

AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D. C. 20523

BIBLIOGRAPHIC INPUT SHEET

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Batch 52

1. SUBJECT
CLASSI-
FICATION

A. PRIMARY

TEMPORARY

B. SECONDARY

2. TITLE AND SUBTITLE

Report on field trip to Jamaica, June 1974

3. AUTHOR(S)

Falconer, J.P.R.

4. DOCUMENT DATE

1974

5. NUMBER OF PAGES

46p.

6. ARC NUMBER

ARC

7. REFERENCE ORGANIZATION NAME AND ADDRESS

Monsanto

8. SUPPLEMENTARY NOTES (*Sponsoring Organization, Publishers, Availability*)

9. ABSTRACT

(HOUSING R & D)

10. CONTROL NUMBER

PN-AAD-104

11. PRICE OF DOCUMENT

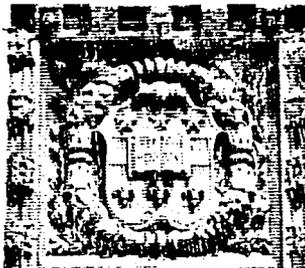
12. DESCRIPTORS

13. PROJECT NUMBER

14. CONTRACT NUMBER

AID/CM/ta -C-73-12 Res.

15. TYPE OF DOCUMENT



AID/CM/ea/C-73312 R

(Monsanto)

PN-AAD-124

WASHINGTON UNIVERSITY

USAID/MONSANTO RESEARCH CORPORATION/WASHINGTON UNIVERSITY
Subcontract AID 7312

Report on Field Trip to Jamaica

June 12 to 18, 1974

J. P. R. Falconer
Associate Director
Center for Development Technology
Washington University
St. Louis, Missouri 63130

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1. INTRODUCTION: PURPOSE OF THE FIELD TRIP

The principal purpose of this trip was to begin to gain familiarity with Jamaican housing projects, both current and in the planning stages, with which the roofing project might be aligned during development and demonstration phases of the research. A secondary objective was to extend the range of Jamaican contacts, especially in the field of local design, building and related socio-economic aspects of housing.

A few minor difficulties caused confusion at the outset of the visit -- they are mentioned here in the hope of avoiding unnecessary confusion and delay from similar occurrences in the future. The project contact officer at USAID, Mr. Peter Kolar, was found to be somewhat upset by the fact that he had not been notified promptly of Jamaica's selection for the Research Project -- that is, after the May 2nd decision. The AID/W cable, which apparently had informed him simultaneously of Jamaica's selection and of the impending arrival of the field team (Falconer, followed by Usmani), had left him with little room to maneuver to avoid scheduling conflicts with two other housing-related field teams from Washington who, he felt, would want to meet the same Jamaican housing officials. This situation had been discussed in an exchange of cables and calls between Kolar and Littlewood. Since Falconer was enroute and out of communication during this interchange, the decision was made to hold Usmani and let Falconer discuss the situation with Kolar as the first item of business in Kingston. This was done, causing some delay in scheduling appointments.

Kolar was frank about stating his concern for wanting to be kept informed, but he also made it clear that this was not in any way to be construed as an attempt to interfere or obstruct our work in the field.

Kolar obviously wants to avoid local scheduling conflicts between Jamaican officials and visitors on AID projects, and he will appreciate any effort made by field visitors that will help him understand the purpose of the trips. He is willing to assist us in making contacts and scheduling meetings when we feel we need the help of the mission to do so -- he is interested in the project, feels that it will dovetail with other AID housing assistance, and is willing to attend meetings with us if we believe it would be helpful to have mission presence. (This may very well be useful at times.) Kolar was reassured that our understanding of the Mission's position, and of its limited ability to provide us with staff support, was the same as his, and that our objective is to establish a local communication network as rapidly as possible through a set of Jamaican contacts. On this basis it was agreed to proceed with the field visit, keeping in touch by telephone, with a final debriefing in the AID offices at the conclusion of the visit.

Kolar's wish to be informed is most reasonable, and we should make an effort to rationalize the method of communicating with local AID missions, particularly in the scheduling of trips, which process has proved awkward and ponderous on several occasions so far in the project. A large part of the problem is caused by communicating with local AID missions through the TA/OST office of AID/W. Notwithstanding the need for official sanction of a trip between AID/W and the Missions, the path could be smoothed considerably by informal, supplementary communication between the persons assigned to make the trip and the Mission contact officer. Kolar himself said that he would encourage such supplementary communication -- in the case of Jamaica, the use of the telephone is a simple solution. For

example, while the decision to hold Usmani was probably the right one under the circumstances since it appeared to take pressure off the mission, in reality Usmani's visit would not have caused conflicts since he would have been concentrating on material resource aspects of the project, and this would not have involved the same Jamaicans as the other two housing teams were interested in meeting. Direct explanation of this in advance of the trip would have avoided both the confusion and the present result of setting the project behind in its timetable.

It should be emphasized that Kolar is not at all negative about the project. He feels it is a good one for Jamaica, and that all feedback that has reached him subsequent to the April field visit has been positive on the Jamaican side.

It was something of a drawback not to be able to discuss the project in detail with Father McLaughlin who had previously designated himself as our primary contact in the Ministry of Housing. He was off-island upon arrival, scheduled to return about the middle of the field trip, but his return was postponed until July 18th making an interview impossible. However, Mrs. Dorene Williams substituted for him by arranging meetings with the Ministry and with several very informative people in the design and building field. Mrs. Williams is a sociologist who formerly worked for the ministry doing sociological studies of low-income Jamaicans, and in this role worked closely with Father McLaughlin. She is now with the National Housing Corporation working on marketing studies.

2. PROJECT AND SITE SELECTION CRITERIA

Prior to the field trip, Cronberg and Falconer met to begin to formulate a series of criteria for eventual site and project selection. These are listed below, and served as a guide during discussion and observation of specific projects visited during the trip. Pending further discussion with MRC members of the research effort, subject to amplification which may result with input from the materials science side and clarification of industrial objectives (such as scale of operation, employment opportunities, etc.), these criteria should be considered unweighted, in no particular order of priority for overall project objectives.

1. Income range, skills and other socio-economic characteristics of the residents of the project, housing development or housing unit(s), related to the type of housing for which the material is intended.
2. Degree to which socio-economic and other data such as usage, preferences, etc., are available from past surveys; likelihood of continued monitoring of such data on residents of the housing.
3. Viability of the area, for which the housing is intended, as a coherent community likely to retain its residential characteristics over the long term.
4. Physical character of the area: Its density, uniformity or heterogeneity, variety of building form placing demands of adaptability on new materials.
5. Physical location of the site -- rural, urban or peri-urban with respect to demonstration and implementation objectives.
6. Location of the site with respect to sources of raw material.

7. Particular geo-climatic characteristics of the site, such as rainfall, wind, industrial pollution, affecting roof performance.
8. Visibility of the project (including location, sponsorship and political representation of the residents) with respect to its value in demonstrating and testing response of both local and external observers.

3. GOVERNMENT OF JAMAICA/WORLD BANK SITE AND SERVICE PROJECTS

An agreement has been reached between the International Bank for Reconstruction and Development (IBRD=World Bank) and the Jamaican Government for the financing and implementation of site and service, self-help, low-income housing which will eventually provide some 6,000 serviced lots in the 4 largest Jamaican cities, distributed as follows:

Kingston-St. Andrews Area:

Marcus Garvey Site	785
Camplands Site	455
<u>Hunts Bay Site</u>	<u>2700</u>
	3940

Spanish Town:

Prison Farm Site	560
------------------	-----

May Pen:

Bushey Park Site	840
------------------	-----

Montego Bay:

Catherine Hall Site	<u>660</u>
---------------------	------------

TOTAL 6000 Lots

In addition, the GOJ/IBRD agreement includes three squatter upgrading projects which will eventually affect some 2750 households, distributed as follows:

Kingston-St. Andrews Area:

Cockburn Pen Site 310

Dreweiland Site 1400

Montego Bay:

Canterbury 1040

TOTAL 2750 Households

The locations of these sites are shown in Figures 1,2 and 3.

As shown in Table 1, construction will be phased over a period of three years. At the time of the field visit, tenders had been received for work at the first-year Kingston and Spanish Town sites, and it was indicated in discussions at the Ministry of Housing that some of the proposals were within desired cost ranges and contracts would be let shortly.

(See Figure 4).

The GOJ/IBRD site and service projects are designed to be implemented primarily by self-help construction, and to be primarily self-financing, providing a basis for a continuing national site and service program for low-income urbanites. It appears to be a thoroughly thought-out and comprehensively-designed program, which contains a number housing-related components other than physical construction of housing. These include:

1. Community facilities in the form of schools, day-care centers, community meeting facilities, vocational schools and training centers, police posts and market facilities;
2. Technical Assistance and the financing of small-to-medium scale community industries directed at creating local employment opportunities linked to the low-cost housing and the training of idle urban labor force for these enterprises. (The goal for

the site and service projects is the creation of about 1000 new jobs in the three-year period.)

3. Monitoring of social and economic aspects of the projects by professionals from the Institute of Social and Economic Research at the University of the West Indies. A special grant is being made for this purpose by the Inter-American Foundation, which will cover such aspects as extent and time period of self-help construction, source and preferences for materials, degree of satisfaction with housing, community services and technical assistance, income toward housing and utilities, default rates on repayments, income derived from community industries.
(Careful monitoring of results as proposed here can have important implications for later phases of the roofing research).
4. Institutional development in the form of technical assistance in the reorganization of the Ministry of Housing, directed at greater efficiency and the formulation of long-term policy and program in government-assisted housing; an urban growth and management study aimed at improved city services and related decision-making; consultant services for engineering aspects and the training of project staff.

Three of the Kingston first-year sites were visited during the field trip: Marcus Garvey, Camplands and Cockburn Pen (the latter being one of the squatter-upgrading areas). The site and service areas seemed to be very well chosen in terms of relation to existing employment opportunities, to available transportation, and to existing over-crowded slum and squatter areas which can be expected to benefit by the contiguous new construction.

The Cockburn Pen Area (designated for upgrading by the provision of roads, paths, drainage, sanitary facilities, lighting and water connections) was observed by Cronberg in some detail on the April field trip. She noted that the area appeared to contain a community of stability and potential for improvement (based on the evidence of self-improved and government-assisted individual houses in the area), and that building skills obviously existed within the community. The housing is very heterogeneous in character, ranging from squatter shacks to well-built basic units which have been extended over the years, and thus include a variety of forms to which roofing and other materials should be adaptable. It thus appears that an area such as Cockburn Pen -- an existing, viable community -- might well be considered for the demonstration and determination of acceptance and utility of roofing research results.

Time did not permit visits across island to the site and service sites in Spanish Town, May Pen and Montego Bay. The Catherine Hall site, in Montego Bay, is included in the area being developed by the Urban Development Corporation, and an invitation was extended by David Gregory Jones, Chief Architect/Planner of UDC, to visit that site on the next field trip, when some of the new and somewhat experimental UDC housing can be observed in his company.

