilities has been brought up previously. The town council has called for proposals for a new cultural center to be located in Gibson's Heights, as part of the community recreational complex. However there is a need for facilities in the Landing which are accessible to all groups (the second point) and which can also be for visitors. A theatre proposal for the Landing has been promoted by many people for years, but lack of funding and suitable land caused its demise. There comes a period of "burn-out" to citizens who have worked ardently for such causes.

The fourth point above needs some expansion. Many young people stay in the community after high school graduation. As there is little work available locally, many are unemployed or working part-time at menial tasks. Without any sense of power or commitment, they resort to acts which bring them into contact with the law. The provision of more meaningful work and a voice in decision-making would help this group.

⁹ Coast News 7 June 1982

Chapter 4

THE ECONOMY: FORESTRY AND FISHING

4.1 THE FOREST INDUSTRY

Forest production is the primary industry of British Columbia, with mining and fishing following the lead. The economy of Gibson's Landing derives from these industries: lumber and fishing have provided the base since early settlement.

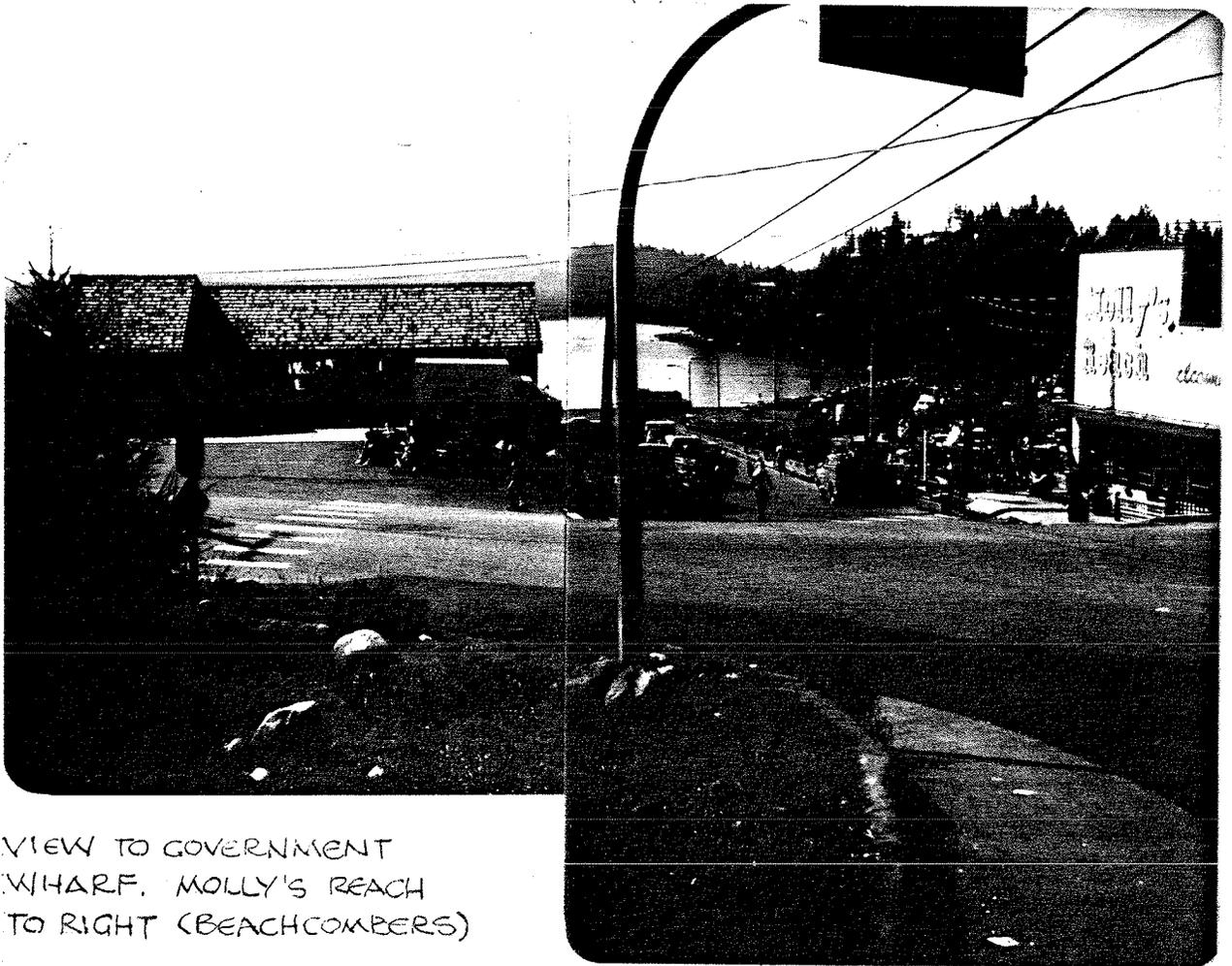
In the early stages of the industry timber was only cut along the shores in the broader valleys and on the general slopes. The growing demand has caused more extensive exploration in the less accessible areas, and the cutting is extending farther inland each year...The logs are carried to tide-water by small railways and log chutes, where they are collected in booms and towed to mills at Vancouver and elsewhere along the coast. In some of the valleys long flumes have been built along the creeks for the transportation of cedar shingle bolts.

The principal commercial woods are the Douglas fir (*Pseudotsuga douglasii*) and the Western Cedar (*Tsuga gigantea*). The following species also occur in greater or less abundance in this region: spruce (*Picea sitchensis*), hemlock (*Tsuga mertensiana*), yew (*Taxus brevifolia*), white pine (*Pinus monticola*), scrub pine (*Pinus contorta*), yellow cypress (*Thuja excelsor*) and alder (*Alnus rubra*).¹⁰

As the hills surrounding Gibsons were cut back, residents travelled north to Port Mellon for work in the pulp mill (the oldest in British Columbia).¹¹ When the highway was extended to the plant in 1954, workers commuted daily. The

¹⁰ O.E. Le Roy, "Preliminary Report on a Portion of the Main Coast of B.C. and Adjacent Islands", Department of Mines, Geological Survey Branch. Ottawa, No. 996.

¹¹ Source: Elphinstone Pioneer Museum. A 1912 photograph of the old mill and wharf is found in Peterson's book[1962].



VIEW TO GOVERNMENT
WHARF. MOLLY'S BEACH
TO RIGHT (BEACHCOMBERS)

mill, as the sole largest in the area, has continued to provide yearly employment subject to the fluctuation of world markets and labor strife. "About 40% of Canfor's locally produced pulp goes to Europe, 40% to Japan and 20% to South Africa, Australia, China and Korea...Canfor was forced to maintain its 1981 contract price of \$545 per ton during 1982, resulting in substantial monthly losses. The company has been able to survive because of its diversification of interests during the past 10 years".¹²

The Canfor payroll provides for a degree of economic stability to the town. The company was able to maintain their level of employment during the recent recession by freezing the wages of senior officials and limiting increases to its salaried employees. Canfor's annual payroll was expected to reach \$21 million in 1982. Employment was listed at 510.

Canfor expansion for future improvements costing \$76 million was announced last year. It included upgrading of facilities, new storage and handling, office renovation, pollution abatement and a new bleached pulp storage tank. Work to begin in the fall of 1983 would provide 300 additional jobs and have an immediate impact on Gibsons.

4.2 COMMERCIAL FISHING

The commercial fishing industry is made up of 40 vessels employing 200 people and bringing in a revenue of \$8 million.¹³ Although it is possible to catch bottom fish (flounder, sole, rock cod, etc.) and shrimp all year, the major operations take place from May through July when the prized chinook and other species of salmon such as coho, sockeye and chum are running. Herring roe fishing has a 22 day season in March. Though prices have fallen (\$12-\$20 per pound), it is still a lucrative market with the Japanese.

Two of the boats in dock, including the Twin J owned by Dan Strom, pack salmon and rock herring to markets in Vancouver and Blaine (Washington State).¹⁴ Strom's boat is equipped with a special brine facility and freezer for maintaining fresh fish at 30 F. The Twin J is also one of 6 boats from Gibsons licensed to fish halibut; a season of two 12 day periods, north of the Queen Charlotte Islands. There is much competition with American boats especially as no

¹² Coast News 29 March 1982

¹³ Coast News 11 January 1982

¹⁴ Dan Strom, interview 16 December 1983

treaty has yet been signed to regulate the fishery.

One other major fishery in northern waters is the black cod. The Ocean Pearl with 24 crew and the La Coche with 12, are out 6 to 8 months during the season. Black cod at \$.80 to \$1.00 per pound and halibut at \$1.20 per pound offer the highest return, except for roe and direct sales of shrimp to the public.

The fishermen's union is expecting to be granted the right to process fish on board, allowing direct sales to the public. In this event, boat owners like Dan Strom would have to realize sales of \$100 per day to cover expenses, including \$50 per day insurance.

Depletion of the fish stock has become a serious problem for species such as halibut, chinook salmon, and more recently herring. The Department of Fisheries and Oceans notes of the declining chinook

Of immediate (and critical) concern is the drastic decline in salmon stocks of B.C. Chinook salmon, particularly, face a perilous future because of habitat degradation and overexploitation. No one fishery can be held responsible for all the damage. Most chinooks are taken in the commercial troll fisheries of the U.S.A. and Canada, and by net fishermen. Some 21 percent are taken by recreational fishermen in both tidal and non-tidal waters. In addition, chinook are also harvested by native food fisheries during upstream migration. The number of chinook returning to spawn has steadily declined over the last ten years by an average of 6 percent per year. With spawning numbers less than 50 percent of the optimum required (and still falling) the future of the wild chinook is seriously threatened.¹⁶

Conservation measures limiting the harvest and the season are in effect. "It is hoped that these measures, combined with active programs of enhancement and habitat management, will help to stem the decline and begin to build these stocks back to strength again."¹⁷

There is a growing market in fish farms. The farms provide fresh fish year round and ameliorate the situation of stock depletion. Norway and other European countries who

¹⁶ Ministry of Fisheries and Oceans. 1983 British Columbia Tidal Waters Sport Fishing Guide p.2

¹⁷ Ibid

formerly bought Canadian fish stock have now built up a fish farm industry, leaving Canada to find new buyers. There are at present 450 operating salmon farms in Norway and only 7 in B.C.¹⁷

The trend in the fishing industry is for larger, more seaworthy vessels which can be more competitive on the open ocean. The boats employ more people, but their number has remained relatively constant. Currently there are no canneries set up in Gibsons to process fish for the market.

Both of these primary industries, fishing and lumbering, have seasonal employment patterns resulting in long periods of unemployment over the winter. Brent, a 25 year old fisherman who has been on the coast for six years, survives the winter living on unemployment, a situation typical of most people in these occupations.

¹⁷ The Press 13 December 1983 (statement by Oddvin Vedo, Economic Development Commissioner, S.C.R.D.)



At Govt Wharf, Gibsons Summer 83 RCB.

Chapter 5

MARINE ACTIVITY

Gibson's Landing has the only harbor from Horseshoe Bay in Howe Sound to Pender Harbor on the Sunshine Coast. It is a main refueling stop for craft travelling up the coast. During the boating season it is a well-protected bay. In winter it suffers from exposure to storms originating from the northeast out of the Squamish Valley.

5.1 EXISTING FACILITIES

The Government wharf provides permanent berths for approximately 30 fishing vessels, as well as temporary docking facilities for large ships (navy boats, cruise ships, coast guard vessels, tugs, etc.) and an assemblage of smaller craft. There is also a seaplane berth. All summer long the floats are crowded with small boats tying up 2,3 and even 4 abreast. Normally 100 small craft can be accommodated at the 3 floats.

Electrical hook-ups are available on the floats. Fresh water is not as easily accessible as there is only one tap. As for sewage, the bay is the repository.

The two private marinas, Smitty's and Hyak, have the only service floats for marine traffic. Berths are assigned on a permanent basis. There is limited overnight docking. Most of their trade is with local boat owners going sports fishing. Boats from Vancouver stop here on their way up the coast to refuel and stock herring bait, ice, food and drink. Services are available year round, but June to September traffic is heaviest.

5.2 THE NEW MARINA

For the past 10 years the village has been engaged in promoting a marina development. The cost of such a project has been prohibitory; private investment was not forthcoming, so the onus has been on the village to arrange the necessary financing.

The marina is to be built under the auspices of the Marina Assistance Program, through the Small Craft Harbors Branch of the Ministry of Fisheries and Oceans. "The marina policy is to encourage the development of additional public facilities for recreational boaters, and in particular, those who might be classed as tourists...The Federal Government may build breakwaters and/or perform initial dredging in the harbor public areas, provided the developer will establish onshore facilities of equal dollar value"¹⁸

"The basis of building the marina is to ensure that capital costs will be self-liquidating and the marina will begin to earn money for the village within 3 years of operation. Total cost of the project was estimated at \$1,660,000 (1979)...Gibsons was to contribute \$830,000 on a 50-50 cost share".¹⁹ Costs since then have more than doubled. The B.C. Government is expected to contribute \$400,000 from the lottery fund. Gibsons had planned to finance the marina expenditures through sales of undeveloped municipal properties, but because of the recession, revenue has been reduced. Consequently in June 1983 the town called for proposals from private developers to undertake the marina development.

Armour's Beach had been discussed as the possible site for the proposed development, but higher breakwater costs at that location made the bay site more attractive. Consultants determined that a 438 berth marina was required, to be located in the central area of the bay, by dredging the flats.²⁰

This location appears to be more fragile than the former because of the impacts to the biota of the bay. Conclusions of the Environmental Assessment Review Process Study(1977) are "The longshore geo-hydraulic drift or flushing action of the bay must not be interfered with (a current flowing south to north). Avoid total disintegration by extreme dredging of the indigenous micro-habitat on the tidal flats and

¹⁸ Ryan[1978]

¹⁹ Coast News 11 January 1982

²⁰ P. Eby and Associates, "Feasibility and Benefit-Cost Evaluation of the Proposed Gibsons Marina", May 1979.

marshes. These occur on the south shore of the bay. The report favors a marina done under strict controls, maintaining the diverse nature of the bay".²¹

In the 1979 referendum, 67% of Gibsons' residents voted in favor of a municipal marina. However there has been opposition to the project by waterfront residents. Pollution, noise and loss of privacy are being cited as negative aspects. At a meeting on rezoning for the bay, attended by 40 local property owners, objections were raised to any large-scale commercial development in the bay area. They were in favor of a "class" marina. Rezoning the area from CDA and R-1 to CM-2, a marine zoning, would allow hotels, motels, commercial and light industrial development such as gas stations, boat repairs, etc. Multi-family residences are also allowed.²²

A new breakwater was built in the spring of 1982 at a cost of \$1,366,610 as the first phase of a federal program.²³ It upgraded the Government wharf, a responsibility of the Ministry of Fisheries and Oceans. Another rock mound breakwater is under construction at this time (January 1984), to protect the entrance to the harbor and the bay areas where the new marina is to be built. There has been concern for the eel grass at the site as the "best location for dredging is right on top of the eel grass".²⁴ Eel grass is an essential link in the food chain and is to be transplanted to another site. The intention is to cause least impact on the biota by dredging from October to January.

Carina Enterprises has an agreement in principal to lease land from the town to build a 381 berth marina and an 80 room hotel on adjacent land.²⁵ Art McGinnis, a spokesman for Carina said "It's going to change the whole economic base of Gibsons...It will revitalize Gibsons".²⁶ Construction and spinoffs will create 131 jobs in the year it will take to build the marina and hotel. Cost of the marina is set at \$1.1 million, with a 28 year second rebuilt. Moorage fees will be \$2.70/ft./mo., launch fees \$4.00 plus \$1.00 for trailer parking.

²¹ Ryan[1978]

²² Coast News 11 January 1982

²³ Coast News 22 March 1982

²⁴ Council meeting 2 August 1983

²⁵ Planning meeting 17 July 1983

²⁶ The Press(Sechelt, B.C.)2 August 1983

Sitting at outdoor picnic table
Graham: Looking up at street
property.

July 30/9 Gibson. RCB.



Page 90
Graham
RCB

Chapter 6

TOURISM AND RECREATION

6.1 DESTINATION RESORT AREA

A visitor to the Sunshine Coast in 1952 extolled the beauty of the area, saying that people should decide what to make of the District

If tourist trade is to be the chief aim- there should be facilities on land and sea: there should be plenty of boats available for both fishing and pleasure (and guides for fishing). Perhaps there could be riding horses and bicycles for rent and paths for those sports and hiking- also a youth hostel. Salmon and other sea food should be available. The District should produce more of its own food.²⁷

The writer suggested several ways to enhance the natural beauty including maintaining more treed areas and cultivating lawns and gardens.

At the Sunshine Coast Regional District meeting July 14, 1983, a motion was discussed to have the Sunshine Coast designated "Destination Resort Area". This status would necessitate the expansion of services including Sunday opening of commercial sectors, and the granting of additional liquor licenses. At present Gibson's Landing is the only commercial strip in the region with Sunday opening. It is also the first business area that visitors approach coming along the coast from the Langdale ferry terminal.

While the S.C.R.D. is now affirming its position regarding tourism, Gibson's Landing has for many years recognized tourism as an important business focussed on the marine development. Some regard the scenery as the special feature; others come to fish or to be photographed in front of Molly's Reach or the Persephone of Beachcomber fame. This CBC series has brought reknown to Gibsons both nationally and abroad, as the program is now viewed in 26 countries.

²⁷ Coast News 23 October 1952. Letter to the editor by R. Bates, Illinois, U.S.

6.2 SUMMER RESIDENTS

Steam boats brought the early mainland visitors to their summer cottages along the coast. The "Daddyboat" came Friday night- so fathers visited with their families over the weekend. A community was established among these temporary residents, who would share the beach together every summer. They rarely went into Gibsons and then only to shop.

"From the earliest years the inhabited territory consisted of a single line of homes occupying lots running several hundred feet back from the beach. Basically, this pattern has not greatly altered throughout most of the coastline".²⁸ Granthams landing (between Gibsons and the Langdale ferry terminal) was a more concentrated summer place. Now nearly all the residents are permanent- a trend that seems to have occurred in all the older cottage areas.

Many of the parents have retired and are now located permanently on the Sunshine Coast. Martha, whom I met on the beach with her young daughter one sunny day, has relocated here, and occupies the summer home of her parents, who have been regular visitors for 25 years.

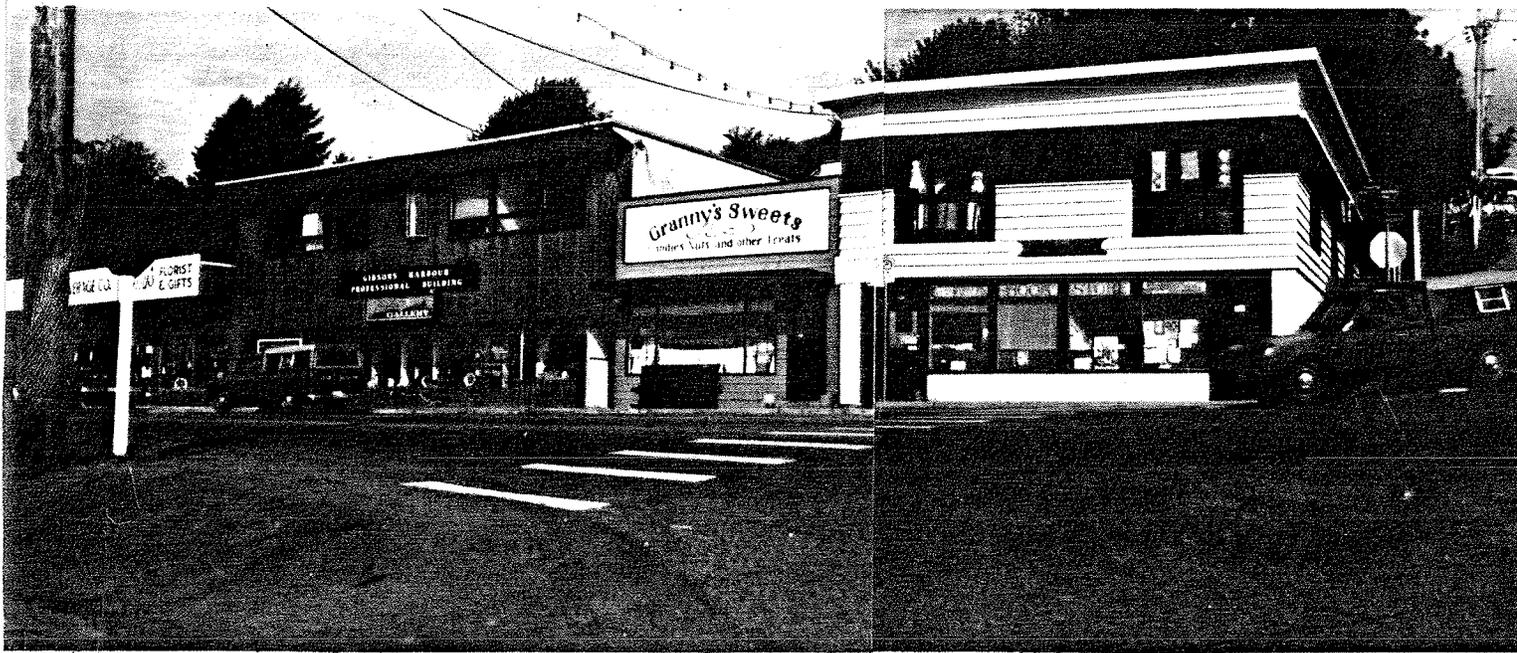
Their house is on Chekwelp Indian Reserve, adjacent to Marine Drive, on the boundary of Gibson's Landing. It is the intention of the Indian band to terminate the leases of the summer residents when they expire in 1990, and to develop the property. There are no fixed plans as yet, but such development could have impact on the Landing.

Many families from the mainland have summer cottages along the beach to the west of the town on Gower Point Road. As at Grantham's Landing, the trend is toward permanent residences as more summer visitors become established year round.

6.3 WEEKEND TOURISM

Weekend visitors during summer months create a continuous stream from Marine Drive down to the wharf and up to Gower Point Road shops. Live music, craft displays and food services out on the Government wharf were initiated on Sundays during summer by the Centennial Society. This activity provided more interest for residents and visitors, but rain occasionally dampened the scene. From 100 to 200 people per hour cross this busy intersection, and during the Sea Caval-

²⁸ Peterson[1962,p.98]



SHOPS ON COWER POINT ROAD

cade weekend, these numbers again doubled.²⁹ Weekday pedestrian traffic is generally less than 100 persons per hour. Cyclists are becoming more noticeable as the sport embraces more enthusiasts. I have recorded many individual cyclists plus a few groups of 10 to 12 .

6.4 BOATING AND SPORTS FISHING

Gibson's Landing draws a large number of visitors all summer, and while many travel on up the Sunshine Coast, others come here specifically for sports fishing and boating. These people may have boats berthed in the harbor, or may be bringing them in to launch. Much of the traffic is from over-nighters from mainland marinas who continue up the coast for a weekend sail.

Others take one of the private charters available: the Alibi Wahoo, a 58 foot 10 ton streamlined yacht (formerly an east coast rum-runner) or the Moonfleet, a sturdy smaller craft built for fishing and salvage operations. Smitty's Marina also has a couple of boats for charter. The charters are out continually during summer. Many of the charter customers are Americans.

All 5 species of salmon indigenous to the coastal waters may be taken in sports fishery. Only chinook and coho may be taken in the fresh waters: pink, chum and sockeye may not be taken. Sports fishing closures for salmon are in effect from July 18 to September 18 in Howe Sound to the Langdale terminal. Regulations permit a seasonal bag limit of 30 chinook yearly. Daily catch limit in tidal waters as of 13 December 1983 "is varied from 4 to 2".³⁰

6.5 TOURISM DEVELOPMENT

Business owners favor increased tourism, but some townspeople are against it because of the changes it will bring. "If businessmen had their way, this would be a tourist resort area, a bay ringed with hotels and casinos". Jon McRae, a local real estate promoter, sees the area developing for commercial tourism. He anticipates the commercial strip expanding along Gower Point Road to the Ritz motel. The Ritz, the only accommodation on the bay, is up for sale right now. Other accommodation is available in Gibson's Heights along

²⁹ See pedestrian counts, Appendix

³⁰ The Press 13 December 1983

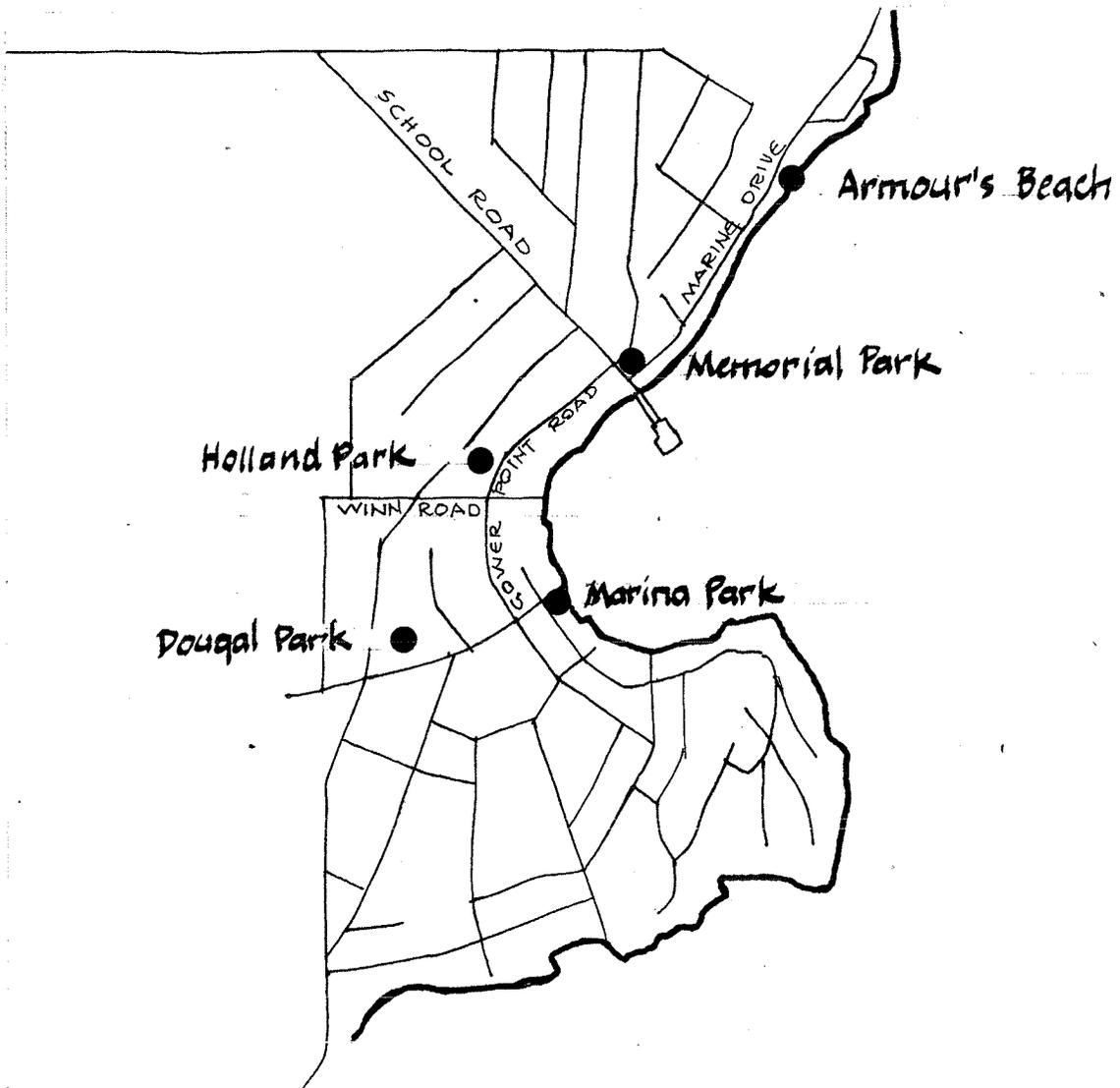
Highway 101.

Jon McRae is promoting the 80 unit hotel to be built as part of the new marina package (privately financed). It is to contain health club facilities, banquet and meeting rooms, swimming pool, convention facilities and underground parking.

George Gianakos, the owner of the Omega building, is undertaking construction of a 68 unit 3 storey hotel adjacent to his property on the bay. The foundations are in, but the project has been on hold over the past year, due to financial constraints. Gibsons' council has recommended that the new facility conform to Gibsons' downtown revitalization guidelines.³¹ Access to the harbor is one of the requirements. Because sufficient parking space will not be available for the project, it was suggested that Gianakos contribute \$1,500 per parking space toward a city-built parking facility. It is the owner's intent to build in 2 phases, with 34 rooms to be finished within a year.

The town of Gibsons, through the Guidelines, is attempting to improve the Landing area. The council's position is supported by several business owners who feel that more can be done to encourage tourism, such as building the seawalk around the bay and cleaning up and beautifying the waterfront. Many want the "fishing village" atmosphere to be preserved.

³¹ Architectural Services[1982]



Chapter 7

OPEN SPACE AREAS/PARKS

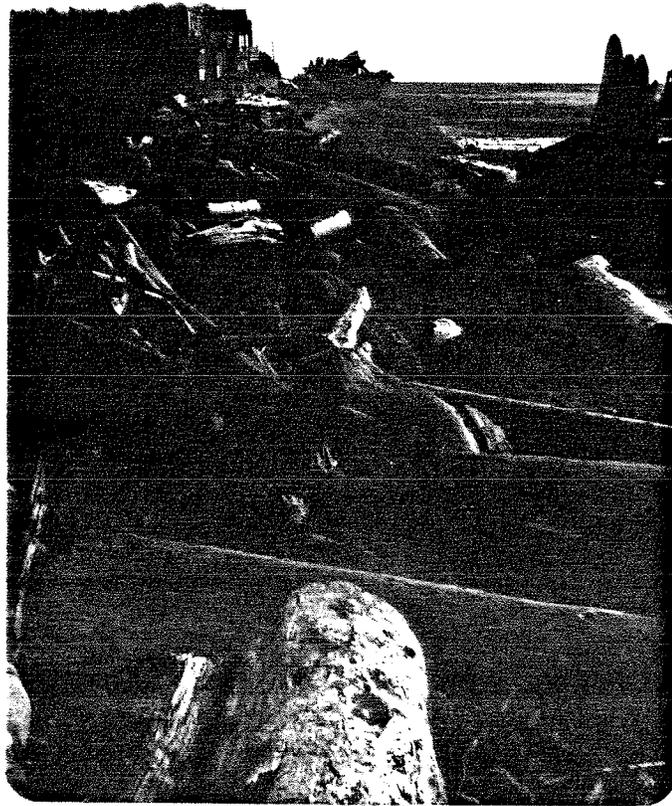
There are several open space areas within the Landing which I wish to consider in more depth in this study. I am including a description of Armour's Beach, Cemetery Park (Memorial Park), Holland Park and Dougal Park. The proposed park within the new marina should be linked into the open space system, and I shall incorporate the information that is now available concerning it.

7.0.1 Armour's Beach

This recreational area near the northeast boundary of the village provides direct access to the waters of the bay. The steeply sloping hillside has a service road cutting down to the lower bank (originally to service the bay sewer line). Pilings hold the floats and log enclosures from where the residents, mainly teenagers and children, can play. Part of the beach has been cleared of rock and driftwood. The area is subject to tidal variations of 5 meters, leaving the floats on the silty flats in low tide.

There is little provision for parking as the top of the slope fronts directly onto Marine Drive. There are rock retaining walls either side of the service road, to hold back the grass-covered hill. Two small buildings are on the site, a shed near the top, and one near the bottom, both apparently unused. Peterson makes reference to the site in his book [1962 p.93] "a municipal hall was built on a park site on the waterfront just south of the Armour property in 1947".

Residents have shown strong support for maintaining a swimming pool here. A 25 meter filtered saltwater pool has been proposed in the development of recreation facilities for the park.



DRIFTWOOD AT ARMOUR'S BEACH.



MEMORIAL PARK... HARBORING RICH HISTORY

7.0.2 Memorial Park

This plot, at the junction of Marine Drive, Highway 101 and School Road, served as the Gibson family cemetery. A small Methodist Church built in 1910 used to stand on the corner, to the south of the cemetery.³² It was later renamed Gibson Memorial Church. The property was deeded to the village of Gibsons with the understanding that the cemetery would be maintained. This has become a problem, for both the cemetery and the adjacent washrooms have been vandalized so greatly that the town closed the latter and has not remounted the cemetery plaque. I passed by the site for several weeks without knowing it was harboring such rich history. Town manager Goddard feels that there should be constant surveillance of the washrooms. She suggested adding a tourist information center as part of the park.

This particular site is one of the most important public spaces in the Landing: it is at the busiest intersection and it commands one of the best views of the Government wharf. It could be a focal point or target area from several directions. It is also, unfortunately, littered and down-trodden.

There are a few evergreens planted in an undesirable location to obstruct the view to the wharf. Grass and shrubbery are the ground cover. There is a public parking lot, part of the site of the nearby Bank of Montreal, adjacent to the northeast side on which the washrooms are aligned. The rock walls of the washrooms appear to be in good condition and are attractive to view.

