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MEXICO

SECOND URBAN AND REGIONAL DEVELOPMENT PROJECT

STAFF APPRAISAL REPORT

April 24, 1981

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Currency Equivalent

Currency Unit	=	Mexican Peso (Mex\$)
US\$1	=	Mex\$ 22.5
Mex\$ 1	=	US\$0.04
Mex\$ 1 million	=	US\$44,400

Units and Measures

m	=	meter (39.37 inches)
km	=	kilometer (0.62 miles)
m^2	=	square meter (10.76 square feet)
ha	=	hectare (2.47 acres)
m^3	=	cubic meter (264 US gallons)
lt	=	liter (.264 US gallons)
lps	=	liters per second

Fiscal Year

January 1 - December 31

LIST OF ACRONYMS AND ABBREVIATIONS

ARMO	-	Servicio Nacional de Adiestramiento Rapido de la Mano de Obra en la Industria
BANOBRAS	-	Banco Nacional de Obras y Servicios Publicos
CANACINTRA	-	Camara Nacional de la Industria de la Transformacion
CANACO	-	Camara Nacional de Comercio
CECATI	-	Centro de Capacitacion Tecnica e Industrial
CENAPRO	-	Centro Nacional de Productividad
CEPROTAB	-	Centro de Productividad de Tabasco
COPLADECH <u>1/</u>	-	Comite de Planeacion Estatal del Estado de Chiapas
DPF	-	Detailed Project Features
FIDEIN	-	Fideicomiso de Conjuntos, Parques, Ciudades Industriales y Centros Comerciales
FIDELAC	-	Fideicomiso Ciudad Lazaro Cardenas
FIFAPA	-	Fondo de Inversiones Financieras para Agua Potable y Alcantarillado
FOGAIN	-	Fondo de Garantia y Fomento a la Industria Mediana y Pequena
FOMITA	-	Fondo Mixto para el Desarrollo Industrial de Tabasco
FONATUR	-	Fondo Nacional de Fomento al Turismo
IDUVIV	-	Instituto de Desarrollo Urbano y de la Vivienda INDECO - Veracruz
IDVICH	-	Instituto de Vivienda INDECO - Chiapas
IDVIT	-	Instituto de Vivienda INDECO - Tabasco
INDECO	-	Instituto Nacional para el Desarrollo de la Comunidad y de la Vivienda Popular
PEMEX	-	Petroleos Mexicanos
SAHET	-	Secretaria de Asentamientos Humanos del Estado de Tabasco
SAHOP	-	Secretaria de Asentamientos Humanos y Obras Publicas
SAPA <u>2/</u>	-	Servicios de Agua Potable y Alcantarillado del Estado
SARH	-	Secretaria de Agricultura y Recursos Hidraulicos
SEPAFIN	-	Secretaria del Patrimonio y Fomento Industrial
SHCP	-	Secretaria de Hacienda y Credito Publico
SPP	-	Secretaria de Programacion y Presupuesto

1/ COPLADET and COPLADEV stand for these committees in Tabasco and Veracruz, respectively.

2/ SAPAET and SAPAECH stand for these authorities in the States of Tabasco and Chiapas, respectively.

MEXICO

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This report has been completed on the basis of an appraisal mission which visited Mexico between May 16 and June 18, 1979; and of a post-appraisal mission that was in Mexico between February 4 and 20, 1980. The report was written by M.F. Rothschild (Project Officer), with the cooperation of T. Persaud and M. Arbell, D. Cole, C. Ramirez, N. Schutz, and Ch. Stevens (Consultants); and additional support by M. Etcheverry and J. Gough (Research Assistants).

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I. SPATIAL AND URBAN-REGIONAL BACKGROUND

A. Spatial Issues

1.01 The major issues of spatial development in Mexico refer to the heavy centralization of economic activity, wealth and people in Mexico City; the lack of integration between urban and rural areas; and imbalanced inter-regional development. ^{1/} The first and second, however, present different kinds of policy issues than the third--which reflects differences in resource endowment and comparative advantages--and is primarily political.

1.02 Whether economic and demographic concentration in Mexico City has already reached a point at which the social costs of agglomeration exceed the benefits cannot be proved conclusively. But it is clear that if this threshold has not yet been reached, it is likely to be reached in the relatively near future. It is also clear that cities which may represent alternatives to the further growth of Mexico City, should be identified on a basis which is consistent with the achievement of national economic growth and social development. Such cities should not only offer agglomeration economies, but should have a sufficiently elaborate system of secondary centers to permit the development of self-sustained and integrated regional systems.

1.03 Even when a region is richly endowed, a concerted intersectoral social and economic investment program is essential. The programming, implementation and administration of such a program require strong and effective institutions, partly in order to attenuate the imbalances which often occur between the growth of a leading economic sector and the development of infrastructure and complementary activities. Such imbalances particularly affect low-income groups in these regions.

B. National Spatial Policies

1.04 In recent years the main goal of urban policy in Mexico has been to control the growth of Mexico City and, to a lesser degree, Guadalajara, and Monterrey. New prices for public utilities, tax incentives, differential interest rates for industrial credit, and public investments in industrial estates and urban complexes in selected locations have been introduced in support of these objectives.

1.05 A Law of Human Settlements (1976) provides a legal basis for planning and implementing a spatial development strategy. Its objectives are: to promote medium-sized cities as alternatives to the largest urban centers; to foster rural-urban integration; to encourage local participation in resolving urban problems; to enforce land use control; to improve urban services; and to minimize journeys (between residential and work areas) within cities.

^{1/} As distinct from imbalances in inter-personal equity. A detailed discussion of these issues is presented in Spatial Development in Mexico, IBRD Report No. 1081a-ME, January 31, 1977. Urban Development in Mexico is discussed in a report of the same title (No. 1449-ME, also dated January 31, 1977).

1.06 The Ministry of Human Settlements and Public Works (SAHOP), established in 1976, published a National Urban Development Plan in May, 1978. The Plan contains a spatial strategy based on a system of 13 integrated urban regions, of which ten were selected as maximum priority areas; 1/ in the remaining three, further growth will be regulated. 2/ Because of its relatively recent date and the lack of real control over investments in other sectors, not many of the Plan's objectives have been achieved. The roles of SAHOP, BANOBRAS, 3/ SPP 4/ and SHCP 5/ in the urban and regional fields overlap to some extent, adding an additional degree of difficulty to an already complex situation.

1.07 Although the Plan represents a significant effort to spell out consistent guidelines for urban development in Mexico, and although many of its parameters are appropriate, some of its conclusions are questionable. One of the major recommendations of the Plan, however, deserves full support: to encourage and facilitate the orderly development of regions with high potential for growth. 6/ Lazaro Cardenas is one of the regions mentioned in the Plan and is given priority by the Government. This area was selected for the first Bank-supported project in the urban field in Mexico (see next section). Another priority region, the Isthmus of Tehuantepec, is one of those with the highest potential for growth in the country. This is the area selected for the new proposed second urban project (see Sections D and E below).

1/ The priority zones considered in the Plan and the corresponding urban centers are: (1) the Rio Panuco - Huasteca Potosina Conurbation zone (Tampico, Ciudad Madero, Ciudad Mante and Ciudad Valles); (2) the Gulf Coast and Isthmus of Tehuantepec area (Coatzacoalcos-Minatitlan, Villahermosa and Salina Cruz); (3) the Chihuahua Border area (Ciudad Juarez); (4) the Laguna Conurbation area (Torreon and Gomez Palacio-Lerdo); (5) the Bajio Zone (Leon, Irapuato and Queretaro); (6) the Baja California Border area (Tijuana, Mexicali and Ensenada); (7) the North Sinaloa and Sonora Coast (Ciudad Obregon, Guayunas and Los Mochis); (8) the Rio Armecca Conurbation Zone (Puerto Vallarta and Bahia de Banderas); (9) the Manzanillo-Barra de Navidad Conurbation zone (Manzanillo and Barra de Navidad); and (10) the Balsas River Conurbation and Guerrero Coast area (Lazaro Cardenas, Zihuatanejo and Acapulco).

2/ This group consists of the Monterrey, Guadalajara, and the greater Mexico City metropolitan areas.

3/ Banco Nacional de Obras y Servicios Publicos is the main financial institution for housing and infrastructure works (see Section B in Chapter III).

4/ Secretariat of Programming and Budgeting.

5/ Secretariat of Finance.

6/ All the high-priority regions mentioned in this Plan have been endorsed and included in the Industrial Development Plan published by the Government in March of 1979.

C. Previous Urban Projects in Mexico

1.08 The first urban project supported by the Bank in Mexico was the Lazaro Cardenas Conurbation Development project (Loan No. 1554-ME), which was approved by the Board on September 27, 1978 and which became effective on February 14, 1979. The Lazaro Cardenas project was an attempt to deal with a variety of urban and regional development issues in a priority region which had previously been the subject of other Bank-supported projects: the Las Truchas (SICARTSA) Steel Mill, the Zihuatanejo-Ixtapa tourism development project and an international airport. The project includes shelter-related programs, credits for productive enterprises, river control works, rural feeder roads, and regional and project-preparation studies.

1.09 During implementation, progress has been made towards reducing subsidies in shelter programs. Despite strong initial scepticism by the authorities as to whether substantial changes in interest rates for mortgages and in tariffs for services would be acceptable to low-income groups, such changes have been successfully institutionalized. This has confirmed that the capacity-to-pay of low-income groups is often underestimated. Incomes are often understated and additional funds often become available 1/ when needed to pay for priority programs. The success of this program has led to its rapid expansion in the Lazaro Cardenas area, and has attracted the attention of sociologists and shelter experts elsewhere in the country. 2/

1.10 Implementation of other components has also been generally satisfactory, but Bank disbursements are behind the original schedule by about one and a half year. 3/ This is mainly because the Borrower has not processed reimbursement requests for disbursements already made, and because of some delays in the implementation of components not carried out directly by the main implementing agency of this project; recent action is expected to improve this situation and the pace of Bank disbursements is expected to increase substantially during 1981. Some problems have arisen regarding the accounting procedures used in the implementation of this project; in particular with respect to the Construction Material Loans program. This issue is presently being discussed with the Borrower.

1.11 The institutional structure for implementing the Lazaro Cardenas project was a pre-existing trust (FIDELAC) controlled by BANOBRAS. This trust was created for the urban development of the region, began operations in

1/ For example, by taking additional jobs or even, by changes in their consumption function.

2/ The experiences of the shelter-related programs (see photographs at end of this report) were reviewed in detail during a seminar held in July of 1980 in the offices of the project's implementing agency (FIDELAC-Fideicomiso Ciudad Lazaro Cardenas). The seminar was held at the request of FONATUR (Fondo Nacional de Fomento al Turismo) to acquaint its staff with these experiences and introduce similar programs in the (Bank-supported) tourism projects in Baja California.

3/ Bank disbursements by December 31, 1980 reached about US\$3.2 million, although they were scheduled to have reached US\$11.3 million by then.

January 1973, and was strongly supported by the Secretariat of Human Settlements and Public Works (SAHOP). However, present Government policy is that investment programs should be implemented and managed by state and municipal authorities, rather than by federal (sectoral) agencies. These procedures are certain to result in more appropriate investment programs, and in an institutional structure conducive to the effective implementation of urban and regional development projects.

D. The Isthmus Region ^{1/}

1.12 This region can be roughly defined as an area of about 14 million ha ^{2/} limited on its northern and southern margins by the Gulf and Pacific coasts, respectively; on its eastern side by the Guatemala border and a sparsely populated area east of Villahermosa; and on its south-western and north-western sides by a range of mountains in the State of Oaxaca, and by the Coatzacoalcos-Minatitlan metropolitan areas, respectively. Its population in 1970 was estimated at about 3.1 million, or 6.3 percent of the national total. It is expected that the 1980 census data, when available, will indicate a regional population of close to 5.0 million. A high proportion of this population (51.1 percent in 1970) is between 15 and 65 years old, which yields a relatively favorable ratio between this group and non-working dependents. About 40 percent of the region's population lives in urban areas -- defined as those with at least 2500 inhabitants.

1.13 This region provides a unique environment for regional development in Mexico because it combines an unusual potential for future economic and population growth with a present level of welfare that makes it one of the poorest areas in the country. By comparison with the rest of Mexico, the Isthmic region is well endowed with natural resources. The Gulf Coast has been recognized for some time as an appropriate location for intensive agricultural development given its abundant soil and water resources. The predominance of agriculture in the region's economy and employment structure is illustrated by the fact that about two-thirds of the economically active population and of all males were (in 1970) engaged in this sector. Only 14.1 percent of the labor force in the region was engaged in 1970 in the industrial sector, most of which (e.g., 80 percent in Tabasco), in turn, related to agro-industries. Since 1974 the region has become Mexico's major oil producer, and now provides about two-thirds of national output. The region is also well endowed with hydroelectric resources.

^{1/} See Maps 15686 and 14902 at the back of this report. A more detailed description of the Isthmus region may be found in a Bank document: The Economic Development of the Isthmus Region of Mexico, Report No. 1080-ME, March 30, 1976, and in the economic study of Tabasco conducted by the Bank in April of 1979: Mexico-Oil Impact on Regional Development: A Case Study of the State of Tabasco, Report No. 3087-ME, July 31, 1980.

^{2/} Of these, about 2.5 million ha are in the state of Tabasco, 7.5 million ha in Chiapas, 2.0 million ha in Oaxaca, and 2.0 million ha in Veracruz.

1.14 The recent growth of the petroleum sector has severely affected the region's social and economic structures. Pemex 1/ investments in the Villahermosa area rose from Mex\$ 420 million in 1976 to nearly Mex\$ 16,000 million in 1978. But combined investments 2/ in all public (federal) sectors fell from Mex\$ 1,600 million in 1976 to Mex\$ 1,400 million in 1978. A similar but stronger trend has developed in the Coatzacoalcos and Minatitlan areas, where large petro-chemical complexes have been built.

1.15 Of particular concern have been the severe disruptions in the local economy in terms of significantly higher prices for the products and services required by this sector, by the local population, and by the new migrants attracted to the region. These migrants have imposed heavy burdens on what was already an inadequate level of urban services, housing and infrastructure, and on the supply of goods and services. Food prices have increased sharply; shortages in housing, marketing and other basic services have become even more serious; the scarcity of skilled labor has distorted wages, and the productive sectors (primarily agriculture and agroindustries) have lost key workers to petroleum-related industries.

1.16 Few backward and forward linkages have been generated within the region. Reliance on "imported" services from other regions has been heavy, and internal multipliers have remained small because incomes generated in the region have generally been spent elsewhere. The internalization of benefits from petroleum activities has been severely constrained by the scarcity of financial resources for new enterprises such as repair shops, light manufacturing, transport services, and food processing and marketing.

E. The Region's Urban System

1.17 The region's urban system is dominated by a linear "core" consisting of Villahermosa, Coatzacoalcos and Minatitlan; the first city has an estimated population of about 200,000 people 3/, and the other two about 150,000 each. The "periphery" of this system consists of a number of other unevenly distributed urban centers, the more important of which are Tuxtla Gutierrez and Tapachula in central and southern Chiapas, respectively, and the port of Salina Cruz in Oaxaca. Economic activities in the Isthmus are largely concentrated in the "core", which in itself constitutes a relatively closed regional sub-system.

1.18 This sub-system has a bi-polar structure which is based on Villahermosa, at one end of a 120 mile axis, and Coatzacoalcos-Minatitlan 4/ at the other. Along this axis and around its two poles are secondary

1/ "Petroleos Mexicanos," the state-owned oil company.

2/ In basic infrastructure works and services.

3/ Latest (1980) estimates indicate that this figure is now probably much higher. Reliable figures are hard to come by, and vary depending on their source.

4/ These two cities are only about 10 miles apart.

("satellite") towns which function as important service centers for the region's agricultural hinterlands and the petroleum producing areas. The more significant among these secondary centers were included in the project; they are: Cosoleacaque (in Veracruz), Reforma (in Chiapas), and Cardenas, Cunduacan, Paraiso, Comalcalco, and Macuspana (in Tabasco). This axis is being settled rapidly and is expected to develop in future into a continuous urban corridor. The urban development plans for the region anticipate and support the creation of such a corridor.

1.19 According to data from the 1970 census, the Villahermosa-Coatzacoalcos-Minatitlan corridor is one of the most rapidly growing areas of Mexico. In recent years its traditional cattle-raising and agriculture-based economy has changed to one characterized by large pipelines and oil installations, massive traffic increases, and heavy flows of migrants to the zones where petroleum-related activities have been developed. The region includes some of the richest petroleum reserves in the country, and is the main connecting route between Central Mexico and the Yucatan Peninsula. Rapid immigration has strained the housing market and illegal settlements have proliferated, many comprising rental units (20 m² huts) at prices equivalent to US\$35-45 per month. Other common housing for low-income groups consists of cuarterias (tenements). These are groupings of rooms (10m² to 20m²), one per family, with shared water, laundry, and bathroom facilities. According to the 1970 census, about 43% of the population in the major cities of the project area lives in such cuarterias. Most of these badly built and run-down rooms rent at prices of up to US\$55 equivalent per month. Fees for water and electricity are collected separately. The situation is deteriorating and will continue to do so if a forceful remedial program is not initiated soon. 1/

1.20 The very rapid growth of Coatzacoalcos and Minatitlan has been mainly a function of the expansion of secondary petroleum-related industries, including a large port in Coatzacoalcos to serve these industries. Both cities lie on flat dunes and marshlands (many of which are flooded in the rainy season), and are characterized by the large industrial plants, construction sites, noise, smoke and fumes that permeate every corner of this area. 2/ Coatzacoalcos is presently expanding over the dunes and marshlands, mainly towards the west and south; but in future will probably redirect its growth to the northwest toward the new industrial port planned at the Laguna del Ostion. 3/ Its urban structure is characterized by irregular and illegal settlements on ejido lands around the city, 4/ many of them on filled marshlands.

1/ Substantially more background information on all project areas and a detailed description of each city included in the project is available in the project file.

2/ See Map 14906.

3/ See Map 14905.

4/ Ejidos are farms on public land assigned to rural communities; their transfer and/or sale for urban use is complicated and is done through special procedures controlled by the Federal Government.

About 35% of the population lives in these areas, mostly without adequate water supply, sewerage, storm drainage, or paved roads.

1.21 Minatitlan is virtually a Pemex-owned city. About 50% of its working population is directly employed by the oil company. About 35% of all households live on company land, and most of the existing housing projects have been built by it. Some of the infrastructure problems of the city result from the very small size of the municipal area, and the resulting small tax base. Although Coatzacoalcos and Minatitlan are about equal in size, Minatitlan's yearly budget is only about one-third that of its sister town. The growth of the city is seriously limited by surrounding swamps, and the only area for expansion is toward Cosoleacaque, a small (11,000 population) town located about eight miles to the west. 1/

1.22 The urban structure of Minatitlan, except in the Pemex neighborhoods, is similar to that of Coatzacoalcos. 2/ About 25% of the population lives in illegal settlements on swamps and government lands. Infrastructure in these settlements is minimal: only about 5% of plots have regular water connections and only 50% have access to communal hydrants. Sewerage networks, storm drainage and paving do not exist. Electricity is generally provided, but street lighting is deficient. Most of the areas are subject to flooding and to serious air and ground water pollution caused by the surrounding industrial plants.

1.23 In Tabasco, the general situation is only slightly better. Villahermosa is located about 25 miles from the sea, on flat ground amid extensive marshlands 3/. The conditions of the low-income groups here are also precarious. As elsewhere in the region, many newcomers settle along river banks and in other low areas surrounding the city. Flooding in these settlements is an ever-present danger, and infrastructure is generally inadequate. Between 30% and 40% of these households are without access to regular water and sanitary facilities. As in Coatzacoalcos and Minatitlan, pressure on housing is severe, with most of the construction sector engaged in Pemex-related activities. 4/

F. Project Objectives

1.24 The main objectives of the project are: (a) to assist the Government in its efforts to establish an appropriate spatial strategy for Mexico by facilitating and harmonizing urban growth in one of the highest priority development

1/ See Maps 14904 and 14906.

2/ In the Pemex neighborhoods, about all households have electricity and 30% have individual water and sewerage connections. About 70% of the areas have street lighting, and 60% of the streets are paved. The conditions of the individual houses vary of course with the respective incomes.

3/ See Map 14903.

4/ This also affects housing for middle- and higher-income groups.

regions in the country, (b) to help establish a programmatic approach to urban and regional development programs, and (c) to support the development of the region's full potential in the interest of both the national economy and of the region's population. The project draws on previously published development plans 1/ and Bank studies.

1.25 The allocation of public financial resources in Mexico is primarily made by national ministries. The Secretariat of Programming and Budgeting (SPP) is responsible for ensuring that these (and to some extent private) investments are distributed between sectors (and within them) in a manner which is consistent with, and supportive of national priorities and objectives. In practice, this task is extremely difficult because of the many forces which compete for the available resources. This system has specially serious drawbacks for the implementation of regional development programs. The volume of public resources allocated to a given region is largely the result of the cumulative decisions of different national sectoral agencies. The investments resulting from these decisions may not always add up to an appropriate program from a regional point of view, as is illustrated by the instances cited in para. 1.14 above.

1.26 Extensive discussions were therefore held with the Government on the actions that could be taken towards two additional important objectives: (a) that of addressing the global problems of a region in a concerted manner, and (b) that of helping establish an institutional mechanism through which state and local authorities could effectively participate in programs which affect them. By entrusting the project to BANOBRAS (at the national level) and the affected state governments, rather than to the federal offices of SAHOP, which tends to view urban problems from a largely physical perspective, the partial achievement of these two objectives would become possible. While BANOBRAS is also mainly concerned with housing and public works, it is expected to take a broader view and has accepted inclusion in the project of an important program designed to facilitate the generation of additional employment and the expansion of training schemes.

1.27 By establishing a financial mechanism that will permit the simultaneous channeling of funds to a number of inter-related activities, the project would meet one of the necessary conditions for the efficient implementation of comprehensive urban and regional development programs. Although the proposed project is not in itself an integrated project, it will help establish the principle of addressing the global problems of a region in a concerted manner. It will specifically link a number of interdependent cities and towns in one investment program, and will address a range of common problems.

1/ Such as the "Plan Estatal de Desarrollo Urbano", published by the State of Tabasco in 1979; the "Planeacion Regional de los Asentamientos Humanos Zona Coatzacoalcos-Villahermosa-Salina Cruz", prepared for SAHOP by consultants (ICATEC); and the plans prepared by the "Comision Coordinadora para el Desarrollo Integral del Istmo de Tehuantepec" in 1972 and 1973 (see also Annex G of this report).

1.28 This new mechanism is intended to complement, but not substitute, the traditional control held by the individual national secretariats and agencies. Although parts of the project could possibly be implemented through existing programs, 1/ fragmentation would defeat the important objective of establishing a programmatic approach to urban and regional development. Furthermore, as for example in the case of water supply and sewerage works, some of the project localities that need to be provided with such works as part of a concerted program are not being considered for immediate attention under the established programs and a new system would therefore need to be established. 2/

1.29 The project has been designed to resolve both critical housing and general infrastructure deficits, and to provide complementary social and economic investments. The shelter-related programs will respond to the needs of low-income groups, be accessible to them, and would be replicable. A major problem in many public housing and infrastructure development projects in Mexico is cost recovery. This can largely be explained by the fact that these programs have usually been implemented by public agencies with few financial responsibilities. Housing programs, particularly for the poor, are often considered to be of a "social" nature (i.e., not recoverable), and funds for them are channeled through budgetary appropriations with little or no repayment obligation. Under these conditions, support for poverty-oriented urban projects cannot be expected to be very strong. The project will address this problem by broadening the application of cost-recovery procedures already tested under the Lazaro Cardenas project.

