

# BEST AVAILABLE DOCUMENT

669-0167  
 PD-AAG-314B1 (3)

AGENCY FOR INTERNATIONAL DEVELOPMENT

## PROJECT PAPER FACESHEET

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 C CHANGE  
 D DELETE

PP  
 2. DOCUMENT CODE  
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3. COUNTRY/ENTITY

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[ Low Income Housing Phase II ]

8. ESTIMATED FY OF PROJECT COMPLETION

[ 81 ]

9. ESTIMATED DATE OF OBLIGATION

A. INITIAL FY [ 79 ] B. QUARTER [ 4 ]  
 C. FINAL FY [ 79 ] (Enter 1, 2, 3, or 4)

10. ESTIMATED COSTS (5000 OR EQUIVALENT \$) -

A. FUNDING SOURCE	FIRST FY			LIFE OF PROJECT		
	B. FX	C. LC	D. TOTAL	E. FX	F. LC	G. TOTAL
AID APPROPRIATED TOTAL	5,000		5,000			5,000
(GRANT)	5,000		5,000			5,000
(LOAN)						
OTHER U.S. 1. FIG	10,000		10,000			10,000
2.						
HOST COUNTRY						
OTHER DONOR(S)						
TOTALS	15,000		15,000			15,000

11. PROPOSED BUDGET APPROPRIATED FUNDS (5000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. 1ST FY 79		F. 2ND FY		K. 3RD FY	
		C. GRANT	D. LOAN	G. GRANT	H. LOAN	I. GRANT	J. LOAN	L. GRANT	M. LOAN
(1) SA	720	862		5,000					
(2)									
(3)									
(4)									
TOTALS				5,000					

A. APPROPRIATION	H. 5TH FY		I. 6TH FY		LIFE OF PROJECT		12. IN-DEPTH EVALUATION SCHEDULE
	J. GRANT	K. LOAN	L. GRANT	M. LOAN	N. GRANT	O. LOAN	
(1) SA					5,000		
(2)							
(3)							
(4)							
TOTALS					5,000		

MM YY  
 01 7 81

13. DATA CHANGE INDICATOR. WERE CHANGES MADE IN THE PID FACESHEET DATA, BLOCKS 12, 13, 14, OR 15 OR IN PRP FACESHEET DATA, BLOCK 12? IF YES, ATTACH CHANGED PID FACESHEET.

NO  
 YES

14. ORIGINATING OFFICE CLEARANCE

SIGNATURE

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TITLE Remo Ray Garufi  
 Mission Director  
 USAID/Liberia

DATE SIGNED

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 06 / 12 / 79

15. DATE DOCUMENT RECEIVED IN AID/W. CP FOR AID/W. DOC. COMMENTS, DATE OF DISTRIBUTION

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11	Project Implementation
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## 1.0 Face Sheet

### 1.1 Recommendation

The following action is hereby submitted for approval within this Project Paper.

Grant \$5,000,000.

### 1.2 Description of Project

The Grantee shall be the Government of Liberia acting through the Ministry of Finance (MOF), the National Housing Authority (NHA) and the National Housing and Savings Bank.

### 1.3 Project Summary

This project will cost a total of \$5,000,000 and will require two years to complete. The grant will provide (a) technical assistance, (b) training, (c) funding to provide infrastructure for the New Georgia Low Income Housing Estate, (d) seed capital to provide construction materials, home improvements, and small business loans for construction related enterprises in New Georgia and New Kru Town, and (e) budgetary support for new personnel to be hired by the National Housing Authority (NHA) and the National Housing and Savings Bank (NHSB) to increase their capability to manage larger projects within a short time frame.

This grant is for an expansion of a shelter project authorized in FY 1978 (669-0146). As part of the Phase I Project, the GOL provides counterparts for technicians, office

space, staff and logistical support. Similar support will be provided in this Phase II of the project.

#### 1.4 Findings

On the basis of the analysis contained herein, the USAID Mission to Liberia concludes that the project is technically, economically and financially sound. It is recommended that the grant be approved immediately so that NEA and NHSB personnel can be hired and construction of infrastructure for New Georgia can commence prior to the end of the calendar year.

The analysis reflected herein supports the conclusion that the project meets all applicable statutory criteria. The Environmental Assessment is in the process of being carried out. The project directly addresses the shelter needs of the rural and urban poor which is one of the four principal objectives in the AID Country Development Strategy Statement and supports the government's Four Year Development Plan goals of improving housing conditions for the urban poor. The USAID Mission Director has certified that Liberia has the capability to effectively maintain and utilize the project. (See Annex 9.

## 2.0 Background and Project Description:

### 2.1 The Problem

On April 14-15, 1979, Monrovia, Liberia was sacked. The number of persons involved in the demonstrations, riots and looting was estimated at twenty to twenty-five thousand. The instigators, who used a possible increase in rice prices as the rallying cry, were few but extremely vocal, and dissident university students, unemployed slum dwellers and finally unsupervised military personnel joined in the rampage. The damage to stores and business is estimated at \$50 million. Forty-one people were killed and five hundred and seven injured. The psychological damage may be even greater than the physical damage since Liberia is hosting the OAU Conference in July. The civil disturbance was a crushing blow to President Tolbert and his government and underlines root problems between the rulers and the ruled and the many thousands of urban poor who perceive themselves as disadvantaged by the Tolbert administration. This also caused an extreme financial squeeze on the GOL at a time when they were "strung out" trying to build the OAU site, highways, rural and urban construction, and maintain the development budget. This requested grant will assist the GOL at a crucial time and provide a housing alternative to the urban poor, which is the potentially volatile group with which the government is most concerned.

Also, it will directly address some of the most pressing problems and concerns identified by Foreign Minister Dennis during his early May meeting with Secretary Vance and May 24th meeting with the American Embassy Chargé and USAID Director.

## 2.2 Project Description

### A. Introduction

The population dynamics of Liberia are similar to those of many developing countries. Its population of approximately 1.7 million is growing at an annual rate of 3.3 percent per year. Liberia is also undergoing rapid urbanization, especially in Monrovia which is growing at a rate of about 8 percent per year. The city's population is expected to double by 1990.

Current estimates for the period 1975 to 1980 indicate the need for approximately 10,000 new dwelling units per year to absorb population increases, housing back-log and replacement of substandard housing in Metropolitan Monrovia. Demand among low income groups substantially outstrips supply by a wide margin. In the center city, low income families are packed into the large, originally, single family structures that have been subdivided into high density rooming houses. As a means of augmenting income, families in low income areas who own or lease land build additional rooms and

other dwellings to accomodate their extended families and others.

These areas are serviced by a limited number of community stand pipes, pirated water and electrical connections, inadequate garbage collection, poor drainage and sewage facilities, dirt roads, community staircases and walkways. Undeveloped lots are used for dumping garbage; are overgrown with weeds and collect water; and are breeding grounds for malaria-carrying mosquitos. In the outlying areas, the low income communities occupy unevenly developed land which is subject to flooding in the rainy season.

During the past decade the Government has sought to come to grips with the housing problem and slowly but definitely entered on the path of greater direct involvement and responsibility. Beginning in 1964, the United Nations prepared a series of studies examining the problem and recommending solutions. The result of these efforts was a major UNDP technical assistance project in early 1970's which was designed to assist the Government to establish the National Housing Authority (NHA), develop a local building materials industry and create a national housing finance institution.

In 1973, a FG financed conventional housing program

was authorized by AID in response to a GOL request. The program was designed to support and build upon the institutional framework prepared by the UN experts. However, following the failure of related negotiations for continued UNDP technical support, further development of the HG program ceased.

The institutional results of these early GOL efforts to deal with housing problems were the creation in 1970 of the NHA as an autonomous Government agency charged with planning, regulating and sponsoring housing development and in 1972 the establishment of the National Housing and Savings Bank (NHSB) to mobilize domestic savings and to attract foreign capital principally to finance the development of housing. The NHSB actually became operational in 1976.

Despite the formation of these institutions, real progress in creating a workable housing delivery system has proceeded slowly. Until 1978, most of NHA's activities have been directed to middle income households. Starting in 1976, the Government of Liberia began reassessing its housing policy in light of continuing urbanization and rapid deterioration in the quality of life for large numbers of Monrovia's population. The GOL recognized that the emphasis on publicly-financed conventional two and three bedroom

units does not meet the needs of the overwhelming majority of Monrovia's population, and was ready to try alternative less costly shelter options which were suitable for and affordable by lower income families and reasonable considering GOL resource limitations.

In 1976 the GOL and AID resumed discussions on the basis of the current AID priorities and the revised GOL strategy. An overall phased intervention was envisioned by AID starting with a Grant for Technical Assistance to the implementing agencies and leading into a mix of HG and DL loan resources to fund the capital projects. The first phase, Technical Assistance Grant for \$1,672,000 was approved in FY 78 and three TA advisers were assigned to the NHA in January 1979. The purpose of the technical assistance is to help the GOL develop a national housing policy to provide an improved, comprehensive framework for decision making for the low income shelter sector; and to assist the NHA to expand and reorient its institutional capacity to design and implement low income shelter projects through training of staff and design of demonstration projects.

This initial activity is moving ahead, however staff and resource constraints have stretched out the time required to begin physical development of the demonstration projects. At the same time, increasing

pressure is being put on the GOL to provide very quickly physical solutions for the poor of Monrovia who live in substandard, overcrowded conditions without services. The Easter riots were a strong manifestation of the unrest among the urban poor. This incident has made the government keenly aware of the gravity and urgency of the situation. The need to provide a better living environment for the masses of urban poor is seen as essential. While the necessary land has already been acquired and the shelter sector planning is sufficiently advanced to allow them to proceed in an orderly manner, the present budgetary constraints inhibit the GOL's ability to respond. The government now has the political will to act but they will need financial assistance to address the shelter needs of low income families and provide support to small enterprises to help stabilize the employment in a timely manner. The implementation of the shelter program as originally planned would not be possible on the new stepped up schedule due to lack of trained staff in the implementing agencies.

The \$5 million grant proposed in this paper will be used to expedite the start-up of these shelter activities, support further institutional development, staff expansion, and training. The grant will be followed on by a \$10 million HG (in two tranches) which

will finance the expansion of activities begun under the special grant, and provides a stream of financing to assure institutionalization of these types of activities both in Monrovia and in secondary centers.

Specifically, HG financing will be used to complete the sites and services projects in New Georgia and Barnersville, implement a community upgrading project, expand the construction material and home improvement loan programs and begin a secondary city pilot project. To assure institutionalization of this project and to maximize the benefits that will flow from the grant-funded activities, it is important that the HG be authorized simultaneously or as soon as possible after approval of this grant. Taking into consideration the time required to complete HG related agreements it is reasonable to expect these resources to begin flowing within a year of authorization.

B. Phase I

USAID currently has a project with the GOL National Housing Authority with two major objectives, (a) develop a national housing policy to provide a comprehensive framework for decision making for the low income shelter sector, and (b) train staff and build up the institutional capacity of the NEA to design and implement low income housing projects. This will lead into Phase II which will finance implementation of demonstration sites and

services, community upgrading and supportive construction material, home improvement and small business loans to the beneficiaries.

With the advent of the "Easter Uprising" the GOL has urgently requested and the Mission endorses moving directly into Phase II of the project immediately. This course of action would generate employment for unskilled and semi-skilled workers immediately after OAU construction was completed, show that the government was interested in the urban poor with slum upgrading projects, and provide an alternative to slum dwellers which would allow them to move onto their serviced plots of land and complete their houses on a self-help basis.

Since the initiation of Phase I, the implementing agencies (NHA and NHSB) have upgraded their capabilities and completed initial design work for implementing the capital projects as follows:

a. Three technicians fielded January 1979 and successfully operating in NHA with counterparts.

b. NHA is in process of reorganization which will expedite its ability to implement low income shelter projects.

c. NHA has identified in its current budget process the additional staff necessary to implement the project.

d. NHA has acquired 500 acres at the New Georgia

site, part of which will be used for the demonstration sites and services project.

e. An initial low income project (not AID financed) of 183 units at New Georgia is complete and occupancy began June 1979.

f. A Master Plan has been developed for New Georgia which includes water, sewer, electricity, a mix of housing types and provision for community facilities, i.e. schools, markets, clinics, etc.

g. New Kru Town (a low income community on Bushrod Island) confirmed as first neighborhood upgrading area and a socio-economic survey completed of 100 percent of the 4,500 households in the area.

h. Based on survey results, outline of the proposed improvements to New Kru Town identified and project description included in HG PP.

i. An inter-ministerial housing policy commission named by President Tolbert, initial meetings held, and subcommittees formed to provide commission members with technical analysis to use to formulate housing policy for Liberia.

j. An initial environmental examination carried out and Environmental Assessment as outlined in the IEE completed.

k. NRESB has a well established mortgage lending

program and procedures which maintain a low delinquency rate.

C. Phase II

NHA constraints which were specifically outlined in the Phase I project paper were mainly (a) lack of a well-defined government policy toward meeting the housing needs of Monrovia and, (b) the organizational structure of the NHA needed reform to clearly define division responsibilities especially since low income shelter is a new institutional focus. Other problem areas were: an inadequate supply of trained personnel for the NHA; and lack of procedures or authority to expedite land acquisition, assure land tenure, select beneficiaries, deliver socio-economic services and assure availability of financing to beneficiaries. The constraints and problems mentioned above are being dealt with (a) through the Presidentially appointed inter-ministerial housing policy commission which is now grappling with land tenure, land acquisition, beneficiary selection, cost recovery and the delivery of services to the project areas and, (b) the NHA is being reorganized so that divisional responsibilities are sharply defined and the institution can respond to the housing needs of low income families.

As a part of the overall upgrading of NHA capability and reorientation to problems of constructing low income shelter, key staff have visited operating projects in Senegal, Kenya and the Ivory Coast. The head of the Research and Town Planning Division has attended the IBRD Economic Development Institute special course on shelter for low income groups. In a move to improve its financial position, NHA has received governmental authority to evict tenants in its estate who are delinquent in rent payments. A legal division has been organized and eviction proceedings begun. The socio-economic unit has completed a series of surveys in representative low income communities. The data from these surveys are being fed into the project design process to assure that the basic needs of the target group are met. A training program, funded partially by this grant and partially by the Phase I grant, will provide in the field intensive training to NHA and NHSB staff directly involved in implementation of the demonstration projects.

The project described below will build on the momentum already started in Phase I Low Income Housing Project and will give the NHA and NHSB the capability to provide sites and services development in New Georgia, construction material, home improvement loans and small loans to businesses in the project areas.

### 2.3 Studies

A great number of studies related generally to the shelter sector and specifically to this project have been undertaken in the last several years and form the basis of the project design for both Phase I and Phase II:

- a. Shelter Sector Analysis
- b. Monrovia Urban Development Study
- c. Project Feasibility Study
- d. Initial Environmental Examination
- e. Environmental Assessment of the proposed Liberia  
DG and HG loan
- f. Mensah Master Plan Study
- g. West Point Fire Victim Survey
- h. New Kru Town Community Survey

### 2.4 Detailed Project Description

#### A. Project Goal:

The goal of this project is to improve the living environment of lower income families.

#### B. Project Purpose:

The purpose is to establish and strengthen a coordinated Liberian operation to design, implement, finance and manage replicable shelter projects for lower income families.

C. End of Project Status:

1. Expanded and trained staff fully functional and totally funded by NHA and NHSB.
2. Infrastructure in place for 600 serviced plots for low income families at the New Georgia site.
3. Seed capital drawn down to finance construction materials, small business development and home improvement loans.

D. Important Assumptions:

The project design makes several assumptions concerning the response of the population, the GOL and the NHA/NHSB.

1. Cost recovery is sufficient to ensure adequate rollover on loans.
2. The projects will stimulate community pride and organization, i.e. neighborhood associations and self-help efforts to assure adequate maintenance of community facilities.
3. NHA will be able to successfully involve and schedule activities of GOL ministries and agencies essential to project execution.

E. Planned Outputs:

The outputs expected to flow from a successful project are:

1. Staff expanded and trained for NHA and NRSB.
2. Sites and services (600 to 900 plots)
3. Construction material, home improvement and small business loans.

F. Inputs:

1. Training: 44 person months of technical assistance (training) will be provided by AID; \$240,000 will be made available from this grant to finance 24 person months of technical assistance (one resident trainer for 24 months), 20 person months of short term consultants (trainers) will be provided from the existing project and IIPUP funds. \$80,000 will be made available for vehicles (buses and transport for trainees) maintenance, POL and contingency costs. \$80,000 will be made available for short term on-the-job participant training in the U.S.
2. Budget Support: \$600,000 will be made available to the NHA and NRSB to hire fifty-one additional

staff to include professional, para-professional and trainees over the two year life-span of the project.

3. Infrastructure at New Georgia: \$1.5 million will be made available to provide infrastructure to 600 to 900 serviced plots for low income families.
4. Seed capital to NHSB: \$2.5 million will be made available to allow the NHSB to become the central fiduciary for housing. Specifically this capital will be used for loans to small business (\$1 million), for construction materials for sites and services beneficiaries, and for home improvement in settlement upgrading projects (\$1.5 million).

The forty-four months of technical assistance (training) will be provided to both the NHA and NHSB existing and new hire staff. The training will include the following components, (a) technical training, (b) financial training, (c) general management and administration, and (d) community development.

As well as conducting daily training sessions, the full-time U.S. training advisor will also coordinate and schedule the specific inputs of the 20 months of specialized training that will be provided by the short term experts. In addition,

the Liberian Institute of Public Administration on-going program will provide classroom theory in general management and administration. The complete training package will be a composite of theory and on-the-job work experience at the NHA and NHSB main headquarters and field offices on the project sites.

Following the in-country training, selected, outstanding trainees will be sent to the U.S. for 2-3 month work attachments to U.S. agencies concerned with urban renewal, low income housing finance, small business administration and local government institutions.

### 3.0 Project Specific Analysis

#### 3.1 Economic Feasibility

##### A. Macro

This project will encourage the GOL to utilize its available shelter sector resources in addressing the needs of the lower income groups in the Monrovia area through minimum standards programs. These programs will encourage ownership schemes through basic sites and services options and will encourage self-help activities in housing completion and home improvements by means of in-kind home improvement loans, combined with physical upgrading of selected existing low-income areas. In addition, employment creation in and adjacent to the project areas will be stimulated by means of a small loan component for small scale construction related businesses.

The cost of the sites and services option is kept as low as possible by means of cross-subsidization, thereby assuring that they will be affordable to the low income groups. The projects will be largely self supporting as additional revenues are generated over time through increased property taxes, income taxes, business taxes and assessments, and will therefore not impose a drain on overall GOL resources.

The economy of Liberia has shown only marginal growth net of inflation over the past five years. This

has been due to a number of factors of which increased costs of imported fuel and equipment; depressed world demand for steel, and therefore iron ore of which Liberia is the world's eleventh largest producer; and reduced levels of investment, are the main components. Growth rates are projected to increase slightly over the next year or two, after which they are forecast to show greater improvement as world demand for steel recovers and prices of rubber, coffee and cocoa are expected to increase over current levels.

While many economies in the developing world have taken a nose-dive in recent years, Liberia has continued to show real economic growth with the assistance of substantial foreign borrowing, especially in the infra-structural and agriculture sectors. The External Debt Service as a ratio of revenues averaged 15.8% during 1973 - 1977/78. This is expected to increase to about 17.5% during 1978/79 - 1983/84 and will rise significantly thereafter as grace periods for loans contracted in the middle and late 1970's come to an end and amortization payments begin and as donors reduce the grant component of their assistance.

However, foreign exchange earnings from Liberia's main exports (iron ore, rubber, lumber, coffee, cocoa) are expected to increase and Liberia appears capable

of sustaining some additional development borrowing for the next decade, especially for socially and politically important purposes such as low income housing and employment creation.

The proposed Housing Investment Guarantee calls for commercial borrowing of \$10 million over a 5 year period along the following schedule:

Year 1	\$ -
Year 2	1.2 m.
Year 3	2.7 m.
Year 4	3.0 m.
Year 5	2.1 m.
Year 6	1.0 m.

Annual debt service, assuming a 11% market rate and a 10 year initial grace period during which only interest would be paid, would be scheduled as follows:

Years 3 - 12	\$1.1 m.
Years 13 - 32	\$1.26 m.

This would result in an average debt service ratio over a 30 year period (repayment as a percentage of original principal) of .120, whereas total GOL external debt service in 1979/80 totals \$41 million on a total draw-down external debt of \$400 million, or a debt service ratio of .103 (Note: most of GOL's external borrowing to date has been on highly concessionary terms).

The Mission has calculated an internal economic return on the combined \$5 m. grant/\$10 m. HIG program over 30 years and estimates the IER to be about 29% (see following Table). No social rate of return has been calculated.

B. Micro

(1) Land development

Funds will be used to develop currently vacant, undeveloped and unused land in the greater Monrovia area for purposes of providing housing to the low income population of the capital city. The GOL has set aside 500 acres in New Georgia and 200 acres in Barnersville in the NE section of Metropolitan Monrovia. These areas are adjacent to or within four miles from on-going and expanding industrial and commercial activities on Bushrod Island (really a peninsula) and along the freeway running from the Freeport to Paynesville.

Both sites are very scenic and have excellent ground water at depths of between 4-8 feet, with low mineral content. In this regard, both sites are ideal locations for either residential or industrial development. There are no alternative uses for the sites since the soil is generally

TABLE

Internal Economic Return on Project (I.E.R.) = 29%

Year	Net Benefit Flow (S000)	Discount Factor 30%	N.P.V. (S000)	Discount Factor 28%	N.P.V. (S000)
1	- 1.893	0.769	- 1.456	0.781	- 1.478
2	- 1.900	0.592	- 1.125	0.610	- 1.159
3	- .169	0.455	.076	0.477	.081
4	.134	0.350	.047	0.373	.050
5	.923	0.269	.248	0.291	.269
6	2.355	0.207	.487	0.227	.535
7	2.045	0.159	.325	0.178	.364
8	1.185	0.123	.146	0.139	.165
9	2.335	0.094	.219	0.108	.252
10	2.885	0.073	.211	0.085	.245
11	- .815	0.056	- .046	0.066	- .054
12	3.790	0.043	.163	0.052	.197
13	- 1.030	0.033	- .034	0.040	- .041
14	3.300	0.025	.083	0.032	.106
15	4.930	0.020	.099	0.025	.123
16	5.445	0.015	.082	0.019	.103
17	2.120	0.012	.025	0.015	.032
18	7.130	0.009	.064	0.012	.086
19	1.940	0.007	.014	0.009	.017
20	6.720	0.005	.034	0.007	.047
21	8.810	0.004	.035	0.006	.053
22	9.280	0.003	.028	0.004	.037
23	9.270	0.002	.019	0.003	.028
24	8.785	0.002	.018	0.003	.026
25	7.925	0.001	.008	0.002	.016
26	12.900	0.001	.013	0.002	.025
27	15.250	0.001	.015	0.001	.015
28	16.380	0.001	.016	0.001	.016
29	16.850	0.001	.017	0.001	.017
30	13.570	0.001	.014	0.001	.014
TOTAL	160.450	3.333	- .155	3.555	.126

sandy and unsuitable for agriculture or pasture land because the top soil is too loose for either crop production or the retention of cover vegetation.

(2) Population Pressure on Housing

Currently 50% of Monrovia's population are unsatisfactorily housed. Between 1979 and 1990 some 50,000 additional housing units will have to be provided to accommodate population growth and household formation in addition to preserving and upgrading existing housing stock and replacement of used-up dwellings.

(3) Employment Generation

Monrovia's current labor force is estimated to be 117,000 persons. The Ministry of Planning and Economic Affairs estimates that 40% of the city's labor force is unemployed. This rate is projected to increase to about 65% by 1990 if a minimum growth rate of 2.5% annually in the modern sector employment is attained over the next two years. Even a maximum employment growth rate in the monetary sector of 7.5% annually would not reduce the unemployment rate below 50% by 1990. The bulk of the labor force consists of unskilled

and illiterate workers. Currently the construction industry employs 3,000 workers, largely in connection with OAU-79 related projects. Using a 1:2 ratio in construction-related indirect employment (materials, production, transportation, warehousing, etc.), total construction sector employment is estimated to constitute 9,000 workers.

Once the construction activities associated with the OAU Conference are completed and the service and support functions of the Conference have been completed, Monrovia will be faced with sudden and significant additional unemployment.

Housing investment generates labor-intensive activities which stimulate employment of largely unskilled and semi-skilled persons. Each \$10,000 of housing investment produces between 7-14 additional jobs; for each person working in construction, two persons work in construction-related activities. Investment in and assistance to small scale industry provides further employment opportunities to low income groups because small scale industry is labor intensive and uses proportionately greater numbers of unskilled and semiskilled workers than medium-size and large scale establishments. Profits of small enterprises

tend to be reinvested in Monrovia so that the stimulative effects are retained in the local economy.

(4) Promotion of Savings

Investment in housing and small scale industry promotes savings. Domestic savings applied to home-ownership and building up enterprises mobilizes funds previously held in unproductive ways (jewelry, cash hoards) or used for consumption expenditure which has a large import component. As a result of increased savings and investment, inflationary tendencies in the economy are restrained.

Between 1973 and 1977 gross domestic savings in Liberia fell by 44%. The current lack of any mechanism for channeling local savings into medium and long term investments is a major constraint on industrial development and on the creation of further job opportunities. Proposed assistance to the NHEB under this project, in addition to on-going USAID assistance to the Agricultural Cooperative Development Bank should help relieve this constraint.

(5) Provide loan funds to low income groups

Currently the only source of investment

financing available to the average Liberian is in the form of personal loans repayable within 10-12 months at an interest rate of 8-10% discounted. These loans constitute a small share of commercial bank credits. Commercial banks are not interested in, nor do they have the capacity to manage small loan portfolios. Low income earners rarely qualify for any kind of loans from banks and are forced into the hands of usurious moneylenders who tend to export profits and reinvest funds outside Liberia.

(6) Industrial Growth

The average annual growth rate of industry, the output of which currently constitutes 7% of GDP, over the period 1970-1978 was only 4.5%. This contrasts sharply with the 7.8% annual growth rate realized for 1960-1970, which was largely the result of foreign-owned operations. Foreign investment in this sector has stagnated in recent years and there is a great need for small scale industrial credit and entrepreneurship development to enable more Liberian participation in this sector which currently is dominated by foreign nationals. In the light of government policy to directly link low income housing development with job creation

and increased employment in the vicinity of low income housing areas, proposed USG investment in small-scale industry development and vocational training opportunities for low cost housing beneficiaries would dovetail with GOL policy and fill a real need.

(7) Impact on Balance of Trade

Housing investment is typically low on import components and its stimulative effects are retained in the economy. The multiplier effect for housing investment is greater, for example, than for investment in plant and equipment and only slightly less than that for exports. Current plans for sites and services to be made available under the proposed USAID shelter sector assistance program would involve only the additional import of klinker (to be crushed for locally manufactured cement). Those beneficiaries opting for the more sophisticated low income housing alternatives would generate additional demand for corrugated zinc-coated roof sheets imported from Japan. Neither item would constitute a significant addition to the import bill. Construction materials constitute only 7% of total imports.

(8) Increased Productivity

A person relocated from a slum area to an improved low-cost housing area is healthier, therefore more productive and as a result capable of earning increased income. His children are healthier and have better conditions under which to study, resulting in deferred educational returns and higher future values as wage earners.

(9) Reduction in Crime-related Costs

Slums, shanty towns and squatter camps in Monrovia are high crime areas. Resettling residents to better serviced low-cost housing tracts, improving currently substandard high density areas and providing additional employment opportunities could be expected to reduce the crime rate and attendant losses to personal property and, in addition, lessen GOL outlays for security services and the judiciary.

