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REPORT RAPPORT

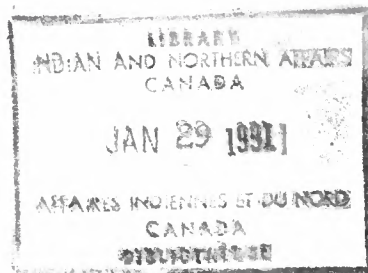
housing / north 1

Native Housing Proposal for Northern Living:
- an integrated community and housing design
concept.

by J. W. Francis, A.R.I.B.A., A.R.I.A.S.

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DRAFT

For Review

ÉBAUCHE

Pour Examen

introduction

These Design Brochures, "Housing/North" Volumes 1 and 2 are intended to explore a variety of alternative housing design solutions suitable for Native families and other Canadians residing in Northern Canada.

Two basic problem areas are being addressed:

- (i) Housing design that will respect Socio-economic, cultural and life style considerations of Northern living and
- (ii) The need for greater energy efficiency related to the Northern Canadian climate.

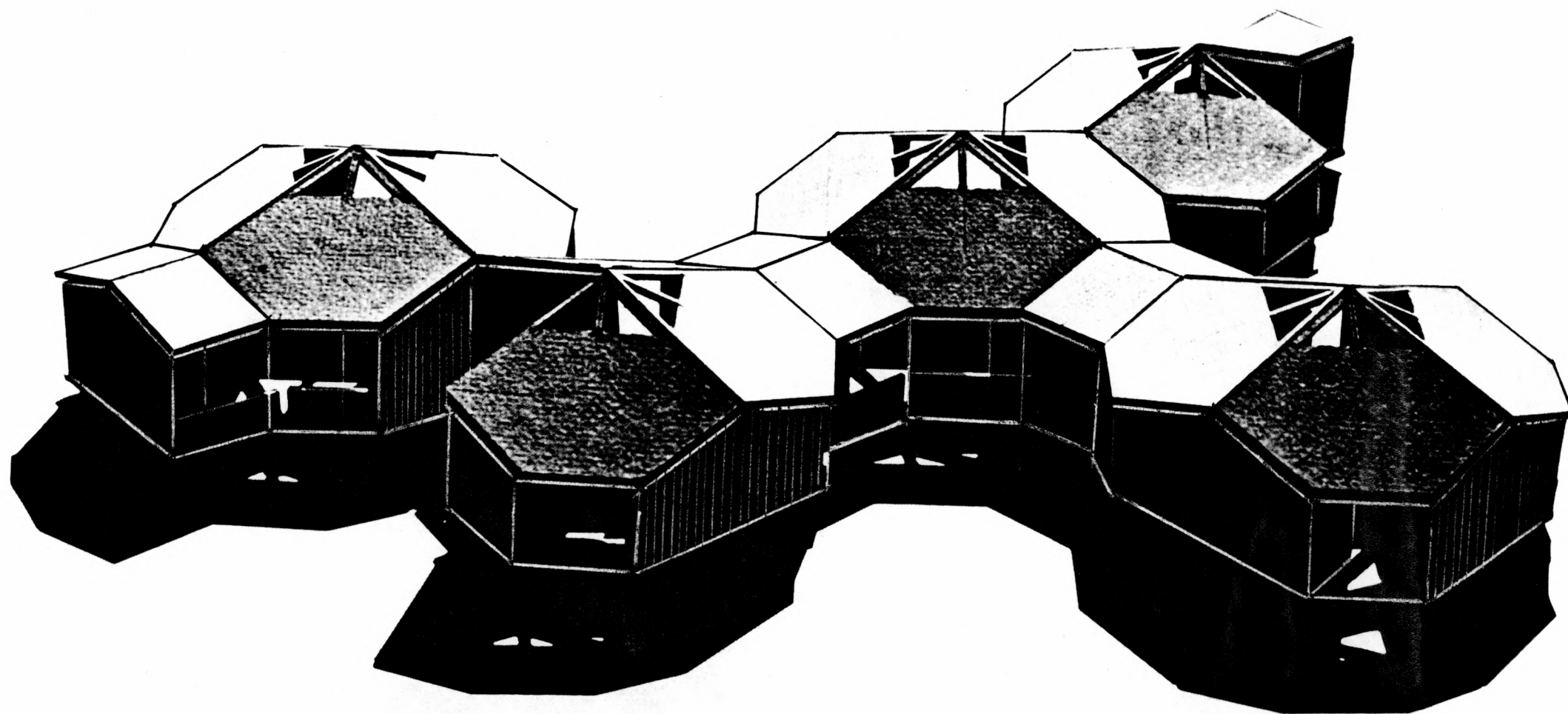
If real progress is to be made in these important aspects, both considerations should begin first with the overall concept of Community Planning and then develop towards the detailed design of the individual home.

While the single family home will always find support for those home owners able to afford it, further consideration has to be given to the provision of more efficient forms of multi-family housing with tighter densities, if real economies are to be made in fuel energy resources and capital construction costs.

2.

In addition, it is our view that for the north, construction systems utilizing factory fabricated components will also insure greater efficiency and better quality control, particularly in areas where a short construction season and low availability of skilled labour apply.

It is the hope of Technical Services and Contracts Branch that these design brochures will provide, a basis for discussion and dialogue with and among northern residents and developers and the means to stimulate ideas for a new approach in seeking better forms of living environment and more efficient solutions in achieving these ends.