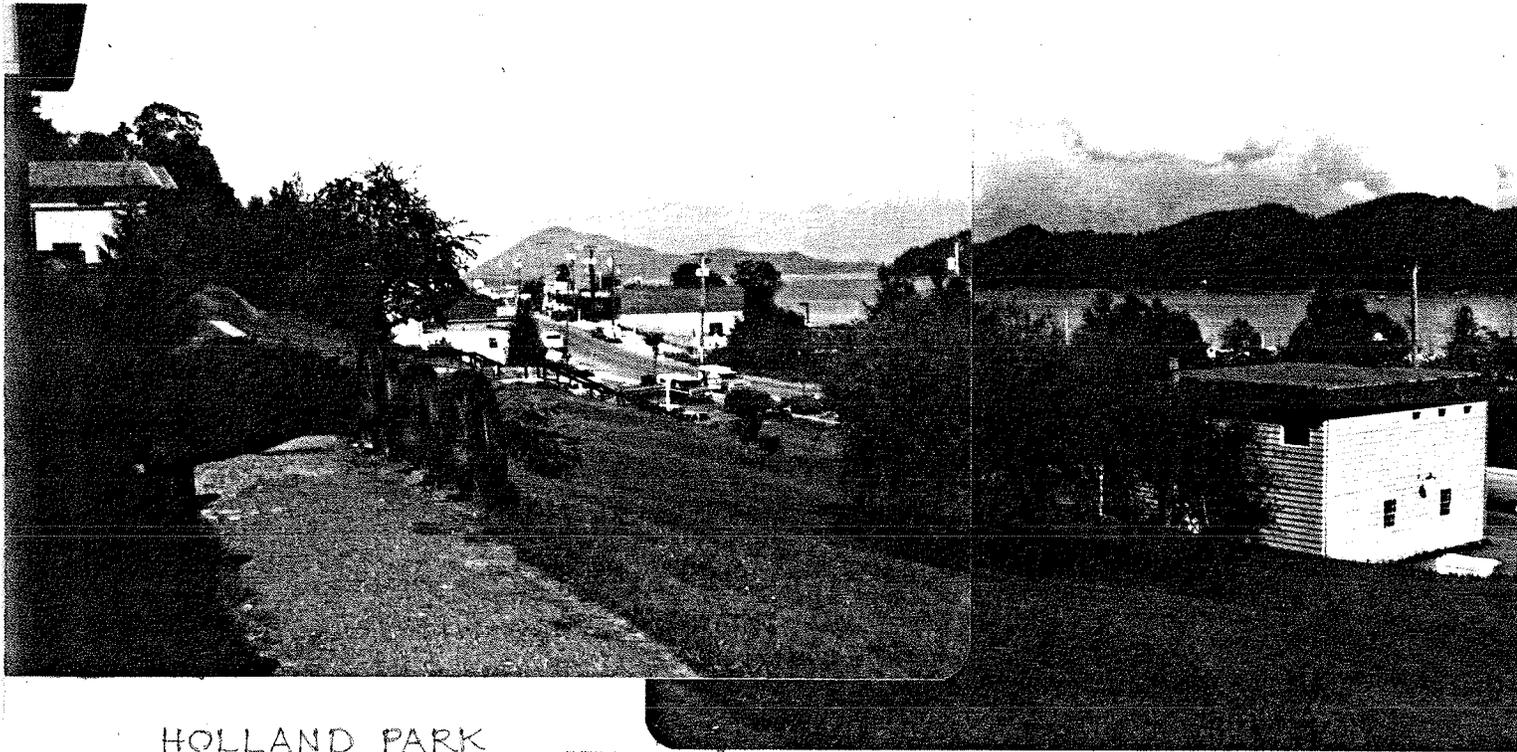
7.0.3 Holland Park

The largest and most prominent of all the open public spaces in the Landing, Holland Park is the location for the Municipal offices, School Board, District Health Unit, Library, Museum, Fire Hall, and the Motor Vehicle Branch. Access and parking are along South Fletcher Street at the top of the slope, and for the Motor Vehicle/Museum building, off Winn Road. Public parking for the commercial area has been developed downslope along Gower Point Road.

The site has always been unique because of the cold water springs flowing out of the lower bank into two ponds, visible only from upslope.

32

See photograph of Gibson's Landing circa 1912, in Peterson's book[1962]



HOLLAND PARK

... A SLOPING EXPANSE OF GREEN... (VIEW TO HOWE SOUND)

The firehall building is about to lose its occupants as a new one is being built on the Heights. A committee is to make recommendations on the future of the hall.

There is an incongruous mating of the Motor Vehicle Branch with the Museum. The Museum is in dire need of room for expansion to handle its various types of displays and to provide educational services as a regional facility. The Museum's role as a tourist feature could be enhanced through greater visibility and increased concentration on the marine features.

This park is the most significant public space in the Landing, and in treating with it, the various functions that are associated with the space must be respected. As it is now, it is not well-utilized as a public space, it is not inviting to walk through- there is total exposure. The most important feature of the site, the natural springs, are not obvious to the public from the main route, Gower Point Road. The park serves only as a display base for the imposing civic buildings on top. The stairway in the central space seems abandoned between an asphalt strip at the top and a parking lot at the bottom. There is great potential to be realized in creating a more inviting and better-utilized space.

One other concern is the dichotomy of the commercial sector and the park -the division is abrupt. It signals the end for the pedestrian promenade as the street focus terminates.

7.0.4 Dougal Park

In 1945, St. Bartholomew's Anglican Church leased the Dougal property for a community playground.³³ It has continued to be maintained by the town as such. It contains some colorful play equipment (swings, poles and slides) against a rather bleak environment of dying grass and gravelly patches. There are a couple of tennis courts to the west side, separated by evergreens. Kinsmen Hall is to the rear of the central open part which serves as a baseball diamond. The hall is an innocuous building of dark green stain.

The park contains ample space, but it requires more greenness, more vegetation, water elements, and places to hide. Here the opportunity exists to use Alder Springs on the north boundary, as a dynamic element in the park.

³³ Museum archives, A38

There is also the opportunity of creating a direct link to the new marina down the street. In his thesis, Ryan has stated "The establishment of a boulevard will help segregate traffic and pedestrians, tying the Charman Creek greenbelt, Dougal Park and the Marine Park into a continuous Park-pedestrian link".³⁴

7.0.5 The Marina Park

As part of the new marina development in the bay, the Gibson Council required that a small park with picnic facilities be built. The developers, McInnis and McRae, have described the park as an "all season's concept".³⁵ It is to have a hard paved surface for rapid run-off, "probably paving stones". The seawalk is part of the proposal. As more information becomes available, it will be important to determine how the park is to be used and how it will relate to the marine environment.

³⁴ Ryan[1977 p.30]

³⁵ Planning meeting 18 July 1983.



PROPOSED REGIONAL TRANSPORTATION ROUTES
SOURCE: B.C. DEPT. OF HIGHWAYS.

Chapter 8

TRANSPORTATION

8.0.6 Sechelt Highway

Highway 101 connects Gibsons east to the Langdale ferry and west to the Sunshine Coast. Most of the ferry traffic comes through the Landing on this route, first narrowing along Marine Drive, then turning hairpins up to Gibson's Heights. The turns are treacherous for truck trailers and for the sleepy drivers who occasionally fail to negotiate them. The Department of Highways has been promoting a bypass system for several years, but it may be several more years before politicians commit funds for this project. This new coast highway would be a collector and would bypass the Landing [refer to map opposite].

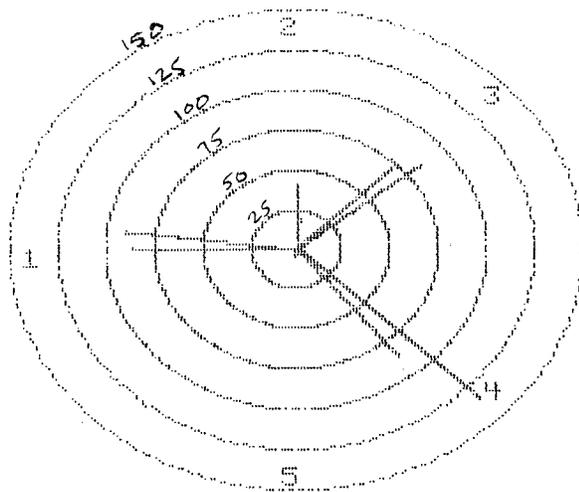
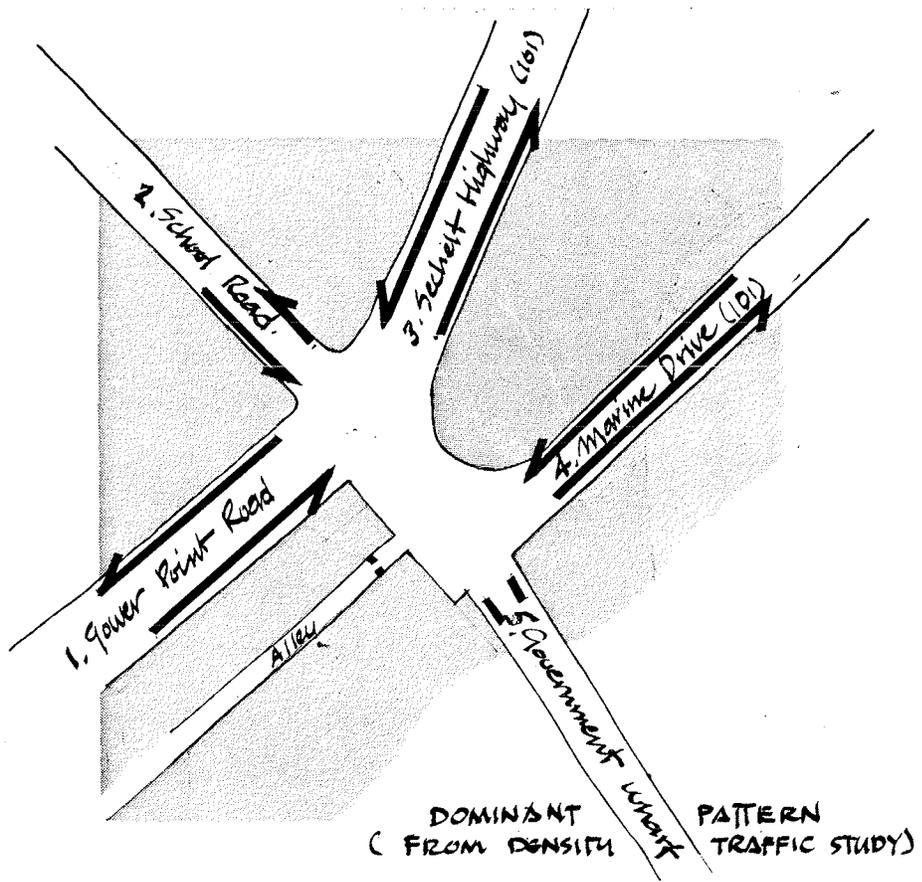
Another major project which has been discussed for many years is the building of a highway around to Squamish to join the mainland route. This would permit people to drive all the way to the city instead of taking ferries. At what point this route would be feasible may be determined by the escalating costs of ferry travel.

8.0.7 Density Traffic Study

The most heavily used part of the road network in the Landing is at the junction of Highway 101, the Government wharf, Gower Point Road and School Road. I selected this intersection to do a traffic analysis during July and August of 1983. Data has been tabulated for 56 one-half hour periods at varying times through the day and week. Vehicle, pedestrian, bicycle and motorcycle traffic was recorded: for vehicles and motorcycles I took note of directionality, for pedestrians and bicycles, a single passage in any direction was recorded. Data is available on request.

Conclusions:

1. Incoming ferry traffic amplifies the regular traffic count to between 100-140 vehicles per half hour on Marine Drive, the most heavily trafficked road because of this. Peaks are northbound Thursday to Monday and southbound Friday P.M. and Sunday.



17 JULY 12.00-12.30

Density traffic study : 1 of 56 data sets, 1983.

2. Sechelt Highway(101) has the second highest traffic flow, slightly less than Marine Drive. Friday and Saturday northbound traffic is heavier on Highway 101, whereas on Sunday, it is heavier southbound indicating the impact of weekend traffic from the mainland. There is also a northbound surge on Monday, probably for business. More than half the ferry traffic on Marine Drive continues up the Sechelt Highway.
3. Gower Point Road appears to carry an average density similar to Sechelt Highway, but the patterns are different. There is a more constant flow in contrast to Sechelt Highway, which has peaks reflecting the outgoing ferry traffic. Both roads carry increased density with the incoming traffic. Weekday densities during the study were 55-70 vehicles per half hour; weekend densities were 65-90 per half hour.
4. Traffic flow rates decrease after 5:30 P.M. for all roads.
5. School Road downhill traffic flow is approximately half the regular traffic flow of Gower Point Road or Sechelt Highway. The uphill rate is even less- about two-thirds of the downhill flow. There appears to be more local use of this road; usage remains constant throughout the entire week. Traffic on the downhill run increases slightly on Friday and Saturday.
6. Wharf traffic is light in comparison to the other roads: 10-15 vehicles per half hour with an increase between 4:30 to 6:30 daily, the time when Gramma's bar is active. There is also an increase of traffic on Fridays and Saturdays.
7. Motorcycle traffic, while not that significant compared to vehicular traffic, doubles on Saturdays and Sundays. This pattern suggests recreational use of the bikes. The wharf is a favorite stopping place. There are the occasional groups of 4-6 motorcyclists, but most travel individually.
8. The alley between Molly's Reach, back of the Shell station, is confined mostly to CBC vehicles for the Beachcomber production and to Shell service trucks which refuel from the storage tanks in the alley. A few cars continue down the alley to park.
9. During Sea Cavalcade weekend(July 29-August 1), the village experienced the heaviest traffic flows, up to 150 vehicles per half hour on Marine Drive and 100-200 pedestrians in that time period.

10. Pedestrian traffic is indiscriminately free-flowing across Marine Drive and Gower Point Road. Little use is made of the crosswalk at Sechelt Highway and School Road. There is nothing of interest to attract people to that corner. The interface between pedestrians and cars at this intersection is often precarious.
11. Pedestrian traffic increased greatly during weekends, with counts of over 150 per half hour as compared to less than 100 during the week.
12. Note: pedestrian counts are difficult to make during times of ferry traffic. Counts may therefore be on the low side.
13. Bicycle traffic is relatively low on a daily basis. The Sunshine Coast seems to be a destination area for some bicycle clubs, however, and groups of cyclists have been observed on weekends(one tour numbered 11). Approximately 6-8 per half hour were recorded on weekends.

8.0.8 Parking

Providing adequate parking for the Landing's commercial area has been an ongoing problem. The parking available along Gower Point Road and Marine Drive is not adequate to provide for the numbers of vehicles. The overflow must resort to offstreet parking on sloping hills like School Road or to the municipal parking lot in Holland Park. Some business establishments provide parking: Gramma's, the Bank of Montreal, KLD and the Omega building (temporary). The town hopes to construct a municipal parkade by raising business tax money. This would alleviate parking problems for residents during weekdays and provide space for weekend visitors.

When merchants complained about inadequate parking, a by-law enforcement officer was hired to monitor the meters- and discovered the merchants were the worst offenders, parking all day in front of their own establishments.

The new 381 berth marina and 80 unit hotel are to have a parking lot with 191 spaces.³⁶ It appears there will still be a need for offstreet parking to handle the increased traffic load to these destinations.

³⁶ The Press 2 August 1983

8.0.9 Public Transit

An agreement signed between the provincial Urban Transit Authority (UTA) and the Sunshine Coast Regional District provided for a limited bus service from Egmont to Port Mellon.³⁷ The Department of Human Resources had financed the Minibus service since 1974. Three daily runs are made between Sechelt and Gibsons, with regular stops and a door-to-door service available. It is run on a shared cost basis, with \$58,000 committed in direct taxes from S.C.R.D. (20% of the cost) and \$111,000 of UTA funds. The service is designed "to give precedence to the travel requirements of senior citizens, youths, the handicapped, and seasonal weekend commuter residents".³⁸

I found the Minibus transit to be a model service and a pleasure to ride when I climbed on board for the town of Sechelt in the summer. It was well-utilized by local residents, who swapped stories during their trip.

8.0.10 Horseshoe Bay/Langdale Ferry

Since the 1950's when Black Ball Ferries ran the system, to the present day ownership by the B.C. Ferry Corporation, residents have had to cope with ever increasing rates, changes to schedules, and strikes. In March of 1982 the Corporation was making plans to introduce a jumbo ferry to the Sunshine Coast.³⁹ It would replace two existing ferries and require that new ramps be built. The move was designed as an economy measure to reduce the number of daily trips and the number of casual workers. "A jumbo ferry can carry 400 vehicles compared to about 200 on the present ferries". A \$25 million cut in ferry subsidies from the province required further cutback in schedules that summer. Cutbacks also occurred this past summer, making the latest ferry at 10 P.M. A late sailing is popular with many people, allowing them to finish off a day's business with dinner or a movie in the city. As of January 1984 ferry service has been reduced to 7 daily trips, and fares have again increased.

³⁷ Coast News 4 January 1982

³⁸ U.T.A. & S.C.R.D. Paratransit Service Plan March 1982

³⁹ Coast News 22 March 1982

8.0.11 Water Taxi

A new craft, the 84 passenger Sea Speed made a maiden voyage to Gibsons this past summer. "The craft, which combines the principles of hovercraft and hydrofoil...makes for a fast, efficient and comfortable means of water transport that may well revolutionize life in our coastal community".⁴⁰ Downtown Vancouver would be within one half hour travel time from the Landing.

The service would be economically viable if it could capture the 80 full-time commuters from the area and up to 200 during summer months. It would also be a welcome addition in view of further government cutbacks on ferry service this winter. The impacts of such a service are that by making the Landing more accessible, it would become a more desirable place to live (to escape to).

⁴⁰ Coast News 1 August 1983

SHOAL CHANNEL

Surveyed in 1973 / Levé en 1973

Scale 1:10000 Échelle

Prece Δ: Lat 49° 23' 25".89 N, Long 123° 29' 24".98 W (1973)

Nautical Miles 1/2 0 1/2 Milles marins

Metres 100 0 1000 Mètres



022° E 1980 (8' W)

GIBSONS

Public

(M)

(M)

Steep Bluff

Keats Island

Public

HARBOUR LIMIT

Gibson Creek

IR

FIG

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Chapter 9

PHYSICAL SYSTEMS

9.1 OCEANOGRAPHY

9.1.1 The Marine Environment

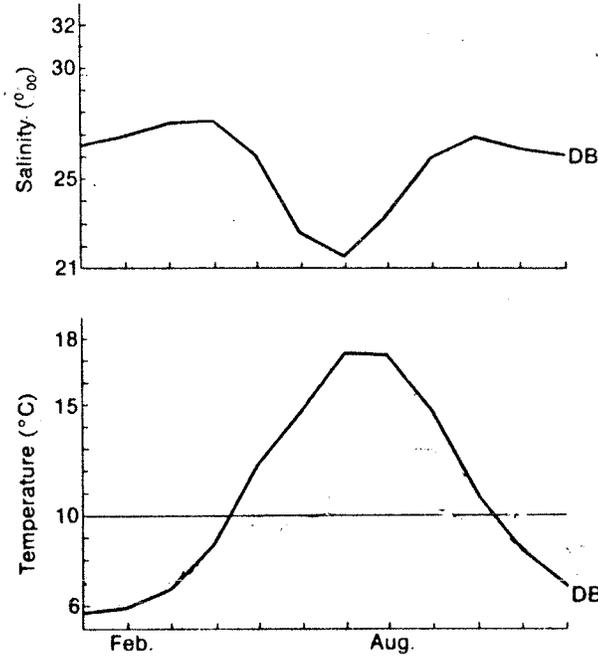
Gibson's Landing is a protected natural bay within the inland waters of the Strait of Georgia, which separates Vancouver Island on the ocean side from the mainland. The southern end of the strait is connected to the Pacific by the Strait of Juan de Fuca.

...the northern section of the Strait of Georgia is practically an inland sea, remote from the ocean, and with water deeper than that in most of the approaches to it, which are also partly blocked by numerous islands. What wave action exists is primarily of local origin; tidal currents are strong, and the salinity of the water is affected by rivers...especially in summer. The water in this region appears to be unusually rich in nutrient salts, partly due to the upwelling of cold bottom water at the mouth of Juan de Fuca Strait.

The sea surrounding Vancouver Island is of relatively low salinity (the monthly means all fall below 33‰) and its temperature range is cold-temperate (monthly means at the sea surface fall below 10 C, but do not approach zero, in the winter, and usually rise to between 10 and 20 C in the summer).⁴¹

A submerged shelf of land running between Keats Island and the Bluff acts to attenuate the energy of the waves entering Shoal Channel. The inside channel and the bay have finer bottom sediments (mud) in these more protected waters (see Nautical Chart opposite). At low tide mud flats are exposed across the bay.

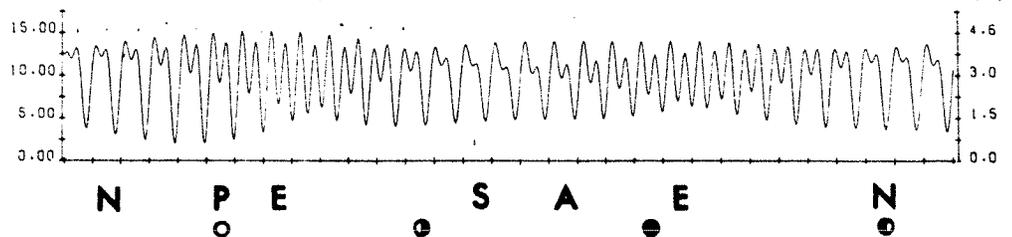
⁴¹ T.A. Stephenson and Anne Stephenson Life Between Tide-marks on Rocky Shores San Francisco: W.H. Freeman & Co. 1977 p.207



SALINITY & TEMPERATURE OF STRAIT OF GEORGIA (DEPARTURE BAY).
SOURCE: STEPHENSON [1977:207]

TYPICAL TIDAL CURVE

Point Atkinson



LEGEND

- - new moon
- ◐ - first quarter
- - full moon
- ◑ - last quarter
- A - moon in apogee
- P - moon in perigee
- E - moon on equator
- N - moon farthest north of equator
- S - moon farthest south of equator

SOURCE: CANADIAN TIDE & CURRENT TABLES 1983

The shoreline is steep around the rocky bluff, then flattens around the bay and becomes progressively steeper and more rocky to the northeast. Driftwood is stranded on all the beaches. Many shoreline properties are in need of erosion control. A riprap wall over the town's main sanitary sewer line (1-2m below high water) forms the shoreline of the bay and helps to impede erosion.

9.1.2 Tides

The entire West Coast experiences a mixed, mainly semi-diurnal tide pattern. This refers to two complete tidal oscillations daily: diurnal inequalities in the height and interval between the two high tides of each day are conspicuous.

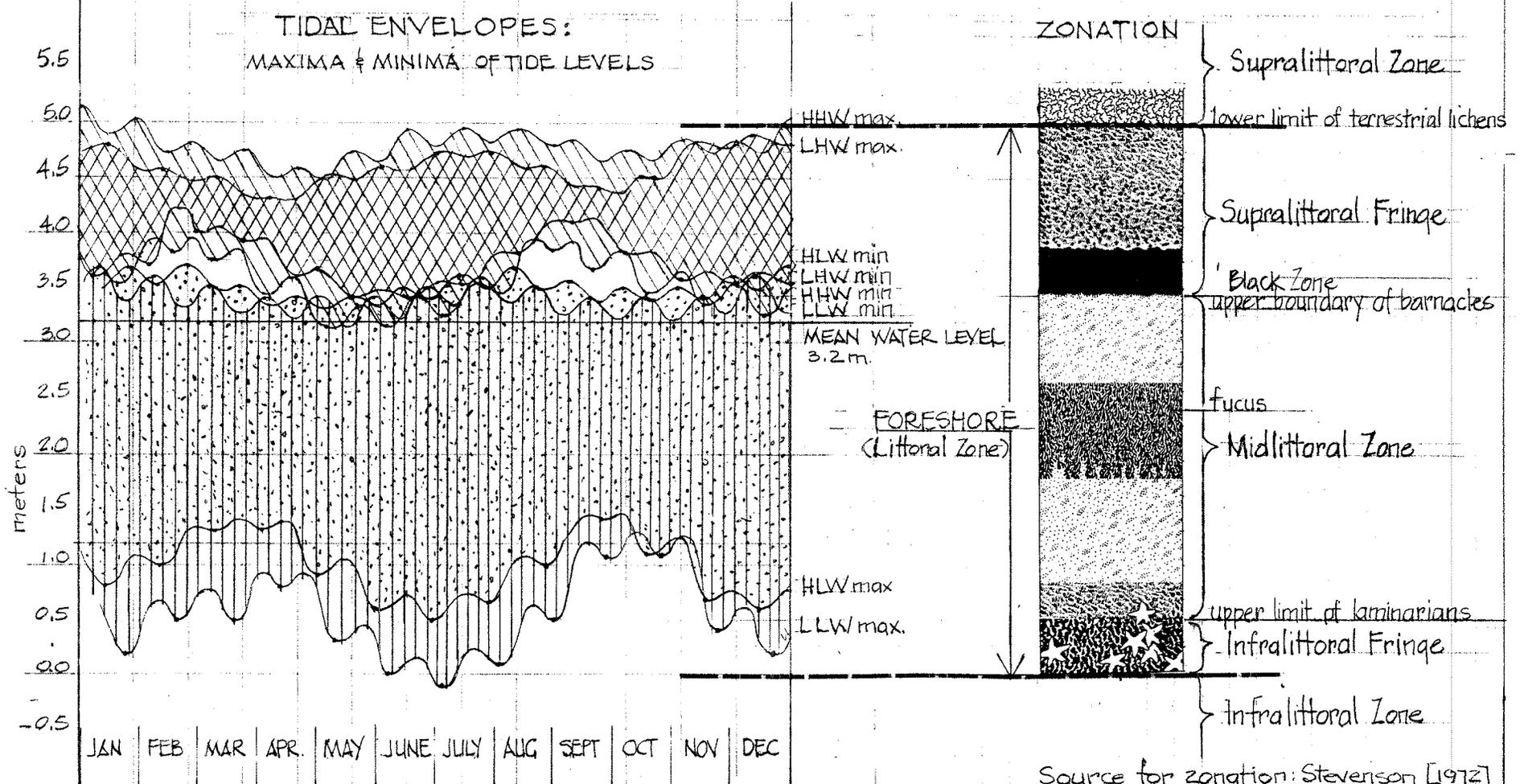
The tidal curve of Point Atkinson (the reference station for Gibsons) records the alteration in the relative heights of the two semi-diurnal peaks near the times of lunar passage over the equator. At perigee (the nearest point in the moon's elliptical orbit) tides are 20% higher,⁴² and that much lower at apogee.

...At the winter and summer solstices the times of maximum north and south declination of the moon fell close to the times of new and full moon. When this occurred the maximum tide-raising forces of the synodic and tropical monthly cycles were in phase. The rhythm in tidal height for each semi-diurnal component exhibited a unimodal pattern with a peak near the time of new or full moon (and the time of maximum north or south declination). Over the equinoxes, however, the tide-raising forces of the synodic and tropical monthly cycles were in opposition.⁴³

The different high and low waters are referred to as higher high water (HHW), lower high water (LHW), and higher low water (HLW), lower low water (LLW). For Gibsons, these are provided in the nautical charts. Actual recordings vary from predictions due to meteorological conditions, "such as strong or prolonged winds, abrupt changes in barometric pressure, or prolonged periods of very high or very low

⁴² W. Bascom Waves and Beaches Doubleday & Co. Inc. N.Y. 1964 p.88

⁴³ F.H. Barnwell "Variation in the form of the tide and some problems it poses for biological timing systems" in Biological Rhythms in the Marine Environment edited by De Coursey, 1976 pp.171-177.



Source for zonation: Stevenson [1972] pp 17-22, 212

NOTE
Graph generated from calibration of values in Canadian Tide and Current Tables 1983. Reference point: Point Atkinson, Secondary Point: Gibsons.

pressures"⁴⁴ which introduce fluctuations in the water level.

Storms coming down Howe Sound from the north are prevalent during the winter. There is little protection from this onslaught outside of the Government breakwater. Last winter severe storms caused much damage to private seawalls and floats.

Tide "envelopes" have been constructed for the tide ranges in Gibsons from the tide tables(1983). These envelopes represent the maxima and minima of the higher and lower high waters and of the higher and lower low waters (see opposite). The patterns of the tide envelopes reflect the maximum amplitude of the summer and winter solstice, and the modification during the equinoxes.

9.1.3 Biotic Zones

In studying the shorelines of different coasts in the world, T.A. Stephenson has found "widespread" features of zonation:

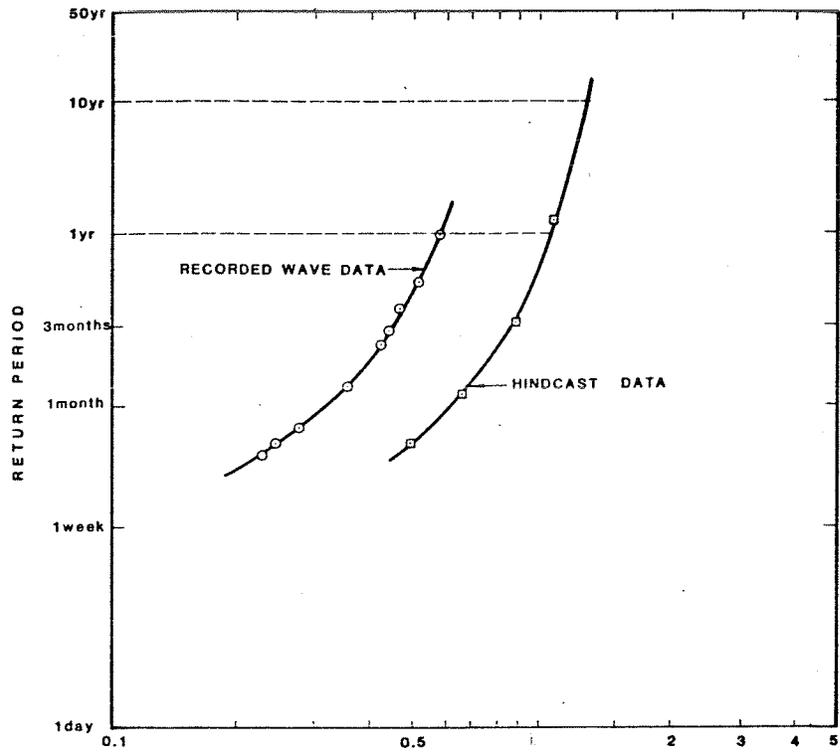
...seashores show a widespread tendency to develop three principal zones, a littorina zone above, a barnacle zone in the middle, and a wetter zone of variable population below. In addition, there is typically a blackish myxophycean or lichen zone at a high level, and an incrustation of lithothamnia over all the lower parts of the rock... Above the littorina zone, there are often other zones distinguished by coloured lichens (orange, grey, green, white, brown) belonging to species other than those characteristic of the black zone.

These widespread zones are often best displayed on fairly continuous rocky slopes (whether steep or gradual) subject to wave action that is strong without being maximal...one does not necessarily see all the widespread features at the same time on the same shore.⁴⁵

The names Stephenson has applied to these zones are supralittoral fringe (littorina), midlittoral zone (barnacles) and infralittoral fringe (laminarians). These divisions have

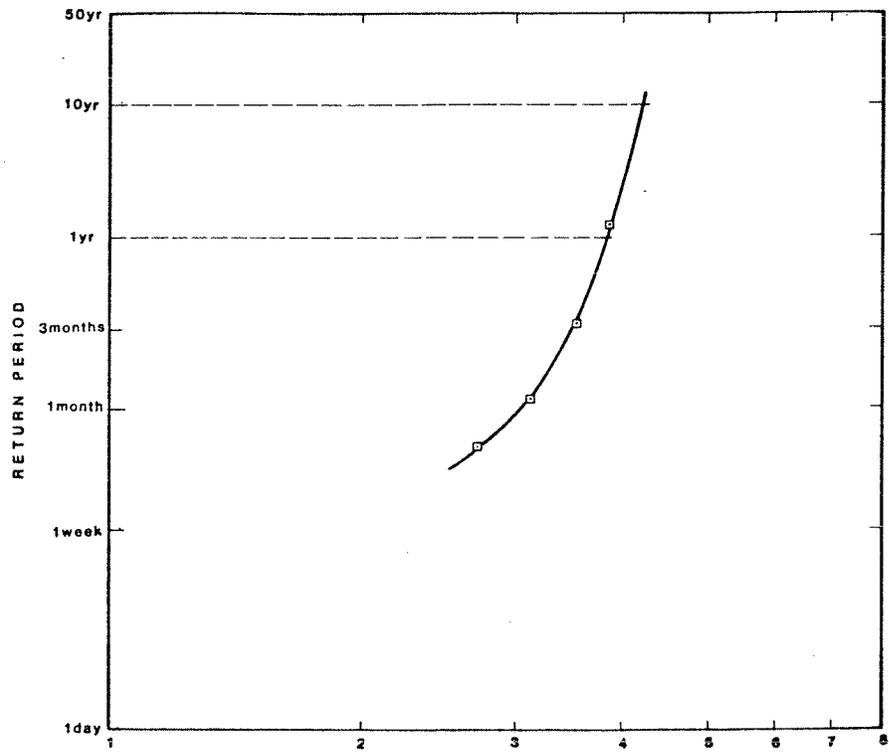
⁴⁴ Fisheries and Oceans Canadian Tide and Current Tables 1983. Ottawa

⁴⁵ Stephenson[1972 p.19]



SIGNIFICANT WAVE HEIGHT (metres)

WAVE HEIGHT EXCEEDENCE DIAGRAM.



SIGNIFICANT WAVE PERIOD (sec)

WAVE PERIOD EXCEEDENCE DIAGRAM.

been applied to the tide levels at Gibsons, using a comparative analysis of the Brandon Island profile in Departure Bay which has a similar beach orientation (Stephenson[1972, pp.213-223]).

9.1.4 Wave Action

It is wave activity in the bay, generated from wind forces that has greatest impact for marine development, and not action from currents and tides. However it is during periods of high tides (following winter solstice) that Squamish storms bear down on the Landing, producing extreme wave heights and wrecking havoc.