### 3.2 Social Soundness Analysis

#### A. Sociocultural Feasibility

This project represents the first major attempt of the GOL to provide shelter to the large sector of growing urban population who cannot afford conventionally or publicly financed housing produced to date except on highly subsidized schemes. The project also provides for the preservation and upgrading of existing housing stock. The emphasis is on development of affordable shelter and upgrading of substandard housing on a cost-recovery basis. This is reinforced by a loan program geared to the target group needs, thus providing for a broader distribution of limited public resources among the lower income urban population.

Sites and services projects provide minimum standard infrastructure services to lots that are sold or rented to low income families. Construction of dwelling unit is generally on a self-help basis with technical assistance provided by the developer. This allows low income families to retain cultural identity in design of their homes while at the same time upgrading to modern sanitation standards.

Settlement Upgrading projects define a low income community with relatively stable population base, housing

inventory which can be improved and below standard level of infrastructure service. This type of project finances the upgrading of infrastructure within the community (roads, drainage, sewer, water, street lights), provides loans and technical assistance to residents to improve their houses and supports upgrading the provision of improved social and economic services. Since relocation is not involved in this type of project, traditional living patterns are maintained with minimum disruption.

The target group for this project is the lower income sector of the Monrovia population, that is, families having an income below the median for Monrovia, estimated at \$125 per month in 1979. Recent NHA surveys of several low-income areas in Monrovia show that most of the target population, currently live in substandard housing. A typical family will rent one or two rooms and share kitchen, bathroom and toilet facilities with several other families. These families lack adequate supplies of basic food staples, adequate medical-care facilities, and employment opportunities which can yield tangible economic gains. However, there is virtually no economic segregation in Monrovia. Although there are some low income concentrations, one typically finds low income families living adjacent to middle and upper income families. In fact, middle and upper income

families use this to their advantage by renting a portion of their lot to low income families who construct temporary shelter on their allotted area, usually without adequate basic sanitation facilities.

The normal family size is five but it is common to find additional members of the extended family "visiting" either to eventually return to the interior or establish their own household in Monrovia. The head-of-household is the only income-provider in most cases, although in one of every five families more than one family member is gainfully employed. Most head-of-households are employed as laborers, transport equipment operators or sales workers and are usually paid-employees. Families have no access to credit and do their shopping mostly on a day-to-day cash basis.

Although families are mostly nuclear type, related families tend to live close to each other and low-income communities are usually socially and culturally homogeneous. Families with a common tribal origin and dialect tend to cluster together in specific geographic areas. Most communities have opinion leaders, either officially appointed or selected by the community, who have a definite impact on community and personal decision-making.

Housing is important to development in both economic and welfare terms. This project will stimulate employment

in both the formal and informal construction sectors. It will also provide improved sanitation facilities, more adequate community services and additional economic development for beneficiaries through the small-business loan program, thereby significantly contributing to the social welfare of the target group.

All of the options offered in the program will be affordable to the target group. The sites and services component of the program will affect "volunteer beneficiaries", that is, participants will have to make a conscious effort to apply for program services and to determine whether they are financially or otherwise suited for the project.

The NHA has substantially upgraded its capacity to do socio-economic research over the past year. AID financed short term technical assistance to this Division during 1978. The result of this effort is the completion of a number of socio-economic surveys of low income communities in Monrovia providing basic characteristics data on this population. The NHA is inputting these data into the project design process. These data are also being used to identify potential constraints to successful implementation of the project and design innovative ways of minimizing the negative impact of these constraints.

During the last several years, the following studies were completed by the NHA Research Division:

- a. Matadi Socio-Economic Feasibility Study -  
ROL/NHA (1978)
- b. Socio-Economic Feasibility Study for Housing  
Development - ROL/NHA (1978)
- c. New Kru Town Data Sheet - ROL/NHA (1978)
- d. Plaunkor Data Sheet - ROL/NEA (1978)
- e. Community Needs Survey, West Point Sector -  
ROL/NHA (1978)

These studies confirm that the target population is scattered throughout Monrovia. An indication of the intensity of interest was the June 1979 response to the NHA announcement that 183 low income rental units were available at New Georgia. During the three days when applications were accepted, 600 applications were submitted and at least another 400 persons were turned away. The same type of response is anticipated for the sites and services project.

The basic indicator used for defining the target group is family income. For purposes of AID financing, beneficiaries must have incomes which fall below the median for the city in which the project is located.

Overall Monrovia income data are collected infrequently and subject to a relatively large margin of error. The last census was conducted in 1974. During the 5 years since this census spot samples have been conducted but no official update for Monrovia has been completed. Therefore, based on NEA sample surveys, consumption patterns and general cost increases, the 1979 Monrovia income distribution has been estimated as follows:

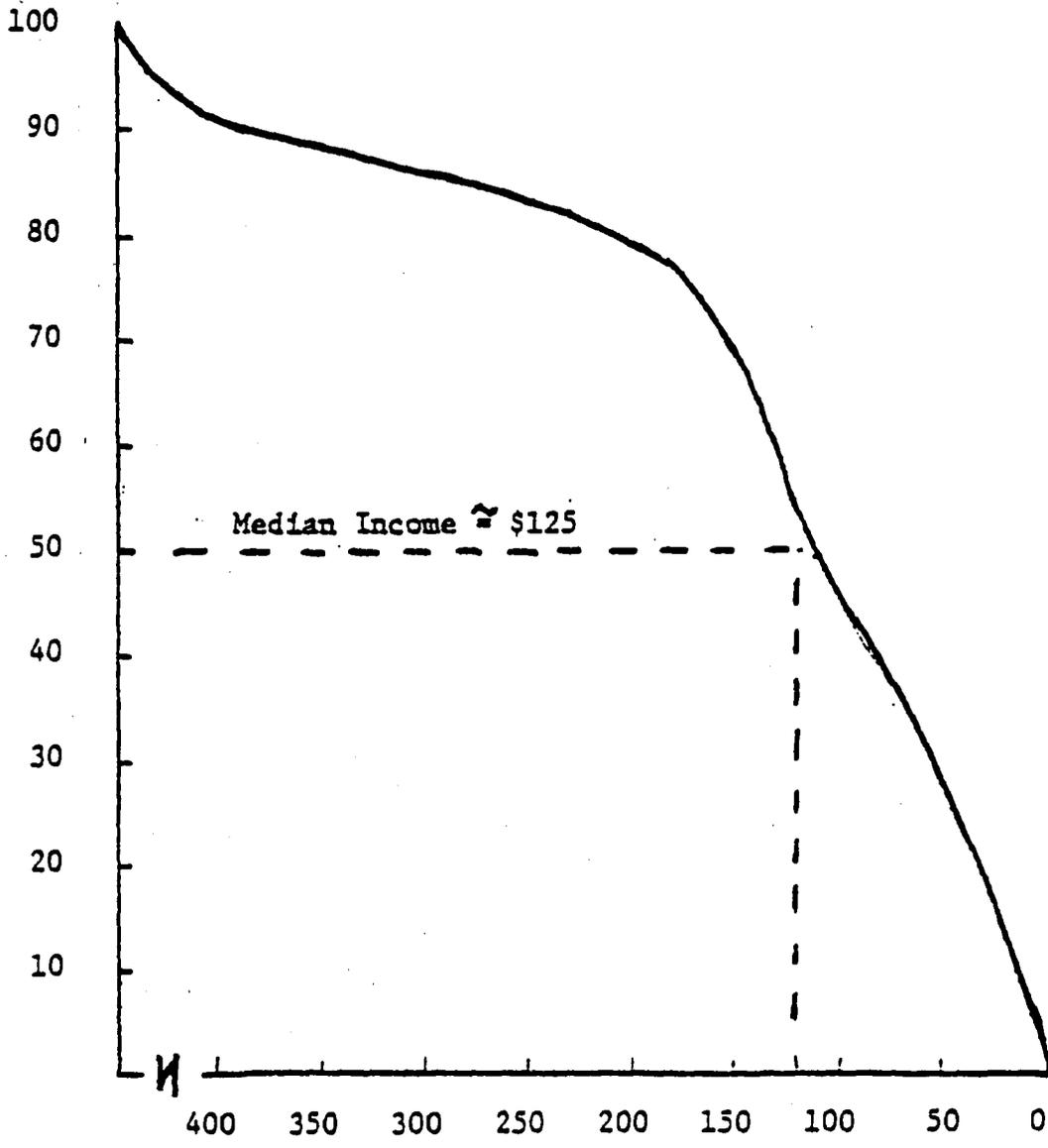
1. Population for Liberia was assumed to grow at a 3.3% rate starting from a base of 1.5 million in 1974, resulting in population for 1979 of 1.76 million persons. See World Bank Report 1642a-LBR
2. Per capita gross domestic product was assumed to grow at a rate of 10.21% per year from 1976, the rate of growth which occurred from 1975 to 1976. This assumption is relatively conservative as the five year growth rate from 1971 to 1976 was 16.5% per year. 1975 and 1976 figures taken from World Bank Report 1642a-LBR
3. Using the above figures the Gross Domestic Product per capita for 1979 is \$701.82, or 51% higher than the 1974 figure of \$465.73. Assuming a 5

person household in Liberia the average household income in 1979 would be \$3509. per year or \$292.45 per month.

4. The figures for income distribution shown in this page are arrived at by taking the N.H.A. estimated income distribution for 1974 and adjusting it in the above described manner. Using the most conservative estimate the 1979 median income is estimated at approximately \$113.25 per month based on an estimated median in 1974 of \$75. If the five year average growth in gross domestic income is used to project incomes from 1976 to 1979, then 1979 median income would be \$133.50 based on an estimated level of \$75. Given the paucity of data and the difficulty of projections an estimated median of \$125 per month is used as the best estimate.

ESTIMATED HOUSEHOLD INCOME DISTRIBUTION  
MONROVIA 1979

Percent of  
Monrovia  
Families  
with  
Lower  
Income



Monthly Household Income (\$)

NHA surveys conducted in 1977 and 1978 provided sample estimates for representative low income communities as follows:

MONTHLY INCOME/ HOUSEHOLD IN \$100 INCREMENTS	% OF TOTAL HOUSEHOLDS SURVEYED COMPOSITE DERIVED FROM NHA DATA			
	1977 LORMA QUARTER	1977 WEST POINT	1978 PLUNKOR	1978 NEW KRU TOWN
Under \$50	18	28	7.9	5.5
50 - 150	65	59	56.5	55.4
150 - 250	12	9	18.7	19.4
250 - 350	3	-	5.3	5.5
350 & Over	2	4	2.4	5.2
	LORMA QUARTER	WEST POINT	PLUNKOR	NEW KRU TOWN
Approximate Population	11,892	19,667	4,201	17,458
Approximate Median Income	\$99.-	\$87.-	\$98.-	\$118.-

These NEA surveys also collected data on household composition which indicates an overall average permanent household size of 5 persons. The following table shows the distribution by household size:

HOUSEHOLD COMPOSITION TABLE (%)								
NUMBER OF PERSONS	LORMA QUARTERS (1977) NUCLEAR EXTENDED BOTH			WEST POINT (1977) NUCLEAR EXTENDED BOTH			PLUNKOR (1978) BOTH	NEW KRUI (1978) BOTH
1	16.3	-	16.3	14.6	-	14.6	13.6	16.5
2	11.6	-	11.6	18.6	-	18.6	21.5	15.0
3 - 4	25.3	8.7	34.0	29.3	6.2	31.5	31.8	26.4
5 - 8	7.9	17.3	25.2	10.0	14.5	24.5	24.6	26.8
9 - 12	1.8	8.3	10.1	1.6	3.2	4.8	6.0	10.8
13 - 16	0.4	1.1	1.5	1.2	0.8	2.0	1.8	4.5
17 - 20	-	0.7	0.7	0.7	0.8	1.5	0.9	-
21 - 24	-	-	-	0.5	1.1	1.6	-	-
25 & Over	-	-	-	0.8	0.3	1.1	-	-

A detailed 100 percent survey was conducted in New Kru Town during 1978. These data (tabulations included as Social Soundness Annex) provide a representative description of the target group. The 100 percent census was conducted as the first step in the process of designing the community upgrading project.

Two constraints to project implementation could be affordability and cost recovery. The project design incorporates minimum acceptable standards that are affordable to the target group at prices that are consistent with their current shelter expenditure. Since all costs are built into the sales price, the project will not be dependent on budgetary allocations.

To improve the possibility of maintaining a high level of buyer responsibility, the NHA and NESB will maintain a project office on site staffed with loan officers, business and self-help construction advisors and other advisors trained to assist buyers in budgeting and other responsibilities of home ownership. A pre-savings program will develop the habit of making regular payments as pre-condition to responsible home ownership. This will assist the transition of recent rural migrants into the urban monetary economy.

B. Spread Effects and Benefit Incidence

Prior to 1976, GOL efforts were directed towards middle income subsidized shelter solutions. A combination of increased cost inflation and increased pressure from low income families whose quality of life was deteriorating convinced the GOL to begin focusing on low income shelter needs. Initial attempts at construction of conventional estates for rental incorporated large subsidies which severely limited the number of beneficiaries. Even with the subsidies, rents charged on units averaging a cost of \$18,000 ranges from \$40 to \$70 per month, excluding a majority of the Monrovia population.

At this time, GOL requested AID to assist in finding less costly solutions that could address the shelter needs of low income families. The sites and services and community upgrading solutions suggested by AID reduce standards to the minimum acceptable level allowing full cost incorporation in the selling price. This allows full recovery of costs which provides a model and funds for replication in Monrovia and other emerging regional growth center. At the same time, it incrementally improves the standard of living of the beneficiary population. Prototypes of beneficiary payment mechanisms, delivery of health, education and socio-economic services will provide a model for introduction in follow-on projects.

The project components will impact the beneficiary population as follows:

1. Government will construct markets within the overall project areas. This will provide local access to basic consumer goods and local employment for market women.
2. Individual water connections will be a great improvement over the general existing pattern of carrying water from common stand pipes. Overall health of family members should improve with direct access to safe water.
3. Health of women and their families should improve with provision of sewerage disposal to each lot.
4. Easy access to clinics will encourage women to utilize maternal health services for themselves and their children.
5. Schools will be available on site as part of the greater Monrovia Consolidated School System.
6. The wet core option on the serviced sites will provide flush toilet, wash and kitchen area. This will be a substantial improvement over the unmaintained pit privies and over hang toilets; the use of tin shelters without concrete slab for washing and food preparation that occurs directly on the ground with no raised work area generally found in low income

areas of Monrovia.

7. Neighborhood road system will minimize thru traffic therefore providing safe play and congregation areas.
8. Public transportation will be easily available to residents.
9. Land has been allocated for church and parochial school construction.
10. Neighborhood parks and playgrounds have been incorporated into site design.
11. Construction materials manufacturing will take place on site and provide employment to residents.
12. Street lights and individual connections will be provided which will add to the security of the community.

C. Role of Women

Women in Liberia are active in government and commerce. They can legally hold title to land and engage in its sale or purchase. NHA socio-economic surveys reveal that approximately 15% of the total working population in the lower income sectors are women. Self-employment of women in market activities is typical of the low-income families in Monrovia. Most market activities are handled by women, enabling them to gain experience in simple business transactions and to attain a degree of financial independence.

Women will participate actively in the program and will have equal access to shelter and small-business loans.

It is expected that they will play an important role in program promotion as well as in self- and mutual help activities. Many of the social service programs to be implemented in the project area will directly benefit women and women will be a key factor in the determination of community priorities in the development of social service programs.

Many elements of the project have been specifically designed to take account of the special needs of women. These include programs such as family planning programs, availability of water and sewerage facilities, access to small-business loans and others as described in detail in the previous section will greatly contribute to improving the living conditions of women from the low-income sector.

D. Availability of Family Planning Service and Information

The project will provide sites and services lots to approximately 600 families, most of them relatively young. A clinic and health facilities are planned for this development. As is typically the case in Monrovia, maternal health and family planning services will be available in this clinic. The home economics service of the Department of Agriculture, which is also involved in lifestyle education including dissemination of child

spacing information, will be active in the area. Schools will also be provided on site as an expansion of the existing school system. Residents of the project will have access to information and services which will allow them to make family planning decisions that can influence their ability to provide adequate health care and education to their families. The necessary commodities and services are available in country.

### 3.3 Technical Feasibility

#### A. Sites and Services

##### (1) Introduction

The New Georgia site, located approximately 1.5 miles north of the Freeway road is on moderately high ground relative to the wet marshy area which surrounds part of the site. The marsh area is used for fish breeding.

The topography of the land is high towards the center and slopes down towards the site boundaries.

A new graded road connects the Freeway to the existing housing area.

It is proposed that collector roads will link all units of the site together, and that all roads in the housing site be considered as neighborhood roads.

Soil investigation on site has revealed good percolation possibilities, so that it is proposed that drainage be a noncontinuous system with non grassed bottom percolation ditches unless slopes exceed 3 percent. Drainage will generally be sheet flow (non concentrated) and discharge from culvert pipes dispersed.

An 8" water line has been brought from the Freeway to serve the existing housing. This 8 inch connects to an existing 16" water main belonging to Liberia Water and Sewer Corporation. On the Freeway there are two water mains, one the 16" and the other a 36". In 1981 these two lines are to be interconnected. Pressure in the water main is maintained by a water booster station in the Bushrod Island area. Capacity of water is adequate by the fact that the Water Purification Plant has recently been increased from 6 million gallons per day to 12 million gallons per day. The existing 8" water main on site will be sufficient for the whole site and will generally be looped around the site with 4" and 6" connectors and 2" minor lines. All of the distribution system will serve the individual house water connections as well as providing some fire protection.

The individual house sewer connection from the sanitary core flush toilet is taken through 8" and 10" sewerage collection systems to sewage treatment plants located near the wet marshes. The design selected was the waste stabilisation pond containing anaerobic, facultative and maturation ponds which gave the best cost, maintenance, operation,

cleaning, BOD and Pathogenic removal as well as being compatible for discharge into a fish marsh. Sewage Treatment Plant designs considered and rejected are conventional (too costly in capital, operation and maintenance) septic tanks (too numerous) aeration ponds (costly plus aerator).

Electricity as supplied by Liberia Electric Corporation is on site supplying the existing housing. A 68,000 volt system also runs along the Freeway and a substation is closeby.

Landscaping will include some of the magnificent trees on the site.

NHA has estimated that the cost of the construction materials required for a low income shelter unit is approximately \$4.70/sq. ft. This cost per square foot is based on the following type of construction:

- a. trowel finished concrete floor slab.
- b. unplastered sandcrete or soil cement block walls.
- c. corrugated steel roof on poles or local lumber.
- d. local wood doors and windows.
- e. minimal electrical installation
- f. one water closet, one precast lavatory,

one precast kitchen sink and one shower plus the necessary piping, fittings and couplings.

It is assumed that the low income beneficiaries will carry out a substantial amount of the construction work required on a self-help basis. NHA will provide the necessary technical support and guidance through out the duration of the project in addition to other support related to garbage collection and repairs to the infrastructure whenever necessary.

(2) Technical Feasibility and Soundness

The choice of technology and level of infrastructure services has been influenced by a number of factors indigenous to Monrovia, Liberia. Constraint factors include: (1) the financial affordability of the target population to repay capital and user charges; (2) cultural traditions, social expectations and willingness to assimilate technological changes; (3) low cost operation and maintenance of equipment; (4) complications due to phased construction and fragmented ownership; and (5) variable physical features of the site including topography, water table, soils and marsh.

a. Design Standards

Final design and plans will be reviewed by USAID. AID review and approval of this design will be made a condition precedent to any disbursement of monies.

Based upon preliminary studies, USAID has concluded that the technical aspects of this project are sound, meet statutory criteria and are within the capabilities of GOL to implement.

b. Choice of Construction Technologies

A recent study of labor versus capital intensive methodology in Liberia was prepared by Checci and Lyons in which the preferred technology for road construction is the capital intensive method.

Liberia has a population density of 40 per square mile. However relevant to the availability of labor are regional and seasonal characteristics of labor supply and utilization. The available labor force is most intensively occupied from January to May (dry season) with the seasonal unemployment most prevalent from June to October when constructional activity is minimal.

The laying of utility pipes will be capital intensive in excavation and refill dependent upon soils and labor intensive pipe placing and jointing.

Building of sanitary cores will be labor intensive.

c. Commodities

Anticipated imported commodities are crude oil for asphalt, clinker for cement, water pipes and fittings, electrical equipment.

(3) Cost Estimates

Budget figures have been prepared. Preliminary plans are being prepared up to a point where reasonably firm estimates can be compiled. Following this, plans, specifications and estimates will be prepared for USAID review and approval. USAID approval of the final plans, specifications and cost estimates will be a condition prior to disbursement.

B. Revolving Loan Fund

At the present time the major organization concerned with low income housing in Liberia is the National Housing Authority. While substantial progress has been made by the Housing Authority, a major weakness in effectively providing low income housing is the lack of a financial institution to service this sector of the housing market. The primary mortgage lending institution in the country of Liberia is the National Housing and Savings Bank, having total assets of approximately \$15.5 million. The NHSB has not so far been active in the financing of low income housing. It is a relatively new organization and has financial resources inadequate to the national demands for housing funds. The typical mortgage loan made by the NHSB in 1977 averaged over \$14,000.

One of the principle objectives of the project will be to create a viable mechanism for the financing of low income housing services by expanding the facilities, improving the capabilities, and providing an incentive for NHSB to become active in this sector of the market.

A portion of the grant will be used to strengthen the NHSB capability to provide low income housing finance. This will be done by providing funds for the following purposes:

1. Training and recruitment of additional staff.

2. The staffing of new branches in New Kru Town and New Georgia, conveniently located to the target population.
3. Provision of personnel, training, and capital to allow the Bank to make small business loans.

Two and one half million dollars of the grant, later to be supplemented by an additional \$1.5 million of H.G. funds, will be channeled through the NHSB as seed money to create new low income lending programs.

Three types of loans will be instituted:

1. Loans to occupants of the sites and services project for the purpose of acquiring construction material for building.
2. A home improvement loan program for residents of existing low income neighborhoods (initially New Kru Town).
3. Working capital and short-term, to intermediate term, capital loans to small businesses operating within the low income housing project areas.

The full range of the NHSB's facilities will be useful in the present project and in future contemplated

low income housing efforts. In the immediate project NHSB will be used not only to handle low income housing finance loans but should be able to mobilize other funds to provide its more traditional middle income loans to generate a diversity of income levels and social characteristics within the project areas. The inclusion of middle income families within the project areas is expected to provide an improved social environment, is consistent with mixed housing types presently found in Monrovia neighborhoods, and may allow for cross-subsidy from upper and middle income families to lower income residents of the project. All grant and HG funds will be expended for the project and will be used exclusively for low income groups; the injection of these funds into the NHSB's capital base will allow for economies of scale and overall lower cost of operation within the NHSB.

The overall goals of the grant funds channeled through the NHSB include:

1. The generation of capacity within the NHSB to make low income housing loans on a profitable basis independent of outside support.
2. To provide an effective financial conduit for low income housing funds.

3. To develop a bridge of cooperation and understanding between the National Housing Authority and the National Housing and Savings Bank.
4. To expand employment opportunities and to lower the costs of goods and services in the project areas through encouraging small business by providing operating and capital loans.

With the implementation of the training program described in section C below, these goals are considered to be attainable and technically feasible within the time span of the project.

C. Training Program

Even though the training component under the proposed grant is only \$400,000, it is an integral part of the overall low-income housing sector training program.

Funding elements are derived from the following sources:

- (1) existing grant to the NHA, (2) new IIPUP funds and
- (3) from part of this proposed grant.

The training program for both existing and new-hire staff consists of the followi

1. technical
2. financial
3. general management and administration
4. community development.

(1) Technical Training

Trainees will be Construction Advisors (CAs), who will be used in all Sites-and-Services and Upgrading projects to assist families in self help construction, repair, renovation or expansion of their existing houses; such as digging water trenches, drainage ditches, pit latrines and other community facilities. They will also monitor the quality of work undertaken by private contractors on project sites.

Curriculum

Construction technology

The City

Housing Design

Economics of Housing

Cost Accounting

Community Upgrading

Community Planning

Project Implementation

Project Evaluation

Sanitation and Environmental Health Training for CAs to meet NEA needs should be accomplished in two phases. Phase one will be a general training course for the first 12 CAs, followed up by a series of specific training workshops based on an evaluation

of field effectiveness. Phase two will consist of on-the-job training; learning under supervision while actually carrying out the work task.

(2) Financial Training

Trainees will be the following categories of NHSB employees:

home improvement loan officers

home improvement advisors

small scale industry loan officers

small scale industry advisors

collection officers

savings officers

home office support officers (desk officers)

Except for the home office support officers, they are the NHSB front-line employees who deal directly with the low-income persons in the project areas for whose benefit the home improvement loan program and the small scale industry loan program have been designed.

Curriculum

Finance and credit

Savings and investment (incl. IER)

Savings account processing

Loan processing

Loan evaluation

Simple bookkeeping systems

Cash management and cash flow analysis

Small business/family budgeting

Micro economics

Purchasing

Cost benefit analysis

Accounts analysis

Bad debt recognition

Elements of law dealing with indebtedness

(3) General Management and Administration

Trainees will be the (1) Project Inspectors and Administrators who are NHA's day-to-day site representatives during project implementation, who have senior coordinating and management responsibility to ensure that project development proceeds efficiently and effectively; and (2) the Estate and Social Service Coordinators who will have on-site management responsibility after the initial implementation is completed and Project Inspectors and Administrators have moved on to other projects.

Curriculum

Project implementation planning

Work planning and work control

Quality control and performance standards

Delegation, supervision and motivation

Materials handling and logistics  
Maintenance scheduling  
Cost control  
Report writing and communication  
Information storage and retrieval  
Mediation  
Decision making  
Problem identification  
Problem solving techniques  
Data gathering and interpretation  
Planned and Unplanned Change  
Sanitation and environmental health

(4) Community Development

In addition to the functional training programs described above, all trainees will have to undergo extensive training in various aspects of community development and human relations, which will help them in dealing more effectively with their clientele in the various project areas. This element will account for approximately 50% of total course time for all trainees and will consist of the following components from which trainees can select a content mix which they feel will be most useful for them as individuals and as a group.

Curriculum

1) Human Relations Segment:

Theories of learning  
Communication and Influence  
Oral Communication  
Groups and Group Dynamics  
Theories of Training  
Small Group Participation  
Leadership Development

2) Community Development Segment:

Introduction to Community Development  
Community Development Theory  
Community Development in Liberia  
Communities and "Community"  
The Rural Community  
The Urban Community  
  
Human Behavior and the Values of Community  
Development  
Community Organization  
Citizen Participation  
Roles of the Urban Change Agent  
  
Introduction to Urban Economics  
Urban Economic Systems  
National Economic Problems and Potential  
The Economics of Subsistence

Resource Development

Urban Political Systems, Formal and Informal

Problem Identification

Problem Solving Models

Dynamics of Change

Stages, Models, and Strategies of Change

The Process of Innovation

Planned/Unplanned Change

Social Systems: Adaptation and Change

Urban Social Systems

The Sociology of Subsistence

Introduction to Urban Development and Planning

Rural-Urban drift: Causes, Problems, Solutions

Government and Party-Structure and Function

Liberian Law: Relationship to Community and Shelter Development

The Liberian Bureaucracy

Youth Work

Working with Women

Self-Help Groups

Clubs, Committees and Organizations

Research, Evaluation, and Surveys

Urban Role Analysis

Urban Social Welfare Infrastructure - Formal  
and Informal

Theories of the Individual, Family, Tribe,  
National

Personal Development

An additional component of the training program has been included to afford the most outstanding trainees to go for 2 months work attachments to various agencies in the US concerned with urban renewal, low income housing finance, small business administration and local government institutions.

