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UNITED STATES AGENCY for INTERNATIONAL DEVELOPMENT

CAIRO, EGYPT

December 3, 1985

MEMORANDUM

FROM: Shanti Conly, DPPE/PE *SC*

SUBJECT: Evaluation of Helwan Housing Project, Upgrading
Component (263-0066): USAID/Egypt Comments

TO: See Distribution

This evaluation took place in July-August 1984. It was conducted by a five person team led by Sonia Hammam, RHUDO/Tunis. The team leader submitted the final report in August 1985, almost one year after the evaluation.

The report is comprehensive and raises several important issues. Its deficiencies are largely a question of presentation rather than substance. The purpose of this memo is to provide certain clarifications necessary to view findings and recommendations in context; to highlight important findings obscured by the presentation of the report; and to provide an up-date on certain project issues identified for follow-up action in the PES facesheet.

1. Purpose of the Evaluation: The project has two basic components: development of the Helwan New Community (HNC), a sites and services and core unit housing program for an initial population of 35,000; and an upgrading program, including credit for home improvements and small enterprise development, infrastructure and community facilities, in seven existing low-income communities in Helwan area with a combined population of nearly 100,000.

An evaluation of the overall project had been conducted in February 1982 but was considered by USAID to give inadequate attention to the upgrading component. The PES facesheet for the 1982 evaluation recommended further study of the upgrading component's progress. The current evaluation was planned in response to this recommendation, and is limited to the upgrading component. The Scope of Work called for a detailed assessment of the upgrading component's performance in meeting its implementation schedule and its institutional, economic and financial objectives.

2. Cost Overruns: The discussion in the evaluation regarding cost overruns is confusing, since the main focus of the evaluation is on the upgrading component, and the cost overruns are primarily in the other, HNC component. Costs for the upgrading portion of the project, moreover, remain very close to the original estimates.

Based on the March 1984 revised implementation plan, the evaluation projected a cost overrun of \$40 million over the original total project cost of \$160 million. The overruns appear to be in the design, construction and supervision of the HNC. Since the evaluation, UAD and the Joint Housing Projects Agency (JHP) have arranged for L.E. 4 million to be allocated and disbursed to the project from the 1984-85 CIP Special Account allocations towards meeting these overruns. Meanwhile, UAD, the JHP and the technical assistance contractor have begun work on a revised implementation plan that would reduce the estimated cost overruns in the HNC component. As soon as the cost estimates have been revised, UAD and the JHP will determine whether a request for additional allocations from the Special Account is necessary.

3. PACD Extension: The project will probably require a PACD extension. In the evaluation team's assessment, completion of the upgrading component "is likely to be after the first or second quarter of 1987". The current DR/UAD estimate for final completion of both the HNC and upgrading components is December, 1988.

4. Cost Recovery: The report includes an analysis of the potential cost-recovery for the three major elements of the upgrading package, i.e., home improvement loans, infrastructure and land title. The team estimates this potential using varying assumptions regarding affordability, land prices, etc. The major conclusions are:

- Some level of subsidy is necessary to reach the target low-income group, i.e., households below the 60th percentile of national urban household income.
- Project Paper standards for cost-recovery for the upgrading component are probably over ambitious. The Project Paper called for 100% recovery of land value, housing loans at 7% interest, and partial* recovery of infrastructure costs. It appears that households at the median income or below are unlikely to be able to afford Project Paper recovery standards. Cost-recovery expectations should be more directly

*The evaluation team assumed a target of 50% cost-recovery for infrastructure costs.

linked to affordability, and future upgrading programs for low-income groups should probably lower cost-recovery targets.

Any attempt to increase current levels of cost recovery for any one element of the upgrading package (e.g. increasing interest rates for home improvement loans) is likely to jeopardize ability to pay for other components (land title and infrastructure).

Although the upgrading program includes a substantial subsidy, this subsidy is significantly lower than in alternative GOE housing programs. It indicates that low-income groups can afford to pay a greater share of total housing costs than currently demanded of them in traditional GOE shelter programs, and that it is feasible for the GOE to recover a higher percentage of costs than it has in the past.

5. Legalization of land title: At the time the evaluation was conducted, little progress had been made towards the legalization of land title, a critical component to upgrading informal settlements. However, a major recent breakthrough has been the GOE approval of the land-use plans for the upgrading areas. This is the first step towards recognition and legalization of the squatters' land title. The second logical step would be the sale of the land by the authorities to the inhabitants. The JHP will soon begin discussions with the Cairo Governorate and other concerned authorities to expedite the land legalization process and the sale of land on affordable terms to the inhabitants.

6. Expansion of Home Improvement Loan Program: The report views the Home Improvement Loan Program (HILP) as the major success story of the project, and suggests that the appropriate strategy for expansion of this program is to convince commercial finance institutions to invest their own funds in similar loan programs. Some progress has been made in this area; Credit Foncier has recently taken a more active interest in the project. However, it is unlikely that private financial institutions will invest in home improvement loans unless interest rates charged are profitable, i.e. substantially higher than the 7% currently charged under the project. Moreover, until the land title issue has been resolved, alternatives to land title will need to be identified to guarantee the security of loans made by commercial institutions.

7. USAID Replication: Based upon USAID experience to date, the upgrading component - and in particular the HILP - is an important, potentially replicable, alternative model for

urban low-income housing programs, because it reduces the subsidy substantially from traditional GOE housing programs, and takes advantage of individual initiative and private sector construction capabilities to meet community needs in informal settlements. USAID has included a new shelf activity in this area for possible future funding.

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USAID/EGYPT
MID-PROJECT EVALUATION REPORT
COMMUNITY UPGRADING COMPONENT
HOUSING AND COMMUNITY UPGRADING FOR LOW INCOME EGYPTIANS
(Project 263-0066)

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Final Report Date: July 1985
Evaluation Conducted: August 1984

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Exchange rate : LE1 = \$1.22

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ACRONYMNS OF MINISTRIES, AGENCIES AND INSTITUTIONS INVOLVED IN THE
DESIGN, IMPLEMENTATION AND EVALUATION OF THE HELWAN UPGRADING PROJECT.

ARE Arab Republic of Egypt
MCH Ministry of Housing, ARE
JHP Joint Housing Projects Department of the MOH, ARE
PIU Project Implementation Unit of the JHP
CFE Credit Foncier Egyptien
CHF Foundation for Cooperative Housing, International
CWO Cairo Water Organization
USAID United States Agency for International Development
MH Ministry of Health, ARE
MOI Ministry of Irrigation
MCE Ministry of Education
MOA Ministry of Antiquities
GOGCSSD General Organization for Greater Cairo Sewerage and Sanitary
Drainage
C/GCSD Cairo General Organization for Sanitary Drainage
GOGCWS General Organization for Greater Cairo Water Supply
GOPP General Organization for Physical Planning
GOPW General Organization for Potable Water
NOFWASD National Organization for Potable Water and Sanitary Drainage
CAPMAS Central Agency for Public Mobilization and Statistics

AAW Dr. Ahmed Abdel-Warith, consulting engineers
ETE Binnie, Taylor, Egypt, consulting engineers
SEA Sherif M. El-Hakim & Associates, planning consultants
PBS P.B. Sabbour, engineers, architects, planners
EQI Environmental Quality Int'l., planning consultants

EXECUTIVE SUMMARY

I. BACKGROUND AND CURRENT STATUS OF PROJECT

The USAID and Government of Egypt (GOE) funded project, "Housing and Community Upgrading for Low Income Egyptians", was authorized in 1978. The project was designed to demonstrate the premise that basic housing and community facilities--that are socially acceptable and affordable--can be provided for low-income families in a manner that allows the GOE to recover a "substantial" percentage of its investment.

The project was designed to test the viability of this premise in six communities. The residents of these communities were to be provided with basic physical and social infrastructure and services, land title, and home improvement loans. USAID and the GOE agreed to share the project expenses, estimated at \$160 million equally. Of the total estimated budget, approximately US \$57 million was budgeted for upgrading interventions. These interventions are to extend upgrading to a estimated population of 80,280.

As of mid-1984, the majority of the activities focused primarily on three of the six communities. Major accomplishments included:

- the operation of a Home Improvement Loan Program and Small Scale Enterprise program in three communities, and their recent introduction in an additional two communities;
- an active vocational training program in building trades;
- construction of 2 schools, a community training center and a youth center;
- trial programs for sewage pumping vehicles and solid waste collection were underway or just completed;
- a variety of community organization activities had taken place and been essential to involving community residents.

While there seems to have been sufficient progress achieved in implementing programs in the upgrading communities and introducing social infrastructure, progress on physical infrastructure construction has been limited. Construction undertaken to date has included extension of a water distribution system and washstands in one community and soakaways in another. However, draft tender documents for infrastructure construction are now ready for most communities, and the project is entering its most critical stage.

II. MID-TERM EVALUATION CONCLUSIONS

The Evaluation Team's (ET's) efforts were directed at assessing the performance of the upgrading component of the project to date in meeting its implementation schedule and its institutional, economic and financial objectives. Additionally, the Evaluation Team was asked to look at three specific aspects of the program: The Home Improvement Loan Program (HILP), Project Management Work Flow Process for Community Upgrading, and Community Planning and Infrastructure Design Standards.

The scope of work emphasized the need to document problems and to suggest solutions for their resolution. In particular, the ET was asked to give detailed attention to those project components that were functioning well and facilitating the achievement of project goals, measured as reaching intended beneficiaries through the effective operation of programs and institutions responsible for project implementation.

A. Project Progress Toward Achievement of Objectives

At this stage of project implementation the project is making progress toward meeting most of its objectives.

- Housing stock is being improved and conserved in those informal settlement communities where credit has been made available for this purpose. In fact, beneficiaries of the Home Improvement Loan Program (HILP) have contributed to increasing the stock of rental units for other low income households.
- A housing finance system which effectively serves low-income groups has been introduced. At least 15 percent of the HILP beneficiaries are below the 20th percentile of the urban income distribution and perhaps as many as 90 percent below the median. These beneficiaries are repaying loans at 7 percent interest. While this interest rate is below the cost of capital, cost recovery at this rate represents a significant reduction in capital cost subsidies when compared with other GOE housing credit programs. Our analysis also suggests that given current income distribution, there is a potential for a greater recovery of capital costs on loans used for housing from higher income beneficiaries, thereby distributing subsidies according to ability to pay.

- Based on current cost estimates and income levels, the project can certainly recover a greater percentage of costs than traditional GOE housing and infrastructure programs while still reaching low income groups. It is, therefore, a more replicable model for providing shelter to low-income groups. Our analysis suggests that a majority of the total costs allocable to each building are affordable to households below the median at the current interest rate. The level of subsidy on on-site infrastructure could be halved. This argues for institutionalizing greater recovery on GOE infrastructure programs in general.
- The objectives toward which little progress has been made, or for which there is, as yet, little evidence of the degree to which these objectives will be met, involve policy issues and changes. Acceptance of substantial lowering of standards to reduce costs and subsidies has proven difficult to achieve for infrastructure services. In addition, land title, one of the principal components of formalizing informal settlements through upgrading, is still an unresolved policy issue. Finally, while the project has the potential for recovering costs and demonstrating the cost-effectiveness and replicability of upgrading, there is as yet no decision on what level costs are to be recovered or what mechanisms are to be used. JHP is only beginning to address these issues and until recently has not had the opportunity to distance itself from operational issues to reflect on policy issues.

B. Project Beneficiaries and Replicability

No attempt was made to define the affordability of the upgrading component relative to beneficiary income levels when the original cost estimates were made. Nonetheless, the ET was requested to estimate the level of recovery that

could be expected. This analysis was made on the basis of a consideration of current cost estimates of land, infrastructure and the HILP program. The ET's analysis of land costs suggests that if land were valued at the market rate, it would not be affordable to households within the target group. Moreover, it is questionable whether beneficiaries who have been living for extended periods of time in these communities should be charged current-market prices.

Recovery of some cost of land, however, is important in upgrading sites if the project is to meet its objectives of replicability and cost-effectiveness. In estimating cost recovery potential, the ET has assumed land prices similar to those being charged by the GOE on sales of adjacent sites for new housing. It also assumed on-site infrastructure costs would be "partially" recovered at 50 percent. These cost recovery objectives could be met by households as low as the 25th percentile of the urban income distribution (\$100/month), provided they could pay an additional 25 percent of income for shelter.

If the total cost of on-site infrastructure were included, the affordability levels would be 63 percent of the total allocable cost of on-site infrastructure, HILP and land for households at the 25th percentile of the urban income distribution and 91 percent for those households at the median (given an additional 25 percent of income available for shelter). Households below the 25th percentile, however, would not be able to afford to pay for HILP, infrastructure and land, even if they devoted 25 percent of their income to shelter. It is likely that such households would be forced to use credit facilities to purchase the land and pay for infrastructure and forego the option of home improvement.

C. The Home Improvement Loan Program

The home improvement program has been functioning effectively since March 1981, principally in three of the upgrading communities with the very recent addition of two more. A substantial number of loans have been made, nearly reaching original expectations already.

The loans have been quickly translated into tangible housing extension improvements. Borrowers have added significant amounts of their own money to the loans in making improvements and built a significant number of rental units. Additionally, benefits of the loans have gone systematically to people of lower incomes as intended. The major constraints facing the lowest income beneficiaries is that they receive very small loans. Moreover, their current level of indebtedness for home improvements, especially where households have obtained additional guarantees to get larger loans, may limit their ability to pay for infrastructure and land once these components come on stream.

Administrative costs for HILP have been reasonable and the process for operating the programs seems adequately efficient and coordinated among participating parties (PIU, CFE, CHF). Loan repayments have been complete and generally prompt. As a result, the program is reaching Project Paper established goals for cost recovery, though subsidies are nonetheless being paid by the GOE and AID. These subsidies are primarily to cover operational costs to which beneficiaries contribute only a small portion.

Full cost recovery would require charging higher interest rates to reflect the true value of capital if put to alternative uses. Our analysis suggests that higher

interest rates could be charged on loans while still reaching low-income groups. Some, but not all, of the borrowers would need the current interest rate to make loans affordable. However, higher interest rates on HILP loans would reduce the ability of these borrowers to pay for other upgrading components (land and infrastructure).

The HILP could, if necessary, operate without further AID and GOE support beyond that originally budgeted. It would do that by proceeding as a revolving loan fund, relending the remainder of loans repayments received once operating costs were paid. But on that basis the HILP would be scaled back significantly from even its present level and would fall short of meeting well-established demand in just the Helwan upgrading communities.

Given the good performance to date, it may well make sense to extend the program. This could logically be done by giving the HILP further direct support in its current form by carrying operating costs. Later, some restructuring might be appropriate.

At least in the long-term, restructuring could include capturing somewhat more of the resources of the program's highest income beneficiaries. But more centrally, it could include arranging for financial institutions to provide the home improvement loans from their own funds, rather than only servicing loans made with GOE and AID resources.

To do that, either land titling or loan guarantees are needed to provide sufficient security to the lender. The current program participant, Crédit Foncier Egyptien (CFE), insists on land title and secured mortgage lending; but the guarantee may still have potential if titling cannot be achieved. In either case, some interest subsidy would be required in order to involve financial institutions, whose cost of obtaining money to lend requires lending at higher than current HILP interest rates.

The GOE and AID role could then focus on providing adequate operating budgets and skilled staff, sufficiently low interest payment levels (subsidized, if necessary), and loan-security arrangements to keep the program functioning and to ensure that it continues to serve lower income people. The up-front costs of such an approach would be significantly lower, allowing more extensive early progress.

D. Engineering Design and Construction

Currently, most of the design work has been completed for four sites and final tender documents are complete for three of the seven sites. The design standards used for infrastructure in these documents has largely followed standard Egyptian practices due to the reluctance of infrastructure agencies to approve lower standards. Cost-savings have nonetheless been incorporated by reduction of roadway widths, the use of compacted and unpaved roads, and reduction of service standards for community facilities. In addition, the electrical network has been eliminated from the project budget. At this stage in the implementation of the project, it is difficult to tell whether additional cost-savings through lower standards could have been incorporated, given the delays experienced in obtaining approval for lower standards.

As noted earlier, construction of infrastructure has thus far been limited, however, major construction activities are almost ready to begin on several sites. There are several constraints and issues which face JHP/PIU in attempting to assure a smooth implementation of construction activities on time and within budget. First, successful execution of the construction phase will require close and continual monitoring by the JHP/PIU and AID in order to contain and resolve the many problems that are bound to arise. The amount of monitoring required is beyond the present staffing levels of JHP/PIU and AID. It is therefore recommended that JHP/PIU have an additional cadre of 3 field engineers assigned and that AID hire an additional full-time engineer to collaborate with JHP/PIU engineers.

Second is the issue of off-site facilities for final disposal of sewage. The fact that this was overlooked in the site selection process has necessitated addition of construction of a temporary facility within the project budget at considerable cost and could possibly delay project implementation. At this stage, there is no option but to go ahead with construction of the sewerage network as designed. However, written assurances should be obtained for the final disposal of sewage to adequate and functioning off-site facilities for all the upgrading sites.

Third is the issue of linking installation and functioning of sewerage systems to a functioning solid waste disposal system. This linkage has often been overlooked as a necessary requirement when installing sewerage systems. In the present project, trial solid waste programs have been

attempted. It is recommended that these be reviewed and a solid waste disposal system be adopted as part of the project to assure the effective operation of sewerage networks without the blockages caused by dumping solid waste.

Fourth, current road and sewerage network design will require demolition of houses and cesspits, respectively. Resolving this issue is likely to cause delays in implementation. To avoid these delays, it is recommended that JHP/PIU should agree to allow enough flexibility for the contractor/consultant not to install roads and sewers that would require demolition. This may require reclassifying roads and excluding some areas from direct connection to sewerage systems, but is likely to be less costly and time-consuming than demolition.

Fifth, securing of land for rights-of-way and facilities may prove difficult due to encroachment on land identified. However, JHP/PIU should exhaust all efforts to secure the land required before it begins to explore alternative network design and sites for facilities.

E. Project Management

The management structure that has evolved represents a workable response to the problems encountered in implementing an innovative and complex project while simultaneously establishing an effective management unit. Although initially committed to carrying out the entire upgrading program, the Joint Housing Program Agency (JHP)/Project Implementation Unit (PIU) came to realize that its role had to be modified and focused if the program was to be launched and the philosophy of upgrading accepted.

Current project management has a recognizable organizational identity, a good understanding of its resources, and operates as a coordinating, contracting and monitoring agency for upgrading activities. Operations are defined by these functions and effectiveness is assessed by the extent to which JHP/PIU can establish and maintain good relationships with the other agencies needed to implement the components of the program. The enthusiasm for upgrading is an important component of urban development, exhibited by a number of the agencies working with the JHP/PIU, is one indication that this management style and structure has been effective.

The present structure places the least strain on the management capacity of JHP/PIU staff while enhancing

available skills and increasing flexibility. At the same time, the existing structure relies heavily on the resources of the Cooperative Housing Foundation (CHF) contracted for technical assistance and private sector design tangible improvements in the upgrading communities. This structure facilitates implementation and recognizes that project success is directly tied to the maintenance of harmonious relationships with other GOE agencies and units needed to implement the components of the project. The principal mechanism for achieving coordination are the standing committees composed of representatives of agencies and units involved in the project to discuss and resolve issues pertinent to implementation.

To avoid the common problems faced by public agencies in recruiting staff, JHP/PIU has resorted to hiring consultants in key positions. It has also relied on CHF's hiring on consultants as mid-level and upper-level staff for the project. This process has allowed JHP/PIU to staff up and avoid a high rate of staff turnover. However, current attempts to train a full complement of staff to carry out all tasks, appear questionable. It would seem more appropriate to focus on development of a small well-trained staff capable of carrying out coordinating, contracting and monitoring functions. This approach may seem contrary to JHP/PIU's recent efforts to be reorganized as a general organization as a means of resolving management issues of staff recruitment and retention.

Reorganization is also viewed as a means of providing JHP/PIU with the financial autonomy required to fund additional projects, emphasizing the importance of upgrading and establishing a format for implementing the present programs and launching future programs. While these objectives are valid, the assumption that they can only be achieved by creation of a large traditional bureaucratic structure appears questionable. Our analysis suggests that the current lean management structure should not be viewed as contrary to achieving these objectives whatever the ultimate constitutional base for the agency.

1. Role of CHF

CHF has played a seminal role in the development of project management and implementation. CHF's role has, however, been made difficult due to the need to serve both staff and line functions. It has had to provide technical assistance

to develop the management structure of JHP while simultaneously performing a large amount of the specific staff activities for its client.

It has made a major effort to establish sound management procedures. However, resources for its efforts to develop and launch training programs and activities that institutionalize upgrading process have only recently been available, despite a steady increase in the technical assistance component of the project.

Past problems regarding the proper role that CHF should play have prompted CHF to have its tasks spelled out and take a literal approach to what its tasks are. While this position is understandable, CHF should be encouraged to continue to provide assistance in a flexible manner with specific focus on those areas where JHP/PIU is weakest, developing skills that are absent in the local environment, and framing the work of short-term consultants in a creative and innovative fashion that responds to local conditions.

2. Role of AID

Initially, AID interpreted its review/approval and monitoring role very broadly by taking an active part in project management and implementation. This active involvement produced some friction between AID on the one hand, JHP/PIU and CHF on the other. This situation has been resolved and relations between AID, the CHF and JHP/PIU are more collaborative.

H. Project Implementation

The project is obviously not proceeding according to the original project paper schedule. However, this schedule was unrealistic in its estimate of the time required to set up a functioning management unit and accomplish each activity in the implementation process. A new, more realistic schedule has been proposed in the 1983 Implementation Plan. Comparing project progress to this schedule, we find that the project is generally proceeding according to this revised schedule, but with some delays in certain areas due principally to lengthy reviews and approval procedures for design and the difficulty of obtaining approval for the proposed design changes. Design review and approval has proven to be the most time consuming process since it involves numerous agencies.

At the current rate of project activity, we estimate that 29 months are required for completion of all activities. This assumes that all steps preceding draft tender documents are completed and all remaining steps will take place as scheduled. If this estimate is accepted as accurate, completion of the upgrading activities will not occur until after the PACD of December 1986, and is likely to be after the first or second quarter of 1987.

There is one major factor that may prevent the project from being fully implemented. The total project budget estimates have been increased, despite the fact that the upgrading component has remained largely within the original budget proposed in the project paper and only \$160 million has been committed. The anticipated shortfall presents JHP/PIU with a serious constraint. To overcome this constraint JHP/PIU should make every effort to find the additional resources now estimated to be necessary while at the same time develop plans based on the currently available funds so as to avoid having work remain incomplete, if additional funds are not forthcoming.

III. Lessons Learned and Recommendations

Some of the lessons learned to date have a bearing on future stages of the effort, the design development and replicability of the project. First, with regard to the issue of beneficiary affordability and cost recovery policy, it is important to establish a clearer definition of target beneficiaries and to estimate their capacity to pay for upgrading costs at the outset during the design of the project. It is also imperative to define more precisely the elements to be charged to beneficiaries and the extent to which they are to be recovered. Without such clear guidelines it is difficult to evaluate the replicability of the project.

Second, in planning future upgrading programs, attention should be paid to the following design issues:

- Assuring at the site selection phase that off-site sewerage disposal facilities are available and the timing of their availability coordinated with the timing of completion of on-site facilities.
- Integrating the acquisition and reservation of land for rights-of-way and facilities into the site selection process.

This issue may not be an easy one to resolve even in future upgrading projects, given the amount of time it takes to obtain land. However, the involvement of community residents in assuring that land identified for facilities remains vacant so that construction can proceed, as was done in Arab Rashed, may be an effective mechanism to use in the future.

Recognizing the time required for introducing innovations in design of materials or techniques or standards. In addition, innovations should be developed and tested on a trial basis as a separate pilot demonstration activity run in parallel with the main flow elements, such as was done for the solid waste programs, so as not to slow down implementation.

A. The Home Improvement Loan Program

The HILP is a model that has merit not only in future upgrading programs, but as a housing finance system that can effectively reach low-income groups. If the program is to be extended, attention needs to be paid to land-titling issues. Consideration should also be given to providing guarantees beyond the present salary guarantees for repayments of loans that are not secured by land. While the present guarantee system has been effective as demonstrated by the absence of default, financial institutions are less likely to accept it as a form of security on an expanded program in areas where publicly salaried workers are not likely to form the majority of beneficiaries.

B. Project Management

1. It takes time and considerable patience to introduce new ideas and to have them accepted. Innovation and change are not compatible with fixed, defined management structures. Innovations are most easily introduced when structures are allowed to be responsive rather than rigid.

The evolution of the management style and structure of the Helwan Upgrading Project substantiates this principle. The current management configuration evolved in order to introduce the idea of upgrading informal settlements as an important and established policy of urban development in Egypt. Changes in management structure and staff functions were dictated by the JHP/PIU's realization that (1) the agency could not carry out all aspects of the upgrading program and that (2) it was necessary to establish cooperative relationships with the agencies and institutions

capable of executing the upgrading activities. These changes were designed to make the agency more responsive to the needs of the project and to the cause of promoting the importance of upgrading. Still, within the current structure, the roles of JHP/PIU need to be more differentiated with JHP concentrating on overall policy formulation and directing interagency liaison functions. The PIU on the other hand should continue to concentrate on direct supervision and evaluation at the program level.

2. It is JHP/PIU's obligation to define the meaning of upgrading, and an overall implementation strategy. At present, there is general agreement among all agencies and institutions involved in the project that upgrading low-income settlement is an appropriate component of urban development in Egypt. There is a consensus among the agencies involved in the project, also, that land tenure is an essential element and that the community must be involved in the upgrading process from the beginning. There are, however, different views on which elements and essential facilities are required. It also remains to be decided whether cost recovery is an acceptable objective.

3. The efficacy of project management is directly attributable to the extent to which the JHP/PIU can maintain a very lean, flexible structure dedicated to contracting, monitoring and coordinating upgrading activities and providing policy guidance and direction. This structure needs to be staffed by a few, key senior staff who can handle all areas of contract management and construction monitoring and the technical specialities of water, sewer and roads and policy formulation and overall program direction. In addition, if upgrading programs are to be replicated in other settlement areas, JHP/PIU needs to have the authority to (1) retain the revenues it receives and (2) coordinate the work of other, local government agencies carrying out upgrading activities.

4. When programming technical assistance for innovative projects, a broad and flexible definition should be utilized. Through the experience of CHF, it was realized that technical assistance should be designed (1) to respond to the evolving needs of the client and (2) to encourage the client to test approaches that will have positive effects on the implementation and acceptance of the program.

As CHF has discovered, providing technical assistance to an evolving structure and a new program is very difficult. It

is difficult even with an established agency. In this project CHF has been forced to respond both to program and institutional needs. On the one hand, it has performed a large amount of the staff work of PIU. On the other, it has worked to develop the management capacity of the JHP.

The amount of technical assistance required to accomplish both sets of activities was underestimated at the start of the project, although there was some understanding of the magnitude of the tasks. Still, the extent of the need for technical assistance only became apparent over time.

5. Although eager to see that funds are properly utilized and that tangible results are produced with investments, AID should remember that lasting impact will be achieved only if the program and approach are accepted and institutionalized by the GOE.

F. PROJECT IMPLEMENTATION

1. Implementation plans must be realistic. If not, those responsible for executing the project are held to standards of performance that cannot be achieved. In addition, donors and project beneficiaries with expectations of certain results within a given period of time will be unnecessarily disappointed.

The delays experienced in project implementation are understandable. If the implementation plans had anticipated the amount of time needed to build a new and functioning management unit, and for this unit to establish effective working relationships with agencies and institutions involved in upgrading, a more realistic timetable might have been developed and the current difference between anticipated and actual levels of project activity might not be so large.

2. Once developed, implementation plans should be used as management tools. Performance targets should be defined and given fixed budgets. Those responsible for managing activities must be made aware of targets and budgets, and held accountable for achieving specific results on time and within budget. Project implementation must be recorded in the context of the plan and the budget. Deviations from plan and budget should be explained.

3. Effective implementation occurs on two levels--from the top down and the bottom up. On one level, implementation is achieved through the development of a

harmonious relationship among the institutions, agencies and companies responsible for designing, constructing and operating the components of the upgrading project. On another level, implementation can be effectively stymied unless the beneficiaries are involved in the upgrading process. There is general agreement on this principle among those involved in the project.

Coordination at the level of JHP/PIU has been slow to develop. There have been misunderstandings in the past among the agencies involved. Only recently have effective mechanisms been established to bring the principal actors together to discuss the objectives and components of the project, and to agree on a course of action. Until JHP/PIU defined its management role in the project, it was not possible to define the tasks of others.

The content and process of upgrading have been promoted at the community level. The relationship between community involvement and project success is well understood by the JHP/PIU. A negative experience in one community and positive experiences in others have had the effect of prompting the JHP/PIU to inform and involve the community.

4. Successful project implementation currently depends on JHP/PIU's ability to (1) contract firms who can install the infrastructure and community facilities on time and within budget, (2) maintain effective coordination with the GOE agencies who have the authority to review and approve designs and to operate the facilities once in place, and (3) motivate the community to participate fully in the upgrading program.
5. In general, components involving the least number of agencies and requiring the least amount of coordination are quickly implemented. This explains the success of the HILP and the completion of four community facilities. It is also apparent that there is a direct and positive relationship between the degree of community participation and the rate of project implementation. This lesson has been well learned by JHP/PIU.

I.

INTRODUCTION

1.1. Background

The USAID/Government of Egypt-funded project "Housing and Community Upgrading for Low Income Egyptians" was authorized in 1978. The project was designed to demonstrate the premise that "basic housing and community facilities -- that are socially acceptable and affordable -- can be provided for low-income families" in a manner that allows the Government of Egypt (GOE) to recover a "substantial" percentage of its investment. (USAID Project paper, p. 3).

