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DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT PAPER

EGYPT - HOUSING AND COMMUNITY UPGRADING

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10. ESTIMATED COSTS (\$000 OR EQUIVALENT \$1 = L.E., 70)

A. FUNDING SOURCE	FIRST FY			LIFE OF PROJECT		
	B. FX	C. L/C	D. TOTAL	E. FX	F. L/C	G. TOTAL
AID APPROPRIATED TOTAL	50000		50000	80000		80000
(GRANT)	(50000)	()	(50000)	(80000)	()	(80000)
(LOAN)	()	()	()	()	()	()
OTHER U.S. 1.						
OTHER U.S. 2.						
HOST COUNTRY		1000	1,000		80000	80000
OTHER DONOR(S)						
TOTALS	50000	1000	51000	80000	80000	160000

11. PROPOSED BUDGET APPROPRIATED FUNDS (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. 1ST FY 78		H. 2ND FY 79		K. 3RD FY	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	I. GRANT	J. LOAN	L. GRANT	M. LOAN
(1) SA	722	860	860	50000		30000			
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(3)									
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TOTALS				50000		30000			

A. APPROPRIATION	N. 4TH FY		O. 5TH FY		LIFE OF PROJECT		12. IN-DEPTH EVALUATION SCHEDULED MM YY [1] [2] [8] [1]
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TOTALS					80000		

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I. INTRODUCTION

The need for housing in urban Egypt is one of the more pressing of the developing world. Urban growth is estimated at 4% as opposed to 2.5% for the country as a whole--much of it attributable to rural migration. Over 1000 new migrants crowd into Cairo each day. Reports indicate that over 1.5 million housing units are needed now in urban areas and that demand will double over the next 10 years. In addition, much of the existing housing is substandard, over-crowded and lacking in elementary water and sanitary facilities.

A number of reasons have been responsible for the shortage of housing and the substandard quality of much of the existing housing. Perhaps, one of the most important factors has been an unfavorable investment climate owing to GOE rent controls, regulatory and bureaucratic procedures, as well as a lack of financial assistance for lower income groups. Other important factors have been the destruction of housing in the Suez Canal area as a result of the 1973 war, the drain on the GOE budget of large defense expenditures, and the unavailability of land, construction materials and labor (the last factor due in good part to migration of skilled Egyptian labor to nearby Arab countries).

Up to the present, Egyptian housing has been provided through largely uncoordinated efforts of the public and private sectors. The COE approach to housing has been concentrated on the construction of large, five-story walk-up apartment buildings, designed in size essentially to middle-class needs but (owing to rent control and resulting tendency of occupants to sub-let) densely-crowded with middle and lower income people. Little attention has been given to vital social services such as schools and health facilities. In addition, little or no maintenance has been provided with adverse effects on health and sanitation. Most importantly, however, because of heavily-subsidized nature of public housing and continually rising construction costs, the GOE budgetary resources devoted to housing even though increasing are clearly inadequate to the needs of Egypt's poor.

Much less is known of private sector efforts. As previously noted, due to a lack of financial incentives and restrictive governmental controls, private sector construction was limited for years but has recently revived. This activity has manifested itself in two ways: first, in construction of luxury apartments which are in growing evidence throughout Cairo, funded in large part by expatriate worker earnings and; second, through the so-called "informal" or non-regulated sector. The latter sector provides for the housing needs of much of Egypt's urban poor but for the most part under substandard conditions which lack adequate urban facilities such as water, sewage and often electricity. As evidence that private sector housing is frequently inadequate, each year over 12,000 units collapse in Cairo, many of these recently constructed.

The GOE continues to place high priority on meeting the housing needs of its population-- particularly, the poor but recognizes that a new approach is required which combines the resources of the public and private sector in a coordinated fashion. In response to a request from the GOE, AID financed a series of studies of the housing market in 1976 and 1977. Growing out of these studies was a series of policy changes on the part of the Government and a number of jointly-agreed upon working objectives between the GOE and AID. While details of these changes are discussed in Annex F, paramount among these were:

-- An agreement that the GOE's emphasis in its housing program would be switched from middle to low income families.

-- Public sector housing subsidies should be reduced by reducing the size housing, land and supporting facilities to accommodate lower income groups, as well as recovery of costs from the target population.

-- Subsidies should be distributed as to ability of beneficiaries to pay in a manner which clearly demonstrates the cost and extent of subsidization.

-- A housing finance system with a rationalized interest structure would be extended to the lower income groups.

-- Encouragement would be given to mobilize private savings to be invested in the private sector.

-- The private sector would be encouraged to participate in all aspects of the housing program.

-- Lower and flexible planning and building standards would be developed to accommodate housing for target groups.

II. SUMMARIZED DESCRIPTION

The purpose of the GOE-AID Housing Project is to demonstrate the premise of a proposed new housing policy--that basic housing and community facilities can be provided for low-income families which is socially acceptable, at a price they are willing to pay, and which provides to the GOE for a substantial recovery of its investment. The success of the project should enhance the ability of the entire Egyptian housing sector both public and private to respond to the shelter and community development needs of the urban population, particularly low-income households. At the same time, we recognize that under varying conditions and geographical locations other housing approaches including a variant of the five-story walk-up may prove to be viable. Nonetheless, the success of this project should have a major impact on the housing industry in Egypt.

Drawing upon a combination of public and private resources, the project will attempt through an integrated comprehensive program to demonstrate the viability of a new approach to housing policy in Egypt. The primary project elements which are described below are: a new community program which should present a viable public housing alternative to the five-story walk-up described previously; an upgraded program which should demonstrate a combined approach to improving existing housing; vocational education which should expand skills necessary for the housing industry; and institutional development in the form of improved administration and operation of GOE entities responsible for carrying out housing policy and provision of credit.

1. New Community Program: New urbanized land in the desert is to be developed utilizing appropriate "cluster" site planning concepts to provide an individual lot to each beneficiary family. The program will be carried out on 150 hectares in the Cairo industrial suburb of Helwan 27 kilometers to the south along the Nile River. New housing has a high priority here to reduce the commuter load of 80,000 workers who travel each day to Helwan from Cairo.

The MOH and CDE utilizing US and Egyptian consultants and technical assistance will design and build about 6,697 core (expandable) dwelling solutions and urbanize an additional 512 lots to serve a total of approximately 7,209 families (36,000 people). See Annex K. Water sewage and electric-service will be provided to 9 schools, health and social welfare services and mutual associations for community management and to supplement inadequate provision of municipal maintenance services. The essential purpose and innovative element of this program is to demonstrate the social acceptability and marketability of minimal housing to be sold at much reduced subsidy by the GOE. The underlying assumption is that although living space will be reduced the attractiveness of home ownership will offset loss of space and as a result the overall cost to the GOE will be substantially less. Such a housing solution, utilizing lower area and building standards than previously provided will allow governments limited housing budget funds to serve more needy people, while specifically targeting the solution to the affordability of families below the urban average income. Five dwelling solution options will range in construction cost from \$2,727 to \$4,498 and in area from a 4 M2 sanitary core to a 30 M2 three-room dwelling. The program includes credit funds and services to encourage beneficiaries to quickly improve the initial core unit up to maximum of three floors and 100 M2 of dwelling area.

At least 74,000 secondary beneficiaries are anticipated as the community is expanded over the mortgage period of the dwellings. Another 57,000 person years of

employment will be provided to construction workers and at least 2,100 jobs in commerce and institutions will be created.

2. Up-Grading Program: Existing communities in urbanized Helwan and Cairo will be improved and existing housing conserved as another approach to reduce the severe housing needs of the country. The poorly urbanized and illegal "informal" communities have previously not been included as a part of national policy and yet these areas are the major zones of housing opportunity and growth for low-income urban families.

This project will provide basic services of water, sewerage and facilities of (9) schools, (4) health and (3) community centers to an estimated 112 hectares in an estimated six informal communities of Helwan and North Cairo (Ain Shams). Residents will also be provided with access to home improvement financing consistent with their income. An estimated 10,000 families (50,000 people) will initially and directly benefit and ultimately as the communities expand about 15,000 additional families will be added. Another 25,000 families who live outside the upgraded areas will share community facilities and may be classified as secondary beneficiaries.

The innovative element of this program is the introduction of technical assistance to legalize informal areas with land titles and improve their capacity to contribute to resolution of the severe housing shortage with urbanization and credit. A second innovative element is the intent to rely upon organized associations of community residents to achieve a higher level of environmental sanitation and maintenance.

The MOH and CFE, utilizing Egyptian consultants and technical assistance will design and build the program after first determining that a high degree of receptiveness is present among community residents.

3. Vocational Training: A distinct part of the community upgrading program in Helwan is the construction of a Vocational Training Center for the building trades as part of a national plan to expand vocational training. The Center will supplement the supply of craftsmen available for the AID/GOE project and upgrade the skills of existing craftsmen who may participate as small contractors in home improvement activities. About 900 persons will be graduated from the Center each year. Vocational training for women and youth is a part of the community center program of the Ministry of Social Welfare mentioned above in the project. See Annex I for more details.

4. Institutional Development:

- a) Ministry of Housing (MOH). An Implementation Unit (IU) directed by a Steering Committee composed of key representatives of participating ministries is to be established under the chairmanship of the Minister of Housing. The 50 to 60 professionals of the IU will work with US and Egyptian A/E consultants and technical advisors to organize, integrate and monitor the social and physical development components of the project.

The innovative element of this program is the recognition of the interrelationship of physical and social components particularly housing cooperatives and community associations, and their inclusion in the M.O.H. administration, for the success of elements of a new housing policy.

As a result of the project the MOH will have upgraded its capacity to coordinate and replicate several strategies of low cost housing to resolve Egypt's housing needs. The MOH will have upgraded its capacity to investigate and make recommendations on a national scale regarding housing and land policy.

- b) Credit Foncier d'Egypt (CFE): Mortgage financing and home improvement credit oriented to the low-income worker under normal and (relatively) unsubsidized banking procedures is to be introduced to Egypt as a part of this project. The "Semi-public" CFE, with the help automatic data processing equipment and US Technical Assistance, will offer an expanded range of services including savings accounts which have never been available before to the target income group while also serving as sole financial, and fiscal agent for the project to the MOH. In addition the CFE will provide ✓ \$28 million as bridge or interim financing during the project implementation period.

As a result of the project an investment fund will be created in the CFE for use by it and the MOH for further investment in housing to benefit families with below medium annual income and establish a pattern for further involvement of semi-public banking institutions to resolve the housing problem. (See Annex P).

B. RELATIONSHIP OF THE PROGRAM TO AID PROGRAMS:

The Program is directly supportive of AID overall objective of improving the quality of life of the

beneficiaries and it ties in with the strategy of broadening the base and improving the services to the urban poor. It also compliments the objectives of the Urban Health project which emphasized an intergration of services, outreach and preventive health, and the grant to the Ministry of Social Affairs which ties in directly by providing training to staff workers of the social centers who will stimulate community development and outreach in both upgrading and new housing areas. A similar approach to urbanization upgrading without community development is being developed under the capital development program of AID. This project will allow a direct evaluation of the beneficiary contribution of community associations to long term viability and maintenance of utilities for water supply in Cairo and sewage services in Alexandria.

C. RELATIONSHIP OF THE PROJECT AND NATIONAL HOUSING POLICY:

Current housing investments in Egypt are governed by the "National Five Year Plan" adopted by the Government in 1977. While the Five-Year Plan speaks encouragingly about the need to improve recovery of housing investments and reduce subsidies and some building standards, the investments which are planned do not reflect a radical departure from previous policies or little evidence of a comprehensive grip on the nation's problems in this regard.

A planning and evaluation division will be established as part of the MOH implementation unit of the AID/GOE project. The continuous flow of information generated by the evaluation division as a result of experiences will be made available to the Ministries of Housing and Reconstruction and will serve to provide guidance for structuring of a new national housing policy to guide the development of future solutions to the Egyptian housing problem. Technical assistance will be provided to the planning and evaluation division to assist in a new housing and urban land policy to be adopted by the Government. Further information concerning the housing component of the current Five-Year Plan can be found in the Reading File.

III. PROJECT ANALYSIS

A. Economic Analysis

The economic analysis of the housing project was designed to:

1. Compare the project with other current housing programs on an economic basis.
2. Determine that the project provided a sufficient level of direct and indirect benefits to justify the capital commitment required.

The lack of extensive economic data combined with the economic climate in which the project is to be implemented precluded the use of some of the preferred methods of project analysis. Nevertheless, sufficient data and information was available to indicate the attractiveness of an acceptable rate of return on funds invested. The thorough analysis is detailed in Annex V. The methodology used was a least cost analysis limited to available data.

The highlights of the analysis are :

1. Economic construction cost for a 10x2 core house in this project is 9% lower than a similar unit built by the informal private construction sector; and, about 29% lower than comparable space in a GCE five story walk-up apartment, but with substantially lower standards.
2. The project core housing solution is the least expensive in terms of cost per beneficiary : 9% less than an informal sector core house, and 69% than an apartment in a GCE five story walk-up housing, assuming only one family occupied versus two in comparable core housing space, and due in part to reduced building standards.
3. The AID/GCE project reaches its target income group and is among the most affordable of the current GCE sponsored or co-sponsored programs.
4. The project provides for greater or equal recovery of housing funds than any previous or planned GCE low income housing project. Consequently, the project is among the most replicable and least subsidized of the GCE projects.
5. Construction of new rooms by the private sector will eventually be equal to 4 times the initial housing construction costs in the project, and expand the initial floor space by six times. Thus with an initial economic investment of \$ 11.2 million by the project in housing the private sector will eventually add \$ 44.7 million (in constant terms)

for horizontal and vertical expansion to ultimately house 20,091 families in 30m² units. To provide the same number of families in apartments in five story walk-up (60m²) the GOE would have to spend \$ 177.4 million. This is over 3 time the ultimate cost of housing in this project and provided only twice as much space. Further, the initial investment in the AID/GOE project is only one sixteenth the cost of building 5 story walk-up apartments.

6. In comparing the project's two major components, the new community and the upgrading program, it was seen that the new community can provide immediate beneficiaries with full utilities and streets at less than 2/3 the cost per beneficiary of the upgrading component.

7. The project uses desert land and thus preserves valuable agricultural land.

8. The housing Project will provide direct and indirect economic benefits to : -

- 1- Capital formation among low income Egyptians.
- 2- The private construction sector.
- 3- Mortgage lending and other public institutions.
- 4- The health and education of residents.

A definitive and absolutely conclusive demonstration of comparative cost effectiveness with all possible solutions to Egypt's housing problem is not feasible due, in part, to incomplete data and difficulties presented by the GOE's price support policy. Despite these limitations and with the admittedly tentative nature of available data, it is evident that the project represents a significant improvement in budget savings and level of recovery for a given number of beneficiaries over previous programs. Similarly, within the minimum specifications established to create an environment which is safe and sanitary, the project promises to provide shelter and land tenure to a sector of the population with incomes below the median for urban Egyptian families. Accordingly, the project is judged a cost effective solution to the housing crisis of the country.

B. Social Soundness

1. Program Impact

a. General

This program utilizes the medium of the physical construction of shelter and community facilities to introduce increased access of the urban poor to savings better health, education, and social services. The long term vitality, maintenance, and growth of these services is regarded as essentially tied to an intensive program to stimulate full community participation of beneficiaries by means of organized cooperatives and community associations.

Both the upgrading program and the core-unit concept take as their premises practices common in informal settlements and families in Egypt of encouraging incremental expansion and improvement of dwellings by the residents. The aim of the project is to demonstrate the policy implications to make resources accessible for this while providing direct initial investments only for those services which are lacking and cannot be provided on an individual and informal or unplanned basis. The GOE does not have sufficient resources to meet the needs in rapidly growing areas and to provide both housing and full services in new communities.

b. New Community

Underlying the construction of a new community in Helwan is the assumption that a demand exists among workers, earning less than the median of \$ 812 currently living in Cairo, to relocate closer to their work and to buy the core units with land titles being offered. This assumption was verified through a market survey of 400 Helwan factory workers with income and residence characteristics that place them among the group of potential beneficiaries for which this project is intended. The survey found that the distance between the workers' homes and their place of employment averaged 27 kms. This is a major source of dissatisfaction with the current housing situation. More significantly, 67.6% of those interviewed expressed a desire to relocate to Helwan and buy one of the housing alternatives offered; 18.4% were receptive to both the idea of relocation and being housed in core units, but claimed that the monthly payments were beyond their means. Only 14% were totally unreceptive, expressing a preference to remain in their neighborhoods. When asked to express a preference between a one-room core unit and land ownership and a three room apartment in

Helwan for the same monthly payment, 42% opted for the former alternative. This preference was greatly influenced by the personal freedom, the opportunity to expand to suit one's needs and have a garden which the core unit offers.

c. Upgrading Communities

Preliminary surveys were undertaken in five of the six selected sites in order to take into account priorities for improvements, prevailing socio-economic conditions and cultural values in designing the upgrading components of the project. These surveys indicate that the residents' perceptions of their own situation and their priorities are not limited to the problem of being poorly housed, but include the inadequacies of social, physical and economic resources which affects the quality of life. The comprehensive package of services being provided by the program reflects these perceptions and priorities by providing improvements in housing as well as social and physical services.

2. Participation by Beneficiaries

The upgrading program will make use of the practice of pooling resources for the maintenance and organization of services which are inadequately provided by the municipality. Mutual assistance efforts will be encouraged through the organization of community associations. In the new community cooperatives and voluntary community associations will compete with one another to demonstrate which method of participation is most effective in providing beneficiaries the services required for a safe and sanitary environment. Access to credit and technical assistance is to be provided to encourage beneficiaries' participation in improving and expanding their own dwellings.

3. Effect on Egyptian Women

The program will benefit women in a direct way through provision of access to shelter which can be expanded to fully accommodate all of the important housing functions and which is close to the husband's work so as to provide greater time for family life.

The increased access to health centers which include maternal and child health care, day-care facilities and educational facilities within the communities will combat the perpetration of a high rate of female dependency which in turn effectively accounts for the low rate of participation in the labor force. (See Annex I).

4. Spread Effect

It is expected that the impact of the project will spread well beyond the boundaries of the project. People not directly participating in the project will see the improvements being made through the upgrading program. They will be motivated to initiate improvements on their own or seek outside assistance in doing so. Also, the health, educational and recreational facilities will be utilized by persons who are not participating directly in the project. More importantly as people became exercised to self improvement and organizationally oriented, through coops, and family associations, they will become more active and productive participants in the control of their destiny through both their social and professional outlets.

As the GOE observes the policy demonstration aspects of the project, it can more effectively apply its resources for the benefit of a larger number of low income families.

C. TECHNICAL FEASIBILITY

1. Introduction

The building of the project presents no unusual problems of design or construction technique. Rather, the difficulties lie in the mobilization and management of engineers and constructors, and the availability of material and equipment to complete an undertaking that is relatively simple with respect to individual components but complex in coordination and timely implementation of the overall program. The two distinct physical elements of the project, the New Community at Helwan and the Upgrading Demonstration areas will be treated separately below. For further details, see Annex H, Technical Analysis and Annex J Building Systems Design and Materials Supply strategy.

2. Engineering Requirements

a. New Community Program. The site is located adjacent to the existing urbanized area of the City of Helwan bounded by a four-lane "King Khaled" highway which is under construction. Utilities will be designed to serve the initial population of 7,209 families plus the ultimate growth potential for a total population of 110,000 persons. Major utility components include the construction of a 400,000 gallon water storage tank, a temporary 1.5 MG per day package sewage treatment plant, electric transmission lines and power sub-station. Water, sewage and electric service will be brought to each lot in the new community site. Conventional building techniques for core house and community facilities will be utilized coupled with a program of development research to introduce appropriate materials and techniques for lower cost construction into the Egyptian market. Preliminary house plans and cost feasibility analysis have been prepared utilizing reinforced concrete frame construction; single wyth brick masonry infill for walls; and one-way flat plate reinforced concrete roof construction all calculated to support loads for an additional two stories in height. Alternate analysis indicates that bearing wall construction may prove more economical. Final selection of the building system will be determined based on study of potential innovative practices, price and materials supply conditions as the project develops.

b. The Upgrading Demonstration Area Portion of the project, covering five sites in Helwan and one in Ain Shams, is designed to establish a framework to improve and accelerate the process of home and community improvement and to demonstrate the means by which this efficient method of community development can achieve the desired level of service, sanitation and livability of standard urban areas. The Credit Foncier will provide home improvement loans in cash and 'in kind' from stockpiles of materials. Materials appropriate for high quality construction will be stockpiled assuring dependable supply and providing savings in transport cost and bulk purchases to beneficiaries.

Cooperatives will, within their jurisdictions, enforce a simplified building code; and the MOH, during the implementation period, will enforce a similar code in other project areas which will be referenced in individual beneficiaries sales contracts.

Major utility components of the program will include street paving, increased potable water services, solid waste collection stations and regularized system of sewage piping to leaching or holding facilities which can later be connected to an improved municipal sewage trunk line and disposal system. Home improvement loans will be offered based on standard and fully engineered plans to expand and make more livable existing dwellings.

c. Summary

Construction of the Helwan New Community is a straightforward undertaking which is clearly feasible. Construction in the Upgrading Areas is inherently linked with responsiveness of the area residents and will proceed incrementally in accord with community acceptance. Social surveys in the areas indicate a high level of favorable response to the proposed program which supports a finding of technical feasibility.

In both cases, preliminary engineering and architectural plans and cost estimates based on detailed site surveys have been prepared by Engineering Sciences-Parsons, a joint venture of two well known US engineering firms with previous experience on projects in Egypt. Those plans and related cost estimates are presented in Annex L and ES-Parsons Report with Addendum.

3. Capability and Availability of Personnel

The current intensive construction activity not only in Egypt but also in the remainder of the Middle East have made heavy demands on Egyptian management and technical personnel. Consequently, it is not possible to put full confidence in the integrity of local design nor give a high probability to the timeliness of construction. For these reasons, a U.S. Architectural firm holding prime responsibility for the new community is a necessity. To the greatest extent possible local A/Es will be used and a criteria for selection of the US A/E will be maximum use of local firms. However, construction supervision of the new community will be the responsibility of the US A/E Firm. In addition to overall planning and management responsibility, the US A/E will have direct design and supervisory responsibility for specific areas of concern among which are:

- a. Urbanization in the New Community
- b. Materials testing for construction in the New Community
- c. Training MOH staff in Modern Construction Supervision

d. Advise MOH in procedures for construction contracting, prequalifications and bid evaluations for the new community.

e. Construction supervision in conjunction with MOH and local A/E staff in new community. The US A/E consultant firm, in the course of executing services for construction supervision and materials testing, will analyze and from time to time make specific recommendations regarding the bearing capacity of masonry units employed in construction as part of the home improvement credit program of this project.

In addition, the contract with the A/E consulting firm for urbanization will provide for contingent assumption of responsibility for contract documents for housing, community buildings and urbanization in the upgrading program, in the event of default by firms contracted to provide professional services for this work.

House and community service building design will be performed by Egyptian A&E firms.

Engineering and architectural services for the upgrading program in each area--Kafr El Elw*, Rashid, Ghoneim, Izbet Zein, Izbet Sidqi (all in Helwan), and in Ain Shams -- will be provided by an Egyptian A/E firm.

Construction will be carried out by US and/or Egyptian contractors who have demonstrated a capacity to build projects of similar magnitude and complexity. An estimated 5700 man years of construction labor are required. Labor supplies in the Cairo area are regarded as adequate. US and Egyptian construction firms will have the opportunity to be prequalified and bid for contracts to execute all portions of this project. Selection will be based in all instances upon the lowest price quotation of all qualified bidders. Special attention will be made, however, to attract bids from small and medium-sized construction firms by means of dividing bid offerings into appropriate sized packages. In addition to making the entire offering available for a single price quotation.

4. Maintenance of Technology and Availability of Supplies

Community services and building design will be coordinated with the concerned ministries: Health, Education, etc., and will be consistent with their specifications.

A special training program for package sewage treatment plant personnel is part of the project. Formal agreements with government authorizing agencies for price controlled building materials assuring priority supply for the project is a condition precedent to disbursement for this project.

5. Recommendation

Project plans have been developed in sufficient detail to enable reasonable accurate cost estimating which, upon review, is judged to meet Section 611(a) requirements for reasonably firm project estimates.

* Subject to satisfying environmental issue.

D. Administrative Feasibility

The GOE through the MOH will be responsible for the overall implementation of the project.

A steering committee comprised of representatives of the various participating GOE agencies will be appointed to serve as a policy making body and to assist in coordinating the roles of the entities participating in the project. This same steering committee may also be responsible for the \$ 21 Million World Bank Project.

An Implementation Unit in the MOH headed by a director, will be directly responsible for orchestrating the inputs of various agencies and for overall management, supervision and evaluation of the project. The director will report to and be under the supervision of the MOH. He will be guided in overall policy by the decisions of the steering committee which will be chaired by the MOH.

The MOH has had a record in the implementation of conventional housing, and very limited experience with small expandable type dwelling construction. It is reasonably experienced in the various facets of qualifying, selecting, and contracting with A&E firms and construction companies for design construction of its housing projects. They will be assisted in the implementation of the project by a U.S. A/E firm and the technical assistance component of the project.

The Credit Foncier D'Egypte (CFE), an established financial institution with extensive experience in conventional middle and upper income mortgage lending, will be utilized as a firm through which project provided credit funds will be administered to the individuals seeking loans for the core houses or home improvement loans under the program.

Since the CFE does not have experience in the financing of low cost housing for persons in the income level of the target beneficiaries, technical assistance, staff training and required equipment will be provided under the project to assist them in upgrading their staff capability and procedures to adequately serve the needs of the project.

The organization and duties of the CFE is further discussed in Annex P.

In general, in terms of professional level education and training, the technical and administrative capability required to carry out various facets of the project exists.

The primary administrative deficiency is the lack of experience in the planning and implementation within an acceptable time frame of a project of this magnitude and complexity. To assist the MOH in overcoming this deficiency, an Implementation Unit staffed with qualified architects, engineers, managers, community developers, evaluators, and monitors will be established in the MOH to provide assistance, training, and other consultant assistance as required to assure timely implementation, monitoring and evaluation of the project.

An understanding has been reached with the MOH to form the implementation unit in the next several months and prior to signing the Grant Agreement. An official list of membership of the steering committee has not been issued by the MOH.

E. Environmental Assessment

The initial Environmental Examination (IEE), which was completed in January 1978, after having examined a checklist of environmental parameters, focused on several issues of potential environmental significance. An analysis of these concerns concluded that the environmental aspects of this project relate to both the construction period and the post construction period with special attention to be given to problems of air pollution, sanitary wastes, solid wastes and socio-economic issues. Based on the above findings, it was recommended that an environmental assessment be undertaken.

ES-Parsons was contracted in March 1978 to make an environmental assessment in accord with AID regulations. In their initial report which was submitted to USAID in May 1978, it was concluded that the ambient air quality from precipitate deposits of the Helwan Cement Company on the upgrading site of Kafr El Elw would render the feasibility of undertaking improvements on the site negative, unless significant investments were made by the cement plant to reduce the pollution. Special investment funds are being made available by means of other capital development programs of AID to the GOE to reduce environmental hazards. These funds may be utilized to assist the Helwan Cement Company reduce stack effluents over Kafr El Elw. It was recommended that environmental acceptability in the upgrading areas of Rashed and Ghoneim could be attained by draining and filling the existing stagnant water areas.

No significant environmental issues were found in the new community area. The environmental assessment has been developed in sufficient detail to enable a reasonable judgement that this project will, in itself, not have negative environmental effects but will rather be beneficial to Helwan and Cairo.

See ES-Parsons final report in backup reading material.

IV. The Financial Plan

A. Source of Funds

The total cost of the program is estimated at \$ 160 million. AID will provide a grant of \$ 80 million (\$50 in FY 78 and \$30 in FY 79). The GOE will contribute \$ 80 million equivalent in-kind and cash, which will represent about 13 percent of the MOH budget for the five-year construction period. The MOH included \$ 1.4 million in the CY 78 budget, for its initial contribution to the project.

In order to assure adequate flow of operating funds for the construction phase of the program, an agreement was reached with CFE Administrator/Fiscal Agent to advance up to \$ 28 million as interim financing. 1

To assure adequate GOE input in FY 79, the Grant Agreement will contain a condition precedent to the first disbursement requiring evidence that the GOE/MOH has adequately budgeted for its CY 79 input.

AID funds will be utilized for all foreign exchange requirements, which are estimated at approximately fifty percent (50%) of the US cost of the project. Major components of those costs will be the procurement of technical services, participant training, and commodities which will be procured directly from the US. An illustrative list of the types materials which will be imported for the project is shown below:

- Wood for formwork, doors and windows
- Electric cable and fittings
- Transformers and switch gear
- Street lamps and fittings
- Water and waste water pumps and controls
- Prefabricated sewage treatment plant
- Specialized construction equipment and materials (explosives, blasting mats, etc-.)

Foreign exchange costs are included for major electrical products included in "shelf-items". These electrical products which are also produced in Egypt are included here because the E.S. Parsons A&E Firm have indicated that the production quality control and technical specifications may not be adequate to assure the design level of reliability and safety.

The FX and local currency cost of the program is reflected in Table I. A schedule of disbursement is shown on Table II.

1. For additional information on the CFE see Annex P & the Richard Pratt Associates Report Dated May 17, 1978.

B. Project Financial Control

Project control mechanisms are designed to account for, monitor and control US contribution to the project for both domestic goods and services and imported goods and services. The process and the control of the disbursement of funds is detailed in Table 7 and 8.

Table 7 deals with the procurement of imported goods and services. The system outlined in the table provides for accountability at every step of the operation and carefully separate the handling of funds from the authorization for funds expenditures. Table 8 provides a similar breakdown and analysis of procurement of local goods and services. The table references the overall agreement which determines the method, timing, and agreed arrangements for the transfer of US funds to the project, and also documents the control mechanism for the ordering of local goods and services and method of payment.

It is envisioned that immediate payment of local funds will be made by the CFE upon approval of the Implementation Unit (I.U.) and these disbursements will be charged to a project loan account. On a monthly basis the accounting and control unit of the IU will examine disbursement occurring during the previous month allocate responsibility for funds disbursed to the GOE and to USAID and will solicit funds from USAID and GOE. These funds will then flow directly to the CFE and reduce the loan balance of the project. As in the case of the procurement and control for imported items local procurement and control provides for complete separation of authority between disbursing and authorizing agents and provides a continuing accurate account of the position of the CFE, GOE and USAID in the project.

C. Mortgage Credit

1. General

The CFE will serve as the mortgage banker for both the new community and in the upgrading areas and will act as the Agent of the MOH steering committee and Implementation Agency employing lending and servicing regulations which are established by the Committee. The CFE will establish a branch office in the Helwan new community and a small office in Ain Shams. Until the branch office is built in Helwan, the CFE will utilize space in the Governorate's district office in Hewan to receive savings, sales and loan applications for the new community and upgrading areas.

2. Eligibility Criteria for New Community and Upgrading Areas:

To be eligible for loans the applicants must:

New Community

- a. Be employed in industry in Helwan and reside in areas other than Helwan or be a tenant in one of the upgrading areas in Helwan.
- b. Have a level of household income such that monthly house payments will not exceed 20 percent of income and his income must not place the buyer above the 60th percentile group.
- c. Not own any other dwelling unit within the metropolitan area of Cairo at the time of purchase of the core unit.

Upgrading Areas

- a. Be occupying government owned land and exercised his right to purchase the land.
- b. Be able to demonstrate that he has occupied private owned land for a minimum of 15 years and is in the process of obtaining permanent title by reason of his 15 year occupancy.
- c. Be able to demonstrate that he is in the process of purchasing private owned land if he has occupied the land for less than 15 years.

3. Loan Terms and conditions

The interest rate on all loans in the new community will be 8% with repayment within 30 years. The downpayment on all units less than 30 M2 will be 5% and for 30 M2 or more 10%.

The interest rate on home improvement loans will be 8% for a term not to exceed 10 years.

Following the recommendation of the 1976 Finance Reports, the interest rate subsidy common in publically assisted housing programs has been modified to make it more visible and eliminate its long terms adverse

effects on housing financial resources in this program. The subsidy will be applied as a front-end discount representing the difference between the 7% MOH suggested subsidy rate and the 8% market rate which will be charged by CFE on loans. This discount will also serve as a deterrent to speculation, as the penalty for violations of sale terms will require payment of the total sum of the front end discount.

To guard against speculation all residents of the New Community will be required to agree in the housing loan contract, not to sell their home without prior approval from the cooperative or the MOH for a period of three years.

The requirement that MOH enforce anti-speculation measures against unauthorized sale, rent or occupancy of new dwelling solutions shall be discontinued three years after completion of disbursement of AID funds. Enforcement thereafter shall be at the discretion of individual cooperatives and community associations.

Payroll deductions from wages by the employer will be the principle method of collecting mortgage payments. In the housing cooperatives, where ownership is held by the cooperative, the finance committee is empowered to monitor rent receipts, counsel delinquent members and if necessary evict families not conforming to the rules and regulations

Home improvement loan payments in the New Community will become a surcharge to monthly mortgage under the payroll deduction system in factories.

The CFE as the administrator and fiscal agent and collection agent for both the core housing loans and the improvement loans will also be responsible for foreclosing on any loans where the borrower fails to make payments in accordance with the terms of his contract after a reasonable forbearance period.

4. Credit Foncier (CFE) Fee

The CFE will be paid a two part fee for its financial services divided as follows:

	<u>New Core Houses</u>	<u>Improvement Loans</u>
disbursement service fee	1.5% of loan Disb.	2% of Loan Disbursement
Monthly collection fee	1% pf mo. pay collection	1% of mo. pay collection

5. Affordability

Homebuyers will be offered the choice of a graduated payment mortgage or a traditional level payment mortgage. In order to broaden the purchasing power of the poor majority and allow more low income families to participate in the program, the graduated payment mortgage (GPM) will be offered for the first time to Egyptian homebuyers. Under the current plan the GPM will increase each year in an amount equal to 10% of the first annual payment. For a 30 year loan the actual rate of growth is 4.7% per annum. If incomes continue to increase at the rate of 10%, the ratio of payment to income falls from 20% the first year to 15% by the 10th year to 9% by the 20th year.

Table III provides a summary of the financing and affordability for the core housing units. The assumptions used in the analysis include a 30 year mortgage at 8% and a first year payment equal to 20% of household income.

In addition to the six housing solutions indicated in Table III, two additional solutions will be tested in the model house section constructed prior to full project development mobilization. Purpose of the model solutions is to gauge initial buyer receptivity to the several solution options planned for the project.

Solution VI(a) will consist of a 50-65m² lot without construction of any kind (similar to solution VI - 100 m² serviced lot). This option will cost about \$1,800. With a 5% down payment (\$90) the monthly mortgage charge is \$11.38 under level payment or \$5.70 under the graduated payment method. Corresponding minimum beneficiary income groups fall in the \$683 and \$342 per year groups, respectively.

Solution Ia will consist of the Type I solution enclosed with a masonry screen wall of one wyth of brick - 2 meters in height. Brick pilasters will be installed approximately every three meters of wall length. A reinforced concrete footing will be installed to accommodate a second wyth of brick later in the event the wall is to be utilized for a structural purpose. This option will cost about \$3,393 or slightly more than the Type III option with corresponding specifications for monthly mortgage payment and qualifying household incomes.

Table V reflects the income levels reached in both the new community and upgrading program. All of the core housing units are affordable by families in the lower half of the income scale and the lowest cost 4.3 M2 sanitary core solution is within the financial means of families up to the 70th percentile level.

6. Home Improvement Program

Following an initial training period in conjunction with development and occupancy of a model house site, the major portion of the New Community Home Improvement Loan Program will begin in early 1981.

It is estimated that 5,900 loans will be approved for new community program beneficiaries and a total of 5,000 loans are anticipated in the upgrading sites.

The average dwelling unit in the Program is a 10 M2 unit which will require an initial monthly charge in the graduated mortgage payment system of 9.40 per month (14% of the average monthly income). The monthly charge for the average home improvement loan at 8% for 10 years will be 8.00 for a 11 M2 room costing C70. The total charge of 17.4 per month represents 26% of base income. This is regarded as within the reasonable capacity of program residents in view of the supplementary income of these families.

7. Cost Recovery

In the new community the cost of land, streets, drainage, on-site water supply, sewage, core housing and construction services will be recovered from the beneficiaries through the sale of core houses. Prime commercial land and approximately 512 lots for higher income families will be sold at market value to offset part of the cost of offsite infrastructure, schools, health centers and community facilities. The proceeds from the sales of these lots will be provided to the CFE for additional loans to lower income families. For additional information pertaining to which cost items are recoverable in the program see Table VI.

TABLE I
SUMMARY COST ESTIMATE
AND FINANCIAL PLAN

(US \$ 000,000)

SOURCE USE	AID GRANT		GOE		TOTAL
	FX	LC [†]	FX	LC	
Land				6.3	6.3
Urbanization	33.5			16.0	49.5
Community Facilities	1.5	6.1		2.4	10.0
Housing	1.2	7.1		2.5	10.8
Improvement Credit	-	4.0		3.5	7.5
Design Supervision	3.3	-		1.8	5.1
Administration	-	-		3.8	3.8
TA/Training/Evaluation	3.0	0.2		-	3.2
Inflation Factor	-	15.1		36.3	51.4
Contingency (15%) **	2.0	3.0		7.4	12.4
Subtotal	44.5	35.5		80.0	
Total	80.0		80.0		160.0

† LC secured by Egyptian Central Bank Mechanisms From FX

** Includes in contingency materials, design, supervision, administration, and training.

TABLE II
SCHEDULE OF DISBURSEMENTS
(\$ 000,000)

ITEM	1978		1979		1980		1981		1982		1983 (1/2YR)		Summary		Total
	AID	GOE	AID	GOE	AID	GOE									
A. NEW COMMUNITY PROGRAM															
Land		5.7													
Urbanization			2.5	.7	.7	.9	4.2	3.8	8.0	6.0	2.2	1.1	-	5.7	5.7
Community Facilities					.8	.2	2.3	.8	.8	.2			17.6	12.5	30.1
Housing				.1	1.0	.4	1.7	.6	4.4	1.0	1.2	.4	3.9	1.2	5.1
Improvement Credit					.2		.4		2.7				8.3	2.5	10.8
Design/Supervision (8%)			1.8	.2	.5	.1	.4	.1	.4				4.0	-	4.0
1-Sub-Total		5.7	4.3	1.0	3.2	1.6	9.0	5.3	16.3	7.2	4.3	1.5	37.3	22.3	59.4
B. UP-GRADING PROGRAM															
Land				.6											
Urbanization			.9	.4	4.0	1.0	4.0	1.0	4.0	1.0	3.0	.1	-	.6	.6
Community Facilities			1.0	.2	.6	.3	.6	.3	1.5	.4			15.9	3.5	19.4
Housing	-	-	-	-	-	-	-	-	-	-	-	-	3.7	1.2	4.9
Improvement Credit				.2		.3		1.0		1.5			-	-	-
Design/Supervision (6%)				.5		.3		.3		.2		.1	-	3.5	3.5
Sub-Total		0	1.9	1.9	4.6	1.9	4.6	2.6	5.5	3.1	3.0	.7	19.6	10.2	29.8
C. ADMINISTRATION-MANAGEMENT															
MOH Impl. Unit		0.1		.3		.5		.6		.7		.3	-	2.5	2.5
CFE Branch Bank		0.3		.1		.2		.3		.3		.1	-	1.3	1.3
Tech. Assistance	.1		.6		.7		.5		.6		.3		2.8	-	2.8
Training	.1		.2		.1								.4	-	.4
2-Sub-Total	.2	.4	.8	.4	.8	.7	.5	.9	.6	1.0	.3	.4	3.2	3.8	7.0
3-Sub-Total	.2	6.1	7.0	3.3	8.6	4.2	14.1	8.8	22.4	11.3	7.6	2.6	59.9	36.3	96.2
D. INFLATION FACTOR															
													15.1	36.3	51.4
E. CONTEGENCY															
													5.0	7.4	12.4
GRAND TOTAL													80.0	80.0	160.0

TABLE III

SUMMARY CHART
 DWELLING SOLUTION OFFERED IN THE HELMAN
 NEW COMMUNITY PROGRAM (\$- IN U.S. DOLLARS)

Type	Description	Land & Urban Cost	Solution Const'n Cost	Total Cost	Minimum Down payment (at 5%)	Base Amount	Less Anti-speculation Discount	Mortgage Amount	Required Monthly Payment A=Level B=1st. Year GPM	Annual Income of Beneficiaries (at 20% of income)	Percent of Households Qualifying by Family Income
I	4 M2 Sanitary Core-50-65 M2 lot (800 Units)	\$ 1832	\$ 895	\$ 2,727	\$ 545 (20%)	\$ 2,182	\$ 204	\$ 1978	\$ A 14.51	\$ 871 level	46% +
					\$ 136 (5%)	2,591	307	2284	B 8.02	529 GPM	70% +
II	10 M2 solution (toilet + 1 room partially enclosed) 50-60 M2 lot (1,300 Units)	1832	1112	2,944	589 (20%)	2,355	220	2135	A 15.67	941 level	43%
					147 (5%)	2,797	332	2465	B 9.51	571 GPM	65% +
III	10 M2 Solution (toilet, 1 room + Footing adnl. room) on 50-60 M2 lot (2,000 Units)	1832	1426	3,258							
					163 (5%)	3,095	367	2728	B 10.53	632 GPM	60%
IV	20 M2 Solution (toilet, Kitchen, 1 room, footing adnl. - room) 50-60 M2 lot (2000 units)	1832	2091	3,923	196 (5%)	3,727	442	3285	B 12.68	761 GPM	55%
V	30 M2 Solution (toilet, Kitchen, 2 rooms) 50-60 M2 lot (597 units)	1832	2666	4,498	450 (10%)	4,048	480	3568	B 13.77	826 GPM	48%
VI	100 M2 lot (512 lots)	3664	-	3,664						No limit	
										No limit	

Note: MORTGAGE PAYMENT 8% INTEREST ON DISCOUNTED SALES PRICE EQUALS EFFECTIVE (7%) INTEREST RATE, 30 YEAR TERM.