An engineering analysis of the wave climate in the bay provided information for the construction of the new marina:

The longest fetch adjacent to Gibsons lies in the northeast quadrant, and winds from this quadrant will produce the most severe wave conditions. In addition, waves generated over the relatively short fetch to the east and bounded by Keats Island have a more critical direction with respect to the proposed breakwater layout and so should be considered. Waves from the Strait of Georgia would have to propagate through Shoal Channel and bend through almost 180 in order to reach Gibsons, and are not considered a factor.

None of the available wind data are entirely representative of conditions over this fetch because the local topography causes considerable variability in wind strengths and directions. Even so, the worst storms at Gibsons are known to be associated with "Squamish" winds from the north to northeast, and the data from Squamish has been used in the hindcasting analysis as coming the closest to representing wind conditions over the fetch.

...Because of the relatively short fetch applicable here, the duration needed to generate the stated wave conditions seldom exceeds one hour. The frequency of occurrence for each wind condition can be converted to a corresponding return period, and in this way an exceedence diagram showing significant wave height as a function of return period can be constructed....A corresponding curve for significant wave period is shown (opposite page).

Frequency Analysis of Wind Data for Squamish (Annual)

PERCENT FREQUENCY WIND SPEEDS BY DIRECTION

SQUAMISH FNC CHEMICALS

LATITUDE 49 41 NORTH LONGITUDE 123 10 WEST ELEVATION 3M ANEMOMETER HEIGHT 9M AGL

ANEMOMETER TYPE:- U2A 04/1971-05/1976

SPEED(KT)	ANNUAL											1971-1976			
	1-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55	56-63	64+	TOTAL	MEAN SPEED	STANDARD DEVIATION
NORTH	13.0	9.2	6.8	1.3	.3	.2	.1	*					30.9	5.3	4.1
NORTHEAST	3.8	1.0	.8	.9	.4	.3	.1	*					7.4	6.9	7.3
EAST	1.5	.9	.8	.4	.1	*							3.8	6.3	4.9
SOUTHEAST	1.0	.8	.6	.4	.2	*							2.9	7.1	5.3
SOUTH	4.8	5.0	5.9	3.9	1.1	.3	.1	*	*	*			21.2	8.1	5.6
SOUTHWEST	1.4	.9	4.4	7.6	2.7	.4	*	*	*	*			17.5	12.3	5.3
WEST	1.3	1.0	1.0	.8	.2	*	*						4.3	7.4	5.2
NORTHWEST	2.2	1.3	1.1	.2	.1	*	*	*					5.0	5.2	4.1
TOTAL	29.0	20.2	21.3	15.6	5.0	1.3	.4	.1	*	*			93.0	7.6	5.7

PERCENT CALMS 7.0

TOTAL NUMBER OF OBSERVATIONS 34948

MAXIMUM RECORDED SPEED 50 KT

DIRECTION OF MAXIMUM WIND 180 DEG

MEAN WEST TO EAST COMPONENT 2.5 KT

MEAN SOUTH TO NORTH COMPONENT 2.1 KT

MEAN VECTOR WIND 231/ 3.2 KT

NOTE- AN ASTERISK(*) INDICATES PERCENTAGE GREATER THAN ZERO BUT LESS THAN 0.05 PERCENT

A corresponding analysis for waves propagating from the east and limited by Keats Island has been carried out. The hindcast analyses for both the northeast and east directions indicate that suitable design waves corresponding to various return periods are as given in the table.

Design Wave Heights and Periods for Gibsons

Wind Direction	Return Period (years)	Significant Wave Height (m)	Significant Wave Period (sec)
NE	1	1.03	3.8
	10	1.25	4.2
E	1	0.53	2.4
	10	0.65	2.6

...For a known duration of a fully-developed storm, the maximum wave height occurring can be estimated and is often taken to be 1.8 times the significant wave height. However, in applying criteria for breakwater damage or for the amount of distress occurring within a harbour, the significant wave height rather than the maximum individual wave height is in any case preferred.⁴⁶

Wave refraction from northeast would occur in water depths of less than about 13m, and from the east, in water depth less than 5m (for a 10 year design wave).

9.2 THE CLIMATE

Gibsons is subject to the same generalized weather patterns as Vancouver. Micro-climatic influences, however, differ in that it is the Squamish Valley at the head of Howe Sound and not the Frazer Valley that determines local circulation. Winter and summer weather patterns are discussed by Hay and Oke in The Climate of Vancouver:

Vancouver winter experiences a high frequency of low pressure disturbances... in January the lows occurred on 72 per cent of the days and the highs

⁴⁶ Northwest Hydraulic Consultants Ltd. "Gibsons Municipal Marina Expansion" Public Works Canada. 1981.

CLIMATE

The following table represents an interpretation of the average rainfall and temperature in Gibsons, condensed from readings taken at Gower Point, two miles southwest of Gibsons over a twenty year period (1960-1980). Similarly, from the same records an approximation of sun hours has been extracted:

Month	Rainfall, inches			Temp., °F			Sun Hours	
	Mean Total	Max.	Min.	Mean	Max.	Min.	Mon. Tot.	ratio of daily max.
Jan.	7.3	11.00	3.48	38	51	29	60	.22
Feb.	5.62	7.06	3.64	41	52	30	123	.43
Mar.	5.95	9.73	2.66	40	52	28	165	.45
April	2.88	4.52	0.94	47	60	34	186	.45
May	2.59	4.78	1.15	53	82	42	240	.50
June	2.18	4.15	0.53	58	89	48	288	.59
July	2.11	5.40	0.69	61	71	52	300	.59
Aug.	2.09	4.11	0.12	61	74	30	246	.55
Sept.	2.39	4.87	0.03	58	70	48	210	.54
Oct.	5.38	12.09	1.90	49	57?	41	174	.52
Nov.	7.72	10.94	2.57	42	78	34	111	.40
Dec.	9.21	12.80	5.32	38	66	30	55	.23

Annual

Total 55.42 91.45 23.03

SOURCE: TOWN OF GIBSONS (DATA BASE STUDY)

only 22 per cent. The predominance of cyclones in winter is consequent upon atmospheric temperature gradients being best developed at these latitudes at that time of year, this in turn being a consequence of the southward expansion of the cold dry mass of Arctic air which mixes vigorously with the warmer, moist Pacific air...southern coastal British Columbia is a preferred track for cyclonic disturbances moving either eastward from the eastern Pacific or southeastward out of the Gulf of Alaska, which, in January, has the highest frequency of cyclones in the Northern Hemisphere. By April, the significance of the eastern Pacific track is considerably reduced...

High-pressure (anticyclonic) regimes have a relatively low frequency in the winter months... Occasionally, a high-pressure system stabilizes over the area and then dominates the weather sequence for a few winter days, with notable effects. The build up of pressure usually accompanies the movement of a large mass of dry, cold Arctic air through the coastal valleys (with accompanying high wind speeds). The advance and retreat of the Arctic air are often accompanied with snowfall, while during its predominance the weather is characteristically clear and abnormally cold.

Summer brings an extension of the Pacific anticyclone regime into the mid-latitudes, resulting in the predominance of high-pressure conditions and generally clear, warm weather... Characteristically, by September and occasionally as late as October, the summer weather pattern ceases and cyclonic types again predominate over the anticyclonic regimes as storm tracks move southward, with consequent increased cloudiness and precipitation.⁴⁷

Climatological statistics (opposite page) are from readings taken at Gower Point, 10 miles southwest of Gibsons, and represent a 20 year period. There is a greater mean daily temperature range in summer than in winter, due to the clearer skies and subsequent heating and cooling of the ground surface. However, absolute temperature extremes are greatest in winter due to periods of circulation of relatively cold Arctic air, or, at times, a southerly flow of

⁴⁷ John E. Hay & Timothy R. Oke The Climate of Vancouver B.C. Geographical Series, Number 23, Tantalus Research Ltd. Vancouver, 1976 pp.6-7

warm air from lower latitudes.

...The long period of summer warming, aided by the moderating maritime conditions, gives Vancouver a relatively long frost-free period averaging about 208 days between the last frost on April 2 and the first frost on November 12.

Associated with the winter maximum in storm activity is a parallel maximum of precipitation as reflected in the figures for total rainfall for the month...Generally, Vancouver is not burdened with excessive or prolonged snowfalls, some winters being without any snow accumulation.⁴⁸

Fog formation is more predominant during the winter months. "Radiation fog" is due to air saturation by rapid radiant heat energy loss. This type dissipates by increasing air movement or by heat from the sun. "Advection fog" forms from air picking up moisture in passing over the open strait or flowing over the cold land surface. It is less easily dissipated due to the atmospheric structure creating this flow pattern.

9.3 GEOLOGY

There is little published material on the geology of the area except for the account by Peterson. He mentions a basement formation of intrusive rock (granitic) formed during the Paleozoic Age (450 to 150 million years ago), and periods of volcanic activity along the coastal plate. Folding of the coast range occurred between the Jurassic and Pliocene Ages (70 to 5 million years ago), when Mount Elphinstone and Keats Island, volcanic roof pendants, were formed. Little trace of the succeeding periods of submersion and deposition exist.

It was the Jurassic-Pliocene upheavals which began to give the Pacific coast its final shape, and a succession of ice sheets which completed the process. Folds between mountain ranges allowed water from the ocean to flow through the entire length of the former valley separating the then coastal range from the next series of mountains, creating what is now called Vancouver Island. River valleys along the coast also submerged, forming arms of salt water, among them Howe Sound and Jervis Inlet...Whether or not the entire area was once

⁴⁸ Hay & Oke[1976, p.20]

LEGEND

SALISH SEDIMENTS

 SHORE, DELTAIC, FLUVIAL, AND SWAMP DEPOSITS: GRAVEL, SAND, CLAY, PEAT

CAPILANO SEDIMENTS

 FLUVIAL DELTAIC, FAN, AND CHANNEL DEPOSITS: COBBLES, GRAVEL, SAND, AND SILT

 MARINE AND GLACIO-MARINE DEPOSITS: VARIED GRAVELLY, SANDY, STONEY, CLAY, AND CLAY VENEER (NORMALLY OVER TILL)

VASHON DRIFT

 GLACIO-FLUVIAL DEPOSITS: GRAVEL AND SAND

 GROUND MORaine DEPOSITS: MAINLY TILL

PRE-VASHON SEDIMENTS

 GRAVEL, SAND AND SILT

BEDROCK OUTCROPS

 MOSTLY BARE ROCK WITH THIN PATCHES OF OVERBURDEN, USUALLY TILL OR MARINE VENEER

SYMBOLS

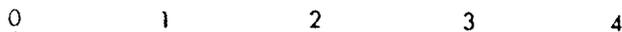
GLACIAL STRIAE, GROOVES AND STOSS AND LEE SURFACES INDICATING DIRECTION OF ICE MOVEMENT 

FOSSIL LOCALITY 

GRAVEL PIT 

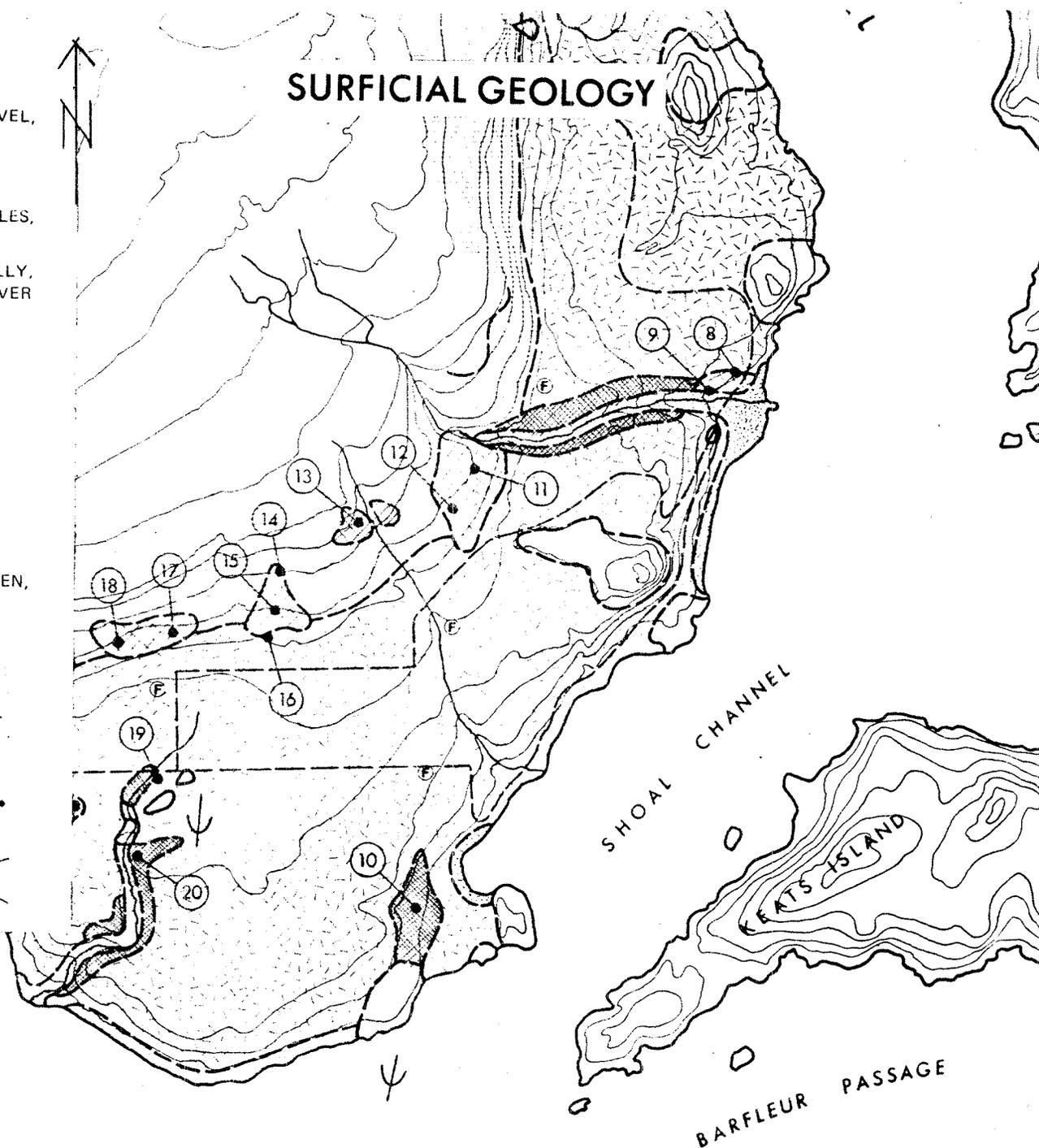
ROAD 

CONTOURS (100 FOOT INTERVALS) 



SCALE-KILOMETRES

SURFICIAL GEOLOGY



covered with carboniferous forest, whether other coal-beds formed and were later destroyed through upheaval and erosion, or whether conditions for the formation of coal did not exist along the peninsula, we cannot know. In any case, all of the pre-glacial soil must have been pushed away during the ice ages, and the beds of clay, sand and gravel now found here must have been deposited by glaciers during the ice ages and by water action subsequent to their retreat.⁴⁹

A survey of the surficial geology of the Sunshine Coast area was carried out by J.W. McCammon to determine sand and gravel deposits. The survey concentrated on the deposits below the 300m level, the zone of maximum stratification (see map opposite).

Only one till [Vashon] was recognized in most of the area, but drill logs record two in the Gower Point district.... The area between Highway 101 and Gower Point is underlain by a complex of materials deposited at the junction of glaciers that moved south off the Coast Mountains and down Howe Sound, and southeast down Georgia Strait. Drill records indicate a general stratigraphic column consisting of a marine sand and gravel or clay veneer on up to 4 metres of till, over 12 to 18 metres of sand and gravel overlying more till which, in turn, overlies an undetermined thickness of silt and sand with some gravel...

The Vashon ground moraine consists essentially of till with occasional lenses of sand and gravel. Exposures...can be seen in ditches, roadcuts, building excavations, stream banks, and sea cliffs. Normal till is a tough concrete-like mixture of fairly well-rounded mixed pebbles in a sandy matrix with scattered boulders up to a metre or more in diameter.... Below 180 metres elevation the till is covered to variable depths by diverse marine deposits. The maximum thickness of till is not known but more than 30 metres has been recorded in drill holes.

The most widespread unconsolidated deposits comprise a variety of marine and glaciomarine sediments...The commonest type consists of a lag veneer, a metre or less thick, of brown sand, gravel, or sandy gravel lying directly on till... Another common variety is stony clay. This

⁴⁹ Peterson[1962, pp1-7]

consists of a sandy-silty clay matrix containing scattered stones up to several centimetres in diameter... A third material is found in north and west Gibsons... This is a silty, blue-grey, thin-bedded clay ranging up to at least 10 metres thick.

The Capilano fluvial deposits are composed of sands and gravels that form fans and deltas left by streams above present sea level up to about the 180-metre contour. The larger deltas extend downward in terraces or foreslopes to near sea level but numerous small ones have limited vertical range... These Capilano deposits are the sites of most of the aggregate pits in the area.

Salish sediments are materials now being deposited or that have been deposited since sea level became more or less stabilized at its present position. These include silt, sand, and gravel that are found in modern stream channels and deltas; sand and gravel on modern beaches; and bog deposits.

The town sewer plant and a rubbish dump occupy the site of an old sand pit at No. 10 [pre-Vashon] on Lot 685 in south Gibsons. In the slumped face of the excavation the material exposed is mostly sand with some fine gravel.⁵⁰

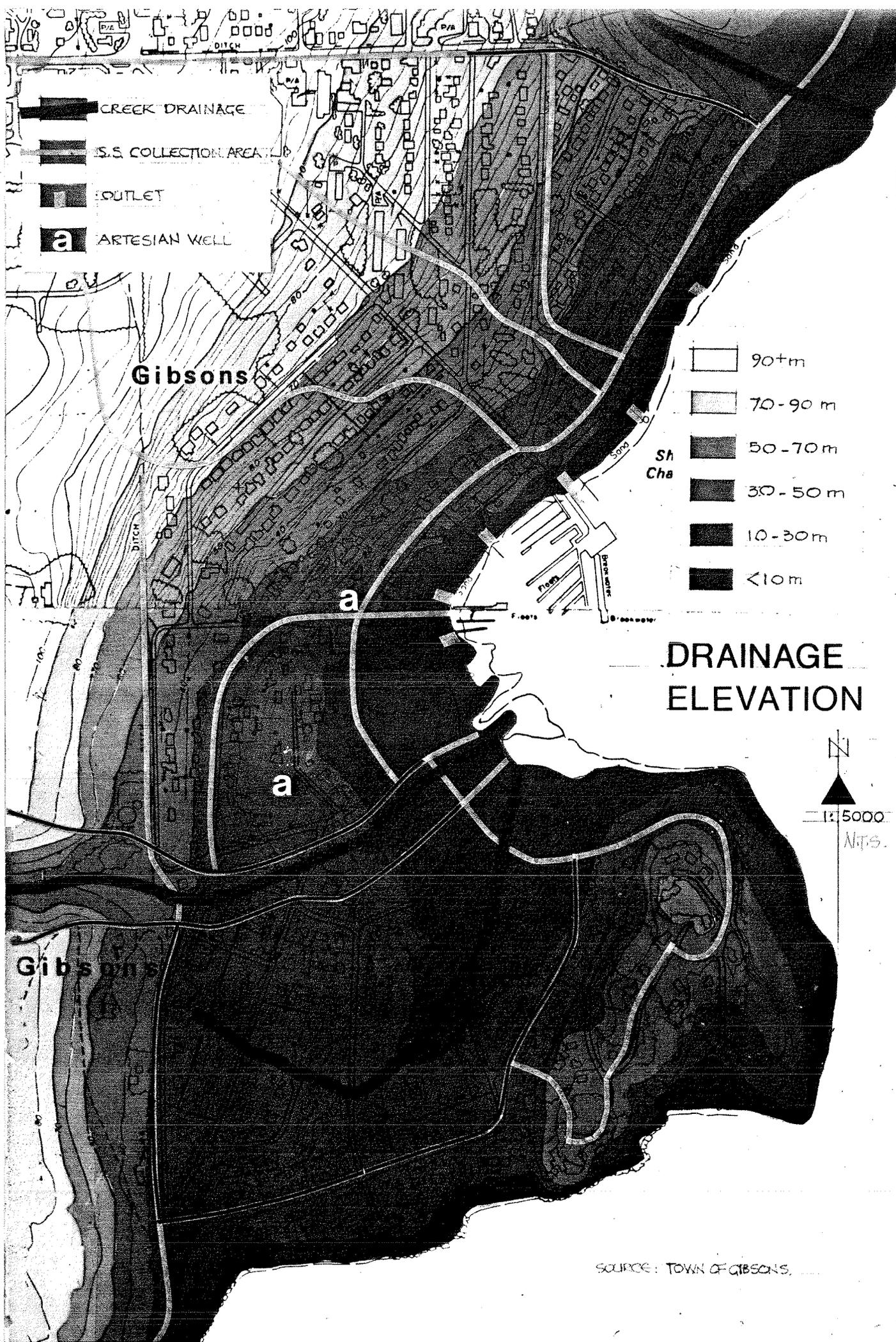
9.4 HYDROLOGY

9.4.1 Drainage

Gibsons and Gower Point are bounded by two second order streams draining Mount Elphinstone (elevation 1 260m, 4,137 ft.): Gibson Creek to the northeast and Chaster Creek to the west. The Landing area is further contained to the southwest and south by Charman and Goose Bird Creeks, both first order streams.

The surficial geology and engineering reports indicate that erosion and sedimentation along Gibson Creek are not problems. The steep banks are now heavily vegetated. Residential development which has been proceeding in Gibson's

⁵⁰ J.W. McCammon "Surficial Geology and Sand and Gravel Deposits of Sunshine Coast, Powell River, and Campbell River Areas", Province of British Columbia, Ministry of Mines and Petroleum Resources, Bulletin 65, 1977.



-  CREEK DRAINAGE
-  S.S. COLLECTION AREA
-  OUTLET
-  ARTESIAN WELL

-  90+m
-  70-90 m
-  50-70 m
-  30-50 m
-  10-30 m
-  <10 m

DRAINAGE ELEVATION

N
 1:5000
 M.P.S.

SOURCE: TOWN OF GIBSONS.

Heights may impact on the creek.

Charman and Goose Bird Creeks are gently sloped near the south of the bay; they have low banks with heavy brush and ground cover. A section of Charman Creek, adjacent to the Ritz motel, flooded a year ago when the owner "straightened out" the creek bed by bulldozing it.

Both creeks drain into the bay in the vicinity of the new marina. Recent heavy rains (after Christmas) created a problem with bank stability over the sewage line. Movement of water and sediments are accelerated as the stream seeks to establish equilibrium by downcutting the bed to the level of the dredged plane. Temporary methods of stabilizing the riprap wall are being carried out.

Most residential areas of the Landing are drained by a storm sewer system, emptying into the bay where indicated on the drainage map (opposite). Part of the system is open-channelled, presenting a dynamic quality during stream flow, before it enters the bay through unattractive pipe falls.

9.4.2 Aquifer Basin

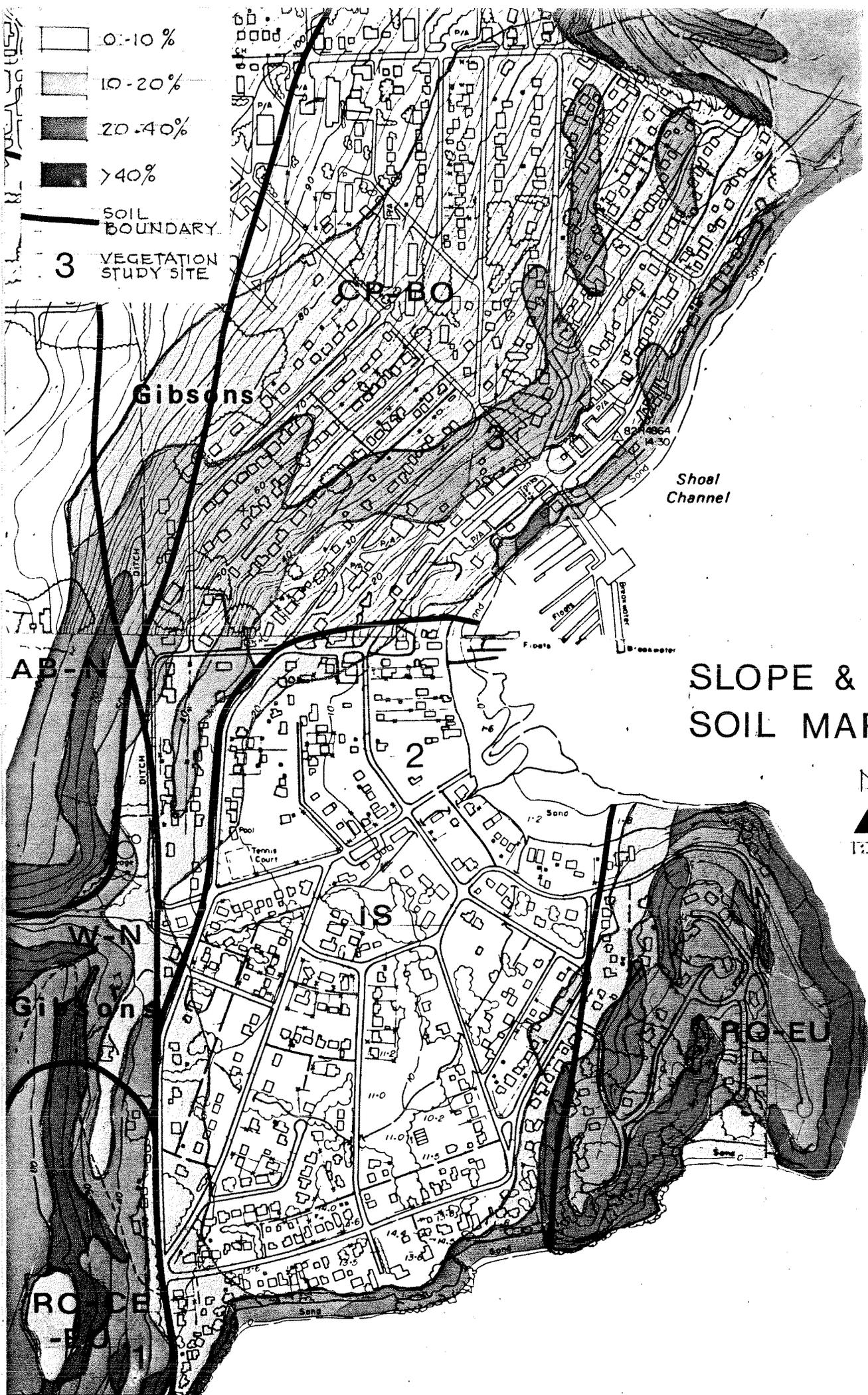
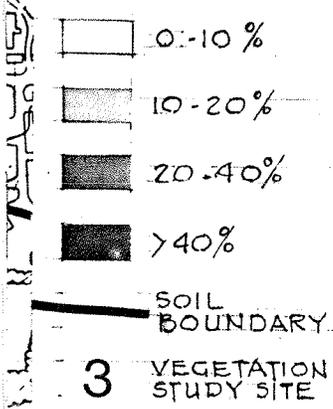
Artesian wells, one in Holland Park and the other in Dougal Park, supply the lower townsite, feeding into the town's reservoir system. The wells are 75 and 47 feet deep, tapping a fresh water lense that extends out under the bay. Discharge rates vary from 155 gal/min (Dougal Park) to 250 gal/min (Holland Park).⁵¹ This water pressure zone has created an upwelling at these sites, giving rise to surface springs. At Holland Park the springs have been entrained in pools at the south end.

Enge and Chaster Creeks, northwest of Gibsons, are major sources of water for the upper reservoir system, with flow rates of 35,000 and 600,000 gal/day, respectively.⁵² Concern has been expressed by the town council for the protection of the basin from encroaching development to the southwest. Gravel deposits have been developed on part of Lot 1313, and the S.C.R.D. is interested in the main portion as a regional parksite.⁵³

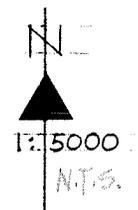
⁵¹ Ron Webber, Superintendent of Works, Town of Gibsons.

⁵² Coast News 17 October 1983.

⁵³ Town council meeting 17 July 1983



SLOPE & SOIL MAP



9.5 SOILS

Soils within the Landing area fall into three dominant groups, based on the parent material. The rock outcropping of the bluff has some organic material (Eunice) cover. Slopes are generally very steep (30-60%) resulting in rapid runoff where cover is sparse. The more gently sloping land (2-5%) at the head of the bay contains parent material of coarse-textured alluvial fan deposits (Isar) from the surrounding slopes. It is well to rapidly drained. The sloping hillside wrapping the bay to the north has coarse-textured soils from gravelly glacial outwash deposits (Capilano and Bose). Slopes vary from strongly sloping (9-15%) to very steeply sloping (30-60%). Soils are well drained to rapidly drained. Where land has been developed, the steep slopes cause fairly rapid runoff.

Key	Parent Material	Soil Group	Texture	Drainage
CP	glacial outwash	Capilano	gravelly	W, R
BO	glacial outwash over till & glaciomarine dep.	Bose	gravelly	W, MW
SS	littoral & glacial outwash	Sunshine	sandy	W, MW
SR	< 1m littoral & till over glaciomarine dep.	Summer	coarse	I*
AB	glaciomarine deposits	Albion	moderately fine	MP, P
CD	glaciomarine deposits	Cloverdale	moderately fine to fine	?
N	glaciomarine deposits	Nicholson	moderately fine	MW
W	glaciomarine deposits	Whatcom	moderately fine	MW
IS	alluvial fan deposits	Isar	coarse	W, R
H	littoral deposits over till or glaciomarine	Heron	coarse	P*
EU	>10cm organic material over bedrock	Eunice	?	W, R
CE	10-50cm till or colluvium over bedrock	Cannel	moderately coarse	W, R
RO	rock outcrop			

* perched water table

P-poor W-well R-rapid
 MP-moderately poor MW-moderately well I-imperfect

Source: Town of Gibsons "Data Base Study" (unpublished).

9.6 VEGETATION

Gibsons is within the Coast Forest zone, a biotic zone controlled by particular climatic conditions. "The heavy forest of Douglas fir, red cedar, western hemlock, broadleaf maple and red alder at lower elevations gives way at higher elevations to mountain hemlock, yellow cedar and alpine fir. Salal and a heavy growth of ferns are other characteristics. Winters are mild, summer moderate and rainfall high being over 100" a year on most of the Coast range."⁵⁴

Species common to the Gulf Islands zone are also present in Gibsons, namely Arbutus and garry oak. This zone is the most varied and contains all the Coast Forest zone except for white-bark pine, birch and vine maple. Open, grassy or rocky knolls are common, and precipitation is generally less (30" per year average). Gibsons' annual precipitation is 55" per year.

The forest cover that exists on the hills around Gibsons has been cut over several times. In 1906 a fire swept over much of the area from Roberts Creek to Gibsons, threatening to wipe out homesteads (and helping to clear the land). Few lands are now being maintained in agriculture. Many areas that were cleared are reverting back to woods while others are being subdivided for development.

Orientation around the bay is from southeast to east, providing good exposure to sunlight and incident light from water reflection.

I have selected out three sites within the bay area which are fairly representative of the vegetation complex, and the parent soils:

9.6.0.1 Site 1 Gower Point Road

(a) at the rock outcropping, Eunice soils (organic)

arbutus- <i>Arbutus menziesii</i>	broom- <i>Cytisus scoparius</i> (not native)
shore pine- <i>Pinus contorta</i>	blackberry- <i>Rubus ursinus</i>
var. <i>contorta</i>	grasses

(b) in shaded areas along roadside, Cannel (till/colluvium) and Eunice soils

<u>red cedar- <i>Thuja plicata</i></u>	salal- <i>Gaultheria shallon</i>
--	----------------------------------

⁵⁴ C.P. Lyon Trees, Shrubs & Flowers To Know In British Columbia J.M. Dent & Sons Ltd., Vancouver, 1976 p.12

Douglas fir- *Pseudotsuga menziensis*
 grand fir- *Abies grandis*
 western hemlock- *Tsuga heterophylla*
 broadleaf maple- *Acer macrophyllum*
 alder- *Alnus rubra*

blackberry- *Rubus ursinus*
 salmonberry- *Rubus specta*
 elderberry- *Sambucus racemosa* var. *arborescens*
 ocean spray- *Holodiscus discolor*
 sword fern- *Polystichum munitum*
 lady fern- *Athyrium filix-femina*
 maidenhair fern- *Adiantum pedatum aleuticum*
 purple pea- *Lathyrus nevadensis*

9.6.0.2 Site 2 Old Field Near Bay

Isar soil (alluvial). High water table

old apple tree- *Pyrus malus* L.
 mountain ash- *Sorbus sitchensis*

horsetail- *Equisetum arvense*
 grasses
 blackberry- *Rubus ursinus*
 rush- *Juncus* sp.
 sedge- *Carex* sp.
 fireweed- *Epilobium angustifolium*
 hedge nettle- *Stachys cooleyae*
 ocean spray- *Holodiscus discolor*
 lady fern- *Athyrium filix-femina*

9.6.0.3 Site 3 School Road

Transect from the waterfront up School Road to Fletcher Road. Steeply sloping south face (east side). Cut over lot, treed, much brush. Well-drained. Capilano-Bose soils (glacial outwash).

