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**FEASIBILITY STUDY OF ARCHAEOLOGICAL
DEVELOPMENT TO STIMULATE TOURISM:
SITE IDENTIFICATION, INFRASTRUCTURE NEEDS
AND INVESTMENT REQUIREMENTS**

Presented to
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and the
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Prepared by
K. Joaquin Glaesel-Kohler
and
Ricardo Anzola-Betancourt
RDA INTERNATIONAL, Inc.
under Contract No.
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RDA INTERNATIONAL, INC.
801 Morey Drive
Placerville, California 95667
Telephone: (916) 622-8800
Facsimile: (916) 626-7391
Telex: 383656 RDA

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1.0 EXECUTIVE SUMMARY

For the past fifteen years or so, Belize has slowly developed a very specialized tourist destination activity, centered mainly on the country's unique natural resource -- the world's second largest coral reef. Because of the specialized type of tourist that has travelled to Belize (mainly Scuba divers and fishermen), most of the tourism infrastructure development and the corresponding derived benefits have centered on the islands (cayes) in and around the reef.

As this tourism activity grew and positively impacted the country's economy, the Government of Belize (GOB) began to take notice. The GOB now realizes the potential contribution the tourism sector can make to the economy of the country and has given tourism a very high development priority, second only to the country's agricultural development.

Recently, the GOB has turned its attention to the resources the mainland can offer tourists, especially wild nature areas and Mayan archaeological sites. These areas and sites are largely unexplored and unexploited and have the potential to both attract additional visitors and to extend the visitation period of tourists presently concentrating on the islands.

RDA International, Inc., at the request of the GOB's Ministry of Economic Development, was contracted by the U.S. Agency for International Development (USAID) to determine the feasibility of developing the country's Mayan archaeological sites for the purpose of tourism expansion in Belize. The scope of work included:

- o A survey of the country's significant Maya archaeological sites,
- o A "short listing" of those sites with the highest development potential for tourism purposes, and
- o A final selection of the most appropriate sites for future development.

While the original scope of work listed only four archaeological sites for consideration, the RDA team determined early on that an expanded effort was required. Therefore, the team visited and evaluated a total of twelve archaeological sites in the northern, central, and southern regions of the country. For each site, infrastructure needs and/or improvements for tourism activities were identified and estimates on required investment levels and recurrent expenses were made.

In addition, several nature reserves, thirty hotels and resorts, the new air terminal construction in Belize City, the Ramada Hotel site, and border crossing facilities were visited and the managers of all airlines flying into Belize and several tour guide operators were interviewed. The team attended the BTIA annual meeting in Belize and the annual ITEX Show in Chicago and held meetings with the tourism advisor from the European Economic Community, officials of the GOB's Department of Archaeology and the Ministry of Economic Development, the Belize Export and Investment Promotion Unit (BEIPU), and the Belize Tourism Board.

Three archaeological sites -- Lamanai, Caracol, and Lubaatun -- were identified as having the most development potential for tourism. Of these, Lamanai is the site recommended for the first development effort, with the other two sites to be developed in the future.

The study was conducted by Mr. Joaquin Glaesel, an economist with extensive experience in Central America and the Caribbean, and Mr. Ricardo Anzola-Betancourt, a tourism specialist for Latin America and the Caribbean. They received home office logistical support from Ms. Kelly W. Sackheim, RDA's Belize Project Manager. The RDA field team was in Belize for approximately five weeks.

2.0 THE BELIZE TOURISM ACTIVITY

2.1 Sector Growth and Constraints

2.1.1 Qualitative Aspects

A considerable number of studies, documents, and papers related to tourism in Belize have been written in the last few years. The following is a brief outline of what the RDA team learned during its investigation and this information is taken as background information for this study. It was also the prime information used in deciding on a tourism strategy statement, specifically relevant to the objectives of this study.

Tourism development in Belize has been based mainly on the sand, sea, and coral attraction of the country's islands or "Cayes." These islands, part of the world's second largest coral reef, form the Outer, Middle, and Inner Reef, depending on their distance from the mainland.(1)

The largest and most developed of these islands, Ambergris Caye, is located at the northern end of the country and is considered to be one of the "middle" islands. Together with Caye Caulker, Caye Chapel, Turneffe Islands, the Lighthouse Reef, and Half Moon Caye, Ambergris Caye has the highest amount of tourism activity.

To date, Belize has not been a tourism destination catering to massive visitor influx. Visitors in the past few years have consisted of certain special interest groups, especially amateur divers. These people prefer to stay along beach fronts on the islands close to the reef. Belize's competitive edge over other Caribbean tourist locations in attracting and keeping this type of tourism lies mainly with the quality of diving. The Belize Barrier Reef has massive coral formations, abundant fish life, and clear waters with underwater visibility often exceeding 200 feet.

Recently, tourists coming to Belize have demonstrated an increasing interest in the land-based natural history of the country. Recognizing this, the GOB and conservationist groups have been promoting the creation of natural reserves to protect the country's wild flora and fauna and their habitats. These reserves are attracting tourists and will attract more, but they need to be developed in appropriate stages to protect their uniqueness. In a world becoming more conscious of the ever-increasing depletion of wild, natural resources and the instinctive craving for visiting and enjoying such areas, these reserves can help Belize attract visitors who will spend more time and money in the country, especially the better-educated, high income travelers.

The presence of archaeological sites, sometimes within or close to the natural reserve areas, are an added lure to these visitors.

Belize lacks additional tourist attractions often found in other countries (climate, large urban centers, folklore, art, and culture). Its mainland tourism development strategy, therefore, should be based on development of the country's archaeological sites and natural reserve areas. However, future development will have to be carefully planned and monitored so as not to hinder, damage, or actually destroy the very resources that are the country's main tourism attractions. The RDA team found, with



very few exceptions, Belizeans and foreigners, both in the public and private sectors, are very conscious of this limitation on tourism sector development. All agree that the total number of visitors to the country in the future should be limited to amounts that will not contaminate nor endanger the country's marine and land natural resources. In this sense, Belize is following a worldwide trend of avoiding the destruction of areas known for their unique natural, cultural, and historic qualities.

Consideration should be given to tourism infrastructure investment where local public and private funds are exceptionally scarce. In Belize (within the general framework of development as here stated), investments to improve, open, and facilitate access to areas of interest can only be forthcoming from the public sector and/or through foreign aid funding. Projects such as these cannot be expected to yield a positive financial return that would attract a private sector investor. Many of the benefits from investment in tourism infrastructure are indirect: business opportunities are improved for entrepreneurs in the tourism industry; from a non-financial viewpoint, respect for Belize and its people is enhanced around the world, and Belizeans themselves may enjoy their national treasure.

Private sector investments in tourism-related activities are much more likely to occur once government-funded improvements are in place. Private sector involvement will be the final factor in attracting additional visitors, since the private sector is the prime mover of travelers. Cost-benefit considerations will be specific to each site development and will be a decisive factor in stimulating or not stimulating such investments.

Government funding should be directed toward conservation/natural reserve programs and/or archaeological site development. This funding could be provided to developers through grants or very soft financing conditions. Private sector investment should be allowed to occur spontaneously, as each program or site area is developed.

2.1.2 Quantitative Aspects

2.1.2.1 **Historic Tourism Arrival Figures.** The basic and most significant figures of tourism arrivals in the last six years have been summarized in Table 1.(2)

Final data was not available for 1988, so an estimate was made based on official figures for the months of January through May. Some adjustments were made for figures that did not coincide exactly.