1.30 Many problems, in the past, have been associated with the inability of federal agencies to program adequately and carry out efficiently programs managed from Mexico City. Although investments can be theoretically planned and programmed at the federal level, their implementation is crucially affected by local conditions and the support (or lack of it) they receive from state and municipal authorities. The gap between budgetary planning and the record of project implementation has become so wide that this issue has become a major concern of the Government. The institutional structure selected for the project was expressly designed to enable state and local authorities to participate in its programming and to include priorities as defined by them. The participation of local authorities in the preparation and implementation of this project will lead to the kind of support required to resolve this problem; it provides an attractive model for additional such projects in other regions of Mexico.

1.31 An important objective will be to diversify the regional economy and augment the multiplier effects of existing investments. Besides credits for the establishment of critical enterprises, the project will also attempt to improve the local services and marketing facilities which are needed to capture a greater share of the economic benefits generated by the region's growth. Finally, the project will contribute, through training, to the alleviation of manpower shortages.

1/ For example, the Bank-supported FIFAPA Water-Supply and Sewerage project could (possibly) cover some of the cities.

2/ See paras. 15 to 20 in the Detailed Project Features report (DPF) in the project file.

II. PROJECT COMPONENTS, COSTS AND FINANCING

A. Project Components

2.01 The main principle underlying the composition of the project is the wish to support the Government's objective to establish a systematic and programmatic approach to urban and regional development. Each part of the project is important on its own merits, will help respond to the needs of the region, and will facilitate accelerated and orderly growth and social development. But the impact of the project on the development of an institutional capacity to plan and implement such programs is probably more fundamental than these benefits.

2.02 The composition of the project was derived from the objectives mentioned above (Section F of Chapter I), and the proposed components will cover a significant part of the comprehensive investment plans that have been prepared for the region. Complementary investments, such as for river control and drainage, rural feeder roads and transport infrastructure, as well as support for the agricultural sector, would be made through other federal and local programs. The project components are summarized below, and a summary cost table showing the project components by state is given as Annex A.

2.03 The Shelter Program (Mex\$6,062 million) ^{2/} has been mainly defined in terms of the shelter and basic infrastructure needs of the urban poor. The program consists of complementary elements which offer a wide range of shelter choices designed to suit the particular needs and affordability of the region's various income groups. It includes:

- (a) Sites and Services. This component will provide about 19,000 new lots in the region's most important cities and towns. The lots will be of three different sizes, service levels and costs (US\$2,790, US\$4,370 and US\$7,200). The total cost of this component will be Mex\$3,394 million, or US\$150.9 million.
- (b) Construction Material Credits. This component will complement the sites and services scheme by allowing households to build a variety of shelter solutions through self-help. Based on the experience obtained in other programs of this type, these solutions will vary in size and standards, thus requiring credits in corresponding different amounts. It is estimated that there will be about 15,000 credits of this

^{1/} More details on each component are provided in the DPF report available in the project file.

^{2/} To facilitate cross-references to global cost and affordability tables, the total program and component costs shown in this section include engineering, physical contingencies and price escalations; partial (unit) costs do not, however, include price escalations.

type, ranging between Mex\$25,000 (US\$1,100) 1/ and Mex\$127,500 (US\$5,600). The total cost of this component will be Mex\$1,510.0 million, or US\$67.2 million.

- (c) Urban Upgrading. An upgrading program to improve the level of services for more than 14,000 families in poorer neighborhoods will include: water supply, sewerage networks, and home connections; paving and storm drainage works; and street lighting. Twenty community water and washing facilities will be provided in areas where a full-fledged upgrading is not yet possible because of very complicated land tenure conditions. The cost of the regular upgrading program 2/ will vary between US\$2,000 and US\$3,000 per household (depending on needs in each area). The total cost of the program will be about Mex\$435.7 million, or US\$19.4 million.
- (d) Home Improvement Loans. About 10,000 loans, ranging between Mex\$10,000 (US\$440) and Mex\$60,000 (US\$2,700), will be granted to households in the upgrading areas for improving or expanding individual homes. 3/ The total cost of this program will be about Mex\$625.8 million, or US\$27.8 million.
- (e) Community Centers. Twelve simple community centers will be established in the areas of the shelter program to provide a focus for community activities--including the management of the self-help construction and credit programs, training and adult education, elementary health programs, a post office and other public services 4/. The total cost of these centers will be Mex\$95.9 million, or US\$4.3 million.

2.04 City-Wide Infrastructure (Mex\$2,678 million) will cover the needs arising from the rapid growth of the region's cities. Because of this growth, the capacity of water supply and sewerage facilities is overtaxed, as are those of the corresponding networks and other basic services. The timely expansion of these services is urgently needed; not least because they are a pre-requisite for the construction of the shelter-related components of the project. This program includes:

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- 1/ These will be "minimum credits" sufficient to build very modest shelters. It is estimated that less than 10% of all credits will be of the largest (US\$5,600) size. These two figures do not include price contingencies.
 - 2/ Excluding the community water and washing facilities (See para. 4.01).
 - 3/ Although these are also in effect construction material credits, they have been classified as "home improvement loans" because implementation procedures will be different.
 - 4/ Health and other public services will be managed by the respective state or federal agencies.

- (a) Water Supply Works. The distribution networks and service connections in areas not covered under the shelter-related programs will be expanded, transmission lines will be extended, pumping stations (either at wells or river intakes) will be increased, tanks and treatment facilities will be built. The cost of these works has been estimated at Mex\$1,103.0 million, or US\$49.0 million.
- (b) Sewerage Works. Collection system and service connections will be expanded, and main collectors, pumping stations, treatment plants, and discharge systems extended. The cost of these elements will be Mex\$1,428.0 million, or US\$63.5 million.
- (c) Other Infrastructure. Will primarily consist of access roads to low-income neighborhoods, as well as electrification, city lighting, and telephone network expansion. ^{1/} The cost of this component will be Mex\$147.5 million, or US\$6.5 million.

2.05 The Municipal Facilities and Services Program (Mex\$925 million) will remove serious bottlenecks in food marketing, and improve the sanitation levels of essential services. It will include:

- (a) Retail Markets. Three new retail markets will be built and six others rehabilitated and expanded (60 stalls each), mainly to cover the needs of low-income areas. The cost of this component will be Mex\$107.0 million, or US\$4.8 million.
- (b) Wholesale Market. A new food wholesale market will be built in Villahermosa which will reduce the congestion and improve the hygienic conditions and operating efficiency of existing (dispersed) wholesale operations. The new market will have 200 stalls for various types of food products and groceries, and will cost Mex\$183.0 million, or US\$8.1 million.
- (c) Slaughterhouses. Existing facilities are not only inadequate in size, but are also held responsible--because of poor sanitary conditions--for much of the gastro-intestinal infection rampant in the region. Clandestine operations aggravate this situation. It is proposed to build 14 new facilities in the project areas; at a cost of Mex\$537.0 million, or US\$23.9 million.

^{1/} The three last mentioned elements would be implemented in Reforma only and would cost Mex\$17.8 million (less than 1% of project costs), including all contingencies.

- (d) Refuse Collection. The level of this service in the project areas ranges from 75% of the population served in Villahermosa, to a mere 14% in Minatitlan. Existing dumps and access to them are inadequate, and insufficient equipment is available. Illegal dumping of waste along the main roads is common. New sites will be acquired and fenced, required equipment will be purchased, access roads will be built, and technical assistance will be provided to increase the efficiency of these operations. The total cost will be Mex\$98.0 million or US\$4.4 million.

2.06 Productive Activities (Mex\$925 million). The components in this program will expand the number of job opportunities in the project areas, particularly among low income groups. In order to facilitate forward and backward linkages to the petroleum sector and take better advantage of the complementary opportunities available in the region, the region's economic base will be diversified and the skills of the population increased to enable them to take advantage of new job opportunities. This program will consist of the following elements:

- (a) Credits to Artisans. Approximately 1,800 credits will be extended to entrepreneurs in the "informal" sector engaged in manufacturing, personal services, and maintenance and repair operations. Of these, about 70% will be reserved for working capital (averaging about Mex\$50,000 each), and the rest for fixed assets (averaging Mex\$80,000 each). The total cost of this component, including the participation of the beneficiaries, is estimated at Mex\$121.5 million or US\$5.4 million.
- (b) Credits to Small-Scale Enterprises. About 600 credits will be made available to enterprises in manufacturing (with preference given to food processing and construction materials), transportation, maintenance and repair facilities, personal services, and commerce. It is estimated that credits for commerce (about 190) will average about Mex\$155,000 (US\$6,900) each, and those for other activities, Mex\$655,000 (US\$29,100) each. The total cost, including the participation of the beneficiaries (averaging 10%), is estimated at Mex\$335.2 million, or US\$14.9 million.
- (c) Industrial Estates. As an additional incentive to generate local jobs, basic infrastructure for the first phase (50 ha) of new industrial estates in the project areas will be provided. These estates, which will be specially geared to the needs of small-scale enterprises, are estimated to cost Mex\$256.3 million, or US\$11.4 million.

- (d) Training Center. To complement training programs already in effect or planned by Pemex and other federal agencies, a new training center will be built in Villahermosa 1/. The 3,000 m² center is estimated to cost Mex\$33.3 million (US\$1.5 million), including Mex\$2.0 million for equipment.
- (e) Promotional Programs. Assistance and training actions to support and promote the beneficiaries of the credit schemes, the intermediaries of these schemes, and the operating agencies of the proposed industrial estates. The total cost of these elements is estimated at Mex\$16.6 million, or US\$700,000.

2.07 Studies and Complementary Support Activities. Beyond the actions required for the promotion of the Productive Activities program, additional assistance is required to support the implementation of other project components. Several planning studies are needed to prepare further programs for the region. Funds will be made available to provide technical assistance to the implementing agencies, and to carry out studies affecting or related to the urbanization of the region. The total amount assigned to these activities is Mex\$102.5 million (US\$4.6 million), of which Mex\$80 million and Mex\$22.5 million will be for studies and other support activities, respectively. Approximately 80 staff-months of consultants' time are expected to be required, mainly for support activities.

2.08 Environment. The project's various components are expected to result in an improvement of the region's environment. They will not, however, resolve the major environmental problems caused by industry. Considerable efforts were made during project preparation to address these problems, but it was not possible to obtain support for such a program. The effects of the operations of the petroleum industry are severe, but Pemex believes the pollution control (and indemnification) programs presently in operation are adequate. Although this industry is by no means the only source of ecological damage in the region, 2/ it is by far the largest; without its participation a pollution control program would be meaningless. Some of the proposed studies will deal with pollution control issues and should provide the basis for subsequent efforts.

B. Cost Estimates

2.09 Total project costs, including engineering, physical contingencies and price escalation, are about Mex\$10,530.0 million (US\$468.0 million). This

1/ Most of the training programs for the informal sector would be carried out in the planned community centers.

2/ Serious ecological problems are also caused by the sugar processing plants (ingenios).

estimate includes taxes. The foreign exchange component is estimated at about Mex\$3,690 million (US\$164.0 million), or 35% of total project costs. These costs are based on detailed design and engineering studies for a sample of the works, and on preliminary designs for the remainder. The costs of consultant services are estimated at about US\$70,000 (all inclusive) per staff-year. The price escalation values used for the foreign component are: 12.5% in 1980, 9.0% in 1981, 8.5% in 1982 and 7.5% thereafter up to and including 1985. The corresponding values for local price escalations are: 30% in 1980, 25% in 1981, 20% in 1982, 15% in 1983, and 12% in 1984 and in 1985. For the purpose of estimating the foreign component, it is assumed that any future changes between local and foreign inflation rates would be compensated by corresponding changes in the exchange rate between the Mexican peso and the US dollar. A summary of project costs is presented in the table on the preceding page.

C. Financing

2.10 The proposed Bank loan to BANOBRAS will finance the 35% foreign exchange component (US\$164.0 million) of total project costs (US\$468.0 million). ^{1/} The Bank loan would be for 15 years, including three years of grace. The exchange risk on the Bank loan will be borne by the Government.

2.11 The Federal Government will provide the equivalent of US\$275.0 million from its own resources. The beneficiaries of various programs will contribute the equivalent of US\$29.0 million. The sources of funds for the project are summarized below and presented in greater detail in Table I of Annex B.

Summary of Project Financing
(in US\$ million)

	Total		%	Govern- ment of		Benefi- ciaries	
	Cost	IBRD		Mexico	%		%
Shelter-Related Programs	269.0	75.2	28	168.0	62	26.2	10
City-Wide Infrastructure	119.0	50.0	42	69.0	58	-	-
Municipal Facilities and Services	41.1	16.4	40	24.7	60	-	-
Productive Activities	33.9	17.0	50	13.8	41	3.1	9
Studies and Complementary Activities	4.6	4.6	100	-	-	-	-
	468.0	164.0	35	275.0	59	29.0	6

^{1/} The cost of land, taxes, import fees and similar duties would not be financed by the loan.

Summary Project Costs
(In Million US\$)

<u>Components</u>	<u>Local</u>	<u>Foreign</u>	<u>Total</u>	<u>% Foreign Exchange</u>
<u>Shelter-Related Programs</u>				
- Sites and Services	49.50	19.20	68.70	28
- Construction Material Credits	26.50	9.30	35.80*	26
- Urban Upgrading	6.00	3.20	9.20	35
- Home Improvement Loans	11.00	3.90	14.90*	26
- Community Centers	1.40	0.60	2.00	32
Sub-Total	<u>94.40</u>	<u>36.20</u>	<u>130.60</u>	<u>28</u>
<u>City-Wide Infrastructure</u>				
- Water Supply	13.50	9.80	23.30	42
- Sewerage	17.20	12.50	29.70	42
- Other Infrastructure	2.00	1.50	3.50	42
Sub-Total	<u>32.70</u>	<u>23.80</u>	<u>56.50</u>	<u>42</u>
<u>Municipal Facilities and Services</u>				
- Retail Markets	1.60	1.10	2.70	40
- Wholesale Market	2.80	1.80	4.60	40
- Slaughterhouses	8.10	5.40	13.50	40
- Refuse Collection	1.60	1.10	2.70	40
Sub-Total	<u>14.10</u>	<u>9.40</u>	<u>23.50</u>	<u>40</u>
<u>Productive Activities</u>				
- Credits to Artisans	2.70	2.70	5.40*	50
- Credits to Small-Scale Enterprises	7.45	7.45	14.90*	50
- Industrial Estates	2.90	2.00	4.90	40
- Training Center	0.60	0.30	0.90	35
- Promotional Programs	0.00	0.70	0.70*	100
Sub-Total	<u>13.70</u>	<u>13.10</u>	<u>26.80</u>	<u>49</u>
<u>Studies and Complementary Support Activities</u>				
- Studies	-	3.60	3.60*	100
- Support Activities	-	1.00	1.00*	100
Sub-Total	<u>-</u>	<u>4.60</u>	<u>4.60</u>	<u>100</u>
Sub-Total Base Costs	154.90	87.10	242.00	36
Professional Services <u>1/</u>	7.70	3.90	11.60	34
Contingencies <u>2/</u>				
(a) Physical	17.60	9.00	26.60	34
(b) Price Escalation	<u>124.10</u>	<u>63.80</u>	<u>187.90</u>	<u>34</u>
Total Cost of Project Including Land Cost	<u>304.00</u>	<u>164.00</u>	<u>468.00</u>	<u>35</u>

1/ Includes 7% for design and supervision on base cost.

2/ Assuming 15% for physical contingencies and price escalations detailed in para. 2.09 above.

*Neither Professional Services nor Physical Contingencies were considered for these items.

III. PROJECT IMPLEMENTATION 1/

A. Implementation Arrangements

3.01 The borrower will be BANOBRAS 2/ to which counterpart funds will be transferred by the Government except for some resources which will be passed on directly to intermediaries as Government grants. BANOBRAS will onlend IBRD and counterpart funds to the various implementing agencies 3/ according to procedures and conditions agreed to with the Government and to be defined in respective subsidiary loan agreements. Preliminary drafts of such agreements have been presented to the Bank. The conclusion of these onlending arrangements, satisfactory to the Bank, between BANOBRAS and each of the implementing agencies (intermediaries) will be a condition of disbursements for the respective project components. Such arrangements between BANOBRAS and each intermediary, will be concluded no later than July 31, 1981. 4/ All funds onlent by BANOBRAS to state or municipal agencies, will be guaranteed by the corresponding states. This, as well as additional obligations, will be formalized in project agreements to be signed between BANOBRAS and each of the three state governments. These agreements will be concluded not later than July 31, 1981. 5/ The conclusion of at least one project agreement and of one subsidiary loan agreement (with an intermediary in the same state with which a project agreement is signed), satisfactory to the Bank, will be a condition of loan effectiveness. Funds transferred as federal grants will be intended to finance such non-recoverable elements as community centers, special promotion campaigns and technical assistance programs. 6/ The implementing agencies, in turn, will carry out the various programs and works, and will charge beneficiaries to recover project costs. 7/

3.02 BANOBRAS has established a project unit in Mexico City and a field office in Coatzacoalcos responsible for supervising the implementation of all project components, and for following-up on any actions required to correct

1/ A description of each intermediary is provided in Section B of this Chapter. Table I of Annex C lists the implementing responsibilities for each component.

2/ See paras. 3.14 to 3.17 below.

3/ See paras. 3.18 to 3.28 below.

4/ Except those between BANOBRAS and the municipalities, which will be concluded not later than December 31, 1981.

5/ Preliminary drafts of these agreements have also been received by the Bank.

6/ These grants will be part of the project costs and will be channelled by the Government as budgetary transfers, i.e., not through BANOBRAS.

7/ For cost recovery procedures, See Section A of Chapter IV.

difficulties. The BANOBRAS unit will need to authorize all transfers of resources and payments, and will be the official contact with the Bank on all project-related matters. The unit will consist of at least three qualified staff assigned full time to the project; namely, a project director, a project engineer and a financial administrator. These three professionals have already been appointed to the unit. Additional qualified staff for supervision and monitoring of project implementation will be assigned to the unit as required for its effective operation.

3.03 In addition, and as a complement (but not as a substitute) to the BANOBRAS unit, special procedures have been established in each state to coordinate and monitor the progress of those parts of the program to be carried out in their respective jurisdictions. These responsibilities will be carried out by the state development committees (COPLADEs), 1/ providing a mechanism for coordination with the Federal and state governments. 2/ The responsibilities of each state, as well as the obligations of BANOBRAS to the project, will be spelled out in the corresponding project agreements between BANOBRAS and each state. Finally, a coordinating committee will be established at the federal level to follow-up on all matters that could require Government intervention; this will be done no later than June 30, 1981 (see also para. 3.37). 3/

3.04 Each state, either through its COPLADE or other appropriate planning agencies, actively participated in the definition of the scope and of the composition of the project. This participation extended to the municipal and, where appropriate, individual community levels. Consistent with the wishes of the present Government to delegate more responsibility to states and municipalities, this project will be exclusively implemented by state and municipal agencies. 4/ The main role assigned to federal agencies relates to normative, technical support, and general supervisory functions. Also, all the water supply and sewerage works of the project will be carried out through SAHOP (see para. 3.06 below).

3.05 Implementation of the shelter-related components in each state will be the responsibility of the corresponding Instituto de Vivienda. 5/ The scope of these components has been adjusted to ensure that the Institutos will not need to expand their staff to unreasonable levels. The Institutos carried out similar projects in the past, some of them funded by INDECO, 6/

1/ Comite de Planeacion del Estado (these are the former COPRODEs).

2/ The president of each COPLADE is the governor of the state.

3/ The draft of the corresponding agreement between the Federal Government (through its Secretariat of Finance) and BANOBRAS was presented to the Bank during negotiations.

4/ The only exception is BANOBRAS, which will be directly responsible for the execution of parts of the Productive Credits component.

5/ See paras. 3.18 to 3.20 below.

6/ Instituto Nacional para el Desarrollo de la Comunidad y de la Vivienda Popular.

and some by state governments. Under the project the Institutos will be made primarily responsible to state authorities. This will increase their effectiveness and efficiency, and make them more responsive to local needs. They will preserve their technical teams and implementation capabilities, but will provide a more manageable framework within which changes in design and construction norms, and in the conditions applied to mortgage and loan recipients could be negotiated. In the upgrading program the participation of the respective municipalities will be required.

3.06 The water supply and sewerage elements of the project's city-wide infrastructure component will be implemented in Tabasco and in Reforma (Chiapas) by new state-wide authorities (SAPAs) 1/, and in Coatzacoalcos and Minatitlan (both in Veracruz) by a state water authority responsible only for these two cities. In every case these authorities will operate under the same conditions applied in the FIFAPA program 2/. An important aspect of this procedure is that the same authority will contract the loan with BANOBRAS and will be responsible for operating and administering the systems, and for cost recovery. The various authorities will be assisted and supported by SAHOP 3/, through which all the works to be implemented by them will be carried out. These authorities will be established, under conditions satisfactory to the Bank, as a condition of disbursement for the respective water and sewerage works (see also para. 3.23). 4/

3.07 The access roads envisaged under the "Other Infrastructure" component will be implemented and maintained by the respective municipalities 5/; except for Reforma, where the local Instituto (IDVICH) is the only effectively operating public agency and will therefore be responsible for the implementation of these elements. 6/ The respective municipalities will also be responsible

1/ Servicios de Agua Potable y Alcantarillado del Estado (see paras 3.21 to 3.24). The Tabasco and the Chiapas SAPAs (SAPAET and SAPAECH, respectively) are the first authorities of this type being created in Mexico as part of a national program planned by SAHOP for all states. Although it is the firm intention of the Federal Government to establish SAPAs in each state, only in Tabasco and in Chiapas does this seem possible in the immediate future. The arrangements planned in the other cities of the project would eventually lead to a SAPA in Veracruz as well.

2/ Following the guidelines already agreed to between the Bank and SAHOP: "Guia General para la Elaboracion de Proyectos de Ingenieria de Sistemas de Agua Potable y Alcantarillado", SAHOP, October 1979 (see also paras. 15 to 20, and page 17 of the DPF report in the project file).

3/ SAHOP has been instrumental in preparing the technical background and statutes of the new water authorities and will be their technical coordinator.

4/ The SAPAET and the SAPAECH have already been established and the water authority in Veracruz will be established not later than June 30, 1981.

5/ See paras 3.25 and 3.26.

6/ IDVICH will also implement the electrification, city lighting and telephone network expansions planned for Reforma.

for the implementation, operation and maintenance of all items included in the Municipal Facilities and Services component (i.e., Markets, Slaughterhouses, and Refuse Collection and Disposal).

3.08 Implementation of the Productive Credits and Promotional programs will be the responsibility of BANOBRAS through a special unit created for this purpose (see para. 3.27), and of the Institutos de Vivienda. In the case of credits for the formal sector, the BANOBRAS unit will carry out the promotion, preparation, and financial transactions of individual operations. Satisfactory financing arrangements will be established by BANOBRAS. These arrangements will reflect the conditions already in force in the first Bank-supported urban development project. 1/ In the case of credits to the informal sector, these will be handled by the Institutos de Vivienda. A special department, consisting of at least one program coordinator, will be created in each Instituto to support this program. These special departments will be operated in a manner satisfactory to the Bank. 2/ Appropriate arrangements will be formalized in the corresponding subsidiary loan agreements to be finalized no later than July 31, 1981.

3.09 The proposed industrial estates will be developed under special trusts (Fideicomisos Especiales). 3/ Once the final location of an estate has been approved by the respective state and federal authorities, the site will be acquired by the state and turned over to the new trust. The trust will, in turn, supervise the implementation of the civil works 4/, and then promote and administer the estate through its Technical Secretariat and under procedures consistent with those applied under the Bank-supported FIDEIN program 5/. Feasibility studies and final designs for each estate will need to be approved by the Bank prior to the implementation of these works. To allow sufficient time for completion of the estates, a final date of December 31, 1982 has been established for presentation of all feasibility studies and complete designs.

3.10 The assistance and promotional programs related to productive activities will be carried out by various agencies 6/ under the supervision and coordination of the BANOBRAS unit. The training center in Villahermosa will be implemented by a special trust (CEPROTAB) 7/ created to promote

1/ In Loan No. 1554-ME.

