III

TYPOLOGY

Typology

The typology aims to classify basic characteristics of housing and settlement in the Caspian Region. To serve this purpose it has to be a generalization which can be broadly applied to any one particular area, and which enables one to see how houses, for example, in the coastal area of Rasht-Bandar Pahlevi differ fundamentally from those in the Fouman Plain. In making this classification, it must be remembered that many factors influence the form of a house. The occupation and wealth of the owner, the local site conditions, size of family, age of the building, etc. - all of which can result in an individual house varying from the pattern suggested by the typology. In practise, it is rare to find even two houses that are identical. Since this is the case, the typology must identify those features which are notable in a regional archetype.

Typological change in the Caspian region is most noted from the coast moving into the mountains. This cross section can be divided into four parts: the coast, the plains, the foothills and the mountains. Through the climate and topography of these four divisions, one can readily see the progressive changes that take place.

The coastal areas are low lying, flat, and in most parts subject to flooding. The climate is extremely humid, with very high rainfall, but has a low seasonal and diurnal change in temperature.

In comparison to this, the plains, while being flat, are better drained and flooding is less likely; the delta of the Sefid Rud is an exception to this. The climate in the plain is less humid, and the rainfall is lower. Temperatures are both seasonally and diurnally more extreme.

The transition from the plains to the foothills is sometimes quite gradual, but is characterised by the land becoming hillier and drier. Both ground water and rainfall are less, as is the humidity. Temperatures are more extreme. Unlike the plains which have been cleared, the foothills are still predominantly covered with forest.

The climate in the mountains becomes progressively drier as distance increases from the sea, and as the rainfall and humidity decrease so do the forests.

Although less marked than the change that takes place moving inland, there is also a change from west to east. Climatically this can be seen in the decreasing rainfall, which itself has an effect on the house forms of different areas.

Land use also changes from the coast to the mountains. The coastal areas are marshy with reed beds, but rice is grown on the perimeter of these marshes. In the plains forests have mostly been cleared to make way for agriculture, using controlled irrigation. In the wetter west rice is the predominant crop. Moving eastwards, crops requiring less water are also grown, as cotton, wheat, etc. Moving through the foothills into the mountains, there is a gradual change from predominant agriculture to predominant animal husbandry.

The character of settlements or dwellings is a response to two groups of determinants: physio-environmental conditions, which can be regarded as constants and incorporate topography, climate, and other natural resources such as water; and socioeconomic conditions, which are variable and incorporate culture, economics, communications and other artificial resources. Most of the latter conditions can in a finite sense also be seen as responsive to the physioenvironmental conditions. Individual aspects of these determinants will each

have a greater or lesser influence on settlement or house form or on particular elements within these two.

GILAN ~ NORTH to SOUTH SECTION ~ PHYSICAL DATA

	COAST	PLAIN	FOOTHILL	MOUNTAIN
Topography	Low flat	Low Flat	Hilly	High Plateau & mountain valley
Climate	Warm humid	Temperate humid	Temperate	Temperate dry
Rainfall	Very high 1600mm+	1200mm+	800mm+	Below 800mm
Landuse	Marsh Rice & Reeds grown	Rice growing	Agriculture Forestry Animal husbandry	Animal Husbandry Forestry limited Some agriculture
Water supply	Well Marsh & controlled irrigation Badly drained	Well Controlled Irrigation	Running Water Dry farmed, some controlled irrigation	Running Water Dry farming
Transport	Traditionally by boat Roads poor	Good	Fair	Poor: mountain pass
Population density	Medium	High	Medium	Low
Settlement distribution	Occaisional small settlements	Many small settlements	Infrequent medium settlements	Very sparse but large settlements