TABLE IV

COSTS ATTRIBUTED TO PLOT AND MORTGAGE CHARGES
IN THE NEW COMMUNITY
 (in US \$ 000,000)

	<u>Total Investment</u>	<u>Plot/Mortgage Cost</u>	
Land	£ 5.7	4.8	(1)
Urbanization (Off-Site)	6.5	-	(2)
" (On-Site)	23.6	7.8	(3)
Community Facilities	5.1	-	(4)
Housing	10.8	10.8	(5)
Design/Supervision -(6% Egyptian A/E fee)	2.7	1.7	(6)
Sub total	<u>£54.4</u>	<u>£25.1</u>	(7)
Improvement Credit	4.0		(8)
Total	<u>£58.4</u>		

Note

- 1- Land cost is prorated to exclude area devoted to community facilities. Cost is divided among "Lot Units". 50 - 65m² Lots = 1 "Lot Unit"
 100m² Lots = 2 "Lot Units"
 £ 4.8 million ÷ 7721 "Lot Units" =
- 2- Table VI item A-4
- 3- Site preparation cost and utilities are prorated to exclude area devoted to community facilities
 £ 7.8 million ÷ 7721 "Lot Units" =
- 4- Table VI item A 7-3
- 5- £ 10.8 million ÷ 6697 dwelling solutions
- 6- Design/Supervision will be recovered at a rate represented by the fee schedule of Egyptian professional A/E firms prorated to exclude design of off-site urbanization and community facilities.
 £ 1.7 million ÷ 7721 "Lot Units" =
- 7- Average recuperation per beneficiary :
 Total Solutions I - V
 Solution VI (2 Lot Units)

 Average for 7.209 Beneficiaries
- 8- £ 4.0 million for Improvement Credit is also fully recoverable from monthly charges.

Lot Unit	Core House
£ 622	
£1.010	
	£1613
200	
<u>1832</u>	<u>1613</u>
£ 3445	
£ 3664	
<u>£ 3461</u>	

TABLE V

HOUSE HOLD INCOME
(US DOLLARS)

ESTIMATED NATIONAL
ANNUAL INCOME DISTRIBUTION
EGYPT'S URBAN POPULATION 1978

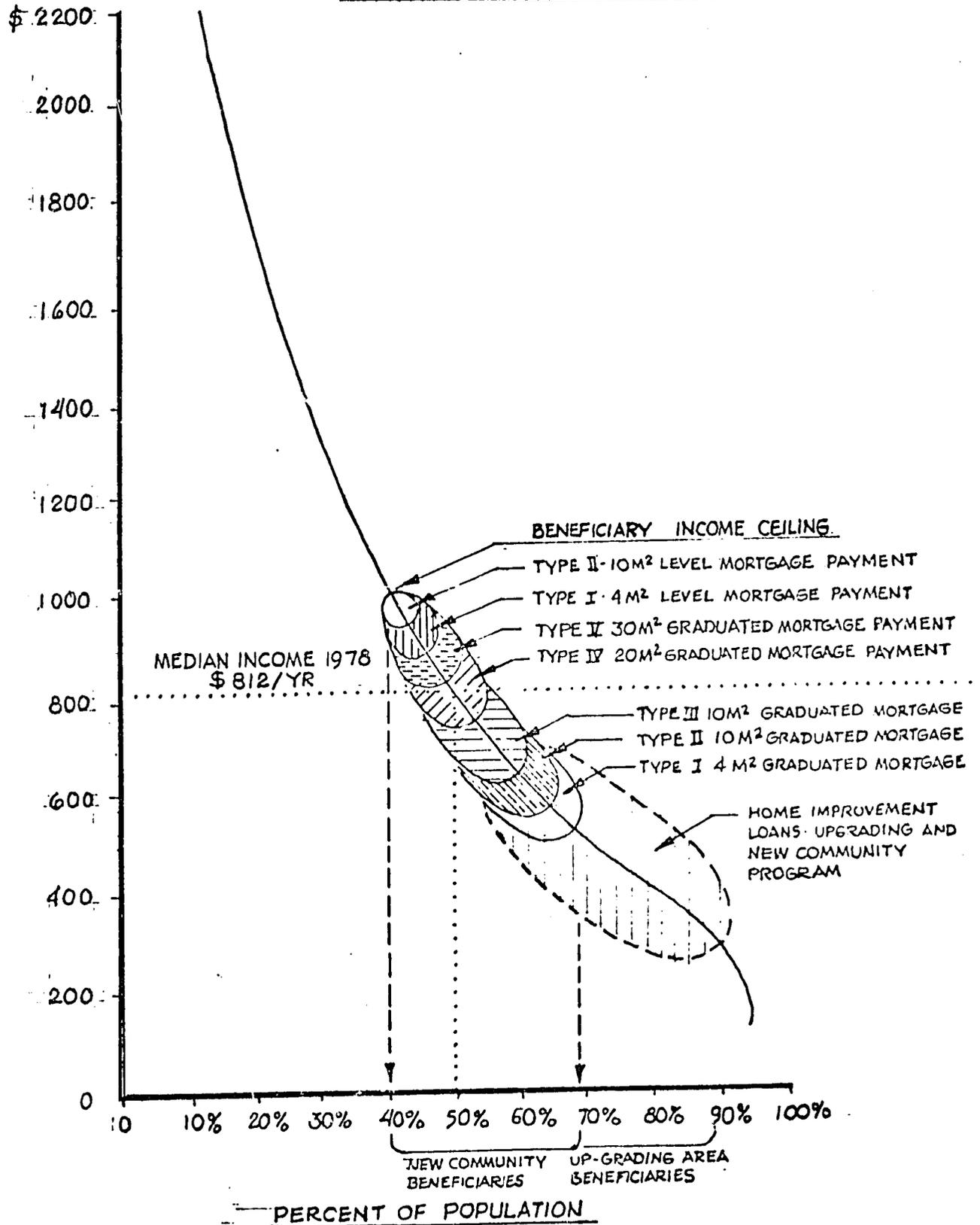


TABLE VI

SOURCES OF RECOVERY OF PROGRAM COSTS

<u>COST ITEM</u>	<u>RECOVERY SOURCE</u>
<u>A. New Community</u>	
1. Land Value	Plot Charge
2. Site Preparation	" "
3. On-site Infrastructure	" "
Water Supply	" "
Sewerage	" "
Solid Waste Holding Stations	" "
Roads	" "
Electricity-Street Lights	Electricity Tariffs
4. Off-site Infrastructure	
Water Supply	Not Recovered
Sewerage	Not Recovered
Roads	Not Recovered
Electricity	Electricity Tariffs
5. Core Houses	Plot Charges
6. Core Expansion-Improvement	Loan Repayments
Loans	
7. Community Centers, clinics, schools	Not Recovered
8. Commercial	Lease and Sale proceeds
<u>B. Up-Graded Communities</u>	
1. Land Value	Plot Charge share on Government land
2. Site Preparation	Not recoverable
3. On-Site Infrastructure	
Water Supply	Partially/Water Tariffs
Sewerage (Including cesspits)	Not Recovered
Roads	Not Recovered
Paths	Partially by Assessment
Solid Waste Holding Stations	Clearing Tax
Electricity	Electricity Tariff
4. Off-Site Infrastructure	
Water supply	Not Recovered
Sewerage	Not Recovered
Roads	Not Recovered
Electricity	Electricity Tariffs
5. Core Expansion, Improvement	Loan Repayments
Water/Sewer Connection Loans	
6. Core Houses (Relocation)	Plot Charges

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7. Community Centers, Clinics, Schools	Not Recovered
C. <u>General Program Costs</u>	
1. Manpower Training	Not Recovered
2. New Products Development-Test	Not Recovered
3. Design and Supervision Fees	Design/Supervision will be recovered at a rate represented by the fee schedule of Egyptian professional A/E firms prorated to exclude design of off-site urbanization and community facilities. The Fee schedule is estimated at 6 % of the cost of the construction components of the project.
4. Interest during construction	Plot Charges, Except where applicable to non-recovery items, e.g. schools, off-site infr.
5. MOH Project Management	Not Recovered
6. Technical Assistance	Not Recovered

PROCUREMENT OF IMPORTED GOODS
AND SERVICES

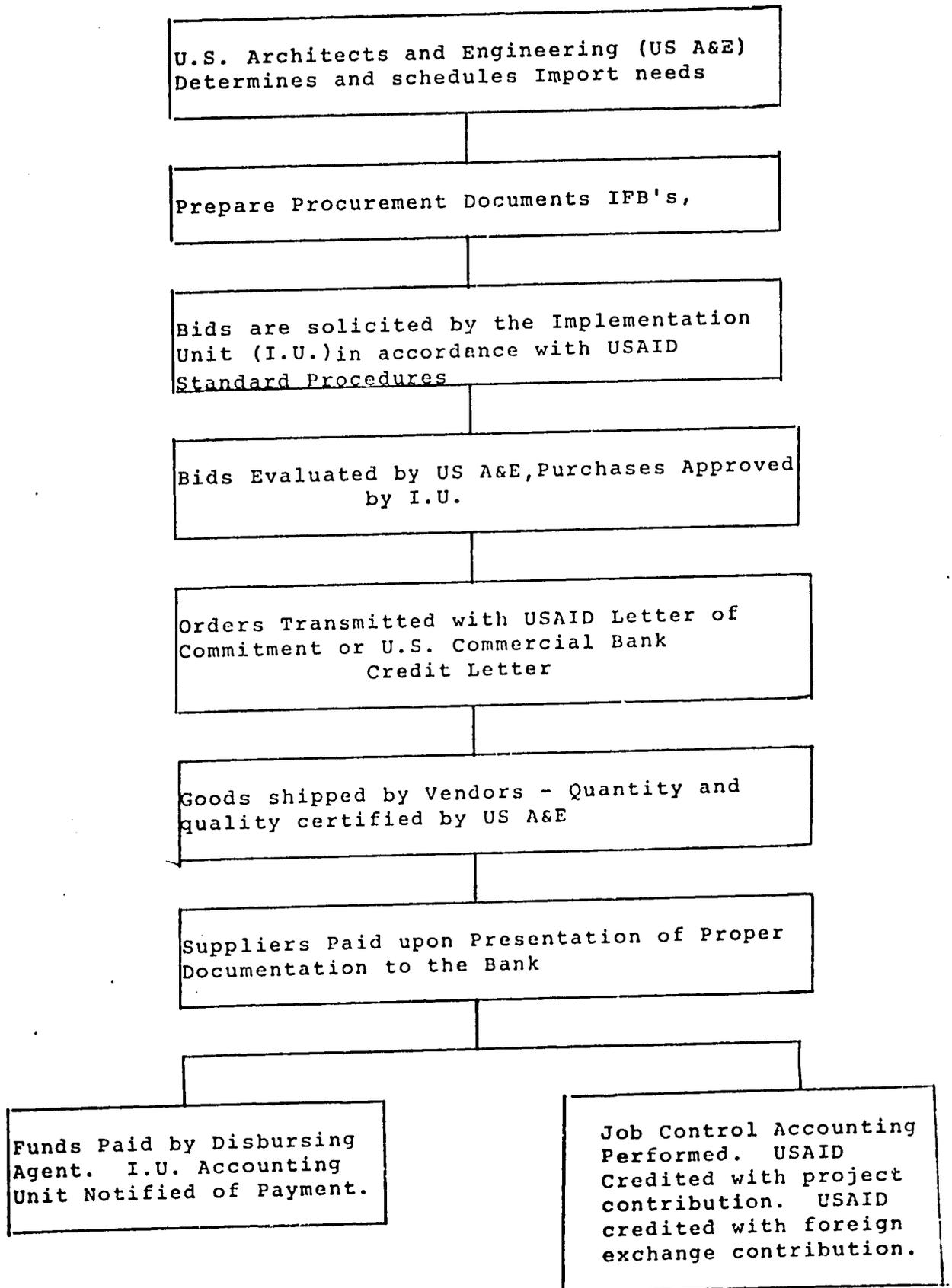
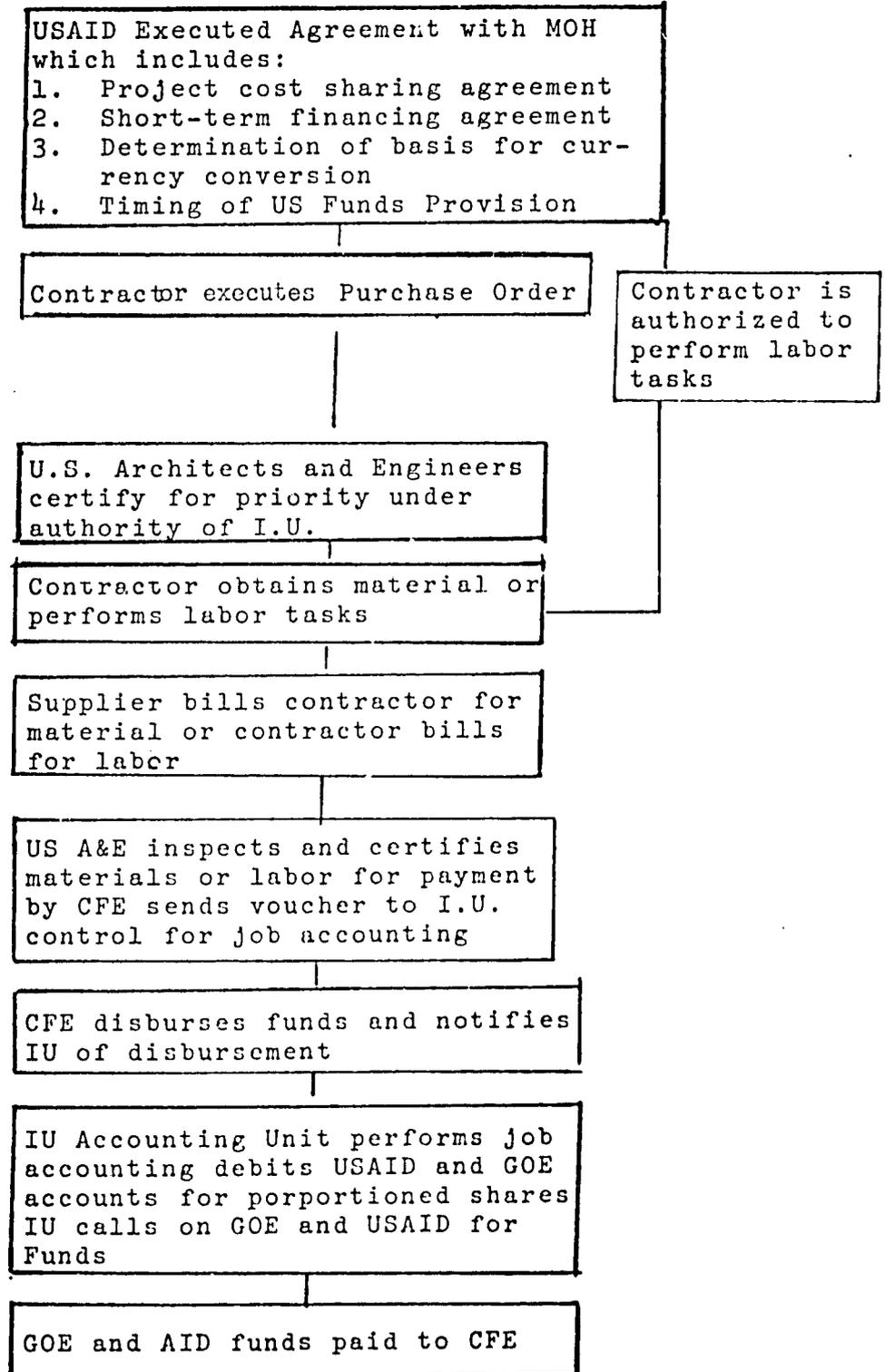


TABLE VIII
LOCAL PROCUREMENT AND FINANCIAL CONTROL



V. IMPLEMENTATION PLAN

A. General

The COE organization responsible for carrying out the project is the Ministry of Housing (MOH). The group comprising a project Implementation Unit will be set up within the MOH to discharge this responsibility:

- The Project Steering Committee which will have overall responsibility for policy, planning and inter-governmental and private sector agency coordination.
- The Project Implementation Agency which will be in charge of all day-to-day implementing activities--procurement of architectural, engineering and construction services, commodities and equipment, supervision and inspection of construction, community development services, monitoring and evaluation followup. All plans, contracts and related documents will be submitted for AID's concurrence.

The Organizational Framework of the MOH Implementation Unit is shown as Annex H and the related functional statement of duties and activities of the various responsible offices is set forth in Annex O.

B. Engineering and Construction Services

All engineering and construction services will be secured by the MOH through contracts and administered by the Project Implementation Agency.

1. Helwan New Community

Engineering services for off-site infrastructure--water sewage, electricity, roads, etc.-- design and construction management will be provided by a U.S. Architect-Engineer (A/E) firm.

Design of houses and community buildings will be provided by Egyptian A/E firms.

Infrastructure, site development construction and house construction will be done pursuant to AID policy and regulations.

Project construction is expected to be completed June 30, 1983. Timing of major design and construction events are shown in Annex M, Design and Construction Schedule.

2. Community Upgrading Program

Engineering and Architectural services for the upgrading programs in all areas --- Kafr El Elw, Rashid, Ghoneim, Izbet Zein, Izbet

Sidqi and Ain Shams --- will be provided by Egyptian A/E firms.

All infrastructure and utilities improvement work, and construction of community buildings will be undertaken by Egyptian contractors under contract with MOH.

Individual home construction/improvement will be handled by small local contractors, with the staff of the Project Implementation Agency offering technical advice and assistance to the home owner.

C. Procurement of Commodities and Equipment

It will be necessary for the MOH to procure certain materials and equipment directly from vendors rather than through the construction contractors. Such procurement will be specified by the U.S. A&E firms under the authority of the Project Implementation Unit using standard AID procedures for US-funded procurement.

D. Financial Controller-Administrator

The CFE as the Financial Administrator-Controller of the project, will receive funds for the project from the GOE and AID and make disbursements to contractors, participating government agencies, and non-governmental institutions as required in the implementation of the project.

All financial reflows from the project will be made to the CFE either directly by beneficiaries or through intermediary participant agencies such as cooperatives or community organizations.

E. Home Expansion and Improvement Credit

Home Expansion and Improvement Credit financed under the project will be administered by the CFE utilizing its own personnel for credit authorization, financial control and collection. Credit will be advanced both in cash and in building materials.

Promotion and technical supervision of home improvement loans will be executed by special teams assigned to the CFE from the Implementation Units Community Services and Construction Supervision Departments.

Construction of improvement credit projects may be carried out at the option of the beneficiaries by self help (when the beneficiary is qualified) or by small contractors with building craftsmen selected from a prequalified list. Utilization of prepared home expansion plans developed specially for the credit program will receive priority in the allocation of credit approvals.

F. Community Services and Development.

Success of the project will require a high degree of interaction with project beneficiaries. This task will be undertaken by the Community Services Department of the Project Implementation Agency working with the Governorates, municipalities, and cooperating Ministries, such as Health, Education, Social Affairs, as well as local indigenous leaders and associations. The Department will undertake an information program to increase awareness of the range of services, benefits and responsibilities entailed in the project areas. It will also promote a community development program, and the establishment of institutions such as cooperatives and home-owner associations.

All participants in the new community will be required to join either a cooperative or home-owners association. Membership dues will be collected as part of the monthly mortgage payments made by the residents. Both organizations will be expected to promote community development efforts and coordinate the provision of integrated services for improving and maintaining the communities. Community Development Associations in the upgrading areas will be stimulated by the Community Service Department in order to elicit the participation of residents in upgrading and maintenance efforts. These associations will also coordinate the provision of and access to services based on an assessment of local needs and initiatives. A preliminary assessment of service needs has been established through our surveys undertaken to date in the upgrading communities. More detailed information on potentials and needs for community development is being generated through the comprehensive survey and community case studies currently under way - (See Annex G)

G. Monitoring

USAID/Cairo will have the primary responsibility for monitoring the project through the Housing Office, headed by a DH Housing Officer. Technical Assistance will be provided by U.S. consultants. The Housing Officer, as AID project manager, assisted by assigned USAID engineering officers will maintain a close working relationship with the contractors and with the Planning, Followup and Evaluation Departments of the MOH Project Implementation Agency. A regular reporting system will be devised to assure effective monitoring of project activities and progress.

NOTE: Special monitoring and evaluation will be undertaken to determine acceptability by prospective owners of the planned housing solutions for the project. Prior to construction of houses in the first neighborhoods at Helwan, a block of sample model houses illustrating the range of housing solutions planned will be built for occupancy in one of the Helwan community upgrading areas.

This will serve to disclose early-on design deficiencies and market acceptance. If indicated, design modifications will be made before mass construction begins. Construction at Helwan will proceed in a phased manner by neighborhoods (1 to 5). The reaction of early occupants of neighborhood will be carefully considered before proceeding with phased, but overlapping, construction of other neighborhoods. As occupancy proceeds throughout the construction life of the project, owner reaction will be continually monitored and design modifications made as considered appropriate.

H. Technical Assistance:

Elements of this demonstration project are unfamiliar to Egypt and to the MOH. It is important for the timely completion of the schedule of events that the understanding and technical competence of the MOH and CFE staff be stimulated and guided in an efficient manner towards the innovative objectives of each component of the project. Long term and short term U.S. technical assistance will be provided for this purpose.

The technical assistance effort is divided into three groups:

Assistance to the MOH: Two long term advisors in general project implementation and community/cooperative organization will form the basic team. Other advisors will be added for long and short periods in home improvement programs, management, building materials, market analysis, and evaluation.

Assistance to CFE: One long term advisor will assist in establishing branch bank consumer oriented services and data processing program. A short term advisor will provide additional evaluation expertise and assist in preparation of a national housing finance policy.

Assistance in National Policy: Two short term advisors will assist the MOH develop a national land and housing policy drawing upon the demonstrated results of this project.

I. Logistic Support by AID:

Outside of A-E contracts which will be self-contained with respect to logistic support, U.S. technical assistance to MOH will be provided as continuation of project development work. Accordingly resident technicians will be provided office space by the MOH Project Implementation Agency. However, since there are logistic problems in all GOE offices which may adversely affect the performance of U.S. technicians/consultants, the technical assistance contract should provide financing for supplemental office space, equipment, supplies, transportation and secretarial and other local personnel and some specified back-up services from USAID/Cairo.

J. Summary Schedule of Events:

Following is a summary of major events in the project (See following page.)

EVENTS	RESPONSIBLE ORGANIZATION	ESTIMATED DATE	
		START	COMPLETED
1. GOE Steering Committee & MOH Project Implementation Agency established.	MOH	7/78	7/79
2. Project Agreement	AID/MOH	8/78	9/78
3. US Technical Assistance Basic Team contracted & functioning (Planner-Arch, Community coop. specialists)	AID/MOH US Consultants	9/78	6/83
4. Architectural & Engineering contracts let	US/Egyptian A/E MOH/AID	10/78	3/79
5. Helwan new community house plans (model units)	Egyptian A/E	11/78	3/80
6. Helwan new community infrastructure & site development plans.	US/Egyptian A/E	1/79	1/80
7. First purchase of materials	MOH	4/79	9/79
8. Helwan Model new dwelling solutions on test site constructed by MOH	MOH/Contractors	5/79	4/80
9. Bidding for off-site infrastructure new community and neighborhood 1 site development	Egyptian & US construction contractors	9/79	4/80
10. Construction of off-site infrastructure new community first neighborhood site development	Egyptian & US construction contractors	1/80	1/82
11. Construction of core houses & community facilities neighborhood 1 new community.	Contractors	4/80	3/82
12. Construction & move in successive neighborhoods	MOH/Contractors	3/81	6/83
13. Move in first section 36 units model house site with interim utility system. (Branch Bank TA Functioning).	MOH/Credit Foncier US Consultants	5/80	7/80
14. Social/Economic Evaluation program (Evaluation TA Functioning)	MOH/USAID research institution. US Consultants	5/80	3/81

15. Building Materials/Products Design Evaluation-Testing (Materials and market TA Functioning).	US Consultants MOH/Research Institute	6/79	6/80
16. Home improvement & Expansion loan program operating (Home Improvement TA Functioning).	MOH/Credit Foncier, US Consultants	4/79	Cont
17. Collection of mortgage payments in New Community.	Credit Foncier	3/81	Cont.
18. Upgrading areas Social Survey complete; link community organizations	MOH & Coopera- ting Ministries	3/79	6/83
19. Organization of Cooperatives & Home Owners Association (Housing Management TA Functioning).	MOH/Governorate, US Consultants	1/81	6/83
20. Architectural & Engineering contracts for design community facilities (health clinics, schools, etc.) and infrastructure for first upgrading area.	MOH	9/78	2/80
21. Plans & Specs. for item 20 1st package	MOH/Egyptian A & E Firms	12/78	2/80
22. Bidding for item 20 construction contracts let 1st package	MOH	3/79	4/79
23. Plans complete & contracts let for remainder of item 20.	MOH	5/79	1/83
24. Evaluation & Modification of project activities	MOH/Social Res- earch Center/AID/ US Consultants	1/79	6/83
25. Housing Policy & Land Policy Study	MOH/US Consult- ants	1/79	6/83

VI. EVALUATION PLAN

The MOH and USAID will jointly conduct or contract for evaluations of project progress and final results as mutually agreed to support timely implementation and assurance of accomplishment of agreed objectives. In support of this work, an evaluation section will be included in the MOH Project Implementation Agency.

A. Evaluation Objectives

The periodic and terminal evaluation of the project will be designed to:

1. Assess the effect of a comprehensive shelter and community service program in both new housing and upgrading areas, regarding its ability to provide access to housing and services at a more favorable cost;
2. Measure the extent to which core units are expanded to accommodate family needs or to house new occupants;
3. Assess the impact of new credit terms on the expansion of core housing, upgrading of existing housing and development of new shelter program;
4. Test the capacity of the government agencies to implement and maintain programs building on the concepts underlying this project; and
5. Measure the spin-off effects of the project on building materials production, new employment generation, skill training in the building trades, and related components.

B. Evaluation Schedule

Baseline data will be collected in the upgrading communities from July through October 1978. This will build on initial information gathered during the development phase of the project. Topics to be covered include basic socio-economic data (age, sex, family size, education income, etc..) an assessment

of felt priority needs for community improvements and general indices of resident satisfaction with various aspects of their living environment. A sample of 1200 families will be surveyed in the six upgrading areas, divided proportionally according to population size. An additional 250 families living in communities which have similar general geographic areas will be selected for control purposes (See Annex G).

During implementation and upon completion of the AID inputs to the project, four major evaluations are anticipated:

1. The model home demonstration phase will be evaluated. Basically, this is to establish base line data for new community residents and to be a test of resident satisfaction with the core house design and the financial arrangements. Program modifications will be considered on the basis of the findings of this survey.
2. An interim in-depth evaluation focused on:
 - a) the 1500 housing unit, first integrated neighborhood in the new community: housing facilities and community organization, b) progress in community upgrading program regarding improvements, community facilities, and the build-up of community associations (including follow-up with control communities). In both new housing and upgrading communities, a comparison of the project with alternate house types and home improvement costs would be made. c) the functioning of the implementation unit responsible for this project and its relationship with A&E firms working with the unit. There will be an assessment made at this stage as to whether the original project design was followed and the manner in which the implementation process is contributing to the achievement of project purposes and goals. Surveys, interviews and analysis of documents pursuant to this interim evaluation will be conducted in the last quarter of 1981.
3. Follow-up evaluation to see if recommendations arising from interim evaluation have been put into practice.
4. Final in-depth evaluation on progress and impact of all project components, to take place after the end of project. The focus of this evaluation will

be on the physical and socio-economic changes which have taken place in the new and upgrading communities (in reference to control communities), the institutional performance and evolution of the MOH in relation to its work on this project, the impact of the innovations of housing finance and quality of home construction and improvement, and the effect the project has on GOE policy formation in the shelter sector.

It is planned that evaluations will be conducted as a joint effort of the MOH and US Consultants utilizing its planning evaluation division and local research institutions.

Funding for all evaluation activities, local research and technical assistance and training will be included under the project. (See Annex T)

VIII. COVENANTS AND CONDITIONS:

The substance of the following conditions precedent to disbursement and covenants will be included in the Grant Agreement.

A. Conditions Precedent to Disbursement:

I. Prior to the first disbursement or to the issuance by AID of documentation pursuant to which disbursement will be made, the Grantee shall, except as the parties may agree otherwise in writing, furnish to AID in form and substance satisfactory to AID :

a) A statement of the names and title with specimen signatures of the person or persons who will act as the representatives of the GOE.

b) Evidence that the Grantee has included in its budget for FY 1979 adequate local currency for its contribution to the project.

c) Evidence of the existence of an agreement for technical assistance services for the MOH Implementation Unit acceptable to AID.

d) Such other documentation as AID may require.

II. Prior to any disbursement or issuance by AID of documentation pursuant to which disbursement will be made, other than for technical assistance services (I c. above) the GOE shall, except as the parties may agree otherwise in writing, furnish to AID in form and substance satisfactory to AID:

a) Evidence of an executed contract for design and supervisory services with an architectural and engineering services contractor acceptable to AID.

b) Evidence of formation of an implementation organization acceptable to AID under the jurisdiction of the MOH to include a steering committee and implementation unit to administer the project.

c) Evidence of firm reservation of land for both components of the project.

d) Such other documentation as AID may require.

III. Prior to any disbursement or issuance by AID of documentation pursuant to which disbursement will be made, other than for technical assistance services and on architectural and engineering services, the GOE shall, except as the parties may agree otherwise in writing, furnish to AID in form and substance satisfactory to AID:

- a) An implementation plan prepared by MOH outlining specifications for design, social and community development activities, supporting action of other ministries and GOE agencies, schedules for progress and completion of the project, model sales/mortgage agreements, model improvement loan agreement, financial plan and a project evaluation plan.
- b) Evidence in the form of a legal opinion furnished by legal counsel to the MOH that the implementation plans for both components of the project are in compliance with the legal and regulatory authority of the MOH.
- c) Evidence that the Credit Foncier D'Egypt (CFE) has been engaged to implement financing arrangements for the project and that the agreement or commitment conforms with existing laws and regulations of the GOE.
- d) Evidence that the CFE as administrator for the project has established a special project account and has deposited a first installment for interim financing of construction for the project.
- e) Such other documentation as AID may require.

B. Convenants:

In addition to the standard covenants which will be included in the Grant Agreement the substance of the following special covenants will be included in the Grant Agreement.

1. Execution of the Project.

- a. To submit for AID approval evidence of commitment by cooperating Ministries with responsibility to staff and operate community facilities to be constructed as part of the project to include in future budget plans the timely recruitment and funding of staff and provision of other operating costs.
- b) To submit for AID approval evidence of a

commitment of the MOH to furnish the Egyptian pound equivalent of 80 million U.S. dollars in local currency and/or in-kind support over the life of the project in timely fashion.

b. To carry out the project with due diligence and efficiency, and in conformity with sound engineering, construction, financial and administrative practices.

c. To cause the project to be carried out in conformance with all the plans, specifications, and with all modifications therein approved by AID pursuant to this agreement, including the provision, on a timely basis, of necessary local currency and in-kind support as specified in this Agreement and its Annexes. This covenant shall be deemed to include the understanding that the Grantee undertakes to use whatever legal enforcement measures are necessary and proper to assure that the Project conforms in this Agreement and the Annexes hereto.

d. To submit for AID approval prior to implementation, issuance or execution, all plans, specifications, construction schedules, bid documents, documents concerning solicitation of proposals relating to eligible items, contracts, and all modifications to these documents.

2. Funds and other Resources to be Provided

To make available on a timely basis all Egyptian currency, building materials (i.e. cement, steel, etc...) and all other resources required, for the punctual and effective implementation of the program.

3. Continuing Consultation

To cooperate fully with AID to assure that the purpose of the loan will be accomplished, the MOH and AID shall from time to time, at the request of either party, exchange views through their representatives with regard to the progress of the project, the performance of consultants, contractors and suppliers engaged on the project, and other matters relating to the project.

4. Preparation of Proposed Policy Documents for Housing Land, and Mortgage Finance

To establish within the MOH a planning unit for the purpose of preparing proposed policy documents for a new housing land and mortgage finance policy in cooperation with technical assistance provided as a part of this project.

ANNEX'S LIST

ANNEX

- A Draft letter for Grant Application.
- B Project Authorization & Request for Allotment of Funds.
- C Certificate Pursuant to Section 611 (e) of FA 1961 as amended.
- D 6C (1-2-3) Project Checklist.
- E Logical Framework
- F History of Project Design Process and Official Statement of Program Objectives.
- G Social & Market Analysis
- H Technical Analysis
- I Community Facilities/Cooperatives and Community Development
- J Building System Design / Materials Supply Strategy and Justification For Origin Waivers
- K Preliminary House Design
- L Total Project Costs
- M Design & Construction Schedule
- N Organization Framework-MOH Implementation Unit
- O Description of MOH Implementation Unit
- P Project Mortgage Lending
- Q Summary of Related Recent Projects of GOE :-
 - Fifteenth of May New Town-Helwan
 - IBRD Project
 - Sadat City Plan
 - Suez Demonstration Project
 - Ismailia Demonstration Project
- R Background Report/Land Tenure and Land Use
- S Site Selection
- T Technical Assistance & Training
- U Environment Assessment *
- V Project Economic Consideration
- W Recommendation to Authorize Local Cost Financing
- X Justification for Origin Waiver
- Y Maintenance of Facilities and Services

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ES-Parsons Environmental Assessment Available in Reading File.



ARAB REPUBLIC OF EGYPT
MINISTRY OF HOUSING & RECONSTRUCTION

Your Ref. :

Our Ref. :

ACTION TO	<i>TAIB</i>
ACTION TAKEN	<i>DATE 7/4</i>
NAN	INITIALS

MINISTER'S OFFICE
1, Ismail Abaza Street,
Cairo, A.R.E.,

July 4th, 1978

Mr. Donald S. Brown
Mission Director
Agency for International Development
U.S. Embassy
Cairo, Egypt

352
6/7/1978

Dear Mr. Brown,

The Government of the Arab Republic of Egypt has placed a high priority on the need for improving the housing conditions of low income Egyptians. From mid-1976 to late 1977 a joint Housing Team sponsored by AID and the Ministry of Housing and Reconstruction studied various approaches to improving the supply of Shelter, infrastructure and public facilities available to this target group. Since November 1977 the outline of a specific series of projects has been developed .

The specific projects recommended consist of the following main elements :

1. Helwan Upgrading Project on up to five sites ;
2. Helwan New Community Project ;
3. Ain Shams Upgrading Project ;
4. Related Components : Technical Assistance and Training, Housing and Land Policy ;
5. Technical Training Institute for the building trades .

The estimated total cost of the above project is estimated to be U.S. \$ 160 million. The Government of the Arab Republic of Egypt is prepared to allocate the equivalent in Egyptian pounds of U.S. \$ 80 million to these projects and requests the Agency for International Development to make available a grant of U.S. \$ 80 million for the remainder of the costs .

Sincerely Yours,

Eng. Ahmed Talaat
Minister of Housing

PROJECT AUTHORIZATION
AND REQUEST FOR ALLOTMENT OF FUNDS

PART II

Name of Country: Arab Republic of Egypt Name of Project: Housing and Community Upgrading for Low Income Egyptians
Number of Project: 263-0066

Pursuant to Part II, Chapter 4, Section 532 (Security Supporting Assistance Funds), of the Foreign Assistance Act of 1961, as amended (the "Act"), I hereby authorize a Grant to the Arab Republic of Egypt (the "Cooperating Country") of not to exceed Fifty Million United States Dollars (\$50,000,000) to finance the foreign exchange costs and to help finance the local currency costs for goods and services required by the project as described in the following paragraph.

The principal components of the project are:

- (1) construction of a new community, which will consist of approximately 6,797 core housing units designed to demonstrate the social acceptability and marketability of minimal housing to be sold at much reduced subsidy by the Grantee;
- (2) upgrading of up to six existing communities which will be urbanized and existing housing improved and conserved;
- (3) establishment of a technical training center which will be built to supplement the existing supply of craftsmen in the building trade; and
- (4) providing technical assistance and training in the fields of housing management, housing and land policy, and housing credit.

I approve the total level of A.I.D. appropriated funding planned for this project of not to exceed Eighty Million United States Dollars (\$80,000,000) of which \$50,000,000 is authorized above, during the period FY 1978 through 1979. I approve further increments during that period of Grant funding of up to \$30,000,000, subject to the availability of funds in accordance with A.I.D. allotment procedures.

Based on the justification set forth in Annex W of the Project Paper, I hereby determine in accordance with Section 612(b) of the Act, that the expenditure of United States Dollars for the procurement of goods and services in Egypt is required to fulfill the purposes of this Project; the purposes of this project cannot be met effectively through the expenditure of U.S.-owned local currencies for such procurement; and the administrative official approving local cost vouchers may use this determination as the basis for his certification as required by Section 612(b) of the Act.

I hereby authorize the initiation of negotiation and execution of the project agreement by the officer to whom such authority has been delegated in accordance with A.I.D. regulations and delegations of authority, subject to the following essential terms and covenants and major conditions; together with such other terms and conditions as A.I.D. may deem appropriate:

a. Source and Origin of Goods and Services

(1) Except as A.I.D. may otherwise agree in writing, or as provided in paragraph (2) below, goods and services financed by A.I.D. appropriated funding shall have their source and origin in the United States or in the Arab Republic of Egypt.

(2) In accordance with Handbook 1, Supplement B, paragraph 18D, with respect to shelf items financed with Egyptian Pounds purchased with U.S. dollars, (A) such items shall be of Egyptian source only provided that their origin is a country included in A.I.D. Geographic Code 935; and (B) the individual unit limitation of \$2,500 and the total limitation of \$10,000 on the amount of shelf items authorized to be procured are hereby waived.

b. Conditions Precedent to Initial Disbursement

Prior to any disbursement, or the issuance of any commitment documents under the Project Agreement, Grantee shall, except as A.I.D. shall otherwise agree in writing, furnish in form and substance satisfactory to A.I.D.:

- (1) a statement of the person or persons acting as Grantee's representatives, plus a specimen signature of each such person;
- (2) evidence that the Grantee has included in its budget for FY 1979 adequate local currency for its contribution to the project; and
- (3) such other information and documents as A.I.D. may reasonably require.

c. Additional Disbursement

(1) Phase I:

Prior to disbursement under the Grant, or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made, other than for technical assistance services, Grantee shall, except as A.I.D. may otherwise agree in writing furnish in form and substance satisfactory to A.I.D.:

- (a) Evidence of an executed contract for design and supervisory services with an architectural and engineering services contractor acceptable to A.I.D.;
- (b) Evidence of formation of an implementation organization acceptable to A.I.D. under the jurisdiction of the MOH to include a steering committee and implementation unit to administer the project;

- (c) Evidence of firm reservation of land for both components of the project; and
 - (d) Such other documentation as A.I.D. may require.
- (2) Phase II:

Prior to disbursement under the Grant; or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made, for any other purpose other than to finance activities under paragraph b. and c.(1) above, Grantee shall, except as A.I.D. may otherwise agree in writing, furnish in form and substance satisfactory to A.I.D. evidence that the Credit Foncier d'Egypt (CFE) has been engaged to implement financing arrangements for the project and that the agreement or commitment conforms with existing laws and regulations of the GOE.

d. Covenants

The Grantee shall

- (1) submit for A.I.D. approval evidence of a commitment of the MOH to furnish the Egyptian pound equivalent of 80 million U.S. dollars in local currency and/or in-kind support over the life of the project in timely fashion;
- (2) carry out the project with due diligence and efficiency, and in conformity with sound engineering, construction, financial and administrative practices;
- (3) cause the project to be carried out in conformance with all the plans, specifications, and with all modifications therein approved by A.I.D. pursuant to the Grant Agreement, including the provision, on a timely basis, of necessary local currency and in-kind support as specified in the Agreement and its Annexes. This covenant shall be deemed to include the understanding that the Grantee undertakes to use whatever legal enforcement measures are necessary and proper to assure that the Project conforms to the Agreement and the Annexes thereto;
- (4) make available on a timely basis all Egyptian currency, building materials (i.e., cement, steel, etc.) and all other resources required for the punctual and effective implementation of the program;
- (5) cooperate fully with A.I.D. to assure that the purpose of the Grant will be accomplished. The Grantee and A.I.D. shall from time to time, at the request of either party, exchange views through their representatives with regard to the progress of the project, the performance of consultants, contractors and suppliers engaged on the project, and other matters relating to the project.