2/ The actual financial transactions involved in granting and recovering these credits will be handled by commercial banks.

3/ In Tabasco, this function would be assumed by FOMITA ("Fondo Mixto para el Desarrollo Industrial de Tabasco").

4/ To be carried out by SAHOP or state agencies.

5/ Fideicomiso de Conjuntos, Parques, Ciudades Industriales y Centros Comerciales is a government trust in charge of industrial estates across Mexico.

6/ Such as CENAPRO and ARMO, which are specialized programs of the Ministry of Labor.

7/ Centro de Productividad de Tabasco.

training activities in Tabasco. The trust will run this center, and the state will provide the required staff, and finance all its operations. Confirmation that the state of Tabasco will assume these responsibilities will be incorporated in the subsidiary loan agreement between BANOBRAS and CEPROTAB and in the project agreement with the State of Tabasco.

3.11 The program of studies and complementary support activities will be carried out by various offices under the supervision and coordination of the BANOBRAS unit. All the studies dealing with issues connected to water and sewerage or sanitation matters will be carried out through the water authorities; all studies related to shelter-related matters will be carried out through the respective Institutos; and all studies related to urbanization will be carried out through the respective municipalities under the supervision and coordination of the states. Detailed terms of reference for each of the studies and the corresponding contracts will need to be presented to and approved by the Bank prior to their initiation. Complementary support activities will be executed by various public agencies and consultants, depending on the assistance required. This assistance will be preceded by a preparatory stage: the definition of the specific details and schedule of actions required for each agency. This first stage, to be prepared by the Institutos, by each of the respective water authorities, and by the municipalities, under the coordination of BANOBRAS in a manner satisfactory to the Bank, will be completed no later than July 31, 1981, and a report (including a recommended work program for each activity) will be submitted by that date. 1/

3.12 The preparation of engineering studies for each project component will be the responsibility of the respective implementing agencies. Sufficient detailed studies have already been completed to begin the implementation of most programs. This includes studies for typical sites and services projects, for community centers and for about 30% of the water supply and sewerage works. Additional studies will be prepared during 1981, after loan approval. A schedule was agreed during negotiations, and is included in the legal documents, establishing specific dates by which the studies for all project works must be completed. Appropriate budgetary allocations have been considered by the Government to cover expected expenditures during 1981. The responsibility for coordinating future actions required in this respect will rest with the BANOBRAS project unit.

3.13 Approximately 420 ha of land are required to implement the shelter-related programs. Of these, about 174 ha are already the property of the various Institutos 2/, and the rest (249 ha) still need to be purchased. The available land is sufficient to carry out a large part of the planned program; no difficulties are envisaged in connection with the purchase of the remaining land for the project which will be purchased from private owners. No ejido 3/ land will be involved.

1/ A fuller description of the proposed support activities and their tentative implementation schedule are available in the project file.

2/ 92 ha in the state of Tabasco, 44 ha in Veracruz, and all the 38 ha required in Reforma (Chiapas).

3/ See footnote for para. 1.20 above.

B. Implementing Agencies 1/

BANOBRAS 2/

3.14 The Banco Nacional de Obras y Servicios Publicos, S.A. (BANOBRAS) was founded on February 20, 1933. The Federal Government has been the major stockholder of BANOBRAS since its creation and now owns, directly or indirectly, approximately 98% of the Bank's outstanding capital stock. The remaining capital stock is held by various investors, including state governments, municipalities and private investors. The assets and liabilities of BANOBRAS (as of December 31, 1978) totaled approximately US\$3.8 billion and US\$3.6 billion equivalent, respectively. 3/

3.15 BANOBRAS functions as the principal agent of the Federal Government for receiving domestic and foreign sources for public works construction in Mexico. Credit obtained by BANOBRAS is lent primarily to the Federal Government and its agencies for the implementation of public works, low-cost housing and the improvement of public transport facilities. Loans are also made to the Mexican states and municipalities. As of December 31, 1978, approximately 75% of BANOBRAS' outstanding loans were loans made directly to the Federal Government or its institutions.

3.16 By statute, the Federal Government controls the policies and, in practice, substantially directs the borrowing and lending activities of BANOBRAS. The Ministry of Finance and Public Credit (SHCP) has veto power over the resolutions of the BANOBRAS Board of Directors, and approves its yearly budget. In effect, therefore, BANOBRAS functions as an agency of the Federal Government. The Chairman of BANOBRAS' Board of Directors is Mexico's Secretary of Finance and Public Credit; the majority of its directors are cabinet officers or high ranking government officials; and its principal executive officer, the Director General, holds cabinet rank in the Mexican Government. Responsible to him are the Deputy Director General and the General Manager; an Internal Commission for Administration and Programming (CIDAP) acts as his advisory council.

1/ Besides the information provided in this section, additional data and background on each intermediary (including financial data), are available in the project file.

2/ This institution has been the borrower of a number of Bank-supported projects, e.g., for the Lazaro Cardenas Project (Loan No. 1554-ME); the Medium-Size Cities Water Supply and Sewerage Projects (Loans No. 1186-ME and 1913-ME); and the Highways Sector Project (Loan No. 1671-ME). Thus, only a general description is provided here.

3/ General financial information on BANOBRAS is available in the project file but is not discussed here because BANOBRAS will only manage funds provided by the Government and it will not have significant financial responsibilities in this project.

3.17 Three divisions under the coordination of the Deputy Director General deal with: (a) the various trusts managed by BANOBRAS; (b) economic development, and (c) financial management. The three main trusts managed by BANOBRAS are: (a) the Municipal Fund for loans to municipalities; (b) FIFAPA, for loans for water and sewerage systems; and (c) the Housing Fund for low-cost housing. Another trust supervised by BANOBRAS is the Fideicomiso Ciudad Lazaro Cardenas (FIDELAC), which is the implementing agency of the first Bank supported urban project in Mexico. 1/ The project and the project unit will be controlled and supervised by the director of the financial management division. The unit will supervise and be responsible for all the administrative, technical, and financial matters associated with the implementation of the project and for compliance with the conditions agreed to on the operations of the intermediaries. BANOBRAS will contract and employ adequate staff for the unit as required to ensure its proper and effective operation (see para. 3.02 above).

3.18 The Institutos de Vivienda 2/ were initially established in each state as local representatives of INDECO, the federal agency in charge of housing for lower-income groups. Most of their activities are related to sites and services and self-help construction programs. Funding for these activities is presently shared by both INDECO and the respective states. These institutions therefore operate under the combined guidelines of both entities. Of the three Institutos that will participate in the project, both the one in Veracruz (IDUVIV) and the one in Tabasco (IDVIT) are presently under the control of the state Governor and are authorized to obtain credits from BANOBRAS. The legal statutes and regulations of the Chiapas Instituto will be modified to allow this agency to become a sub-borrower in the project and to participate in the credits to artisans program. 3/ These procedures have been discussed with the pertinent authorities, and the required actions are expected to be completed by June 30, 1981. The conclusion of subsidiary loan agreements, satisfactory to the Bank, between BANOBRAS and each Instituto will be a condition of disbursements for the shelter-related components in the respective states.

3.19 The director and staff of each Instituto are appointed by the respective Governor for a six-year period coinciding with his own term of office. The staffs of the Institutos are experienced in technical matters and are highly motivated, but need to be strengthened in areas dealing with accounting, financial and management matters and in response to the significant increase of the operations to which the new project will lead. Besides the special department for credits to artisans mentioned in para. 3.08 above, it was agreed at negotiations that the respective subsidiary loan agreements will include a commitment by each Instituto to maintain appropriate levels of qualified staff. This commitment will be reviewed at periodic meetings (as part of supervision) by the Bank, BANOBRAS and each Instituto, at which time also the staffing and training needs, as well as the financial, the administrative and the technical performance of the corresponding Instituto will be

1/ See paras 1.08 and 1.11 above.

2/ Additional information on the Institutos is available in the project file.

3/ See also para. 3.08 above.

reviewed. These matters have been discussed with the Mexican authorities; appropriate staff increases have been assured and will be gradually contracted as required.

3.20 In the past, the Institutos have operated primarily as public agencies with little responsibility for recovering the cost of the programs they implement. This, in addition to their dual responsibilities to the states and to INDECO, has led to unsatisfactory management, accounting, and financial procedures. Appropriate procedures, satisfactory to the Bank, will be adopted in conjunction with the implementation of the project. The adoption of such procedures and the maintenance of qualified staff was confirmed during negotiations. 1/

3.21 The three water authorities will only be new in the sense that they will be new administrative bodies, but their technical needs will continue to be met by the staff of SAHOP which has, in the past, prepared, designed and implemented most works of this type in the region. The management of the new authorities will be built on experienced staff now engaged in similar tasks as employees of SAHOP. A special convenio (agreement) describing the functions and responsibilities of the new SAPA for Tabasco, its financial and technical structures, building norms, standards and tariff structure has already been prepared and presented for review to the Bank (see para. 3.23 below). The corresponding convenios for the other water authorities will be completed before July 31, 1981.

3.22 In preparing the convenios, SAHOP is consulting with other federal agencies related to these sectors (such as SPP and SARH), states and municipalities. All these entities will participate on the boards of the new authorities; technical coordination will be the responsibility of SAHOP. The Tabasco and Chiapas SAPAs have already been formally created and are expected to become operational by mid-1981. The joint authority for Coatzacoalcos and Minatitlan is expected to be constituted and operational no later than June 30, 1981. Technical support to establish the operational capacity of all these authorities is to be provided by SAHOP.

3.23 The statutes and regulations of each water authority will be reviewed by the Bank and, if required, adjusted to comply with the conditions applied in the Second Medium Size Cities Water Supply and Sewerage Projects (FIFAPA program). These conditions include the preparation of appropriate feasibility studies, the acceptance of specific financial covenants, the approval of appropriate tariff structures by the state legislature, the introduction of institutional arrangements recommended in the feasibility studies, the establishment of a leak detection and control program if required, the implementation of proper accounting and auditing procedures (see para. 3.40), the revaluation of fixed assets according to specific guidelines, and the introduction of monitoring indicators (see para. 3.37). 2/

1/ Detailed administrative and accounting conditions for the Institutos are presented on Table V of the DPF report. These will be incorporated in the respective subsidiary loan agreements.

2/ Detailed financial and operational covenants for the water and sewerage authorities are presented on Table X of the DPF report. These covenants are the same as those applied in the FIFAPA program.

3.24 Feasibility studies for over 30% of the water supply and sewerage works planned under the City-Wide Infrastructure component have already been prepared and presented to the Bank. Some revisions and additional information requested by the Bank are presently being processed by SAHOP. Feasibility studies, satisfactory to the Bank, for a total of 60% of these works, will be furnished to the Bank by January 31, 1982; and for the remainder of these works by January 31, 1983.

3.25 Corresponding to differences in size and in the social and economic conditions in each city, the operational efficiency and performance of the municipalities involved in the project varies. None are free of administrative, financial and political problems. The most difficult situations probably exist in Coatzacoalcos, Minatitlan and, to some degree, Cosoleacaque. Villahermosa, the capital of Tabasco and the seat of the state government, is relatively better off. The main sources of income for the municipalities are local taxes, licenses and registration fees of various types (e.g., on land, construction and building improvements, beverages, and businesses), and budgetary transfers from the states. The municipalities also borrow from private banks (and BANOBRAS), usually with the guarantee of the corresponding state. Municipal finances are almost exclusively planned on a year-by-year basis; investment programs rely on budgetary support from the states.

3.26 Long-term commitments, including borrowing from commercial banks are also, in effect, the responsibility of the states by virtue of their role as loan guarantors. For example, of the Mex\$ 143.3 million (US\$6.4 million) budget of Coatzacoalcos in 1979, Mex\$ 80.1 million (55%) were state budgetary transfers, and only Mex\$ 29.0 million (20%) came from taxes 1/. The budget of Minatitlan, Mex\$ 44.4 million in 1979, was only about one-third of what it was in Coatzacoalcos; of which state and federal transfers totalled Mex\$ 17.2 million (37%). The difference in budget size can be largely explained by the fact that the municipal area of Minatitlan is much smaller, and that Pemex provides many services in its own zones. The difference in the share of state support appears to be attributable to political factors.

3.27 BANOBRAS will implement the credit line for small-scale enterprises through a special unit created to identify, promote, appraise and provide technical assistance to participants in this program. This unit will operate as part of the Department of Credit to States and Municipalities 2/, which is the same department where the overall project unit is located. The credit unit (similar to the project unit) will have a branch in the field in the BANOBRAS regional office in Coatzacoalcos. The actual channelling of the

1/ Another Mex\$ 19.5 million (17%) came from services, permits and rents. Major expenditures in 1979 were Mex\$ 37.0 millions (25%) for public works, and Mex\$ 4.6 (3%) for vehicles and equipment.

2/ Gerencia de Creditos a Estados y Municipios.

individual credits and their recovery will be through BANOBRAS' regular banking branches located in various cities in the region. Approval of individual credits will be processed through a special committee 1/ consisting of the divisional manager of Development Credit (who heads the committee), the manager of the Department of Special Credits and the manager of the Department of Credit to States and Municipalities. Support for the credit unit in the form of technical assistance and training has already been programmed by BANOBRAS, including some training missions of the unit's staff to countries where similar schemes are presently in operation. 2/

3.28 The Fideicomisos (trusts) will be legal entities with considerable autonomy to develop and operate the industrial estates. The state governor will be the president of each trust; policies and operational guidelines will be set by a Technical Secretariat consisting of representatives from the Federal Government's secretariats and other institutions (SAHOP, SHCP, SPP, SEPAFIN 3/ and FIDEIN), local municipalities and the private sector. The senior staff of a Fideicomiso will typically consist of a general manager, an accountant, and a sales and promotion manager. The general manager reports directly to the Technical Secretariat and works closely with staff of FIDEIN in Mexico City. FIDEIN will monitor and coordinate the trusts' activities and provide advice on such matters as promotion, accounting and financial control, legal contracts, and administrative and operational procedures. 4/

C. Implementing Schedule

3.29 The project will be implemented over a five year period, that is, until the end of 1985. Shelter-related components will require the whole of this period, but the home improvement loans program and the community centers could be completed earlier. The full implementation period will also apply to most other components, but the municipal facilities and the training center could be completed by the end of 1982, and the industrial estates by mid-1983. Consideration was given to the fact that changes in the state government took

1/ Comite Tecnico.

2/ Also staff from the Institutos' special units in charge of productive credits to artisans have been scheduled to participate in these field trips.

3/ SEPAFIN is the Secretariat of National Patrimony and Industrial Development.

4/ A detailed analysis of these trusts was made in connection with the preparation of the Small and Medium Scale Industry Development Project; an extensive description is provided in Chapter IV of the corresponding SAR (Report No. 1811b-ME).

place in Veracruz in 1980, and a change is scheduled in Tabasco in 1982; 1/ the implementation schedules have been adjusted correspondingly. Detailed implementation schedules by state are attached in Tables II, III and IV of Annex C. These schedules show the approximate proportion of works that are expected to be carried out each year. The number of corresponding units, credits or other actions that are expected to be built during the lifetime of the project are presented in tables available in the project file. These figures will constitute the basic project monitoring indicators.

D. Procurement

3.30 The preparation of tender documents and the award of individual contracts will be the responsibility of the respective implementing agencies, under the supervision of the BANOBRAS project unit. This unit will also act as liaison with the Bank on all procurement matters.

3.31 The Mexican contracting industry is capable of undertaking all types of civil works at competitive prices; bids from non-Mexican firms are only rarely submitted for such works. A common procedure is to award contracts for relatively small projects on the basis of negotiated prices and conditions (shopping). Although Mexican law establishes upper limits for such contracts, appropriate justification on a case-by-case basis has become increasingly common. This procedure appears reasonable in view of the present level of costs and prices in the project areas. 2/

3.32 Civil works valued above US\$2.5 million equivalent, and equipment and materials valued above US\$500,000 equivalent will be contracted under ICB. To facilitate the participation of international contractors under ICB, civil works will, as far as possible, be grouped into contracts with a minimum value of US\$2.5 million equivalent. Also equipment and materials will, as far as possible, be contracted under ICB and for this purpose grouped into contracts having a minimum value of US\$500,000 equivalent. Local competitive bidding will be accepted for civil works contracts with values over US\$250,000 and less than US\$2.5 million equivalent, and for contracts for equipment and materials valued more than US\$150,000 and less than US\$500,000 equivalent. Civil works and equipment and materials for less than the indicated amounts and up to an aggregate limit of US\$50.0 million will be procured directly on the basis of a minimum of three quotations in each case.

3.33 Since most of the project components are relatively small and are geographically scattered, foreign contractors are not expected to participate in many of them. Specifically, only about US\$50 million equivalent for civil works and equipment--mostly related to water supply and sewerage elements--is expected to be awarded through ICB; the rest will be awarded according to local procedures satisfactory to the Bank. For all contracts

1/ President Lopez Portillo's administration also ends in November 1982.

2/ Mexican regulations also allow that equipment and materials be purchased at prices approved and listed by the Secretariat of Commerce (updated every year). In any case, exceptions to bidding procedures have to be approved by the Secretariat of Programming and Budgeting (SPP).

under ICB, copies of bidding documents, bid analysis reports and recommendations for award will be made available to the Bank for prior review and approval. 1/ Disbursements for contracts awarded under local competitive bidding procedures and submitted to the Bank for ex-post review will only be made after the Bank is satisfied with said review. Goods manufactured locally and procured under ICB will be allowed a preference of 15% of the CIF price or the level of import duty, whichever is lower, over foreign goods.

E. Disbursement

3.34 The Bank will disburse against:

- (a) 45% of amounts paid for civil works, construction materials, equipment and consultants required for the implementation of the water supply and sewerage components; 2/
- (b) 32% of all other civil works costs (excluding those under (a) above), including the costs of engineering, promotion activities and supervision;
- (c) 26% of construction material credits and home improvement loans;
- (d) 55% of production credits; 3/
- (e) 100% of foreign expenditures for imports and 50% of local expenditures for locally procured equipment and vehicles, except as specified in (b) above; and
- (f) 100% of expenditures for consultants 4/, or 50% of other expenditures associated with the promotion programs of the productive activities component, and for studies and complementary support activities.

3.35 A total of up to US\$5.0 million will be available for the retro-active financing of project expenditures after January 31, 1980. These funds will be required in partial payment of works and preparatory studies already begun and/or carried out by Mexican institutions in anticipation of loan

1/ General conditions for tender documents to be used for ICB and local procurement for water supply and sewerage works have been prepared under the first FIFAPA operation (Loan 1186-ME) and are acceptable to the Bank.

2/ The Bank will disburse 45% (rather than the 42% representing the foreign exchange component) to compensate for the 5% retention withheld from contractors of civil works during the guarantee period following the completion of works, and for professional services (e.g., engineering and supervision) carried out directly by SAHOP. The maximum amount to be disbursed under this category is equal to 42% of this component's total cost.

3/ 55% of the requested credits is equivalent to 50% financing of the total cost of the corresponding undertaking, including the 10% self participation share of the beneficiaries.

4/ It is assumed that most of the consultants would be foreign experts.

approval. These include two sites and services projects in Villahermosa and Coatzacoalcos, preparatory studies for future shelter-related, water and sewerage works, and some upgrading. All these works and studies will need to conform with the designs, norms and standards agreed on during project preparation.

3.36 Disbursements will be fully documented for most of civil works, but statements of expenditures procedures will be used in the case of construction material credits and home improvement loans, production credits, and other minor expenditures under the studies and support activities program. All these expenditures will be audited by independent auditors. BANOBRAS will process all required documents through its project unit, and forward them to the Bank with corresponding withdrawal applications. Loan disbursements are expected to be in accordance with the schedule shown in Annex D 1/. The closing date of the loan will be December 31, 1986.

F. Monitoring and Evaluation

3.37 Considering the relative complexity of this project in terms of the number of participating agencies and localities, and the varied characteristics of its components, proper monitoring and supervision procedures are crucial to its success. Preliminary discussions have been held on this subject with the federal and state governments, and with BANOBRAS. Special monitoring and evaluation procedures will be established within the BANOBRAS project unit and in each state unit 2/. These procedures were discussed during negotiations and will include the updating of key indicators to be incorporated in quarterly supervision reports (see para 3.39). Assurances were obtained during negotiations, that not later than twelve months after project completion BANOBRAS will prepare a completion report, satisfactory to the Bank, describing the implementation of the project, as well as its financial and physical achievements and benefits. A federal inter-ministerial coordinating committee will be established to monitor and follow-up, as required, on difficulties that may arise during implementation. Confirmation on this matter was obtained during negotiations.

G. Supervision

3.38 Considering the scope and number of localities and programs included in the project, given the innovative character of many of the proposed institutional and financial aspects, and in order to minimize the risks of such

1/ This schedule assumes that Bank reimbursements will lag between six and 12 months behind disbursements by the implementing agencies. This is a reasonable assumption based on the Bank's experience in Mexico.

2/ BANOBRAS has opened a new regional office in Coatzacoalcos that covers all project areas. This office significantly strengthens BANOBRAS' ability to supervise this project effectively.

a large operation, close and intensive Bank supervision will be required, particularly during the early stages of project implementation. It is expected that after this initial period, many of the supervision responsibilities will be taken over by the project unit at BANOBRAS.

3.39 The BANOBRAS project unit will prepare semi-annual reports on the progress of the project and forward them to the Bank at corresponding intervals. These reports will contain a descriptive section and quantitative indicators on subjects and in a format agreed during negotiations. 1/ These reports will include information on such subjects as the pace of construction and disbursements, the specific number of units built and credits granted, the record of cost recovery, the development of institutional capabilities, employment generated, and the socio-economic impact of the project, as well as on particular technical, budgetary, or institutional difficulties experienced during project implementation.

H. Accounts and Audits

3.40 Accounting procedures in the municipalities and the Institutos are inadequate and do not permit proper analysis or auditing. Proper accounting procedures, acceptable to the Bank, will be introduced by each intermediary within one year of the respective sub-loan signature. This will entail maintaining records reflecting their operations and financial conditions, including separate accounts for the Bank's components, in accordance with appropriate accounting principles. The accounts and financial statements (balance sheets, statements of income and expenses and related statements) will be audited by independent auditors at least once each fiscal year. 2/ A copy of these audit reports, complete with auditor's notes, will be provided to the Bank as soon as they are available and no later than six months after the end of each fiscal year, and the Bank will be furnished with such other information concerning the accounts and financial statements and the audits of the various agencies as the Bank shall from time to time reasonably request. These procedures were confirmed during negotiations, and they will be incorporated in the financing agreements between BANOBRAS and the respective intermediaries.

1/ The content and format of these reports will be similar to those presently used in the Lazaro Cardenas project (Loan 1554-ME).

2/ With the exception of the municipalities; in this case, verified accounts will be provided.

IV. FINANCIAL ANALYSIS

A. Cost Recovery

4.01 Major efforts were made during project preparation to establish cost recovery standards and procedures that demonstrate the feasibility of carrying out urban projects that pay for themselves and are not a constant drain on public resources. About 96% of all project costs are expected to be recovered directly from beneficiaries. 1/ Extensive discussions were held with the Mexican authorities on the feasibility of recovering these costs through appropriate charges and tariffs. 2/ Less than full cost recovery will occur with respect to upgrading (75% of costs are expected to be recovered) 3/, community centers (60% of costs are expected to be recovered), "other" infrastructure (50% of costs are expected to be recovered), and nothing at all will be recovered with respect to the training center or with respect to studies and complementary support activities. The Government will provide directly the respective implementing agencies with the necessary funds to cover these differences. Confirmation on this commitment was obtained during negotiations.