(a) at waterfront:

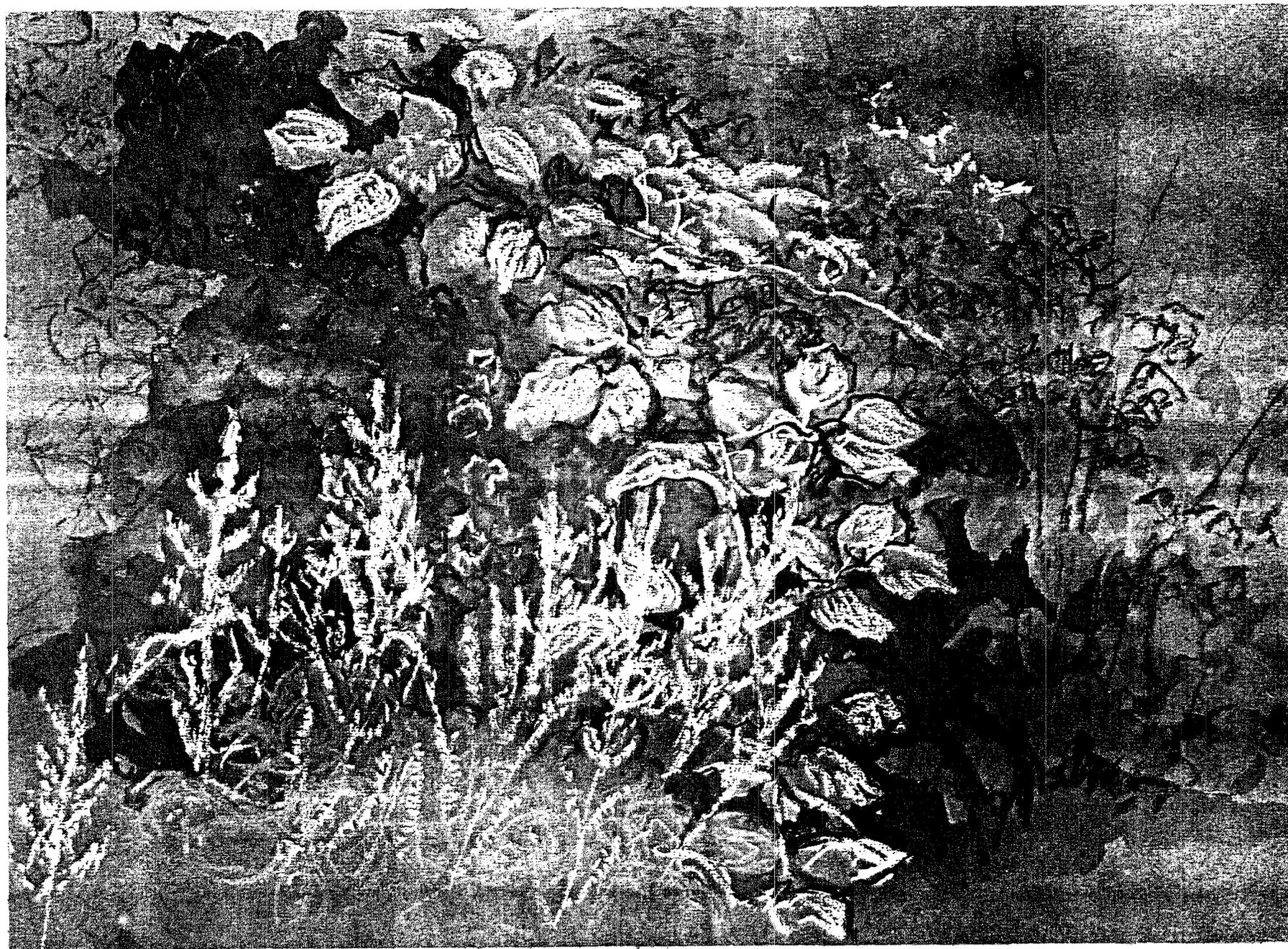
honey locust- *Gleditsia triacanthos* L. (imported)

rose- *Rosa* sp.
 salal- *Gaultheria shallon*
 honeysuckle- *Lonicera ciliosa*
 grasses
 blackberry- *Rubus ursinus*
 hardhack- *Spirea douglasii*

(b) up School Road:

honey locust- (imported)
 dogwood- *Cornus nuttallii*
 black cherry- *Prunus serotina*
 apple- *Pyrus malus* L.

blackberry- *Rubus ursinus*
 goldenrod- *Solidago canadensis*
 salal- *Gaultheria shallon*
 oregon grape- *Berberis nervosa*
 purple clover- *Trifolium pratense*
 cat's ears- *Hypochaeris radicata*
 grasses- (*Orizopsis* sp. etc.)



bracken- *Pteridium aquilinum*
 yarrow- *Achillea millefolium*

(c) top of hill (near Fletcher Road)

arbutus- <i>Arbutus menziensis</i>	ivy (not native)
black hawthorn- <i>Crataegus</i>	bracken- <i>Pteridium aquilinum</i> L.
<i>douglasii</i>	blackberry- <i>Rubus ursinus</i>
holly- <i>Berberis aquifolium</i>	sword fern- <i>Polystichum munitum</i>

There were additional species on the west side of the hill: yellow cedar (*Chamaecyparis nootkatensis*), fir and broom. In the alley off this side were also horse chestnut (*Aesculus hippocastanum* L.- not local), sumac (*Rhus glabra*), hazelnut (*Corylus* sp.), waxberry (*Symphoricarpos albus*), burdock (*Arctium minus*) and laurel (not local). Laurel is the most commonly used domestic plant.

In winter, the vegetation appears as vivid as in the summer; blackberry leaves remain on the bush through December. The major change is from the maples and alders shedding their leaves, opening the canopy to views through to the hills and down to the harbor. The view aspect becomes an important design feature on sloping hillsides such as at the Landing. Vegetation must be carefully selected to provide screening and privacy yet also providing distant viewing to the water.

PART III

SYNTHESIS, DESIGN AND IMPLEMENTATION FOR PUBLIC
OPEN SPACE

Chapter 10

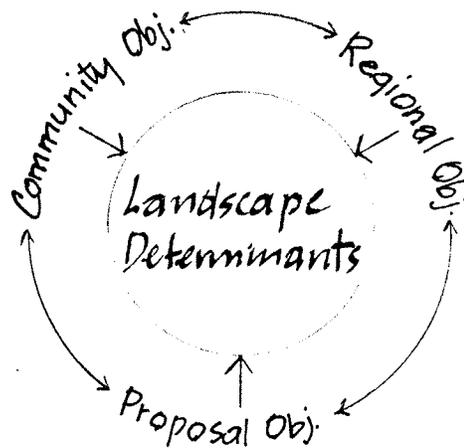
SYNTHESIS APPROACH

Many needs expressed by the residents are woven throughout the background data, and many conditions for change impacting their community are outlined. These concerns and conditions for change give shape to the direction of this project. They are summarized as follows:

1. Community objectives
 - economic stimulation through tourism
 - diversification of activities
 - need for cultural and recreational facilities
2. Reinforcement of the visual attributes of the Landing
 - marine orientation
 - scale and character
 - historic settlement
3. Impact of regionally significant data
 - transportation
 - marine development
 - recreation facilities

My first objective in this proposal is to create a unique quality for each open space (p.3), in cognizance with community objectives stated above, and secondly to provide linkage both between spaces and to the bay. There are determinants of the landscape that must be acknowledged in making such decisions. They are:

1. Dominant views to the bay (from Marine Drive, School Hill Road, upper Holland Park)
2. Shoreline features -changing view and character
3. Focal points -mainly Government wharf and the shopping activity along Gower Point Road and Marine Drive
4. The "harbor" aspect, providing refuge
5. The springs, a major natural resource



The diagram above represents the elements of the synthesis: objectives give direction to the decision-making process, while physical determinants of the landscape provide the framework. To sum up, "this is what you can do with what you have".

The following two chapters contain the thrust of my proposal for Gibson's Landing. They incorporate recommendations having regional impacts as well as local. The one area to be dealt with more fully is that of the reinforcement of the visual attributes of the Landing. The next stage of the process, the design phase, will be concerned with exploring and expanding the visual attributes of the sites ("this is how it can be done"). Qualities such as reflection, changing light, ocean sounds and breezes are part of the visual imagery that will be considered.

PROPOSED ROUTE:

COLLECTOR

ARTERIAL

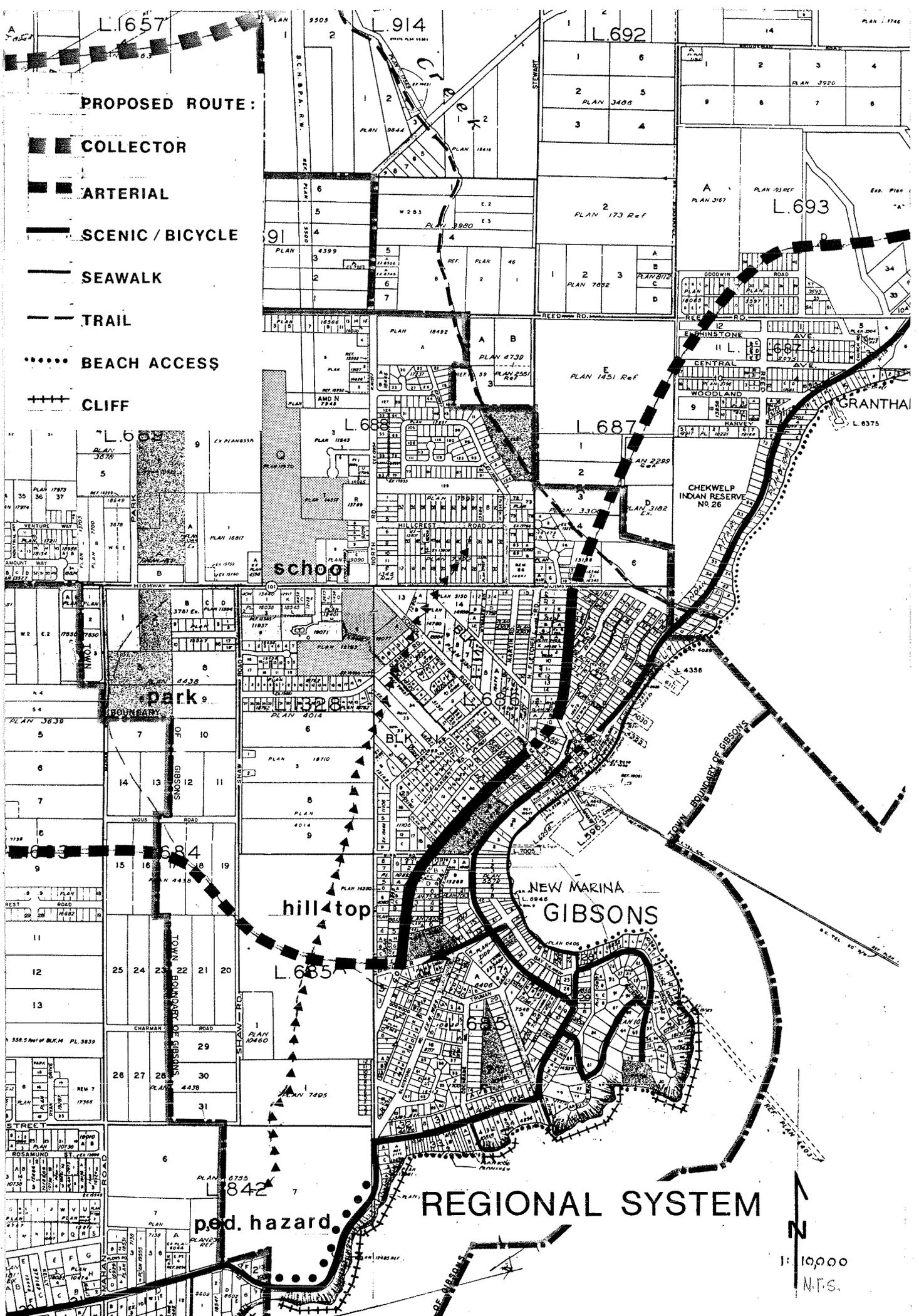
SCENIC / BICYCLE

SEAWALK

TRAIL

BEACH ACCESS

CLIFF



REGIONAL SYSTEM

1:10,000
N.T.S.

Chapter 11

IMPACTS OF REGIONAL SIGNIFICANCE

11.1 TRANSPORTATION

Proposed regional transportation networks have been overlaid on the Regional Systems Map (opposite). The new routes linking the Sunshine Coast and Gibson's Heights directly with the ferry terminal (bypassing the Landing) would consequently cause the surge of traffic streaming along Marine Drive in mid-summer to be modified (refer to p.33).

A new link joining Gower Point Road with Kearton Road via Charman Creek ravine would provide direct access to residents in west Gibsons. The route passes Dougal Park, which offers regional recreation facilities, and would terminate in the bay at the new marina, a regional facility.

One further link which I would like to recommend is the joining of Sechelt Highway with South Fletcher Road, providing a major northeast/southwest arterial. Marine Drive and Gower Point Road, as alternative routes, could then be given a regional "Scenic Route" designation. The bluff at the head of Gibson's Landing is an important viewpoint that should be designated part of the scenic route.

11.2 WALKWAYS AND TRAILS

Two trails up Mount Elphinstone and one winding around Soames Hill (the Knob) are noted regionally.^{5 5} Opportunities exist to provide hiking and horseback riding trails linking Cemetery and Cablevision trails via Chaster and Gibson Creeks with the seafront. Ecological reserves of creek greenbelt strips from the waterfront into the Provincial forest lands are supported in S.C.R.D. Official Regional Parks Plan (Objectives).^{5 6}

^{5 5} Rita Percheson, Pam Gross and Sandy Barrett Hiking Trails of the Sunshine Coast Harbour Publishing (Madeira Park, B.C.)/Signpost Books (Edmonds, Wash.) 1979.

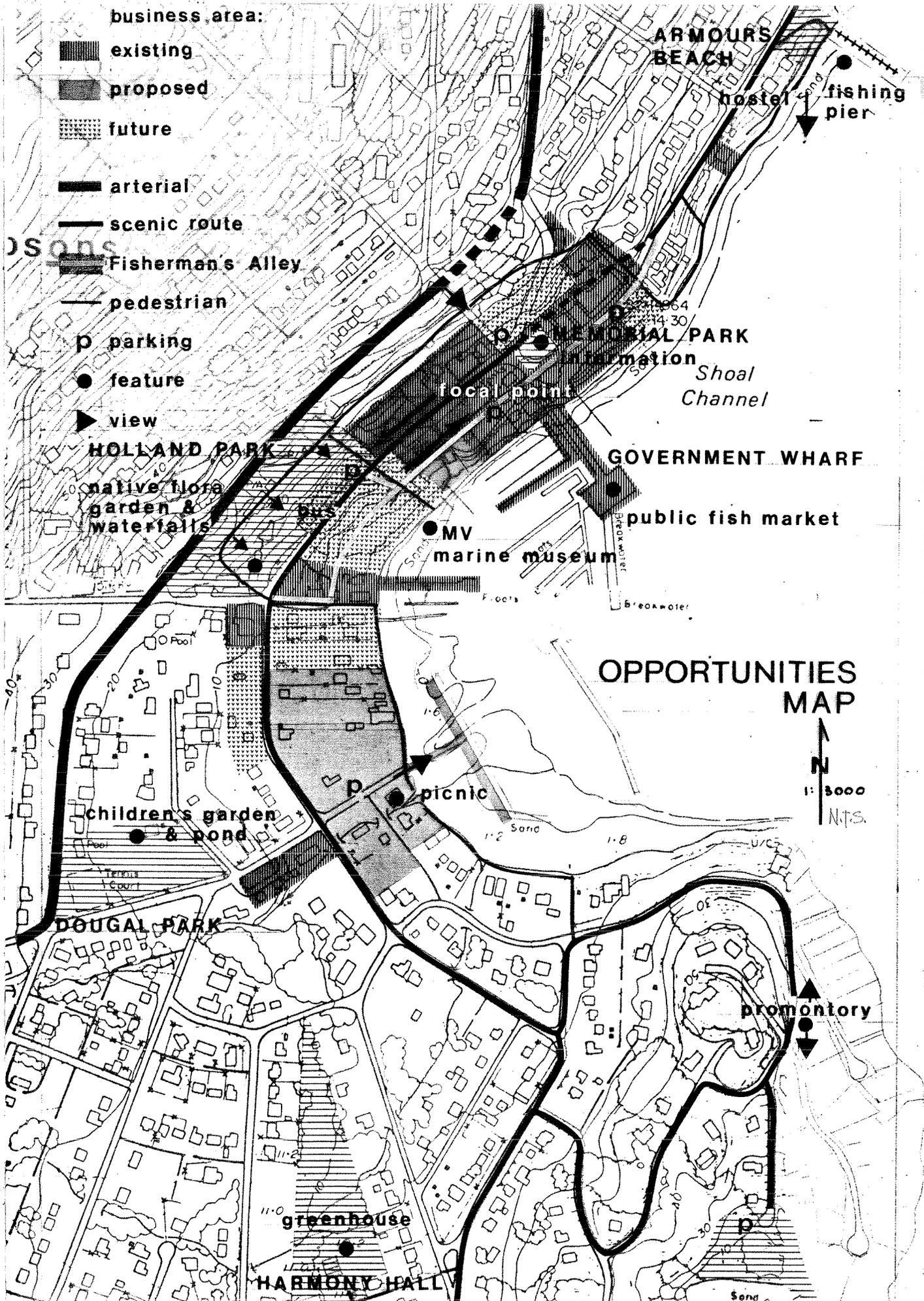
^{5 6} Stuart Lefeaux and Jim Johnstone Sunshine Coast Official

Soames Hill, a promontory northeast of the Landing, can be reached by an easy hike along the beach to Soames Point where the trail begins.

Seashore access to the south of the Landing is contiguous except in areas of rock outcrops which are usually too steep to pass. At points such as Gospel rock, pedestrians are confined to the hazardous route at road edge. It is recommended that a pedestrian path be created in this area (indicated on map).

11.3 BICYCLE PATHS

The scenic route which has been designated under 'Transportation' also provides opportunities as a major bicycle tour route. Little conflict is envisaged unless traffic densities increase on Marine Drive and Gower Point Road.



Chapter 12

PROPOSALS FOR PUBLIC OPEN SPACE/PARKS

12.1 GOVERNMENT WHARF AND MEMORIAL PARK

Note: It is necessary to deal with the use of space around the wharfhead for it is in the broader context of the problem that long term solutions can be sought.

The direct links between Government wharf and the road system had a historical significance in that the wharf was the supply line to the Sunshine Coast until 1958 when ferry operations shifted to the Langdale terminal. The primary function of the wharf now is the berthing of the fishing fleet. Small craft berthing will eventually be shifted to the new marina.

There is potential for a public fish market to be launched when government licenses are issued to prepare fish on the boats for direct sale to the public. The market concept could extend to shops at the wharfhead.

This proposal recognizes that Government wharf will continue to be the central focus for activity at the Landing. From the open water, it represents a place of shelter and sustenance.

The municipality has been contemplating the closure of School Road to traffic. The steepness of the grade has caused problems especially during winter weather. I support the road closure given that the space would more feasibly provide for a parking area for the town. Downhill flow of parking from South Fletcher Road to Gower Point Road would impact less than total closure. Closure to uphill traffic, which is light, would have negligible impact.

Memorial Park is a pivotal site at the wharfhead. It is surrounded by a sea of asphalt, formidable to the pedestrian crossing the intersection to visit the wharf. In view of the light vehicular traffic to the wharf, I recommend that Marine Drive be aligned with Gower Point Road above the park. The intersection would be reduced or removed, leaving a shopping alley at the wharfhead, designated "Fisherman's Alley".

Memorial Park would be an urban park providing pedestrians with an exciting view of the wharf activity and the bay. It would be a meeting place, rest stop and information center. It would continue the terracing of School Road, providing a point of orientation before stepping down to Fisherman's Alley and Government wharf.

These moderate changes to the road system would allow a three to four tiered shopping strata to develop in a more dense form, providing easier pedestrian access.

Molly's Reach is an institution which should be preserved because of the identity the Beachcomber Series has given the Landing. I believe the facility should be utilized the entire year -not just during the summer months when filming takes place. Facilities and equipment could be rented out to local theatre companies; Beachcomber re-runs and NFB films could be shown year round. There is room for a theatre addition to the rear of the building, providing opportunities for productions during all seasons. Theatre patrons would support other establishments in the area.

Evening parking would be available on School Road, at the wharf, and along the shopping streets. When the Shell tanks are relocated, there will be space available for parking in the alley.

12.2 HOLLAND PARK AND HARBOR DEVELOPMENT

Holland Park offers the public one of the broadest expanses of view to the bay. The springs on the site have provided water to the Landing since early settlement, and to a former garden that was once on the original Holland farm. It would be appropriate to create a garden once again -"Gibsons Gardens" representing the flora native to the Sunshine Coast (akin to the Pacific Coast flora of Vancouver's Van Dusen Botanical Garden). Using the water on site, waterfalls could cascade downslope through the garden, providing irrigation as needed. Species such as Arbutus, the only broad-leaf evergreen native in Canada, could be featured, as well as shore pine, western sumac and western azalea. Bearberry, trillium, lily and iris would be part of the ground cover complex.

Landscaping is required to effectively reduce the impact of the buildings upslope, and shelter the pedestrian on a rainy day. Downslope, along Gower Point Road, a pavilion would serve as the bus station and pedestrian rest area. The firehall should be removed or be renovated and linked with the pavilion. The building could serve well as a youth center, for which there is a need.

The Gibson Garden development provides a feature on the hillside; it is equally important to provide a "pull" down to the bay. I recommend that one of the old ships that plied the waters of Howe Sound and the Landing be brought back and permanently berthed below Holland Park to serve as a marine museum. The Elphinstone Museum, which is in need of more space, would have a permanent home and would be able to expand on the marine collections as a regional feature. Ships of the Union Steamship Company or ferry boats such as the M.V. Quillayute or the Langdale Queen⁵⁷ would be an important asset to the Landing and the region, apart from the functions they would now serve.

12.3 ARMOUR'S BEACH

The community had proposed a saltwater enclosed pool for this park. My investigations with the Parks Department in Vancouver reveal that such a pool would be a very expensive undertaking. The B.C. Health Act no longer allows tidewater pools. All other pools require filtering and purification, with equipment costs alone at \$1 million (pool construction would be roughly another million). I feel therefore that a saltwater pool is not justified, especially as the town is already supporting an indoor pool.

It is important to provide a swimming beach here, and to create a better activity area for teenagers. Armour's Beach is the most suitable site for launching light boats including canoes, kayaks, and wind surfers. A protected area is also useful for waterball sports and log rolling, as demonstrated by the Sea Cavalcade weekend activities. One other major need that could be met here is the establishment of a fishing pier, an attraction to people of all ages. My recommendation is that a pier be built to meet all these needs, including protection of a swimming area. Floats can be added as required. A terraced hillside with decks for sunning and viewing would be part of the design solution. Driftwood, which washes ashore in such abundance, could be used in the landscape design and in the breakwater structure.

At some future time there may be a problem of pollution from the marinas around the bay, especially as the littoral drift is from south to north. The two year monitoring program being carried out by Fish and Wildlife should give some indication of this. In the event of beach closure for swimming, it would not affect the fishing and boating activities. The option is to apply more stringent regulations now

⁵⁷ Rob Buchan, town planner, mentioned this ship is languishing under the Second Narrows Bridge in Vancouver.

to sewage disposal in the bay.

Adjacent to Armour's Beach are some vintage houses that would serve as hostels (most notable is the Marina House, built 1931 by Doc Inglis). There is a need for such a facility, regionally and locally, and the location here at "the gateway to the Sunshine Coast" is important. It could also serve Katimavik groups who come each year, and bicycle tours. It would be an important link to the countrywide Canadian Youth Hostels Association.

One of the best views of the harbor is seen from this point along the seawalk. It is a short distance to the stairs at Jack's Lane and the beginning of Fisherman's Alley.

12.4 DOUGAL AND MARINA PARKS

A short link along Gower Point Road connects Dougal Park to the bay and the Marina Park. The latter is envisioned as a picnic/open space area. It is in a prominent visual position on the bay. It is also the site of a prehistoric Indian midden. This background can be emphasized in the Marina design with the use of the fire circle bringing travellers together, and the display of legends and artifacts.

Charman Creek, which is the most suitable location for the Marina Park, provides the link for pedestrian access to Dougal Park. This large park space offers many recreational play areas, including tennis courts and a ball diamond. The tennis courts need to be unshrouded from their veil of evergreens so viewers are permitted to appreciate the action on the courts.

I mentioned previously the opportunities to use Alder Springs within the park design. Probably the most significant use of the park is the children's play area. I propose that this be extended to include a stream and pond feature, bordering or enclosed by a children's garden, using native species suitable to this habitat.

A tent structure for children's summer theatre would be an asset. The marine character can be emphasized by the use of driftwood, light buoys and an old schooner which would be a play feature, improvised stage, and a picnic shelter. And driftwood can become any mythological creature the imagination desires. The function of Kinsmen Hall may be more clearly defined as a community center and as a day-time nursery if it were redesigned with a deck to open onto the park space.

12.5 HARMONY HALL PARK

One public space I have not dealt with previously is the land opening out from Harmony Hall, the senior citizen's complex. As there has been no development of this area, I recommend that it become utilized as garden projects for senior citizens. Greenhouses could be developed here, using water from the creek for irrigation. Year round production could meet the members' needs and provide a source of income through sales at the public market. Nursery plantings could also be developed for use in the Holland Park Garden and Dougal Park children's garden.

Chapter 13

DESIGN APPROACH

13.1 INTRODUCTION

13.1.1 The Themes: Shelter and Sustenance

The previous chapter contained proposals for open space/park use; this section is concerned with the design approach to be applied in attaining the quality of space and linkage desired. For this purpose it is necessary to define an overall theme or meaning which will serve as a unifying element for all of the open space/park areas of the Landing, and a vocabulary of marine imagery by which the themes can be realized. In describing the significant form of the Landing, I mentioned the sheltering aspect of the bay,^{5 8} reinforced and contained by the surrounding hill. It is important to pick up on this theme- the harbor, a refuge- as central to the open space design.

Supporting this dominant theme is a secondary one, the provision of sustenance. The springs, as a natural resource, would be highlighted, and information and access to food, lodging and auxiliary services (such as transportation) would be emphasized. Edible native flora would be represented, as well as plants having medicinal properties (e.g. Cascara).

These two themes, shelter and sustenance, are inherent components in the history of the Landing. It is through the design process that they be re-created.

^{5 8} Chapter 2.1 Impressions, p.9

13.1.2 Principles of Open Space Design

Interpreting these themes with other landscape determinants (p.53), I have drawn up the following principles for the design of open space/park areas:

1. That the quality of sheltering and sustenance be fostered, both physically and psychologically,
2. That there be a source of fresh spring water at each site,
3. That major views be maintained,
4. That direct links between the bay and open space areas be created (where necessary),
5. That native flora be propagated as appropriate to the habitat, and that it incorporate edible species,
6. That main routes and aspects be keyed visually to an orientation plan of the Landing,
7. Finally, that built forms are compatible with those of the local marine environment (eg. indigenous use of local timber and stone), and that there is uniformity in the use of materials and construction techniques at sites.

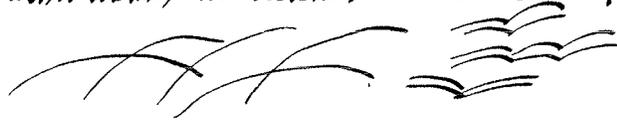
These are statements of intent derived from a synthesis of the background data; the following section defines the design motifs employed in carrying them out.

13.2 IMAGERY OF THE MARINE LANDSCAPE

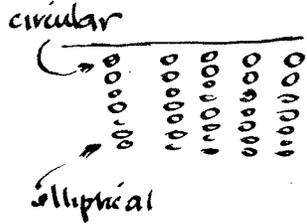
One of my major concerns in the development of this proposal is the creation of a visual vocabulary of marine imagery, to be used in the design process.⁵⁹ It is my intention to use imagery to provide both a marine orientation to the landscape, and a means of linkage between sites.

⁵⁹ p.5, 3.2.2 Creation of Marine Imagery, also 3.3 Synthesis

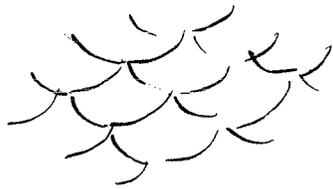
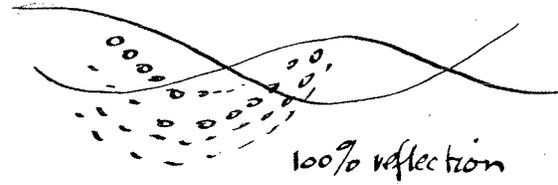
swash marks at beaches - arcuate ridges



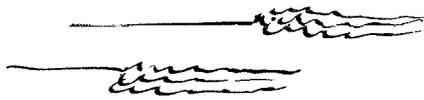
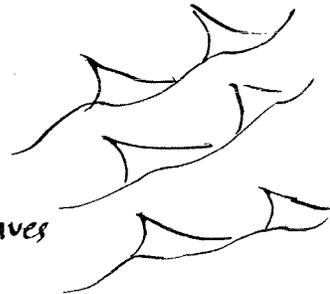
pure progressive waves



pure standing waves



spilling breaking waves
(ocean)



turbulent flow

13.2.1 Inherent Characteristics of the Marine Landscape

The dominant features of the marine landscape which distinguish it from other environments are the patterns of wave action and of light. Together with wind movement and precipitation, the Landing environment constitutes a highly dynamic landscape.

The shoreline can be seen as the edge of a field of energy, the ocean. Wave action is the dissipation of energy of that mass. It is by the action of these dynamic processes that forms are created: the forms represent the energy released by a system. The face of the landscape at Gibsons is the result of such major processes- wave activity, sun, wind and rain, with which man interacts. It is this energy, acting on the land mass, that has created the harbor at Gibsons. The salient form of the design then recognizes wave activity as a generating form creating the effect of sheltering.

The significance of the form derives from the impact and occurrence of the process. Wave activity creates arc-shaped ridges of sorted material; the hills of the Landing can be seen as a series of shorelines that the receding inlet waters sculpted after release from the last glacier. The pattern of marine activity is rhythmic, curvilinear and antidunal. Overlying this are sporadic wind forces shaping dunal forms, intermittent rains creating gullying effects, and the cyclic growth processes of nature. The most dramatic change is the alternating circadian day/night sequence, creating a focal change from the water to the land, and thus emphasizing the sense of sheltering of the surrounding hills.

These dynamic processes provide for the abundance of life to sustain man. Man manipulates, and in turn is manipulated by, these processes. He can only influence the rate at which these processes are occurring, and thus the shape of the emergent form.

13.3 THE DESIGN

13.3.1 The Shoreline Terrace

The rhythmic pattern of wave activity and the consequent building of shorelines can be translated into design forms- into a series of terraces which represent the structure of formation of the sloping hillside. The terrace face can be sloped to accommodate the incline of the hill, leaving a series of flattened plateaus for planting and pathways. Where the slope is greater, the terracing is steeper, graduating into the hillside as slopes become gentle. Terraces can also

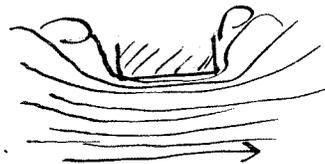
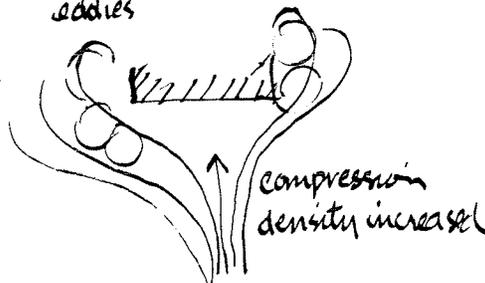


quality of rhythm - juxtaposed
on ~~long~~ mass.



or gentle swells

planting in undulating rows, increasing
energy of the system, increasing momentum
eddies



Dynamics of the system : ways in which
energy is held and released produces the rhythm

be stabilized to serve as retaining walls, as required at Holland Park. Individual terrace wall heights of up to one meter reflect the yearly range of significant wave heights(p.42), and provide a scale compatible with other built elements, eg. railings.

The rhythm established by terracing determines the pedestrian and vehicular movement. New road patterns, as required in the Marina parking, are aligned following the contours of the bay. Belts of vegetation are stepped down to accommodate the slope, and to provide an edge of visual relief in the sea of asphalt and concrete.

Pathways are developed along the upper edge of the terrace walls, parallel to the contours of the terrace. Vertical movement is by stairs, ladders and ramps, cut into the face. Inclination of the stairs is determined by the slope: for less than 30%, a ramp is used.

13.3.2 Terraced Planting

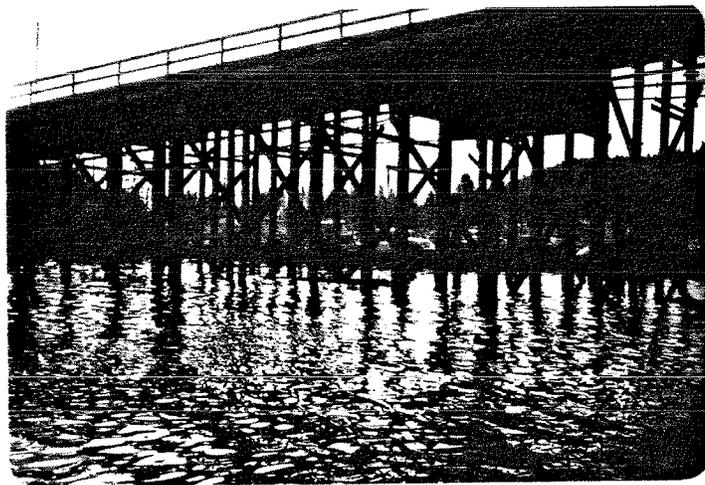
Plant community selection and placement are also strongly determined by the terraces, which reflect on-site conditions such as slope, soil cover and degree of exposure. Xeric conditions on the hillside of Holland Park (north end) and Armour's Beach, where hills are steeply sloping and soils are gravelly, indicate the selection of the Arbutus/Garry oak complex with Arctostaphylos species and ericaceous plants(heath family) as ground cover. This complex is found on rock outcroppings where shallower soils and drier conditions prevail. The terracing would help to prevent erosion and hence help in moisture retention.