MAZANDARAN (SARI) NORTH to SOUTH SECTION ~ PHYSICAL DATA

	COAST	PLAIN	FOOTHILL	MOUNTAIN
Topography	Low, flat	Low, flat	Hilly	High Plateau & Mountain valley
Climate	Warm humid	Temperate humid	Temperate	Temperate dry
Rainfall	800+	800+	1000+	800+
Water supply	Well Marsh & controlled irrigation	Well Artificial Irrigation	Running Water Dry farming	Running Water Dry farming
Transport	Poor	Good	Fair	Poor; mountain passes etc.
Land use	Marsh. Reeds Rice	Agriculture Cotton, grains	Agriculture, animal husbandry. Forestry	Animal husbandry some agriculture
Population density	Medium	High	Medium	Low
Settlement distribution	Occasional medium settlements	Scattered medium settlements	Infrequent medium settlements	Very sparse medium settlements

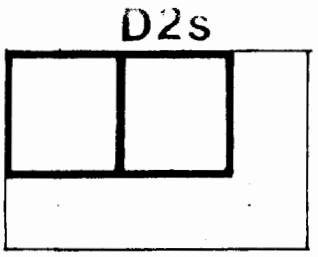
The Morphology of House Form

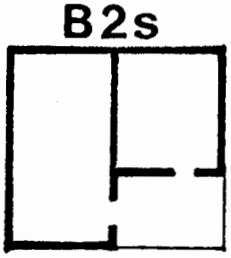
In order to understand the fundamental forms (plan and sectional form) of the various house types that have come to exist within the Caspian Region, an insight into the development or morphology of the house is necessary. The existing house forms in the different areas of the Caspian are a result of the vocabulary of housing methods and styles that has developed through the evolution of the basic shelter or the generative house form. This morphology of the house followed different directions in various regions of the Caspian according to each region's physical environment and the socioeconomic relations of its inhabitants.

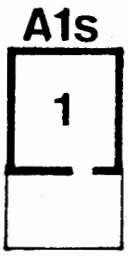
The case studies carried out in settlements throughout the region indicate that many of the villages were originally formed by people who led a semi-nomadic, pastoral life. Generally, this population inhabited the mountain yeylaqs during the summer months and in winter came down to their qeshlaq in the plains. In each camp a plot of land was demarcated and fenced in order to protect the animals, while a small rudimentary shelter was constructed for the people's habitation. Within the plains and the foothills this basic shelter became the generative house form. It consisted of the two fundamental spaces necessary for the house in the Caspian region: the enclosed room and the roofed but unwalled aivan (verandah) (House type A1s). The room provides an enclosed space for use during the cooler less humid months and in some areas also for sleeping at night; the aivan is a shaded, semi-enclosed, roofed space in which most daytime activities take place, especially during the warm humid summer months. These two elements are found in almost all house types within the region, but the ratio of room area to aivan size and their relationship vary according to the climate and lifestyle requirements within each region. Some houses in

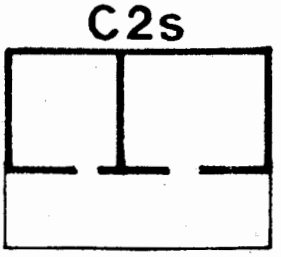
The verandah or aivan is an essential element found in nearly all houses within the Caspian region.

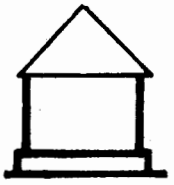
The aivan is a multi use space and caters for many household activities during the warmer summer months.