 Indian and
Northern Affairs

NATIVE HOUSING PROPOSAL

J.W. Francis
Project Manager
Guideline Building Design Program
Buildings Division

program - a systems approach

INTRODUCTION

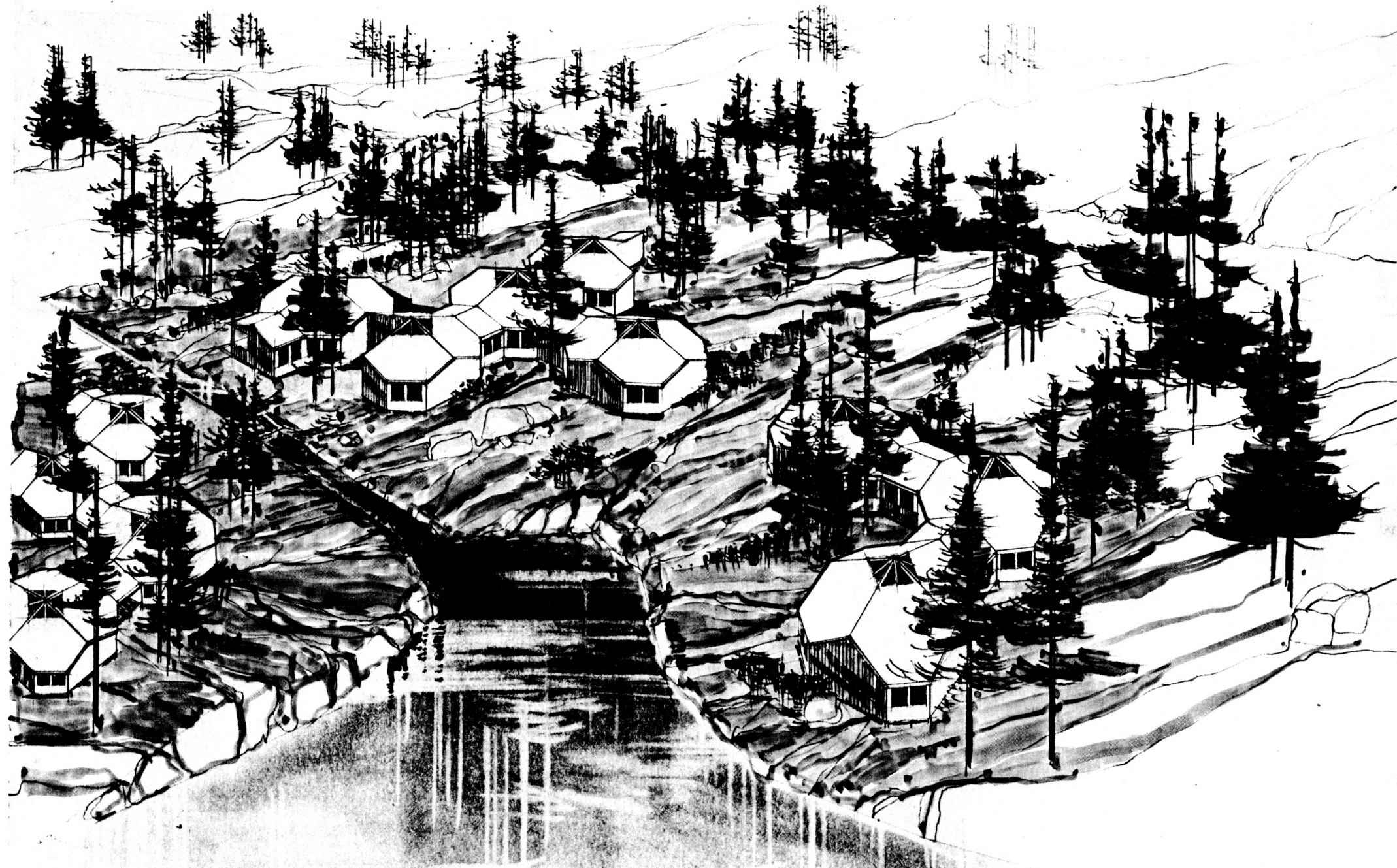
This study attempts to explore and identify a concept for an authentic form of Native habitat at five levels of integrated development -

1. Detached Single - Family Home
2. Cluster Group Housing
3. Community Neighbourhood Unit
4. Village
5. Town

All levels of the proposed Native habitat are interrelated and are based on the growth principle of the living cell, which in this instance consists of a octagonal shaped module capable of providing in various combinations and groups an infinite variety of living environments from 1 to 6 bedroom units.

The plan form would derive from the land and the people and the basic design philosophy is carried through all group development stages to produce a unique and clearly distinctive Native Community.

The basic design and planning philosophy is Native while the methods and techniques used to implement the concept are contemporary technology.



cluster group housing

DESIGN CONCEPT & SYSTEM ANALYSIS

A brief examination of the concept described in this brochure will quickly reveal that it is not another catalogue of standard housing plans to be offered to the Native people. Rather it is intended to be a total comprehensive system of building design and construction techniques which will enable Native families to design, build and assemble their own homes to the extent that they wish. Further it will allow groups of families to shape their own community neighbourhood environment and Councils to plan and create their villages and towns in organic progressive fashion following the principle of the living cell.

The system represents an intriguing and imaginative new approach to housing and community design based on Native ideas and philosophy and using modern construction technology.