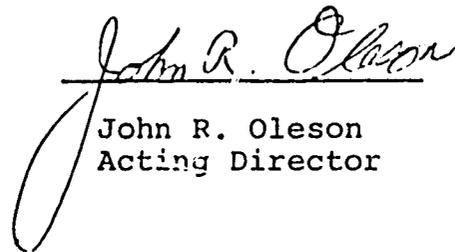
John J. Gilligan

EGYPT-HOUSING AND COMMUNITY UP-
GRADING FOR LOW INCOME EGYPTIANS

CERTIFICATION PURSUANT TO SECTION
611 (e) OF FA 1961 AS AMENDED

I, John R. Oleson, Acting Director, the principal officer of the Agency for International Development in Egypt, having taken into account, among other things, the maintenance and utilization of projects in Egypt previously financed or assisted by the United States, do hereby certify that in my judgement Egypt has both the financial capability and the human resources to effectively install, maintain and utilize the capital assistance to be provided for (a) the Helwan New Community, and (b) the Helwan and Ain Shams Upgrading Areas.

This judgement is based upon general consideration discussed in the capital assistance paper to which this certification is to be attached.



John R. Oleson
Acting Director

4. FAA Sec.620(c). If assistance is to government, is the government liable as debtor or unconditional guarantor on any debt to a U.S. citizen for goods or services furnished or ordered where (a) such citizen has exhausted available legal remedies and (b) debt is not denied or contested by such government? None of the known claims of any US citizen asserted against the GOE meet the criteria of this section. In any event, Egypt participated with the US in a joint commission to discuss debt of Egypt to US citizens and has agreed with the USG on an amount which the GOE will pay to settle these debts.
5. FAA Sec.620(e) (1). If assistance is to a government, has it (including government agencies or subdivisions) taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking steps to discharge its obligations toward such citizens or entities? The Secretary of State has determined that Egypt's agreement to establish a joint Commission to discuss compensation of American nationals constitutes taking appropriate steps for the purpose of this section.
6. FAA Sec.620(a), 620(f); App. Sec. 107, 144. Is recipient country a communist country? Will assistance be provided to the Socialist Republic of Vietnam, Cambodia, Laos, Cuba, Uganda, Mozambique, or Angola? Egypt is not a communist country.
7. FAA Sec.620(i). Is recipient country in any way involved in (a) subversion of, or military aggression against, the United States or any country receiving U.S. assistance, or (b) the planning of such subversion or aggression? The President has not determined that the recipient country is involved in such conduct.

8. FAA Sec.(j). Has the country permitted, or failed to take adequate measures to prevent, the damage or destruction, by mob action, of U.S.property?
- The President, in accordance with the requirement of section 620(j), has considered terminating assistance to Egypt&has determined that no sufficient reason exists not to furnish the assistance.
9. FAA Sec.620(1). If the country has failed to institute the investment guaranty program for the specific risks of expropriation, inconvrttibility or confiscation, has the AID Administrator within the past year considered denying assistance to such government for this reason?
- Egypt has reactivated its Investment Guaranty Agreement with the U.S.
10. FAA Sec. 620(o);Fishermen's Protective Act, Sec.5. If the country has seized, or imposed any penalty or sanction against any U.S. fishing activities in international waters,
- No instance of any such seizure or imposition of such penalty or sanction is now known.
- a. has any deduction required by Fishermen's Protective Act been made?
- Not applicable .
- b. has complete denial of assistance been considered by AID Administrator?
- Not applicable.
11. FAA Sec. 620(q); App.Sec.504.
(a) Is the government of the recipient country in default on interest or principal of any AID loan to the country?
(b) is country of default on interest or principal on U.S. loan under program for which App.Act appropriates funds, unless debt was earlier disputed, or appropriate steps taken to cure default?
- No such default exists. Reconciliation is taking place between the books of AID and the Government of Egypt in regard to several very minor amounts.
12. FAA Sec.620 (s). What percentage of country budget is for military expenditures? How much of foreign exchange resources spent on mil-

- itary equipment? How much spent for the purchase of sophisticated weapons systems? (Consideration of these points is to be coordinated with the Bureau for Program and Policy Coordination, Regional Coordinators and Military Assistance Staff (PPC/RC).)
- The President has taken into account each of the listed considerations as to current military expenditures by the GOE and has determined that these do not inhibit economic aid to Egypt but rather that the projected program contributes to the underlying intent of the FAA which seeks to reduce arms costs and to stimulate economic development.
13. FAA Sec. 620(t). Has the country severed diplomatic relations with the United States? If so, have they been resumed and have new bilateral assistance agreements been negotiated and entered into since such resumption?
- Egypt severed diplomatic relations with the U.S. in 1967. Diplomatic relations have now been resumed. New bilateral assistance agreements have been entered into since such resumption.
14. FAA Sec. 620(u). What is the payment status of the country's U.N. obligations? If the country is in arrears, where such arrearages taken into account by the AID Administrator in determining the current AID Operational Year Budget?
- Egypt has paid all of its outstanding U.N. obligations.
15. FAA Sec. 620A. Has the country granted sanctuary from prosecution to any individual or group which has committed an act of international terrorism?
- No.
16. FAA Sec 666. Does the country object, on basis of race, religion, national origin or sex, to the presence of any officer or employee of the U.S, there to carry out economic development program under FAA?
- No.
17. FAA Sec. 669, 670. Has the country, after Aug. 3, 1977, delivered or received nuclear enrichment or reprocessing equipment, materials or technology, without specified arrangements or safeguards? Has it detonated a nuclear device after Aug. 3, 1977 although not a "nuclear-weapon State" under the non-proliferation treaty?
- No

- (4)(b) Diverting such resources for unnecessary military expenditure and intervention in affairs of other free and independent nations.
- (5) Making economic, social, and political reforms such as tax collection improvements, and changes in land tenure arrangements, and making progress toward respect for the rule of law, freedom of expression and of the press, and recognizing the importance of individual freedom, initiative, and private enterprise.
- (6) Otherwise responding to the vital economic, political, and social concerns of its people, and demonstrating a clear determination to take effective self-help measures.

d. FAA Sec. 201(b), 211(a). Is the country among the 20 countries in which development assistance grants (other than for self-help projects) may be made?

e. FAA Sec. 115. Will country be furnished, in same fiscal year, either security supporting assistance, or Middle East peace funds? If so, is assistance for population programs, humanitarian aid through international organizations, or regional programs?

2. Security Supporting Assistance Country Criteria

a. FAA Sec. 502B. Has the country engaged in a consistent pattern of gross violations of internationally recognized human rights? Is program in accordance with policy of this Section? (1) No. (2) Yes.

b. FAA Sec. 531. Is the Assistance to be furnished to a friendly country, organization, or body eligible to receive assistance? Yes.

c. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made?

No applicable

d. FAA Sec. 533(c) (2). Will assistance under the Southern African Special Requirements fund be provided to Mozambique, Angola, Tanzania, or Zambia? If so, has President determined (and reported to the Congress) that such assistance will further U.S. foreign policy interests?

Not applicable

e. App. Sec. 113. Will security assistance be provided for the purpose of aiding directly the efforts of the government of such country to repress the legitimate rights of the population of such country contrary to the Universal Declaration of Human Rights?

No.

6C(2) PROJECT CHECKLIST

A. GENERAL CRITERIA FOR PROJECT

1. App.Unnumbered; FAA Sec.653(b)
 - (a) Describe how Committees on Appropriations of Senate and House have been or will be notified concerning the project;
 - (b) is assistance within (Operational Year Budget) country or international organization allocation reported to Congress (or not more than \$ 1 million over that figure plus 10%)?

1. An "Advice of Program Change" has been prepared for transmittal to the appropriate committees of Congress. Obligations under this amendment will not take place prior to 15 days after the date of delivery of this notification. The intended obligation is within the level of funds appropriated for EgyptFY 1978 and FY 1979.
2. FAA Sec. 611 (a)(1). Prior to obligation in excess of \$ 100,000, will there be (a) engineering, financial, and other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U.S. of the assistance?
 2. (a) Yes
 - (b) Yes
3. FAA Sec.611 (a)(2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance?

3. No further legislative action is required to implement the project.
4. FAA Sec. 611 (b);App. Sec.101

4. Not applicable

If for water or water-related land resource construction, has project met the standards and criteria as per Memorandum of the President dated Sept.5,1973 (replaces Memorandum of May 15, 1962; see Fed.Register, Vol.38, No. 174, Part III, Sept. 10,1973)?

5. FAA Sec. 611(e). If project is capital assistance (e.g., construction), and all U.S. assistance for it will exceed \$ 1 million, has Mission Director certified the country's capability effectively to maintain and utilize the project?
5. The Mission Director has so certified (see Annex C)
6. FAA Sec. 209, 619. Is project susceptible of execution as part of regional or multi-lateral project? If so why is project not so executed? Information and conclusion whether assistance will encourage regional development programs. If assistance is for newly independent country, is it furnished through multi-lateral organizations.
6. The project is not susceptible of execution as part of a regional project. Coordination with similar multilateral projects (World Bank to finance) is being maintained and will be mutually supporting. Egypt is not a newly independent country.
7. FAA Sec. 601 (a); (and Sec. 201 (f) for development loans)
- Information and conclusions whether project will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions.
7. The project is not a development loan, but will have the following effect on the items listed: (a) will not increase the flow of international trade; (b) will foster private initiative through enhanced opportunities for home ownership of individuals and improvement to existing privately owned small and large firms in the construction industry; (c) will encourage the development of cooperatives as a central organizing device for project execution, is not intended to utilize credit unions but will mobilize private savings; (d) will discourage monopolistic practices through competitive bidding and use of many small contractors; (e) will improve the technical efficiency of the residential construction sector; (f) will not effect free labor unions.
8. FAA Sec. 601 (b). Information and conclusion on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign
9. The US private sector will provide all foreign exchange related goods and services for the project.

assistance programs (including use of private trade channels and the services of US private enterprise).

9. FAA Sec. 612(b);Sec.636(h). Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized to meet the cost of contractual and other services.
9. The GOE is to provide 50 percent of the total financing (equivalent to US\$ 80 million).
10. FAA Sec. 612 (d). Does the US own excess foreign currency and, if so, what arrangements have been made for its release?
10. Yes. See Annex W.
11. ISA 14. Are any FAA funds for FY 78 being used in this project to construct, operate, maintain, or supply fuel for, any nuclear powerplant under an agreement for cooperation between the U.S. and any other country?
11. No.

B. FUNDING CRITERIA FOR PROJECT.

1. Development Assistance Project Criteria

- a. FAA Sec. 102(c);Sec.111;Sec. 281a. Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production, spreading investment out from cities to small towns and rural areas; and (b) help develop cooperatives, especially by technical assistance, to assist rural & urban poor to help themselves toward better life, and other-
1. a. The project will (a) directly involve the urban poor as beneficiaries of the houses and community upgrading and through the creation of jobs for the poor by use of labor intensive construction technologies and special supplemental vocational training; (b) cooperatives will be formed in the project areas for housing management.

wise encourage democratic private and local governmental institutions?

b. FAA Sec, 103, 103A, 104, 105, 106, 107. Is assistance being made available: (including only applicable paragraph-- e.g.a,b,etc-- which corresponds to source of funds used. If more than one fund source is used for the project, include relevant paragraph for each fund source).

- | | |
|--|---|
| (1) (103) for agriculture, rural or nutrition; if so, extent to which activity is specifically designed to increase productivity and income of rural poor; (103A) if for agricultural research, is full account taken of needs of small farmers; | 1.b.(1) not applicable as it is an urban project. |
| (2) (104) for population planning or health; if so, extent to which activity extends low-cost, integrated delivery systems to provide health and family planning services, especially to rural areas and poor; | 1.b.(2) health centers including family planning programs are to be provided within the project areas improving access to GOE supported low cost services. |
| (3) (105) for education, public administration, or human resources development, if so, extent to which activity strengthens nonformal education, makes formal education more relevant, especially for rural families and urban poor, or strengthens management capability of institutions enabling the poor to participate in development; | 1.b.(3) education facilities and programs are to be provided within the project areas oriented to current GOE education policies including stimulation of labor in the building trades. This directly supports non-formal education and participation of the poor in development by their completion, through self-help of the minimum shelter. |

(4) (106) for technical assistance, energy, research, reconstruction, and selected development problems; if so, extent activity is:

(a) technical cooperation and development, especially with U.S. private and voluntary, or original and international development, organizations;

(b) to help alleviate energy problem;

(c) research into, and evaluation of, economic development processes and techniques;

(d) reconstruction after natural or manmade disaster;

(e) for special development problem, and to enable proper utilization of earlier U.S. infrastructure, etc., assistance;

(f) for programs of urban development, especially small labor-intensive enterprises, marketing systems, and financial or other institutions to help urban poor participate in economic and social development.

a. U.S. private non-profit organizations are anticipated to be the source of assistance to develop cooperatives in the project.

b. Reduction of commuter transport load to Helwan as a result of project location will reduce energy demand.

c. Research and evaluation is included for building techniques, cost effectiveness and social responsiveness of this project.

d. not applicable

e. project will demonstrate the recommendations made as a part of a series of joint urban studies which have been carried out since 1976.

f. financial institutions are to be encouraged as a result of increasing the interest rate for housing and demonstrating credit worthiness for home improvement credit of low income families.

(5) (107) by grants for coordinated private effort to develop and disseminate intermediate technologies appropriate for developing countries.

1.b.(5) Intermediate building technologies in the construction sector are to be encouraged through training and technical assistance.

- c. FAA Sec.110(a); Sec.208(e). 1.c. The GOE will contribute by means of grant, 50 percent of the funds for the project.
- Is the recipient country willing to contribute funds to the project, and in what manner has or will it provide assurance that it will provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or has the latter cost-sharing requirement been waived for a "relatively least-developed" country)?
- d. FAA Sec.110(b). Will grant capital assistance be disbursed for project over more than 3 years? If so, has justification satisfactory to Congress been made, and efforts for other financing, or is the recipient country relatively "least developed". 1.d. Grant funding for only the two years is being requested at this time.
- e. FAA Sec. 207; Sec.113. Extent to which assistance reflects appropriate emphasis on;(1) encouraging development of democratic, economic, political, and social institutions; (2) self-help in meeting the country's food needs; (3) improving availability of trained worker-power in the country;(4) programs designed to meet the country's health needs; (5) other important areas of economic, political, and social development, including industry, free labor unions, cooperatives, and Voluntary Agencies, transportation and communication; planning and public administration; urban development, and modernization of existing laws; or (6) integrating women into the recipient country's national economy. 1.e. The project will (1) encourage democratic institutions through cooperatives and community development programs; (2) not applicable as it will not effect food needs;(3) will improve supply of trained workers through direct training programs in construction sector, urban planning and design and supplemental programs of vocational training within the project;(4) will help meet the country's health needs through development of health centers within the project areas; (5) will assist in economic, political, and social development through creation of cooperatives and community associations amongst the urban poor for housing as well as improve urban development.

ment process and urban management skills; (6) the project will directly assist women through encouraging their participation in development through training programs, cooperative economic activities, provision of day care centers, and provision of better housing and community environment.

f. FAA Sec.281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resource to encourage institutional development; and supports civic education and training in skills required for effective participation in governmental and political process essential to self-government.

1.f. The project is in part based on survey's taken of the urban poor who will be the beneficiaries of the project to ascertain their priorities, the community development part of the program will encourage civic participation, the training aspects of the project will assist in developing skills required for participation in the political process.

g. FAA Sec.201(b)(2)-(4) and (8);Sec.201(e);Sec.211(a)(1)-(3) and-(8). Does the activity give reasonable promise of contributing to the development: of economic resources, or to the increase of productive capacities and self-sustaining economic growth; or of educational or other institutions directed toward social progress? Is it related to and consistent with other development activities, and will it contribute to realizable long-range objectives? And does project paper provide information and conclusion on an activity's economic and technical soundness?

1.g The project should contribute to the improvement and rationalization of the housing sector in Egypt. It is related to other housing sector development activities through demonstration of lower cost means to urbanize new land and conserve existing urbanization for the benefit of low income families while recovering a greater percentage of original investments for reuse. It is supportive of similar projects in Egypt undertaken by the GOE. The project Paper does provide information on the activities overall economic and technical soundness.

- h. FAA Sec.201(b)(6);Sec.211 (a)(5),(6). Information & conclusion on possible effects of the assistance on U.S. economy, with special reference to areas of substantial labor surplus, and extent to which U.S. commodities and assistance are furnished in a manner consistent with improving or safeguarding the U.S. balance-of-payments position.
2. Development Assistance Project Criteria (Loans Only).
3. Project Criteria Solely for Security Supporting Assistance
- FAA Sec.531. How will this assistance support promote economic or political stability?
4. Additional Criteria for Alliance for Progress
- (Note: Alliance for Progress projects should add the following two items to a project checklist).
- 1.h. The project will have no significant effect on the US economy other than to provide some potential export opportunities for goods and services from the US private sector.
2. Not applicable as this is to be a grant funded project.
3. This assistance will result in a contribution to the economic and political stability of Egypt because it will demonstrate the means to relieving the acute housing crisis in the country while directly recovering a greater share of the original investment for use in further housing construction. The GOE places a very high priority on housing.
4. Not applicable.

6C(3) STANDARD ITEM CHECKLIST

A. PROCUREMENT

1. FAA Sec.602. Are there arrangements to permit U.S. small business to participate equitably in the furnishing of goods and services financed? 1. Procurement of goods and services will be pursuant to established AID regulations.
2. FAA Sec.604(a). Will all commodity procurement financed be from the US except as otherwise determined by the President or under delegation from him? 2. Yes.
3. FAA Sec.604(d). If the co-operating country discriminates against U.S. marine insurance companies, will agreement require that marine insurance be placed in the US on commodities financed? 3. Yes.
4. FAA Sec.604(e). If offshore procurement of agricultural commodity or product is to be financed, is there provision against such procurement when the domestic price of such commodity is less than parity? 4. There will be no such procurement.
5. FAA Sec.608(a). Will US Government excess personal property to be utilized wherever practicable in lieu of the procurement of new items? 5. Consideration will be given to the use of excess property when practical.
6. MMA Sec.901(b). (a) Compliance with requirement that at least 50 per centum of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned US-flag commercial vessels to the extent that such vessels are available at fair and reasonable rates. 6. Yes.

7. FAA Sec.621. If technical assistance is financed, will such assistance be furnished to the fullest extent practicable as goods and professional and other services from private enterprise on a contract basis? If the facilities of other Federal agencies will be utilized, are they particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs?
7. Technical assistance, to the greatest extent practical will be from private enterprise on a contract basis.

8. International Air Transport Fair Competitive Practices Act, 1974.
8. Yes.

If air transportation of persons or property is financed on grant basis, will provision be made that US-flag carriers will be utilized to the extent such service is available?

1. FAA Sec.601(d). If a capital (e.g. construction) project, are engineering and professional services of US firms and their affiliates to be used to the maximum extent consistent with the national interest?
1. Yes.
2. FAA Sec. 611(c). If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable?
2. Yes.
3. FAA Sec.620(k). If for construction of productive enterprise, will aggregate value of assistance to be furnished by the US not exceed \$100 million?
3. Not applicable.

C. OTHER RESTRICTIONS

1. FAA Sec.201(d). If development loan, is interest rate
1. Not applicable

at least 2% per annum
during grace period and
at least 3% per annum
thereafter?

2. FAA Sec.301(d) If fund is established solely by US contributions and administered by an international organization, does Comptroller General have audit rights? 2. Not applicable.
3. FAA Sec. 620(h). Do arrangements preclude promoting or assisting the foreign aid projects or activities of Communist-Bloc countries, contrary to the best interests of the US? 3. The Grant Agreement will so stipulate.
4. FAA Sec.636(i). Is financing not permitted to be used, without waiver, for purchase, long-term lease, or exchange of motor vehicle manufactured outside the US or guaranty of such transaction? 4. Financing is not permitted to be used for such purposes.
5. Will arrangements preclude use of financing:
 - a. FAA Sec.114. to pay for performance of abortions or to motivate or coerce persons to practice abortions? 5.a. Yes.
 - b. FAA Sec.620(g). to compensate owners for expropriate nationalized property? 5.b. Yes.
 - c. FAA Sec.660. to finance police training or other law enforcement assistance except for narcotics programs? 5.c. Yes.

- d. FAA Sec. 662. for CIA 5.d. Yes
activities?
- e. App. Sec. 103. to pay 5.e. Yes
pensions, etc., for military
personnel?
- f. App. Sec. 106. to pay UN 5.f. Yes.
assessments?
- g. App. Sec. 107. to carry 5.g. Yes.
out provisions of FAA Sec-
tions 209(d) and 251(h)?
(transfer to multilateral
organization for lending).
- h. App. Sec. 501. to be used 5.h. Yes.
for publicity or propa~~g~~anda
purposes within US not
authorized by Congress?
- i. App. Sec. 112. to finance 5.i. Yes.
the export of nuclear equip-
ment, fuel or technology or
to train foreign nationals
in the nuclear field.

ANNEX E

AID 1620-28 (1-72)

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY _____ to FY _____
Total U.S. Funding _____
Date Prepared: _____

Project Title & Number: **LOW COST HOUSING**

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes:</p> <ol style="list-style-type: none"> 1. Provision of acceptable housing for the population. 2. Equitable distribution of housing resources and community services. 	<p>Measures of Goal Achievement:</p> <ol style="list-style-type: none"> 1. Projects of similar nature in place or under design. 2. 35% of urban population in minimum shelter by 1990 increasing to 30% by the year 2000. 3. Resources focused at low income target groups. 	<ol style="list-style-type: none"> 1. Multi year GOE plans for new housing stock 2. Review of budget allocation 3. Observation & surveys 4. Statistical data. 	<p>Assumptions for achieving goal targets:</p> <ol style="list-style-type: none"> 1. Political/economic stability. 2. Reduced population growth rate. 3. GOE commitment to low income family needs—minimum shelter and basic community services—budget available. 4. Private sector involvement in low cost housing construction on large scale. 5. Materials and skilled personnel available. 6. Pride/desire for ownership and community spirit.
<p>Project Purpose:</p> <p>To demonstrate the premise of a proposed new housing policy — that basic housing and community facilities can be provided for low-income families which is socially acceptable, at a price they are willing to pay, and which provides to the GOE for a substantial recovery of its investment.</p>	<p>Conditions that will indicate purpose has been achieved: End of project status.</p> <ol style="list-style-type: none"> 1. Comprehensive shelter/community service policy tested/modified as necessary. 2. Core housing occupied: evidence of satisfaction and expansion of core units. 3. Improvement loan program active in upgrading areas. 4. GOE/pvt. sector agencies with capacity to expand program. 5. New Employment/Training opportunities in building trades 	<ol style="list-style-type: none"> 1. Published plans, decrees, policy statements by national leadership 2. Inspections, evaluation reports, surveys 3. Consultant reports, observation. 4. Statistical data. 	<p>Assumptions for achieving purpose:</p> <ol style="list-style-type: none"> 1. Institutional support for low cost housing from various agencies concerned with housing & community needs. 2. GOE/Mortgage Bank can generate funds for expanding program to new areas. 3. Availability/allotment of materials for new construction at reasonable costs. 4. Personal income growth with housing costs within reach of majority of low income groups without subsidy. 5. Favorable publicity on project concepts — acceptance.
<p>Outputs:</p> <ol style="list-style-type: none"> 1. New housing and land use policy 2. Demonstration projects a) Informal settlements upgraded. b) New community development completed. 3. Building trades training center established. 4. Building Materials & Products testing 5. Community/Cooperative Associations. 6. Functioning credit institution for Low-cost housing and home improvement. 	<p>Magnitude of Outputs:</p> <ol style="list-style-type: none"> 1. Alternative designs/models/implementation plans available and tested. 2. a) Six sites (25,000 families) upgraded during life of project. b) Core housing units 6,700; sites & service plots developed 700; 5 health center; 19 schools; 5 community centers 3. Personnel in finance 35; housing design planning 350; bldg trades 3000. 4. Associations 11. 	<ol style="list-style-type: none"> 1. Inspections, evaluation reports, surveys. 2. Consultant reports. 3. Statistical data. 	<p>Assumptions for achieving outputs:</p> <ol style="list-style-type: none"> 1. Land tenure/ownership resolved. 2. Modernized mortgage/savings program supported by GOE and utilized by low income groups. 3. Qualified personnel to implement "programs at field & levels & for in country training. 4. Core housing concept accepted by low income groups. 5. Community leadership/individual motivation for self improvement.
<p>Inputs:</p> <p>US Financial Resources (FX) (Consultant services) (Training opportunities)</p> <p>GOE Financial Resources (LE)</p>	<p>Implementation Target (Type and Quantity):</p> <p>U.S. \$ 30.00 million (1/3 work years in various specialties)</p> <p>L.E. equivalent to \$ 80.00 million</p>	<ol style="list-style-type: none"> 1. GOE budget data. 2. Statistical data. 3. Consultant report. 	<p>Assumptions for providing inputs:</p> <ol style="list-style-type: none"> 1. Availability of U.S. and GOE funds. 2. Qualified personnel to direct program at mgt. level and for training. 3. Availability/allocation of materials for construction on a timely basis.

HISTORY OF PROJECT DESIGN PROCESS AND
OFFICIAL STATEMENT OF PROGRAM OBJECTIVES

Early in 1976 the Ministry of Housing (previously the Ministry of Housing and Reconstruction) requested technical assistance from AID in reviewing their housing policy and in developing proposals for new housing activities. As a result of this request a report entitled " Immediate Action Proposals for Housing in Egypt" was issued by and AID funded group of US consultants working jointly with Egyptian housing officials. It was well received by the GOE.

Major recommendations were focused on shifting the supply of housing from middle and upper income population groups to lower income families by means of reducing cost by reducing the size and improving design and construction techniques; increasing the recovery of housing investments and encouraging private sector participation by reducing subsidies in materials and to beneficiaires through rent control; develop a land policy and a national housing policy to define needs and procedures and control speculation.

Following the evident success of the initial report the MOH requested that the joint collaborative effort be repeated for the purpose of identifying specific demonstration projects by which to carry out the recommendations. Three US consultant teams were assembled during the month of March and April 1977 and prepared a series of joint reports on specific aspects of the housing problems. The Housing Finance Report of the joint consultant/GOE team made recommendations for improvement of the Credit Foncier D'Egypte (CFE) - Real Estate Bank, the General Authority for Building and Housing Cooperatives (GABHS), and the National Housing Fund (NHF).

The general recommendations of the report focus on the integration of programs and objectives of the CFE, GABHC and NHF, revitalization of financing of the CFE by accepting savings and issuance of new bonds and of the NHF by deposit of deductions made from industrial workers salaries for housing. General reduction and rationalization of subsidies particularly interest rates of the GABHC and NHF were stressed. Management of the CFE should be modernized and main focus be fixed on low and low-middle income families through advertising, rational eligibility criteria, and decentralization to branch offices.

Development of a "National Urban Land Use Policy" is the major focus of the Urban Land Policy joint Report. To this goal it was recommended that the proposed planning law be passed, a new deputy Minister for land planning be appointed in the MOH and a national urban land policy be formulated. Specific proposals in support of the policy were recommended including a Land Development Agency for

planning and finance and revisions in tax policy to reduce registration fees, introduce a capital gain tax and annual property tax based on assessed valuation.

The Housing and Community Upgrading Joint Report proposed that specific demonstration projects be carried out focused on problems of both conservation of existing urbanized land and problems of creating new additions to urbanization at costs affordable by very low income worker families. A policy of comprehensive and parallel investment in necessary community services (schools, health centers, water, sewer) was stressed together with social mobilization by training and organization particularly through cooperatives. A "complementary program" to increase production of indigenous building materials was noted.

To make basic shelter affordable, partially completed housing on individual lots was recommended. Land ownership provides a maximum degree of suitability to national socio-cultural patterns. It is a flexible solution in which owners can shape their desirable shelter solution according to their individual needs, with minimum long term debt and as their financial resources permit.

Five demonstration projects were recommended:

- 1) Upgrading of "informal settlements" in Helwan with improved housing and community services.
- 2) A cooperative new community project for Helwan demonstrating improved techniques in site planning, house design, construction methods and community organization.
- 3) Upgrading of "informal settlements" in Ain Shams on the northern edge of Greater Cairo.
- 4) Upgrading and rehabilitation of the central and historical Cairo neighborhood of Gamalia.
- 5) New and comprehensive urbanization of "Growth Pole" secondary towns of Minia or Qena to support national planning objectives of encouraging a reduction of emigration to Cairo from outlying more rural regions.

This 1977 Joint Report was again widely circulated in AID and in Egypt. Each member of the National Popular Assembly received a copy. Approval of the recommendations in this report resulted in the initiation by USAID in October of 1977 of the preparation of studies for a Low Cost Housing and Community Upgrading Project for Egypt.

The following is a statement of working objectives agreed upon and signed by AID and the MOH during the field visit of the Joint Housing Teams to Egypt in July 1977, to guide preparation of the Joint AID/GOE housing program.

EGYPTIAN/AID PROGRAM OBJECTIVES
HOUSING AND COMMUNITY UPGRADING FOR LOW
INCOME EGYPTIANS

OVERALL OBJECTIVES

1. The overall objective of the Egyptian/AID project is to enhance the ability of the entire Egyptian housing sector (public and private) to respond to the shelter and community development needs of the urban population, particularly for low income households. *
2. The concept of relating specific housing action "projects, programs, and policies" to specific target groups will guide all joint program work and should be used by Egyptian Government agencies to define all other housing sector actions.

PROGRAM POLICY OBJECTIVES

1. The use of subsidies in public sector financed or constructed housing projects should be reduced by:
 - Scaling standards of plot size, infrastructure, house construction, and related facilities to specific target group beneficiaries;
 - Seeking cost recovery from the target group at its ability to pay.

* "Low-income households" are defined as those below the 50th percentile on the urban income distribution curve as contained in joint report or as modified in the future.

2. Housing subsidies should be distributed according to the ability of families to pay and should be provided in a form which clearly reveals to the beneficiaries and to government policymakers the extent of the subsidy. For example, subsidies required to reach particular target groups could be in the form of a reduction of the price of the unit below its cost of construction.

3. In order to facilitate the development and expansion of the housing finance system, a rational structure of interest rates should apply to all housing finance. To accomplish this, the interest rate used in cooperatives and public sector financed projects for either sale, lease or in establishing economic rents should be equal to or at least pegged to the mortgage rate established by the Central Bank of Egypt.

4. Public sector funds mobilized domestically and internationally to finance housing and related infrastructure and facilities should be kept separate from general public sector funds for accounting purposes. Financial recoveries from beneficiaries of public sector housing programs should be returned to designated housing agencies for relending such funds for further housing development and related housing sector operations.

5. Workable procedures should be established to permit and encourage the mobilization of private savings to be invested in the housing sector through formal housing finance mechanisms. For example, authority should be given to the Credit Foncier to accept deposits from individuals and the establishment of other types of financial institutions such as Credit Unions should be facilitated.

6. The programs supported should facilitate increased private sector participation in all aspects of housing and should provide maximum opportunities for self help and individual and community initiative from target group households.

7. Lower and more flexible planning and building standards based on people's needs and existing social and economic conditions will be developed for the project which, after being agreed to by the Egyptian Government, should be considered for use in future public sector projects related to the respective target groups.

PROGRAM ACTION OBJECTIVES

1. The Egyptian Government will formulate an Egyptian national housing and land policy during the first stage of project planning incorporating these objectives.

2. The Egyptian Government will prepare with AID technical assistance after completing its national housing and land policy, a national housing and urban land plan. The plan should detail the implementation strategy and establish time schedules. It should establish specific targets in time for the number of residential plots to be prepared and for the number and kind of dwelling units to be constructed, by target group and geographical area. It should set forth the details of an urban settlement upgrading program by the city.

It should specify the public investment levels required, the source of funds, and the administrative procedures to be followed. It should define the role of the private sector and identify steps to be taken by the public sector to facilitate its achievement. The national housing and urban land plan should be coordinated with the national economic development plan.

3. Upon approval of joint AID and Egyptian Government financing, a specific program will be prepared. This will consist of projects to include new urban settlements and upgrading of older neighborhoods, and other related activities such as building materials and housing finance to be detailed in the project paper. The projects will be compatible with the objectives listed above and, in addition, will :

Involve the introduction of new, innovative, site planning and physical design solutions which will substantially lower the per capital costs of infrastructure and housing below current public sector practice in Egypt, by reducing dwelling unit sizes on the average, lowering infrastructure standards, increasing densities where appropriate, and utilizing less costly construction techniques.

Introduce related social and economic programming within project areas. It is too early to be specific on the content and organization of social and economic project components, but the objective will be to respond to the comprehensive needs of the neighborhood. Therefore, components to be considered for possible inclusion in some form might include : urban community development, education, health, nutrition, job generation and income enhancement, access to credit facilities, and community participation and self help.

Consider multiple delivery systems for the projects, through involvement of different public and private entities, alternative financial mechanisms, and appropriate procedures to involve the private sector, the existing and future residents and the informal sectors of construction and commerce.

The projects will receive Government of Egypt priority for the allocation of building materials and such skilled labor as required to ensure rapid completion of the projects within specified schedules. AID will facilitate procurement of the Off-shore equipment, materials and other commodities required to support the program.

ORGANIZATIONAL OBJECTIVES

1. The joint program is intended to impact the major public sector ministries, agencies, public sector companies, cooperatives, the Credit Foncier, local governments and other housing institutions charged with housing sector responsibilities. A senior level coordinating group with representation from all major units of concern will be established to provide oversight and policy direction to the preparation of the project paper.

2. The next step in the joint project is to prepare a project paper which will detail specifically what is to be accomplished during project implementation as well as the overall schedule to be followed. AID will provide a consultancy team to work on the project paper and the Egyptian Government will provide an inter-agency team to work with the AID team including at least the following :

- Housing Finance Specialist
- Cooperative housing specialist
- Lawyer
- Urban economist
- Urban planner
- Architect
- Civil Engineer (familiar with Cairo and Helwan)
- Sociologist
- Community development specialist

3. During project planning and implementation, AID will provide technical assistance deemed necessary by mutual agreement for work with each of the key Egyptian Government agencies responsible for various aspects of the work program. The Egyptian Government will provide local counterpart colleagues to work with the consultants as mutually agreed upon within the project paper.

4. The Egyptian Government will : provide the joint team access to all available data as required, arrange essential interviews with key government officials, and provide office space, transportation, and other facilities and supplies as required.

5. An appropriate training program for Egyptians involved in all aspects of the project will be planned and undertaken simultaneously with project planning and implementation.

6. A formalized evaluation and project monitoring system will be established to aid in coordination, obtain feedback, and permit corrective action to be built into subsequent years of the program.

PROGRAM FINANCIAL OBJECTIVES

It is understood that AID funds to be contributed to the projects would be combined with Egyptian Government funds already allocated to the housing sector, to provide one overall capital investment fund. Its size and the ratio between domestic and international funds will be determined during preparation of the project paper.

CONCLUSION

The above objectives will guide preparation of the project paper which will further specify project planning and implementation period objectives and provide detail on program content and scheduling. The initiation of an actual project and the commitment of funding will be based on acceptance of the project paper by the United States Government and the Government of Egypt.

Summary : Market Analysis

The market analysis was conducted among 100 Nasr Car Company workers living in Cairo whose salaries ranged from 330-550 L.E. annually, and whose ages were between 25-45 years. The selection of these income and age characteristics was based on the desire to limit the sample to those who could be beneficiaries, i.e., young families with incomes below the median. A sample of 300 residents in Hadaiq Helwan was also surveyed in order to gather information about the residents' receptivity to upgrading.

The results of the market analysis, i.e., questions pertaining to the marketability of the program components are summarised below :

The survey indicates a demand for the expandable core unit house and relocation in Helwan among workers currently living in Cairo. The process of building additional rooms as money becomes available is one that is used by 95% of the residents in the upgrading communities and is therefore not new to the target group.

The preferred unit size for the core house was 3 rooms with a monthly payment of 12 L.E. for 71% of the respondents, 2 rooms at 8 L.E./month for 24% and only 5% selected the one room unit for 6 L.E./month. The larger size unit also corresponds to the average number of rooms thought to be optimal and is generally bigger than what most of the workers are currently living in. Analysis of the data reveals that income and room densities were the only socioeconomic characteristics which bore a significant relationship to the choices made among the various size alternatives. This would seem to indicate that both affordability and the desire for space influenced these selections. It is worth noting that the monthly payment of 12 L.E. represented 24% of the average monthly household income of 50 L.E., and is almost twice the average rent currently being paid by workers for the same number of rooms in Cairo. A relevant factor in this respect may be the fact that this payment would be made towards purchasing a house as the survey reveals that ownership is a significant value in determining housing satisfaction.

The prospect of living in a community designed to accommodate workers of the Helwan industries was found to be acceptable to 60% of the workers. The predominant reasons given were that they would be able to obtain better services from their factories if they were grouped together and the companionship of fellow-workers living in the same community. The remaining 40% argued that they disliked being segregated in workers' communities. It should be observed that the survey did not cover the wives and it is likely that their responses may be different. However, follow-up case studies indicated similar attitudes as those of the workers whether they were for or against relocating.

In Hadaiq Helwan, the results indicate that 80.0% of the owners -- 81% of the sample -- wanted to make home improvements provided they had access to credit. A preference for having the credit in the form of building materials and being allowed to contract for the work which would be supervised by inspectors is apparent in some of the responses given informally. Most of the respondents were against having a publically run

and executed program of home improvement. The reasons given were that such projects took too long and their costs were higher.

There is a willingness to pay off the costs of having sewage system introduced in the area, on credit. The demand for this facility is so high that 95.9% expressed a willingness to make such payments, 20% of them said they would be willing to pay over 5 L.E./month for this service. The average monthly installment that they were willing to pay was 2.8 L.E.

At present, the majority rely primarily on cesspits which are flushed out twice a year on the average. Annual expenditure on this service that is provided by a private sludge removal company is 6.7 L.E.

Socioeconomic Survey Summary

The preliminary survey was conducted in order to obtain information pertaining to the socio-economic characteristics and housing conditions of the populations in the upgrading areas- The following five communities were surveyed: Hadaiq Helwan, Kafr El Elw, Ghoneim, Rashid and Ain Shams.

The five communities surveyed are settlements that have developed informally in what was once a primarily rural setting. A semi-rural quality is still evident in the lifestyles and patterns of settlement. All of the communities are inadequately serviced by public facilities. Their informal and rapid development is a response to shelter needs. Yet the communities are incapable of providing for other needs such as health, sewage, water, and education or even recreational facilities. Moreover, the system which had developed to providing for housing makes the location of services more difficult. The priorities of the residents reflect this by emphasizing the needs for services rather than housing. The two most frequently mentioned services needed are sewage and health centers- as table I.1 reveals.

The primary sources of satisfaction with conditions in the communities of Helwan among the 70% who reported being satisfied are: a) an identification with the people of the neighborhood; b) proximity to work and c) the availability of housing. In Ain Shams the locality itself seems desirable because it offers opportunities for housing.

The four Helwan communities are similar in being focal points of attraction for industrial workers and others who are seeking to take advantage of employment opportunities in the area. Over half the number of people employed are

industrial workers

The majority of the Ain Shams residents (98%) work outside the community, 75% work within the surrounding East Zone communities of Abbassiya, Nasr City and Heliopolis, while the remaining 23% work in more distant parts of Cairo.

The size of the households indicates that the primary means of absorbing a growing population has been through densification. The range of household sizes is 4.8 persons per household in Helwan and 6.3 persons in Ain Shams.

The aggregation of related nuclear families in a single household is common as is the accomodation of married children within the parental home due to the scarcity of alternative housing sources. This pattern is even more common among industrial workers living in Cairo

Room occupancy rates also reflect the levels of crowding. As Table 1-2 reveals the number of persons per room averages 2.7 persons per room in the Helwan communities to 2.2 persons in Ain Shams. Room occupancy rates vary considerably according to the type of tenure. Accordingly, in Helwan where tenants account for 35.9% of the sample, 66.7% of all tenants occupy one room, and only 3.6% occupy more than two rooms.

It should be noted that the existence of separate facilities for cooking, washing and laundry is the exception rather than the rule. Thus tenants who occupy one room will invariably share facilities with other households. A variety of activities ranging from raising ducks and chickens to cooking and laundry are conducted within the confines of rather limited space.

Building occupancy levels reveal an almost even mix of single and a multi household occupied structures in Helwan and a slightly higher number (60%) of multi household buildings in Ain Shams. Multi household buildings (49.3%) average 2.8 households per building in Helwan and 2.9 in Ain Shams. The majority of multi-household dwellings are owner occupied.

HOUSING PRIORITIES

The priorities for housing among owners reflect the desire to reconstruct houses in more permanent materials, extend the house and install tile floors. However, in Helwan the most sought after improvement was a water-borne sewage system.

In Ain Shams, where a majority of the houses are built in red brick and concrete, the top home-improvement priority is the extension of the building. The primary purpose for such extensions is personal use to accomodate the second generation. Rental is generally a secondary consideration used to defray the costs of home construction and only a third of the households expressed their desire to extend for the sole purpose of rental.

Priorities among tenants reveal a strong preference for ownership and purchasing rather than building a house.