Across the moderately sloping hillside, mesic conditions generally occur, and are reflected in the more moderate rhythms of terracing and lower wall structures. Planting cover is more easily stabilized in these areas. Introduction of more variegated species is possible as there is less stress. On the open grassy areas of the sites, sun-tolerant species such as pine act as nurse crops to improve the site. Meadow species can be regenerated for variegated ground cover.

Abundance of water (hydric conditions) at the foot of slopes and in low lying areas is selective of other communities, including wetland species. The shaded moist Coast Forest floor of elder and yew, salal, fern and moss has conditions somewhat similar. Holland Park represents a cross-section of these conditions and communities, from the Coast Forest on the lower south boundary to the Arbutus complex on the north. Terraces define the edges, or boundaries of each



... the bay is a mirror silvered to sky color.



... the dynamic silhouette of contrasts.

community. Grouping the plants in this way helps to reinforce the terraced form of the hill.

The base of the terrace wall serves as an irrigation and drainage duct, containing a channel to conduct water to the planting. It is necessary to provide irrigation for sod and meadow areas as they do not have the same moisture holding capacity on south-facing slopes as do wooded areas.

The shape of the planting is analogous to the dynamics of a wave: it flows through open spaces in undulating waves with a leading edge. Where there are obstructions (buildings) the massing becomes more dense and heightens. This will act to screen lines of the building from view and provide sun shading and wind buffering. This approach is used in Holland Park where there are many buildings, and at Armour's Beach where parking areas and buildings above the road are masked. Smaller types of trees with good light penetration (pine, cascara, mountain ash) are preferred to maples, firs and cedars, which block the views due to their substantial masses.

The pattern of planting on different slopes also reinforces wave dynamics: on the gently sloping areas, grass and meadow are maintained, whereas shrubs are utilized on the steeper gradients.

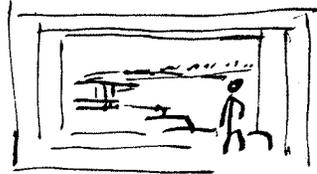
13.3.3 Patterns of Light: the Background

The intensity of color on a clear, breezy day- the choppy water and the sky a vivid blue, the distant mountains darkened and snow-capped- draws the viewer outward. The Landing becomes a well-defined entity bounded by shoreline, ridge and island. The long view sweeps across the bay framed by range of mountains. The foreground ceases to be a visually prominent element. There are several important viewing areas which capture the long view on clear days. These locations have been designated in previous drawings including the site analysis maps.

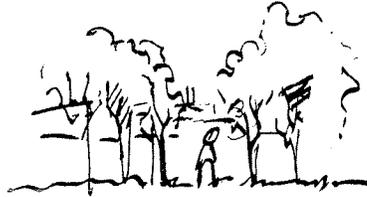
13.3.4 The Foreground

Conditions change remarkably when clouds mass the sky, when surface waters are calm. Heightened wave activity dissipates light, whereas there is a concentration of light on a tranquil surface. The bay is a mirror silvered to sky color. It provides a background for the dynamic silhouette of contrasts: horizontal thrust of wave pounding seawall, flowing versus static, glazed versus rugged, sound versus silent.

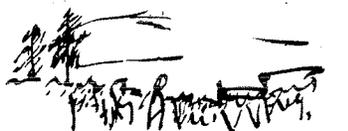
Viewing :



distant views framed
by man made structure



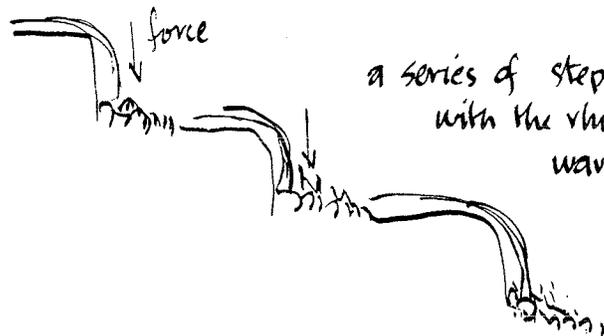
bounded by tree
trunk & canopy.



shrub belt screening
lower elements



panoramic - gentle
break in structure.



a series of stepped falls
with the rhythm of
wave fronts.

Color also forms a contrasting element against a neutral ground. Oranges, reds and blues are more vivid in conditions of low visibility and low illumination and work well as accent colors for built elements and signage.

Similarly in conditions of fog and rain, the background is swallowed up while the foreground is emphasized. The designs in this proposal recognize the changing focus by creating immediate (short) views along the paths and shelter areas and at prime resting points.

The first important set of short views captures the waterfront, the docks and boats: the fishing pier at Armour's Beach, Government wharf from the Information center, the M.V. Harbor Queen from Holland Park, and views to the new marina.

A second set are those created along the esplanade and streetscapes. They are focal points to provide orientation and entry to the sites: the raised pilings at Armour's Beach and Dougal Park (the latter supporting a summer tent), the flags on approach to the Information center, the overhead bridge at Holland Park and the totem pole(s) at the Marina midden.

A third set are the intimate viewing areas within the site. Included are the fountains, the reflecting ponds at Holland and Dougal parks, the stone and wood shelters, and the floristic communities and special features such as the old schooner in Dougal Park.

People-viewing will no doubt be an important pastime from all of the above vantage points, most of which are activity nodes.

13.3.5 Reflections

The mirror-imaging of the ocean accentuates the light and dark contrasts of sky and structure within the rhythmic quality of the wave front. Water bodies on land recreate this imagery.

13.3.5.1 Fountains

Bubbling up from the ground, from rock faces, the natural springs are contained in fountains designed uniquely to represent the character of each particular space. Reflecting catch basins at each fountain overflow onto rocks, downcutting channels to ponds, generating wave patterns on the pond surface (Dougal and Holland Parks).

The fountains are found in highly visible locations at the base of banks or rock outcrops (their natural field of association), and have seating areas adjacent where the traveller may rest after refreshing himself .

13.3.5.2 Ponds

Wave patterns generated by inflow from fountains reflect the warped images of bankline and special marine features, heightening the land/water contrast. The pond edge is treated as a shoreline, with curvilinear form and character varying from the barnacled stony beach of a sheltered inlet, with mud flats at beach head, to the sand-sorted or scoured rock face of an exposed beach.

Plant communities compatible with the character of the shoreline are selected as follows:

1. protected-
 - a) marshy: wetland species (reed, sedge, horsetail, fireweed, willow)
 - b) stony: bushy, edge type, sun-tolerant (hardhack, honey suckle, rose, morning glory, salal)
2. exposed-
 - a) sand-sorted: supple clumped stands (alders, maples, berries)
 - b) rocky outcrop: xeric species (shore pine, Arbutus, grasses, heath family)

Areas of greatest turbulence and scouring occur where waves are generated at inflow. These areas represent the exposed shoreline of the ocean.

13.3.6 Night Lighting

The community becomes land-focused as dusk settles over the ridge, and lights dot the hillside, outlining the shape of the bay. The aspect of light on water is an important reinforcing element of the harbor, providing orientation and signaling shelter and sustenance to the wayfarer.

Lighting gives a sense of overall pattern of settlement and of landform. There appears to be four visible patterns within the bay: the clustering of store lights at the wharf-

head, the regularity of the intense road lights of Sechelt Highway and Marine Drive, the cluster of marine lights softly reflecting across the bay from boats and docks, and the myriad of lights from cottages within the Landing area.

On quiet nights the lights are luminous across the bay; on windswept nights the lights are beacons, signaling safety from the choppy waters.

13.3.6.1 Interpretation

Lights are signals which provide information on direction, location, shape and identity. Lighting is used in this proposal to highlight the marine character in the following way:

1. Placed along paths, lighting gives form to the terracing of the site, which emphasizes the shape of the bay and the rhythm of the waves.
2. All focal points and entries to sites will be illuminated to provide orientation to the site from approaches by land and water.
3. The lighting of public areas and the connecting pedestrian walks will add another pattern to the existing form, increasing the contrast between the water/land base.
4. Those thematic elements, especially shelters and fountains, are intended to be illuminated at night. Indirect lighting is preferred for all fountains. Ponds and other water surfaces are not illuminated, but serve as reflecting surfaces for those surrounding features which are. Illuminated features are positioned to bring out the lines of the shore.

Chapter 14

THE DESIGN OF PUBLIC OPEN SPACE/PARK AREAS

14.1 INTRODUCTION: THE DRAWINGS

An overall concept plan broadly defines what proposals are intended and where and how. The connecting road and pedestrian pattern are also shown.

A set of site analyses and plot plans, indicating design intent, have been developed for all five sites: Memorial and Holland Parks, Armour's Beach, and Marina and Dougal Parks. Designs are included for the first three sites.

Perspectives of the various sites demonstrate the themes of shelter and sustenance, and the marine imagery described in chapter 13. The quality of moving water and of sheltering is visible in most drawings, with emphasis on view, feature, and site entry and focus. The quality of lighting, and of night lighting is also represented (Information center and Marina drawings).

Detailed designs for stairways, parking and the water cascade/shelter are included. They delineate the use of local materials (stone and timber) and the manner of use compatible with the marine environment.

14.1.1 List of Drawings for Open Space Design

Concept Plan

Memorial Park -Site Analysis
-Plot Plan and Design
-View of Information Center and Fountain (night)

Holland Park -Site Analysis
-Plot Plan
-Design
-View of Entry and Waterfall (from shopping area)
-2 Views: Across Site to Howe Sound
Entry from Winn Road
-Waterfall/Shelter Design
-Step Design (typical)

- Armour's Beach -Site Analysis
 -Plot Plan and Design
 -View to Fishing Pier and Bay
 -View of Seawall and Terraces (from pier)
- Marina Park -Marina Development Plan Analysis
 -Plot Plan
 -Shelter with Fire Circle (view to Howe Sound)
 -Parking Design
- Dougal Park -Site Analysis
 -Plot Plan
 -View of Pond (showing tent and schooner)

14.2 MEMORIAL PARK

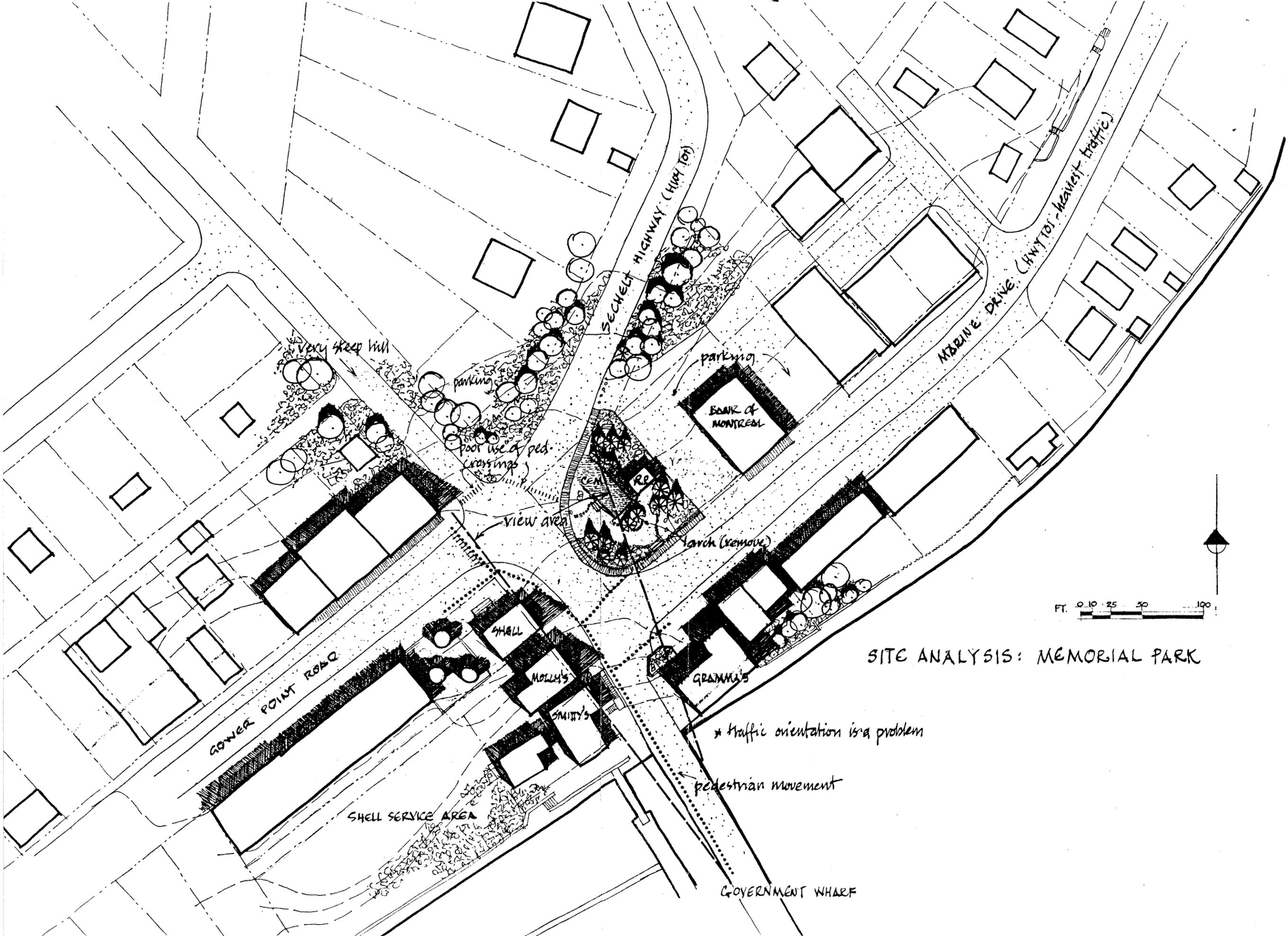
14.2.1 Traffic Patterns

The one-way traffic circulation system resolves the problem of traffic congestion and lack of orientation at the junction of Memorial Park. It provides for increased parking on the lower side (shade side) of the street and for wider sidewalks. Traffic density on each road is reduced, providing for increased capacity and for safer pedestrian movement, especially in the direction of Government wharf. The one-way system requires the widening and upgrading of Fisherman's Alley (west side of Government wharf), which would now become part of the Scenic Route.

14.2.2 Park Design

Flags flying over the park are visible from all directions, including the approach from Government wharf by sea. Orientation to the Landing and hospitality are extended here to all people. The information center in the upper corner of the site has one of the best views of the wharf, and utilizes the south-facing aspect of the site and inclination of the slope. People can stop to rest and refresh themselves at the fountain in the courtyard, where the Landing's history is glimpsed in the gravestone markers, remnant of the Gibson family cemetery. Water from the fountain heads cascades down over the steps, onto the rocks at the site, feeding low shrubbery to the streetside.

The roof of the refurbished washrooms, now integrated with the information center, is covered with planting also.



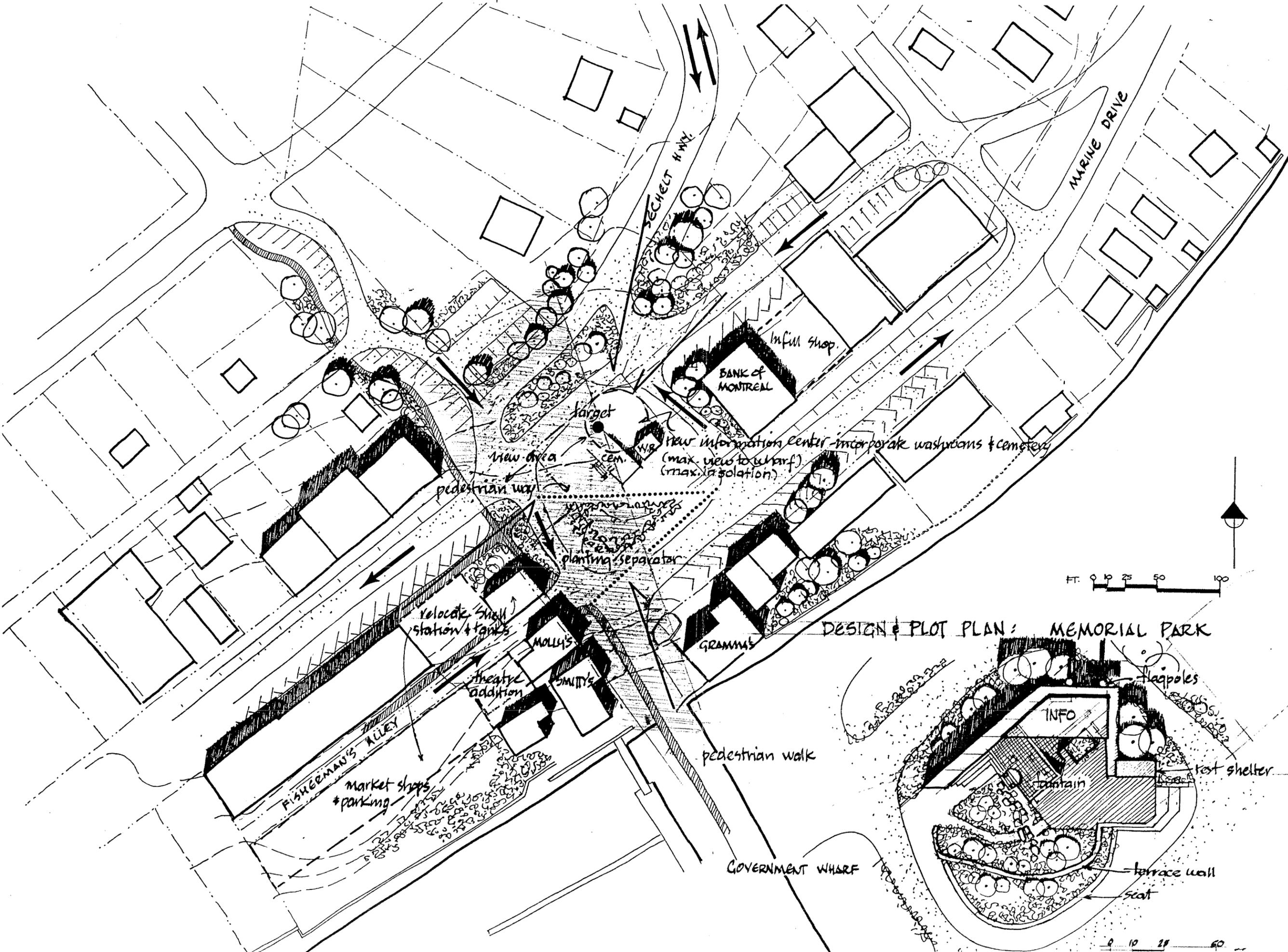
SITE ANALYSIS: MEMORIAL PARK

* traffic orientation is a problem

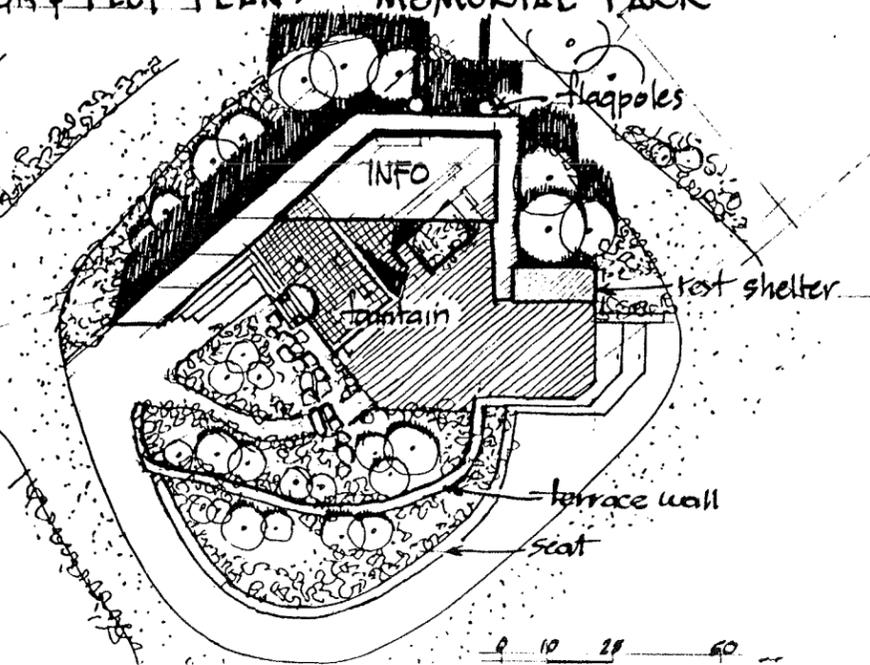
pedestrian movement

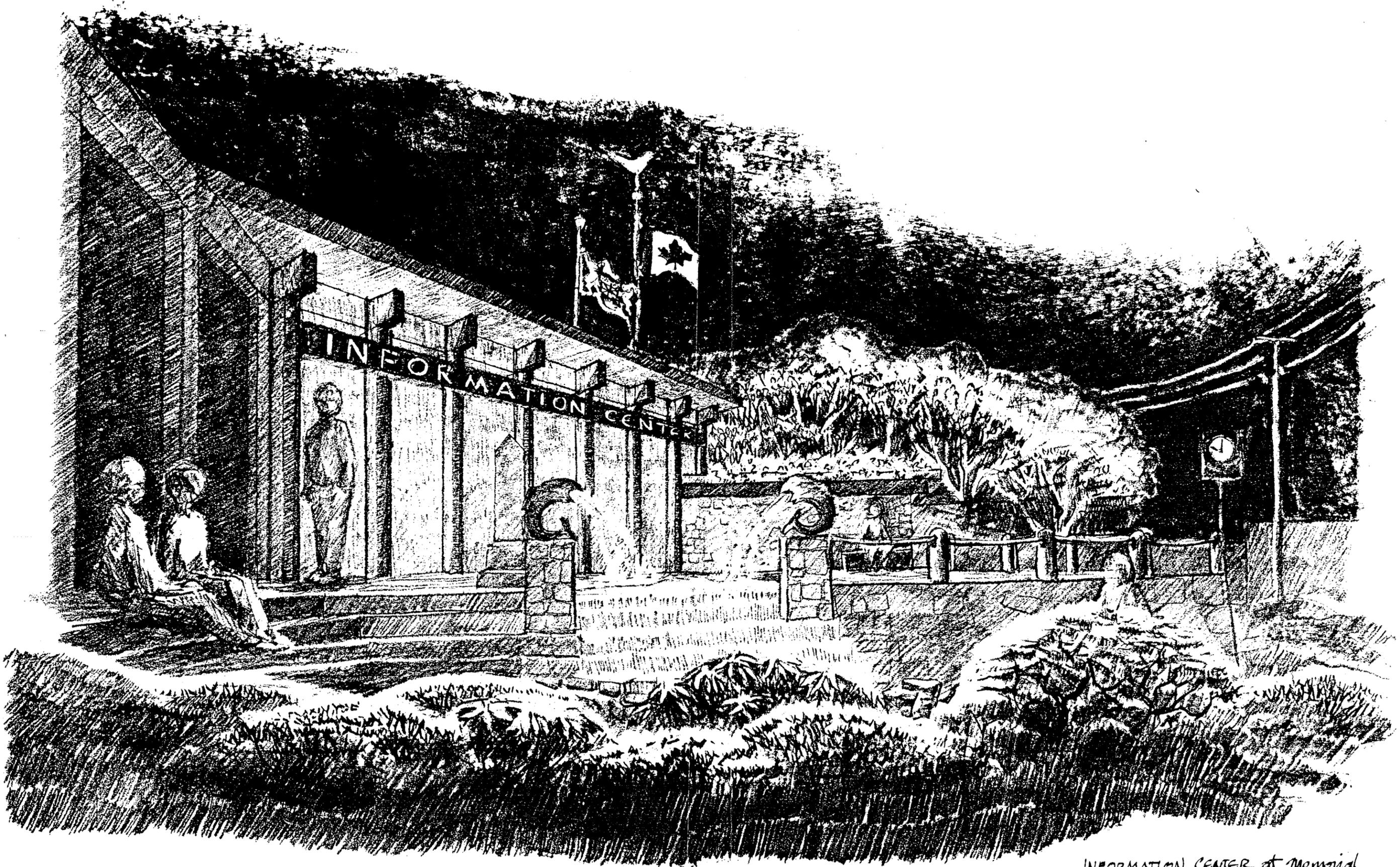
GOVERNMENT WHARF

FT. 0 10 25 50 100



DESIGN & PLOT PLAN: MEMORIAL PARK





INFORMATION CENTER at Memorial Park, south-facing. Existing walked cemetery is now paved court with fountain feature. Washrooms are in background. Apr. 84 RCB.

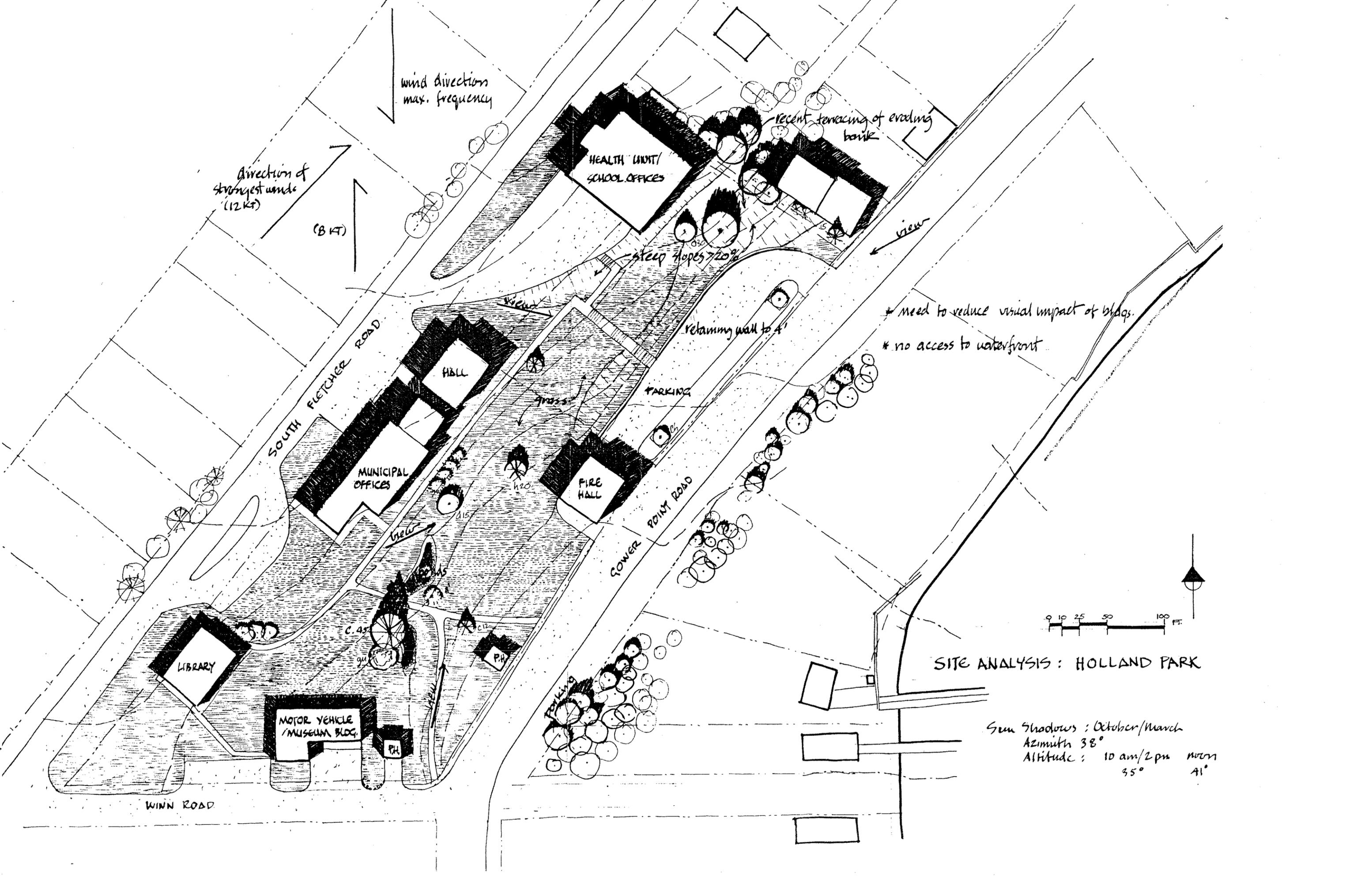
14.3 HOLLAND PARK

The creation of Gibsons Gardens at this site adds to the vegetation complexity and stimulation for the viewer strolling along Gower Point Road. It helps to mask the many buildings on the site. A street facade incorporating the former firehall emphasizes points of entry into the park. People emerging from buses are greeted by the drama of waterfalls cascading down the park terraces, alongside a pedestrian stairway to a pool at the street, before flowing down into the bay. An overhead pedestrian trestle (reminiscent of the old log bridges and tramways) guides the visitors across Gower Point Road, providing a magnificent view of the bay and of the M.V. Harbor Queen, who waits for them to explore her historic treasures.

Pacific Coast flora displayed in the park will feature three areas:

1. Arbutus/Garry oak complex (Gulf Islands) on the rock terraces with broom, bearberry, and manzanita shrub layers,
2. Coast Forest complex, using shore pine and mountain hemlock to create a forest canopy surrounded by a lower canopy of juniper, sumac, yew, cascara and vine maple. Azalea, flowering currant and salal form the shrub layer, with ferns, trillium and lilies as ground cover. Iris, gold-eyed grass and bulbous plants are found along the drainage channels.
3. Mixed: viewing areas are maintained across open areas of the site where grass and meadow-regenerated areas are now picnic sites. Shore pine, with its slender trunk, flattened top and good light penetration, is massed in front of the municipal offices to provide screening.

Picnicking, resting and viewing areas occur along the pathways. The path passes under the upper level waterfall where a shelter is tucked into the rock face.



wind direction
max. frequency

direction of
strongest winds
(12 kts)

(8 kts)

recent terracing of eroding
bank

HEALTH UNIT/
SCHOOL OFFICES

steep slopes 7-20%

retaining wall to 4'

* need to reduce visual impact of bldgs.

* no access to waterfront

SOUTH FLETCHER ROAD

HALL

MUNICIPAL
OFFICES

FIRE
HALL

POWER POINT ROAD

LIBRARY

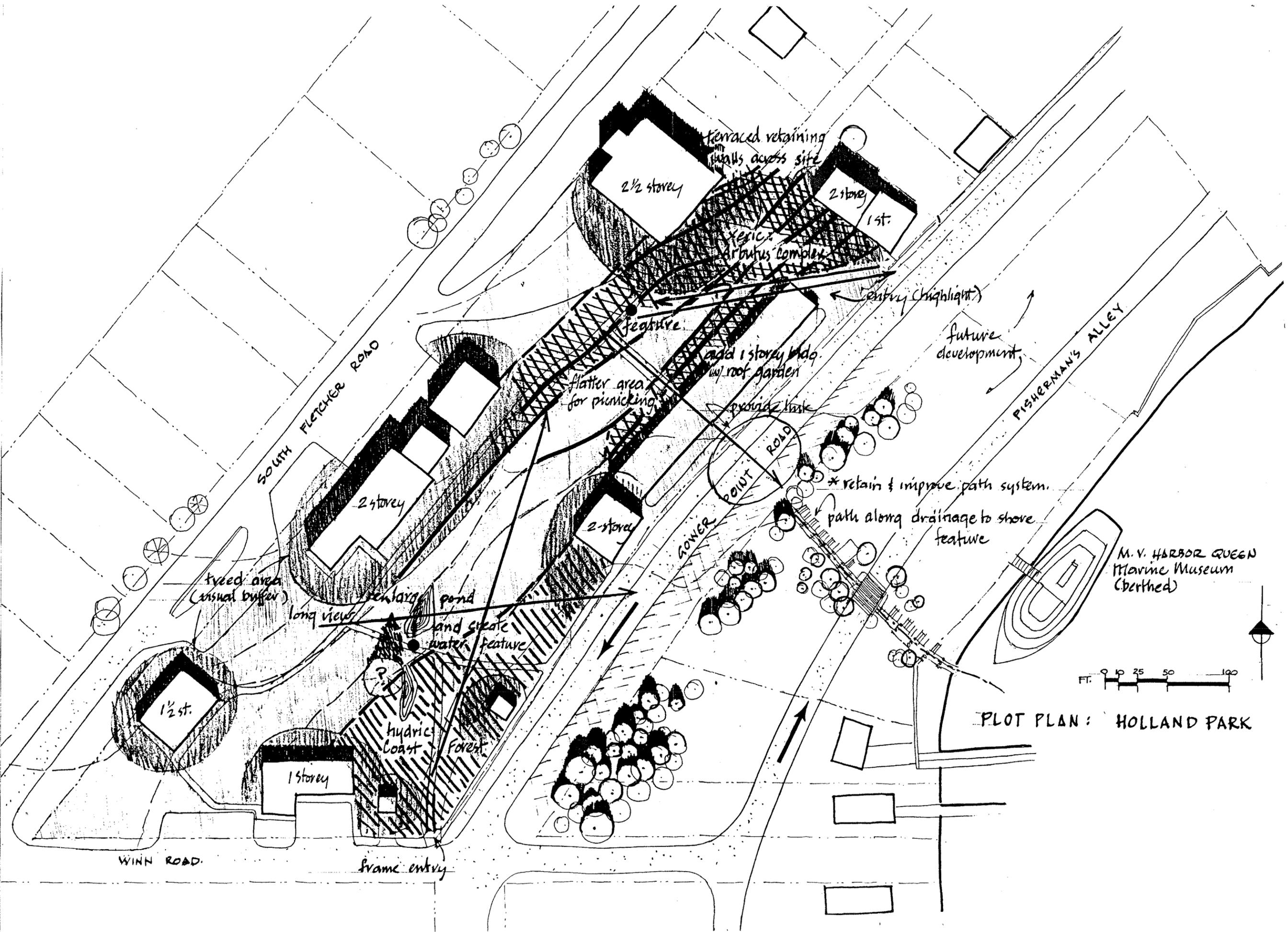
MOTOR VEHICLE
/ MUSEUM BLDG.