The Project was developed to test new approaches to meet the shelter needs of low-income Egyptians. Rather than continue to support the traditional shelter practice of constructing and renting five-storey apartment complexes, USAID, in collaboration with the Ministry of Housing (MOH) of the Government of Egypt, defined a strategy (1) to develop a new community consisting of 'core' units on individual sites, and (2) to 'upgrade' living conditions existing in 'informal' communities.

As defined in the Project Paper, the upgrading interventions were designed to demonstrate that:

- one approach to reducing the severe housing shortage is through investment of housing resources in upgrading and expanding the existing housing stock.
- upgrading of informal settlements is an effective and replicable approach and should be adopted as part of national housing policy as a means of addressing the shelter needs of the low-income urban population.
- an effective working partnership can be established between the government and the private sector to provide housing for low income families,
- public sector subsidies can be reduced to accommodate lower income groups by altering size of housing, land and supporting facilities, and by recovering the costs from the target population,
- subsidies can be distributed according to the ability of the beneficiaries to pay in a manner which clearly demonstrates the cost and extent of subsidization,
- a housing finance system with a rationalized interest structure can be extended to the lower income groups, and;
- lower and flexible planning and building standards can be developed to accommodate housing for low-income groups.

USAID and the Government of Egypt agreed to share the project expenses -- estimated to be US \$160 million -- equally. Of the total budget, approximately US \$57 million was budgeted for upgrading interventions. All project activities were scheduled to be completed by September 30, 1983.

1.2. Assumptions Underlying Project Design and Implementation

Laudable in purpose, the project is complex and ambitious in design. In the course of achieving the stated objectives, the Project Paper assumes that three fundamental, not to say revolutionary, changes would occur in housing and urban development practices in Egypt.

First, project implementation was dependent on the creation and efficient operation of a wholly new and inexperienced institution -- the Joint Housing Projects Agency (JHP) of the Ministry of Housing. Through its Project Implementation Unit (PIU), the JHP was responsible for projects designed to improve housing for low-income Egyptians that were funded with international, as well as GOE funds.

Second, the Project Paper called for the definition and adoption of a public housing strategy that emphasized the legalization and

upgrading -- measured as land title and improvements in community living conditions -- of squatter and low-income settlements. This approach suggests that traditional public housing construction practices and designs and standards for infrastructure would have to be changed.

Finally, the Project Paper proposes the design, promotion and operation of a system to recover a portion of the costs incurred in upgrading the low-income communities. Since the GOE traditionally recovered little, if any, of the capital costs associated with improving land and building public housing, advocating this practice represented a deviation from formal GOE policy.

In attempting to improve the living standards of the beneficiaries, those charged with implementing this project had to affect radical changes in the attitudes and practices of the officials of the GOE, the technicians and administrators of public and private sector implementing agencies, and the residents of the community.

It should be noted that it is not uncommon to assume that the host-country government supports the project's goals and will move expeditiously to develop institutions and alter policies and practices in order to achieve the objectives of the project. It should also be emphasized that this project was viewed, and

continues to be seen, as a demonstration project. Defined in this manner, the changes needed to produce an effective and timely implementation of the program could be seen as "experimental" and not necessarily a direct threat to existing institutions and practices.

Still, the successful execution of the upgrading program required changes which, if delayed, could adversely effect the project and undermine the credibility of the new approaches being introduced.

1.3. Project Site

Helwan, one of 18 districts within the Cairo Governorate located 25 kilometers south of Cairo, was chosen as the project site. Like other settlement areas in Egypt, Helwan has seen the growth of informal settlements within the last twenty years as formal housing production has not kept up with demand.. It is estimated that a large percentage of current residents migrated from other areas of Egypt to find employment in the factories, e.g. automobile, arms, cement, etc., operating in the area.

The settlement pattern in the selected Helwan upgrading communities is typical of "informal" communities throughout Egypt. Most dwelling units in these areas were built without permits on

title to the land. The units are multi-family, multi-storey (no more than two or three currently) structures. Overall densities for the site are estimated to range from 800 inhabitants per hectare to 1500 inhabitants per hectare.

While a good portion of the Helwan District reflects "informal" settlement patterns and practices, USAID/Government of Egypt-supported project activities are restricted to eight sites. Seven areas are currently settled -- Arab Ghoneim, Arab Rashed, Izbet Sidqi, Izbet Zein, El Bagour, Ghoneim Baharia, Kafr El Elw; the eighth is unsettled and is the site of the Helwan New Community.

The total current estimated population of the upgrading sites is 80,280 (1982), growing at an annual rate of approximately 6%. At saturation in 2005, around 288,000 inhabitants are projected to be in residence.

1.4. Mid-project Evaluation of Upgrading Component

The mid-project evaluation took place from July 15 - August 14, 1984. Resident in Egypt during the period of the evaluation, the team consisted of Ms. Sonia Hammam, RHUDO/Tunis (team leader), Mr. Joseph Haratani, WASH (civil engineer), Dr. Neil Meyer, the Urban

Institute (financial analyst), and Dr. John B. Tomaro, The Research Triangle Institute (management analyst) and Dr. Mounir Neamatalla Environmental Quality International (engineer).

The mid-project evaluation reviewed only the upgrading activities at the seven sites in Helwan. Specifically, the evaluation team (ET) attempted to document the progress achieved, as well as the difficulties encountered, in three areas, namely:

- The design, implementation and operation of the Home Improvement Loan Program (HILP);
- Engineering designs, standards and construction practices for upgrading low-income settlements.
- Overall Project Management and Implementation;

The Scope of Work of the Evaluation emphasizes the need to identify and document problems, and to suggest solutions for resolving difficulties. In particular, the ET was asked to give detailed attention to those project components that are operating well and facilitating the achievement of project goals, measured as reaching intended beneficiaries through the effective operation of programs and institutions responsible for project implementation.

1.5. Evaluation Methodology

Conclusions about the nature, extent and quality of the upgrading component of the Helwan Project were drawn from (1) a review and analysis of extant documents; (2) a brief sample survey; and, (3) interviews with staff as detailed below.

1.5.1. Document Review

Most of the documents reviewed fall into the category of planning and engineering studies. Only the evaluation report by Robert R. Nathan Associates and some of the CHF reports and proposals contain information on project management and implementation. Published information on the Home Improvement Loan Program (HILP) and the operations of the CFE is minimally available. There are no surveys on the impact of the upgrading activities at the sites, although it may be too early in the project implementation sequence to be able to measure any effect.

1.5.2. Sample Survey

During the visit of the evaluation team a brief survey was administered in one community -- Arab Rashed. This sample survey was designed to provide information on (1) the extent to which households were contributing to home improvement beyond the loan amounts, (2) the degree to which HILP loans create rental units affordable to low-income groups, and (3) the

predominant form of home improvement being undertaken with the loans and supplemental household contributions. The survey also attempted to determine those factors which have prevented households from applying for home improvement loans.

1.5.3. Interviews

In addition to the data and information reviewed by the ET, extensive interviews were conducted with staff members of the agencies and institutions responsible for defining and implementing the project. Without exception, all those contacted made themselves available to the team. Each gave his/her time and information willingly. In addition, without prompting or encouragement each expressed support for a program of upgrading urban settlements and suggested that this approach was culturally acceptable and cost-effective in the Egyptian context.

1.5.4. Site Visits

Finally, several upgrading sites and the Helwan New Community site, the location of the project management office, were visited frequently during the evaluation mission. Since upgrading activities are in place in only two of the seven sites, namely Arab Ghoneim and Arab Rashed, these locations were given special consideration. The team visited (1) homes that have been improved with funds borrowed through the HILP, (2) the

vocational training center in Arab Rashed, (3) the two schools built with support from the community facilities fund, and 4) the few infrastructure improvements -- public taps and soakaways. In addition, Mr. Haratani, the engineer on the evaluation team, walked sections of the sites scheduled to receive upgrading interventions. He made a special effort to review the physical conditions at the sites visited and to determine the extent to which the plans proposed for upgrading conditions reflect innovative, cost-effective and socially acceptable solutions.

1.6. Outline

The report is divided into six analytical chapters organized as follows:

Chapter II provides an in-depth review of the HILP. It starts by examining HILP cost, cost recovery and the subsidies involved in order to assess its replicability and the viability of the program operating on its own without additional AID/GOE funds, and to determine the appropriate level of support. Based on this examination, alternative options for restructuring the program to increase its resources and expand its operations are explored. These include recovering loans at higher rates of interest and

AID/GOE provision of operational costs. Noting that these options would minimally increase the current level of operations, the emphasis is on encouraging financial institutions to provide their own funds for HILP lending. The changes required to achieve this are charging interest rates attractive enough to financial institutions, with GOE/AID subsidies for lower income beneficiaries and providing security to lenders in the form of land-title or guarantees.

Chapter II then goes on to review the success of the HILP in targetting intended beneficiaries both in terms of the income levels of actual beneficiaries and the accessibility of the program to various salary/income groups in the upgrading communities. Next, demand for the HILP is examined on the basis of actual experience to date and compared to original projections. Projections of demand based on actual experience indicate that while it will far exceed original estimates, it perhaps will fall slightly short of the revised projections of demand in the 1984 Implementation Plan.

The uses to which the HILP loans have been put are then reviewed to assess progress toward achieving the objectives of improving existing communities and conserving housing stock, noting the unexpected addition of new units. This activity is examined further on the basis of sample survey information in order to determine

whether rental units have been created. Finally, survey data are also utilized to arrive at conclusions regarding the HILP's ability to leverage household savings for home improvements.

The chapter ends with a review of HILP implementation procedures in terms of how well responsibilities are coordinated and the efficiency with which loan processing occurs.

Chapter III examines engineering design and construction. It begins with a review of the current status of these activities for infrastructure and community facilities. The chapter then looks at the design standards adopted for infrastructure and community facilities and how these standards reflect the objective of introducing lower, more flexible and innovative standards with lower per capita costs as set forth in the Project Paper. Noting the difficulties encountered in deviating from standards currently in use and the delays in obtaining approval for less than standard practice on infrastructure network design, the analysis underscores those areas where cost-savings have been achieved.

Given that the design phase is near completion, the chapter ends by emphasizing recommendations to resolve the issues and constraints identified as the project moves to the construction phase with the view to keeping implementation of this phase on schedule. These

include the level of monitoring required by AID and JHP/PIU. Securing sewage disposal to ensure proper operation of the sewerage network and avoid the additional costs of constructing disposal facilities, and instituting a solid waste program as a necessary link to introducing sewerage networks. Additionally, demolitions required by current road and sewerage network designs are viewed as a possible constraint to timely implementation. Finally, the issues of AID approval procedures of construction, the introduction of innovations in future programs, and the construction time are all discussed and recommendations made for resolving them.

Chapter IV discusses the structure of project management. It starts with a consideration of the current organizational structure for management. This analysis emphasizes that this current structure evolved during the course of implementation as JHP/PIU moved away from attempting to undertake all aspects of the upgrading program to a role of contracting, monitoring and coordinating. The roles of the JHP/PIU and the mechanisms for achieving coordination through the creation of standing committees are described and their effectiveness assessed. The issues and problems associated with staff recruitment and retention by public agencies are raised. These issues and problems have led to hiring consultants at higher pay as a means of staffing positions at upper and middle management levels. Yet, this problem underscores the need to keep the

organizational structure of JHP/PIU lean. Consideration is then given to the proposed reorganization of JHP/PIU as a general organization to resolve problems of recruitment and financial autonomy. This analysis emphasizes the need for JHP/PIU to be granted authority to retain revenues and to coordinate the agencies involved in upgrading but warns against establishing a bureaucratic structure to achieve this.

The roles of other agencies, principally CHF and AID, are then described in terms of their relationship to JHP/PIU and the effect of their performance on project implementation. Finally, the chapter ends with a summary of lessons learned with regard to: the role of the JHP/PIU and the need to keep their structure lean and responsive to the evolving needs of the project; the programming of technical assistant to suit the needs of the project and complement the client's role, and; the appropriate role for AID in monitoring projects it funds.

Chapter V reviews project implementation. It starts with a description of the various procedures, agencies and tasks involved in implementing the construction of the physical components of the project, and the operation of the community development process. On the basis of a time estimate for various tasks, the question of whether the project is proceeding according to the original and

revised schedules, and the time required to complete implementation are addressed, noting the impact of delays on the implementation schedule.

Progress on implementation is then reviewed by comparing expenditures to date with those projected in the original and revised project budgets. On the basis of this comparison, the issue of meeting budget targets which project sharp increases in expenditures is raised. The revised 1984 budget is reviewed in terms of the GOE's ability to meet budget commitments, and the possible impact of projected increased resource requirements for the total project beyond those available on completing the upgrading component of the project.

The chapter ends with a summary of lessons learned. These include the need to develop: 1) realistic implementation plans which anticipate the time required for various tasks, such as the creation of a new and functioning management unit; 2) the use of implementation plans as management tools with performance targets set and budgets defined in order to judge progress against projected implementation and expenditures. Finally, project experience suggests that successful implementation at this stage depends on the ability of JHP/PIU to (1) contract firms to undertake construction on time and within budget, (2) maintain effective coordination with other agencies, and (3) motivate the community to participate fully.

Chapter VI assesses cost-recovery potential for the entire upgrading project. It starts with a definition of national urban income distribution and an examination of ability to pay to establish the basis for analyzing the potential for cost recovery. To arrive at a definition of costs of upgrading, cost figures for one community are used, and project paper guidelines are adapted to define "recoverable" costs. The potential for cost-recovery is analyzed on the basis of project paper guidelines for recoverable costs and interest rates compared with full recovery of all costs at market interest rates.

The Scope of Work raised some issues that the Evaluation Team could not address, or was unable to address with a complete degree of confidence. There are no data, and only very imprecise estimates, on the benefits derived from upgrading. The absence of these critical data led the team to conclude that a cost/benefit analysis would not generate a meaningful result. Although called for in the Scope of Work, this analysis was not carried out. However, the methodology that should be employed and the data that are required to carry out an analysis are discussed in the report. In addition, the scope of work raised a series of specific questions for the ET. The responses to these questions are included as Annex A.

II.

THE HOME IMPROVEMENT LOAN PROGRAM2.1. Summary, Findings and Conclusions2.1.1. Background

The home improvement loan program (HILP) was designed to provide Helwan informal community residents with access to credit for improving their homes and for paying some cost of infrastructure connections. The program has thus far been used solely for expanding and improving the housing stock itself, because of the delay in infrastructure development. The program provides loans at a 7% interest rate for 10 to 20 years. ^{1/} It establishes eligibility standards in order to target credit to people of limited incomes, but it provides mechanisms to assure repayment. HILP makes a major departure from past government and private action in Egypt in providing long-term housing loans at modest interest rates intended for the lower income residents of informal settlements, with nonetheless an expectation of significant cost recovery.

^{1/} Shorter in the case of pensioners.

2.1.2. Major Findings, Conclusions and Recommendations

The home improvement program has been functioning effectively since March, 1981, principally in three of the upgrading communities with the very recent addition of two more. A substantial number of loans have been made, nearly reaching original expectations already.

The loans have been quickly translated into tangible housing extension, improvements, as well as housing additions for rental. Borrowers have added significant amounts of their own money to the loans in making improvements. Additionally benefits of the loans have gone systematically to people of lower incomes as intended. The one substantial setback was a temporary freeze on loans, followed by a limitation in the types of loans could be made, beginning in mid 1983. The collapse of a building triggered enforcement of a requirement for a building license for any construction -- a requirement which was impossible to meet without land title. The freeze was relaxed and a final resolution of the problem appears imminent.

Major findings concerning the replicability and viability of the HILP, and conclusions regarding alternative ways for restructuring the program are as follows:

- Administrative costs for HILP have been reasonable and the process for operating the program seems adequately efficient and coordinated among participating parties (PIU, CFE, CHF). Loan repayments have been complete and generally prompt. As a result, the program is reaching Project Paper established goals for cost recovery, though subsidies are nonetheless being paid by the GOE and AID. Full recovery would require charging higher interest rates to reflect the true value of capital if it were put to alternative uses. Yet, repayments cover a substantial part of capital costs even when measured at "market" rates.

- In its current form, HILP is financially viable without AID and GOE support. However, the program would be forced to operate a more reduced scale, relative to its experience to date and to its current potential, if it were to operate on the basis of loan repayments alone and without additional infusions of AID and/or GOE funds or other program changes.

- Given the good performance to date, it may well make sense to extend the program. This could logically be done by giving the HILP further direct support in its current form by carrying operating costs. Later, some restructuring could be appropriate.

- At least in the long-term, restructuring could include capturing somewhat more of the resources of the program's highest income beneficiaries. But more centrally, it could include arranging for financial institutions to provide the home improvement loans from their own funds, rather than only servicing loans made with GOE and AID resources. The GOE and AID role could then focus on providing adequate operating budgets and skilled staff, sufficiently low interest payment levels (subsidized if necessary), and loan-security arrangements to keep the program functioning and to ensure that it continues to serve lower income people. The up-front costs of such an approach would be significantly lower, allowing more extensive early progress.
- Two additional program structuring issues are relevant in considering extension and structuring of the HILP. First, consideration should be given to utilizing graduated payment mortgages as a means of increasing borrower's ability to pay. Second, in communities where there are fewer salaried workers than Helwan, new provisions may be required to guarantee repayment by borrowers.

The seven parts of this chapter present in detail the findings summarized above and provide supporting evidence and analysis.

These seven parts discuss in turn:

1. Costs of the HILP, cost recovery from beneficiaries, and the subsidies required;
2. Financial viability of the current program, and alternative ways to structure and support it;
3. The incomes of HILP beneficiaries.
4. The demand for HILP loans;
5. The types of improvements made with them;
6. The contributions of HILP beneficiaries to rental supply and to home improvements from non-HILP resources; and
7. The process of implementing the HILP;

Each part begins with a summary of its key findings and conclusions, for the convenience of the reader.

2.2. HILP Costs, Cost Recovery, and Subsidies

2.2.1. General Summary

The substantial experience in actually operating the HILP provides a good basis for estimating its costs, the share of cost that is recovered from borrowers, and the subsidies that USAID and the GOE provide. Based on this evidence, the overall picture is one of very reasonable expense levels for a program of this type.

Cost recovery on the HILP meets Project Paper capital cost recovery standards with repayments of principal at 7% interest. Full cost recovery would require repayments at higher interest rates, reflecting the true value of capital. By such standards, the HILP recovers an estimated 70 to 85 percent of capital costs. There are, however, net expenses of program administration in addition to the capital cost of credit that reduce the repayments available for future use, a major portion of capital cost, though not all of the expense will be paid for over time by the HILP beneficiaries. This cost recovery level appears to compare favorably with past experience in housing programs in Egypt and elsewhere. The residual subsidy costs have been shared quite equally by AID and JHP, with JHP having a modestly larger share.

2.2.2. Capital Costs, Cost Recovery and Subsidies

Costs of the HILP fall into two major categories: capital costs and operating expenses. Capital costs are simply the costs of providing credit for the home improvements themselves. In any loan program, this cost involves making an initial capital outlay and then waiting for any repayments, both principal and interest, to be returned.

In the HILP, the average loan amount is now about \$1580. ^{2/}
This direct capital cost of making the loans is shared equally
by GOE and USAID. The total cost to date has been \$2.17 million
for 1369 loans.

The capital costs can also reasonably be thought of as being
incurred over time, instead of all in one lump (conceptually, as
though the alternative use of the money were to invest it
elsewhere at some rate of interest). That allows them to be
compared to the stream of repayments. Such costs per year
depend on the rate of interest and the period over which the
money is lent.

According to interviews with CFE Helwan Branch Office Staff, the
average period for payment in the HILP is about 12 years. It is
appropriate to use this actual repayment period in assessing the
costs of providing these loans. There are at least 3 appropri-
ate interest rates at which to consider the cost of capital over
time: ^{3/}

^{2/} LE 1298 as of March, 1984.

^{3/} A fourth is the cost of long-term capital in Egypt, not subsidized by
(Footnote continued on next page)

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- 7.0 percent, the recovery rate sought according to the Project Paper.
- 10.5 percent, the rate at which CFE can currently borrow money from the Egyptian Central Bank (increased by 1% for servicing costs), which represents the potential cost of using borrowed funds in Egypt to finance the program.
- 14%, an approximate cost of long-term capital invested in the U.S.

The first two columns of Table II.1 show the annual cost (per loan and in total) of the loan financing, for each of these rates of interest.

TABLE II. 1
ANNUAL COSTS AND RECOVERY
OF HILP LOAN CAPITAL

	<u>Annual</u> <u>Per Loan</u> <u>Costs(a)</u> <u>(\$)</u>	<u>Total Annual</u> <u>Costs</u> <u>(\$)</u>	<u>% of Costs</u> <u>Recovered</u> <u>in HILP</u>	<u>Annual</u> <u>Implicit</u> <u>Subsidy(b)</u> <u>(\$)</u>
at 7% cost of capital	195	267,000	100%	0
at 10.5% cost of capital	232	318,000	84%	51,000
at 14% cost of capital	272	373,000	72%	106,000

a. Loans through June, 1984

b. Divided evenly by AID and GOE, on the basis that the two share the initial credit cost equally.

(Footnote continued from previous page)

the Central Bank, which given the high current rates of Egyptian inflation (about 16%) would be higher still if borrowed and paid in LE.

Much of the annual loan cost is being recovered through repayments by borrowers. Borrowers are repaying loans at 7% interest over a 12 year period. ^{4/} The effective interest rate ranges as high as 8%, due to the accounting procedures in which monthly repayments to principal are only credited annually. How much borrowers actually repay of course depends on the level of defaults or arrears (late payments) occurring. The experience to date, as reported by CFE, shows no defaults at all. About 5 to 15 percent of loans have been in arrears in a given month. But all of these arrearages have been of short duration (2-3 months) and payments have been restored. Thus repayments are actually being received, combining principal and 7% interest.

As indicated in the third column of Table II.1, the share of capital cost being recovered is high by any standard. The Project Paper's goals are being fully met. The repayments cover a substantial part of capital cost measured at "market" rates. The last column of the table shows the annual subsidy, net of repayments, of capital valued at the various rates, which is effectively divided equally by AID and GOE. These costs will rise as the amount of credit lent out rises for the cases of

^{4/} The repayment period on a given loan ranges from 5 to 20 years.

10.5% and 14% interest. However the subsidy given the 7% Project Paper recovery rate will remain at zero, because on each loan the PP goal of recovery is met.

Continued good performance in recovering capital costs depends on maintaining a low level of defaults. CFE staff are concerned that defaults will rise over time as people retire or die before loans are paid off, or lose their jobs; but CHF observers disagree. We do know that if defaults occur only after many years of repayment, the losses will be low on each default.

It is important to recognize that borrowers' repayments of capital are not actually available solely for capital cost purposes. One percent of each payment is given to CFE as a servicing fee and two percent of the interest is set aside as a bad debt reserve.

2.2.3. Administrative Costs and the Subsidies Involved

In addition to capital costs, there are the full administrative costs of the HILP to be paid. These include the costs of CFE in servicing the loans (processing applications and collecting receipts) and the costs of JHP-PIU and CHF in helping people make loan applications, designing the home improvements and

estimating their costs, inspecting contractor work, and cooperating with CFE in its work, along with initial work in program design. Based on staffing and overhead cost levels obtained in interviews with CFE, JHP-PIU, and CHF staff, the administrative costs are those reported in Table II.2. ^{5/} The table shows both total costs to date and cost for a typical year during implementation. The yearly cost average excludes a CHF program design start-up cost that is not being repeated.

The total administrative cost of just over \$330,000 in Table II.2 reaches about \$400,000 if one-time expenditures in providing a computer capability to CFE are included. The less than \$90,000 average annual cost seems very reasonable for operation of a new and quite complex program, given the need to work out procedures and especially the disruption caused by the freeze on new loans for a major part of 1983-1984. The yearly administrative cost is roughly between 6 and 14 percent of annual loan volume, a good performance under any circumstances.

Borrowers are paying for part of the administrative costs, as well as repaying capital costs. Each borrower pays 2 percent of

^{5/} It would be useful to increase CFE expenditures by an amount that is sufficient enough to provide the branch office with telephone and auto capabilities.

the amount lent as a loan origination fee. As noted above, 1 percent of the interest paid goes to CFE for loan servicing costs. Total fees to date paid to CFE are \$47,780, or 14 percent of total administrative costs of all agencies (without computer).

TABLE II. 2
HILP ADMINISTRATIVE COSTS
(\$)

<u>Institution</u>	<u>Total Costs</u> <u>Jan 1981-June 1984</u>	<u>Average Annual</u> <u>Cost During Implementation</u>
CHF	50,559	6,585
JHP	172,557	51,086
CFE	108,360	30,960
TOTAL	331,476	88,631

That leaves total administrative costs to AID and JHP of about \$284,000 (see Table II.3). ^{6/} With AID paying half CHF and all computer costs and JHP paying for its own and CFE administrative costs, JHP has paid well over two-thirds of the HILP administrative expense subsidy (see Table II.3).

^{6/} Note that the as yet very small 1% loan servicing fees have been doublecounted in analyzing capital and administrative cost recovery separately.

Since the much larger capital costs for the program are split equally, the overall subsidy is split nearly equally between AID and JHP.

Note that JHP has not yet formally agreed to pay CFE anything beyond the origination and service fees CFE is collecting from borrowers, as in their original agreement. The cost figures are based on a tentative agreement to pay enough beyond fees to cover CFE's direct expenses and 80% overhead rate. In the long run, it would probably be best to choose a new service fee level that covers CFE costs even if borrowers pay only part of it, but CFE is willing to participate under the current arrangement, taking a small loss, or under the tentative agreement.

TABLE II. 3
ADMINISTRATIVE COSTS, REVENUES, AND SUBSIDY
(\$)

Total Admin. Costs to Date	331,476
Total Fees Recovered	47,780
Net Admin. Costs (Subsidy)	283,695
AID subsidy share	25,280 (plus computer costs of \$67,000 to date) ^a
JHP subsidy share	258,417

a. Computer costs are based on 50:50 allocation of total computer costs between new communities and upgrading.

2.3. Financial Viability of the HILP, and Alternative Ways to Structure the Program

2.3.1. General Summary

Building on the HILP cost and cost-recovery information developed above, we can assess the financial viability of HILP as currently operating and as potentially restructured. Our major conclusions are as follows:

The HILP could, if necessary, operate without further AID and GOE support, beyond that originally budgeted. It would do that by proceeding as a revolving loan fund, refending the remainder of loan repayments received once operating costs were paid. But on that basis the HILP would be scaled back significantly from even its present level and would fall short of meeting well-established demands in just the Helwan upgrading communities.

The HILP is sufficiently effective in meeting its objectives that further GOE/AID support, in the form of additional credit and perhaps in other forms, may well be warranted.

One reasonable expense for GOE/AID to pay is the cost of technical and social teams in operating the HILP. This by itself however only very modestly increases the viable scale of the program.

- e The HILP could charge higher interest rates on loans. This again only modestly increases the sustainable program scale. And some, but not all, borrowers would need current 7% rates, or equivalently subsidies to help pay higher rates, to make loans affordable.

Higher interest rates on current HILP loans have limited value to GOE/AID overall because they reduce the ability of borrowers to pay for other upgrading components (land title and infrastructure).

- More valuable in extending the program while limiting AID/GOE cost is getting financial institutions to raise their own funds for HILP credit.
- To do that, either land titling or loan guarantees are needed to provide sufficient security to the lender. The current program participant, CFE, insists on land title and secured mortgage lending; but the guarantee may still have potential if titling cannot be achieved. In either case, some interest subsidy would be required in order to involve financial institutions, whose cost of obtaining money to lend requires lending at higher than current HILP interest rates.

2.3.2. HILP as a Revolving Loan Fund

The HILP as currently structured is intended to continue in the future as a revolving loan program, with proceeds of loan repayment by borrowers used to lend to future borrowers. This has not yet occurred. But it does appear to be financially feasible. Annual repayments certainly do exceed the annual administrative costs of operation, leaving funds for making loans. These loans would be in addition to those being made now from the \$1.3 million balance in GOE/AID-supplied credit based on the original Project Paper and Grant Agreement. Let us suppose that the full originally budgeted \$3.5 million were lent out for home improvement loans, at 7% interest and with average repayment period of 12 years. Let us suppose also that the record of no defaults and insignificant arrears continued to hold true. Then annual loan repayments (principal and interest) amount to \$432,000.

Under current operations, part of these payments must be set aside for various other purposes: to meet operating expenses and for bad debt reserves. Bad debt reserves are set by the program at 2% of outstanding loan principal. For purposes of this analysis, annual operating expenses are assumed to show the

same deficit, beyond origination and service fees paid by borrowers, as has occurred in the past. As Table II.4 shows, the size of the fund remaining to make new loans each year is about \$300,000. This is sufficient to support about 190 loans annually. But this total will fall sharply if inflation continues at a rapid pace, pushing up average loan amounts in order to complete the same improvements.

This self-sustaining level is low relative to activity in the program to date, which has averaged nearly 500 loans per year excluding the period during which new loans were prohibited. A reduction of 60 percent in activity level is involved in operating on the basis of loan repayments only. If the program were first expanded to a total of \$5 million in HILP credit outstanding, as envisioned in the current draft Implementation Plan, then about 300 loans could be supported on a revolving basis (See Table II.5) or about 60% of the current level.

TABLE II. 4
LEVEL OF REVOLVING LOANS
SUPPORTABLE BY HILP
WITHOUT AID/GOE SUPPORT

Annual Loan Repayments on \$3.5 million	\$ 432,000
Bad debt reserves (2% of principal)	(70,000)
Operating expense deficit **	(58,000)
Available for relending	304,000
Annual number of loans (average \$1580)	192*

* The total will rise slightly over time as further loans are made out of the revolving funds, and then fall as the original loans are fully repaid.