INCOME AND EMPLOYMENT

Annual incomes in the four Helwan areas range from income group F (300 L.E. or less) to C (700-1000 L.E.). The majority are concentrated in income category E (300-500 L.E.) which falls just below the median for urban areas. The distributions presented in the table below is naturally different from those for urban areas as a whole. The four Helwan areas are quite distinct in that they are industrial working class communities and thus it is not surprising that they would not have residents in income group A or B. The proportion of those in income group C represents the most highly skilled factory and construction workers. It also includes craftsmen and merchants in the areas. Category F generally represent households on fixed incomes from pensions, as well as service workers, day laborers, and peddlars or street vendors.

Income and Housing Expenditures

The distribution of incomes in the upgrading communities is summarized below

INCOME DISTRIBUTION

(Income in L.E./Month)

AREA	ATN SHAMS	KAHR EL ELU	HADAYQ HELWAN	GHONETM	RANIED
<u>Income Category</u>					
20 or less	13	10	12	13.9	5.9
21-40	30.4	48	46	41.7	61.7
41-60	43.6	28	36	33.3	23.5
61 and over	13.0	14	6	11.1	5.9
TOTAL	100.0	100	100	100.0	100.0
MEDIAN	42.85	36.83	36.7	36.46	33.95

The figures may under-represent actual household income since no data was gathered on multiple job holding. They may only reflect salary and benefits earned by the head of the household. The market survey found that multiple job holding is significant in raising household income since most households rely on a sole wage earner. A very small proportion of the women work and less than one fifth of households have a secondary wage earning. This is true of both residents in the upgrading communities and the Helwan industrial workers.

RENTS

The median percentage of income spent on rent ranges from 13% in Hadeiq Helwan to 16.3% in Rached. Rents in the informal settlements tend to be higher than those paid by workers in Cairo which only represented an average of 8% of their incomes. Average expenditures on rent by tenants in the upgrading communities is 6.95 L.E. compared to 6.25 L.E. in other areas of Cairo

EDUCATION

Educational levels in the Helwan Communities are low and vary considerably for males and females beyond the compulsory primary level. The number of males over 12 years continuing with their education is three times that of females and represents 60% of the males between the ages of 12-21 compared to less than 30% of the females in the same age category. University attendance (8% of post primary students) is exclusive male, while vocational education (5% of post primary students) includes only one female who attends a commercial school

Ninety percent of the households in Helwan contained one or more illiterates, compared to 70% of the households in Ain Shams. Overall literacy rates in Helwan are 45.9% and 71.5% in Ain Shams. These rates hide the gap between male and female literacy rates: 68% and 23% respectively in Helwan, and 89% and 58% respectively in Ain Shams.

Educational attainment is hampered by the inadequate supply of schools beyond the primary level in the areas; about 88% of the households with children beyond 12 years of age reported being inconvenienced by the distances to schools which average about thirty minutes.

HEALTH

Visits from health authorities are infrequent in all the areas surveyed and occur only during epidemics. Ninety percent of the respondents in Helwan reported that they had to travel to medical facilities within the city of Helwan. The closest public medical services are at a distance of 3-5 kms. from the communities. Health services were listed as a major priority for locality improvement.

In Ain Shams private clinics and the pharmacy are the major dispensers of medical services for 35% of the households. The others travel to Heliopolis for medical care.

TABLE 1
HOUSING AND INCOME CONDITIONS
IN THE SELECTED AREAS OF HELWAN AND AIN SHAMS

	Kafr El Elw	Hadaiq Helwan	Ghoneim	Rashed	Ain Shams	Average All Helwan Community
<u>Housing Characteristic</u>						
Average number of house- holds per building	1.8	1.8	1.8	2.0	2.0	1.9
Household size	5.5	5.8	6.2	5.6	6.3	5.8
Average number of persons per building	9.9	10.4	11.2	11.2	12.7	10.7
Persons per room	2.2	2.6	2.5	2.7	2.0	2.5
<u>Tenure (%)</u>						
Owners	72	72	45	67.6	74	69.2
Tenants	28	28	55	32.4	26	35.9
<u>Dwelling Occupancy Levels (%)</u>						
Single household	52	54	50	47	40	50.8
Multiple household	48	46	50	53	60	49.6
<u>Available Utilities (%)</u>						
Water	72	72	52.8	67.6	42	66.1
Sewerage	-	-	-	-	-	-
Electricity	90	62	66.7	73.5	73	73.1
<u>Median Income (L.E./mo)</u>	36.83	36.7	37.46	33.9	43	36.2

TABLE 2

Priorities For Improvement

	Number of Responses	%
<u>Helwan</u>		
Sewage	81	26.6
Health Centres	77	25.2
Consumer		
Coops	59	19.3
Schools	52	17.1
Social & Administrative Services	36	11.8
Less Multiple Response		
Total	605	100
<u>Ain-Shams</u>		
Transport	19	29.2
Sewage	16	24.6
Health Centres	12	18.5
Consumer		
Coops	12	18.5
Water	6	9.2
Less Multiple Response		
Total	65	100

Priorities of Tenancy

	Percent
Purchase House	82.5
Built House	5.0
No information :	12.5
Total	100.0
Rental	
Ownership	100.0
Total	100.0

Comprehensive Survey

A comprehensive survey is currently being undertaken by the NCSCR. The components of this survey are :

1. Market survey (completed in May the results of which are summarised above).
2. Baseline survey in the five Helwan upgrading sites.
3. Survey of public housing.
4. Community case studies.
5. Housing case studies .
6. Health survey.
7. Survey of control communities.

The aims of this survey are :

1. To estimate the perceived need and probable demand for new housing among employees of the industries operating in Helwan.
2. To estimate the perceived need and probable demand for home improvement credit among residents of informal settlements in the Helwan region and Ain Shams, Cairo.
3. To describe objective baseline data concerning the perceived attitudes of the target population towards their existing community and their dwelling accomodations and assess their ability and willingness to contribute towards future improvements.
4. To obtain data that will provide a socio-economic profile (complete with income and expenditure patterns on housing) of the resident populations in the upgrading areas.
5. To describe prevailing housing conditions, priorities, expenditure and tenure patterns and the relationship of these factors to income levels and relevant socio-cultural variables.
6. To describe the prevailing physical (labor and materials) and financial resources used in the provision of shelter and in making improvements and additions.

7. To describe the residents; access to services and facilities, their assessment of the adequacy of existing services in meeting community needs and perceived needs for improvement.

8. To describe the informal and formal patterns of leadership and mutual assistance involved in improving local conditions and solving commonly faced problems.

9. To describe housing conditions, levels of satisfaction and problems in existing public housing.

10. To provide control group data for evaluation purposes.

TECHNICAL ANALYSIS

1. General Site Selection

The process of general site selection was carried out during studies relevant to the preparation of the Project Identification Document (PID) and is elaborated in the report "Housing and Community Upgrading for Low-Income Egyptians". (Annex S. Describes the detailed process of site selection)

Development of Helwan as the most important industrial center for Cairo has taken place, beginning with the Five Year Plan of 1960-65 to the present day, without a corresponding investment being made in workers housing or community infrastructure. Indeed, pre-existing infrastructure has been allowed to deteriorate. Health and safety of the residents is threatened - particularly in informal settlements areas. Commuter transit services from Cairo for the excess worker population of more than 60,000 workers per day is grossly overloaded and equal to the total resident population for the City of Helwan. These factors point to a need to upgrade existing facilities to meet immediate needs as well as planned growth and to provide opportunities to serve a potentially strong market for new housing in the area. New settlements should be located away from the scarce agricultural land to conserve food production and to exploit the unlimited expanse of the desert. (See Annex S for specific selection criteria.)

2. New Community - Helwan

The site selected for this new community project is on desert land at the edge of the existing urbanized area of Helwan.

An area of 157 Hectares has been reserved by the GOE, which will be used as a site for 7,209 dwelling lots and community facilities. This site is part of a planned link between the City and the proposed larger new Helwan residential community titled "15th May New Town" planned further to the east and south.

a. Infrastructure and Utilities:

Supporting services for the community --water, sewerage, electricity-- will be designed to accommodate an ultimate

* Report of the Joint Housing and Community Upgrading Team, MOHR with Office of Housing - AID - August 1977.

population of 110,000. See note below.

(1) Water Supply - Water supply and distribution for the existing needs of Helwan City are inadequate --the supply intermittent and pressure unreliable. Therefore, the project will not be able to merely "tap" the Helwan City System. Fortunately a 600 mm (24-inch) supply main from Kafr El Elw Filtration Plant, which is interconnected with the 50% underutilized El Tebin Filtration Plant to the south, is near the northwest corner of the site. The North Helwan Filtration Plant is currently being expanded. Thus It is expected that the gross supply of water for the project, which will amount to perhaps 22,000 cubic meters per day (200 liters per capita plus community services) when it reaches ultimate growth, will be adequate. The project will require some off-site work such as main extension, pumping station and a 400,000 gallon storage reservoir on the site.

(2) Sewerage - The existing city of Helwan has outgrown installed sewerage piping and treatment facilities. Maintenance is also inadequate. At present, disposal of a large proportion of waste water is haphazard. Overflowing of the existing sewers and surface contamination is prevalent. A Master Plan and program of development for the Helwan

It is expected that each of the 7,209 lots will at a maximum contain a three-story house representing three dwelling units (D.U.) Preliminary surveys indicate that there are an average of 3 households for building with roughly .5 persons per household in multi household buildings in informal settlements. Assuming that all lots will be eventually converted to multi household building through vertical expansion and this pattern will hold, it is estimated that maximum densities reached will be approximately 110,000 persons

This density estimate represents the allowable maximum occupancy for the new-community site. The optimal and probable density will be determined by future market forces for land and low-income family accommodations which may well be less severe in the future. A second influence for lower than maximum densities are the smaller lot sizes and ownership opportunities for lower income families. The probable and optimal density for the new community site is estimated at about 110,000 persons.

area are being prepared; however, new installations are not anticipated in service earlier than the middle 1980s. The new community must have its own independent sewerage system which will later be incorporated into the Master Plan facilities.

A conventional underground sewer net to collect waste water from each building will be installed at the site. The net will be designed to accommodate 200 liters per capita per day and will tie into the Master Plan trunk sewer when completed. In the interim, an independent disposal system for the project will be constructed utilizing primary treatment "package plants" to provide treatment compatible with satisfactory disposal of effluent by leaching on desert waste land.

(3) Electricity Distribution - The Helwan area is served by the Greater Cairo grid and includes a major generating station, Cairo South, and stepdown station (66/6.6 KV) in the vicinity. Sufficient capacity does not exist however to serve the 30 MVA load. A distribution substation supplied by a double circuit steel tower transmission line from the existing Wadi-Nat substation (8 kilometers distant) must be provided. Eight feeders at 10.5 KVA will distribute power throughout the area to about 46 transformers. Underground customer service in 4" product will provide 380/220 volt house connections for a design load for 10KVA per dwelling unit.

(4) Telephone - The economic status of the residents of the new community will not justify installation of a residential telephone system.

(5) Solid Waste(Garbage) Disposal - An essential consideration to assure the future proper functioning of the water-borne sewerage system to be installed is the organization of an effective collection system for solid waste. Experience in Cairo has shown that, without effective collection of solid waste, residents will deposit these materials at any convenient open area or into sewers using street manholes. This project will install a system of durable solid waste holding stations (based on 20 Kilograms waste per capita per day) and related equipment for public street cleaning, waste collection and removal.

(6) **Off-Site Roads** - The first link of the major connector road between Helwan and the King Khaled four lane highway bisects the new community site. Other short connections between existing streets in Helwan and the new community will be improved and paved.

b. Neighborhood and Dwelling Design:

The GOE has, up to the present, built public housing units to fixed dwelling area standards. The inflated cost of building materials, increasing needs of lower income families and requirements of high subsidies have forced the Government to re-examine this policy.

The prevailing solution of such standard apartments in five story walk-up buildings have not proved fully satisfactory to residents. Families with small apartments have been ingenious in attempting to extend this living space horizontally beyond the building face --even residents in apartments up above the third floor. Clearly a development pattern which can accommodate a degree of owner modification and expansion of the dwelling space, making use of the economies found in the "informal" communities, is more appropriate to the needs of lowest income families.

The desert site selected for the project consists of generally gently sloping terrain with several longitudinal well defined breaks in topography of from one to three meters. The top soil is composed of sand and gravel about one meter in depth overlaying a base of bedded limestone. Foundation bearing conditions are optimal for economy on most of the site. Excavation costs however, will be high and extraordinary care must be taken to fit dwellings to the existing topography and to exploit rough terrain where it exists.

(1) The Neighborhood:

The site design and dwelling design strategy adopted for the project attempts to incorporate the best and most appropriate elements of traditional Egyptian commodities for shade, privacy, land use efficiency, reflection of national cultural values with modern planning objectives of convenient siting of important and functionally related facilities, safety from vehicles and modern hygiene. Accordingly neighborhoods will be planned as units containing "clusters" of small groups of dwellings where pedestrian vehicle conflict will be minimized. Aside from emergency access, most communication will be carried out on foot by narrow pathways and streets between dwellings.

Aesthetic distinctions will be developed between neighborhoods by making maximum use of topographic and geographic features. All public open space will have well defined boundaries and functions such as sports grounds, public assembly areas, gardens. Public use and access spaces will be clearly defined so as not to be used as open dumping grounds for trash. Dwelling building lines or garden walls may be coterminous with the street lines so that responsibility for land use and maintenance is clear.

Visual and functional linkages between grouped public functions and with features of the existing community of Helwan will be developed in the site design. Dwelling solutions for higher income families will be dispersed in the site plan among those appropriate for lower income families so that the variety of building types will create visual harmony avoiding monotony and distinction of neighborhoods according to income.

(2) The Lot

Building lots should have an average maximum size of 65 m² per family --except for the few preferential lots to be sold at auction to the highest bidder. These latter to be appropriate for villas may be of 100 m² or more depending upon topography. A minimum building site of 50 m² will be observed.

The orientation of lots and the dwelling is determined by the location, to the west, of the intense rays of the setting sun; counter cyclical dust bearing winds from the south-west for 90 days of the year; presence most of the year of prevailing cooler breezes from the North and the extreme dryness. A hot arid climate precludes the use of ventilation for cooling but allows for schemes of evaporative cooling and heat insulation designs. Buildings should be closely spaced northwest to southwest with southwest and northeast elements introduced for shade.

To take functional advantage of communication and transportation spaces, larger lots should be planned with their small dimension adjacent to traffic arteries. The lots should be able to accommodate both shops and the dwelling spaces of their owners.

Observation of current, predominately multi-story public housing reveal an evident market advantage for low-cost dwellings located on a private lot space. All low-income family housing of the MOHR-AID project shall be located upon a private lot.

(3) The Dwelling:

Dwelling solution designs have been prepared to conform to the repayment capacity of very low-income worker families and with a minimum of direct subsidy. Higher cost and more comprehensive dwelling solutions have been prepared for higher income workers.

Planning for post-occupancy expansion is imperative because clearly the initial dwelling solutions affordable by lowest income beneficiaries will be inadequate: young families will grow; income will rise; and location advantages of the site close to Helwan and to jobs will remain attractive. Alternate housing opportunities in the area will likely remain scarce.

(4) The Dwelling Interior

Interior privacy is an important consideration for the design of a low-cost dwelling solution. Critical areas are: To screen visitors at the outside or front door from interior activities; when a one-room shelter is included the husband's guests must be separated from other activities; to screen the toilet from the main living space.

House plans and windows views should be oriented to the street while protecting visual privacy of residents. Windows should be small and opaque both for privacy and to protect against the fierce sun and wind. Kitchens and bathrooms should be located toward the rear or middle of lots.

Design economy dictates that the building envelope be as repetitive and compact as possible. High costs for utilities and reinforced concrete foundations encourage the preference for vertical stacking of living space.

(5) The Building System

Dwelling designs for the new community are intended to be adaptable, following initial construction, for future vertical and horizontal expansion .

The building systems to be integrated into the program are variations upon the concrete frame -masonry filler wall or bearing wall theme with a concrete slab roof. See Annex I , Building System Design and Material, Supply Strategy.

c. Building Materials and Special Products.

The building materials supply capability of Egypt has not yet overcome the effects of the 1973 war and the general reconstruction which followed. Moreover, the basic and traditional low-cost material for housing --red, soft-burned brick produced from silt and clay of the Nile Valley -- is being withdrawn from use because the Aswan Dam has eliminated replenishment of this material on the agricultural lands along the banks of the River. Concrete blocks have been used for years, however, local production capacity is unreliable and quality is of a low standard. Plants to produce desert shale bricks are under construction but not yet "on-stream". The first is expected to go into production by the end of 1978. Some precast concrete product plants are in production but on a limited scale.

Masonry walls for the project will utilize shale brick, sand lime brick, cut limestone, or concrete block contractors will include an alternate bid in their proposals for installation of a "job-sized" concrete block plant.

Cement is produced by Government and allocated according to National Policy. Production however, is not sufficient to serve the needs of the country and therefore the importation of cement will be necessary. This project will receive high priority for delivery of imported and domestic cement.

Doors and windows and their frames are fabricated entirely of imported lumber and plywood. Hardware used in public financed housing is the conventional 'bright metal' dipped steel and unnecessarily costly for lowest cost housing. Some window openings are unglazed and closed by fixed-louvre shutters. Special attention will be paid to introducing product designs which will reduce the component of imported materials and costs represented by doors and windows.

3. Upgrading Demonstration Areas :

Six informal settlements have been identified in previous project documents as an appropriate opportunity to focus attention upon housing stock conservation.

Because of the scarcity of land and resources to extend urban utilities, the sites upon which this development is taking place are frequently illegally occupied and lacking in paved streets, sewers, potable water service, and public institutions such as schools or health clinics. For this reason they are termed "informal" settlements.

The Upgrading Demonstration Area will establish a framework to continue and accelerate the process of home and community improvement and to demonstrate the means by which this effective method of community development can achieve the level of service, sanitation.

In Helwan settlements are distinctly located in a file parallel to the Nile River and bordering between the urban-industrial zones at the desert's margin and river-side agricultural land. Starting from south to north these are :

	Area Hectares	Population	Households
<u>Helwan</u>			
Kafr El Elw	37.8	4,800	1,000
Rashid	21.8	6,300	1,200
Ghoneim	42.0	15,200	3,360
Izbet Zein	6.8	3,000	600
Izbet Sidki (Hadaiq Helwan)	57.0	20,100	5,070
<u>Cairo-Ain Shams Area</u>			
Al Abasiri	34.0	26,000	6,200
Total	194.7		<u>17,430</u>

The construction process being carried out in Cairo and Helwan by small private builders and the residents themselves through self-help is recognized as an uncommonly effective method for the construction of housing for low-income families.

Out of a total area of 195 hectares, about 112 will be selected for upgrading on the basis of the evident poverty of their inhabitants and deficiencies in regular community services and infrastructure and the responsiveness and initiative shown by residents to continue the improvement and maintenance process by self help and mutual help.

a. Infrastructure and Utilities

(1) Streets - The five sites in Helwan are characterized by generally higher population density than is Ain Shams in Cairo. Access is more difficult to individual family dwellings and everywhere streets and walks are unpaved. The urbanization program in the demonstration areas will provide for the improvement and paving of principal existing streets and walks and widening space limitations will allow.

No more than 10% of the families in each community may be relocated in the process of improving the pattern of access. Preliminary plans show that at most 1% or 2% of any Community residents need be relocated.

The upgrading sites are located within the geological area of the Delta Land characterized by silt subsoil to a great depth. No special excavation problems are anticipated except in Rashid where groundwater is near the surface.

(2) Water - For all of the upgrading sites, water distribution lines have been installed at least to provide a limited number of public fountains and supply mains are within "reaching" distance of the areas to be up-graded. A few of the affluent householders have managed individual connections to their dwellings.

The project design specifies the extension of primary supply where necessary and installation of a complete supply grid which will service additional public water taps and individual house connections where affordable and desired. Special attention will be paid to the design and location of public taps to reduce wastage of water and provide adequate convenience for clothes and kitchen utensil washing to discourage use of infested open ponds and canals.

(3) Sewerage - No sewerage collector lines serve any of the upgrading areas in Helwan, nor will Master Plan Improvements reach the areas for perhaps ten years. Dwellings will be serviced by cesspools and seepage pits, where water is supplied to the dwelling, to be emptied by municipal government pumping or private operators.

Parts of some areas may lend themselves to mini-collection systems with disposal in leaching fields.

In Ain-Shams a sewer collector line does extend down the central access road of the project area and serves several.

of the adjoining streets for short distances. Here a sewer network will be installed under principal streets to serve individual dwellings that have water service. Conditions of family finances, access or other factors will likely result still in installation of a large number of cess-pools or seepage pits.

(4) Electricity Distribution - Each of the upgrading areas is presently supplied with low-voltage electric service. No difficulty is anticipated in increasing the capacity of the system or in the provision of better street illumination.

(5) Solid Waste Disposal - Solid waste (garbage) is at present disposed of in a casual manner in open drainage canals, in adjacent unoccupied areas and --in Ain Shams-- down sewer manholes. Such garbage deposits not consumed by domestic animals provide breeding grounds for the worst incidence of disease in the community and elsewhere the principal cause for disruption of the waterborne sewerage system. (In these communities the traditional system of private collection and salvage does not function efficiently due to the insufficient salvage potential of garbage of the very poor.) This project will install a system of durable solid-waste holding stations and increase the frequency of public street cleaning, waste collection and removal.

b. Home Improvement Assistance:

To serve the needs of home owners in the upgrading areas, and upon their individual initiative, loans at favorable terms will be made available, together with construction drawings of standard recommended improvements, contracting assistance, plans approval and supervision, a limited amount of training in building skills and access to scarce or specialized building materials. Emphasis will be placed upon developing means to assist the traditional and successful process of construction in informal settlements without obstructing the self-help improvement process. A degree of control and supervision will be introduced only to assure compliance with the use of loans funds, to minimum structural and sanitation standards.

Assistance programs will be incrementally developed according to the demonstrated responsiveness of the community residents to organize themselves, to plan parallel (wholly locally supported) programs of up-grading, and to make savings in approved credit institutions as an equity commitment for future home improvement loans. Without such evidence of receptivity, reflected in high percentage of owner occupied dwellings and local community initiative, an up-grading program would probably prove unsuccessful.

See Section III B. Social Soundness, for objectives and procedures to verify community responsiveness.

Initial pre-engineered improvement packages will be prepared and receive priority consideration in the granting of improvement credit. These are the packaged improvements most appropriate to achieve a rapid short term improvement for the sanitation and safety of the informal community residents. Building permit approval procedures will be automatic in instances where approved package plans are to be utilized.

Most of the construction for the dwelling improvement is anticipated to be carried out under individual contracts between resident families and small scale building craftsmen already working in and around the designated sites. Construction aspects of the loan program will follow traditional procedures, customs and techniques. Technical assistance by technical supervisors will be provided to help loan applicants estimate the cost of their work, prepare a work schedule, design special elements of their credit project, select a contractor, order materials in a timely manner and achieve acceptable standard of quality in the assembly of the materials.

It is understood that the upgrading process of the designated six "informal" housing areas will be heavily influenced by the local and unique conditions of each site. The Upgrading areas are not completely amenable to a pre-set formal construction plan; rather it calls for improvisation and much ingenuity during implementation to provide the facilities envisaged as well as to take full advantage of the positive forces of community pride and cooperation.

4. Community Facilities and Social Services

The Community Facilities and Social Services Program for the New Community and upgrading areas is divided into two general categories. The first category consists of those elements which are standard necessities to a large community such as schools, health centers, and postal services. Also included in the new community are such recreational facilities as a sports field, open park area and a site reserved for a cinema.

The second category consists of those elements which require a constituency of local citizens which participate and contribute to the facility or service for its success. A home improvement credit and cooperative administration center is a good example. The Social/Community Association Center, day-care centers and activities under the Ministry of Social Affairs fall into this group. In this project Solid Waste Holding Stations and Public Water Stations are also included in the group for which a specific community commitment is to be identified prior to installation. Technical assistance to community leaders and residents will be provided by MOH social workers to help them better identify their needs, organize their resources and plan a course of action to improve and upgrade their Community .

5. Design and Supervision

Cost feasibility analysis carried out for this project is based on the standard and prevailing fee schedule for Egyptian architectural and engineering firms of 6% for design and construction management. Agreements with the MOH call for implementation of professional services using US A/E firms for urbanization design in the New Community program and construction management for the entire New Community Program. Egyptian firms will design housing and building for the new community and to carry out all activities in upgrading areas, ES Parsons has estimated the probable value of combined services as follows.

<u>Item</u>	<u>Cost (S equivalent)</u>	<u>% of initial Construction Cost</u>
<u>New Community Program</u>		
Urbanization design (US A/E)	4,390,000	
Building Design (Egyptian A/E)*	477,000	
Construction Supervisor (US A/E)	3,478,000	
	<u>8,345,000</u>	18%

Note : Egyptian design fee based on ratio in ES Parsons Engineering feasibility Report.

Estimates of US A/E participation costs appear excessive.

In this project an 8% design and construction supervision-management ratio is adopted for the new community program and the 6% ratio is retained for the upgrading program.

Agreement was also made that the US architectural-engineering firm contract will provide for the contingency of assuming the responsibility for the entire design program of the New Community Site in the event of default in the delivery of services by the participating Egyptian architectural firm for housing and community facilities. Architectural-engineering fee estimates are difficult to determine with accuracy. In the event of increases in fee requirements the up-grading component of the project will be correspondingly reduced.

6. Construction Cost Contingency

A 15% contingency is estimated on the value of construction elements of the project .

7. Inflation Factor

Based on current inflation trends an inflation factor of 2% per month is estimated on the value of construction elements of the project to mid 1981 when it is assumed all major commodity purchase and half the construction has been executed.

COMMUNITY FACILITIES-
COOPERATIVE AND COM-
MUNITY DEVELOPMENT

INTRODUCTION

A major challenge of this urban development grant will be to demonstrate how a multi-sectoral project can effectuate a positive change in the way of life of the poor. There is a conscious attempt in the design of this project not to reflect a bias in favor of one particular remedy to Egypt's vast social ills. be in increased housing, better health or more employment. Rather the premise is that it is the totality of the condition of poverty in all diverse ramifications, from the cultural through the economic and physical to the social, which must be approached in concerted fashion. That is, poverty is a state of being which is more than the sum of its parts and this is especially true in urban areas where the complexity of the economic and social fabric makes an holistic approach especially germane.

The risk in such an ambitious endeavor is that the many facets of the program will not be executed in coordinated fashion but rather in a disintegrated manner, each piece crudely and unnaturally juxtaposed against the other. The risk in piecemeal approach is that it ignores the interaction of factors by limiting itself to addressing one problem at a time in isolation from all others. In doing so, it invariably falls short of achieving wide-spread and long term-effects.

The underlying rationale, then, for attempting to carry out this difficult feat of coordinated development is that the prevailing urban condition makes it better to have strived to meet the challenge, as presented, with the risk of not achieving all that is desired and needed, than to have perpetuated the piecemeal, disjointed approach which has been the norm in Egypt as in most countries of the world today.

A COMMUNITY FACILITIES

1. Health

a) Approach

In the health area, as elsewhere, this project has followed that policy of the GOE which appears to be most suited to the needs of the urban poor. Consonant with the new AID urban health project, the health component of this grant will combine the features of integrated health services in one center, increased outreach into the community, an emphasis on preventive health, and an orientation to learning, whereby the changes brought about in the health area by a more effective delivery system and improved sanitation (water and sewerage systems) are subject to constant evaluation.

Observation in Cairo and from informal surveys conducted in Helwan and Ain Shams upgrading sites indicate that the lack of sanitation health services is a primary source of dissatisfaction with existing conditions. The need for community based health services was reiterated not only in specific responses to questions on available health services, but also in the expressed priorities for locality improvements.

b) Facilities to be provided

The Ministry of Health of the GOE and the PP team have agreed that the basic health service which will be provided for in this project is a Community Health Center, designated to serve a population of 25 to 50 thousand.

The Community Health Center contains the following elements:

- Maternal Child Health Unit
- Outpatient Clinic
- School Health
- Dental Care
- Health Inspection Center (inoculations, registration of births and deaths; environmental sanitation)
- Family Planning Unit (Physical)
- Preventive Health Education

- Pharmacy
- Ambulances (2)

The center is to be staffed by roughly 35 to 40 persons including:

- 4 doctors (3 half-time; 1 resident)
- 4 nurses
- 4 midwives
- 3 paramedics
- 1 sanitation expert
- 1 dentist (half-time)
- 1 pharmacist
- 1 lab technician
- 10-15 service personnel (drivers, launderers, lab assistants, maintenance staff, etc...)

Nine centers comprising the full range of these services have been built in Cairo, most with the help of World Bank funds. Subsequently a revised unit has been designed which meets the same needs at a reduced cost thus affording greater replicability. It is this latter unit which will be built in this project.

It is the policy of the GOE to provide health service to the people of Egypt either free of charge or for very nominal fees. In the proposed health Center only the outpatient clinic (including dental care) would be paid for, at the rate of 3 piasters a visit. In the one up-grading area where there is now a health facility a small out patient clinic in Maideq Helwan, the Community will be encouraged to make improvements and repairs with paint and tools supplied to the local Community Association through the Ministry of Social Affairs.

c) Location of Proposed Facilities

Helwan

At present there are five health centers in all of Helwan. These are located in Torra, Masara, Helwan proper (2) and Bassatin.

One hospital is in Helwan City; a mental hospital and polyclinic are under construction there also. There are no health facilities in any of the sites selected for upgrading; the communities nearest to an existing center are Huneim and Rashid (two and three kilometers); the other areas are at least five kilometers away from health services. As part of the upgrading process it is proposed that there be three new multi-purpose health centers servicing Hadiq Helwan, Kafr EL Elu, and Ghoneim-Rashid. On the basis of population estimates for the Ain-Shams district there will be two health centers built. The new housing community will contain one center which may be extended with a second floor to serve the adjacent neighborhoods as well as the project beneficiaries.

d) Monitoring

The health facilities which are to be provided in Helwan and Ain-Shams, as stated, consistent with GOE health policy. While less than ten of these centers exist in Cairo at present, representatives of the Ministry of Health have stated that the 5 year plan projects a total of 120 multi-purposes health centers. Additional units similar to those discussed here are to be built with USAID funds in South and West Cairo. The monitoring of the effectiveness of the centers funded in this project will be carried out as part of the general review of these other health centers by the USAID Health and Population Office.

2. Education

a) Approach

The goal in the education component of this project is to provide the normal complement of educational facilities in both new and existing communities as prescribed by the Ministry of Education. The attempt has been made to plan for enough space so that the desired occupancy rate 40 students per classrooms may be attained - a reduction from the prevailing excessive 50 to 60 students per classroom. The project allows for standard school facilities. Where a particular rationale and official recommendation is made for a deviation from this practice as in the proposal to support a basic (combined vocational and normal) education unit in Kafr EL Elw, this has been done.

b) Facilities, Location and Costs

i. Helwan

At present Helwan is served by five high schools (5,318 students), one industrial (high) school (1,000 students), 29 preparatory (Junior high schools) and 140 primary schools (45,015 students). Helwan is a rapidly growing section of Cairo. It now contains about 500,000 persons and with its estimated annual population growth of 5.6 percent is expected to reach 750,000 by 1985.

i.a. Vocational Training Center for the Construction Trades.

The center will be run by the Technical Office of the Ministry of Housing and Reconstruction (TOMOR). Sixty five centers are proposed as part of the current 5 year plan. Currently there are three centers in the Cairo area, two in operation and one near completion. In all of Egypt there are 10 centers and another 17 under construction. The world Bank has agreed to fund the equipment of twenty new centers plus three additional ones for training trainers.

In the absence of equipped centers TOMOR has had to rely upon using secondary schools and other facilities. The current courses taught are intended to produce skilled and semi-skilled workers in the construction industry. Ten basic trades are taught; bricklaying, plastering, plumbing, concrete forms, steel reinforcement, carpentry, electrical work, metal work, floor and tile laying. Each center can handle an average of 300 trainees per course three six months courses commence each year (four months within the center and two months on the job training) i.e. the annual number of persons trained is 900. An effort will be made to complement this normal building industry related training with training in short, practical do-it-yourself skills (plumbing, electricity..) which should be particularly useful for the housewives in the project areas.

3. Social Welfare

a) Approach

The policy of the Ministry of Social Affairs is to integrate the various social and welfare services it provides into one unit, the Social Center. The Center is to service a community of approximately 50,000 persons.

The centers are staffed by Ministry of Social Affairs employees, professional volunteers and "pioneers", girls from the community where the center is located who have at least nine years of formal education and four months of preparation; this latter group helps with the various services of the center, as needed. The center is supervised by a head social worker provided by the Ministry of Social Affairs. As with many of the programs of this Ministry of the GOE, the Center's activities are significantly affected by contributions in staff and funding from Egyptian and foreign private and voluntary organizations (FVOS). This appears to be especially true in the areas of family planning and vocational training.

The social welfare program proposed in the upgrading areas and the new community will be constructed, equipped and staffed to:

- 1- Provide social services needed and for which there is an evident demand.
- 2- Act as a focal point for generating an awareness of needs and means of involving broad citizen participation in improvement of local conditions through coordinating and integrating activities of existing community associations or by stimulating the formation of community groups.
- 3- Act as a social change agent by both facilitating access to services and by developing a community spirit and sense of responsibility for improvement.

b) The Social Center

The Ministry of Social Affairs has at present two large comprehensive social centers, which were funded in large part by UNICEF. Several other centers, less fully equipped, exist as part of housing projects. As in the case of the Health Centers, the intention in this project will be to take the same integral concept and apply it in a more economical fashion so as to facilitate replicability.

Activities in the center are geared towards attracting members of the community to it. Services to be provided **will include** :

- 1- Family planning counseling day care center including nutritional lunch program.
- 2- Recreational space for youths
- 3- A meeting hall large enough to serve purposes as diverse as T.V. viewing, rental for functions like weddings, meetings, indoor recreation.
- 4- Counselling for women on such things as poultry breeding, basic home maintenance problems, sewing. The latter will not be the traditional sewing classes but machines can be provided which allow women to use them for stitching items of clothing.
- 5- Remedial Classes in primary school subjects to prepare children for examinations.
- 6- Distribution of Government pension benefits

The nature of these services will be different for each community depending on needs. However, the focus should be limited to activities that draw residents of different age groups to the center so that the habit of utilizing the center will be formed.

From visits to existing social centers and discussion with social service experts in Egypt, it is apparent that social centers staff, do not at present perform the function of effective agents for community development and social change which they are intended to.

The attempt will be made in this project to upgrade the social center staff so that it may both deliver services and act as stimulus to generate the participation of the community in the project.

Prior to construction of the centers, it will be the task of the community services personnel of the Implementation Unit (Secured from the Ministry of Social Affairs) to identify these activities to which people will be receptive and which will encourage an identification with the center on a community level. This unit will initially staff the center once it is

constructed and carry out its community development and organisation tasks in both the upgrading areas and the new community.

C. Areas, Facilities and Costs

At present Helwan and Ain-Shams have only minimal social services, largely administrative offices for social security and veterans benefits. There are no social services in the sites selected for upgrading. Although final decision for the construction of centers is contingent upon the communities actually selected for upgrading.

The following centers are planned :

<u>Area</u>	<u>Facility</u>
Ghoneim-Rashid	Social Center
Kafr El Elw	Social Center
Hadaiq Helwan	Youth club/Vocational training for boys-girls (9-15 yrs)
Ain-Shams	Social Center
New Community	Social Center

4 Other Facilities

a) Cooperative Administration Credit Building

The Credit Foncier D'Egypte will establish a permanent branch bank on the new community site to administer the sales, home improvement credit and savings program which is a part of this project. Sharing facilities with it will be several administrative offices for management staff of housing cooperatives of the new community. The building will be a training center for all components of the cooperative and home-improvement loan activities.

b) Post Office-Fire Station

The District of Helwan has identified need for additional service to be installed on the new community site as a result of the large increase of population to be added to this zone of the city.

c) Open Market Plaza and Covered Sales Gallery

The eastern zone of the city of Helwan is poorly served by commercial facilities. This project will establish a small open market area to serve the entire eastern zone and relieve excessive daily travel by new community program residents. The market facility will be owned and managed by the District Government.

B. Cooperative and Community Development

Ultimate project success is dependant upon the private initiative of beneficiaries working together to assure an orderly, safe and sanitary environment. To this end up-to half of the new community program areas will be organized in three or more housing cooperatives by the MOH Implementation Staff. The remainder of the new community area and those communities or portions of communities in Helwan and Ain Shams selected for upgrading will be left with functioning community associations.

1. Sales, Training and Organization in the New Community

Sales promotion for the new community program will be focused upon the workers of Helwan industries which have annual incomes at or below the median for the urban Egyptian population-currently estimated at \$ 812 per year. Workers filling sales applications will undergo a credit evaluation by the Credit Foncier D'Egypte (C.F.E.) and

initiate an interest bearing savings account in the CFE to accumulate funds for their downpayment.

Pre-occupancy training will be initiated in central locations in Cairo where the worker and his family will learn some of the details of the project and its innovative features. Characteristics of housing cooperative and the community association organization and operation will be described as it pertains to ownership of individual dwellings and management of community owned services and property. Purpose of the pre-occupancy training is to assure full understanding of the housing opportunities offered by the project and of the residents responsibilities to improve their house and mutually assure community maintenance.

With completion of the first two sections for occupancy, the Governor of Cairo and the MOH will preside over an open lottery of applicants grouped according to their housing choice. Selected families who have complied with all requirements and have made their downpayment, will elect either to live in that portion of the site designated cooperative or community association.

Post-occupancy training will be undertaken to formally organize the cooperative and association leadership groups, establish by laws and internal regulations, funds and management procedures.

2. Training and Organization in the Upgrading Program

Promotion of the upgrading program in the informal communities begins with an assessment of needs carried out by the MOH Implementation unit with local leadership and residents. The focus of activities will be on the formation of specialised citizens' communities under local leadership with responsibility for specific services and programs which, through volunteer action, can contribute to environmental health. A major purpose is to determine if a sense of concern for the neighborhood is present sufficient to command the time, personal efforts and monetary contributions of the people who live there. Secondly the activity is designed to reveal the real informal leaders of the community who would form the core of the community association board and undertake planning of programs such as for example: expansion of the social center's activities in conjunction with the professional staff.

Prior to commitment to any upgrading activity then, aside from perhaps the installation of community facilities, the Implementation Staff will assess the success of citizens committee projects, the extent local leadership and its potential for improvement.

Given the importance to the success of the project of stimulating community development efforts and participation of the residents in maintenance and home improvement, an initial assessment will be conducted the potential for mutual help and local leadership in areas where upgrading might take place. This exercise will provide the implementation unit with preliminary data on existing community associations and their potential for involvement in community development. While the data to date suggests that there is very little formal community level organization with the exception of Hadaiq Helwan which has a functioning community development association, it also suggests that there are patterns of mutual assistance formed on an ad-hoc basis:- Neighbors organizing collections to pay for the installation of water, petitioning for schools to be introduced. These efforts can be encouraged and built upon, moreover, the survey data also indicates that there is a willingness to help in improvements and an awareness of the need for locality improvements.

3. Functions of Housing Cooperatives

The Housing Cooperative is a not-for-profit legalized stock company which is owner of a single mortgage on the land and buildings within its boundaries. Members of the cooperative community are selected, following the initial sales program, by other members according to their character and stated willingness to abide by the cooperative regulations. Members of the cooperative are the owners of the company by reason of their purchase of stock and occupy their dwelling with an occupancy agreement which can be revoked by other members for their failing to abide by the regulations. This strengthens monthly mortgage payment discipline without government or court intervention. Housing Cooperatives will remain in force for the 30 year term of the mortgage. All occupants of dwellings or lots in the housing cooperative area are obliged to be members of the cooperative .

Members form the non-paid, elected executive group with paid staff handling daily operations. Experience in other LDC's has shown that the mobilized individual and collective initiative of cooperative members can provide assistance

in maintenance of publically funded facilities and service - such as guarding against broken street lights. In addition, the cooperative will institute services which supplement inadequate public maintenance investment such as landscape open spaces, paving and repairing walks and roads, and collecting waste from each dwelling.

The application of home improvement loans will be monitored to assure one member does not block the natural ventilation on his lot, that of his neighbor or build an unsafe or poorly maintained structure on cooperative land.

Finally the organization which the group provides allows each member to express himself with greater effect about the quality and character of services provided by public officials.

In Egypt the Housing Cooperative will be called a "Mutual Housing Association" (as in some LOC's with a British tradition) to make a distinction with the existing housing cooperative organization which is obliged by law to operate on a highly subsidized basis.

4. Functions of Community Associations

The Community Association is a not-for profit volunteer organization of members in the new community and residents in upgrading areas which, by agreement with the District of Helwan, will maintain certain common facilities and open spaces. The degree of organization and staff needs of the community association will vary according to the scope of character of its activities.

The organization provides a forum in which community concerns can be discussed, needs identified and resources mobilized. It allows each member to express himself with greater effect than might be individually possible concerning the adequacy of public services and the quality of the neighborhood environment.