The basic unit of the system consists of a factory fabricated 'shell' or 'module' in the form of a octagon with a floor area of 400 sq.ft. The modules are assembled on site from specially designed building panels and can be linked together in an infinite variety of ways to produce single family detached homes, cluster group housing, old folks row units and bachelor apartments, etc. Homes can be produced to serve the needs of a young couple without children, a couple with small children, a middle-aged couple with a large family (six bedrooms) and a couple of retirement age. The single family detached home can grow simply by adding modules to provide more bedrooms and other facilities for the growing family.

CONSTRUCTION AND ASSEMBLY

It is proposed that the modules be manufactured by Natives in Native factories primarily in winter months to provide job opportunities. They will consist of easy-to-assemble floor, wall and roof panels in stressed-skin plywood construction techniques. The pre-built elements can be quickly assembled at the site on prepared footings by relatively unskilled labour to form a basic shell.

Prior to assembly time the family will have given thought to the size and layout for their new homes - some examples are shown in the brochure - but families are encouraged to design their own floor layouts to meet their own particular needs and ideas for the present and also with the future in mind. When the floor layout has been settled, external wall panels containing doors and windows, etc., can be selected from the available range and ordered from stock. These will then be assembled together in positions to best suit the particular floor layout.

The basic shell is now "closed in" and the heating system would be installed by a local heating engineer.

The next stage is the interior finishings. Partitions in 2" X 3" studs, doors and gyproc can be "stick built" in conventional materials to provide the maximum flexibility and convenience. The local community work crew will be of great help at this stage and they will, of course, install the plumbing, wiring and other more complicated jobs. Painting however can be left to the family.

Now all that remains is the exterior finishes and trim and these come in many varieties to suit individual taste, local preferences and availability including brick, stone, wood shingles, cedar and metal siding, etc., etc.

The process of "personalizing" the home will eliminate any possibility of "look-alike" houses and at the same time take advantage of the economics which result from mass produced factory fabricated modules. The automobile industry provides a good example. It has been stated that a car would cost over \$300,000 if every part was handmade like conventional homes. Many people do not realize when they look at three or four different models of a car that they all have the same chassis or "shell". The body package is absolutely identical but the models look and feel different because of different interiors, different paint, different trim, etc. We get the production economics of spreading one chassis over three or more price levels. In modular building systems the same economic principle applies.

OVERALL PLANNING PRINCIPLES

So much for the individual family home, how it is made, assembled and finished. Let us turn now to the constraints and influences that will mould and shape the larger home - the home of the Community which may grow from a small cluster of homes to a neighbourhood unit, to a village or a town in progressive stages.

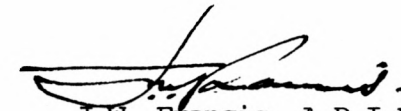
The Planning system envisaged takes inspiration from the living tree. In a sense the mature tree is a "community" and may be likened to the village or town, while at the other end of the scale the leaf represents the individual or family unit.

At every stage of growth the tree, in all its parts are in perfect scale and balance with each other and together as a whole living in harmony with the surrounding environment. Each leaf has its own place in the sun. Each taking from but also contributing to the system producing a balanced life cycle.

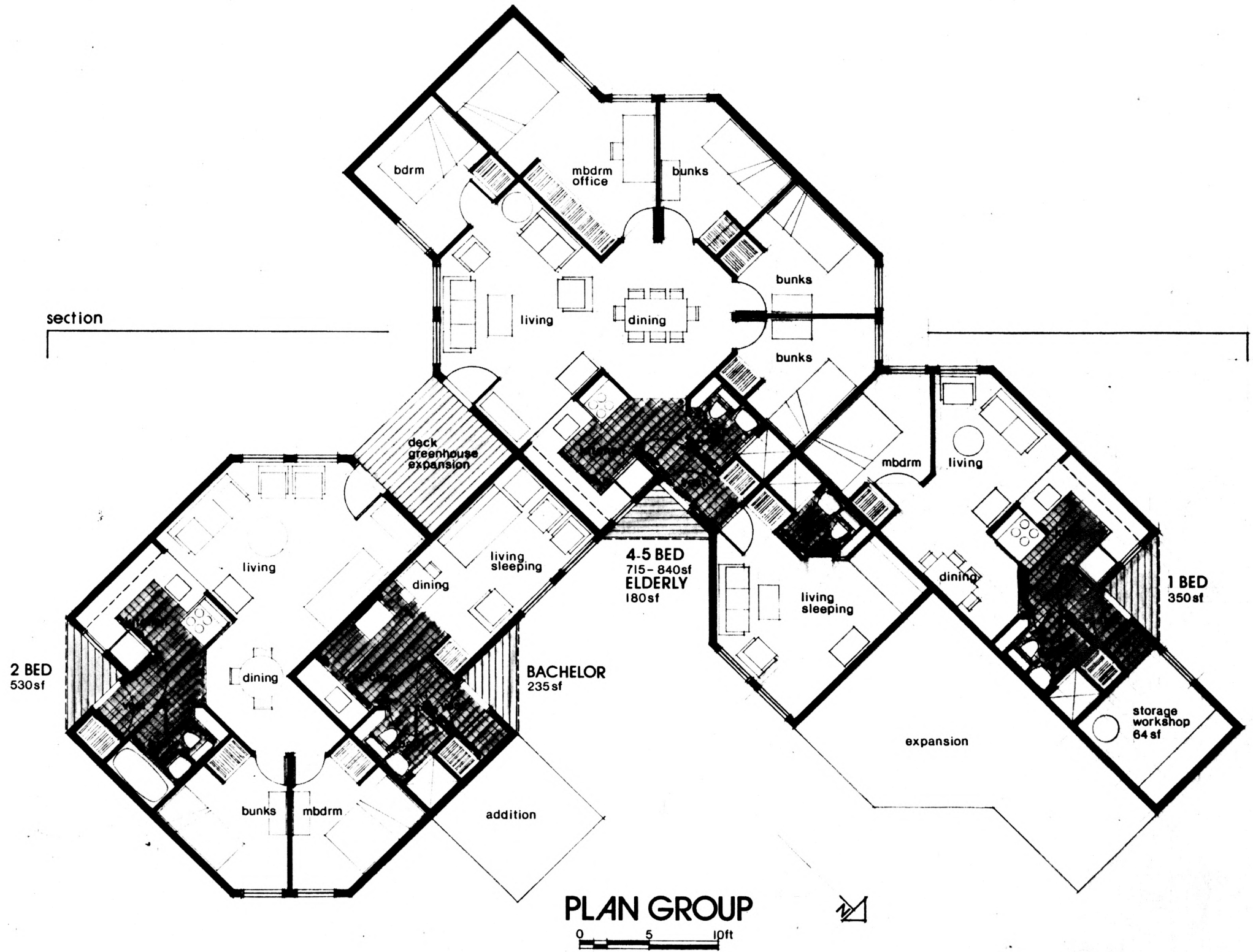
So it is with "man and his community" - all parts must have a logical organic structure and relationship to each other if there is to be balance and social order - the individual, family, group, neighbourhood, village and town and taken all together, man living in harmony with nature itself under the "great spirit" who made all living things.