TABLE 1. BELIZE BASIC TOURIST ARRIVAL FIGURES
1983 - 1988

	1983	1984	1985	1986	1987	1988
TOTAL VISITORS						
Number	64,200	88,400	93,400	93,800	101,636	122,238
Percent yearly increase	—	37.7	5.7	0.4	8.4	20.3
VISITORS BY ORIGIN						
USA	26,900	27,050	33,531	38,833	47,617	55,007
Canada	2,504	2,829	3,829	4,409	43,270	4,889
U.K.	1,990	2,210	6,445	8,723	9,036	11,001
Europe	3,017	5,923	7,472	8,536	8,341	9,779
Other	29,789	50,388	42,123	33,299	32,372	41,562
MODE OF TRANSPORT						
Air	22,791	28,288	31,943	52,059	59,234	67,424
Overland	33,191	55,250	55,106	40,240	38,132	49,278
Sea	8,218	4,862	6,351	1,501	4,270	5,536
AIRLINE GATEWAY*						
Miami	—	—	—	—	26,817	30,341
Houston	—	—	—	—	12,736	14,159
New Orleans	—	—	—	—	9,320	10,788
Central America	—	—	—	—	10,361	12,136
SEASONALITY						
Dec-May	37,813	37,117	52,304	49,245	48,955	57,452
Jun-Nov	26,387	41,283	41,096	44,555	52,681	64,786

SOURCE: Belize Tourist Bureau; Belize Civil Aviation Department; Airlines; RDA estimates based on interviews

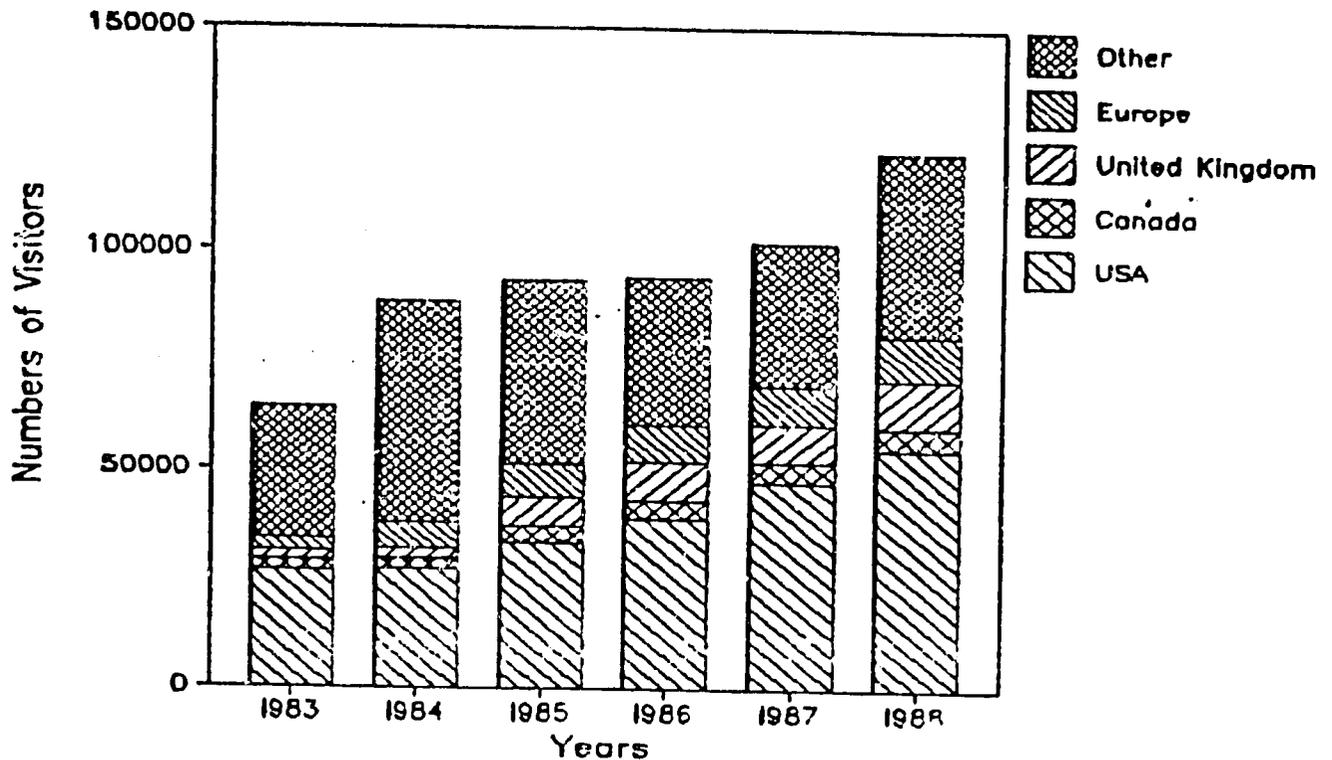
*Not available before 1987.

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The following comments are of relevant interest.

- o Total visitor arrivals to Belize have shown significant growth during the 1983-1988 period, at an average compounded yearly rate of 18% (see Figure 1).

FIGURE 1. BELIZE: TOURIST ARRIVALS BY ORIGIN



- o Approximate figures for bona fide hotel-using tourists arriving in Belize for the years 1983-1988:

1983	25,812
1984	30,387
1985	40,809
1986	47,604
1987	53,027
1988	62,126

- o Total visitor figures include transient border movements -- not necessarily a tourism related activity. To determine a more accurate figure of the total number of bona fide tourists, the percentage of travelers originating from the USA, Canada, the United Kingdom, and Europe was noted (see Figure 2). A very high correlation was found for the 1983-1987 period, where these two classifications of travelers generally increased from about 45- 50% of total visitors to 65% -- an evident trend that the number of hotel-using visitors are increasing percentage-wise over the transient, nonhotel-using visitors.
- o Additional figures provided by GOB sources(3) estimate that 30% to 45% of United States-origin visitors are actually native Belizeans traveling with U.S. documents. These Belizeans are assumed to be nonusers of hotel/tourism facilities. The same source also states that 95% of the so-called other visitors would also be the cross-border type, not using hotel facilities.
- o A significant change in visitor seasonally has been evident during these same years, based on the December-May and June-November seasons. In 1983, more than 59% of arrivals occurred in the December-May season; in 1987/88, approximately 48% of arrivals occurred during these months (see Figure 3).