Trainees will be evaluated in four ways:

- 1) On-the-job performance based on quantity and quality of work output as well as technical expertise.
- 2) By monthly diagnostic examinations of previously covered material. The examinations will be diagnostic in the sense that the grades on these examinations will not be considered in terms of graduation. They will be used to point out to the trainees areas in which they need more work. But these examinations will also test the training staff. A poor showing by a significant number of

trainees on a particular examination, or part of an examination, may demonstrate that an instructor or instructors, have failed to successfully convey their message.

- 3) Feedback sessions will be scheduled throughout the training course. In these feedback sessions the training staff will have the opportunity to "feedback" their opinions about each individual trainee. If the trainee has failed to study hard enough or has been a discipline problem, the feedback sessions are the appropriate vehicle by which to inform the trainee. In many cases (hopefully most) these feedback sessions will be a vehicle for positive reinforcement. The purpose of these sessions is to try to give each trainee a clear picture of where he/she (in the opinion of the training staff) at that particular point in time.
- 4) Grading is another form of evaluation to be used. Only S (Satisfactory) or U (Unsatisfactory) will be used. Such grades

will only be given for the field work experience, a final written examination, and a final general assessment of each trainee by the total teaching staff.

(5) Trainers

The trainers will be contracted for by AID, subject to GOL approval, and will include:

- 1) Senior Trainer; the senior trainer will be a financial expert. He will be resident in Liberia for 2 years. He will have overall responsibility for development of the training program and specific responsibility for the design of the financial training program. He will be assigned specifically to the NHSB and assist the NHSB to organize its operation to mount the small loan program and to support the construction operations of the NES. (see annex for scope of work)
- 2) Short term trainers: These specialists will be brought in on TDY basis by the same firm that fields the Senior Advisor, to assist in design of the training program and conduct the various sessions.

- 3) Counterpart trainers: Four of the new hires from NHA and NHSB (NHA Project Administrator, NHA Estate Management Officer, NHSB Senior Home Improvements Loan Officer, NHSB Senior Home Improvements Advisor) will be designated as counterpart trainers. They will work with the consultant trainers to design the program and assist in providing the training.

### 3.4 Administrative Feasibility

#### A. The National Housing Authority

The NHA was created in 1960 by an act of the Legislature to plan and execute housing development programs. It was, however, not until 1972 that the Authority began to realize the extent of Monrovia's housing problems and the urgency of finding solutions. In 1974 the first Liberian government sponsored program was completed. It provided accommodation for 72 middle income families. To date, with the limited funds allocated to the Authority by the government, the NHA has been able to complete 1500 family housing units, the average cost of which has been \$18,000. These units have been designed for and are occupied by middle income families, and the Authority has so far had very little experience in providing low-income housing. Over the past three or four years there has, however, been a growing awareness on the part of the government that there is an urgent need to address the shelter needs of the poor.

In 1976 the President and the NHA Board specifically instructed the Authority to focus on shelter for low income families. The recognition of the importance of finding shelter solutions for the growing number of urban poor was broadened and stimulated when Liberia

hosted the 5th Conference on Housing in Africa in May of last year. Also in 1978 a number of key government officials from the Ministries of Finance, Planning and Public Works accompanied NHA officials on inspection visits of sites and services projects in Kenya, Ivory Coast and Senegal. The group came back convinced more than ever that Liberia needed to aggressively attack the deplorable housing conditions under which most of its people are forced to live, both in the urban and rural areas.

The first low income housing project consisted of 183 units and was completed in May 1979. Forty-three of these units are now occupied by low income families who lost their homes in the December 1977 West Point slum fire. The remaining 140 units will be occupied by families whose aggregate income does not exceed \$150.00 per month, which is part of the new selection criteria established by the NHA. While this project has generated a high degree of enthusiasm within the Government and has served to build up the morale and confidence of the NHA management and staff, it is recognized that it is only a very small beginning and that the NHA's management and construction capacity will have to be substantially increased if Liberia is to keep pace with the growing demand.

The Easter riots served to make high level policy makers focus on some of the changes needed to permit the Authority to function more efficiently and more high level attention is being directed to overcoming some of the constraints that inhibit the NHA's ability to act. A housing policy commission has been established and is looking into such problems as land acquisition, financing and lack of coordination by other government agencies responsible for providing some of the essential infrastructure and services needed to effectively deal with shelter problems and improved living conditions.

At the same time NHA is making the necessary internal changes needed to permit it to function more effectively and be in a position to double its construction capacity and further improve its rent collection activities which are basic to its continuing successful operation. Although many of the present staff are well trained and motivated, additional people will have to be brought on and trained if the organization is to successfully carry out its low income housing responsibilities. Since this is a relatively new dimension of its mandate, it is having to work out procedures specifically designed to solve problems such as sites and services selection and acquisition criteria, land tenure and community upgrading projects, benefit selection criteria, and an

adequate system for the smooth flow of small loans for home improvement, construction, and small business development. The NEA has recently reorganized itself to meet the expanded programs in low income housing.

The NHA is headed by a Managing Director and Deputy Director, both of whom are appointed by the President. They report to a Board of Directors made up of the Ministers of Finance, Planning, Local Government and Justice. In addition, the managing directors of Liberia Water and Sewer and Liberia Electric Corporation are a part of the Board. The Board makes policy and authorizes implementation of NHA housing projects.

In the past the NHA staff was mainly responsible for project inspections, supervision and management of developed units. In the future, in order to more closely control costs, the NHA is reorganizing the complete Authority so that in addition they will have a planning and legal department and a construction unit to carry out projects on a force account basis.

In consideration of the above the NHA is being reorganized as follows:

Six Departments to include--(1) Research and Town Planning (2) Operations Department (3) Administration and Office Management (4) Legal Department (5) Estate Management Department and (6) Finance Department.

Each of these departments is further subdivided in divisions and sections according to the task assigned to each unit.

The Research and Town Planning Department will consist of two divisions and three sections, namely:

- (1) Planning and Design Division
- (2) Socio-Economic Research Division
- (3) Research and Social Work Section
- (4) Statistics Section
- (5) Drafting Section.

The main duties and responsibilities of this Department will be the selection and analysis of sites, master planning, site planning, housing design, coordinate availability of infrastructure, undertaking of socio-economic surveys, tabulation and analysis of data, community organization, relocation and relocation planning, social interaction, market analysis and statistics.

The Operations Department will be responsible for the field operations of the NHA in respect to construction activities. To fulfill the above, the Department will consist of three divisions and one section, namely:

- (1) Construction Design
- (2) Project Inspection and Supervision
- (3) Construction Division
- (4) Survey Teams Section.

The Department will be responsible for the preparation of construction drawings, specifications

and bidding documents, project inspection and administration during the construction phase, and force account project construction. Survey teams will be directly attached to the Construction Design Division but servicing other units of the NHA. Drafting services will be obtained from the Research and Town Planning Department.

The Administration and Office Management Department will be responsible for the general administration of the National Housing Authority. The Department will be divided in two divisions with six supporting units namely: Personnel Division, Recruitment Section, Changes, Payroll and Records Section, Office Management Division, Transportation and Maintenance Section, Printing and Supply Section, Records and Mail Control Section, and Janitors and Messengers Section.

The Legal Department, a new unit created under the new organizational scheme, is needed to expedite the processing of lease purchase agreements and also of eviction cases. These functions are at present performed under contract and budgetary savings will result from the change. The Department will be responsible for all legal aspects of the NHA including mortgages. Two divisions will be included in this Department, namely the Acquisition Division and the Real Estate Division. In addition to being charged with the legal aspects of

the NHA, the Department will be also responsible for: land acquisition, title search, negotiate land values, prepare cases for acquisition through eminent domain procedures, and will undertake the necessary legal action in eviction and land squatters cases.

The Estate Management Department will assume all the functions of management previously undertaken by the Administration Division. This Department will be responsible for the administration of all NHA owned projects, and will include housing unit maintenance, the tenants-owners selection and rent collection. In order to fulfill the above, the Department will include the following divisions: (1) Tenants and Owners Selection Division, (2) Services and Maintenance Division, (3) Project Administration Division. The NHA will appoint one project administrator per project so as to increase the tenant-NHA relationship and also to increase collections. This Department will also be charged with the provision of social services within the project areas in coordination with the Research and Town Planning Department.

The Finance Department will administer and control all the financial aspects of the NHA. To fulfill the above, five divisions are included within the Department, namely: Budget Division, Disbursement Division, Purchase

and Inventory Division, Accounting Division and Collections Divisions. These units will be directly under the supervision of the Head of the Department, who in turn will be responsible to the Executive Director for all activities undertaken by the Department.

Other supporting units will be also created as part of the new organization scheme of the NHA. These units are: the Public Relations Office; the Auditing Office; Consultants Office and the Bidding Board.

The Bidding Board will be an ad hoc Board that will meet only to consider project bidding proposals and to select contractors.

B. The National Housing and Savings Bank

The National Housing and Savings Bank of Liberia was established in 1972 to mobilize domestic savings and to attract foreign capital to finance housing. The Bank is to provide the financing required to satisfy the housing and building needs of Liberia.

Specifically it was charged with the responsibility of making loans for:

- 1) home ownership
- 2) single and multiple family dwelling units intended for ownership and occupancy on a permanent basis

- 3) land acquisition and development
- 4) provision of infrastructure on the land
- 5) provision of community facilities.

The Bank is also authorized to conduct and transact the normal business of a savings and loan bank.

The act setting up the Bank also establishes priorities in terms of income brackets. First priority is given to persons whose income is below \$250.00 a month. Second priority to persons between \$250.00 and \$450.00 a month, and third priority to persons with incomes over \$400.00

Although the Bank was created in 1972, it was not until 1976 that it became fully operational. To date the number of savings accounts has increased from 5,755 in 1976, and 9,688 in 1977 to approximately 17,000 in 1978. At present the total amount of savings is \$6 million against \$4.9 million in 1977 and \$2.5 million in 1976.

The increase in savings shows that the present lending capacity of the Bank is much higher than that of previous years. In 1978 a total of \$5.3 million dollars were lent out for housing construction or improvement.

In terms of loans, the composition of the portfolio shows that 56.2% of the loans were up to \$8,000 and that

39.9% of the loans were in the range of \$8,001 to \$40,000. Loans over \$40,000 represent only 3.9% of the total number of loans granted. These figures are for the year 1977, but show a similar ratio in 1978.

Due to the increase in the operations of the Bank, its management had to recruit more staff in order to handle the amount of loans and accounts carried. From a staff of 44 in 1977, the number has increased to 62 staff members in 1979. The Bank just recently has changed its accounting system to a computerized system in order to be able to carry this greatly increased number of accounts in an efficient manner. Actual cost is around \$1.00 per account.

To date the bank has been highly conservative in its lending practices. As of 1977 only 44% of its assets were actually invested in mortgage loans, an actual decrease from the 49% achieved in the previous year. A further evidence of what may be an overly conservative posture is the fact that less than 1/2% of the banks loans are delinquent. The bank had not reached a break-even point in its operations as of 1977, having lost \$268,607 in 1976 and \$197,175 in 1977. These losses are partly explained by the fact that the bank held approximately 21% of its assets in non-interest bearing

bank deposits at the end of 1977 and that operation expenses are a very high 7.3% of mortgage loans outstanding.

The bank currently is almost entirely lacking in experience in making low income high loan to value ratio loans. In order to successfully originate and service new loans contemplated under this project, the bank will need the additional staff and training which is being provided under this grant. It is planned to hire fifteen persons for positions as loan officers, small business loan officers, and collections officers. They will be trained and later transferred to the project area offices that will be established. By setting up and training the people to operate these new specialized branch offices and increasing the home office backstopping capabilities for these types of loans it is anticipated that the NRSB will have the institutional capacity to originate and service the loans that will be generated by this project.

C. Expanded Administrative Capacity

Both organizations have strengths and weaknesses which are almost identical. Their strengths include strong leadership, a small, well-trained cadre of personnel, generally good morale, and an emerging reputation of being organizations that want to get the

job done. Their weaknesses include insufficient numbers of trained personnel and a shortage of funds (or capitalization) to increase their staff to the levels that will be required to implement the expanded program. This project is designed to address and overcome these constraints by providing budgetary support and training over a two-year period. At the end of this period there will be sufficient numbers of trained people to handle this level of activity and the institutions will have housing and loan portfolios large enough to absorb the additional personnel costs.

The NEA and NHSB have Boards of Directors responsible for providing policy to each institution. Activities of the institutions will be coordinated through their Boards by the Ministry of Finance which has the ultimate "say" in resolving issues between the two.

Each organization has as its primary purpose the mandate to provide housing to low income families. To date, neither organization has fulfilled this commitment but the NEA has made great strides in redirecting its course and the NHSB is willing to increase its low income housing portfolio once it has the capability to soundly administer such programs. The NEA has a proven record in selecting and administering housing contractors

both local and foreign. The MHSB has demonstrated that it is able to manage its current limited loan program but both organizations need strengthening. The support provided in this grant will increase the capability of both institutions and enable them to assume greater responsibility and successfully undertake the expanded roles which will result from an acceleration and re-direction of the national housing program.

### 3.5 Environmental Concerns

An initial environmental examination carried out in conjunction with a proposed HG/DL for the same project area concluded that an Environmental Assessment was required for the proposed water supply and sanitary collection disposal improvements. This Environmental Assessment has been prepared and the recommendations and conclusions of this study will be incorporated into project design activities. A condition precedent to the disbursement of the Grant will include environmental compliance with the recommendation of this E.A.

4.0 The Financial Plan:

The financial plan is composed of an analysis of the financing designed for the beneficiaries, an analysis of affordability by beneficiaries, and a detailed description of the project budget.

4.1 Housing Finance and Affordability

The project has been designed to provide a number of shelter solutions consistent with the ability to pay in the Monrovia society. As discussed elsewhere in detail and as summarized in the following exhibit, five basic low income shelter options are provided, ranging in cost from \$1134 to \$3038.

1)	Serviced Site Only	\$1134
2)	Serviced Site plus Wet Core	1734
3)	Serviced Site, Wet Core plus Shelter	2584
4)	Serviced Site, Wet Core, Materials Loan	3038
5)	Serviced Site plus Construction Materials Loan	3038

A. Cross Subsidy Within The Project

The prices as shown in the preceding exhibit incorporate the concept of a cross-subsidy within the project. As discussed in the technical annex to this

paper, the actual cost of producing a low income lot, including services, is expected to be \$2442. The program assumes that these lots will be sold for a price of \$1134 or \$1308 below cost. It is believed that this subsidy can be provided by the sale of mid income serviced lots also included within the project at a price of \$7500. Profit from the sale of mid income sites in the amount of \$2616 per site can be realized based on present price and cost estimates.

B. Mortgage Financing Program

In Liberia, as in many developing nations, low income households are not accustomed to the purchase of shelter on a long term installment basis. This project incorporates an affordable understandable mortgage finance system for shelter purchase. The finance system might require monthly deposits to a savings account equal to the loan payment for a one year period prior to the granting of the loan. The amount accumulated in the savings account then becomes a portion of the down payment.

Two advantages are provided by this contractual savings approach. Borrowers will be conditioned to making regular monthly installments and those households which find the discipline of such payments impossible

can be identified before the loans are granted. This should greatly mitigate subsequent loan collection problems. The savings deposit also adds substantially to the borrower's down payment. In addition to the accumulated savings account, the borrower will be asked to pay an additional 10% of the sales price of the shelter unit as down payment. The combined savings account and additional down payment approximates a 20% down payment on the property.

As an alternative to this program the household may make a 25% down payment. The final program design will be subject to AID approval prior to disbursement of funds for the sites and services project. The accompanying table provides a complete example of the combined savings-loan program both on the basis of \$1 of monthly household income and on the basis of the median household income of \$125 per month. As the exhibit shows, the interest rate on the savings deposit is assumed to be 8%, mortgage interest rates 12% and loan terms ranging from 15-30 years.

C. Affordability

As is detailed in the Social Analysis section of this paper, the median monthly household income for the Monrovia area has been determined to be approximately

ILLUSTRATIVE MORTGAGE FINANCING PROGRAM\*

Per \$1 Of Monthly Household Income

Affordable Shelter	Loan Amount	Loan -- Value	Accumulated Savings	Additional Down Payment	Loan Term	Monthly Payment
26.60	20.83	78%	3.11	2.66	15	\$ .25
28.69	22.70	79%	3.11	2.87	20	.25
29.83	23.74	80%	3.11	2.98	25	.25
30.46	24.30	80%	3.11	3.05	30	.25
For Median Income Of \$125 Month						
3325	2604	78%	389	333	15	\$31.25
3586	2838	79%	389	359	20	31.25
3729	2968	80%	389	373	25	31.25
3909	3038	80%	389	381	30	31.25

\*Assumptions

- A. Borrowers will pay 25% of income for housing payments.
- B. For the first 12 months borrowers will pay 25% of income into savings account earning 8% interest compounded monthly
- C. Accumulated savings at the end of one year will become part of down payment.
- D. Borrowers will pay 10% of shelter cost as down payment in addition to accumulated savings account.
- E. Interest rate on loan is 12% compounded monthly.

\$125. The table entitled "Affordability of Housing Options (assumes cross-subsidy of \$1308 per lot)" shows the affordability of the five suggested shelter solutions with the cross-subsidy included. As the table shows, the gamut of shelter solutions is completely available to households earning less than the median income. The lowest cost solution is available to 80% of Monrovia householders and the highest cost shelter solution is available to 55% of Monrovia households.

In the event that the expected cross-subsidies cannot be generated because of increases in costs, or lack of marketability of mid-income lots, at the prices anticipated, the project still appears to be highly viable for a large number of Monrovia households. The attached table entitled "Affordability of Housing Options (assumes no cross-subsidy within the project)" details the affordability of the shelter solutions in the absence of the cross-subsidy. As the table shows, shelter solutions 1 and 2 are available to all median income households. Shelter solution 3 requires a total subsidy of only \$84.50 per unit and is available to 48% of Monrovia households without subsidy. The final column in the table shows the subsidy which would be required to allow the median income Monrovia household to purchase each of the shelter options. As the column shows,

solutions 3 through 5 require a subsidy if these units are to be purchased by the median income household expending no more than 25% of household income on the housing payment. The maximum required subsidy per shelter unit and serviced lot is \$538.50, less than half the cross-subsidy anticipated to be available.

This analysis has indicated that with or without the proposed cross-subsidy mechanism, the low income shelter project is feasible and affordable providing shelter solutions of a high quality to Monrovia households having less than or equal to the median income.

**AFFORDABILITY OF HOUSING OPTIONS\***

(Assumes Cross Subsidy of \$1,308 per lot)

<u>Housing Option</u>	<u>Cost</u>	<u>Loan Maturity (Years)</u>	<u>Interest Rate %</u>	<u>Income Required</u>	<u>% Households Qualifying</u>
1	\$1134	15	12	\$42.63	80
2	1734	20	12	60.44	70
3	2584	25	12	86.62	60
4	3038	25	12	101.84	55
5	3038	25	12	101.84	55

\*Assumes 1979 prices and incomes.

**AFFORDABILITY OF HOUSING OPTIONS**

(Assumes No Cross Subsidy Within Project)

<u>Shelter Solution</u>	<u>Unsubsidized Cost</u>	<u>Loan Maturity (Years)</u>	<u>Interest Rate %</u>	<u>Income Required</u>	<u>% Households Qualify</u>	<u>Required Subsidy For Median Income</u>
1	2442	20	12	85.11	60%	NONE
2	3042	25	12	101.98	55%	NONE
3	3892	30	12	127.77	48%	\$84.50
4	4346	30	12	142.68	35%	538.50
5	4346	30	12	142.68	35%	538.50

#### 4.2 Project Budget

The following tables present an overall picture of the project budget. The "Summary Cost Estimate and Financial Plan" divides the budget between foreign exchange requirements and funds to be expended in-country. The "Projection of Expenditures by Fiscal Year" has been expanded to show expenditures by major components. The "Costing of Project Outputs/Inputs" attempts to allocate costs by distinct project inputs to achieve the anticipated outputs. Tables are included showing a yearly expenditure forecast by major project component, i.e., the training program, NHA/NHSB staff support, sites and services infrastructure, and seed capital for the housing and small business loan programs. Year 1 reflects anticipated expenditures during FY 79 and 80 whereas Year 2 reflects expenditures in FY 81.

Summary Cost Estimate and Financial Plan

(US \$000)

Source	FX	AID IC	Total
<b>Use</b>			
<u>NHA &amp; NHSB Training and Staff Support</u>	266	734	1,000
U.S. Personnel Training	(206)	(34)	(240)
Commodities	(-)	(80)	(80)
Other-salary support and misc.	(40)	(-)	(40)
Contingency	(-)	(620)	(620)
Contingency	(20)	(-)	(20)
<u>Sites and Services Infrastructure</u>	700	800	1,500
Commodities	(700)	(400)	(1,100)
Other - Local Construction Worker salaries	(-)	(400)	(400)
<u>Seed Capital for low income housing and small business loans</u>	-	2,500	2,500
<b>*Total</b>	<b>966</b>	<b>4,034</b>	<b>5,000</b>

\* Inflation factor of 10.3% per year is included in the above figures.

Projection of Expenditures By Fiscal Year  
( \$US 000)

<u>Fiscal Year</u>	<u>A.I.D.</u>
FY-79	83
FY-80	2,000
FY-81	<u>2,917</u>
*Total	5,000

\* Inflation factor of 10.3%/year is included in the above figures.

	FY-79	FY-80	FY-81	Total
Staff Support	50	300	250	600
Training Prog.	33	200	167	400
Commodities & Infra. Cons	-	750	750	1,500
Seed Capital	-	750	1,750	2,500
	<hr/>	<hr/>	<hr/>	<hr/>
Total	83	2,000	2,917	5,000

Costing of Project Outputs/Inputs  
( US \$000)

Project Outputs: (key)

- 1a 22 hired and 40 trained staff at NHA
- 1b 29 hired and 40 trained staff at NHSB
- 2 600-900 sites and service plots completed (owner or rental)
- 3a 2000 low income families receive loans
- 3b 150 small businesses receive loans

Project Inputs	Project Outputs					Total
	1a	1b	2	3a	3b	
<u>NHA &amp; NHEB Training and Staff Support</u>						
1. 1 LT US Training Advisor (24pm)	60	60	-	60	60	240
2. Training for 80 NHA & NHEB staff	40	40	-	-	-	80
3. Salary Support for 22 Add'l NHA staff	80	-	238	-	-	318
4. Salary Support for 29 Add'l NHEB staff	-	70	-	142	70	282
5. 4 Project Vehicles	10	10	-	10	10	40
6. POL/Maintenance	5	5	-	5	5	20
7. Contingency	10	10	-	-	-	20
<u>Sites &amp; Services Infra.</u>						
1. Commodities	-	-	1,100	-	-	1,100
2. Local Construction worker salaries	-	-	400	-	-	400
<u>Seed Capital for low income housing and small business loans</u>	-	-	-	1500	1000	2,500
<b>Total</b>	<b>205</b>	<b>195</b>	<b>1,738</b>	<b>1,717</b>	<b>1,145</b>	<b>5,000</b>

TRAINING PROGRAM  
AID INPUTS  
UNDER PROPOSED GRANT

	<u>YEAR 1</u>	<u>YEAR 2</u>
<u>Personnel</u>		
1 Sr. Advisor (24 PM)	120,000	120,000
Short term consultants (20 PM) (funded from existing project and new IPUP)	-	-
<u>Materials, supplies &amp; equipment</u>		
Training materials (funded from existing project and IPUP)	-	-
Training equipment	-	-
<u>Vehicles</u>		
4 @ \$10,000	40,000	-
Maintenance, repairs, POL	10,000	10,000
<u>Participant Training</u>		
Travel (GOL funded)	-	-
Monthly maintenance allowance	20,000	60,000
<u>Contingency</u>		
(other contingency costs funded from existing project)	10,000	10,000
TOTAL	<u>200,000</u>	<u>200,000</u>

NHA AND NESB ADDITIONAL STAFF

		Salaries	
<u>NHA</u>		<u>Year 1</u>	<u>Year 2</u>
12	Direct Construction Division/ Operations Dept.	100,000	100,000
2	Project Inspectors	16,000	16,000
2	Project Administrators	16,000	16,000
2	Estate Management Officers	9,000	9,000
4	Social Service Coordinators	18,000	18,000
	Sub Total	159,000	159,000
<u>NESB</u>			
2	Sr. Home Improvement Loan Officers	12,000	12,000
2	Jr. Home Improvement Loan Officers	6,000	6,000
2	Sr. Home Improvement Advisors	12,000	12,000
2	Jr. Home Improvement Advisors	6,000	6,000
2	Sr. Small Business Loan Officers	12,000	12,000
2	Jr. Small Business Loan Officers	6,000	6,000
2	Sr. Small Business Advisors	12,000	12,000
2	Jr. Small Business Advisors	6,000	6,000
4	Collection Officers	24,000	24,000
4	Savings Officers	24,000	24,000
5	Home Office Support	21,000	21,000
	Sub Total	141,000	141,000
	TOTAL	<u>300,000</u>	<u>300,000</u>

\* One individual from each category will be trained as a counter-part trainer to the training team funded by this Grant and IIPUP funds.

SITES AND SERVICES  
INFRASTRUCTURE  
( US \$000)

<u>Commodities</u>	<u>Year 1</u>	<u>Year 2</u>
Waterworks, pipe and fittings sewers, electrical equipment	350	350
Road and construction building materials	200	200
<u>Local Construction Worker Salaries</u>	<u>200</u>	<u>200</u>
Total	750	750

SEED CAPITAL

( US \$000)

	<u>Year 1</u>	<u>Year 2</u>
Low Income Housing loan program	250	1,250
Small Business loan program	<u>500</u>	<u>500</u>
Total	750	1,750

5.0 Project Implementation:

5.1 Administrative Arrangement

The Grantee will be the NHSB. The major implementing agencies will be the NHA and the NHSB. NHSB will serve as the central fiduciary for this Grant and the follow-on HG. Signatories to the Grant Agreement will be Ministry of Finance, Ministry of Planning, NHSB and NHA.

Grant disbursements will be channeled through the Ministry of Finance to NHSB. Funds will be disbursed on receipt by USAID of evidence acceptable to USAID of the following:

- a. Budget support to NHA and NHSB: Evidence that the employees identified in the technical feasibility section of this PP have been hired.
- b. Sites and Services:
  - 1) Plan for internally consistent cost recovery policy on the New Georgia site.
  - 2) Program for construction lending to NHA including audit techniques, loan disbursement control and executed sub agreements.
  - 3) Detailed plans, specifications and cost estimates for the project.
  - 4) Criteria and plan for establishing eligibility of beneficiaries.

- 5) Decision on and development of type of financial instrument, lease purchase or mortgage, to be used for beneficiary financing.
- 6) Program for underwriting project loans.
- 7) Program for collection of payments, including possibly utility payments and property taxes.
- 8) Program for eviction of delinquents.
- 9) Establishment of branch (project) office and sufficient staffing to carry out the construction project.
- 10) Procurement plan for purchase of goods in the U.S.

c. Seed Capital:

- 1) Overall proposals acceptable to USAID (similar to above) on the community upgrading and small business loan projects.
- 2) Evidence of loan applications from target group beneficiaries.

d. Training: USAID will request AID/Washington to contract with consultants acceptable to NEA and NESB who will provide the services as outlined in the training plan. The Senior resident trainer will be a financial expert and will be assigned

to the NHSB with dual responsibilities to manage the training program, specifically design the financial institution component and assist the NHSB to develop the lending program.

The NHSB will be responsible for recruiting additional staff, setting up in conjunction with NHA, branch offices at the project sites, developing in conjunction with NHA basic underwriting criteria for qualifying beneficiaries, and designing the lending programs.