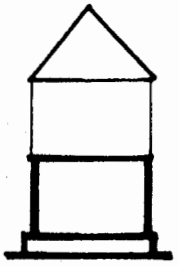








s
Single

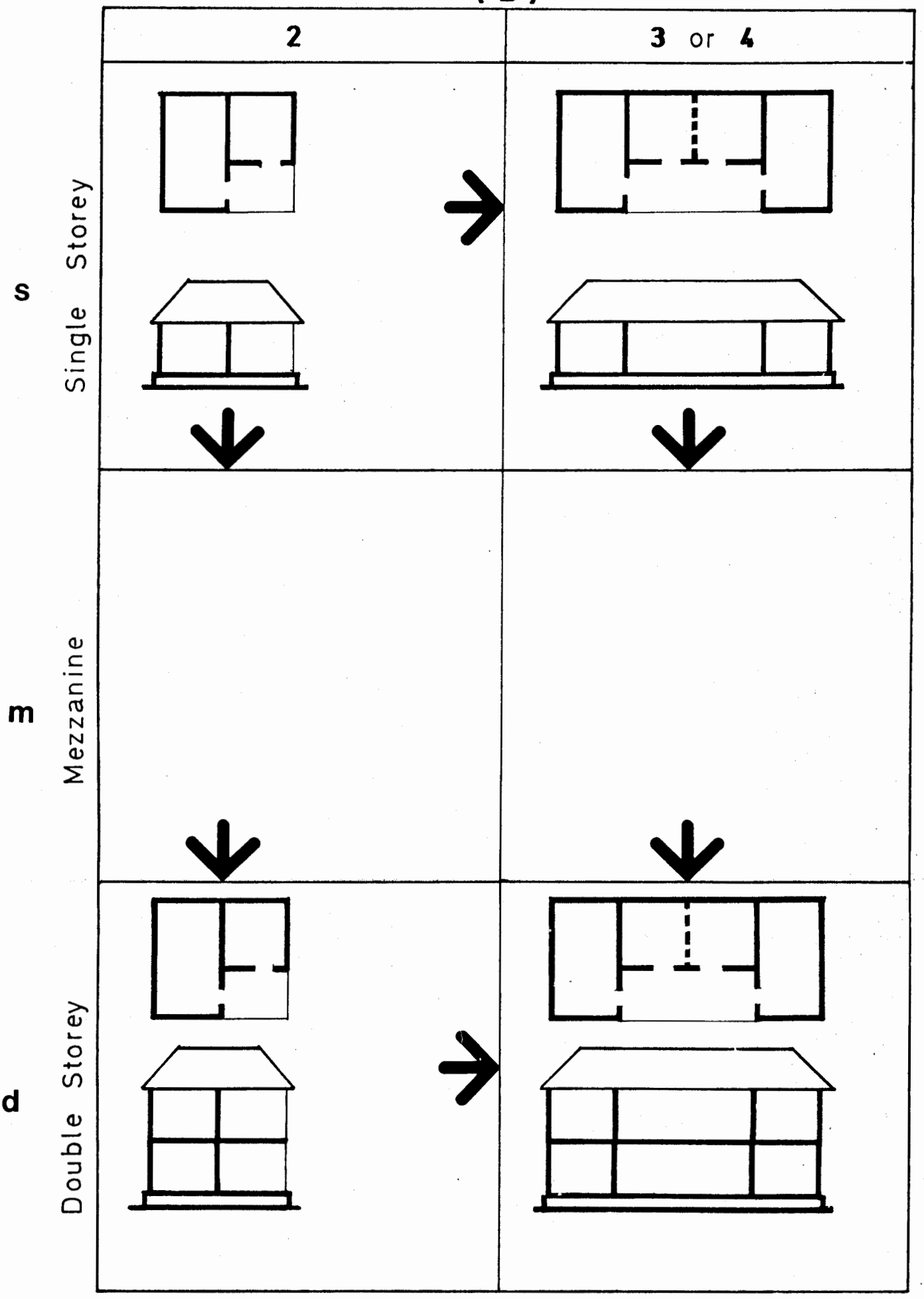


A1do
Double

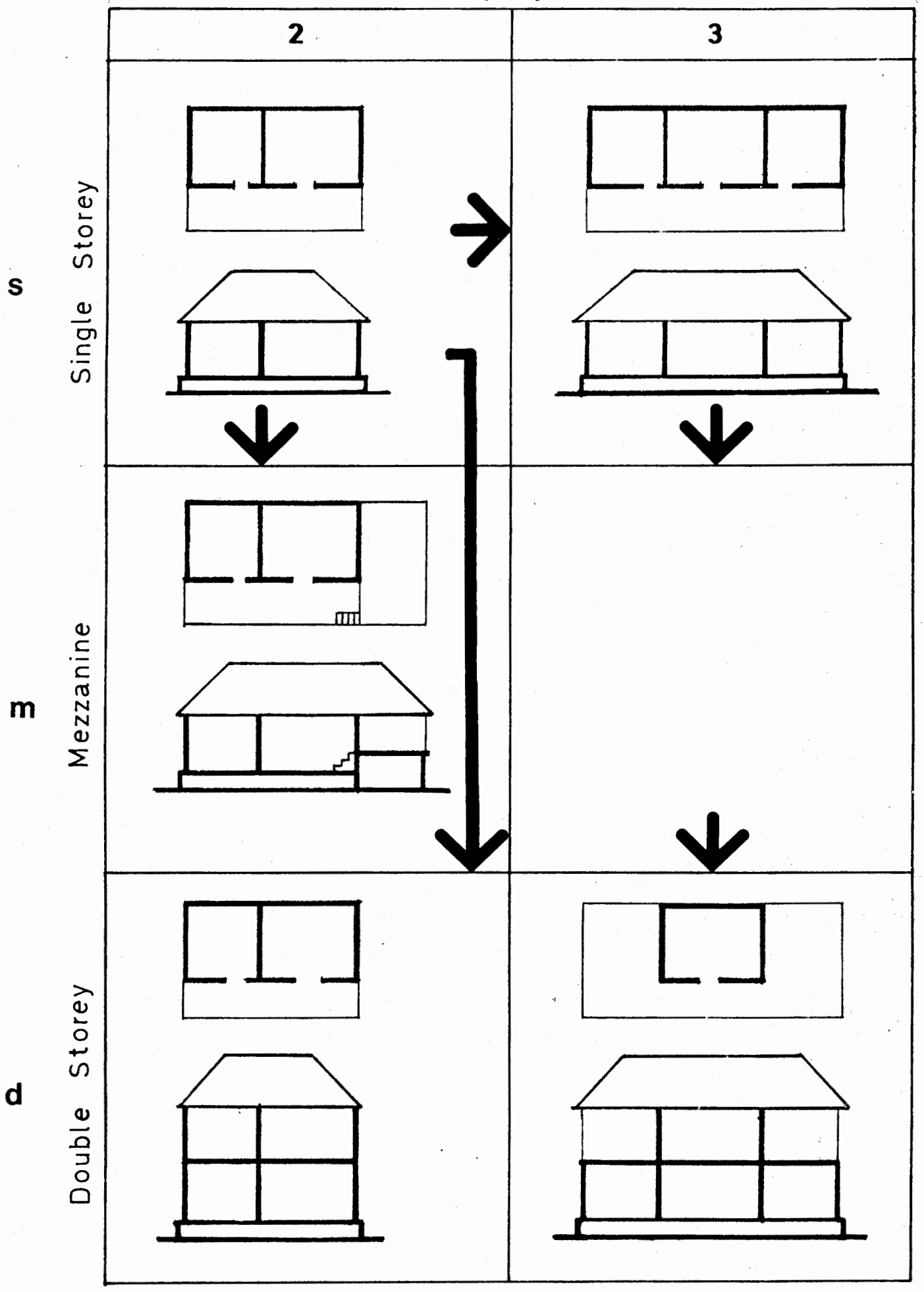
	B	A	C		D
s	B3s ← B2s	← A1s	→ C2s	→ C3s	D2s
m			C2m		
d	B3d3 — B2d2	— A1d0	— C2d2	— C3d1	D2d2

There are other variations possible but only the major house types found in the caspian are shown .

House Morphology , Type
(B)



House Morphology, Type
(C)