FIGURE 2. BELIZE: TOURIST ARRIVALS BY MODE OF TRANSPORT

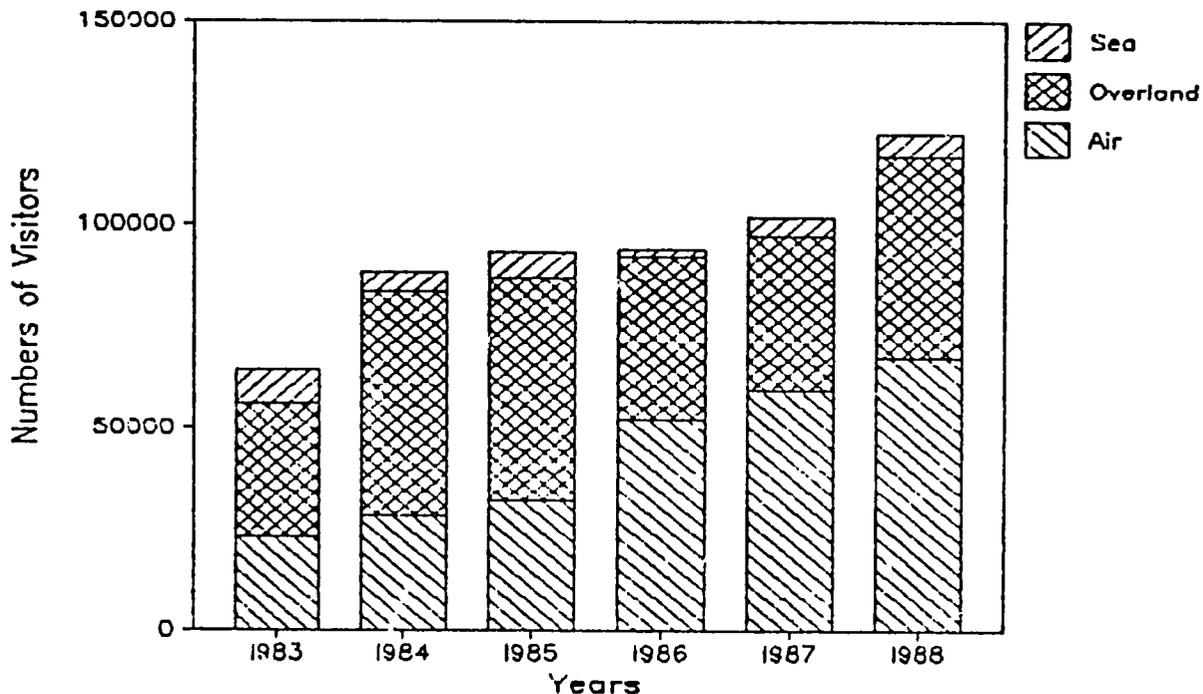
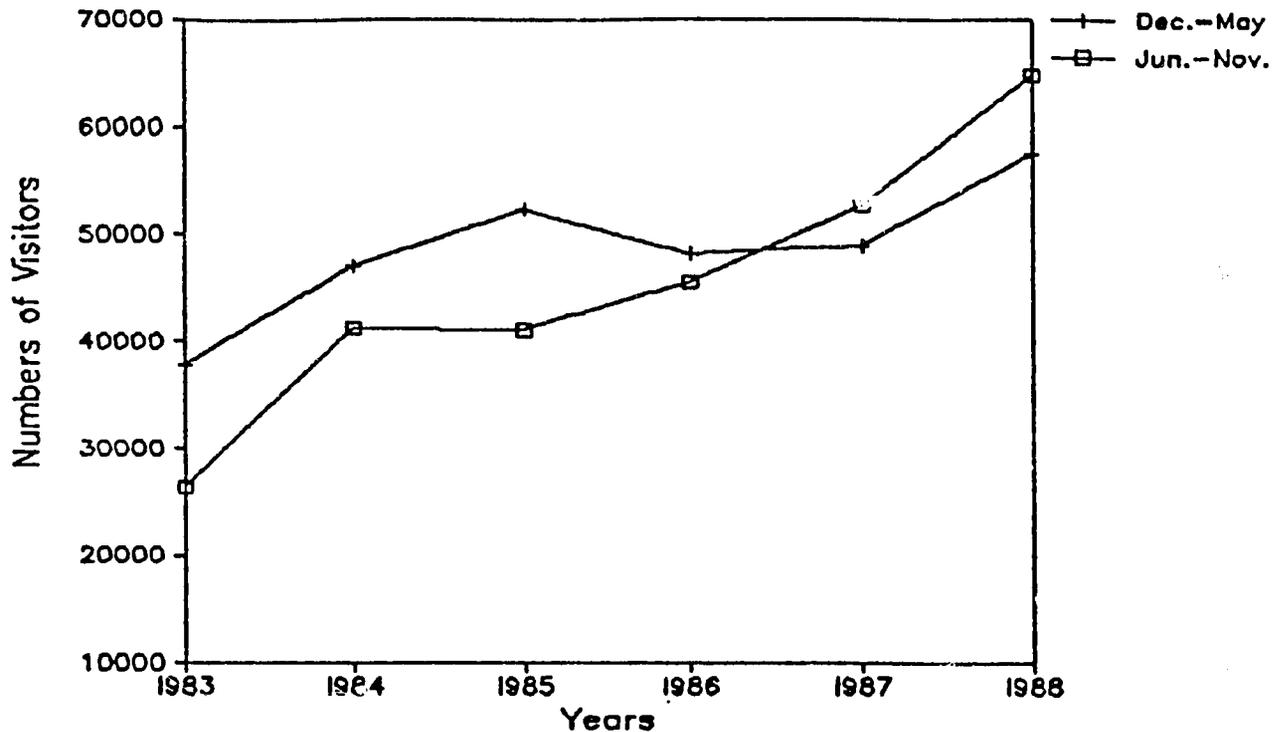


FIGURE 3. BELIZE: TOURIST ARRIVAL SEASONAL DEVELOPMENT



- o These last figures seem to attest to the stated fact that, as hotel room availability has become scarcer, visitors have delayed traveling to Belize to later months, even into the rainy season. This shows that the diver-traveler is not hindered by rain.

2.1.2.2 Tourist Activity and Final Destination. As the major objective of this study is to determine how to stimulate more tourism movement from the islands to the mainland, a historic trend of visitor final destination is presented. This information is summarized in Table No. 2.

TABLE 2. BELIZE: SPECIFIC TOURIST VISITATION SITES
1985 - 1988

	1985	1986	1987	1988
ISLANDS	26,052	30,096	34,664	41,629
Northern Reef	20,662	23,336	26,934	31,885
Ambergris	15,610	16,686	18,494	21,083
Caulker	680	910	1,240	1,550
Chapel	160	290	350	402
Halfmoon (Blue Hole)	1,870	2,640	3,160	4,108
Others	2,342	2,810	3,690	4,742
Southern Reef	1,140	1,380	1,430	1,990
Tabacco	1,000	1,200	1,250	1,780
Bladden	140	180	180	210
Atolls	4,250	5,380	6,300	7,754
Turneffe	1,980	2,370	2,720	3,182
Lighthouse	1,170	1,760	2,170	2,951
Glovers	1,100	1,250	1,410	1,621
ARCHAEOLOGICAL SITES	6,027	6,025	5,790	5,865
Altun Ha	4,020	3,850	3,500	3,300
Xunantunich	2,007	2,175	2,290	2,565
WILDLIFE SANCTUARIES/AREAS				
Crooked Tree	393	436	545	830
Cockscomb Basin	1,190	1,322	1,653	2,145
Community Baboon Sanctuary	90	98	123	970
Mountain Pine Ridge	9,500	9,600	12,000	13,400

SOURCE: Belize Tourist Bureau; RDA International, Inc.

The major comments on these figures are as follows:

- o The estimated number of visitors arriving on the islands is probably close to reality. It is assumed that duplication should be minimal, as it is unusual for tourists to move from one island to another. Of the total number of bona fide tourists who visited Belize during these years, following are the percentages which had the islands as their final destination.

1985	63.8%
1986	73.5%
1987	65.3%
1988	67.0%

- o Although these percentages do not indicate a firm trend, they do show that approximately two-thirds of the total bona fide tourists visiting Belize have the islands as their final destination.

- o Regarding visitors to archaeological and wildlife sites, it has been difficult to determine the extent of duplication which might be implicit in these figures. It is probable that some of the island tourists also have visited Altun Ha and possibly Xunantunich, in which case the same person would be counted three times. The same applies to the wildlife sanctuaries. The situation becomes even more complicated with the inclusion of local or transient visitors to some of these sites, which appears to be the case with the number of visitors to Mountain Pine Ridge. It should be noted that the total number of visitors by final destination (Table No. 2) and the estimated total arrival of bona fide tourists (Pg. 2-7) coincide; which indicates that both sets of figures originated from one source.