WINN ROAD



SITE ANALYSIS: HOLLAND PARK

Sun Shadows: October/March
Azimuth 38°
Altitude: 10 am/2 pm noon
 35° 41°



terraced retaining walls across site

2 1/2 storey

2 storey

1st.

eric. arbutus complex

entry (highlight)

future development

FISHERMAN'S ALLEY

SOUTH FLETCHER ROAD

2 storey

2 storey

POWER POINT ROAD

* retain & improve path system.

path along drainage to shore feature

feed area (casual buffer)

long view

pond and create water feature

flatter area for picnicking

add 1 storey bldg w/ roof garden

provide kiosk

M.V. HARBOR QUEEN Marine Museum (berthed)

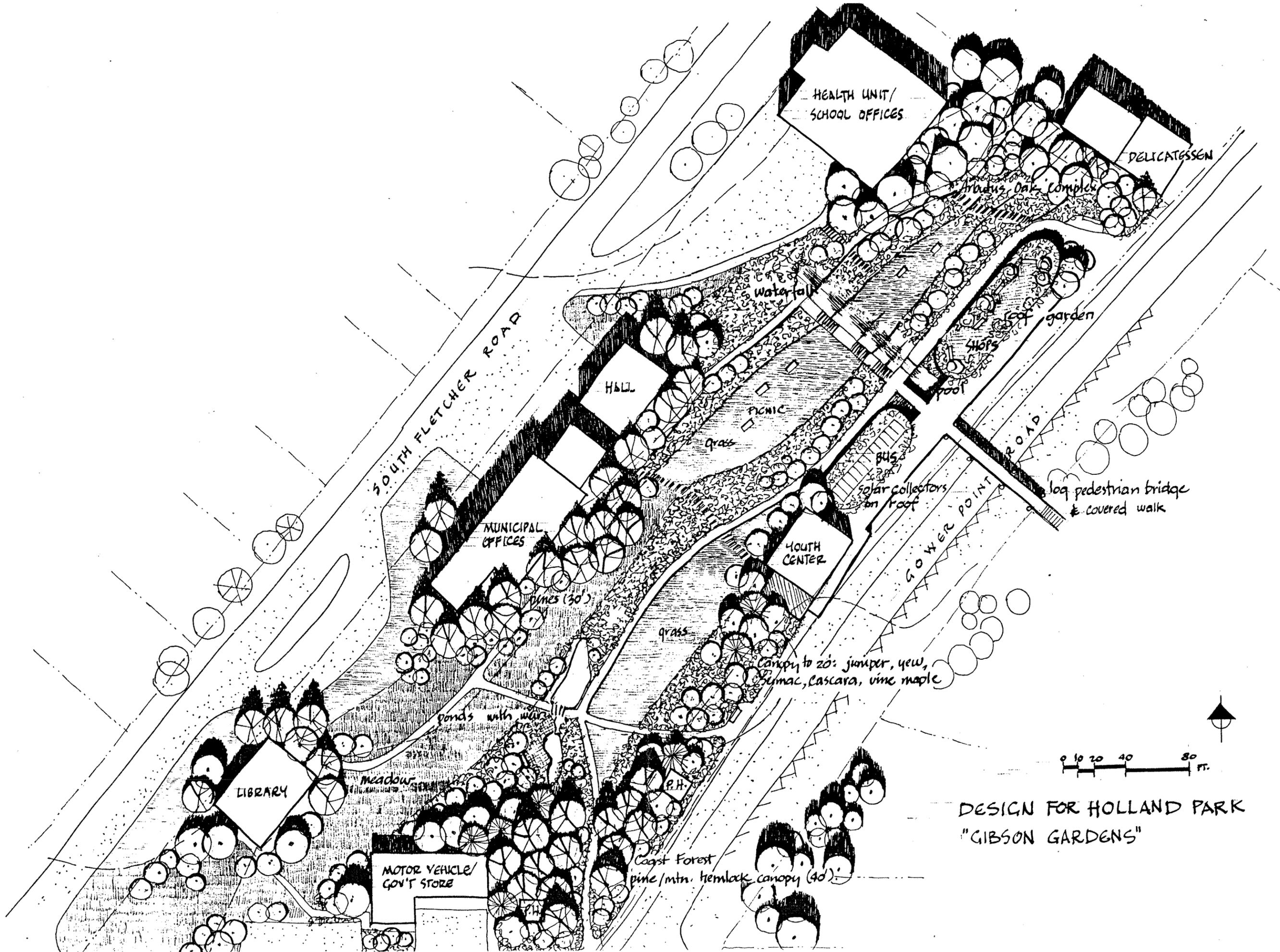
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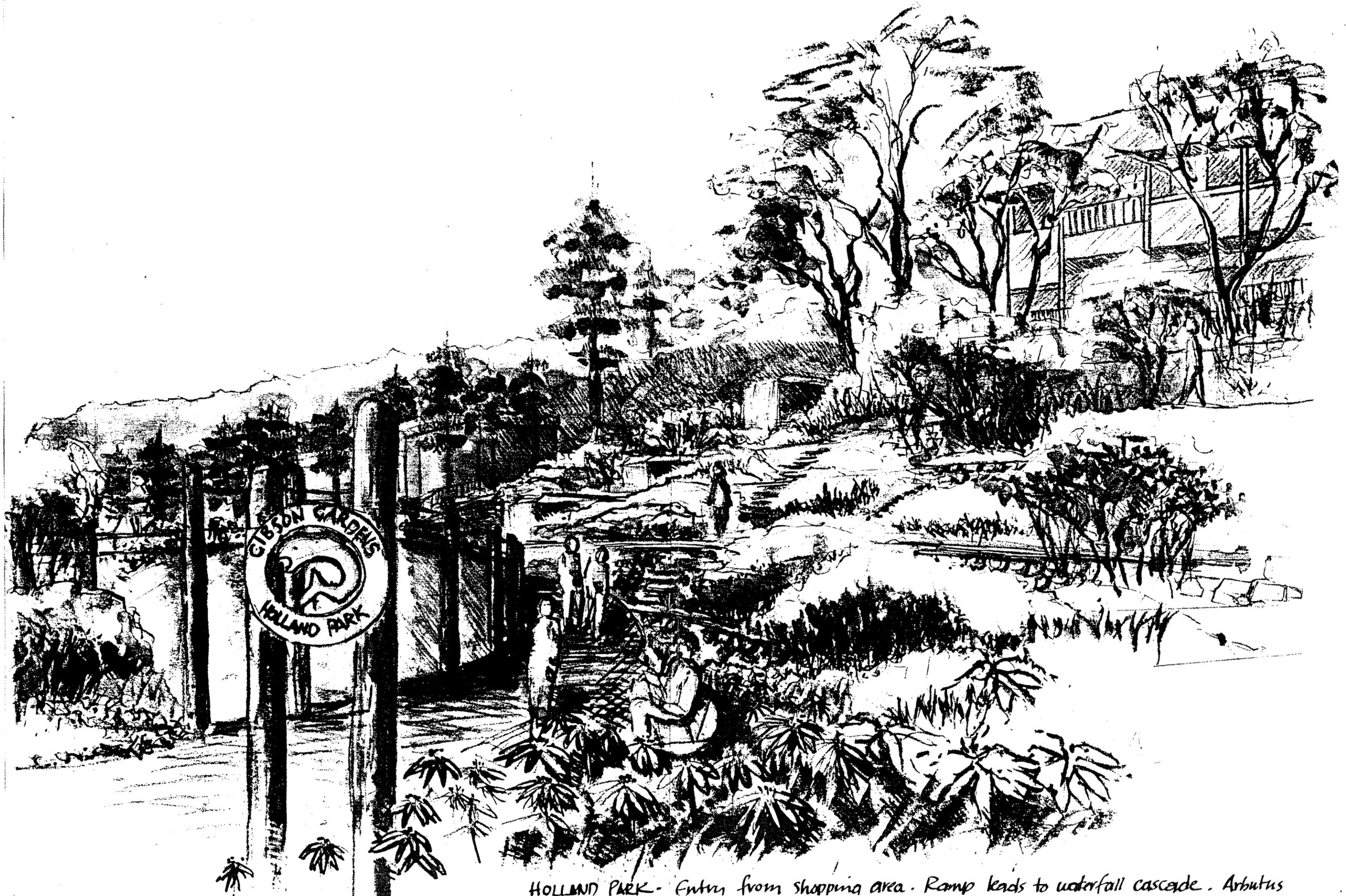
PLOT PLAN: HOLLAND PARK

WINN ROAD

frame entry

hydraic coast forest

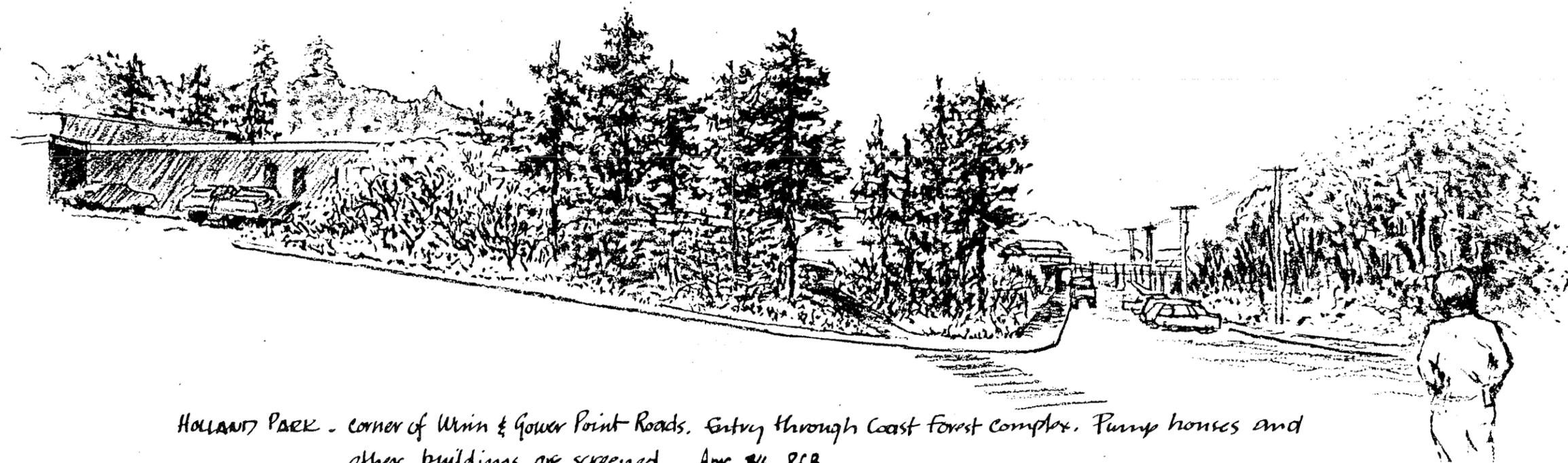




HOLLAND PARK - Entry from shopping area. Ramp leads to waterfall cascade. Arbutus

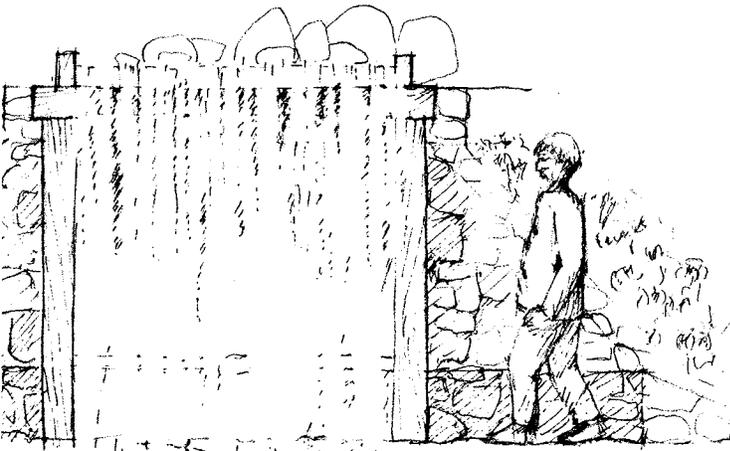


HOLLAND PARK - long view from upper walk to Howe Sound. Planting screens firehall. Ponds downslope are flanked by Coast Forest.

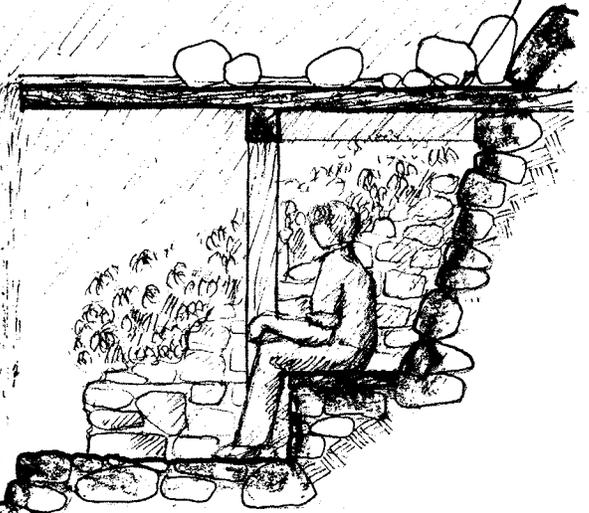


HOLLAND PARK - corner of Union & Gower Point Roads. Entry through Coast Forest complex. Pump houses and other buildings are screened. Apr. 84 RCB

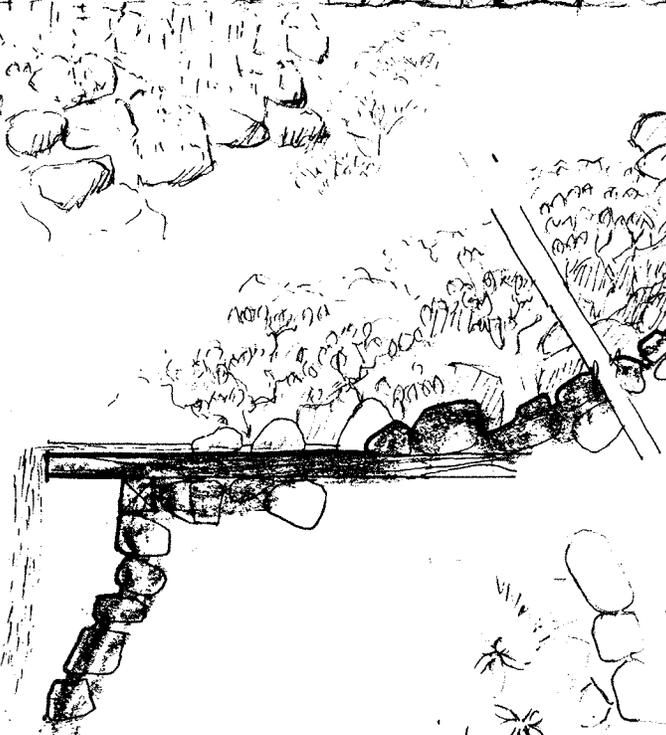
ELEVATION



flow from artesian well

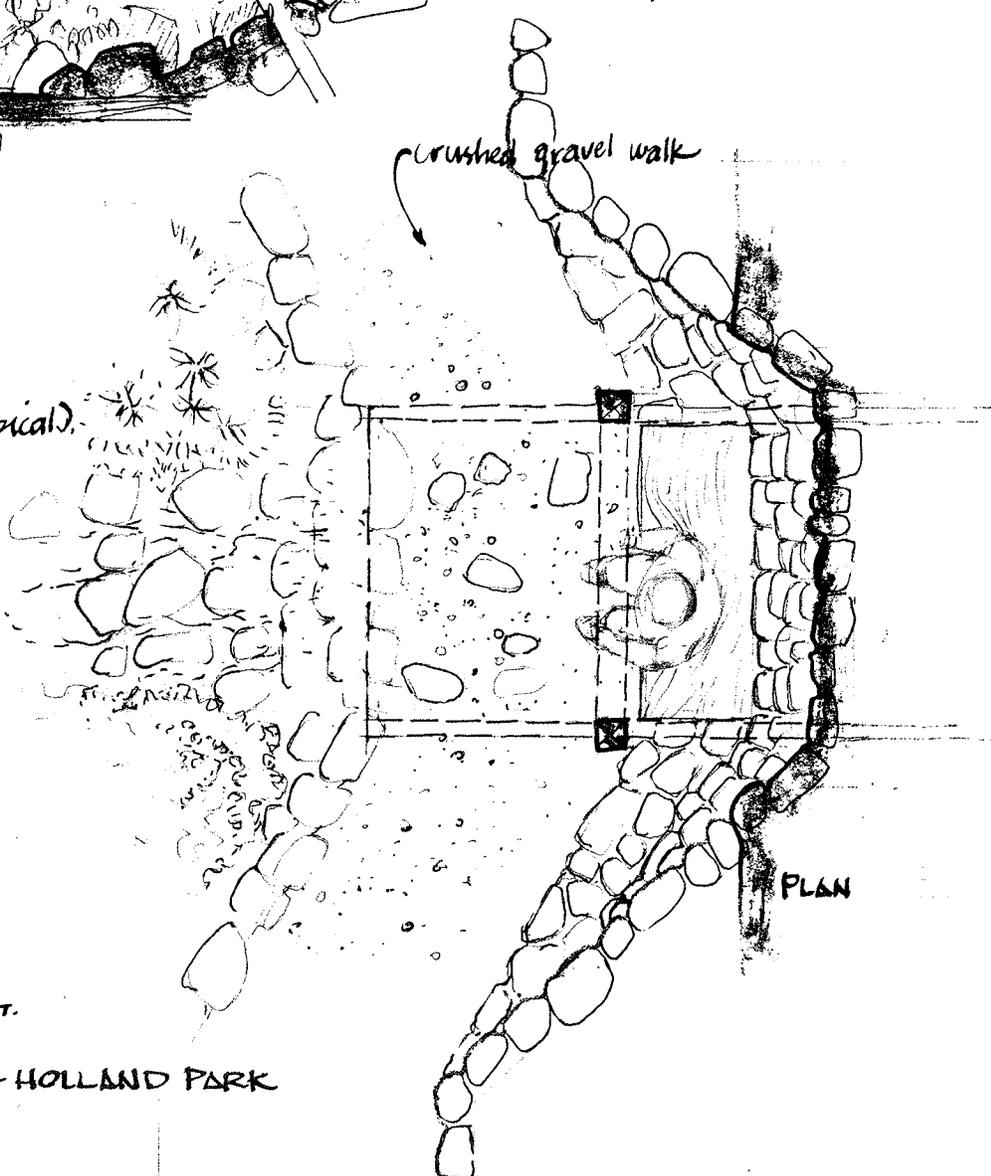


SECTION - Upper level
Waterfall cascades over shelter
and series of lower falls to
pool at street level.



crushed gravel walk

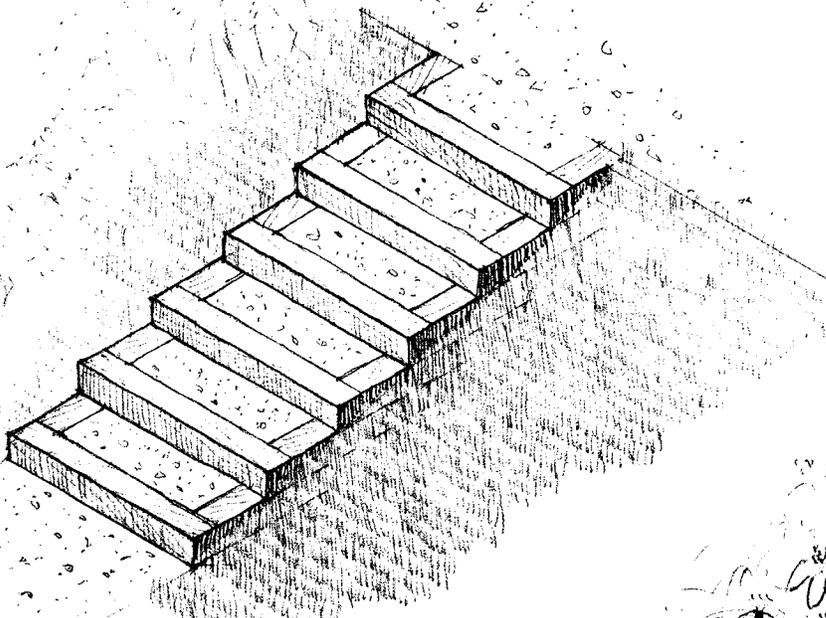
Lower Falls (Typical)



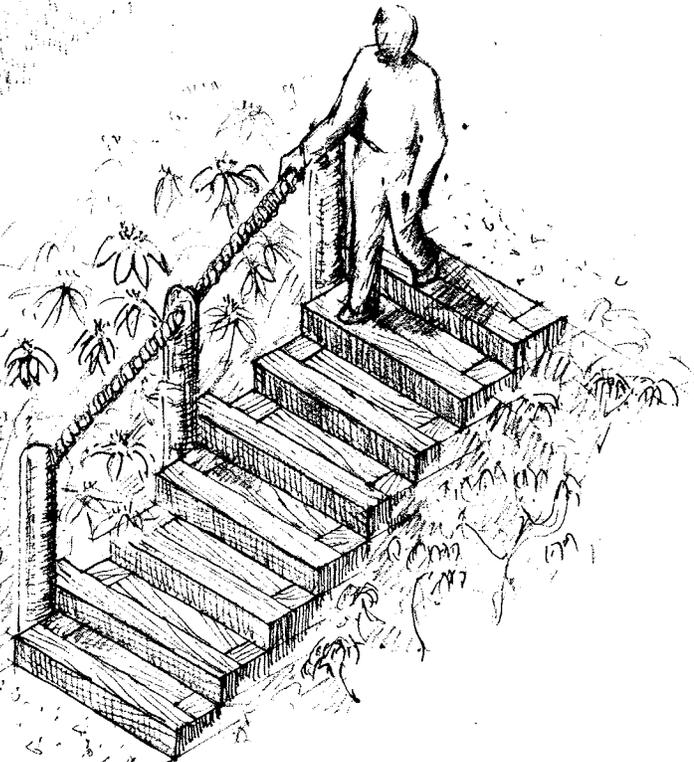
PLAN



WATERFALL & SHELTER - HOLLAND PARK



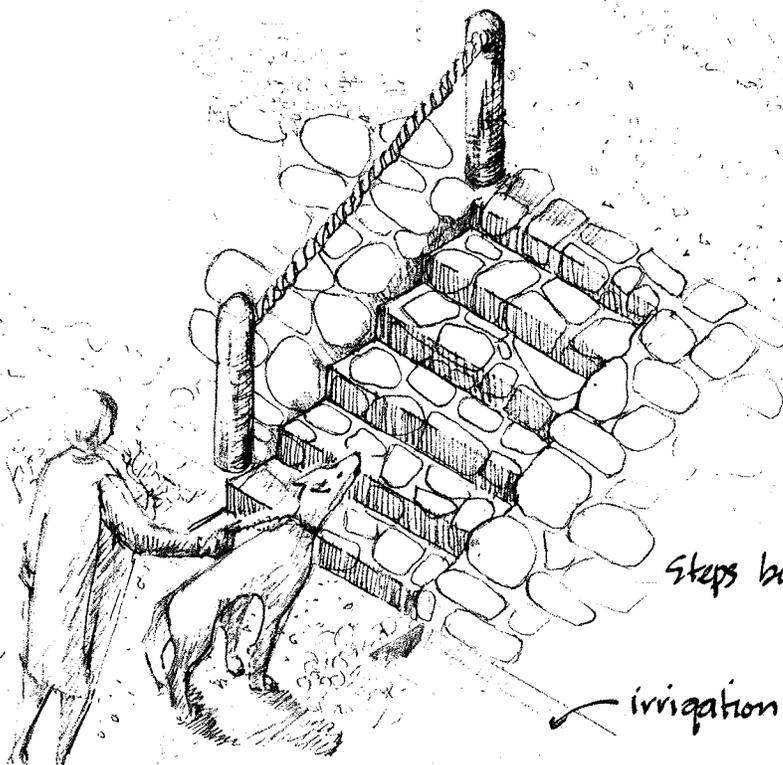
Timber steps with gravel infill (gentle slope). These designs employing component sections are readily adaptable to changes in slope and direction.



Timber steps with cable handrail locate night light on post to hillside



STAIR DESIGNS FOR HOLLAND PARK



Steps built into rock terrace

irrigation channel

14.4 ARMOUR'S BEACH

There is a need to use space efficiently in this confined site, especially as intensity of use will increase with increased functions (fishing pier, small boat launching). A system of terracing creates more parking at the road level, with restrooms under.

The fishing pier is the dominant element at this site, designed to withstand winter storms. The swimming area is sheltered by pier, floats and logs.

The service road has been maintained as part of the design, and doubles as a pedestrian ramp. The sheds have been removed; on the upper site a shelter is built into the hill, overlooking the beach and nearby fountain feature. Grass-covered terraces form the central open space for sunworshippers.

Small trees screening the site from residential areas and the road are selected from cascara, dogwood, Arbutus and pine. Azalea, broom and manzanita are appropriate shrubs for this southeast-oriented hillside.

14.5 MARINA PARK

14.5.1 Parking Lot

The design of the parking lot reflects the form of the shoreline; the road system is aligned to the contours of the bay with planting belts separating the parking strips. Low shrubs screen the traffic but provide viewing up Howe Sound - one of the prime views of the bay.

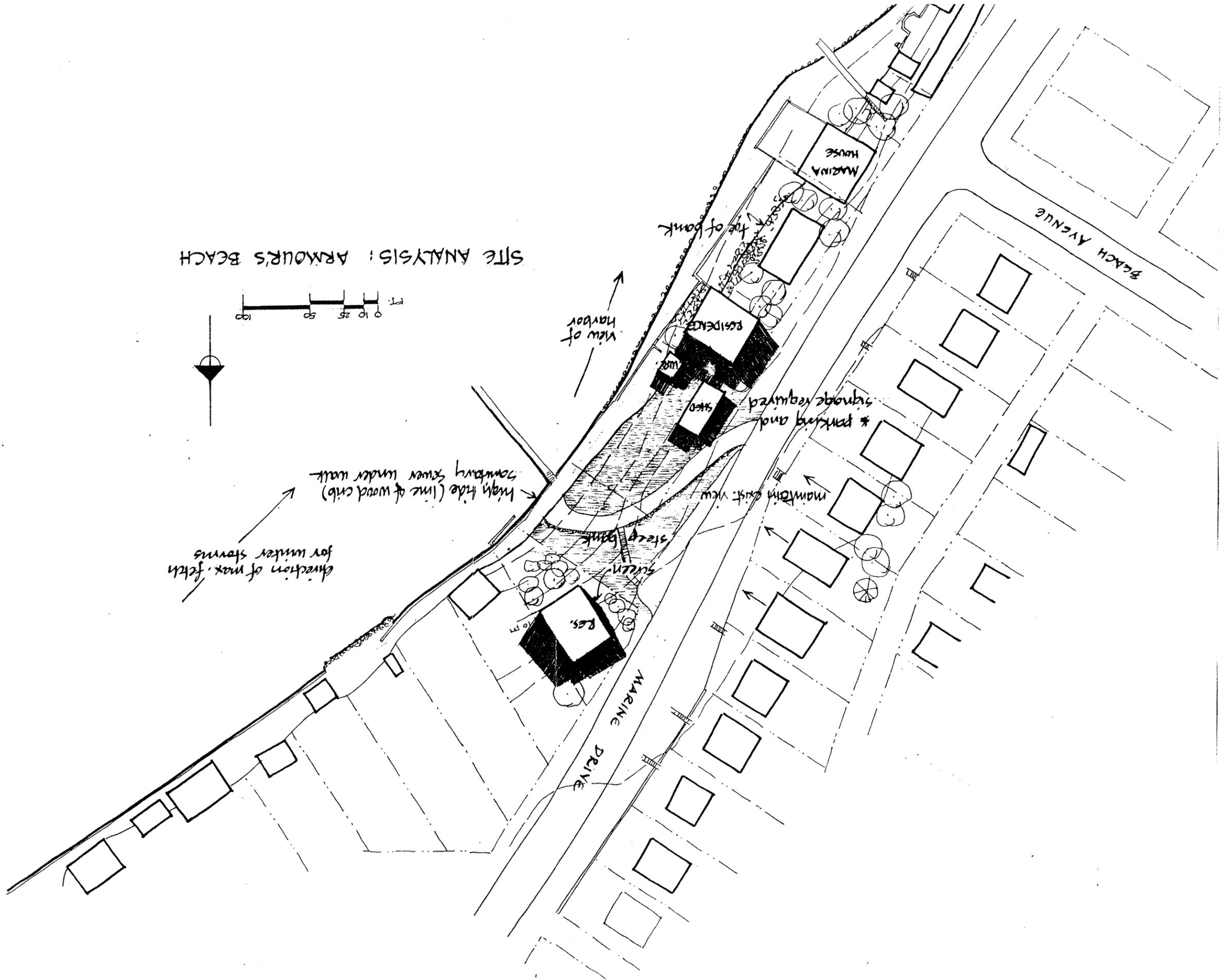
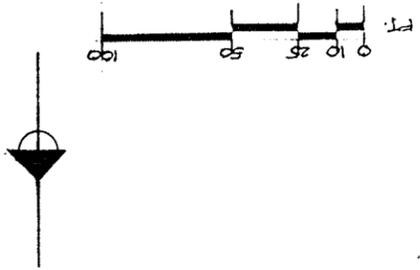
Pedestrian access to the water is through treed parkland, following creekbeds where possible. These links provide strong visual orientation.

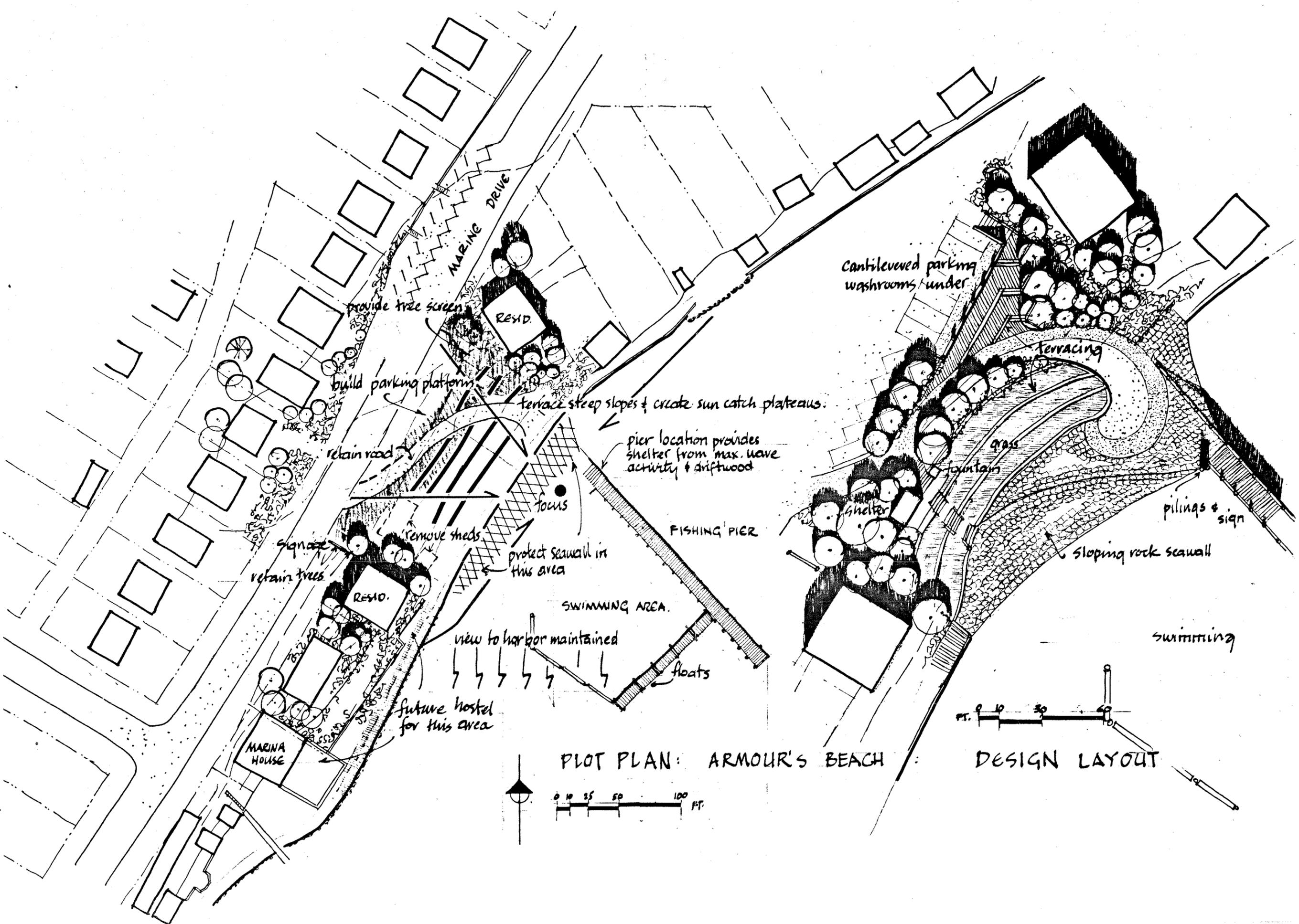
The boat launch ramp has been located closer to the channel entrance for easier access. The inset plan shows an option to increase the launch area.