Project beneficiaries who elect to purchase a dwelling solution or auction lot in the New Community Program are required to join a community association. Community association will remain in effect for at least three years after the termination of implementation of the project and thereafter so long as they receive the voluntary support of beneficiaries

BUILDING SYSTEM DESIGN AND MATERIALS SUPPLY STRATEGY

The data contained in this Annex was developed as a result of a specific AID sponsored research study carried out with the assistance of the Egyptian Government's General Organization For Housing, Building, and Planning.

A. Terms of Reference

The project consists of 7000 initial dwelling solutions in the Helwan expansion area and an equal construction investment in community facilities and dwelling improvement in the new expansion area and in upgrading neighborhoods in Helwan and Cairo. The initial dwelling occupancy pattern consists of single family one-story structures which can be expanded readily into structures up to three floors in height. Community Buildings and room loan designs for upgrading areas similarly will conform to a three-story height limitation.

Construction contracts with small building contractors will receive priority in this Project as a means to generally stimulate the building industry. Similarly, subsequent home improvement should be capable of execution by self-help means if the owners have the technical skill to carry out the work. The building system and materials should be generally conventional to prevailing practice with a minimal degree of mechanical aids necessary in the erection process. Materials should be of a competitive low cost so that they are adopted as part of the natural selection process for this character of housing while providing the quality which is desired by the occupants.

B. Wall Building Components

1. Building System

Both reinforced concrete frame and the bearing wall building systems are in use in low-cost public and private construction. In most instances higher quality standards favor concrete frame-building over bearing wall systems as the "modern" standard. Bearing wall design is primitive in Egypt and uneconomical reflecting high design margins of safety necessary to counter poor quality wall materials available in the market.

As a result of the AID sponsored study the bearing wall building system is recommended as a demonstration component for the Project. This technique dispenses with wood form work and a significant quantity of reinforced steel. Up-to-date design coupled with acceptable new materials being introduced into the market can have an important demonstration effect on the local construction industry. Cement utilization, a critical issue in Egypt, may be no greater than that of frame building and when combined with innovative high-cured concrete blocks with "surface bonding" a significant cement savings may be realized. This project will utilize both traditional Egyptian reinforced concrete frame and bearing wall systems as a means to introduce lower-cost modern design to the country.

2. Materials

a) Clay-Shale Brick. The principal wall material for urban low-cost housing in the past has been red, soft burned, Nile silt brick. With the official government decision established to eliminate Nile silt brick as a building material, (conserving silt for agricultural uses), the GOE has begun a program of building mechanized new plants and converting traditional plants to use desert shale. A new, government operated desert shale brick plant is scheduled to go into full production in one year's time. The first converted traditional brick yard may be in full operation shortly thereafter.

Red Nile silt brick does not generate sufficient strength for use in a bearing wall. Clay shale brick produced from converted brick yards are anticipated to be inadequate also because of insufficient and unchanged brick firing facilities. Clay shale brick from the government's new plant does have sufficient strength and will serve as the principal source of wall materials for this Project.

Doubt exists as to whether it would be possible to secure all wall materials needed by the Project from the government's plant. The plant is designed primarily to produce higher cost clay structural hollow tile. Moreover, long term and unexplained delays have been experienced in placing the plant in operation.

The plant has a design capacity of 100 million brick but may operate on a sustained rate at about 80%. A portion of this capacity will likely be diverted in favor of structural tile rather than brick because of demand and estimated higher per/unit profits. Project estimated needs of 21 million brick per year would consume about 25% of production. The new community program alone will consume less than 10 million brick or only 12% of probable plant production.

It is recommended that 15 to 18 million brick be planned for purchase from the clay shale brick plant (or 85% of Project needs).

Red Silt Brick has been used in cost estimates in the absence of a full production price on clay-shale brick.

b) Limestone Block. The Helwan community extension is to be built in desert land containing extensive limestone deposits. A small quarry operation is presently located on the site in the northeast corner as is a separate cement aggregate crushing facility using limestone.

The present quarry is small and not productive due, it is felt, to the poor quality of machinery utilized. Block dimensions are variable which makes control of the cost of efficient wall erection difficult. As blocks vary in size extra labor is required. Walls may vary in dimension thus increasing mortar costs. The price, however, is competitive with other masonry products and block quality adequate for bearing wall design.

It is recommended that the existing quarry and aggregate facility be closed on the site but relocated to a convenient close location and re-equipped using funds from a separate AID project to the Egyptian Development Industrial Bank. The quarry facility should provide up to one half million block per year or about 15% of project needs.

c) Sand-Lime Brick. A new sand lime brick plant in Cairo is located about 10 kilometers from the Ain-Shams upgrading site and nearly 20 kilometers from Helwan. The product is appropriate for bearing wall construction.

It is competitive in cost at the factory site and will likely be the primary wall material for the Ain Shams upgrading program. Costs of sand lime brick will probably be uncompetitive for delivery in Helwan due to the added transportation. Presently, a three month delivery waiting list exists for the product.

The new sand-lime brick plant is undergoing a prolonged period of adjustment such that after several years production remains at below half the design capacity of 75 million units. Moreover expansion of the facility would be very expensive and there are no plans in the next 5 years at least to expand production.

d) Concrete Block. The AID sponsored research study examined the production of several concrete block plants under both government and private enterprise ownership.

Poor plant discipline and procedure, however, result in block which is too weak for bearing wall design and of such poor quality as to make wall assembly difficult.

Where bearing wall design is attempted with the present concrete block product, the Egyptian practice is to fill each of the hollow cores of the block with cement. A reinforced concrete tie beam with 4 steel bars is placed laterally at the eave level and at grade level also — even when soil conditions are stable. The effect is to construct a solid concrete wall.

Existing concrete block technology is not competitive with the anticipated state of government produced clay shale or sand lime brick. Costs may be excessive in comparison to limestone block walls also. Reinforced concrete frame walls and poor quality concrete block in bearing walls cost about the same amount of money.

PRICES OF BASIC BUILDING MATERIALS

Materials	Standard Unit Size (cm)	Unit Price at Factory (LE/1000 Units)	Comparable Unit Price (LE/m ³)	Materials Price of a 3m x 6m load bearing wall ⁷
Traditional Red Brick	25x12x6	22	12.2	55.00
Desert Shale Brick (projected)				
Public Firm ¹	25x12x6	25		62.50
Private Firm ²	25x12x6	15	8.2	37.50
Probable unsubsidized future price	<u>25x12x6</u>	<u>33</u>	<u>18.4</u>	<u>82.50</u>
Sand Lime Brick	25x12x6	22	12.2	55.00
Limestone Block				
Representative firm ³	20x20x40	160	10.0	36.00
Quarry at building site ⁴	20x20x40	180	11.3	40.50 ⁶
Concrete Block	20x20x40	160 ⁵	10.0	n.a
Probable unsubsidized future price	<u>20x20x40</u>	<u>200</u>	<u>1 54</u>	<u>44.96</u>

NOTES :

1. The public firm is the new factory of the Seigwart Company located at Wadi El Hay. Production is schedule to begin in Summer 1978 and the presently planned price is LE 25/1000 bricks. There is some speculation, however, that the initiation of product will be delayed and that the actual price will be set closer to LE 33/1000 units.
2. This is the projected price for a pilot factory to be converted from red brick to shale brick manufacture. While it is currently projected that production cost will be low, the actual price changed is likely to be higher than LE 15/1000. The particular factory is expected to begin production of shale brick in Summer 1978.
3. The LE 160/1000 price is one commonly quoted.
4. This firm conducts its quarrying activities on the Helwan building site. A long term contract at a price lower than LE 180/1000 would probably be possible. The quarry appears to be a low-cost operation involving the intensive use of unskilled labor.
5. This price reflects an artificially low cement price, subsidized to the point where the official price of cement, available to concrete block producer, is about half of the UF import price. Assuming cement costs will rise closer to the range of imported cement— from LE 20 to perhaps LE 40 — the probable factory price may be LE 200/1000 units.
6. The quality of the concrete block observed during the visit to one major factory was considered insufficient to permit the construction of loans bearing walls.
7. The 3m x 6m reference wall is 25 cm thick in the case of construction with standardized bricks and 20 cm thick when constructed with 20x20x40 cm blocks. no allowance is made for mortar costs.

SOURCE : Interviews and direct price quotations. April 1978.

e) Other Wall Materials. In addition to the aforementioned materials the AID sponsored research team examined a variety of other wall materials such as foamed concrete block, lightweight aggregate concrete brick, asphalt stabilized clay brick and precast concrete wall panels, gypsum and sulfur. Literature sources such as the AID supported study carried out by Massachusetts Institute of Technology (MIT) and Cairo University was the principal and authoritative source for this work. They have not been recommended for consideration as a part of the Project because these products are either in the research and development stage in Egypt or unsuitable for bearing wall installation. In the case of precast concrete wall panels, the cost due to transportation to Helwan was anticipated to increase by a factor of 7 making such installations clearly uneconomical.

f) Surface Bonding. Traditional Egyptian practice favors plastering the surface of masonry walls with a cement and sand stucco-plaster coat as a means of finishing the surface. Lime in plaster is typically not utilized. This practice is not advisable in a country where cement is in short supply.

For more than ten years in the United States the technique of surface bonding in place of individual mortaring of masonry units has been used — particularly for low-cost construction. The facts, as developed by qualified testing agencies, show that surface bonded walls are not only up to 25% cheaper than conventional walls but are stronger. The block wall is laid up dry and then plastered with a thin coat ($\frac{1}{2}$ cm) of mortar of which about $\frac{1}{5}$ by volume consists of chopped glass fiber. It is the high tensile strength of the glass fiber which gives the durability and freedom from cracking to the wall.

Surface bonded bearing walls will be fabricated and tested on a pilot basis prior to general utilization in the Project.

C. Roof Installation

1) Building System

Current practice for the construction of roofs in low-cost housing either by private means or government sponsorship is to fabricate a poured-in-place one way reinforced concrete slab. In public supported housing the method is utilized for lack of economical alternatives for high durability. When the private owner can afford it, the concrete slab roof is installed with the idea that it will soon serve as a floor for the next dwelling addition. Due to scarcity of land, most expansion is vertical by building a simple house up to four stories high over a period of years. A concrete slab roof is expensive however — not only due to a large amount of expensive steel and cement used — but also because of the form work of imported wood which must be built first to hold the concrete until it hardens.

As a result of the AID sponsored study - a system of joist and block or molded cement or hollow tile panels is being considered for the project. Block or panels spanning between the joist hold the block or panels in place. Only an occasional post to take up any sag in the joist from the concrete when wet is needed. There is a savings in cement and in steel but the floor can be stronger than the slab because it has greater depth. Joist and block or panels can be installed by two or three men without special mechanical assistance. Joist with blocks or panels but without poured concrete above can serve as a lower cost temporary roof. A light mat of reeds over the joist will shade it from the hot sun and result in a cooler living space below.

This project will utilize both the one-way reinforced concrete slab and the joist and block roof-floor system as a demonstration of relative advantages in cost and efficiency of construction.

2) Materials

a) Composite joist — The basic building element of the roof-floor system is a light steel joist made up of 1/8" and 1/4" steel bars welded into a truss configuration supporting a hung precast flange. Cast within the concrete flange are tension wires or bars sized to the anticipated expected load on the floor. Joist have bearing plates attached to the ends of the top chord and every second joist is tied to the perimeter bearing beam with a stirrup embedded into the continuous concrete fill. Temporary bracing wires will tie the bottom chords of the joist until cement is poured.

b) Block or Hollow Tile — Because lightweight aggregate for production of light block is not available in quantity in Egypt, conventional 10 cm block will be used. Hollow tile to produced in the government's clay shale plant may be substituted. For concrete block of the same thickness, the substitution to clay shale tile can reduce the weight of the assembly by 30%.

c) Concrete Dome Tile — Block or clay shale tiles require a joist spacing of about 40 cm. Dome shaped concrete tiles permit a spacing of 76cm. The tiles will have a dome rise of 5-8 cm and are 2.5 cm thick. This will produce yet a lighter and more efficient roof-floor system. Dome tiles are not at present produced in Egypt and must be specially fabricated and tested on a pilot basis prior to general utilization in the Project.

D. Floor Design at Grade

The AID sponsored study investigated the possible use of concrete or tile block laid over a compacted sand bed and without a mortar grout as a means to reduce cost. It was determined that an 3" thick tile would be required to resist unequal impact from traffic on the floor.

E. Doors and Windows

The installation process for doors and windows in conventional construction consumes a disproportionate amount of time and the services of the most highly qualified craftsmen. Door and window frames are fabricated on the site of imported lumber. The fitting of doors and windows, after the frames are installed, are a separate operation carried out in the building site.

The AID sponsored study investigated means to simplify and reduce costs in this area. No special recommendations were made as a result of a lack of local experimentation on the topic other than verification that doors and windows are fabricated on the site with reasonable efficiency.

Precast concrete door frames and frameless window openings will be especially fabricated and tested. Doors themselves will be hung from pivots installed in the sill and door lintel. Windows will be of solid louver design hung from hinges embedded in precast lintels over the window opening. Purpose of the test installations will be to gauge market response and stimulate further design modifications.

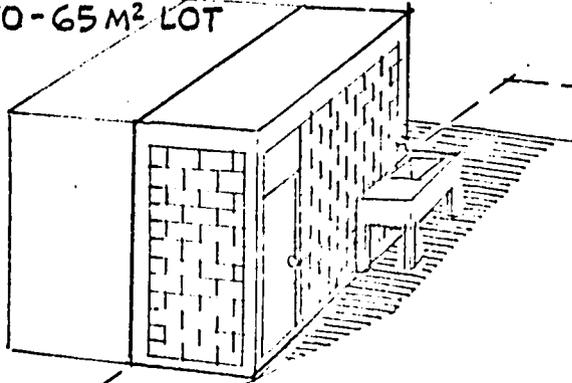
F. Electric Distribution Components

The largest single urbanization cost components of this project, electric cable and transformers and switch gear are produced in Egypt by "The Egyptian Cable Company" and "Elmalco-the Nassar Company for the Manufacture of Transformers and Electrical Equipment. Concern had been expressed previously about production quality control and technical specifications of the products being produced.

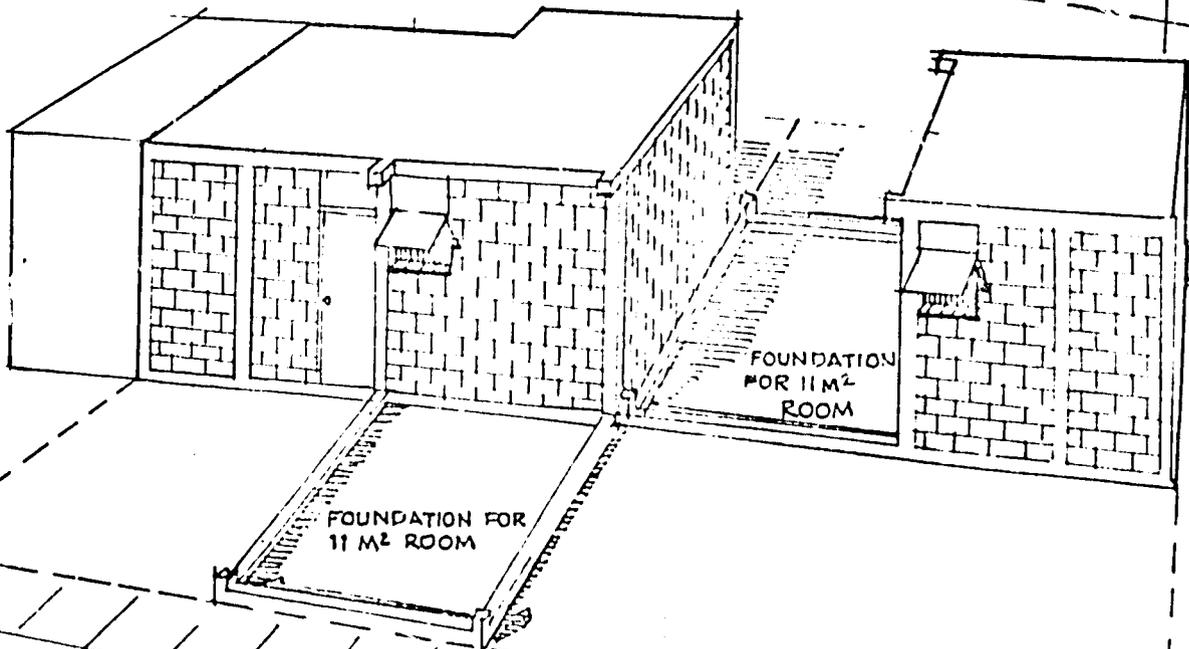
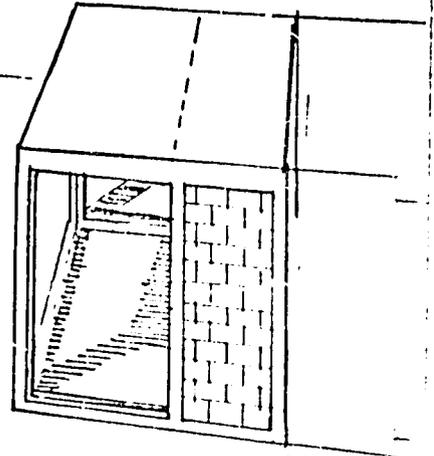
Elmalco has recently formed a joint venture with the German firm Siemens to upgrade their production. As yet new production capability is only in the pilot development stage and it is unclear if production quality and specifications will meet the intended requirements for reliability and safety.

It was the general consensus of the Study Group that savings could be made by fabrication of wash stands and toilet bowls on site. Plumbing components, paint, electric and water meters and builders hardware are produced in quantities inadequate to supply all Egypt's building needs.

TYPE I
4 M² SANITARY CORE
50-65 M² LOT



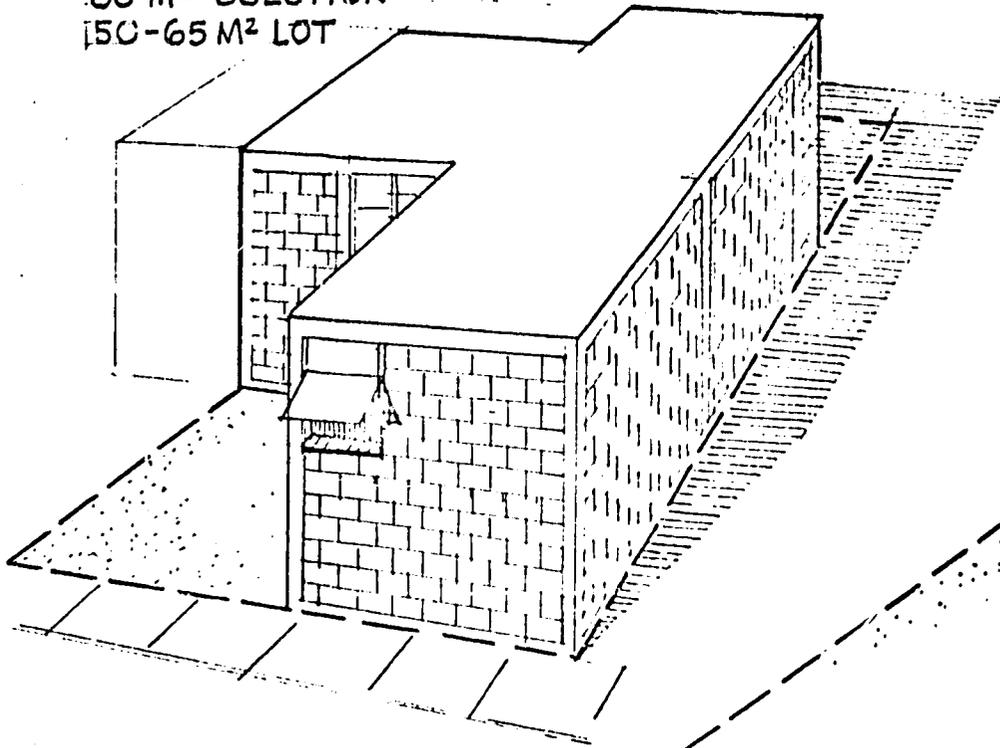
TYPE II
10 M² PARTIALLY ENCLOSED CORE
50-65 M² LOT



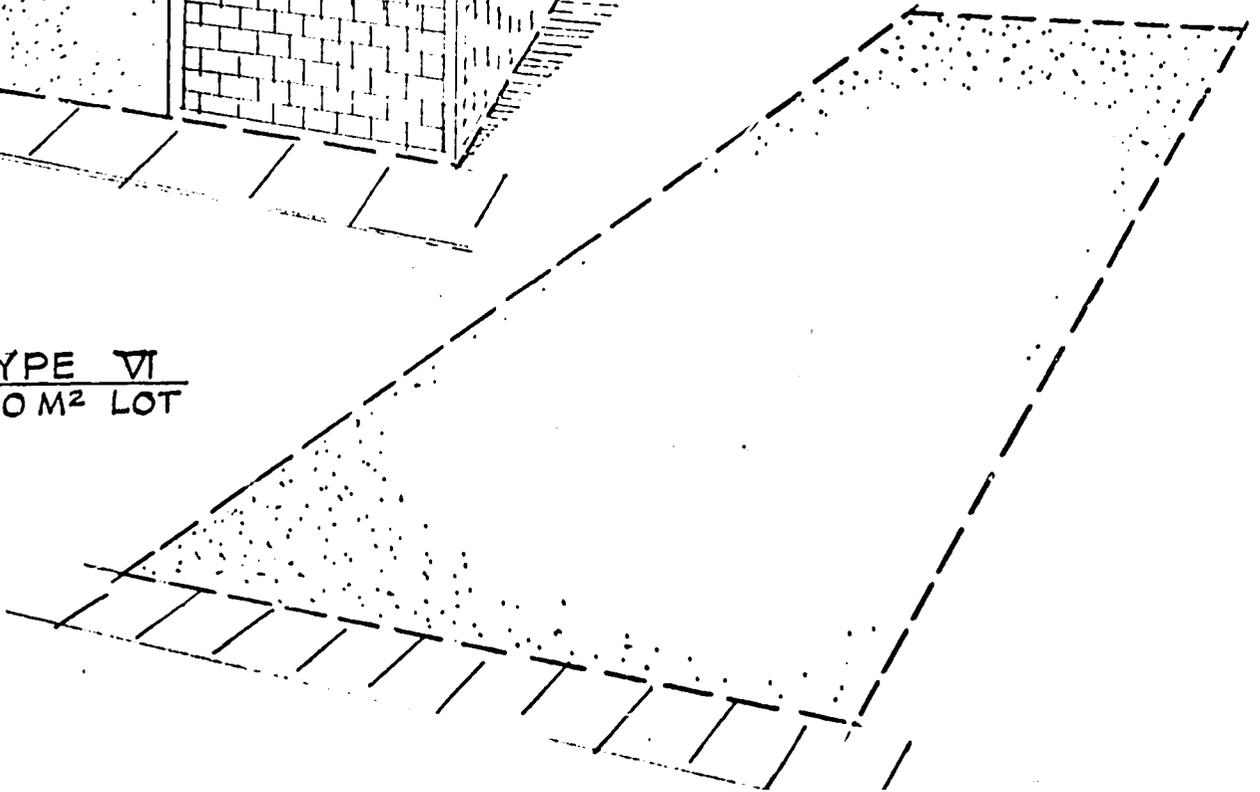
TYPE IV
20 M² SOLUTION
50-65 M² LOT

TYPE III
10 M² SOLUTION
50-65 M² LOT

TYPE V
30 M² SOLUTION
150-65 M² LOT



TYPE VI
100 M² LOT



B. Helwan-Ain Shams Upgrading (111.5 HA)
(Building and Equipment Cost prorated for six Upgrading Areas)

ITEM	SUBTOTAL	TOTAL
1. Land Cost		570
2. Off-Site Urbanization		
Water		
Sewerage	304	
Electricity	7,668	
Roads		
Subtotal		10,672
3. On-Site Urbanization		
Site Preparation		
Water	936	
Sewerage + Solid Waste Collection	1,796	
Electricity	6,942	
Street Lighting	912	
Roads	863	
Subtotal		11,449
4. Community Facilities		
Education	2,969	
Health	1,208	
Social Serv.-Recreation	719	
Subtotal		4,896
5. Home Improvement Credit Program		3,500
6. Design Construction Supervision (at 6% of construction costs)		1,429
SUBTOTAL		<u>29,816</u>

C. Administration-Management

1. Implementation Unit-MOH	2,500	
2. Branch Bank Credit Foncier	1,300	
3. Technical Assistance	2,800	
4. Training	400	
SUBTOTAL		7,000

D. Inflation Factor- 72% of Construction Cost 51,421

E. Contingency- 15% of Construction Cost 12,378

TOTAL 5160,000

COMMUNITY FACILITIES COSTS

	Size	No.	Cost For Each		Total
			Building	Equipment	
<u>New Community Program</u>					
Primary School	(16RM)	5	£354.788	£ 14.212	£ 369.000
Preparatory School	(14RM)	2	330.500	13.500	344.000
Secondary School	(27RM)	1	590.242	24.758	615.000
Secondary School	(18RM)	1	379.500	15.500	395.000
Health Center	(2950m ²)	1	683.000	35.000	718.000
Social Center	(1200m ²)	1	252.000	10.000	262.000
Coop. Admin. & Credit Blog	(560m ²)	1	118.000	10.000	128.000
Post Office-Fire Station	(780m ²)	1	164.000	-	164.000
Open Market Plaza	(6000m ²)	1	63.000	-	63.000
Covered Sales Gallery	(600m ²)	1	116.400	-	116.400
<u>Up-Grading Program</u>					
Primary School	(16RM)	3	£354.788	£ 14.212	£ 369.000
Primary School	(12RM)	1	305.760	12.740	318.500
Primary School	(20RM) 4 Shops	1	425.676	23.824	449.500
Preparatory School	(20RM)	2	401.821	17.179	419.000
Preparatory School	(14RM)	2	330.500	13.500	356.000
Vocational Technical Inst.	(4742m ²)	1	970,204	39,778	1.009.982
Health Center	(1450m ²)	4	336.000	17.000	353.000
Social Center	(1200m ²)	3	252.000	10.000	262.000

* Number of planned facilities is the total for all informal communities considered for upgrading and will be reduced, not necessarily on a pro-rated basis. to serve the designated upgrading area of about. 112 Hectares.

SERVICE FACILITIES

	Size	No.	Cost For Each		Total
			Building	Equipment	
<u>New Community Program</u>					
Solid Waste Holding Sta.	(70m ²)	9			\$ 15.000
Water Reservoir	400,600 Gal.	1			111.000
Pre-Fab. Sewage Treatment F.	1.5m. G/Day	1			2.633.000
<u>Up-Grading Program</u>					
Solid Waste Holding Sta.	(70m ²)	10			15.000
Public Wash Water Sta.	(56m ²).	31			7.080

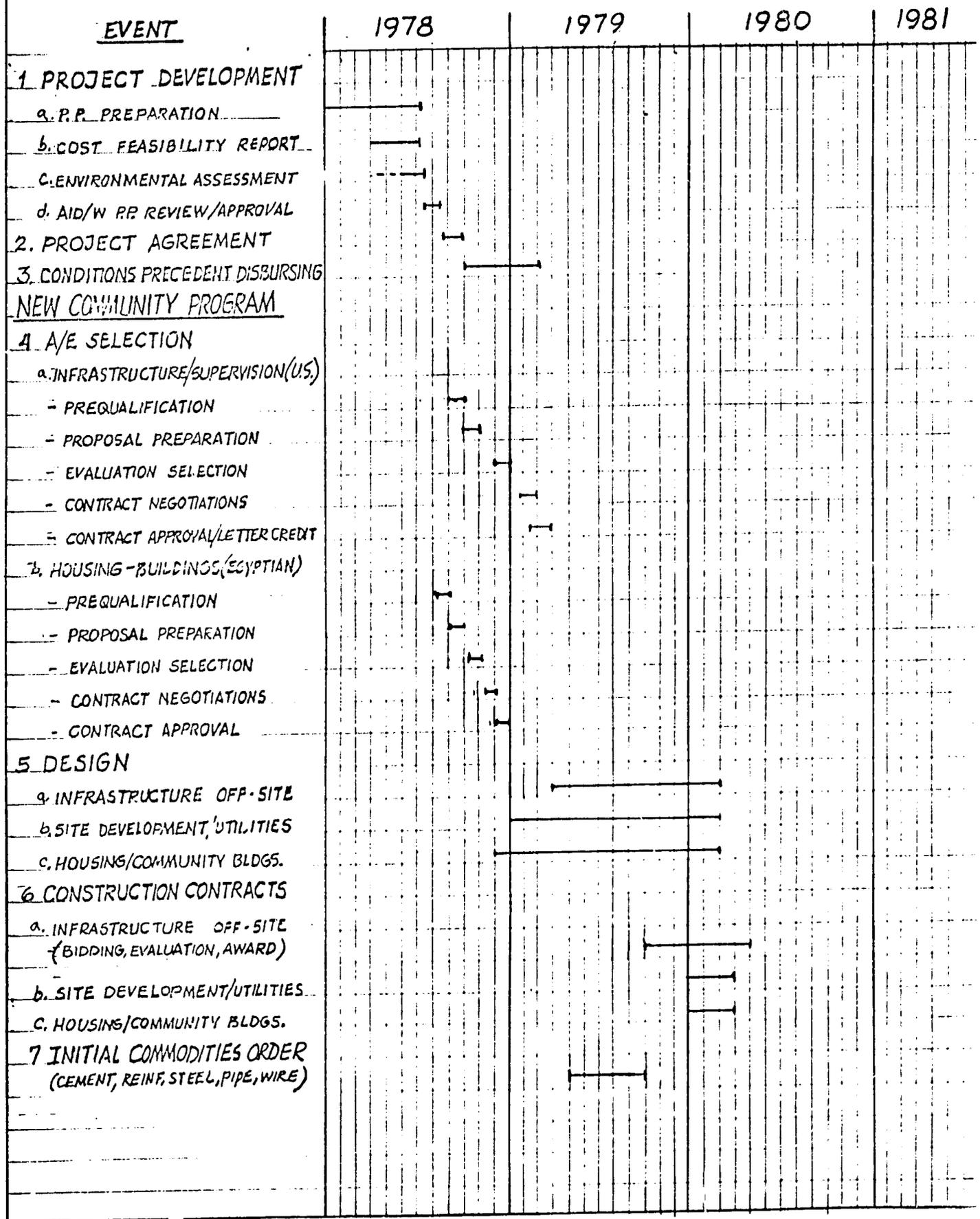
DWELLING CONSTRUCTION COST

NEW COMMUNITY PROGRAM

(in US Dollars)

ITEM	4m ² Sanitary Core	10m ² Sanitary Core pa- rtially enclosed room	10m ² Sanitary Core & one room	20m ² Sanitary Core Kit- chen & one room	30m ² Sanitary Core & two rooms
<u>Site preparation/Excavation</u>	\$ 18	\$ 30	53	76	76
<u>Superstructure</u>					
Reinforced Conc. Footing	48	82	141	200	200
Columns	60	88	88	129	170
Tie Beam	56	100	100	175	249
Roof Slab	62	133	133	304	476
<u>Masonry Walls</u>	72	72	128	240	352
<u>Floor (Shower Pad)</u>	10	10	10	10	10
<u>Carpentry</u>					
Doors	56	56	112	168	224
Windows	30	30	60	105	150
<u>Plumbing</u>					
Meter/connection	42	42	42	42	42
Toilet	35	35	35	35	35
Laundry Basin	56	56	56	56	56
Piping/Shower	84	84	84	84	84
<u>Electricity</u>					
Meter/Connection	100	100	100	100	100
Switches/outlets	49	49	98	98	98
<u>Overhead-Profit (15%)</u>	117	145	186	273	348
Total	\$ 895	\$ 1112	\$ 1426	\$ 2095	\$ 2670

DESIGN AND CONSTRUCTION SCHEDULE



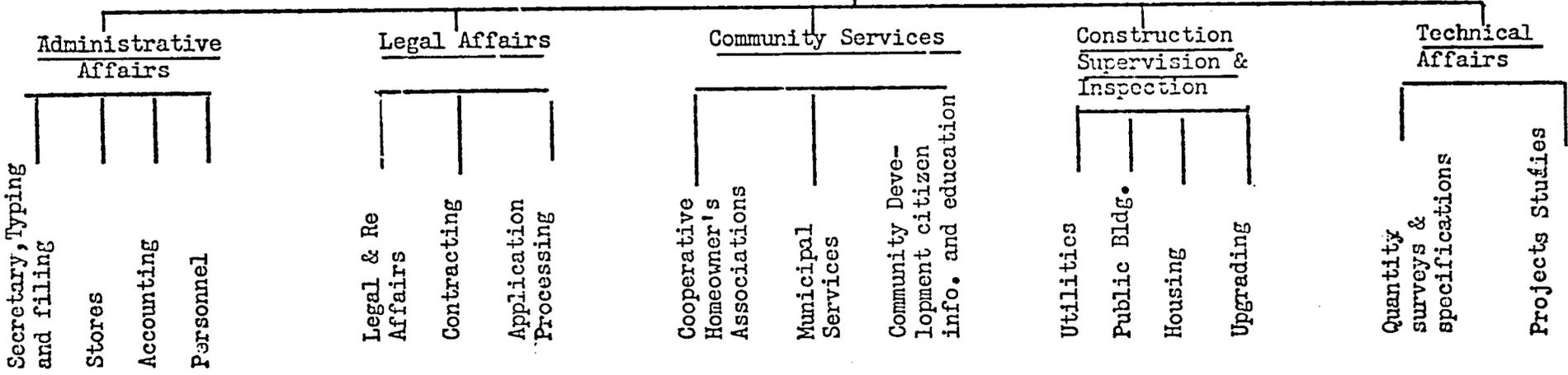
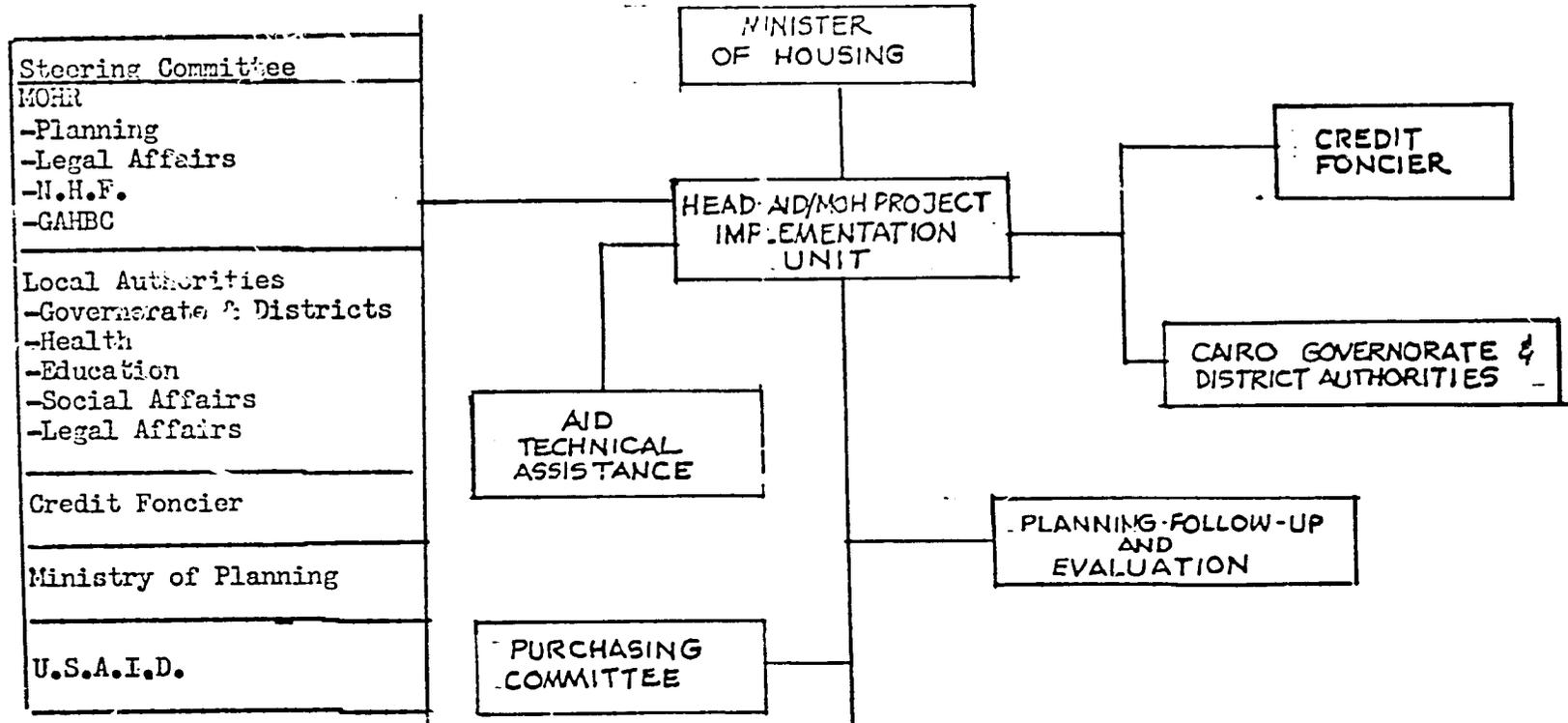
DESIGN AND CONSTRUCTION

<u>EVENT</u>	1978
<u>NEW COMMUNITY PROGRAM</u>	
8 CONSTRUCTION	
a. INFRASTRUCTURE OFF-SITE	
b. NEIGHBORHOOD 1 - 1500 LOTS	
- HOUSING/COMMUNITY BLDGS.	
- SITE DEVELOPMENT/UTILITIES	
c. NEIGHBORHOOD 2 - 800 LOTS	
- HOUSING/COMMUNITY BLDGS.	
- SITE DEVELOPMENT/UTILITIES	
d. NEIGHBORHOOD 3-4, 2500 LOTS	
- HOUSING/COMMUNITY BLDGS.	
- SITE DEVELOPMENT/UTILITIES	
e. NEIGHBORHOOD 5, 1400 LOTS	
- HOUSING/COMMUNITY BLDGS.	
- SITE DEVELOPMENT/UTILITIES	
f. NEIGHBORHOOD 6, 1004 LOTS	
- HOUSING/COMMUNITY BLDGS.	
- SITE DEVELOPMENT/UTILITIES	
<u>UP-GRADING PROGRAM</u>	
1. A/E SELECTION/APPROVAL	-----
2. DESIGN-INFRASTRUCTURE	-----
- CONSTRUCTION-INFRASTRUCTURE	-----
3. DESIGN-COMMUNITY BLDGS.	-----
- CONSTRUCTION-COMMUNITY BLDGS	-----
4 HOME IMPROVEMENT	
- DESIGN TYP. CREDIT PACKAGES	-----
- CONSTRUCTION (BY OWNER)	-----
<u>MODEL HOMES DEMONSTRATION</u>	
- DESIGN	-----
- BID, CONSTRUCTION	-----
- TESTING/MODIFICATION	-----

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Organizational Framework - MOH Implementation Units



DESCRIPTION OF MOH IMPLEMENTATION UNIT

1. Grant Recipient ; MOH

The GOE represented by the Ministry of Housing (MOH) in the negotiation for the Project is the recipient of the Grant Fund and responsible Agent of GOE counterpart funds.

2. Financial Administrator-Controller

The Credit Foncier Egyptien by delegation of the MOH shall serve as the Financial Administrator Controller of project contributions made by AID and GOE, make disbursements of monies to participant government agencies including the MOH, to contractors, and to non-governmental institutions in accordance with program needs.

All recuperations from the Project will be made to the Credit Foncier Egyptien either directly by beneficiaries or through intermediary participant agencies such as co-operatives, community social organizations, commercial management companies. Recuperated funds will be deposited in the CFE to a special MOH account for financing additional low-cost housing for families with incomes below the median for urban workers.

Staff of the branch operation of the CFE will total 30 persons.

3. The Steering Committee

Established under the chairmanship of the Minister will be responsible for planning, coordination and direction of the project.

All the GOE agencies participating in the project will be represented in this committee.

- a. The Ministry of Housing will have representatives from the following departments:
- Planning & Monitoring
 - Legal Affairs
 - Financial Affairs

- b. The Local Authorities will be involved at both the Governorate & District level (See diagram 1) Law 52 of 1975 provided for the transfer of service functions from central ministries to the local level. Governorate & district administrations representing these ministries provide the link between centralized planning and decentralized administration. They are attached to the executive committees responsible for the implementation of national policies at the local level and the administration of government services and projects within the locality. Consequently membership in the project steering committee will be extended to the heads of these various administrations in the Cairo Governorate namely the Undersecretaries of Housing, Health, Education and Social Affairs.
- c. The Credit Foncier Egyptien which will serve as the Financial administrator-controller for the project.
- d. The Ministry of Planning which is responsible for the approval of projects and the programming of annual budgets in accordance with the national development plans. Membership will be completed with representation from USAID.

4. Project Implementation Agency

Law 62 of 1974 has empowered the Ministry to establish new administration agencies as may be necessary to discharge its vast responsibilities and granted it great flexibility in the organization of these agencies. Furthermore, this law allowed the Ministry to sidestep cumbersome procedures in order to expedite its projects.