** It is very difficult to estimate the future operating cost deficit. Origination fees will decline as fewer new loans are made. Servicing fees will rise as more loans are outstanding, but we do not know how the costs of collecting more repayments will compare with the servicing fees. CFE overhead costs per loan may fall, with more total loans outstanding and the computer functioning, or stay the same. CFE expects the computer to provide major savings if it eventually comes on line. JHP and CHF staffing costs per loan may fall with experience or rise when additional communities are added but few new loans are made and more collections problems may arise. An unchanged deficit is therefore assumed for want of clear alternatives.

TABLE II. 5
NUMBERS OF LOANS ANNUALLY UNDER ALTERNATIVE HILP STRUCTURES

<u>Program Structure</u>	Number of Loans Per Year
Current Structure, \$3.5 million Initial Credit, No Further Support	192
Current Structure, \$5.0 million Initial Credit, No Further Support	309
Administrative Deficit Supported, \$3.5 Million Initial Credit	229
Administrative Deficit Supported, \$5.0 Million Initial Credit	346
Interest at 10.5%, Administrative Deficit Supported, \$3.5 Million Initial Credit	281 ^a
Interest at 10.5%, Administrative Deficit Supported, \$5.0 Million Initial Credit	398 ^b
Level of Activity to Date	498

a. The numbers in the table apply reasonably only to the first year after initial GOE/AID credit is lent. After that, continued inflation would decrease the numbers of loans if loan size is allowed to rise--an effect slightly offset by rising total repayments.

b. Full impact not available until existing loans at 7% are paid in full.

Again inflation could drive up average loan size and further reduce the number of loans, or cause loans of unchanged size to provide for significantly less home improvement. It is also worth noting that CHF believes that current staffing levels could process nearly 1000 loans per year, and HILP has operated at nearly that rate during its most productive periods. In sum, then, HILP as currently operating is viable without further GOE/AID funds, as a revolving loan fund. But it would necessarily operate at levels well below past experience and future potential. The program has been sufficiently effective that GOE/AID might want to support it at some greater level, by providing additional funds for credit, and by other mechanisms as well as elaborated below.

2.3.3. Alternative Ways to Increase HILP Resources

Two alternatives appear reasonable for increasing HILP resources within the current structure. The GOE and/or AID could continue to pay the administrative expenses of the program, other than those for CFE's basic loan origination and servicing functions.

This is consistent with the structuring of many other home improvement programs, in which the technical and social functions of helping lower income people through the improvement process are supported by sources other than beneficiaries. With an unchanged operating deficit level, this increases the number of annual loans on a revolving fund basis by a modest 35-40 to levels shown in Table II.5.

A further alternative is to increase the interest rate on loans, say to the 10.5% level which represents the cost of funds to CFE when it borrows funds from the Central Bank plus a one percent servicing cost.. There is little immediate impact on loanable funds from that change, because of the large number of loans already in place at 7% and continuing for years into the future. Ultimately, when all loans are at 10.5%, the effect would be to raise by about 50 the number of loans that could be generated per year (see Table II.5); but by that time inflation would have significantly reduced the loan total. Raising interest rates does help offset the impacts of inflation somewhat.

Probably of greater long-term consequence than just raising interest rates to increase the size of the revolving loan fund size is the possibility of being able to charge interest rates

at or near levels that would make financial institutions willing to provide home improvement loan capital from their own funds. This would allow for potentially large increases in the volume of loan activity with still modest financial involvement by GOE or AID (principally for technical services). The up-front costs to government are greatly lowered by not having to provide the credit. Currently, for example, CFE pays 9.5% for the funds it borrows from Egypt's Central Bank and might be able, if it so desired and under acceptable risks to make loans available for HILP participants for as little as 10.5% interest.

But raising interest rates may create affordability problems for borrower households, since HILP is designed to serve people of limited means. An analysis of this affordability issue was performed, in order to assess the potential to use bank loans and still reach target households. Using a string of parameters and assumptions based on program experience and available income data, summarized in Table II.6, it appears initially that many households could pay the 10.5% interest rate on home improvement loans similar to those they have been obtaining. But there are substantial limitations.

TABLE II. 6KEY PARAMETERS AND ASSUMPTIONS
FOR HILP AFFORDABILITY ANALYSIS

- Household income at percentiles are those given by the lower end of Nathan Associates evaluation's income range updated to 1984 (see Section V of this report for details).
- Principal household earner is a salaried factory worker.
- Household incomes are 1.35 times factory worker net salary (CHF estimate).
- Base salary is 0.6 times net salary (analyses of CHF Helwan factory worker salary and income survey).
- Household takes one HILP loan.
- Size of loan is maximum allowed based on 25% of base salary being used to amortize loan (JHP, CFE staff report this as the minimum that people take).
- Household gets no new rental income after using HILP loan.
- Term of loan is 12 years.
- Household has at least 15% of income to use for improved shelter.

More specifically, affordability was tested for factory worker households at the 25th and 50th percentiles of income levels for urban Egyptian households (as detailed in Chapter VI of this report in discussing overall project affordability/recovery). Each household was assumed to take out a single loan, for the maximum amount allowed in the program given household principal worker's base salary and no other guarantors. Analysis shows

that if households are able to spend at least 15% of household income for shelter beyond what they paid before entering HILP, then they can afford to pay for their loans of unchanged size at 10.5% instead of 7% interest. That is, as seen in Table II.7, income available for improved shelter exceeds loan amortization cost even at 10.5% interest.

TABLE II. 7
AFFORDABILITY OF HILP LOANS
AT 10.5% INTEREST
(MONEY IN LE)

	<u>Size of Loan</u>	<u>Monthly House- hold Income</u>	<u>15% of Monthly House- hold Income</u>	<u>Monthly Loan Costs at 7% Interest</u>	<u>Monthly Loan Costs at 10.5% Interest</u>
Household in 30th Income Percentile	898	82	12.3	9.25	11.0
Household in 60th Income Percentile	1408	130	19.5	14.5	17.0

There are several extremely important limitations to this conclusion, however. The most important is that the 10.5% interest rate leaves virtually no income available to pay either for purchase of land or for payment for improved infrastructure (including future hook-ups to it)--the other central aspects of an upgrading program.^{7/} Second, many households (perhaps half

^{7/} If a HILP was operated in an area where infrastructure improvements and land titling were in place already, existing shelter costs would probably be higher and make less than 15% of income available for HILP repayments.

or more according to CFE and CHF staff) borrow more than their primary earner's base salary would allow. Either that worker gets another guarantor and a larger loan, or a second earner takes a loan, with payments often reaching 25% of total household income. Such households would have to cut back amounts borrowed for home improvements in order to afford any interest rate increase. The same would be the case for some households with non-factory earners, who borrow based on household (not base wage) income. A final constraint is that tenants, to whom some loan costs are often passed on, generally have higher shares of income already devoted to shelter and can pay little more.

A revised program would probably be best off, then, to raise interest rates beyond 7% at most only for households at the higher end of the target population. That means modestly subsidizing interest for others (from say 10.5 to 7%) if loan capital is to be obtained from financial institutions. The value of higher HILP interest rates to GOE or AID is really inherently quite limited in an overall upgrading context, because households' higher HILP expenses directly reduce money available for other cost recovery.

2.3.4. Lending of Banks' Own Funds

How feasible is it to expand the HILP by getting CFE to lend its own funds for home improvements? CFE has expressed a willingness ^{8/} to make loans available at 10.5% interest, given the current 9.5% rate at which it borrows from the Central Bank (though CFE considers the possibility highly hypothetical at the present time). The 10.5% could be met by a combination of borrower payment and in some instances subsidy. The key condition is that the residents of the upgrading communities must have title to their land and buildings, so that CFE can lend in the form of mortgages secured by the property itself. CFE officials appear at present to be unwilling to lend on untitled properties even if an outside party (GOE or AID) provides a 100% guarantee of repayment of loans secured by incomes in the manner of the current HILP. CFE history is as a mortgage lender, its by-laws require security of property, and key officials are not currently interested in making a major departure.

This CFE position makes the issue of land title a potentially important one for the HILP, though the program has proceeded

^{8/} Interview with Mr. Palange, using written questions about which he had consulted Acting Chairman Mr. Gomaa in advance.

effectively without title in the past. CFE's participation with its own funds would make financially feasible a major HILP expansion for very limited AID/GOE outlays but is apparently contingent on title for the foreseeable future. ^{9/}

It should be noted that mortgage lending of CFE funds has some possible dangers as well as advantages. CHF staff expressed concern that mortgage lending would be a much slower and more expensive lending process because of legal and documentary requirements, though CFE disagrees. In addition, CFE loans are made at interest rates that are adjusted when the bank's cost of funds borrowed from the Central Bank changes. This could mean unanticipated burdens on borrowers later.

2.3.5. Loan Guarantees

Despite CFE's lack of current interest in the idea, using financial institutions' funds for home improvement loans based on income, coupled with a loan guarantee by AID and/or GOE, has important attractions if title issues are not resolved in the near future. CFE and other potential lenders are concerned

^{9/} Further discussions about the loan-guarantee option might possibly show more promise than was indicated to the evaluation team.

about the possibility of default on non-mortgage loans to low and moderate-income borrowers, especially in later years. But the actual default experience has been and appears likely to continue to be excellent. ^{10/} A loan guarantee could likely therefore be provided at little cost to the guarantor. It could potentially get bank capital released to expand the HILP at low GOE/AID cost (although an interest subsidy would also be needed for some lower income borrowers), especially in the early years where the current HILP has great up-front costs for credit that is later to be repaid.

Three problems confront the guarantee idea. The primary one is finding a lending institution that is willing to make home improvement loans secured by a combination of people's income and the guarantee. In principle, a 100% guarantee should be sufficient, but perhaps not in practice as it is not for CFE. A second problem to be resolved is the mechanism of creating the guarantee. AID could have substantial difficulty budgeting funds to be set aside for a default contingency.

^{10/} In an interview with Sawsan El Messiri she indicated that families are repaying even after borrowers have died. Some borrowers have argued that their loans should be treated as grants by right, but social team members have convinced them to pay lest they jeopardize an important new program. Many arrears are just delayed paper work, both CFE and CHF agree.

GOE may have a similar difficulty in its budget process. ^{11/}
The best solution may be to use repayments of initial loans as a
guarantee fund. A third difficulty is in designing a loan
servicing fee structure or other mechanism ^{12/} that ensures
that the lending institution retains good incentives to collect
full loan repayment. These issues deserve work toward
resolution especially if land titling cannot be resolved
expeditiously to allow mortgage loans and if AID/GOE funds are
insufficient to provide substantial additional home improvement
credit from their own resources.

2.3.6. Further Issues in HILP Continuation

Finally, two further program-structuring issues are relevant in
considering continuation and extension of the HILP. First, the
program has not yet made extensive use of graduated payment
mortgages. At least for Helwan factory workers whose incomes
rise systematically with inflation, GPMs provide substantial
potential for increasing borrowers' ability to pay for home
improvements and ease pressure on GOE/AID resources. Work would

^{11/} This has not been investigated by the evaluation team.

^{12/} Such as a less-than-100% guarantee.

need to be done to convince borrowers of the value of such loans. Second, other communities where HILP might be extended will likely have fewer workers with assured government salaries, accessible for direct deduction of loan repayments than does Helwan. While non-factory workers in Helwan have shown no repayment problems, new provisions will have to be designed for guaranteeing repayment in such other locations.

2.4. HILP Beneficiaries

2.4.1. General Summary

The HILP was designed to serve low and moderate income households, especially those depending on salaries from Helwan factories. The Project Paper envisioned serving the bottom 60 percent of the income spectrum, except those in the very lowest 10 percent. Maximum limits were established on the individual or household incomes of eligible borrowers in order to help assure that loans did not go to upper income people, and interest rates were held to 7% and loan repayment periods extended to 20 years ^{13/} to improve the chances that lower income people would reasonably participate.

13/ Ten years for non-salaried workers.

Overall, the program has been very successful in targeting its benefits to people of limited means. The income limits set for eligibility prevent participation by upper income groups. Data on the incomes of actual loan recipients show that major shares of HILP loans go to people far down in the income distribution. Factory workers are well served, as intended from the outset. Two potential limitations are, however, suggested by analysis. Lower income borrowers may receive only very small loans, and non-salaried workers may be having some difficulty in participating. Evidence for these conclusions follows below.

2.4.2. HILP Eligibility Criteria and Targetting
to Lower Income Groups

The maximum income limits set for the program ensure that lower income groups are targeted as beneficiaries. The current factory worker limit of LE 120 per month in net salary implies a maximum household income of about LE 162 per month. ^{14/} Comparing the LE 162 figure to the national urban income distribution presented in Table 11.8, we see that this limit

^{14/} CHF analyses of factory worker salaries and incomes supports a conversion factor of 1.35 times net salary to obtain household income.

places the household at most just beyond the 60th percentile of national income and perhaps as low as the 30th percentile. Comparing the net salary to updated CHF factory salary survey data, we find that the maximum household income limit of LE 162 means that only the lower 70 percent of Helwan salary workers are eligible. ^{15/} Similarly, the LE 200 per month HILP limit on household income of non-salaried workers constrains eligibility at least to the bottom 70 percent of the national urban population and perhaps as low as the bottom 40 percent.

Sample information from monitoring documents on actual loans made suggests that eligibility standards have been adhered to with only rare exceptions. ^{16/} In addition, lower income eligibility limits applied in earlier years, offset inflationary changes.

It is important to take a more precise look at the distribution of actual beneficiaries, in order to see whether people below

^{15/} Updated results of CHF Survey on salary of factory workers are presented in Chapter VI, Table VI.I.

^{16/} We have not had the opportunity to pursue the cause of exceptions. It may be that incomes as ultimately verified in the actual loan application process were lower than recorded in monitoring sheets and did meet limits.

TABLE II. 8
NATIONAL URBAN INCOME DISTRIBUTION ESTIMATES,
HOUSEHOLD MONTHLY INCOME, 1984
(LE)

<u>Income Percentile</u>	<u>Lower Estimate</u>	<u>Upper Estimate</u>
20	65	136
25	82	152
30 <u>a/</u>	92	167
50	130	227
60 <u>b/</u>	153	244
70	197	278

Note:

- a. Interpolated linearly.
b. Source of this table is explained in Chapter VI of this report in discussion of cost recovery.

the maximum limits were beneficiaries of the HILP. For this purpose, a one-sixth sample of loan applicants in Rashed, the community with the most applications (over 700), was drawn. Incomes of each loan recipient were recorded, along with incomes of unsuccessful applicants and the source of income (salary, pension, self-employment).

The clear conclusion of the analysis of this data is that the HILP reaches many people well down the income spectrum, even by the most conservative estimates, as can be seen below.

Loans in Rashed were made beginning in mid-1981 and continue to the present, while incomes have risen with inflation. For the sake of drawing conservative conclusions, we have used 1982 national urban income estimates for comparison. ^{17/} These are presented in Table II.9.

TABLE II. 9
NATIONAL URBAN INCOME DISTRIBUTION ESTIMATES,
HOUSEHOLDS' MONTHLY INCOME, 1982
(LE)

<u>Income Percentile</u>	<u>Lower Estimate</u>	<u>Upper Estimate</u>
20	49	96
25	62	108
30 <u>a/</u>	69	118
50	98	160
60 <u>b/</u>	116	172
70	149	197

Note:

a. Interpolated linearly.

b. Source for this table is explained in Chapter VI of this report in discussion of cost recovery.

^{17/} This is equivalent to assuming Rashed borrowers' recorded sample incomes were those earned in 1982.

The actual income distribution of sampled Rashed borrowers is shown in Table II.10. Comparing these data to the national income distribution ranges in Table II.9, we see the following:
18/

- Nearly 15 percent of borrowers fall below the 20th percentile of national income, even using the lower estimate for national income. If, however, the higher national estimate were used, nearly 60 percent of borrowers fall below the 20th percentile.
- At least 60 percent and perhaps 95 percent of borrowers fall below the national urban median income (50th percentile), depending on which estimate of incomes is used--using lowest estimates for income distribution,
- At least 90 percent of borrowers fall below the 60th income percentile set out in the Project Paper.

By any of these measures the targeting performance is excellent. A further note is that the survey data show no lesser rate of success in getting loans for lower income applicants than for wealthier

18/ The observed net salary incomes of salary workers have again been converted to household income by multiplying by 1.35.

TABLE II. 10
HOUSEHOLD INCOME DISTRIBUTION OF HILP LOAN
RECIPIENTS IN RASHED (SAMPLE: N = 84)

<u>Household Income</u> <u>(LE Per Month)</u>	<u>Number of Loan Recipients</u>	<u>Percent of</u> <u>Loan</u> <u>Recipients</u>	<u>Cumulative Percent</u> <u>of Loan Recipients</u>
0-54	15	18	18
55-68	16	19	37
69-95	26	31	68
96-122	14	17	85
123-149	6	7	92
More than 149	7	8	100
Total	84	100	

ones. That is, an interested potential borrower has the same chance of success, once having applied, regardless of income.

One limiting factor that should be kept in mind is that the households at the lower end of the income spectrum are quite restricted in the maximum loan size they can obtain. For example, a family whose income is just within the 20th income percentile (monthly income of LE 49) can, using HILP standards, borrow only about LE 500 (\$610). ^{19/} This severely limits the kind and amount

^{19/} Non-salary workers, one recalls, need guarantors for any loans.

of work that can be done. It may be grounds for a somewhat greater interest subsidy for lower income people despite the successful targetting in the current program. Another approach to expanding loan amounts for lower income people is to use factory workers' net salaries, rather than just base salaries, as determinants of their loan limits, without them having to find a further guarantor. But this creates problems in recovering costs for infrastructure and land as the rest of the upgrading program proceeds. A third worthwhile approach, for factory workers with inflation-indexed salary levels, is to employ more graduated payment mortgages, if borrowers can be persuaded to take them.

The Rashed sample also made possible analysis of the type-of-income characteristics of borrowers. Seventy-six percent of recipients were salaried (factory) workers, highly consistent with the 80 percent level for all upgrading communities. Seventeen percent were self-employed (12 percent in all communities) and the rest were pensioners. Loan applicants other than salaried workers had a higher rate of not obtaining the loans than did factory workers (44 percent vs. 18 percent). While we do not know the reason for certain, this may be due to difficulty in obtaining guarantors.
20/ This possibility is also at least suggested by the fact that

20/ See Environmental Quality International, Solid Waste Component: Arab Rashed Upgrading Program, March 1982 for source-of-earning data.

salary workers got 76% of the loans but were only 65% of the employed population (even neglecting pensioners) in Rashed. ^{21/} This is certainly an area for further examination if the HILP is to be extended outside areas like Helwan to places where government salary income is less prevalent.

Finally, non-borrowers may be affected by the HILP ("externalities"), but we have not been able to find solid information on this topic. A prominent form of externality would be an impact on the general price (rent) for (non-HILP) housing in the upgrading communities. Only observers' impressions are available and these conflict. Some believe that the upgrading project effort as a whole gives an increased sense of security and likely future service provision to the communities and drives up housing prices and rents. Others feel that the additions to the housing supply through HILP, moderating housing shortages, more than offset this effect. Also, some tenants may be displaced by raised rents when owners borrow to improve, but we lack adequate evidence on that topic as well.

2.5. Demand for HILP Loans

^{21/} Some slight approximation is involved because income categories for Rashed data do not precisely match those of the national income distribution.

2.5.1. General Summary

There has been a very substantial demand for HILP loans in those upgrading communities where they have been available. The number of loans made to date in these communities alone is almost at the level projected for all communities over the life of the project. Thus, total demand will clearly outstrip the Project Paper anticipated levels. Nonetheless, due to the fact that the average size of loans has been smaller than originally estimated, total credit extended to date has been smaller than the \$3.5 million budgeted.

The demand does not seem to have been artificially created, but to have served a real need for credit. While future demand is difficult to estimate, it is likely that the number of loans will exceed Project Paper total loan and budget estimates if loans continue to be made at the same rate observed thus far. On the other hand, Project Staff projections are slightly higher than observed activity, and would place the total number of loans at over twice the number of loans made to date, which is consistent with the levels estimated in the 1984 draft Implementation Plan.

2.5.2. Current Demand

Through mid-June, 1984, 1977 applications for loans have been made, overwhelmingly from the three communities with substantial periods of HILP operation: Rashed (begun 7/81), Ghoneim (begun 1/82), and Zein (begun 3/81). ^{22/} Nearly 70 percent of these, a total of 1369, were carried through and resulted in loans being made. Table II.11 provides the number of loans by community. The numbers would be still greater if it were not for the freeze on loans during a significant part of 1983-1984.

TABLE II. 11

HILP Loans Made to Date ^a

	Total ^{b c}	Ghoneim	Rashed	Zein	Kafr El Elw	Sidqi
Number of loans.	1275	716	484	75	14	4
Value (\$ millions)	2.02	1.24	0.70	.08	n/a	n/a
Average loan Amount ^c	1580	1725	1220	1110	n/a	n/a

Notes:

- Through March 31, 1984 for Ghoneim, Rashed, and Zein and approximately to June 1984 for Sidqi and Kafr El Elw.
- Total falls short of numbers reported in text because it is not up-to-date to June.
- Excludes Sidqi and Kafr El Elw loans.

^{22/} Sidqi and Kafr El Elw have only very recently been added to the program.

Loan recipients wasted no time in putting the money to work. Program staff estimate that 90-95 percent of the value of loans made to date has been disbursed on the basis of finished work and that work is nearly always completed within 3 months. Further, it is believed that perhaps 25 percent or more of borrower households seek a second loan, on the basis either of another guarantor for the original borrower's repayment or the earnings of a second family member. And people have consistently, according to CFE, applied for larger initial loans than the maximum that their incomes allow under program rules.

Observed demand has been very substantial in relation to expectations. The Project Paper estimated that a total of 1400 loans would be provided. This is barely more than the number already made, principally in just three communities. And only in Rashed is the loan demand believed by project staff to have been at least temporarily nearly saturated. ^{23/} Total demand in the upgrading communities, in terms of numbers of loans sought, will clearly outstrip the demand that the Project Paper anticipated serving.

^{23/} Even that saturation in Rashed may not be so much demand satisfaction reached by loans to date but inability by some who desire to borrow to find a guarantor who has not himself gotten a loan.

Loans have on average been smaller than anticipated. As previously noted, the average is \$1580, whereas the Project Paper used a loan amount of \$2500 (approximately corresponding to an initial intended loan maximum of LE 2000). The result is that while the number of loans has reached projected levels, only \$2.17 million of the budgeted \$3.5 million of credit has been used. But the Project Paper estimate had no strong empirical basis, and the actual average corresponds to what the borrowers can obtain given their income levels.

It is not surprising that long-term, 7% interest credit for home improvements is in strong demand in the upgrading communities. Households have few alternatives. Credit in the form of installment payments is provided by some contractors. But the period of repayment is generally a year and surely no more than two, and interest rates are in the range of 20 percent. Households do pool their savings and lend to each other at zero interest (Gamiya), but the size of these pools is apparently insufficient for the housing needs of all households together.

The demand does not, furthermore, seem to have been artificially created by the availability of credit. The fact that loans are put quickly to work is one indicator, as is the successful

targeting to low income people discussed in detail in Section 2.4 of this chapter. Additional evidence on this point is provided by a sample of 25 households in Rashed who did not apply for loans. The most common reason for not applying was that the household had no need for a loan, suggesting that households in need of these resources used them. The bulk of the other non-applicants are people who feel they cannot afford repayment on current HILP terms.

The demand picture is not totally without problems. In each community added to the program, an education and explanation process is required. Initial resistance, particularly resistance to interest charges on religious grounds, must be overcome by showing the results of a first few loans. This has been accomplished so far. In Sidqi, however, organized religious opposition seems stronger to date; and this issue might create some continuing problems there or elsewhere.

2.5.3. Future Loan Demand

It is difficult to estimate accurately what future loan demand will be, even given the experience to date. Communities have been added to the program at different points, the loan freeze and gradual thaw confounds observed loan patterns, and operating

procedures, eligibility standards, and the like have changed over time. Setting all complications aside, we could estimate loan activity at 500 loans per year, which is the rate of activity so far. ^{24/} This produces 875 more loans through the first quarter of 1986 (the scheduled project end for HILP according to the current draft Implementation Plan), for a total of about 2250 loans. The further cost, with unchanged average loan size, would be \$1.38 million, for a total cost of \$3.55 million.

On the other hand, project staff believe 80 loans per month can be generated and processed. That rate results in 1680 further loans, through the first quarter of 1986 for a total of nearly 3050. The added cost is \$2.65 million, for a total of \$4.82 million. These last numbers are roughly consistent with the estimates, summing across projections for individual communities, that CHF has made in the draft Implementation Plan and which seem generally well-founded if a bit optimistic. They predict a final total of 3407 loans, costing \$4.99 million, according to Table II.12.

^{24/} Neglecting the freeze.

TABLE II. 12
CHF PROJECTIONS OF DEMAND FOR HOME
IMPROVEMENT LOANS

<u>Community</u>	<u>Buildings</u>	<u>Percent Demand</u>	<u>Number of Loans</u>	<u>Loan Amount (\$)</u>
Rashed	1000	.6	600	1463
Ghoneim	2500	.6	1500	1463
Sidqi	1407	.4	563	1463
Zein	500	.3	150	1463
Kafr El Elw	690	.6	414	1463
G. Baharia	300	.6	180	1463
Total	6397	.54	3407	

Actual demand per building has now reached nearly .5 for Rashed but is at .3 for Ghoneim after a significant period of activity, making the CHF expectations probably an approximate upper bound. By any of these projections, total demand for home improvement loans is both substantial and beyond expectations.

2.6. Types of Home Improvements

2.6.1. General Summary

The Project Paper envisioned that the HILP would assist people in improving the quality of their existing living space, in adding needed further rooms, and in linking their homes to the new infrastructure to be provided. Actual experience has been somewhat different. Households have indeed added rooms and improved existing homes on a substantial scale. But they have also built a significant number of entirely new apartments, likely demonstrating a backlog of potential demand for construction credit on reasonable terms for purchase of new homes. Also, because the HILP implementation has preceded the development of new infrastructure, loans have not as yet been used for infrastructure links. Significantly, a substantial number of rental units have been added. These units appear to be rented at prices affordable to low-income groups indicating that the HILP has contributed to the supply of units for this segment of the population.

2.6.2. Uses of HILP Credit

Tables II.13 and II.14 provide a detailed picture of how HILP credit has been used in the three communities in which there has been substantial experience. Turning first to Table II.3, it

TABLE II. 13
NUMBER OF UNITS AND ROOMS BUILT AS OF
DECEMBER 31, 1983

<u>Community</u>	<u>Construction of Water Closets</u>	<u>Construction of Complete Apartments</u>	<u>Construction of 3 Rooms</u>	<u>Construction of 2 Rooms</u>	<u>Construction of 1 Room</u>
Rashed and Zein	75	120	24	135	65
Ghoneim	53	152	92	134	75
Total	128	272	116	269	140

is clear that addition of rooms has been a major activity. By the end of 1983, 520 households had added one or more rooms (not including water closets); and a total of 1016 rooms were constructed. But in addition, nearly 275 entirely new apartments typically 2 to 3 rooms with a hall and water closet were built; this is one apartment for each five home improvement loans. ^{25/}

The extent of both room additions and especially apartment construction understates the interest households have in these activities. This is due to the fact that the issue of building license requirements for construction/improvement has only been partially resolved. After the freeze on all new HILP activities was lifted around the start of 1984, loans were initially made only for the least structurally substantial improvement activities.

^{25/} Complete apartments are typically 2 to 3 rooms with a hall and water closet.

TABLE II. 14
NUMBERS OF IMPROVEMENTS OF VARIOUS TYPES
TO EXISTING ROOMS AND APARTMENTS THROUGH MARCH 1, 1983

Community	Wood Roof	Trench for Cesspit	General Finishings	Plumbing	Stairs	Carpentry (windows, doors)	Electrical	Plastering, Painting	Tiling	Brick- laying ^a	Concrete Roof ^a
Rashed & Zein	4	15	14	25	20	117	32	196	151	136	767
Ghoneim	1	15	1	4	81	30	9	75	38	24	883
Total	5	30	15	29	101	147	41	271	189	160	1650

Note:

- a. These numbers refer to the number of existing rooms that had brick walls built for them or concrete roofs placed over them, estimated from m³ of activity.

Gradually, the addition of rooms was allowed. Even at present, construction of new apartments from the ground up is not permitted within the HILP.

Improvements to existing apartments and rooms have been concentrated in a few types of activities (see Table II.10, which is current only to March, 1983).

The most prominent activity is the provision of concrete roofs. If we assume that all roofs were placed on 4-room apartments, over 400 households roofed their homes. The other principal quality-improvement activities include plastering and painting, tiling, and carpentry (doors and windows).

It is worth noting that the patterns of activities differ substantially between the upgrading communities. The evaluation team did not investigate the reasons for differences, but the differences do at least suggest the value of letting households make their own choices about the kinds of activities they prefer to undertake.

2.6.3. Changes in Future Use of HILP Loans

We can anticipate at least two changes in the pattern of loan use in the future. Once infrastructure is installed, households will likely want to borrow to link their homes to it and perhaps for internal replumbing, provided that is allowed under the HILP. Market surveys reported in the Project Paper make clear that people have substantial interest in having sewerage services, even more so than in making other housing improvements. A second likely change is a return to heavier emphasis on building new units once the building license issue is fully resolved and such construction is again fully permitted.