14.5.2 Marina Park and Offices

The park theme recognizes the archaeological significance of the prehistoric Indian site. A totem pole commemorates this importance and provides a visual key to visitors on shore and on ship. The park and service buildings have been located at the creek site in order to explore more fully the use

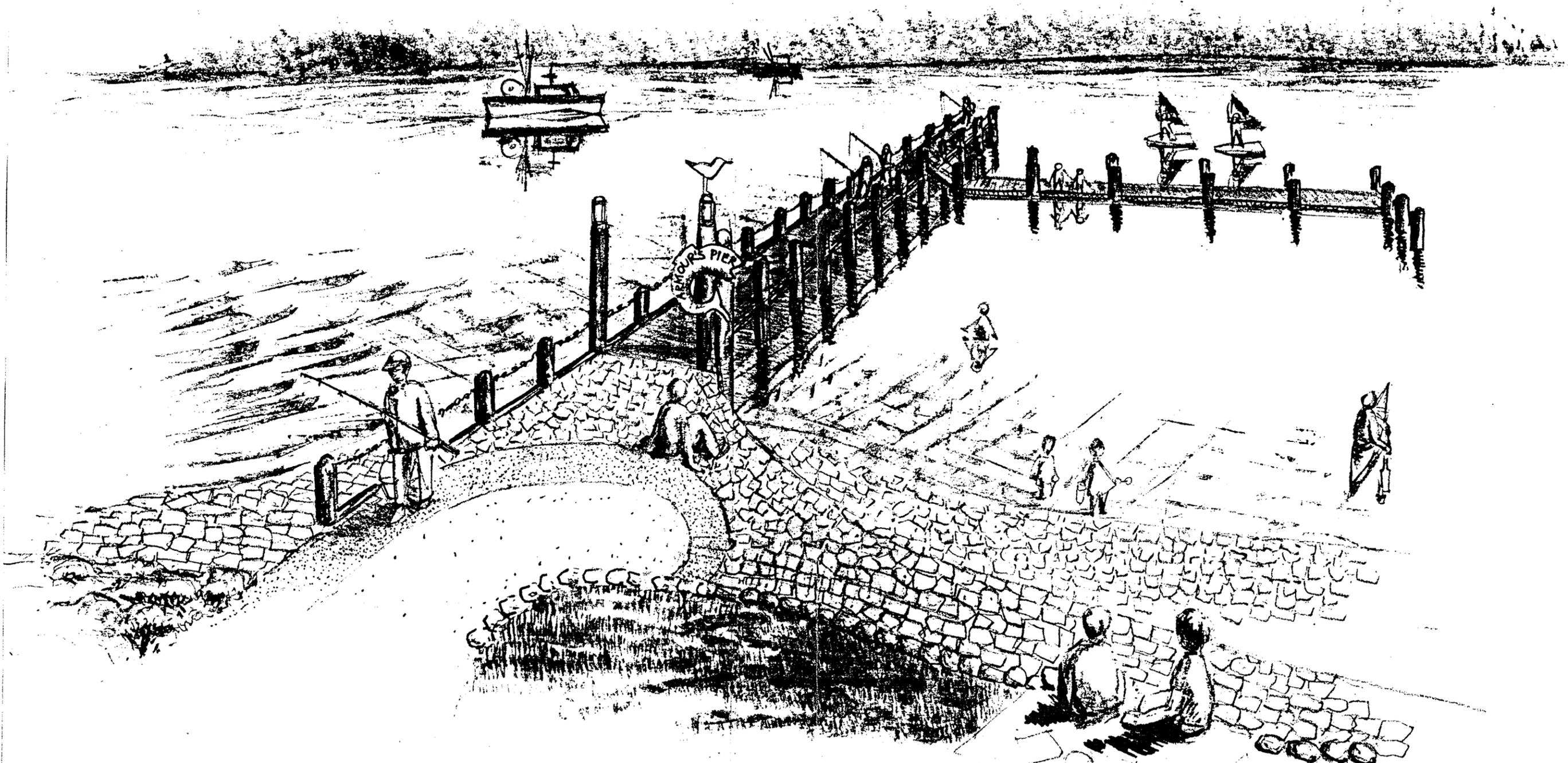
SITE ANALYSIS: ARMOUR'S BEACH



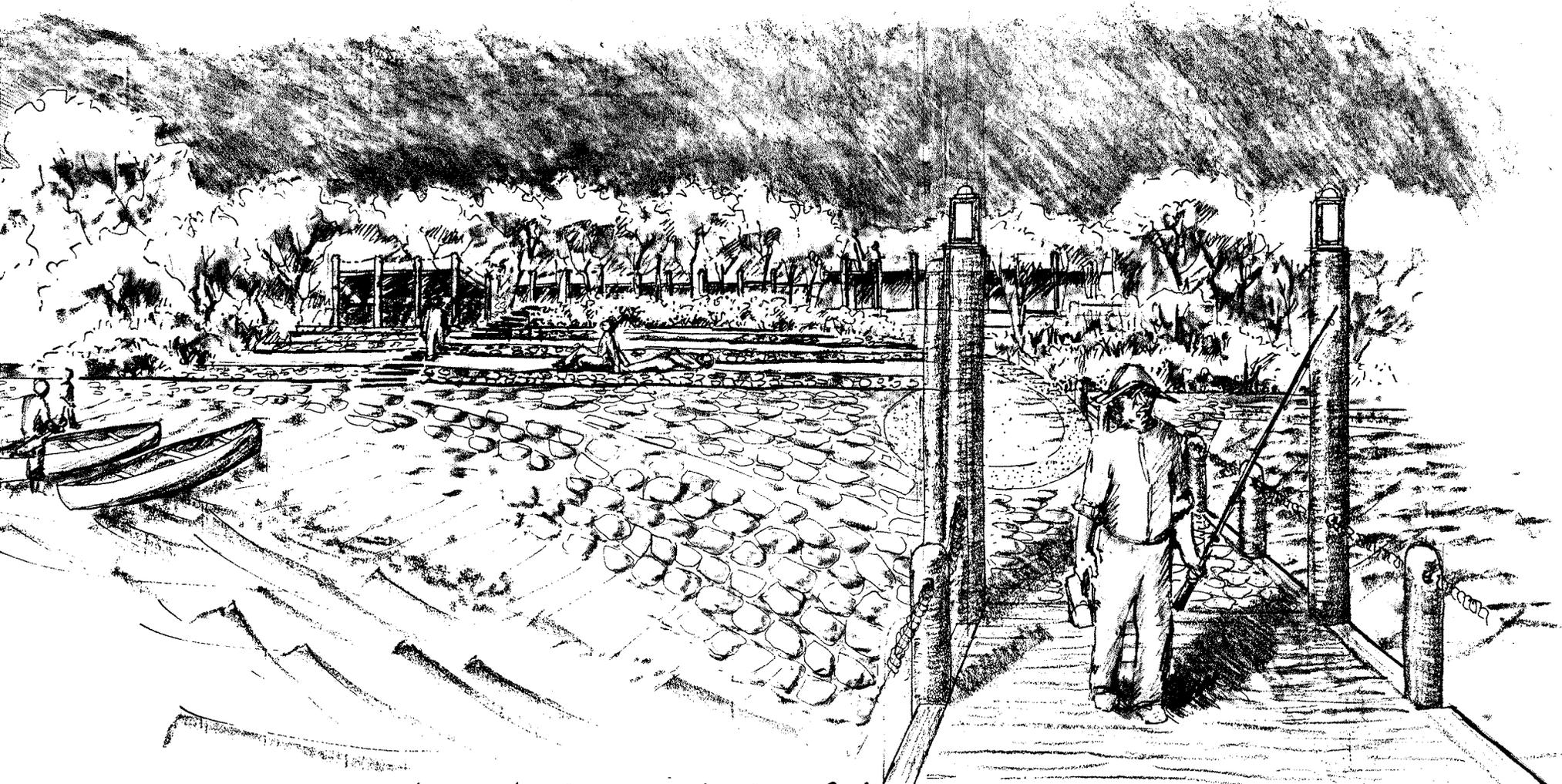


PLOT PLAN: ARMOUR'S BEACH

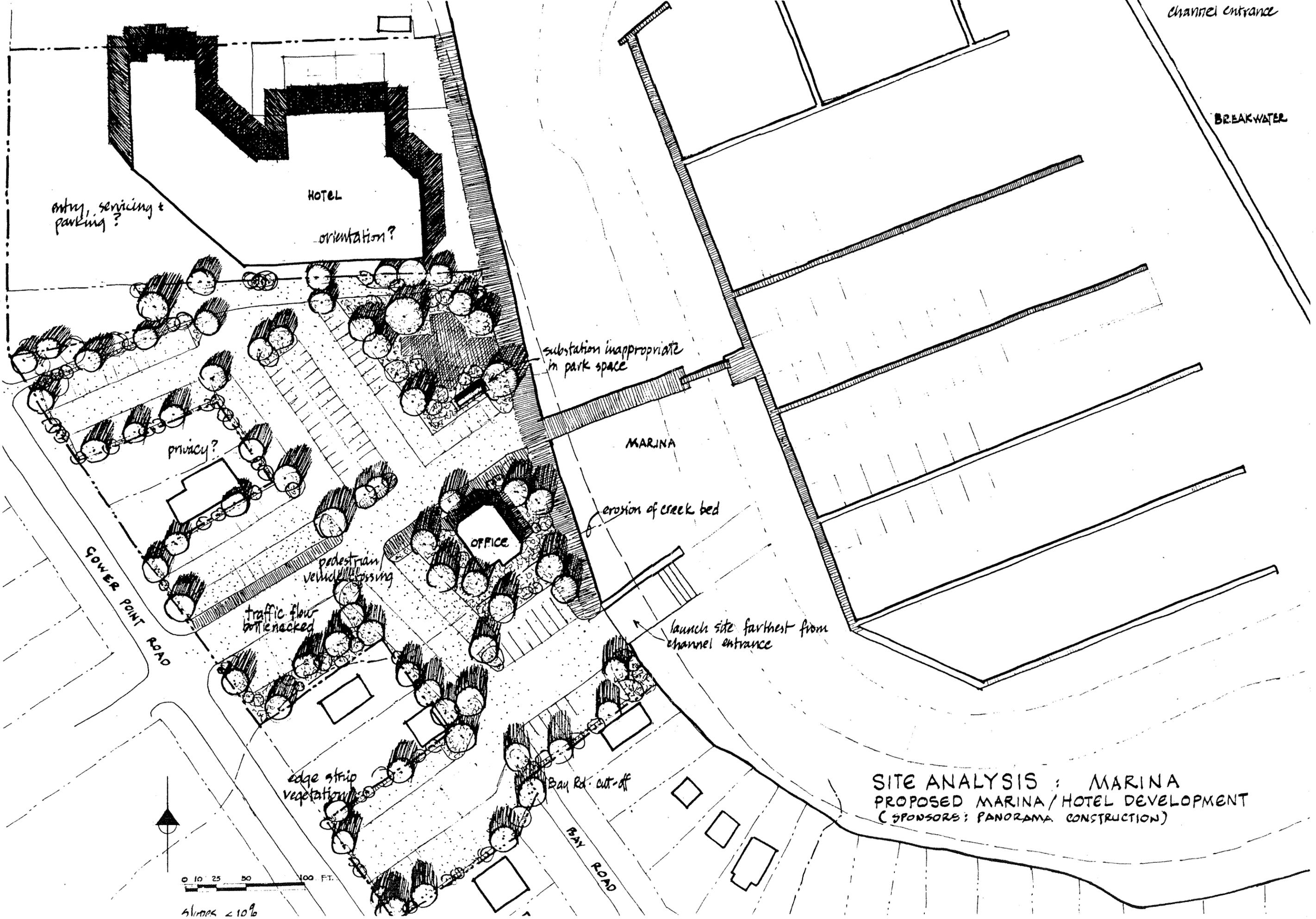
DESIGN LAYOUT



ARMOUR'S BEACH - view to bay. Fishing pier extends out beyond low tide level, with floats for swimming (in protected area) and for small craft tie-up. Apr. 84 RCB.



ARMOUR'S BEACH - view from fishing pier to sloping rock seawall and grass-covered terraces. Planting screens adjacent buildings. Shelter to left. Apr 54 RCB.



entry, servicing & parking?

HOTEL

orientation?

substation inappropriate in park space

MARINA

erosion of creek bed

OFFICE

launch site farthest from channel entrance

privacy?

pedestrian/vehicle crossing

traffic flow bottlenecked

edge strip vegetation

Bay Rd. cut-off

BAY ROAD

SOWER POINT ROAD

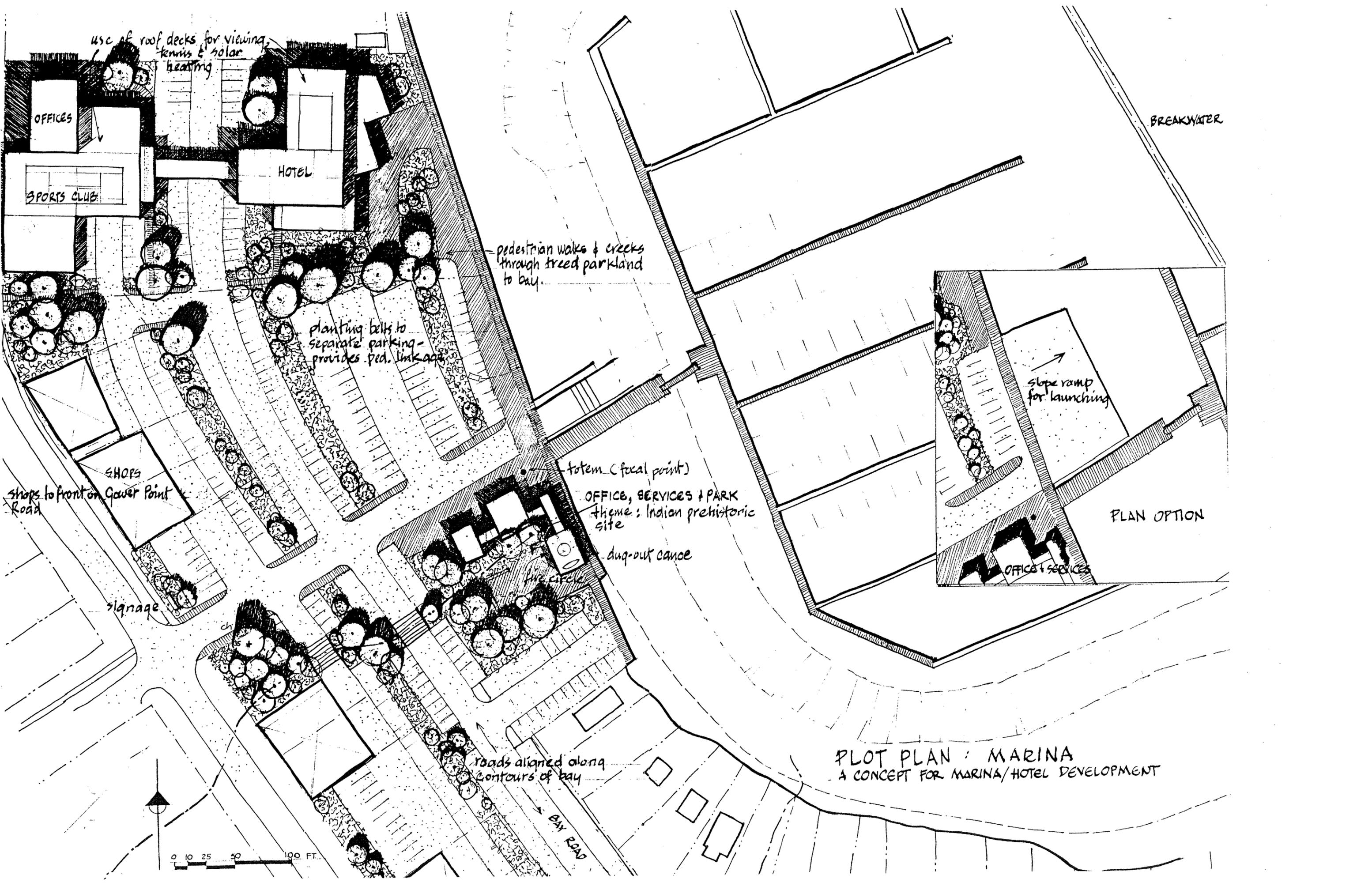
Channel Entrance

BREAKWATER

SITE ANALYSIS : MARINA
 PROPOSED MARINA/HOTEL DEVELOPMENT
 (SPONSORS: PANORAMA CONSTRUCTION)

0 10 25 50 100 FT.

Slopes < 10%



use of roof decks for viewing, tennis & solar heating

OFFICES

SPORTS CLUB

HOTEL

BREAKWATER

pedestrian walks & creeks through treed parkland to bay.

planting belts to separate parking - provides ped. link-ups

slope ramp for launching

PLAN OPTION

OFFICE + SERVICES

totem (focal point)

OFFICE, SERVICES + PARK theme: Indian prehistoric site

dug-out canoe

roads aligned along contours of bay

BAY ROAD

PLOT PLAN: MARINA
A CONCEPT FOR MARINA/HOTEL DEVELOPMENT

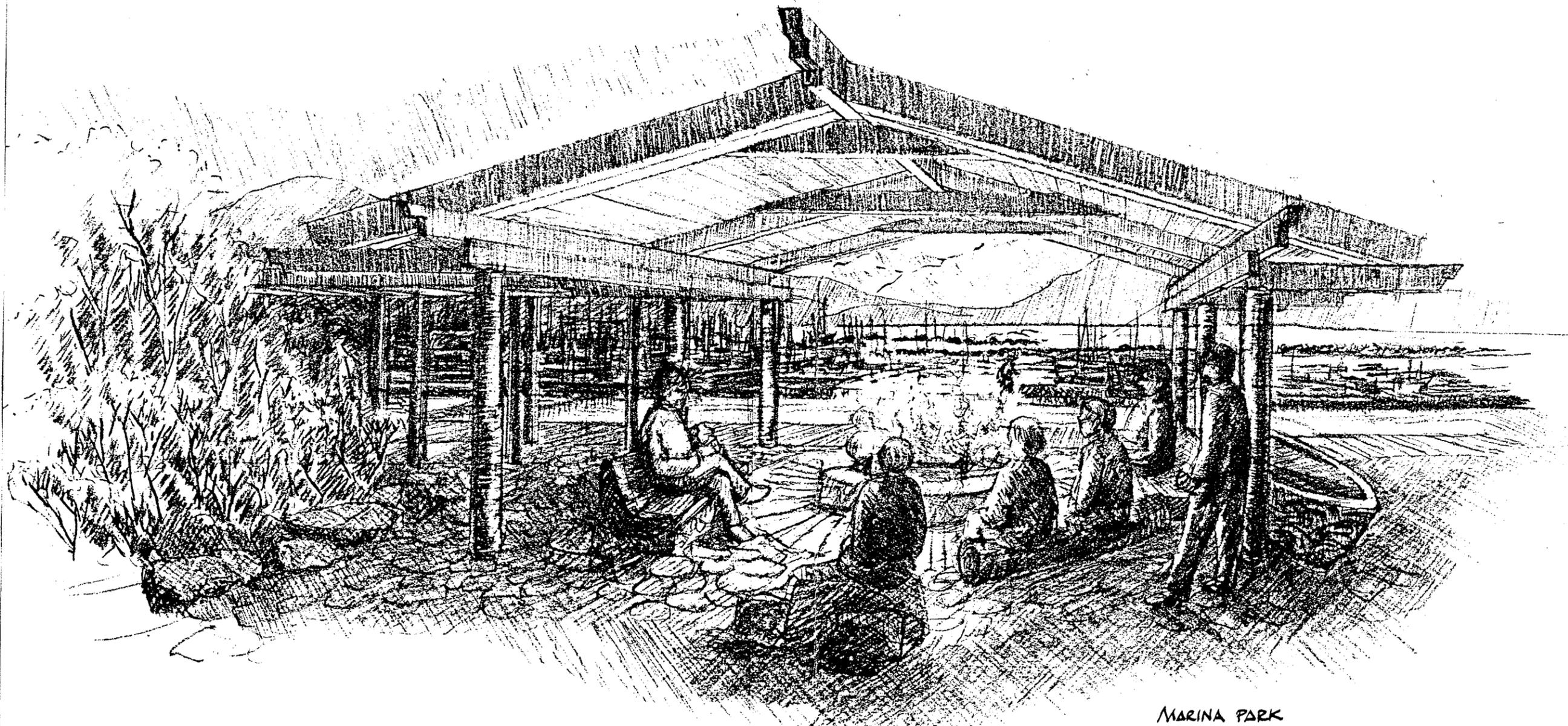
0 10 25 50 100 FT.



shops to front on Gower Point Road

SHOPS

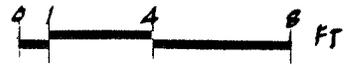
signage



MARINA PARK

The long view up Howe Sound is framed by a shelter, located on the bay, the site of an Indian midden. The five circle draws together people from all places. Creek, to left, flows through rock bed and planting screen. Apr. 84 RCB.

PARKING AREA DESIGN



roadway

gravel fill of parking area preferred
to allow for percolation of rainwater

SECTION THRU SLOPE

timber bump strip

line of slope of end section (14.5%)

OPTION: Pedestrian pathway along terrace

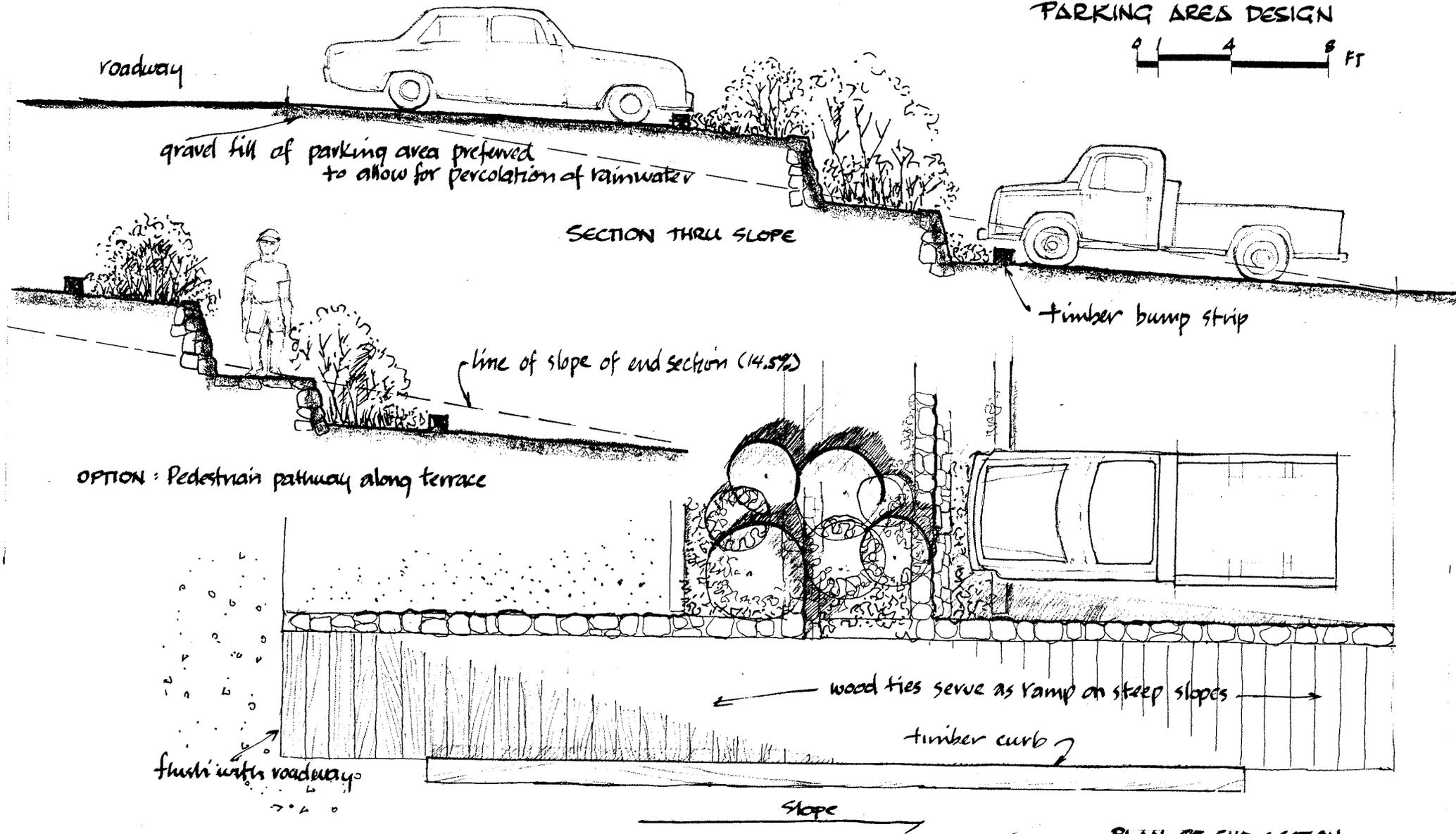
flush with roadway

wood ties serve as ramp on steep slopes

timber curb

slope

PLAN OF END SECTION



of water as a theme. Visitors are brought together in the evening around a fire circle, within a timber shelter oriented to the bay. A replica of the dug-out cedar canoes once used by the Indians is on view in nearby.

14.6 DOUGAL PARK

The concept is to increase the use of the park by emphasizing the children's playground and increasing the amenities offered. In carrying out the children's garden concept, a pond fed from Alder Springs is created in the wetlands area, surrounded by a variety of aquatic plants (cattails, sedges, water lilies, iris). An old schooner is beached in the sand nearby, ready to be explored.

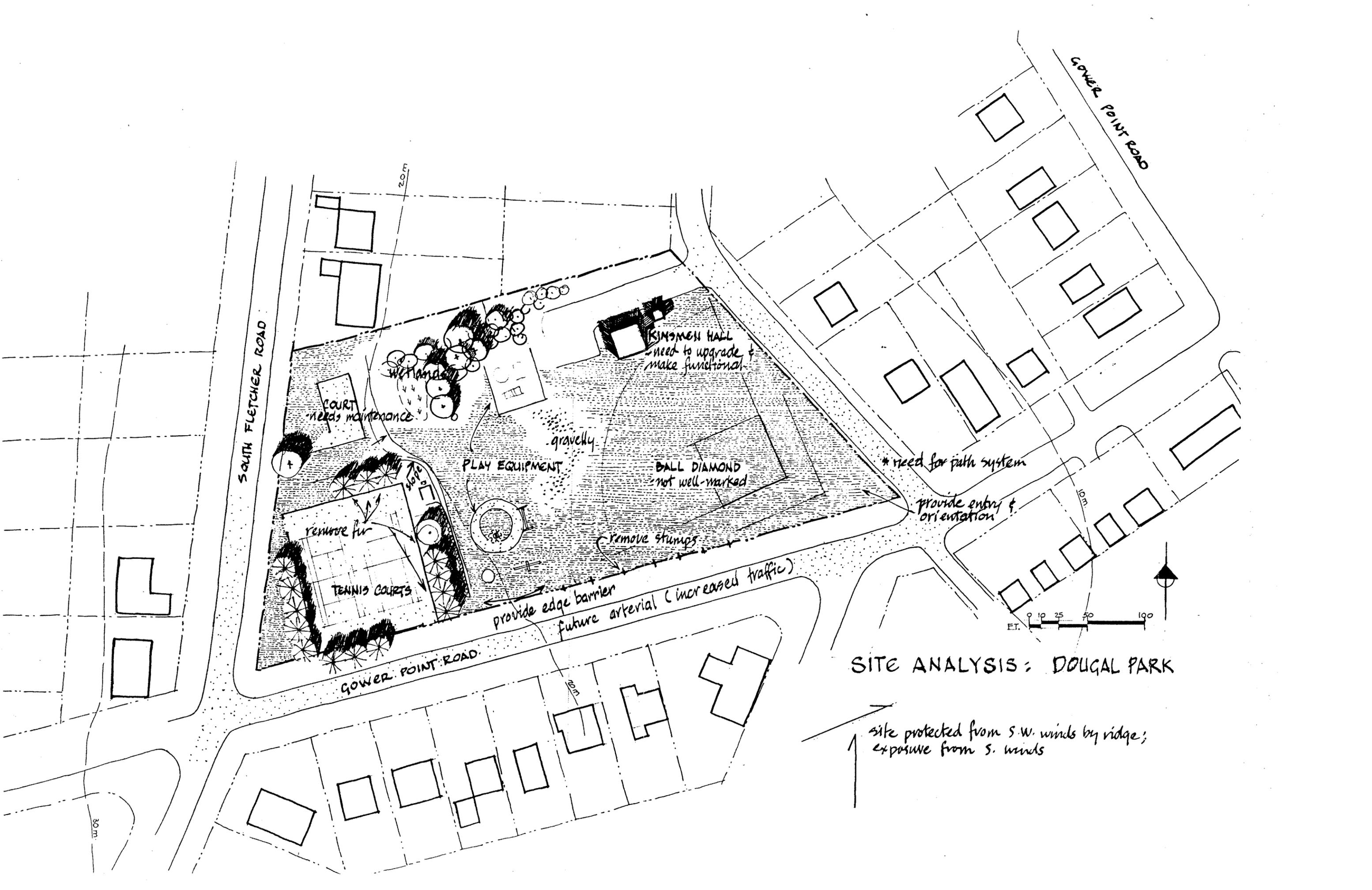
Other areas of the garden have representative species of local flora and are chosen for their visual characteristics:

- woodlands: maple, alder, hazelnut, hawthorn, willow -with a carpet of trillium, iris, lily, and berries
- meadow: grasses, daisies, Queen Anne's lace, clover, buttercups, bluebells
- rock garden: broom, gorse, potentilla, the heath family (Gulf Islands complex)

A group of wooden pilings function as climbing poles and as a tent support for summer theatre. They also provide a target point for orientation on approach from Gower Point Road and other directions.

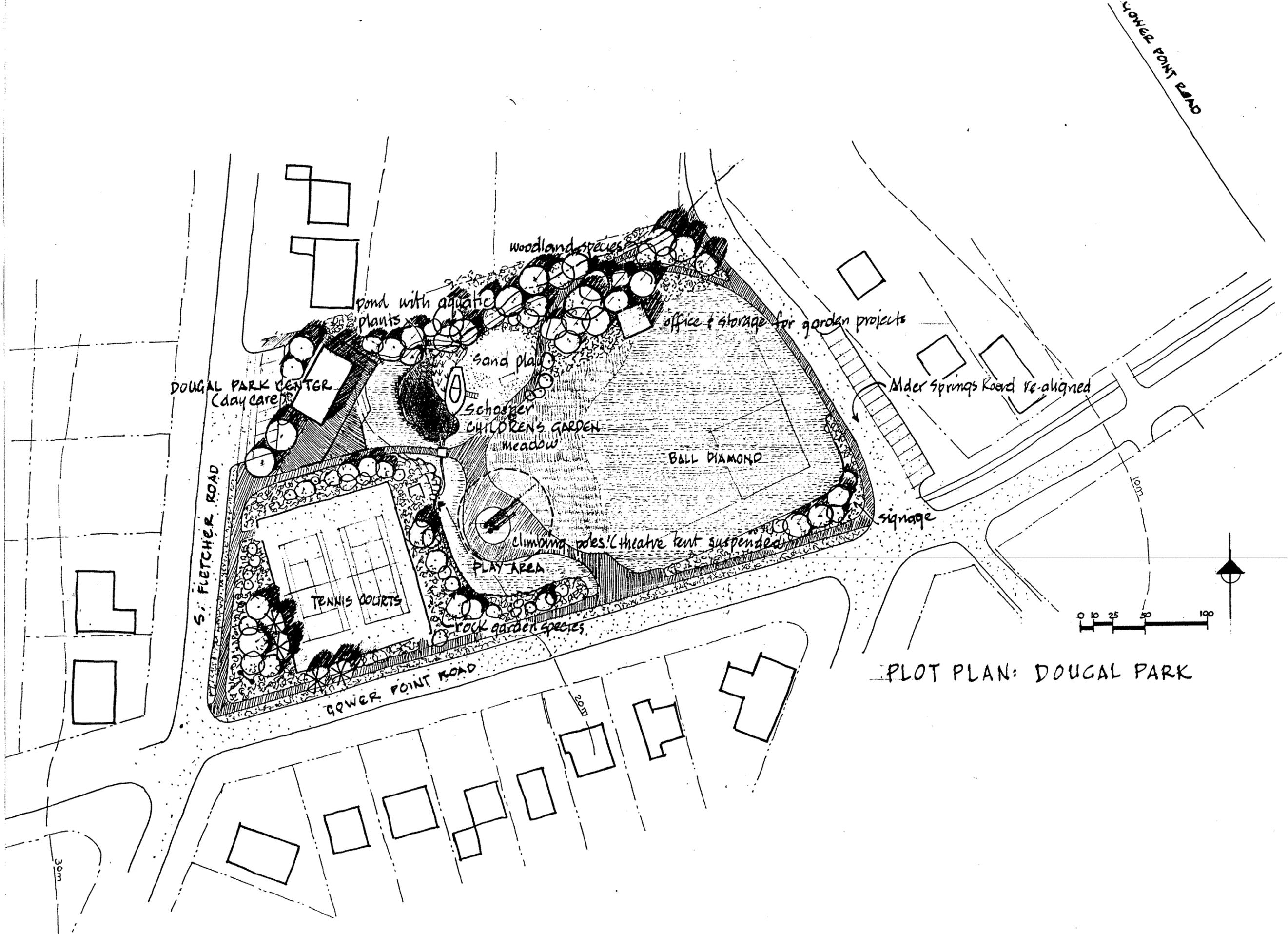
A new community hall overlooks the play area. A center for day care activities for pre-schoolers is one of the many functions it serves. Kinsmen Hall can serve as a center of supplies and operations for children's projects in gardening or construction, while Kinsmen functions can be relocated to the new Community Center.