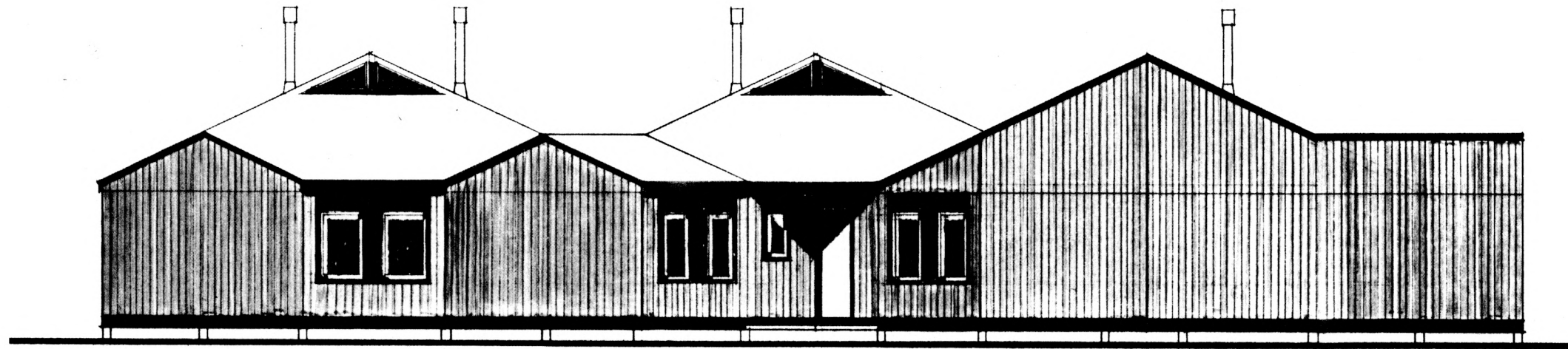
Man's physical community is subject to a variety of constraints such as soil conditions, topography, geography, climate as well as economic, cultural and social implications and these are the factors that should influence the shape and substance of the Community rather than arbitrary notions and values that have no historical relevance to the Indian Community. The subdivision of land in lots for example with street allowances of 66 feet width - (the English survey chain) are considered by many Natives to be quite arbitrary and irrelevant and have no place in the Native Community. These Native values have been respected in this study. Indeed the removal of lot lines and street allowances has given rise to design forms that respond to the natural environment, are more flexible, organic, human and highly distinctive - dare we say it more Native. Advantage can be taken of existing trees and foliage patterns, rock outcrops and other natural phenomena working in and around them - embracing the landscape rather than disturbing it.

These are the qualitative approaches and guidelines that will create the truly contemporary Native village and town Community and distinguish it from all others.