Additional Issues Related to HILP's Contribution to Increasing
Housing Supply and Mobilization of Household Resources

2.7.1. General Summary

Two important questions were raised in evaluating the HILP's effectiveness. First is the question of whether or not the HILP has contributed to increasing the supply of rental units. Second is the amount of household resources leveraged by the loans for additional improvements. Our analysis suggests that the HILP has been effective on both counts. A significant number of HILP beneficiaries have built rental units. These units are rented at prices affordable to low-income households. In addition, an even greater number have contributed savings beyond the loans amounts granted to improve and expand their homes.

2.7.2. Rental Additions

An important question is whether home improvement loan funds are being used to add rental units that serve lower income people. A survey of a random sample of 25 borrowers in Rashed (conducted for this evaluation) yields some information on this topic. The 25 households added 9 rental units. These households are apparently not perfectly representative of all borrowers, because that frequency of rental additions would imply more

total added apartments than actually occurred; but they do indicate substantial rental additions. If one assumed that these households are representative of HILP borrowers, one can estimate that a total of 180 additional rental units were created in Rashed by HILP borrowers. This may be indicative of the fact that HILP borrowers are anxious to provide rental units in order to repay their loans. Most (38%) of the rental units, however, were created in buildings where the owners evidently has some savings to invest in addition to the loan. In short, while a direct relationship between borrowing for improvements and additions and creating rental units cannot be established, it can be safely assumed that without the loan fewer rental units would have been built. The additional savings invested would have most likely been used for the owners' own housing needs.

Nearly all the rental units added were rented for LE 20 to LE 25. If the units went to households paying 25 percent of their income for rent, their incomes would place them in the 25th to 35th percentiles of the national urban income distribution. Based on our limited sample, the rental stock affordable to lower income people is being expanded through the HILP. To an apparently lesser extent, further units are being constructed for the use of relatives (sons) of current homeowners who then marry and establish their own households.

2.7.3. Contributions of Families to Home Improvement

How much do families contribute to home improvements aside from the funds they obtain from HILP loans? Because this information is not generally collected in the loan process, we again relied on the survey of 25 Rashed borrowers.

The median contribution by these households was about \$650 and ranged from zero to \$3050. While over a quarter of the borrowers added no money of their own, the others averaged over \$1350 each. The largest number of those who did add some of their own money obtained the funds from a combination of pooled savings (Gamiya) and bonuses received at their factory workplaces. Others relied principally on earnings from work in the Gulf states, family members' funds, or extra work beyond their regular jobs.

The typical contribution adds a substantial amount to the work that can be undertaken using only the home improvement loan itself. For every LE 1.00 provided in the form of credit, an additional LE .52 of household resources was mobilized by surveyed borrowers. This sample-based calculation is consistent with JHP-PIU Engineer Mohamed Foda's rough estimate that households in the HILP overall add about 50 percent of the

amount of the loan from their own resources. Borrowers may also contribute materials and labor, but no explicit information is available. ^{26/}

Mr. Foda believes that at least the people trained in the Helwan Upgrading project's building trades vocational program are putting some of their efforts into carrying out work associated with the HILP. Regardless of the extent of the added labor, the cash contribution alone provides substantial leveraging of HILP loan monies. If the observed Rashed experience is indeed typical, borrowers will have added about \$1 million of their own resources to the slightly over \$2 million in HILP loans to date. Families are clearly very interested in making home improvements and are marshalling their various resources, extended by HILP loans, to pay for them.

2.8. Implementing the HILP

The HILP has been in operation for more than 3 years, during which a well-defined set of operating procedures has been developed. Overall, they seem to be serving the program well, getting loans efficiently made and repaid.

^{26/} At the time of Project Paper development, CFE predicted 50 percent defaults very early in the loan period. This has not been the case.

The basis for operation is the multi-faceted team that deals with each loan application. Each applicant deals with a team including a sociologist/social worker from CHF and JHP/PIU, an engineer from JHP/PIU, and a staff member of CFE's Helwan branch. The process is as follows:

- a. Social team members explain the loan program to potential applicants and assist them in preliminarily preparing applications, including gathering necessary information and documentation and indicating desired loan amounts and improvements to be undertaken.
- b. A formal loan application is completed at the CFE branch office in Helwan (formerly in a field office, before the branch was established), detailing applicant characteristics and loan desired. Social team members assist in this process but CFE staff have primary responsibility.
- c. Application information is verified: checking factory-worker salaries against actual payment documents, assuring ownership of buildings through presentation of a municipal tax receipt, ^{27/}

^{27/} Tenants are also eligible for the HILP, if the owners of their buildings sign an agreement to allow it; but few are actual borrowers to date.

checking residency with local community associations.

- d. CFE determines eligibility for a loan. Salaried factory workers must have incomes below LE 120 per month (individual, not household income). ^{28/} Pensioners and self-employed people must have incomes below LE 200 per month.
- e. CFE determines the maximum amount of the loan an applicant may borrow. The top limit is now LE 3000. But in general, loan amounts are constrained by established standards based on measures of ability to repay. Factory workers may have loan repayments no greater than 25 percent of base salary on their own. If they obtain a guarantee from another salaried worker, this may rise to 25 percent of net salary. ^{29/} The length of the loan repayment period is limited by the number of years left until the workers' expected retirement. ^{30/} Using the income standards, loan term, and the 7% interest rate, CFE can determine the maximum loan size. A similar process applies to pensioners and the self-employed, except that they must have guarantors who are salaried workers, they have an income

^{28/} Up from LE 80 and LE 100 previously.

^{29/} Net salary is about 1.67 times base salary on average.

^{30/} Maximum 20 years.

standard of 30 percent of household income up to LE 200 per month, and their loan terms are 10 years at most.

- f. An engineer team member inspects the home, makes sure the proposed work is feasible, ^{31/} and estimates the true cost of the applicant's desired improvements. If the cost is no more than the maximum loan amount, then that cost is the amount that is lent. If cost exceeds the maximum loan, ^{32/} a reduced level of improvement work is agreed upon.
- g. A CFE loan committee reviews and approves the loan, a direct salary deduction at the factory is arranged for to make repayments (for salaried workers), and the borrower signs a loan agreement.
- h. An engineer provides aid in final design and contracting, work begins, and a first disbursement is made from CFE once the engineer inspects the work. Additional disbursements are made, usually a total of three, as work is completed and inspected. Building materials are made available, by permit.

^{31/} For example that the foundation can support a proposed added floor of rooms.

^{32/} This is prevalent.

- i. Collection of repayments proceeds through deductions from factory-worker salaries and by payment at the CFE branch office by other borrowers. Door-to-door collections are made by CFE when payments do not arrive, unless the problem is a paper-work one with factory employers. Social team members have worked with CFE in problem cases, especially to help explain why it is important to the future of the program for borrowers to repay and not claim the loan as a grant they deserve.

While the procedures have numerous steps, they move quickly. In many cases, the period from initial application to loan approval is 15 days. Delays occur when documentation cannot be easily provided (particularly of having paid taxes) or when needed guarantors cannot be found, but processing itself is swift. And construction proceeds promptly. Teams are apparently quite efficient. A problem might arise in the future in retaining skilled staff, since a number of key people are not regular GOE employees and are paid salaries higher than normal GOE scale.

Coordination between CFE and PIU is good in most aspects of the process. The organizations and staffers clearly share goals of serving lower income people, especially factory workers, and

getting real home improvements made; and they are proud of their progress. The basic operations seem to proceed in substantial harmony.

However, there are some tensions regarding aspects of banking practice, which both CHF and CFE recognize. CHF considers CFE too inflexible on loan amounts, and would like the social team more involved in arrears collections. CFE considers the level of guarantee provided by borrowers and their guarantors' incomes, without further property security, to be insufficient. This is especially true because loans are relatively long term and, in CFE's view, may outlast people's employment in factories, their working lifetimes, or actual lives. CHF disagrees. CFE believes the current security standards are not fully sufficient for sound banking practice, expresses its disagreement in writing, and requests that it be directed in writing to proceed in particular ways. CFE considers itself functionally to be a financial service arm of JHP in the HILP, rather than a bank in its normal practice. This view is heavily colored by CFE's history of making only mortgage loans secured by the value of property ownership. In fact, many aspects of the HILP process--income and ownership verification, income affordability standards, periodic disbursement only after work is completed, full effort at collection--are very much the

equivalent of normal and sound banking practices. The default and arrears record of HILP to date supports the view that present guarantees are sufficient, although long-run experience may differ. ^{33/} The HILP can apparently proceed well as currently structured, and CFE is willing to continue in its current role. But CFE, or likely another financial institution as well, would need altered assurances and regulations in order to willingly lend their own funds in a HILP effort.

^{33/} Source is interviews with CFE and CHF staff.

III.

ENGINEERING DESIGN AND CONSTRUCTION

3.1. Review of Engineering Design and Construction

This chapter examines the implementation status of the project with regard to physical design and construction noting achievements to date and cost-savings in the design of infrastructure and community facilities. Based on this examination the chapter ends by underscoring constraints and issues and recommendations relevant to the implementation of the physical components of the upgrading project as well as for future projects.

3.2. Current Status and Achievements3.2.1. Infrastructure

Currently JHP/PIU has two contracts with joint Egyptian/expatriate consulting engineering firms (Dr. Ahmed Abdel Warith/Binnie Taylor and P.B. Sabbour/Parsons Brinkerhoff) to design the infrastructure networks, prepare bid documents and supervise the construction of these systems. These firms have now completed the designs for the water supply, sewerage, and

electrical distribution networks for the upgrading sites of Arab Rashed, Izbet Zein, Izbet Sidgi, Arab Ghoneim and Ghoneim Baharia and are in the final stages of completing the designs for El Bagour and Kafr El Elw (see Table III.1, Implementation Status). Draft bid documents have also been prepared for the first five sites, however, none of the work has been advertised for bids. In addition to the work on the infrastructure designs and bid documents, construction of several infrastructure facilities has been completed. The JHP/PIU has installed 8 wastewater soakaways to dispose of wastewater from public taps in Arab Rashed, extended the water supply network and installed wash stands in Arab Ghoneim. The water supply extension and wash stands have not been put into operation and the soakaway are yet to be turned over to the local authorities for operation and maintenance.

Based on the description above of actual accomplishments, the physical upgrading of the project areas is not proceeding according to the original Project schedule which had a completion date of FY 83. However, a new schedule has been proposed in the 1983 Implementation Plan. Using this schedule as the new basis of comparison between projected and actual accomplishments, we find that project implementation is generally proceeding according to schedule, but with some delays in certain areas

Table III.1

IMPLEMENTATION STATUSUPGRADING COMPONENT

	<u>CFF-SITE COLLECTOR</u>	<u>KAFR EL AL</u>	<u>EL BAGOUR</u>	<u>IZBET ZEIN</u>	<u>ARAB GHONEIM</u>	<u>GHONEIM BAHARIA</u>	<u>IZBET SIDOI</u>	<u>ARAB RASHEH</u>
<u>Data Inventory Report</u>	X	X	X	NA	X	X	X	NA
<u>Urban Plan</u>								
Topography	X	X	X	X	X	X	X	X
Land Use Plan	-	-	-	-	X	X	-	X
<u>Preliminary Design*</u>	X	X	X	X	X	X	X	X
<u>Basic of Design Report</u>	X	X	X	NA	X	X	X	NA
<u>Draft Tender Documents/ FINAL DESIGN</u>	-	-	-	X	X	-	X	X
<u>Final Tender Documents*</u>	7/84	9/84	9/84	X	5/84	5/84	X	X
<u>Tendering/Contracting**</u>	9/84	12/84	12/84	12/83	6/84	6/84	3/84	1/84
<u>Construction</u>	-	-	-	-	-	-	-	-

X COMPLETED- NOT COMPLETED

N/A Not Applicable

* Planned completion date for final tender documents.

** Planned completion date for tendering and contracting.

Where the project has fallen behind is in completing action on the final bid documents for infrastructure construction at Arab Ghoneim, Ghoneim Baharia and the off-site sewage collector. The project is also falling behind the projected schedule for bidding and contracting in Arab Rashed, Izbet Sidqi, Arab Ghoneim and Ghoneim Baharia.

The delay in the case of Arab Rashed was due to a belated request by AID for design changes in the sewerage network coupled with a drawn out period of negotiating this change with the engineering consultant firm. The other delays are largely due to the lengthy review and approval process required by AID. In addition, the implementation plans did not provide sufficient time in the process for unforeseen problems, e.g. The delays cause by the proposed use of the "Y" connection and its ultimate rejection by GOSSD in June of this year.

3.2.2. Community Facilities

JHP/PIU has built two schools (one each in Arab Rashed and Arab Ghoneim) and a community training center in Arab Rashed and a youth center in Arab Ghoneim. (See Table III.2). All of these facilities have been functioning although the schools are presently closed for summer vacation. However, the Arab Rashed

TABLE III. 2 .
NUMBER AND LOCATION
OF COMMUNITY FACILITIES
TO BE BUILT

	Fire St.	Schools	Community Center	Youth Center	Health Center
Rashed	-	1*	1*	-	-
Ghoneim	-	2*	1	1*	-
Sidqi	1	2	2	1	1
Zein	-	1	-	-	-
Kafr El Elw	-	1	1(Combination Health Center)	1	-
Baharia	-	-	1	-	-
Bagour	-	-	-	-	-
	—	—	—	—	—
Subtotals	1	7	6	2	1

*Construction completed.

Vocational Training Center is currently running its eighth training session with 28 students receiving practical training in masonry, plumbing, electricity and carpentry. (See photos in Annex.) In addition, the JHP/PIU has had two separate solid wastes collection trials completed, each using different approaches (i.e. strategically placed empty oil barrels with truck pick-up in Arab Ghneim and individual household collection Zabaleen in Arab Rashed).

3.3. Cost Savings on Community Planning and Infrastructure Design Standards

The project paper called for "the introduction of new, innovative site planning and physical design solutions... which will substantially lower the per capita costs of infrastructure and housing below current public sector practice in Egypt". The extent to which it has been possible to introduce new solutions that cut costs is examined below.

3.3.1. Infrastructure Networks

In response to instructions from the JHP/PIU to incorporate cost-saving components in their designs, the consulting engineers proposed three changes - a reduction in the minimum roadway width, the installation of unpaved streets and the substitution of

the "Y" connection to the sewer instead of the traditional connection which discharges into a manhole. JHP/PIU obtained approval for the reduction of the minimum roadway width from 8 meters to 6 meters. JHP/PIU is also moving ahead with its plan to install unpaved, compacted streets. Approval was also received for the installation of the "Y" connections in the Arab Rashed sewer network. However, this approval was made on the original sewer network plans which have since been revised and it remains to be determined if the approval is still valid. While this report was in its final drafting, the sewerage authority (GOGCSSD) sent a letter to JHP/PIU disapproving the use of the "Y" connection.

In addition, the engineering consultants contracted by JHP/PIU to prepare the infrastructure designs have employed the least cost approach in selecting the types of water supply and sewer pipes (both locally produced) to be used in the upgrading sites. However the networks for water supply, sewerage and electrical services were designed using standard Egyptian engineering practices.

These infrastructure network designs are based on providing service to each house wherever possible, but in an effort to reduce costs further, the JHP/PIU is now planning to eliminate

the installation of the electrical network from the upgrading component because of its high cost and the fact that the Egyptian Electric Company is capable of providing this service using its own resources.

As a result of the changes proposed, total costs of infrastructure have been reduced by approximately \$3 million. Significant savings have already been incorporated in the project budget through the use of the 6 meter minimum road width and the unpaved, compacted road. The 6 meter minimum road width represents a cost savings of 25% wherever it has been substituted for the 8 meter road. The use of unpaved, compacted roads represents a savings of approximately 80% from the costs of paved roads of equal width. The combined savings produced by these two changes is estimated to be around \$1.0 million. The greatest savings will come from the elimination of the electrical network which is estimated to reduce costs by US \$2.0 million.

As noted above, the most significant cost savings in the project have come from the reductions in road width and in the use of unpaved, compacted roadways. The fact that narrow streets restrict access to larger vehicles has both positive and negative consequences. The restriction of vehicles tend to restrict noise and air pollution but also limits access to emergency service

(e.g. fire trucks and ambulances) are not readily available to the residents.

With regard to unpaved, compacted roads, while they are handy in terms of cost-savings, especially for the installation of underground utility networks, they are a source of dust and the residents may over a period of time, beyond the implementation period of this project, want these to be paved.

3.3.2. House Design

Historically, the traditional house construction method (i.e. brick bearing-walls with plain, non-reinforced concrete and brick foundations and steel reinforced concrete beam and slab floors and roofs) was cheaper than the steel reinforced concrete frame construction system using brick partition walls. However, this no longer appears to be the case mainly because of the sharp rise in the cost of the highest quality brick required for wall-bearing construction.

The residents in low-income informal settlements continue to use the traditional house building system because it requires less skilled workers than the reinforced concrete frame construction even though this choice no longer provides a savings in the cost

of construction. The traditional construction system also contains some inherent disadvantages in that it requires uniform and high-resistance soil characteristics to avoid differential settling and cracking of walls and, for safety reasons, should not be built higher than two stories. Some of the residents in the upgrading areas are reducing construction costs by using corrugated asbestos-cement roofing in place of the traditional reinforced concrete beam and slab.

3.3.3. Community Facilities and Organizations

Rather than attempting to incorporate cost-saving design changes in community facilities, the JHP/PIU obtained a part of its cost-saving objective by reducing the number of facilities to be built.

Despite the fact that the service standards being used for community facilities in the upgrading sites, are lower than the official standards, they appear to be sufficient to meet the needs of the communities. The shortfall in the number of classrooms is being resolved by increasing class size and by operation 3-shifts per day.

While a total of U/S/ \$7.5 million (including 53% inflation) was provided in the original Project Paper budget, the 1983

Implementation Plan sets aside U.S. \$6.0 million for community facilities. It also sets aside U.S. \$2.0 million for community organization, a budget category that does not appear in the Project paper budget. Assuming that the cost of community organization activities was meant to be included in the Project Paper community facilities budget, then there is an apparent cost increase of about U.S. \$0.5 million in the 1983 Implementation Plan Budget over that in the Project Paper.

3.4. Constraints/Issues and Recommendations

All of the parties involved in the upgrading program have valid reasons for wanting the construction phase to proceed as designed and on schedule. Some of the parties also want the construction completed within budget. For obvious reasons, the residents want to see the infrastructure in place and put into service. The consultants and contractors want to get the job done in order to move on to the next job to maintain their own schedules and profitability. JHP/PIU also want to complete constructions on schedule in order to have a workable model and a track record to position itself to manage future upgrading projects. However, JHP/PIU's desire to get on with the job is tempered by the fact that the proposed implementation schedule entails a significant upsurge in the rate of budget expenditures at a time when the MOH, as well as other GOE agencies, are operating under strict budgetary constraints. On the other

hand, AID because of its own internal policies regarding budgeting and accountability, finds itself with its own compelling reasons for wanting to see that the construction is correctly executed on schedule, within budget and as designed. There are several constraints and issues which face the JHP/PIU and AID with respect to implementing the infrastructure networks as designed assuming that the construction phase moves smoothly and the systems function once installed. These issues and constraints are discussed below and recommendations for their resolution in this project are made as well as recommendations for avoiding their repetition in future projects where relevant.

3.4.1. Level of Monitoring

Regarding the progress in the engineering aspects of the upgrading component, the project has completed most of the planning and design tasks and now is at the point of moving into the most demanding phase of implementation - namely that of construction. This phase, under the best of circumstances, will have major impacts on the living environment in the upgrading sites and, inevitably, will disrupt the living pattern of the residents. Therefore successful execution of the construction phase will require close and continual monitoring by both JHP/PIU and AID in order to contain and solve the many unforeseen problems which are bound to arise.

The level of monitoring required by AID in order to meet its own obligations as well as those to the beneficiaries, cannot be met at the present level of staffing. It will require an additional full-time AID project engineer (working out of the Helwan office) to collaborate with the JHP/PIU field engineer in monitoring work activities when construction at all eight sites (the seven communities plus the off-site works) are underway.

On the JHP/PIU side, there are not enough engineering positions in the present organization to provide the staff resources needed to monitor the infrastructure construction phase. Assuming that the present staff will continue to provide the same level of attention to H I L P community facilities construction and community organization activities, a totally new cadre of engineers will be needed to monitor infrastructure construction. Ideally there should be one engineer working full-time at each of the eight sites. However, because of the difficulty government agencies have in recruiting and retaining engineers with construction experience and because two of the communities involved (El Bagour and Izbet, Zein) are relatively small, it may be that an additional cadre of three field engineers would be a realistic number and could provide the level of monitoring needed to keep the construction moving smoothly and on schedule.

3.4.2. Operation of Sewerage Networks

To ensure the proper operation of the sewer networks, two major issues need to be resolved. The first is the need to provide adequate disposal of sewage and the second is the need to install and operate a permanent solid collection and disposal system in each upgrading site. (Discussed separately below - see 3.4.3.)

What might have appeared to have been a minor omission from the set of criteria applied in site selection has resulted in a significant increase in infrastructure costs and could possibly delay the start of the construction phase of the project. The fact that the need to have a functioning off-site facility for final disposal of sewerage from each upgrading site was not included among the site selection criteria has required the project to build temporary sewerage treatment and disposal facilities. The cost of these temporary installations is estimated in the 1984 Implementation Plan at U.S. \$8.25 million. This represents approximately 30% of the total infrastructure costs for all upgrading sites. At this point in the project implementation process, there appears to be no alternative but to go ahead with the installation of the sewerage networks as designed. However, before starting construction, JHP/PIU (and AID) should obtain written approvals from the proper authorities for the Izbet Zein discharge and for the off-site sewage

collector discharge to Tebeen pumping station. Approvals have been obtained from the Ministry of Health and the Ministry of Irrigation for the discharge of treated sewage from the Izbet Sidgi package treatment plant to the Reshah Drain. Furthermore, JHP/PIU (and AID) should obtain assurance from GOSSD and CWO that the additional pumping capacity needed to handle the discharge from the off-site collector will be in place and operating before the off-site collector or any of the five related sewer networks are completed.

3.4.3. Solid Waste

In this and other projects, AID has insisted on linking the installation of water supply to the simultaneous installation of sewerage systems. The value of this linkage was demonstrated in the fact that the Arab Ghoneim water network extension will not be placed into service until the sewer network is installed and put into operation. The need for a similar linkage between sewerage and solid wastes collection is demonstrated by the frequent blockage of sewers due to the residents' practices of disposing of solid wastes in the sewerage system. With regard to the solid wastes collection system for each site, JHP/PIU should conduct its own ex-post-facto evaluation of the collection trials in Arab Rashed and Arab Ghoneim to determine which of the two systems or a modification of either system would provide a viable

and permanent operation. In addition, in future AID funded projects, AID should insist on linking solid waste collection to the installation of sewerage and water supply systems.

3.4.4. Road Networks Design and Demolition

If the road network is constructed as designed, it will require the demolition of some houses. Resolving the issue of demolition of houses and the relocation of occupants is likely to cause delays in the implementation of the project. In order to avoid further delays, JHP/PIU should seriously consider not building roads which would require demolition of homes and retain the existing rights-of-way as footpaths. Although, in theory, this approach would limit access to fire trucks, in reality the residents have no telephones to call the fire station even if it were located close enough to respond in a timely manner. Therefore, the provision of access to fire trucks has no practical value for the near term. Access may be provided in the long-term when the equipment necessary for timely notification and response is finally in place.

3.4.5. Sewerage Network Installation and Demolition of Cesspits

The installation of the sewerage network as designed will require the demolition of cesspits. Several temporary solutions for handling the sewage have been proposed. These alternatives

include relocation of affected families, the installation of temporary cesspits within the house, the collection and piping of sewage from affected homes to an unaffected cesspit or to a sump serviced by a pumper truck, or the use of chemical toilets. Ideally, the sewer network could be installed beginning from the downstream end thus allowing the installation of an operating house connection and thereby eliminating the need for the temporary storage and disposal of sewage. In cases where none of these solutions is acceptable, JHP/PIU should consider leaving the cesspits in place and not install the sewer in the affected streets. The same recommendation would also apply where streets are too narrow to allow the installation of traditional house connections. The remaining cesspits could be serviced by pumper trucks for the present. For the long-term solution JHP/PIU might consider the installation of small-bore sewers to collect and transport the liquid effluent from improved cesspits (or septic tanks) to the collector.

3.4.6. Innovations in Designs

The introduction of new equipment, materials or techniques into the design of infrastructure components, especially for disposal of sewage, has met with opposition from the specialized GOE agencies concerned. The reluctance of these GOE agencies to approve these variations from standard designs practices has caused considerable delay in the implementation of the project.

To avoid delays in the future, it is recommended that new, innovative designs be developed and tested either in parallel with the main flow elements of the project to avoid delaying implementation of the project (eg. in the manner that the solid waste collection trials were run) or as a separate pilot demonstration activity.

They could also be developed and tested as part of the activities to be implemented in the "unsewered areas" component of the Cairo Wastewater Project.

3.4.7. AID Review and Approval Processes

AID regulations require its review and approval of construction projects at each significant step of implementation. (See "covenants", Project Paper, page 44, pp. B.1.d.) This procedure has caused delays in project implementation.

✓ In planning future upgrading projects, the implementation schedule should provide sufficient time for the review and approval process to proceed without impacting on the total project schedule. The review and approval process should also be formalized by appointing specific working groups of competent senior engineers for each infrastructure category (i.e. water,

sewer, and roads). Members of these working groups should coordinate their review work and submit their approval recommendation simultaneously to the JHP/PIU and AID within a predetermined time frame.

3. 4.8. Acquisition of Land for Rights-of-Way
and Community Facilities

In the site selection process JHP/PIU staff have identified sites on vacant land for the future construction of community facilities. In some cases these lands have been built upon or occupied in some manner making them unavailable for the intended purpose. JHP/PIU is well aware of the need to identify and reserve land and is taking steps to resolve this problem. Land and rights-of-way are also needed for infrastructure networks and related facilities. JHP/PIU is now having trouble obtaining the necessary land and rights-of-way for its physical structures and networks. In the future, it is recommended that the identification, reservation and acquisition of land for project structures and networks be integrated into the site selection process.

There may be no easy solution to the issue of acquisition of land and rights-of-way. JHP/PIU will have to continue to address this issue as best it can. However, JHP/PIU may be forced to explore

alternative sites and routing of networks as a possible way of resolving this issue in the event that the land and rights-of-way required by the approved plans reflect the optimal routing possible under existing circumstances, any alternate routing would be certain to entail additional costs. Therefore JHP/PIU should make all reasonable efforts to obtain land and rights-of-way for the present design before investing both time and money in investigating alternatives. The major constraint affecting the installation of facilities appears to be the identification and reservation of land at each site.

3.4.9. Construction Time

There is a final concern that the installation of infrastructure will require more time than the 18 month period that the JHP/PIU and engineering consultants are projecting. Even the 18-month period will be extended by the phasing of construction. Any major additional delays may require the extension of the PACD beyond 12/31/86.

IV.

PROJECT MANAGEMENT4.1. Background

One key to the successful implementation of the upgrading program at the Helwan sites is effective project management. While the importance of good management was recognized when the project was first defined, the amount of time needed to establish a new management unit, and perhaps the ability of the GOE to identify, recruit and assemble a good management team was unquestionably underestimated. While this is not an uncommon phenomenon in the context of a developing country, the absence of a full complement of effective and experienced project managers has had a negative effect on the timeliness of project implementation.

It was initially assumed that little time would be needed to put the management team in place, and that there would be few, if any, difficulties associated with the establishment of a new unit, the Joint Housing project (JHP), in the Ministry of Housing. Little attention appears to have been given to the problems that arise when establishing a new agency. Even less attention was given to the consequence of assigning this new government agency primary responsibility for the management of a US \$160 million project.

The definition of the role and administrative structure of the Joint Housing Project, the MOH agency responsible for overall project management, has emerged during the four and one-half years of project implementation. The responsibilities and authority of JHP staff have developed in the context of working with the other agencies and institutions involved in executing the upgrading activities in Helwan.

This chapter discusses the structure of project management. It begins with a consideration of the role of the JHP, the government agency responsible for managing the project, and the Project Implementation Unit (PIU), the division of JHP charged with executing the project. The activities of the other agencies and institutions that have influenced the structure of project management (USAID and CHF) are summarized, and the role of each is analyzed. While the Credit Foncier Egyptien plays the central role in the implementation of the Home Improvement Loan Program, a critical component of the upgrading project, its operations are considered in another section of this report.