NHA will be responsible for recruiting additional staff, setting up the project office on site, gaining GOL approval on the cost recovery policy for the New Georgia project, developing with NHSB the criteria for establishing beneficiary eligibility, developing a procurement plan for purchase of U.S. goods, establishing with NHSB the procedures for verifying construction progress to NHSB, and construction of infrastructure.

The project monitoring will be handled by USAID/Monrovia with technical consultation provided by RHUDO/Abidjan. Because of the complexity of this overall project, the Office of Housing has nominated a member of their Washington staff for assignment to USAID as housing officer. This person

is scheduled to arrive in Monrovia August 1979. The Housing Officer will report to the USAID Director on housing-related projects in Liberia. Up to one-third of this officer's time may be devoted to assisting RHUDO/Abidjan on housing matters in other countries.

## 5.2 Implementation Plan

The conditions to permit a 611a determination are expected to be met on or about July 1, 1979. There are several elements of the project such as the final procurement plan, and procedures for the small loan program that will require formal USAID approval prior to the disbursement of funds. However, the \$5 million grant can be obligated once the project has been authorized and the required 15 day congressional notification period has been satisfied. Subsequently implementation is expected to proceed rapidly. It is anticipated that the grant will be expended within 24 months. The timing of the major events required to implement the project over a 24 month period are included below in the Project Network Tracking Table. The schedule of events leading up to the signing of the grant agreement will take place as follows:

<u>Month/Year</u>	<u>Event</u>
June 1979	PP authorized
July 1979	Grant Agreement signed
July 1979	PIO/T issued for Training Contract
August 1979	Vehicles ordered
August 1979	Year one of the project implementation schedule begins



100a

- 15. Functional Training \_\_\_\_\_
- 16. Field Experience \_\_\_\_\_
- 17. Complete Training \_\_\_\_\_
- 18. Follow Up Workshops \_\_\_\_\_
- 19. Evaluation \_\_\_\_\_
- 20. Grading & Site Layout \_\_\_\_\_
- 21. Neighborhood Road Construction \_\_\_\_\_
- 22. Trenching for Water, Sewer & Drainage \_\_\_\_\_
- 23. Stabilization Ponds \_\_\_\_\_
- 24. Manholes, Sewer & Water Lines \_\_\_\_\_
- 25. Electrical Installation \_\_\_\_\_
- 26. Monumenting Individual Lots \_\_\_\_\_
- 27. Wet Cores & Basic Shelters \_\_\_\_\_
- 28. Delivery Starts \_\_\_\_\_

Note: Assuming Authorization in June 1979, Month 1 equals August 1979.

### 5.3 Procurement Plan

The National Housing Authority will be responsible for procurement of all commodities under the grant. The National Housing Authority (NHA) has demonstrated that it has the capacity to procure goods and services locally and internationally in an efficient and timely manner. It is anticipated that NHA will procure the goods and services for this project, in collaboration with the Liberian General Services Agency. They will utilize their own personnel and that of the Commercial Section of the Liberian Embassy in Washington, D.C. Nevertheless, prior to the disbursement of any funds for the procurement of goods and services financed by this grant, NHA will be required to submit a detailed procurement plan to USAID Director, acceptable to AID.

Crude oil is imported into Liberia from Saudi Arabia and refined at the Local refinery. A crude oil by-product is used in the manufacture of asphalt which will be utilized by this project. Cement and concrete pipe are also manufactured in Liberia. The clinkers are imported from Norway. All of the preceding commodities are imported, refined/ manufactured in Liberia to meet general consumer demand and not necessarily for the specific use of this project. Consequently, since Norway and Saudi Arabia are eligible

AID Geographic Code Book 935 countries and asphalt, cement and concrete pipe meet the tests stipulated in AID Handbook 15, Chapter 11B2, the necessity of a source/origin waiver is not anticipated. It has been estimated that the cost of off-the-shelf procurement of these commodities will be approximately US \$300,000. Lumber, sand and gravel are indigenous to Liberia and are available in sufficient quantities to meet the general consumer demand. It has been estimated that the cost of off-the-shelf procurement of sand, gravel, lumber, and concrete pipe will be approximately US \$100,000.

Commodities Which Will Be Procured Utilizing Grant Funds

(a) U.S. Source and Origin

Waterworks pipe and fittings

Electrical conductors

Electrical equipment

1. transformers
2. switchgear
3. breakers
4. insulators

Sewers

1. manhole covers
2. inlet gratings

Estimated Total Cost      US \$700,000

(b) Off-the-shelf procurement in Liberia of commodities processed in Liberia with input components from Code 935 countries

Asphalt - crude imported from Arab Emirates but distilled locally

Cement - clinker imported from Europe

Estimated Total Cost US \$300,000

(c) Off-the-shelf procurement of commodities of Liberian source and origin

Lumber

Sand

Gravel

Concrete pipe

Estimated Total Cost US \$100,000

5.4 Evaluation Plan

- A. The Evaluation Plan will include:
1. An evaluation of progress towards attainment of the objectives of the Project.
  2. Identification and evaluation of constraints which may inhibit such attainment.
  3. An assessment of how such information may be used to help overcome such problems, and
  4. Evaluation to the degree feasible, of the overall development impact of the Project.
- B. Project performance will be routinely monitored by the USAID Project Officer and engineer and will include regularly scheduled project site visits. The GOL National Housing Authority officials will be invited to accompany USAID officials.
- C. Project performance evaluation will be done periodically, usually once a year in conjunction with the existing technical assistance grant project, Low Income Housing. The USAID Project Officer and the GOL National Housing Authority officials will develop project status assessment to address items 1 and 2 in the above evaluation

plan, focusing on project outputs, objectively verifiable indicators, implementation schedule and disbursement of funds.

- D. At the conclusion of the project in FY 1978, a formal evaluation of the project will be conducted. The evaluation team will consist of representatives from USAID, a high level officer of the National Housing Authority, a representative from the Ministry of Finance, the Ministry of Planning and Economic Affairs, the Ministry of Public Works Engineering Division, and the USAID regional housing office in Abidjan.

6.0 Covenants:

- A. The NHA and GOL agree to maintain a position of full cost recovery on all shelter and site development sub-projects in the New Georgia area during the development construction and sales phases of AID supported projects.
- B. GOL, NHA and NHSB understand that AID salary support will terminate after 2 years and agree to take over salaries of the staff supported by this project after 2 years.
- C. NHA and NHSB agree to establish branch office operations at the project sites, initially New Georgia and New Kru Town.
- D. GOL agrees to accept minimum shelter standards and specifications consistent with target group affordability and full cost recovery.

Scope of Work

Senior Finance Advisor (Trainer)

A. Scope

1. The advisor will work directly with the N.H.S.B. and will be familiar with background and operations of the institution.
2. The advisor will counsel the bank on the mobilization of savings capital thru the use of consumer deposits and the mobilization of other capital sources.
3. The advisor will aid the bank in designing shelter and housing finance programs and must be conversant with, and able to design and implement a broad range of programs, including; amortizing mortgage loans, contract finance, variable rate loans, graduated payment loans, and combination savings account-mortgage loan contracts.
4. The advisor will support and aid the bank in development of a small business lending capability. The person should be qualified to instruct the bank in credit and financial analysis of small firms and will be familiar with standard analytical techniques such as ratio analysis, cash budgeting, and internal rate of return analysis.

5. The advisor will be required to design and conduct training in each of the areas of activity described above and coordinate the overall training effort.

B. Qualifications

The scope of work requires that the Senior Financial Advisor have a broad background in general and housing finance. A degree in finance, real estate finance, economics or accounting combined with substantial consulting or operating experience in housing finance is required. Economic or finance experience in a developing country context would be highly beneficial.

LOGICAL FRAMEWORK

Annex 2-1

PROJECT DESIGN SUMMARY

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Assumptions
<b>SECTOR GOAL:</b>	<b>Measures of Goal Achievement</b>		
Improve living environment for lower income families	<ol style="list-style-type: none"> <li>1. Increased access to utilities</li> <li>2. Increased access to GOL services for lower income areas</li> </ol>	<ol style="list-style-type: none"> <li>1. Socio-economic surveys conducted by the NIA Research Department</li> <li>2. Records of Iberia Electric Co. and Water &amp; Sewer Corp.</li> </ol>	The President and legislature will adopt the recommended national housing policy
<b>PROJECT PURPOSE:</b>	<b>End of Project Status (Grant):</b>		
Establish and strengthen a coordinated Iberian operation to design, implement, finance and manage replicable shelter projects for lower income families	<ol style="list-style-type: none"> <li>1. Expanded and trained staff fully functional and totally funded by NIA and NISB</li> <li>2. Infrastructure in place for ± 600-900 serviced plots for low income families at the New Georgia site</li> <li>3. Seed capital drawn down to finance construction materials, small business development and home improvement loans</li> </ol>	<ol style="list-style-type: none"> <li>1. Project monitoring and evaluation</li> <li>2. NIA construction reports and audits</li> <li>3. Physical inspection</li> <li>4. NISB loan records</li> </ol>	<ol style="list-style-type: none"> <li>1. Necessary personnel can be recruited, trained and assimilated into NIA NISB</li> <li>2. NIA will have the capacity to supervise and monitor construction</li> <li>3. Cost recovery is sufficient to ensure adequate rollover</li> <li>4. The projects will stimulate sufficient community pride and organization, i.e., neighborhood associations and self-help efforts to assure adequate maintenance of community facilities</li> </ol>
	<b>End of Project Status (IG):</b>		
	<ol style="list-style-type: none"> <li>1. Shelter related ministries and agencies cooperate to deliver project components on schedule</li> <li>2. Implementation of IG financed components follows IG activity on schedule</li> <li>3. Shelter institutions prepare proposals for future low income housing projects</li> <li>4. Cost recovery principle firmly established and effective collection mechanisms in place</li> <li>5. PE for IG authorized to fund secondary city pilot project</li> <li>6. Project units affordable by low income beneficiaries</li> </ol>		

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Assumptions
<b>PROJECT OUTCOMES</b>			
1. Staff expanded and trained for NUA and NISB	<u>Magnitude</u> (Grant) 1a. 22 hired and 40 trained for NUA b. 29 hired and 40 trained for NISB	1. Personnel records	1. The GOL accepts a concept of slum upgrading and sites and services as viable alternative to slum clearance
2. Completed projects in: a. Sites and services b. Settlement upgrading	2a. ± 600-900 sites and services plots, owner or rental	2. Project monitoring	
3. Construction material, home improvement and small business loans	3a. ± 2,000 low income families receive loans	3. On-site inspection	2. Middle and low income sites developed and sold simultaneously to assure recovery of full costs
4. Secondary city pilot design (PP)	b. ± 150 businesses receive loans		
	(ING) 2a. ± 1,100-1,400 sites and services plots owned or rented		
	b. ± 5,000 families receive improved infrastructure in existing low income neighborhoods		
	3. ± 2,000 low income families receive loans		
	4. City selected, detailed design completed, and PP drafted for DL funding of project		

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Assumptions
<b>PROJECT IMPUIS</b>	<b>Implementation Target (Type and Quantity)</b>		
Grant:	Grant:	1. Disbursement records	1. Within two years the GOI/NIA will be able to cover total operating costs and NISB will be self-supporting
(a) NIA and NISB training and staff support:	(a) \$1 million		
1. 1 IT US training advisor (24 pm)			
2. Training for 80 NIA and NISB staff			
3. Salary support for additional NIA (22) and NISB (29) staff			
4. Provision of four vehicles			
(b) Sites and services infrastructure	(b) \$1.5 million		
1. Commodities - waterworks pipe and fittings, conductors and other electrical equipment, manhole covers/gratings, asphalt, cement, lumber, concrete pipe, sand, gravel, etc.			
2. Local construction worker salaries			
(c) Seed capital for low income housing and small business loans	(c) \$2.5 million		

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Assumptions
<b>PROJECT INPUTS, cont.:</b>	<u>Implementing Target (Type and Quantity, cont.:</u>		
IG:	IG:	2. Evaluation of secondary city project	2. NIA will be able to successfully involve and schedule activities of GOI, ministries and agencies essential to project execution
(a) Sites and services infrastructure	(a) \$4.0 million		
(b) Upgrading Infrastructure	(b) \$4.0 million		
(c) Capital for low income housing loans	(c) \$1.5 million		
(d) Secondary city pilot project	(d) \$ .5 million		

# BEST AVAILABLE DOCUMENT

INITIAL ENVIRONMENTAL EXAMINATION

PROPOSED LIBERIA

AID DEVELOPMENT GRANT/DEVELOPMENT LOAN/HOUSING GUARANTEE PROGRAM

PREPARED FOR

USAID/MONROVIA AND OFFICE OF HOUSING  
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

PREPARED BY

JEFFORY G. BOYER, ENVIRONMENTAL CONSULTANT  
NATIONAL SAVINGS AND LOAN LEAGUE  
DECEMBER 1977

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## IV. COUNTRY BACKGROUND AND DESCRIPTION OF PROPOSED AID DEVELOPMENT AND HC PROGRAM

### A. Existing Environmental Conditions in Liberia

Two physical factors influence significantly the status of environmental quality in the region surrounding Liberia's national capital—its physical setting and climatic conditions. Monrovia is situated in a low-lying coastal belt which extends about 50 miles inland. This geographic area is characterized by its numerous tidal creeks, shallow lagoons and mangrove marshes. The tropical climate is typified by sustained heat, high humidity, and one of the heaviest seasonal rainfalls in the world. The combination of factors creates a set of natural conditions which pose major constraints on the development and maintenance of human settlements and the well-being of inhabitants in this region.

It is estimated that more than 50 percent of the land within a five-mile radius of central Monrovia (Mamba Point) is naturally unsuitable for development without major investments in land reclamation and drainage improvements. The limited availability of buildable land combined with the traditional Liberian value of holding land for purposes of economic security and social status create a severe shortage of land to accommodate urban growth pressures. Consequently, low-income families are forced to reside in areas where environmental hygienic conditions pose serious risks to their health. Numerous low-income communities have been established in marginally suitable areas along streams, rivers, and wetland marshes. These areas are subject to perennial flooding in the wet season and ponding and stagnant water in the dry season. The absence or limited availability of basic public services has forced residents: (1) to depend upon contaminated private wells or a limited number of community standpipes for their water supply; (2) to dispose of human waste in the "bush" or into pit-privy latrines which malfunction because of high groundwater; (3) to dump solid waste material (garbage) between buildings or onto undeveloped lots since public collection service is non-existent or infrequent; and (4) to discharge wastewater into the streets or open drainage ditches for lack of a storm drainage or sanitary collection system.

These environmental health conditions are made worse by a wet and humid climate that favors the breeding of insects, parasites, and other disease organisms. As a result, malaria is hyperendemic in the Monrovia area, and the occurrence of other diseases is very high including filariasis, dengue fever, cholera, dysentery, diarrhea, hepatitis, hookworm and tuberculosis. The effect of these conditions on the quality of the human environment causes life expectancy to be only 45 years. In addition, it poses particularly high risks to infants, young children less than five years

of age, and mothers of child-bearing age (15-44 years). A 1971 health survey conducted by Liberia's Ministry of Planning and Economic Affairs found that the rate of infant mortality was 159 per 1,000 births.

### 3. Monrovia's Shelter Needs

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An analysis of Liberia's shelter needs focuses on the situation in the nation's capital because it is the most rapidly growing urban center in the country. Within the past fifteen years Monrovia's population has increased from 81,000 persons in 1962 to an estimate of 250,000 persons in 1977. This rate of urban growth is equivalent to approximately seven percent annually, or roughly twice the national growth rate. One of the most significant factors contributing to the city's rapid population growth is the influx of rural migrants. As much as two-thirds of the increment in Monrovia's population in this period is attributable to rural-to-urban migration. This phenomenon is in part stimulated by a rejection of conditions in the rural countryside and a corresponding expectation that aspirations will be fulfilled in an urban setting such as Monrovia. The principal "pull" factors influencing Liberia's urban migration trends are economic--such as employment opportunities, differentials in wage scales, expendable income, and related educational opportunities. In turn, these factors are the prime determinants of the standard of living, level of health care, and social status.

The 1974 Census data indicate that 36 percent of Monrovia's existing housing stock was constructed of temporary or semi-permanent materials. The balance was built of permanent materials such as stone, concrete or cement block. In addition, the Census data reveal that 34 percent of all units are without any utilities, and 32 percent had only piped water inside or electricity. Approximately 25 percent of the dwellings had a combination of water, electricity and flush toilet. In conclusion, Monrovia's current housing stock of about 30,000 units is comprised roughly of 13,000 substandard units. A "substandard" unit is defined as one deficient in one or more basic utilities and/or constructed of non-permanent materials.

Future projections of Monrovia's population growth suggest that the urban housing and environmental health conditions will become even more critical unless corrective steps are taken immediately. It is estimated that the city's population will expand to approximately 500,000 persons by the year 1990. Approximately 2,700-3,700 units will be required annually to accommodate this rate of growth in addition to the number of replacement units eliminated annually because of their deterioration, obsolescence and changes in land use. Between 1977 and 1981, when the proposed project is expected to be completed, Monrovia's housing stock must be increased by 11,500 to 14,500 units to meet the shelter needs of new households and units to be replaced.

A number of factors have limited COI's efforts to expand the available housing supply to meet growth demands. These factors include the scarcity of developable land, the Liberian tradition of retaining ownership of property, and the high delivery cost of new housing construction. These conditions have primarily forced the City's growing population to use Monrovia's existing housing stock to meet its basic shelter needs.

### C. Target Population

The target population is identified as those households in Monrovia earning less than the median income of \$93 per month, which represents about 125,000 persons or 18,300 households. The Shelter Sector Assessment of January 1977, concluded that 25 percent was a reasonable estimate of household expenditure for shelter. Available socio-economic data provide the following demographic profile of the target population:

1. Principal concentrations of low-income households are found in central Monrovia's tenements, Bassi Quarter, and along Newbern Street as well as in outlying marginal areas of the city which include the communities of Duaha, New York Town, Point Four, Lower Town, Jamaica Road, Fonti Town, West Point, Clara Town, Bassa Community and Sinkor;
2. The tenure of housing is predominantly rental, whereas home ownership is limited mostly to higher-income families;
3. Extended family relationships and tribal identity are important cultural values that play vital functions in family structure, household size, number of households per dwelling, and in local government structure; and
4. Heads of households are relatively young with approximately 50 percent under thirty years of age, have limited formal education, and a majority are classified as unskilled or semi-skilled.

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D. Proposed AID Development Grant/Development Loan/Housing Guaranty Program

The proposed actions are designed to accomplish a three-fold purpose:

1. A national housing policy will be developed by the GOB beginning in 1975 with technical assistance from consultants funded by an AID grant. The policy will be designed to provide for a long-range comprehensive approach to meet Liberia's present and future shelter needs. It will consider Liberia's rural-urban migration trends as well as the related rural and urban shelter needs. Concurrent development of the urban low-income shelter program will help to formulate an overall policy development process. The policy will allow for adjustments during implementation of the AID-funded demonstration projects as new experience is gained and as "feedback" becomes available through the evaluation system;
2. The institutional capacity of the National Housing Authority (NHA) to carry out low income shelter projects will be expanded by the technical assistance component of this program. The NHA will serve as borrower and will be responsible for demonstration project design, implementation, monitoring and evaluation. NHA's prior experience has been limited to the production of approximately 900 units of conventional middle-income housing; and
3. A demonstration program will be developed to provide improved shelter and community services to low-income families in Monrovia. The main components of the demonstration program include:
  - Service Sites and Core Units

Approximately 1,775 serviced sites with expandable core units will be provided in two large projects and in a series of scattered "vest pocket" projects in existing low-income communities. Supportive facilities such as schools, clinics, markets will be constructed to complement the housing activities.
  - Community Upgrading

Approximately 4,953 families in existing low-income communities will benefit through the provision of water, storm and sanitary sewers, electricity, graded access streets and community facilities.

• Home Improvement Loans

Approximately 3,900 small loans will be made to assist the residents of the new "dorm and services" projects to expand and complete the core units and to assist residents of existing communities to expand and improve their homes.

The proposed program will involve a total cost of \$11.825 million to be financed by the AID resources, the beneficiaries and the host country. The total of the program funding of \$11.825 million will be distributed among the three components as shown below:

AID Technical Assistance Grant	\$ 1,175,000
AID Development Loan	4,000,000
AID Housing Guaranty	<u>5,000,000</u>
 TOTAL AID	 \$10,175,000
Beneficiaries and Host Country	<u>1,650,000</u>
 TOTAL	 \$11,825,000

II. ENVIRONMENTAL IMPACT IDENTIFICATION AND EVALUATION

This section of the IEE sets forth the reasonably foreseeable effects that the proposed program will have on the human environment in Liberia. To assure that the environmental consequences of these actions have been fully considered, AID's Office of Housing recently conducted field investigations of potential project sites in the country. A description of existing environmental conditions is summarized briefly in the preceding section, while the complete findings are set forth in the Liberia Shelter Sector Analysis (January 1977) and Supplement (August 1977).

The actions of the proposed program can be divided into three basic areas:

- Technical assistance for development of a draft National Housing Policy;
- Technical assistance for strengthening the institutional capacity of the National Housing Authority;
- The development of three types of demonstration shelter programs.

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For purposes of this evaluation, the first two actions are discussed jointly, while the third is examined separately, as it represents an entirely different type of activity. An impact identification matrix was developed for the proposed demonstration shelter program as a means of identifying potential impacts on critical areas of environmental concern likely to result from specific components of the proposed program. For the summary findings of the environmental analysis process, see Table 1. This evaluation procedure serves to answer three basic questions:

1. What are the most critical environmental concerns indigenous to the area of Liberia in which the proposed program is to be implemented?
2. What specific components of the proposed program will affect areas of identified environmental concern?
3. How will the proposed program components affect existing environmental conditions in terms of the nature and extent of probable environmental impacts?

A. Identification and Description of Critical Concerns Related to the Technical Assistance Component of the Shelter Program

AID will grant \$1.275 million to Liberia's National Housing Authority in the form of 122 person-months of technical assistance to strengthen this institution's capabilities and to assist in development of a national housing policy. The selective training and skill development include management and programming, credit and collection, loan procedures, physical design, low cost construction techniques, socio-economic surveys and analyses. The policy development component is designed to help NHA formulate a set of broad housing objectives, priorities, institutional responsibilities, delivery systems, levels of funding, and financial terms and conditions.

The conclusion of the Initial Environmental Examination (IEE) Technical Assistance component of the proposed shelter program is as follows:

The proposed technical assistance actions are not project-specific, nor are they activities which will directly affect the environment. They are within the range of actions designed to improve skill development, build institutions and define policy. As such they are the types of activities which Regulation 16 designates as not requiring an Environmental Assessment (EA). Therefore, a Negative Determination of environmental impact is warranted.

*end of T/A portion*

TABLE 1

CHECK LIST FOR ENVIRONMENTAL IMPACT IDENTIFICATION AND EVALUATION

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4
LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN	PROGRAM/PROJECT COMPONENTS LIKELY TO CAUSE CHANGES	ENVIRONMENTAL NATURE OF PROGRAM IMPACTS--NEGATIVE (-) POSITIVE (+)
<b>PROGRAM/PROJECT IMPACTS ON THE ENVIRONMENT</b>			
<u>NATURAL ENVIRONMENT</u>			
<b>1. EXISTING WATER RESOURCES:</b>			
a) SURFACE (RIVERS, LAKES, RESERVOIRS)	P	STORM DRAINAGE SEWERAGE SYSTEM	(-) ELIMINATION OR REDUCTION IN THE AMOUNT OF RAW SEWAGE & SEDIMENT LOADS DISCHARGED INTO SURFACE WATERS MAY BE EXPECTED
b) UNDERGROUND (ARTIFICIAL)	P	SEWERAGE SYSTEM	(+) PROTECTION OF GROUNDWATER RESOURCES
c) L. ENERGY	C	STORM DRAINAGE AND SEWERAGE SYSTEM	(+) IMPROVEMENT IN WATER QUALITY
d) SOIL	P		
<b>2. ENVIRONMENTALLY SENSITIVE AREAS:</b>			
a) Mangrove, Marsh, etc.	NA		
b) Coastal, Mangrove, Marsh, etc.	C	TOTAL HOUSING PROGRAM	(+) CONSERVATION AND PROTECTION OF MANGROVE MARSHES & COASTAL ESTUARY

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\*COLUMN 2 - LEVEL OF CONCERN: P -- THE AREA OF CONCERN IS OF HIGH IMPORTANCE TO THE PROJECT AND THE PROTECTION OF THE AREA IS A MAJOR CONCERN; C -- THE AREA OF CONCERN IS OF MODERATE IMPORTANCE TO THE PROJECT AND THE PROTECTION OF THE AREA IS A MODERATE CONCERN; NA -- NOT APPLICABLE; S -- SIGNIFICANT ENVIRONMENTAL IMPACTS WILL OCCUR UNLESS ALTERNATIVE ACTIONS OR MITIGATION MEASURES ARE INSTITUTED

CHECKLIST FOR  
ENVIRONMENTAL IMPACT IDENTIFICATION AND EVALUATION

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4
LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN	IF A PROJECT OR CONCERN IS LIKELY TO CAUSE CHANGES	ENVIRONMENTAL NATURE OF PROJECT IMPACTS--NEGATIVE (-) POSITIVE (+)
c) AQUIFER RECHARGE AREAS	P	SEWERAGE SYSTEM	(+) POTENTIAL PROBLEMS TO BE AVOIDED THROUGH SITE SELECTION PROCESS AND PROJECT DESIGN DECISIONS
d) RARE OR ENDANGERED PLANT AND ANIMAL SPECIES AND THEIR HABITATS	U		
e) HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES	U		
3. INFLUENCE OF EXISTING AND/OR FUTURE LAND USE ACTIVITIES AND DEVELOPMENT PATTERNS WHICH MAY AFFECT:			
a) WILDLIFE RESOURCES	U		
b) PAST AGRICULTURAL LANDS	NA		

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COLUMN 2 SYMBOLS: NA -- THIS AREA OF CONCERN IS NOT APPLICABLE TO THE COUNTY, REGION OR THE PROPOSED PROJECT  
 U -- THIS AREA OF CONCERN IS OF LOW TO MODERATE IMPORTANCE  
 P -- THIS AREA OF CONCERN IS OF HIGH IMPORTANCE  
 C -- THIS AREA OF CONCERN IS OF CRITICAL IMPORTANCE  
 S -- SIGNIFICANT ENVIRONMENTAL IMPACT WILL OCCUR UNLESS ALTERNATIVE ACTIONS OR MITIGATING MEASURES ARE IMPLEMENTED

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CHECKLIST FOR ENVIRONMENTAL IMPACT IDENTIFICATION AND EVALUATION

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4
LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN*	PROGRAM/PROJECT COMPONENTS LIKELY TO CAUSE CHANGES	ENVIRONMENTAL NATURE OF PROBABLE IMPACTS--NEGATIVE (-) POSITIVE (+)
c) VALUABLE NATURAL RESOURCES--FORESTS, WETLANDS, MINERALS, ETC.	C	TOTAL HOUSING & INFRA-STRUCTURE	(+)REDUCTION IN EXISTING LEVELS OF POLLUTION FROM URBAN RUNOFF AND MALFUNCTIONING SEWAGE DISPOSAL SYSTEMS
d) OPEN SPACE/RECREATION LANDS	U		
e) ECOLOGICAL BALANCE OF THE AREA/REGION	P	TOTAL HOUSING PROGRAM	(+)PHYSICAL LAYOUT OF PROPOSED IMPROVEMENTS WILL BE UNDERTAKEN IN RECOGNITION OF ENVIRONMENTAL SENSITIVITY OF ADJACENT WETLANDS.
j) STABILITY AND PRESERVATION OF HUMAN SETTLEMENT AREAS	P	TOTAL HOUSING PROGRAM	(+)DEMONSTRATION EFFECT OF PROGRAM'S VALUE IN ASSISTING NIA TO MEET LIBERIA'S CURRENT/FUTURE HOUSING REQUIREMENTS