The design of the self-help housing is based on the "core unit" principal, in which the housing authority provides a basic sanitary core, with water, sewer and electrical connections to the community utility grids. In the Jamaican version, three options are being provided, (Figure 5) ranging from the most basic which is merely a party wall with piping and connections, to the most complete, which includes a roofed and walled shelter

approximately 10' x 16' in plan. Figure 6 shows the method by which the core unit can be extended to eventual two and three-bedroom duplex units. Figures 7 and 8 are plans of Marcus Garvey and Spanish Town sites.

One interesting aspect of the Jamaica site and service projects from the standpoint of the roofing research project is that an attempt will be made to encourage self help extensions of the core units by establishing a construction materials fund, financed out of lot downpayments. From this fund, owners will be able to receive materials loans of up to J\$ 400, to be repaid over 4 years at an interest rate of 1% per month on the outstanding balance of the loan. Borrowers may obtain a grace period on mortgage payments equal to the duration of the materials loan.

Lots will be allocated to families earning less than J\$ 1,500/year, a figure that falls in the 50th to 60th percentile on Jamaica's urban income distribution curve. From Ministry of Housing estimates, the cutoff point below which urban households cannot afford repayments of subsidized housing is an annual income of J\$ 1,200. (See also Figure 9). Some 25% of the lots will be allocated to incomes less than J\$ 900/year, these being cross-subsidized from premiums charged for another 25% of the lots considered to have locational advantages on the sites. Lots will be leased for 40 years, renewable, inheritable and alienable, except that during the first 10 years of lease, Government will have the right to determine terms and conditions of transfer.

The Ministry of Housing has set up a special unit called the "Sites and Services Planning and Implementation Unit" which up to now has been charged with project preparation and will be expanded to implement the projects. The director of this unit will be equal in rank to the under Secretary of Housing, and liaise closely with the Minister. Figure 10

shows the organization of the ministry and the special relationship of the Site and Service Unit. However, this organization chart is likely to become obsolete, as the Ministry is undergoing changes and, as noted above, will continue to be reorganized under the impetus of the IBRD agreement.

Mr. Fitz Ford, newly arrived at the Ministry to head the technical services section within which the Sites and Services Unit will fall organizationally, was interviewed on the status of the unit, and on the possibility of aligning roofing demonstration with one of more of the sites and services projects. Mr. Ford stated that the unit is not completely staffed, but thought by the time of the next field trip it would be possible for the team to talk with him and with specific staff members (architects, engineers and sociologists) about the implications of such an alignment. Mr. Ford did not object in principle to the idea, but cautioned that he would not want the acceptability of the self-help concept or any project in general, to be jeopardized by the experimental nature of a material undergoing research. It was explained that our objective throughout the development phase of the project will be to liaise closely with local researchers and testing laboratories (specifically the Scientific Research Council and the Bureau of Standards), and that local test results will be available prior to the introduction of the material in any demonstration. Mr. Ford offered the opinion that we should consider demonstrating the material on a range of housing types rather than only low-income self-help housing.

IBRD Report No. 294a-JM of April 12, 1974, "Jamaica: Appraisal of a Sites and Services Project" contains full details of the objectives, organization, and financing of the project; a copy has been obtained for future reference.

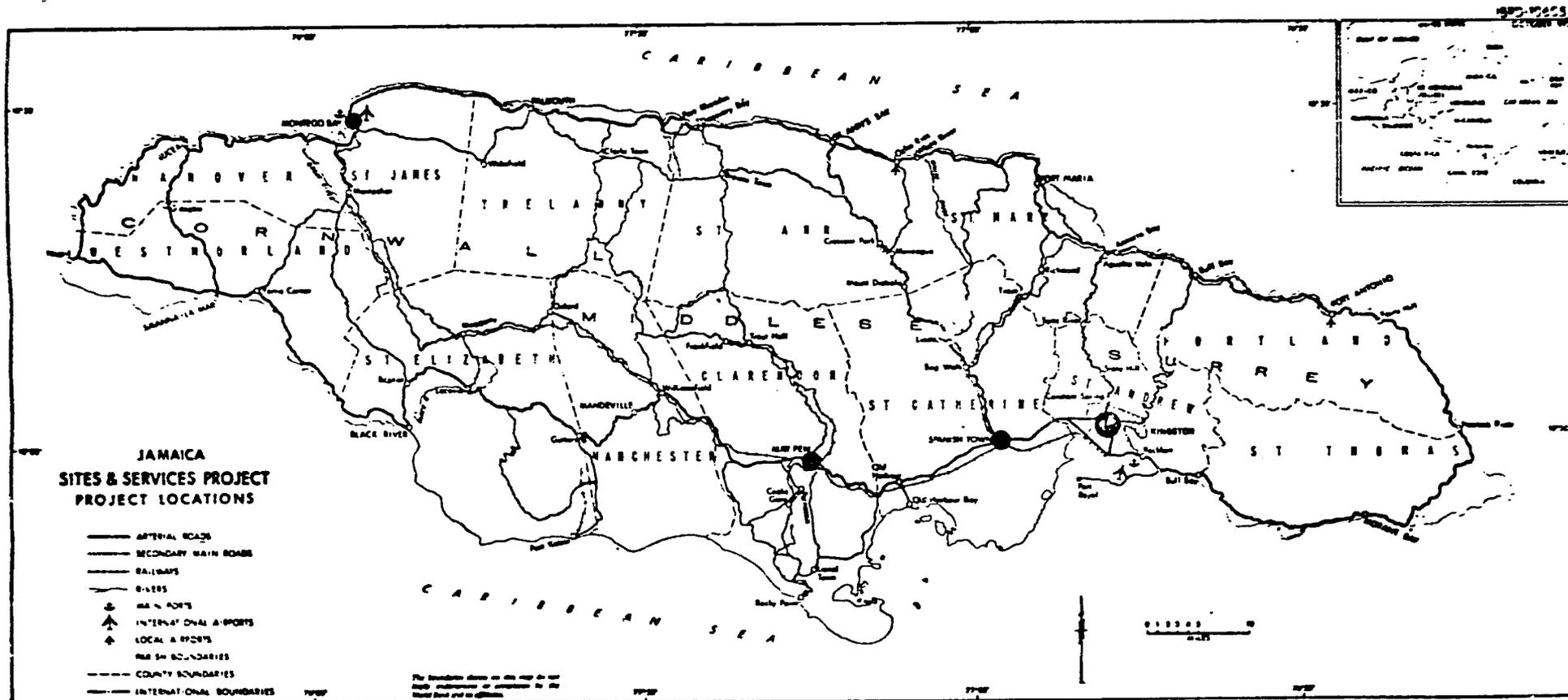


Figure 1: Location of GOJ/IBRD Sites and Services Projects.