A special agency will be set up within the Ministry to implement both components of the project, the new community and the upgrading. The proposed organization chart for this unit is shown on diagram 2. It will have 6 departments corresponding to the major functions, it will be called upon to perform:

- a. Technical Affairs Department: This unit will be responsible for: 1) the review of architecture & engineering consultant work including quantity take offs and specification 2) the preparation of bid documents and the analysis and evaluation of

proposals and adjudications 3) It will also assist in the monitoring or project execution and advise on adjustments that may be necessitated by field conditions particularly in the upgrading areas. A staff of 5 professionals; site planners, architects and engineers, with about 3 assistants and 2 draftsmen will be needed to perform these tasks.

b. Construction Supervision and Inspection Department

This unit will devote its efforts to the supervision of construction. Its staff will include both architects and engineers in each of the specializations required civil, electrical, sanitary, structural... This implies a minimum of 8 professionals. In addition a support staff of technical assistants, construction inspectors and clerks will be needed at each of the various sites to ensure that specifications are accurately followed.

Both the number of professionals and the size of the supporting staff will depend upon the staging of the project in terms of the volume of construction to be undertaken at any one time and the geographic location of the sites. In general a site supervision team is composed of about 8 to 10 persons. The Engineer in charge, 2 or 3 professionals and 4 to 6 assistants depending on the size of the construction work.

c. Community Services Department: This department will group together those activities which involve continuous interaction with beneficiaries. Its functions will include:-

1) To prepare and carry out a citizen information program to familiarize residents of upgrading areas with the purposes and potential benefits of the project.

2) To undertake a citizen education program aimed at the following:

- Assisting prospective beneficiaries in the new community to take full advantage of the range of services offered to them.
- Developing an understanding of the flexibility of the rights and responsibilities of recipients.

3) To organize a comprehensive community development program including:

- Promoting the development for community spirit in the project areas.
- Establishing an interim system for the provision of municipal services in the new community during the construction stage. This system would draw on the resources of the district authorities and supplement them as necessary. This responsibility will be eventually turned over to the local activities once the project is completed.
- Encouraging participation in home improvement programs particularly in the upgrading areas where this objective will entail an unrelenting effort at outreach in real grass roots action. The organization of project committees at the various sites is envisaged to act as a catalyst for the mobilization of local resources as well as to provide a forum for ongoing citizen participation.
- Promoting the development of small business in the project area.

4) To assist in the establishment of formal institutions that could assure housing management functions after project completion such as cooperatives and homeowners associations.

A skeleton staff of 12 to 14 persons would be required for this unit. Its organization and staffing must be given high priority as its work is critical to the success of the project.

d. Legal Affairs Department: This department is expected to discharge 3 major responsibilities:

- 1) Prepare contracts for design and other services as well as contracts for construction and purchasing.
- 2) Receive applications from prospective beneficiaries, check whether applicants meet the selection criteria set by the steering committee and forward all qualifying applications to the Credit Foncier Egyptien for credit rating.
- 3) Advise and assist residents in upgrading areas secure land titles.

In order to avoid costly duplication it is anticipated that issues requiring detailed investigation as well as the preparation of draft legislation if needed, will be referred to the Ministry's legal advisor.

The implementation agency's own legal affairs department would have a staff of 6 to 8 persons.

- e. Administrative Affairs Department: This Department will provide the support services required including secretarial services, accounting personnel, storing, etc. It is expected to employ between 7 & 10 persons.
- f. Planning, Follow up & Evaluation Department: This is a key unit attached to the office of the head of the implementation agency and in direct contact with the various departments as well as with the other agencies involved in project implementation. It is expected to report to both the Ministry and USAID and:
 - 1) Coordinate the work of the different departments and maintain continuous liaison with other agencies involved.
 - 2) Monitor work progress and address any problem that may arise during project execution.
 - 3) Evaluate the performance of project components particularly as regards alternative house designs and shelter packages.
 - 4) Make recommendations for expediting work and adjusting schedules and in light of the above evaluations revise subsequent project phases.
 - 5) Act as intermediary between research entity conducting evaluation surveys and implementation agency, i.e. assimilate, analyse and communicate evaluation research judging to appropriate execution personnel.
 - 6) Coordinate with a new planning division of the MOH in formulation of a National Housing and Land Policy based on lessons learned from the project.
- g. Purchasing Committee: In addition, the implementation agency will form its own purchasing committee composed of the department directors and representatives from

the Credit Foncier,

Under current regulations this committee would be empowered to service the procurement needed for the project from both local and foreign suppliers with the exception of regulated building materials which have to be obtained through the Central Building Materials Committee established within the Ministry for this purpose.

At present the following illustrative items are subject to government regulations:

Cement - steel - lumber - glass - ceramics - metal frames for doors and windows.
Galvanized steel pipes.

5. Administrative budget

The Implementation Unit will be established as a separate entity under the Ministry of Housing. In this capacity, staff members may enjoy increased salary benefits and incentives to improve efficiency. Current MOH practice provides for an effective 36 hour week. The Implementation Unit will work an effective 40 hour week. Staff costs of the CFE will be budgeted accordingly for a similar objective.

<u>Item</u>	<u>No.</u>	<u>Average salary</u>	<u>Term</u>	<u>Total</u>
MOH staff	60 X	\$ 500/mo X	5 years	\$ 1.8 million
		(overhead at 40 % of salary)		.8
CFE staff	30 X	\$ 500/mo X	say 5 years	2.6 million
		(overhead at 40 % of salary)		.9 million
			Total	.4 million
				1.3 million

6. Capability and Availability of Personnel

Qualified Egyptian personnel are available however this project introduces several unfamiliar demonstration elements to the conventional practice of the MOH and CFE. Consequently, technical assistance will be provided to maintain close coordination of activities with the special requirements of AID, to organize and train personnel to

carry out community development activities, to execute the home improvement credit program, to organize a modern data processing department and consumer saving department and to assure efficiency in the cooperative management, evaluation and long range housing policy formulation activities of the project.

PROJECT MORTGAGE LENDING

A major aspect of the current project deals with the development of housing finance. At the present time Egypt has no institution with adequate resources or faculties to provide for national housing finance needs.

The goals of the housing finance aspects of the project can be described as follows:-

- a) To efficiently provide housing finance for the new community and the upgrading areas.
- b) To provide direction in establishing a housing finance system capable of a substantial degree of self sufficiency.
- c) To encourage the rationalizing of the housing finance interest rate structure.

These goals will be furthered by the implementation of the housing finance program for the project. The major aspects of the housing finance program are:-

- A) The project will employ the Credit Foncier Egyptien to provide housing finance for both the new community and the upgrading areas.
- B) Financing of the new community will employ the graduated payment mortgage. This will allow housing to be provided for families substantially below median income levels, while at the same time preserving housing funds through the use of more realistic interest rates.
- C) Credit will be provided for home improvement, expansion and dwelling upgrading in lower income areas. Credit will be provided by the Credit Foncier through the use of short term 5-10 year loans. The project provides the first experiment in providing home improvement loans for low income households through the formal sector.
- D) The project financing will introduce monthly mortgage payments in Egypt. This change will generate additional

-2-

housing capital while at the same time easing the burden of mortgage payments for low income families.

E) The Credit Foncier does not presently accept savings from the general public. Changes instituted in association with the project will initiate consumer savings accounts and provide a potentially important new source of housing finance funds.

F) The lending associated with the project will be more than double the present assets of the Credit Foncier while the volume of new loans will increase several times. The switch from annual to monthly collections will also magnify the volume of work to be processed at the CFE. As a result of the increased volume, and to facilitate the introduction of improved financial management, and to facilitate the more complicated accounting associated with the graduated payment mortgage, the project provides for the computerization of lending and savings processes at the CFE.

G) In order to aid in the development of housing finance the project incorporates technical assistance in the areas of saving management, design and management of graduated payment loans and, computer systems development for savings and lending.

CREDIT FONCIER

Financing for the project is to be accomplished through the Credit Foncier D'Egypte (CFE); the CFE will act as the fiscal agent on the project receiving funds from project sources, distributing loans to households and collecting monthly payments. The CFE was founded in 1881 and presently provides limited amounts of housing finance for middle and upper income housing. The CFE's participation in the project is designed to extend it's capabilities and interests into housing finance for middle and lower income households. In payment for disbursement and servicing of mortgage loans the CFE will receive a fee composed of two parts.

The CFE will receive a fee at loan origination and a fee from each monthly payment collected. The proposed fee schedule is :

Program	origination Fee	Servicing Fee
New Community	1.5% of the loan	1% of the monthly payment
Upgrading	2.0% of the loan	1% of the monthly payment

The effective cost of loan servicing under this arrangement will be less than $\frac{1}{2}\%$ for loans in the new community and 1% for the upgrading loans. The servicing fee compares favorably with costs in the United States and in other highly developed mortgage markets.

THE GRADUATED PAYMENT MORTGAGE

The Egyptian economy has been characterized in recent years by artificial and unrealistic interest rates and as a result suffers from poorly developed financial markets. In order to move housing finance toward a sounder financial basis, the new project incorporates interest rates which are closer to market levels. However the raising of interest rates in the absence of a new approach to mortgage lending would price most lower income Egyptian households out of the project.

In order to solve this problem, the project will incorporate the use of graduated payment mortgages. This mortgage incorporates an increasing level payments over time, with early payments being less than interest on the loan. The graduated payment mortgage is appropriate because of real income growth and inflation existing in the Egyptian Economy. Recent price increases in construction have been estimated at 15% per year, and even official sources have estimated that general inflation is at least 15% per year.

The graduated mortgage payment incorporates a term of 30 years at an interest rate of 8%, which is reduced to an effective 7% by a front end subsidy to the buyer. It is assumed that Egyptian households can afford 20% of income for mortgage payments. Extensive consideration was given to various approaches to determining the extent of graduation in the mortgage payments. The approach decided upon uses a graduation equal to 10% of the first annual payment. Thus, a mortgage loan having an initial payment of LE. 100 would have an annual increase in payment of LE. 10. The final payment in the 30th year would then be LE. 390. While the increase is 10% in the first year the percentage increase declines in each subsequent year. The average rate of increase in the payment for the first ten years is 7.4% per year, during the second ten years the payment increases at a rate of 4.3% per year and during the final ten years the effective average increase is 3% per year. The actual rate of growth of the mortgage payments over the 30 year period is 4.7% per year.

Exhibit 1 provides a graphic summary of the graduated mortgage proposal. As the exhibit shows an income growth rate of 10% per year will cause the burden of housing payment to fall rapidly. With income growth of 10% the ratio of payment to income falls to 15% by the 10th year and 9% by the 20th year. Household income growth of 5% per year would require payments of 25% of income in year 10 and 23% of income in year 20.

The required rate of increase in household income appears conservative in the context of the current Egyptian economy. Because the rate of growth in the payment decreases over time a high level of sustained income growth is not required.

When the concept of the graduated payment mortgage is introduced into the project, substantial increases in affordability are generated while higher and somewhat more realistic interest rates are achieved.

Because middle and lower income housing are predominately provided by multi-family occupancy of rental projects, it is proposed that alternative methods of loan qualifications be allowed including an income approach to dwelling additions.

Loans will be made for housing additions where the expected increase in rents is adequate to cover debt service.

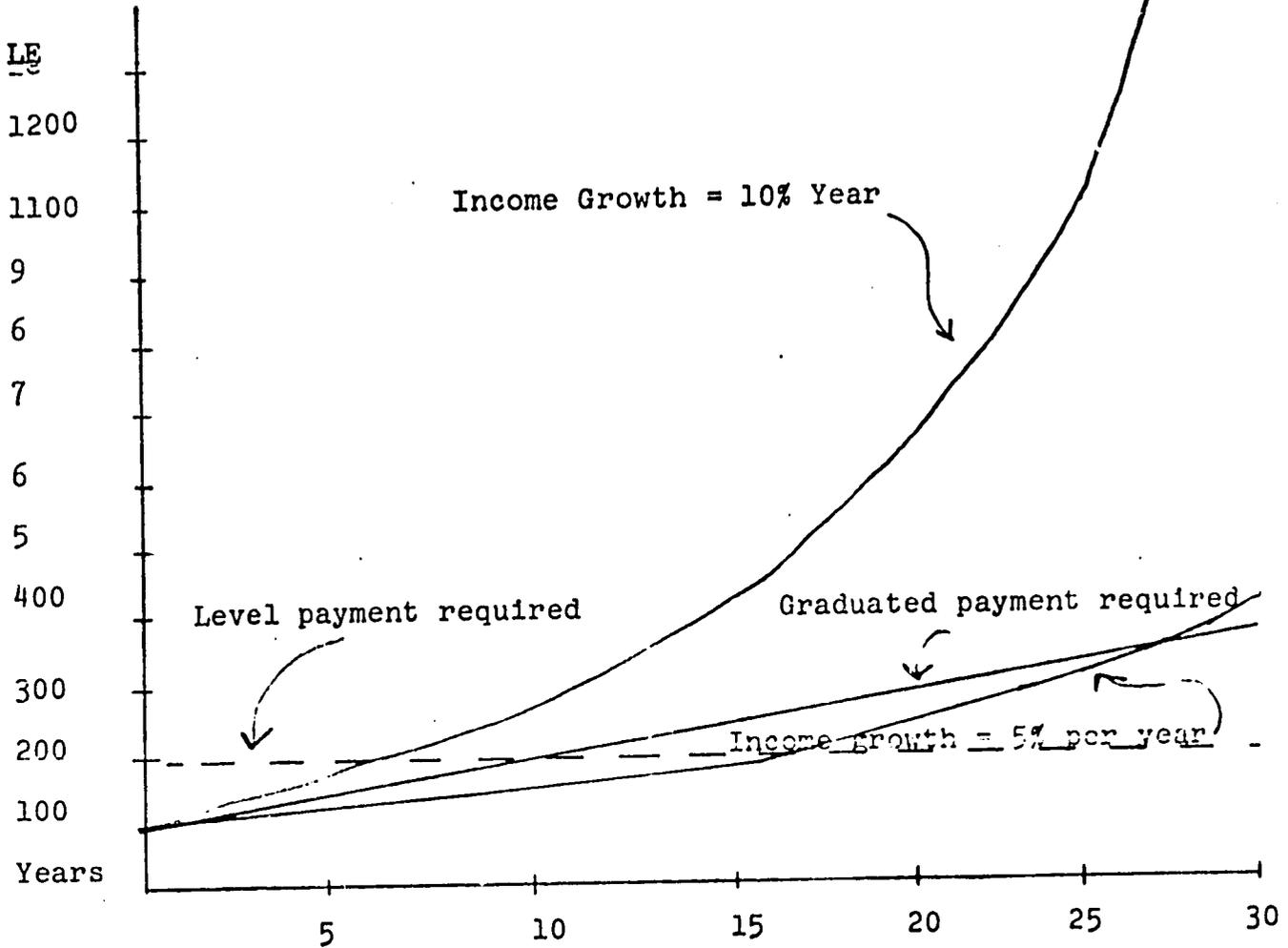
LOAN SECURITY

Under the graduated payment mortgage, and given the level of down payments required, loan to value ratios may exceed 100% based on original appraisals in the early years of the mortgage. This is a major deviation from the traditional loan to appear to be adequately secured given the rate of housing price increase occurring in the Cairo Area. Assuming that property values increase only 2.6% per year, a loan which begins at a 9% loan to value ratio will never have a loan to value ratio higher than 90%.

Exhibit 1

GRADUATED MORTGAGE RELATIONSHIP
OF PAYMENT REQUIRED TO AVAILABLE
INCOME

(ASSUMES ANNUAL INCOME LE.500, 20% SPENT FOR
MORTGAGE) 30 Year, 7% Mortgage, Amount 2451 LE.



	<u>Year</u>			
	<u>1</u>	<u>10</u>	<u>20</u>	<u>30</u>
Graduated Payment required LE	100	190	290	390
Income available at 10% growth Rate	100	259	673	1745
Income available at 5% growth Rate	100	155	253	412
Level payment Required	198	198	198	198

* Assumes first yearly payment LE. 100 and each subsequent yearly payment increases LE. 10.

Exhibit 2 provides two examples amortization tables of a graduated payment mortgage and associated information on loan to value ratio.

MONTHLY PAYMENT

The CFE has traditionally collected annual payments rather than monthly payments. Financing under the project will use monthly payments which appear to have several advantages. First and most important, it will be much easier for low and middle income families to accumulate the smaller monthly installments. The monthly payment is much more closely associated with the period of time between income receipts. The change to monthly payments will also provide advantages to the CFE. The effective interest rate based on monthly payments is approximately 1% higher than the effective rate using annual payments and monthly payments provide a quicker return of housing capital which can be relented to other borrowers. The ability to service monthly payments will be facilitated by the introduction of updated loan management procedures including the computerization of accounts.

DEVELOPMENT OF SAVINGS

At the present time the CFE is accepting saving accounts only from Egyptian Insurance companies. In conjunction with the project, the CFE is taking steps towards the development of consumer saving instruments.

The proposed saving accounts development will include contract saving programs, short term highly liquid pass book type accounts and longer term higher interest rate saving certificates.

COMPUTERIZATION

It is recommended that the project includes the provision of an NCR model 8250 computer or equivalent. The inclusion of this equipment and the associated training will provide several major benefits including:-

1. The computer will allow the CFE to handle the massive increase in transaction caused by the addition of the project and the shift from yearly to monthly payments.

Exhibit 2

Graduated Mortgage Payment
A Mortization
Table

Interest Rate 7%
Term 30 Years
Initial Loan to Value 90%
Initial Value of House 2723 LE.

Loan to Value with price
Increase

<u>Year</u>	<u>Payment</u>	<u>Beginning</u>	<u>Interest</u>	<u>Principal</u>	<u>0</u>	<u>5%</u>	<u>10%</u>
1	100	2451.	171.54	-71.54	90	90	90
2	110	2522.	176.55	-66.55	93	88	84
3	120	2589.	181.21	-61.21	95	86	79
4	130	2650.	185.49	-55.49	97	84	73
5	140	2705.	189.38	-49.38	99	82	68
6	150	2755.	192.84	-42.84	101	79	63
7	160	2798.	195.83	-35.83	103	77	58
8	170	2833.	198.34	-28.34	104	74	53
9	180	2862.	200.33	-20.33	105	71	49
10	190	2882.	201.75	-11.75	106	68	45
11	200	2894.	202.57	-2.57	106		41
12	210	2896.	202.75	7.25	106		37
13	220	2889.	202.24	17.76	106		34
14	230	2871.	201.00	29.00	105		31
15	240	2842.	198.97	41.03	104		27
16	250	2801.	196.10	53.90	103		25
17	260	2748.	192.33	67.67	101		22
18	270	2680.	187.59	82.41	98		19
19	280	2597.	181.82	98.18	95		17
20	290	2499.	174.95	115.05	92		15
21	300	2384.	166.90	133.10	88		13
22	310	2251.	157.58	152.42	83		11
23	320	2099.	146.91	173.09	77		9
24	330	1926.	134.79	195.21	71		8
25	340	1730.	121.13	218.87	64		6
26	350	1512.	105.81	244.19	55		5
27	360	1267.	88.71	271.29	47		4
28	370	996.	69.72	300.28	37		3
29	380	696.	48.70	331.30	26		2
30	390	365.	25.51	364.49	13		1

EXHIBIT 2 page 2

Graduated Payment Mortgage
Amortization Table*

Interest Rate 8%
Term 30 Years
Initial Loan to Value 90%
Initial Value of House L.E. 2400

Year	L.E. Yearly Payment	Beginning Balance	Interest	Principal	Loan to Value with Various Ratios of Increase in House Value			
					0%	3.5%	5%	10%
1	100	2,160	172.83	-72.83	.90	.90	.90	.90
2	110	2,233	178.65	-68.65	.93	.89	.89	.85
3	120	2,301	184.14	-64.14	.96	.87	.97	.79
4	130	2,365	189.28	-59.28	.99	.85	.85	.74
5	140	2,425	194.02	-54.02	1.01	.83	.83	.69
6	150	2,479	198.34	-48.34	1.03	.81	.81	.64
7	160	2,527	202.21	-42.21	1.05	.79	.79	.59
8	170	2,569	205.58	-35.58	1.07	.76	.76	.55
9	180	2,605	208.43	-28.43	1.09	.73	.73	.51
10	190	2,633	210.70	-20.70	1.10	.71	.71	.47
11	200	2,654	212.36	-12.36	1.11	.68	.68	.43
12	210	2,666	213.35	-3.35	1.11	.65	.65	.39
13	220	2,670	213.62	6.38	1.11	.62	.62	.35
14	230	2,663	213.11	16.89	1.11	.59	.59	.32
15	240	2,646	211.76	28.24				
16	250	2,618	209.50	40.50				
17	260	2,578	206.26	53.74				
18	270	2,524	201.96	68.04				
19	280	2,456	196.51	83.49				
20	290	2,372	189.83	100.17				
21	300	2,272	181.82	118.18				
22	310	2,154	172.37	137.63				
23	320	2,016	161.36	158.64				
24	330	1,858	148.66	181.34				
25	340	1,676	134.16	205.84				
26	350	1,471	117.69	232.31				
27	360	1,238	99.11	260.89				
28	370	977	78.23	291.77				
29	380	686	54.89	325.11				
30	390	361	28.88	361.12				

*For illustration purposes table uses yearly amortization. Actual program will incorporate monthly payments, but magnitudes will remain relatively unchanged.

The CFE has agreed not to increase their staff if a computer is provided.

2. The availability of the computer will allow the CFE to handle the accounting and amortization associated with the graduated payment mortgage.

3. The computer will allow the development of short term savings accounts on an economical basis.

4. The computer will provide a general vehicle for introducing more modern management accounting into the housing finance system.

The proposed computer facilities and training incorporate the following items:-

I. NCR Model 8250 minicomputer and assorted peripherals	\$ 175,000
II. Installation facilities	\$ 20,000
III. Personnel Training in Egypt	\$ 10,000
IV. Software support Egypt	\$ 25,000
V. U.S. Technical Assistance	\$ 75,000
	<hr/>
TOTAL	\$ 310,000

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Fifteenth of May New Town-Helwan *

General Goal

The Fifteenth of May New Town is one of three new cities originally planned by the GOE to resolve the specific problems of housing, transportation, and public service facilities as a result of the rapid industrial growth of Helwan. One clear implicit goal of the New Town was to make use of the desert land east of present urban growth and to exploit the production of several concrete pre-fabrication facilities recently introduced to Egypt. The multi-family, multi-story apartment blocks produced by this building system lend themselves to another goal important to planners.- The expression of a hierarchy of functions and urban visual impact between components of the buildings and the topography.

Urbanization Standard

Design total population for the New Town is 150,000 persons to occupy 27,400 dwellings on a site of 1034 hectares. Some 36 neighborhoods of 4165 inhabitants (avg.) in 761 dwelling units make up the basic planning structure. Here a primary school and some shops are located. Six neighborhoods comprising a population of about 25,000 persons make up a "District". The district center is the location of two preparatory schools and 1 secondary school. Two "Districts" make up a "Quarter" which is the focus of a commercial sub center. Three "Quarters" comprise the New Town.

The access hierarchy does not rely heavily on footpaths and bicycle paths. Service roads with an 8 meter right-of-way (six meter paved width) are the lowest defined access path in the Master Plan. The next access level consists of "access" and "local distributor roads" of 18-19 meters width and the "district distributor" and the "Ring Road" of 40 meters width. Thirty-two automobiles per 1000 inhabitants are projected in the New Town for the year 2000.

* First Residential City for the Workers of Helwan Industrial Area-By Cppa-Weidle plan (Consultants), October 1976- "Master Plan Vol.2.

Housing Solutions

It is estimated that 75% of the residents of the 15th of May New Town will be of the low-income group with an annual income of no more than LE. 480 per year. Twenty percent of the population will be in the medium income range and 5% in the upper medium range. The incomes corresponding to these categories are not defined.

The average apartment in the New Town is planned to have a floor area about 100 M2 (20 M2 per person) in multi-family, multi-story buildings if four stories in height. Ten percent of the dwellings are proposed to consist of one room (probably about 60 M2 in floor area; 35% will consist of two rooms, 47% of three rooms and 7% of four rooms primarily for the benefit of the higher income groups. Based on surveys of rent rates paid by the present population of Helwan, it is proposed that the two bedroom flat should have a monthly carrying charge of L.E. 5.00 per month.

The terms of reference for dwelling design proposed to accommodate raising of chickens and other animals by providing two balconies per flat. One balcony is intended for the living functions of the family and the second for the animals and other domestic functions of the house.

The average Town density is 238 inhabitants per hectare. Lots will range upward from an area of 400 M2 for villas to 8500 M2 for cooperative multi-story buildings.

Community Facilities

The New Town is proposed to be constructed over a 15 year period in 3 stages. The first stage corresponding to 10,000 dwellings will house 56,500 persons and provide the following facilities in one main commercial center and two urban centers corresponding to the two "districts" making up this stage:

<u>Facility</u>	<u>Location</u>	<u>Floor Area M2</u>
Super Market	Main Center	11,600 M2
Shops	Main Center	1,800 M2
	District Center	3,600 M2
Professional Services	Main Center	2,300 M2
	District Center	2,700 M2
Offices	Main Center	4,800 M2
	Sub Center	500 M2

..../...

<u>Facility</u>	<u>Location</u>	<u>Floor Area M2</u>
Public Admin. Office	Main Center	11,500 M2
Cultural Affairs	Main Center	3,600 M2
Technical College	Main Center	18,000 M2
Health Facility	Main Center	150 beds
Green Space		28 Hectares
Telephones		1,900 Units

Special Note

The master plan pointed out the difficulty due to the sloping topography of using large concrete pre-fabrication systems of the site. An initial trial site of 11 hectares was proposed for 940 dwelling units (4,200 persons) on the northern boundary of the New Town property.

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IBRD PROJECT*General Goals

Following general guidelines established by the World Bank for its housing programs through out the world, the Egypt project proposes as its goals the rationalization on national urban housing policy to provide adequate shelter for the low-income majority. The policy focuses upon preservation through upgrading sub-standard neighborhoods and new construction of minimal housing solutions: Services lots and core houses. Upgraded and new communities established in this program are intended to be, in addition to centers of habitation, semi independent economic units as a result of special encouragement given to small businessmen. The IBRD and AID projects reinforced the general housing policy commitment of the GOE to tailor housing programs to practical budget limitations, reductions in subsidies, and utilizing self-help techniques.

Urbanization Standard

New Community programs are proposed for Alexandria on briny tidal flats behind the city (which is to be reclaimed) and South of Cairo in Assiut on agricultural land which is to be expropriated by the government. A total of nearly 4840 plots housing 21,000 to 25,000 persons will be developed of which 10% are to be auctioned for cross subsidy. Half of the auctioned preferential lots are for workshops and half for commercial purposes. Twenty and Twenty Five percent of lots will receive a core house 10 M2 of floor area, 65-70% are for serviced lots of 45 M2, 54 M2 and 60 M2 of land area. Preferential lots are 72 M2, 81 and 108 M2 in area. Lots are proportioned according to 5 x 9 and 6 x 9 meters width to length.

Houses are sited according to an unvarying grid in long ranks 95 meters deep along a six meter cul-de-sac street. There is little use of narrower foot paths or bicycle paths for access. Commercial shops are located on auctioned preferential lots which border the central loop road. A small crafts, small industry area of about 100 lots (where they are also combined with houses) is segregated at one corner of the site.

* From IBRD Project Summary by Doxiadis Consultants and MOHR, January 1978.

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Each neighborhood in a new community is furnished with one primary school, community center, and health clinic. Four small parklets of about 1000 M2 are sited at the four corners of the project site. Gross population density for the two new communities is about 500 to 515 inhabitants per hectares.

Housing Solution

Site and service lots will be enclosed on three sides by a privacy screen of masonry two meters in height. Sanitation facilities were originally planned at the back of lots in a quadruplex configuration with the sanitation facilities of three adjoining and back-abutting lots. The easement arrangement proposed for this scheme for the location of connecting piping as been criticized and so may be changed.

Core house designs which have been prepared show the 10M2 sleeping space at the front lot line with a window on the street. Commercial shops and workshops on 72 M2 preferential lots are evidently intended for the front half of the lot with the owners dwelling space filling out the area to the rear of lot.

Upgrading Program

About 153 hectares in Cairo and ten hectares in Alexandria- consisting primarily of informal settlements will be upgraded with improved utilities, home expansion loans and small business credit. About 16000 families or 80.000 persons will benefit, Because of the site difficulties a variety of urban development standards have been adopted for the upgrading areas. In one site in Cairo, two third of the households will continue to use cess-pools as in traditional practice. Most of these will also not have the opportunity to have water piped to their lot. One third of the existing families will enjoy full services and ten percent of the residents will occupy new cess pool serviced lots developed in the community. Building material loans equal in value to only about \$ 140 per family are planned to assist 1250 families improve their dwellings. Some 1,300 house electric connections will be made. Solid Waste connections will be upgraded by the addition of mor&donkey carts and

demonstration composting disposal plant adjacent to one improvement area.

Project Cost

Of the total project cost of US \$ 21. million the World Bank will loan \$ 14 of the value and \$ 7 of the project will be funded by the Government of Egypt. IBRD will assume all of the foreign exchange costs as the major portion of its share (\$ 7million or 33% of the total). All funds from IBRD and the GOE are funded through the National Low Income Housing Fund, a semi-autonomous entity of the Ministry of Housing and Reconstruction.

Since local governorates also will supply funds to the project this administrative arrangement requires special approval. About \$2.0 million will go to the National Bank of Egypt instead of the low cost housing fund, to be re-lent for small business credit. These funds will have a charge of 8% to 9% to the borrower.

A system of subsidized interest rates is proposed for the new community mortgage and building materials loans and upgrading loans. Five percent will be charged for amortization and interest plus two percent charged monthly for administration by the Low Income Housing Fund. Preferential lot buyers will pay 9% for their mortgages. Terms will vary from 10 to 20 years with more generous terms going mainly to the new community residents. No down payment will be required except for workshop plots, however an incentive is added through an offer to reduce a share of project management costs up to 80% to encourage voluntary downpayment.

Housing solution costs for new communities are as follows:-

DEVELOPMENT COST (in Dollars)

Type	Lot Size M2	Sanitation Core\$	Perimeter Wall	Core house	Matl's Loan	Land INFR Alex.	Land INFR-Assiut
1 Site &Service	45	100	210	-	42	1103	686
2 Site &Service	54-60	100	230	-	42	1267	766
3 10M2 Core House	54-60	100	170	263	-	1430	927
4 Auction Lot	54-60	100	100	-	-	2155	989
5 Auction Lot	72	100	270	-	-	2814	1300
6 Auction Lot	81	-	-	-	-	2900	1425
7 Auction Lot	108	-	-	-	-	3844	-

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The breakdown of per-lot charges for a type 2 solution as shown above is as follows:-

WORK	Approximate Percentage of Development- Costs per Lot (Type 2) (in Dollars)		
	ALEXANDRIA	ASSIUT	AID/MOH NEW COMMUNITY PROG- RAM- HELWAN
<u>PLOT</u>			
Land	45.9%	31%	11.5%
Site Preparation		3.7%	7.0%
<u>ON SITE INFRASTRUCTURE</u>			
Water	.8%	1.0%	3.2%
Sewer	4.5%	5.0%	4.0%
Roads	2.8%	6.3%	3.3%
Electricity	2.5%	3.5%	25.9%
Other	2%	3%	4.0%
<u>LOT SUPER STRUCTURE</u>			
Sanitary Core	6.4%	9.9%	19.7%
Perimter Wall	15.1%	23.2%	
<u>FEES</u>			
Water/Sewer connection	2.1%	3.3%	1.9%
<u>DESIGN SUPERV.MGT.CONT- ENCY</u>			
	19.7%	12.7%	19.3%
<u>TOTAL</u>	100%	100%	100%
<u>PROPORTEONATE COST OF SCHOOLS, CLINICS, COMM. CENTER</u>			
	\$ 143.00	\$ 91.00	

Income groups able to afford these solutions range for families earning annually from LE 304 to LE 428 in Alexandria and LE 192 to 284 in Assiut. The auction lots for workshops or commercial shops will be affordable for families earning from LE 576 to LE 1052 in Alexandria and LE 272 to 424 in Assiut.

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In upgrading areas, utility improvement packages will be charged on a rate multiple of the size from 100 to 200 M2. Estimated upgrading charges for one site in Cairo is as follows:

IMPROVEMENT VALUES CHARGABLE
TO UPGRADING-MANSHIET-NASSER,
CAIRO

<u>UPGRADE PACKAGE</u>	<u>EST.NO. LOTS</u>	<u>AVG.LOT SIZE M2</u>	<u>CHARGE PER M2</u>	<u>TOTAL PER LOT \$</u>	<u>HOUSE HILD INCOME RECED 10 YEARS</u>
A. Public Fountain cesspool Electricity	1480	200	\$ 2.34	\$ 468	LE. 144/yr
B. Individual water cesspool	2200	150	\$ 4.20	\$ 630	LE. 149/yr
C. Individual water Piped Sewerage	800	100	\$ 5.60	\$ 560	LE. 134/yr
D. <u>On New Lots</u> Public fountain cess- pool	300	100	\$ 2.5	\$ 280	LE. 110/yr

PROJECT MANAGEMENT

The Ministry of Housing is expected to set up a special Low Income Housing Development Unit for the project consisting of a manager and seven technicians divided into technical and support groups. With each Governorat Staff a low income housing officer is identified to provide liaison with the MOH. Land acquisition design and construction would be carried out by the regular staff of the Governorate which will set up supervision teams of 12 persons in the field. Direct control of other ministry work (health, education, etc.) will also continue to be the normal responsibility of the Governorate staff (Directorates).

SADAT CITY PLAN*

Program Goals:

Proposed Sadat City is located west of the Nile River, 61 kilometers north of Cairo on the 220-kilometer long Cairo-Alexandria desert road. It is planned for threshold populations of 60,000 (after five years), 150,000 (after 10 years), 50,000 (after 25 years) with an ultimate expansion capacity of over one million people, all within a self-contained economic base.

Goals of the City are to attract population and urban activities away from scarce agricultural land best left to farming, and away from the congested cities of Cairo and Alexandria. It is intended to become part of a system of urban areas on a crescent at the periphery of the Nile Delta.

A second goal is to provide an efficient and attractive infrastructure to assist the industrial economic growth of the Nation and foreign investment.

Three community development goals are identified:

- 1) To create an optimal combination of natural and man made features into a comfortable environment for human habitation;
- 2) To plan efficient and reliable community facilities and services;
- 3) To provide special attractions and amenities to make the City a pleasant and stimulating place to live. >

Special Features:

The City is located on the east side of the desert highway at an intersection with a road which leads to a crossing on the Nile. Orientation of the City is at a 45° angle to the north-south axes and protected along the south and west boundary by countercyclical winds. The orientation is considered optimal to take advantage of gentle and steady north-west breezes and provide maximum shade from the sun.

* From: "The Planning of Sadat City" by the Sadat City Development Group, Advisory Commission for Reconstruction, Ministry of Housing and Reconstruction, 1977).

A sanitary lagoon system for sewage disposal is proposed and industries are planned for a north-east location to minimize smoke pollution.

Expansion of the City is planned to proceed toward the northeast with most traffic arteries parallel to "favorable" northwest breezes.

Housing:

The City is divided into "basic neighborhood units" of 4,000 - 6,000 people (1,000 families) and "sectors"--units of 24,000 to 36,000 persons (5 neighborhoods). "District" units of 72,000 to 108,000 people (3 sectors) have separate functions after the City passes its 10-year growth objective:

After the first five years of growth the projection for Sadat City roughly corresponds to that of the proposed AID-MOHR Helwan-New Community Project component. About 60,000 persons will be resident in the City in 12 neighborhoods comprising two districts. Some 7,970 housing units will contain them: 2,440 apartments and 5,530 individual houses ranging upward from a 140 m² lot simply bounded by markers (which, though costed, is not in plan recommendations) to a 12.25 m² core house, 24.52 m² core house, 36 m² core house, multi-story units of 61 m², 75 m², 98 m², 130 and 150 m² in floor area. About half of the dwelling solutions are anticipated to consist of one-and two-room core units no larger than 36 m² of floor area. One-third will consist of the 12 m² and 24 m² solutions.

Construction is proposed to be by sand lime (or cement) bricks or blocks for load-bearing walls with pre-stressed concrete planks for ceiling and floor construction topped and leveled with concrete. A 3.5 meter construction design module is proposed. Proposed dwelling area standards are:

2-3 persons	36 m ² dwelling
8-10 persons	74 m ² dwelling

The 60,000 population community will require about 185 hectares of neighborhood space; the 150,000 community will require about 350 hectares .

Dwelling block sizes for 24 units (7 x 20 meter lots) range from 44 x 84 meters including a 20 x 84 cooperative garden in the middle of the block. This feature carries the risk of becoming a collection space for trash with the responsibility of no one.

Each neighborhood center consists of about 17 hectares of which 14 hectares pertain to the primary school and sports grounds. Each district center is to consume about 57 hectares.

Cost:

The estimated cost of Sadat City at a population AID-MOHR New Community is about LE 60 million (\$86 million) of which housing is estimated to cost LE 17.3 million (\$25 million).

These cost estimates are strikingly low-- only LE 37/m² for core dwellings; only LE 26/m² for attached two-story dwellings of 75 m² floor area. Moreover, in calculations of purchase price no consideration is given evidently to recovery of the cost of neighborhood domestic water, sewer, power and street illumination or street and walk paving. No calculation is made for raw land and land preparation cost. The plan acknowledges that a state subsidy is required.

Neighborhood Density:

The average residential density ranges from 136 persons per hectare (pph) to 270 pph with an average of 145 pph including sewage waste disposal and heavy industry areas. This compares with the following record of densities for Egypt new communities:-

	<u>Total Population</u>	<u>Density</u>
Sadat City	500,000	145 pph
Port Said	750,000	225
Suez	1,000,000	147
Helwan Phase I	150,000	145
Nasr City	200,000	111
10th of Ramadan	500,000	67
Heliopolis Zone 6	30,000	22

Residential Site Density: Sadat City	
Detached houses	103 pph
Apartments	756 pph
Average net site density	300 pph

Employment Generated by Urban Services-Population
of 60,000 (Total 1.47 Jobs/HH)

<u>Facility</u>	<u>Jobs Each</u>	<u>No.</u>	<u>Total</u>
Primary School	38	12	456
Preparatory School	55	4	220
Secondary School	66	1	66
Industrial School	100	(1/2)	(50)
Collective Health Center	15	2	30
Ambulance Center	7	1	7
Neighborhood Social Center	10	12	120
Kindergarten School	7	12	84
Dist. Social Center	15	2	30
Dist. Recreational Center	27	2	54
Public Safety Bldg.	26	2	52
Telephone Postal Center	7	12	84
Neighborhood Sports Area	5	12	60
Youth Center	25	2	50
Neighborhood Commer Proff	7	12	84
Neighborhood Retail Trade	35	12	420
District Comm Proof Center	19	2	38
District Retail Trade	56	2	<u>112</u>

2,017 Jobs.

SOCIAL AND COMMUNITY INSTITUTIONS AT 60,000 POPULATION

	No.	Rooms	Building	Site	Cost LE
Primary School	12	24	2,100 m ² (3 fl)	4,700 m ²	210,000
Preparatory School	4	26	4,000 m ²	7,600 m ²	400,000
Secondary School	1	30	5,500	11,900 m ²	715,000
Industrial School	1/2	30	7,500	13,400 m ²	1,125,000
Collective Health Center	2		3,000	3,000	150,000
Ambulance Center	1		1,200	1,200	240,000
Neighborhood Social Center	12		200 m ²	200	20,000
Kindergarten School	12		100	100	10,000
District Social Center	2	(No. Voc. Crafts)	1,000	500	250,000
District Recreation Center	2	(Incl. Cinema)	6,100	7,500	1,830,000
Public Safety Bldg	2	(Incl. 750 m ² gar.)	1,750	1,000	150,000
Telephone Postal Center	12		200	200	12,000
Sports Area	12		750	10,000	67,500
Youth Center	2		2,750	13,700	983,050
A. Commercial Prof. Center	12		105		
A. Retail Service	12		455		
B. Commercial Prof. Center	2		285		
B. Retail Service	2		728		

SUEZ DEMONSTRATION PROJECTS *
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Program Goals:

Suez is located at the head of the Suez Canal. The Master Plan for Suez is for the purpose of directing war damage reconstruction in that portion of the Canal Zone area.

Goals of the Master Plan are to fit into a regional program to;

1. Reduce the population pressure on Cairo, Alexandria and the Delta without encroaching on valuable agricultural land.
2. Accomodate a six fold increase in population (to 828,000) in 25 years.
3. Provide associated and sufficient employment by planning new industrial zones.
4. Rehabilitate the existing residential and administrative center of the city and plan new communities.

Special Features:

A. REHABILITATION

The identified "Rehabilitation Demonstration Area" is a portion of the neighborhood known as QALZAM. Here 25% of the buildings were demolished by war. Rat infestation of the lower floors of building is a problem. War rubble still blocks some main streets. Pools of raw sewage collect here from unrepaired utilities. Water from public potable supply fountains is continuously flowing. There is no functioning system of refuse collection. Disruption of the education system has left an uncommonly high percentage of adult illiteracy.