\*COLUMN 2 SYMBOLS:  
 E -- THIS AREA OF CONCERN IS NOT APPLICABLE TO THE COUNTRY, REGIONS OF THE PROPOSED PROJECT  
 U -- THIS AREA OF CONCERN IS OF LOW TO MEDIUM IMPORTANCE  
 P -- THIS AREA OF CONCERN IS POTENTIALLY OF IMPORTANCE  
 C -- THIS AREA OF CONCERN IS CONSIDERED CRITICAL

TABLE 1  
CHECK LIST FOR  
ENVIRONMENTAL IMPACT IDENTIFICATION AND EVALUATION

EXEMPT FROM BEST  
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COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4
LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN	PROGRAM/PROJECT COMPONENTS LIKELY TO CAUSE CHANGES	ENVIRONMENTAL NATURE OF PROBABLE IMPACTS--NEGATIVE (-) POSITIVE (+)
4. ECOLOGICAL CONSEQUENCE FROM INTRODUCING NEW OR DIFFERENT TECHNOLOGICAL SYSTEMS ASSOCIATED WITH COMMUNITY INFRASTRUCTURE & SERVICES:			
a) WATER CONSUMPTION VERSUS SUPPLY LIMITATION	U	SEWERAGE SYSTEM	(+)- CONVERSION FROM ON-SITE WATER SUPPLY AND SEWAGE DISPOSAL SYSTEMS TO A PUBLIC WATER SUPPLY AND WATERBORNE SEWAGE COLLECTION/TREATMENT SYSTEM WILL INCREASE WATER CONSUMPTION. SUPPLY WILL BE ADEQUATE TO MEET INCREASED DEMAND.
b) ENERGY REQUIREMENTS	NA		
c) AMBIENT AIR QUALITY	NA		
d) WATER QUALITY	U	SEWERAGE SYSTEM	(+)- COLLECTION AND TREATMENT OF RAW SEWAGE FROM PROJECT SITES PRESENTLY NOT CONNECTED TO EXISTING WATERBORNE SANITARY SYSTEM WILL IMPROVE WATER QUALITY CONDITIONS IN ADJACENT WETLANDS. TREATMENT PLANT HAS ADEQUATE CAPACITY TO HANDLE INCREASE IN WASTEWATER FLOWS. SLIGHT DETERIORATION IN WATER QUALITY MAY BE EXPECTED IN THE IMMEDIATE VICINITY, HOWEVER, ASSIMILATIVE CAPACITY OF RECEIVING STREAM IS BELIEVED ADEQUATE TO ACCOMMODATE INCREASED SEWAGE FLOWS.
e) CHANGE IN AGRICULTURAL PRACTICES AND USE OF HUMAN WASTE FOR FERTILIZER	NA		

\*COLUMN 2 SYMBOLS:

NA--THIS AREA OF CONCERN IS NOT APPLICABLE TO THE COUNTRY, REGION OR THE PROPOSED PROJECT

U --THIS AREA OF CONCERN IS ORDINARILY OF LOW IMPORTANCE

P --THIS AREA OF CONCERN IS POTENTIALLY OF IMPORTANCE

C --THIS AREA OF CONCERN IS CONSIDERED CRITICAL

S -- SIGNIFICANT ENVIRONMENTAL IMPACT WILL OCCUR UNLESS ALTERNATIVE ACTION OR MITIGATING MEASURES ARE INSTITUTED

TABLE 1

CHECK LIST FOR ENVIRONMENTAL IMPACT IDENTIFICATION AND EVALUATION

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4
LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN	PROGRAM/PROJECT COMPONENTS LIKELY TO CAUSE CHANGES	ENVIRONMENTAL NATURE OF PROBABLE IMPACTS--NEGATIVE (-) POSITIVE (+)
<u>HUMAN ENVIRONMENT</u>			
1. TRADITIONAL CUSTOMS & SOCIO-CULTURAL CONDITIONS:			
a) COMMUNITY CHARACTER & COHESION	C	TOTAL HOUSING PROGRAM	(+ ENHANCEMENT IN IMAGE OF COMMUNITY AND REINFORCEMENT OF SENSE OF IDENTITY
b) SOCIAL ORGANIZATION	U		
c) INSTITUTIONAL STRUCTURES	U		
d) LIFE STYLES & CULTURAL TRADITIONS	U		
e) FAMILY PATTERNS & VALUES	U		
f) DEMOGRAPHIC & SOCIAL PROFILE	U		

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Legend: E -- High level of concern; P -- Moderate level of concern; C -- Low level of concern; S -- Significant environmental impact will occur unless alternative actions or mitigating measures are instituted.

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LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN	PROGRAM/PROJECT COMPONENTS LIKELY TO CAUSE CHANGES	ENVIRONMENTAL NATURE OF PROBABLE IMPACTS--NEGATIVE (-) POSITIVE (+)
g) LEVEL OF PERSONAL SAFETY & CONVENIENCE	P	ROADS & PEDESTRIAN PATHS, WATER & SEWER SERVICES, & COMMUNITY FACILITIES	(+) MINIMIZE PHYSICAL HAZARDS AND IMPROVEMENT IN CONVENIENCE OF BASIC SERVICES.
2. ESTABLISHED HOUSING CONCEPTS AND PRACTICES:			
a) BUILDING MATERIALS	U	STANDARD	
b) CONSTRUCTION TECHNIQUES	U	STANDARD	
c) HOUSING FORM AND STYLES	U	STANDARD	
d) INTERIOR DESIGN OR STRUCTURE	U	STANDARD	
e) SPATIAL RELATIONSHIP OF STRUCTURE TO OTHER SHELTER COMPONENTS (COURTYARDS, COOKING AREA, BATH, ETC.)	U	STANDARD	

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E -- THE AREA OF CONCERN IS OF SIGNIFICANT IMPORTANCE TO THE WELL-BEING OF THE COMMUNITY.  
 U -- THE AREA OF CONCERN IS OF MODERATE IMPORTANCE TO THE WELL-BEING OF THE COMMUNITY.  
 P -- THE AREA OF CONCERN IS OF MINOR IMPORTANCE TO THE WELL-BEING OF THE COMMUNITY.  
 C -- THE AREA OF CONCERN IS OF MINOR IMPORTANCE TO THE WELL-BEING OF THE COMMUNITY.  
 S -- SIGNIFICANT ENVIRONMENTAL IMPACT WILL OCCUR UNLESS ALTERNATIVE ACTIONS OR MITIGATING MEASURES ARE INSTITUTED.

CHECK LIST FOR  
ENVIRONMENTAL IMPACT IDENTIFICATION AND EVALUATION

ENVIRONMENTAL IMPACT IDENTIFICATION AND EVALUATION  
AVAILABLE COPY

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4
LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN*	PROGRAM/PROJECT COMPONENTS LIKELY TO CAUSE CHANGES	ENVIRONMENTAL NATURE OF PROJECT IMPACTS--NEGATIVE (-) POSITIVE (+)
g) POPULATION SIZE	S	TOTAL HOUSING PROGRAM	(+) THE ESTIMATED NUMBER OF BENEFICIARIES OF THE PROGRAM (6728 HOUSEHOLDS) REPRESENT 38% OF MONROVIA'S BELOW MEDIAN POPULATION OR 19% OF THE CITY'S TOTAL POPULATION.
ii) HOUSING LOCATION	C	TOTAL HOUSING PROGRAM	(+) DEMONSTRATION EFFECT ON SITE SELECTION PROCESS & PROPOSED DEVELOPMENT ACTIVITIES CONSIDERING ENVIRONMENTAL CONSTRAINTS/ OPPORTUNITIES
3. EFFECT ON PUBLIC HEALTH AND GENERAL WELL-BEING:			
a) COMMUNICABLE DISEASE CONTROL AND ENVIRONMENTAL HEALTH CONDITIONS	C	TOTAL HOUSING PROGRAM	(+) IMPROVEMENT IN ENVIRONMENTAL HYGIENE CONDITIONS IN SELECTED PROJECT AREAS REPRESENTS A POSITIVE STEP TOWARD GREATER CONTROL OF COMMUNICABLE DISEASES, BUT EXTENSIVE ABATEMENT IS UNLIKELY BECAUSE OF OTHER DISEASE SOURCES & VECTORS OF TRANSMISSION EXIST BOTH ON-SITE AND OFF-SITE
ii) DISPLACEMENT AND RELOCATION OF POPULATION	P		(-) MINIMUM DISPLACEMENT & NUMEROUS MITIGATING MEASURES DESIGNED INTO PROGRAM TO AVOID OR REDUCE EXTENT OF ADVERSE EFFECTS

\*Column 2 Symbol Key:

- E -- THE AREA OF CONCERN IS ENTIRELY EXCLUDED FROM THE PROJECT AREA
- P -- THE AREA OF CONCERN IS PARTIALLY EXCLUDED FROM THE PROJECT AREA
- P -- THE AREA OF CONCERN IS PARTIALLY EXCLUDED FROM THE PROJECT AREA
- C -- THE AREA OF CONCERN IS PARTIALLY EXCLUDED FROM THE PROJECT AREA
- S -- SIGNIFICANT ENVIRONMENTAL IMPACT WILL OCCUR UNLESS ALTERNATIVE ACTIONS OR MITIGATING MEASURES ARE INSTALLED

CHECK LIST FOR  
ENVIRONMENTAL IMPACT IDENTIFICATION AND EVALUATION

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4
LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN	PROGRAM/PROJECT COMPONENTS LIKELY TO CAUSE CHANGES	ENVIRONMENTAL NATURE OF PROBABLE IMPACTS--NEGATIVE (-) POSITIVE (+)
c) EMPLOYMENT/INCOME GENERATION	P		(+) STIMULATION OF SHORT-TERM EMPLOYMENT & LIMITED SKILL DEVELOPMENT. CREATION OF OPPORTUNITIES FOR LONG-TERM INCOME GENERATION
d) LAND TENURE AND/OR STABILITY OF HUMAN SETTLEMENT AREAS	U		
e) INCOME EXPENDITURE PATTERNS	C		(-) THE REPAYMENT OF SHELTER & COMMUNITY UP-GRADING IMPROVEMENTS ARE EXPECTED TO CAUSE SOME CHANGES IN ESTABLISHED INCOME EXPENDITURE PATTERNS BECAUSE OF THE REQUIREMENT FOR COST RECOVERY.

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- CODES: E -- THE AREA OF CONCERN IS OF EXTREME IMPORTANCE TO THE PEOPLE OF THE AREA  
 C -- THE AREA OF CONCERN IS OF HIGH IMPORTANCE TO THE PEOPLE  
 P -- THE AREA OF CONCERN IS OF MODERATE IMPORTANCE TO THE PEOPLE  
 S -- THE AREA OF CONCERN IS CONSIDERED CRITICAL  
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CHECKLIST FOR ENVIRONMENTAL IMPACT IDENTIFICATION AND EVALUATION

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4
LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN*	SPECIFIC ENVIRONMENTAL CONCERNS TO BE CONSIDERED IN AID/NIA SITE SELECTION AND LAND DEVELOPMENT FEASIBILITY INVESTIGATIONS AS WELL AS IN THE PREPARATION OF SITE DEVELOPMENT PLANS	
LOCATIONAL FACTORS POTENTIALLY IMPACTING PROGRAM/PROJECT		MICROFILMED FROM BEST AVAILABLE COPY	
1. PRESENCE OF SIGNIFICANT NATURAL HAZARDS:			
a) SEISMIC DISTURBANCES	NA		
b) FLOODING/HIGH WATER TABLE	C		
c) DROUGHTS	NA		
d) TORNADOES, HURRICANES, OR STRUCCOS	NA	SELECTED LOW-LYING AREAS IN TARGET COMMUNITIES SHOULD BE EVALUATED FOR THEIR SUITABILITY FOR HABITATION OR OTHER RELATED MAN-MADE USES.	
e) LANDSLIDES, ROCK SLIDES, OR UNSTABLE SLOPE CONDITIONS	NA		
f) FIRES	NA		
g) SOIL STABILITY- SHIFTING SANDS, EXPANDING CLAY, FROST, ETC.	C		

\*COLUMN 2 SYMBOLS: NA -- THIS AREA OF CONCERN IS NOT APPLICABLE TO THE COUNTRY, REGION OR THE PROPOSED PROJECT;  
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COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4
LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN	SPECIFIC ENVIRONMENTAL CONCERNS TO BE CONSIDERED IN AID/NIA SITE SELECTION AND LAND DEVELOPMENT FEASIBILITY INVESTIGATIONS AS WELL AS IN THE PREPARATION OF SITE DEVELOPMENT PLANS	
2. EXISTENCE OF MAJOR ENVIRONMENTAL HEALTH PROBLEMS:			
a) WATER QUALITY/SUPPLY	P	PRIMARY RELIANCE WILL BE PLACED ON THE USE OF LWSC'S WATER SUPPLY AND DISTRIBUTION SYSTEM WHICH MEETS WHO STANDARDS. IF GROUNDWATER RESOURCES MUST BE UTILIZED IN ANY SELECTED SITES AND SERVICE PROJECTS, APPROPRIATE TESTING WILL BE CONDUCTED TO ASSURE AN ADEQUATE AND SAFE POTABLE WATER SUPPLY.	
b) CLIMATE AND AMBIENT AIR QUALITY	U		
c) COMMUNICABLE DISEASES	C	THE MULTIPLICITY OF POTENTIAL DISEASE VECTORS POSES SERIOUS HEALTH PROBLEMS TO THE TARGET POPULATION. RECOGNIZING THAT AID'S ACTIONS WILL ONLY HAVE A LIMITED EFFECT ON DISEASE PREVENTION. THE ASSISTANCE OF LIBERIA'S MUNICIPAL AND NATIONAL GOVERNMENT AGENCIES MUST BE SOLICITED IN CONJUNCTION WITH AID'S PROPOSED IMPROVEMENTS TO EFFECTIVELY COMBAT THE HIGH INCIDENCE OF COMMUNICABLE DISEASES.	
d) MAN-MADE NUISANCE - NOISE, ODORS, TOXIC MATERIALS, ETC.	NA		

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COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4
LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN*		
3. AVAILABILITY AND CAPACITY OF BASIC COMMUNITY INFRASTRUCTURE AND SERVICES:			
a) TRANSPORTATION - ACCESSIBILITY TO JOBS, SERVICES, ETC.	P	EXISTING LOW-INCOME COMMUNITIES ENJOY REASONABLE ACCESSIBILITY TO EMPLOYMENT OPPORTUNITIES, SERVICES, MARKETS, ETC. PLANNED FUTURE SITES AND SERVICE PROJECTS WILL REQUIRE TRANSPORT SERVICES TO BE ARRANGED AND AVAILABLE AT THE TIME OF THE ANTICIPATED OCCUPANCY OF UNITS.	
b) WATER SUPPLY AND DISTRIBUTION	U		
c) SEWAGE COLLECTION, TREATMENT AND DISPOSAL	S	PRIMARY TREATMENT PROVIDED BUT LIMITED CAPACITY OF PUMP STATIONS & TRANSPORT SYSTEM ON BUSHROD ISLAND POSSES POTENTIAL LIMITATIONS ON SLURRY HOOK-UPS	
d) HEALTH CARE	U		
e) SOLID WASTE COLLECTION AND DISPOSAL	U	PROGRAM PLANNING AND IMPLEMENTATION SHOULD BE COORDINATED WITH THE MUNICIPAL GOVERNMENT OF MONROVIA TO ASSURE THE PROVISION OF APPROPRIATE PUBLIC SERVICES.	

ENVIRONMENTAL IMPACT STATEMENT  
AVAILABLE COPY

\*COLUMN 2 SYMBOLS: NA -- THIS AREA OF CONCERN IS NOT APPLICABLE TO THE COUNTRY, REGION OR THE PROPOSED PROJECT  
 U -- THIS AREA OF CONCERN IS UNLIKELY TO BE OF IMPORTANCE  
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TABLE 1

CHECKLIST FOR ENVIRONMENTAL IMPACT IDENTIFICATION AND EVALUATION

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4
LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN*		
II. URBAN/REGIONAL GROWTH AND LAND USE CONSIDERATIONS:			
A) STRAINS ON THE CAPACITY OF EXISTING NATURAL SYSTEMS (FOOD PRODUCTION, WATER SUPPLY, ETC.) OR MAN-MADE SYSTEMS (PUBLIC TRANSPORT, ELECTRICAL SUPPLY, SCHOOLS, ETC.) DUE TO PREVAILING PHYSICAL GROWTH PATTERN OF URBAN CENTER (S) ANTICIPATED TO BE POSSIBLE IG SITES	U	GOL PROGRAM WILL NOT STIMULATE URBAN GROWTH AND WILL BE PLANNED TO BE CONSISTENT WITH MUHROVIA'S PLANNING AND HOUSING POLICIES.	
B) IDENTIFIABLE IMPORTANT ENVIRONMENTAL RESOURCES THREATENED BY THE PROCESS OF URBANIZATION			
• RARE OR ENDANGERED PLANT AND WILDLIFE HABITATS	U		MICROFILMED FROM BEST AVAILABLE COPY

\*COLUMN 2 SYMBOLS:

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- U -- THIS AREA OF CONCERN IS USUALLY TO BE OF IMPORTANCE
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TABLE 1

CHECKLIST FOR  
 ENVIRONMENTAL IMPACT IDENTIFICATION AND EVALUATION

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4
LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN		
• WETLANDS	C	UNCONTROLLED URBAN DEVELOPMENT POSES A POTENTIAL THREAT TO THE LONG-TERM PRODUCTIVITY OF HEBROVIA'S COASTAL ESTUARY. THE PROGRAM WILL REDUCE THE CUMULATIVE IMPACT OF SELECTED INHABITED RESIDENTIAL AREAS AND OFFER DEMONSTRATION EFFECT ON CONSIDERATION OF ENVIRONMENTAL CONCERNS IN FUTURE PLANNING AND DEVELOPMENT DECISIONS.	
• AGRICULTURAL LANDS	U		
• FLOOD PLAINS	U		
• FOREST	U		
• HISTORIC, ARCHAEOLOGIC AND CULTURALLY SIGNIFICANT SITES	U		
• UNIQUE NATURAL AREAS	U		
• SCARCITY OF CRITICAL RAW MATERIAL	U		

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\*COLUMN 2 SYMBOLS: **EA** -- THIS AREA OF CONCERN IS NOT APPLICABLE TO THE COUNTY, PARTS OF THE PROJECT OR THE PROJECT AREA.  
**U** -- THE AREA OF CONCERN IS OF MODERATE LEVEL OF IMPORTANCE.  
**P** -- THE AREA OF CONCERN IS OF MODERATE LEVEL OF IMPORTANCE.  
**C** -- THE AREA OF CONCERN IS OF MODERATE LEVEL OF IMPORTANCE.  
**S** -- SIGNIFICANT EFFECTS OF PROJECT DEVELOPMENT. **MEASURES A & B** -- MITIGATING MEASURES A & B.

3. Identification and Description of Critical Concerns Related to the Demonstration Shelter Programs

The focus of this part of the IEE is directed towards the proposed project level actions. The establishment of existing baseline conditions from which to judge probable environmental impacts is based on field investigations of a number of potential project sites in outlying areas of Monrovia. They included New Georgia, Barmersville, New Kru Town, Point Four, Duala, Logan Town, Jamaica Road and Plonkor. Because existing environmental conditions in Monrovia (except the downtown section) are generally consistent, the findings of the IEE can be applied to other sites that may be identified during project design.

The following discussion is presented on those environmental issues identified in Column 2 of Table 1 as being a potential (P) or a critical (C) concern. The relationships between these areas of environmental concern and specific program components is examined, and the probable nature and extent of the environmental impacts are stated in Column 4. In addition, special mitigating measures to be incorporated into the project design to minimize potential adverse impacts are identified.

Impact Rating

1. NATURAL ENVIRONMENT

(+)

• Existing Water Resources

The lack of or improperly functioning sanitary and/or storm drainage systems in target communities is the primary cause of water pollution in the Monrovia area. The maintenance of good water quality is particularly critical to the country's fisheries, which are directly tied to the coastal mangrove ecosystem. In addition, protection of existing water resources is important since Liberian officials contemplate utilizing groundwater in the near future to supplement Monrovia's existing surface water supply sources. Implementation of the community upgrading program will cause a reduction in the quantity of raw sewage and sediment being discharged into the coastal estuary. This program will therefore contribute towards improved water quality management in Monrovia.

(-)

• Environmentally Sensitive Areas

The proposed actions are primarily directed towards the upgrading of existing low-income communities rather than to new housing construction. Since the process of community building has already taken place, the primary impacts on the natural

environment have already occurred. Monrovia's low-income communities are located close to environmentally sensitive areas--mangrove marshes and coastal estuary. To avoid or minimize potentially adverse impacts, the land selected for project sites will not be physically extended beyond its present habitable boundaries. The anticipated effects of community upgrading and basic infrastructure will minimize or eliminate a number of pollutional sources which are damaging to the coastal ecosystem. Surfacing of local streets and the installation of storm drainage systems are expected to reduce the amount of sediment discharged into adjacent wetlands from unpaved laterite streets and erosion-prone hillsides. Similarly, the extension of the City's waterborne sewage collection system into areas with malfunctioning or non-existent sewage disposal systems will eliminate the runoff of raw sewage potentially detrimental to both terrestrial and aquatic plant and animal life in the coastal estuary.

(+)

• Influence on Current/Future Land Planning and Development Decisions

Recognition and integration of environmental factors and values in the site planning and development process of the demonstration projects could serve to increase environmental awareness and provide a positive approach to be followed. Specifically, the technical assistance personnel will represent the opportunity to strengthen the National Housing Authority (NHA) staff's awareness and sensitivity to environmental concerns.

(+)

• Ecological Consequence of Introducing Technological Changes

The ecological consequences of introducing waterborne sanitary and storm drainage systems into unsewered or partially sewerd low-income communities is not expected to result in any significant adverse impact on existing environmental conditions. The anticipated effects will be primarily twofold. First, the city's total volume of water consumption will increase proportionally with the number of new consumers added. The present consumption level per capita is 30-50 gallons per day. Based on current expansion plans, the Liberian Water and Sewer Corporation (LWSC) is expected to have sufficient production capacity to meet the additional water demand. Secondly, the transport of raw sewage from the target areas to a central point of treatment and discharge into the Mesurado River will increase the current level of effluent loading. However, the estimated increment in sewerage flow (1.3 million GPD) is not believed to be sufficient to significantly affect existing water quality conditions. Use of Monrovia's waterborne sewerage system will be far less damaging to the environment than uncontrolled and untreated sewage from malfunctioning privies and septic tanks.

2. HUMAN ENVIRONMENT

(+)

• Community Character and Cohesion

The proposed upgrading program of existing low-income areas will be directed towards the elimination or reduction of existing physical deterioration by means of improved infrastructure services and accommodations while preserving the community character. Field investigations and discussions with Liberian officials indicate that a strong sense of identity is an important aspect of the Liberian culture. It is anticipated that the process of community upgrading will increase participation of local residents in community affairs and strengthen community cohesiveness.

(+)

• Population Size

The number of residents of the target communities affected by the proposed program is estimated to be approximately 6,728 households. Assuming the average household size is seven (7) persons, 47,000 persons, or 38% of Monrovia's existing below-median-income-level population (125,000) will be affected. This represents 19 percent of the City's total population in 1977. Since the project includes a number of sites and relocation of population will be insignificant there will not be a positive significant effect.

(+)

• Housing Location

Monrovia's current rate of population growth and physical expansion poses potential environmental problems, given its natural physical setting and scarcity of buildable land. Since marginal areas will be utilized to accommodate future growth, the program may have a demonstration value of how ecological considerations may be integrated with other development factors in the planning and design of housing projects.

3. PUBLIC HEALTH AND GENERAL WELL-BEING

(+)

• Communicable Disease Control and Environmental Hygiene

The proposed community upgrading and home improvement efforts will substantially intervene in the chain of transmission of

Impact  
Rating

prevalent communicable diseases which commonly afflict inhabitants of low-income communities. All waterborne and some water-based diseases depend on faecal access to domestic water sources. The extension of a community wastewater collection and disposal system and safe potable water supply to individual dwellings may substantially reduce both opportunities for breeding of insect vectors and transmission of waterborne, water-washed and water-based infections. However, the potential improvement in community health may be somewhat limited because of several conditions: (1) the limited area to be improved and the presence of extensive wetlands within and surrounding the target communities; (2) the level of public health education; and (3) the slow process of acceptance of disease prevention.

• Displacement and Relocation of Families

It is expected that no more than 566 families, i.e., not more than 10% of the households in any one community will have to be relocated in order to accommodate the improvements proposed in the community upgrading program. To minimize the extent of dislocation of people and property, the following mitigating measures, among others, have been incorporated into the project's design:

- 1) adoption of a policy to minimize right-of-way easements in the street upgrading, use of pedestrian paths and limiting the extent of new street construction;
- 2) implementation of a socio-economic survey to identify the characteristics and conditions of the families to be displaced in order to develop a suitable relocation plan;
- 3) integration of "vest pocket" sites and services units in selected communities where community upgrading improvements will be made to minimize disruption of established socio-economic patterns and cultural ties;
- 4) provision of transport by WTA for relocation of households to prepared resettlement areas; and
- 5) advanced installation of essential infrastructure and construction of new housing accommodations prior to demolition of existing housing structures.

Considering the limited extent of displacement and the incorporated mitigating measures, the cumulative effect of the proposed action will not significantly affect the human environment.

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• Employment/Income Generation

Unemployment and underemployment are considered serious socio-economic problems in Monrovia's low-income communities. It is anticipated that the labor force in the target communities is mainly represented by unskilled laborers. The proposed improvements will provide opportunities for the project area's skilled and unskilled laborers to participate in construction of the 1,775 sites and services units and installation of basic infrastructure. Similar employment generation is expected through the 3,900 home improvement loans.

Because completion of the program is not anticipated to exceed a period of five years, the creation of direct employment benefits is expected to be short-term. However, long-term benefits may be expected through on-the-job training and advancement of existing cottage industries.

In addition, the program will enable the target population to generate additional income by renting part of their quarters. This will provide some long-term income stability and financial security against unexpected economic fluctuations.

• Income Expenditure Pattern:

The 1977 median income in Monrovia is estimated at approximately \$93 per month, or \$1,115 annually. The target population is identified as those families earning less than this amount. A 1974 income distribution survey, conducted by the Ministry of Planning and Economic Affairs, indicates that a large portion of the target population earns substantially below the median income. Accurate survey data are not presently available regarding the target population's income expenditure pattern. It is estimated that the average family spends approximately 25 percent of income for meeting its shelter needs.

A number of alternative shelter solutions have been formulated which should be both culturally acceptable and financially affordable. The following describes each of these shelter solutions and its costs. Table 2 shows the comparison of shelter cost and affordability by the target population.

Sites and Services Program Options:

- a) A 20'x60' lot serviced with water and septic tank and a 5'x3' sanitary core with a shower faucet installation, a drain, and a water closet connected to a septic tank.

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The walls will be made of 8"x8"x16" concrete blocks on strip foundations and a 4" concrete pad. The roof will be constructed of termite-treated poles or milled lumber and metal sheet roofing.

- b) A serviced lot with a sanitary core and a 6'x15' unenclosed, but covered cooking/utility area comprised of strip foundations, a 4" concrete slab, 4"x8" termite-treated wood columns, and a similarly treated roof structure of 2"x4" plates and pole or milled lumber frame. The roof cover will be metal sheets.
- c) A serviced lot with a sanitary core, cooking/utility space and a 12'x18' multifunctional space comprised of strip foundations, a 4" concrete slab, 4"x8" termite-treated wood columns, and a roof structure with metal sheet cover. A three-course high concrete block wall around the perimeter of the multifunctional space will be provided as a splash guard for organic wall materials presently used or as a base for full height block walls.