Source: IBRD Report No. 294a-JM, April 12, 1974

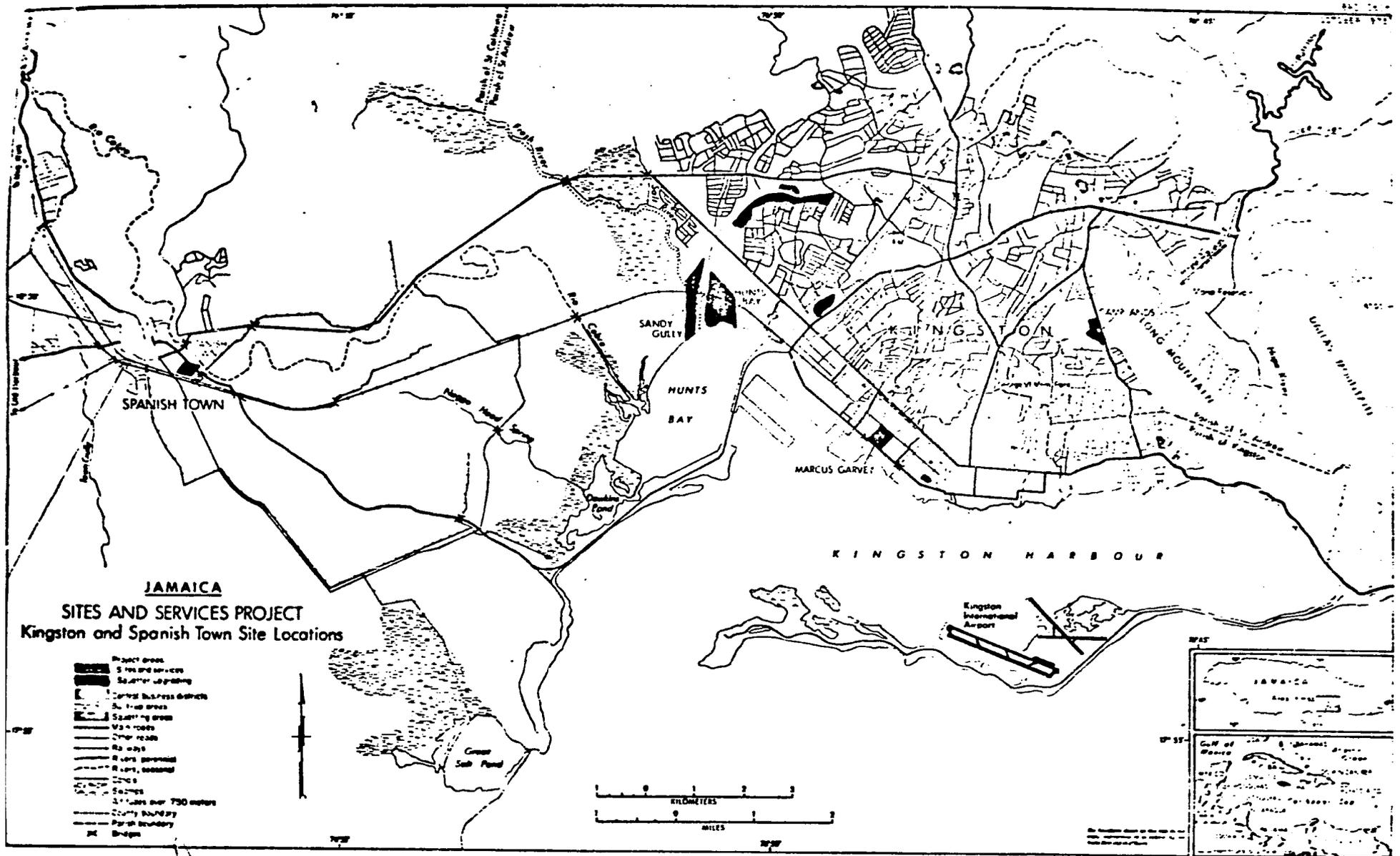


Figure 2: GOJ/IBRD Sites and Services Projects in Kingston/Spanish Town

Source: IBRD Report No. 294a-JM, April 12, 1974

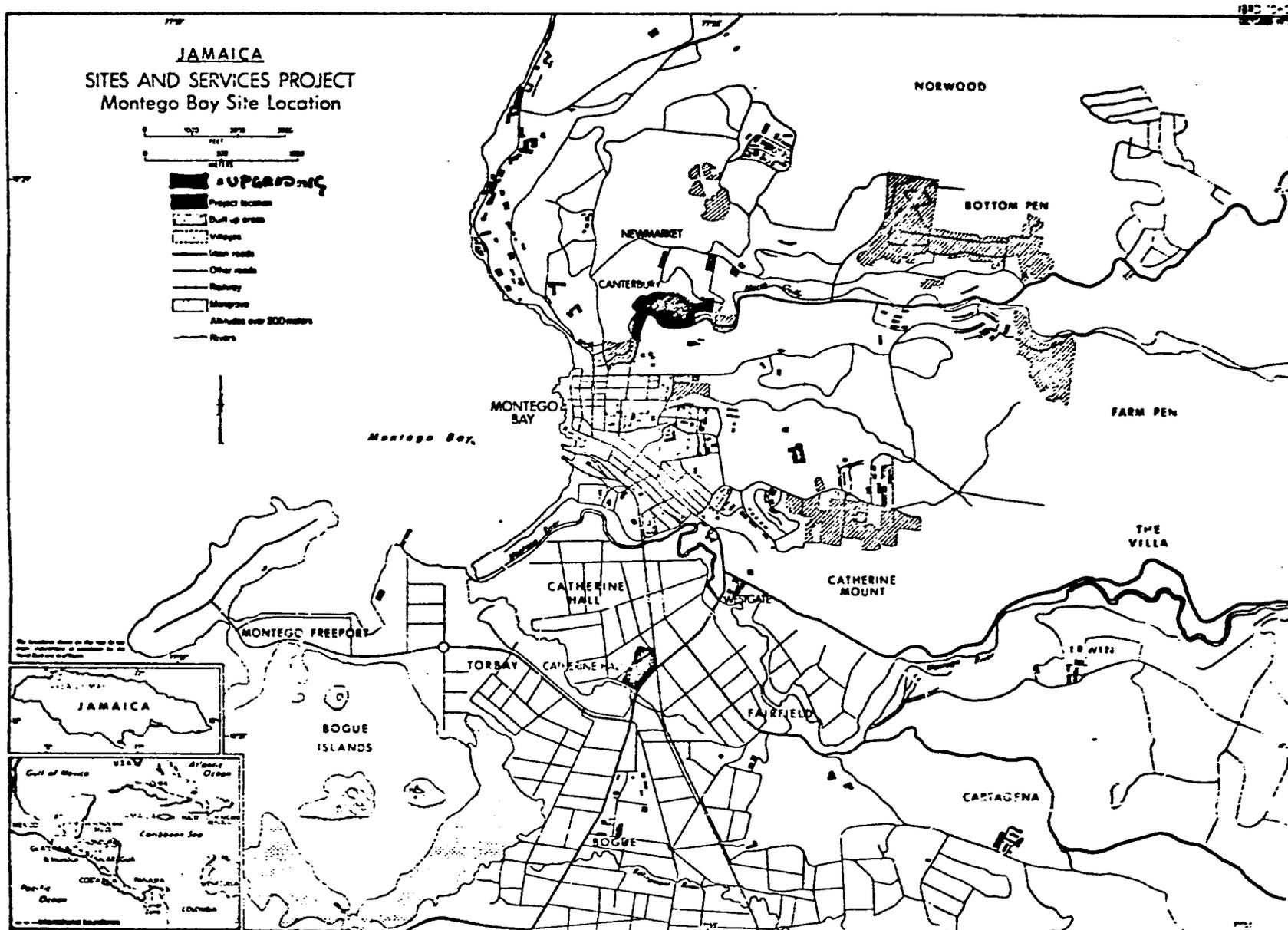


Figure 3: GOJ/IBRD Sites and Services Project in Montego Bay

Source: IBRD Report No. 294a-JM, April 12, 1974

TABLE 1

JAMAICA
SITES AND SERVICES PROJECT
SUMMARY COST ESTIMATES
(in thousands of Jamaican Dollars)

Year	Site	City	Site Area (Acres)	Number of Lots	Infra-structure Cost <u>/1</u>	On-Lot Cost <u>/1</u>	Community Facilities Cost <u>/1</u>	Industries Cost	Land Cost	Material Fund	Technical Assistance, Training and Monitoring	Total
1st	Marcus Garvey	Kingston	35	785	721	1,100	623		875			
	Cemplands	Kingston	24	455	360	623	286		530		40 (Training)	
	Pricon Farm	Spanish Town	25	558	493	763	613		185		280 (T.A.)	
	Sub-total		84	1,798	1,574	2,486	1,522		1,590	400	110 (Consultants)	
	Cockburn Pen	Kingston	(Squatter Upgrading)		202		72					
Canterbury	Mont. Bay	(" ")		-		92						
1st Year Total			84	1,798	1,776	2,487	1,686		1,590	400	430	3,369
2nd	Hunts Bay	Kingston	75	1,500	1,645	2,021	991		950		150 (Monitoring)	
	Catherine Hall	Mont. Bay	30	660	724	959	608		900		25 (Training)	
	Bushy Park	May Pen	30	400	438	569	597		125		150 (T.A.)	
	Sub-total		135	2,560	2,807	3,549	2,201		1,975	750	100 (Consultants)	
	Drewsland	Kingston	(Squatter Upgrading)		293		155					
2nd Year Total			135	2,560	3,100	3,549	2,351		1,975	750	425	12,150
3rd	Hunts Bay	Kingston	55	1,200	1,473	1,750	648		750		150 (Monitoring)	
	Bushy Park	May Pen	30	442	540	625	420		125		15 (Training)	
	Sub-total		85	1,642	2,013	2,375	1,060		875	600	90 (T.A.)	
	Drewsland	Kingston	(Squatter Upgrading)		311		145					
	3rd Year Total			85	1,642	2,324	2,375	1,213		875	600	255
TOTAL			304	6,000	7,200	8,410	5,250	3,550 <u>/2</u>	4,440	1,750	1,110	31,710

/1 Includes contingencies

/2 The industrial areas for the first-year sites have been allocated; the exact location and timing of individual projects will be determined at the time of approval of each sub-component

February 20, 1974

Source: IBRD Report No. 294a-JM, April 12, 1974

Ministry of Housing Sites and Services Project

jointly financed by International Bank for Reconstruction and development and Government of Jamaica

The Ministry of Housing will shortly be INVITING TENDERS for the provision of building, and infra-structure work at each of the following sites.

- (1) Camp Lands — Kingston — 455 lots
- (2) Marcus Garvey Drive — Kingston — 785 lots
- (3) Prison Farm Lands — Spanish Town 558 lots

2. The works comprise construction of Sanitary Core Units and open Shelter areas and development works and the contract periods in each case should not exceed fourteen (14) months.

3. Contractors from Jamaica who are rated Grade 'A' by the Contracts Committee of the Ministry of Works and Contractors from member Countries of the I.B.R.D. and Switzerland wishing to tender should apply to the Ministry of Housing for Tender Documents between the 3rd and the 11th June 1974.

4. 11 applications should be addressed to:—

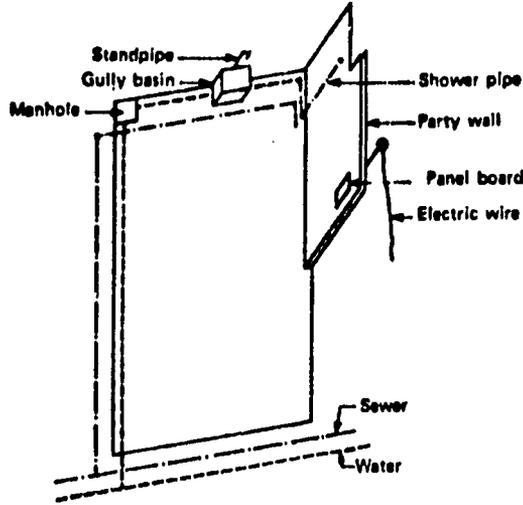
The Permanent Secretary,
Ministry of Housing,
P.O. Box 397,
Kingston 10,
Jamaica W.I.

clearly marked for the attention of the Acting Project Director.

5. Contractors will be required to deposit a Bid Bond in respect of each site in the amount of One Hundred Jamaican Dollars (J\$100.00) or their equivalent on receipt of the Tender Documents.

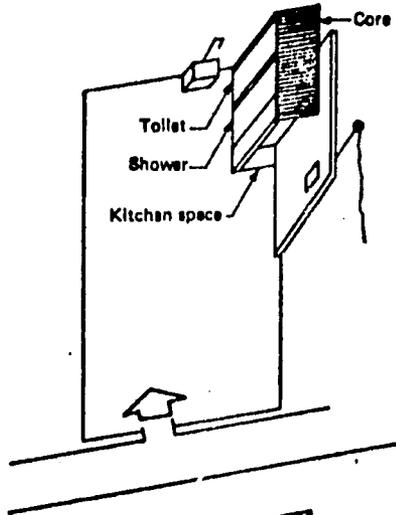
6. The Ministry of Housing and the International Bank for Reconstruction and Development reserve the right to make a selection from a list of applicants and do not bind themselves to accept the lowest or any Tender.

Option I (40% of lots)
Lot Services and
Materials for Core
Shelter & Enclosure



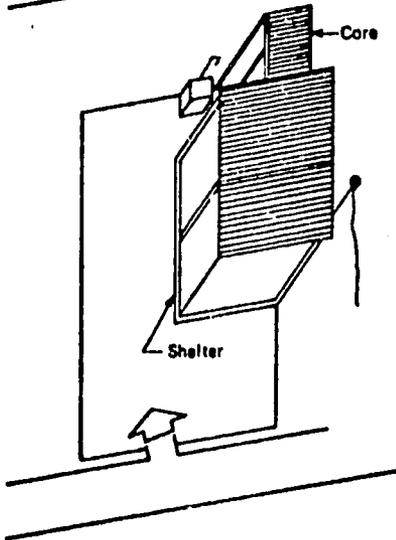
COSTS	JS
Services and Connections	490
Materials for Core Shelter and Enclosure	<u>620</u>
Total	1,110

Option II (40% of lots)
Lot Services, Built
Core and Materials
for Shelter and
Enclosure



Services and Connections	490
Core	380
Materials for Shelter and Enclosure	<u>490</u>
Total	1,360

Option III (20% of lots)
Lot Services, Built
Core and Shelter
and Materials for
Enclosure



Services and Connections	490
Core	380
Shelter	620
Materials for Enclosure	<u>250</u>
Total	1,740