* From SUEZ MASTER PLAN DEMONSTRATION PROJECTS by MOHR-UK Ministry of OVERSEAS DEVELOPMENT- Matthew, Johnson, Marshall, Halcrow, E.C. Ltd. Atd. KADDAH JOINT GROUP.- Feb., 1978 (3 vol)

Excessive population densities exist in the remaining dwelling structures. Uncommonly low family income is prevalent.

The objective for rehabilitation programs is to remove the effects of war; reduce the population (and population density) ; improve utility services and add schools, health community facilities and the highway-transport system; preserving the existing good housing stock and facilities.

Presently there are 5000 to 6000 households in QALZAM on 1,328 housing plots. Vacant plots number 755. The total population is between 25,000 to 30,000 persons increasing by 675 per year (2.5%). The population is to be reduced to 4,600 households by year 2000 and from an average of 5.2 persons per H.H. to 4.3 persons per household.

A small loan program to^{be} funded at about L.E. 275,000 proposes an interest rate of 3% and terms up to 25 years. Specific improvement packages are proposed to be pre-designed with the incentive of an automatic building permit approval to encourage a safe and sanitary environment. Estimated improvement package costs are:

- | | |
|---------------------------------------|------------|
| 1. Water connection | L.E. 85 |
| 2. Waste water connection | L.E. 150 |
| 3. Four bathrooms per dwelling | L.E. 480 |
| 4. Building structural repairs | L.E. 500 |
| 5. Bath, repairs, connections package | L.E. 1,215 |

The average amortized loan cost per building is L.E.70/yr or a rent increase per month of 70 piastres per rental family.

B. NEW COMMUNITY

The identified "New Community Demonstration Area" is called CABANON. Here 7,250 new dwelling solutions will be built on about 108 hectates. All houses will be located on private lots because:

1. Construction costs can be reduced (particularly in view of very poor soil-foundation conditions found in the area)
2. The majority of households cannot afford to purchase or rent a complete dwelling. Continuous extension and improvement of individual dwellings is easier and less expensive at ground level.

page: 3

3. Many families supplement their income by breeding poultry or livestock, and with other home based industries. These activities can be carried out more effectively and with less health hazard in homes which have private open space at ground level.
4. Minimum standards of daylight, ventilation and space are more easily achieved in homes on ground level.

Urbanization Standards :

Lots for the new community range from a size of 90m² to 108m² and are organized into "plot cluster groups" of about 80 lots within a space of one hectare, Cluster groups are organized into neighborhoods each consisting of 1.100 dwellings (14-15 clusters). The neighborhood population is about 5000 persons. Some 32 neighborhoods comprise a "district " of about 160,000 persons.

Access to most dwelling in a cluster is proposed to be by footpath of a minimum of 2 meters of width. Footpaths may be no longer than 15 meters in length or serve more than six dwellings. Outside the cluster, vehicle access takes place along streets of 6 meters and 10 meters right-of-way width. The minimum paved surface width is 5.5 meters. Note it is planned that each cluster of about 344 persons will require service-parking space for only one or two cars. Middle income housing will require one parking space per dwelling and one visitor's parking spot per 10 dwelling units.

New Housing Solution:

Nine basic housing solutions are offered as indicated on the following page:

Housing Solution	Lot Size	Dwelling Size	Number to be Build
<u>Site and Service</u>			
Lot + pit latrine public fountain	90M2-180M2	-	(715)
Lot + sewerage+ individual water	90M2-180M2	-	
<u>Core Dwelling</u>			
One room	90M2	18.9M2	2955
Two rooms	108M2	27.8M2	430
<u>Villas "NO.2"</u> *			
Medium income	200-275M2	-	370
High income	200-275M2	-	350
<u>Villas "NO.3"</u> *			
High income	200-275M2	-	620
<u>Ap'artments</u> *			
Middle income			1030
High income			180
TOTAL			7250

* Concession solutions to be auctioned for cross-subsidy purposes.

The site and service and core house solution to be sold to families earning less than L.E. 500 per year are expected to require subsidies totaling from L.E. 51 to L.E. 874 depending on the solution, whether free hold or lease hold

legal status is applied to land financing, and the size of the family. The percentage of income required for housing ranges from 7% or 8% to 20% for subsidized housing. Subsidized solutions comprise the Site and Service Lots and the small Core House and enjoy subsidized level payment mortgage terms of generally 3% for 15 years- up to 25 years. Non subsidized families pay 7% for 15 years up to 25 years. A 10% down payment is required. Leasehold costs are recommended to be charged at 7% for 60 years. (L.E. 13.0 to L.E. 15.0 per year)

Land cost (at L.E. 2.00 per M2 of lot area) is included in the solution cost calculations. Total costs are as follows:

House Solution	Land, connection Survey administration	Construc- tion Cost	total	Income Group
<u>1. Site and Service</u>				
a) partially serviced lot	LE 424	-	424	LE 144-203
b) serviced lot	LE 549	-	549	LE 256-316
<u>2. Core Solution</u>				
a) one room	LE 719	LE. 680	1399	LE 390-720
b) two room	LE 720	LE 1160	1880	LE 720-990
<u>3. Villas No2 Concessional</u>				
- middle income				LE 720-990
- high income				LE1440-2880
<u>4. Villas No3 Concessional</u>				
				LE1440-2880
<u>5. Appartments</u>				
- middle income				LE 720-990
- high income				LE1440-2880

Community facilities

The community facilities for Suez are planned to be staged according to the improvement plan proposed for Egypt and needs as incomes improve in the community.

Facility	Building Area M2	Total Facilities Installed	
		Year 5 7,250 Dwellings	Year 25 9,440 Dwellings
Primary school (16C.R)	1,000	4	8
Preparatory school(24 C.R)	2,550	1	3
Industrial Boys 2nd school (20 C.R.)	2,400	1	1
Girls 2nd school (24 C.R)	3,200	0	1
Genl. Health/Ambulance Cent.	1,100	1	2
Soc.Welfare/Comm Center	1,300	2	4
Police station garage	500	1	2
Post-Telegraph office	360	1	1
Local Mosque	850	8	8
Friday Mosque	1,500	1	1
Church	1,500	2	2
Open air cinema/Cafe	2,800	1	1
Open air market	2,000	1	1
Retail shops (16 m2 ea)	1,600	100	100
Workshops (10 m2 ea)	2,000	200	200
Park and open space .04 Ha. per 1000 pop., 1/2 in clusters			

ISMALIA DEMONSTRATION PROJECT *

PROJECT GOAL

Ismalia is one of three cities along the Canal Zone undergoing reconstruction and replanning.

The goals of the ISMALIA DEMONSTRATION PROJECT are to give impetus and provide early implementation to growth policies of the Ismalia Master Plan. Housing proposed to be constructed as part of the Project is intended to be affordable and appropriate to low income groups forming the majority of the population while capable of being implemented with a minimum of subsidy. Administrative and design proposals must be based upon an understanding of existing cultural, social, economic and physical needs. Proposals must be capable of being administered without high sophistication or continued reliance upon expatriate outside support. Proposals should be within the existing framework of legal, administrative and organizational experience while being adjustable to the lessons of experience or other changing factors. Proposals should be reproducible elsewhere in Egypt.

SPECIAL FEATURES

Initial demonstration project plans were to incorporate two existing informal communities together with a light industrial area. The industrial area "NIFISHA", was postponed for development due to heavy site development costs.

Communities selected for development are "EL HEKR" and "ABU ATWA". Each of these will receive both urban/upgrading and new housing development which includes a portion of the new development site for larger plots to serve as cross subsidy for the remainder of the community.

* Ismalia Demonstration Projects (Draft Report) U.K.
Ministry of Overseas Development, MOHR, February 1978.

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In all about 5000 new lots will be developed on 134 hectares of new development land. The upgrading portions of the selected communities total 172 hectares with a total population of 57,000 persons.

The DEMONSTRATION PROJECT is intended to be administered by several "Project Agencies" each functioning independently for the two sites but under the control of the Secretary General of the Governorate. Development will proceed according to several general policies:

- a) Non residential activities will be allowed on all plots,
- b) All settlers may provide rental accommodations on their plots,
- c) Commercial facilities are planned so that more of the percentage of household expenditures are captured within the community.
- d) Because public land maintenance is the Government's biggest burden, some of collective responsibility for maintenance will be fostered in conjunction with semi-private land ownership.
- e) Speculation on land will be prevented by granting only lease-hold rental on lots for the first 10 to 30 years.
- f) Urbanization costs for individual lot piped water and water borne sewerage should be paid for by a mix of user charges and outside subsidy. The development step for the first 3 years however, to enable improvement without subsidy, envisions the installation of potable water stand pipes and pit latrines to be emptied by suction trucks.
- g) Secure tenure of land and removal of threat of dwelling demolition will provide the maximum incentive for home improvement with durable materials in upgrading areas.

URBANIZATION STANDARDS

Average lot size for the Ismailia Demonstration is 97.5 m². Lot sizes range from 72 m² (6 x 12) to 144 m² (12 x 12). A 54 m² lot (6 x 9) was not adopted reportedly because of difficulty in siting a 3 room dwelling.

The basic planning unit is titled the "cluster" and consists of 20 to 30 lots and common circulation space. Four to five clusters make up a "block" of 120 to 180 lots. Six blocks make up a neighborhood of between 700 to 900 lots and a population of around 5000 persons

The access system consists of:

1. The semi-private lane leading to "clusters". Minimum right-of-way width is 6 meters.
2. Access may lead in and around blocks, Minimum right-of-way is 10.5 meter and the gravel-earth wear surface is 5.5 meters wide.
3. Local streets bounding the neighborhoods. Minimum right-of-way is 15 meters and the gravel-earth wearing surface is 7 meters wide. This travel lane is to be later upgraded to an asphalt surface.
4. District streets will have a 20 meters right-of-way and 7 meters wear surface of asphalt.
An overhead electric distribution system will be combined with street lighting.

HOUSING SOLUTIONS

Two construction options are proposed to be erected upon the individual dwelling lot:

- a) A flat concrete "sanitation" plate of 1.68 m² (in tandem with an equal size plate for the adjoining lot) to support a water-seal toilet and potable water spigot.

page:

- b) a 24 m2 core house, incorporating an enclosed and roofed sanitary plate, 20 cm block walls, timber roof and compacted earth floor. Rows of core houses are evidently intended to be sited at the front of the lot, An electric connection is also made to the core unit. Ceiling height of the unit is 2.7 meters about 3 m2 in the center of the house remains unroofed.

Beneficiary costs for these proposed housing solutions are calculated as a pro-rata proportion of the size of the lot on which they are sited.

New Housing Solution Costs

(in egyptian pounds)

	Lot Size *		
	72 m2	90 m2	108 m2
Lot + level 1 ** Urbanize (survey, pit latrines, public fountain)	LE 153	LE 177	LE 194
Lot + level Vll *** Urbanize + sewerage, on site water, elec., roads) Sanitation slab.	LE 561-665	LE 605-808	LE 661-914
All of above + 24m2 core house	LE 1098	LE 1142	LE 1198

* Land cost is evidently not charged to beneficiaries

** Urbanization levels 1 to Vll are cumulative in cost.

*** There is disagreement in the study. The slab only appears to cost LE 163.

Mortgage terms are proposed to be set at 7% interest for 20 to 30 years with additions of direct subsidies or required saving down payments ranging from LE 127 to 227 to reach the 50% level of the target population income group which in Ismailia is LE 310 per year.

BACKGROUND REPORT

LAND TENURE AND LAND USE

The problems of land tenure and land use are discussed in detail in the report on Urban Land Use In Egypt (2 volumes) (August 1977), prepared by the Joint Land Policy Team. This paper will update those reports and discuss specific questions related to the Community Upgrading and Low Cost Housing Project.

A. Updating of Previous Report

Since the Urban Land Use report was written there have been several changes in laws and regulations regarding landlord-tenant law, housing and building regulations. These changes can be briefly summarized as follows:

1. Changes Made by the new Landlord-Tenant and Housing Law, Law No. 49 of 1977

The new Landlord-Tenant and Housing Law makes a number of changes that affect land and housing policy:

a. Increase in Computation of Construction Costs upon which allowed Rental Values and Thus Property Taxes are Based

Article 14 of new Law No. 49 of 1977 makes a major step toward bringing rental values, and thus also property taxes, in line with market values. It increases allowed rental prices on new buildings from 8% of the construction cost and 5% of the land value at the time of construction to 10% of construction cost and 7% of the land value at the time of construction. More importantly, it also increases the official prices by housing type from set costs for 1970 to market values for new construction and 1974 values for existing construction plus an allowed increase of 7% per annum from that date to the present. (Article 15). The latter change could increase rents on apartments in many existing buildings by two to three times. (See Table 11, p. 55, Appendix, Urban Land Use in Egypt). However, it is yet to be seen by how much such rents will actually rise.

In addition, the tax on buildings is directly related to the land and building costs as set above. That tax is figured on net income equal to 80% of gross rental income. Thus 20% of gross income is allowed as a deduction for expenses. Article 66 of Law No. 49 of 1977 extends the exemption from both the basic property tax and from the additional taxes--the national defense tax, the national security tax, the guards fee, the occupancy fee, municipal fees and the cleaning tax. Previously, the basic

LAND TENURE (2)

property tax was abated for all monthly rents of less than LE 5 per room and for most of the additional taxes where monthly rents were less than LE 3 per room. (see table 12, p.70, Appendix, Urban Land Use in Egypt.) However, the new law exempts from both the basic and additional taxes all existing buildings with rents of \$ 7 or less per room and from the basic tax also all buildings with rents of \$ 11.2 or less per room. New buildings, such as those constructed under the Helwan New Community Project, would be exempted from the basic tax when room rents are less than \$ 14.0 per room. They would also be exempted from most of the additional taxes where rents are \$ 11.2 or less per room. (see Table 1.)

The expected increase in rent levels and property taxes following from these changes will make it somewhat easier to introduce the higher monthly payment levels that would arise from the Helwan New Community project. It should be noted also that the increase in the effective interest rate upon which rental values for buildings are based, whether rented or not, rises from 5% (plus the percentage of the total cost applied to land and its accompanying infrastructure) to 8% plus the percentage of the total cost applied to land and its accompanying infrastructure.

The other question remaining to be faced is whether our plots will be given property taxes based on real values as determined by the method above by a local Committee for the Fixing of Rental Values or whether such taxes will be based on our actual payments charged per month.

TABLE I

Building Taxation Schedule,
1978 (in percent of monthly
rent per room)

Type of Tax	Less than \$4.2	Monthly Rent Per Room			
		\$ 4.2 to 7	\$ 7 to 11.2	\$ 11.2 to 14	Over \$14
Basic Real Estate Tax <u>1/</u>	10.00% <u>2/</u>	15.00% <u>2/</u>	20.00% <u>2/</u>	30.00% <u>3/</u>	40.00%
National Defense Tax <u>4/</u>	2.50	5.00	5.00	5.00	5.00
National Security Tax <u>4/</u>	2.00	4.00	4.00	4.00	4.00
Guards Fee <u>1/</u>	2.00 <u>2/</u>	3.00 <u>2/</u>	4.00 <u>3/</u>	6.00	8.00
Occupancy Fee	2.00 <u>2/</u>	2.00 <u>2/</u>	2.00 <u>3/</u>	2.00	2.00
Municipal Fee <u>1/</u>	2.67 <u>2/</u>	2.67 <u>2/</u>	2.67 <u>3/</u>	2.67	2.67
Cleaning Tax	<u>2.00</u>	<u>2.00</u>	<u>2.00</u>	<u>2.00</u>	<u>2.00</u>
Total <u>5/</u>	23.17%	33.67%	39.67%	51.67%	63.67%
Total <u>6/</u>	6.50%	11.0 %	19.0 %	51.67%	63.67%

NOTES:

1. Tax computed on net rent equivalent to the rent charged, less a 20 percent allowance for maintenance costs.
2. These taxes have been abated.
3. These taxes have been abated for buildings constructed after August 30, 1977.
4. These taxes have been abated for buildings constructed before January 1, 1944.
5. This total is without considering abatement.
6. This total is effective tax, considering abatement for existing buildings.

SOURCE: Law No. 49 of 1977; Ministry of Housing and Reconstruction.

b. Increase in Rent Allowable Due to Repairs and Maintenance Costs

The percentage by which landlords can increase annual rents for making necessary repairs and maintenance was increased from 12% to 20% of the cost of such repairs. (Article 61). However, that increase is probably still not enough to encourage owners in upgrading areas who do abide by the rent control provisions to make repairs. It will not have any effect, of course, where rent control is ignored.

In addition, Article 62 provides for the first time that the Ministry of Housing and Reconstruction, banks and units of local government may give loans at reasonable terms to owners of buildings or to their occupants to carry out repairs and maintenance. The Ministry of Housing and Reconstruction is presently drafting regulations regarding such loans which must be agreed to by the Ministry of Finance. It is unclear exactly what terms would be applied to such loans, although the Ministry of Housing appears to indicate that the interest rate would be lower than the current market interest rate of 8% per annum. However, the Ministry of Finance is opposed to further subsidies in the housing sector.

c. Key Money

The new law codifies the specific outlaw of key money found in Military Regulation No. 4 of 1976. (see Article 26). Also specifically, a lessor can not be forced to pay more than two months rent in advance. (Article 25). In addition, the penalty for violation of the key money provision was increased to imprisonment for not less than three months and a fine equivalent to double the sum of money charged in violation of the provision by the landlord.

d. Demolition and Repair of Buildings

The rules with regard to demolition and repair of buildings were strengthened thus making the rights of tenants more impregnable than ever. In order to demolish a building landlords would have to acquire both a permit of demolition and a building permit. The demolition of non-residential buildings requires that the total area of the floors of the new building be no less than four times the area of the floors of the building before demolition. In addition, the new building must have at least 50% of its area comprised of residential or hotel units. (Article 49). Lessees are not required to vacate the building except by their unanimous consent or by judgment of a court if three months have elapsed without such an agreement. Landlords must pay an indemnity to this lessee if he is forced to move or else provide him with an appropriate unit at the identical rental value. The landlord must then complete demolition of the building within three months of its vacating and begin reconstruction within three months of the date of completing demolition. (Article 52) If reconstruction is not begun during that period then the Governor concerned can entrust

completion to another at the landlord's expense and has the right to lease the building, and collect rents until it receives back the monies that it has expended plus administrative expenses. The landlord however, is entitled to 20% of that rent monthly. (Article 53).

e. Permission to Secure Building Materials

This law puts into the form of legislation the requirements that persons who have secured permits to construct luxury buildings may not benefit from the special government privileges regarding the securing of building materials at subsidized prices but must purchase the materials they need at the world price and import such materials on their own initiative, where necessary. (Article 3). The quotas for such construction will only be set after material needs for low and middle income housing are filled. Thus low income housing should be encouraged.

f. Compulsory Purchase of Bonds for Financing of Economic Housing Projects

Article 68 of the new law requires private companies building housing and the purchasers of such housing to subscribe 5% of the sales price of the house to the purchase of bonds issued by the National Low Income Housing Fund. This requirement is in addition to that under the law establishing the Low Income Housing Fund (Law No. 107 of 1976) requiring builders of housing costing over LE 50,000 to purchase such housing bonds equal to 10% of the value of the building. To date no such housing bonds have been floated.

g. Sale of Public Housing

Article 72 of this law specifically states that existing units of economic housing and middle income public housing shall be sold to their renters with a payment period of fifteen years. The law itself does not set specific terms for these sales but the Ministry of Housing has decided that such housing would be sold with an interest rate of 5%.

h. Vacancy of Dwellings

Article 8 of the law states that dwellings prepared for residence may not be kept vacant for a period exceeding four months if a person offers to lease the dwelling at the legal rental value.

LAND TENURE (6)

1. Furnished Apartments

As under Law No. 52 of 1969, a landlord may generally lease only one furnished apartment in each of his buildings. (article 39). However, the new law specifically allows the landlord to raise rents to a tenant who sub-leases a furnished apartment. Such rents may be raised by:

- 1) 400% if the building was constructed before January 1, 1944.
- 2) 200% if the building was constructed between January 1, 1944 and November 5, 1961..
- 3) 150% if the building was constructed between November 5, 1961 and August 30, 1977.
- 4) 100% if the building was constructed after August 30, 1977. (the date that the new law took effect).

It should also be noted that a tenant who has lived in a furnished apartment for five consecutive years cannot be forced to leave. If the person is a sub-tenant then he must have lived in the furnished apartment for ten consecutive years.(Article 46).

J. Water Charges to be Paid by Tenant

Article 33 of the new law sets forth in detail the principle that charges for water consumption should be borne by the tenant. However, the landlord is responsible for constructing necessary water tanks and pumps.

2. New Regulations for Government-Assisted Economic Housing

Another change made after these reports were written were the issuance of new regulations setting priority levels and income categories for residents of government-assisted economic housing and setting the basis for payment for both economic housing and middle income housing assisted by the government.

The priority rankings set aside 25% each for displaced residents and newlveds; 15% for recently transferred employees; 10% for armed forces personnel (residency in

LAND TENURE (7)

that governorate required); and left 25% at the discretion of the Governor to be distributed according to local needs. For economic housing income levels for displaced residents and newlyweds was set not to exceed LE 35 per month (LE 420 per year) for a dwelling unit of one room and one hall and not to exceed LE 50 per month (LE 600 per year) for units of two rooms and one hall. No income limits were set for middle income housing.

With regards to basis of payment, economic housing was to be paid for with a minimum down payment equal to 10% of the real building costs with the remaining balance amortized over 30 years with no interest rate. In special cases the down payment might be paid over three to five years with a five percent interest charge. For middle income housing there was also a minimum down payment set at 10% of the real building cost with the remaining balance to be paid over a period of 30 years with an interest rate of 5% per annum. In addition, a 10% discount would be given for payment of the full price of the unit or of the outstanding balance. Receipts of the sale are to be deposited in the National Housing Fund to be used in building more low income housing (when necessary legal changes are made to allow this). Such units cannot be sold or otherwise disposed of except with the approval of the Governorate and are restricted for sale to persons who would qualify as original recipients.

This regulation, together with an accompanying regulation that states that 70% of government-assisted economic housing must not be greater than 45m² in size and that the rest must be 60m² or less, goes a long way toward providing a legal basis so that the government does indeed build low income housing with its monies.

3. Property Taxes and Speculation

The new tax law is presently in its final reading by the Peoples' Assembly and is expected to pass early in 1978. As presently drafted, it contains a 2% annual penal tax on vacant land which will go to the governorates and a capital gains tax to be levied on the sale of property. However, in its present form the latter tax would fall on the total sale price rather than on the gain only.

4. Planning Law

The proposed planning law is only being considered at a first reading by the Peoples' Assembly. It is not expected to pass for one to two years.

SITE SELECTION

Background

Discussion of the general criteria for Site Selection of the Project was discussed in the Project Identification Document and the August 1977 report titled "Housing and Community Upgrading for Low-Income Egyptians" of the Joint AID/GOE Housing Team. Helwan was selected as the main focus of the project at this time because:

- a) Its importance to Cairo as a modern center of industry and employment;
- b) The severe housing shortage of the City as evidenced by a disproportionate community pattern;
- c) The existence in the Master Plan for Helwan of areas specifically identified for new community development (15th of May New Town, Second Industrial City, etc.) for which foreign or local sources of investment had not been specifically identified.

Several demonstration sites for upgrading were also identified as a means to "improve the living conditions of the 283,000 people now living in the Helwan area". The principle reason for attention to these areas is the scarcity of essential services contributing to an adequate living environment caused by their rapid settlement, low resident incomes, uncoordinated government infrastructure investment and insecure, illegal land tenancy. Hadaiq Helwan-Sidqi and Kafr El Elw were briefly examined. In Cairo, Ain Shams was identified for upgrading for similar reasons - the zone had tripled in population in the ten year period 1966-76. Gamalia in medieval Cairo was also identified but a later evaluation of this component -together with new house construction outside the Cairo Region was deferred to a later stage of analysis and investment.

Detailed Investigation Procedures

A. New Community:

The site selection process was carried out jointly by AID and its consultants, representatives of the Ministry of Housing and of

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the District Governorate- Office of Engineering of Helwan. Documents were examined in the district government office, site reconnaissance the presence of the concerned GOE officials. A formal recommendation with reference maps was submitted to the Cairo Governorate by the MOH for approval for conveyance and for replanning in conformance with the Master Plan.

Criteria for guidance in making the site selection were:

1. Adequate undeveloped area upon which to plot at least 7000 to 10,000 units at approximate current densities but high ground coverage development pattern to illustrate demonstration effects of site planning.
2. Gentle sloping topography.
3. A location which is evidently remote from the air pollution effects of neighboring industrial areas.
4. Close access to existing Helwan City urban influences and municipal services and in general conformance to the Helwan Master Plan.
5. A site reasonably clear from evident surface seepage and other negative foundation problems. influences of military installations and other special planning restrictions.
6. Because of stated GOE policy to give preference to exploitation of the desert for residential purposes, a desert site location was adopted as an important factor for selection.

Following are sites considered for location of the New Helwan Community:

- a) Triangular parcel of about 100 HA West of King Khaled Highway from the "Water Tower" North and East to approximately opposite the Helwan Astronomical Observatory.
- b) Parcel of 300 Hectars East of King Khaled Highway in area designated as the site of the "15th of May" New Helwan Industrial City.
- c) Triangular parcel of 75 hectares west of King Khaled Highway opposite New Helwan Industrial City and adjacent to the Helwan Military Airport.

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- d) Rectangular parcel of 160 hectares west of King Khaled Highway, South of the "water Tower" which was eventually selected.
- e) Rectangular parcel of 100 Hectares West of the "Ain Helwan" Springs and bounded by the embankments of the Helwan railroad.

Briefly the considered sites were rated according to the above criteria as follows:

Site (a) was discarded because it is crossed by several deep and abrupt ravines making development impossible.

Site (b) was discarded because the 15th of May project was actively revived. It is remote from existing Helwan City influences and because the topography appears to be more broken than other sites.

Site (c) is currently zoned for recreational uses to conform to military needs for in-and-around the Military Airport.

Site (d) the selected site, conforms to the selection criteria. A portion of site "C" was added and one of the original parcels removed because of conflicting evidence of control and ownership.

Site (e) shows evidence of sub-soil instability and ponding of surface water. The site has been identified for several competing uses and therefore is inadequate in size for the Project. This parcel is partially to be occupied by a 2000 unit project for which design has been completed by the GABHC and by the University of Helwan for a new campus complex.

Project design is intended to conform to the existing topography and minimize earth movement due to limited amounts of overburden found deposited upon the limestone base. Preferential lots of 100 m² are sited at zones where topography restricts site development. We have no information which would lead us to believe that the selected site is more costly than other government owned desert sites reviewed in the Helwan area.

B. Upgrading Community: Purpose of the site selection process for upgrading communities was to identify potential sites for investment. Final selection of sites or Zones within identified sites is to be carried out during the project implementation phase as a result of a social development assessment carried out by the MOH. The initial potential upgrading area identification was carried out in a similar manner to that of the New Community. A final request for identifying the selected areas for replanning was submitted, with reference maps, to the Cairo Governorate for its approval.

Criteria for guidance in making the site selection were:

1. Evidence that the incomes of area residents was at or below the median urban income of Egypt. The evidence was gathered from visual impressions of the dwellings which had been constructed and two surveys of the residents,
2. No active replanning of the area for a competing use was in progress which might obstruct procedures to secure legal land title,
3. Scarcity or absence of basic urban utility services and public institutions,
4. Reasonable freedom from chronic or irremediable environmental influences.

Following are the sites considered for location of potential upgrading areas in Helwan and Cairo.

- a) Kafr El Elu, Helwan
- b) Rashid, Helwan
- c) Ghoneim, Helwan
- d) Izbet Zein, Helwan
- e) Izbet Walda, Helwan
- f) Hadaiq, Helwan
- g) Izbet Sidqi, Helwan
- h) Ain Shams No 1 Cairo,
- i) Ain Shams No 2 Cairo
- j) Ezbet El Abasery, Ain Shams, Cairo.

Briefly the considered sites were rated according to the above criteria as follows:

Site (a) Kafr El Elu - Conforms to criteria 1,2,3. Air pollution problem 4 can be partially abated. Suggestions for relocating most southerly extension into a consolidated location around a cemetery is not considered a practical demonstration as the abandoned property will be reoccupied in absence of effective municipal land use controls. Conditionally accepted.

Site (b) Rashid, Helwan - Conforms to criteria 1,2,3 and 4. With approval of the Governorate for replanning, the site is conditionally accepted.

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Site (c) Ghoneim, Helwan - Conforms to criteria 1,2,3 and 4. A large openspace reserved for agricultural cooperative building expansion exists to the west. This is an ideal site for model house display and testing. With approval of the Governorate for replanning, the site is conditionally accepted.

Site (d) Izbet Zain, Helwan. Conforms to criteria 1, 2, 3 and 4. Conditionally accepted.

Site (e) Izbet Walda, Helwan - Conforms to criteria 1, 2 and 4. University of Helwan desires to displace the community to clear land for new campus. Site rejected.

Site (f) Hadaiq Helwan - Conforms to criteria 2, 3 and 4. The major portion of the site, however, shows evidence that residents enjoy incomes greater than the median for the urban population. Lower income Zone will be consolidated as part of Izbet Sidqi, Helwan.

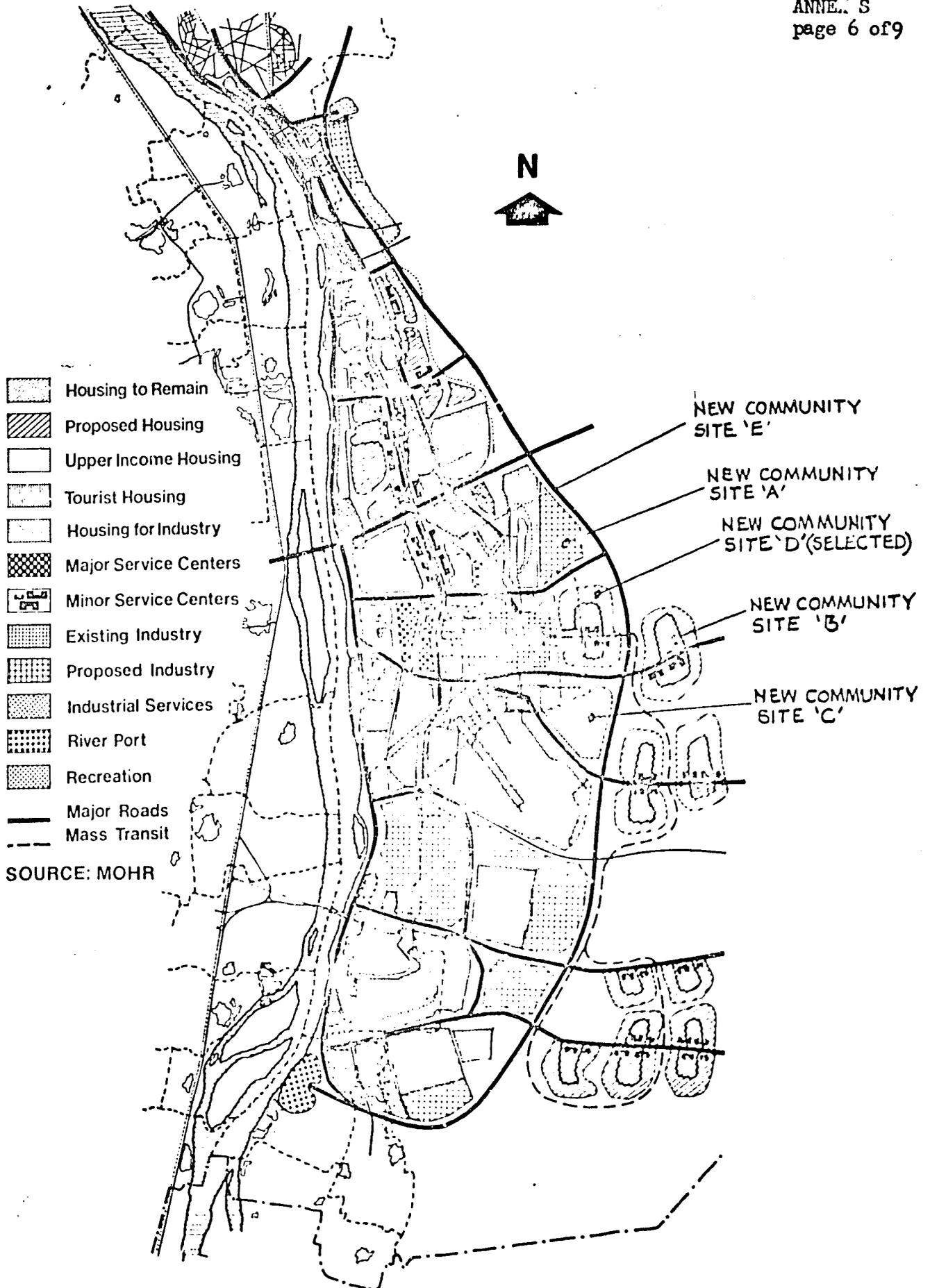
Site (g) Izbet Sidqi, Helwan- Conforms to all criteria. Conditionally accepted.

Site (h) Ain Shams No1, Cairo - Conforms to criteria 1, 3 and 4. The Governorate has identified about half the eastern zone for relocation of residents to make way for new housing. Site rejected.

Site (i) Ain Shams No. 2, Cairo - Conforms to criteria 2, 3 and 4. It was determined that an insufficient proportion of the population suffered from sub-median incomes. Site rejected.

Site (j) Izbet El Abasery, Ain Shams, Cairo - Conforms to all criteria. Conditionally accepted.

Attached is the authorization of the Governor of Cairo reserving selected sites for this project.



HELWAN AREA MASTER PLAN

Another consequence was the growth of uncontrolled settlements which spread on almost any developable land, private and government owned. To provide for controlled growth, the Master Plan for Helwan calls for the development of four new communities which will provide more than 50,000 new dwelling units; one of the three new communities has already been planned in detail and is ready for construction. At the same time, the government wants to improve and upgrade the existing informal settlements.

Comparative statistics for Helwan are difficult to assess because of the changes introduced in the boundaries of quarters over the past decade as a result of population growth and movements which led to sub-division or aggregation as the case may be:

Helwan Quarters (Shiakhas)

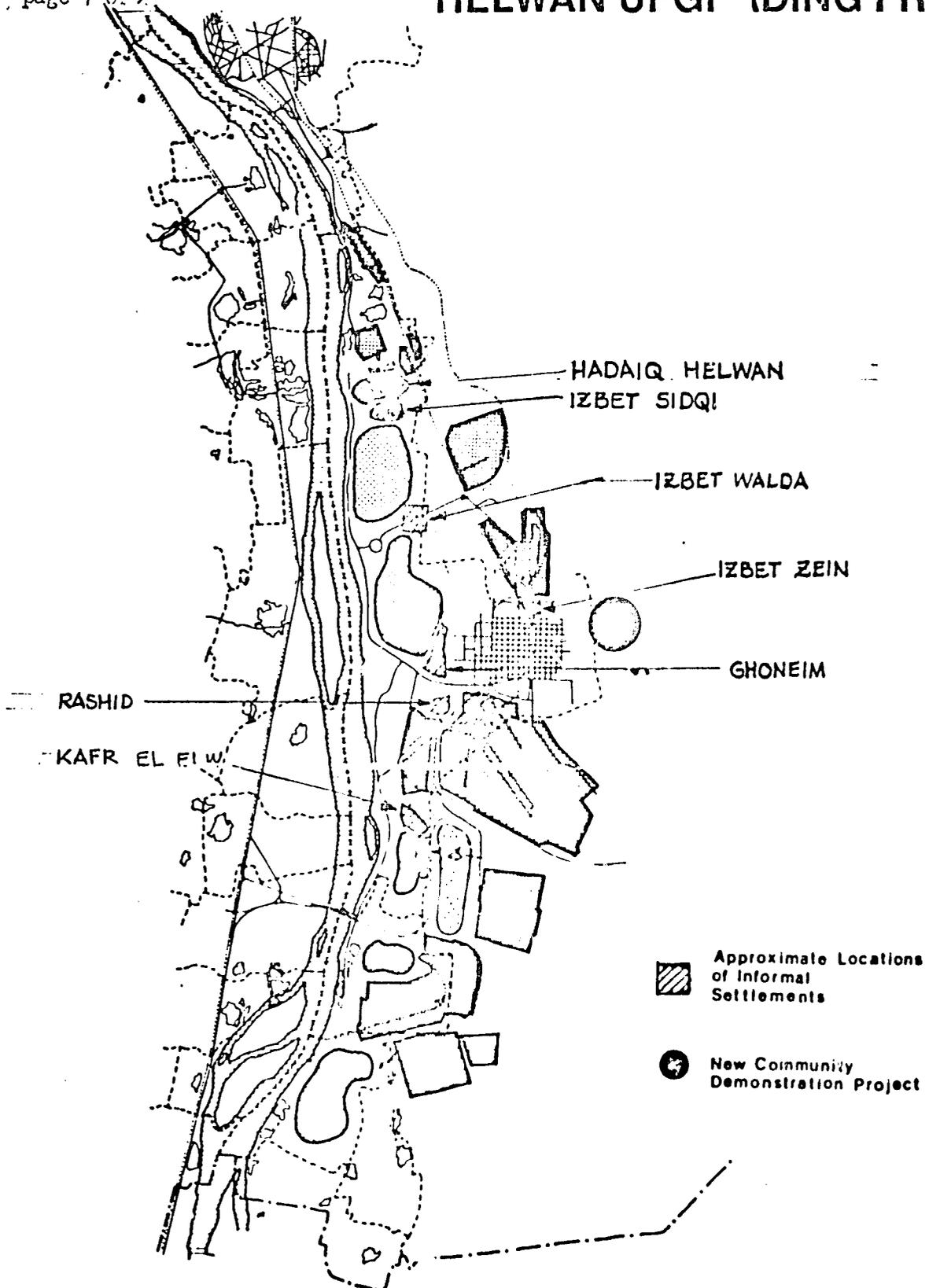
1966	1976
Masara El Balad	El Masaratein
Masara El Mahata	Munshat Naser
Helwan El Balad	Helwan El Balad
North Helwan	El Ezbetein
South Helwan	El Masaken
East Helwan	East Helwan
West Helwan	West Helwan
Kafr El Elu	Kafr El Elu

However, it is apparent that as the pollution in the Tourah-Masara area increased, development activities, formal and informal, shifted to the South to Hadaiq Helwan, Zahret Helwan, and Exbet Sidqi. These areas, which were part of Helwan El Balad in 1966, now form a separate Shiakha: Munshat Nasser--sometimes also referred to as Manishiyat Nasser--not to be confused with the settlement bearing a similar name at the foot-hills of the Mokattam near the Citadel.

Similar to many recent developments, these areas comprise some middle income formal subdivisions along the transportation axis and lower income informal housing to the back. Expansion has been impressive and it is estimated that the number of households in the area more than doubled over the 1966-1976 decade. This development occurred at a time when the utility networks in Helwan were totally unable to absorb it. As a result, most dwellings are not sewered and have to rely on cesspools if drainage is at all provided. However, less than 50% have access to filtered water in the structure where they live and about 10% do not have access to water supply close by and have to carry water to their homes in a variety of containers from the nearest public fountain. Close to 40% of the households still do not have electricity in their dwellings.

Yet conditions in this area are slightly better than in Kafr El Elu, stretching to the South between Helwan and Tibbin. This series of old Bedouin settlements on government desert land now house low income workers employed in the factories nearby. Here, houses are different from the typical informal settlements and still conserve the rural character.