4.02 The estimated proportion of funds recovered from beneficiaries is based on the experience of similar programs in Mexico, and on a number of additional assumptions regarding proposed changes in charges and tariffs (see following paragraphs and Annex E). The lending rates applied by BANOBRAS to the intermediaries (implementing agencies) will be consistent with those prevailing in the country and already in force in the latest Bank-supported FOGAIN 4/ and FIFAPA programs (Loans 1881-ME and 1913-ME, respectively). For the shelter-related component, the onlending rate will be 10%. Although rates applied by the intermediaries to beneficiaries are below present inflation rates, they are in line with those expected for 1983 and are expected to become positive thereafter. 5/ Agreements on onlending rates and conditions and on user charges, satisfactory to the Bank, were reached during negotiations and will be incorporated in the subsidiary loan agreements between BANOBRAS and the respective intermediaries.

1/ In nominal terms because inflation is still, at the present time, higher than the interest rates charged to beneficiaries (see para. 2.09 and remainder of Chapter IV).

2/ See Annex E for detailed cost recovery estimates.

3/ The costs not recovered refer to streets (usually paid for from the ordinary budget), and to the water and washing facilities in Coatzacoalcos and Minatitlan which will be offered as a social service in areas where the land tenure situation does not yet permit full-fledged upgrading.

4/ This is a nation-wide rediscounting system used to promote industrial enterprises which is supported by the Bank (through Loans 1152-ME and 1881-ME).

5/ The annual inflation rate in Mexico (according to the National Consumer Price Index published by the Banco de Mexico) was 28.9% in 1976, 17.5% in 1977, and 18.3% in 1979. According to Bank estimates, it was about 30% in 1980, and is expected to be 25% in 1981, 20% in 1982, 15% in 1983, and 12% in 1984 and 1985.

4.03 With the exception of part of the upgrading program and of the community centers, the beneficiaries of the shelter-related programs will pay for all costs associated with these programs, including the cost of land, land preparation, infrastructure, and construction material credits and home improvement loans (including professional services and contingencies). Cost recovery for sites and services, and for any credit that may be associated with their development will be consolidated through mortgage payments. In many cases the interest rates to be charged to beneficiaries will be substantially higher than those charged in the past. For example, in the sites and services program in Veracruz, interest rates will be more than double those of past programs (from a previous range of 0% to 6%, to new rates of 15% per year).

4.04 The sale of sites and services and the provision of upgrading will be based on 10% down payments, with the balance in monthly payments at 15% annual interest over 15 years (no grace period). The agencies in charge of implementing these programs will be free to introduce variations (such as escalated monthly payments or cross-subsidies between higher and lower-income groups) to suit the particular needs and possibilities of the beneficiaries. Construction material credits and home improvement loans will also be offered at 15% annual interest over a period of up to 15 years (no grace period), with no down payment. 1/ Given the experience of the Lazaro Cardenas project, it is expected that many households will opt for shorter repayment periods. The above detailed conditions will be incorporated in the subsidiary loan agreements between BANOBRAS and the Institutos.

4.05 The cost of the community centers will be partially (about 60%) recovered through charges for technical assistance, and the remainder will be absorbed by the Government as part of its promotional support for this type of program.

4.06 The investment, operational and maintenance costs of water supply and sewerage works included in the City-Wide Infrastructure component is expected to be recovered in full from final beneficiaries through tariff charges and fees paid by households receiving new connections, adjusted to comply with conditions applied under the FIFAPA program.

4.07 The cost of access roads will be absorbed by the respective municipalities, as always with this type of improvement. The cost of the remaining infrastructure (electricity and telephone connections) will be recovered in full through charges to beneficiaries.

4.08 The costs of all items included in the Municipal Facilities and Services component will be fully recovered, except for the retail markets. In this case, the respective municipalities (and states) will absorb about 50% of the costs. 2/ The costs of slaughterhouses will be fully recovered

1/ But a 10% guarantee deposit.

2/ At the present time, municipalities usually only recover the operating costs of markets.

through a flat fee on each animal slaughtered, 1/ and the costs of the refuse collection systems will be recovered through direct charges to beneficiaries. 2/

4.09 The cost of the wholesale market will be fully recovered through payments by beneficiaries. On registration, wholesalers will be required to make a down payment of 20% of the price of a stall, and the rest will be paid over 10-15 years (depending on the date of occupancy) at interest rates of 17% with no grace period. A field study of the payment capacity of the wholesalers who will be relocated to the new market shows that will be their debts in monthly installments (Mex\$ 6,700), about equal to or lower than their current monthly rental payments. 3/ Final designs will be submitted to the Bank for its approval, and tariffs and charges sufficient to recover the investment and operating costs of all municipal facilities will need to be adopted prior to the implementation of these works.

4.10 Productive credits will be completely recovered through payments by beneficiaries. Lending conditions for artisans 4/ will be 15% p.a. with maturities of up to 3 years for working capital and up to 5 years for fixed assets, and no grace period. The terms of working capital credits for small-scale enterprises will conform with interest rates prevailing in the project areas 5/. For fixed asset credits, the interest rate will be the same as charged by FOGAIN 6/. Amortization periods for working capital will be up to three years, and for fixed assets up to five years. Grace periods of up to six months will be permitted on fixed asset credits to formal enterprises. Guarantee requirements will consist of personal signatures with one or two co-signatories and two acceptable credit references. For fixed asset credits, a lien on the assets financed by the sub-loan will also be required. It has been assumed that the spread to BANOBRAS will be 6%, which should allow it to absorb bad debts, to cover higher administrative costs resulting from the small size of the credits, to direct sufficient resources to the

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- 1/ These fees are generally sufficient to recover investments and operating costs of these facilities. They were (in 1979) Mex\$5 and Mex\$50 for each slaughtered chicken and pig, respectively.
- 2/ Present tariffs are about Mex\$ 5 (US\$0.22) per household per month, and will need to be doubled to recover investments and operational costs.
- 3/ The majority (80%) of the wholesalers located in downtown Villahermosa pay rental for their storage facilities.
- 4/ See para. 30 in the DPF report.
- 5/ Currently, the terms for working capital credits include an interest rate of 16.5% p.a. and a flat commission fee of 1.5%.
- 6/ Its lending rate in high-priority regions such as the project cities is presently 14%.

promotion and preparation of subloans, and to provide technical and managerial assistance to final beneficiaries. 1/

4.11 The cost of the industrial estates will be fully recovered through the sale of lots or through rents at a level that will enable the Fideicomisos to achieve a positive financial return on the capital invested. This condition was confirmed during negotiations and will be incorporated in the subsidiary loan agreements between BANOBRAS and the respective Fideicomisos.

4.12 The costs of the planned promotion schemes for productive credits will be absorbed by BANOBRAS through margins from the credit program. The proposed training center, studies and complementary support activities are important for the promotion of an effective development program for the region. Their costs will be covered by the Federal Government through direct grants.

B. Affordability

4.13 Those components which address the needs of low-income groups were defined on the basis of the priorities of these groups taking account of their capacity to pay. As a result, households in every income group in the project areas will have access to reasonably priced shelter solutions. The sites and services program and the upgrading schemes, including the provision of construction material credits and of home improvement loans, have been specially designed to solve the housing problems of the poor. 2/ The artisan credits, which account for 27% of the productive credits program, have been specially designed to support low-income groups, who will also benefit from the related training programs.

4.14 A detailed analysis was made to identify what type of shelter would be affordable by each income group. Taking account of this and of the proportion of households in each group, the possible combination of solutions was then derived to estimate the cost of these programs. The actual proportion of units to be offered in each sub-project will eventually be determined by each Instituto according to the conditions in each city and neighborhood. 3/ To ensure that these programs reach an appropriate number of low-income

1/ Initial resources for technical assistance will be made available as start-up expenditures.

2/ Other income groups will be assisted by the expansion of city-wide infrastructure and more specifically, by the provision of 3,110 high-standard serviced lots. Housing for these groups will not be financed by the project.

3/ A distribution more favorable to the bottom income groups could be obtained if the amount of the construction material credits is reduced, and if less expensive land becomes available in some cases. Such conditions will enable the provision of even cheaper combinations than the ones shown in the tables.

people, an average of at least 50% of the shelter-related combinations offered in each state will be reserved for households earning less than one-and-one-half "minimum salaries". 1/

4.15 About Mex\$ 3,600.0 million (US\$160.0 million), or about 34% of project costs are for programs reaching the poor. 2/ The least expensive sites and services solutions are minimum-serviced lots. These will cost (including physical contingencies) about Mex\$ 62,900 (US\$2,790), and will be accessible to about 76% of the population. 3/ A serviced lot plus a construction material credit of Mex\$ 25,000 (US\$1,100), sufficient for the construction of a modest shelter solution, will be accessible to about 60% of the population. 4/ The same lot plus a 30 m² shelter unit will cost about Mex\$ 138,900 (US\$6,170), and will be accessible to about 42% of the population. 5/ Additional alternative combinations of sites and services with material credits will be made available in accordance with the capacity to pay of the beneficiaries.

4.16 Many households are relatively new to the region and have either not yet established a solid economic base, or are not sure about their permanency in the region. Their shelter needs could be well served by some form of rental housing. Therefore, the affordability structure presented here could be significantly improved if one assumes that many low-income households will not need to purchase shelter, but would be able and willing to rent parts of the shelter-related combinations offered in the project. These procedures would also help households finance larger shelter solutions than those strictly affordable to them according to their regular income.

1/ Currently, this cut-off point (in the project region) is only about 13% above the Bank defined poverty level in Mexico. The corresponding figures are Mex\$ 7,650 (5,100 x 1.5) and Mex\$ 6,755 (equivalent to US\$655 per capita per year).

2/ Defined as households with one-and-one-half "minimum salaries."

3/ Assuming some cross-subsidies (on the cost of the unit) among the different combinations offered, these serviced lots would be accessible to 95% of the population. (See next para. and the affordability table on page 36). Although the income distribution and unit costs in Villahermosa were used as the basis for these computations, it is assumed that similar relationships between incomes and costs of various alternative solutions (i.e., affordability) exist in the other cities and towns of the region.

4/ Assuming some cross-subsidies as detailed in the affordability table below, these combinations could reach 83% of the population.

5/ By comparison, the least expensive "low-income" units now available for ownership in the formal market cost at least Mex\$ 600,000 (about (about US\$27,000); they are accessible to less than 5% of the population. Many households choose of course rented accommodations.

Income Distribution

<u>Monthly Income (Households)</u>		<u>% of Total Population</u>	<u>Cumulative % of Population</u>
<u>In Minimum Salaries</u>	<u>in Mex\$ (1978)</u>		
Up to 0.5	Up to 2,495	17.4	17.4
0.5 - 0.75	2,496 - 3,742	11.3	28.7
0.76 - 1.00	3,743 - 5,110	21.1	49.8
1.01 - 1.25	5,111 - 6,240	6.4	56.2
1.26 - 1.50	6,241 - 7,487	3.1	59.3
1.51 - 1.75	7,488 - 8,734	11.2	70.5
1.76 - 2.00	8,735 - 9,982	6.6	77.1
2.01 - 2.25	9,983 - 11,230	4.5	81.6
2.26 - 2.50	11,231 - 12,480	2.9	84.5
2.51 and up	12,481 and up	15.5	100.0

Source: Based on a survey of about 550 households conducted by the state of Tabasco in Villahermosa, October 1978; and data compiled by the Instituto de Vivienda - Tabasco.

Affordability 1/

<u>Option</u>	<u>Cost (In Mex\$)</u>	<u>Monthly Payment (In Mex\$)</u>	<u>% of Households with Access to Alternatives 2/</u>
Lot 1	62,900	792	95
Lot 1 + Minimum Credit (Mex\$25,000)	87,900	1,120	83
Lot 2	98,300	1,236	53
Lot 1 + Credit for 25m ² Unit	99,900	1,258	51
Lot 2 + Credit for 25m ² Unit	135,300	1,746	42
Lot 1 + Credit for 30m ² Unit	138,900	1,745	42
Lot 2 + Credit for 30m ² Unit	174,300	2,240	28
Lot 2 + Credit for 60m ² Unit	226,300	2,920	17
Lot 3	162,500	2,096	- 3/

1/ To determine affordability, it is assumed that 25% of household incomes will be available for shelter. Past experience (in the Lazaro Cardenas project) has shown that actual incomes are usually above reported incomes. Thus, this (25%) proportion probably overstates the burden of the program on the average household.

2/ The percentage of households with access to the first two solutions assumes cross-subsidies of Mex\$ 21.5 million (9.3 for the first and 12.2 for the second group). About 19% and 23% of these two income groups, respectively, will need to be subsidized. To cover these deficits, the higher income groups receiving type 3 (200 m²) serviced lots will need to pay another Mex\$ 98 each, in addition to the estimated Mex\$ 2,096 monthly payment required to cover the costs of their own lots (i.e., an increase of less than 5%).

3/ These lots are intended for higher income households and for small businesses; therefore, no affordability percentage was computed.

4.17 A system of cross-subsidies could be incorporated into the project to reach more of the lower income groups in the project areas (see footnote 2 of affordability table). This is an important procedure that would allow the Institutos to offer shelter solutions to households that would otherwise not have access to them. The system has been widely used in similar projects implemented by the Institutos in the past, and has long been accepted by the different income groups in these communities. Cross-subsidies are particularly important because the Institutos did not agree to lower the standards (and costs) of the sites below fully serviced levels as proposed by the Bank. It is anticipated that this issue will be discussed further with the Mexican authorities in connection with future Bank-supported urban projects. The proposed project will nevertheless involve considerable progress in the provision of housing and related basic services for the poor as a result of more efficient layouts (i.e., higher densities and corresponding lower unit costs), and the introduction of a massive self-help housing program.

C. Replicability

4.18 Besides the efforts made to prepare sound and well justified individual project components, the creation of an institutional framework for the expansion of such programs in the region and elsewhere in the country is a major objective of the project. To support this objective, funds recovered by the Institutos and by BANOBRAS will be retained and used for the expansion of such programs. The establishment of a special project unit at BANOBRAS, supported by the resources made available through the project, will provide a suitable basis for the replicability of these programs. Better cost recovery will help reduce the stigma which poverty-oriented urban projects have, encouraging the channeling of additional resources to such programs. Substantial expansion of these programs in the project areas would be possible in future years if demand should increase and if the institutional capacity of the implementing agencies is adjusted accordingly.

D. Institutos de Vivienda

4.19 The Institutos have been in operation for several years, but their volume of operations has increased significantly only recently with the more active participation of the respective states. The assets of the Instituto in Veracruz (IDUVIV) almost doubled from Mex\$125.6 million (US\$5.6 million) in 1978, to Mex\$241.3 million (US\$10.7 million) in 1979. About 65% of this increase was due to an increase in the mortgage portfolio, the net worth of which increased slightly (between 1978 and 1979) from Mex\$124.2 million to Mex\$126.7 million. A comparison of the mortgage portfolio to loans payable shows a favorable leverage ratio of 1.4 to 1 for 1979. The assets of the Instituto in Tabasco (IDVIT) increased from Mex\$20.4 million (US\$0.9 million) in 1978, to Mex\$65.8 million (US\$2.9 million) in 1979. Approximately 44% of this increase was linked with new projects in process, and another 27% was due

to land acquisition. Because the available information on the operations of the Instituto in Reforma (Chiapas) was inadequate, no meaningful financial indicators on past performance could be defined.

4.20 The Institutos' financial projections (available in the project file) assume that they will be concerned primarily with the implementation of the project's shelter component and related activities through 1985. This will produce a rapid growth in their portfolios, from Mex\$322.0 million in 1981 to Mex\$5,546.0 million in 1985. Over the same period, interest revenues should grow from Mex\$63.0 million in 1981 to Mex\$864.0 million in 1985. The forecasts show that the 5% spread between the Institutos' lending and borrowing rates should be sufficient to achieve a reasonable financial performance, provided reasonable control is maintained over costs. Debt service coverage for all the Institutos is expected to remain above 1.0 times and the debt/capitalization ratio should improve from 91% in 1981 to around 81% in 1985. To ensure achievement of these results, a number of specific covenants will be included in the subsidiary loan agreements between BANOBRAS and the respective Institutos (see para. 6.04(h) below, and Table V of the DPF report), and no major new programs will be undertaken by the Institutos prior to project completion without the agreement of BANOBRAS and the Bank.

4.21 The financing requirements of the Institutos during the 1980-1985 period are estimated at US\$352.0 million equivalent. This amount includes US\$269.4 million for the proposed project, US\$31.1 million for future projects, and working capital and other investments of US\$51.5 million. About 15% of the requirements will be financed from net internally generated funds, repayments and down payments, 76% from the project fund, and 9% from other sources. The table below summarizes their financing plans.

INSTITUTOS DE VIVIENDA - FINANCING PLAN 1980-1985
(In Millions US\$)

<u>Sources of Funds</u>	<u>Cost</u>	<u>%</u>
Funds Provided by Operations	146.3	42
Less Debt Service	94.8	27
Net Internally Generated Funds	51.5	15
Project Fund /1	269.4	76
Other /2	31.1	9
 Total Sources of Funds	 352.0 =====	 100 ===
 <u>Application of Funds</u>		
Proposed Project	269.4	76
Future Projects	31.1	9
Working Capital	51.5	15
 Total Application of Funds	 352.0 =====	 100 ===

/1 Including US\$75.2 million from the proposed Bank loan.

/2 Financing for the construction of future projects beginning in 1985.

F. Water and Sewerage Authorities

4.22 Water supply and sewerage systems in most cities of the region are operated by the respective municipalities or by local semi-autonomous authorities called juntas. The systems have usually been built by SAHOP and entrusted to the juntas for their operation and the recovery of the investment costs. If the systems are built with the participation of federal funds 1/ a federal junta is established upon their completion, and the corresponding share of the recovered funds needs to be returned to the federal government. Enforcement of such obligations is difficult and the record of cost-recovery is in most cases inadequate. Funds collected often only cover (sometimes barely) maintenance and operating costs. The financial, administrative and technical management of the systems is usually weak and accounting procedures and auditing practices are generally inadequate. To improve this situation, the new water authorities will be established on the much more rigorous standards and conditions applied under the FIFAPA program (DPF report, Table X). The financial projections related to the water and sewerage systems financed under the project for each State are available in the project file. The table below summarizes the consolidated financing plan for these works.

WATER AND SEWERAGE SYSTEMS FINANCING PLAN 1980-1985

(US\$ Million)

Description	Total Cost	%
<u>Sources of Funds</u>		
Net Internal Generation	25.3	18
Project Fund:		
- IBRD	47.2	33
- Government	65.3	46
- Other <u>/a</u>	<u>4.9</u>	<u>3</u>
Total Sources of Funds	<u>142.7</u>	<u>100</u>
<u>Application of Funds</u>		
Project Cost	112.4	79
Capitalized Interest	15.6	11
Other Works and Replacements	5.2	4
Working Capital and Cash Surplus	<u>9.5</u>	<u>6</u>
Total Application of Funds	<u>142.7</u>	<u>100</u>

/a Loans for new projects to be executed in 1985 and thereafter.

1/ Usually in the form of a long-term loan.

4.23 Net internal generation of funds is expected to finance 18% of total financial requirements; the project fund (IBRD and Government) will finance another 79%, and other sources the remaining 3%.

V. SOCIAL AND ECONOMIC JUSTIFICATION ^{1/}

A. Project Benefits

5.01 The project is designed to help maximize the development potential of the Isthmic region which is one of the richest in the country in terms of its resource endowment, but one of the poorest in terms of the present welfare levels of its population. The project will help internalize economic benefits in the region which now produces about two-thirds of the petroleum output of the country, by facilitating the expansion of forward and backward linkages between this industry and other sectors and subsectors. The project will alleviate some of the serious imbalances that have recently occurred as a consequence of contrasting levels of investment in petroleum related activities and in housing and urban infrastructure. The levels of infrastructure and basic services in important secondary cities that serve as service centers to rural hinterlands will be raised in order to decrease the welfare differences between rural and urban areas. Employment opportunities will be increased by providing appropriate credits and training programs. Marketing difficulties and bottlenecks in commerce activities will be reduced through the construction of appropriate facilities. New institutional arrangements will be established to strengthen the capabilities of local agencies to program and implement integrated urban and regional investment plans. The potential replicability of such programs will be enhanced by introducing more efficient management and significantly better cost-recovery standards.

5.02 The project will directly benefit about 95,000 households (or over half a million people) in the form of:

- (a) secured property rights with improved housing conditions;
- (b) access to better health, education and other community development facilities;
- (c) better employment opportunities with improved earning capacity; and
- (d) increased availability of goods and services at more competitive prices.

^{1/} Only a summary of project benefits is given here. A wider description is given in the discussion on project objectives contained in paras. 1.24 to 1.31 in Chapter I of this report.

B. Economic Analysis

5.03 An economic rate of return was calculated for components which constitute 83% of total project costs. This includes sites and services, construction material credits, urban upgrading, home improvement loans community centers, and city-wide infrastructure works. Productive activities, municipal facilities, studies and support activities were excluded because of the difficulty of quantifying their benefits.

5.04 All the cost and benefit streams used here are in constant 1979 prices, taxes and transfer payments excluded. The cost streams consist of: (a) the market value of all land used for sites and services works; (b) all on and off-site infrastructure (including such items as earthworks, water and sewerage, drainage, electricity, and roads); (c) the complete cost of all material and labor used in shelter construction; and (d) appropriate operation and maintenance costs of all infrastructure and community facilities. No residual values of land or houses were taken into account since these are assumed to be offset by maintenance costs for houses during the life of the project. Physical contingencies of 15% of the relevant costs (excluding land) and a 7% surcharge for professional services were included.

5.05 It was assumed that the construction of the shelter units would start with the simultaneous construction of units of different sizes (25 m², 30 m², 40 m² and 60 m²). Construction would continue over a period of 15 years, including the expansion of originally smaller units. The final distribution of the planned 18,860 units has been assumed to be: 50% of 30 m² units, 30% of 40 m² and 20% of 60 m² units. The imputed rental values range from US\$1,080 per year for a 25 m² unit, to US\$2,400 per year for a 60 m² unit. These figures are based on estimates made by the appraisal mission in the field, and they were calculated for houses of similar sizes and with access to similar service levels as those which are to be provided under this project. Use of these figures tends to underestimate the real payments made for housing since field observations in the region indicate that price increases in the housing market have consistently been greater than overall inflation rates over the past five years. This trend is not likely to change much even with the envisaged increases in available housing units.

5.06 Incremental benefits from urban upgrading, home improvement loans and city-wide infrastructure were phased, taking account of comparable prices (in 1979) for similar houses. In the case of city-wide infrastructure, only the water and sewerage works were considered because of the difficulty in estimating the benefits of the other infrastructure (the excluded items represent less than 7% of this program). The benefits included in the analysis do not measure consumer surplus, or the value of the service to the consumer beyond what he is asked to pay. They also underestimate the total benefits to be derived by excluding difficult to quantify health benefits, and the increase in land values associated with increased accessibility of safe, treated water and sewerage services. No benefits were imputed for the approximately 10,000 families who would make use of the water and washing facilities installed under the urban upgrading component. These exclusions were made because of the difficulty of making objective estimates of benefits.

D. Risks

5.10 It is reasonable to expect a higher risk associated with a multi-sector and multi-city project than with a simpler project concerned only with a single sector or a smaller number of intermediaries. The most serious risk probably relates to the eventual implementation of the planned institutional improvements; no major difficulties are anticipated in the implementation of the planned works.

5.11 The issues which may adversely affect implementation are: (a) The complexity of the program and the relatively large number of cities and towns included; (b) The requirement to establish new water supply and sewerage authorities for the implementation of such works, and operate them according to guidelines acceptable to the Bank. This process may become more difficult and take longer than anticipated; (c) The requirement that proper engineering and feasibility studies for these works be submitted for review by the Bank prior to their implementation. Some of the anticipated works may therefore eventually not be required. In such a case, the corresponding funds would be transferred to other components, or could be cancelled from the loan amount; (d) The operational changes required of the Institutos de Vivienda may take longer than anticipated, and this could cause corresponding slippages in disbursements; and (e) The fact that success of the productive activities component partly depends on the degree of promotion given this program; failure to carry out such promotion in a forceful manner could limit the pace of implementation. Although no reductions in the program amounts would (in such a case) be necessary 1/, slippages in disbursements could occur.