4.2. Project Management

The present structure of overall project management appears as Figure 1. This structure is an arrangement that allows current momentum to be maintained in regard to:

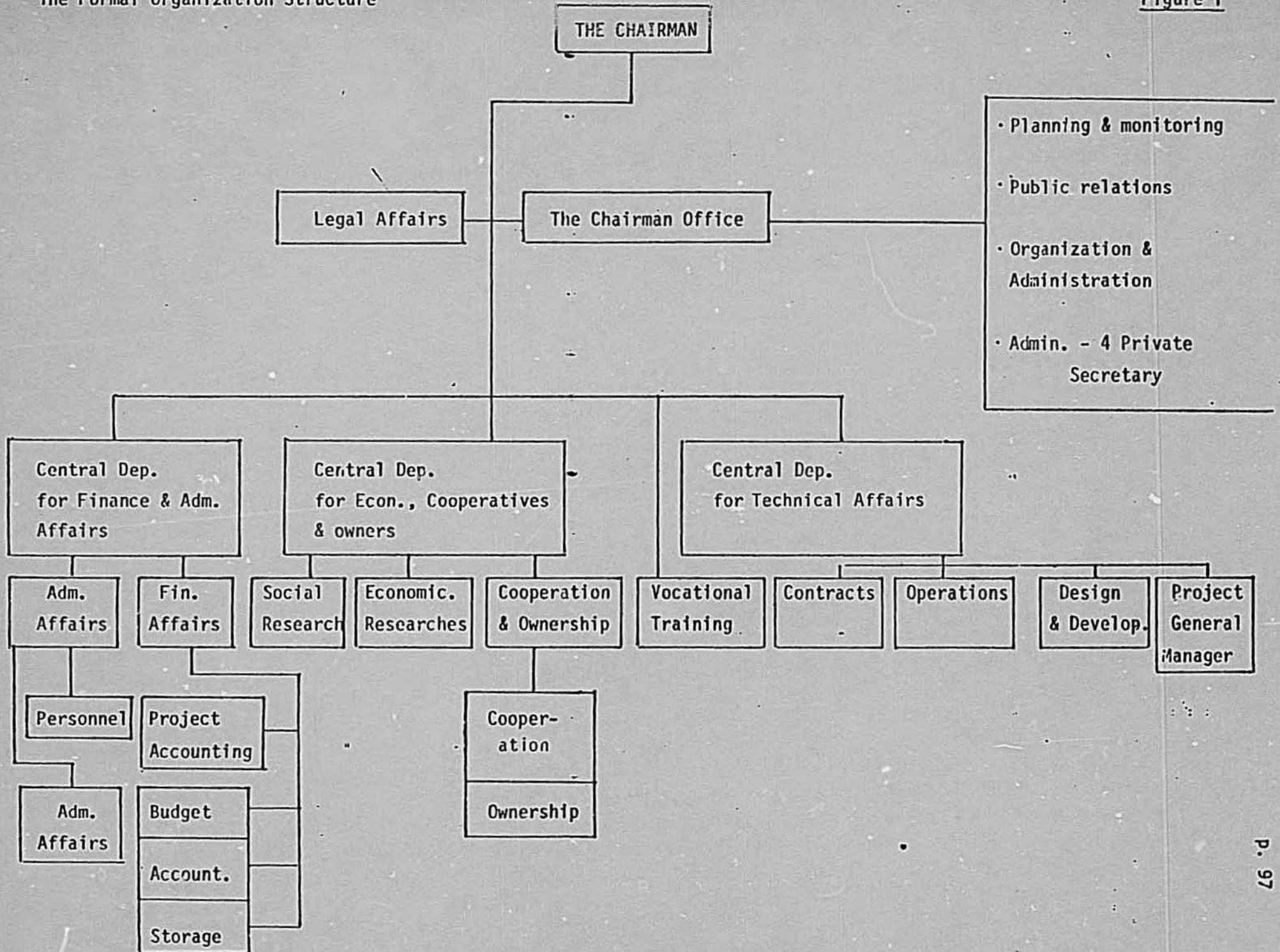
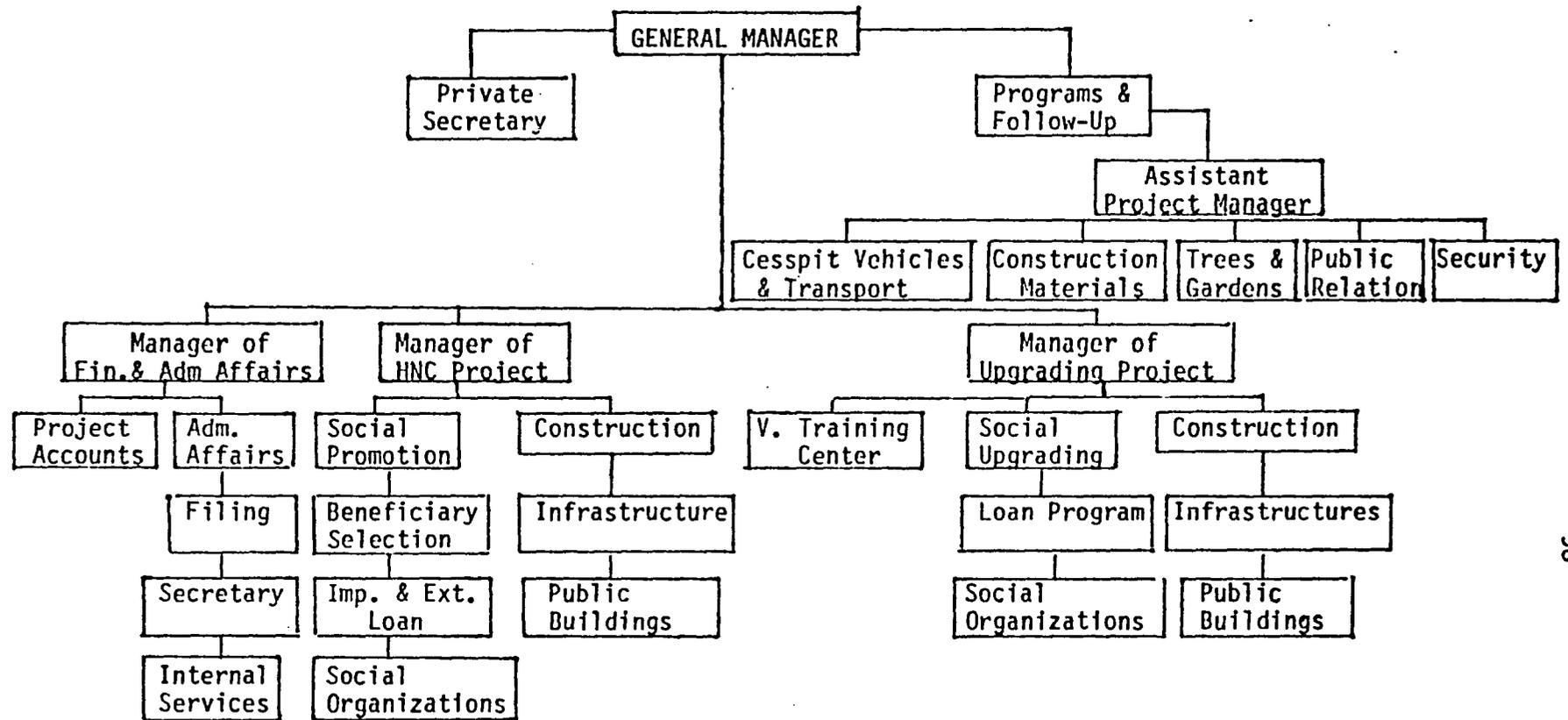


Figure I A



INTERNAL STRUCTURE

FOR

THE PROJECT

(PIU)

- Upgrading informal settlements;
- Establishing and operating community development programs, e.g. vocational training program, and
- Operating a functioning and effective credit program for home improvement.

The present structure reflects a workable response to the problems encountered in the course of (1) implementing the upgrading activities in Helwan and (2) simultaneously establishing an institution charged with defining and executing the upgrading and new community programs.

The diagram of the organizational structure does not incorporate those committees which play a critical coordinating role in project management. These committees were organized to achieve specific project objectives by bringing together individuals from departments and divisions within the project, as well as from other agencies and organizations, e.g. GOSSD, Greater Cairo Water Authority, etc. who among others have the authority to review (and approve?) the upgrading component of the Helwan project. These committees were formed by the JHP to discuss and resolve issues pertinent to the project. They constitute an important channel through which the opinions of the different agencies and institutions are being exchanged.

Since several staff members of and technical advisors to the JHP and PIU, its implementation arm, were once members of the agencies whose approval JHP/PIU requires for project implementation; there are strong personal ties between the project staff and key individuals working in the agencies represented on the committees. Furthermore, JHP/PIU has hired consultants on a part-time basis who presently hold senior positions in the agencies responsible for approving infrastructure designs and operating the networks after installation.

Below is a partial list of the standing committees that deal with upgrading.

JHP Steering Committee

Foreign Purchase Committee

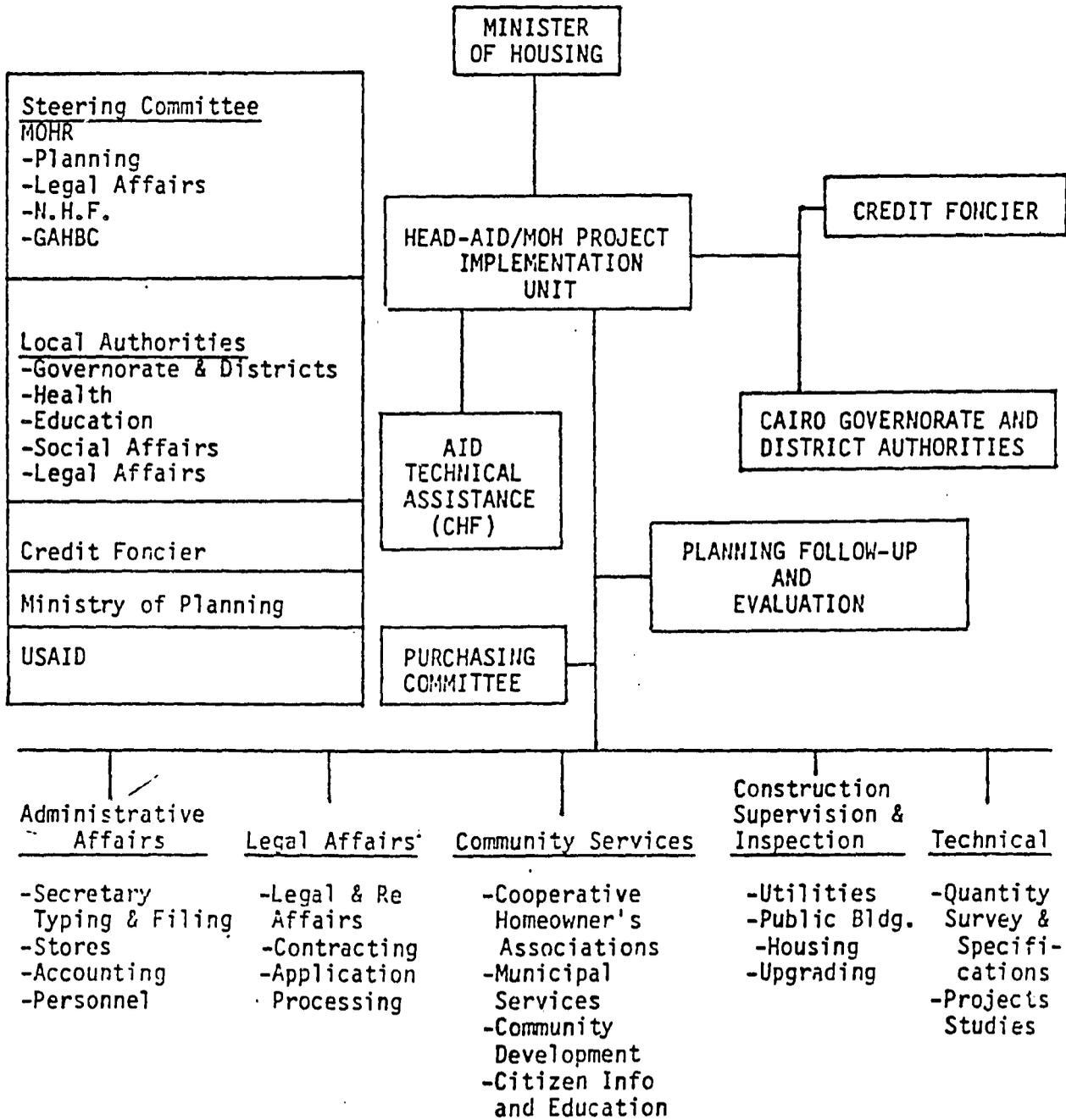
Upgrading Coordination Committee

Home Improvement/Small Enterprise Loan Committee

Project records indicate that neither the above structure nor the management structure defined in the Project Paper were in place at the start of project activities. (See Figure 2.) In fact, the management structure proposed in the Project paper was never established. That structure assumed that the Joint Housing Projects Division of the MOH would be responsible for making policy,

Figure 2

PROJECT PAPER ORGANIZATIONAL FRAMEWORK - MOH IMPLEMENTATION UNITS



Administrative Affairs

- Secretary
- Typing & Filing
- Stores
- Accounting
- Personnel

Legal Affairs

- Legal & Re Affairs
- Contracting
- Application Processing

Community Services

- Cooperative Homeowner's Associations
- Municipal Services
- Community Development
- Citizen Info and Education

Construction Supervision & Inspection

- Utilities
- Public Bldg.
- Housing
- Upgrading

Technical

- Quantity Survey & Specifications
- Projects Studies

coordinating the activities of the agencies involved in funding (USAID and MOH) and implementing the program.

Created by Ministerial Decree No. 48, issued on February 13, 1979, the Joint Housing Projects Agency of the MOH was given a broader mandate than originally defined in the Project Paper. This new organization was "to implement agreements with foreign governments and international organizations to finance projects for low-income families." The decree also established a Project Implementation Unit (PIU), although this was not given an organizational format or a specific scope of work. (See Figure 3.)

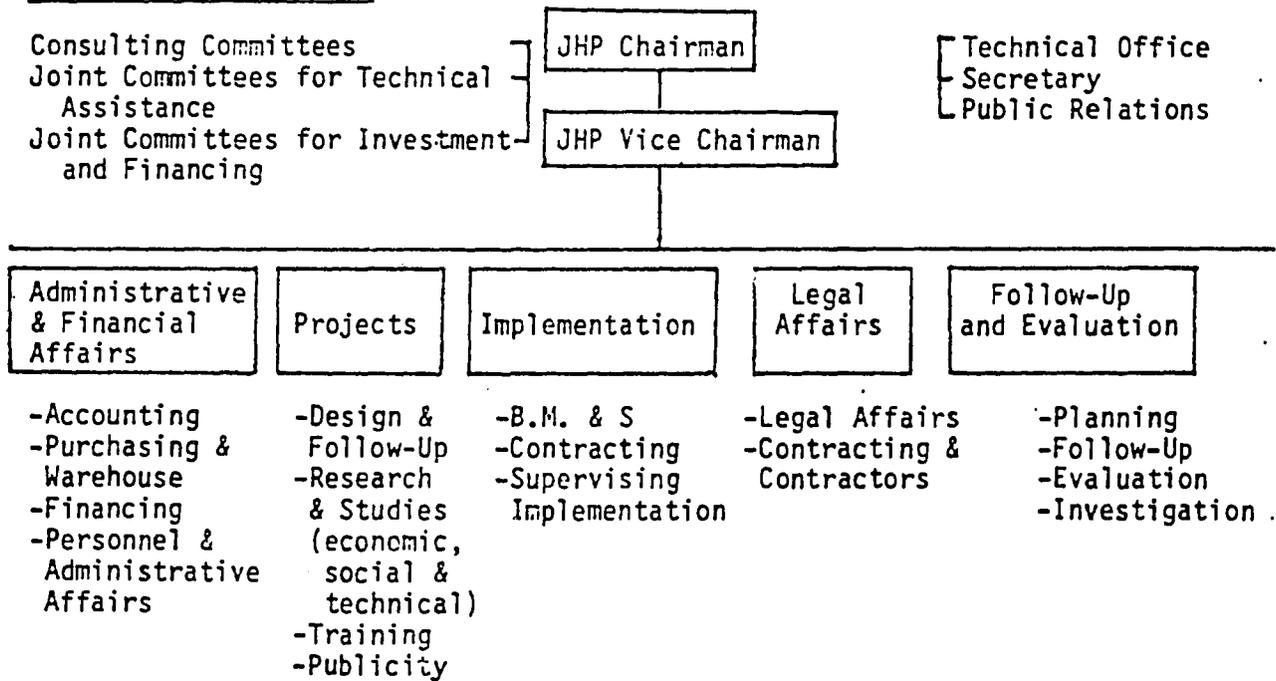
Failure to establish clear lines of authority and responsibility between the JHP and the PIU, and the absence of a clear definition of the mission of the agency produced a debate on these issues and, over time, prompted changes in the overall organization structure. The debate occurred between the staffs of the JHP and PIU, and between the JHP/PIU and the agencies working with them to implement the project, principally USAID - the funding agency, and the Cooperative Housing Foundation (CHF) - the technical advisor to JHP/PIU.

One view, formulated after protracted delays in project implementation and the continued absence of a defined management

Figure 3

JHP Organization Chart in Decree #48

MINISTRY OF HOUSING
ORGANIZATION CHART
JOINT HOUSING PROJECTS



structure -- in spite of repeated attempts to establish one, suggested that efforts should be made to begin implementation. Lessons learned in the course of implementation would be used to develop a responsive and effective management structure.

Another view argued that securing management and technical support was the first priority. Without qualified and experienced project management, the upgrading program could not be implemented at the scale and rate proposed in the Project Paper. This view proposed that implementation should be delayed until project management issues were satisfactorily resolved.

Neither position was as rigidly expressed as the statements above suggest. Both recognized the important connection between effective implementation and good management. The difference between the two positions turned on the issue of where the initial emphasis should be placed. To a considerable extent the debate was never definitively resolved.

At project start-up in 1979 the JHP/PIU -- although inadequately equipped and staffed -- tried to plan, implement and monitor every aspect of the upgrading project. With few staff and an unclear definition of the scope of work of individual departments and the relationship between the JHP and the PIU, the agency executed urban

plans and engineering designs, prepared tenders and wrote contracts, and supervised construction.

The burden of this work load on the small staff of the JHP/PIU, coupled with coordination requirements between JHP/PIU and the other institutions and agencies involved in the project, produced lengthy delays in project implementation. Almost two and one-half years passed between the formal establishment of the JHP/PIU and completion of the first upgrading activity. This was in part due to JHP/PIU's failure to define an administrative structure that corresponded with its management resources.

CHF reports from project start-up through June of 1982 indicate that JHP/PIU was not discussing the issue of overall project management but involved in designing and implementing specific interventions at certain sites in Helwan, specifically Arab Ghoneim and Arab Rashed. (In fairness to JHP/PIU, it should be noted that emphasis on implementation rather than the development of an effective project management structure may have been imposed from without rather than decided within the agency.)

The current management structure (Figure 1) places the least strain on the management capacity of the JHP/PIU staff while enhancing available skills and increasing the flexibility, responsiveness and

technical competence of the agency. At the same time, the existing structure relies heavily on the resources of CHF, the technical assistance unit, and private sector design, engineering and construction firms to achieve tangible, visible improvements in the communities selected for upgrading.

By operation rather than explicit definition, the current management structure focuses on three functions:

- (1) tendering, contracting and supervising upgrading tasks -- a role familiar to most public works agencies;
- (2) working with government departments responsible for approvals, the GOE agencies charged with operating infrastructure systems after installation, and the A/E firms and construction companies contracted to design and supervise construction of the physical components of the upgrading projects to discuss and resolve problems of planning and design, and
- (3) acting in concert with the communities to prepare each to accept and utilize properly not only the public facilities and physical infrastructure called for in the project, but all the programs available, e.g., vocational training.

In the current context of project management, the JHP/PIU -- the only agency with authority to manage the upgrading project -- is emphasizing (1) management training, (2) the development of good working relationships with all the agencies and institutions involved in the project through the definition and promulgation of improved procedures for designing, tendering and contracting, and (3) the establishment and/or institutional enhancement of "Community Associations for Development." 34/

4.2.1. The Roles of the JHP and the PIU

The Joint Housing Projects Department and its Project Implementation Unit have frequently been mentioned together throughout the above discussion of the project management structure. This would suggest that both are responsible for all project activities. Technically the role of JHP and PIU are distinct. However, since the lines of authority and responsibility frequently overlap in certain areas, the two are discussed jointly as JHP/PIU.

34/ See Zaki memoranda of March 1, 1984 - "A Budget for Training JHP staff for the Coming two Fiscal Years," and April 8, 1984 - "Planning for the Implementation of the Results of the Workshop of May 7, 1984", and El-Messiri's undated memorandum of 1984 - "Implementation Plan for Community Organization in Upgrading Areas."

Constitutionally the JHP is responsible for policy formulation and programming international assistance with GOE counterpart funds in urban upgrading activities. The JHP is also the coordinating and administrative unit that deals with donors and the GOE on the selection and financing of upgrading sites and, through its implementation unit (PIU), with public and private sector agencies, institutions and companies technically capable and contractually obligated to define, execute, monitor and evaluate the upgrading program. The JHP has a policy-making and an administrative, i.e., support, role.

The Project Implementation Unit is in principle a technical, staff unit responsible for managing the overall execution of the upgrading program. The PIU has a line function and contains technicians and experts who are familiar with the technical, as distinct from the administrative, substance of the program.

While this distinction is clear by definition, there is considerable overlap in practice. Many of the functions that should properly fall exclusively to one division are in fact found in the other or, more commonly, an aspect of the same function can be found in both the JHP and the PIU. This results in part from the fact that the institution is still in the process of defining its final organizational structure. In

addition, it has only had two upgrading programs to manage. ^{35/} In other words, while the agency was created to direct what was assumed to be a comprehensive and national program in upgrading, its experience has been limited to the two projects for which it is responsible. This reality has the effect of making the institution responsive to the specific objectives its projects, and in some respects, of making the institution and the projects indistinguishable.

4.2.2. Staff Recruitment, Training and Retention

The present management structure of JHP/PIU emphasizes the contracting, monitoring and evaluation functions of upgrading. This seems to reflect a good blend of JHP/PIU resources and the demands of the Hewlan project. In order to accomplish these objectives, considerable effort is being given to training staff in these disciplines.

The JHP/PIU has reduced the degree of staff involvement in the activities of the program -- (for example, staff are no longer involved in executing engineering designs). Still, the agency

^{35/} JHP/PIU has been working with the World Bank on their first Urban Development Project.

remains subject to all the problems common to government agencies throughout the developing world. Low government salaries, and the differential between salaries in the public and private sectors, make it difficult for the JHP/PIU to recruit, and retain staff.

At present, many key JHP/PIU staff positions are filled by consultants who are paid more than government staff. These staff are generally retired, former government employees who have the required experience and technical competence but no signature authority.

Many top management positions in the JHP/PIU are filled by advisors; many middle management posts are vacant. This is a phenomenon common to most public and even private sector firms in Egypt. The allure of better salaries elsewhere in the Middle East prompts many of the best Egyptian managers to leave the country. The absence of mid-level management staff has had a critical effect on the rate of project implementation in Helwan. In an attempt to resolve this problem, CHF, with the concurrence of USAID and the Government of Egypt, has recruited and pays -- at a higher wage level than GOE employees -- mid-level and upper level management staff for the project.

It is apparently not difficult to recruit entry-level staff, but almost all are recent graduates without relevant job experience. As soon as a modest amount of experience is acquired, many go to other countries in the Gulf or take positions with other agencies and companies in Egypt. (Those interviewed suggested that men are more likely to go overseas than women. While women exhibit a high degree of loyalty to the program, their available time is limited by family obligations.)

Retention is a major problem. It is common to all agencies -- not just JHP/PIU, and is unlikely to be resolved in the near future, even with additional emphasis on staff training.

4.2.3. Proposed Reorganization of the JHP/PIU

In the last six months (1984), JHP/PIU has made a major effort to be reorganized as a "general organization." Reorganization, it is suggested, will resolve several existing management problems. As a general organization, the JHP/PIU would have an independent Board of Directors, consisting of the representative of the agencies involved in upgrading. The Board would set policy and the broad programmatic guidelines. Personnel of the new general organization could receive salaries higher than those paid to government employees. In addition, they would be

eligible for production incentives, bonuses and allowances. With a higher level of compensation and incentives, better qualified staff could be recruited; those recruited would be more likely to remain with the agency.

In addition, as a general organization the JHP/PIU would have a special budget and be empowered to retain the revenues it receives from upgrading activities. With secure financial resources the JHP/PIU could fund additional projects and would need to rely less on support from the general budget or foreign donors and lenders. If established as an independent entity, distinct from the Ministry of Housing, with authority and responsibility similar to that of other public works agencies, e.g. water, sewer, electricity, the JHP/PIU could expand and develop as new projects and opportunities appear.

JHP/PIU's establishment as a general organization is seen as (1) a recognition of the important role that upgrading should and will play in urban development in Egypt, and as (2) the structural format needed to implement the proposed upgrading the activities and to launch other programs in the future.

It should be noted that the structure of management assumed to be the best form for achieving the objectives of the project by

the Project Paper and the management advisors of CHF mirrors the familiar model found in developed societies and regularly proposed by USAID for its projects. The essential components of this model include:

- a monocratic hierarchical authority
- complex and fixed departmentalization, and
- the maintenance of administrative impersonality through specialized training, professionalism and tenure.

The model is well-suited to perform routine, established functions. However, it is unclear whether it works well in the context of change or to affect change. In short, while the authors of the Project Paper sought to create change in housing policy and practice in Egypt, the institution proposed to facilitate these innovations was structurally traditional, inflexible and bureaucratic.

The evolution of the JHP to its present configuration should not be regarded as contradictory to achieving the objectives of the project. In many respects, JHP/PIU's current policy-making and coordinating role seems to offer the promise of effective and timely implementation. After all the trial and error, the JHP/PIU seems well positioned to begin to launch the upgrading

activities. The JHP/PIU should continue to develop good relationships with existing organizations that have common goals and can form the constituency needed to make upgrading a respected component of the housing policy of the Government of Egypt. The JHP/PIU structure should be kept lean in order to avoid (1) the all-too-common difficulties of recruiting, training and retaining staff, and (2) possible conflicts with agencies threatened by its growth and development. In addition retaining and strengthening the structure in place would allow the agency to be responsive to policy shifts and program changes related to its central objective -- upgrading informal urban settlements.

Still, within the current management structure, the functions of JHP and PIU need to be more clearly differentiated. In addition, JHP/PIU needs authority (1) to retain the revenues received from upgrading, since these resources give some promise that upgrading will be an on-going, i.e., replicable, activity, and (2) to coordinate the agencies of local government that carry out upgrading programs.

It is suggested that overall policy formulation and the interagency liaison function should rest with JHP. The PIU should have authority to direct and supervise activities at the

program level, as is currently the case. The PIU should continue to coordinate the work of technical professionals in response to diverse and changing conditions at the project sites. The PIU will need a core of technicians and managers to monitor and evaluate specific programmatic interventions. The JHP will require general managers for policy formulation and overall program direction, and administrative staff to support the field operations of PIU.

The efficacy of project management is directly attributable to the extent to which the JHP/PIU can maintain a very lean, flexible structure dedicated to contracting and coordinating upgrading activities. This structure needs to be staffed by very key, senior managers who can handle all areas of contract management and construction monitoring and the technical areas of water, sewer and roads. The appropriate constitutional basis for such an agency remains to be chosen. This choice is beyond the scope of the present evaluation. Yet, whatever the ultimate choice of the appropriate constitutional base, it should be guided by the objective of maintaining a lean and flexible organizational structure.

4.2.4. The Cooperative Housing Foundation (CHF)

The Cooperative Housing Foundation (CHF), contracted to provide technical assistance to the JHP/PIU, has played a seminal role

to develop and launch training programs for JHP/PIU staff, and 93) to put in place those measures that can institutionalize the urban upgrading process. Until recently, however, resources were not available for the development of management training programs and institutionalization activities, although there has been a steady increase in the technical assistance component of the project budget.

In the four and one-half years since project launch CHF has had a difficult time trying to define its proper role and to have its position accepted by JHP/PIU and USAID. In numerous memoranda and several contract amendments CHF has tried to formulate its position. This effort to specify tasks for which it will be accountable and to acquire the staff necessary to accomplish them undoubtedly stems from the criticism CHF has received from both JHP/PIU and USAID, either for working in areas outside its scope of services or for failing to meet contractual obligations.

Currently, CHF has taken a very literal approach to technical assistance under the project. Specifically it consists of the eight tasks defined in the proposed Contract Amendment Six (September, 1984). Listed below these tasks continue to reflect the split in emphasis between those activities that are PIU staff functions and those that contribute directly to institutionalizing the upgrading process.

CHF Technical Assistance Tasks:

1. Organization of Community Improvement Associations and Housing Cooperatives.
2. Organization of Home Improvement Programs
3. Organization of Housing Consumer Banking Services
4. Project Evaluation and New Project Development
5. Design and Evaluation of Building Methods and Products for low-cost housing
6. Community Upgrading Coordination
7. Institutional Development and Training
8. Financial-Management and Accounting

While CHF's position is understandable and the direct result of its past experience with past USAID officers the scope, complexity and novelty of the Helwan Upgrading Project would suggest that CHF be encouraged to provide very broad assistance in a rather flexible manner. Specifically, CHF should provide assistance in those areas where JHP/PIU is weakest.

CHF should also be asked to develop a very limited and specific range of skills that are absent in the local environment and essential for executing the upgrading activities on time and within budget. For example, program managers need to learn how to use implementation plans as management tools. The tasks mentioned above may indeed respond to this criteria. It seems clear from discussions with the CHF team leader and the USAID project officer that there is general agreement on this approach.

In addition, CHF should continue to frame its technical assistance, and especially the work of short-term consultants, in a creative and innovative fashion to respond to local conditions. In this regard, current attempts to recruit and train a total complement of JHP/PIU staff to carry out all administrative and technical upgrading tasks as one CHF consultant recommended, appears questionable.

The experience of other public and private agencies in Egypt suggests that the rate of staff turnover far outstrips the rate of replacement, and that no amount of training will produce the government personnel needed to staff a large number of posts in the JHP/PIU. Since many staff members of JHP/PIU are consultants to the project and the agency, rather than government employees, JHP/PIU has not been afflicted with a high rate of staff

turnover. Still, at least one key staff member has left the agency to accept a more attractive opportunity. Also, if the current compensation procedure was not in effect and key positions were staffed by government employees rather than "consultants", there is some likelihood that others would depart for more lucrative positions in the private sector or in the Gulf states. It would seem more appropriate to develop a very small, well-trained core staff of individuals who can contract services and tasks and coordinate the activities of the other agencies and institutions (both public and private) involved in executing upgrading activities.

