

ISRAEL SHELTER SECTOR UPDATE

AND

TECHNICAL ASSISTANCE RECOMMENDATIONS



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I. INTRODUCTION

In the summer of 1981, the AID Office of Housing provided technical assistance to the Government of Israel (GOI). This assignment was part of a continuing effort to help the GOI improve its assisted housing programs. As a vital source of financing for GOI housing programs, the Office has an abiding interest in helping the GOI to improve its housing activities.

This report treats several different but interrelated concerns. One central area of concern among the Office of Housing and the GOI has been the cost of constructing housing. Chapter II of this report reviews the progress that has been made in this area since 1975, when it became prominent.

Chapter III reviews major shelter sector events since 1978-79, with a focus on housing costs. Some of the important events that are discussed are the growing equilibrium in the Israeli housing market and the emerging consumer preference for low density, non-condominium housing. Recent important changes in Israel's building industry and their impact on costs are noted.

Chapter IV is devoted to rental housing. In its search for a more effective housing program the GOI examined the value of an expanded rental housing effort. A number of activities that would initiate a private rental housing industry were recently devised. This chapter reviews the events surrounding this work and since rental housing is of great interest to GOI officials, assesses its future.

Chapter V examines site development in Israel. One hypothesis of this report, that housing productivity can be increased by improving the site development process was verified by the field visit. The origins of Israel's site development practices and their effect on housing costs are reviewed.

Chapter VI focuses on the issue of land marketing and its relationship to local housing costs. Land for development has always been considered in short supply in Israel. Hence, when land is valued at market prices, the effect on housing costs is acute. The connections between land availability and site development are also discussed in the chapter.

Chapter VII offers recommendations for continuing the GOI's efforts to reduce housing costs. Recommendations are divided into three areas: the construction, land marketing and site development.

One thought that runs through these recommendations is that some facets of the U.S. development experience may be relevant to Israel's search for a more effective housing industry. In a number of ways, Israel's housing product and development techniques are moving closer to the U.S. experience. Many aspects of the era of rapid growth in the U.S. in the 1960s and early 1970s may be applicable to Israel. It would be a mistake if Israeli housing officials did not benefit from the lessons learned of their American counterparts.

II. REVIEW OF RECOMMENDATIONS MADE IN THE 1975 AND 1976-1977 SHELTER SECTOR ANALYSES

The 1981 update of Israel's shelter sector begins with a brief review of the recommendations that were made to the Government of Israel (GOI) in the shelter sector reports of 1975 and 1976-77. As many of the concerns that were expressed by GOI housing officials and AID personnel in the middle of the last decade are now being addressed, a review of previous recommendations and comments seems an appropriate point of departure.

For the reader who may want to review the earlier reports, they are available at the AID Office of Housing.

The 1976-77 Shelter Sector Update, prepared in November of 1976, was a major assessment by the AID Office of Housing of Israel's housing situation. The 1976 report presented its own recommendations and restated those originally made in 1975. As a prelude to this report, the recommendations offered in Chapters IV and V of the 1976 report are reviewed below.

A. THE 1975 RECOMMENDATIONS

1. REDUCE THE COMPLEXITIES OF MORTGAGE ASSISTANCE PROGRAMS

By 1976 Israel had made significant progress in simplifying and reducing its array of housing subsidy programs. By 1981 this codification process was essentially completed.

In the past the subsidy programs and the means used to determine eligibility were bureaucratic nightmares. Initially there were a variety of programs, each designed for a different population group. For example, there were separate programs for Israeli Arabs and Israeli Jews and young couples seeking their first home. Today, eligibility is expressed

in terms of five basic groups. Ethnic origin has also been eliminated and the only measure applied to a young couple is an economic one. The extensive criteria that were used to determine subsidy levels have now been reduced to a few standards that are used to set levels of assistance.

The basic housing assistance program relies upon a "point" system; the greater the number of points amassed by an applicant family, the larger the subsidy to which they are entitled. Once a family has accumulated its points they can be used in a variety of housing programs. By reducing the criteria that are used to determine the number of points the entire housing assistance effort has been made less arbitrary. Formerly, each group, such as young couples or veteran settlers, needed a different number of points to be eligible for housing assistance. These differences in eligibility have now been eliminated.

Use of the subsidy program has gradually increased since 1976. In that year about 1,300 successful applications were made each month. During the first months of 1981 successful applications were running at a rate of approximately 2,150 per month.

2. ESTABLISH A CENTRAL PLANNING INSTITUTION

Both the 1975 and 1976 AID groups noted the need for an effective, centralized office concerned with housing policy. As the consultants were aware in 1976 Israel's internal political situation prevented such a recommendation from being implemented. However, over the last two years there has been some measurable informal progress towards a central housing policy institution. In part because the Ministry of Housing and Construction has changed from a development agency to a ministry concerned

more with policy and planning, the organizational opportunities and personnel required to embark upon comprehensive policy planning are now available. Together with the Ministry of Finance, significant work has been done on housing policy. While an informal approach to planning and policy making can yield substantial immediate results, the problems of long-term planning and policy remain. As will be seen later, major problems related to land use and other resource allocations have not yet been resolved.

The need for effective central institutions that can allocate land and plan for housing will become even more acute this decade. One critical factor is that the quantity of land needed for housing will significantly increase during the 1980s, as demand shifts from apartment dwellings, at a density of 20 to 30 units per acre, to individual dwellings at densities of 5 to 10 units per acre. Internal growth alone, excluding population increases due to net migration, which itself will require an additional 30,000 to 35,000 units per year, will increase the demand for new residential land from about 1,500 to 3,000 acres per year. The way in which this rapid increase in the demand for residential land is implemented will have major implications for Israel's future housing and land use policy.

3. REVISE THE LAND SUBSIDY PROGRAM

According to AID housing experts who worked on the pre-1975 HG loans, a basic distortion in Israel's assistance programs was that virtually all government owned land that was used for assisted housing was allocated on arbitrary cost bases. Consequently, it was impossible to identify the actual level of assistance that was provided to the participating families under various subsidy programs.

The 1975 recommendation that real land values be introduced into government sponsored housing has been fully implemented. The allocation of land for urban development is now based upon its appraised value for future use. In determining land values for government assisted housing the Israel Land Authority not only considers the planned use but also the value of the site with its urban infrastructure.

In fact, the rationalization of land values in government housing programs may have gone so far that it could endanger long-term social planning. Pricing government-owned land solely on future market values and incorporating infrastructure costs may inhibit achieving "socially balanced" neighborhoods. As Israeli housing consumers seek lower density housing land values will constitute a larger share of their total shelter expenditures. If land prices are based on future market value only the more affluent population groups may be able to afford the new types of housing. One of the major advantages of Israeli society, a close physical intermingling of economic groups, may be lost because of land policies.

4. DEVELOP AN INSTITUTION TO PROVIDE INTERIM FINANCING FOR HOUSING

As was evident in 1975 and 1976, there is still a need for an institution to furnish interim financing for housing construction. However, the chances of establishing such an institution are less now than five years ago. Given an annual inflation rate of well over 100%, establishing a rational banking institution is almost an irrational act. With short-term interest rates at one-half of one percent per day conventional financing for construction is simply not available.

An institution for interim financing will have to await a more economically propitious time in Isareli history. Nevertheless, the reasons which were cited in 1975 for establishing such a mechanism still pertain and are perhaps even stronger today. Because of the absence of organized construction lending, builders and building companies have to spend an inordinate amount of time and energy on financial matters. To survive, the Israeli builder has to be a financial expert as well as a builder.

Interim financing for housing production is virtually dependent upon advance payments by consumers. Since the market for new housing fluctuates in response to non-shelter factors, the availability of interim financing from consumers varies, imposing an erratic pattern on housing production. The constantly shifting rate of housing output, based on day-to-day market changes, disrupts the production process of Israeli builders.

5. ESTABLISH A SAVINGS AND LOAN SYSTEM FOR ISRAEL

Since 1975, the AID Housing Office and the Government of Israel have been discussing joint opportunities for housing savings, especially establishing an Israeli savings and loan industry. From the GOI's point of view, a national savings and loan system would materially reduce the dependence on government for financing housing. From AID's point of view, such an institution would reduce the need for HG loans. There are two major impediments to such a solution. First, the Israeli economy has to be stabilized to the point where long-term capital can be generated through personal savings. Secondly, there has to be a major change in banking practices. Israeli banks have not made conventional housing loans for more than thirty years; virtually all residential lending has been in partnership with government or quasi-governmental institutions with

the risk assumed by the GOI. Before the Israeli banking system could undertake private residential financing it would have to become reaccustomed to taking risks.

B. THE 1976-77 RECOMMENDATIONS

1. DECREASE HOUSING COSTS

In recent years both the housing sector and the GOI have made considerable progress in reducing the cost of housing. In fact, AID's most important contribution may have been to get the GOI out of the construction business. By turning housing production over to the private sector and eliminating the hidden subsidies in government assistance, housing production has been made more efficient and economical.

The extended production period for housing in Israel was recognized in 1976 and recommendations for reducing the cycle were offered. At that time, the period from planning to occupancy could span six or more years and the actual building period could take three or more years. It was recommended that consideration be given to "stockpiling" complete development plans, site infrastructure elements or "partially completed housing...". Hindsight suggests that these recommendations were, on the whole, well founded. Some Israeli construction companies can now complete construction within one year after receiving a building permit. However, the total production cycle, from site acquisition to occupancy, can still take years. Housing production problems arise in two areas: site development and the governmental approval process. (It should be noted that the GOI specifically requested that this report focus on these two subjects and make new recommendations for reducing the time required to develop housing.)

Another aspect of the 1976 recommendations dealt with building design and its relation to costs. It was recommended that the responsibility for designing government-assisted housing be shifted from the public to the private sector. The 1976 AID recommendations noted that as long as government was responsible for architecture the design process could not effectively respond to either costs or the market. The shift of the design responsibility to private firms is now almost complete. Because private developers must now compete in marketing their housing units, whether public or private, the design process has become much more sensitive to costs.

Another earlier recommendation was that more attention be paid to producing standard components for the local building industry. The recent and rapid mechanization of part of the Israeli building industry has indeed led to greater standardization.

A final cost-reducing measure was to decrease the initial and long-term cost of the infrastructure improvements. This subject is still vital to Israel housing officials and is treated later in the report.

2. IMPROVE THE MAINTENANCE OF PUBLIC AND PRIVATE HOUSING

Because of the limited duration of the 1981 study there was no opportunity to review the operating performance of Israel's two public rental housing companies: Armidar and Armigur. A brief meeting was held with the chief operating officer of Armidar, Mr. Albert Levi. Mr. Levi indicated that increasing attention was being given to maintaining the existing housing stock. In real terms Armidar's operating budget has risen by 20% over the least year. Earlier AID recommendations and the joint AID/GOI housing management

training program have focused attention on the collection and restructuring of rents. Armidar is now reported to be actively and consistently collecting rents from all of its tenants. However, these payments still do not reflect either the economic cost of providing the shelter nor the occupants' ability to pay for it.

However, major changes are expected in the operations of Armidar during 1981 and 1982. Armidar is scheduled to move its national headquarters from Tel Aviv to Jerusalem late in 1981. Experience has shown that when major Israeli agencies move from the commercial capital of Tel Aviv to the government capital of Jerusalem they gain an opportunity to reorganize their operations and change their staff. As with many governmental bodies, it is difficult to make significant personnel changes during the course of normal operations. Because of the immobility of labor (largely in response to the Israeli housing market), employees are given special benefits if they elect not to follow their office from Tel Aviv to Jerusalem. For the agency or department that is moving this unique situation permits both staff turnover and reorganization.

As will be discussed later in the report, the character of the demand for housing in Israel is changing from condominiums to more "independent" types of housing. Independent housing involves a non-condominium form of ownership plus a housing type that, in most cases, provides direct access to the ground. In part, this shift is a reaction against the limitations and failures of the traditional medium-density condominium building. Because of the reluctance of consumers to wait any longer for visible improvements in local housing management, the new housing type, which does not require a complex management system, is becoming much more popular.