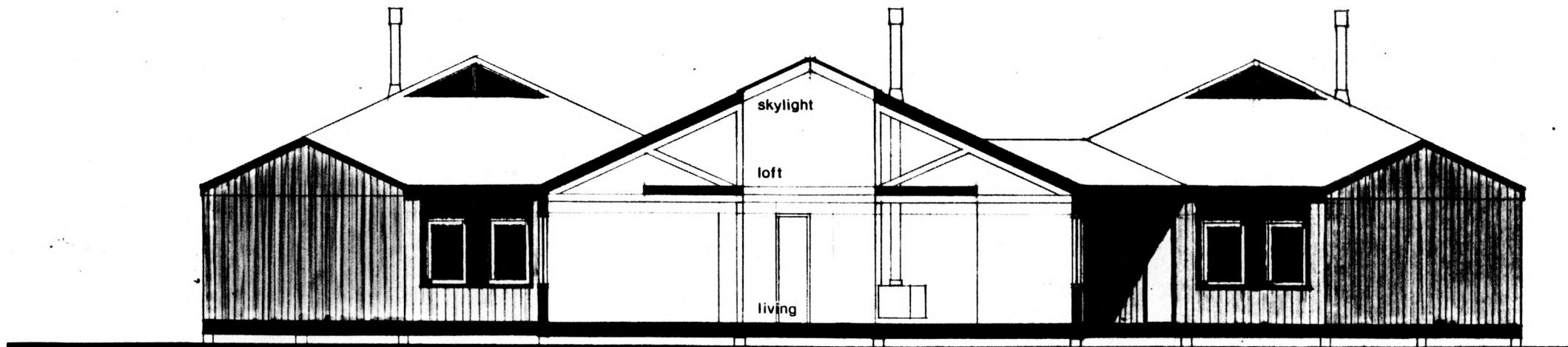


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Indian and Northern Affairs



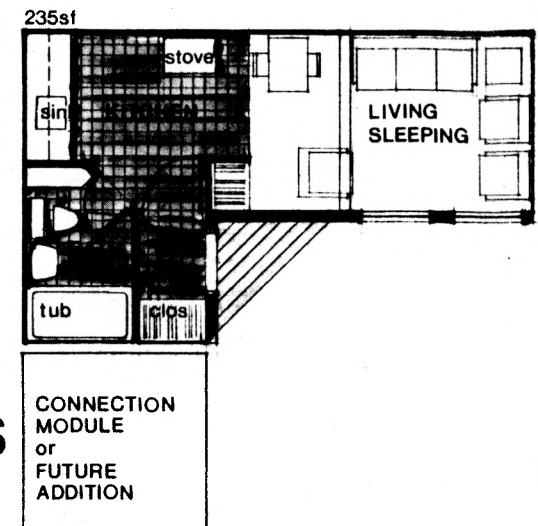
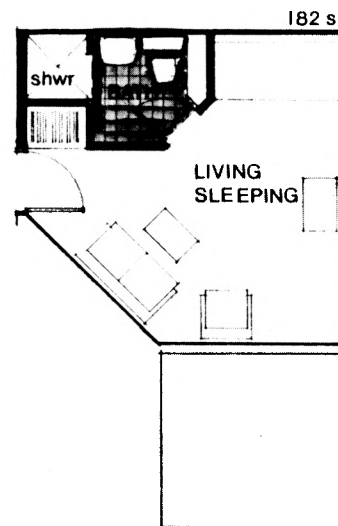
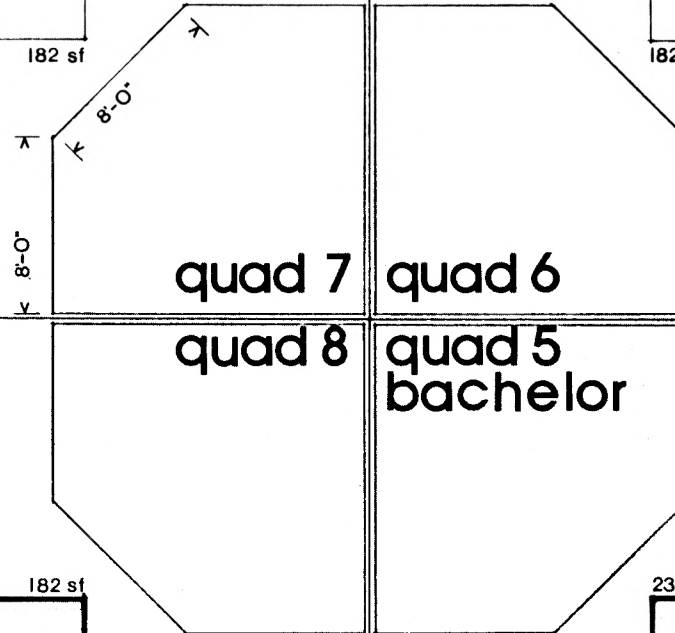
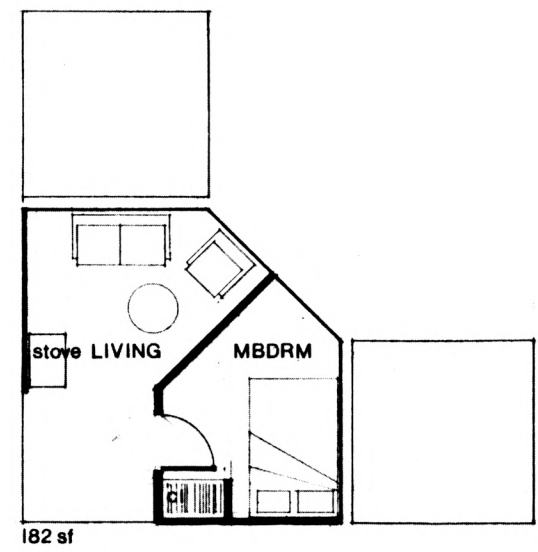
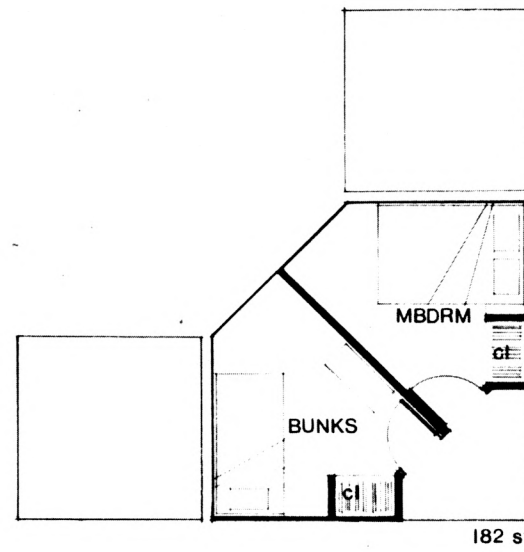