Community Upgrading Program:

The basic infrastructure improvements include provision of water supply, sewage collection and disposal, electricity, street pavement, curbs, and storm drainage.

Small Home Improvements Program:

Improvements may include installation of a septic tank or connection to a waterborne sewage disposal system, construction of a 14'x14' concrete slab, building materials for completion of a two-room addition, and four concrete block walls.

TABLE 1

FINANCIAL COST/AFFORDABILITY ANALYSIS

Type of Program	Loan Amount	Monthly	Required Monthly Income
<b>SITES AND SERVICES</b>			
Option A*	\$ 1,250	\$ 12.25**	\$ 49.00
Option B*	\$ 1,490	\$ 14.25**	\$ 57.00
Option C*	\$ 1,820	\$ 17.40**	\$ 70.00
<b>SMALL HOME IMPROVEMENTS</b>			
Average Loan	\$ 500	\$ 10.15***	\$ 40.00
<b>COMMUNITY UPGRADING</b>			
Average Loan	\$ 665	\$ 6.35**	\$ 27.00

- \* See description of sites and services options above.
- \*\* Terms are 8% interest rate, 15 years (average).
- \*\*\* Terms are 8% interest rate, 5 years (average).

The use of one or several methods of cost recovery will cause some changes in established expenditure patterns. Therefore, special care must be taken to assure that the additional costs for urban services and shelter improvements are within the beneficiaries' ability and willingness to pay.

1. LOCATIONAL FACTORS POTENTIALLY IMPACTING PROGRAM/PROJECT

• Natural Hazards—Flooding/High Water Table and Soil Instability

The encroachment by Monrovia's low-income population into marginal areas poses potential dangers of flooding from nearby surface waters and/or storm water runoff. In addition, these areas are noted for unstable soil conditions and limited bearing capacity. These potential development constraints should be recognized and evaluated. It is recommended that the analysis of hydrologic and geologic/soil conditions be carried out in concert with Liberia's Geologic Survey.

• Environmental Health Problems--Water Quality/Supply

For the New Georgia site where it may be impossible to connect to the existing public water distribution system, a local water supply system will be developed. Cooperation of Liberia's Geologic Survey in assessment of groundwater capacity and reliability on this and other sites with similar conditions will be required.

Special consideration must be given, however, to effective protection of aquifer recharge areas, particularly if the Liberian Water and Sewer Corporation decides to utilize the groundwater to increase Monrovia's water supply.

• Environmental Health Problems--Exposure to Communicable Diseases

Since the proposed program envisions both upgrading of existing low-income communities and possibly two new sites and services projects, consideration must be given to communicable disease problems and to use of both curative and preventive measures. Families exposed to poor hygienic conditions due to locational disadvantages may be relocated to areas where the proposed infrastructure improvements are to be installed to eliminate such health hazards as flooding, ponding of high water, and hillside erosion.

To avoid unnecessary health risks to future residents of any new projects, initial site feasibility investigations should consider such factors as:

- 1) proximity to bodies of surface water known to be seriously contaminated or breeding areas for water-related insect vectors posing a high health risk;
- 2) permeability of soils to avoid a high water table or periodic ponding of water;
- 3) surface drainage patterns; and
- 4) other similar environmental design constraints.

• Availability and Capacity of Basic Community Infrastructure and Services

Considering the transportation service difficulties NHA has experienced with its Siporex II project at Barmersville, it may be expected that similar problems may initially develop with the two proposed sites and services projects.

It appears that the Siporex II transportation problems are attributable to the distance from downtown Monrovia and the freeway, poor conditions and maintenance of the access road and low ridership demand. It is, however, anticipated that these conditions will substantially improve once the Siporex II project is fully occupied.

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The proposed New Georgia site will have similar, possibly even more difficult, problems. It is therefore mandatory that the site evaluation and feasibility studies carefully analyze the potential availability and efficiency of transportation for future residents.

● Sewage Collection, Treatment and Disposal

Monrovia's municipal sewerage disposal system provides a primary level of treatment and its operational performance is reasonably good. The treatment reduces the biochemical oxygen demand (BOD) of raw sewage from an average of 250 parts per million to 25 PPM. However, the system does have a number of operational problems:

- 1) Excess infiltration of groundwater which causes average dry weather flows to increase from 3.0 million gallons per day (MGD) to 6.0 MGD in the wet season.
- 2) The capacity of the sewage collection system is limited by the capacity of the two pump stations and transport system serving the Bushrod Island area.

The latter is expected to represent a potentially critical constraint to the proposed improvement program.

It is expected that the existing two pump stations and interceptor sewers will not handle the additional sewage flow generated by the proposed improvements. Preliminary estimates indicate that the present hydrologic capacity of the pumping stations will be exceeded by the increment in sewage flow from the proposed community ungrading action and the capacity of the interceptors will reach or nearly equal their capacity.

Other potential programs related to the capacity of the existing primary treatment plant and the additional demand generated by the improvement program must be considered. The plant which discharges effluent into the Mesurado River appears presently to have sufficient capacity to handle the increased flow during the dry season. Infiltration during the rainy season, however, causes the present sewage flow to reach the plant's rated capacity leaving practically no excess capacity for any additional demand.

As to the disposal of partially treated effluent into the Mesurado River, it can be assumed that because of the augmentation in flow during the wet season, the stream will have enough assimilative capacity to handle the expected additional effluent load. However, it must be realized that its assimilative

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capacity and its use as a receiving stream are limited. Monrovia's growth and continuous use of the River as the sole body of water receiving its sewerage effluent could critically affect the coastal estuary which its fishing population depends upon for employment and economic security.

C. Special Environmental Performance Standards Incorporated Into Program Design

A number of potential adverse effects were recognized in the early stages of program design, and appropriate mitigating measures were incorporated to eliminate or reduce their impact. Both have been identified and discussed in the preceding impact analysis section. However, the Initial Environmental Examination process has identified additional actions to be undertaken to further protect and enhance the quality of the environment on project sites.

The selection of project sites in close proximity to environmentally sensitive wetlands shall be guided by regulations controlling the alteration of land and removal of vegetation by specific guidelines for site drainage, erosion and sedimentation control, and sewage effluent disposal.

1. Environmental Objectives

- a. Project development should not have a significant detrimental effect on environmentally sensitive areas or ecologically important natural resources including Monrovia's coastal waters, tributary streams, and adjacent uplands.
- b. Development process should minimize alteration of natural site conditions to preserve and protect the environment.
- c. Site development plans should demonstrate a recognition of physical features and environmentally sensitive areas both on-site and off-site.

2. Specific Development Guidelines

- a. Preliminary and final site development and construction plans will identify the location and type of environmentally sensitive areas and will take appropriate preservation and protection steps.

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- b. No alterations to the existing character of environmentally sensitive areas, such as wetlands, mangrove marshes will be made except in those cases where the natural ecological function has already been substantially changed.
- c. A buffer zone will be established along the boundaries of environmentally sensitive areas. In most cases, the buffer will be sufficient to minimize significant adverse impacts resulting from storm runoff and sedimentation. No development activity will occur in this restricted zone unless the proposed use can be shown to be compatible.
- d. During development and construction, cut and fill operations or grading will not encroach upon natural water courses, flood plains, or constructed channels to adversely affect adjacent land areas.
- e. Land development will occur in increments which can be completed during a single construction season.
- f. Erosion and sediment control measures will be coordinated with grading and construction operations. Control measures will be established prior to the initiation of each increment of the development/construction process. These measures will be maintained through the development process to avoid any deleterious effects on vegetation, water quality and aquatic life.
- g. In the design of drainage and runoff control systems consideration will be given to alternative methods of on-site storm water retention, such as:
  - seepage basins
  - unpaved ditches
  - grading of lots and streets to achieve dispersion rather than concentration of runoff into swales, terraces, or open space areas
  - use of natural gravel deposits for the lower portions of storm collection basins
  - flattening of drainage slopes.
- h. The design of all on-site drainage facilities will minimize the need for maintenance and the creation of nuisances or public health hazards, such as stagnant water with concomitant algae growth, insect breeding, and odors; discarded debris; or a threat to public safety.
- i. Outlet control structures will be designed to keep storm water runoff velocities at a minimum.

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**NO. 31 (ANNEX 3)**

## BEST AVAILABLE DOCUMENT

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Based upon the preceding environmental evaluation, it is recommended that the Technical Assistance portion of the Liberia Program be given a Negative Determination requiring no further environmental review and the Housing Guaranty and Development Loan portion to be given a Positive Determination.

A. Technical Assistance Development Grant (20)

The proposed technical assistance actions which are non-project related, involve a general range of activities which are directed towards institution building, skill development, and policy definition. These types of actions are identified in NEI Regulation 10 Section 216.21a, as not representing a major Federal action significantly affecting the human environment. Therefore, a Negative Determination is recommended for the Technical Assistance (20) portion.

B. Housing Guaranty (21) and Development Loan (22)

The NEI has concluded that the physical size and the potential number of beneficiaries of the Shelter Program will significantly affect Monrovia's waterborne sewage disposal system's ability to effectively function. It is therefore concluded that an Environmental Analysis should be conducted.

The objective of the recommended EA should be to identify the probable impacts of the Shelter Program on Bushrod Island's sewage collection, and transport system, and on the treatment facilities in Sinkor. The following specific issues should be discussed in the EA:

1. Estimate of available capacity of existing sewage collection/transmission system (lines and pump stations) to accommodate future sewage flows;
2. Estimate of potential increment to existing flows as a result of sewer hook-ups from the Program;

3. Assessment of the environmental effects generated by the proposed actions on Monrovia's existing sewage collection/transmission and treatment facilities and by any future planned improvements which may occur within the anticipated implementation period;
4. Review of alternative courses of feasible action in terms of:
  - Contribution towards Achievement of Environmental Goals
  - Capital and Operating Cost
  - Environmental Effects--Physical, Social, Economic and Cultural
  - Operability, Reliability and Flexibility of Transport and Treatment Components/Systems

It is further recommended that the EA be conducted in collaboration with GOI personnel as a part of program feasibility studies. This would most logically occur after placement of the technical assistance personnel funded under the EC portion of the Liberia Program.

STANDARD ITEM CHECKLIST

Listed below are statutory items which normally will be covered routinely in those provisions of an assistance agreement dealing with its implementation, or covered in the agreement by exclusion (as where certain uses of funds are permitted, but other uses not).

These items are arranged under the general headings of (A) Procurement, (B) Construction, and (C) Other Restrictions.

A. Procurement

- |  |  |
|--|--|
| 1. <u>FAA Sec. 602.</u> Are there arrangements to permit U. S. small business to participate equitably in the furnishing of goods and services financed?   | <u>Yes.</u> Formal solicitations/ advertising in U.S. will be required to the maximum extent feasible.                     |
| 2. <u>FAA Sec. 604 (a).</u> Will all commodity procurement financed be from the U. S. except as otherwise determined by the President or under delegation from him?  | 64% will be procured from U.S. sources. 27% manufactured in Liberia with Code 935 componentry and 9% indigenous to Liberia |
| 3. <u>FAA Sec. 604 (d).</u> If the cooperating country discriminates against U. S. marine insurance companies, will agreement require that marine insurance be placed in the U. S. on commodities financed?            | Liberia does not discriminate against U.S. marine insurance companies.   |
| 4. <u>FAA Sec. 604 (e).</u> If offshore procurement of agricultural commodity or product is to be financed, is there provision against such procurement when the domestic price of such commodity is less than parity? | <u>Not Applicable.</u>   |
| 5. <u>FAA Sec. 608 (a).</u> Will U. S. Government excess personal property be utilized wherever practicable in lieu of the procurement of new items?   | <u>Yes.</u>  |

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6. FAA Sec. 901 (b). (a) Compliance with requirement that at least 50 per centum of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U. S.-flag commercial vessels to the extent that such vessels are available at fair and reasonable rates. Yes.

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

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

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

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B. Construction

1. FAA Sec. 601 (d). If a capital (e.g., construction) project, are engineering and professional services of U. S. firms and their affiliates to be used to the maximum extent consistent with the national interest? Yes.

2. FAA Sec. 611 (c). If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable? Yes.

- 3. FAA Sec. 620 (x). If for construction of productive enterprise, will aggregate value of assistance to be furnished by the U. S. not exceed \$100 million? Not Applicable.

C. Other Restrictions

- 1. FAA Sec. 201 (d). If development loan, is interest rate at least 2% per annum during grace period and at least 3% per annum thereafter? Not Applicable.
  
- 2. FAA Sec. 301 (d). If fund is established solely by U. S. contributions and administered by an international organization, does Comptroller General have audit rights? Not Applicable.
  
- 3. FAA Sec. 620 (h). Do arrangements preclude promoting or assisting the foreign aid projects or activities of Communist-Bloc countries, contrary to the best interests of the U. S.? Yes.
  
- 4. FAA Sec. 636 (i). Is financing not permitted to be used, without waiver, for purchase, long-term lease, or exchange of motor vehicle manufactured outside the U. S. or guaranty of such transaction? Yes.
  
- 5. Will arrangements preclude use of financing:
  - a. FAA Sec. 114. to pay for performance of abortions or to motivate or coerce persons to practice abortions? Yes.
  
  - b. FAA Sec. 620 (g). to compensate owners for expropriated nationalized property? Yes.

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c. FAA Sec. 660. to finance police training or other law enforcement assistance, except for narcotics programs? Yes.

d. FAA Sec. 662. for CIA activities? Yes.

e. App. Sec. 103. to pay pensions, etc., for military personnel? Yes.

f. App. Sec. 106. to pay U. N. assessments? Yes.

g. App. Sec. 107. to carry out provisions of FAA Sections 209 (3) and 251 (n)? (transfer to multilateral organization for lending). Yes.

h. App. Sec. 501. to be used for publicity or propaganda purposes within U. S. not authorized by Congress? Yes.

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PROJECT CHECKLIST

Listed below are, first, statutory criteria applicable generally to projects with FAA funds, and then project criteria applicable to individual fund sources: Development Assistance (with a sub-category for criteria applicable only to loans); and Security Supporting Assistance funds.

A. GENERAL CRITERIA FOR PROJECT.

1. App. Unnumbered; FAA Sec. 653(3)

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

(a) by Congressional Notification  
(b) No. A Section 653(c) Report to the Congress will be submitted.

2. FAA Sec. 611(a)(1). Prior to obligation in excess of \$100,000, will there be (a) engineering, financial, and other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U. S. of the assistance?

Yes. See Section 3.3 A(3)

3. FAA Sec. 611(a)(2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance?

No further legislative action by the Liberian Legislature will be required.

4. FAA Sec. 611(b); App. Sec. 101. If for water or water-related land resource construction, has project met the standards and criteria as per Memorandum of the President dated Sept. 5, 1973 (replaces Memorandum of May 15, 1962; see Fed. Register, Vol 38, No. 174, Part III, Sept. 10, 1973)?

Not Applicable.

5. FAA Sec. 611(e). If project is capital assistance (e.g., construction), and all U. S. assistance for it will exceed \$1 million, has Mission Director certified the country's capability effectively to maintain and utilize the project? Yes.

6. FAA Sec. 209, 619. Is project susceptible of execution as part of regional or multi-lateral project? If so why is project not so executed? Information and conclusion whether assistance will encourage regional development programs. If assistance is for newly independent country, is it furnished through multi-lateral organizations or plans to the maximum extent appropriate? No.

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7. FAA Sec. 601 (a); (and Sec. 201 (f) for development loans). Information and conclusions whether project will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions. Project will facilitate private initiative by encouraging self-help and small loan contractor construction Success of small loan program could stimulate financial sector

8. FAA Sec. 601(b). Information and conclusion on how project will encourage U. S. private trade and investment abroad and encourage private U. S. participation in foreign assistance programs (including use of private trade channels and the services of U. S. private enterprise). U.S. investors are and have always expressed interest in Liberia. The HIG loan will be obtained from an American financial institution and grant funds will be utilized for U.S. source origin goods and services to the maximum extent feasible.

9. FAA Sec. 612(b); Sec. 636(h). Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U. S. are utilized to meet the cost of contractual and other services. Not Applicable.

10. FAA Sec. 512(d). Does the U. S. own excess foreign currency and, if so, what arrangements have been made for its release?

No.

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3. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

a. FAA Sec. 102(c); Sec. 111; Sec. 291a. Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production, spreading investment out from cities to small towns and rural areas; and (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and otherwise encourage democratic private and local governmental institutions?

Project will stimulate employment and self-help construction and improve access to socio-economic services for the urban poor.

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

Not Applicable.

(1) (103) for agriculture, rural development or nutrition; if so, extent to which activity is specifically designed to increase productivity and income of rural poor; (103A) if for agricultural research, is full account taken of needs of small farmers;

Not Applicable.

(2) (104) for population planning or health; if so, extent to which activity extends low-cost, integrated delivery systems to provide health and family planning services, especially to rural areas and poor;

Not Applicable.

(3) (105) for education, public administration, or human resources development; if so, extent to which activity strengthens nonformal education, makes formal education more relevant, especially for rural families and urban poor, or strengthens management capability of institutions: enabling the poor to participate in development; Not Applicable.

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(4) (106) for technical assistance, energy, research, reconstruction, and selected development problems; if so, extent activity is: Not Applicable.

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

(b) to help alleviate energy problem;

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

(d) reconstruction after natural or manmade disaster;

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

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

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

Not Applicable.

c. FRA Sec. 110(a); Sec. 206(a). Is the recipient country willing to contribute funds to the project, and in what manner has or will it provide assurances that it will provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or has the latter cost-sharing requirement been waived for a "relatively least-developed" country)?

Not Applicable.

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d. FRA Sec. 110(b). Will grant capital assistance be disbursed for project over more than 3 years? If so, has justification satisfactory to Congress been made, and efforts for other financing?

No.

e. FRA Sec. 207; Sec. 113. Extant to which assistance reflects appropriate emphasis on; (1) encouraging development of democratic, economic, political, and social institutions; (2) self-help in meeting the country's food needs; (3) improving availability of trained worker-power in the country; (4) programs designed to meet the country's health needs; (5) other important areas of economic, political, and social development, including industry; free labor unions, cooperatives, and Voluntary Agencies; transportation and communication; planning and public administration; urban development, and modernization of existing laws; or (6) integrating women into the recipient country's national economy.

- (1) Project intended to stimulate economic activity.
- (2) N.A.
- (3) Project construction directly and indirectly provides on-the-job training.
- (4) Improved shelter water supply and sanitation facilities will contribute to improved health.
- (5) Communities will be closely involved in upgrading projects. Policy exercise and institutional development will greatly enhance GOL ability to deal with shelter and related problems of urban poor.
- (6) Women play integral role in all project aspects.

f. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civic education and training in skills required for effective participation in governmental and political processes essential to self-government. Housing has been identified as GOL development priority. Project beneficiaries through community feedback and self-help will play important role in project execution. All technical advisors will work with GOL counterparts.

g. FAA Sec. 201(b)(2)-(4) and -(2); Sec. 201(e); Sec. 211(a)(1) - (3) and - (5). Does the activity give reasonable promise of contributing to the development: of economic resources, or to the increase of productive capacities and self-sustaining economic growth; or of educational or other institutions directed toward social progress? Is it related to and consistent with other development activities, and will it contribute to realizable long-range objectives? And does project paper provide information and conclusion on an activity's economic and technical soundness?

To a significant degree the project will contribute to the development of Liberia's economic resources, productive capacities and development of GOL institutions directed toward social progress, as well as self-sustaining economic growth through the addition of productive housing and services to lower economic groups and improved planning/implementation capacity of GOL.

This project is a high priority of GOL and is included in its long-range National Development Plan. Further, the project paper provides concise information and highly favorable conclusions on the project's economic and technical soundness.

h. FAA Sec. 201(b)(6); Sec. 211(a)(5), (6). Information and conclusion on possible effects of the assistance on U. S. economy, with special reference to areas of substantial labor surplus, and extent to which U. S. commodities and assistance are furnished in a manner consistent with improving or safeguarding the U. S. balance-of-payments position.

Approximately 64% of all project commodities financed by the grant will be of U.S. source/origin; 27% with Code 935 componentry, but manufactured in Liberia; and 9% indigenous to Liberia.

The U.S. dollar is legal tender in Liberia.

2. Development Assistance Project Criteria  
(Loans only)

a. FAA Sec. 201(b)(1). Information and conclusion on availability of financing from other free-world sources, including private sources within U. S.

Not Applicable.

b. FAA Sec. 201(b)(2); 201(d). Information and conclusion on (1) capacity of the country to repay the loan, including reasonableness of repayment prospects, and (2) reasonableness and legality (under laws of country and U. S.) of lending and relending terms of the loan.

Not Applicable.

c. FAA Sec. 201(e). If loan is not made pursuant to a multilateral plan, and the amount of the loan exceeds \$100,000, has country submitted to AID an application for such funds together with assurances to indicate that funds will be used in an economically and technically sound manner?

Not Applicable.

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d. FAA Sec. 201(f). Does project paper describe how project will promote the country's economic development taking into account the country's human and material resources requirements and relationship between ultimate objectives of the project and overall economic development?

Not Applicable.

e. FAA Sec. 202(a). Total amount of money under loan which is going directly to private enterprise, is going to intermediate credit institutions or other borrowers for use by private enterprise, is being used to finance imports from private sources, or is otherwise being used to finance procurements from private sources?

Not Applicable.

f. FAA Sec. 620(d). If assistance is for any productive enterprise which will compete in the U. S. with U. S. enterprise, is there an agreement by the recipient country to prevent export to the U. S. of more than 20% of the enterprise's annual production during the life of the loan?

Not Applicable.

3. Project Criteria Solely for Security Supporting Assistance

FAA Sec. 531. How will this assistance support promote economic or political stability?

This project proposes to mitigate the severe pressures of unemployment/underemployment and improve the access to decent housing and promote the protection of the basic human rights of the lower economic classes.

4. Additional Criteria for Alliance for Progress

(Note: Alliance for Progress projects should add the following two items to a project checklist.)

Not Applicable.

a. FAA Sec. 251(b)(1), -(3). Does assistance take into account principles of the Act of Bogota and the Charter of Punta del Este; and to what extent will the activity contribute to the economic or political integration of Latin America?

Not Applicable.

b. FAA Sec. 251(b)(3); 251(h). For loans, has there been taken into account the effort made by recipient nation to repatriate capital invested in other countries by their own citizens? Is loan consistent with the findings and recommendations of the Inter-American Committee for the Alliance for Progress (now "CEPCIES," the Permanent Executive Committee of the OAS) in its annual review of national development activities?

Not Applicable.

LIBERIA - COUNTRY CHECKLIST

Listed below are, first, statutory criteria applicable generally to FAA funds, and then criteria applicable to individual fund sources: Development Assistance and Security Supporting Assistance funds.

A. GENERAL CRITERIA FOR COUNTRY

- |   |  |
|---|--|
| <p>1. <u>FAA Sec. 116.</u> Can it be demonstrated that contemplated assistance will directly benefit the needy? If not, has the Department of State determined that this government has engaged in consistent pattern of gross violations of internationally recognized human rights?</p>   | <p>This project is designed to improve the quality of living environment of lower income families. Further, it aims to establish and strengthen a coordinated Liberian operation to design, implement, finance and manage replicable shelter projects for lower income families. Improved accessibility to decent housing.</p> |
| <p>2. <u>FAA Sec. 481.</u> Has it been determined that the government of recipient country has failed to take adequate steps to prevent narcotics drugs and other controlled substances (as defined by the Comprehensive Drug Abuse Prevention and Control Act of 1970) produced or processed, in whole or in part, in such country, or transported through such country, from being sold illegally within the jurisdiction of such country to U.S. Government personnel or their dependents, or from entering the U.S. unlawfully?</p> | <p><u>No.</u></p>  |
| <p>3. <u>FAA Sec. 620(a).</u> Does recipient country furnish assistance to Cuba or fail to take appropriate steps to prevent ships or aircraft under its flag from carrying cargoes to or from Cuba?</p>  | <p><u>No.</u> Ships or aircraft under Liberian flag do not carry cargo to or from Cuba.</p>  |

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4. FPA Sec. 620(b). If assistance is to a government, has the Secretary of State determined that it is not controlled by the International Communist movement? Yes.
5. FPA Sec. 620(c). If assistance is to government, is the government liable as debtor or unconditional guarantor on any debt to a U.S. citizen for goods or services furnished or ordered where (a) such citizen has exhausted available legal remedies and (b) debt is not denied or contested by such government? No such case in Liberia.
6. FPA Sec. 620(e) (1). If assistance is to a government, has it (including government agencies or subdivisions) taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking steps to discharge its obligations toward such citizens or entities? No such case in Liberia.
7. FPA Sec. 620(f). App. Sec. 100. Is recipient country a Communist country? Will assistance be provided to the Democratic Republic of Vietnam (North Vietnam), South Vietnam, Cambodia or Laos? No.
8. FPA Sec. 620(i). Is recipient country in any way involved in (a) subversion of, or military aggression against the United States or any country receiving U.S. assistance, or (b) the planning of such subversion or aggression? No.

9. FPA Sec. 620(i). Has the country permitted, or failed to take adequate measures to prevent the damage or destruction by non-action, of U.S. property? No.
10. FPA Sec. 620(l). If the country has failed to institute the investment guaranty program for the specific risks of expropriation, inconvertibility or confiscation, has the AID Administrator within the past year considered denying assistance to such government for this reason? Liberia has an Investment Guaranty Agreement with the U.S.
11. FPA Sec. 620(o); Fishermen's Protective Act, Sec. 5. If country has seized, or imposed any penalty or sanction against any U.S. fishing activities in international waters. No.
- a. has any deduction required by Fishermen's Protective Act been made? No.
- b. has complete denial of assistance been considered by AID Administrator? No.
12. FPA Sec. 620(g); App. Sec. 504. (a) No.  
(b) No.  
(a) Is the government of the recipient country in default on interests or principal of any AID loan to the country? (b) Is country in default exceeding one year on interest or principal on U.S. loan under program for which App. Act appropriates funds, unless debt was earlier disputed, or appropriate steps taken to cure default?

13. FPA Sec. 620(s). What percentage of country budget is for military expenditures? How much of foreign exchange resources spent on military equipment? How much spent for the purchase of sophisticated weapons systems? (Consideration of these points is to be coordinated with the Bureau for Program and Policy Coordination, Regional Coordinators and Military Assistance Staff (PPC/RC).
- 2.7% of budget is for military expenditures. The U.S. dollar is legal tender in Liberia so all military expenditures can be considered both domestic resources and foreign exchange. Liberia is not a purchaser of sophisticated weapons.
14. FPA Sec. 620(t). Has the country severed diplomatic relations with the United States? If so, have they been resumed and have new bilateral assistance agreements been negotiated and entered into since such resumption?
- No.
15. FPA Sec. 620 (u). What is the payment status of the country's U.N. obligations? If the country is in arrears, were such arrears taken into account by the AID Administrator in determining the current AID Operational Year Budget?
- Liberia is not in arrears in U.N. obligations.
16. FPA Sec. 620A. Has the country granted sanctuary from prosecution to any individual or group which has committed an act of international terrorism?
- No case to date.
17. FPA Sec. 666. Does the country object on basis of race, religion, national origin or sex, to the presence of any officer or employee of the U.S. there to carry out economic development program under FPA?
- No case to date.
18. FPA Sec. 669. Has the country delivered or received nuclear reprocessing or enrichment equipment, materials or technology without specified arrangements on safeguards, etc.?
- No.