A large proportion of the tourism flow to Belize (approximately two-thirds) has the islands as a final destination. This indicates that one-third of all tourists entering Belize, even if they are hotel and other facility users, are either business visitors or tourists whose destinations are sites on the mainland.

2.2 Sector Growth Relative to the Economy

As this study also takes into account some social cost/benefit criteria, a few comments on the importance of tourism activity within the Belizean economy is made here.

Belize's Gross Domestic Product (GDP) for 1989(4) is estimated at BZ\$543.1 million, with an expected real growth rate of 4.3%. Gross Domestic Expenditure (GDE) was estimated at BZ\$593.1 million, with the consumption component accounting for BZ\$458.4 million. Since no specific figure for the tourism component is available, an estimate was derived from expected expenditures of bona fide tourists traveling to Belize in 1989 of approximately BZ\$51.0 million(5). Using this figure, tourism will contribute 9.3% of the total GDP for 1989.

From the 1989 estimated Balance of Payment figures, the following is a summary of the import and export accounts:

<u>IMPORTS</u>	<u>BZ\$ (millions)</u>
Fuel	31.2
Food	71.2
Manufactured goods	52.8
Machinery plus transport equipment	75.4
Other	99.6
Nonfactor services	<u>61.6</u>
TOTAL	391.8

EXPORTS

Sugar	63.8
Garments	55.2
Citrus	35.2
Banana	56.6
Fish	37.4
Other	23.6
Nonfactor services	<u>109.6</u>
TOTAL	381.4

Although a nonfactor service export breakdown was not available, it is assumed, based on the country's service export capacity, that at least 53% of this category is income generated from tourism-related activities.(6) Using this assumption, tourism is generating almost 15% of Belize's foreign exchange earnings.

Longer-term projections, reviewed by the RDA team but not discussed here, show an increasing relative importance of the tourism activity with regards to GDP growth and foreign exchange earnings.

2.3 Outline of Perceived Tourism Policy

The GOB decides and carries out its tourism policy through the Permanent Secretary of the Ministry of Commerce, Industry and Tourism (under whom the Tourism Bureau falls directly). However, because the Tourism Bureau is understaffed, all policy and strategy proposals seem to originate from a Tourism Advisor, who has been funded and appointed by the European Economic Community (EEC).

Two recently-written Bureau documents, "Integrated Tourism Policy/Strategy Statement" and the "Tourism Sector Development Plan 1990-1994" are available but had not received official GOB approval at the time of this report.

The counterpart tourism organization for the private sector is the Belize Tourism Industry Association (BTIA). The BTIA and the Tourism Bureau are not totally in agreement with some policy statements regarding tourism development in Belize.

From the documents reviewed, the following is a summary of the officially stated, but not yet approved, tourism development policy.

- o Tourism has received a number two priority from the GOB in its economic development strategy. (This is probably the only tourism policy statement that has been approved and sanctioned at the highest government levels).
- o The objectives of the proposed tourism development strategy are: To increase stay-over visitors with an emphasis on long-stay, upper income travelers and an orderly and balanced development of the activity with full consideration of social saturation points, the environment, ecology, and the country's physical absorption capacity. It also envisions, albeit quite briefly, the provision of capital for the expansion of tourism infrastructure and services, the training of personnel, and the establishment of a reliable tourism administration, with respect to planning and quality standards maintenance.

- o Regarding specific policy directives, the strategy proposes that major public sector services include the following: Extension and improvement of the Belize City International Airport and other facilities in the interior and on the islands; the creation of access roads and nature trails; the improvement of water, telecommunications, and other services; and the improvement of customs and immigration services, and general safety standards.
- o With respect to the tourism product, the strategy states the importance of upgrading the quality of services now offered, especially by small and medium size facilities, and of duly providing these facilities with financial support.

The strategy statement also identifies a number of constraints, the most important being: scarcity of capital (envisioned to be addressed by the Development Finance Corporation); development costs related to the absence of a local construction materials industry; air transport network (in the sense that present carrier capacity is limited and should be allowed to expand); human resources training (considered critical and thus merits strong, immediate action); neighboring countries' higher competitive capacity (to be addressed via the Mayan circuit concept); and the lack of preparation of natural attractions to be visitor receptive.

Regarding archaeological site development and related activities, the policy/strategy statement specifically states the following points:

- o It recognizes the importance of avoiding social saturation points and the destruction of the country's environment and ecology.
- o It states that historical/archaeological sites should receive government infrastructure support.
- o It specifically requests the construction of airstrips at sites ". . . such as Caracol, etc. . . ."
- o A statement is made regarding the long-term development of sites at Santa Rita, Cerros, Cuello, Lamanai, Cahal Pech, Xunantunich, Altun Ha, Nim Li Punit, Lubaantun, and others, in a program ". . . to fully excavate, upgrade and restore . . . to be followed by excavations of other ruins to eventually offer one or two fully restored ruins per district. If possible." It places a high priority on Caracol.
- o Finally, the strategy suggests the construction of an Anthropology/Natural History/Archaeology museum in Belmopan.

These aspects will be further discussed in Section 3.

2.4 Constraints in Belize Tourism Generation and Receptive Services

As previously stated, the RDA team found differing sets of figures related to tourism activity. These differences have been found in officially generated GOB statistics, estimates by different consulting organizations that have addressed the subject, and from verbally stated opinions of individuals working in the tourism sector.



Since questioning this information is not one of the objectives of this study, the RDA team has simply reviewed already-stated figures, selecting those that seemed more in tune with the reality perceived during the team's stay in country. This information was necessary to complement quantitative data for determining archaeological site selection and site development objectives.

The latest available figures of hotel capacity in Belize are found in Table No. 3 and Figure No. 4. The figures in Table No. 3 include those hotels and guest houses registered with the Belize Tourism Bureau. It was also reported that there are some very small facilities operating in country which are not registered, including holiday homes, individual houses renting rooms, and apartments.

Most of the small- and medium-sized registered hotels, which have an average of ten rooms, have been developed in a very informal way in response to a perceived demand, as the number of visitors has increased over the years. The largest share of accommodation facilities is found on the islands. The islands and Belize City had approximately 69% of the total number of beds available in 1988. In both locations, hotel installations range from buildings specifically designed for the purpose (i.e., the Fort George Hotel or the Villa), to converted houses (i.e., the Four Fort and the Chateau Caribbean).

On the islands (i.e., Ambergris), the style is more towards cabana rooms, although the traditionally-designed resort is also present.

Mainland facilities outside Belize City are rather scarce. However, the RDA team visited tourist-quality hotels at the Corozal/Orange Walk area (three),(7) and in or around San Ignacio in the Cayo District (two or three). A hotel approximating tourism quality is also found in Belmopan, although the service was rated below most other Belize hotels of comparable size.

The area south of Belize City (Stann Creek and Toledo), although offering hotel services that seem to be used frequently by tourists, are in a class well below accepted standards.