Figure 5: GOJ/IBRD Core Options

Source: IBRD Report No. 294a-JM, April 12, 1974

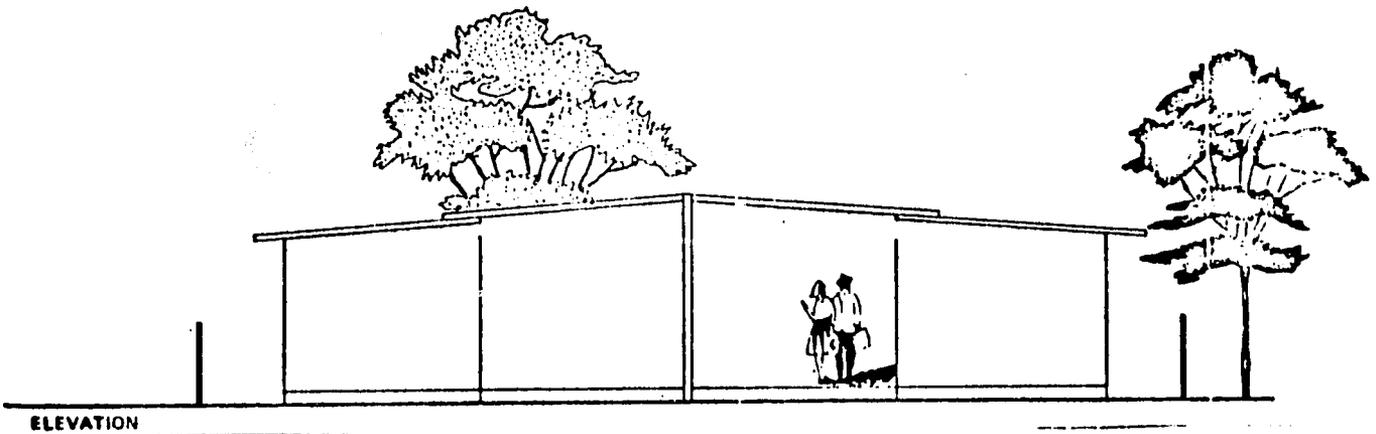
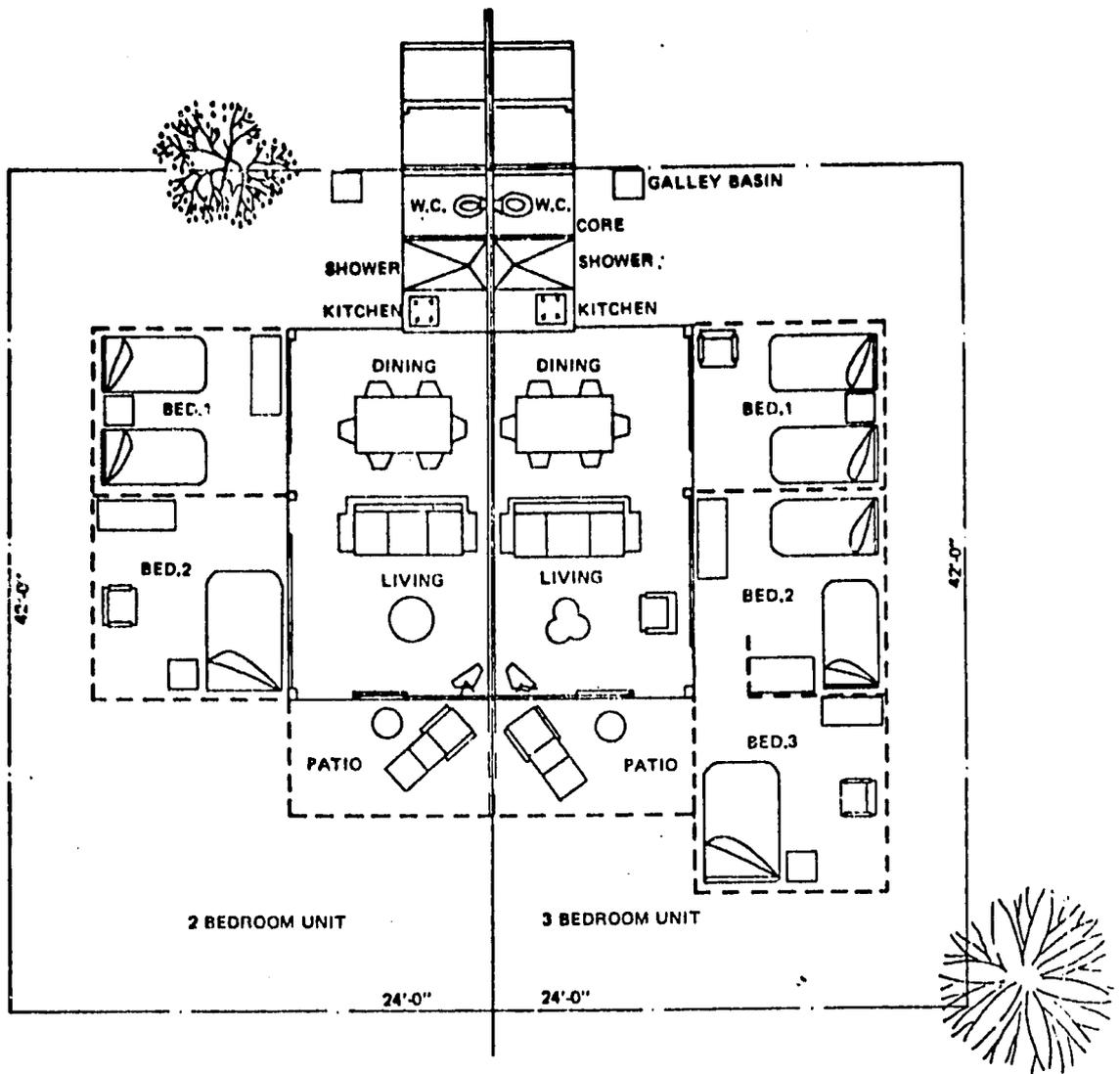
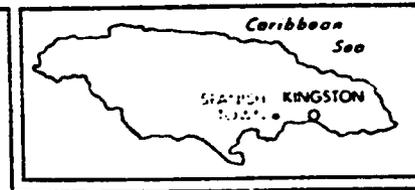


Figure 6: GOJ/IBRD Extended House Plan
Source: IBRD Report No. 294a-JM, April 12, 1974

JAMAICA

SITES AND SERVICES PROJECT

SPANISH TOWN SITE LAYOUT PLAN



The numbers shown on this map do not imply endorsement or acceptance by the World Bank and its affiliates.

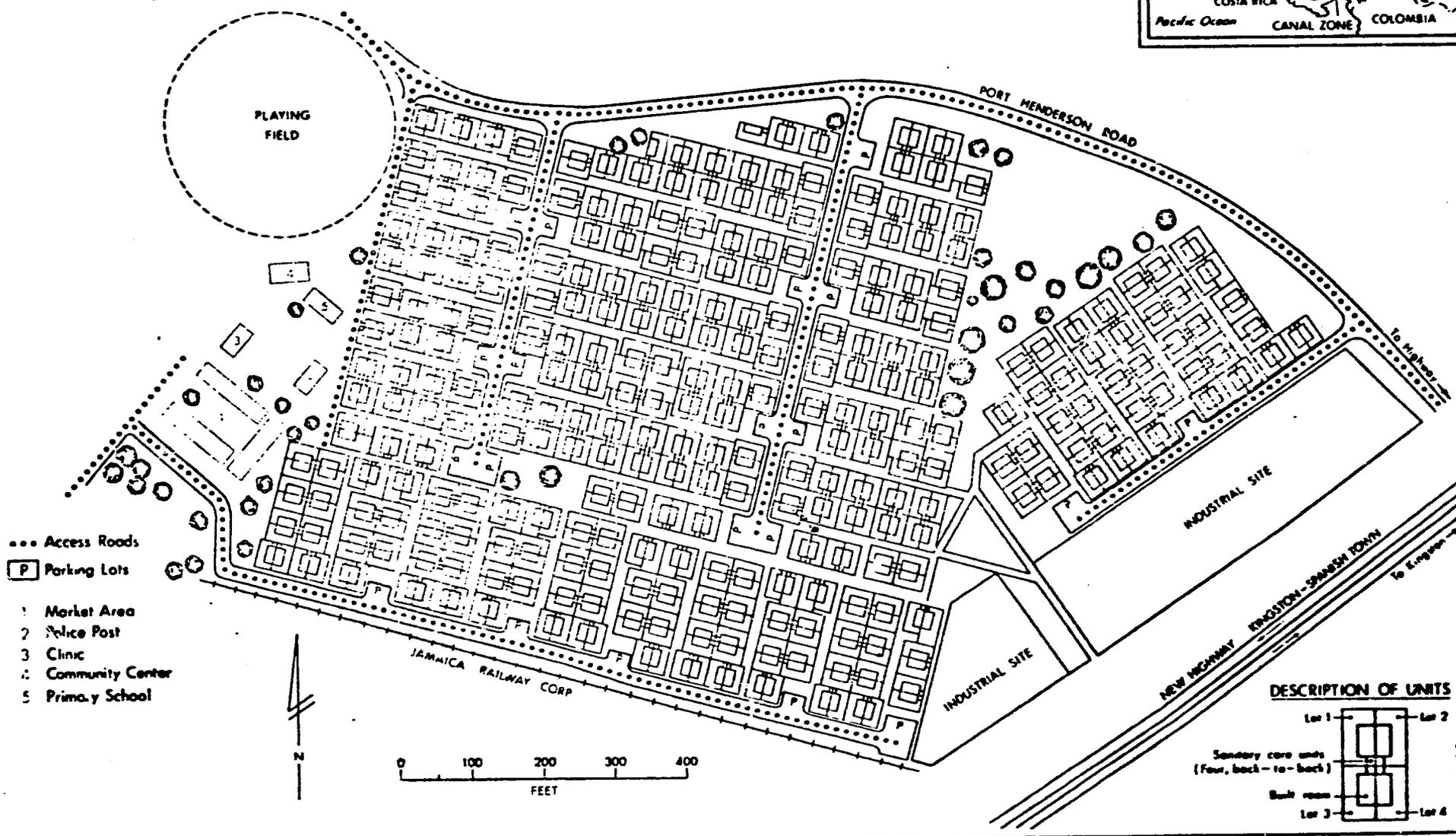
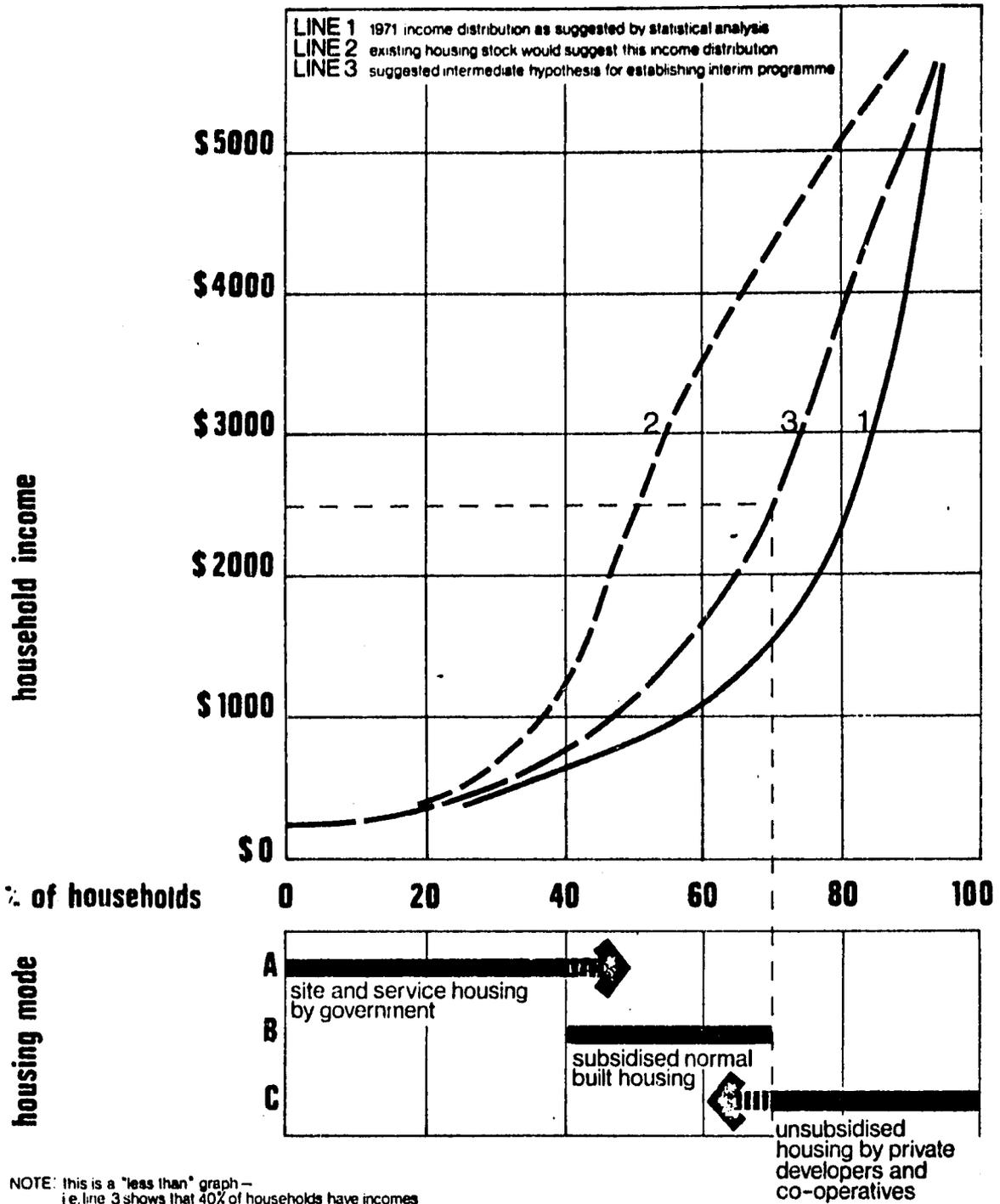