This approach may be different from what the JHP/PIU has in mind, i.e., its establishment as a general organization with a large staff. Still, in the long run, this approach may generate acceptance of upgrading as an essential component of urban development in Egypt. In cooperation with JHP, CHF should review its technical assistance activities and select and implement those that offer the promise of establishing a unique role for the JHP and making upgrading an accepted policy of the Government of Egypt.

Present CHF staff is in a good position to conduct these discussions. The staff seem to be highly regarded by their

Egyptian counterparts and dedicated to making the upgrading project a success. The responsive management style of the team leader is well respected, as is his and the team's commitment to making certain that the program responds to local conditions and expectations and is directed by a well-trained Egyptian staff.

4.2.5. United States Agency for International Development

The covenants and conditions precedent to disbursement of project funds set forth in both the Project Paper and the Grant Agreement between USAID and the MOH give USAID very broad review and approval powers, and the right to veto the use of any AID funds for expenditures deemed technically inadequate to meet the objectives of the project. The right to approve disbursements gives AID an important monitoring role in the project.

As noted in the Nathan Report, USAID interpreted its monitoring responsibility very broadly in the early years of the project and took a very active role in project management and implementation. Motivated by a desire to see project resources produce tangible results rapidly at the Helwan sites, former AID project officers exercised a degree of oversight that produced some friction between AID and those answerable to AID and responsible for management and implementation.

This situation was eventually resolved through discussions between AID and JHP/PIU and CHF, changes in the AID project staff, and substantive developments in the JHP/PIU in the form of personnel changes and the development of an emphasis on implementing the upgrading component of the project. Over the last two years a more harmonious working style has developed between AID, JHP/PIU and CHF, and there is general agreement that management authority rests with JHP/PIU alone.

The current USAID project officer has endorsed some innovative measures that have had a beneficial impact on the development of management expertise within JHP/PIU and the rate at which implementation proceeds. For example, AID approved and funded a management proposal submitted by JHP/PIU that has produced a short-term, effective solution to the problem of finding staff for JHP/PIU. (CHF was authorized to hire and assign Egyptian staff with the necessary technical competence in upgrading as "consultants" to the JHP/PIU.) This innovative measure has given credibility to the JHP/PIU and created good will for USAID.

Although still charged with monitoring project expenditures and holding extensive rights of review and approval, AID is currently seen as a force committed to maintaining the momentum

in the project and to working with the JHP/PIU and CHF to find creative solutions to problems as they occurs.

The present project officer is trying to present AID as a positive and supportive force in the project, committed to working with--not directing--the JHP and its consultant. While AID policies and procedures remain at times an enigma to JHP/PIU and CHF, both are pleased by the interest and supportive attitude of AID. There appears to be an increasing willingness to involve AID in discussions regarding the project. The agency is seen as a partner in the program and one who can offer some creative solutions.

4.3 Summary and Lessons Learned

1. It takes time and considerable patience to introduce new ideas and to have them accepted. Innovation and change are not compatible with fixed, defined management structures. Innovations are most easily introduced when structures are allowed to be responsive rather than rigid.

The evolution of the management style and structure of the Helwan Upgrading Project substantiates this principle. The current management configuration evolved in order to introduce the idea of

upgrading informal settlements as an important and established policy of urban development in Egypt. Changes in management structure and staff functions were dictated by the JHP/PIU's realization that (1) the agency could not carry out all aspects of the upgrading program and that (2) it was necessary to establish cooperative relationships with the agencies and institutions capable of executing the upgrading activities. Although initially committed to carrying out the entire program, the JHP/PIU came to realize that its role had to be modified and focused if the program was to be launched and the philosophy of upgrading accepted.

Current project management has a recognizable organizational identity, a good understanding of its resources, and operates as a coordinating, contracting and monitoring agency for upgrading activities. Operations are defined by these functions and effectiveness is assessed by the extent to which JHP/PIU can establish and maintain good relationships with the other agencies needed to implement the components of the program. The enthusiasm for upgrading is an important component of urban development, exhibited by a number of the agencies working with the JHP/PIU, is one indication that this management style and structure has been effective.

Upgrading by definition will always require innovative and flexible approaches to conditions found at the settlements selected for improvement. A management structure that is lean and emphasizes inter-agency cooperation and flexibility--something uncommon in large bureaucracies--will be required to ensure project success. For maximum effectiveness, the management structure and program should be complementary, not redundant, to those of other agencies involved in carrying out upgrading activities.

It is JHP/PIU's obligation to define the meaning of upgrading, and an overall implementation strategy. At present, there is general agreement among all agencies and institutions involved in the project that upgrading low-income settlement is an appropriate component of urban development in Egypt.

JHP/PIU is beginning to address key management issues related to the stated objectives of the project. Until recently, JHP/PIU was totally involved in day-to-day operational issues and establishing an effective management structure. JHP/PIU has only recently given consideration to the manner in which organizational structure and patterns of implementation can be framed to ensure that project objectives are achieved. In the course of examining the degree to which organizational structure

affects project accomplishment JHP/PIU has undergone several reorganizations; all were designed to make the agency more responsive to the needs of the project and to the cause of promoting the importance of urban upgrading. JHP/PIU did not have an opportunity to distance itself on the degree to which the stated objectives are appropriate and realizable.

2. When programming technical assistance for innovative projects, a broad and flexible definition should be utilized. Through the experience of CHF, it was realized that technical assistance should be designed (1) to respond to the evolving needs of the client and (2) to encourage the client to test approaches that will have positive effects on the implementation and acceptance of the program.

As CHF has discovered, providing technical assistance to an evolving structure and a new program is very difficult. It is difficult even with an established agency. In this project CHF has been forced to respond both to program and institutional needs. On the one hand, it has performed a large amount of the staff work of PIU. On the other, it has worked to develop the management capacity of the JHP.

The amount of technical assistance required to accomplish both sets of activities was underestimated at the start of the

project, although there was some understanding of the magnitude of the tasks. Still, the extent of the need for technical assistance only became apparent over time.

3. Although eager to see that funds are properly utilized and that tangible results are produced with investments, AID should remember that lasting impact will be achieved only if the program and approach are accepted and institutionalized by the GOE. This realization should prompt AID to be cooperative, responsive and creative in the way it monitors the program, albeit within the guidelines of AID policies and procedures. The current AID project monitoring staff is aware of the difficulties that AID's actions created in the past. AID seems to be willing to engage in a genuine "dialogue" with the JHP/PIU and to consider supporting all measures that can have a beneficial effect on the program and the prospects for replicating these activities in other informal settlement areas of Egypt. This approach promises to be one that can achieve the objectives of all who are involved in the project.

In funding the Helwan Project AID wanted to improve the living conditions of the residents of the settlement area, and to encourage the Government of Egypt to consider a new approach in its urban development program. The novelty of the approach and

the government's long-standing commitment to new construction, rather than upgrading, should have led AID to conclude that considerable patience and time would be required to change some urban development practices and to achieve the objectives of the project. However, in its haste to reach beneficiaries, AID took a very active role in the project. This action may have had negative rather than positive consequences.

V.

PROJECT IMPLEMENTATION

This chapter describes the project implementation procedures for three of the four principal components of the upgrading program at the Helwan sites: infrastructure installation, construction of community facilities, and the operation of the community development process. (The Home Improvement Loan Program, the fourth component, is discussed in Chapter II.)

This chapter also compares the progress achieved in upgrading to the original and revised implementation schedules, and compares the expenditures--to date and projected--with original and revised budgets. The impact of delays in implementation on the upgrading budget is assessed, and the lessons learned are summarized.

5.1. Implementation Procedures for Upgrading

Table V.1 lists the activities, agencies and time needed to develop, review and approve the infrastructure and community facilities segments of the upgrading program at the Helwan sites. Table V.2 presents a time-line for each activity and indicates those activities that overlap and those that occur sequentially. The table suggests that 49 months are required to complete all stages of the upgrading process.

TABLE V. 1
HELWAN UPGRADING PROJECT
PROJECT IMPLEMENTATION PROCEDURE BY ACTIVITY, AGENCY(IES) INVOLVED
AND TIME (IN MONTHS) REQUIRED TO COMPLETE THE ACTIVITY

(Agency) (Activity)	AID	MOH	JHP/ PIU	CHF	A&E CON	COM. ORGS.	GOE AGCS.	GENRL. CONTRS.	TIME MOS.
A. Funding	x	x							
B. Data Inven. Reports (soc/ec) review/appr.	o	o	x	*	x	x			3 2
C. Urban Plan topography/ cadastral surveys review/appr.	o		x	*	x				2 2
land use/infra. & commun. fac. review/appr.	2		(1)			x	x	x(2)	
	o		x	*		x	x(2)		2
D. Prel. design (infra) review/appr.	x		x	*	x		x		3 2
E. Econ and/cost rec. review/appr.	x		x	*	x		(3)		2 1
F. Draft tender docs review/appr.	x		x	*	x		x		4 2
G. Final tender docs. review/appr.	x		x	*	x				1 1
H. Tendering/contracting		x(4)		x	*	*		x	5
I. Implementation construction/infrastructure construction/super.			x	*	x	(6)	o(7)	x	18
J. Comm. facilities supervision			x	*	x	(6)		x	14
K. Cost recovery supervision			(5) x	*		(6)	x		30yr

Key

x = Formal involvement and approval required.

* = Advisory role.

o = Courtesy copies of these documents are sent to the institutions/agencies indicated but their formal approval is not required.

= Cost recovery is to begin after construction is complete.

Notes to Table V.1

1. The Ministry of Housing and Land Reclamation (MOH) was involved in the first case. The MOH set up a special committee to set guidelines for upgrading activities. Once guidelines were set, the Joint Housing Projects Department was empowered to discuss and resolve matters pertaining to land use plans and upgrading in general, the MOH withdrew and the committee was disbanded.
2. The community facilities are designed and constructed in a fashion different from the infrastructure. The designs are executed by the JHP or by a general contractor, hired by the local community and paid with funds received as a direct grant from the JHP. The ministry responsible for the operation of the facility after completion reviews the designs. General contractors do the construction of the community facilities.
3. It is anticipated that the GOE agencies responsible for collecting fees for infrastructure operations will at some point get involved in the discussions concerning cost recovery of the capital costs of the infrastructure.
4. When USAID funds are not involved in the project component, the agency does not review the tender documents and contracts.
5. The project calls for the collection of fees for land and infrastructure improvements. The institution responsible for collecting these fees has not been determined. Both the Cairo Governorate and the JHP have laid claim to this function. The Credit Foncier Egyptien (CFE) collects payments on the home improvements loans (HILP).
6. Community cooperation/liasion is needed for all implementation activities. (See discussion of Community Development Process).
7. In addition to working with the agencies responsible for accepting and operating the infrastructure once it has been installed, the construction firms frequently have to deal with the Department of Antiquities at certain sites.

The procedures for upgrading, presented in Table V.1 and derived from project experience, indicate that numerous agencies are involved in upgrading and that, on average, an estimated 31 months passes between the initiation of the first step and the start of construction. Infrastructure requires 18 additional months; community facilities can be completed in less time (14 months).

The steps in this procedure evolved in the course of project implementation. The table listing the steps in project implementation was produced by the Evaluation Team.

Since JHP/PIU has only recently begun to define its management role as one of coordination and monitoring, rather than design and implementation, the agency is in the process of producing an instrument that can be used (1) to compare progress to plan and (2) to define the steps involved in the implementation process.

Aware of past management deficiencies, JHP/PIU has devised measures to facilitate the implementation of the project. Coordination among the agencies involved in designing, reviewing and approving plans, tenders and contracts in infrastructure design is handled through standing committees, chaired by a ranking member of JHP/PIU and consisting of representatives of the GOE infrastructure agencies, as well as other public and private sector institutions. These

representatives attend for the purpose of reviewing designs and facilitating the approval process.

The steps involved in developing and approving the infrastructure designs have proven to be the most time-consuming. These have also required the greatest degree of involvement by the funding agency (USAID), project management staff, community organizations, the A&E firms and the government agencies responsible for operating the systems -- water, sewer, electricity, roads -- after installation. Relations with the GOE agencies, both administrative and public works, have been especially problematic. Insistence by these agencies that upgrading designs incorporate existing standards and correspond to existing land use master plans has created delays in project implementation.

Table V. 2

HELWAN UPGRADING PROJECT
PROJECT IMPLEMENTATION SCHEDULE BY ACTIVITY
(BY SITE) AND TIME (IN MONTHS) REQUIRED TO COMPLETE ACTIVITY

Activity	Month:	6	12	18	24	30	-----54
Data Inven. Reports							----- (5)
Urban Plan							
1. topography cad. surveys							----- (4)
2. land use infra/.com. fac.							----- (4)
Prelim. design (infra)							----- (5)
Econ. Analysis/ Cost recovery							----- (3)
Draft tender docs.							----- (6)
Final tender docs.							--- (2)
Tendering/ contracting							----- (5)
Implementation							
1. constr. (infra)							----- (18)
2. construc. (communit facilities)							----- (14)

Notes

1. The cost recovery program is scheduled to go into effect after completion of infrastructure installation.
2. See Table V.3 for estimates of the current stage of the Helwan Upgrading Project, and time remaining until completion.

In general, implementation has proceeded most rapidly when only a few agencies are involved. While it takes an estimated two and one-half years to complete the design and secure the approvals for the basic infrastructure, less time and simpler procedures are involved in designing and obtaining approval for the community facilities. Once the land use plan has been developed and approved under JHP/PIU's direction, and the site chosen and secured -- steps that require at least 13 months according to the current schedule of activities -- the designs of the facilities need only be reviewed and approved by the institution responsible for their operation after construction, e.g., the Ministry of Education for schools, the Ministry of Health for clinics, etc., and construction can begin. Involvement by only a few agencies has allowed the community facilities program to proceed at a relatively rapid pace, 24-30 months. (See note 2 of Table V.1)

The community development program, or more appropriately process, is a critical upgrading activity, and the third upgrading components discussed in this chapter. The time required to implement this activity is not recorded on Table V.1. Community development activities occur concurrently with the other three components, and are conducted by social teams working under the direction of

JHP/PIU. Experience has proven that acceptance of the upgrading interventions is directly related to the efficacy of the community development process.

Unlike the infrastructure and community facility construction programs, the community development process is intangible. It is, however, the mechanism by which the community (1) learns about upgrading, (2) participates in determining its priorities among the upgrading interventions, (3) specifies sites for construction of community facilities, (4) and knows how to use and maintain the facilities and programs after installation.

The community development process is the "software" side of upgrading. The experience in Helwan indicates that once the community is prepared to receive the upgrading component and educated in its use and maintenance, the component will be used properly. This is the lesson of the school site in Arab Ghoneim. Once the community was informed that a school was to be built in the community and that a site would be needed, the community participated in choosing the location and guarded the property from settlement by squatters until construction began. After this experience, preparing and involving the community has been regarded as the sine qua non of successful upgrading and an activity that must take place concurrently with the definition and installation of the other upgrading programs.

5.2. The Status of Project Implementation

5.2.1. Project Performance compared to Implementation Plans.

Tables V.3 and V.4 are based on the monthly project reports of CHF available from project launch through May 1984. Table V.3 is a summary of the upgrading activities completed by site through 1983. Table V.4 documents the upgrading activities by year through 1983.

The work accomplished is only a portion (less than 20%) of what the Project Paper estimated would be carried out within 18 months of project start-up. Even the 1981 Implementation Plan, designed to complete the project within the time period estimated by the Project Paper, assumed that construction would be underway at all sites by 1983.

At the current rate of project activity, an estimated 29 months will be needed to complete all the upgrading components. This estimate assumes that all steps preceding the preparation of the draft tender documents have been accomplished (See Table V.1), and that, the remaining steps (draft tender documents - 6 months final tender documents/tendering and contracting 5 months, and project construction - 18 months) will take place as planned.

TABLE V. 3
UPGRADING COMPONENTS COMPLETED BY SITE: ACCORDING TO
CONTRACT AMENDMENT SIX BETWEEN ARE AND CHF INTERNATIONAL = (V-1984)

Arab Rashed

trial solid waste program - 1981/82
 home improvement loan program begun -1981
 trial Small Enterprise Loan - 1982
 comm. ctr. completed and in use - winter, 1982
 urban plan complete
 Ph I infra improvements "nearing" completion
 Ph II construc. - tender documents "being finalized"
 school completed - 1981/classes began - fall, 1983

Arab Ghoneim

water network completed - 1981
 school complete - 1981 (?)
 trial solid waste program - 1981/82
 urban plan complete
 water and sewer design and constr. docs. "under preparation"
 tender docs. "ready for bid on community center
 youth center bldg. and playing field complete

Izbet Sidoi

urban plan complete
 infra. tender documents "under preparation"

Izbet Zein

home improvement loan program begun - 1981
 TOR for urban plans complete
 infra. tender docs. complete and "ready" for bidding
 tender docs. "ready" for bid on school

Ghoneim Baharia

TOR for urban plans complete
 water and sewer designs and constr. docs. "under preparation"

Kafr El Elw

TOR for urban plans complete
 water and sewer designs and constr. docs. "under preparation"

Table V. 4PROJECT ACTIVITIES BY YEAR - UPGRADING

1978/79

- create JHP Executive Agency of MOH
- est. and staff PIU
- appoint TA advisors

1980

- preparation for upgrading implementation

1981

- construct water network and school in Arab Ghoneim
- construct community center and a school in Arab Rashed
- HILP in Zein and Arab Rashed

1982

- develop Community Associations for Development
- trial solid waste programs - Rashed and Ghoneim
- literacy training/youth activities - Rashed/Ghoneim
- trial Small Enterprise Loan Program in Rashed

1983

- approx. 1,200 home improvement/small enterprise loans com.
- ph. I infra. complete in two sites (?)

This is an optimistic estimate and yet, even if accepted as accurate, completion of the upgrading activities is not likely to occur until the first or second quarter of 1987.

Given the complexity and novelty of the upgrading project and the limited management staff available to direct the project, the original project implementation schedule was unrealistic. Delays should have been anticipated at the start of the project; their occurrence, for whatever reason, should have prompted JHP/PIU to modify the implementation schedule to reflect realistic estimates of the amount of time needed to carry out each activity.

Overall improvement in the quality of project management and the lessons learned in launching and evaluating upgrading activities will have positive effects on the rate of implementation in the near future. Contracting and coordinating the amount of work that remains will put great strains on JHP/PIU, an agency that is already understaffed and overburdened. Delays will undoubtedly occur in the review and approval process, as they have in the past; construction of the infrastructure will require more time than currently estimated. This has been the experience of other projects in Egypt, not just the Helwan program. With this in mind, JHP/PIU should prepare a plan that

presents estimates of the time required to implement the project based on assessments of its current management capacity and past experience.

5.2.2. Project Expenditure Compared to Budgets

Table V.5 (Helwan Upgrading Project - Comparison of Budgets) presents an estimate of the upgrading component of the three project budgets prepared in the Project Paper (July 1978) and the revised 1981 and 1984 budget. The budget estimates were derived by combining the direct upgrading costs and the portion of the administrative costs attributable to upgrading estimated at approximately 60%. The percentage of administrative costs attributable to upgrading was determined through discussions with the staff of JHP/PIU and CHF.

Upgrading costs are less than 36% of the US \$160 total project budgets, prepared in 1978 and 1981 and less than 29% of the recently proposed (1984) US \$200 million project budget. Infrastructure and public facility costs repeatedly comprise the largest percentage of all upgrading budgets, although the estimated expenditures for technical assistance reflect the largest percentage change from one budget to another.

TABLE V. 5
HELWAN UPGRADING PROJECT
COMPARISON OF REVISED BUDGETS: 1978, 1981, 1984
(US \$ MILLION)

	Project Paper	1981 Budget	1984 Budget
Upgrading			
--design/sup.	1.4	3.70	2.54
--infra.	19.4	29.46	23.31
--pub fac.	4.9	6.52	5.85
--com org.	0	0	1.89
--credit	3.5	4.62	5.32
--land purchase	.6	.92	1.02
--land/in-kind	0	0	0
--relocation	0	0	1.07
Subtotal	29.8	45.22	41
% of Upg.	.524	.794	.713
Administration			
--tech/asst.	1.6	1.13	5.57
--training	.26	.26	.26
--buildg. mats. res.	0	0	.05
--JHP/PIU adm. cos.	1.65	1.68	2.95
--CFE admin. fee	.85	1.05	.79
--computer	0	0	.33
Subtotal	4.36	4.12	9.95
% of Upg.	.077	.072	.173
Contingencies			
--upgrading	19.8	7.18	5.92
--admin.	2.91	.41	.65
Subtotal	22.71	7.59	6.57
% of Upg.	.399	.133	.114
Budg: Upg. total	56.87	56.93	57.52
Total Project Budget	160	160	200
--Upgrading: % of Project	.355	.356	.288

Notes on the Revised budgets for the upgrading component.
A percentage of the budget for administration has been allocated to upgrading as follows:

technical assistance	.58
training	.66
building materials research	.5
JHP/PIU adm. cost	.66
CFE adm. fee	.66
contingency for upgrading	.6

Tables V.6 and V.7 and V.8 present a breakdown of upgrading costs (direct and attributable administrative expenses) for each of the three project budgets: Table V.6 - 1978 Project Paper budget; Table V.7 - JHP/PIU 1981 budget, and Table V.8 - JHP/PIU 1984 budget. (The "revision" column that appears in each of these budgets has been drawn from Table V.5. It should be noted that only the budgetary amounts allocated for "administration" and "contingencies" are different from the original budget figures.) These tables indicate that infrastructure and public facility costs repeatedly comprise the largest percentage of all upgrading budgets. Estimated expenditures for infrastructure in the 1984 budget are US \$4 million less than the figure in the 1981 budget. This reduction indicates that some savings on infrastructure are anticipated since only US \$400,000 has been

TABLE V. 6
HELWAN UPGRADING PROJECT: PROJECT PAPER BUDGET SUMMARY (1978)
(US \$ MILLION)

	<u>VII-78-Project Paper</u> ^a	<u>Revision</u>	<u>% of Subtotal</u>	<u>% of Total</u>
Upgrading				
--design/sup.	1.4	1.4	0.47	.025
--infrastructure	19.4	19.4	.651	.341
--public facility	4.9	4.9	.164	.086
--com org.	0	0		0
--credit	3.5	3.5	.117	.062
--land purchase	.6	.6	.020	.011
--land/in-kind	0	0		0
--relocation	0	0		0
Subtotal	29.8	29.8		
% of Upgrading	.487	.524		
		<u>%A1</u> ^b		
Administration				
--tech/asst.	2.8	.58	1.624	.369
--training	.4	.66	.264	.060
--building mats re	0	.5	0	0
--JHP/PIU adm. cost	2.5	.66	1.65	.375
--CFE admin. fee	1.3	.66	.858	.195
--computer	0	.5	0	0
Subtotal	7		4.396	
% of Upgrading	.114		.077	
Contingencies				
--upgrading	19.8		19.8	.872
--admin.	4.64	.628	2.91392	.128
Subtotal	24.44		22.71392	
% of Upgrading	.399		.399	
Total	61.24		56.90992	

Notes:

- a) Source Project Paper - project Implementation Budget: VII-78/XII-83
b) A percentage of the budget for administration has been allocated to upgrading, indicated in column headed "% A1".

TABLE V. 7
HELWAN UPGRADING PROJECT: PROJECT IMPLEMENTATION BUDGET SUMMARY (1981)
(US \$ MILLION)

	X-1981-JHP/PIU ^a		Revision	% of Subtotal	% of Total
Upgrading					
--design/sup.	3.7		3.7	.082	.065
--infrastructure	29.46		29.46	.651	.517
--pub. fac.	6.52		6.52	.144	.115
--com org.	0		0	0	0
--credit	4.62		4.62	.102	.081
--land purchase	.92		.92	.020	.016
--land/in-kind	0		0	0	0
--relocation	0		0	0	0
Subtotal	45.22		45.22		
% of Upg.	.759		.794		
		<u>%A1</u> ^b			
Administration					
--tech/asst.	1.95	.58	1.131	.274	.020
--training	.4	.66	.264	.064	.005
--building mats.	0	.5	0	0	0
--JHP/PIU adm. cors.	2.55	.66	1.683	.407	.030
--CFE adm. fee	1.6	.66	1.056	.255	.019
--computer	0	.5	0	0	0
Subtotal	6.5		4.134	.636	
% of Upg.	.109		.073		
Contingencies					
--upgrad. (.44x16)	7.18		7.18	.946	.126
--admin.	.64	.636	.40704	.054	.007
Subtotal	7.82		7.58704	.970	
% of Upg.	.131		.133		
Total	59.54		56.94104		

Notes:

- a) Project Implementation Budget, X-1981/IX-1984.
b) A percentage of the budget for administration has been allocated to upgrading, indicated in column headed "% A1".

TABLE V. 8
HELWAN UPGRADING PROJECT: PROJECT IMPLEMENTATION BUDGET SUMMARY (1984)
(US \$ MILLION)

	1984-JHP/PIU ^a		Revision	% of Subtotal	% of Total
Upgrading					
--design/sup.	2.54		2.54	.062	.044
--infrastructure	23.31		23.31	.569	.405
--pub. fac.	5.85		5.85	.143	.102
--com org.	1.89		1.89	.046	.033
--credit	5.32		5.32	.130	.092
--land purchase	1.02		1.02	.025	.018
--land/in-kind	0		0	0	0
--relocation	1.07		1.07	.026	.019
Subtotal	41.00		41.00		
% of Upg.	.638	<u>% A1</u> ^b	.713		
Administration					
--tech/asst	9.61	.58	5.5738	.560	.097
--training	.4	.66	.264	.027	.005
--buidlg. mats. res	.199	.5	.0495	.005	.001
--JHP/PIU adm. cos	4.47	.66	2.9502	.296	.051
--CFE Admin. fee	1.2	.66	.792	.080	.014
--computer	.65	.5	.325	.033	.006
Subtotal	16.429	.606	9.9545		
% of Upg.	.256		.173		
Contingencies					
--upgrading	5.92		5.92	.901	.103
--admin	.89	.606	.65	.099	.011
Subtotal	6.81	.965	6.57		
% of Upg.	.106		.114		
Total	64.239		57.5245		

Notes:

- a) Project Implementation Budget: IX-83/XII-86
b) A percentage of the budget for administration has been allocated to upgrading, indicated in column headed "% A1".

Table V.9 compares the three project budgets and presents the "amount of change" and "percent of change" by line item from 1978 to 1984. The amount budgeted for technical assistance constitutes the largest percentage increase -- approximately 45%.

The budgets of the Project paper and 1981 suggest that annual expenditures will approach US \$17.5 million. Annual expenditures through December, 1983 have, however, not exceeded US \$3 million and total expenditures are slightly more than US \$6 million. (See Tables V.10 and V.11). In the period 1979-1983, actual expenditures amounted to slightly more than 11% of the total upgrading budget; technical assistance was almost 20% of the expenditures incurred to date.

If actual expenditures to date are reduced from the 1984 revised budget total of \$57.52, we can estimate for the period 1984-1986 annual expenditures at US \$17.18 million. This annual amount is almost three times the amount spent over the last three years. Construction of infrastructure and public facilities will certainly increase the annual level of expenditure from what it has been but it will be difficult to meet the budget target. Two other points need to be discussed in connection with the Revised Budget for 1984. First, at current rates of expenditure

TABLE V. 9
HELWAN UPGRADING PROJECT: COMPARISON OF REVISED BUDGETS BY AMT AND %
OF CHANGE (1978-1984)

	Am't Chg. 1978/81	% Change 1978/81	Am't Chg. 1981/84	% Change 1981/84	Am't Chg. 1978/84	% Change 1978/84
Upgrading						
--design /sup.	2.3	.62	-1.16	-.46	1.14	.45
--infra.	10.06	.34	-6.15	-.26	3.91	.17
--pub fac.	1.62	.25	-.67	-.11	.95	.16
--com org.	0	0	1.89	1.00	1.89	1.00
--credit	1.12	.24	.70	.13	1.82	.34
--land purcha	.32	.35	.10	.09	.42	.41
--land/in-kin	0	0	0	0	0	0
--relocation	0	0	1.07	1.00	1.07	1.00
Subtotal	15.42	.34	-4.22	-.10	11.20	.27
Administration						
--tech/asst.	-.47	-.41593	4.44	.797127	3.97	.712747
--training	0	0	0	0	0	0
--buildg mats.	0	0	.05	1.00	.05	1.00
--JHP/PIU adm.	.03	.017857	1.27	.430508	1.30	.440678
--CFE admin.	.20	.190476	-.26	-.32911	-.06	-.07595
--computer	0	0	.33	1.00	.33	1.00
Subtotal	-.24	-.05825	5.83	.585930	5.59	.561809
Contingencies						
--upgrading	12.62	-1.7577	-1.26	-.21284	-13.88	-2.3446
--admin.	2.50	6.0976	.24	.369231	-2.26	.369231
Subtotal	-15.12	-2.1058	-1.02	-.15525	-16.14	-2.4566
Tot. Budt: Upg.	.06	.010364	.59	.010257	.65	.011300
Tct. Budget Pro.	0	0	40.00	.20	40.00	.20

TABLE V. 10
HELWAN UPGRADING PROJECT: COMPARISON OF BUDGETS VS EXPENDITURE
(ADMINISTRATION/UPGRADING)

	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>TOTAL</u>
A. <u>Actual expenditures by year</u> ^{1/} (1981-XII-1983)				
Upgrading	.811	2.101	2.162	5.074
Admin.	.393	.536	.567	1.496
TOTAL	1.204	2.637	2.729	6.57
B. <u>Projected expenditure by year</u> (1981, revised budget) ^{2/}				
Upgrading	17.47	17.47	17.47	52.41
Admin.	1.51	1.51	1.51	4.53
TOTAL	18.98	18.98	18.98	56.94
C. <u>Diff budg-exp.</u>	17.776	16.343	16.251	50.37
D. <u>Estimated Expenditure/Year</u> (1984 Revised Budget) ^{3/}				
Upgrading	14.603	14.603	14.603	43.809
Admin.	2.577	2.577	2.577	7.731
TOTAL	17.180	17.180	17.180	51.540

Notes:

^{1/} It is estimated that only 11% of the upgrading budget was spent in the period 1979-1983 ($6.57 / 56.94 = 11.54\%$)

^{2/} The Revised Budget for 1981 was apportioned equally over a three-year project implementation period. The total amount per year is the budget figure divided by 3. (18.98)

^{3/} Revised Budget for 1984 was apportioned in the following fashion: expenditures through XII 1983 were subtracted from the 1984 budget; the amount remaining was allocated equally over the period until project completion.