3. MORTGAGE ASSISTANCE PROGRAMS

Significant changes have been made in Israel's mortgage assistance programs since the 1976 report. Several factors led to the replacement of the old system of unlinked mortgage financing to an index that obtains repayment in real terms.* The changes in the mortgage assistance system were partly inspired by recommendations made by AID in the early 1970s. AID personnel saw that the unlinked program had major economic and social policy problems. The most significant force for changing the old system was Israel's accelerating inflation. The spiral of inflation led GOI officials to conclude that housing finance had to be placed on a realistic basis. The economy could not afford debt based upon borrowing at real terms and repayment in nominal terms. As a result of these changes, the GOI can now determine both its annual housing subsidy needs and its accumulated subsidies in real terms. Both the giver and the recipient can see the long-term real costs involved in housing.

Another important change associated with the linking of mortgages to real values is that Israel's housing program is no longer a major contributor to inflation. The anti-inflationary shift has been in two directions: reducing housing consumption and reducing housing's role as a speculative good. As assisted housing has become a real cost item consumer attitudes towards it have changed. Israelis now tend to "buy" only as much housing as they need for the foreseeable future. In the past, families often obtained as much housing as the subsidies would allow, overbuying

Since the 1960s the mortgage system for assisted housing involved lending capital for housing in real terms and repayment in nominal terms. The rate of inflation during the term of any loan was, in part, a housing subsidy. When the annual rate of inflation reached 20% to 30% per year, the system became financially untenable. More important, the level of assistance was no longer a function of government policy but rather a function of the rate of inflation.

out of fear that their access to the assisted housing was a "one-time" opportunity. Under this motivation many young families would buy enough housing for a full life-cycle, rather than the amount that they needed for the first few years.

The old program of unlinked mortgages, which enabled families to buy shelter in real terms and repay in nominal terms, also encouraged Israelis to use housing as an investment hedge against inflation.

Rationalizing the assistance program also helped make Israel's population distribution policy more effective. Eliminating both the unlinked mortgages and the "one-shot" aspect of the housing mortgage programs has caused more people to base their locational decisions upon employment opportunities, rather than perceptions of future housing values.

In order for housing to provide a financial hedge against inflation there has to be a strong resale market. Such a market has existed in the major urban centers but not in the development towns. Therefore, there has always been a reluctance among people in the development towns, even those with jobs, to buy housing. There was always a fear that because of the weak market (and in some towns, a non-existent market) people would have to sacrifice the potential economic reward of the unlinked mortgage assistance system. By establishing a linked system this perception has been dispelled.

Although the problem of convincing people to buy housing in development towns remains, a new housing solution is being developed and implemented for these key areas. As suggested in the 1976 AID report, housing subsidies, even the unlinked mortgages, might not be a sufficient economic

incentive to convince Israeli families to move to development areas entailing significant social, economic and often physical hardships. It was tentatively suggested in that report that the Israeli equivalent of the single family house might be used to motivate people to settle in the development areas. Over the last few years this concept has received considerable acceptance. In the newer development towns large areas of single-family houses are being planned and built. In fact, this form of housing appears to be a major force in attracting socially strong families to these communities.

By eliminating the windfall aspects of the unlinked mortgage programs and using a type of housing with strong consumer appeal, some of the social resistance towards the development town program has been overcome.

A final suggestion that was made in respect to the existing mortgage programs was that the housing subsidies available to an Israeli family should not be viewed as a "one-time" benefit. As noted above, the typical Israeli family was very cautious in using its housing eligibility. This caution often caused them to pass up good employment opportunities because of their unwillingness to move to an area with a weak housing market. In the last two years Armidar and the Ministry of Housing have developed a program which provides Armidar rental housing to families who are eligible to purchase homes with government housing assistance. Under this program, an eligible family is able to rent assisted housing for two years and later use mortgage assistance to purchase the home. By allowing a family to use both the rental and housing purchase programs a substantial amount of flexibility has been introduced into the GOI housing activities. An additional benefit is the introduction of economically and socially stronger families into the rental housing inventory.

III. RECENT MAJOR CHANGES IN ISRAEL'S HOUSING ACTIVITIES

A. INTRODUCTION

This chapter charts the major changes that have occurred in Israel's housing activities over the past two years, since the 1979 shelter sector report. Among the key changes that are considered in relation to housing programs, land allocation and development policy are: the reduction of the GOI's direct role in housing production, shifts in the production of public and private housing, the emerging consumer preference for single-family housing, reduction in the time required to construct housing and changes in its cost structure and modifications in Israel's building industry. Lastly, the recent equilibrium between housing supply and demand is discussed.

B. REDUCTION IN THE DIRECT ROLE OF THE GOVERNMENT IN HOUSING PRODUCTION

Over the last two years major changes have occurred in Israel's housing assistance programs. In the past, the GOI, through the Ministry of Housing and Construction, built publicly-assisted housing for resale to eligible families. In 1979 over 6,000 dwelling units were built. In 1980 about 3,000 dwelling units were produced and in 1981 only 400 units were being built directly for the government. If this downward trend continues, by 1982 the government will be out of the housing business as a direct producer and original owner.

Many of the problems that Israel has experienced with its housing programs are related, directly and indirectly, to the necessary role of the government in housing production.* Eliminating

Since the establishment of the State in 1948 it has been necessary, in order to meet the housing needs of most of the population, for the GOI, through its Housing Ministry, to assume the role and risks involved in building and owning housing.

the government as a producer and seller of housing, represents a major change in Israel's housing policy.*

A complementary change in the government's role in housing has been to shift responsibility for housing ownership from the public to the private sector. Depending upon the demand for housing from internal sources and immigration, the GOI has sponsored, as a developer/owner, ten to twenty thousand dwelling units per year over the last decade. For economic as well as social reasons the GOI has attempted, in recent years, to shift its developer/owner function to the private sector. Acting as a developer/owner of assisted housing has created a number of problems in the shelter sector for the GOI. Although many of these problems were considered in earlier AID shelter sector studies, the more significant ones, and the GOI's response to them, are reviewed below.

1. EFFECT ON THE CONSTRUCTION PERIOD

Without the economic incentive inherent in the private sector it has been very difficult for the GOI to reduce the long construction period characteristic of Israeli housing production. By and large, it has been difficult for the government, acting as developer/owner, to make the quick and detailed judgements necessary to evaluate consumer housing preferences. The inability to accurately assess consumer preferences has, in turn, adversely affected sales of the completed units to condominium purchasers.

* This review focuses on the housing program that provides mortgage assistance to eligible families for purchasing apartments from the GOI. Israel's basic housing subsidy is provided through the terms of the mortgages granted to families who are eligible for homeownership. In most cases these families rely upon government produced housing as their principal source of shelter.

From both an economic and social point of view, marketing condominium housing is an important factor in the success or failure of a project or neighborhood. Even with the best of efforts (mainly through subsidy incentives) the government has been unable to create the conditions required to market assisted housing. In the absence of an effective sales program, units have gone unsold for long periods or were eventually converted into rental housing to avoid permanent vacancies. The GOI's new policy is to maximize the use of government sponsored housing in the condominium market and to minimize its use by the national rental housing companies.

2. CREATING A NEW HOUSING MARKET

In changing the nature of the financial assistance that is provided to publicly-assisted housing, the GOI has sought to create a market for assisted housing which behaves like the private market. As a first step in this conversion the GOI estimates the market equilibrium point for assisted housing in a particular location and then determines the amount of new housing that is needed. In the light of population dispersion priorities the Ministry of Construction and Housing determines the location of the new housing. Within the general dimensions of housing quality and location, the private builder is encouraged to produce his version of assisted housing for eligible families. Insofar as possible, the GOI attempts to cease its function in the housing process at this point.

The financial stimulus that private developers need in order to undertake the assisted housing is achieved through three financial mechanisms. The first is the traditional governmental financial assistance that is extended to the builder in the form of interim (construction) financing.

Secondly, eligible families receive mortgage assistance based upon economic and social need and government policy. The third fiscal mechanism is new. The fiscal concept of reducing a builder's risk through a re-purchase agreement is an important innovation in Israel's housing assistance activities. This financial mechanism gives private builders and developers the incentive to take risks and act as real estate owners, within the context of the government's housing assistance programs.

3. THE NEW HOUSING ASSISTANCE PROGRAM - THE REPURCHASE AGREEMENT

Through the MOCH the GOI has established a repurchase program for new assisted housing which materially reduces the risk to private entrepreneurs of owning and marketing assisted shelter. The new program is based on bidding by pre-qualified builder/developers for repurchase agreements for private apartment projects offered for development by the MOCH. Based upon the anticipated housing demand and GOI population policy in a geographic area, the MOCH will provide the necessary land and infrastructure for a number of projects at various locations. The development rights for each project are bid upon by pre-qualified entities. The builder/developer who enters a bid for producing the required number of dwelling units (with some general limits as to room size and distribution) in return for the lowest guaranteed per dwelling repurchase price to the government is awarded the project. The opportunity to be builder and developer is awarded to the firm which is willing to take the highest risk in the form of the lowest level of required repurchase.

Except for site boundaries, general site layout and total number of dwelling units, the successful bidder will be expected to determine all other project characteristics based on marketability. Type of building, size of apartments

(within certain limits), size of rooms, architectural design and interior layout as well as finishes are the responsibility of the builder/owner. Before the repurchase agreement was introduced all of these detailed decisions were made by MOCH officials.

The GOI uses a specific approach to create an economic market for the assisted housing. Based upon the inventory of vacant assisted units and the number of active applications from families eligible for assistance, the GOI determines the quantity of new dwelling units that must be added to the inventory to maintain market equilibrium. At this time, it is estimated that an equilibrium between supply and demand requires about 10,000 additional assisted dwelling units per year. The Ministry of Housing and Construction then refines this quantity estimate in terms of location and housing type. Because of the scarcity of land and infrastructure for housing, the Ministry is able to exercise control over assisted housing by allocating these commodities to new residential developments.

The Ministry of Construction and Housing issues requests for proposals for quantities and qualities of housing at various locations throughout the country. The builder is free to sell the units with and without government mortgages. Based upon their perception of the local market, builders indicate, in the form of a bid to the GOI, the percentage of housing units that will have to be re-purchased if they cannot be sold after a certain time. The program encourages private builders to produce housing, using either private financing or governmentally-assisted mortgages, based on their marketing decisions and the economics of the project.

4. DETAILS OF THE REPURCHASE AGREEMENT

There are three basic types of government repurchase agreements. In the first, the government guarantees to repurchase all the dwelling units in areas where self-sustaining population growth has not been achieved. This level of guaranteed repurchase is only extended to the most economically depressed areas in the country.

The second level of assistance commits the GOI to repurchase 60% to 70% of the units. This level is being used in the new community of Givon north of Jerusalem. Because it is still under construction, a viable local real estate market has not yet emerged. Nevertheless, widespread consumer acceptance is anticipated because of the area's proximity to Jerusalem, the excellent site and other advantages. To induce developers to invest in the community a fairly high level of repurchase will be required in its early years.

In the remainder of the country the level of repurchase that is offered by the GOI ranges from 25% to 35% of the units, depending upon local circumstances. This level of assistance, wherein most of the units are not repurchased by the GOI, accounts for the largest group of projects now being sponsored by the GOI. In most instances, projects receiving this level of assistance are in development towns and new communities which have attained a self-sustaining level of population growth and a viable real estate market. This level of assistance is also provided in some of the major new neighborhoods that are being established in the Jerusalem district.

Communities where the government guarantees to repurchase all of the dwellings to be built are characterized by marginal employment opportunities, adverse defense or climatic conditions or other problems which prevent self-sustaining

growth. Two distinctive characteristics of the communities where the full repurchase guarantee is applied are the lack of internal growth and the absence of a local real estate market. Where a viable real estate market for existing government-sponsored housing does not exist there is also little likelihood that new housing can be sold. When there is no local real estate market builder/developers expect that the GOI will purchase all the housing, if necessary.

There are perhaps five or six places in Israel where the GOI accepts bids for full repurchase. Although these communities do not offer immediate prospects for growth, they are important to Israel's long-term development. Since most of the housing that is built in these communities is not acquired by eligible families, it is conveyed, after repurchase by the GOI, to one of the national rental housing companies. These companies then rent the dwelling to a family and attempt to sell it later.