Figure 8 : Site Plan, Spanish Town

Source: IBRD Report No. 294a-JM, April 12, 1974



HOUSING MODE RELATED TO INCOME LEVEL

Figure 9

Source: "Sites and Service Housing in Jamaica: The Camplands Project."
 Shankland Cox Partnership, 1973

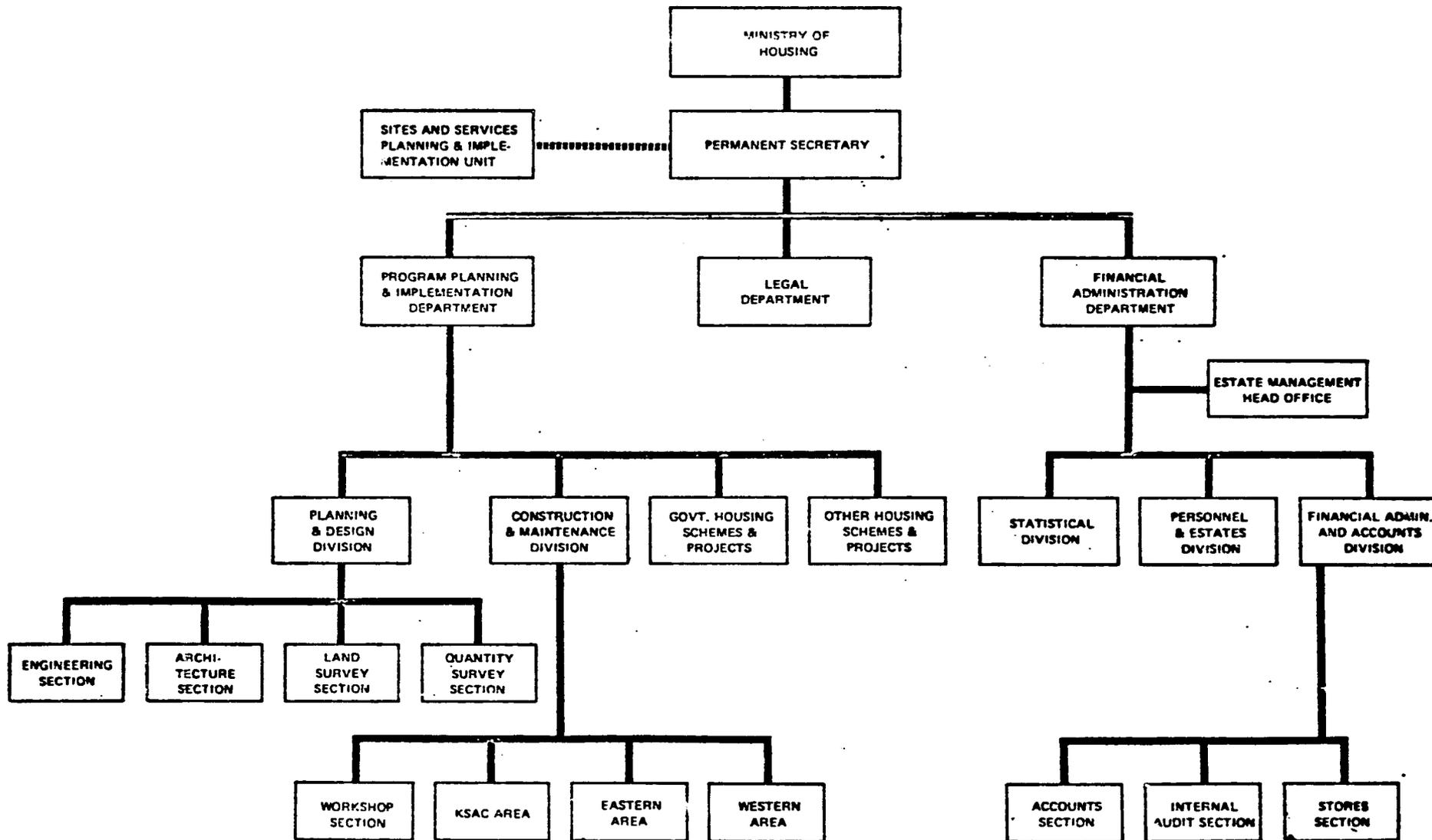


Figure 10: Organization of the Ministry of Housing

Source: IBRD Report No. 294a-JM, April 12, 1974

4. MISCELLANEOUS INTERVIEWS:

Discussion with Mr. Ted Warmington, Architect/Builder/Developer

Mr. Warmington is an architect whose practice these days is almost exclusively housing developments -- mostly in the middle-income range. He was the designer and builder, as well as the manager, of the Mountain Terrace Project, an IBEC-financed housing development intended for lower middle income cooperative ownership. Houses were built as fourplexes, in clusters, at a density of 34 houses to the acre. Two years ago the units were marketed for \$6,700 but purchasers were not found in the income range intended -- today they are selling for \$20,000. Mr. Warmington cites the conservatism of the lower-income Jamaican as the main reason, which has come about for historical reasons: Under colonial rule, Jamaicans couldn't vote unless they could produce tax papers showing them to be land-owners. Housing has therefore always had particular importance to Jamaicans as security, and Mr. Warmington says that even the higher incomes who now occupy Mountain Terrace resist the cooperative concept. Jamaicans, he says, are above all capitalists, and don't want their rights to speculate and profit by selling land and housing restricted.

The holding of land for speculation has of course been a factor contributing heavily to high costs of Jamaican housing. The Government is considering higher taxes on transfers, and higher land-tax rates, to help control this problem, but these are politically difficult. Mr. Warmington said that a good many Jamaicans own second houses -- most of these purchased with remittances sent by family from abroad.

Mr. Warmington represents the construction industry on the Jamaican Trade Administration, and thus will be a valuable source of information

on materials costs, import duty policy and tax questions relating to building materials.

Mr. Warmington noted that there will be a new corrugated galvanized iron plant in operation by next year in Kingston. He said the use of asphalt shingles is growing in Jamaica - that people find them attractive, as they simulate the prestigious cedar shingle roof. He mentioned the "decromastic" roof tile now being introduced (see following section).

In the area of building costs, Mr. Warmington felt that building construction costs are a relatively minor factor in arriving at the selling price of the house, and produced some detailed figures to support his view. Assuming four acres were to be developed with forty houses, at a land cost of J\$ 10,000/acre, his experience has been that about 55% of the cost to the purchaser lies outside the labor and materials of construction. The breakdown is shown in the following table:

1. Professional services	\$-	793.00	-	7.93%
2. Finance costs	-	768.00	-	7.68%
3. Government expenses	-	667.00	-	6.67%
4. Developer's costs and profit	-	1,500.00	-	.15%
5. Infra structure	-	247.00	-	2.47%
6. Attorney	-	80.00	-	.80%
7. Land	-	1,000.00	-	.10%
8. Contractor's overhead and profit	-	495.00	-	4.95%
9. House cost	-	<u>4,450.00</u>	-	<u>44.50%</u>
PURCHASE COST	\$	10,000.00		100 %

A breakdown of the cost of a house in this price range would be approximately as follows:

Labor	2,000.00
Materials	2,005.00
Insurance, Excise Duty	<u>445.00</u>
	<u>4,450.00</u>

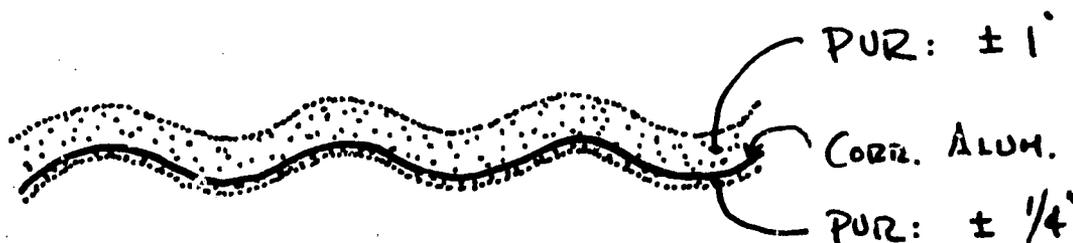
In addition to the purchase cost, a buyer would have to pay about \$500 in closing costs.