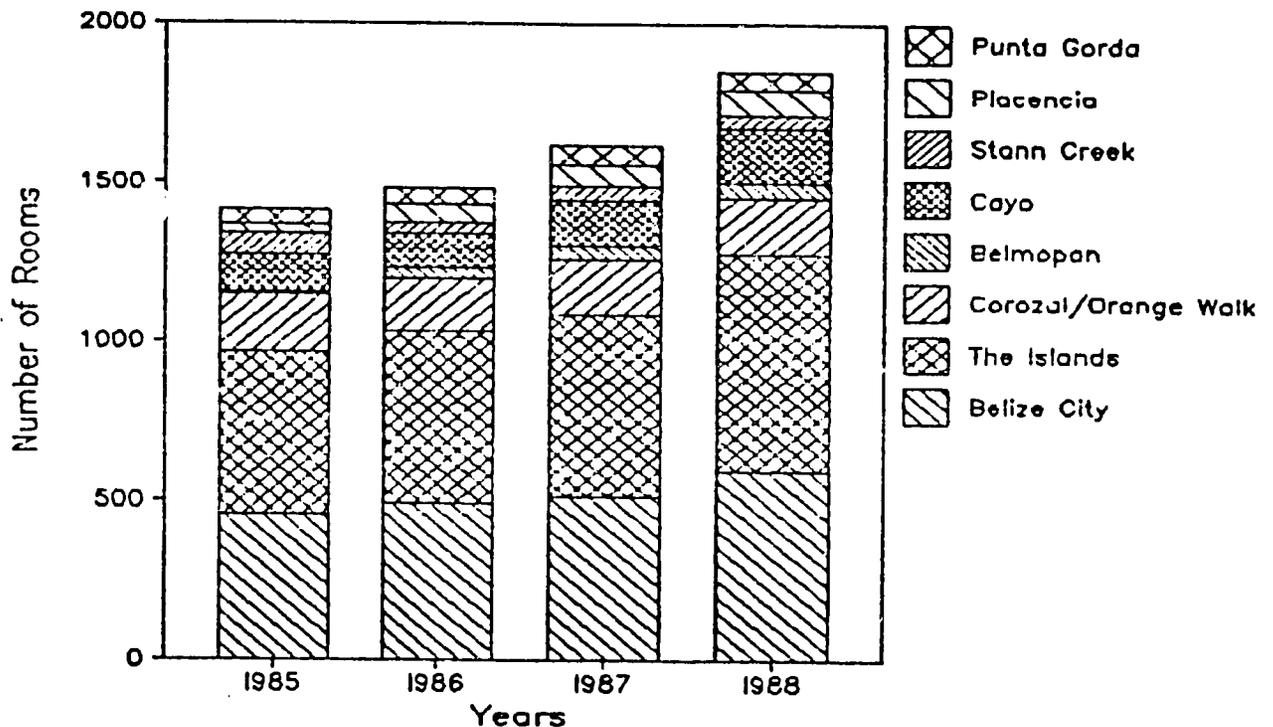
The RDA team found a very widespread and generalized consensus that a large proportion of hotel accommodations in Belize are not really in line with internationally accepted standards. This poses some doubts as to real tourism-standard room availability vis-a-vis officially registered totals.

TABLE 3. BELIZE: TOTAL HOTEL ROOM INVENTORY, 1985 -- 1988

LOCATION	1985		1986		1987		1988	
	BEDS	ROOMS	BEDS	ROOMS	BEDS	ROOMS	BEDS	ROOMS
Belize City	655	455	741	495	936	517	1,144	597
The Islands	892	513	945	537	1,023	574	1,245	681
Corozal/ Orange Walk	296	178	249	166	278	169	339	180
Belmopan	26	16	72	37	80	44	85	45
Cayo	195	114	209	104	265	143	322	170
Stann Creek	103	62	74	34	82	46	101	47
Placencia	60	34	93	63	105	66	129	76
Punta Corda	67	42	84	49	97	60	119	60
TOTALS	2,294	1,414	2,467	1,485	2,866	1,619	3,484	1,856

SOURCE: Belize Tourist Bureau; RDA International, Inc.

FIGURE 4. BELIZE: HOTEL ROOM AVAILABILITY



The only known authorized opinion on the net room availability was found in a report prepared in 1988(8). These figures were checked with numerous hotel owners and with other Belizeans and foreigners dealing with tourism. All agreed that these figures, which are detailed in Table No. 4, seem correct. These were adjusted in regards to findings made during the RDA team's field work. The concept of tourism-app facilities was quite flexible.

TABLE 4. BELIZE: ESTIMATED CAPACITY OF TOURISM CLASS HOTEL ACCOMMODATIONS IN BELIZE, 1988

Location	Hotels	Rooms	Beds
Belize City	8	51	271
The Islands	15	226	402
Corozal/Orange Walk	3	40	67
Belmopan	1	20	37
Cayo	7	91	168
Stann Creek	4	35	62
Placencia/Punta Gorda	1	6	10
TOTALS	39	568	1,017

Source: Pannell Kerr Forster; RDA International, Inc.

The average rooms-per-hotel is, in this case, almost fifteen. Another sixty-two rooms can be considered available in the five live-aboard boats presently operating in Belize.

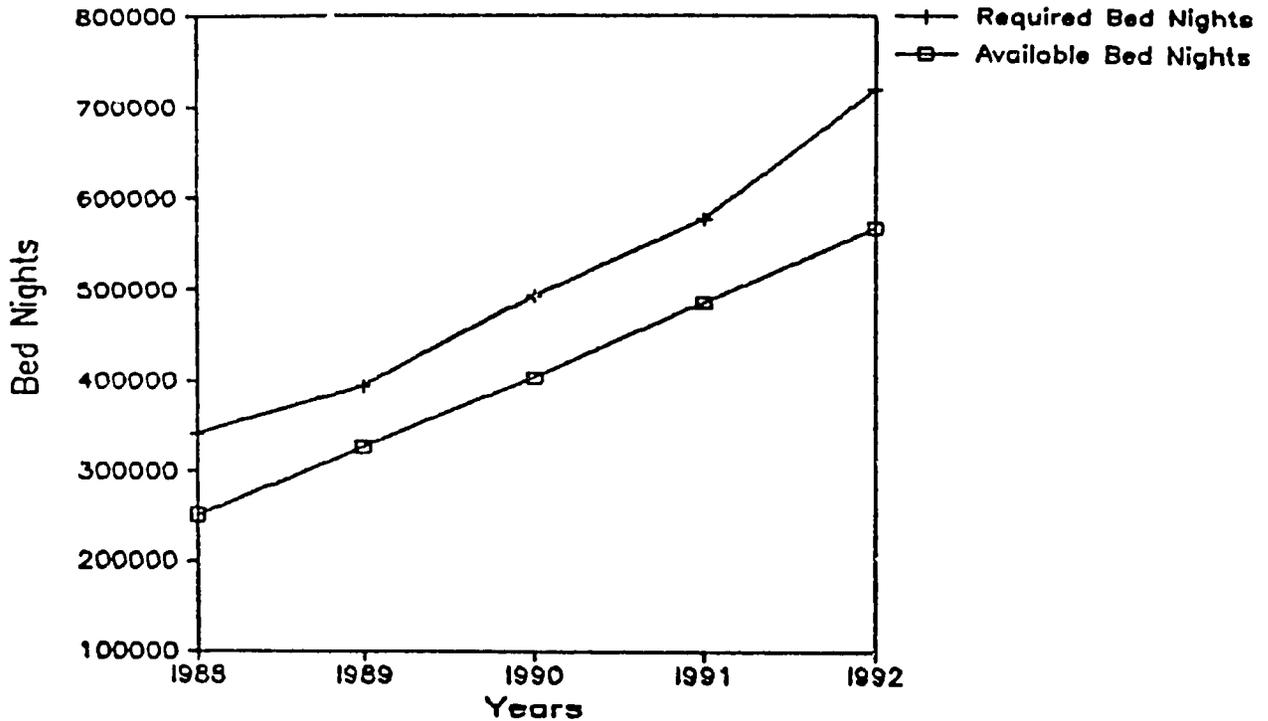
The average length of tourist stay was also reviewed. The Belize Tourist Bureau has estimated a 1988 average of 6.0 nights. However, a Caribbean Tourism Research and Development Center survey undertaken in Belize in 1986 estimated an average stay in excess of 10.0 nights. The findings of Pannell Kerr Forster indicate that this same survey showed 55% of tourists interviewed reported they actually spent less than seven nights in Belize, with 38% spending between four and seven nights. The RDA team paid special attention to this figure during interviews with hotel owners and tour operators. The average length of package tours was also analyzed. In general, everyone interviewed agreed that a 10.0-night average stay is inaccurate and that a 5.5-night average stay is a more accurate estimate. Based on the above, the apparent rooms required/rooms available situation is shown in Table 5 and Figure No. 5.