The repurchase agreement may not apply to all the dwellings that a builder/developer produces. In order to encourage the construction of certain sizes and types of dwellings the repurchase agreement specifies the types of units that are covered. The agreement covers more of the uncommon dwellings rather than the popular types.

The repurchase arrangement requires that the builder make his best effort to market all the dwellings in a project, even those covered by the agreement. Currently, a nine month marketing period must elapse for any unit included in the agreement before the builder can require the MOCH to repurchase it. Since Israeli builder/developers depend upon the sales of individual dwellings for interim financing, there is a strong incentive for them to market all of the

units, regardless of their repurchase status.*

The repurchase price for the dwelling units is determined in advance between the builder/developer and the MOCH. Since the MOCH uses competing companies in the program, it is familiar with market conditions and costs and is able to negotiate confidently with builders on the repurchase price. The price is cost plus a fixed fee.

All dwelling units built with MOCH sponsorship, whether or not they are in the repurchase program, are eligible for MOCH interim financing. This interim financing is a construction loan equal to approximately 30% to 40% of the anticipated sales price of the units. The price includes the cost of government-owned land and government-provided site work. Because builders have to pay at the start of construction for the land and infrastructure from the interim financing, only a limited amount remains for actual construction. The schedule of payments and interim financing is a strong incentive for the builder to complete the project fast and to build a highly marketable dwelling.

Construction financing remains a major problem for builders in Israel. Bank financing, when it is available, can cost 1/2% to 1% per day, an untenable rate for builders. A major source of construction financing for government assisted housing is in the MOCH. However, government construction financing covers only a small portion of the total costs of the project. Contractors will normally furnish 10% to 20% of the interim financing from their capital resources. Most of the remaining interim financing comes from the sale of dwelling units during construction. Unless an adequate cash flow is maintained during construction by selling the completed dwellings, there will be major cash flow problems. Consequently, under the new repurchase system, the marketing and pricing of new sales dwellings is heavily emphasized by the builder/developers as a source of interim financing for the rest of the dwellings.

Another result of these new incentives, which rewards a fast and efficient building cycle, has been to change the structure of the Israeli building industry. In the recent past, the quasi-public building and development companies were the main producers of the larger government housing projects. Since the new incentives have not benefited the construction activities of the large scale companies, they have turned from building production and land development as they have been supplanted by a new generation of more efficient private builders.

B. CHANGES IN PUBLIC HOUSING PRODUCTION

1. CHANGE IN DIRECT GOI HOUSING PRODUCTION

Since the last major review of the Israeli shelter sector in early 1981 the annual rate of housing production has been between 30,000 and 35,000 dwelling units, including publicly and privately sponsored housing. During the last two years, 1980 and 1981, public production has dropped significantly as a share of total production.

In the years before 1979 publicly sponsored or assisted housing accounted for approximately 40% to 50% of the housing market. In the last two years public housing production has declined to about 30%, or even less, of total production. The GOI estimates that in 1981 publicly assisted housing will be at an annual rate of approximately 10,000 dwelling units, of which 9,600 will be built through a "turnkey" system using private contractors.* Only 400 dwelling units will be built directly by public authorities. Since many of the 9,600 dwelling units that are being built for the government by private contractors will also be marketed by these contractors, the actual role of the GOI in

As used in this section, the term contractor refers to building companies which often do more than construct housing. The Israeli contractor also does site development, financing and marketing.

construction and marketing will be further reduced. The recommendation made by AID in the early 1970s that the GOI significantly lessen its role as a producer and marketer of housing has for all practical purposes been achieved. There was no indication in 1981 that a change in this policy is either appropriate or being contemplated.

At the present time, public involvement in housing production (the 400 dwelling units) is limited to a few special situations, such as some development areas and the occupied territories. Direct government building now occurs only where there is virtually no economic market for housing.

2. REDUCTION IN GOI HOUSING SUBSIDIES

A second major change has been in the level of subsidies for government sponsored ownership and rental housing. Large subsidies are provided only in new communities in the development areas of Israel, which, as a matter of government policy, the GOI has been creating since the 1960s. To attract and retain people in these new communities the government has practically had to give away the housing. In order to reduce government investment, the number of new towns and settlements where very high subsidies must be used to attract population has been curtailed.

In other development regions the GOI's long-term policy for new towns has begun to work. In some cases people from established towns and cities are moving to the new towns to obtain better jobs and improve their living conditions. In the more economically fortunate development towns the local real estate market has matured to the point where direct government intervention, in the form of below market housing prices, has been significantly reduced.

3. CHANGES IN RENTAL HOUSING

Another key change has been a reduction in the volume of government-sponsored housing available for rent. When a dwelling unit assisted by the GOI is not purchased, even under favorable mortgage rates, because of the lack of a market in a development town, the total GOI subsidy becomes very large. Rather than leave an unpurchased apartment empty, the GOI will make the unit available for rent through one of the national rental housing companies: Armidar or Amigur.

The monthly rent paid by a lower income family is nominal and bears no relation to either the cost of construction or the operating costs of the dwelling. In the past the number of rental dwelling units made available to the two companies has been about 20% of total government-sponsored housing production, and has accounted for a significant share of the total subsidies devoted to housing. As a result of the emerging real estate market in some of the more advanced development towns, less and less government-sponsored housing is involved in the rental inventory. As more of the GOI housing in the development towns is purchased by new families the level of housing subsidies will be significantly reduced.

Even more important than the immediate reduction in GOI housing subsidies are the social changes fostered by the changing real estate markets in the development communities. Rental housing constitutes a major long-term social and economic problem for the GOI. The best remedy is to have less rental housing. Because people are finding some development towns desirable places in which to live, the share of ownership housing is increasing, enhancing the quality of the towns.

In the wake of these changes, the direct involvement by the GOI in building and marketing housing has been reduced over the past two years. More and more, the housing role of the GOI, through the Ministry of Construction and Housing, is shifting to policy planning, allocating financial resources and site development. The emerging role of the Ministry in site development is described in greater detail in other parts of the report.

Observations made in 1981 reveal that the AID recommendations, starting with those of the early 1970s and continuing through 1977, have either been adopted or are now being implemented. For all practical purposes, the GOI has shifted from a producer of shelter to a financial intermediary, directing housing allocations in accordance with national policy.

C. CHANGE IN PRIVATE SECTOR HOUSING PRODUCTION

To a modest extent, the private sector has reduced its production of housing. While the current annual rate of 20,000 to 25,000 dwellings is a significant quantity, in comparison to the nation's total public and private housing stock, it represents a decline in private production. However, when economic conditions stabilize (and runaway inflation is controlled) private housing production will probably rise to at least 30,000 units per year.

D. THE EMERGING STABILITY OF THE ISRAELI HOUSING MARKET

In the winter of 1980, during the last AID shelter sector update, there were indications that the so-called "hot market" in housing was beginning to cool. This cooling process, which has continued into the fall of 1981, has led to a significant reduction in "real" housing prices throughout the Israeli housing market.

Another important and related trend has been a reduction in the over-purchasing of housing, fueled by fears of a continued inflation in housing prices. This basic economic change in the housing market is reflected in the growing difference in the value of small versus large apartments. The decline in real prices, which started in late 1979 and early 1980, has been much more rapid for larger than smaller dwelling units. Until late 1979 and early 1980, the housing decisions of most first-time home buyers, whether new immigrants or veteran younger families, reflected the perception that real shortages in the housing supply would continue for the foreseeable future. Newcomers to the housing market sought to acquire the largest possible dwelling unit within their economic means and/or the government-assistance programs available to them. As a consequence, young couples often bought apartments large enough for two, three or more children. This behavior also meant that a large share of the housing inventory was underused and that larger dwellings commanded excessive prices.

The actions of people entering the housing market and perceptions about the future availability of housing have changed over the last few years. Many consumers now recognize that the housing market has emerged from the uncertainty of the 1970s into a market which offers flexibility and choice. Hence, today's consumer is making shelter decisions based upon current demand and supply, thereby reducing the inflationary trends associated with housing.

These underlying shifts are reflected in the relative increase in the price of smaller dwelling units. As first-time buyers gain confidence in the local market they will be more willing to purchase an initial dwelling.*

One divergent trend which affects the Israeli housing market in respect to apartment size has been the interest of some local municipalities in having builders produce only larger apartments. As in the United States, one measure of the community's value is the quality of its real estate. Hence, local authorities press private developers and contractors (and in some cases the GOI) to build large apartments and resist the market forces to produce smaller dwellings for the emerging younger market.

E. THE EMERGING CONSUMER PREFERENCE FOR SINGLE-FAMILY HOUSING

In retrospect, it appears that a new trend in the housing preferences of Israelis became apparent in 1980. To the extent possible Israeli consumers are now trying to obtain single-family housing rather than the traditional multi-family condominium. Currently, between 20% and 30% of all new housing consists of one and two family homes, or what Israelis call "low level" housing.

Low level housing refers to any type of fee simple house ranging from an individual free standing home (commonly called a "villa" in Israel and a detached, single family house in U.S. housing terminology) to a non-condominium townhouse. The typical fee simple multi-family dwelling has an individual entrance onto a public way and a private garden. Typical densities for low level housing range from 6 to 20 dwelling units per acre.

The major design difference between Israeli and U.S. low density housing is its physical characteristics. Until now, Israeli low density housing has been compact and built at a fairly high density. For a free standing dwelling 1,500 gross square feet of floor space is substantial. The expensive Israeli single-family unit has a building lot of approximately 500 square meters (or 5,980 square feet) and the moderately priced dwelling has a lot of about 400 square meters (or 4,784 square feet).

The most important distinctions between "low level" housing and the traditional form of Israeli housing are the ownership arrangement and the character of the housing organizations which operate the condominiums. Until recently, the Israeli housing solution was based almost exclusively upon the condominium. Condominium developments ranged from four dwellings in a small two-story walk-up building to a twelve story, sixty-dwelling apartment building. Regardless of the physical characteristics of the housing, virtually all Israeli housing is owned by a condominium

association and operated by an elected group of building residents known as the housing committee. Both the physical and organizational characteristics of traditional Israeli housing impose

1. PROBLEMS WITH PRESENT FORMS OF HOUSING

The basic problem facing condominiums in Israel is the lack of a workable management and maintenance system. While the problem has been recognized for many years, no popularly accepted solution has yet been devised for operating the condominiums. Although condominium operating problems cut across geographic and social class lines, they are often more pronounced in the development regions. Since the new owners are not as experienced with condominium organization and operation, this form of housing has not been able to enhance the quality of life in the development areas. In many development towns, beset by other problems, the inability of housing to foster social and economic growth has created a serious problem for the GOI.

2. USE OF NEW FORMS OF HOUSING

Israeli authorities have begun to suspect that the opportunity for a family to own its home, rather than be involved in a condominium association, may be a more important and powerful tool in attracting people to the development areas than the traditional housing subsidies. This realization has become an important force in the growing use of low level housing to attract families to the development areas. As a consequence of this policy, increasing numbers of the Israeli equivalent of the American style single family house are being built in the less developed communities in the central plains and other development areas.

3. POLICY IMPLICATIONS

The trend away from higher density condominium dwellings and towards individually owned lower density shelter has important implications for GOI housing and development policy. The amount of land and the cost of the site infrastructure that will be needed to meet future housing needs will increase sharply. Until now (1979-80) the high costs of urban infrastructure and site development have been balanced by the relatively high densities (20 to 40 dwellings per acre) that were obtained with multi-family condominiums. The emphasis on lower density fee simply housing (6 to 20 dwellings per acre) will make site development standards and costs a much more critical part of the housing equation. The issue of land supply, which has always been central to GOI housing policy, will also become more important as relatively more residential land will be needed to meet the growing demand for lower density housing.

4. IMPACT ON AREAS OF OLDER MULTI FAMILY HOUSING

One potentially important issue, which has not yet been fully recognized by the GOI, is the effect that the change in consumer preferences will have on older multi-family housing areas in the larger urban centers. As consumer preferences continue to shift to lower density, individually owned homes at the edge of existing towns and cities, population densities and housing values in the established urban areas may decrease.