Discussion with Mr. Pat Stanigar, Partner in Design Collaborative,
Architects and Planners

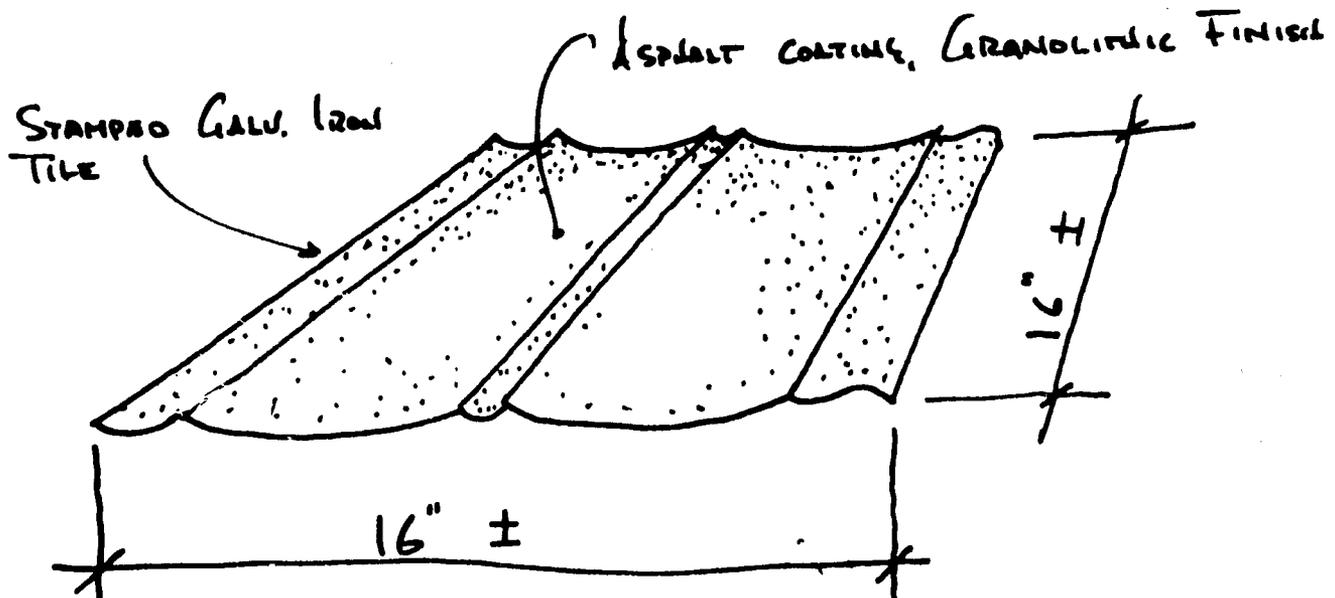
Design collaborative has been involved with "thousand of houses", but only one of the projects has been government assisted -- this is McIntyre Lands in Central Kingston, currently under construction. It consists of 450 houses: terrace units and 3-story blocks of flats, originally estimated at J\$ 6.00/sq. ft. but now coming in at about J\$ 11.00/sq. ft. Mr. Stanigar cites delays in construction due to shortages of material as well as rising costs as the principle problems.

The firm generally takes an innovative approach to design, and is particularly interested in improved materials and building methods. One of their projects is an experimental pipe-frame and cement-on-wire-lath house under development -- an early version of this unit was built at the National Housing Exhibit at a cost of J\$ 8.00/sq. ft. -- Mr. Stanigar said it seemed to be acceptable in spite of its unusual characteristics and appearance.

The McIntyre Lands project utilizes a self-spanning (12') arched corrugated aluminum roof, sprayed both sides with polyurethane:



He showed a sample of the "Decromastic" tile -- a stamped galvanized iron sheet (about 28 ga.) coated with asphalt with a granular mineral surface, similar to that on asphalt roll roofing:



Mr. Stanigar did not know the local source of the sample, nor the cost, but felt that it would be a very acceptable form of roofing, since it simulates a tile roof in shadow-line.

In view of their work with innovative materials, this firm is likely to be interested in results of the Jamaican roofing research, and quite possibly in collaborating for demonstration.

Discussion with Angus Macdonald, Architect

Angus Macdonald is a young American architect who has immigrated to Jamaica, and recently has formed a partnership with a Jamaican engineer, Roydell Kinghorne, and others, called Space Utilization Group, Ltd. The firm has several housing projects in the formative stages. Macdonald is particularly interested in developing the use of local materials for building. He and Kinghorne are about to undertake construction of four rammed earth houses on a speculative basis; if three are found acceptable to buyers, they will probably start a construction firm, training a crew in soil building techniques. Macdonald has done several rammed earth designs -- one version (not the one to be built first) is shown in

Figure 11. Intended for rural low-income dwellers, it is estimated at J\$ 3,760 (J\$ 5.00/sq. ft.) with self-help construction, J\$ 6,500 (J\$ 10.00/sq. ft.) if contractor built.

Another Macdonald design is shown in Figure 12. This is modular design of pre-cost lightweight concrete panels, expandable to two bedrooms. The cost of each module is estimated at J\$ 3,365.00.

Macdonald mentioned having had good experience with a roofing product called "English Butyl", by English Butyl Products, Ltd. It is a sheet material, cemented to a roof deck; joints are lapped and heat-sealed with a portable heater -- flashings and coves are formed easily on the job with the heater. He had no specific cost data, but said it could not be considered a low-cost roofing.

Another weatherproof coating which he has used for masonry in Jamaica is "Weathercote" by Surco (U.S.A.) -- apparently a resin mortar (acrylic?). It would not work as a coating for a concrete roof slab, as it is brittle and would crack with the slab.

Macdonald is very sympathetic to the roofing research, and would be happy to cooperate in demonstration phases.

Discussion with Mr. David Gregory Jones, Chief Architect-Planner,
Urban Development Corporation

This interview was a follow-up on the interview held at UDC on the previous field trip. Mr. Jones had obtained two reports on low-cost housing studies done by the Shankland Cox Partnership for the Ministry of Housing, and made them available for the roofing project. These are: "Site and Service Housing in Jamaica: The Camplands Project" (1973), and "Low Cost Housing in Jamaica: Study and Proposals for the Redevelopment of a Squatter Area in Trench Town, Kingston, Jamaica" (1971). Both these

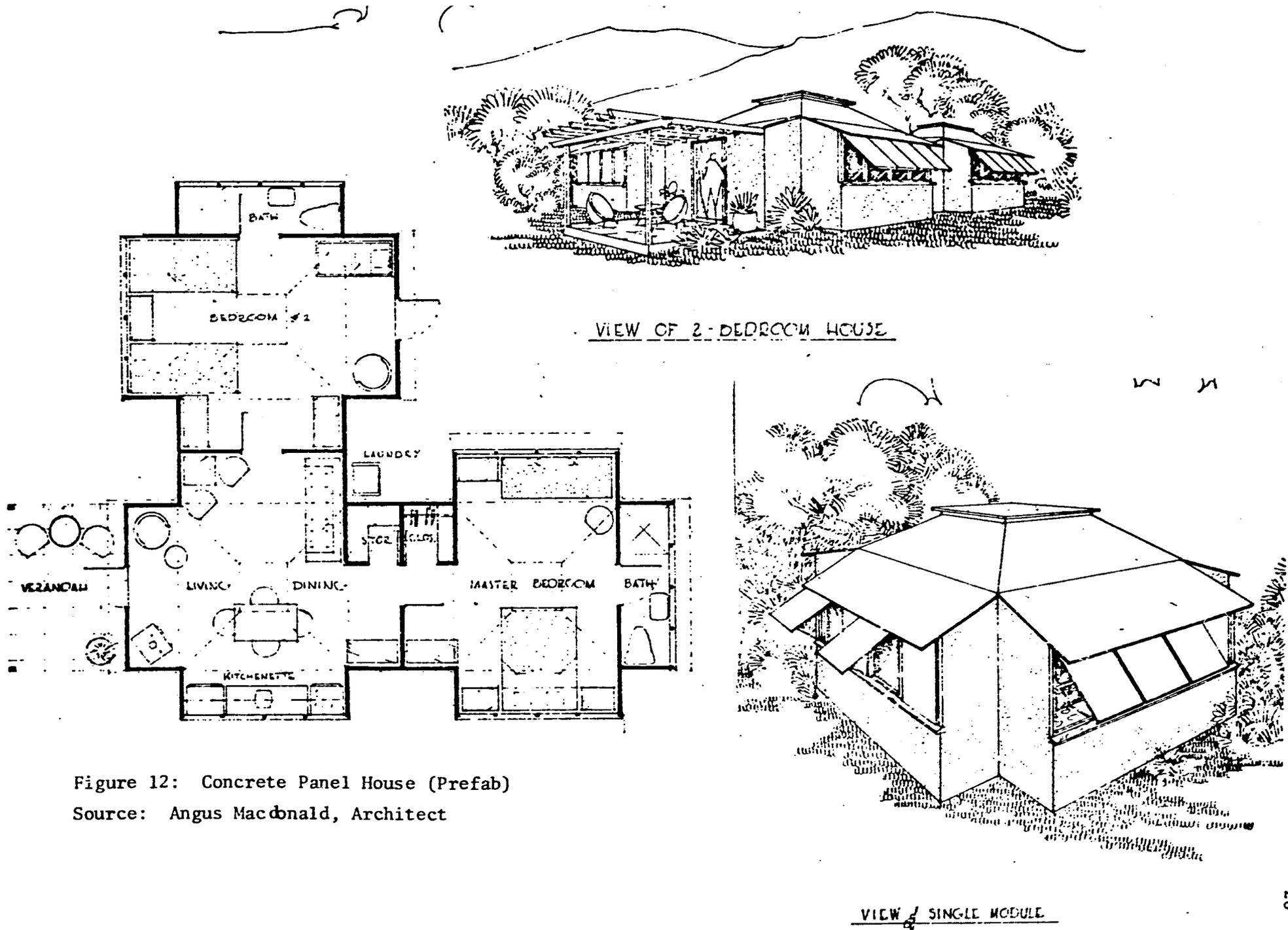


Figure 12: Concrete Panel House (Prefab)

Source: Angus Macdonald, Architect

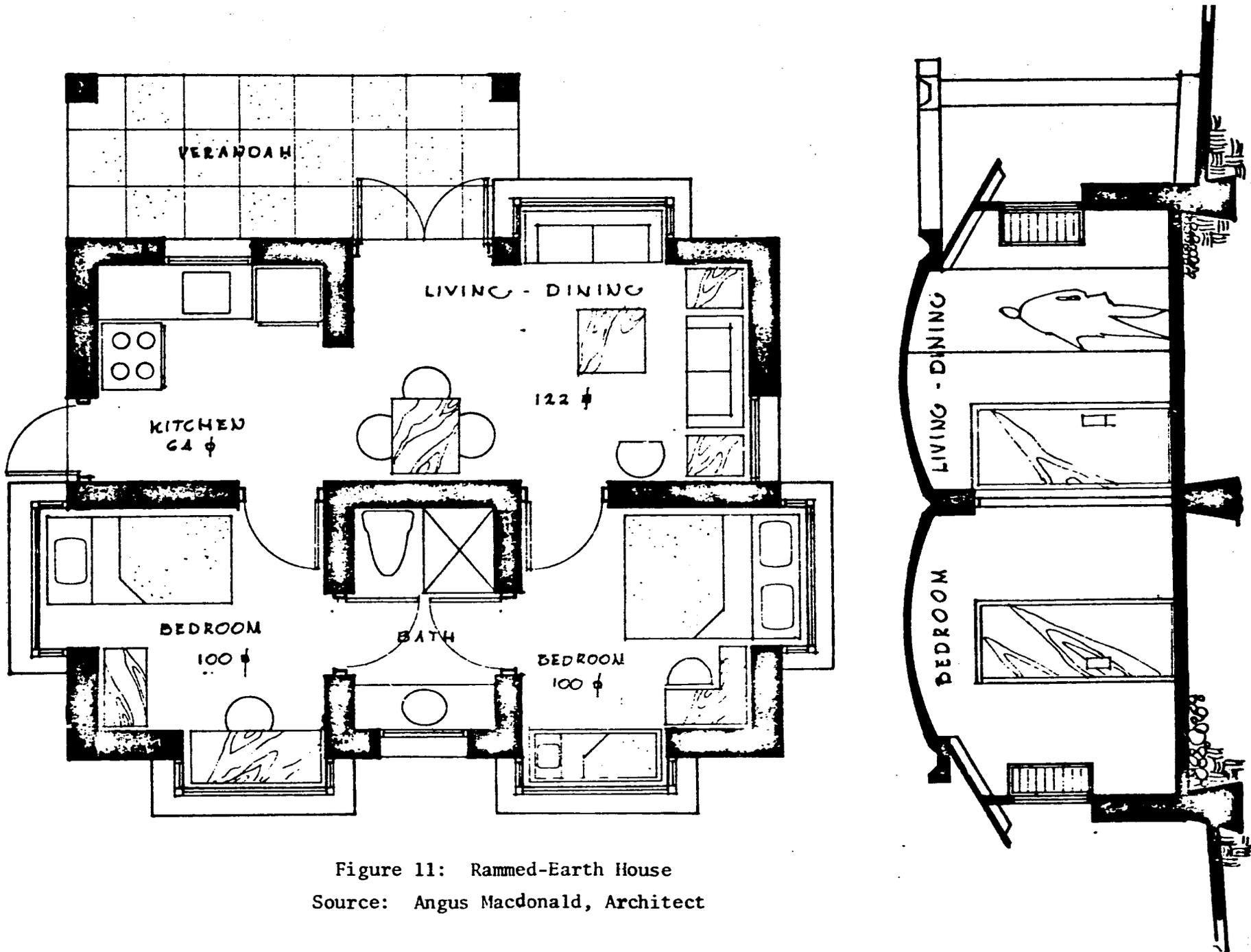


Figure 11: Rammed-Earth House
 Source: Angus Macdonald, Architect

reports contain considerable interesting information about low-income housing characteristics and the use of space by squatter families in the Kingston area. The Trench Town Report resulted in the redevelopment of part of the area -- some of the housing (Arnett Gardens) was visited on the previous field trip. The report refers to several socio-economic studies that have been made in the past which will be useful to obtain for the project. These are:

Survey of occupants of government housing built since 1961 - by the Department of Sociology, University of the West Indies, 1965.

Survey of economic and social conditions in squatter area of Trench Town - a statistical report by the Department of Statistics, 1967.

Survey of household structure, income and employment of tenants in old government housing - a 5% sample by the Ministry of Housing, 1969.

Study of dwelling use, travel-to-work, play and shopping habits - by Shankland Cox, 1969.

Mr. Jones noted that the GOJ/IBRD Montego Bay sites and service project (Catherine Hall) lies within the UDC redevelopment area, and extended an invitation to visit that site and observe current UDC housing on the next field visit.

He felt that the next few years would generate considerable housing activity in Jamaica -- that the Government is strongly committed to upgrading housing conditions, especially in squatter and slum areas in the major cities, and that there would be opportunities for experimentation and innovation in UDC and other housing agencies.

Discussion with Peter Kolar, USAID Mission (De-Briefing)

Mr. Kolar reported that the Foundation for Cooperative Housing (FCH) is sending two people to Jamaica at the end of June to work with the Ministry of Housing on setting up a cooperative housing program within the Ministry of Housing. The USAID housing officer is sending two people (Harold Robinson and Donald Gardner) on June 24th to begin work on a "National Housing Strategy" for Jamaica. These efforts will require a series of trips and it is likely that they will overlap with our visits. Kolar would be interested in having us meet with them to discuss the roofing research. One of the FCH people will be Paul Campbell -- FCH has expressed interest in developing a Housing Cooperative Demonstration within the GOJ/IBRD sites and services project. Mutual Housing Services Company, the Jamaican cooperative housing organization, currently receives technical assistance from FCH, funded by USAID.

Kolar agrees that there is an increasing interest in dealing with Jamaica's housing problems on the part of both Jamaican Government, bilateral aid (especially the USA) and of course the World Bank, whose sites and services project has provided a major impetus to recent housing activity.

Kolar will be away part of July -- tentatively from July 15th to 26th. This, however, need not keep us from scheduling a trip then, unless we want him to assist. He re-emphasized during this final meeting that we are free to operate as necessary in making our own contacts, that he will assist as we wish, and that he will appreciate being kept informed.

5. MISCELLANEOUS NOTES

Little attempt was made to obtain information on the sources and economics of raw materials, this being left to the MRC field effort. However, during the field trip the Jamaican papers were full of discussion on the decision of 3 Caricom countries -- Jamaica, Trinidad and Guyana -- to join together to build two bauxite smelters, one each in Trinidad and Guyana, with alumina supplied by Jamaica. Since there will be no equity participation by any entity outside of the Caribbean Region, eventually this will result in aluminum (including roofing, a principal roofing material at present) becoming more of an indigenous product than has been the case. Jamaica has also taken steps to obtain more revenue from her bauxite resources by revising its taxation policy. (See Figure 13).

The new C.G.I. Plant, scheduled to come on line next year, was mentioned in Section 4. Detailed information should be sought on the next trip by MRC.

On Sunday, June 16th, at the invitation of Dorene Williams, the writer participated in a self-help school building project in a rural hamlet about an hour and a half north of Kingston. It was one of a series of building parties that have been organized to construct a small building in a remote area where children presently must walk for miles to attend school. Non-local participants included a sociologist, an architect, an electrical engineer, several bureaucrats and the Member of Parliament in whose district the town lies. Local participants included a store keeper, a barkeeper, and several skilled masons who laid block for the walls, tended with materials by the others. Organization was poor and the work party was slow getting started, but once underway a lot of blocks were laid by virtue of the sheer number of participants. There are, over the

island, a number of such self-help projects in progress, and they possibly might provide opportunities for roofing demonstration.

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Arabs giving
\$200 to
Africans
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VOL. 2 No 7

Sunday, June 9, 1971

Big Three's economic horizons widened:

BAUXITE SMELTERS FOR TRINIDAD, GUYANA

THE ECONOMIC horizons of the Caricom big three — Jamaica, Guyana and Trinidad — widened Friday night when a decision was taken to build two smelting plants in Trinidad and Guyana.

Prime Minister Michael Manley returned from Port of Spain yesterday with news of the agreement, following a meeting with Eric Williams and Forbes Burnham.

Agreement on the two-pronged scheme calls for one smelter on the Point Lisas industrial complex in south Trinidad. It will be powered by natural gas from the east coast and will use alumina supplied by Jamaica and Guyana.

The second smelter in Guyana will operate through the exploitation of that country's potential for hydro electric power.

Guyana is to offer equity participation to the other two Governments in facilities for the production of alumina for the smelter.

Responsibility

As far as the Guyana smelter is concerned that country will be solely responsible for the provision of power facilities and undertake to take all reasonable steps to supply uninterrupted power.

Although the financial implication and costs were not given priority will be given to the employment of nationals from the countries.

At the same time preference will be given to contractors in the three countries for construction and supplying raw materials.

The transportation facilities are to be owned by the three countries and may be extended to other Caribbean countries approved by them. Those facilities will be extended to oil and sugar and other commodities where possible.

Understanding

It is understood that construction on the Trinidad smelter will begin early January 1976 while the production of ingot will commence in January 1979. The Guyana smelter is slated for 1981.

Meanwhile, a joint venture group has been set up to co-ordinate the work and this group will meet in Jamaica on June 21. Out of this meeting a report will be submitted to a proposed meeting of the Prime Ministers to be held shortly after.

Agreement was also reached that decisions taken in respect of activities connected with the Trinidad smelter should not adversely affect the later activities for the Guyana smelter.

Both smelters will have first claim relative to any extra-regional requirement on regional supplies of alumina, gas and power.

Capacity

Both plants will have a capacity of 200,000 tons each and will be owned by the three Governments. Jamaica and Guyana will each own 33 per cent of the Trinidad smelter while the host country will own 34 per cent.

In the Guyana plant Jamaica and Trinidad will own 24 per cent each, with Guyana taking 52 per cent.

The first plank of the scheme rests in Trinidad. The three countries will share production costs and output and the way has been left clear for later participation by Surinam and other Caribbean countries on agreement by the original partners.

Stipulation

There will be no equity participation by any entity outside of the region. Each participating country will dispose of its share of the product but there is room for joint arrangements.

The Trinidad Government will be solely responsible for providing power while Jamaica and Guyana will provide guaranteed supplies, in equal proportions, of Alumina.

Mr. Manley said that Jamaica will have exclusive responsibility for its share of alumina supply.



Mr. Burnham



Dr. Williams



Mr. Manley

Levy praised

Jamaica's move to get more income from exploitation of its bauxite resources was hailed in Trinidad on Friday night by Guyana's Prime Minister Forbes Burnham and Trinidad's Eric Williams.

A Reuter's report said the two leaders considered Jamaica's taxation formula an important advance in securing a more equitable distribution of the proceeds arising from the successive stages of processing primary products.

"It was" a significant step in the direction of finding solutions to the problem of deteriorating terms of trade which is of central concern of all countries of the Third World.

Referring to further negotiations between the Jamaica Government and the bauxite and alumina plants Mr. Burnham and Dr. Williams said: "The progress of these negotiations will be observed with interest since the two Governments are firmly in support of efforts to increase national control of resource industries."

They also pledged support to ensure the success of the negotiations.

The Ruling Peoples National Congress of Guyana through its official organ the New Nation called the Production Levy "ingenious, realistic and beautiful."

A Reuter's report stated that the New Nation said the Production Levy might well have created a pricing formula for the International Bauxite Association.

The levy was "a studied and courageous attempt to correct the plunder which half a dozen multinational companies had been committing against the Jamaican people for too long."

**Leacraft Robinson,
Ian Ramsay:
different views
on Gun Court Act
— Page 3**

Local sugar interests watching situation in US

BY LESLIE THOMPSON
Commonwealth Caribbean sugar interests were reportedly in touch with their local representative in the United States over the week-end, concerning developments arising out of the US House of Representatives defeat of the Sugar Act's extension Bill.

The Commonwealth Caribbean was among 21 supplier areas which were virtually left without a guaranteed outlet for their sugar in the United States' market, following the House's defeat of the Bill last Thursday.

The US Sugar Act is due for expiry at the end of this year, and the defeated Bill had sought to extend it for another

five years.
The Commonwealth Caribbean's legal representative in the United States, Arthur Lee Quinn, was reportedly keeping eyes and ears keyed to developments, for feedback to the region.

Meanwhile, a qualified source in the local industry has said that the implications of the defeat of the Bill throws some discomfort over the long term outlook for the region.

The source felt that the stability of the industry was uncertain, especially since the region has not yet received any assurance of getting a place in the enlarged EEC market.

Since 1960, the Common-

wealth Caribbean has shipped 2,152,673 tons of sugar to the United States — not taking the amount sold under a special agreement this year, when the U.S. threw its doors open to take in an additional amount of sugar.

Jamaica's share of the 2.15 million tons is 977,963 tons.

Meanwhile, reports from Guyana are that "management and workers representatives have reacted with optimism to the U.S. defeat of the Bill, feeling that "there could be a silver lining for the Caribbean behind the present dark cloud."

According to the Guyanese opinion, it "was wrong for anyone to rush to the conclusion that the outcome of the vote was necessarily bad for the West Indies."

The sugar workers' union president, Herbert Ishmael feels that if the Senate overruled the House of Representatives' vote, "it could be a blessing in disguise for the Caribbean over the next three years."

Mr. Ishmael said that there were strong possibilities that the Caribbean can sell its sugar to Canada and to other markets at prevailing lucrative prices, which might remain like that for at least three years. After that period, prices might fall, but still be above the current U.S. price, Mr. Ishmael pointed out.