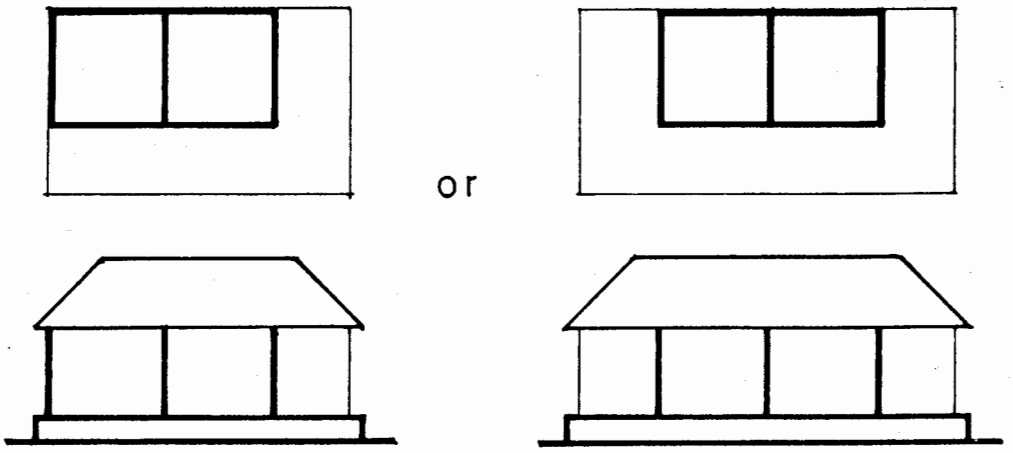


House Morphology , Type

(D)

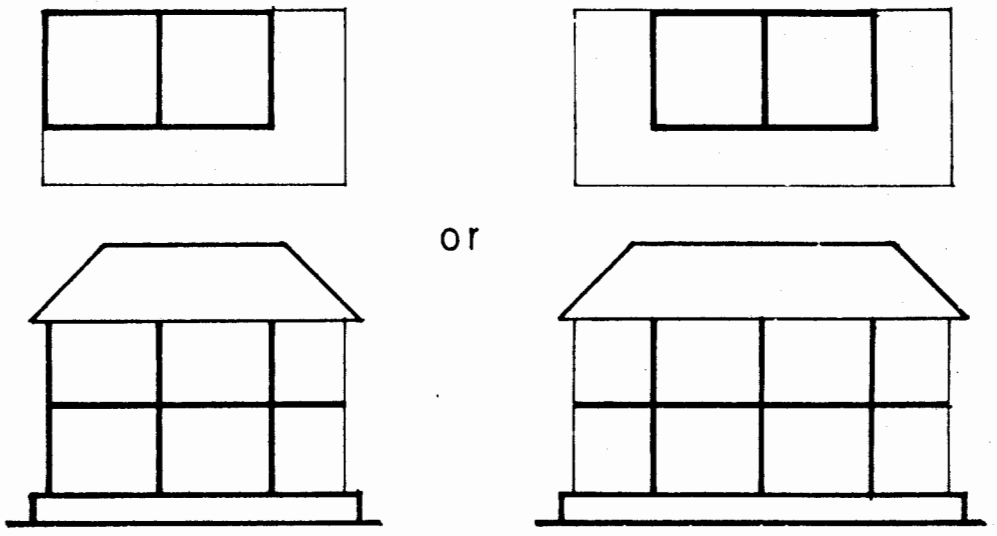
2

s Single Storey



m Mezzanine

d Double Storey



Masouleh do not have aivans.

As the people began to change from animal husbandry to cultivated farming by reclaiming forested or marsh lands, they became more permanently settled; they expanded their houses, which over time became quite substantial housing. This expansion of the original house, which followed various patterns according to regional requirements, provided the archetypes, or vocabulary of housing, within each region. The clearest change in the direction of expansion follows the varying environmental conditions from the coast inland towards the mountains. Along the coastal strip with its severe climatic conditions (high rainfall and wind) the expansion takes place in a horizontal direction. Rooms are added side by side and the aivan extended across the front of the rooms (Type C2S) as in the Rasht-Bandar Pahlavi or Sari coast. In the Astara narrow coastal strip, the rooms form an "L" and the aivan completes the square of the plan, providing a more sheltered semi-enclosed space (Type B2S). In certain cases where the aivan is more extensively used it covers two or three sides of the house (Type D2S), a form found commonly in the Sefid Rud delta where the house is situated on a platform raised on stilts (see House Morphology and types chart). Generally the coastal houses have low rooms but very high roofs and are built on high platforms, especially where flooding is likely. In the rice growing plains further inland from the coast the first signs of vertical expansion of the house become apparent. The two room front aivan house (C2S) has been developed by the addition of a mezzanine on the east side of the house, forming Type C2M. An extension of the roof eaves which comes down almost to the ground level protects the western exposure of the house from high winds and rain, and provides a narrow corridor-like space on the north and west side of the house which is used as storage or animal shel-

The basic generative house form in the Caspian consists of two fundamental spaces: the room and the aivan.