TABLE 5. BELIZE: ESTIMATED HOTEL ACCOMMODATION AVAILABILITY AND USE 1988 -- 1992

Year	Expected Tourists	Average Stay	Bed Nights Required	Primary Bed Nights Available	% Surplus (Deficit)
1988	62,126	5.5	341,693	250,481	(26.7)
1989	71,445	5.5	392,947	326,584	(16.9)
1990	82,162	6.0	492,972	402,686	(18.3)
1991	88,735	6.5	576,777	484,811	(15.9)
1992	95,883	7.5	718,748	566,937	(21.1)

Source: National Tourism Bureau; Pannell Kerr Forster; RDA International, Inc.

FIGURE 5. BELIZE: PROJECTED REQUIRED AND AVAILABLE HOTEL CAPACITY



The above yearly figures are averages and do not include seasonal movements, which exacerbate the problem during part of the year and minimize it for the rest. These deficits show, in the final analysis, that primary room availability in Belize is very limited and that the overflow of visitors, especially in the high season, is using substandard facilities.

Additional constraints were also perceived at the so-called ground operator level, mainly sea- and air-operators. This service is limited to the transportation of tourists by air (via Tropic and Maya Airways and some charter service) to the different islands and to a rather well-developed boat service, especially in the northern Cayes.

A review of international airline service to Belize was also conducted specifically to identify possible constraints (See Table 6). The information was directly gathered at the source and is based on present airline equipment, schedules, and itineraries at highest capacity (seat availability), from each gateway. The estimated availability covers the low and high season programmed flights. It was based on total seating and includes all passenger movement into and through Belize. Total number of visitors arriving by air in 1988 was 72% of total seating capacity. This indicates near saturation in air transportation.



TABLE 6. BELIZE: INTERNATIONAL AIR TRAFFIC AVAILABILITY -- MAY 1989

Gateway and Airline	Total Yearly Seat Availability
Miami	36,810
Eastern Airlines	10,802
Tan/Sahsa	9,062
TACA	16,946
Houston	35,088
Continental	16,530
Tan/Sahsa	9,425
TACA	9,133
New Orleans	21,451
Tan/Sahsa	9,751
TACA	11,700
TOTAL	93,349

Source: Belize Airline Offices

2.5 Archaeological Site Development Policies

A specific policy on archaeological site development in Belize has not yet been formulated. The government agency called upon to address the subject is the Archaeology Department, which is headed by an Archaeological Commissioner. The Department does not have adequate funding to carry out all of its assigned functions. At the time of the research for this report, there were two archaeologists (including the Commissioner, two or three assistants, and twelve site caretakers, all working on a budget of BZ\$170,000 per year.

Given the large number of sites so far identified in Belize, it is a working policy stated by the Commissioner that the Department should strive to open as many of them as possible, mainly to avoid further deterioration and also to discourage looting, which is widespread and increasing. This large amount of work has forced the Department to be spread very thin at the twelve major archaeological sites. It has not been able to properly maintain or upgrade any of these sites to make them adequate tourist attractions.

It is a normal procedure in most countries -- Guatemala and Mexico being good examples -- that in any work done on a site involving expatriates, a local archaeologist has to be present. As site development progresses, local staffing will increase in quality and numbers, to the degree that eventually the indigenous Archaeology or Anthropology Departments will be totally responsible for site development. This is now the case with Tikal in Guatemala. The RDA team noted with particular concern, that at one important site in Belize (Caracol), archaeological work is done without the permanent presence of Belizean archaeologists.

To rectify this situation, the GOB has made efforts to train additional personnel by trying to obtain funds and grant scholarships for young students interested in pursuing a degree in anthropology or archaeology. However, in some cases, these Belizeans will not return to the country after completing their studies. The Department should

be made aware of the procedure used in other countries whereby anyone obtaining a government-sponsored scholarship -- regardless the source of funding -- has to sign a contract obliging himself to serve in a given position for a period at least equal to the duration of the training or, in default, be held legally responsible for reimbursing the total cost.

It was also noted that the Department is actively promoting the feasibility, funding, and construction of a museum site. A preliminary study by the British firm, Shackland and Cox, has recently been presented to the GOB.

There are reports, most of them oral and obtained from Belizeans who have worked in some diggings, of archaeologists crating and shipping out artifacts. It is also a known fact that many interesting pieces are now resting in different museums in Canada, the United States, and Great Britain. One recent case that has received much comment is that of the Lubaantun crystal skull. Even if these artifacts have been shipped out of Belize with proper official authorization, the fact remains that the country has lost a very important cultural and historical heritage. On the other hand, the archaeological profession cannot be blamed for its concern in remitting worthwhile pieces to places where they will be properly restored, cared for, and exhibited. The museum project is, therefore, of great importance.

The Ancient Monuments and Antiquities Ordinance provides for the following:

- o It defines what is meant as an "ancient monument" or an "antiquity."
- o It states that all ancient monuments and antiquities property and control are to be vested in the Crown. They may be vested on individuals with the proper granting at the Ministerial level.
- o A provision is made stating the time and manner in which anyone possessing ancient monuments or antiquities may register and/or turn in such artifacts to the proper government authority.
- o The Minister may allow the person who has registered such a possession to continue such possession, if, in his opinion, the national interest would be furthered by such action. The Minister may also take possession if, in his opinion, the national interest is furthered by acquiring the monument or antiquity for the Crown.
- o Fines up to BZ\$1,000 and imprisonment for up to twelve months are foreseen penalties for those who contravene these Ministerial decisions.
- o Compensations are foreseen in certain cases of acquisition by the Crown.
- o In case of private acquisitions, the application, granting, and revocation of licenses is foreseen. These cannot be transferred or alienated.
- o The ordinance also regulates acquisitions of the finds by the Crown.
- o The Minister may also grant permits to enter upon specified lands to search or excavate. If this is done on private land, the permit can only be issued with consent of the owner, occupier, or lessee of the land, with exceptions that relate to owner compliance with certain rulings.



- o The removal of monuments and antiquities is also regulated.
- o Trading or selling in ancient monuments or antiquities can only be done with previous licensing.
- o The ordinance also specifies the power to enter and search premises, stop and search persons and vehicles.
- o Provisions for the declaration of archaeological reserves, acquisition of adjacent lands, openings of such reserves to the public, and rules for these reserves are also stated.
- o Finally, the ordinance establishes rules on prohibiting removal of earth or stones, damage or destruction of monuments, and control of land operations.

In summary, the ordinance leaves an almost absolute freedom of action and discretionary measures to the appointed Minister -- in this case the Trade and Industry portfolio -- or to the Minister responsible for ancient monuments and antiquities, or any other person so appointed. The Department of Archaeology has also prepared certain guidelines for archaeologists and a set of contractual conditions for working permits which follow the ordinance guidelines.