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19. FAA Sec. 901. Has the country denied its citizens the right or opportunity to emigrate? No.

B. FUNDING CRITERIA FOR COUNTRY

1. Development Assistance Country Criteria

- a. FAA Sec. 102(c), (d). Have criteria been established, and taken into account, to assess commitment and progress of country in effectively involving the poor in development, on such indexes as: (1) small-farm labor intensive agriculture, (2) reduced infant mortality, (3) population growth, (4) equality of income distribution, and (5) unemployment.

Yes, Liberia's Four Year Development Plan focuses on improved agriculture, health and delivery of educational and housing services/facilities to the poor.

- b. FAA Sec. 201(b)(5), (7) & (8); Sec. 208; 211(a)(4), (7). Describe extent to which country is:

- (1) Making appropriate efforts to increase production and improve means for food storage and distribution.

The GOL is seeking self-sufficiency in rice production.

- (2) Creating a favorable climate for foreign and domestic private enterprise and investment.

The GOL provides a favorable climate for both foreign and national enterprise and investment through their "open door" policy.

- (3) Increasing the public's role in the development process.

The GOL promotes self-help as well as government development projects.

- (4)a. Allocating available budgetary resources to development.

Forty-seven percent of GOL budget is for development projects.

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(b) Diverting such resources for unnecessary military expenditure and intervention in affairs of other free and independent nations.

No.

(5) Making economic, social and political reforms such as tax collection improvements and changes in land tenure arrangements, and making progress toward respect for the rule of law, freedom of expression and of the press, and recognizing the importance of individual freedom, initiative, and private enterprise.

The GOL has become increasingly aware of the need for efficient tax collection, eradication of corruption and social development. There is freedom of press and encouragement of private enterprise reflecting Liberia's doctrine of "humanitarian capitalism".

(6) Otherwise responding to the vital economic, political and social concerns of its people, and demonstrating a clear determination to take effective self-help measures.

The GOL's "total involvement" policy calls for the association of all citizens with the national development process.

c. FAA Sec. 201(b), 211(a). Is the country among the 20 countries in which development assistance loans may be made in this fiscal year, or among the 40 in which development assistance grants (other than for self-help projects) may be made.

Yes. FAA Sec. 201 and FAA Sec. 211 repealed - 1978.

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

Yes. FAA Sec. 115 repealed - 1978. Population and humanitarian aid is provided through international and regional programs. Liberia has a long established population planning program.

2. Security Supporting Assistance Country Criteria

a. FAA Sec. 502B. Has the country engaged in a consistent pattern of gross violations of internationally recognized human rights? Is program in accordance with policy of this section?

No.

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

Yes.

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

Not Applicable.

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NATIONAL HOUSING AUTHORITY  
PROPOSED ORGANIZATIONAL CHART  
UNIT FUNCTIONS

ANNEX 7

## A - RESEARCH & TOWN PLANNING DEPARTMENT

This Department will consist of two Divisions and three Sections. Namely: (1) Planning & Design Division; (2) Socio-Economic Research Division; (3) Research & Social Work Section; (4) Statistics Section; and (5) Drafting Section.

### 1 - Planning & Design Division:

This Division will be under the Head of the Department and will be responsible for: the selection and analysis of sites; master planning; site planning; housing design to fit socio-economic needs of beneficiaries; design of community facilities buildings; give support to the Real Estate Division in the unit inspection for housing loans under the Chase Bank Program; coordinate with other ministries/agencies the availability of infrastructure; prepare the Annual Housing Plan and the Four Year Housing Development Plan.

a - Drafting Section: Under the supervision of the Head of the Planning & Design Division, will be responsible of all drafting activities of the N.H.A. giving support to the Operations Department and other units.

### 2 - Socio-Economic Research Division

This Division, under the Head of the Department, will be subdivided in two sections directly responding to the Head of the Division. These Sections will be: (a) Research & Social Work (b) Statistics.

a - Research & Social Work Section: Will be responsible for the execution of socio-economic surveys; analysis of needs and preferences in terms of housing and income; analysis of community facilities to be provided; community organizations; relocation planning and relocation; community orientation; social intervention and social work; market analysis.

b - Statistics Section: This Section will be responsible for the tabulation of all field data received; preparation of final reports on studies and its scientific analysis or interpretations; will keep record of all studies for their publication; will prepare the N.H.A. Annual Report in coordination with other units of the N.H.A.; will secure statistical information from other ministries/agencies useful to the interests of the N.H.A. and from other units of the N.H.A.

**B - OPERATIONS DEPARTMENT**

This Department will be responsible of the field operations of the N.M.A. in what respects to construction activities, and will prepare final construction drawings for all projects. The Department will be divided in two Divisions, receiving support from the Drafting Section. Survey Teams will be attached to this Department.

1 - Construction Design: This Division will be responsible for the preparation of construction drawings for projects to be developed by the N.M.A. and the coordination of these designs with the corresponding ministries/agencies; will secure necessary construction permits; will prepare all bidding documents including specifications; will prepare change orders for projects and will coordinate them with contractors.

a - Survey Teams Section: This Section will be under the supervision of the Head of the Construction Design Division. However, will service other units as Planning, Acquisition and Real Estate. Their services will include, but not be limited to: survey of areas, topographic surveys; cadastral surveys; inscription plans; and plot plans.

2 - Project Inspection & Management Division: This Division will be responsible of the inspection of project construction activities and the management of projects during construction stage. Problems arising during construction because of design will be turned in to the Design Unit for their solution. Reports on construction works should be made weekly to countercheck against time schedules.

3 - Construction Division: This Division will be responsible for the construction of N.M.A. projects (in house construction) in direct competition with private contractors. Will be also responsible of experimental buildings and of the erection of prototypes and of the research in low cost building materials and low cost construction techniques.

**C - ADMINISTRATION & OFFICE MANAGEMENT DEPARTMENT**

This Department will be responsible for the general administration of the N.M.A. The Department will be mainly divided in two Divisions with six supporting units or sections.

- 1 - Personnel Division: This Division will be responsible for personnel recruitment and also of personnel changes in status. Two Sections are proposed: Recruitment; and Changes, Payroll & Records. However, at present one or two persons can handle actual work. Nevertheless, as the N.M.A. expands their activities and consequently their personnel needs, the two units will be required.
  - a - Recruitment Section: This Section will be responsible for the recruitment of personnel, including but not limited to: the evaluation of candidates; verification of qualifications; entrance examinations; appointments/terminations; labor relations.
  - b - Changes, Payroll & Records Section: This Section will be responsible for the reclassification of personnel; the administration of promotional test; custodian of the records of all employees; process changes in status; deductions; medical plans; and the preparation of payrolls.
- 2 - Office Management Division: This Division will consist of four Sections under the direct supervision of the Head of the Division. Explanation of their functions follows:
  - a - Transportation and Maintenance Section: This Section will be responsible of all the vehicles of the NMA; will coordinate transportation services to be provided; vehicle maintenance; keep records of all gasoline and oil expenses; miles run per vehicle; keep service records; records of cost per mile operation; repair costs per unit; will act as a dispatcher of units and issue daily trip tickets to each unit in which trips and mileage are recorded; will implement a vehicle inspection policy; all NMA drivers will be under his supervision. Vehicle requests will be made early in the afternoon to the Head of the Division, who will set priority services.
  - b - Printing and Supply Section: This Section, under the direct supervision of the Head of the Division, will be responsible of all printing activities of the NMA including, map printing; Xerox Machine operation and Stencil Machine; will keep daily records of all materials used. Will be responsible of all office supplies and will secure the continue availability of them. Services should be procure through the Administrator by means of a Requisition for Services.

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- c - Records and Mail Control Section: This section will be responsible for the custody of all N.H.A. records. Will receive all incoming mail and will keep track of it in the different offices by an adequate referral system.
- d - Janitors and Messengers Section: Should be responsible for the general cleanliness of the office and related activities. Messengers will be responsible for the daily delivery and pick-up of mail at the post office and to turn-in incoming mail to the Records and Mail Section for its control and distribution within the N.H.A.

**D - LEGAL DEPARTMENT**

This Department will be responsible for all legal aspects of N.H.A. including mortgages. For the accomplishment of the above the following units will be under the direct supervision of a Legal Counsel.

- a - Legal Counsel: Will be the Head of the Department. Will provide legal advice to the Executive Director and will be responsible to undertake the necessary legal action that may be required for the eviction of land squatters and of debtors cases, or of any violations on rent contract agreements or purchase options.
- b - Acquisition Division: Will be responsible for the acquisition of land; title search; procure surveys; coordinate with other ministries/agencies its acquisition if required; will negotiate land values; prepare cases for acquisition through eminent domain procedures.
- c - Real Estate Division: This Division will be the custodian of all real estate property of the NHA; secure that land titles are adequately recorded in the Registry of Property; coordinate land appraisals; disposition of projects (actual sale) in coordination with the Owner and Tenant Selection Unit; prepare mortgage deeds; administer the Chase Manhattan Bank Program.

**E - ESTATE MANAGEMENT DEPARTMENT**

This Department will be responsible for the administration of all NHA owned projects; secure of services and unit maintenances; the tenants-owners collection; collections. For the above, the Department will include the following Divisions.

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- 1 - Tenants & Owners Selection Division: This Division will screen and process all applications for rental or purchase of units constructed by the HMA, including the preparation of all contractual documents related to rental, and purchase agreement on purchase cases. In the case of rental units, once the case is completed and the unit assigned, in coordination with the Project Administration Division, the case will be turn in to the Project Administrator. In the case of ownership of units, once the case is completed (screen & investigated) the case will be submitted to the Real Estate Section of the Legal Department, that will finish the case, prepare mortgage deeds, and once executed, will authorize the occupancy of the unit. Sales units should not be occupied unless a mortgage deed is executed between concerned parties (HMA or Bank and Purchaser).
- 2 - Services & Maintenance Division: This Division will be responsible for garbage collection; physical maintenance of units in what respect to electrical and plumbing facilities; and general cleanliness of the project site. Garbage collection should be scheduled so that at least twice a week projects are serviced. Maintenance inquiries will be taken by the lessee to the Project Manager who will submit it to the Head of this Division for the corresponding action. All other services required within the Project areas will be the responsibility of this Division. A general supervisor or inspector will be appointed, that will check the operation of these activities at least on a daily basis per project, and will collect maintenance inquiries from administrator on a daily basis.
- 3 - Project Administration Division: Under the supervision of the Head of this Division, one Project Manager or Administrator should be appointed per project. Administrator will be responsible for enforcing the provisions agreed to in rental contracts. Will receive requests for maintenance services from the renters and will submit them to the Services and Maintenance Division through the general Supervisor or Inspector. Administrators will undertake rent collection in coordination with the Finance Department. Will coordinate all social services in their projects. Will conduct, with the advice of the Socio-Economic Research Division, orientation meetings with project residents, as well as social activities. With the advice of the Collection Section of the Finance Department, will submit for legal action all debtors cases. Legal counsel will determine the action to be taken on a case by case basis.

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**F - FINANCE DEPARTMENT:**

The Finance Department will administer and control the financial aspects of the N.H.A. For the above, the following Divisions will be responsible to the Head of the Department:

- 1 - Budget Division: This Division will prepare the Annual Budget of the N.H.A. after all Heads of Departments have prepared their corresponding budget. Budget should be prepared taking into account: the tasks to be accomplished based on the Four Year Development Plan of the NHA and the Current Year Housing Plan, and the overall budgetary requirements of operational and administrative units. Monthly reports on current expenditures will be submitted to this Division, so as to check expenditures with approved budgets and make necessary adjustments. However, before any Department, Division or Section intends to incur any expenditure, Budget Division should approve the expenditure if within the approved budget.
- 2 - Disbursement Division: This Division will be responsible for the actual payments of debts, including the payroll of the NHA. All invoices (purchases, services) and payroll as prepared by the Personnel Office will be submitted to Disbursement through Accounting for its final processing.
- 3 - Purchase & Inventory Division: Will be responsible for the acquisition of materials, vehicles, office supplies, etc. once the Purchase Order has been approved by the Budget Division and the Head of the Department. Will be the custodian of all NHA equipment and/or materials and will dispose of obsolete equipment or materials. Payment of invoices on purchases should be submitted to Disbursement through Accounting. Reports on purchases should be made to Accounting weekly.
- 4 - Accounting Division: This Division will be responsible of the accounting activity of the N.H.A. Will prepare financial statements including Quarterly Balance Sheets, reconciliation of bank accounts and posting of cumulative budgets. Should be responsible for the operation of a Petty Cash Account. The Accounting Division should be informed weekly of the collections so as to have all accounts corrected and be able to prepare the Quarterly Balance Sheet of the National Housing Authority.

5 - Collections Division: Will be responsible to receive rents collected by the Project Administrators through the Head of the Project Administration Division. They will prepare daily collection reports and will make deposits in the National Housing & Savings Bank. They will be responsible for crediting and debiting accounts as the rents are paid by tenants. Copies of reports will be submitted per projects on a monthly basis to the Project Administrator for their records.

6 - OTHER SUPPORTING UNITS:

- a - Public Relations Office: This Office will be attached to the Executive Director Office and will be directly responsible to him. Director of the Office will be a Special Aide to the Director. Will coordinate Director meetings and will be responsible of all community affairs of the N.H.A. as an Agency.
- b - Auditor: Will be directly responsible to the Board of Directors of the N.H.A. His main responsibility will be to secure that all NHA Administrative and Operational activities are undertaken and carried out in accordance with Liberian Laws and the NHA By-Laws as approved by the Board of Directors or by the President as the case may be. Audit Reports will be made annually to the Board of Directors for appropriate actions.
- c - Consultants: This Office or Consultants, as the case may be, will be directly responsible to the Executive Director Office unless he directs otherwise. Monthly reports will be submitted by Consultants to the Executive Director.
- d - Bidding Board: This is an Ad Hoc Board which only meets to consider project bidding proposals, analyze them and select the contractor. Will also resolve in dispute matters between N.H.A. and Contractors. Members of the Board will be the: (1) Head of the Planning and Research Department; (2) Head of the Operations Department; (3) Head of the Legal Department; (4) Head of the Finance Department; (5) Deputy Director who will be the Chairman of the Board. Contract awarding will be recommended to Executive Directors, who by means of a Resolution shall instruct the Executive Director to award the Contract.

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## ANNEX 8

### Technical Detail

- A. Sites and Services
- B. Waste Water Design
- C. Small Scale Business/Industry
- D. Training Program - Total Costs
- E. New Kru Town Survey

## SITES AND SERVICES

(1) Introduction

The GOL has authorized the NHA to purchase and develop a 200-acre tract located about 3.8 miles west of the Free Port area and about 1.5 miles north of the Freeway that runs parallel to the North Shore of the Mesurado River.

Within this tract, known as the New Georgia Low Income Estates, NHA has developed a low density-low income housing scheme for 180 families. These existing facilities take up approximately 12 acres of the total available area.

NHA's development plan for the remaining 188 acres is as follows:

- 15 acres will be transferred to the Ministry of Education which will provide the school facilities.
- 10 acres will be retained by NHA for commercial development and general activities for subsequent rental.
- 163 acres will be set aside for housing and housing support facilities, such as roads, playgrounds, etc.

The project to be developed within this 163-acre tract will provide a mix of both low and mid-income, fully serviced, lots on the basis of one mid-income lot to two low-income lots. The underlying idea of this scheme is that the mid-income purchaser will pay more than cost for his lot, therefore making it possible to sell the low-income

lot at less than cost. This cross-subsidy arrangement, hopefully, will bring the low-income lots within the affordability range of the very low-income households in Monrovia.

(2) Description New Georgia Site

a. Land Use

1) Total acres to be developed	163 acres
2) Housing acres	114 acres
3) Roads	30 acres
4) Playgrounds and other uses	19 acres

b. Road widths

1) Collector roads (loop system)	30 feet
2) Neighborhood roads	26 feet

Note: Neighborhood roads width is designed to provide a total of six feet pedestrian walks width, a 10 foot wide street parking lane and a 10 foot wide one way traffic lane. Neighborhood roads are designed to block thru traffic at all times.

c. Lot sizes

- 1) Mid-income - 44 foot frontage by 75 foot depth, 3300 sq. ft.
- 2) Low-income - 22 foot frontage by 75 foot depth, 1650 sq. ft.
- 3) Total number of mid-income lots - 752 lots
- 4) Total number of low-income lots - 1504 lots
- 5) Total number of lots - 2256 lots

- d. Civil infrastructure facilities to be provided by this project
  - 1) Paved roads
  - 2) Individual water connections
  - 3) Individual electrical connections
  - 4) Water borne sewer and sewage treatment
- e. Socio-economic infrastructure to be provided by GOL as funds become available
  - 1) Market building (to be leased to the private sector)
  - 2) Location for movie house (ditto)
  - 3) Location for church (to be sold)
  - 4) Dispensary building (GOL contribution)
  - 5) Bus terminal (ditto)
  - 6) Post office station (ditto)
  - 7) Commuter shelters, one at Freeway entrance, several within project area (ditto)
  - 8) Elementary, junior and high schools (ditto)
  - 9) Police station (ditto)
  - 10. Garbage collection (to be paid by beneficiaries on a fee or use basis)
  - 11. Bus shuttle service to Freeway and back to project site (ditto)

(3) Costs (3-year Project)

- a. Year 1 costs based on a production of 250 mid-income and 500 low-income lots

- 1) Costs

(a) Paved road	\$ 622,000
(b) Water	567,000
(c) Sewer and sewage disposition	622,000

(d) Electrical	220,000
(e) Grading and drainage	55,000
Subtotal	\$2,086,000
(f) Project management and overhead (7% of above)	146,000
Subtotal	\$2,232,000
(g) Interest cost first year (11% rate on the average dist.)	123,000
Subtotal	\$2,355,000
(h) Land cost (1/3 of total)	87,000
Total	\$2,442,000

Cost per:

a. Mid-income lot	\$4884
b. Low-income lot	\$2442

2) Sale price, cross-subsidy scheme

(a) 250 mid-income lots @ \$7500	\$1,875,000
(b) 500 low-income lots @ \$1134	567,000

Total sales price \$2,442,000

b. Year 2 costs based on a production of 250 mid-income and 500 low-income lots. Costs have been adjusted for a 10.3% inflationary rate.

1) Costs

(a) Construction \$2,086,000 x 1.103 =	\$2,300,858
(b) Project management and overhead (assumed fixed)	146,000
Subtotal	\$2,446,858
(c) Interest cost on first year amount (11% rate)	245,520
(d) Interest cost on second year average dist. (11% rate)	134,577
Running subtotal	\$2,826,955

(e) Land cost (1/3 of total) 87,000

Total \$2,913,955

Cost per:

a. Mid-income lot \$5827

b. Low-income lot \$2914

2) Sale price, cross subsidy scheme:

(a) 250 mid-income lots @ \$9000 \$2,250,000

(b) 500 low-income lots @ \$1328 644,000

Total Sales Price \$2,914,000

c. Year 3 costs based on a production of 250 mid-income lots and 500 low-income lots.

1) Costs

(a) Construction 2,300,858 x 1.103 \$2,537,846

(b) Project management and overhead (assumed fixed) 146,000

Subtotal \$2,683,846

(c) Interest cost on first year amount (11% rate) 245,520

(d) Interest cost on second year amount (11% rate) 310,965

(e) Interest cost third year average dist. (11% rate) 147,611

Running subtotal \$3,387,942

(f) Land cost (remaining amount) 86,800

Total \$3,474,742

Cost per:

a. Mid-income lot \$6950

b. Low-income lot \$3475

2) Sale price, cross subsidy scheme		
(a)	250 mid-income lots @ \$11,000	\$2,750,000
(b)	500 low-income lots @ \$1,449	724,742
	Total Sales Price	\$3,474,742

## Housing Options Available

- Option 1      Serviced Site Only      \$1134
- This option includes the 150 square meter lot, plus paved road, street lights and individual access to water, sewer and electrical connections.
- Option 2      Serviced Site plus Wet Core      \$1734
- This option includes option 1 plus a 110 square feet wet core providing a reinforced concrete floor slab, sandcrete or soil cement block walls and a corrugated steel roof on a lumber frame. The estimated cost of the wet core including a water closet, a precast concrete lavatory and a shower enclosure is \$600 including labor and materials.
- Option 3      Serviced Site, wet core and a partially enclosed shelter area      \$2584
- This option includes option 2 plus a 375 square feet shelter area providing a reinforced concrete floor slab, two sandcrete or soil cement block walls and a corrugated steel roof on a lumber frame. The estimated cost of the shelter area is \$850 including materials and labor.
- Option 4      Serviced Site, completed wet core and a construction materials loan, maximum loan allowable on this option amounts to:      \$3038



WASTE WATER DESIGN OF WASTE STABILISATION POND

$$\frac{\text{BOD contribution (g/person/day)} \times 1000}{\text{Effluent flow (lit/person per day)}} = \text{BOD in mg/l}$$

$$\frac{0.08 \times 464 \times 1000}{3.78 \times 30} = 328$$

Anaerobic Ponds

$$\lambda_v = L_i Q/V$$

Since  $Q/V$  is the retention time

$$\lambda_v = L_i/t^*$$

Range of permissible loading is 100 to 400 g/m<sup>3</sup> per day. Below 100 it is difficult to maintain the pond fully anaerobic. Above 400 there is the danger of odor release.

Consider 250 for design purposes.

$$250 = 328/t^* \quad t^* = \frac{328}{250} = 1.3 \text{ days}$$

The relation between retention times and BOD removal is 1 day 50%, 2.5 days 60% for temperatures between 20° to 25°. Suggested removal close to 60%.

Make the anaerobic pond 1.5 day retention with secondary anaerobic pond 0.5 days. BOD removal 57%. The secondary anaerobic pond would act as a solids catch tank to prevent solids carry out into the facultative pond.

Pond dimensions

Length to breadth 2:1 to 3:1 to ensure good wind mixing.

Depth of pond 6 to 13 feet.

For New Georgia and Barnersville sites try 10 feet.

## Facultative Pond

Equation is  $L_e = \frac{L_i}{1+k_i t^*}$  where  $L_e$  is effluent BOD,  $L_i$  is influent BOD (mg/l)  $k_i$  is first order rate constant for BOD removal per day and  $t^*$  is mean hydraulic retention time in days.

Rearranging  $t^* = \left( \frac{L_i}{L_e} - 1 \right) \frac{1}{k}$  Consider  $L_e = 60$  and  $k_i = 0.30$

$$t^* = \left( \frac{2.50 \times .43}{60} - 1 \right) \frac{1}{0.30} = 0.79 \times 3.33 = 2.6 \text{ days}$$

Minimum mean temperature of Monrovia per month is 23°C.

$$k_{i_t} = 0.30 (1.05)^{23-20} \quad k_{i_t} = 0.30 \times 1.158 = 0.35$$

$$\text{Revised } t^* = 0.79 \times \frac{1}{.35} = 2.25 \text{ days}$$

## Pond Dimensions

Length to breadth 2:1 to 3:1 to ensure good wind mixing

Depth of pond 3 to 5 feet

For New Georgia and Barnersville sites try 5 feet. No deeper!

## Maturation Ponds

Maturation Ponds are responsible for the quality of the final effluent. Design should try and obtain BOD < 25 mg/l, Faecal Coliforms < 5000. These standards are high standards for the New Georgia and Barnersville sites and may not be required dependent on point of discharge.

The rate at which faecal bacteria die off in stabilisation ponds are represented by a first order model  $N_e = \frac{N_i}{1+k_b t^*}$

where  $N_e$  is number of faecal coliforms per 100 ml of effluent,  $N_i$  represents influent,  $k_b$  is first order rate for faecal coliform decay and  $t^*$  is mean hydraulic retention time.

For a series of ponds (anaerobic, facultative, maturation)

$$N_e = \frac{N_i}{(1+k_b t^*_{an})(1+k_b t^*_{fac})(1+k_b t_{mat})^2} \quad \text{for 2 maturation ponds}$$

Raw sewage generally has counts of  $5 \times 10^6$  to  $5 \times 10^7$  for  $N_i$ .  
For design use  $N_i$  at  $10^8$ .

$$k_b(T) = 2.6(1.19)^{T-20} \quad \text{or} \quad 2.6(1.19)^3 = 4.38$$

$$N_e = \frac{10^8}{(1+4.38 \times 2)(1+4.38 \times 2.25)(1+4.38 \times 8)^2}$$

$$= \frac{10^8}{9.76 \times 10.86 \times 200.7}$$

$$= 4700 \quad \text{OK}$$

### Pond Dimensions

Length to breadth 2:1 to 3:1 to ensure good wind mixing.

Depth of pond 3 to 5 feet. Try 5 feet.

Waste from 500 household units at 30 gpcd and 5 persons per household =  $500 \times 5 \times 30 = 75,000$  gpd or 10,000 cfd.

### Anaerobic Pond

Primary  $1.5 \times 10,000 = 15,000$  cf

With depth 10 feet, area = 1,500 sf

Possible Dimensions 60' x 25'

Secondary  $0.5 \times 10,000 = 5000$  Depth 10'

Possible Dimensions 20' x 25'

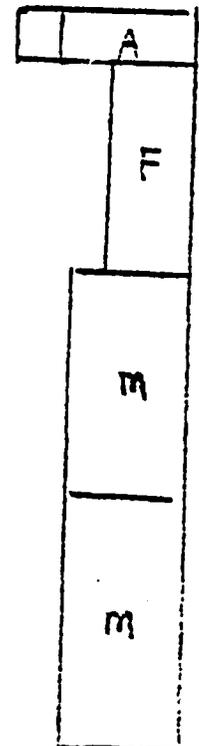
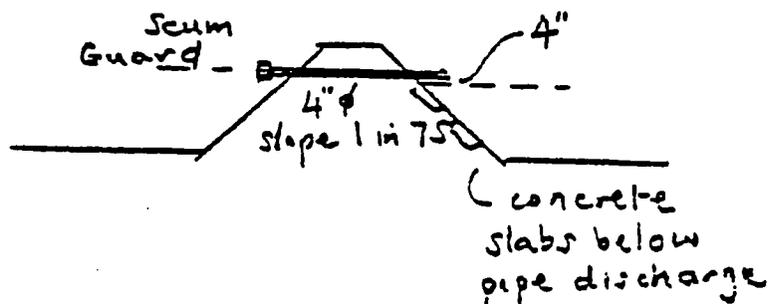
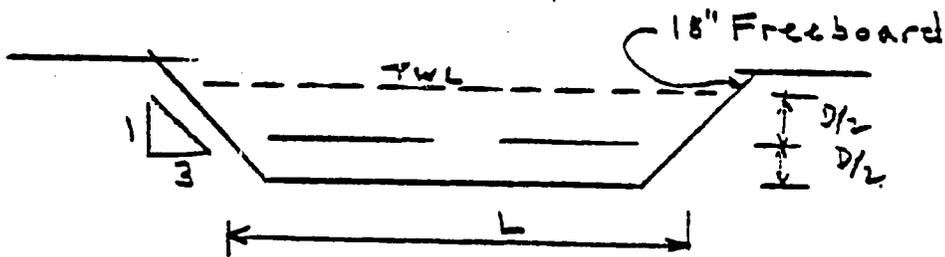
Facultative Pond

2.25 x 10,000 = 22,500 cf  
With depth 5 feet, area = 4,500 sf  
Possible dimensions 100' x 45'

Maturation Ponds

3 x 10,000 = 30,000 cf  
With depth 5 feet, area = 6,000 sf  
Possible dimensions 110' x 55'

If the maturation ponds discharge in a water marsh with minimum continuous water 1 foot depth minimum, one maturation pond may be eliminated as the water marsh itself will act as a maturation pond due to the shallow depth.