Alder Springs Road has been realigned to meet with Glassford Road. The extra space has become parking for the site.



SITE ANALYSIS: DOUGAL PARK

↑ site protected from S.W. winds by ridge;
exposure from S. winds



LOWER POINT ROAD

DOUGAL PARK CENTER
(day care)

S. FLETCHER ROAD

TENNIS COURTS

LOWER POINT ROAD

woodland species

pond with aquatic plants

sand play

Schooner
CHILDREN'S GARDEN
meadow

office & storage for garden projects

BALL DIAMOND

climbing poles / theatre tent suspended
PLAY AREA

rock garden species

Mdx Springs Road re-aligned

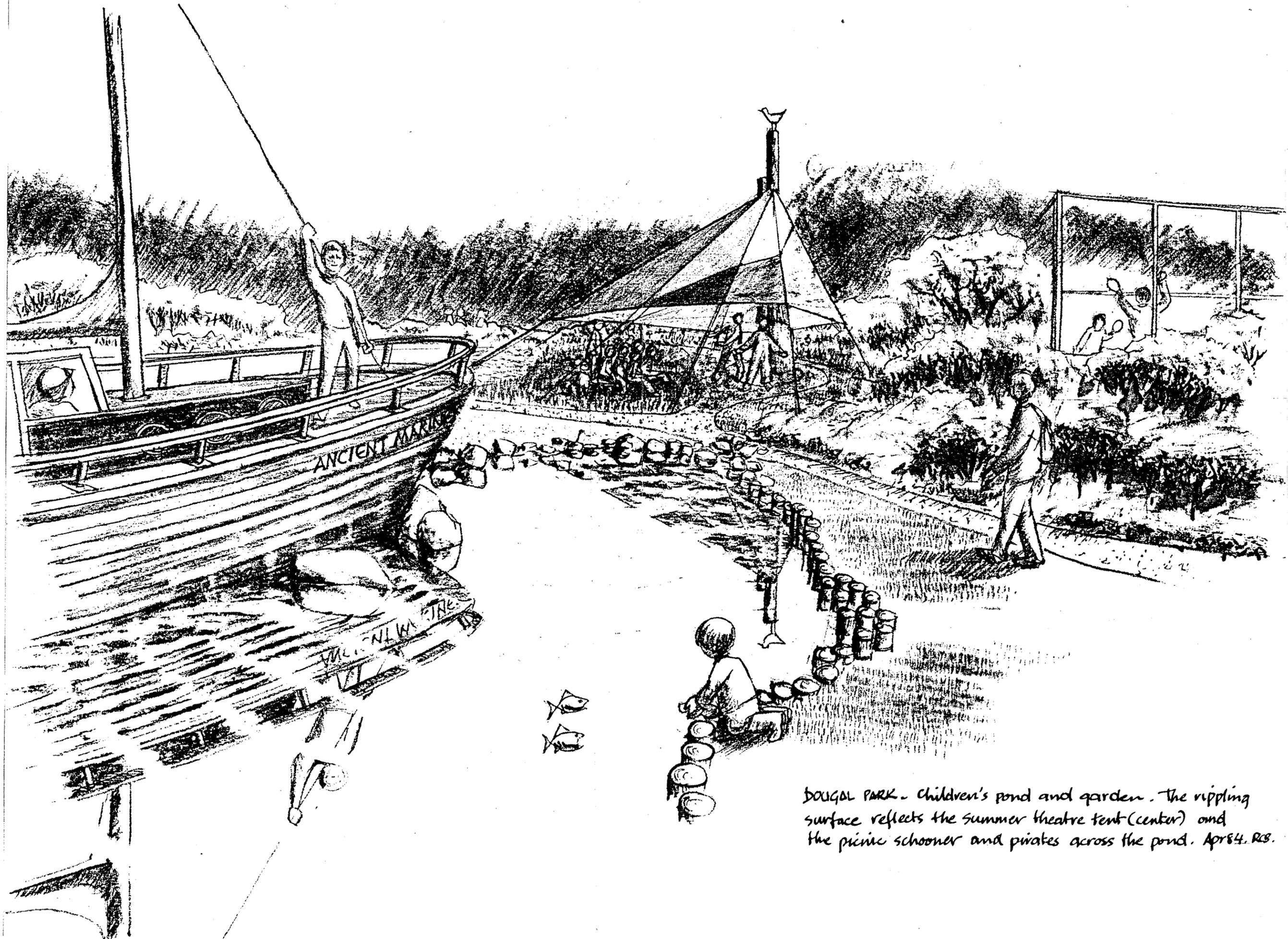
signage



PLOT PLAN: DOUGAL PARK

30m

20m



DOUGLASS PARK - Children's pond and garden. The rippling surface reflects the summer theatre tent (center) and the picnic schooner and pirates across the pond. Apr 84. R.S.

Chapter 15

IMPLEMENTATION

15.1 DESIGN APPROACH AND IMPLEMENTATION

There are aspects of the design approach which have implications for the implementation phase:

1. Changes can occur incrementally, that is, by developing one part at a time. This method is appropriate for the nature of the design projects and the limited deployable resources of the town.
2. Construction of the various elements is anticipated to require a low level of technology using basic materials of wood, stone, planting and water. With this intention, it is feasible to consider that much of the site development can be handled through youth work programs.
3. Support groups would be involved in the implementation phase through roles in public relations, funding and voluntary work.

15.2 OPPORTUNITIES FOR PUBLIC INVOLVEMENT

There is need for a broad area of cooperation from the public. Some of the opportunities for public involvement have already been mentioned: senior citizens to organize and provide planting for the Gibsons Gardens and Dougal Park children's garden, Katimavik contribution to community development and the Canadian Youth Hostel Association to operate a hostel adjacent to Armour's Beach. There is also opportunity to enlist the Chamber of Commerce and the Board of Trade in the promotion and development of the Information Center, and for sports clubs and the Fishermen's Association to be involved in the development of Armour's Beach. A cooperative effort from parents of young children would generate support for a center and increased activity use of Dougal Park. Funds are available from government and private organizations for such purposes.

15.3 IMPLEMENTATION PROGRAM

It is necessary to determine an order of development which is related to budget and resource allocation. A development committee with Council and interest group representation would have the role of establishing a program for the public open space/park area development, incorporating recommendations and designs put forth in this proposal.

The designs in this proposal are not intended to be used in the present form for construction purposes. It is necessary, as part of the implementation program, that plans and working drawings be executed using these drawings as guidelines.

The committee would have the following responsibilities:

1. to establish priorities for development and a budget,
2. to establish a schedule determining work to be done, time line, and who is to be involved,
3. to specify the role for support groups in program development, eg. promotion, funding, services,
4. to establish implementation procedures: what is the process for approval, adoption and management of projects and funding?
5. to allocate funds in the budget for maintenance, operations and supervision.

15.4 DEVELOPMENT

Some parts of the development program could be on-going, eg. putting up signage, linking walkways and construction of planting areas. Other parts of the program would require more concerted effort and planning. Road building and improvement, a joint responsibility between the town and the Department of Highways, requires cooperative planning and allocation for funding well in advance of construction.

All sites have important structures: the fishing pier and the cantilevered parking with washrooms below at Armour's Beach, the Information Center at Memorial Park, the bus depot, shops and overhead pedestrian trestle at Holland Park, the Marina offices and shelter, and the Community Center at Dougal Park. A building program as part of the development program would provide for these facilities, including the acquisition of a historic ship to serve as a marine museum. It is now time, especially with the opportunities of Expo 86 looming, to bring such a feature home to the Landing.

Planning for auxiliary components in the open space/park development program should be considered concurrently with site development: the hostel, the theatre for Molly's Reach, the fish market at Government wharf, and the relocation of the Shell gas station and tanks.

The major site construction activity required is for walkways and steps, terraced walls, small shelters, planting and fountains. Because of the importance of water as a feature at each site, fountain and pond design will be an important consideration of each plan. The fact that water resources are available on site precludes the use of costly pumping and storage equipment.

The building of the sloping rock seawall at Armour's Beach can be carried out prior to the pier construction, providing easier beach access. It will also serve to protect the buried sewer line.

LIST OF REFERENCES

- Architectural Services in consultation with Rob Buchan Assoc. and the Pacific Landplan Collaborative Ltd. "Gibsons Landing Downtown Revitalization". Village of Gibsons. 1982.
- Barnwell, F.H. "Variation in the form of the tide and some problems it poses for biological timing systems" in Biological Rhythms in the Marine Environment. Ed. De Coursey, P.J. University of South Carolina Press 1976.
- Bascom, Willard Waves and Beaches. New York: Doubleday & Co. Inc. 1964.
- Eby, P. and Associates. "Feasibility and Benefit-Cost Evaluation of the Proposed Gibsons Marina". Vancouver:1979.
- Fisheries and Oceans 1983 British Columbia Tidal Waters Sport Fishing Guide Vancouver.
- Fisheries and Oceans Canadian Tide and Current Tables 1983 Ottawa.
- Hay, John E. & Oke, Timothy R. The Climate of Vancouver, B.C.. Geographical Series No. 23 Vancouver: Tantalus Research 1976
- Lefaux, Stuart and Johnstone, Jim Sunshine Coast Official Regional Parks Plan Vancouver:1982.
- Le Roy, O.E. "Preliminary Report on a Portion of the Main Coast of B.C. and Adjacent Islands". Ottawa: Department of Mines Geological Survey Branch. N. 996.
- Lyon, C.P. Trees, Shrubs & Flowers to Know in British Columbia. Vancouver: J.M. Dent & Sons Ltd. 1976.
- McCammon, J.W. "Surficial Geology and Sand and Gravel Deposits of Sunshine Coast, Powell River, and Campbell River Areas". Bulletin 65. B.C. Ministry of Mines and Petroleum Resources 1977.
- Northwest Hydraulic Consultants Ltd. "Gibsons Municipal Marina Expansion" commissioned by Public Works Canada. Vancouver 1981.

- Percheson, Rita, Gross, Pam and Barrett, Sandy Hiking Trails of the Sunshine Coast Edmonds, Wash.:Signpost Books, and Madeira Park, B.C.:Harbour Publishing 1979.
- Peterson, Lester R. The Gibson's Landing Story. Toronto: P.Martin Books 1962.
- Ryan, Kevin. Thesis (in architecture for Gibsons, B.C.). University of Edinburgh 1978.
- Stephenson, T.A. and Stephenson, Anne. Life Between Tidemarks on Rocky Shores. San Francisco: W.H. Freeman & Co. 1977.
- Sunshine Coast News (Gibsons,B.C.) 23 October 1952. 4 January - 7 August 1982. 1 August 1983.
- The Press (Sechelt,B.C.) 2 August 1983. 13 December 1983.
- Urban Transit Authority and Sunshine Coast Regional District. Sunshine Coast Regional District Paratransit Service Plan. Victoria:1982.

NOTICE/AVIS

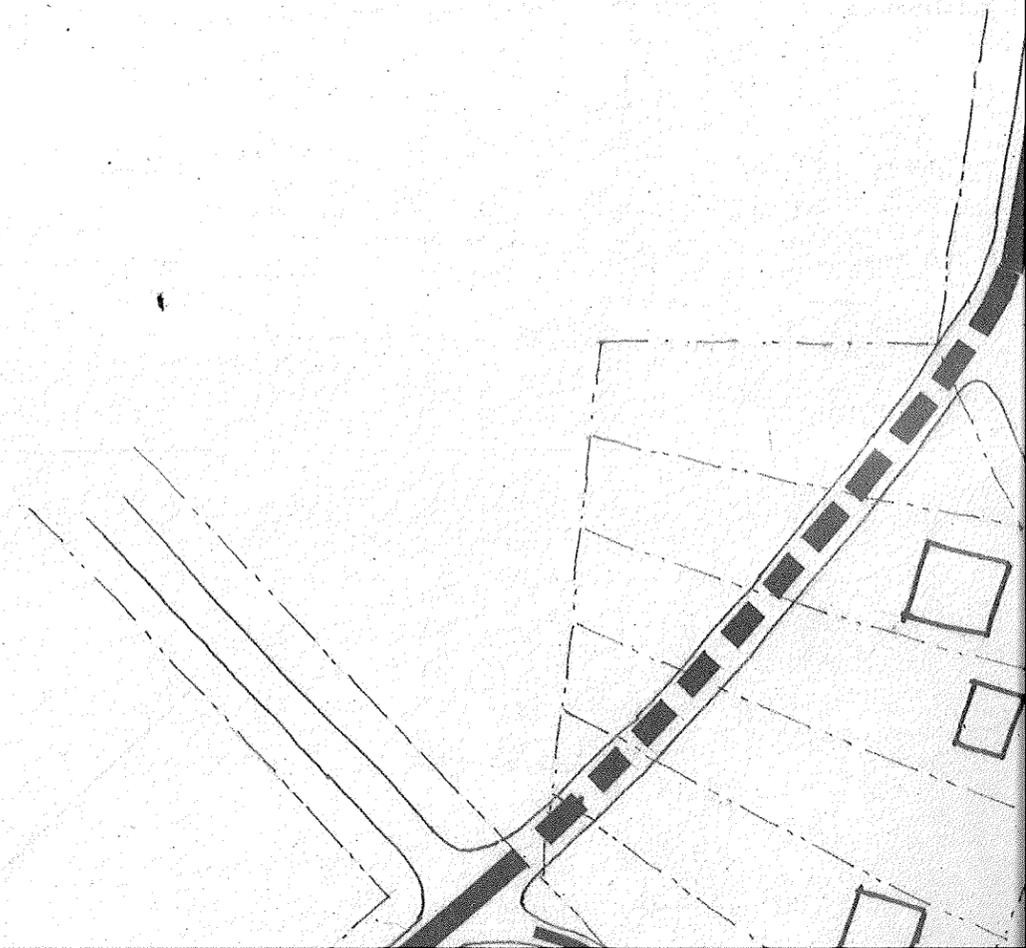
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Concept Plan

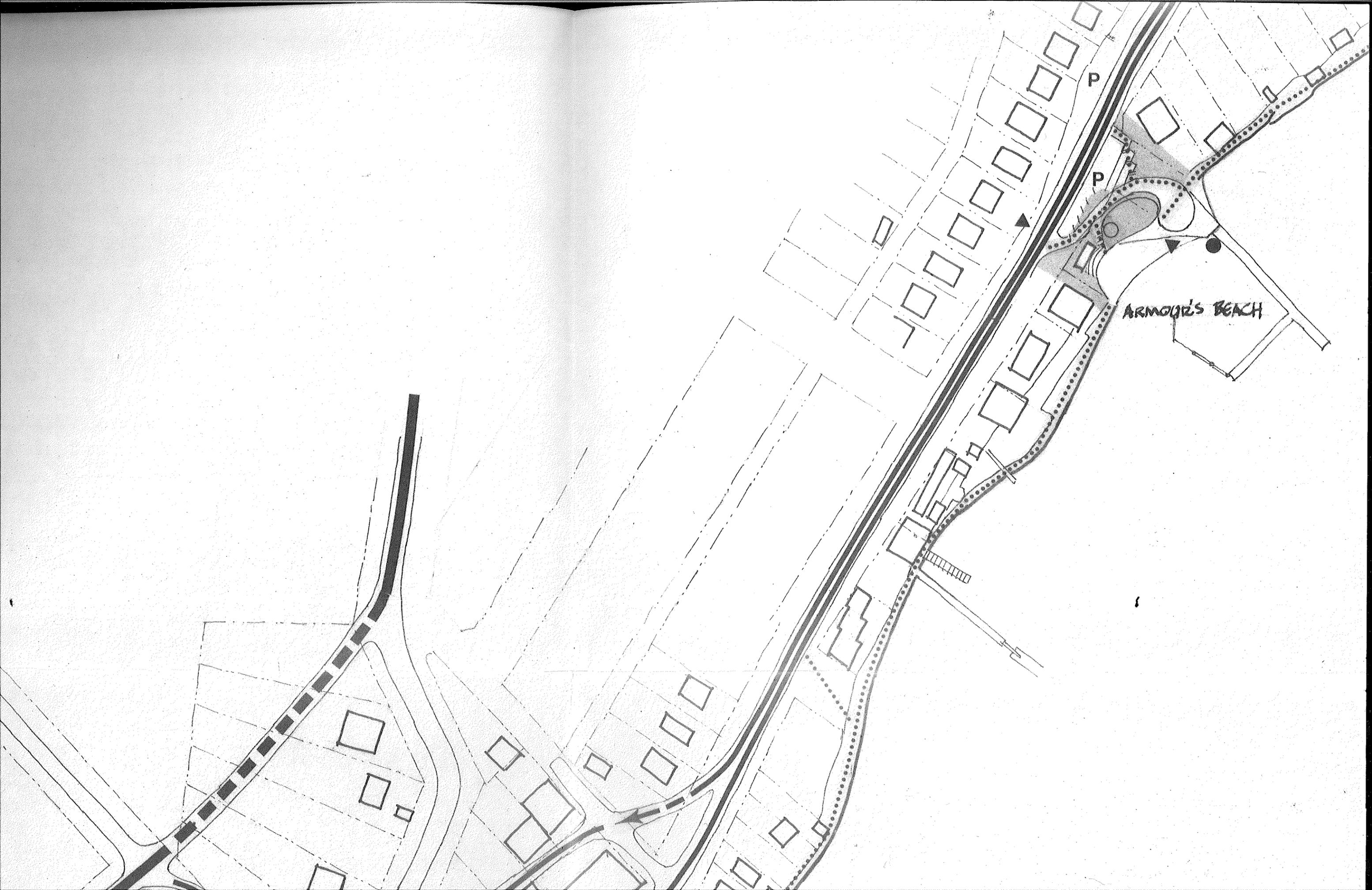
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Appendix A
CONCEPT PLAN

- ▬ Arterial Road
- ▬ Scenic Route
- Pedestrian Path
- Site Division
- Planting
- Focal Point
- ▶ View
- W Water (from springs)
- Drinking Fountain
- S Shelter
- P Parking





ARMOUR'S BEACH

P

P

P

P

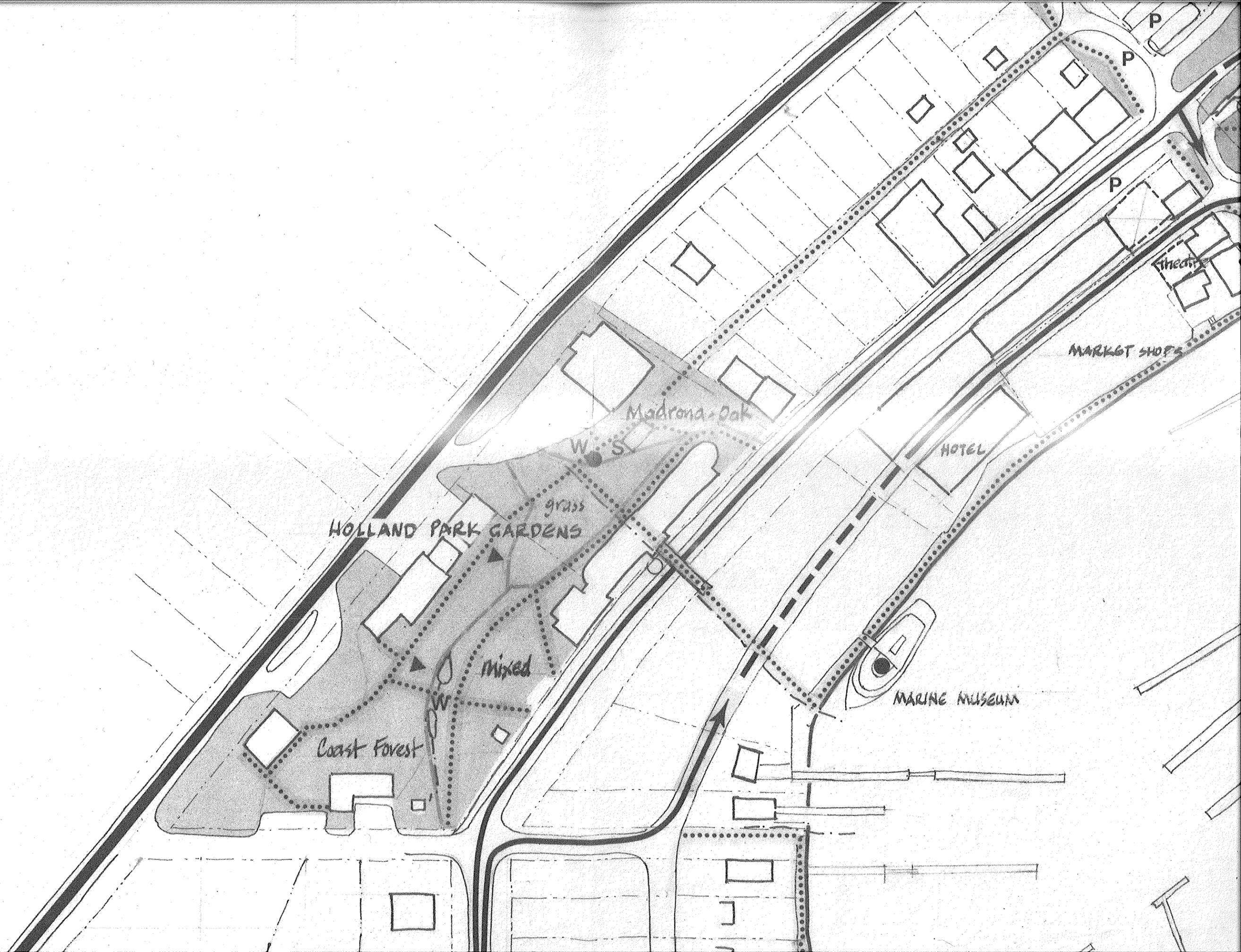
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HOLLAND PARK GARDENS

Madrona Oak

grass

Mixed

Coast Forest

HOTEL

MARKET SHOPS

MARINE MUSEUM

Theater

P

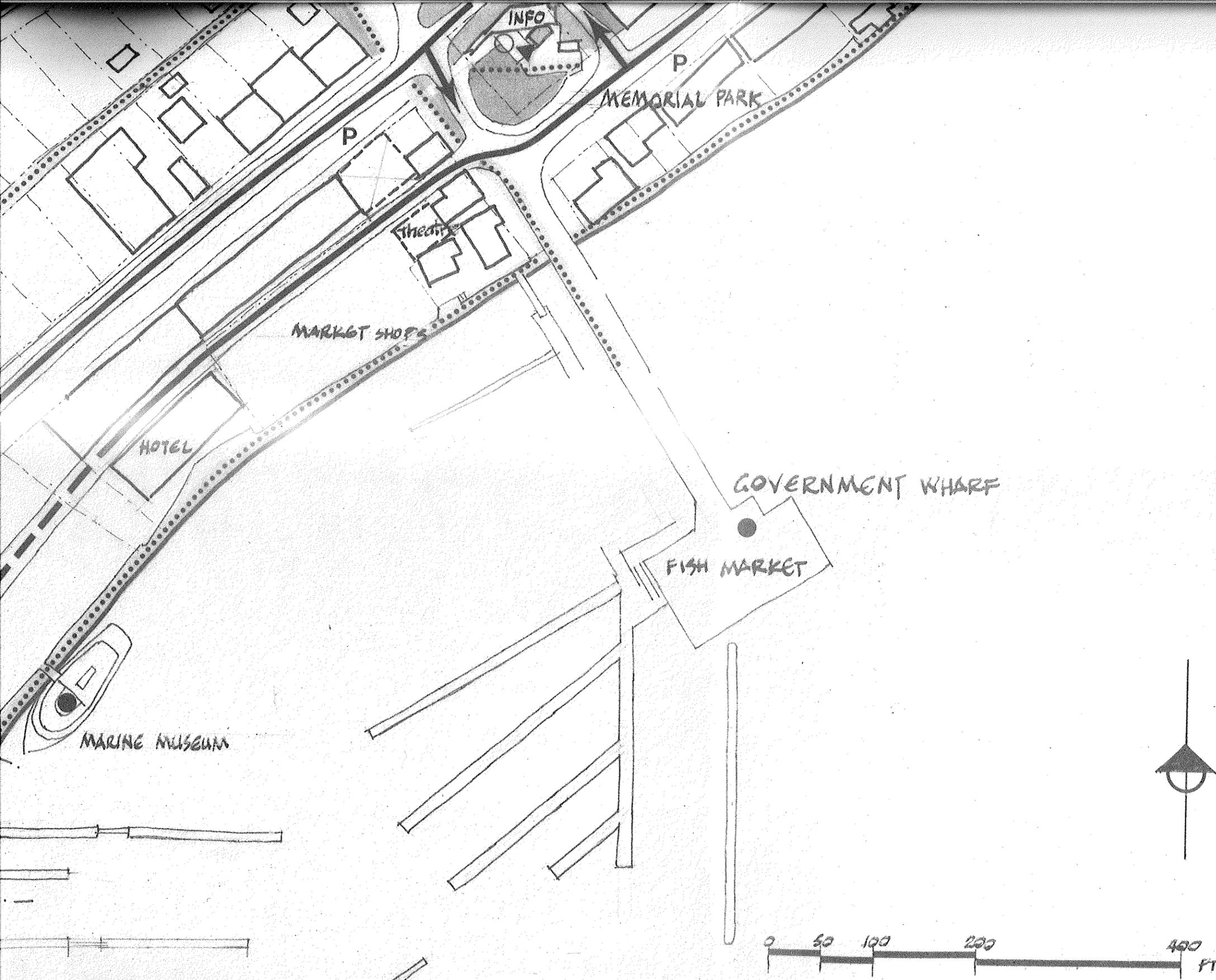
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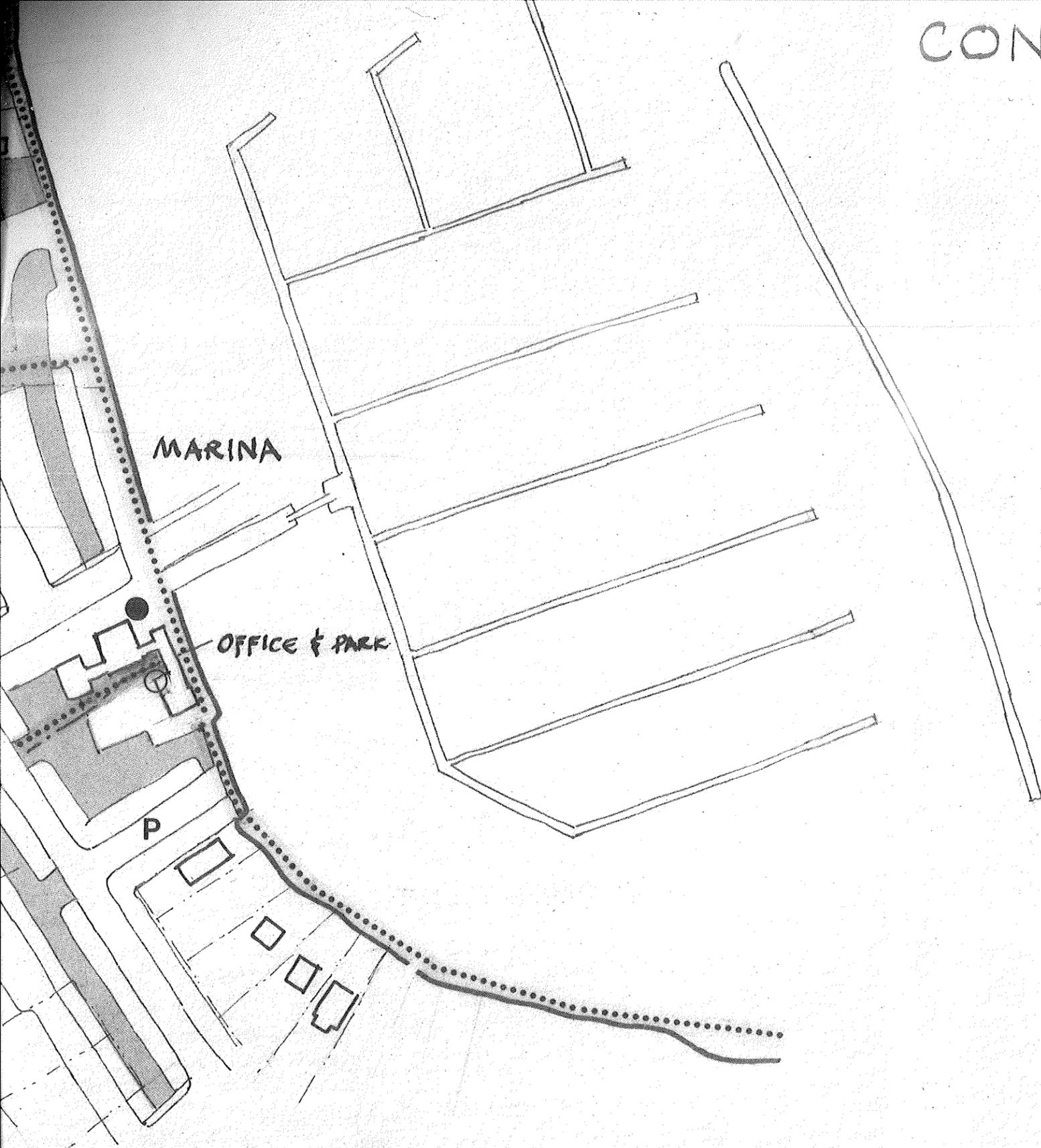
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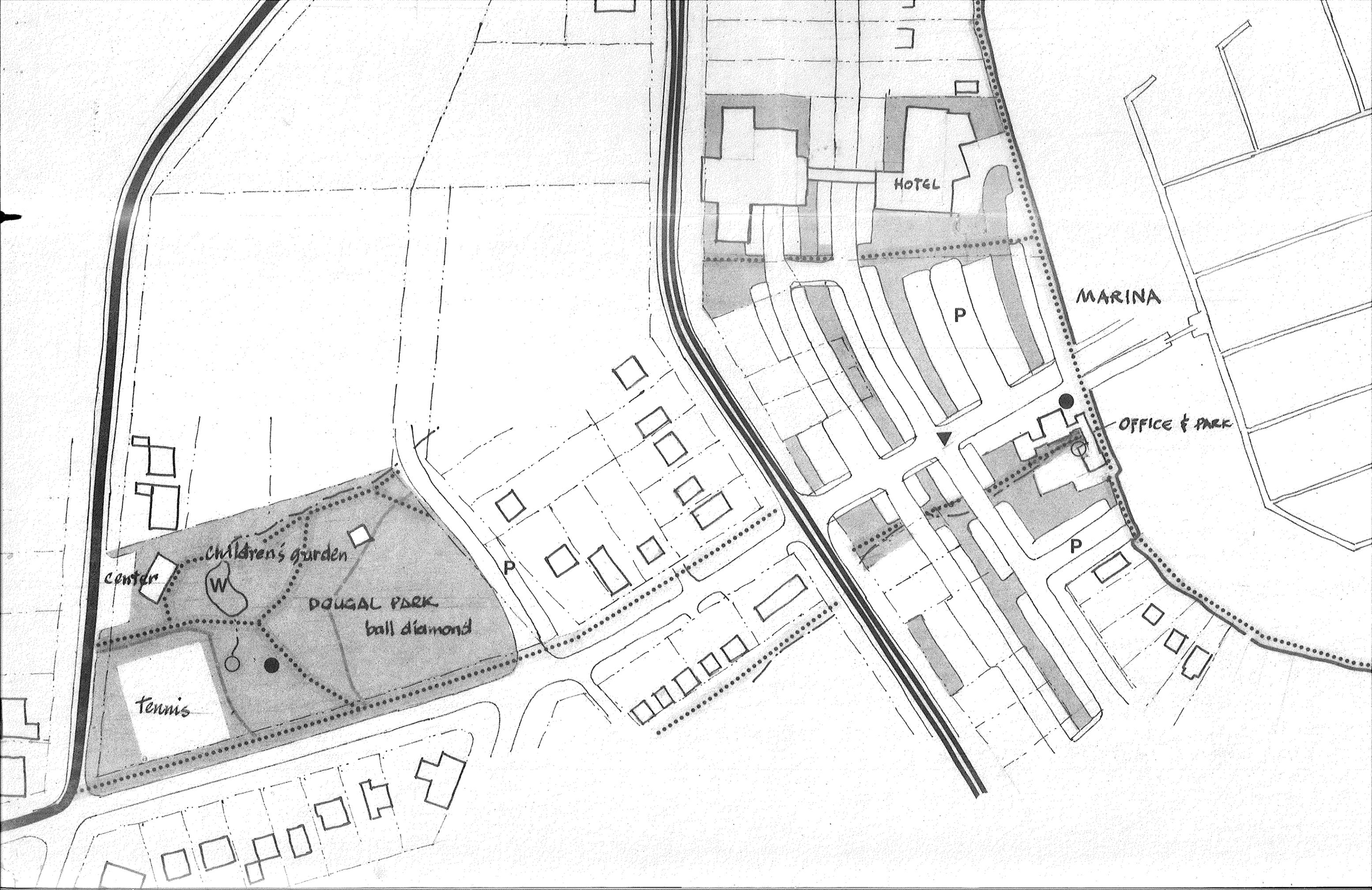
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CONCEPT PLAN

CONCEPT PLAN





HOTEL

MARINA

OFFICE & PARK

children's garden

DAUGAL PARK
ball diamond

center

tennis

P

P

P