TABLE V. 11
HELWAN UPGRADING PROJECT: PROJECT EXPENDITURES/ACTUAL
(US \$ MILLION).
EXPENDITURES FOR YEARS 1981, 1982, 1983

	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>Total Exp.</u>	<u>% of Tot. Expend.</u>
Upgrading					
--design/sup.	.037	.211	.378	.626	.090
--infras.	.063	.179	.148	.390	.050
--pub. fac.	.094	.360	.361	.815	.110
--com org.	.010	.070	.023	.100	.010
--credit	.289	.895	.866	2.050	.029
--land purchase	0	0	0	0	0
--land/in-kind	.318	.386	.386	1.090	.150
--relocation	0	0	0	0	0
Subtotal	.811	2.101	2.162	5.070	
Administration					
--tech/asst (.5)	.392	.536	.476	1.400	.200
--training (.66)					
--buldg. mat. res (.5)					
--JHP/PIU admin. (.66)					
--CFE Adm. Cst. (.66)			.024	.024	.033
--computer (.5)			.067	.067	.010
Subtotal	.392	.536	.567	1.500	
Total Expend.	1.203	2.637	2.729	6.570	

the Government of Egypt has had little difficulty meeting its commitment to fund the Helwan project. To date, GOE payments have totalled less than US \$1 million annually. However, given current government budget constraints, the effect of a higher expenditure level on the government's ability to meet its commitment needs to be assessed.

Second, the 1984 Revised Budget estimates that US \$200 million will be required to complete the Helwan Project, although the budget for upgrading has remained at approximately the same level and only US \$160 million has been committed to the project. Both the foreign exchange and local currency components have increased in the 1984 budget.

The anticipated shortfall in the 1984 Budget presents the JHP/PIU with a serious dilemma. Several options are available to resolve the dilemma. The JHP/PIU can:

- (1) scaleback the upgrading portion of the budget to the level of available funding,
- (2) request an increased grant from USAID,
- (3) ask the GOE to increase budget support, or
- (4) ask the ministries and agencies who will eventually run the public facilities, e.g. schools, clinics, youth centers, etc., to finance their design and construction.

All these options should be explored. JHP/PIU should examine the situation carefully and make every effort to find the

necessary resources. At the same time, JHP/PIU should develop plans based on a budget figure of US \$160 million rather than US \$200 million. If funds are obtained, the total project can be implemented as planned; if not, a plan will be in place to complete a project of reduced scale. It is certain that if no plans are developed and JHP/PIU proceeds as if US \$200 million is available, there is some likelihood that work will remain incomplete at all the sites.

5.3. Summary and Lessons Learned

1. Implementation plans must be realistic. If not, those responsible for executing the project are held to standards of performance that cannot be achieved. In addition, donors and project beneficiaries, with expectations of certain results within a given period of time, will be unnecessarily disappointed.

The delays experienced in project implementation are understandable. If the implementation plans had anticipated the amount of time needed to build a new and functioning management unit, and for this unit to establish effective working relationships with the agencies and institutions involved in upgrading, a more realistic timetable might have been developed

and the current difference between anticipated and actual levels of project activity might not be so large.

Once developed, implementations plans should be used as management tools. Performance targets should be defined and given fixed budgets. Those responsible for managing activities must be made aware of targets and budgets, and held accountable for achieving specific results on time and within budget. Project implementation must be recorded in the context of the plan and the budget. Deviations from plan and budget should be explained.

The 1983 Implementation Plan proposes an implementation schedule based on project experience. Its estimates of the amount of time required to accomplish specific tasks are more realistic than the Project Paper. Comparing the activities accomplished to the schedule set forth in the Revised Plan suggests that the project is generally on schedule.

At this point in the implementation schedule the project is moving steadily toward achieving its stated objectives. Housing stock is being improved, some community facilities have been constructed and others are designed, designs for the infrastructure have been developed and are ready to be put out

for bid, and JHP/PIU is exploring ways to resolve the land tenure issue.

2. Effective implementation occurs on two levels -- from the top down and the bottom up. On one level, implementation is achieved through the development of a harmonious relationship among the institutions, agencies and companies responsible for designing, constructing and operating the components of the upgrading project. On another level, implementation can be effectively stymied unless the beneficiaries are involved in the upgrading process. There is general agreement on this principle among those involved in the project.

Coordination at the level of JHP/PIU has been slow to develop. There have been misunderstandings in the past among the agencies involved. Only recently have effective mechanisms been established to bring the principal actors together to discuss the objectives and components of the project, and to agree on a course of action. Until JHP/PIU defined its management role in the project, it was not possible for it to define the tasks of others.

Since JHP is the spokesman for "upgrading" in Egypt, it is responsible for defining and promoting the program. While there is general agreement among all individuals interviewed that "upgrading" has a valid and appropriate role in urban development in Egypt, there is no clear agreement on the program's components, methods of implementation or potential benefits. It remains for JHP to define a program in the light of the experience provided by this and other upgrading projects underway in Egypt.

The content and process of upgrading have been promoted at the community level. The relationship between community involvement and project success is well understood by the JHP/PIU. A negative experience in one community and positive experiences in other have had the effect of prompting the JHP/PIU to inform and involve the community. A strategy for community development has been developed. The fruits of its application are evident in the two sites visited by the team, Arab Rashed and Arab Ghoneim. Informing and educating each community is a regular and repeated activity of the upgrading program.

3. Successful project implementation currently depends on JHP/PIU's ability to (1) contract firms who can install the infrastructure and community facilities on time and within budget, (2) maintain effective coordination with the GOE agencies who have the authority to review and approve designs

and to operate the facilities once in place, and (3) motivate the community to participate fully in the upgrading program.

4. In general, components involving the least number of agencies and requiring the least amount of coordination are quickly implemented.

This explains the success of the HILP and the completion of four community facilities. It is also apparent that there is a direct and positive relationship between the degree of community organization and the rate of project implementation.

This lesson has been well learned by JHP/PIU. Still, the lag time between the launch of the HILP program and the installation of infrastructure has implications for the cost-recovery program. Since some of the beneficiaries of upgrading program are already indebted to the maximum level through their participation in the HILP program (See Section --), they may not have the resources necessary to pay the recoverable portion of the cost of the infrastructure, once that program is launched and cost recovery begins. If recovering costs remains an objective of upgrading, the JHP/PIU will need to adjust the timing of the implementation of the programs, or reduce the amount of indebtedness allowable under the HILP.

VI.

COST RECOVERY FOR THE UPGRADING PROGRAM AS A WHOLE

6.1. Summary of Findings

Agencies providing for the Helwan upgrading project have a legitimate interest in the level of recovery of project costs through payments from project beneficiaries. Obviously, if more of the cost is recovered, then more upgrading work can be performed with a given budget or part of the funds can be put to alternative productive uses. The presumed intent is to recover those costs that beneficiaries are able to pay, given their incomes and other socio-economic conditions.

To date, only the HILP element of the upgrading effort has actually been implemented. Only for that element alone do we have actual cost recovery experience and information. The analysis of cost recovery on the HILP has been presented in Chapter II of this report. The major conclusions there are that:

- Cost recovery in the HILP meets Project Paper standards, returning home improvement loans in repayments of principal and 7 percent interest by beneficiaries.
- There are, however, net expenses of program administration in addition to the actual capital cost of credit that reduce the repayments available for future use.
- Full cost recovery would require repayments at higher rates of interest, reflecting the true value of the capital if it were put to alternative uses. By such standards, the HILP recovers roughly 70 percent ^{35/} to 85 percent ^{36/} of program credit costs.

In this chapter, we estimate the potential for cost recovery for the entire upgrading project, concentrating on its three principal elements: land title purchase, provision of infrastructure and community facilities, and use of HILP loans for home improvements. This potential depends on numerous parameters regarding households' ability to pay for shelter and the costs of providing the three elements. On the basis of the analysis presented in this section, our principal conclusions on the potential for cost-recovery are that:

^{35/} Assuming a U.S. market rate of interest (long-term) of 14%.8

^{36/} Assuming 10.5% as the cost of capital, corresponding to the rate at which the Egypt Central Bank presently makes loans to CFE, plus 1% servicing.

- Whether households can meet Project Paper standards for cost recovery depends on how 100 percent recovery of land value ^{37/} is defined. Using a figure representative of other government land sales prices in the Helwan area, individual households at median income or below cannot afford full Project Paper recovery with 15 percent of their income available for improved shelter. But they can with 25 percent of income, if they are at least in the 25th income percentile.
- Even with this land pricing (at one-sixth of market value) individual households with median incomes or below cannot afford "full cost recovery" (defined as 100 percent of infrastructure costs and land and HILP loan at 10.5 percent interest), though those right at the median come close. About 63 percent and 90 percent of "full cost" can be recovered from households at the 25th percentile and the median income, respectively.
- In buildings where two or more households can combine resources, both Project Paper and full or near full cost recovery are generally feasible for two households at the 25th percentile and above.
- If land prices were set at market rates, not even two-household pools could afford just land cost alone, much less recovery on infrastructure and HILP.

^{37/} The Project Paper Standard is 100 percent but does not specify 100 percent of what.

6.2. Household Income and Ability to Pay

In order to consider households' ability to pay for shelter costs, our analysis begins with the incomes of intended beneficiaries. The project is intended to benefit principally people below the 60th percentile of national urban household income. Table VI.1 presents the distribution of incomes that were used in our analysis. Primary attention was given to the lower range of 1984 national urban income estimates (the first column in Table VI.1), because it provides a consistently conservative estimate of the potential for cost recovery. Two other sets of figures are provided for comparison purposes.

TABLE VI. 1
ESTIMATED MONTHLY HOUSEHOLD INCOME IN 1984
(\$)

<u>Income Percentile</u>	<u>National Urban 1/ Lower Range Estimate</u>	<u>National Urban 2/ Upper Range Estimate</u>	<u>Helwan 3/ Factory Workers</u>
20	79	166	116
25	100 ^{4/}	185	138
30	112	204	151
50	159	277	169
60	187	298	182
70	240	339	199

Sources:

1. Updated from lower-range estimates for 1983 in a previous evaluation of the Helwan project, by Robert Nathan Associates, (Housing and Community Upgrading for Low-Income Egyptians, February 1982.) based originally on a 1981 income and expenditure study by Abt Associates, (Informal Housing in Egypt, 1981) updating to 1984 was done by applying CFH's estimate of 16 percent inflation to the 1983 figure.
2. Ibid. Updated from 1983 estimates in the Nathan evaluation which were drawn initially from National Urban Policy Study (NUPS) estimates by PADCO, Inc. National Urban Policy Study: Urban Growth and Urban Data Report, July 1982. Updating to 1984 was done by applying the NUPS estimate of incomes rising by 4 percent more than inflation.
3. CHF, International, "Income Data on Helwan Factory Workers," memo from Billand to Scandar, March 1982. The conversion to household incomes, based on CHF analysis, multiplies net factory salaries of principal earner by 1.35 to obtain full household earnings from all earners and sources. Some observers believe this conversion understates household incomes, but the results are consistent with direct household income and expenditure surveys.
4. Interpolated linearly.

A third set of figures taken from CHF's extensive survey of Helwan factory workers' salaries, converted to household incomes. While these figures do not represent a national income distribution (nor even the full distribution for upgrading communities) and therefore are not the basis for recovery analysis, they do indicate where actual Helwan workers stand in relation to the wider income distribution. One can see that the distribution of Helwan workers' incomes is generally near the lower range estimate within the range of national incomes for any given income percentile group. ^{38/}

For actual analyses, we have directed attention to households at the 25th and 50th percentile of the income distribution, using therefore the lower range income estimates of \$100 per month and \$159 per month respectively.

Because of the way project costs are estimated, analyses is of cost recovery for each building, rather than each household. In a first analysis below, one household is taken to be responsible for meeting cost recovery charges and only its income is counted in measuring ability to pay. This would apply especially well to single-household buildings, to buildings where rent is received from

^{38/} The incomes slip below the lower range at highest percentiles, because most factory workers are not in the upper reaches of national income.

additional households but is thought of as counted within the income level of the owner and is not likely to be raised rapidly after upgrading, or to other situations in which additional households' incomes cannot be pooled and accessed to aid the primary household in upgrading cost repayments. In a second analysis, two household incomes are taken to be available for cost repayment. This is roughly consistent with available survey information on households per building. ^{39/}

Ability to pay depends on both income and on the share of income that households can devote to shelter costs. In our analysis of cost recovery, we assumed both a 15 percent and 25 percent of income as the additional payments for shelter that households could and would pay for the combined elements of the upgrading project: that is 15 or 25 percent of income beyond what they are paying before the project proceeds. The 15 percent figure could be incomes interpreted as being the difference between the nearly 10 percent households pay for shelter, now nationally, and a 25 percent total standard, or as a total of 15 percent compared to the near zero building owners now pay in Helwan (when they are not making lump sum

^{39/} CHF uses a lower 1.5 households per building in its current draft Implementation Plan, but the Project Paper and other community surveys show higher figures. and represents those cases of family, tenant-owner and other situations where income can be readily pooled.

cash outlays for construction). ^{40/} The 25 percent figure represents parallel reasoning based on an assumed higher total. To the extent that upgrading costs are to be passed along by owners to tenants as higher rents, the 15 and 25 percent of income additional ability-to-pay figures are probably on the high side, because renters are already paying about 15%.

6.3. Estimating the Level of Capital Investment Costs to be Recovered

Costs were estimated on two bases: costs at the recovery levels outlined in the Project Paper, and full recovery of cost. Table VI.2 presents both cost estimates for infrastructure and community facilities, land and home improvement loans for households at the 25th and 50th percentile of the urban income distribution. Notice that only the HILP costs differ by income groups, whereas in fact lower income people may have smaller plots and lower land and infrastructure costs as well.

^{43/} Fifteen percent is about what renters already pay in upgrading communities.

TABLE VI. 2
RECOVERY COSTS OF ALL UPGRADING ACTIVITIES
(\$ PER BUILDING)

	<u>Project Paper Standards</u>		<u>Full Cost Recovery</u>	
	<u>Household in 25th Income Percentile</u>	<u>Household in 50th Income Percentile</u>	<u>Household in 25th Income Percentile</u>	<u>Household in 50th Income Percentile</u>
Infrastructure and Community Facilities	460	460	780	780
Land <u>a/</u>	1080	1080	1080	1080
Home Improvement Loans	1095	17	1095	1717
Total	\$2635	57	\$2955	\$3577

Note: a/ Full recovery is defined not as market price but as representative of government land sales in the area.

To reach an assessment of costs and the "recoverable costs" presented in Table VI.2, several assumptions had to be made. These are detailed below:

- The basis for capital investment cost figures for the design, supervision, and construction of infrastructure and community facilities is the proposed 1983 Implementation Plan. Estimates of "recoverable cost" are based on the guidelines presented in Annex V, Exhibit 3 of the Project Paper for the level of cost recovery. These guidelines called for "partial" recovery of infrastructure networks, without specifying what was meant by "partial". We assumed a figure of 50% where "partial recovery" was called for in calculating the amount of capital investment on infrastructure to be recovered.
- The total amount of capital investment to be recovered was allocated to the projected number of buildings (or lots). The projected number of buildings was chosen as the basic unit for cost recovery because land and infrastructure costs are directly related to individual buildings (or lots) rather than to the number of households or number of persons per household.

On the basis of these assumptions, total infrastructure and community facilities costs are \$460 per building for Project Paper recovery standards and \$780 per building for full recovery (i.e., 100% of infrastructure costs are to be recovered).

Additional assumptions had to be made regarding land and the HILP loans. First, the price of land defined here as "full recovery" is \$12 (LE 10) per square meter. This figure was chosen on the basis that new land in Helwan is being sold by the Cairo Governorate to housing cooperatives for between \$3.70 and \$18.30. ^{41/} It also is consistent with pricing land at what present owners on average would have paid for it at the time they settled, expanded by the rate of inflation. ^{42/} The \$12 level is probably about one-sixth of the current market price. Land sold to people who have already lived on it for sometime, as in the upgrading communities, would presumably not have a higher price attached than new land being sold by the same government. The per plot charge of \$1080 is based on an average plot size in upgrading areas of 90m². While this represents full recovery of land cost it does not represent market value).

^{41/} See Mokhtar A. Saleh, Market Research, Helwan New Community Residential Comparison (draft report), November 1981 - February 1982.

^{42/} See SEH, Economic and Financial Analysis for Izbet Sidqi, March 1984.

The HILP loan "cost" is difficult to specify, since households may choose to borrow different amounts. Our assumption therefore is that one loan is taken out on each building (whereas in fact some households have take more than one, two households in a building may each take one or more, and some households have taken none). We also assumed that each household that borrowed for home improvements borrowed the maximum allowable given the base salary of a factory worker for households of their household income group. ^{43/} The maximum loan is set at what can be repaid at 7 percent interest repayable over 12 years (actual program experience). The results are loan costs of \$1095 and \$1717 for households in the 25th and 50th income percentiles respectively in both Project Paper and full recovery estimates.

6.4. Affordability of Project Components at Project Paper Standards and at Market Rates.

No one expects cost recovery from beneficiaries to occur instantaneously, but instead to be paid over time. We have assumed Project Paper recovery repayment standards to be at 7 percent

^{43/} Most households borrowed at least this much. With an additional guarantor they could borrow up to the level where payments were 25% of net salary. Or a second household earner could borrow. Assumptions, as explained in analyzing HILP in Chapter II of this report, are base salary at .6 times net salary, and household income at 1.35 times net salary.

interest over 12 years, for all costs -- matching the 7 percent standard provided for the HILP and the 12 year average from actual HILP experience. ^{44/} We have assumed a 10.5 percent interest rate for full recovery at "market" costs, corresponding to CFE's current cost of borrowing from the Central Bank plus a 1 percent servicing fee, ^{45/} with again a 12-year recovery period. The monthly costs of amortizing the capital cost levels provided in Table VI.2 are presented in the first 2 rows of Table VI.3. The amortizing costs are then arrayed against money available from households to pay for them. The results of this comparison are several:

First, neither income group of households can meet Project Paper recovery standards if they have only an additional 15 percent of income available for shelter. The lower income households could not quite meet these standards even if land purchase price were defined at zero. Under such conditions, many households would not be able to opt for home improvement loans, if land and infrastructure costs were imposed first. But if land titling happens last,

^{44/} The Project Paper specifies an interest rate only for HILP and specifies no repayment periods.

^{45/} This is itself a subsidized rate, but that subsidy is economy - wide and not specific to this project.

insufficient resources would be left for that land purchase. Lower cost recovery levels (or slower recovery) would be needed to allow for participation in all upgrading components, especially for the lower income groups.

TABLE VI. 3
COST RECOVERY ANALYSIS DATA,
ONE HOUSEHOLD'S INCOME AS
BASIS FOR AFFORDABILITY
(\$)

	Households in 25th Income Percentile	Households in 50th Income Percentile
Monthly Costs of Project Paper Recovery Levels (7% interest)	27	30
Monthly Costs of Full Cost Recovery (10.5% interest)	40	44
Monthly Household Income (one household)	100	159
Available for Cost Recovery if 15% (additional) of Income is Spent (monthly)	15	24
Available for Cost Recovery if 25% (additional) of Income is Spent (monthly)	25	40

Second, if people can pay an additional 25 percent of their incomes for shelter, which probably overstates their abilities by a fair margin, then Project Paper recoverability standards as defined here can be met or virtually met by both income categories.

Third, full cost recovery is not feasible for either income group even if an additional 25 percent of income were to be devoted to shelter, though the higher income households group comes close. The percentage of full costs that could be recovered for both cases of income levels and percentage of income expended for shelter is detailed in Table VI.4.

TABLE VI. 4
PERCENTAGE OF FULL COSTS
RECOVERABLE UNDER VARYING
INCOME AND EXPENDITURE ASSUMPTIONS,
ONE HOUSEHOLD'S INCOME

	<u>Households in</u> <u>25th Income</u> <u>Percentile</u>	<u>Households in</u> <u>50th Income</u> <u>Percentile</u>
15% of Income (Additional)		
Available for Cost Recovery	38%	55%
25% of Income (Additional)		
Available for Cost Recovery	63%	91%

It is worth noting that even what we have termed as full cost recovery levels define land payment at one-sixth of market value. If land is sold at market price, not even a household with income at

the 50th percentile cannot come close to meeting land cost plus the lower Project Paper recovery standards for other upgrading elements. Indeed, it cannot even amortize the land cost (nearly \$70 monthly) alone.

Finally, we consider the building with two households pooling incomes to afford cost recovery payments. As Table VI.5 shows, these households can meet Project Paper recovery standards; and all but the 25th income percentile two-household combination adding 15 percent of income for shelter can pay full cost recovery. However, not even two households at the 50th percentile pooling their incomes could afford full cost recovery if land were priced at market values.

TABLE VI. 5
COST RECOVERY ANALYSIS DATA, TWO HOUSEHOLDS
INCOME AS BASIS FOR AFFORDABILITY
(\$)

	Households in 25th Income Percentile	Households in 50th Income Percentile
Monthly Costs of Project Paper Recovery Levels	27	30
Monthly Costs of Full Cost Recovery	40	44
Monthly Household Income (2 Households Total)	200	318
Available for Cost Recovery if 15% (Additional) of Income is spent (Monthly)	30	48
Available for Cost Recovery if 25% (Additional) of Income is spent (Monthly)	50	80

VII.
COST-BENEFIT ANALYSIS

It is not possible, with data currently available or obtainable in the course of this evaluation, to undertake a credible cost-benefit analysis of the upgrading project. While cost estimates have been derived, no systematic information on the value of benefits can be developed at this time. The only at all feasible approach would be to use cost as an approximation of value, which simply produces a cost-benefit ratio of 1.0. The SEH study had both methodological and data shortcomings forced on it by insufficient information as well, which they are in the process of correcting by gathering additional information. No other credible, documented cost-benefit analyses have been previously developed.

We can, however, describe briefly the kinds of information required for a true analysis. Benefits will come in several forms. These include:

- . Services provided by infrastructure, including improved sewer, water, electricity and roads.
- . Services provided by community facilities, including schooling, health services, and community center meeting places.
- . Increased housing space for each household, homes for further households and improved quality of existing housing.
- . The security of title to land and the value of increased ease in selling or borrowing against it.

Most of the benefits should be represented reasonably well by the increase in the value of land and buildings in the upgrading communities

that occurs as a result of the upgrading. People should be willing to pay more for property there in the amount at which they value the stream of services and benefits from new infrastructure and community facilities, improved or expanded homes, and the security of land title (assuming all components are ultimately implemented).

What is needed is to obtain agreed-upon estimates of property value at the start of the upgrading project and at its finish (or at least at the point where it is clear to current and potential residents exactly which components will be put in place). From the difference between initial and final value, one would have to subtract the inflation in value that would have occurred without the upgrading project. A measure of the change in property values in similar communities in which the upgrading project did not operate would provide an adequate estimate for this adjustment.

Also to be deducted would be a measure of the value of building improvements undertaken without HILP assistance. This would likely be difficult to obtain. A potentially more manageable approach to the same result would be to estimate the increase in value of land (serviced but aside from buildings) in the upgrading communities, and add to that the amount of HILP expenditures. The land component would include whatever

the surplus in value of HILP-financed improvements is over the cost of making them, so that the full value of HILP-financed building improvements would be counted.

Note that with such computations, it is not correct methodology to add also the increase in rents of improved buildings or the value of improved health or education, etc. to the benefit total. The benefits of better homes and services would already be reflected in what people would pay for property, including what tenants would pay to owners. The main addition to benefits beyond property value might be any reduction in costs to the government of providing health care to upgrading community residents, if such expenditures had been made, since households would not consider such benefits in deciding how much to pay for property.

ANNEX A

RESPONSE TO QUESTIONS RAISED

The conclusions of the ET based on the analysis and documentation presented in the report are summarized below in the form of answers to a specific set of questions raised in the ET's terms of reference.

A. Project Beneficiaries and Cost

1. Is the upgrading component reaching or is it likely to reach intended beneficiaries?

The Project Paper identified beneficiaries as the residents of the upgrading communities. The HILP beneficiaries were identified according to specified income criteria. Since very few of the project components are actually in place, the ET focussed specifically on the experience with beneficiaries who have been able to benefit from the HILP program. The ET also analyzed on the basis of estimated cost and income data whether the overall project components were likely to be affordable to the intended target groups.

With regard to the overall project components, namely the provision of land and infrastructure on a cost recoverable basis, the analysis

Nonetheless, the budget for the upgrading component on its own has remained close to the original budget. The fact that funds may not be made available to meet the project's total budget requires that additional resources be secured to ensure completion, or that the project's scale be reduced to fit funds available. JHP/PIU should examine this situation carefully and attempt to find the necessary resources from AID and/or GOE. At the same time, it should develop plans that reflect the funding available in the event that it cannot secure additional resources.

Turning to the original cost estimates on the HILP program, we find that they are less than the level now estimated as being justified on the basis of current and projected patterns of demand. However, due to the fact that average loan sizes have been generally smaller than initially estimated, the original cost estimates for the HILP have been more than adequate to cover original projections of demand.

2.b. Are there adequate provisions for cost recovery?

The answer to this question is problematic with regard to overall cost recovery because no attempt was made to define the affordability of the upgrading component relative to beneficiary income levels when the original costs estimates were made. The PP guidelines on cost recovery are imprecise and inconsistent. It is not clear in the PP that infrastructure costs for water were meant

the maximum loan payment being limited to 25 percent of base salary, which tends to under-represent total income. In addition, current indebtedness levels for HILP may limit the ability of the lowest income beneficiaries to pay for infrastructure and land, once these other upgrading components come on stream. Second, self-employed workers have a higher rate of loan refusal than do salaried workers. This has implications for replicability in areas outside Helwan.

2.a. Are the original cost estimates still valid in order to achieve stated project objectives?

The original cost estimates for the entire upgrading program presented in the Project Paper of \$29.8 million are now approximately 33 percent below the \$41 million cost estimates presented in the 1984 Implementation Plan. However, the original PP budget took into account delays and price increases by adding a large inflation factor (an average of 53 percent through 1983) to the original cost estimate. As a result the total amount budgeted in the Project Paper of \$56.87 million for upgrading is only U.S. \$0.5 million less than that proposed in the 1984 Implementation Plan. There is, however, a problem insofar as the 1983 Implementation Plan projects total project costs of \$200 million or \$40 million more than the funding currently available for the two project components, Upgrading and the Helwan New Community.

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to be recovered at all from intended beneficiaries. Thus, while the PP requires "partial" recovery for water, it expects this to come through tariffs. This recovery source covers only Operations and Maintenance, not investment. For sewerage, "partial" recovery is alluded to in one section, and no recovery is listed in another. Land cost was to be fully recovered; however, its value was priced at a minimal level.

With these caveats in mind, the ET estimated the levels of recovery that could be realized. This analysis was made on the basis of a consideration of current cost estimates of land, infrastructure and the HILP program. The ET's analysis of land costs suggests that: If land were valued at the market rate, it would not be affordable to households within the target group. Even with two households pooling their resources, the upgrading area residents would not be able to pay for land, much less pay for infrastructure or take out a home improvement loan. Moreover, it is questionable whether beneficiaries who have been living for extended periods of time in these communities should be charged current market prices for land.

Recovery of some cost of land, however, is important in upgrading sites if the project is to meet its objectives of replicability and cost-effectiveness. In estimating cost recovery potential the ET has assumed land prices similar to those being charged by the GOE on sales of adjacent sites for new housing which have ranged from \$3.70

to \$79.30 per square meter. It also assumed on-site infrastructure costs would be "partially" recovered at 50 percent. (This is an arbitrary definition of "partial" cost recovery called for in the Project Paper but seems reasonable given the results of our analysis.) These cost recovery objectives could be met by households as low as the 25th percentile of the urban income distribution (\$100/month), provided they could pay an additional 25 percent of income for shelter. If the total cost of on-site infrastructure were included in recovery levels affordable from households paying for land, infrastructure and HILP loans would still be reasonable. The affordability levels would be 63 percent of the total cost of infrastructure HILP and land for households at the 25th percentile of the urban income distribution and 91 percent for those households at the median (given an additional 25 percent of income available for shelter). However, it is likely that such households would be forced to use credit facilities to purchase the land and pay for infrastructure and forego the option of home improvement.

As regards cost recovery levels on the HILP, they extend beyond other publicly supported housing credit programs in Egypt. Based on available evidence, the capital costs recovered by the HILP represent a substantial part of capital costs, even when measured at existing market interest rates. Cost recovery in the HILP meets the standards set by the Project Paper which stipulate repayment of principal at 7 percent interest. There are, however, net expenses of program administration in addition to capital costs that reduce

the amounts available from repayments for future use. Full cost recovery on the HILP would require charging higher rates of interest to reflect the true value of capital if it were put to alternative uses. The results of the analysis suggest that charging interest rates similar to those at which the Credit Foncier (CFE) obtains its money (10.5%) might not place an undue burden on current HILP borrowers. However, higher interest rates would necessarily exclude some low-income households from being able to pay the costs of other components of the program, namely land and infrastructure and may be more appropriate for higher income beneficiaries.