The basic house can be expanded horizontally to include two, three or four rooms facing onto an aivan.

ter. In some cases an additional mezzanine has been constructed on the west side as well as the east side of the house. The lower level of the mezzanine consists of an enclosed extra room and the upper level becomes an open platform locally known as talar. The lower room is either sunk somewhat below ground level in which case it would usually be used as animal shelter or storage space, or, if adequate height is provided between the ground level and the ceiling then this room is used as a living space. The open talar provides a well ventilated cool space for the warm humid summer months, and it is used for both living, eating and sleeping from spring to autumn. The mezzanine house is not always an extension of the front aivan house but has become a model or an archetype in the Rasht-Fouman plain.

The front aivan two room house (Type C2s) discussed previously, shows its versatility by undergoing a different evolution in the higher altitudes of the Caspian region. It is extended vertically on the basis of the same floor plan to form a two storey house (C2d2). In the foothills which possess cooler, less humid climates, the ground floor aivan is enclosed to form a corridor for circulation purposes. This also prevents the entrance of wild animals into the house, although in some of the houses surveyed part of the ground floor is used for keeping domestic animals. The household spend winter months in one of the ground floor rooms called "atesh otaq". In the warmer areas this house type possesses wider open verandahs, some extending to more than one side of the house (D2d2); this is usually the case in Toulehsar in the Shahsavar plain, the Behshar area, and the Turkoman sahra.

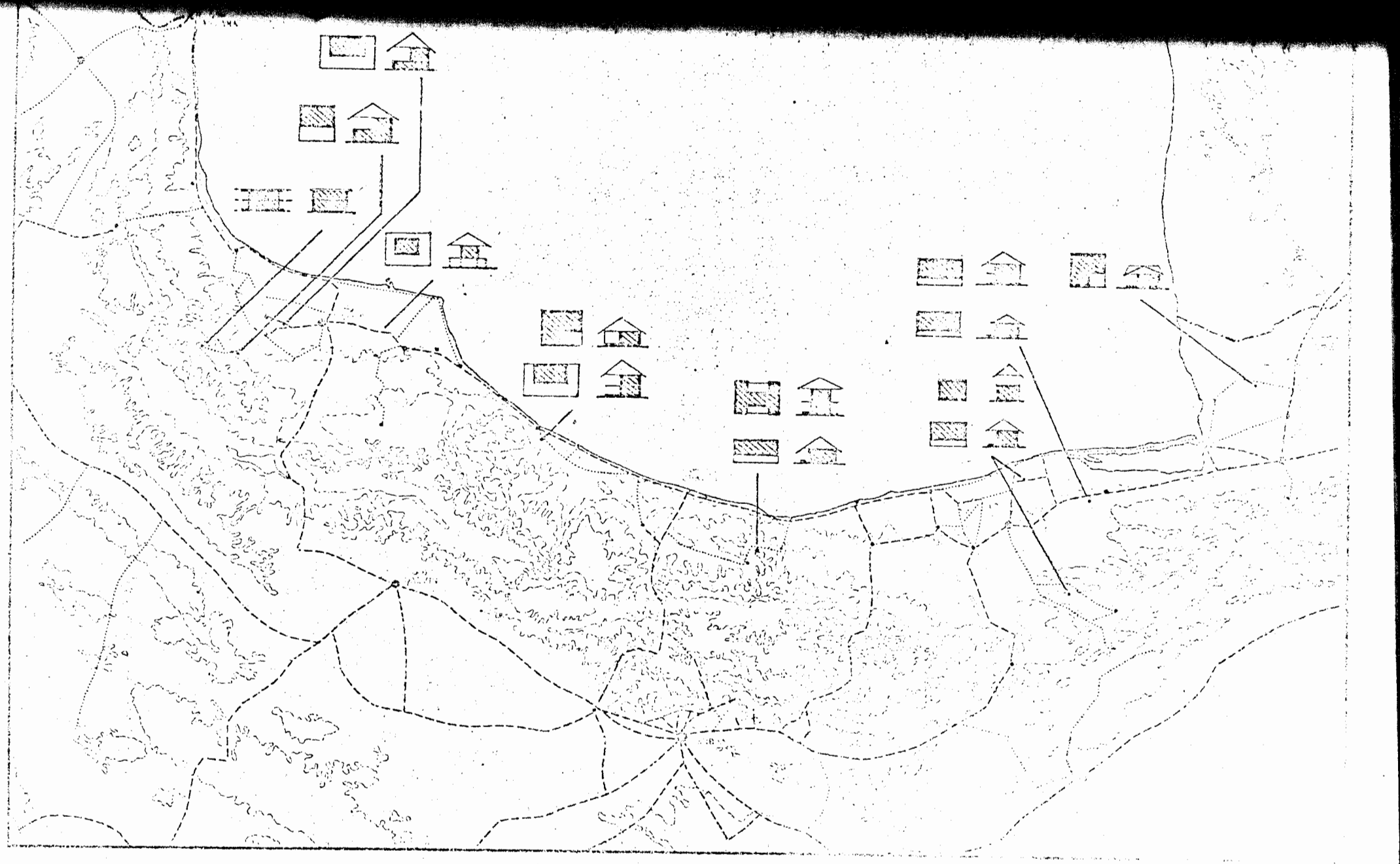
The two room house can also be extended horizontally into a three room house facing onto the aivan (C3s), as can be seen in Kodir village. The double storey version of this house