Since 1948 and until recently, there has been a continual shortage of housing in Israel's three largest cities. Because there were few alternatives, certain neighborhoods and housing areas, even though they have design and physical problems and other limitations, have maintained their economic and social value. The combination of a closer balance

between the supply and demand for housing and the shift in consumer preferences to lower densities may create an entirely new set of problems in the older urban areas.

Until recently, Israel's development policies and the institutions designed to carry them out have been predicated upon so called "shikunim" type of housing. Virtually all of Israel's urban housing was a variation of the multi-family, medium density condominium. For more than three decades, land development, housing design, shelter policy and housing financing have been based upon the predominance of this type of housing. Even the organizational structure and technology of Israel's building industry was based upon this type of housing.

The growing preference for low density, individually-owned housing is probably the single most important finding of the 1981 housing review. The large scale introduction of individually owned dwellings represents a profound shift in Israel's housing sector. If the trend becomes permanent it will entail major changes in the allocation and use of land.

F. THE DURATION OF RESIDENTIAL CONSTRUCTION

Since 1975 a major emphasis of the AID recommendations has been the long time that it takes to produce housing in Israel, especially by the public sector. AID has often noted that Israel's housing sector would benefit immeasurably if the construction span for publicly assisted housing were decreased. In the past, the production time for housing has been from three to five years. Although public and private housing has, on occasion, been built in less time, housing production in Israel is slow and tedious. As a consequence of the long construction period, a large share of the housing inventory is tied up in construction each year, hindering the GOI's ability to respond quickly to changes in housing demand. However, changes within the last two years

clearly reveal that housing production in Israel has been accelerated. When necessary, publicly assisted housing can now be built by a well organized builder in ten to fourteen months from foundation to occupancy. Some contractors and housing officials believe that this period can be shortened even further.

1. THE NEW ISRAELI BUILDER

The reasons for this sharp reduction in production time are rooted in Israeli housing policy. Starting in the late 1970s, and supported by AID recommendations, Israel's housing agencies and planners have looked increasingly to the private sector to produce government sponsored housing. As the private sector has grown and received more work from government agencies, it has become more competitive. A new and confident generation of Israeli builders, who actively compete for publicly assisted housing, has emerged over the past few years. This new generation of builders and their accomplishments are starting to be fully recognized by government housing authorities.

2. UNDERLYING REASONS FOR CHANGES IN CONSTRUCTION TIME

Two long term changes in the Israeli housing sector have led to the reduction in construction time. One has been the gradual but steady easing of the national housing shortage. Until a few years ago, because of its political importance, a perceived or actual housing shortage stimulated an immediate response by the government. The result of the long-standing policy of dealing quickly with shortages was that many marginal contractors, as gauged by construction techniques and financial stability, were encouraged to compete as housing producers simply because the government had little choice. In fact, the government often used marginal producers knowing that it might take them three to five years to finish a project.

The second change, associated with the growing equilibrium in the housing market, has been a shift in the role of the quasi-public housing companies.* Initially these companies, organized in the 1950s, were designed to produce large quantities of housing when Israel's building industry had a limited capacity. The acute political concern with housing shortages, whether real or impending, among immigrants and residents, led to high levels of production by the quasi-public building and development companies. These publicly owned companies expanded at the same time that the capacity and output of the private companies grew in the late '60s and '70s. Although these organizations were not very efficient in terms of costs and time of construction, for various reasons they were given assignments by the government throughout the 1970s.

By the mid-1970s, the need for a large number of housing starts began to diminish as Israel's housing inventory grew and reached a certain point of equilibrium with supply. At the same time, several sizeable private building companies with significant production capacity emerged. Over the last three or four years the participation of the quasi-public companies in housing construction has contracted while their function as development companies has grown. With the withdrawal of both the marginal building contractors and the quasi-public companies opportunities were created for efficient and well organized private business companies.

In retrospect, the central and important change in the effectiveness of the Israeli building industry originated

These development companies were created at the urging of the GOI by major political movements and labor organizations. The government often participates in their ownership. When Israel's construction industry was still in its infancy these quasi-public development groups were the only organizations that could undertake large scale project development within the GOI housing framework.

in the fact that the GOI's ministries of Housing and Finance were finally able to establish an equilibrium between housing supply and demand. Without that key economic foundation the efficiencies in housing production that have been achieved over the last few years would not have been possible.

3. THE SKILLED LABOR PROBLEM

The new breed of private contractors has recognized the main limitation of building in Israel, namely the shortage of skilled labor.* Two basic approaches have evolved in the construction industry to overcome this problem. One type of contractor, exemplified by the Drucker Company, emphasizes the maximum use of costly local labor. The other approach uses mechanical construction systems which maximize capital investment and minimize costly and scarce labor. Both of these approaches have apparently worked with equal success and are being accepted in the Israeli building industry. Although the building companies that pioneered the new approaches to housing construction have been introducing them incrementally since the mid-1970s, it is only in recent years that they have become highly visible in the housing industry.

* Skilled construction labor has always been a problem for residential building in Israel. When large scale housing production started in 1949-50, there were only a few hundred journeymen construction workers in the country. Non-residential construction - public, private and defense - has always competed for the limited supply of skilled construction labor. The housing sector responded by adopting building types which did not require much skilled labor. This situation did not materially change, even with the introduction of non-resident Arab construction labor. Israeli developers continued to build housing that did not require large amounts of skilled construction.

G. CHANGES IN THE COST STRUCTURE OF HOUSING

Since the 1970s a major concern of Israeli housing policy has been the high cost of construction. A number of AID and other consultants have noted that in world terms the cost of building housing in Israel is relatively high. It is generally agreed that the construction process is the largest contributor to the high cost of housing. Some of the aspects of the construction phase that contribute to high production costs are:

- Generally a very long construction period
- The inefficient use of and an insufficient supply of on-site construction labor
- The high cost of construction labor
- The high cost of building materials, both imported and domestic
- The high cost of energy at the construction site
- Inefficiencies and costs resulting from the start and stop nature of Israeli housing construction caused by interim financing problems
- Special high costs attributable to the defense and security measures required in most Israeli housing

The new Israeli contractor who is attentive to the construction process has been able to overcome a number of these problems. Some aspects of the cost situation, such as defense and security, remain and are not subject to current solutions. However, because of the more efficient use of labor, construction costs are no longer the most significant factor in the high cost of shelter in Israel.

In addition to a direct reduction in the labor component, other shifts in the building industry have reduced cost elements. As noted in other sections of the report, new techniques have significantly reduced the duration of construction. Because of better marketing methods some of the start and stop aspects of housing production have also been dampened.

As a consequence of the emerging role of new and more efficient producers, the continuing search for lower housing costs is moving from the production of the dwelling into two new areas. Site development and land marketing are the new targets of attempts to lower housing costs. Construction costs could be reduced by 10% to 15%, or perhaps even more, within the prevailing production process. This further reduction will have to be achieved incrementally and at a slower pace than earlier reductions through the concerted efforts of the "new" Israeli housing contractors.

H. ORGANIZATIONAL CHANGES IN THE ISRAELI BUILDING SECTOR

A restructured Israeli building sector has emerged in less than a decade. The product of this reorganization is a small group of private building companies which are responsible for an increasingly larger share of Israel's residential construction, especially the larger scale housing development. In Israeli terms these companies are large; they normally produce 300 to 400 dwellings per year and the largest can turn out 2,000 dwellings a year.

In the past, residential production in Israel was undertaken by two types of building companies: the large quasi-public company and the small private contractor.* The large building companies consist of two types of organizations one sponsored essentially by the government and one supported by private investors concerned with development in Israel. The first type of large organization is quasi-publicly owned by such bodies as the labor federation, the Ministry of Construction and Housing and ideological groups, such as Shikun Ovidim and Shikun Petuach,

* The major exception to this distinction is a large international building company called Scle Bohne, whose prime owner is the Israeli labor movement. This integrated construction company, by and large, competes for international work and major public projects in Israel. However, when international work is difficult to obtain it also seeks government sponsored residential construction.

that are associated with political parties. Shikun Ovidim is related to the labor movement while Shikun Petuach is allied with the Ministry of Construction and Housing.

Obviously, the GOI has an interest in insuring that the quasi-public contracting organizations have sufficient work to stay in business. One important reason for their perpetuation has been to provide the GOI with an alternative to the small scale and often marginal private contractors. A second reason, whose importance has recently diminished, has been the virtual absence of large scale private contractors who could build sizeable residential projects. The large quasi-public companies undertake a full range of activities: site development, building production and marketing.

The other major type of large scale construction organization is the investment building and development company owned by private entrepreneurs. Traditionally these stock companies were established by investors from overseas Jewish communities. Rosco and Ampal are among the largest organizations of this type. Rosco has its roots in the United States while Ampal is related to South African Jewry. Since these private stock companies wish to earn profits for both management and investors, they will not participate in development projects with a high risk or little possibility of a return on investment. While these companies have no direct connection to the GOI, it has always been government policy to assure that they have a role in the Israeli development program. Hence, these companies are involved in land marketing, site development, building construction and marketing completed housing. While the quasi-public companies are concerned principally with lower income groups (who are eligible for GOI assistance programs) the private companies focus their attention on the middle and upper income groups and the needs of Jewry from overseas.

What both types of large development companies share is the continued concern of the GOI that they remain in operation and be able to contribute to the country's overall building effort. Consequently, strong economic incentives for them to become more efficient housing producers have not been exercised. What may happen is that the new group of Israeli contractors, who are emerging as major builders and often do the actual contracting for these large public and private development companies, may abandon the contracting function altogether, in order to focus on land development and real estate investment.

The second major part of Israel's building industry consists of individually or family-owned small scale builders. The largest of these firms can produce up to 200 dwelling units a year. The smaller builders focus either on individual homes or smaller apartment buildings with up to 20 dwellings. It is estimated that there are now about 2,000 of these smaller builders in Israel. While individually small, these contractors were, until the mid-1970s, responsible for a significant share of Israel's public and private development. A major problem facing the small scale builders was the protracted construction period and its connection to the flow of construction financing. The small scale builder had to depend upon advance payments from apartment sales or advances on government contracts to finance the completion of a housing project. The financing problem was a principal reason why housing production in the traditional private sector often took three to five years.

What has emerged between the two major groups of Israeli contractors - the large public companies and the small, economically marginal builders - are privately owned, medium to large sized building companies without fiscal or political connections to the government and with the management skills, production capacity and financial ability to build good sized housing developments in less than one year.

These new companies, of which there are approximately 10, now produce approximately 60% of Israel's housing. In some instances they are supplanting the larger publicly or privately owned development companies in the construction of GOI housing. Many of these new builders can turn out up to a thousand dwellings per year; one, the Drucker Company, can produce 2,000 units per year. These new contractors use a wide variety of building methods and technologies. They have in common a substantial level of entrepreneurial skill; a thorough understanding of the best way to use labor, materials and capital and the financial and organizational capacity to conduct major building projects.

While these companies have only emerged since the mid-1970s and have only gained wide-scale recognition in the last two or three years, it is likely that they will dominate the Israeli housing sector in the foreseeable future.

I. AN EQUILIBRIUM BETWEEN SUPPLIES AND DEMAND

Since the 1980 shelter sector update, there has been an overall decline in the demand for new housing in Israel. The major causes have been a drop in immigration and the cooling of the local demand for housing. The out-migration of residents, which rose during the last decade, has added to the supply of local housing and is an important factor in the recent equilibrium of the housing market.*

As of the summer of 1981 the Israeli housing market appears to be cooling off. Not only has the market subsided because of an equilibrium between supply and demand, but there has also been a retreat from the housing market by individuals who were using it as an investment hedge against rapid inflation.

Much of the housing owned by Israelis who leave the country is not actually sold. Because people sometimes decide to return to Israel and fear being squeezed out of the local housing market, families who leave are reluctant to actually sell their home. Instead, they will rent it to another family.

There are several indicators of the change in the housing market. First, the purchase price of housing has declined significantly in real terms. Another indicator of the growing normalization of the market is the emerging supply of local rental housing. Until two or three years ago rental housing was essentially limited to luxury housing for foreigners. The rents for the limited amount of rental housing that was available reflected its anticipated future sales price. The average Israeli could not afford rental housing. In the last year, with the cooling of the Israeli housing market, rents for private apartments have decreased appreciably and a new rental market for Israelis has emerged.