Actual costs of operating the HILP are very reasonable, representing between 6 and 14 percent of annual loan volume, a good performance under any circumstances. These costs are to be recovered primarily from the JHP, with borrowers fees covering only a small fraction of the administrative costs.

3. What economic benefits are derived from the upgrading component of the Project?

The primary economic benefits of community upgrading will come through: infrastructure services, community facilities, decrease in housing densities as measured by households per dwelling unit, additions and improvements to the existing housing stock, and the value of the increased ease in selling or borrowing against secure

title to land. Quantification of the stream of these benefits in terms of increased land and building values was difficult because of the lack of data. However, it is safe to assume a benefit-to-cost ratio well over 1:0 if the backlog in demand for the HILP is taken as a guide. The demand for loans in this program suggests that there is a high valuation of its benefits relative to costs, most of which are being charged to borrowers. Furthermore, preference surveys indicate an even higher value and priority for infrastructure improvements.

B. Project Management and Implementation

1. Is the upgrading component of the project proceeding according to schedule: Is it progressing toward its stated objectives?

The upgrading component of the project is not proceeding according to the schedule set forth in the Project Paper. One year after the original project completion date, the project is roughly 20 percent completed.

The 1983 Implementation Plan prepared by CHF for the JHP proposes an implementation schedule based on project experience. Estimates of the amount of time required to accomplish specific tasks are more realistic than the Project Paper. A comparison of the activities accomplished to the schedule set forth in the 1983 Plan suggest that

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the project is generally on the revised schedule, which proposes a project completion date of December 31, 1986. Yet, given the project's history and the documented delays, there is a high probability that completion will not occur until the first or second quarter of 1987, and therefore, an extension of the PACD is required.

At this point in the implementation schedule, the project is moving steadily toward achieving its stated objectives. Housing stock is being improved and additional units have been built; loans are being recovered from beneficiaries; some community facilities have been constructed and others are designed; designs for the infrastructure have been developed and most are ready to be put out for bid; and JHP/PIU is exploring ways to resolve the land tenure issue. In addition, the program is clearly demonstrating that there is a potential for reducing subsidies on public housing programs through cost recovery for distributing subsidies according to beneficiary ability to pay. The objective on which little progress seems to have been made is a substantial reduction of design standards to lower costs. Finally, it is too early to tell how much progress has been made toward the objective of adoption of upgrading as part of national housing policy, though clearly all involved share the belief that it is an appropriate response to the shelter problems of low income groups.

Successful project implementation currently depends on JHP/PIU's ability to: (1) contract firms who can construct the infrastructure

and community facilities, (2) maintain effective coordination with the GOE agencies who have the authority to review and approve designs and to operate the facilities once in place; and, (3) motivate the community to participate. Timely project implementation will also depend on the level of monitoring staff, reduction of the number of demolitions required to install the current road and sewerage network design, and securing land for rights of way and construction of facilities.

2. Are the agencies and units managing the upgrading component of the project in a coordinated and effective manner?

There is only one agency, JHP/PIU, that has the authority to manage the upgrading project. All the other agencies, such as CHF, CFE, USAID, and the units, Joint Task Groups, i.e., standing committees, take their direction from JHP/PIU. JHP/PIU is responsible for establishing and maintaining effective coordination among the agencies, institutions and firms involved in the upgrading project. At project start-up, JHP/PIU attempted to carry out all phases of the upgrading program. At present, JHP/PIU has restricted its role to one of contracting and monitoring the execution of specific project components.

JHP/PIU's current management style facilitates project implementation and is based on the realization that project success is directly

tied to the establishment and maintenance of a harmonious working relationship with other agencies and units.

The standing committees created by JHP/PIU are the principal mechanism for maintaining good coordination. Through these committees, representatives of the different agencies and institutions involved in the Helwan Project are discussing and resolving issues pertinent to the project. The committees, chaired by JHP/PIU, constitute an important channel through which the opinions of the different representatives are being exchanged.

Since several staff members of and technical advisors to the JHP/PIU were once members of the agencies whose approval JHP/PIU requires for project implementation, there are strong personal ties between the project staff and key individuals working in these agencies, e.g., General Organization for Greater Cairo Sewerage and Sanitary Drainage (GOSSD), Cairo Wastewater Organization (CWO). Furthermore, JHP/PIU has hired consultants on a part-time basis who presently hold senior positions in the agencies responsible for approving infrastructure designs and operating the networks after installation.

In addition, through the experience of working with contractors to produce designs for facilities and infrastructure, JHP/PIU has developed relationships with consultants who have a common understanding of the requirements and objectives of the project.

This relationship provides a solid base for involving the consultants in the construction supervision of infrastructure.

3. Do all the agencies and units involved share a common set of views on the Project's objectives under upgrading, the roles which different actors have, reasons for successes and/or failures, and future implementation strategies? If not, how are the different views affecting the chances for Project success? Can the differences be overcome? How?

It is JHP/PIU's obligation to define the meaning of upgrading, and an overall implementation strategy. There is general agreement among all agencies and institutions involved that upgrading low-income settlements is an appropriate approach to urban development in Egypt.

There is a consensus among the agencies involved in the project that land tenure is an essential element and that the community must be involved in the upgrading process from the beginning. There are, however, different views on which elements and essential facilities are required. It also remains to be decided whether cost recovery is an acceptable objective.

JHP/PIU is beginning to address key issues related to the stated objectives of the project. Until recently, JHP/PIU was totally

involved in day-to-day operational issues and establishing an effective management structure. JHP/PIU did not have an opportunity to distance itself from the concerns of implementation and reflect on the degree to which the stated objectives are appropriate and realizable.

Viewed from those involved in the implementing and/or utilizing project components, the community development process--reflected in such activities as the vocational training center at Rashed, and the HILP--is successful. To the extent that community facilities have been built and are operating, this project component has also been successful. The absence of the promised infrastructure has been a disappointment to all concerned, but especially the residents of the upgrading sites.

While CFE and the PIU share objectives of serving low-income people and improving housing there are some differences in perceptions with regard to implementation strategies of the HILP. The CHF and PIU team considers the CFE to be inflexible in its lending practices. The CFE, on the other hand, believes that existing income guarantees are insufficient for sound banking practices. CFE, therefore, considers its role more as a financial service arm of JHP in HILP rather than as a bank.

These perceptions may not affect project success in meeting objectives but are not encouraging regarding the institutional

replicability of the HILP by a banking institution tied to mortgage-backed loans.

C. Lessons Learned

Some of the lessons learned to date have a bearing on future stages of the effort, the design development and replicability of the project. First, with regard to the issue of beneficiary affordability and cost recovery policy, it is important to establish a clearer definition of target beneficiaries and to estimate their capacity to pay for upgrading costs at the outset during the design of the project. It is also imperative to define more precisely the elements to be charged to beneficiaries and the extent to which they are to be recovered. Without such clear guidelines, it is difficult to evaluate the replicability of the project.

According to the ET's estimate, the project will certainly recover a greater percentage of costs than is currently recovered under current GOE housing and infrastructure programs. It is therefore an improved and more replicable model for providing services to low-income groups. The level of subsidy for on-site infrastructure provision could be halved in this project with 50 percent of on-site costs recovered from low-income residents at the 25th percentile. This demonstrates that it is possible to introduce cost recovery in infrastructure service programs and argues for a greater recovery of

such on-site costs in GOE housing programs in general. A policy of cost recovery, especially from higher income groups, would allow cross subsidy in favor of low-income groups.

A greater level of recovery, and therefore a reduced subsidy, would have been perhaps possible if less than the traditional standards for infrastructure had been applied. However, it is difficult to tell whether the cost-savings on the introduction of reduced standards may not have been offset by even greater delays in implementation, given the reluctance of infrastructure authorities to approve less than standard practices.

The lessons learned in Project Management and Implementation suggest that introducing innovative programs and creating a new unit to implement them, requires more time than was originally foreseen. In addition, management must be structured to be responsive to project needs. The latter lesson has been absorbed over time. After much trial and error, the JHP/PIU has come to realize that it cannot single-handedly carry out all aspects of the upgrading program. It has, therefore, gradually limited its role to planning, funding, coordinating, contracting and monitoring functions.

The amount of technical assistance required to implement the project in a timely manner was underestimated at the outset. At present, the technical assistance tends to take a very literal approach to

the contract tasks. This is due to past misunderstandings about the functions to be performed by the technical assistance team. In this project, it is important that technical assistance continue to be utilized more to (1) respond to the evolving needs of the client, and (2) to encourage the client to test approaches that will have positive effects on the rate of implementation and degree of acceptance of the program.

The upgrading model proposed in the Project Paper, consisting of the four components, appears to be workable in the Egyptian setting. It is too early in implementation to judge the Helwan upgrading project as a possible model for future upgrading project in Egypt. Certain aspects which have been operating and shown results certainly deserve consideration for future projects. The HILP and the community development efforts to involve and familiarize beneficiaries with various project components fall into this category.

The approach of testing and evaluating programs which require community awareness and involvement, such as was done for the HILP, the solid waste collection and the sewerage pumping trucks has proved to be an effective way of introducing "innovations" to the community and gaining acceptance. This trial approach could perhaps be tried for introducing "innovative" and less costly physical infrastructure in future upgrading programs.

The HILP is an additional model that has merit not only for future upgrading projects, but as a housing finance system that can effectively reach low-income groups. The demand for this program has surpassed original expectations. The loans have been quickly translated into tangible housing improvements. Some households have actually built additional units. This demonstrates a backlog of potential demand for housing construction and improvement credit on reasonable terms. The HILP has successfully mobilized savings by leveraging household resources beyond the credit amounts. An important contribution made by this program has been the addition of rental units affordable to low-income groups through a combination of the loans and household savings. The program is operated at reasonable costs and represents a marked departure from previous GOE housing finance. It has demonstrated the viability of recovering substantial amounts of the cost of credit even from low-income beneficiaries.

If the HILP is to become a model for lending to low-income families, attention should be paid to land titling issues as well as to mechanisms for providing alternative guarantees for loans that are not secured by land. The program's effectiveness warrants further support and providing mechanisms for mobilizing additional resources so that it can operate on a wider scale.

The potential for expanding and utilizing the HILP as a means of meeting credit requirements of low-income groups may depend on resolution of the land-title issue. The HILP can best be extended at limited AID/GOE cost if a financial institution will provide credit from its own funds. Credit Foncier's position in this regard is one of concern over credit being extended without the security of mortgages backed by land title. The absence of defaults on the HILP does not seem to have convince CFE that income guarantees may be sufficient and a viable alternative for lending to low-income groups who rarely have land title.

One of the present constraints to the timely execution of the bidding, contracting and construction of the infrastructure work is the sensitive issue of demolition. The installation of roads and sewers as presently designed will require the demolition of some houses and cesspits. The delays to be encountered in resolving the issue on a case-by-case basis could be completely avoided if JHP/PIU and AID would agree to allow the consultant and contractor enough flexibility not to install roads and sewers where they would require demolition. This may require reclassifying some of the roads as pedestrian walkways and excluding some limited areas from having direct connection to the sewerage system.

The efficacy of project management is directly attributable to the extent to which the JHP/PIU can maintain a very lean, flexible

structure dedicated to contracting and coordinating upgrading activities. This structure needs to be staffed by a few key, senior staff who can handle all areas of contract management and construction monitoring and the technical specialities of water, sewer and roads. In addition, if upgrading programs are to be replicated in other settlement areas, JHP/PIU needs to have the authority to (1) retain the revenues it receives and, (2) coordinate the work of other, local government agencies carrying out upgrading activities.

To help JHP/PIU meet Project objectives more rapidly, USAID should assign a full-time U.S. field engineer to work with the PIU, preferably at the project site in Helwan. This person would be a field engineer who could collaborate with the PIU field engineer to resolve technical problems that will arise in the course of installing the infrastructure. This engineer would also identify major issues that need to be referred to JHP/PIU management for discussion and decision.

ANNEX B

Helwan Upgrading Project

Documents reviewed: Title, Agency/author, Date.

<u>Document title</u>	<u>Agency/author</u>	<u>Date</u>
*(General Documents)		
Project Paper	USAID	78
Final Engineering Feasibility Report (2 vols)	ES Parsons	30-IX-78
Project Grant Agreement	USAID	VIII-78
Project Implementation Plan	JHP/PIU/CHF	X-81
Project Implementation Plan (Draft)	JHP/PIU/CHF	IV-83
Important Laws and Regulations regarding Land, Housing and Urban Development in the Arab Republic of Egypt	Joint Housing Teams w/USAID & MOHR	VII-78
Relocation and Upgrading Community Programs for Urban Settlements	National Center for Social and Criminological Research	V-78
Informal Housing in Egypt	Abt Associates	I-78
Assembled Results of the Four Rounds Household Budget Survey in the ARE (1974-75)	Central Agency for Public Mobilization and Statistics CAPMAS	IX-78
Role of the Credit Foncier Egyptian in the Housing and Community Upgrading Project for Low-Income Egyptians	Richard Pratt Assocs.	78
Economic Finance: An Analysis of the Prospects for Increased Activity	Nat'l Savings and Loan League	III-81
Housing and Community Upgrading for Low-Income Egyptians: Final Evaluation Report	Robert Nathan Assocs.	VI-82
National Urban Policy Study: Urban Growth and Urban Data	PADCO, Inc.	VII-82
Income Data on Helwan Factory Workers: memo (Billand to Scandar)	CHF	14-III-82

Market Research, Helwan New Community Residential Comparison	Mokhtar A. Salah	81-82
Housing Finance: An Analysis of the Prospects for Increased Activity	Nat'l Savings and Loan League	III-81
Housing and Community Upgrading for Low-Income Egyptians: Final Evaluation Report	Robert Nathan Assocs.	VI-82
PIU-HILP Monitoring Reports	PIU of the JHP	
CHF Progress Reports	CHF/consultant to Pro. Imple. Unit/JHP	81-
The Off-site Sewage Collector Data Inventory Report/on-site	AAW/BTE	III-84
The Off-site Sewage Collector Study Report/on-site	AAW/BTE	VI-84
The Off-site Sewage Collector Study Report/off-site	AAW/BTE	IV-84
The Off-site Sewage Collector Basis of Design report/off-site	AAW/BTE	VI-84
*(Site specific documents)		
Arab Ghoneim		
1. Socio-economic survey		
A. Arab Ghoneim: A case study of an urban settlement in Greater Cairo	Nat'l Ctr. for social and Criminological Research	79
B. Izbet Sidqi and Arab Ghoneim: Data Inventory Report for Arab Ghoneim	AAW/BTE/SEA	XII-83
C. Arab Ghoneim and Ghoneim Baharia: Data Inventory Report	AAW/BTE/SEA	I-84
2. Urban Plan		
A. Izbet Sidqi and Arab Ghoneim: Land ownership for Arab Ghoneim	AAW/BTE/SEA	I-84

Arab Rashed

1. Socio-economic surveys
 - A. Arab Rashed: A case study of an urban settlement in Greater Cairo Nat'l Center for Social and Criminological Research 79
 - B. Arab Rashed: Report on Economic Analysis P.B. Sabbour 1-II-82
 - C. Arab Rashed: Social and - Economic Analysis P.B. Sabbour 7-III-82
 - D. Arab Rashed: Economic Analysis (Draft) P.B. Sabbour 2-II-83
2. Preliminary Design
 - A. Arab Rashed: Preliminary infrastructure design standards: (a) water supply Phase I and II, (b) sewage disposal/phase I and II, (c) electric distr. system, (d) telephone system, (e) street improvement P.B. Sabbour ?
 - B. Arab Rashed: General condition technical specifications and bill of quantities: Phase I - water supply and sewerage, and site drainage P.B. Sabbour ?
 - C. Arab Rashed: Design report Phase II - Water Supply and Sewerage. Street Improve. Ele. distribution and telephone system. P.B. Sabbour 28-IV-82
 - D. Arab Rashed: Urban Planning Planning Studies and Analysis Planning Criteria and Stds, Proposed Plan P.B. Sabbour IX-82
 - E. Arab Rashed: Solid Waste Component International Envr. Quality 10-III-82
 - F. Arab Rashed: Strategies for upgrading solid waste management in Cairo: policies and programs Envr. Quality International IV-82
 - G. Arab Rashed: Trial Household solid waste collection program Envr. Quality International 12-III-82

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------|
| 3. Tender Document | | |
| A. Arab Rashed: Tender Document
Technical Specs. Phase II
Infrastructure - 1st General Conditions | P.B. Sabbour | ? |
| 4. Monthly Reports | | |
| A. Arab Rashed:
(Reports 2-21 except 1, 3, 4) | P.B. Sabbour | 31-XII-81/
31-VII-83 |
| 5. HILP | | |
| A. HILP Beneficiary: Limited
field survey | PIU | VII-84 |
| Izbet Sidqi | | |
| 1. Socio-economic surveys | | |
| A. Izbet Sidqi and Arab Ghoneim:
Data Inventory Report for Izbet Sidqi
with Appendix | AAW/BTE/SEA | VI-83 |
| 2. Urban Plan | | |
| A. Izbet Sidqi and Arab Ghoneim:
Land Ownership for Izbet Sidqi - vol. 1 | AAW/BTE/SEA | XI-83 |
| B. Izbet Sidqi and Arab Ghoneim:
Land Use
Report for Izbet Sidqi | AAW/BTE/SEA | IX-83 |
| C. Izbet Sidqi and Arab Ghoneim:
Design Report for Izbet Sidqi | AAW/BTE/SEA | XI-83 |
| 3. Economic Analysis | | |
| A. Izbet Sidqi and Arab Ghoneim:
Economic and Financial Analysis for
Izbet Sidqi | AAW/BTE/SEA | III-84 |
| 4. Documents | | |
| A. Izbet Sidqi and Arab Ghoneim:
Scope of Contract: Izbet Sidqi | AAW/BTE/SEA | 84 |
| B. Izbet Sidqi and Arab Ghoneim:
Contract I-Conditions of Contract
for Izbet Sidqi | AAW/BTE/SEA | IV-84 |
| C. Izbet Sidqi and Arab Ghoneim:
Contract II:
Contract Documents and Technical
Specification - N&S Pumping Stations and
Package Sewage Treatment Plant for
Izbet Sidqi | AAW/BTE/SEA | II-84 |

Ghoneim Baharia

- | | | |
|------------------------------------------------------------|-------------|--------|
| 1. Socio-economic survey | AAW/BTE/SEA | I-84 |
| A. Arab Ghoneim and Ghoneim Baharia: Data Inventory Report | | |
| 2. Preliminary Designs | AAW/BTE/SEA | II-84 |
| A. Arab Ghoneim and Ghoneim Baharia: Study Report | | |
| B. Arab Ghoneim and Ghoneim Baharia: Design Report | AAW/BTE/SEA | III-84 |
| 3. Documents | | |
| A. Arab Ghoneim and Ghoneim Baharia: Scope of Contracts | AAW/BTE/SEA | IV-84 |

Izbet Zein

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|--------------------------------------------------------------------------------------------------------------------|-----------|--------|
| 1. HILP Program | | |
| A. Proposed Home Improvement Loan Trial Program and Evaluation of the Home Improvement Pilot Program in Izbet Zein | CHF/USAID | XII-80 |

Ghoneim El Baharia, Kafr El Elw
Izbet Zein and El Bagour

- | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|
| 1. Proposals | | |
| A. Proposal for Consulting Serv. for Planning Studies for Ghoneim El Baharia, Kafr El Elw, Izbet Zein and El Bagour: Sewerage System for Helwan El Balad (Technical and Financial Proposals 2 volumes). | AAW/BTE/SEA | III-84 |

ANNEX

Agencies visited and Individuals Interviewed during the Mid-project Evaluation of the USAID Project - Community Upgrading for Low-Income Egyptians.

<u>Agency</u>	<u>Individual</u>
Joint Housing Projects (MOH)	Youssef El Rafie, Chairman Ihsan Sheri, Dir., Land tenure and Economic Affairs Adel Scharabas, Gen'l. Sec'y Farouk Sadek, Legal Affairs H. El Wakeel, cons., Technical Affairs Salah El Essawi, Hd., Finance and Administration Ghayatti, Hd, Evaluation Fawzi Guirguis, Cons., Technical Affairs
Project Implementation Unit (PIU)	Halim Scandar, Gen'l Mgr. Mohammed Maher, planning dept. Yousef Ragheb, Cons., Engineering and Planning Dept. Mohamed Foda, Dir., Upgrading AREas Emad El Tobki, Cons., Site Engineer Ibrahim Dessouki, Architect, HILP Program Wadie Nashed, Cons., Engr. Nabil El Kholi, Social Team, HILP Eagaa Khalif, Social TEam, HILP Aly Abdelal, Cons., Accountant
Credit Foncier Egyptien	Aly Salam Gomaa, Act'g Chmn Alexandar Pallange, Gen'. Mgr. Azmi Riad, Mgr. helwan Branch Mohamed Hassan, Helwan Branch Mohsen, Progr. Coord., SCE Helwan Branch
Cooperative Housing Foundation	Charles Billand, Team Leader Barry Frazier, Architect Jeffrey Stubbs, Economic and Financial Advisor John Driscoll, Administrative Advisor Sawsan El Messiri, Dir., Com. Org. Program Alber Wahba, Engineer Salah Zaki, Inst. Dev. Spc.

United States Agency for
International Development

Fred Zobrist, Office Director,
DRPS/UAD
David Painter, Project Officer
Eglal Oghia, Project Officer
Nabil Saba, Engineering

Ahmed Abdel Warith, Engrs.

Dr. A.A. Warith, Project Dir.
M. Hassan Morsi, Proj. Mgr. Alan Reid,
Proj. Mgr.
Fathy Abdel Latif, Engr.
Said Fahmy Mohamed, Engr.
Yousef El Gamal, Engr.
Mohamed Awad, Engr.
Hamdi Kech, Engr.

Sherif El-Hakim & Assocs.

Sherif M. El-Hakim, Pres.
Mahmoud H. Ahmed, Economist
Omar A. Salama, Mgr.
S. H. Hassaneum, Arch/planner

P.B. Sabbour

Hussein Sabbour, Pres.
Rmases Attala, Proj. Mgr.
Derrick A. Anderson, Pers.

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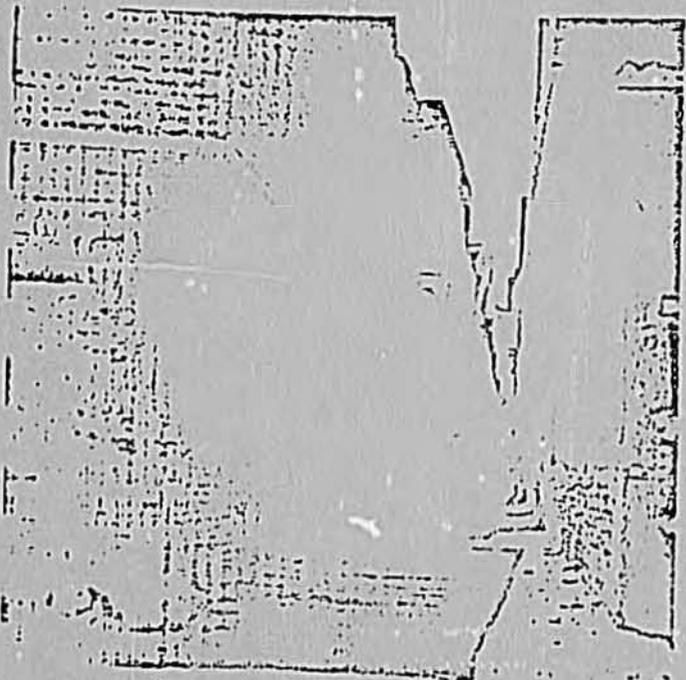
Public Water Fountain
(Arab Rashed)



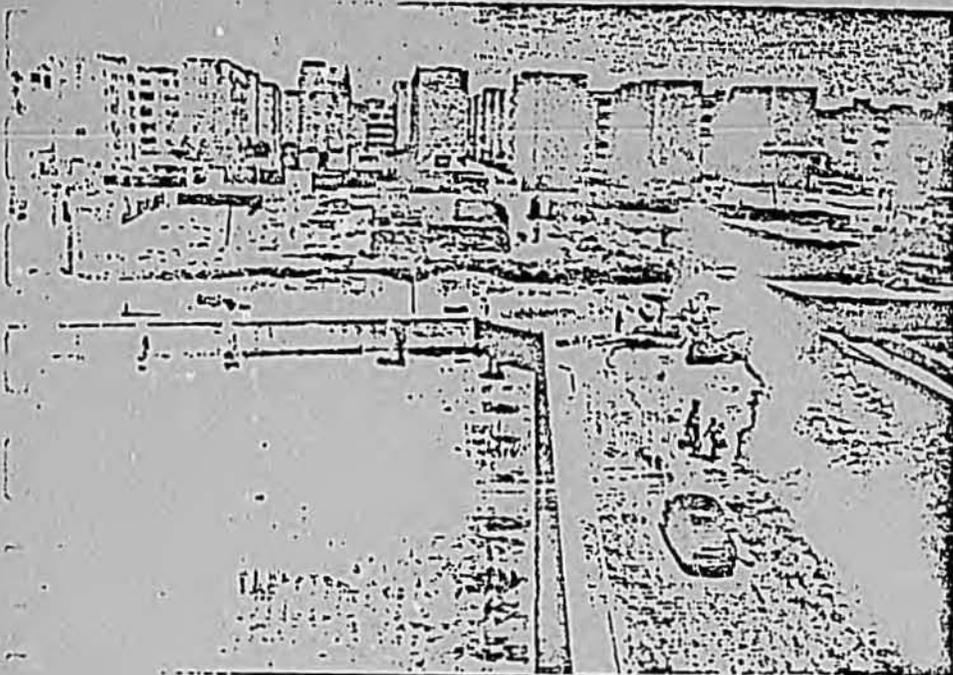
Soakaway
(Arab Rashed)



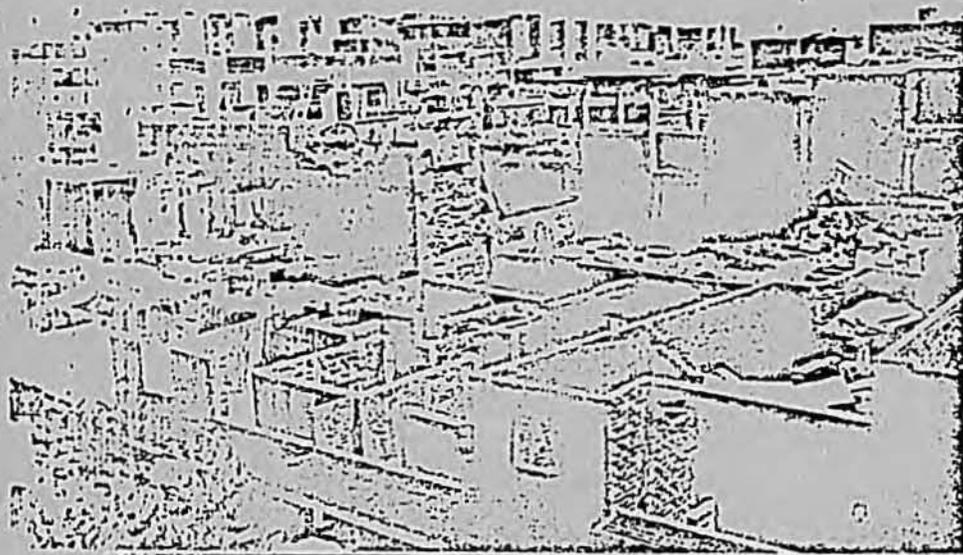
Wide Street (6 meters)
(Arab Ghoneim)



Narrow Street (4 meters)
(Arab Ghoneim)



Looking east across railroad at typical public housing from Arab Ghoneim School.



Looking west from Arab Ghoneim School.



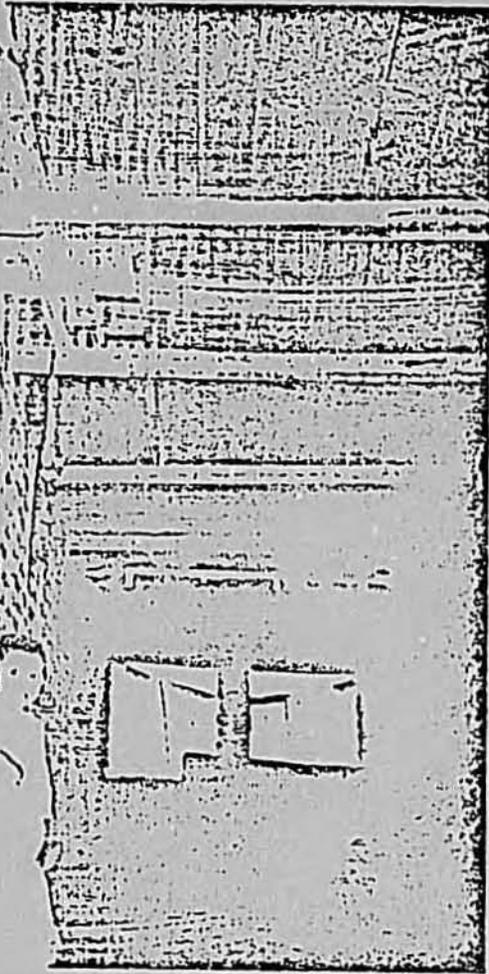
Looking south east from Arab Ghoneim School.



Public Water Foundation
(Arab Ghoneim)



Public Water Fountain
(Arab Ghoneim)



Home Improvement Construction
(Arab Rashed)



Same as above