5.12 Although some program parts in Veracruz may have a slower start than in Tabasco and Chiapas, 2/ it is expected that they will eventually match the implementation pace of the other subregions. The urgency and relevance of this project to all cities in the region are such, that the new (state) government in Veracruz has already endorsed it.

5.13 Despite the higher risks inherent in such a project, these risks are justifiable because of the new ground it will break in the traditional pattern of urban projects in Mexico, because of the unusual opportunity the project region represents in terms of its development potential, because of the impact it will have on the Government's policy of decentralizing planning and financial responsibilities to state and municipal authorities, and last, but not least, because of the political urgency to improve the social conditions in a region of such importance to the country. The commitment of the federal, state and municipal authorities to this program, and the high professional level of Mexico's institutions and officials make these risks acceptable.

5.14 No difficulties are envisaged with respect to land purchases still needed for the project, as these will all be purchased from private owners, and not from ejidos.

1/ Because of the conservative demand estimates made.

2/ Because of the recent change of administration in Veracruz (December of 1980).

VI. RECOMMENDATIONS AND LOAN CONDITIONS

6.01 To ensure the success of the project, the following agreements were reached during negotiations concerning a number of actions to be taken by the Government, BANOBRAS, and by various agencies involved in projects' implementation.

6.02 The conditions of loan effectiveness will be:

- (a) the execution of at least one project agreement between BANOBRAS and a state (SAR 3.01; LA 6.01(a); and
- (b) the execution of at least one subsidiary loan agreement between BANOBRAS and an intermediary in the state referred to in section (a) above (SAR 3.01; and LA 6.01(b)).

6.03 Assurances were obtained on the following:

- (a) the establishment of a federal interministerial coordinating unit for this project no later than June 30, 1981 (SAR 3.03 and 3.37; GA 4.03);
- (b) The water supply and sewerage authorities will be established and, together with the Institutos, maintained in a manner satisfactory to the Bank. The respective subsidiary loan agreements between BANOBRAS and all intermediaries will be concluded no later than July 31, 1981. These agreements with the municipalities will be concluded not later than December 31, 1981 (SAR 3.01, 3.06, 3.08, 3.19, 3.20, and 4.02; LA 3.01(b));
- (c) the new water supply and sewerage authorities will operate according to conditions applicable under the FIFAPA program, and all works implemented by these authorities will be carried out through SAHOP (SAR 3.06 and 3.23; GA 3.01);
- (d) feasibility studies, satisfactory to the Bank, for 60% of the works planned under the City-Wide Infrastructure component will be completed no later than January 31, 1983; and for the remainder of these works by January 31, 1983 (SAR 3.24; LA 3.03(a));
- (e) feasibility studies and the corresponding final designs of the industrial estates will be presented to the Bank no later than December 31, 1982 and these works will not be carried out until the Bank has approved these studies and designs (SAR 3.09; LA 3.03(c) and 3.06);
- (f) the terms of reference and contracts for each of the elements under the Studies program will need prior Bank approval (SAR 3.11; LA 3.09);
- (g) a detailed program of assistance (under the support activities component) and a corresponding schedule of implementation will be prepared by BANOBRAS, in a manner satisfactory to the Bank, no later than July 31, 1981 (SAR 3.11; LA 3.07);

- (h) BANOBRAS will maintain the project unit and provide it with adequate staff to carry out BANOBRAS' obligations as borrower (SAR 3.02 and 3.17; LA 3.02);
- (i) satisfactory monitoring and evaluation procedures will be maintained at BANOBRAS for the project, and a completion report, satisfactory to the Bank, will be prepared by BANOBRAS not later than twelve months after project completion (SAR 3.37; LA 3.05(b)(i) and (c));
- (j) semi-annual supervision reports in a format satisfactory to the Bank, will be prepared by BANOBRAS and submitted to the Bank at corresponding intervals (SAR 3.39; LA 3.05(b)(iii));
- (k) separate accounts will be kept for the project by BANOBRAS and by each of the intermediaries, and yearly audited financial statements for each of these agencies (completed by independent auditors), satisfactory to the Bank, will be forwarded to the Bank by BANOBRAS no later than six months after the end of each fiscal year. In the case of municipalities, only verified accounts will be provided (SAR 3.40; LA 4.01 and 4.02);
- (l) the Government will provide to the respective intermediaries, in a form satisfactory to the Bank, amounts corresponding to the non-recoverable elements of the project (SAR 4.01; GA 2.02);
- (m) BANOBRAS will maintain a special unit in its Credit Department for the implementation of the credits to small-scale enterprises component, such unit to be organized and staffed at all times in a manner satisfactory to the Bank (SAR 3.08; LA 3.10); and
- (n) BANOBRAS will utilize its earnings from the credits to small-scale enterprises component for further lending in this program (SAR 4.18; LA 3.08(b)).

6.04 The following undertakings to be obtained from project intermediaries will be reflected in subsidiary loan agreements to be entered into between BANOBRAS and the respective intermediaries (LA 3.01(b)):

- (a) the special departments in the Institutos for the support of the credits for artisans program will be established in all Institutos and operate under conditions satisfactory to the Bank (SAR 3.08);
- (b) the implementation of the industrial estates will be in accordance with the procedures established under the FIDEIN program (SAR 3.09);
- (c) the introduction by the Institutos of appropriate management and accounting practices, and the maintaining of appropriate qualified staff (SAR 3.19; and 3.20);

- (d) proper accounting procedures, acceptable to the Bank, will be introduced by each intermediary within one year of the respective subloan signature (SAR 3.40);
- (e) the application by the Institutos of agreed terms and conditions to the beneficiaries of the shelter-related programs (SAR 4.04);
- (f) tariffs and charges sufficient to recover the investment and operating costs of all municipal facilities, with the exception of 50% of the investment costs of retail markets, will need to be adopted and final designs for all these works approved by the Bank prior to the respective implementation of these works (SAR 4.08 and 4.09);
- (g) at least 50% of shelter-related combinations will be reserved (as an average) for households earning less than one-and-one-half "minimum salary" (SAR 4.14);
- (h) the Institutos will charge appropriate interest rates, retain earnings for the expansion of programs similar to those being implemented under the project, and will not undertake major new programs prior to project completion without the agreement of BANOBRAS and the Bank (SAR 4.18 and 4.20);
- (i) the application of agreed terms and conditions to beneficiaries of the productive credits (SAR 3.08 and 4.10);
- (j) the municipalities will keep separate accounts for the works to be carried out under the municipal facilities and services program, and these accounts will be kept and managed according to procedures acceptable to the Bank (SAR 3.40);
- (k) the Fideicomisos will recover the cost of industrial estates through the sale of lots or their rent at a level sufficient to achieve a positive financial return on the invested capital (SAR 4.11); and
- (l) the state of Tabasco, through CEPROTAB will provide appropriate staffing, and finance all the operations of the proposed training center (SAR 3.10).

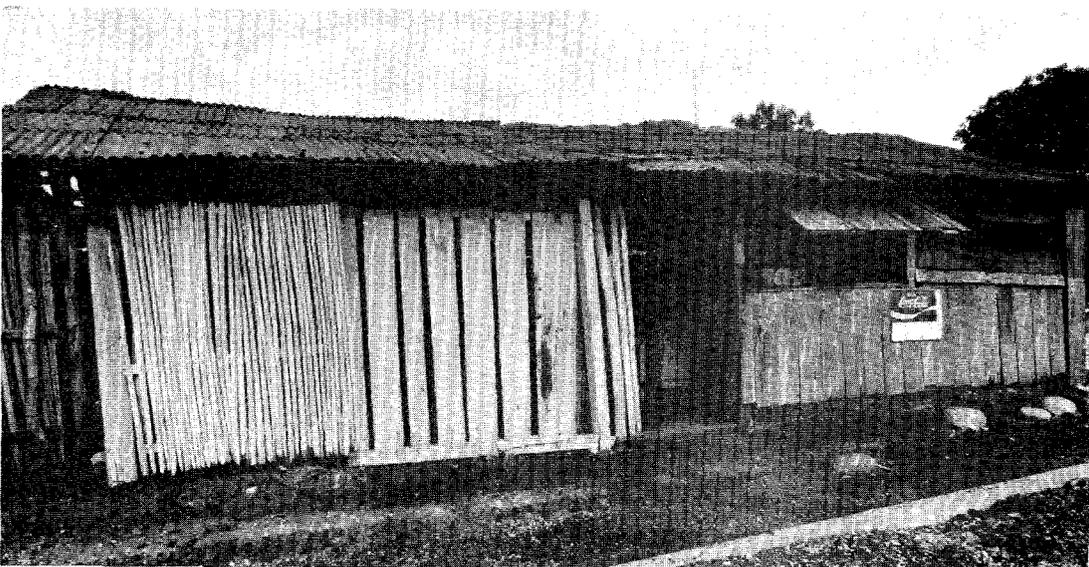
6.05 The conditions of disbursements will be:

- (a) the conclusion of subsidiary loan arrangements, satisfactory to the Bank, between BANOBRAS and each of the intermediaries for the project components to be carried out by the respective agencies (SAR 3.01, 3.08 and 3.18; LA Sch 1 4(d));
- (b) the establishment and operation of new state water and sewerage authorities, including state-wide authorities (SAPAs) in Tabasco and in Chiapas, and a joint authority for Coatzacoalcos and Minatitlan, under conditions satisfactory to the Bank (SAR 3.06 and 3.23; LA Sch 1 4(c)); and

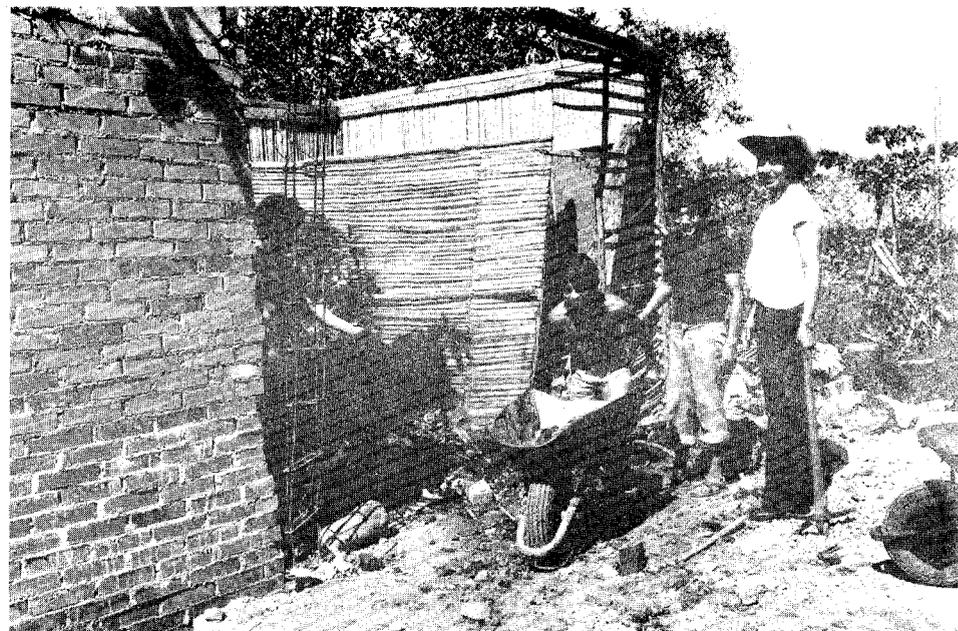
- (c) special departments will be established in each Instituto for the support of the credits to artisans program and will be operated in a manner satisfactory to the Bank (SAR 3.08; LA Sch 1 4(c)).

6.06 The mission recommends that up to US\$5.0 million be made available in the project for retroactive financing of expenditures made after January 31, 1980 (SAR 3.35; LA Sch 1 4(a)).

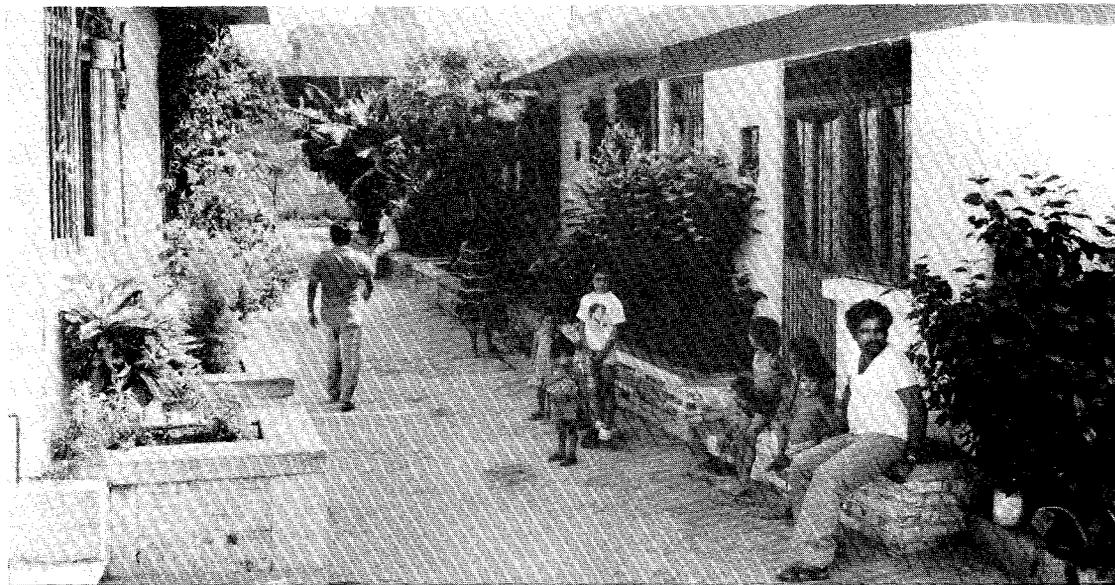
6.07 Subject to the conditions mentioned in paras. 6.02 to 6.05, the proposed project is suitable for a Bank loan of US\$164.0 million equivalent to the Government of Mexico for a term of 15 years, including a grace period of three years.



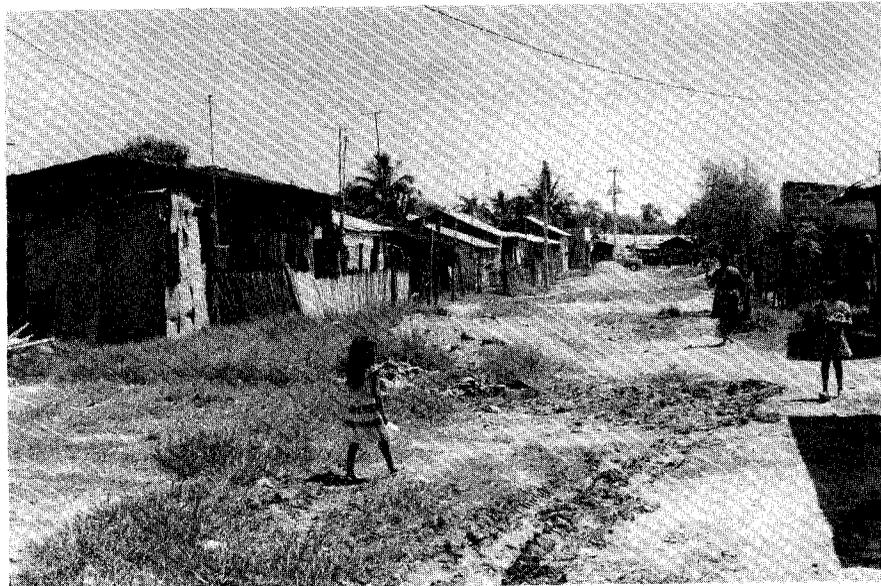
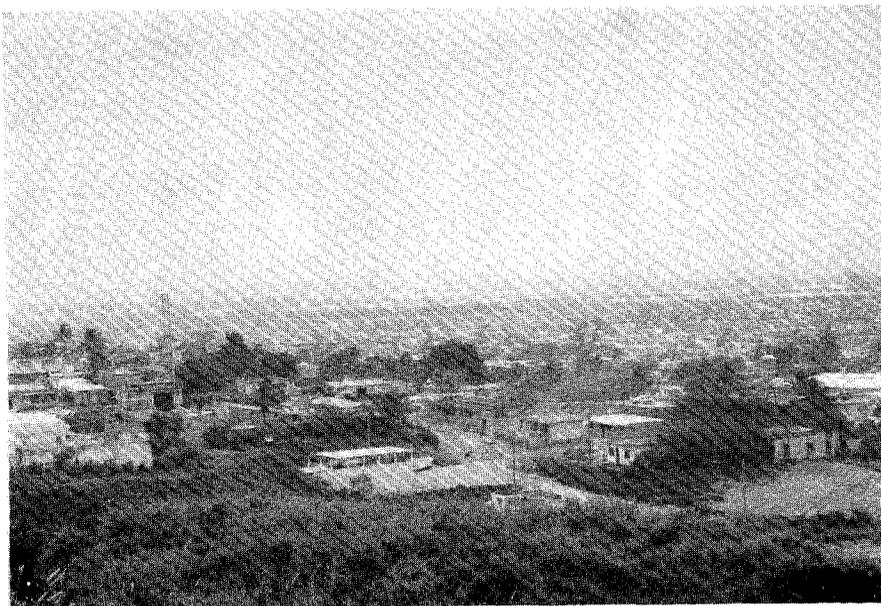
Original conditions in areas of Bank-supported Lázaro Cárdenas Conurbation Development Project (Loan No. 1554-ME).



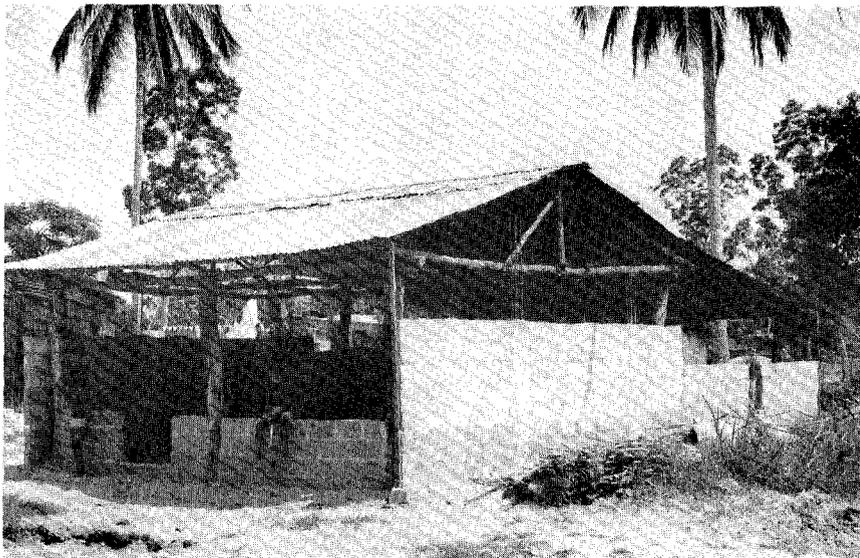
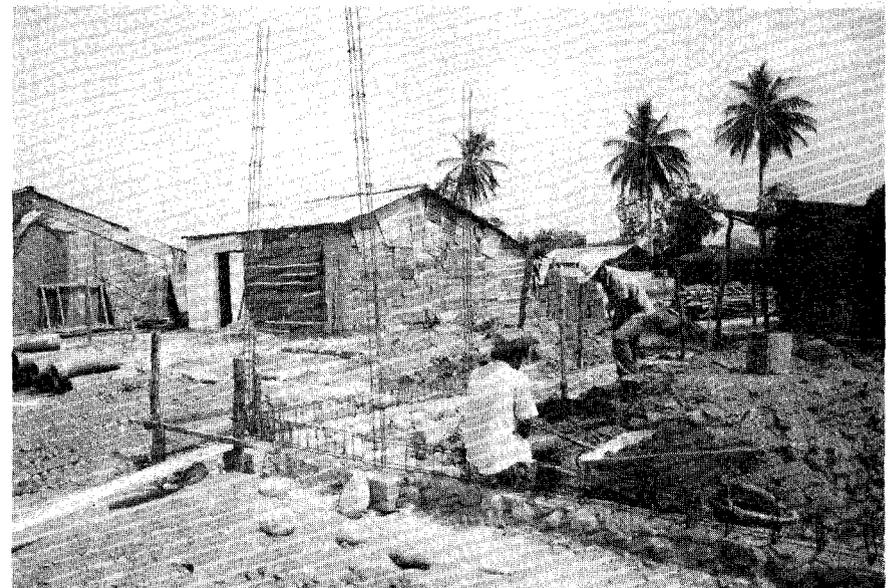
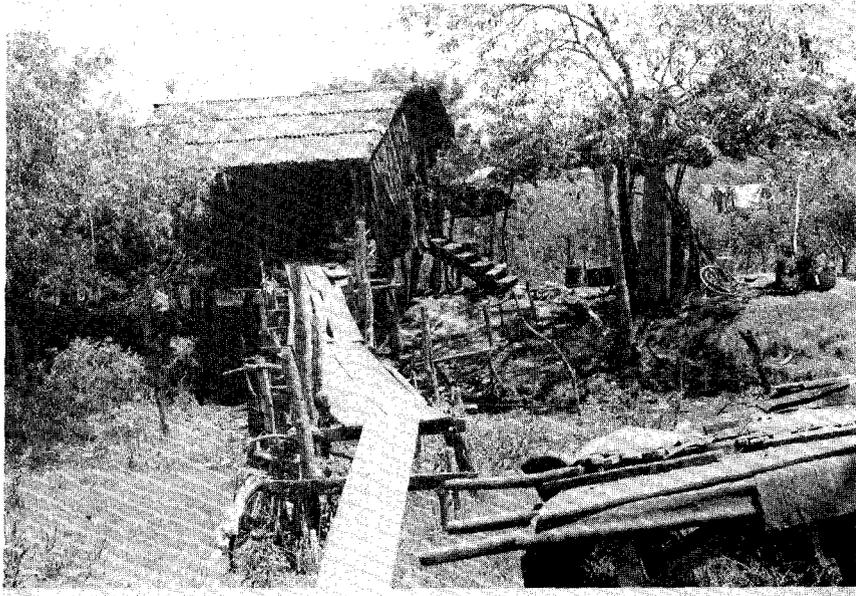
Bank-supported self-help housing under construction in Lázaro Cárdenas (Loan No. 1554-ME).