Waste from 1000 household units at 30 gpcd and 5 persons per household =  $1000 \times 5 \times 30 = 150,000$  gpcd or 20,000 cfd

Anaerobic Pond

Primary  $1.5 \times 20,000 = 30,000$  cf

With depth 10', area = 3,000 sf

Possible dimensions 80' x 40'

Secondary  $0.5 \times 20,000 = 10,000$  cf

Depth 10', area = 1,000 sf

Possible dimensions 40' x 25'

Facultative Pond

$2.25 \times 20,000 = 45,000$  cf

With depth 5', area = 9,000 sf

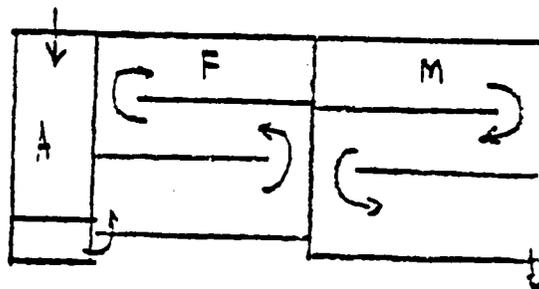
Possible dimensions 140' x 70' or 100' x 90' divided into 3 compartments

Maturation Ponds

$3 \times 20,000 = 60,000$  cf

With depth 5', area = 12,000 sf

Possible dimensions 160' x 80' or 110' x 110' divided into 3 compartments



Waste from 750 households at 30 gpcd and 5 persons per household =  $750 \times 5 \times 30 = 112,500$  gpcd or 15,000 cfd.

Anaerobic Pond

Primary  $1.5 \times 15,000 = 22,500$  cf

With depth 10', area = 2,250 sf

Possible dimensions 70' x 35'

Secondary  $0.5 \times 15,000 = 7,500$

Possible dimensions 22' x 35'

Facultative Pond

$2.25 \times 15,000 = 37,500$

With depth 5', area = 7,500

Possible dimensions 125' x 60'

Maturation Pond

$3 \times 15,000 = 45,000$

With depth 5', area = 9,000

Possible dimensions 140' x 65'

-----  
New Georgia Site

Elevation of outlet pipe 5.0

Loss of elevation through plant 1.0

Minimum inlet elevation 6.0

Erosion of embankment prevented by placing precast concrete slabs at top water level.

Pond systems to have standing wave flume to measure influent, vee notch for effluent.

Screen at influent is necessary.

Pond maintenance is cutting embankment grass and removal of scum from the surface.

Anaerobic ponds must be desludged when they are half full (every 3 to 5 years). Facultative ponds require desludging every 10 to 15 years.

Maturation ponds do not require desludging.

### Waste Stabilisation Ponds

Waste Stabilisation Ponds are large shallow man made lakes in which raw sewage is treated entirely by natural processes involving both algae and bacteria.

There are 3 different kinds of ponds.

Anaerobic pretreats strong wastes.

Facultative has the main removal of BOD.

Maturation destroys the faecal pathogens.

The facultative and the anaerobic govern the level of nuisance (odor, fly breeding)

The quality (especially bacteriological) of the final effluent is governed by the maturation ponds.

Anaerobic Ponds act in the same way as septic tanks. It removes 50 to 60% of the BOD. It does however gradually accumulate sludge. No odor is experienced if good design is used.

### Facultative Ponds

BOD is removed by the normal process of aerobic biological oxidation. The oxygen supply for the bacteria comes not from the atmosphere but from the photosynthetic activity of the algae which grow so that the pond liquid is colored bright green. Facultative ponds should never be built in sheltered areas. It needs wind action.

C. Small-Scale Business/Industry

It is the policy of the GOL to link low-income housing solutions directly with increased employment opportunities either in or in close proximity to new low-income housing locations and in or near existing areas scheduled for upgrading.

The Ministry of Planning and Economic Affairs estimates Monrovia's current labor force to be about 117,000 persons, 40% of which is un- or underemployed. This rate is projected to increase to about 65% by 1990 if a minimum modern sector employment growth rate of 2.5% annually is attained over the next ten years. Even a maximum annual employment growth rate of 7.5% in this sector would not reduce the unemployment rate below 50% by 1990. The bulk of the labor force consists of unskilled and illiterate workers.

Currently the Monrovia construction industry employs 3,000 workers, the majority of which are working on "OAU-'79" related infrastructure and building construction activities. Using a 1:2 ratio in construction to construction-related employment (materials production, transportation, warehousing, etc.) total construction sector employment accounts for about 9,000 workers. Once construction activities in connection with OAU-'79 are completed and once the services and conference support functions have been completed in August 1979, Monrovia

will be faced with a sudden and significant increase in unemployment.

The average annual growth rate of industry, the output of which currently contributes 7% to GDP, reached only 4.5% during the years 1970-1978. This contrasts with an average annual growth rate of 7.8% for the decade 1960-1970. There is a great need for small business and small-scale industrial credit and entrepreneurship development, linked with vocational improvement programs, to enable more Liberian participation in this sector which is dominated by foreign nationals.

Little or no loan funds are currently available to meet demand for small-scale industrial credit. Whatever small business financing that is available is usually lent out as personal loans to middle and upper income Liberians. These constitute a small share of commercial bank portfolios and are typically for periods of 10-12 months at 10% or more interest, discounted. Most commercial banks have not shown much interest in developing small-scale industry loan portfolios, nor do they have the staff capability to effectively manage them. Low income earners rarely qualify for any kind of loans from banks and are forced into the hands of usurious foreign money lenders who tend to export their profits and reinvest funds outside Liberia.

In the light of government policy to directly link how income housing development with increased job opportunities

creation in the vicinity of such areas, it is proposed that the NHSB, through USG assistance, should open a small-scale industry loan window and a small-scale industry/business development advisory capability in the Barnesville and New Georgia housing project areas and in the New Kru Town and the Doula/Point Four upgrading areas.

Investment in and assistance to small-scale industry has four main local beneficial effects:

- (1) It encourages savings; domestic savings applied to small-scale industry investment mobilizes funds previously held in unproductive ways or used for consumption (which in Liberia has a high import component);
- (2) as a result of increased savings and investment, inflationary tendencies in the economy are restrained;
- (3) it provides additional employment opportunities to low income groups because small-scale industry is labor intensive and uses proportionately greater numbers of unskilled and semiskilled workers than medium-size and large-scale establishments;
- (4) profits of small enterprises tend to be reinvested or spent in Monrovia so that the stimulative effects are retained in the local economy.

A study of the small business sector in Liberia undertaken by the Continental-Allied Co. of Washington, DC on behalf of the US Government and the Government of Liberia, identified the following small-scale business opportunities:

(1) Service facilities

reproduction and photocopying

printing shops

office cleaning companies.

garage and vehicle repair shops

restaurants

laundries and dry cleaning establishments

small and major appliance repair shops

welding shops

(2) Manufacturing

furniture making and upholstery

clothing manufacturing

food processing

food canning

construction materials manufacturing

small hand tools manufacturing

metal kitchen utensils manufacturing

wheelbarrow and pushcart manufacturing

footwear (sandals, slippers)

pottery and crockery

building fixtures manufacturing

cosmetics and soap making

sawmilling

plastics molding

umbrella assembly  
bags and sacks making  
container manufacturing  
bottles and glassware production  
weaving/spinning  
cloth silkscreening  
cigar making  
wire nails and tacks manufacturing

(3) Agriculture business sector

poultry and eggs  
piggeries (includes butchering and smoking)  
fish smoking/canning  
rice milling  
bread and biscuit bakeries  
candy making  
coffee roasting  
ice cream making  
ice block freezing

The report noted that the main constraint to the development of a small-scale industry sector was the lack of credit facilities.

It is proposed that the NHSB will administer \$1 million in seed capital to start a revolving small-scale business loan

fund which will be recycled eight times during a projected 30-year period. Loans would average \$5,000-\$7,500 each and would be repayable over a five year period. Credit would be extended in kind rather than in cash and would primarily be in the form of machinery, equipment and supplies. The budget support component of the proposed grant segment to NHSB would cover the initial two years salary and benefits of Liberian staff consisting of two senior and two junior small scale industry loan officers and of two senior and two junior small scale industry development advisors, including their on-the-job training element. These officers would process and evaluate the loan applications and would work closely with the loan recipients to insure an adequate return on investment and repayment of principal and interest. It is assumed that the additional economic activity and employment generated by these loans will contribute significantly to GOL revenues in the form of business, excise and income taxes, licenses and fees.

TOTAL HOUSING SECTOR  
TRAINING PROGRAM  
AID INPUTS

	<u>Year 1</u>	<u>Year 2</u>
<u>Personnel</u>		
Resident Advisor (24 PM)	120,000	120,000
Short term consultants (20 PM)	120,000	120,000
<u>Materials &amp; Supplies</u>		
Training materials	50,000	50,000
Training equipment	20,000	20,000
<u>Vehicles</u>		
4 @ \$10,000	40,000	-
Maintenance, POL	10,000	10,000
<u>Participant Training</u> (short term work attachments in US)		
Travel (GOL funded)	-	-
Monthly maintenance allowance	20,000	60,000
<u>Contingency</u>	20,000	20,000
SECTOR TOTAL	400,000	400,000
<u>Breakdown of funding:</u>		
New IPUP	200,000	
Existing project	200,000	
New Grant	400,000	

SOCIO-ECONOMIC SURVEY

NEW KRU TOWN

1978

DISTRIBUTION OF HOUSEHOLDS

BY PLACE OF WORK

NEW KRU TOWN

<u>Place of Work</u>	<u>No. of Persons</u>	<u>Percent</u>
<u>Total</u>	<u>2527</u>	<u>100.00</u>
<u>Monrovia Proper</u>	<u>479</u>	<u>18.96</u>
<u>Freeport</u>	<u>506</u>	<u>20.02</u>
<u>New Kru Town</u>	<u>326</u>	<u>12.90</u>
<u>Sinkor</u>	<u>91</u>	<u>3.60</u>
<u>Dwala</u>	<u>194</u>	<u>7.68</u>
<u>Gardnersville</u>	<u>34</u>	<u>1.35</u>
<u>Point Four</u>	<u>8</u>	<u>.32</u>
<u>Bentol</u>	<u>6</u>	<u>.24</u>
<u>Via Town</u>	<u>44</u>	<u>1.74</u>
<u>Paynesward</u>	<u>16</u>	<u>.53</u>
<u>Logan Town</u>	<u>68</u>	<u>2.69</u>
<u>Clara Town</u>	<u>38</u>	<u>1.50</u>
<u>Virginia</u>	<u>13</u>	<u>.51</u>
<u>Others</u>	<u>34</u>	<u>1.35</u>
<u>No Information</u>	<u>670</u>	<u>26.51</u>

DISTRIBUTION OF POPULATION

BY ECONOMIC ACTIVITIES

NEW KRU TOWN

<u>Economic Activities</u>	<u>No. of Persons</u>	<u>Percent</u>
<u>Total</u>	<u>5301</u>	<u>100.00</u>
<u>Working Population</u>	<u>2527</u>	<u>47.67</u>
<u>Keeping House Population</u>	<u>2051</u>	<u>38.69</u>
<u>Retired Population</u>	<u>202</u>	<u>3.81</u>
<u>Unemployed and others</u>	<u>521</u>	<u>9.83</u>

DISTRIBUTION OF WORKING POPULATION

BY WORK STATUS

NEW KRU TOWN

<u>Work Status</u>	<u>No. of Persons</u>	<u>Percentage</u>
<u>All Households*</u>	<u>2527</u>	<u>100.00</u>
<u>Self-Employed</u>	<u>478</u>	<u>18.92</u>
<u>Paid Employees</u>	<u>1708</u>	<u>67.59</u>
<u>Unpaid Family Workers</u>	<u>15</u>	<u>.59</u>
<u>Others</u>	<u>326</u>	<u>12.90</u>

\*Households total base on all reported working in the household and not only household heads.

DISTRIBUTION OF HOUSEHOLDS

BY OCCUPATIONS

NEW KRU TOWN

<u>Occupations</u>	<u>No. of Persons</u>	<u>Percent</u>
<u>Total</u>	<u>2527</u>	<u>100.00</u>
<u>Professional, Technical &amp; Related Workers</u>	<u>409</u>	<u>16.19</u>
<u>Administrative &amp; Managerial Workers</u>	<u>32</u>	<u>1.27</u>
<u>Clerical &amp; Related Workers</u>	<u>236</u>	<u>9.34</u>
<u>Production &amp; Related Workers</u>		
<u>Transport Equipment Operators &amp; Labourers</u>	<u>764</u>	<u>30.23</u>
<u>Agriculture, Animal Husbandry and Forestry Workers, Fishermen &amp; Hunters</u>	<u>103</u>	<u>4.08</u>
<u>Sales Workers</u>	<u>368</u>	<u>14.56</u>
<u>Service Workers</u>	<u>321</u>	<u>12.70</u>
<u>Workers not Classified by Occupation</u>	<u>82</u>	<u>3.24</u>
<u>No Information</u>	<u>212</u>	<u>8.39</u>

DISTRIBUTION OF HOUSEHOLDS

BY INCOME

NEW KRU TOWN

<u>INCOME LEVELS</u>	<u>NUMBER</u>	<u>CUM. FREQUENCY</u>
<u>Under - 25</u>	<u>98</u>	<u>98</u>
<u>25 - 49</u>	<u>123</u>	<u>221</u>
<u>50 - 74</u>	<u>281</u>	<u>502</u>
<u>75 - 99</u>	<u>277</u>	<u>779</u>
<u>100 - 124</u>	<u>239</u>	<u>1018</u>
<u>125 - 149</u>	<u>171</u>	<u>1189</u>
<u>150 - 174</u>	<u>142</u>	<u>1331</u>
<u>175 - 199</u>	<u>92</u>	<u>1423</u>
<u>200 - 224</u>	<u>105</u>	<u>1528</u>
<u>225 - 249</u>	<u>29</u>	<u>1557</u>
<u>250 - 274</u>	<u>34</u>	<u>1591</u>
<u>275 - 299</u>	<u>30</u>	<u>1621</u>
<u>300 - 324</u>	<u>33</u>	<u>1654</u>
<u>325 - 349</u>	<u>13</u>	<u>1667</u>
<u>350 - 374</u>	<u>12</u>	<u>1679</u>
<u>375 - 399</u>	<u>14</u>	<u>1693</u>
<u>400 - 424</u>	<u>11</u>	<u>1704</u>
<u>425 +</u>	<u>59</u>	<u>1763</u>
<u>Total</u>	<u>1763</u>	

Median = \$110.72

DISTRIBUTION OF HOUSEHOLDS BY NUMBER

OF PERSONS OF AGE 14 YEARS & UNDER

NEW KRU TOWN

<u>Types of Households</u>	<u>No. of Households</u>	<u>Percent</u>
<u>All Households</u>	<u>2122</u>	<u>100.00</u>
<u>Households with no persons of age 14 &amp; under</u>	<u>857</u>	<u>40.39</u>
<u>Households with 1 persons of age 14 &amp; under</u>	<u>400</u>	<u>18.85</u>
<u>Households with 2 persons of age 14 &amp; under</u>	<u>301</u>	<u>14.18</u>
<u>Households with 3 persons of age 14 &amp; under</u>	<u>218</u>	<u>10.27</u>
<u>Households with 4 persons of age 14 &amp; under</u>	<u>133</u>	<u>6.27</u>
<u>Households with 5 persons of age 14 &amp; under</u>	<u>82</u>	<u>3.86</u>
<u>Households with 6 persons of age 14 &amp; under</u>	<u>57</u>	<u>2.69</u>
<u>Households with 7 persons of age 14 &amp; under</u>	<u>36</u>	<u>1.70</u>
<u>Households with 8 persons of age 14 &amp; under</u>	<u>17</u>	<u>0.80</u>
<u>Households with 9 persons or more of age 14 &amp; under</u>	<u>21</u>	<u>0.99</u>

DISTRIBUTION OF HOUSEHOLDS

BY NUMBER OF PERSONS

LOCATION: NEW KRU TOWN

<u>Types of Households</u>	<u>No. of Households</u>	<u>Percent</u>
<u>All Households</u>	<u>2122</u>	<u>100.00</u>
<u>Households with 1 Person</u>	<u>350</u>	<u>16.49</u>
<u>Households with 2 Persons</u>	<u>318</u>	<u>14.99</u>
<u>Households with 3 Persons</u>	<u>319</u>	<u>15.03</u>
<u>Households with 4 Persons</u>	<u>232</u>	<u>11.40</u>
<u>Households with 5 Persons</u>	<u>193</u>	<u>9.10</u>
<u>Households with 6 Persons</u>	<u>149</u>	<u>7.02</u>
<u>Households with 7 Persons</u>	<u>121</u>	<u>5.70</u>
<u>Households with 8 Persons</u>	<u>106</u>	<u>5.00</u>
<u>Households with 9 Persons</u>	<u>98</u>	<u>4.62</u>
<u>Households with 10 Persons</u>	<u>54</u>	<u>2.54</u>
<u>Households with 11 Persons</u>	<u>45</u>	<u>2.12</u>
<u>Households with 12 Persons</u>	<u>31</u>	<u>1.46</u>
<u>Households with 13 Persons</u>	<u>18</u>	<u>0.85</u>
<u>Households with 14 Persons &amp; above</u>	<u>78</u>	<u>3.68</u>

DISTRIBUTION OF HOUSING UNITS BY NUMBER OF ROOMS

NEW KRU TOWN

<u>Types of Housing Units</u>	<u>No. of Housing Units</u>	<u>Percent</u>
<u>All Housing Units</u>	<u>2122</u>	<u>100.00</u>
<u>Housing Units with 1 Room</u>	<u>1241</u>	<u>58.48</u>
<u>Housing Units with 2 Rooms</u>	<u>320</u>	<u>15.08</u>
<u>Housing Units with 3 Rooms</u>	<u>235</u>	<u>11.07</u>
<u>Housing Units with 4 Rooms</u>	<u>173</u>	<u>8.15</u>
<u>Housing Units with 5 Rooms</u>	<u>81</u>	<u>3.82</u>
<u>Housing Units with 6 Rooms</u>	<u>46</u>	<u>2.17</u>
<u>Housing Units with 7 Rooms</u>	<u>12</u>	<u>0.57</u>
<u>Housing Units with 8 Rooms</u>	<u>12</u>	<u>0.57</u>
<u>Housing Units with 9 Rooms</u>	<u>2</u>	<u>0.09</u>
<u>Housing Units with 10 Rooms</u>	<u>0</u>	<u>0.00</u>

DISTRIBUTION OF HOUSEHOLDS  
BY RENT LEVELS OF HOUSEHOLD HEADS  
LOCATION: NEW KRU TOWN

Monthly Rent Levels	No. of Households	Percent
All Households	1324	100.00
1 - 9	225	16.99
10 - 19	548	41.39
20 - 29	186	14.05
30 - 39	31	2.34
40 - 49	16	1.21
50 - 59	34	2.57
60 - 69	11	.83
70 - 79	10	.76
80 - 89	2	.15
90 - 99	2	.15
100 & Above	30	2.26
Households Rent for Free or other arrangement	229	17.30

DISTRIBUTION OF HOUSEHOLDS  
BY RENT LEVEL OF HOUSEHOLD HEADS  
LOCATION: NEW KRU TOWN

<u>Rent Levels</u>	<u>Frequency</u>	<u>Cum. Frequency</u>
<u>1 - 9</u>	<u>225</u>	<u>225</u>
<u>10 - 19</u>	<u>548</u>	<u>773</u>
<u>20 - 29</u>	<u>186</u>	<u>959</u>
<u>30 - 39</u>	<u>31</u>	<u>990</u>
<u>40 - 49</u>	<u>16</u>	<u>1006</u>
<u>50 - 59</u>	<u>34</u>	<u>1040</u>
<u>60 - 69</u>	<u>11</u>	<u>1051</u>
<u>70 - 79</u>	<u>10</u>	<u>1061</u>
<u>80 - 89</u>	<u>2</u>	<u>1063</u>
<u>90 - 99</u>	<u>2</u>	<u>1065</u>
<u>100 +</u>	<u>30</u>	<u>1095</u>

Median Rent = \$15.30

DISTRIBUTION OF FEMALES WORKING POP 1<sup>n</sup>

BY TYPES OF OCCUPATION

NEW KRU TOWN

<u>Types of Occupation</u>	<u>No. of Persons</u>	<u>Percent</u>
<u>Total</u>	<u>347</u>	<u>100.00</u>
<u>Professional and Technical Workers</u>	<u>25</u>	<u>7.20</u>
<u>Administrative and Managerial Workers</u>	<u>6</u>	<u>1.73</u>
<u>Clerical and Related Workers</u>	<u>18</u>	<u>5.19</u>
<u>Sales Workers</u>	<u>225</u>	<u>64.84</u>
<u>Service Workers</u>	<u>39</u>	<u>11.24</u>
<u>Agriculture, Animal Husbandry and Forestry Workers, Fishmen, and Hunters</u>	<u>1</u>	<u>.29</u>
<u>Production and Related Workers, Transport Equipment Operators and Laborers</u>	<u>33</u>	<u>9.51</u>

DISTRIBUTION OF FEMALE WORKING POPULATION  
BY WORK STATUS  
NEW KRU TOWN

<u>Work Status</u>	<u>No. Persons</u>	<u>Percent</u>
<u>Total</u>	<u>347</u>	<u>100.00</u>
<u>Paid-employees</u>	<u>128</u>	<u>36.89</u>
<u>Self-employed</u>	<u>219</u>	<u>63.11</u>

DISTRIBUTION OF FEMALES WORKING POP 1<sup>st</sup>

BY PLACE OF WORK

NEW KRU TOWN

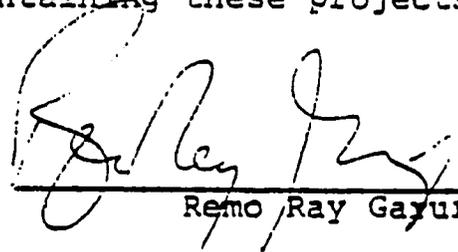
<u>Places of Work</u>	<u>No. Persons</u>	<u>Percent</u>
<u>Total</u>	<u>347</u>	<u>100.00</u>
<u>Monrovia Proper</u>	<u>59</u>	<u>17.00</u>
<u>New Kru Town</u>	<u>152</u>	<u>44.00</u>
<u>Dwala</u>	<u>69</u>	<u>20.00</u>
<u>Sinkor</u>	<u>20</u>	<u>6.00</u>
<u>Point Four</u>	<u>4</u>	<u>1.00</u>
<u>Logan Town</u>	<u>8</u>	<u>2.00</u>
<u>Free Port</u>	<u>16</u>	<u>5.00</u>
<u>Vai Town</u>	<u>6</u>	<u>2.00</u>
<u>Virginia</u>	<u>4</u>	<u>1.00</u>
<u>Others</u>	<u>9</u>	<u>2.00</u>

LIBERIA: LOW INCOME HOUSING PHASE II - GRANT  
CERTIFICATION PURSUANT TO SECTION 611(e) OF THE  
FOREIGN ASSISTANCE ACT OF 1961, AS AMENDED

I, Remo Ray Garufi, Director of the USAID Mission to Liberia, do hereby certify that in my judgement the Republic of Liberia will have the financial capability and the human resources capability to implement, maintain and utilize effectively the subject grant assistance project. This certification takes into consideration the requirements placed on the Republic of Liberia to maintain and utilize other projects previously financed or assisted by the United States.

This judgement is based on the fact, inter alia that:

1. The Government has given a high priority to relieving the housing shortage for low income groups as an essential element to the development of Liberia.
2. It has utilized successfully capital assistance provided under other AID projects and has given assurances of improved performance in maintaining these projects.

  
\_\_\_\_\_  
Remo Ray Garufi

6/12/79  
\_\_\_\_\_  
Date

ENVIRONMENTAL DETERMINED SHEET

PROJECT TITLE AND NUMBER: HOUSING GUARANTY (HG) AND DEVELOPMENT LOAN (DL)  
COMPONENTS OF THE LOW INCOME HOUSING PROGRAM  
669-HG-001 and 669-0146

LOCATION: LIBERIA

ENVIRONMENTAL DETERMINATION/DECLARATION: (CHECK ONE)

ON THE BASIS OF THE ATTACHED SUPPORTIVE MATERIALS, I RECOMMEND THAT YOU MAKE THE FOLLOWING THRESHOLD DECISION:

1. THE PROPOSED OFFICE OF HOUSING ACTION IS NOT A MAJOR FEDERAL ACTION, WHICH WILL HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT (NEGATIVE DETERMINATION).
2. THE PROPOSED AGENCY ACTION IS A MAJOR FEDERAL ACTION, WHICH WILL HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT (POSITIVE DETERMINATION) AND:
- A. AN ENVIRONMENTAL ASSESSMENT IS REQUIRED; OR
- B. AN ENVIRONMENTAL IMPACT STATEMENT IS REQUIRED.
3. THE PROPOSED AGENCY ACTION QUALIFIES FOR A NEGATIVE DECLARATION, BASED UPON:

SUPPORTIVE MATERIALS PREPARED BY:

APPROPRIATE OFFICIAL CONCURRENCE:  
APPROVED:

Peter Kimm  
PETER M. KIMM

2/19/78  
DATE

ASSISTANT ADMINISTRATOR'S DECISION:  
APPROVED:

Goler T. Butcher AA/AFR

**BEST AVAILABLE DOCUMENT**

Clearances:

SER/H:DMcVoy Jan 24/78

SER/H:SFrankel 2/2/78

GC/H:MKitay 2/1/78

AFR/DR:DDibble \_\_\_\_\_

AFR/DR:GThompson \_\_\_\_\_

GC/AFR:JPatterson \_\_\_\_\_

AFR/CAWA:Sauderson 2/19/78

DS/ENGR:PStearns \_\_\_\_\_

DS/OST:APrince \_\_\_\_\_

ENVIRONMENTAL ASSESSMENT

AN EVALUATION OF PROBABLE ENVIRONMENTAL IMPACTS  
OF ALTERNATIVE SEWERAGE SYSTEMS IN THE  
NEW KRUTOWN AND NEW GEORGIA SHELTER PROJECTS  
(LOW INCOME HOUSING PHASE II)

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

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in Preparation of the Environmental Assessment

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**ACKNOWLEDGEMENT  
OF  
PARTICIPANTS ASSISTING  
IN THE  
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**RAPHAEL KPISSAY, Technical Supervisor, Ministry of Health**

I. INTRODUCTION

A. DESCRIPTION OF THE PROPOSED ACTIONS

The segment of the USAID/Liberia Shelter Program covered by this EA is the capital portion composed of (1) development of sites and services lots with basic core housing; (2) upgrading infrastructure in existing low-income communities; and (3) provision of home improvement and construction material loans to beneficiaries. These capital activities will be financed by \$4 million of a grant and \$10 million of a HG. These activities are a continuation of a grant funded technical assistance project authorized in FY 78.

B. FINDINGS AND RECOMMENDATIONS OF THE IEE

An Initial Environmental Examination (IEE) was carried out on the proposed U.S. AID/Liberia Shelter Program in December 1977. The institutional building technical assistance components were given a negative determination. A Positive Determination was recommended for the capital component of the shelter program. The principal environmental concern was identified to be the New Krutown sub-project's potential increase in sewage flows into the existing and overloaded Bushrod Island collection and transmission system and the limited treatment capacity of the Sinkor plant. The EA would also examine the environmental effects of the waterborne sanitary collection and treatment system proposed for the New Georgia sites and services project. The sanitary design standards established for these two types of projects will be considered prototypical for the follow-on activities planned for the project on similar sites.

In addition, it was recommended that the Environmental Assessment (EA) be conducted in collaboration with GOL personnel as an integral part of project design activities and in support of the technical analysis for the Project Paper. It was stipulated that the logical timing of the EA's investigations occur after placement of the technical assistance team in Monrovia, Liberia.