HELWAN UPGF PLANNING PROJECT



AIN SHAMS-CAIRO UPGRADING SITE

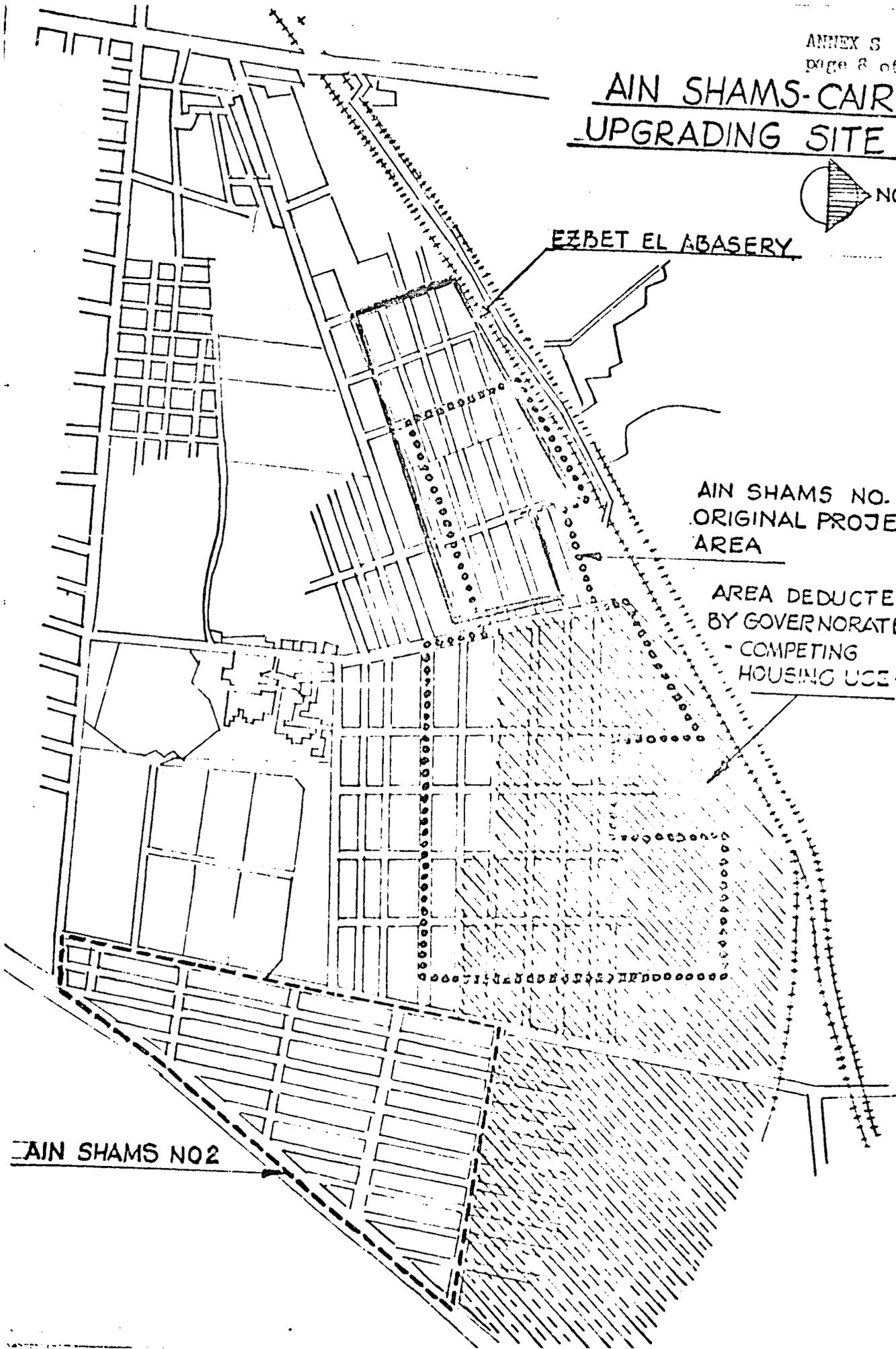


EZBET EL ABASERY

AIN SHAMS NO. 1
ORIGINAL PROJECT
AREA

AREA DEDUCTED
BY GOVERNORATE
- COMPETING
HOUSING USE -

AIN SHAMS NO 2



Decree No. For 1978

Date / / 78

Subject : Community and Housing Development Project in Helwan and Ain Shams

After reviewing law No. 52 of 1975 on local government organization and the executive regulations, concerning the direction and law No. 106 of 1976 and organization of building construction, and law No. 52 of 1940 concerning the subdivision of lands for construction and the laws pertaining to it -

and the Cairo governors decree 347 of 1976

and " " " " 198 of 1975

and the decree of the Cairo local council No. 143 of 1978

It has been decreed to :

Article 1 :

Specify the plot of land belonging to the government, outlined in red on the accompanying map the area of which is 265 feddans lying west of the Helwan Autostrade, for building a low-cost housing project through the collaboration between the governorate of Cairo and the MOH.

Article 2 :

Specify the plot of land belonging to the government outlined in green on the accompanying map to this decree, the area of which is around 108 feddans west of the Helwan Autostrad for the governorate of Cairo to install recreational spaces to serve the residential area, through the collaboration between the governorate and the Ministry of Housing.

Article 3 :

Consider the areas of Kafr El Ela, Rashed, Ghoneim, Sidki (Hadaig Helwan) and Zein in Helwan and the site of Ain Shams the boundaries of which are indicated on the map accompanying this decree, as areas for the execution of the first phase of the project for residential upgrading and completion of services and infrastructure.

ANNEX T

TECHNICAL ASSISTANCE AND TRAINING

A. General

The objective of Technical Assistance and Training is two-fold, to help with the implementation of the project itself and, to increase the likelihood that this project will lead to other similar efforts in the future. Technical Assistance will be directed towards the success of project execution while training is primarily geared to increasing the Ministry of Housing and Credit Foncier's capacity to replicate the project on a larger scale. The two activities are to be seen as complementary and, to a large degree, are to be performed by the same persons. All technical assistance activity will have as one of its major purposes the training of GOF personnel and building of GOE institutions so that the benefits of this project may spread to more than the target population in the future. Other training resources will be added as needed.

There are four major areas in which technical assistance and training will be required for the successful completion of this project:

- a. to assist with the establishment and operation of the Implementation Unit in the Ministry of Housing responsible for the design and execution of this project and preparation of new policies for housing, land and finance.
- b. to build the necessary capacity in the Credit Foncier to administer loan programs for low-cost housing effectively in this and other projects;
- c. to design and test building products and construction systems appropriate for low-cost housing.
- d. to train staff, particularly, of the MOH, the Credit Foncier in the demonstration aspects of this project.

B. Technical Assistance to Implementation Unit of the MOH

A team of four permanent advisors and short-term consultants is needed for the effective functioning of the Implementation Unit of the MOH:

1. A senior advisor trained in architecture and urban planning to assist with the overall management of the project with particular reference to designs, costs and specifications.

2. A community development and cooperative advisor trained in sociology/social work and with experience in community development and social research methodology. This advisor will assist the planning and coordination of the activities of the MOH, the Ministries of Education, Health and Social Affairs in the effective administration of the social components of the project and help to bring out the fullest possible participation of the project beneficiaries in community affairs. (See Annex I).
3. Home Improvement Advisor, to assist in the Development Training and Organization of the home improvement component of the project.
4. Short-term Assistance:
 - a) Housing Management Advisor- to assist housing cooperatives and community associations develop supplementary services to maintain a safe and sanitary environment and administer other services desired by the residents.
 - b) Building systems Engineer- to design, test and encourage adoption of low-cost building products and construction methods appropriate for low-cost housing.
 - c) Market Analyst- to assist in market testing for the introduction of low-cost building products.
 - d) Evaluation Specialist- to assist in design and analysis of the evaluation program of the project.
 - e) Housing Policy Advisor- to assist the MOH and other concerned agencies of the GOE formulate a National Housing Policy to provide for the equitable distribution of housing resources and community services.
 - f) Land Policy Advisor- to assist the MOH, as part of the development of a National Housing Policy, to formulate an urban land policy which will conserve scarce resources, stimulate appropriate land use changes, control speculation and equitably recapture increased value for the benefit of the general welfare.

C. Technical Assistance to Credit Foncier

1. Branch Bank Systems Advisor- to assist in the establishment and administration of the savings and credit which will be used in this project, as related to electronic data processing and consumer banking procedures.
2. Short-term Assistance
 - a) Finance Policy- to assist the MOH, as part of the development of a National Housing Policy, formulate a finance policy which encourage the mobilization of private savings and investment in housing.

D. Training

In addition to the training which each of the technical assistance will perform, training courses and seminars are planned for the following groups, by number and place where course/seminar is to be offered:

<u>Group</u>	<u>Location of Course/Seminar</u>		<u>Persons</u>
	<u>Egypt</u>	<u>Abroad</u>	
a) Building Systems Testing	100		100
b) Sewerage Treatment Staff		5	5
c) Cooperative/Community and Association (Promoters and Leaders)	20		20
d) MOH Implementation Unit	20	10	30
e) Credit Foncier	10	10	20
f) Tech. Training Inst. (Building trades teachers)	25	5	30
TOTAL	175	30	205

The training done in Egypt will be in existing facilities or will be designed and run by short-term consultants. Training outside of Egypt will be done under the guidance

of contractors. Specific job description for technical assistance and course content for training will be developed on the basis of mutual agreement between AID and the MOH Implementation Unit.

CHART I ILLUSTRATIVE TECHNICAL ASSISTANCE PLAN

<u>A. Advisor</u>	<u>Duration of Stay</u>	<u>Cost (000's)</u>	
	<u>(Person-Months)</u>	<u>\$</u>	<u>LE</u>
Senior Advisor-Architect/ Planner	60	480	175
Community and Cooperative Specialist	60	450	150
Home Improvement	48	360	150
Branch Bank Systems	24	190	75
<u>Consultants</u>			
Housing Management	12	48	25
Building Materials design/Test- ing	12	48	25
Materials Market Analyst	8	32	15
Finance Policy	8	40	15
Evaluation	8	32	15
Land Policy	4	16	8
Housing Policy	4	16	8
TOTAL	296	\$ 1,712	LE 661 *

* Equals \$ 924

Total equivalent technical assistance cost in dollars is estimated at \$ 2,800,000 including \$ 75,000 for materials and subcontracts for building systems development and testing. Training activities abroad will average one man-month per participant for a total of 30 man-months at a rate of \$ 6000 per man-month. Seminar participants in Egypt are estimated to cost \$ 1,250 per person. The total training program is estimated to cost \$ 400,000.

Approximately 200 man months are required to carry out the on-going social and general project achievement evaluation program and 50 man months are budgeted for materials testing in support of the innovative building products design and testing technical assistance activity. A budget of \$ 100,000 in equivalent local currency is estimated to be required based on previous project experience with Egyptian research agencies.

Technical assistance, training and evaluation will be provided both under predominant capability procedures to AID and competitive bidding procedures for host country contracting. All funding for technical assistance is provided by the project. Two technical assistance and training contracts will be sought-one for assistance to the CFE and the second for assistance to the MOH Implementation Unit for all other aspects of the project. A two local contracts for evaluation will be secured- one for project achievement and a second for assistance in building materials and product testing.

PROJECT ECONOMIC CONSIDERATIONS

Introduction

The GOE/AID housing project is designed to demonstrate to the GOE that :

- 1) With the same limited GOE budget resources, core housing will provide more housing starts than could be obtained building finished 5 story walk-ups apartments.
- 2) Various affordable housing solutions can be provided for families at or below the median income level in planned, serviced areas;
- 3) Onsite costs are affordable for families below the median income;
- 4) Onsite costs of the project are recoverable allowing for replicability of the project;
- 5) Upgrading the existing house stock can restore and expand available housing; and,
- 6) An effective working partnership can exist between a Government sponsored activity and the private sector to provide housing relying mostly on private initiative.

The Project is very successful relative to other planned GOE projects in :

- 1- Providing services at a low cost per beneficiary;
- 2- Recovering costs to be reinvested in future projects;
- 3- Minimizing the level of subsidy;
- 4- Reaching lower income families;
- 5- Generating private domestic savings; and
- 6- Increasing private sector involvement.

The project is a leader relative to current and past Egyptian housing efforts. It reflects a major economic and political move from the traditional highly subsidized approaches to low cost housing. It does not appear possible to design a more effective project given the political realities, past GOE experience and practice, and public attitudes and customs. The AID/GOE approach represents the maximum innovation and cost reductions possible until demonstration projects produce some measurable results.

The Egyptian Economy and Economic Analysis

The social and economic environment in which the AID/GOE project is to be completed causes a number of difficulties for economic analysis. General inflation levels are over 15% annually with current inflation in the construction sector at 25% - 30% per year. This situation causes great difficulty in making meaningful project cost estimates and interproject comparisons. Price controls and subsidies make formal methods such as cost/benefit analysis difficult or impossible. Long standing rent controls have disrupted normal market rents and land values. Since economic benefits are generally measured either by imputed economic rental value or increases in land values, these benefits in Egypt would have to be estimated without sufficient data to defend their reasonableness.

The price and availability of building materials are in disarray. Essentially three prices exist for building materials : the Government controlled price, the import price and the free market or black market price. Difficulties exist with each of these. Building materials of many types are generally unavailable at the official Government price or may be available only after extensive waiting periods of up to two years. Imported building materials may not be available because of lack of foreign currency or import restrictions. Prices in the free market are unreliable and quality varies substantially from situation to situation.

Further, a calculation of the Internal Rate of Return (IRR) of a housing project requires an estimation of intangible social benefits. Relevant socio-economic data is to a large extent non-existent and to the extent it exists, its validity is questionable.

Given the distortions caused by government controls and lack of appropriate data, the analysis of the AID/GOE project was conducted on a least cost basis using available data.

Housing Efforts Aimed At Low-Income Families

Low-income housing in Egypt has been provided by two methods :

1- The GOE constructed five story, 60m², rental apartments which were expensive and required a high level of subsidy. Demand for these units greatly exceeded supply. The units were virtually given away to recipients with rents set at LE. 1 per room. Because of the uneconomic rents these units were completely non-replicable. In most cases, rents were so low that it was not worth the expense to collect them. Because the units were basically uneconomic, adequate funds were not available for maintenance and the housing quality deteriorated.

Recently, the Government began selling these units. The sales price is designed to recover the costs of the dwelling and on-site infrastructure. However, the low mortgage interest rates constitute a massive housing subsidy. Even with the subsidized financing the units for sale are unaffordable to the target income group of the AID/GOE project.

2- The private informal (illegal) construction sector builds expandable core houses for low income homeowners. These homes in general appear to be of good quality but they are built in unplanned neighborhoods and have inadequate or non-existent services. Costs for these units can be higher than economic costs because many materials are purchased on the black market. More important it can cost the GOE up to 30% more to put in services after an area is built up than it would cost to have put the services in first.

Comparison of the AID/GOE Project to Other Current Low-income Projects

Several low-income housing projects are currently being planned in Egypt. These projects include a co-funded World Bank (IBRD)/GOE project, and several other GOE projects. (see Annex Q, "Summary of Related Recent Projects of GOE").

An analysis has been conducted comparing the AID/GOE project to these alternative housing efforts. The analysis has focused on 1) cost comparisons 2) the least cost approach for low income housing solutions, and 3) replicability which relates to the level of subsidy and the recovery of funds. The affordability of the housing solutions to low income families has been addressed in the Project Paper under Section IV.

Cost Comparisons

A comparison of costs is complicated by the various price levels and rapid inflation in the construction sector. A cost comparison of the AID/GOE, IBRD/GOE and other GOE projects is impossible at this time because these other projects have not progressed to the point of making accurate and detailed cost estimates in current prices. For example, the World Bank points out in their project paper that their cost estimates should not be relied upon at this time. Sadat City planners state that thus far they have been primarily concerned with plans rather than detailed cost estimates.

However, AID/GOE construction costs were compared with currently offered low-income housing alternatives : the GOE five story apartment built by the public sector, private informal sector core house.

The goal of the cost comparison was to reduce the construction elements down to their comparable components and make adjustments such that those components are comparable on an economic basis and inferences can be drawn as to the relative efficiency of each sector. The absolute levels of costs may not accurately reflect the cost of constructing the units. The focus is on the relative standing of the comparable costs per square meter.

In the case of the 5 story walk-up it must be recognized that the standards in this building are significantly higher than is planned for the AID/GOE Project core unit. However, since the GOE is continuing to build these units and offer them as a solution to the housing shortage a comparison is necessary.

The first step was to reduce the construction elements down to their comparable components. Two adjustments were necessary to equate the units :

- 1) Design and supervision charges were eliminated from the AID/GOE 10m² unit since cost information was not available for this service in the public and the informal sectors. This elimination carries some implicit assumptions :
 - a. To the extent that the informal sector does not design and supervise their construction, higher costs may be incurred at a later time from maintenance, repair, and the shorter life span of the building.

- b. To the extent that the informal sector copies designs of the formal private and public sectors, the design costs of the AID/GOE units will be spread over informal sector replication of these units.
 - c. The public sector design and supervision costs are roughly equivalent to the AID/GOE costs.
- 2) The second adjustment necessary to equate these units was to add the AID/GOE of excavation/back fill to the informal units since this was not costed out. This adjustment is necessary to equate the informal unit with the AID/GOE unit and the 5 story apartment who costed out this service. The assumption here is that the informal sector costs would be similar to the AID/GOE costs.
- 3) A third consideration is that the informal unit is constructed with load bearing wall rather than the more expensive frame structure whose costs are used in the AID/GOE 10m2 units.

The second step was to make adjustments such that the components are comparable on an economic basis. This was done by determining the economic cost of the construction and making adjustments for inflation. To measure economic costs of price controlled materials, i.e. cement and reinforcing bar, the import price was used. These items were valued at, respectively, \$ 47/MT and \$ 306/MT compared to the official prices used by E.S. Parson of \$ 30 and \$ 320; and, free market prices of \$ 72 and \$ 500 (available from domestic production).

Exhibit 1 shows the comparison using June 1976 prices. The first comparison is between the 10m2 core house and a similar one built in the informal sector. The K2 cost of the informal unit is \$ 150. This is \$ 13 higher than equivalent adjusted AID/GOE housing cost.

The next comparison is between the projects 30m2 core unit expanded by 30m2 to arrive at a similar living space and an apartment unit in a GOE 5 story walk-up. The per square meter economic cost of a five-story walk-up is \$ 131 versus \$ 93 for the expanded core house. It should be noted that there is a large qualitative difference between a finished 60m2 flat and 2 base 30m2 core units. However, it has been decided to lower building standards and reduce living space in order to make units affordable to low-income families at little subsidy.

When the cost per unit is considered there is also a significant difference. The project 30m2 unit costs \$ 2781 versus \$ 3331 per walk-up unit (includes 7.5m2 per unit exterior space). Thus the GOE could provide 3.2 30m2 core units for the price of one walk-up unit. Over three times the current level of beneficiaries could be reached for the same cost. Even if there were 2 families in each five story apartment and only one family in each core unit, the cost per beneficiary of the core house would be 61% greater than in the apartment. This is one reason why core housing is more attractive than providing finished apartments for this particular housing project.

EXHIBIT I

CONSTRUCTION COST COMPARISON :

Table A : Between Alternative

	AID/GOE 10m2 unit	Informal Sector 10m2 unit	AID/GOE 30m2 unit with 30m2 vertical expansion (2 units)	GOE 5 story apartment (1 unit) ¹
Base Cost	1158 ²	1165	2318	4113
Economic Cost Adjustment ³	+37	+53	100	+776 ⁴
Inflation Adjustment	<u>0</u>	<u>0</u>	<u>0</u>	+1393 ⁵
Total	1195	1218	2418	6303
Overhead & Profit	<u>+179</u>	<u>+244</u>	<u>363</u>	<u>+2523</u>
Subtotal	1374	1462	2781	8831
Other Adjustments	<u>0</u>	+ 36 ⁶	<u>2731</u> ⁷	<u>0</u>
Total cost per unit	1374	1498	5562	8831
Number of M2	10	10	60 ⁸	67.5
Cost per M2	137	150	93	131

Footnotes :

1. Calculated by dividing the cost of a 10 unit building by 10.
2. AID/GOE 10m2 enclosed unit less £ 34 for footings for additional 11:2 room.
3. Adjustment made for the difference between the economic cost and the prices paid for cement and reinforced steel.
4. Includes inflation adjustment for cement and reinforced steel with economic price.
5. Source material for the apartment was in January 1977 prices, these were brought to June 1978 assuming a 25% per year increase in materials and labor for 1977 and 30% for 1978. These are inflation estimates used by the GOE public housing sector.
6. Not costed for the informal sector. Cost equal to AID/GOE project assumed.
7. Additional 30m2 unit of vertical expansion should cost £ 247 less than original base unit , however it was assumed the stairs to additional floors would cost £ 247.

EXHIBIT 1 (cont.)

8. Does not include M2 for stairway as in 5 story walk-up and therefore slightly overstates per m2 cost.

- Source : - Housing and Community Upgrading for Low-Income Egyptians
MOH-AID, August 1977,
- Detailed Estimates of the 5 story Walk-up Apartment, Ministry of Housing
- GOE/AID Housing and Community Upgrading Program Detailed Cost Estimates, E.S. Parsons, June 20, 1977.
- Informal sector information : ES-Parsons interviews.
Prices are based on constructing 500 units at Government controlled prices for material.

CONSTRUCTION COST COMPARISON

Table B : Within The Project

B

Item	4m2 Sanitary core	10m2 Partially enclosed	10m2 with footing for addition	20m2 with footing for addition	30m2
Basic Cost	778	967	1240	1818	2318
Economic Cost Adjustment	21	37	45	77	100
Subtotal	799	1004	1285	1895	2418
Overhead & Profit	120	150	191	284	353
Total Cost Permit	919	1154	1476	2179	2781
Cost Per m2	230	115	148	109	93

Least Cost Analysis

In the absence of other accurate project estimates, and given the fact that the AID/GOE project incorporates competitive bidding, and that it is equally or more efficient than public sector and informal sector costs, it is considered that construction costs will at a minimum be competitive with other currently planned projects of equal standard. Further, from a cost per M2 basis and a cost per beneficiary basis, the core housing approach is preferred to apartments with respect to least cost.

Given the superiority of the core housing unit to apartments, the relative standing of the AID/GOE core houses to other core houses must be established. In the absence of cost data, other criteria must be used. Given that the AID/GOE private contractors can perform the same work as the public and informal sectors at competitive prices, it is concluded that the cost per core unit will be proportional to unit size.

Exhibit 2 compares the GOE/AID core units with core units of other projects. The exhibit shows that the AID/GOE core units and lots are similar in size to IBRD units, and both are smaller than GOE units. Further, the AID/GOE units have the potential for 3 stories while the IBRD units are limited to two stories. Therefore, it is concluded that the AID/GOE core units provide the least cost housing solutions given present economic and social conditions and constraints.

Exhibit 2 also shows that the target income group of the AID/GOE project ranks with the lowest of other projects. The IBRD project is aiming at a lower income group, however this group is residing outside of Cairo. Further, when IBRD updates its cost estimates, it may need to revise its target income group or increase its subsidy.

Replicability

Replicability of the project components is not judged on the basis of total cost recovery or the maintenance of the economic value of funds expended. We are not aware of any housing project in a developing country trying to reach low-income families that is designed to meet those criteria. Rather the replicability issue is addressed in terms of minimizing subsidy elements of the project and conversely, maximizing the recovery of funds. The following analysis shows that the AID/GOE project, when compared to others, meets this criterion.

In order for the AID/GOE project to have long run benefits as a demonstration project it must be reproducible on an economic basis. Previous and planned GOE projects have very low cost recovery. The AID/GOE project has been a leader in increasing recovery through charging residents for core services, but funds provided a quantum increase in recovery of housing funds through its use of a higher less subsidized interest rate.

Exhibit 3 summarizes components of cost recovery for the various projects. A close examination of the exhibit reveals that the AID/GOE project recovers funds equal to or better than any alternative project. The exhibit also shows that in some cost categories the New Community is able to recover a higher percentage of costs than the upgrading Project. However, the upgrading program is more effective in recovering funds at the finance stage because of a higher effective interest rate and shorter loan term.

EXHIBIT 2

CORE HOUSING APPROACHES IN EGYPT

	AID	IBRD	SADAT CITY	SUEZ DEMONS- TRATION PROJECT	ISMALIA DEMONS- TRATION PROJECT
Core Size (m ²)	10	10	12.6	18.9	24
Lot Size (m ²)	50-65	45-60	140	90	72
Dwellings per Plot	3	2	2	2	3
Target Income Group (LE/yr)	391-432	192-428	na	390-720	561

Exhibit 3
LEVEL OF RECOVERY

Item	AID New Commu- nity	AID Upgrading	IBRD	1) 5 Story Walk-up	Sadat City	15th/May New Town	Suez	Ismalia
Land Value	100%	100%	100%	0%	0%	0%	100%	0%
Site Preparation	100%	Partial	100 %	0%	0%	0%	Partial	Partial
Design & Supervision	Partial	0%	Partial	0%	0%	0%	Partial	0%
Interest during construction	Partial	Partial	100%	Partial	0%	0%	0%	0%
Advisory Services	na	na	Partial	na	na	na	na	na
Production Center Training	0%	0%	na	na	na	na	na	na
Man power Training	na	0%	0%	na	na	na	na	na
On-Site Infrastructure	100%	Partial	Partial	Partial	Partial	Partial	Partial	Partial
Water	100%	Partial	Partial	na	Partial	0%	100%	100%
Sewer	100%	Partial	Partial	na	na	0%	0%	100%
Roads & Paths	100%	Partial	100%	na	na	0%	0%	100%
Solid Waste disposal	100%	100%	Partial	na	na	0%	0%	0%
Electricity	100%	100%	100%	na	na	0%	0%	100%
Street Lights	100%	100%	100%	na	na	0%	0%	0%
Off-Site Infrastructure	Partial	Partial	Partial	Partial	Partial	Partial	Partial	Partial
Water	Partial	Partial	Partial	Partial	Partial	Partial	Partial	Partial
Sewer	0%	0%	0%	0%	0%	0%	0%	0%
Roads	0%	0%	0%	0%	0%	0%	0%	0%
Electricity	100%	100%	100%	100%	100%	100%	100%	100%
Housing	100%	100%	100%	100%	Partial	Partial	Partial	Partial
Interest Rate	8%	0%	7%	3-5%	3-7%	na	na	7%
Home Improvement Loans	100%	100%	100%	na	na	na	100%	na
Interest Rate	7%	7%	8%	na	na	na	3%	na
Schools, Clinics, Community Centers	0%	0%	0%	0%	0%	0%	0%	0%
Commercial	100%	na	100%	na	na	na	na	na
Business Loans	na	na	100%	na	na	na	na	na
Interest Rate	na	na	8-9%	na	na	na	na	na

1) This column represents current sale of the units. In the past, there was no recoverability

Beyond the recovery of the initial AID/GOE funds, additional housing will be provided by the private sector in the New Community. A lot with a 10 m² core house can be expanded to 90m² or more as a result of additional investment in construction by the private sector. The project is designed such that the private sector will eventually provide 4 times the initial housing investment to the project as the community housing space increases to six times its original size. To the extent that anticipated expansion takes place, the additional provided is completely replicable and funds are completely recovered.

Using the number of planned units from Table III page 26 and the economic cost of each unit it can be determined that £ 11.2 million will be initially invested in core housing by this project and provide 94,110 m². Assuming each unit expands horizontally to 90m² and vertically two additional floors, each of the 6,497 units would represent 90m² or a total of 602,730m². The cost of each unit would be £ 8,343 for a total of £ 55.9 million. The £ 44.7 million difference would be forthcoming from the private sector. Each 90m² unit is assumed to house one family for a total of 20,091 families. If the GOE were to provide a 60m² apartment in a 5 story walk-up for each family it would cost £ 177.4 million. Doubling the number of families per apartment equating the space per family, would still cost £ 354.7 million or about 60% more than the project. Much of this cost difference is due to higher standards but by having lower standards significantly more people can be minimally housed and a larger portion of the costs recovered in order to provide even more housing or alternatively more services to existing informal areas. Basically the cost to the GOE of providing one finished 60m² apartment is equivalent to providing the initial shelter to eventually house sixteen families in the AID/GOE project.

Comparison of Alternatives Open To GOE

Alternative housing solutions were examined to determine, the approach which would provide the maximum value of housing services for the money spent.

The alternatives open to GOE are :

1- New Community - GOE can built new communities to varying degrees of completion, ranging from sites and various levels of services to finished apartment buildings.

2- Upgrading programs - The spectrum of options under this alternative ranges from provision of minimal levels of infrastructure to full urban renewal.

New Community VS. Upgrading

In comparing the costs per beneficiary of the new community and upgrading community components, it was seen that the new community can provide infrastructure at E 247 per person, while it costs E 457 per person to install infrastructure in the existing communities; See Exhibit 4.

In general, costs for providing physical infrastructure in existing communities are estimated by E.S. Parsons to be 30% higher than in a New Community. However, the actual total cost of projects in the upgrading programs will vary widely depending on the location and the existing state of community development. Projects may range from modest improvements of dwellings which only are minimally deficient to provision of full infrastructure services and renovations under the most difficult circumstances. Complete urban renewal would be very expensive due to the necessity of providing displaced families with alternate housing as required under Egyptian law.

Sites and Services

There are two basic issues to be addressed when discussing sites and services : the trade-offs between providing, or not providing, some type of shelter; and the cost of the level of services to be provided. These issues are discussed below :

Trade-offs The only quantitative economic issue that arises with a least cost housing solution on a site and services area is the number of beneficiaries that could be reached for the same amount of money invested. On the qualitative side it could be argued that by providing an initial dwelling unit substantial control and/or influence is gained on the overall direction and appearance of the community's development. This problem is not a real issue in this project because the GOE is currently willing to accept a large site and service project in a highly visible metropolitan area only if some shelter is provided. Moving the GOE away from providing highly subsidized apartments has involved not only AID over the last two years but also the IBRD, MIT and other housing specialists. The GOE is waiting until the various demonstration projects have actually produced some measu-

Exhibit 4
COST PER BENEFICIARY
BY PROJECT COMPONENT

3

Item	New Community	Upgrading
<u>Off-Site Urbanization</u>		
Sewer	24	6
Electricity	36	153
Total	60	159
<u>On-Site Urbanization</u>		
Water	15	28
Sewer & Solid Waste Collection	19	36
Electricity	120	210
Street Lights	18	12
Roads	15	12
Total	187	298
Total Urbanization	247	457
<u>Housing Units</u>		
4m ²	143	na
10m ² Partially Enclosed	289	na
10m ²	570	na
20m ²	836	na
30m ²	318	na
100m ² lot	0	na
Weighted Average	485	na
<u>Home Improvement Loans</u>	136	136
<u>Community Facilities</u>		
Education	98	59
Health	7	6
Social Services-recreation	5	5
Government Services	1	na
Community/Cooperative Administration	1	na
Market	1	na

rable results before making additional policy changes. The minimum acceptable standard to the GOE so far has been perimeter walls on a site and service lot in relatively isolated areas (the IBRD draft project). Further, the USG has a similar concern in that it has appeared desirable to have a fairly visible project which would demonstrate the benefits of US assistance to Egypt.

Housing Solutions at Helwan The AID/GOE project provides a variety of minimal housing solutions to test the market response to this demonstration approach. Site and Service solutions are included both without sanitary facilities and with sanitary facilities in a $4m^2$ sanitary core. If only these solutions were provided instead of the range of solutions offered a substantial increase in the number of dwelling solutions could be provided. However, the absence of experience in the formal sector of the Egyptian Economy in building low cost efficient housing makes it highly desirable to provide a range of demonstration structures providing several levels of housing services. It is believed that the basic core house, the core house with footings, and the expanded core house will provide patterns and models for both the informal and formal private sectors.

In addition to this consideration an important factor in the particular project at hand is the special need for completed and occupiable units. The particular circumstance is that the project is designed to provide housing for an initial population of 36,000 (ultimate population 110,000) where the head of the household, in general, is presently commuting from Cairo to Helwan for employment. Self-help and informal housing construction would be extremely difficult given the fact that serviced lots are some 30 km from their present residence. Costs imposed by the inefficiencies of attempting to maintain construction while commuting, and the need to pay debt service and carrying costs on two potential residences would more than offset the gain which might accrue from the expanded number of units which could be provided under a project composed totally of sites and services.

Level of Infrastructures Services A site and service project can provide various levels of services. The developer can choose between partial services with low initial costs and higher subsequent costs, and a high level of initial service facilities with high initial cost and lower subsequent cost. Some services are substantially more expensive to put in place following partial or total development. These facilities should receive highest priority for early installation.

Overhead or surface infrastructure can be provided later with the least disruption and engineering problems, so that there is not a significant difference in dealing provision of these services. There could easily be trade-offs between the cost of providing this type of service now versus supplying less of these services but providing more dwelling solutions. However, social acceptability must also be taken into account and if a certain minimum level is not provided it will be very difficult to convince people to move to the site and service area in Helwan which is on the desert.

This is especially true in urban areas where people, although they may be poorly housed now, do have some level of access to infrastructural and social services and would probably be unwilling to accept less on a site and service lot..

This project falls short of providing full infrastructure services in that roads of less than 7 meters in width will not be paved. However, all underground utilities are provided. Thus, this project presents no major issue from the standpoint of the level of services provided. The GCE has a certain minimum standard of required services in the project area because it is aware of the social acceptability issue and believes people would not move to the project area unless the minimum level of services is provided. This minimum requires the provision of permanent utilities to service the expected total future population. A bare sites and service program appears unacceptable to the GCE thus precludes this option as a project alternative.

Other Considerations

Other aspects of the project have economic significance.

Location

Public Policy required that the project be located on non-agricultural land and the actual location of the project is one in which site improvement cost are relatively high because of the physical difficulties associated with the location. The social costs of the location are minimal in as much as there is essentially no alternative economic use of the land. While the monetary costs for our project are high because of locality (Cairo) and type of land (Limestone), the engineering of the project incorporates all reasonable measures to reduce costs.

Interest Rates

A long and substantial history of massive interest rate subsidies for housing exists in the country of Egypt. Interest rates in the project, while below open market rates, have been pushed to the highest level of GCE acceptability.

Buyer Eligibility

As a matter of policy AID and the GCE restricted buyers both by income level and location of their present residence. Higher prices or more favorable selling terms might have existed for the units in the absence of this constraint.

Redefinition of Housing Standard

By designing a unit specifically tailored to the target income group rather than a physical design preconception, the AID/GOE project has helped to redefine public sector housing standards. This will contribute to increased replication and affordability in future housing projects.

Capital Formation

The project is designed to induce capital formation by low income families through creating equity in dwelling units and encouragement of savings. The core housing has the effect of seed capital. The members of the new community will finance up to 4.4 times the initial housing investment of the new community. This expansion will be performed by private sector firms, thus furthering their development. This is the first time that residents will have financed any portion of a government sponsored housing project.

Mortgage Development

The project is designed to remove economic imperfection in the provision of housing finance and to stimulate development of an active mortgage lending institution, the Credit Foncier Egyptien.

RECOMMENDATION TO AUTHORIZE LOCAL COST
FINANCE

Over the life of the Project, \$ 80,000,000 will be used to support construction activities of the Ministry of Housing and local currency expenditures for specific items in support of this project. Local cost financing will be made available to the Ministry of Housing for project implementation for disbursement in accordance with the agreements reached between USAID and the GOE in the Project Agreement and subsequent letter of implementation.

One reason for authorizing local cost financing is that this represents an additional real resource to the Egyptian economy and provides an incentive for the Egyptian Government to implement new initiatives that otherwise it might not be able to undertake. The use of existing U.S. owned local currency to fund local costs of construction would add no additional real resources to the economy. Given the GOE's need to restrict the growth in the money supply to correspond to the growth in real resources in the economy, the inflationary impact of using U.S.-owned local currency would have to be offset by reduced GOE disbursements of other programs. Maintaining this fiscal balance is also required under the terms of the current IMF Standby Agreement with Egypt, which the U.S. and other donors have strongly supported.

Consequently, if U.S.- owned local currency were used for all the Egyptian pound costs associated with this project, is doubtful that the Ministry of Housing could enter into this agreement since they would have to sustain budgetary cutbacks in other areas. Given the above considerations and the fact that the Housing and Community Upgrading project is consistent with the Congressional Mandate of the Foreign Assistance Act to undertake activities designed to improve the economic position and quality of life of the poor majority and will have an important impact in the urban areas of Helwan and Cairo, we have concluded that local cost financing should be authorized.

Based on the current projections the U.S. owned excess currency fund will be fully depleted within the next two years. Based on the above projection, there wouldn't be any U.S. owned excess currency funds available for the project during the peak period of its implementation.

Based on the foregoing, USAID requests that it be determined that local cost financing with dollar appropriations be authorized in accordance with Section 612(b) of the Foreign Assistance Act.

JUSTIFICATION FOR ORIGIN WAIVER

Purchase of goods and services with U.S. dollars provided under the project shall be limited to goods and services that have both their source and origin in the U.S., unless AID otherwise agrees in writing.

Without waiving the AID origin requirements, this project is not feasible unless there is an origin waiver with regards to goods which are procured with Egyptian pounds purchased with U.S. dollars. The nature of the project purpose which seeks to demonstrate the means to produce lower-cost housing by the MOH would be impossible if commodity purchases are confined to a narrow range of procurement possibilities not reflecting the normal and economical pattern of importation. The project hopes to encourage the GOE to allow the home buyer and small contractor to make their decisions regarding what types of materials they may install within the confines of sound technical, economic, and financial viability and to implement the project free from the heavy hand of the central government. For AID to pass on to the GOE a set of origin guidelines which they would have to pass to each small contractor or improvement credit applicant does not seem consistent with the scope or the spirit of this project. Aside from this policy level consideration there are practical reasons to waive the origin requirements for Egyptian pounds procurement under this project. Egypt has had little commercial contact with the United States over the last 25 years. Egypt has not been a traditional trading partner of the United States and US origin materials of the type which would be purchased locally under this project are not available here. We expect that a majority of the goods and services procured will have Egyptian source and origin but a significant number of transactions would undoubtedly involve procurement from AID Geographic Code 935 countries, because, for example, Western Europe and Japan both constitute major suppliers of capital goods to Egypt. To restrict procurement to US and Egyptian source and origin would destroy the conceptual framework which underlies the program and would render it inoperable in the Egyptian environment. For these reasons the Mission recommends waiving the origin requirements outlined in Handbook 15 Section 2A4 b (2) of the Foreign Assistance Act.

MAINTENANCE OF FACILITIES AND SERVICES

This project provides for the installation of specific housing and community physical facilities and strengthening of Egyptian support institutions of the Ministry of Housing and Credit Foncier D'Egypt.

Physical facilities are designed to conform to local specifications but with special characteristics of site planning to minimize maintenance costs. Specific attention has been paid to providing special training in maintenance, as for instance for the temporary package sewage treatment plant, where this need is indicated. Housing cooperatives and community associations have been introduced in the project as a means to maintain maintenance discipline by mutual self-help as a supplement to municipal services.

An implementation unit in the MOH and consumer credit service in the Helwan branch of the Credit Foncier will be established to continue the achievements demonstrated by the project. The GOE will provide all personnel and 100% of the operating expenses of these support institutions. Staff will be drawn from several ministries or other components of the effected institutions and no additional employees will be required.

Training and technical assistance will raise skills to required levels of efficiency and competence.

The AID program is new in Egypt and so there is little experience in the required maintenance investment levels of similar projects. To date the GOE has provided full cooperation; has been fully involved in the planning of each component of the project; and has expressed the belief that maintenance of the physical and institutional support components of the project are within their capability.

SUMMARY OF ACTIVITIES PROPOSED FOR UPGRADING
OF SELECTED INFORMAL COMMUNITIES

An "Informal Community" consists, initially, of resident built houses or shacks illegally sited on government land or on land which has been subdivided by its private owner but without approval by the government and without the initial installation of full basic community services of water, water-borne sewerage, electricity and paved streets. The private sponsored land may or may not be available for sale to residents. Only in relatively rare instances have residents of an informal settlement on private land occupied the site without owner's permission (squatters). These communities are located at the fringe of all major urban areas and are seen as a direct result of inadequate government organization and investment to encourage urbanization space with the population.

Informal communities of the Helwan and Ain Shams area of Cairo contain a mix of single and multi-household dwelling structures ranging from mud brick one-story shacks to contractor built, very high quality, apartment buildings five stories in height. Most units enjoy electric service; water service is inadequate; solid waste and other environmental contaminants are prevalent, and sewage disposal is accomplished by cess pit on each lot. Crowding in available dwelling space is intense with an average of 2.2 to 2.7 persons per room. Incomes are, on the average, below the national median for urban families and a little over a third the informal settlement residents are tenants of the dwelling owner. Major expressed needs of the residents are for water-borne sewage and community facilities (schools, markets, transport).

In the absence of the availability of large investments to be made in these areas to bring them to a minimum safe and sanitary standard, it is seen that the principal development motivation force is the evident individual and mutual initiative of the residents themselves. Accordingly an essential feature of the upgrading program is to identify the clusters of families making up a project sized geographical location within the communities who will participate in the improvement process. Self-help and mutual help activities can improve housing, pave walks, assure collection and disposal of unsanitary waste and guarantee maintenance or freedom from wanton destruction of valuable community facilities. All of these actions can reinforce governments investments so as to assure their maximum, initial or long-term impact and cost effectiveness.

Initial efforts will focus on those community facilities (schools, health clinics, community service buildings) which can be built early from prepared plans already on file in the several ministries. Early evidence of action on the part of government will help demonstrate credibility for the second stage effort or organizing the receptive neighborhood groups into community associations. Social workers of the Project Implementation Unit, seconded from appropriate ministries, will continue in this work over the five-year implementation period.

Where community improvement needs are identified by the association of residents, the appropriate plans and investments by the implementation unit will be initiated (using Egyptian A/E firms and contractors selected

by competitive bidding) and parallel with supporting projects by the associations. Member residents of associations will be expected to participate in planning and any arbitration which may be required during the course of construction as well as devoting time, labor and financial contributions to the project success.

Standards of participation will be established for investment in each improvement project -- for example, over half of residents on a street must commit to connecting to a water line to be installed prior to initiating the work.

Home improvement loans will be made available by the Credit Foncier d'Egypte (C.F.E.) to all families participating in community associations. Promotion and initial credit investigations will be made by social workers and technical supervisors of the implementation unit who are assigned to this work. Loan projects which make the most direct contribution to health and safety will receive first priority and will probably consist of construction necessary to connect dwellings to water/sewer services being installed in the street.

Loans for improvement will be made both in cash and materials specially stockpiled near the upgrading areas for borrowers' benefit. Pre-engineered credit packages of plans and materials lists and estimates will be available for borrowers' selection. Loans will be made in at least two payments so as to control proper use of the credit funds or materials. Small craftsmen contractors will be encouraged to execute work. Their qualifications will be verified by the implementation unit and a list of qualified small contractors maintained for consultation by improvement credit borrowers.

All improvement loans will be subject to inspection on a regular basis by technical supervisors on the staff of the implementation unit.