2.6 General Description and Role of Archaeological Sites in Belize's Tourism Activity

2.6.1 The Sites and Their Environment

According to the Archaeology Department, there are over 700 registered pre-Columbian sites in Belize. This is an average of one site per thirteen square miles, an unusually high concentration.

Although the already-excavated sites have yielded dates of activity going as far back as the archaic and formative periods, most visible upper structures are from Middle to Late Classic activity. This is the most interesting and culturally rich period of Mayan art and architecture.

The Belizeans are, in effect, the custodians of a universal heritage. This heritage, which is part of the vast mesoamerican culture -- one of the most refined of ancient civilization groups -- has its finest examples of classic Mayan sites at Copan, Tikal, and Palenque. Other important sites, generally associated with postclassic ages and additional influences from the North, are Chichen Itza and Uxmal.

There are many more very interesting sites in the area, including Tulum, Coba, Dzibilchaltun, Kabah, Etzna, Sayil, and Mayapan in the Yucatan/Quintana Roo area (mostly postclassical), and Uaxactun, Piedras Negras, Yaxchilan, Rio Azul, Seibal, and Quirigua in Guatemala (generally associated with Preclassic to Late Classic). There is also a lot of expectation regarding the El Mirador site in the Peten, which is reported to have a higher temple and a larger area than Tikal. With this last exception, all other sites mentioned have been explored, consolidated, and restored to different degrees. Not all, however, are easily accessible to tourism, especially in the Guatemalan Peten area.

Regarding Mayan sites in Belize, the best comparison sites in neighboring countries would be the Chichen Itza, Uxmal, and Palenque sites in Mexico, Copan in Honduras, and Tikal in Guatemala, all of which have the following three points in common.

- o They were large and important ceremonial centers.
- o They have received large restoration efforts, affording a view of their architecture.
- o All have carved stelae, friezes, stuccoed high reliefs, and other indications of important artistic achievements.

In addition, they are readily accessible and are, therefore, the highest visitor receiving sites in the Mayan mesoamerican area. They are also organized for tourism activity, offering museums and/or interpretation centers on site and other amenities, such as sound and light spectacles.

Besides the differences from archaeological, architectural, and artistic points of view, these five sites also afford some important differences in their natural settings. Chichen Itza and Uxmal are located in a flat area, vegetation is mostly low trees and shrubbery, and they have relatively dry and unattractive hot lowland climate. On the other hand, Palenque, Copan, and especially Tikal are situated in rain forests offering interesting wildlife. This is less so in Copan, which sits on a hill overlooking a meandering river, very much so in Tikal, which is situated within a natural wildlife reserve and also in Palenque, which sits at the foot of some spectacular to mountain forest.

The Yucatan sites, and to a lesser extent, Copan, attract travelers who are also seeking beach and sun facilities located at Cancun/Cozumel and the Bay Islands.

Belize Mayan sites to date have received relatively little development work. Sites which have received the most attention (and therefore have some visitor movement) are Altun Ha and Xunantunich. Neither of these sites can be expected to be an attraction similar to the five aforementioned sites, because they are not as large nor as spectacular. They also do not have any unusual architectural features nor any notably different artistic achievement, at least as they can now be viewed.

Archaeological importance and tourism development possibilities at any one site do not always go hand in hand. The most spectacular archaeology finds are normally made by digging and, in many cases, by opening tombs. The fact that a site has yielded, for example, an extraordinary sculptured jade head now resting in some foreign museum or a marvelously painted polychrome vase, probably also on some distant shelf, will have little bearing on tourism visitor interest. A covered mound, however large and promising, will not normally move the average visitor to make an extra effort and travel to a given site. However, a reconstructed pyramid or acropolis, a carved stela, an architecturally attractive and artistically rendered building -- the Governor's Palace and the Nunnery in Uxmal are very good examples -- will motivate tourists to visit the site. A dramatic setting is also important.

Of the sites opened to the public in Belize, Lamanai promises quality, art and a dramatic setting. Caracol has an extraordinary setting, but not enough is yet known as to what it may yield and some time will pass before a fuller picture is obtained.



Cerros has received very little reconstruction, but its location beside the sea could make it a second Tulum. Lubaantun has extraordinary architecture and a good setting, but no art.

In short, Belize sites capable of attracting tourism have not been fully investigated where interesting yields might be expected. Other developed sites have yielded findings of relatively little apparent interest, compared to what they need to yield in order to compete with other Mayan sites in the region.

When archaeology is viewed in the context of Belize's tourism activity, a positive picture emerges. First it should be able to combine the already existing sand and sea visitor with archaeology, provided it can offer a site that is attractive, competes with the Peten, Yucatan, and Quintana Roo activity, and affords the additional advantages of, even if presently inaccessible, relative nearness to other activities. Second, most sites are on or near very unique and attractive wildlife areas, i.e., Tikal and Palenque.

The missing piece in the puzzle is the selection of one site for an imaginative, well-conceived pilot development plan that will attract more visitors and slowly enhance Belize's position along the Maya circuit.

The selection of the site should contribute toward affording and justifying the investment that might be necessary to turn it into a visitor attraction. This justification can be achieved through creating jobs and improving the income of the living near the site, and in contributing towards increasing the average stay of visitors, which will help to improve the contribution of tourism activity within the Belizean economy.

2.6.2 The Sites and Archaeology

Archaeology, as with any science that is based largely on assumptions, has and will undergo changes in conceptual and methodological approaches. These changes may derive from actual scientific contributions that address past methodological errors, from fads or misconceptions, or (especially in modern times) from the need to maximize results from limited efforts. As a result, the profession has tended to become utilitarian.

The general public conception is that archaeological fieldwork in the 1970s and 1980s, upon discovery of a new site of past or ancient cultural interest, primarily organizes a search of artifacts that may yield, as rapidly and thoroughly as possible, maximum information that may be used to either disprove past theories, show findings supportive of personal theories, or elucidate new ones. The objective is to publish written material that will enhance the author's prestige within the profession which, as all others, has its quantity of rivalries, egoism, and fatuity as well as dedication, prestige, and attainment of excellence.

Additionally, and with the multiplication of activities in all areas of the world, the institutional support a given site may receive, particularly financial assistance, will be more directed to scientific finds than to site enhancement.



These are probably the most important factors accounting for trends followed by the profession in the last decades which justify having dropped the term "reconstruction" from their working methodology, particularly on sites with architectural remains, and accepting that normal site development should only involve excavation, consolidation, and, in some cases, restoration phases.

There are other inherent components in the activity that warrant these trends, some related to conservationist vexations, very much justified in growing environments of looting, climatic irregularities, acid rain and other polluting agents, as well as past reconstruction monstrosities performed on certain monuments.

Unfortunately, as stated earlier in this report archaeological site development per se and improvement of a site to attract visitors do not always go hand in hand.

There are also some very practical considerations that neophytes who dabble in archaeology cannot seem to accept. In the case of certain Mayan sites which evidently show important building remains, why is so much care given to, for instance, the restoration of a smashed polychrome vase and no consideration given to restoring beautiful monumental architecture? What is wrong with restoring and showing to the world the past appearance of the Palace of the Governor or the Nunnery in Uxmal? Why not restore a pyramid to its former glory, as with the Great Jaguar temple in Tikal?

The art, materials, and means that modern technology could provide for monumental reconstruction or restoration should be a challenge to any archaeologist. They can also be a challenge to the imagination, sense of the aesthetic realization, and plastic concept of an architect.