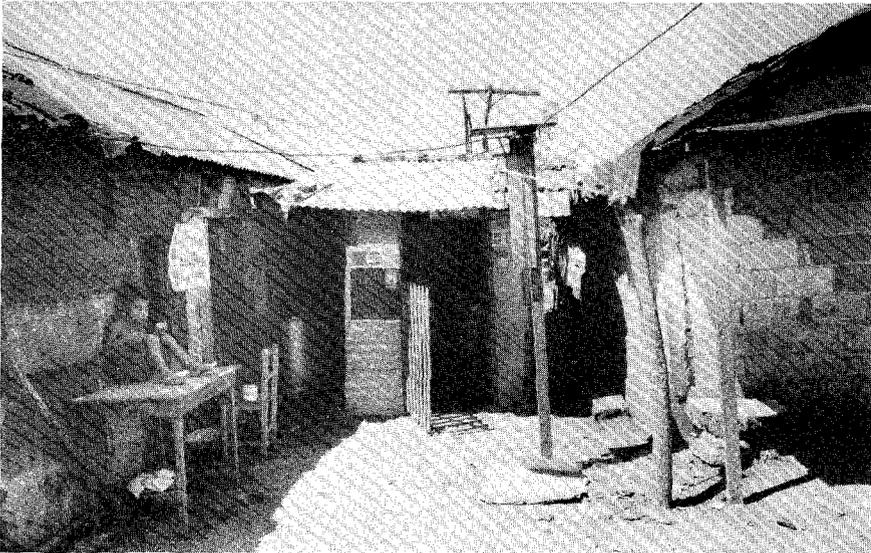
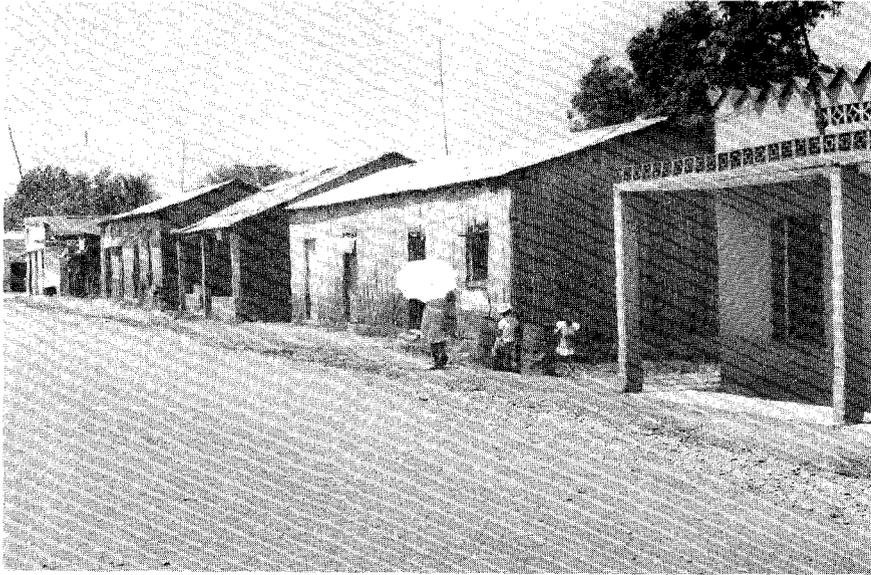
Final conditions of self-help construction units in Lázaro Cárdenas project areas. (Loan No. 1554-ME)



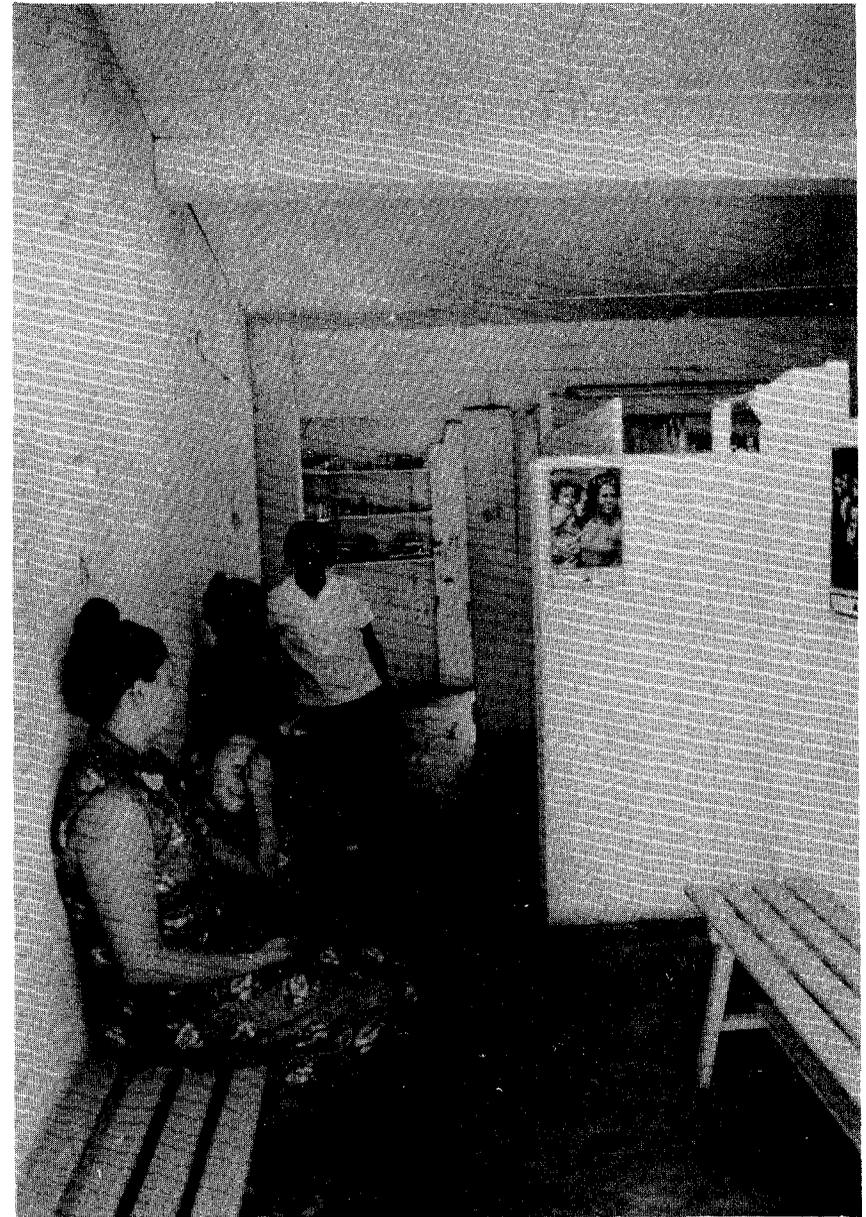
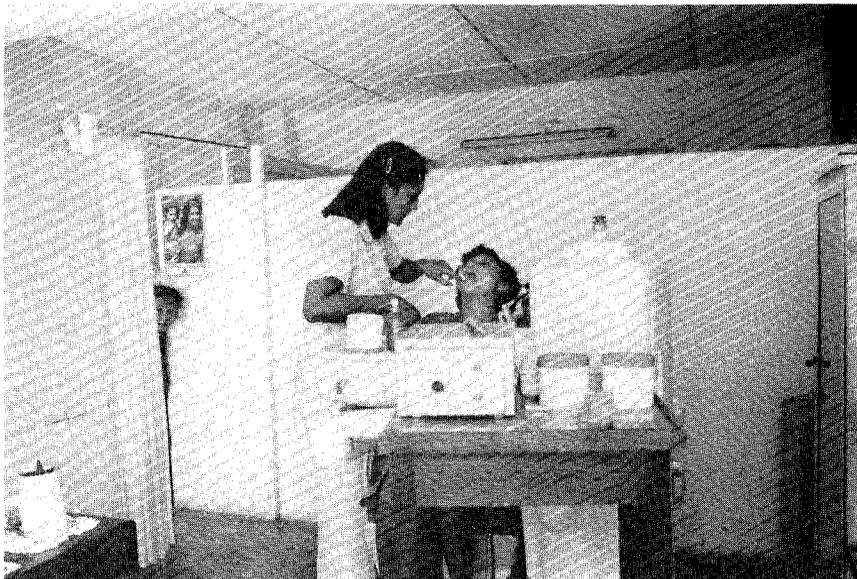
THE PROJECT AREAS: The outskirts of Coatzacoalcos (upper left); a squatter settlement in Villahermosa (lower left); approaching Minatitlan coming from Coatzacoalcos (upper right); and illegal refuse dumping on the outskirts of Coatzacoalcos (lower right).



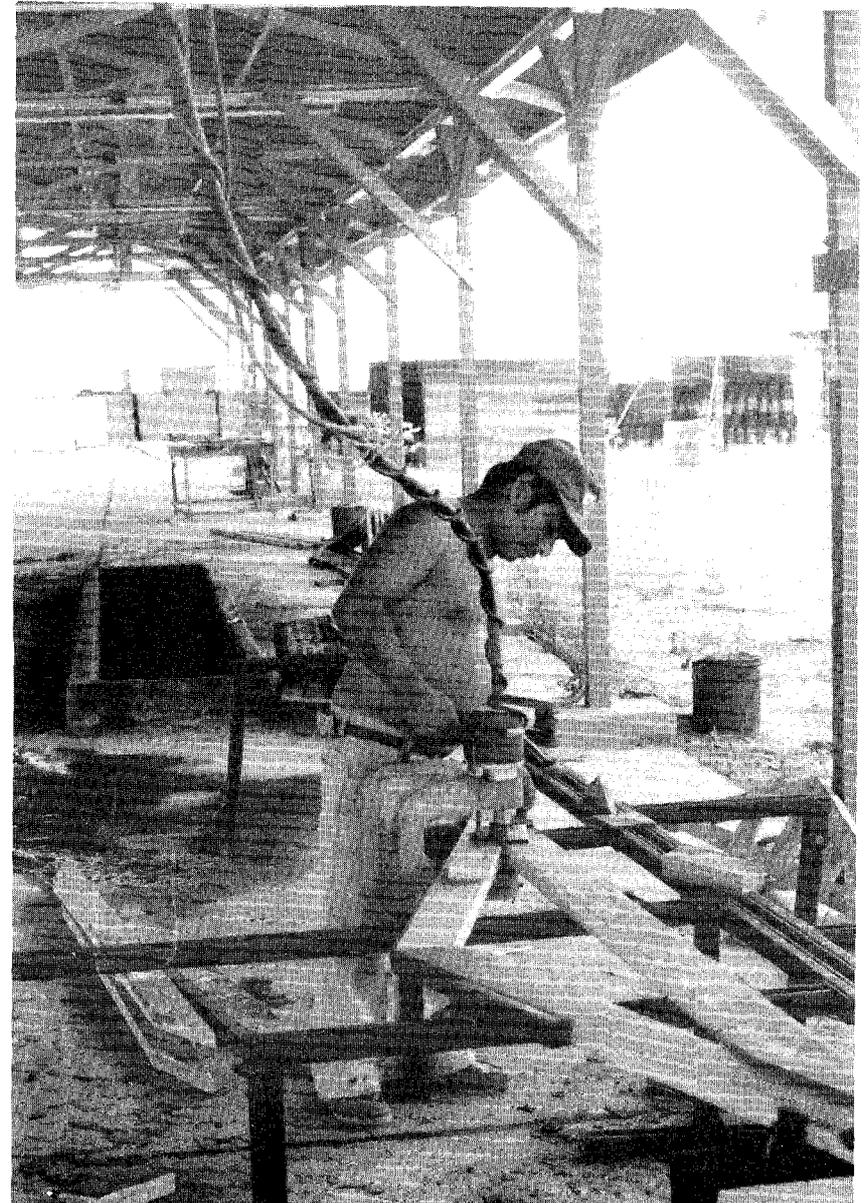
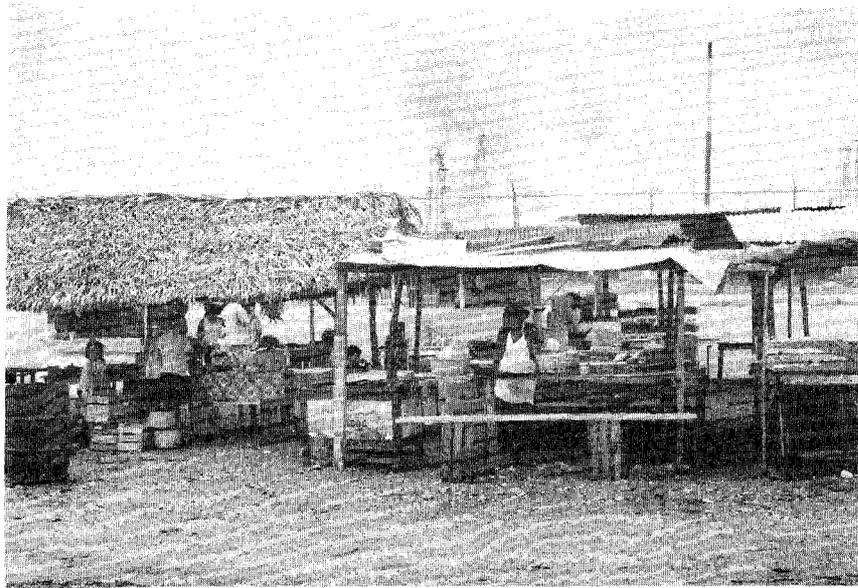
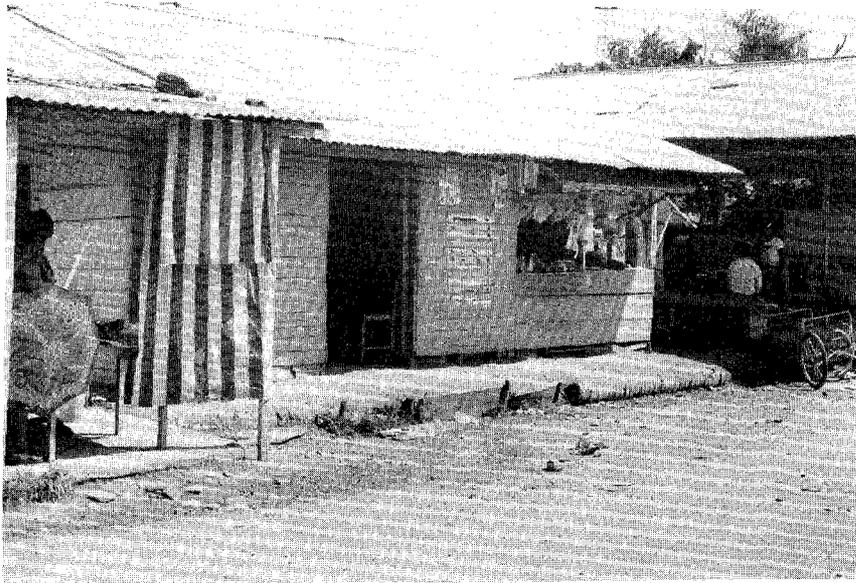
SHELTER CONDITIONS IN VILLAHERMOSA: Typical squatter settlement on the outskirts of the city (upper left); traditional self-help efforts (lower left); on-going upgrading programs (upper right); and higher level self-help housing (lower right).



UPGRADING AREAS: Typical street without water and sewerage services in Reforma (upper left); tenement court ("cuartería") in Villahermosa (lower left); existing water supply facilities in a marginal settlement of Villahermosa (upper right); and washing facilities in the same settlement (lower right).



HEALTH AND SANITATION: "Washing facilities" on the Grijalva River in Villahermosa (upper left); dental care in a community center (lower left); and waiting room in the same center (photo on right).



CREDITS TO SMALL-SCALE ENTERPRISES: "Typical Corner Store" in Villahermosa (upper left); traditional "diners" (lower left); and a small construction firms (photo on the right) as an illustration of the kind of enterprises that would receive such credits.

PROJECT COMPONENTS AND COSTS ^{1/}

	<u>Veracruz</u>	<u>Tabasco</u>	<u>Chiapas</u>	<u>Total Project In Million Mex\$</u>	<u>In Million US\$</u>
<u>Shelter-Related</u>					
- Sites and Services	1,719.3	1,344.7	330.32	3,394.3	150.9
- Construction Material					
Credits	641.1	719.1	151.1	1,510.2	67.2
- Urban Upgrading	86.3	250.3	99.1	435.7	19.4
- Home Improvement Loans	458.2	120.6	47.1	625.8	27.8
- Community Centers	67.7	19.8	7.4	95.9	4.3
Sub-Total	<u>2,972.5</u>	<u>2,454.5</u>	<u>635.0</u>	<u>6,062.0</u>	<u>269.4</u>
<u>City-Wide Infrastructure</u>					
- Water Supply	424.0	646.0	33.0	1,103.0	49.0
- Sewerage	820.0	565.0	43.0	1,428.0	63.5
- Other Infrastructure	78.0	36.0	33.0	147.5	6.5
Sub-Total	<u>1,322.0</u>	<u>1,247.0</u>	<u>109.0</u>	<u>2,678.0</u>	<u>119.0</u>
<u>Municipal Facilities and Services</u>					
- Retail Markets	71.4	35.6	0.0	107.0	4.8
- Wholesale Market	0.0	183.0	0.0	183.0	8.1
- Slaughterhouses	106.9	430.1	0.0	537.0	23.9
- Refuse Collection	61.0	37.0	0.0	98.0	4.4
Sub-Total	<u>239.4</u>	<u>685.6</u>	<u>0.0</u>	<u>925.0</u>	<u>41.1</u>
<u>Productive Activities</u>					
- Credits to Artisans ^{2/}	48.6	47.1	25.7	121.5	5.4
- Credits to Small-scale ^{2/}					
Enterprises	170.7	110.3	54.2	335.2	14.9
- Industrial Estates	128.2	128.2	0.0	256.3	11.4
- Training Center	0.0	33.3	0.0	33.3	1.5
- Promotional Programs ^{2/}	6.3	6.3	4.0	16.6	0.7
Sub-Total	<u>353.8</u>	<u>325.2</u>	<u>84.0</u>	<u>763.0</u>	<u>33.9</u>
<u>Studies and Complementary</u>					
<u> Support Activities ^{2/}</u>					
- Studies	50.0	20.0	10.0	80.0	3.6
- Support Activities	10.0	10.0	2.5	22.5	1.0
Sub-Total	<u>60.0</u>	<u>30.0</u>	<u>12.5</u>	<u>102.5</u>	<u>4.6</u>
 TOTAL	 <u>4,948.0</u>	 <u>4,742.0</u>	 <u>840.0</u>	 <u>10,530.0</u>	 <u>468.0</u>

^{1/} Includes engineering studies, physical contingencies and price escalation except where otherwise noted. Sub-totals may not add up due to rounding off.

^{2/} No price escalation considered.

Table I
PROJECT FINANCING
(In Million US\$)

	Total Cost	IBRD	%	Government of Mexico	%	Bene- ficiaries ^{1/}	%
<u>Shelter-Related Program</u>							
- Sites and Services	150.9	42.3	28	93.6	62	15.1	10
- Construction Material Credits	67.2	17.5	26	43.0	64	6.7	10
- Urban Upgrading	19.4	6.8	35	11.0	57	1.6 ^{2/}	8
- Home Improvement Loans	27.8	7.2	26	17.8	64	2.8	10
- Community Centers	4.3	1.4	32	2.9	68	---	--
Sub-Total	<u>269.4</u>	<u>75.2</u>	<u>28</u>	<u>168.0</u>	<u>62</u>	<u>26.2</u>	<u>10</u>
<u>City-Wide Infrastructure</u>							
- Water Supply	49.0	20.6	42	28.4	58	---	--
- Sewerage	63.5	26.7	42	36.8	58	---	--
- Other Infrastructure	6.5	2.7	42	3.8	58	---	--
Sub-Total	<u>119.0</u>	<u>50.0</u>	<u>42</u>	<u>69.0</u>	<u>58</u>	<u>---</u>	<u>---</u>
<u>Municipal Facilities and Services</u>							
- Retail Markets	4.8	1.9	40	2.9	60	---	--
- Wholesale Market	8.1	3.2	40	4.9	60	---	--
- Slaughterhouses	23.7	9.5	40	14.2	60	---	--
- Refuse Collection	4.4	1.8	40	2.6	60	---	--
Sub-Total	<u>41.1</u>	<u>16.4</u>	<u>40</u>	<u>24.7</u>	<u>60</u>	<u>---</u>	<u>---</u>
<u>Productive Activities</u>							
- Credits to Artisans	5.4	3.0	55	1.9	35	0.5	10
- Credits to Small Scale Enterprises	14.9	8.2	55	5.2	35	1.5	10
- Industrial Estates	11.4	4.6	40	5.7	50	1.1	10
- Training Centers	1.5	0.5	35	1.0	65	---	--
- Promotional Programs	0.7	0.7	100	--	--	---	--
Sub-Total	<u>33.9</u>	<u>17.0</u>	<u>50</u>	<u>13.8</u>	<u>41</u>	<u>3.1</u>	<u>9</u>
<u>Studies and Complementary Support Activities</u>							
- Studies	3.6	3.6	100	--	--	---	--
- Support Activities	1.0	1.0	100	--	--	---	--
Sub-Total	<u>4.6</u>	<u>4.6</u>	<u>100</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>
TOTAL	<u>468.0</u>	<u>164.0</u>	<u>35</u>	<u>275.0</u>	<u>59</u>	<u>29.0</u>	<u>6</u>

1/ The indicated amounts correspond to downpayments, guarantee deposits which are made upon inscription into the various programs (in the case of Construction Material Credits, Home Improvement Loans, and Industrial Estates), or self-participation shares (in the case of the Productive Credits).

2/ Does not include costs for public hydrants.

Note: Sub-totals may not add up due to rounding off.

TABLE II - SHELTER-RELATED COMPONENT

Consolidated Component - Cash Flow

(In million Mex\$)

	1980 ^{1/}	1981	1982	1983	1984	1985	1986	1987
INFLOW								
Project Fund	28	510	836	2,057	2,108	523	-	-
Down Payments	2	48	78	201	199	120	151	166
Future Loans	-	-	-	-	-	701	1,526	1,650
Beneficiary Repayments: ^{2/}								
Principal	-	10	34	86	130	185	251	321
Interest	-	63	198	520	750	957	1,194	1,424
TOTAL INFLOW	30	631	1,146	2,864	3,187	2,486	3,122	3,561
OUTFLOW:								
Sites and Services ^{3/}	21	327	490	1,235	1,106	637	921	995
Construction Material Credits ^{3/}	4	103	163	441	492	491	396	429
Urban Upgrading ^{3/}	3	67	110	67	188	27	58	63
Home Improvement Loans ^{3/}	-	-	44	294	289	59	130	141
Community Centers ^{3/}	-	12	28	20	34	9	20	22
Instituto-Administration ^{4/}	0	5	21	45	69	99	109	125
Project Fund - Principal ^{5/}	-	-	-	112	221	300	340	375
- Interest	-	38	111	277	473	556	543	509
Future Loans - Principal ^{6/}	-	-	-	-	-	-	-	104
- Interest	-	-	-	-	-	48	174	336
Building and Equipment	2	1	-	-	-	-	-	-
TOTAL OUTFLOW	30	553	967	2,491	2,872	2,226	2,691	3,099
Net Surplus/Deficit Accumulated	0	78	179	373	315	260	431	462
	-	78	257	630	945	1,205	1,636	2,098

NOTES:

^{1/} Includes retroactive financing and represents last quarter of FY/CY1980.^{2/} Based on 15 year loans at 15%, includes effect of 2 months average collection period and 2% write-off of receivables.^{3/} Includes future projects beginning 1985 based on 1980-1985 activity spread over 5 years.^{4/} Based on 3% of work in progress-1980; 1981 and 1982-3% of average loans receivable; 1983-2-1/2 of average loans receivable; 1984 and 1985-2% of average loans receivable; 1986-1.75% of average loans receivable; 1987-1.65% of average loans receivable.^{5/} 15 years at 10% including 2 year grace period, repayment based on 67% of disbursement each year because most funds should be disbursed by mid-year.^{6/} 15 years at 10% including 2 year grace period. Loan is anticipated from Federal Government or State Government.

Table III
CITY-WIDE INFRASTRUCTURE COMPONENT 1/
CONSOLIDATED COMPONENT - CASH FLOW

(In million Mex\$)

	<u>1980</u> <u>2/</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
<u>INFLOW</u>								
Project Fund	14	387	529	639	669	293	-	-
Future Loans	-	-	-	-	-	111	241	262
Connection Charges <u>3/</u>								
Water	3	46	82	73	92	94	68	76
Sewer	2	11	27	25	38	37	27	30
Permit Charges <u>4/</u>	-	7	10	9	12	18	17	18
Tariff Collections <u>5/</u>	85	144	195	387	521	698	807	929
TOTAL INFLOW	104	595	843	1,133	1,332	1,251	1,160	1,315
<u>OUTFLOW:</u>								
Water Supply System <u>6/</u>	6	183	249	252	273	186	99	108
Sewerage System	8	204	280	387	396	218	142	154
Water and Sewerage Authority - Administration and Maintenance	70	113	208	258	329	404	470	552
Building and Equipment	2	5	-	-	-	-	-	-
Inventory	4	4	7	9	12	12	9	9
Project Fund <u>7/-</u> Principal	-	-	-	63	101	135	153	166
-Interest	-	-	-	37	96	139	127	146
Existing Loans <u>8/-</u> Principal	3	3	3	3	4	5	5	5
-Interest	4	4	4	4	4	3	2	2
Future Loans <u>9/</u> Principal	-	-	-	-	-	-	-	16
-Interest	-	-	-	-	-	-	-	6
TOTAL OUTFLOW	97	516	751	1,013	1,215	1,102	1,007	1,164
NET SURPLUS/(DEFICIT)	7	79	92	120	117	149	153	151
Accumulated	-	86	178	298	415	564	717	868

NOTES:

1/ Excludes other infrastructure.