As a result of the "cooling off" process, some of the housing which had been held by private investors for sales purposes has re-entered the market as private rental housing. Within the existing inventory of privately owned housing a small but noticeable rental market has evolved. This trend has received public recognition and support from the GOI; a new tax policy to encourage the renting of existing housing units was recently introduced.

IV. THE DEMAND FOR MARKET RATE RENTAL HOUSING

A. INTRODUCTION

The assignment called for an evaluation of the GOI's views towards market rate rental housing and an assessment of the role of market rental housing in the foreseeable future.

B. PUBLIC RENTAL HOUSING

There are two types of rental housing in Israel. One type, which is produced and operated by the government, accounts for about 20% of the nation's housing inventory. The second type, private rental housing, forms a small share of the housing inventory. With a few exceptions all of this type is accounted for by individuals who rent their own apartments.

The two national rental housing companies, Armidar and Armigur, provide approximately 210,000 government owned housing rental units for low and moderate income families. Because of the economics of the rental program this segment of the inventory has remained a major problem for Israel. The rental income from government owned housing does not provide sufficient return. Even though government economic support for this housing is increasing, the present level of support is insufficient to adequately maintain the inventory. For this reason as well as social and political considerations, the GOI is not interested in increasing the amount of shelter furnished under the traditional rental programs. One reason for the popularity of the new repurchase program is that it reduces the flow of government sponsored housing into the rental inventory.

C. PRIVATE RENTAL HOUSING

Israel has always had a small stock of market rate rental shelter that is used by various groups. Major users are non-residents who need a place to live for a short time. Rental housing is also used by middle and upper income Israelis who own apartments but must move for employment reasons. A rise in divorces and separations has added to the demand for rental housing. Finally, students are prime occupants of rental housing.

The prospects for the rental sector improved considerably in 1967 with the adoption of national legislation stating that any new housing offered for rent would not be affected by rent control. However, the absence of long-term financing over the last three decades has inhibited the construction of new rental housing. Much of the rental housing inventory consists of condominium apartments that are rented by individual owners. With few exceptions, little market rate rental housing has been built.

Private rental housing originates in a number of sources. The housing owned (and left behind) by Israelis who leave the country, either temporarily or permanently, is one important source. Other rental housing is provided by families who own more than one apartment. People will sometimes buy additional apartments as a first home for their children, renting it in the meantime on the open market.

The best estimates are that between five and six percent of Israel's housing is being offered for rent by individual owners. Rents are based upon real rather than nominal rents and the rents are quoted in U.S. dollars, instead of the constantly deflating Israel shekel. Israeli rental housing of a standard quality now costs between \$200 to \$300 U.S. per month for apartments of 800 to 1,000 square feet. It must be stressed

that this housing has very low operating expenses, virtually no liability costs and very often no debt service.

D. GOI VIEW OF RENTAL HOUSING

The prevailing GOI policy is that rental housing has a growing role to play in the Israeli shelter sector. The government, prior to July 1981, demonstrated its support of rental housing by enacting legislation to encourage the construction of rental housing through tax incentives. Adopted in 1980, the law provides that the tax on the income from rents and from the sale of an apartment in a building where half or more of the units are rented shall not exceed 30%.

1. PROBLEMS WITH RENTAL HOUSING

Government housing officials have clearly expressed the view that government should not be a partner, directly or indirectly, in market rate rental housing. The experience with rental housing in Israel has demonstrated that regardless of its original purposes, government controlled rental housing quickly becomes "social housing". On the more mundane level, rental housing also poses operating problems. The following illustration shows why housing officials believe that the government should not be involved in market rate rental housing. Recently, the Ministry of Construction and Housing argued a case before the Israeli Supreme Court pertaining to its legal ability to raise the rents in government owned housing. Because of the social and political forces favoring the tenant, pressures were brought upon the Ministry by other government officials to resolve the matter before a legal decision was issued.

The major problem in developing market rate rental housing is the lack of institutional financing. For a number of

reasons, long term and even intermediate term loans are not available within the Israeli banking system. The little capital that is available is invested in enterprises with higher rates of return than can be obtained from rental housing. Also, local banks and other long term lenders have no experience in taking the kind of risks that are inherent in financing housing. Because of the acute demand for capital and the GOI's involvement in allocating capital, Israel banks can almost avoid risks in lending activities. These two factors - absence of long term capital and lack of incentive for lenders to take risks - have combined to prevent the emergence of meaningful lending for rental housing.

2. THE PREVIOUS PLAN FOR FINANCING RENTAL HOUSING

In 1980 the Ministry of Construction and Housing and the Ministry of Finance offered a plan for overcoming the capital problem and generating long term financing for rental housing. The plan was based on the conclusion that, in real terms, long term capital in the United States was relatively inexpensive in relation to world prices and very cheap compared to Israel's cost of capital. Capital from the U.S. was sufficiently inexpensive so that it could be used to finance rental housing in Israel. Capital for rental housing would come from two U.S. sources. Equity financing would be provided by U.S. investors who would benefit from both the return on equity and the tax shelter. (Some equity financing would also come from Israeli investors.) Long-term capital would come from traditional long term real estate lenders in the United States. (It should be noted that this program was designed when long term lenders, such as insurance companies, were still providing customary constant payment loans for real estate developments.)

In order to attract institutional lenders from the U.S., the GOI realized that significant and firm guarantees would have to be offered. Without a strong assurance of repayment there would be little hope of obtaining the U.S. capital at reasonable rates. Therefore, the plan included two types of guarantees for repaying principle and interest. The first guarantee was to use the AID Housing Guarantee Program. The second guarantee would be offered by the GOI. In order to make this guarantee effective, the GOI would offer it in the form of dollar accounts maintained by Israeli banks in the United States. It was anticipated that the combined guarantees - the AID HG program and GOI escrow accounts - would assure good financial terms for rental housing.

For two reasons this innovative financial device failed to gain governmental approval. The failure resulted from both a lack of understanding of the complex plan and its political vulnerability. The plan adopted a number of U.S. financial mechanisms and tax provisions that were generally unknown or not understood in Israel. In order to make the plan operable, a set of complicated institutions and relationships were used to provide the level of assurance that U.S. lenders would demand before making long term capital available to Israel. Because the plan was not readily understood; for example, the U.S. tax shelter concept had no counterpart in Israel, the stage was set for its rejection on basically political grounds.

The original sponsors of the plan were the two sons of a major political and financial figure. As 1980 was a time of intense political activity, prior to the national elections of 1981, the financing plan was used by one political party against another political faction. Much political capital was made of the fact that

the key sponsors would have much to gain if the GOI was to approve and initiate the program. After the sponsorship became a political issue and it was evident that the proposal would be rejected on political grounds, the original sponsors said that they would withdraw if it would help the plan win approval. However, by the time the sponsorship problem had been overcome the plan had created too much political controversy and it was eventually set aside by the GOI committee responsible for reviewing it.

While the program was being evaluated by the government, Israel's largest private bank, Bank Leumi, was independently assessing it. The Bank concluded that the program was sound and could help create a capital market for rental housing in Israel. However, this professional approval came too late to rescue the program.

GOI officials are still searching for a way to establish a rental housing industry in Israel. In fact, a market rate rental housing program is part of the present government's political platform. Both the present and the previous government concluded that more private rental housing would materially help reduce the national government's participation in housing subsidies. Attempts are still underway to obtain long term capital for rental housing.

E. THE CONSULTANT'S VIEW OF THE FUTURE OF RENTAL HOUSING IN ISRAEL

The assignment called for the consultant to make an independent assessment of the prospects for rental housing in Israel in the foreseeable future.

Housing tenure systems providing some form of family ownership will continue to dominate Israel's housing market over the foreseeable future. If housing ownership in Israel has done nothing else it has proved emphatically and beyond any doubt that home

ownership is perhaps the best single investment for the middle income family. So far, no other form of investment has been as economically rewarding for the typical Israeli family

Nevertheless, it is the consultant's opinion that the embryonic role of rental housing in Israel will expand significantly in the next five to ten years. The economic and social conditions which have created the present limited rental market will continue, increasing the stock of rental housing. The increased demand for market rate rental housing will result from changes in Israel's society and economy. As the economy expands, more Israelis will seek greater flexibility in the location of housing so that they can make the most of broader work opportunities. As people become accustomed to more occupational mobility there will be a concomitant demand for the flexibility of location and tenure that rental housing offers.

Social changes are also increasing the demand for rental housing. A major factor has been the shift in the social cycle preceding family formation. In the past, young people lived with their families until it was time for the mandatory period of military service after high school. Upon completing their military service, most young people married and either set up their own homes or moved in with in-laws. Until recently it was rare for young Israelis to live independently after completing their military service. Now, young people are marrying later and looking for an independent life style before marriage. This new life style requires more rental housing.

As in similar countries at comparable economic and social levels, divorces and separations are becoming more common in the Israeli society. The higher rate of break-ups in family units has enlarged the demand for rental housing.

It appears that two other social groups will augment the demand for rental housing. One group is senior citizens. This growing group may want to realize the appreciation in the value of their condominium apartment by selling it, or wish to convey it to their children. Rental housing may be the best economic alternative for those older people. Another group which will seek rental housing is composed of prosperous Israelis and non-Israelis. Many of them will not want to buy an apartment and will be interested in renting.

V. SITE DEVELOPMENT

A. INTRODUCTION

A continuing concern of GOI housing policy makers is decreasing the costs of housing. As noted earlier in the report, significant progress has recently been made by the Israel construction and development industry in decreasing the costs of housing production. Additional savings can be expected from further improvements in construction methods.

The focus of this technical assistance assignment was on two areas for achieving additional savings in shelter costs and improving housing quality: site development and land marketing.

1. RELEVANCE TO THE QUALITY OF LIFE

The site development and land marketing processes profoundly affect housing in a way that goes beyond costs and quality. The emerging demand for single family housing, as well as the individual ownership of townhouses, will be seriously affected by site development and land marketing. The ability of these two processes to respond quickly and accurately to housing demand will directly shape the quality of life in Israel.

The political issue of "quality of life" will become more important as both the public and government ponder the issue of an equilibrium between in and out migration. Although there are many views on this critical issue, there is fairly widespread acceptance that whether the out migration is temporary or permanent, Israel, in the last decade, has failed to meet the expectations of some of its citizens regarding the quality of life. A major part of the unmet expectations revolves around housing. Therefore, the connection between migration and the quality of life, as

reflected in housing, will most likely become a major public concern over the next few years.

There is, as suggested earlier, an increasing public awareness and interest in lower density housing joined with fee simple ownership. This growing interest and the resulting increased demand will be expressed in all facets of the site development process.

2. IMPORTANCE OF SECOND COSTS

A key area of interest is the cost of site development. At present, the understanding of site development in Israel embraces only "first costs". Site development also entails a "second cost", which while not evident in its consequences, deserves equal attention. "Second costs" - the costs of operating, maintaining and replacing the infrastructure - may well be more significant over the long run than first costs.

Principally because the GOI has had to satisfy the tremendous immediate demands created by migration and defense, it has found it very difficult to look at investment from other than a first cost perspective. However, the economic effects of second costs are bound to become more important over time. A good example of this situation is Israel's inter-urban highway system, whose operating and maintenance costs are rivaling investment in new roads.

3. RELATIONSHIP TO MUNICIPAL GOVERNMENT ACTIVITIES

What makes the issue of second costs especially critical is the fact that during its first 30 years Israel has been unable to develop economically strong municipalities. Israel's municipalities, with their limited budgetary resources, receive the site and infrastructure improvements. To expect

the municipalities, with their restricted economic resources, to operate, maintain and replace the infrastructure system is to invite serious future consequences. Because of its hidden nature and the large sums involved, the issue of second costs will emerge in the foreseeable future as a major economic and political issue for the GOI and the municipalities. In reviewing this report, GOI officials and other parties should be especially sensitive to both the first and second costs associated with the high standards of site development that are employed in Israel.