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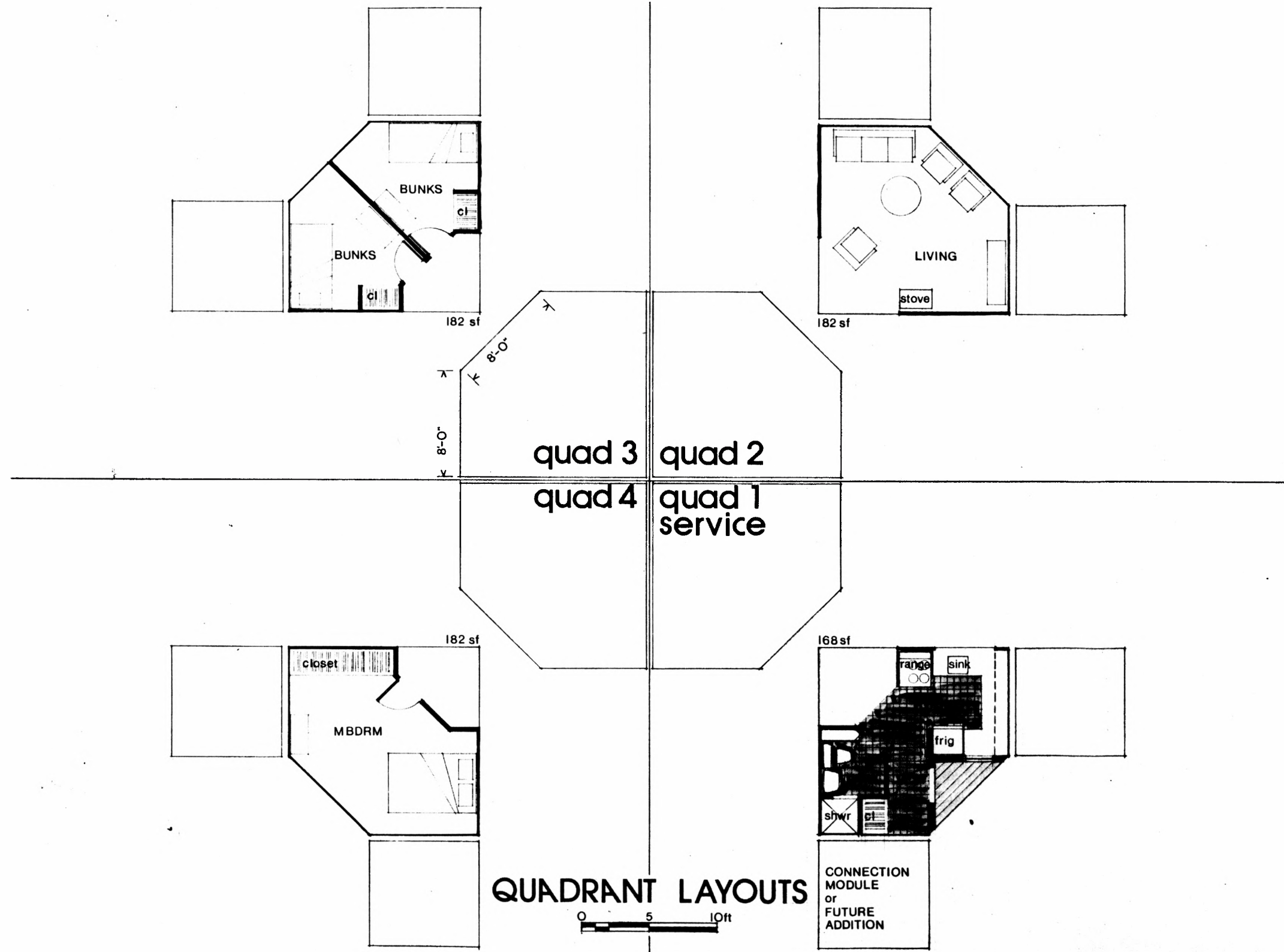
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