2/ Includes retroactive financing.

3/ Mex.\$3,500 per water connection and Mex.\$1,400 per sewer connection based on population growth.

4/ Mex.\$2,000 per lot.

5/ This assumes that the present tariffs will be increased according to the schedules indicated in the financial analysis of the water authorities.

6/ Future projects based on Annex A, Table VII.

7/ 15 years at 9% including 2 year grace period. Repayment based on 67% of disbursement because most funds should be disbursed by mid-year.

8/ 13 years at 9%.

9/ 15 years at 9% including 2 year grace period. Loan anticipated from Federal Government or State Government.

Table IV
PRODUCTIVE ACTIVITIES COMPONENT 1/

Cash Flow
(In million Mex\$)

	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
<u>INFLOW:</u>								
Project Fund	-	7,309	9,135	11,419	11,419	6,393	-	-
Down Payments	-	731	1,010	1,337	1,558	1,291	683	580
Beneficiary Repayments 2/								
Principal	-	-	963	2,338	4,581	7,615	9,202	9,915
Interest	-	-	1,132	2,680	4,649	6,497	7,601	5,734
TOTAL INFLOW	-	8,040	12,240	17,774	22,207	21,796	17,486	16,229
<u>OUTFLOW:</u>								
Credits to Artisans	-	1,944	2,467	3,126	3,197	1,940	397	456
Credits to Small-Scale Enterprises	-	5,365	7,631	10,631	12,481	10,978	6,432	5,346
Administration 3/	-	100	200	200	200	200	100	100
Project Fund Repayment 4/								
Principal	-	-	-	983	1,615	2,210	2,432	2,676
Interest	-	489	1,343	2,410	3,453	4,097	3,876	3,632
TOTAL OUTFLOW	-	7,898	11,641	17,350	20,946	19,425	13,237	12,210
NET SURPLUS (DEFICIT)	-	142	599	424	1,261	2,371	4,249	4,019
ACCUMULATED	-	-	741	1,165	2,426	4,797	9,046	13,065

NOTES:

1/ Excludes promotional programs.

2/ Repayments based on four year term at 18% per annum for small-scale enterprises, and 15-year term at 15% for artisans. 18% interest rate roll-over funds reinvested each year.

3/ Small-scale enterprises, 1-1/2% for administration included in 18% interest rate. Artisans, 1-1/2% for administration is included in 15% interest rate.

4/ Repayment based on 67% of disbursements each year. Terms used 15-year loan including 2-year grace period at 10% per annum.

Table X

PROJECT CONSOLIDATED CASH FLOW

(In million Mex\$)

	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
<u>INFLOW:</u>								
Project Fund	42	970	1,456	2,810	2,891	880	-	-
Down Payments	2	55	88	214	215	133	158	172
Future Loans	-	-	-	-	-	812	1,767	1,912
Connection Charges:								
Water and Sewer	5	57	109	98	130	131	95	106
Permit Charges	-	7	10	9	12	18	17	18
Beneficiary Repayments:								
Principal	-	10	44	109	176	261	343	420
Interest	-	63	209	547	796	1,022	1,270	1,481
Tariff Collections	85	144	195	387	521	698	807	929
TOTAL INFLOW	134	1,306	2,111	4,174	4,741	3,955	4,457	5,038
<u>OUTFLOW:</u>								
Shelter-Related	30	515	856	2,102	2,178	1,322	1,643	1,775
City-Wide Infrastructure	90	509	744	906	1,010	820	720	823
Productive Activities	-	74	103	139	158	131	69	59
Project Fund - Principal	-	-	-	185	338	457	517	568
- Interest	-	43	124	338	604	736	709	691
Existing and Future Loans								
- Principal	3	3	3	3	4	5	5	21
- Interest	4	4	4	4	4	3	2	8
TOTAL OUTFLOW	127	1,148	1,834	3,677	4,296	3,474	3,656	3,945
NET SURPLUS/(DEFICIT)	7	158	277	497	445	481	801	1,093
ACCUMULATED	-	165	442	939	1,384	1,865	2,666	3,759

NOTE:

1/ Figures based on cash flows for (including their respective notes):

- (a) Shelter-Related Component,
- (b) City-Wide Infrastructure Component, and
- (c) Productive Activities Component.

TABLE I: IMPLEMENTATION, OPERATION AND MAINTENANCE RESPONSIBILITIES

	VERACRUZ		TABASCO		CHIAPAS	
	Implementation	Operation and Maintenance	Implementation	Operation and Maintenance	Implementation	Operation and Maintenance
A. <u>Shelter-Related Programs</u>						
- Sites and Services	IDUVIV <u>1/</u>	Beneficiaries, IDUVIV, Water Authority or Municipalities	IDVIT <u>2/</u>	Beneficiaries, IDVIT, Water Authority or Municipalities	IDVICH <u>3/</u>	Beneficiaries, IDVICH or Water Authority
- Construction Material Credits	IDUVIV and Beneficiaries	Beneficiaries	IDVIT and Beneficiaries	Beneficiaries	IDVICH and Beneficiaries	Beneficiaries
- Urban Upgrading	-same-	Municipalities and Beneficiaries	-same-	Municipalities and Beneficiaries	-same-	Municipalities and Beneficiaries
- Home Improvement Loans	-same-	Beneficiaries	-same-	Beneficiaries	-same-	Beneficiaries
- Community Centers	IDUVIV	IDUVIV and Beneficiaries <u>7/</u>	IDVIT	IDVIT and Beneficiaries <u>7/</u>	IDVICH	IDVICH and Beneficiaries <u>7/</u>
B. <u>City-Wide Infrastructure</u>						
- Water Supply	Water Authority	Water Authority	SAPAET <u>10/</u>	SAPAET	SAPAECH <u>11/</u>	SAPAECH
- Sewerage and Storm Drainage	-same-	-same-	-same-	-same-	-same-	-same-
- Other Infrastructure	Municipalities/SAHOP	Municipalities	Municipalities/SAHOP	Municipalities	IDVICH & Others <u>9/</u>	IDVICH & Others <u>9/</u>
C. <u>Municipal Facilities and Services</u>	Municipalities	Municipalities	Municipalities	Municipalities	--	--
D. <u>Productive Credits and Training</u>						
- Credits to Artisans	IDUVIV	--	IDVIT	--	IDVICH	--
- Credits to Small-Scale Enterprises	BANOBRAS	--	BANOBRAS	--	BANOBRAS	--
- Industrial Estates	FIDEICOMISOS <u>4/</u>	FIDEICOMISOS <u>4/</u>	FOMITA <u>5/</u>	FOMITA <u>5/</u>	--	--
- Training Center	--	--	CEPROTAB <u>8/</u>	CEPROTAB <u>8/</u>	--	--
- Promotional Programs	Various <u>6/</u>	--	Various <u>6/</u>	--	Various <u>6/</u>	--
E. <u>Studies and Complementary Support Activities</u>	BANOBRAS	--	BANOBRAS	--	BANOBRAS	--

1/ Instituto de Desarrollo Urbano y de la Vivienda, INDECO-Veracruz.

2/ Instituto de Vivienda, INDECO-Tabasco.

3/ Instituto de Vivienda, INDECO-Chiapas.

4/ To be established in each state.

5/ "Fondo Mixto para el Desarrollo Industrial de Tabasco".

6/ Mainly the Institutos de Vivienda and BANOBRAS (through ARMO and CENAPRO).

7/ Health and other public services would be managed by the respective state or federal agencies.

8/ Centro de Productividad de Tabasco.

9/ The Electric and Telephone companies for their respective elements.

10/ Servicios de Agua Potable y Alcantarillado del Estado de Tabasco.

11/ Servicios de Agua Potable y Alcantarillado del Estado de Chiapas.

MEXICO
SECOND URBAN AND REGIONAL DEVELOPMENT PROJECT
TABLE II: IMPLEMENTATION SCHEDULE FOR VERACRUZ

	1980				1981				1982				1983				1984				1985			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
SHELTER RELATED																								
<u>Sites and Services</u>																								
Project Preparation			(1)				(10)				(15)				(35)				(30)				(5)	
Tendering																								
Construction																								
<u>Construction Material Credits</u>																								
Urban Upgrading	(1)						(10)				(13)				(30)				(30)				(16)	
Project Preparation	(1)						(9)				(20)				(20)				(50)					
Tendering																								
Construction											(10)				(50)				(40)					
<u>Home Improvement Loans</u>																								
Community Centers							(10)				(15)				(30)				(45)					
Project Preparation																								
Tendering																								
Construction																								
CITY-WIDE INFRASTRUCTURE																								
<u>Water Supply and Sewerage</u>																								
Project Preparation	(1)						(14)				(15)				(35)				(30)				(5)	
Tendering																								
Construction																								
Other Infrastructure	(1)						(24)				(75)													
MUNICIPAL FACILITIES AND SERVICES																								
<u>Retail Markets</u>																								
							(45)				(55)													
<u>Slaughterhouses</u>																								
							(45)				(55)													
<u>Refuse Collection</u>																								
							(80)				(20)													
PRODUCTIVE ACTIVITIES																								
<u>Promotion and Credits</u>																								
							(15)				(20)				(25)				(25)				(15)	
<u>Industrial Estates</u>																								
							(10)				(55)				(35)									
STUDIES AND COMPLEMENTARY																								
<u>SUPPORT ACTIVITIES</u>																								
Studies and Promotion							(15)				(20)				(30)				(30)				(5)	

(20) Numbers in brackets indicate approximate proportion of work to be carried out every year.

MEXICO
SECOND URBAN AND REGIONAL DEVELOPMENT PROJECT
TABLE III: IMPLEMENTATION SCHEDULE FOR TABASCO

	1980				1981				1982				1983				1984				1985			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
SHELTER RELATED																								
<u>Sites and Services</u>																								
Project Preparation			(1)				(29)				(30)				(12)				(15)				(13)	
Tendering																								
Construction																								
<u>Construction Material Credits</u>																								
			(1)				(22)				(34)				(15)				(17)				(11)	
<u>Urban Upgrading</u>																								
Project Preparation			(1)				(39)				(40)				(10)				(10)					
Tendering																								
Construction							(15)				(40)				(20)				(25)					
<u>Home Improvement Loans</u>																								
<u>Community Centers</u>																								
Project Preparation			(1)				(19)				(40)				(10)				(30)					
Tendering																								
Construction																								
<u>CITY-WIDE INFRASTRUCTURE</u>																								
<u>Water Supply and Sewerage</u>																								
Project Preparation			(1)				(29)				(30)				(12)				(15)				(13)	
Tendering																								
Construction			(1)				(24)				(75)													
<u>Other Infrastructure</u>																								
<u>MUNICIPAL FACILITIES AND SERVICES</u>																								
<u>Retail Markets</u>																								
							(45)				(55)													
<u>Wholesale Market</u>																								
							(40)				(60)													
<u>Slaughterhouses</u>																								
							(45)				(55)													
<u>Refuse Collection</u>																								
							(80)				(20)													
<u>PRODUCTIVE ACTIVITIES</u>																								
<u>Promotion and Credits</u>																								
							(15)				(20)				(25)				(25)				(15)	
<u>Industrial Estates</u>																								
			(1)				(49)				(15)				(35)									
<u>Training Center</u>																								
			(1)				(71)				(28)													
<u>STUDIES AND COMPLEMENTARY SUPPORT ACTIVITIES</u>																								
<u>Studies and Promotion</u>																								
			(1)				(25)				(20)				(20)				(15)				(19)	

(20) Numbers in brackets indicate approximate proportion of work to be carried out every year.

MEXICO
SECOND URBAN AND REGIONAL DEVELOPMENT PROJECT
TABLE IV: IMPLEMENTATION SCHEDULE FOR REFORMA (CHIAPAS)

	1980				1981				1982				1983				1984				1985			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
SHELTER RELATED																								
<u>Sites and Services</u>																								
Project Preparation			(1)				(14)				(15)				(40)				(15)				(5)	
Tendering																								
Construction																								
<u>Construction Material Credits</u>																								
Project Preparation			(1)				(13)				(14)				(30)				(25)				(17)	
Tendering																								
Construction																								
<u>Urban Upgrading</u>																								
Project Preparation			(1)				(54)				(45)													
Tendering																								
Construction											(10)				(20)				(70)					
<u>Home Improvement Loans</u>																								
Project Preparation							(5)				(95)													
Tendering																								
Construction																								
<u>CITY-WIDE INFRASTRUCTURE</u>																								
<u>Water Supply and Sewerage</u>																								
Project Preparation			(1)				(14)				(20)				(40)				(20)				(5)	
Tendering																								
Construction																								
<u>Other Infrastructure</u>																								
Project Preparation			(1)				(24)				(75)													
Tendering																								
Construction																								
<u>PRODUCTIVE ACTIVITIES</u>																								
<u>Promotion and Credits</u>																								
Project Preparation							(15)				(20)				(25)				(25)				(15)	
Tendering																								
Construction																								
<u>STUDIES AND COMPLEMENTARY SUPPORT ACTIVITIES</u>																								
<u>Studies and Promotion</u>																								
Project Preparation			(1)				(25)				(20)				(20)				(15)				(19)	
Tendering																								
Construction																								

(20) Numbers in brackets indicate approximate proportion of work to be carried out every year.

ESTIMATED QUARTERLY DISBURSEMENTS SCHEDULE
(In million US\$)

IBRD Fiscal Year and Quarter (Ending Date)	Disbursements During the Quarter	Cumulative Disbursements at the End of Quarter
September 30, 1981	1.0	1.0
December 31, 1981	1.0	2.0
March 31, 1982	2.0	4.0
June 30, 1982	3.0	7.0
September 30, 1982	4.0	11.0
December 31, 1982	4.0	15.0
March 31, 1983	4.0	19.0
June 30, 1983	4.0	23.0
September 30, 1983	8.0	31.0
December 31, 1983	8.0	39.0
March 31, 1984	10.0	49.0
June 30, 1984	10.0	59.0
September 30, 1984	10.0	69.0
December 31, 1984	10.0	79.0
March 31, 1985	12.0	91.0
June 30, 1985	12.0	103.0
September 30, 1985	12.0	115.0
December 31, 1985	12.0	127.0
March 31, 1986	10.0	137.0
June 30, 1986	9.0	146.0
September 30, 1986	9.0	155.0
December 31, 1986	9.0	164.0
TOTAL	<u>164.0</u>	

COST RECOVERY ESTIMATES

	Total Cost ^{1/} (in million US\$)	Recovered	Percent Recovered
<u>Shelter-Related Programs</u>			
Sites and Services	150.9	150.9	100 ^{2/}
Construction Material Credits	67.2	67.2	100 ^{2/}
Urban Upgrading	19.4	14.6	75 ^{3/}
Home Improvement Loans	27.8	27.8	100 ^{2/}
Community Centers	4.3	2.6	60
	<u>269.4</u>	<u>263.1</u>	<u>97.7</u>
<u>City-Wide Infrastructure</u>			
Water Supply	49.0	49.0	100 ^{4/}
Sewerage	63.5	63.5	100 ^{4/}
Other Infrastructure	6.5	3.3	50
	<u>119.0</u>	<u>115.8</u>	<u>97.3</u>
<u>Municipal Facilities and Services</u>			
Retail Markets	4.8	2.4	50
Wholesale Markets	8.1	8.1	100
Slaughterhouses	23.9	23.9	100
Refuse Collection	4.4	4.4	100 ^{5/}
	<u>41.1</u>	<u>38.8</u>	<u>94.4</u>
<u>Productive Activities</u>			
Credit to Artisans	5.4	5.4	100 ^{6/}
Credit to Small-Scale Enterprises	14.9	14.9	100 ^{6/}
Industrial Estates	11.4	11.4	100 ^{7/}
Training Center	1.5	0.0	0
Promotional Programs	0.7	0.7	100 ^{8/}
	<u>33.9</u>	<u>32.4</u>	<u>95.6</u>
<u>Studies and Complementary Support</u>			
<u>Activities</u>			
Studies	3.6	0.0	0
Support Activities	1.0	0.0	0
	<u>4.6</u>	<u>0.0</u>	<u>0</u>
TOTAL	<u>468.0</u>	<u>450.1</u>	<u>96.2</u>

^{1/} Including all contingencies and price escalations.

^{2/} Although some default and related losses are possible (estimated at 10%), the spread given the Institutos should be sufficient to absorb such losses.

^{3/} Given past experience in this type of program, it is estimated that not more than 75% of these costs will be realistically recovered directly from beneficiaries. The rest will need to be absorbed by the respective municipalities and states.

^{4/} This assumes that the present tariffs will be increased according to the schedules indicated in the financial analysis of the water authorities.

^{5/} This assumes doubling of present charges (from about US\$1.5 to about US\$3.0 per month per household).

^{6/} Although some bad debts have also been considered here, the margin allowed the Institutos as well as BANOBRA should be sufficient to compensate for such losses.

^{7/} This assumes that the final design and construction standards will be defined as a function of a thorough review of market conditions and the establishment of appropriate pricing policies.

^{8/} Would be absorbed through the interest rate margin.

MEXICO

SECOND URBAN AND REGIONAL DEVELOPMENT PROJECT

Economic Analysis

(Figures in millions of US\$ at 1980 prices)

1996-2004	SITES AND SERVICES AND HOUSING				URBAN UPGRADING				HOME IMPROVEMENT LOANS				CITYWIDE INFRASTRUCTURE			
	COSTS		BENEFITS		COSTS		BENEFITS		COST		BENEFITS		COSTS		BENEFITS	
	Infrastructure a/	General Maintenance b/	Community Centres	Housing c/	Attributable Benefits d/	Infrastructure Works e/	Maintenance f/	Attributable Benefits g/	Cost h/	Attributable Benefits i/	Incremental Capital Investment	Operational Maintenance k/	Connection Water	Rev. Sewer	Permit Charges m/	Incremental Tariffs n/
1980	0.8	-	-	-	-	0.1	-	-	-	-	0.6	-	-	-	-	-
1981	17.1	0.3	0.2	1.2	-	1.0	0.02	0.3	2.2	-	15.0	1.3	1.6	0.3	0.3	1.8
1982	18.7	0.6	0.6	8.9	0.5	2.2	0.04	1.4	4.9	0.7	17.9	2.9	2.2	0.7	0.3	2.0
1983	21.4	0.9	0.7	17.7	4.2	3.4	0.07	2.2	6.2	2.2	15.5	3.4	1.7	0.5	0.2	6.0
1984	18.6	1.2	0.8	16.6	10.9	4.5	0.09	2.2	4.9	4.1	14.6	4.3	1.9	0.8	0.3	8.0
1985	7.1	1.3	0.2	11.9	17.1	-	0.09	2.2	-	5.6	5.8	5.2	1.7	0.7	0.4	10.4
1986	-	1.3	-	10.7	21.4	-	0.09	2.2	-	5.6	-	5.7	1.1	0.4	0.3	11.3
1987	-	1.3	-	9.7	25.1	-	0.09	2.2	-	5.6	-	6.4	1.2	0.4	0.3	12.2
1988	-	1.3	-	9.6	28.4	-	0.09	2.2	-	5.6	-	6.4	-	-	-	12.2
1989	-	1.3	-	9.6	29.7	-	0.09	2.2	-	5.6	-	6.4	-	-	-	12.2
1990	-	1.3	-	9.2	31.1	-	0.09	2.2	-	5.6	-	6.4	-	-	-	12.2
1991	-	1.3	-	4.8	32.4	-	0.09	2.2	-	5.6	-	6.4	-	-	-	12.2
1992	-	1.3	-	4.8	33.1	-	0.09	2.2	-	5.6	-	6.4	-	-	-	12.2
1993	-	1.3	-	4.8	33.8	-	0.09	2.2	-	5.6	-	6.4	-	-	-	12.2
1994	-	1.3	-	4.8	34.5	-	0.09	2.2	-	5.6	-	6.4	-	-	-	12.2
1995	-	1.3	-	5.0	35.2	-	0.09	2.2	-	5.6	-	6.4	-	-	-	12.2
2004	-	1.3	-	-	36.0	-	0.09	2.2	-	5.6	-	6.4	-	-	-	12.2

a/ Include land (which amounts to about 20% of infrastructure cost); labor cost, all material and off-site works directly attributable to the project.
 b/ Estimated to be approximately 2% of infrastructure cost (excluding land cost).
 c/ Based on assumption of 18,860 plots being available as per implementation schedule.
 d/ Based on assumptions as follows: house of 25 m², US\$1,080/yr/unit; 30 m², 1,720/yr/unit; 40 m², 1,896/yr/unit; 60 m², 2,400/yr/unit. Benefits lag construction by 1 year.
 e/ Based on implementation schedule.
 f/ Estimated to be 2% of infrastructure costs.
 g/ As per implementation schedule.
 h/ Estimated at US\$700/yr/unit in incremental rental value attributable to project works.
 i/ Incremental capital investment phased according to implementation schedule for Veracruz, Tehacan and Chiapas.
 j/ Incremental operation and maintenance costs are adjusted current figures taken from cash flow statement.
 k/ Receipts from incremental connections of water and sewer lines in project areas.
 l/ Incremental charges made in project area. Figures are adjusted current charges taken from cash flow statement.
 m/ Incremental projected current revenue of cash flow statement adjusted for inflation.

SELECTED DOCUMENTS AND DATA AVAILABLE IN THE PROJECT FILE

A. Selected Reports and Studies on the Sector

- A 1. Law of Human Settlements, SAHOP, 1976.
- A 2. National Urban Development Plan (6 Volumes), SAHOP, May 1978.
- A 3. Programming and Budgeting in the Human Settlements Sector - Manual, SAHOP, July 1978.
- A 4. Social Housing - Financial Program, Banco de Mexico, February 1980.
- A 5. Financing Systems for Human Settlements, UN - Habitat Conference in Mexico City, December 1978.
- A 6. "El Desarrollo Urbano de Mexico - Diagnostico e Implicaciones Futuras," Luis Unikel, El Colegio de Mexico, 1978.
- A 7. Program of Finished Housing - Summary Description, INDECO, 1978.
- A 8. Investment Program for Progressive Housing 1978-1982, INDECO, 1978.
- A 9. Housing Upgrading, INDECO, March 1978.

B. Selected Documents Related to the Project

- B 1. Terms of Reference of Preparatory Studies for Urban Development Project, SAHOP, November 1978.
- B 2. Project Proposal ("Programa de Accion Concertada para el Desarrollo Urbano Zona Costera del Golfo e Istmo de Tehuantepec"), 2 Volumes, SAHOP, October 1978.
- B 3. -- idem, SAHOP, May 1979.
- B 4. -- idem. SAHOP, August 1979.
- B 5. -- idem, SAHOP, May 1980.
- B 6. Socio-Economic Data for the States of Tabasco and Veracruz, Comision Nacional de Salarios Minimos, 1978.
- B 7. Regional Planning of Human Settlements in the Coatzacoalcos - Villahermosa - Salina Cruz Region (3 Volumes), SAHOP/ICATEC, March 1978.
- B 8. Projection of Demand for Housing and Services 1978-1982 (for each of the project cities), INDECO, 1979-1980.