B. THE HIGH QUALITY DESIGN STANDARDS FOR SITE DEVELOPMENT AND CONSTRUCTION

The quality of site development in Israel is relatively higher, in terms of standards and quality, than typical higher income housing in the United States. The factors which have led to the standards and practices that are used in urban site development can be described as follows:

1. THE ADOPTION OF STANDARDS AND PRACTICES USED IN THE UNITED STATES AND CANADA

Most site development standards now used in the United States and Canada were instituted in the 1950s and 1960s when economic expectations were rising and there was an unlimited role for the private automobile. What was not recognized when these standards were transferred from one country to another was that, in part, a nation's site development standards not only embody a technical solution but reflect its level of economic development. The American and Canadian standards that were adopted by Israel were based upon a per capita GNP three or four times the Israeli level.

2. RAISING SITE DEVELOPMENT STANDARDS

When the standards and practices were translated from English to Hebrew two decisions were made which generally raised them. First, in translating numerical dimensions from the United States measuring system to Israeli metrics the odd fraction or remainder was usually rounded up to the nearest whole number. For example, an 11 foot wide causeway is equal to 3.3528 meters. However, in the process of rounding and making an even number, 11 feet became 3.40 meters, adding some 1.8 inches to the width of the causeway. Multiplying the seemingly insignificant 1.8 inches by hundreds of kilometers of roads involves a lot of additional concrete. Secondly, when two standards were available the higher standard was usually selected. The rationale for this choice was "rather safe than sorry".

In Israel development standards are adopted at a national level. For various reasons Israel never developed a dual system of local and national standards. In the United States local standards reflect local conditions and usually the limits of local economic resources. Thus, the standards used for Israel's excellent new inter-urban highway systems are directly applied to local streets. Often the much higher national standards have little relevance to local conditions.

3. THE EFFECT OF HIGHER STANDARDS ON COST

The combination of Israel's very rapid development process, which absorbed the nation's human resources in key technical fields, and the limited technical manpower prevented Israel from either creating its own development standards or evaluating those which it indiscriminately adopted. The

inability to evaluate the applicability of foreign standards has created a number of problems.

Outside standards are usually only partially applicable to Israel. However, in practice, the standards are adopted in full rather than only the element which may be appropriate to the Israeli situation. The following is an example of this practice. When underground telephone lines are installed, U.S. engineering standards provide, at best, for telephone junction and splicing enclosures appropriately spaced throughout new residential development. These enclosures are fairly massive structures; the outside dimensions are on the order of 10 feet high, 4 feet wide and 8 feet deep. Wall thickness is between one half to a full foot. The entire structure is formed in place from reinforced concrete and costs about \$2,000.

The general dimensions of these underground enclosures are predicated upon their serving a large number of telephone lines. A typical U.S. telephone splicing enclosure may have a bank of four to six major distribution lines entering the box with each line containing 12 conduits. Each conduit, in turn, carries hundreds of individual telephone lines. Although telephone enclosures built to U.S. standards are used in Israel, the number of telephone lines to be accommodated will most likely be only a small fraction of the number of lines that will use the enclosure in the U.S. The remaining capacity of the Israeli telephone enclosure will, in all likelihood, never be needed.

This example illustrates how a perfectly sound U.S. standard, uncritically transferred to another context, results in excessive or uneconomical site development.

4. THE ORIGINS OF ISRAEL'S DEVELOPMENT STANDARDS

Israel's history has strongly affected the adoption and utilization of very high residential site development standards. During the initial period of urban development local planners and policy makers did not emphasize high standards for new infrastructure. Because of the flood of immigrants virtually all available resources - human, economic and physical - were used to meet immediate housing needs. Where possible, all infrastructure elements were built to the lowest possible standard. What was not absolutely essential was not built. For example, a three meter wide road was considered sufficient for two lanes of traffic. It was assumed that the little parking that was needed could be handled off the undersized roadway on the dirt surface.

In the late 1950s a series of events occurred which changed the policy of low development standards. To a significant degree, this shift is responsible for the very rapid rise in Israel's development standards. In the late 1950s dissatisfaction and unrest surfaced in a number of new towns and areas where new immigrants were settling. The newcomers in the immigrant areas made an issue of the difference in physical quality between their new neighborhoods and the older neighborhoods inhabited by veteran Israelis. Many of their complaints dealt with the urban infrastructure, or the lack of it. Because of climatic conditions, differences in the infrastructure had fairly severe effects on the people who lived in the new settlements. During the winter months the lack of adequate paving, storm drainage and landscaping could turn them into quagmires. During the summer the lack of landscaping turned them into dust bowls. Minimal water and waste systems often failed, creating health hazards.

The political cry was raised that the government, in building the new towns and the new neighborhoods, was treating the newcomers as second class citizens. Since many of the immigrants were from a different ethnic group than the veteran Israelis, the political aspects of the immigrants' complaints struck a responsive cord.

In addition, Israel has always been sensitive to the pleas and demands of its newcomers. The unrest and disturbances of the late 1950s brought about a quick and dramatic change in national policy. As the demand for higher quality infrastructure coincided with a decline in immigration, and hence housing production, both the technical and productive resources required to provide infrastructure of higher quality were available.

The then director of the new Housing Ministry adopted a policy that called for a complete range of infrastructure elements in all new neighborhoods. The government decided that the pioneering environment which many veteran Israelis had endured should no longer be imposed upon immigrants. Once the shift in policy had occurred the pendulum swung in the other direction. Since the 1960s a high quality and often elaborate system of urban or suburban infrastructure is a hallmark of Israeli housing development.

Today, the consequences of this change can best be seen in a new community under construction. The entire site is often improved, including sidewalks on the side of the street where housing has not yet been built, and a full road system where development has not yet occurred.

Another important aspect of Israel's approach to infrastructure is the concern with the protection of life. Israel will spend whatever is necessary to insure that it was not the absence of bricks or mortar that caused an undue loss

of life. The outstanding example of this policy is the requirement that virtually every residential structure in certain areas contain a bomb shelter, regardless of the cost. Another example is in the design standards for local highways. In a country with a fairly hilly or steep topography in some places, U.S. sight distances, elevations and other highway standards are used even though the costs are very high and traffic volumes much lower. The assumption is that these high standards are justified to protect life.

C. THE LACK OF LOCAL DEVELOPMENT CONTROLS AND THE APPLICATION OF NATIONAL STANDARDS

In adopting foreign development standards, Israel did not accept all aspects of the approval system that is used to apply the standards. To a significant degree, the final outcome of the development process in the U.S. is the product of tacitly accepted national standards as well as strong local municipal review, approval and supervision. When necessary, local municipal procedures embodying site plan review, subdivision approval and use variances are used to modify national standards. In both the U.S. and Canada national and local levels of government shape the standards as well as their application to development situations. The effect of infrastructure standards on costs is, in part, determined by the interaction of these two practices.

1. LACK OF LOCAL RESOURCES

Israel's site development process does not involve effective economic analysis procedures. Evaluating a site design, whether for a town or a neighborhood, in terms of economic alternatives, is not part of Israeli design or development practice. Very few of the officials or designers who are involved in the site design process have had academic or practical training in cost-benefit analysis or cost controls.

Even if the professional techniques for an economic analysis of the design process were available, there is often little incentive to apply them. Over the last decade, most major urban projects undertaken by the GOI have been directed at communities in and around the Jerusalem area, the existing development towns and new settlements across the "green line". For reasons of political policy these projects have generally been built with a predetermined budget and in response to a political need, rather than with a production program defined by the economic reality of consumer demand.

D. THE ABSENCE OF A DEVELOPMENT EXPERIENCE

Perhaps the most unusual factor contributing to site design practice in Israel is the absence of a significant development history. From any perspective, Israel has had an exceedingly short modern development period, embracing about sixty years. Israel's concentration on production rather than on operation and maintenance stems from its abbreviated development history. In order to maintain a balanced approach between production and preservation, Israel will need to assimilate the effects of time and use on development.

Israel's first period of development started after World War I and ended in 1939. Since this period occurred under the British mandate, its development consequences are seen by Israelis as belonging to another generation. The public and private improvements that were built during the mandate are often viewed in terms of who built them, rather than as installations requiring upkeep and replacement.

After World War II, right after the State was founded and up to about the early 1960s, development qualities and standards were not emphasized. The Israelis have been building a modern infrastructure only since the early 1960s. Considering the life span

of typical urban improvements Israel has barely reached the half-way mark. Until recently, Israeli officials and engineers have not had to contend with an aging infrastructure.

1. THE EXAMPLE OF HIGHWAY DEVELOPMENT

Because of their lack of experience with the long-term economic results of development, the administrators who are responsible for Israel's development programs and policies cannot fully appreciate the significance of the second costs of development. The absence of this kind of experience can best be understood by examining road construction between Tel Aviv and Jerusalem. Until 1967, the auto trip between Tel Aviv and Jerusalem road was a two hour, hair-raising ride on a road built between 1948 and 1950. Before it became absolutely necessary to fully rebuild the road because of increasing traffic and use by trucks, various sections were replaced, starting in 1970 with a road built to the standard of a U.S. interstate highway. With this road the trip can be made in one hour. In response to the need to replace the earlier road, virtually the entire main highway between Jerusalem and Tel Aviv has been rebuilt over the last decade. Other national roads, such as the Tel Aviv-Haifa road, have undergone the same sequence of events.

Until recently Israeli highway planners and other development officials viewed the national highway system as primarily a construction program. Maintenance and upkeep and eventual rebuilding were not important factors in the design program.

2. CONCENTRATION OF FIRST COSTS

While the national highway system is only one example, the newness of Israel's infrastructure, be it local roads or sanitary sewer plants, has focused attention on the production

and first cost of the system, rather than on its "life cycle" costs. The first consequence of this outlook is a preoccupation with initial design rather than the long-term costs of maintenance and operation. The second consequence is that life cycle costs have not, as a practical matter, been incorporated into many aspects of Israeli life. The third consequence of a brief development history and a lack of experience with long-term costs is that there has been virtually no understanding of the economic implications of high infrastructure standards.

E. SITE DEVELOPMENT STANDARDS AT THE PROJECT LEVEL

Although there are national standards for urban infrastructure, there is no site plan review procedure in Israel. Local site development standards or subdivision regulations consist of a combination of standards. In the process of translating the national standards into actual engineering drawings, several factors, the most important of which is the lack of local regulations and municipal supervision, act to raise the cost of development. Local or municipal review is often lacking and municipal supervision over development is often not exercised. As a consequence, project engineers and architects must use their own judgement on many aspects of the design. Not only may national standards be lacking, but guidance is not usually available from a local planning board or municipal engineer. Hence, the designer or engineer has to make decisions on the details of the particular design, relying upon his experience and training.

1. PROFESSIONAL PRACTICE AND DESIGN STANDARDS

In this flexible situation there is an incentive for Israeli engineers and architects to use higher rather than lower standards. Use of the highest possible and practical standards for a particular project protects the professional reputation of the engineers. Because Israel is a small country and most people who work in development know each other, there is a strong incentive to avoid technical mistakes. When a professional mistake in site development occurs in the U.S. its direct effect upon the responsible professional is softened by the sheer size and complexity of the market for professional services in the U.S., as well as the availability of professional insurance.

It is very important to all parties that, insofar as possible, there be no economic losses to overcome because of design mistakes. Since the costs of mistakes or design errors cannot be passed on to other parties, the chance of errors is minimized by using high standards for initial development.

2. EFFECT OF DESIGN STANDARDS ON CONSTRUCTION PRACTICES

To avoid costly errors and mistakes, Israeli professional practice provides for a sufficient safety factor to insure that there will be no technical or construction problem. This important point was illustrated by an engineer with the following example.

Local engineers are aware that a four-inch diameter local sanitary sewer line with a 1% gradient would normally be adequate for a typical residential building with 24 units. However, recognizing that problems may arise from either a lack of site supervision or improper construction methods, local engineers will recommend a six-inch diameter line with a 2% gradient. The consequences of these seemingly small safety factors on total site development costs are fairly severe. First, installation of a six inch line can raise piping costs by 30% to 40%. More important, changing the gradient from 1% to 2% can more than double the cost of the earth work required to install the sanitary system.

The site engineer's design work reflects the limitations of the building contractor. The site designer recognizes that on-site supervision and attention to detail by the labor force are significant problems for most site contractors. To insure that the site infrastructure will in fact work, the site designer compensates for the limitations of the construction process by over-designing the project's infrastructure.