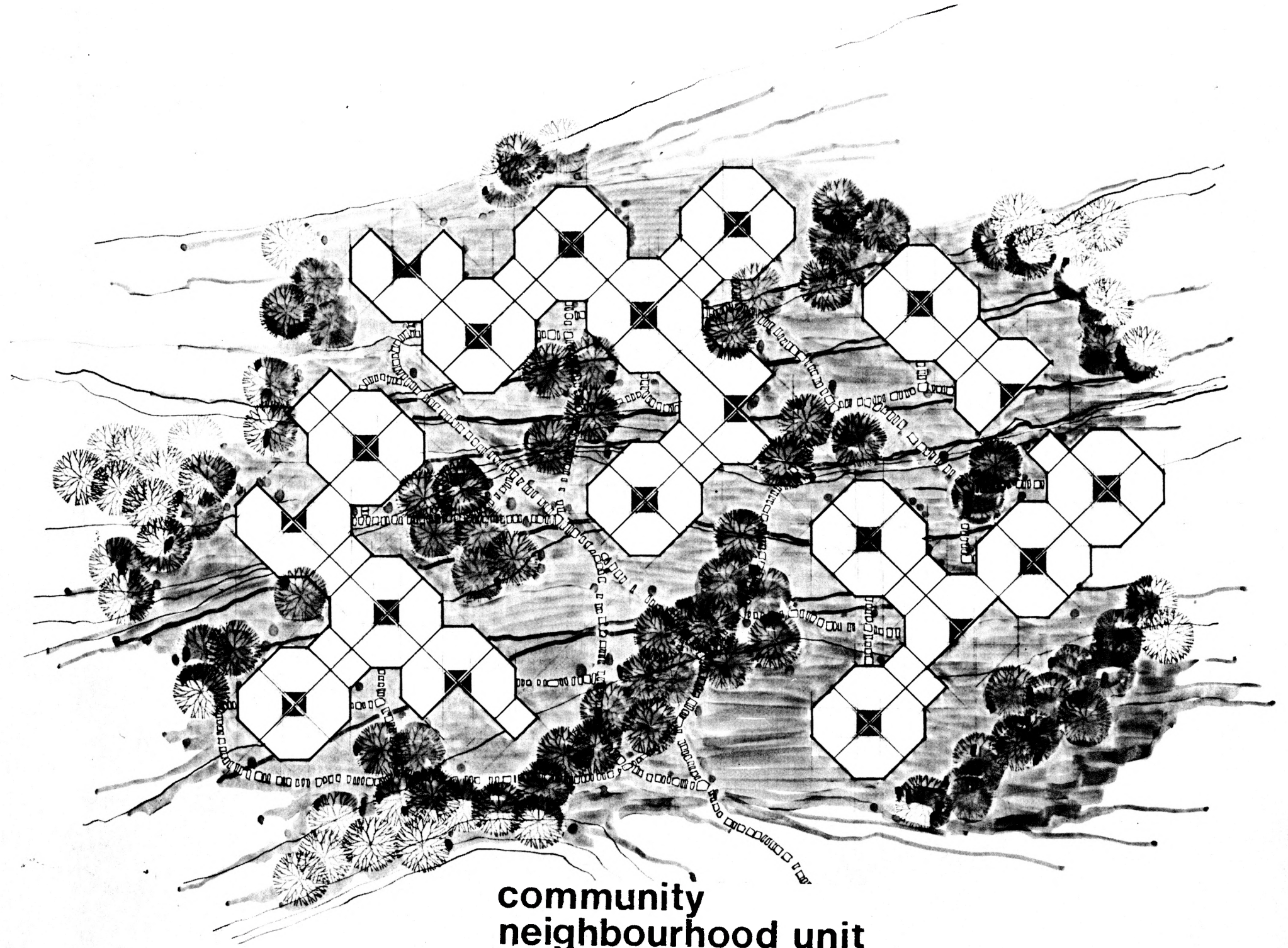
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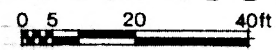
QUADRANT LAYOUTS