- B 9. Tabasco-Development Plan (10 Volumes), State of Tabasco, 1979.
- B 10. Tabasco - Housing Plan 1978 - 1982, SAHOP, October 1978.
- B 11. Preliminary Development Plan for the Pajaritos - Cangrejera - Allende Area (Coatzacoalcos), PEMEX, October 1976.
- B 12. Socio-Economic Survey of Villahermosa, Dr. F. Jhabvala, 1978.
- B 13. Survey of Household Incomes and Expenditures in the States of Veracruz, University of Veracruz, 1975.
- B 14. Statistical Background on the Industrial and Commerce Sectors, State of Veracruz, 1977.
- B 15. The Housing Problem, INDECO - Veracruz, 1977.
- B 16. Housing Demand in Villahermosa, Urbamex (Consultants), October 1979.
- B 17. Quantitative Analysis of Upgrading Needs in Villahermosa (mimeo), State of Tabasco, 1979.
- B 18. Industrial Activities in Tabasco, State of Tabasco, 1980.
- B 19. Analysis of the Commerce Sector, State of Tabasco, September 1979.
- B 20. Inventory of Market Facilities in the State of Tabasco, "Multiestudios Especializados" (Consultants), 1979.
- B 21. Waste Disposal in Villahermosa (mimeo), State of Tabasco, 1979.

C. Selected Working Documents

- C 1. Detailed Project Features (DPF).
- C 2. Financial Analysis of Institutos de Vivienda.
- C 3. Financial Analysis of Water Authorities.
- C 4. Audited Financial Statements of BANOBRAS for 1976, 1977 and 1978.
- C 5. Implementation Schedule of Support Activities and Project Key Indicators.
- C 6. Detailed Background Information and Consultants' Reports on each Program Included in the Project.

UNITED STATES OF AMERICA

MEXICO URBAN PROJECT II



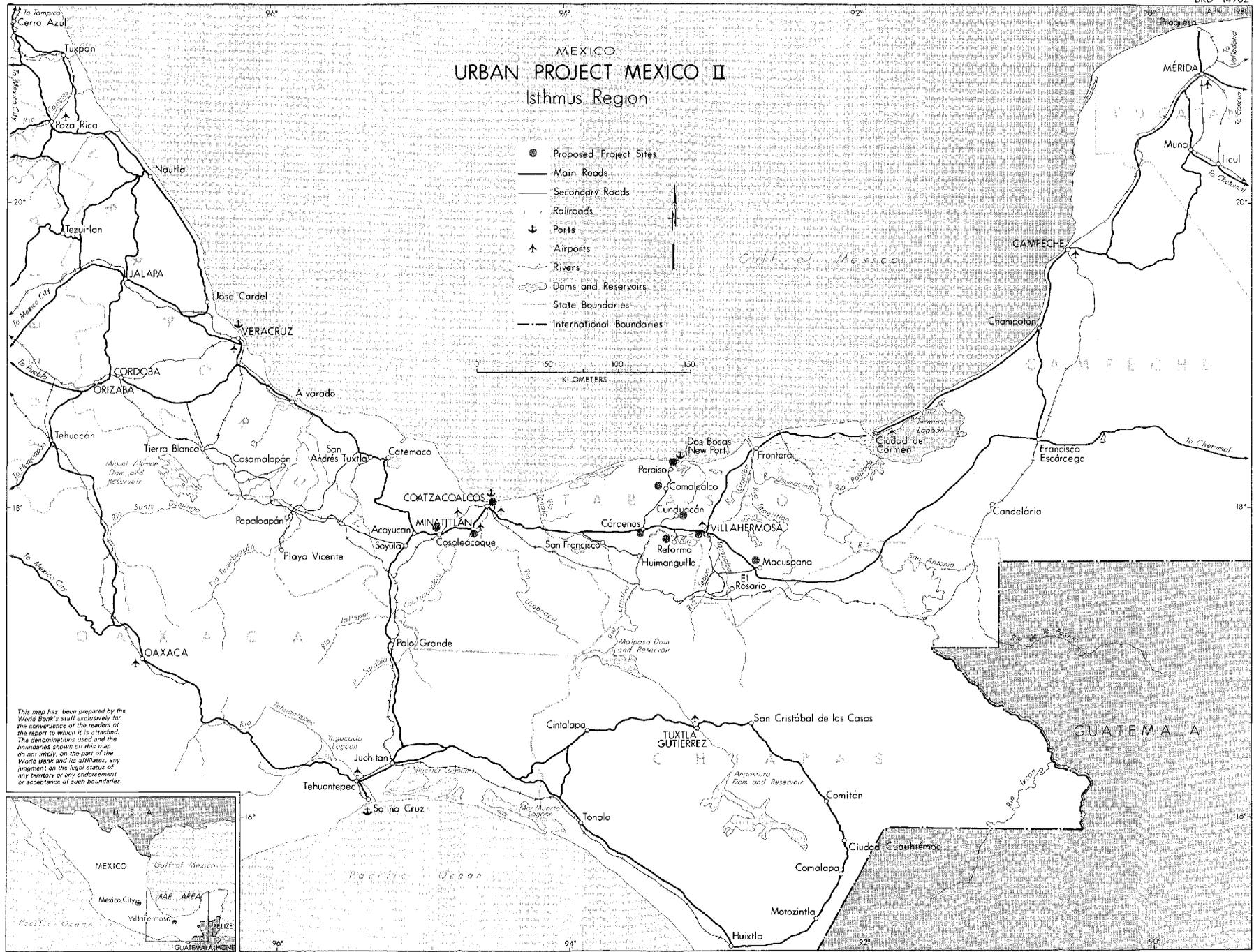
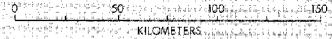
- Project region
- Region of first project
- National capital
- State capitals
- Principal cities or towns
- Divided highways
- Selected main roads
- Railroads
- Rivers
- Principal airports
- State boundaries
- International boundaries

MILEMETERS 0 100 200 300 400 500
 MILES 0 100 200 300

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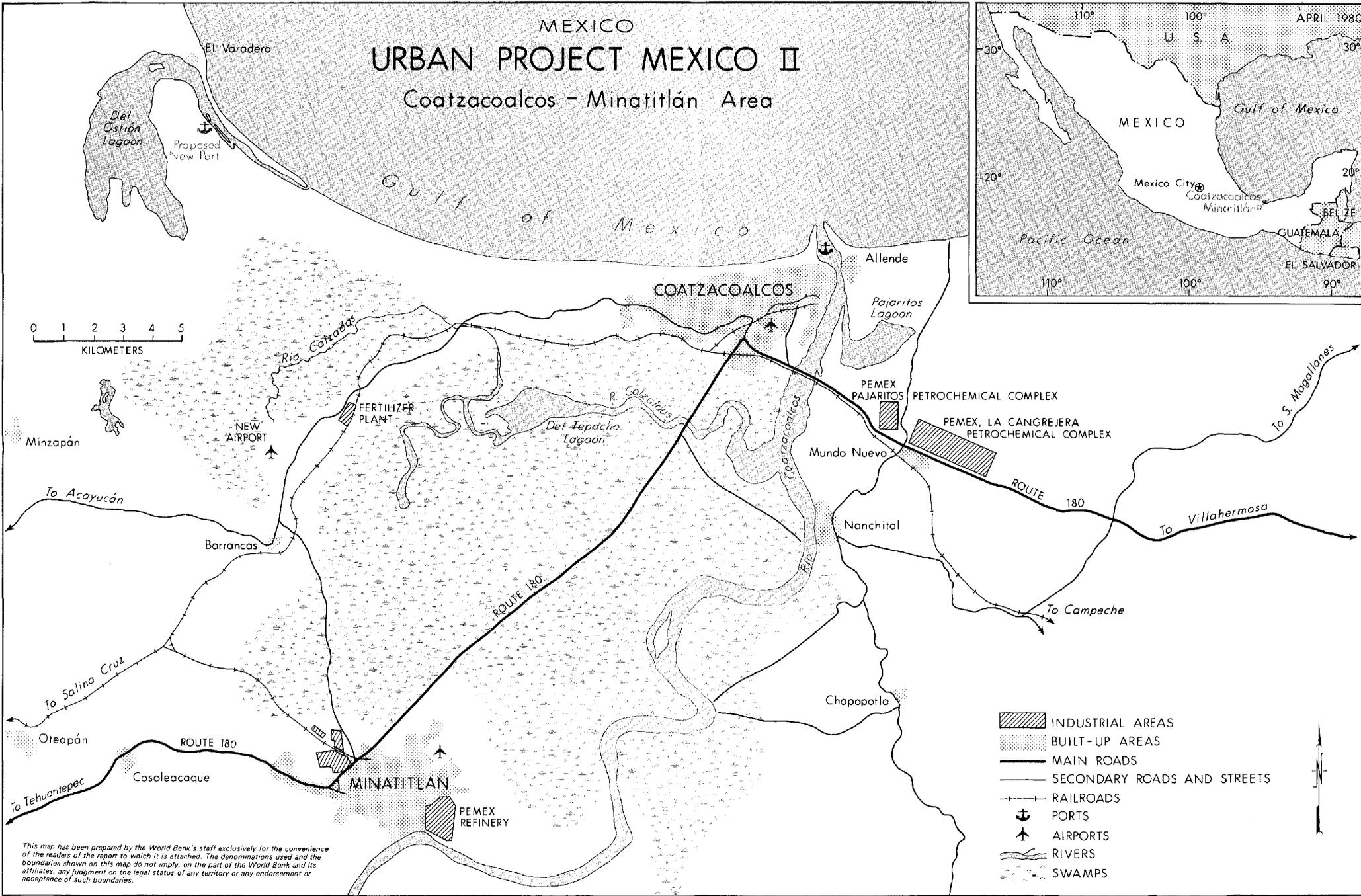
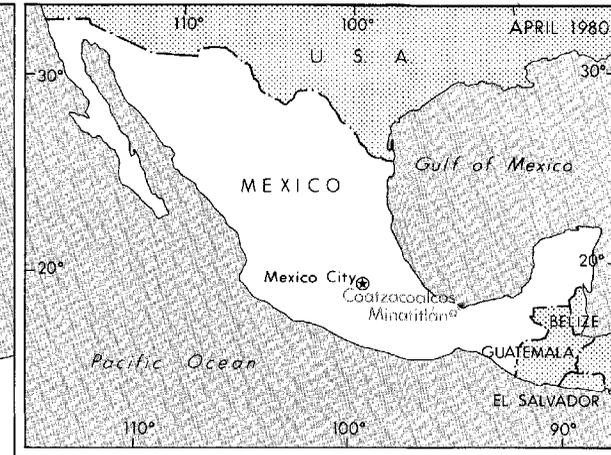
MEXICO URBAN PROJECT MEXICO II Isthmus Region

- Proposed Project Sites
- Main Roads
- Secondary Roads
- Railroads
- ↓ Ports
- ↑ Airports
- Rivers
- Dams and Reservoirs
- State Boundaries
- International Boundaries



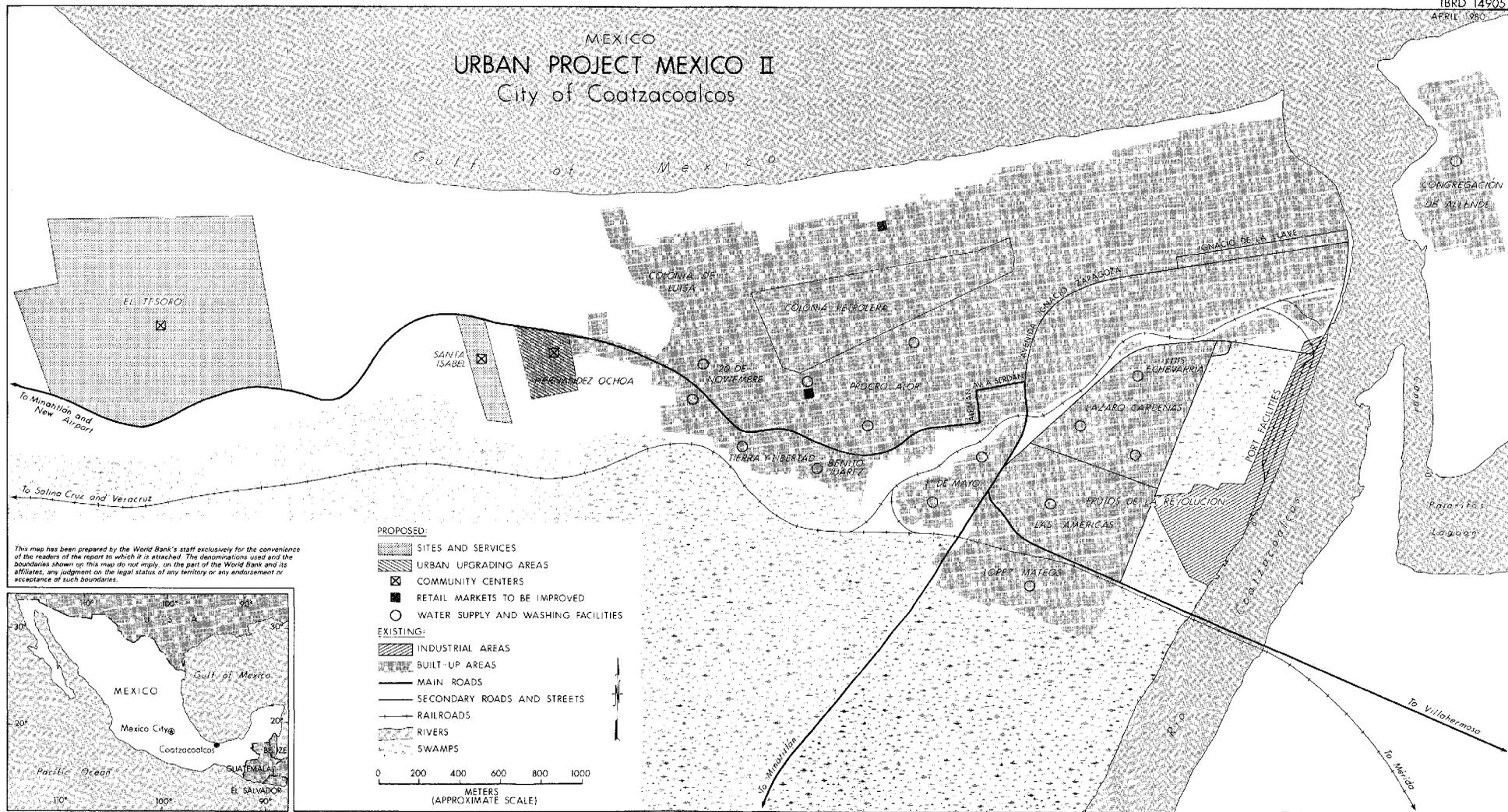
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MEXICO URBAN PROJECT MEXICO II Coatzacoalcos - Minatitlán Area



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MEXICO
URBAN PROJECT MEXICO II
 City of Coatzacoalcos



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- PROPOSED:**
- SITES AND SERVICES
 - URBAN UPGRADING AREAS
 - COMMUNITY CENTERS
 - RETAIL MARKETS TO BE IMPROVED
 - WATER SUPPLY AND WASHING FACILITIES
- EXISTING:**
- INDUSTRIAL AREAS
 - BUILT-UP AREAS
 - MAIN ROADS
 - SECONDARY ROADS AND STREETS
 - RAILROADS
 - RIVERS
 - SWAMPS
- 0 200 400 600 800 1000
 METERS
 (APPROXIMATE SCALE)

CONGRESACION DE ZULANDA

Pajaritos
 Lago

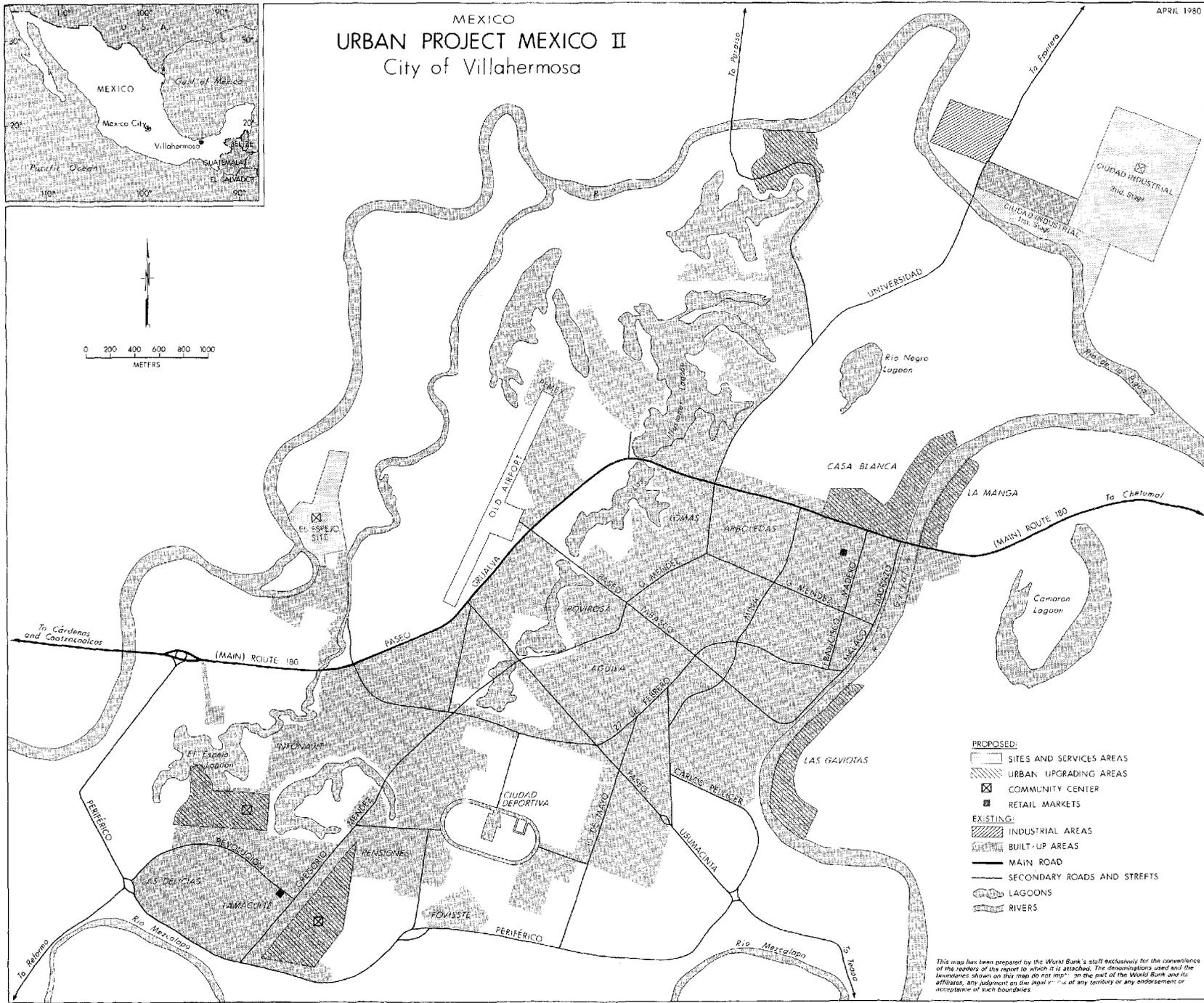
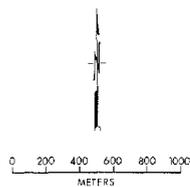
To Villahermosa

To Minatitlan

To Salina Cruz and Veracruz

To Minatitlan and New Airport

MEXICO URBAN PROJECT MEXICO II City of Villahermosa

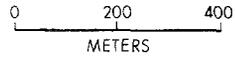
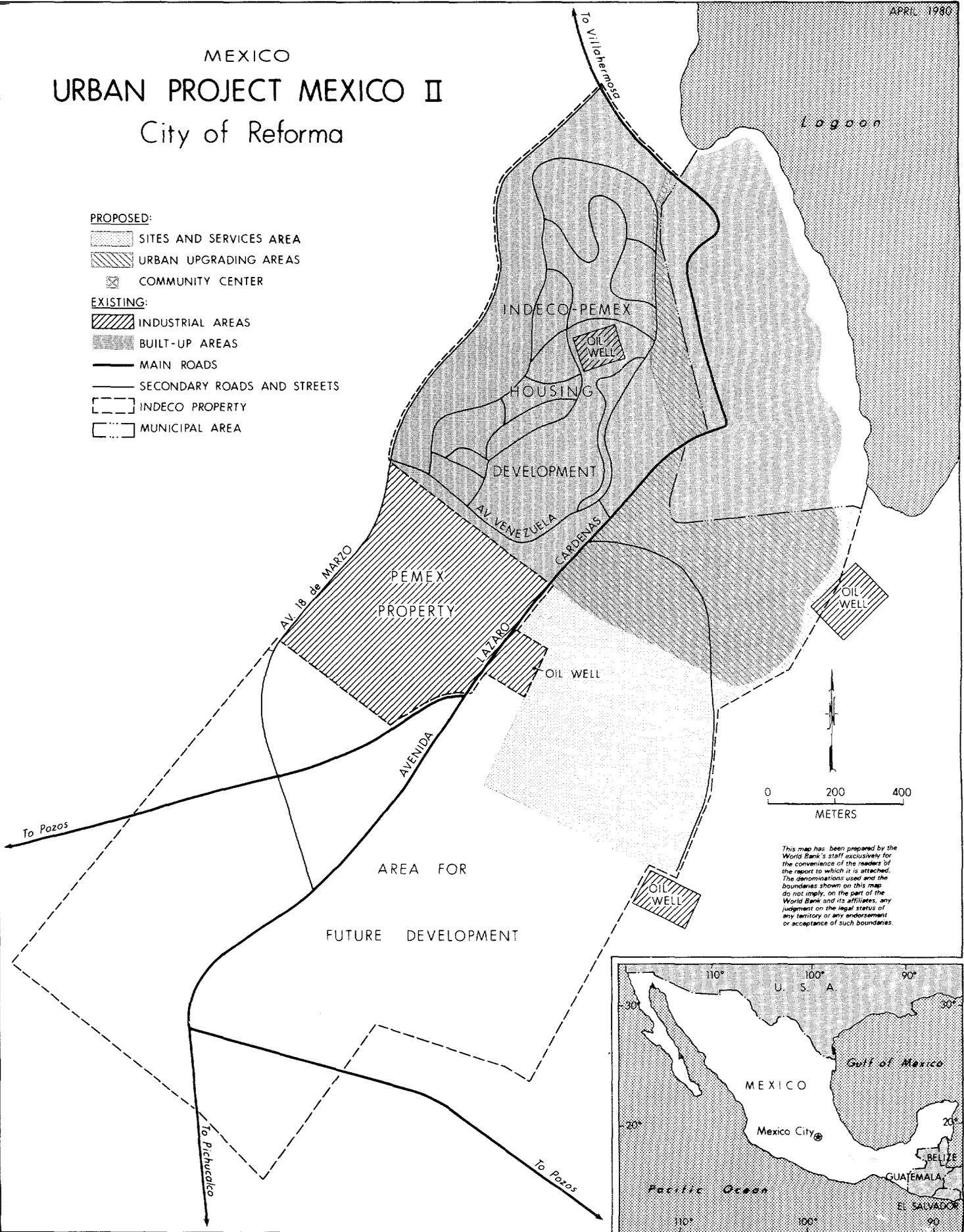


- PROPOSED:**
- SITES AND SERVICES AREAS
 - URBAN UPGRADING AREAS
 - COMMUNITY CENTER
 - RETAIL MARKETS
- EXISTING:**
- INDUSTRIAL AREAS
 - BUILT-UP AREAS
 - MAIN ROAD
 - SECONDARY ROADS AND STREETS
 - LAGOONS
 - RIVERS

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MEXICO URBAN PROJECT MEXICO II City of Reforma

- PROPOSED:**
-  SITES AND SERVICES AREA
 -  URBAN UPGRADING AREAS
 -  COMMUNITY CENTER
- EXISTING:**
-  INDUSTRIAL AREAS
 -  BUILT-UP AREAS
 -  MAIN ROADS
 -  SECONDARY ROADS AND STREETS
 -  INDECO PROPERTY
 -  MUNICIPAL AREA



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