REACTION

PORT OF SPAIN, June 9.—The predicted demise of the United States Sugar Act made it vitally important for the Caribbean to negotiate a satisfactory agreement with Europe, a top regional sugar official said here.

Raymond Norris, Secretary of the West Indies Sugar Association (WISA) was commenting on the surprise defeat in the United States House of Representatives of a motion to extend the 10-year old act for another five years from December 31.

The Act, turned down on Thursday, still has to come before the Senate but observers are already forecasting the demise of the legislation which would mean the end of a guaranteed U.S. market for sugar from Caribbean and other suppliers.

The competition that would result, Mr. Norris said, would make it vitally important for the Caribbean to negotiate a satisfactory agreement for the entry of region sugar into the European Common Market.

Director of the Barbados Sugar Producers Association Erskine Ward expressed disappointment at the defeat of the Act in the House of Representatives.

6. SUMMARY AND CONCLUSIONS

- a. Trip planning in its official aspects should be rationalized by better, more direct communication with the local AID Mission (see comments, Section 1).
- b. If the postponed MRC field trip concentrating on resources cannot be made in July, it should happen in August, to allow time to assimilate information prior to the Africa trips in the fall. There is one drawback to August -- Dr. Ken Magnus will be off island for the month, and discussion should be held with him about counterpart activity and information sources on materials research in the Scientific Research Council. Perhaps MRC could arrange a contact in SRC by writing or phoning Magnus -- at any rate, he is most interested in the project and this should be followed up. Father McLaughlin should be back by July 18th, if not sooner. Peter Kolar will be away (tentatively) from July 15th to 26th, although he has said that it is not important for him to be there unless we want his specific help with Government. If the trip is made in August, it will be best to avoid festival time, approximately the first 10 days of the month.
- c. There is a considerable increase of housing activity -- or the planning for it -- in Jamaica at present. The World Bank projects are providing an impetus, and USAID's housing assistance has stepped up, with the signing of a \$10,000,000 loan to the Jamaica Mortgage Bank, FCH participation in cooperative housing, the arrival of the "Housing Strategy" team from the AID Housing Office, and the roofing research project. The Ministry of Housing is being reshaped, and these changes will undoubtedly continue to result in short-term problems in making

the right contacts within the Ministry. In general, despite severe problems such as a tremendous rate of inflation (30%?), the economic and political mood seems to be upbeat. Recent decisions toward more indigenous control of prime resources (Figure 13) have had much to do with that mood.

- d. The effort to identify housing projects with which the roofing research might be aligned for demonstration revealed a number of possibilities, both public and private. In the public sector, information prior to the trip indicated that the World Bank Sites and Services Project would probably rank high for a number of reasons, viz: the institutional attention that it will receive, the amount of data available by monitoring of social and economic characteristics, the visibility it will afford, etc. The field trip indicated that the first-year sites are underway roughly on schedule, but that the Ministry is somewhat behind in administrative and organizational aspects of the project. CDT should make a special effort to schedule its next trip to allow for discussions with staff of the Ministry's Site and Services Unit, which should be more fully formed by late July or August. Dealing with the sites and services project may be somewhat time-consuming and involve some bureaucratic pitfalls (e.g. protocol between GOJ and IBRD) but it may well be worth the effort. It deserves serious discussion with the Ministry.

In the private sector, each of the architects, builders or developers interviewed expressed strong understanding of the need for improved roofing, and interest in being kept informed and cooperating. Each can be expected to be involved in a number of projects during the period when demonstration

will be required, and it is a matter of keeping in touch with these offices to determine specific demonstration possibilities. The identification of such opportunities is, of course, a continuing process, and each field trip can be expected to add more information.

MRC and CDT should discuss project and site selection criteria (Section 2) to determine if other criteria should be included, and to begin to formulate the range of results desired from demonstration -- i.e. should a variety of incomes and house costs be covered? Should demonstrations cover both urban and rural areas? If rural, how remote?

**APPENDIX A: CUMULATIVE LIST OF JAMAICAN
FIELD CONTACTS**

<u>Name</u>	<u>Position or Field</u>	<u>Business Address</u>	<u>Business Phone</u>	<u>Other Phone</u>
Fitz Ford	Head, Technical Service Section (Formerly Economic Planner w/ Central Planning Agency)	Ministry of Housing Kingston	6-1590 6-7008 6-1693	
Lewis Davidson	Director	Knox Development Foundation Knox College Spaldings	964-2359	
Ted Warmington	Architect/Builder/Developer	149 King Street Kingston	9-1586	
Dorene Williams	Sociologist, Marketing Analyst	National Housing Corp. Ga. Oxford Rd Kingston	6-5854 6-5855 6-5856	
Eran Spiro	Architect-Planner		6-5066	Home: 944-2255 (Stony Hill)
Peter Kolar	Program Officer	USAID Mission 43 Duke Street Kingston	2-6340	Home: 7-6247
Paul Thompson	Director (?)	Mutual Housing Service 9 Tangerine Place Kingston	6-4766	
Patrick Stanigar	Architect	Design Collaborative 3 Dumfries Rd Kingston 10	6-4288	
Herb Bradford	Architect and Principal	Rutkowski Bradford and Partners Architects 7 Cecelio Ave. Kingston 10	6-3150	

<u>Name</u>	<u>Position or Field</u>	<u>Business Address</u>	<u>Business Phone</u>	<u>Other Phone</u>
Dr. Ken E. Magnus	Director	Scientific Research Council Hope Rd, Kingston 6	7-9931	Home: 7-5342
Dr. Marshall Hall	Economist and Head	Dept. of Management Studies University of the West Indies Mona, Kingston 7	7-6661	Home: 7-7477
Alfrico D. Adams	Engineer and Principal	Douet, Brown, Adams-Engineers 7 Lismore Ave. Kingston 5	6-3485	
Roy Brown	Associate	Douet, Brown, Adams-Engineers 7 Lismore Ave. Kingston 5	6-3485	
Ruddy Austin	Jamaica Master Builders (Member)	4 Ballater Ave Kingston 10	6-4588	
Angus W. MacDonald	Architect Space Utilization Group, Ltd	Apt. 6 St. James Court 7 Kingsway Kingston 10	(None)	Pay Phone: 6-9895
Gloria Knight	Manager	Urban Development Corp. 40 Harbour St. Kingston	9-2240	
David Gregory Jones	Chief Architect-Planner	Urban Development Corp. 40 Harbour St. Kingston	9-2240	
Karl Thorne	Senior Architect-Planner	Urban Development Corp. 40 Harbour St. Kingston	9-2240	
Rev. Gerald L. McLaughlin	Special Advisor	Ministry of Housing 2 Hagley Park Rd Kingston 10	6-1590 6-7008 6-1693	Nights: 4-2035

<u>Name</u>	<u>Position or Field</u>	<u>Business Address</u>	<u>Business Phone</u>	<u>Other Phone</u>
A. K. Elliot	Administrative Secretary	Jamaica Bureau of Standards 6 Winchester Rd, Kingston		
Roydell P. Kinghorne	Engineer (Structural) (Also Partner w/ Angus MacDonald in Space Util. Group)	Ministry of Housing 2 Hagley Park Road Kingston 10	6-1590 6-7008 6-1693	
L. A. Dixon	Architect	Ministry of Works 140 Maxfield Ave, Kingston	6-3110	
Douglas Vaz	Manufacturer and President of J.M.A.	Jamaica Manufacturers Assoc 85a. Duke St, Kingston	9-5515	
Denis Simmons	Quantity Surveyor	Systems Building Co., Ltd 42a. Upper Waterloo Rd Kingston 8	4-5429	
Noel E. Foster	Manager	Coconut Industry Board 18 Waterloo Road Kingston 10	6-1770	
David Romney	Director of Research	Coconut Industry Board 18 Waterloo Road Kingston 10	6-1770	
David Lord	Managing Director	Banana Board 10 South Ave. Kingston 4	2-5490	
Trevor Donaldson	Chairman	Banana Board 10 South Ave. Kingston 4	2-5490	
Reggie Cardosa	Sites and Services Group (?)	Ministry of Housing 2 Hagley Park Road Kingston 10	6-1590 6-7008 6-1693	

<u>Name</u>	<u>Position or Field</u>	<u>Business Address</u>	<u>Business Phone</u>	<u>Other Phone</u>
? MacDonald	Ex Permanent Secretary, Now Consultant to Ministry of Housing	Ministry of Housing 2 Hagley Park Road Kingston 10	6-1590 6-7008 6-1693	
Clovis McLean	Acting Permanent Secretary	Ministry of Housing 2 Hagley Park Road Kingston 10	6-1590 6-7008 6-1693	

APPENDIX B:

Cumulative List of Pertinent Literature

* = Copy on file at CDT

National Physical Development Plan for Jamaica. Probably not now obtainable for the project, but can be used at Town Planning Department, Kingston, and the Dag Hammerskold Library, United Nations, N. Y.

*Kingston Regional Plan. Prepared for the Government of Jamaica by the United Nations, 1973.

*Kingston Region Draft Low-Income Housing Strategy. Ministry of Housing, Kingston. Prepared May, 1972, by Shankland Cox Planners and Architects, consultants to the Ministry.

*Budget Speech, 1973, by Hon. Anthony Spaulding, Minister of Housing. Housing Policy in broad outline.

*Survey of Housing Conditions in Delacree Pen, by the Continuous Social and Demographic Survey Unit, Department of Statistics, Kingston, December, 1970. Detailed data on the socio-economic conditions of the people of Delacree Pen, with special reference to type and condition of housing.

*Map, location of slum and squatter settlements, Kingston metropolitan area.

*Economic Survey of Jamaica, 1972. Prepared by the National Planning Agency.

*The Urban Development Corporation Act, 1968, establishing UDC.

*Miscellaneous brochures on Urban Development Corporation projects, some including typical house plans.

*Urbanization in Jamaica. International Urbanization Survey Report to the Ford Foundation. 1972.

National Development Plan, Jamaica, 1970-75. Available at various Ministries and at the National Planning Agency, Kingston. Xeroxed excerpts on housing and development strategies on file at CDT.

*"Low Cost Housing and Extreme Wind-Related Problems in Jamaica." Report to National Bureau of Standards (U.S.A.) by A.D. Adams, November, 1973. Reviews existing low-cost housing systems and materials, socio-economic considerations, wind-related problems.

*Letter to I. O. Salyer from A. D. Adams, outlining available raw materials and products for roofing.

*Jamaica: Appraisal of a Site and Services Project. Report No. 294a-JM, International Bank for Reconstruction and Development. April 12, 1974.

- *Site and Service Housing in Jamaica: The Camplands Project. Report prepared for the Ministry of Housing by Shankland Cox Partnership. 1973.
- *Low-Cost Housing in Jamaica: Study and Proposals for the Redevelopment of a Squatter Area in Trench Town, Kingston. Shankland Cox Partnership, 1971.
- *Jamaica Architect, Issue No. 8: "Housing". 1971.
- *"Falmouth 1791-1970." Georgian Society of Jamaica Special Publication on Jamaica's Architectural Heritage. 1970?
- *Economic Survey, Jamaica, 1972. National Planning Agency, Kingston. 1973.