type often has one room only on the upper floor leaving an open platform on the upper storey level (C3d1) as in Heydar-alat.

The basic single room house has also been extended vertically to include an open platform talar on its upper level. This structure (A1d0), common in the Sari plains and foothills, is locally known as nepar. In the cooler and drier hills and mountains where the need for an open platform is minimised, the upper level is enclosed by walls. The nepar is normally used in conjunction with the main house; the upper open platform provides summer living quarters for the family and the lower enclosed room is usually a store. The winters are spent in the enclosed rooms of the main house.

The "L" shape house, consisting in its simplest form of two rooms and a corner aivan (Type B2s), is found in various degrees of predominance in many parts of the Caspian region. This type is commonly found in the Astara-Lisar narrow coastal plain, the Shahsavar plain and Turkomansahra. The construction materials and house details, however, vary in each of these areas. In Astara region pan tiles are used almost exclusively as a roofing material, whereas in the Shahsavar area sheet metal roofs are most common. The sheet metal roofs in Turkomansahra have a distinct "H" ridge form peculiar to that region. The directions of expansion in the "L" shaped house are both vertical and horizontal. Often another "L" configuration mirrors the original house and forms a central aivan (B3s). Two storey houses using both the single "L" (B2d2) and the double "L" (B3d3) plan are also relatively common, especially in the foothills and mountains of Haraudar-an.

The house types discussed in this section are the main archetypal forms seen or surveyed by the authors within the Caspian