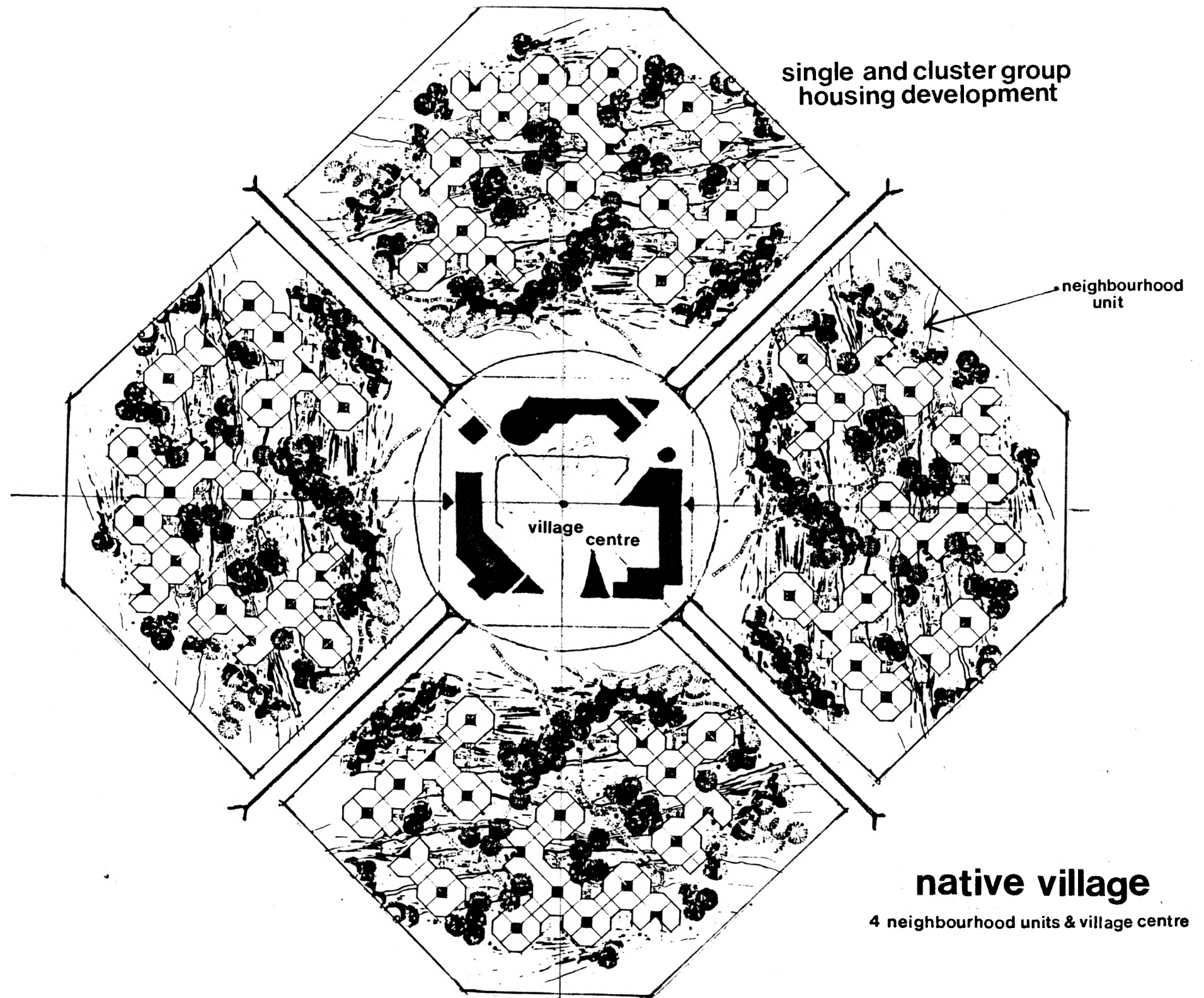
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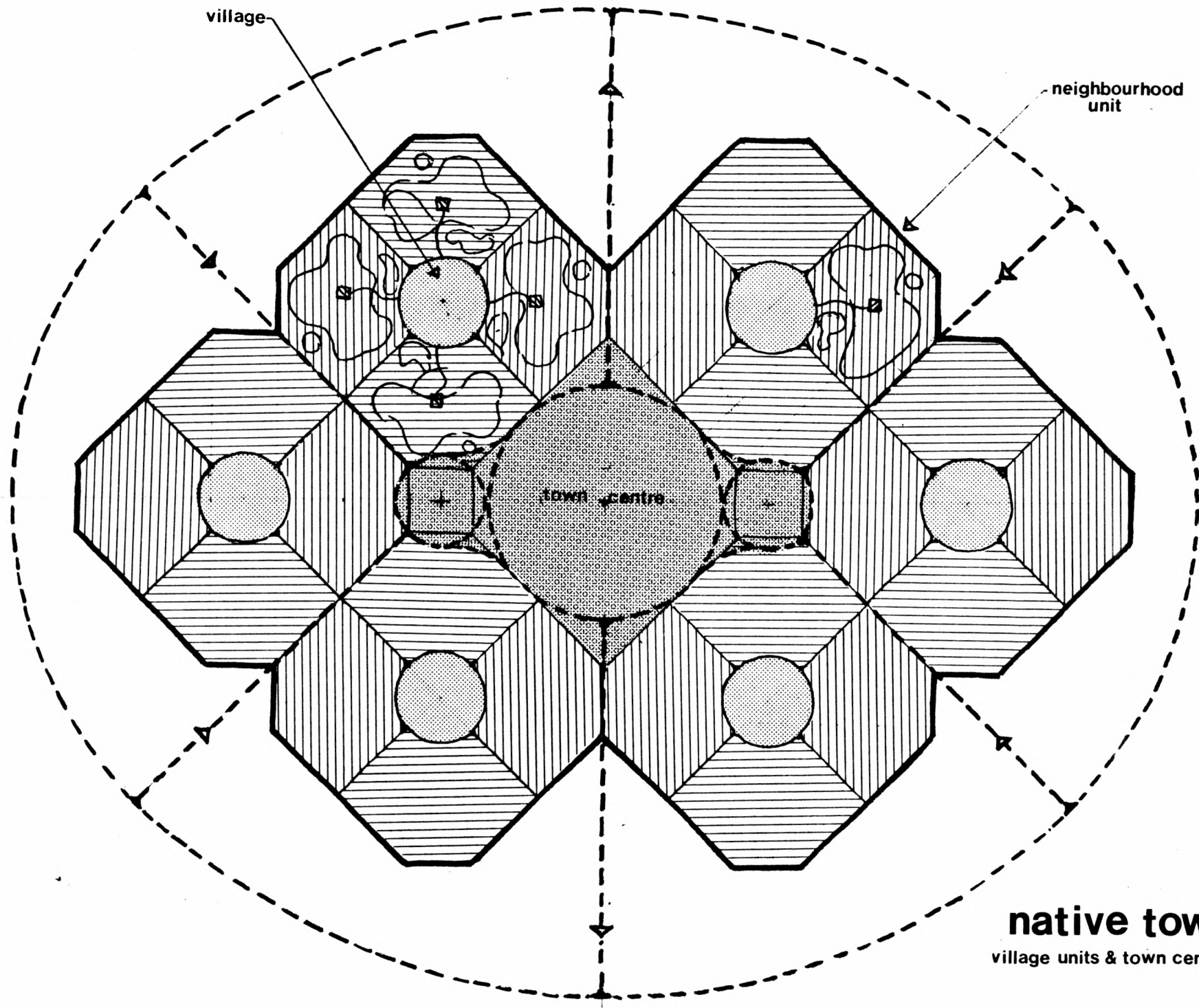




**community
neighbourhood unit**







native town
village units & town centre