VI. LAND MARKETING

A. INTRODUCTION

Because of Israel's unique land tenure circumstances*, a large part of the nation's site development and design process is not integrated with the residential construction process.

Current GOI housing policy is directed at creating a building industry that will be responsive to market forces. Much has been achieved in aligning the housing industry with market forces, as shown by the increasing cost-effectiveness of the housing industry. However, under current development practices the building industry can only produce about two-thirds of the product - namely the building. A different industry, operating under other circumstances and economic conditions, produces the other third, the residential site.

While government sponsored housing now represents only one-third of total housing production, government sponsored site development probably accounts for about 90% of all building site activity. The remaining 10% occurs on "privately owned" land. Most of the "private" development is on a very small scale since very few large "privately owned" parcels are available for development.

B. HISTORICAL BACKGROUND

Control over national land is vested with a quasi-autonomous agency, the Israel Land Authority (ILA). The ILA has its roots in the origins of the State. In 1901, the Kerem Kayemet Leyisrael (KKL), The Jewish National Fund, was established by the

* When Israel was established in 1948 about 92% of its original land area became government-owned. The other 8% which was privately owned has, by and large, been consumed in the development of the Tel Aviv metropolitan area, Haifa, Jerusalem and a few other older towns.

Zionist Congress to implement its settlement policy. The KKL solicited funds from Jews all over the world and began buying land from Turkish and Arab landowners. The land was then closed to early settlers who established the Second Aliya, the name given to the immigration starting about 1890. When the Jewish Agency became the informal government of the Jewish area of Palestine the KKL became the land developer of the Zionist movement. With the establishment of the State in 1948 it was essential to retain the knowledge and structure of the KKL. Since the KKL was an operating institution with almost 50 years of experience, the GOI turned over to it virtually all functions concerning the ownership, management and use of government land. The Israel Land Authority evolved from this arrangement.

Today the ILA is controlled by two ministries: the Ministry of Finance (MOF) and the Ministry of Construction and Housing (MCOH). Traditionally, the Minister of the MOF is the chairperson of the ILA. Because of their mutual responsibility for the country's land, the ILA and the MOH have a very close relationship.

C. APPROACH TO LAND MARKETING

Virtually all the land that is now being used for new communities is developed through the joint efforts of the ILA and the MOH, a mutual responsibility that will increase in the immediate future. Presently, new growth is being carried out by opening up major new sites in undeveloped areas. The remaining in-fill development is confined to the older developed communities in the central coastal plains area. New development is increasingly being focused on the hills area north and south of Jerusalem. In the future, the government will dominate the site development process to the west of Jerusalem and east of Lod. Private land development will become insignificant compared to government sponsored development.

The ILA uses a number of methods to provide land for community development. Its most recent approach has been to rely on an independent land development company. The first of these companies is ARIM. The ILA leases land to ARIM, which plans, designs and constructs the housing. When the land is ready for use ARIM acts as sales agent for the ILA. The choice of fee simple ownership or long-term lease is decided between the ILA and the buyer. While the role of ARIM is growing, most land development programs are still carried out directly by the ILA. Regardless of the particular method, each system involves the ILA as both owner and developer.

D. SITE DESIGN

Three principal approaches are used in general site design. In some situations the ILA undertakes the design using "in-house" professionals. A second method is to employ consulting engineers and architects. A third method is for the process to be carried to the MOH, which retains an outside architect for the general site design.

In virtually all urban situations the improvements are installed by private contractors and sub-contractors. On a rural development project the work may be done by the contracting arm of the ILA. Insofar as is known, State-owned land which is made available for development is designed and improved by government or quasi-public agencies. Except for the exceptional private parcel, a residential developer can obtain only improved land for building.

A major difference both in the process and its economic impact is the inability of the Israel developer (certainly on all large projects) to control site design, engineering and construction. Division of the development process into two stages, undertaken by different parties, results in significantly higher housing costs.

E. ECONOMIC EFFECT

Once the improvements are complete the land and improvements are made available to a residential developer. As there are no other alternatives or land supplies available, the housing developer must pass on the costs of site development directly to the consumer. This situation has been accepted by the various participants in the development process.

A second economic effect of the government sponsorship of development has been the perception of a shortage of land for residential development. This perceived land shortage has a number of economic effects. The single most important one is the creation of abnormally high land costs in private sector and, indirectly, in the public sector housing. The relationship between the limitation on the land available for development and the price of housing is described more fully in other parts of this report.

Another related economic effect is that the perceived shortage of land tends to hide the true cost of development within the total package. Because land is so costly in Israel, the various components which give rise to the high costs become obscured in the total figure. If the operation and costs of the development processes were truly separated, more public attention could be focused on the costs of development. Once the costs and the basis for these costs are understood, there would be an incentive for the consumer and other participants in the housing development process to focus on costs. However, under the present conditions of perceived land shortages that type of market interaction is unlikely to occur.

VII. RECOMMENDATIONS

A. REDUCING CONSTRUCTION COSTS

1. INTRODUCTION

Significant cost reductions have already been realized in Israel's building industry. The framework for attaining improved additional savings is already in place. Cost reductions based on improved building methods will continue as the residential building industry is reorganized into more efficient producers.

The GOI should be concerned that the current downturn in housing demand does not have a crippling effect on the industry. If the new group of Israeli builders were to go out of business the process of reducing housing costs would suffer a severe setback.

2. AN ADEQUATE SUPPLY OF APPROVED LAND

As suggested elsewhere in this report, there is a growing market for low density housing. As the demand for traditional "shikun" housing contracts, this new popular style of housing will become an important source of work for the building industry. Obviously, the building industry needs land for both traditional and new style housing. One of the major impediments in the development cycle is the approval process for land subdivisions and site plans. The limited planning and review resources at the local level mean that design and design review is conducted at the national level. Consequently, the pre-development stage can be very protracted.

3. INCREASED ACCESS TO CAPITAL FOR INTERIM FINANCING

The Israeli building industry has no access to "real" interim financing. The limited advances made by the MOCH are not enough to pay for construction. Most of the MOCH's construction advance is needed to pay for land and site improvements. In order to complete projects contractors count on selling their apartments in advance. While this system rewards the efficient builder, it does not provide an economic "cushion" in the event of an adverse change in market conditions. For local builders to continue they will need fiscal as well as building skills. As one builder told this consultant, "your bookkeepers are more important than your foremen", indicating that maintaining a cash flow was more important than an efficient production process. The Israeli building industry needs interim financing to operate in a businesslike manner and to survive slow periods.

4. INTEGRATING RESIDENTIAL CONSTRUCTION WITH SITE DESIGN AND CONSTRUCTION

One of the major areas where costs can be reduced is by improving the development process prior to construction. Under the present system of development, the developer obtains an improved site from the GOI. As the land and its improvements account for 25% and 35% of total development costs, a large portion of the price paid by the consumer is determined not by the builder/developer but by government and quasi-public agencies.

Because the site work is done mainly by the government excessive costs tend to be built into the process. When the government housing was building itself the process was inefficient. However, when the private sector became responsible for building, costs were reduced significantly. Since the GOI's marketing process emphasizes price and marketing,

the private sector should be able to reduce costs if it is responsible for land development. Because the concern with costs in land development has been limited until now, there should be ample opportunities for reducing them.

5. SHORTEN THE APPROVAL PROCESS FOR SITE PLANS AND LAND SUB-DIVISION

Obtaining approvals is a time consuming aspect of land development in Israel. Obtaining approvals for an uncomplicated government sponsored project can take a year to a year-and-a-half. A complicated matter, say involving planning for a new neighborhood, can take three years. The reasons are interwoven with town planning law, the three tiered approval process, the lack of qualified personnel and traditional Israeli politics. The GOI has established a special committee, the "Barsela" committee, to resolve the problem of development approvals.

In many U.S. jurisdictions the approval process has been rationalized. Thus, some form of U.S.-GOI technical assistance could transfer U.S. knowledge and experience to Israel.*

The lengthy and complicated approval procedure affects construction costs directly and indirectly. The direct costs are in the manpower that is required to obtain the approvals. As in some U.S. municipal jurisdictions, specialized professionals expedite the complicated and time consuming approval process. This unnecessary cost could be eliminated by reducing the uncertainty of the process and normalizing the steps. More significant than the additional labor costs are the indirect or hidden costs of a long approval procedure. Projects that experience long delays in obtaining approvals represent unused resources. Projects are conceived and designed to meet a specific demand; the longer the elapsed

* Professor Charles M. Harr, an AID consultant, did some work in this area for the city of Jerusalem in 1981.

time between conception and completion the greater are the chances that it will not fulfill its goals.

B. LAND MARKETING

The pricing, marketing and distribution of land will become a major problem during the 1980s. Over the last two decades land marketing was fairly simple. Much of the land needed for growth was obtained by "filling-in" communities that had been started in the 1950s. Because of the compact character of Israeli housing, not much land was needed for growth. Finally, land costs were predetermined by the government. These conditions have now changed. As Israel shifts its housing preferences, as the ILA changes its land pricing policy and as new areas are needed for growth all facets of land marketing will become more difficult.

1. LAND PRICES

The land prices set by the ILA now reflect its value at full development as well as its highest value under a particular scheme. The result is that the cost of government owned land is now a large share of the ultimate price of housing. Over the short-term, land prices will begin, or have already begun, to eliminate certain income groups from the new housing market. From a social planning point of view the emergence of economic distinctions in new neighborhoods based on land prices could be undesirable.

Until the early 1970s, artificially low land values represented a hidden subsidy to government assisted building. In the early 1970s AID recommended that the price of land used for GOI sponsored development bear some relationship to real values. This report does not recommend that the real pricing of land be abandoned, but that the basis of the pricing system be reviewed.

Land for development has always been scarce. Because of the scarcity the limited quantity of land available for new construction has always been very expensive, exerting an upward pressure on housing costs. Whereas in the U.S. improved land may represent 20% of total housing costs, in Israel it may account for as much as 50%. These cost relationships have a direct impact on the ILA's land marketing practices, which use market prices to determine the value of land for development.

A broader view of land availability and values in Israel is that there is not a shortage of land, now or in the foreseeable future. Until now, Israel's development process has been conservative in its consumption of land. Tel Aviv has been developed at a gross density of 24 persons per acre.* Haifa's density is six persons per acre. The old community of Petah Tigwa near Tel Aviv has a density of about 4.0 persons per acre.

Israel's future land needs will be related to the demand for housing. For the foreseeable future, immigration and new family formation will require 15,000 to 20,000 new housing units per year. Replacement of substandard housing will require an additional 15,000 units. Thus, over the next decade, Israel will need land for 300,000 to 350,000 dwelling units.

It is assumed that the new housing will be less dense than the old settlements. A mixture of low and conventional densities will yield a net residential density of eight dwellings per acre and a gross density of about 5.0 units per acre. About one-quarter of the growth will probably be in-fill and the remaining three-quarters will require new

Gross density is used to connote all land uses, circulation, and internal open space. In gross density terms residential density would be approximately 36 persons per acre, or about 10 dwellings per acre.

land. At the above densities, between 180 to 190 square kilometers of land will be consumed over the next 10 years.* This is less than 0.01 percent of the total land area within the 1949 armistice line.

Based on this quick analysis, there is a reasonable expectation that Israel can meet its future land needs without an undue consumption of the supply of land. If land will not be a scarce commodity in the future it is appropriate to re-evaluate the methods that are used to set land prices.

In reviewing the pricing policy for land, special attention should be given to the relationship between land values, as determined by government, and the general quality of life in Israel. As noted earlier, satisfaction with the quality of life in Israel may, in a significant manner, be determined by the quality of housing. Emerging trends strongly suggest that lower density housing has enhanced the quality of life. Unless land pricing policies are modified so that lower density housing will be economically feasible and to reflect the fact that land is not scarce, the housing type popularly associated with a higher standard of living will be available only to the well-to-do.