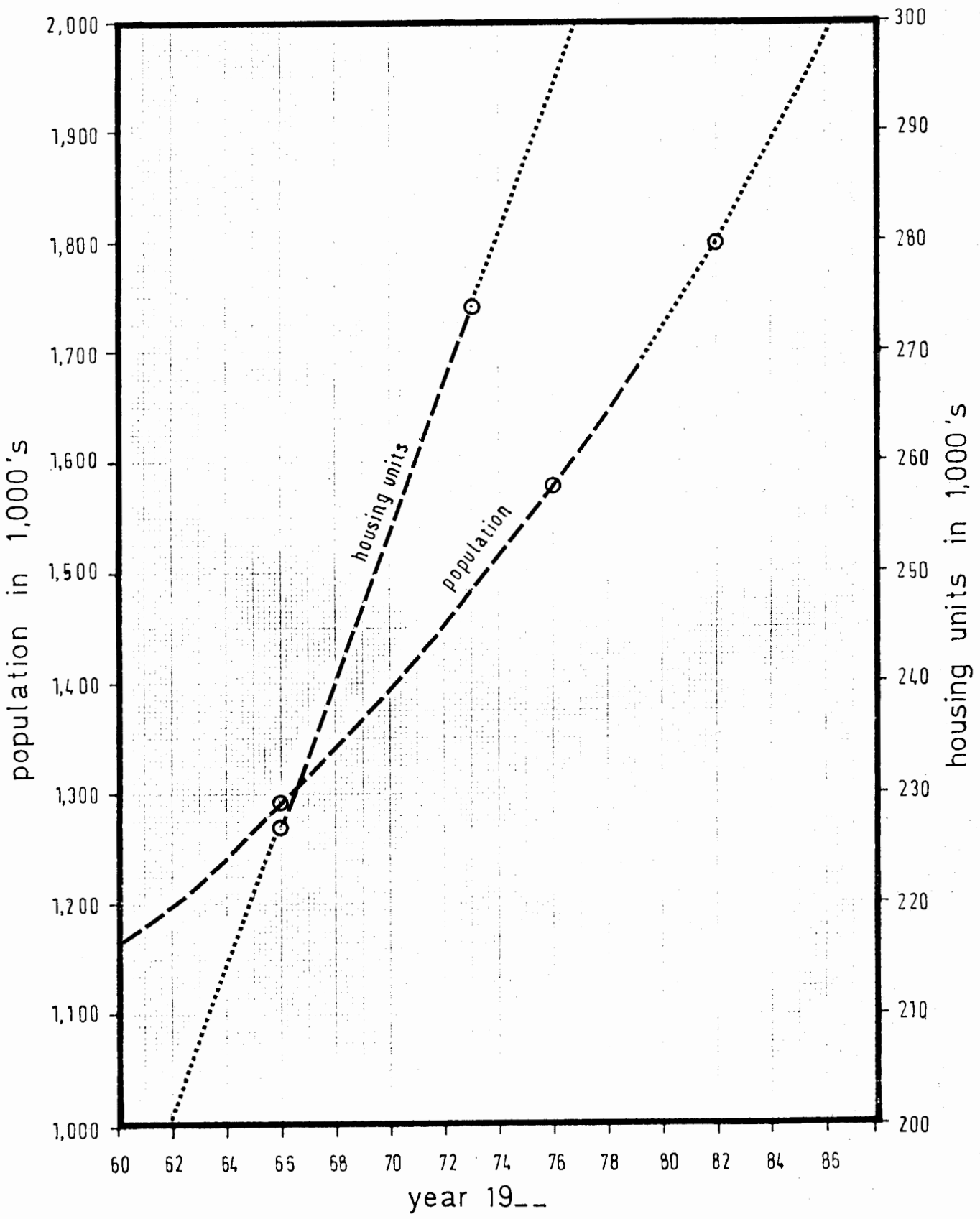
region. The houses constructed today do not always undergo the morphology from the generative form (A1s), but in most cases are based on one of the archetypal forms generated by the morphology at varying stages in its development. The house forms classified here represent the fundamental form of the house and alterations and additions to the basic house have not been considered.

Recent Trends in Housing

It can be seen from the following graphs of recent growth trends in population and housing densities, that despite the rapid growth of population the provision of housing units has surpassed it. Between the years 1966 and 1973 in Gilan, when housing statistics were available the number of housing units grew from about 227,000 to 274,000, representing a 20% increase. During the same period population grew from about 1,290,000 to 1,490,000, a 15.5% increase.

These factors have led to an average population density reduction per housing unit, from about 5.69 to 5.42 people per unit. This trend toward lower densities can therefore be seen as an indicator of improved housing conditions.

Plan & Budget Organization, Statistical Yearbook of Iran 1352


Population and Housing Growth Trends
for Gilan
population in 1,000's
housing units in 1,000's
year 19__
housing units
population
2,000
1,900
1,800
1,700
1,600
1,500
1,400
1,300
1,200
1,100
1,000
300
290
280
270
260
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240
230
220
210
200
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72
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76
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84
86

Housing Density
Persons per Unit