Low Estimate

Total new dwellings, 1982-1992	300,000 D.U.
Gross density	5.0 D.U./acre
Acreage required	60,000 acres
247.1 acres equal one square kilometer	242 sq. kilometers
New land @ 75% of total	181 sq. kilometers
Total land area, Israel	20,325 kilometers
181 - 20,325	0.0089 percent

High Estimate

Total new dwellings, 1982-1992	350,000 D.U.
Gross density	5.0 D.U./acre
Acreage required	70,000 acres
247.1 acres equal one square kilometer	283 sq. kilometers
New land @ 75% of total	212 sq. kilometers
Total land area, Israel	20,325 kilometers
212 - 20,325	0.0014 percent

2. LAND AVAILABILITY

Normally, land prices determine the availability of land. This is not the case in Israel, where major administrative efforts are required to make land available for development. The key steps in the process can be outlined. Before land becomes available for urban purposes it has to be agreed that it is not needed or suited for agriculture. If the land is to be used for a development project an outline scheme has to be prepared and approved. Then, the land has to be surveyed and then plotted. Land ownership in Israel is in large part based on the Ottoman Empire, the British Mandate and local village customs. Land subdivision process is a very time consuming procedure. Once parcellation is complete, land values must then be determined by an understaffed corps of qualified land appraisers. In sum, the present system that is used by the ILA to allocate land cannot readily be expanded. An adequate and timely supply of land is an absolute necessity if the GOI is to respond to the shift in housing preferences.

C. SITE DEVELOPMENT

1. INTRODUCTION

Improvements in the site development process can appreciably affect future housing costs. Next to land costs, reducing the expense of site development will have the greatest effect on long and short term shelter costs. One difficulty in making site development more economical is insuring that the so-called "second costs" or operating costs of the infrastructure are not sacrificed to reductions in first or original construction costs.

Over the past three years, the GOI and the ILA have started to explore new ways of producing and marketing improved land

for the private and the government-assisted housing markets. To date the ARIM experience in development and marketing has apparently been a success. This consultant is of the opinion that the ARIM approach is one answer to the land development problem. However, unless some competing operations are established, the intermediate outlook is that ARIM will lose its innovative approach and leadership and become less effective.

2. REVIEW PHYSICAL DESIGN STANDARDS

As suggested in the preceding chapter, a number of factors have contributed to Israel's high site design and engineering standards. Significant long term cost savings should be possible in this area, both in respect to the national development budget and the budget for individual projects. If the existing design standards for site development were critically reviewed measurable savings could undoubtedly be achieved.

A key step would be to see if new, reduced design standards could be introduced. As noted, some of Israel's standards were adopted when costs were not as important as they are now. This situation has changed, not only in Israel but in other developed countries. Cars now are supposed to go at 55 MPH, not 65 MPH and the size of the parking stall for that car has shrunk by 15%. Additionally, Israel now has the engineering talent to devise standards reflecting its experience and needs. By reviewing standards from an Israeli perspective using experienced Israeli engineers, it should be possible to reduce them without sacrificing essential safety and quality.

Because Israeli development has been characterized by rapid growth, the normal procedure is to design and construct the total infrastructure for a project at the beginning. A

good example of this practice is the new town of Arad. Arad was started in 1964, and by 1981 it had about 12,000 inhabitants. Along the outerside of this small new town is a four lane highway with a median strip. When built in the early 1970s this road probably cost \$100 per linear foot. This local arterial road can handle the traffic generated by a town of 50,000 to 100,000 people. Even though a road of this scale is not likely to be needed in Arad for decades, if ever, a lot of money was spent to build it. Similar examples are common in other parts of the country where major new government projects are being built.*

The Israeli development process needs a means for assuring that only that portion of the infrastructure which will actually be needed in the foreseeable future is built.

As noted, design standards were often "rounded up" when they were converted from U.S. measurements to the metric system. Hence, another goal in the review and revision of development standards is to "round down" the standards if they were originally "rounded up".

3. INCREASE THE EFFECTIVENESS OF THE LOCAL APPROVAL PROCESS

The process of reviewing and approving development plans affects the site development process in a number of ways. The following recommendations are intended to improve the interaction between the planning and local approval of projects.

One important problem affecting site development in the time required for plans to go through the different stages

There may be another explanation for the road in Arad. Government planners may fear that they will be unable to obtain funds to enlarge a facility in the future. Rather than risk an insufficient facility, they will build it all now, if funds are available.

of certification and approval. This problem is most serious in localities where qualified engineering personnel are not available. Since the shortage of qualified municipal engineers is likely to continue, alternative methods for reviewing development plans should be considered. Municipalities which do not have or cannot support qualified review staff should receive professional help at the regional level. Regional authorities, with their broader base, could review the development plans on behalf of the localities.

A regional technical review has two advantages. First, the broader scope for professional work at the regional level should attract better qualified personnel. Second, a regional authority would have a broader revenue base for retaining qualified personnel.

Another possible approach would be to use an engineer, or a small group of engineers, to serve a cluster of towns. By rotating professional seniors among a number of communities, the advantages of the regional approach could be obtained. However, each municipality would still retain direct jurisdiction over the review process.

Israeli planning authorities may also want to consider using the waiver system for local approvals. In this system plans are automatically approved for further processing if no action is taken within a specified period. In U.S. approval procedures waivers are granted in thirty, sixty or ninety days, depending on the importance and scope of the review subject to the waiver. By introducing fixed time periods, professional manpower can be devoted to important proposals or those which require a formal review for engineering reasons having to do with health, welfare and safety.

Another modification is to combine waivers with professional certification. This system allows architects and engineers

with professional standing and adequate insurance to simply state, through a certificate, that all local requirements for specific submissions are fully and completely satisfied. If a problem occurs, the professional who issued the certification has acknowledged his liability and is held accountable.

If the developers/builders enlarge their role in the design and engineering of site development, there will be more pressure to reduce the standards in particular situations. Where appropriate, it would be desirable for local reviewing authorities to allow standards to be reduced to economize on development costs. While the U.S. development practice is certainly not an absolute model for other countries, it is worth noting that the "variance" procedure has been used for more than fifty years as a response to unusual site conditions. However, the process by which such changes are allowed gives substantial latitude to local administrators. As it has emerged, the municipal approval process in the U.S. allows the standards to change while protecting the public health, safety and welfare.

As the need for greater flexibility in local site planning becomes apparent, Israeli planning authorities may want to take advantage of the U.S. experience. Since variance procedure legal cases are of significant importance in American practice, there is ample and detailed literature and case law on the subject.

4. INTEGRATION OF DETAILED SITE DESIGN, ENGINEERING AND CONSTRUCTION WITH RESIDENTIAL DEVELOPMENT AND MARKETING

Recent innovations in residential development in Israel have exposed developers/builders to a growing and wider range of market considerations. These innovations have formed the basis for fundamental improvements in residential

construction, which are being expressed in reduced construction costs.

This consultant believes that further economic improvements in the building industry can be achieved by expanding the process of residential production to embrace all aspects of site development. Unless site design, engineering and site construction are exposed to the reality of the marketplace there will always be a built-in lag in the performance of the construction industry in the development process. The integration of site development and residential construction should start at the design phase. Presently, the local authorities, or the MOCH, prepare the detailed site plan for individual projects. The site plan will not be done by the same architect who designs the building. Hence, a major technical obstacle is the coordination between the site plan architect and the building architect. This can cause major problems in fitting the buildings designed by one architect into a subdivision pattern and street system laid out by another architect.

Detailed site planning should be carried out by one group of designers working for the developer. The developer, who has to market the housing, has the greatest interest in achieving a marketable and economical product. Close coordination between building design and the other elements of a site plan can only be achieved economically when it is done by the same people. The developer is also in the best position to transfer the lessons from one project to another.

Detailed plans are the principal means used by the GOI to control subdivisions, coordinate project elements and implement national planning standards.* If detailed site planning

The Israeli planning system contains certain nationwide standards, such as reservations for open space, location of schools and road dimensions.

were added to the developer's responsibilities, other procedures would have to be used to obtain the necessary government participation in the planning process. This could be done by adopting subdivision and planning standards and using a "general" plan approach for coordinating and implementing national planning standards.

Here again, Israel may find the U.S. and Canadian experience and practice helpful. U.S. planners have developed a fairly effective method for coordinating and directing new residential development. This system was widely used during the decades of intense growth between 1950 and 1970. Where qualified personnel are committed to this approach it has generally worked well. Now that the pace of residential development in Israel is moderating, U.S. methods of planning may be applicable. The U.S. planning system referred to above consists of three main parts.

a. Subdivision Regulation

These regulations specify the minimum planning standards for land parcellation.* They are keyed into the legal process for land registration at the country level.

b. Site Plan Standards

These standards consist of a group of design recommendations, some mandatory and others optional, specifying all planning requirements. In some situations these standards are related to performance requirements. Site plan standards include requirements for presenting the

In part, the reason that the U.S. system works well is that the Department of Commerce prepared "model" or recommended ordinances for local adoption. Thus, the 900 U.S. cities with populations of over 25,000 have similar planning regulations.

developer's scheme in a consistent manner to the local reviewing authority. Since these planning requirements are written instead of drawn, the developer has the flexibility to fashion detailed solutions responsive to the conditions of a particular site.

C. The Comprehensive Plan

In the U.S., for most low to medium density development, the comprehensive or master plan has been sufficient to coordinate private development with long-term local government plans and goals. This type of plan shows ground level use as well as maximum development densities. Together with the land use plan it identifies the location and size of arterial roads, collector roads and, in some cases, minor streets. Areas for public land uses and institutions are shown, as is a program for public acquisition.

These three interrelated methods for directing and coordinating local planning efforts have worked well in the U.S. It would be worthwhile for Israeli planning and development officials to see if the American system and experience provides a suitable method for further integrating their development process.

5. PROVIDE INCENTIVES FOR REDUCING THE OVER-DESIGN OF SITE PLANS AND THE OVER-BUILDING OF INFRASTRUCTURE

The most effective incentive for eliminating overdesign and over building is to make site planning and development responsive to the market place. However, a number of additional steps could be taken to diminish overdesign and excessive infrastructure construction.

U.S. engineers and site engineers have adopted a system of professional insurance to protect them from the professional and economic hazards inherent in preparing economical designs. There is no question that the closer a designer comes to the most economical solution, the higher is the chance of an error. By using professional insurance that risk is minimized and spread over the profession. Under the U.S. system the individual designer can attempt to reduce development costs at a minimum risk and moderate cost to himself and his practice. For the designer's client the professional insurance provides an indemnity in the event of a mistake.

For the U.S. developer/builder, the practice of bonding infrastructure improvements offers a form of insurance to the local municipality. The bonding system generally provides insurance from substantial public liability companies that the newly built infrastructure will perform as specified in the approved plans. This guarantee is usually for a specified period, normally one to three years. The theory behind bonding improvements is that if anything goes wrong it is likely to happen in the early years. By introducing a third party, in the form of an insurance company, the municipality can seek compensation from someone other than the builder.

The insurance company requires certain steps to be taken to lessen its risk. If it has any doubts about the builder, the bonding company, as a third party, will review the plans and monitor the construction. For builders who fail, once too often, to meet local municipal building regulations and other accepted professional standards, future bonding may become impossible or very expensive to obtain.

6. ISRAEL SHOULD BENEFIT FROM THE U.S. EXPERIENCE IN LOW DENSITY SITE DEVELOPMENT

In the opinion of this consultant, the Israeli development industry will increasingly turn to low density shelter in the 1980s. Until now, Israel's architects, planners and engineers have had little experience with this unique and specialized type of development. Unless Israel's designers use the lessons of the past, they will be destined to re-invent this specialized form of land planning and experience some of its problems. The MOCH, the ILA and Israel's professional engineering and architectural associations should seek to understand those aspects of the U.S. experience that are pertinent to Israel's needs and physical situation. What makes this transfer of experience especially relevant is that the U.S. approach has generally been successful in integrating acquisition, site design, site engineering and construction with home building and product marketing. The U.S. system also embraces methods for coordinating private development with municipal development policies.

APPENDIX

LIST OF PEOPLE INTERVIEWED IN PREPARATION OF THIS REPORT

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Yair Maroco - Coordinating & Supervising Engineer
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Zvi Tziknik - Production Man. Drucker Co.
Zeev Drach - Architect (works for Drucker)

Uri Dori - Private Contractor - Haifa
Itzhak Levi - Finance Manager - Dori Co.