Many examples of imaginative restoration are at hand in the world. These can go from tasteful reconstruction of partial standing elements to the use of materials that clearly differentiate original remains from rebuilding. There are even modern examples of restoration in Europe where detailed elements of monumental architecture are indicated by simulating materials through drawings and paintings.

The point is that if any site in Belize is to be worked towards creating a center of attraction to tourism, present trends of archaeological work, as have been seen there, cannot be totally accepted.

As this report makes specific suggestions on site development in later pages, it is strongly recommended that some compromise be found in the profession accepting that architectural restoration must be done on a much larger scale than has been usual, just as tourism development is in fact accepting and even very strongly endorsing -- at least in this report -- that site development must be carried out within limitations conclusive to the protection of archaeological remains.

The following stated principles set forth in the International Charter for the Conservation and Restoration of Monuments and Sites, signed in Venice in 1964, are relevant to this discussion (emphasis by the authors):

"Ruins must be maintained and necessary measures taken for the permanent conservation and protection of architectural features and of objects discovered must be taken. Furthermore, every means must be taken to facilitate the understanding of the monument and to reveal it without ever distorting its meaning . . . reconstruction work should be ruled out a priori. Only the reassembling of existing but dismembered parts can be permitted . . . Material used for integration should be recognizable and its use should be the least that will ensure the conservation of a monument and the reinstatement of its form . . . restoration is a highly specialized operation. Its aim is to preserve and reveal the aesthetic and historic value of the monument . . ."



3.0 BELIZE'S ARCHAEOLOGICAL SITES: DESCRIPTION AND ANALYSIS

3.1 Methodology

Prior to in-country arrival, the RDA team made a preliminary literature search on the Belize Mayan at the Archaeological Institute of America. Findings during this literature search led to the team's decision to expand the scope of the field work. Upon arrival in Belize, contact was established with officials of the GOB's Department of Archaeology to obtain more specific information on site work and locations.

The RDA team divided the country into three geographic areas: (See Map #1)

- o The Northern Region, from Belize City north to Corozal. in and around the main highway. including Ambergris Caye.
- o The Central Region, from Belize City west to Benque Viejo del Carmen, including some areas south of the main road.
- o The Southern Region, from Belmopan south to Dangriga and Punta Gorda, including some areas both east and west of the Dangriga-Punta Gorda road.

The terms "group" and "satellite sites" describe three well-defined clusters of regional urban Mayan development. These clusters (See Map #2) include the areas surrounding Lamanai (532 square miles), Caracol (60 square miles), and Lubaantun (20 square miles). The Lamanai cluster, in addition to being the largest, is the most accessible and closest to Belize City. Lubaantun is the furthest from presently advanced tourist development, and the least accessible.

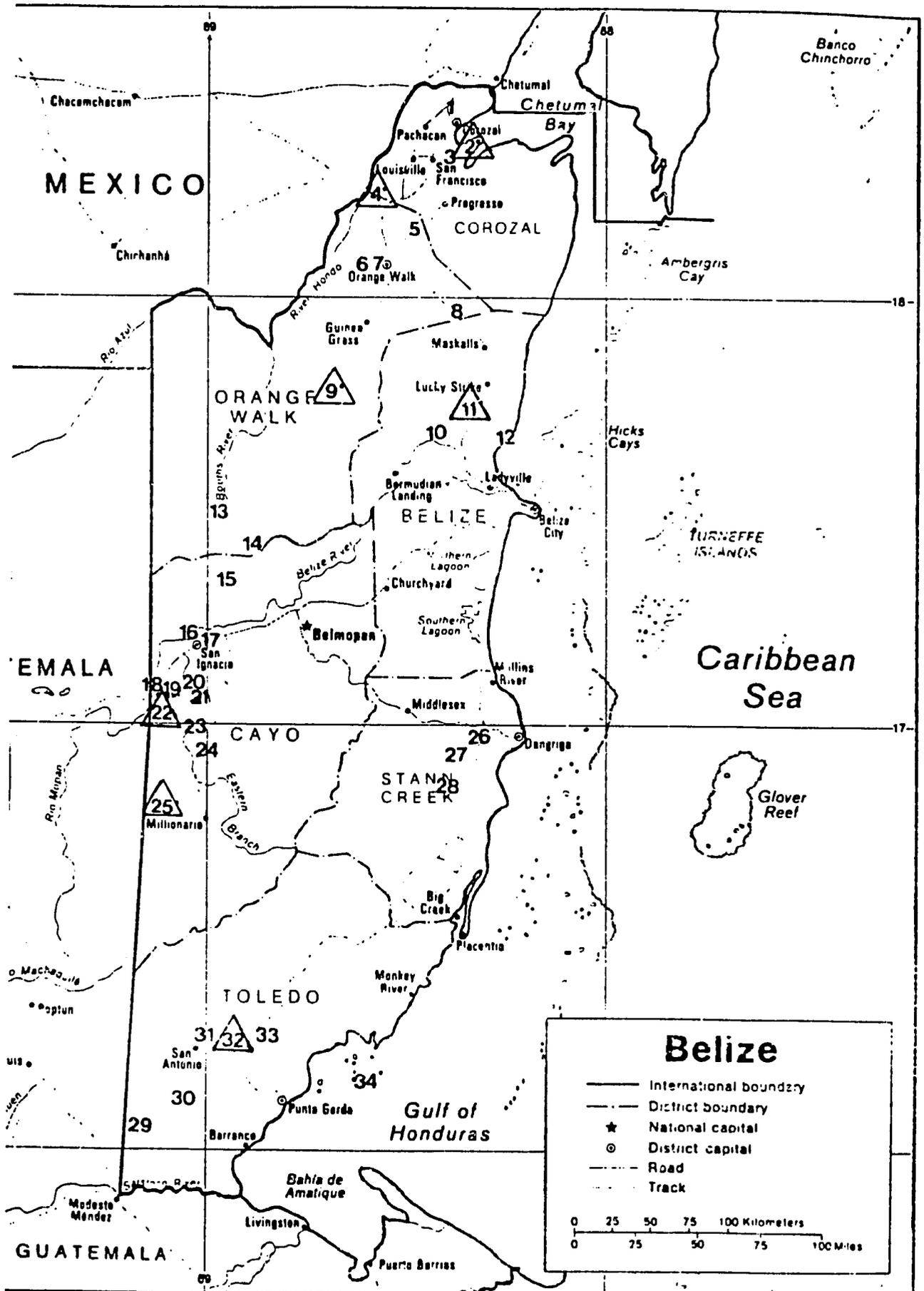
Archaeological sites were the major focus of field visits, but some free time was allotted to visit other tourism-related areas encountered along the way.

All available drawings of the sites were obtained. The Archaeological Department also provided personnel on occasion to travel with the RDA team to some sites and/or provided the team with a letter requesting site caretakers to assist as guides.

At each site notes were made on distances, access, and road conditions. Existing installations were inspected. Also, at each site the archaeologist or the caretaker gave the team a guided tour and explained all the important structures. At most sites, only the main center was inspected. At others (i.e., Caracol, where the most amount of time was spent), some outlying sites were also visited. Upon returning from each site, the team further discussed and sought local information from private individuals known to have such data available.

Finally, additional literature searches were undertaken in Washington, DC, and Guatemala City after the field team departed Belize.

24.



MAP NO. 1 BELIZE: LOCATION OF MAIN ARCHAEOLOGICAL SITES

△ Major Regional Center

25

MAP NO. 1 (Continued)
Names of Sites

Northern Region

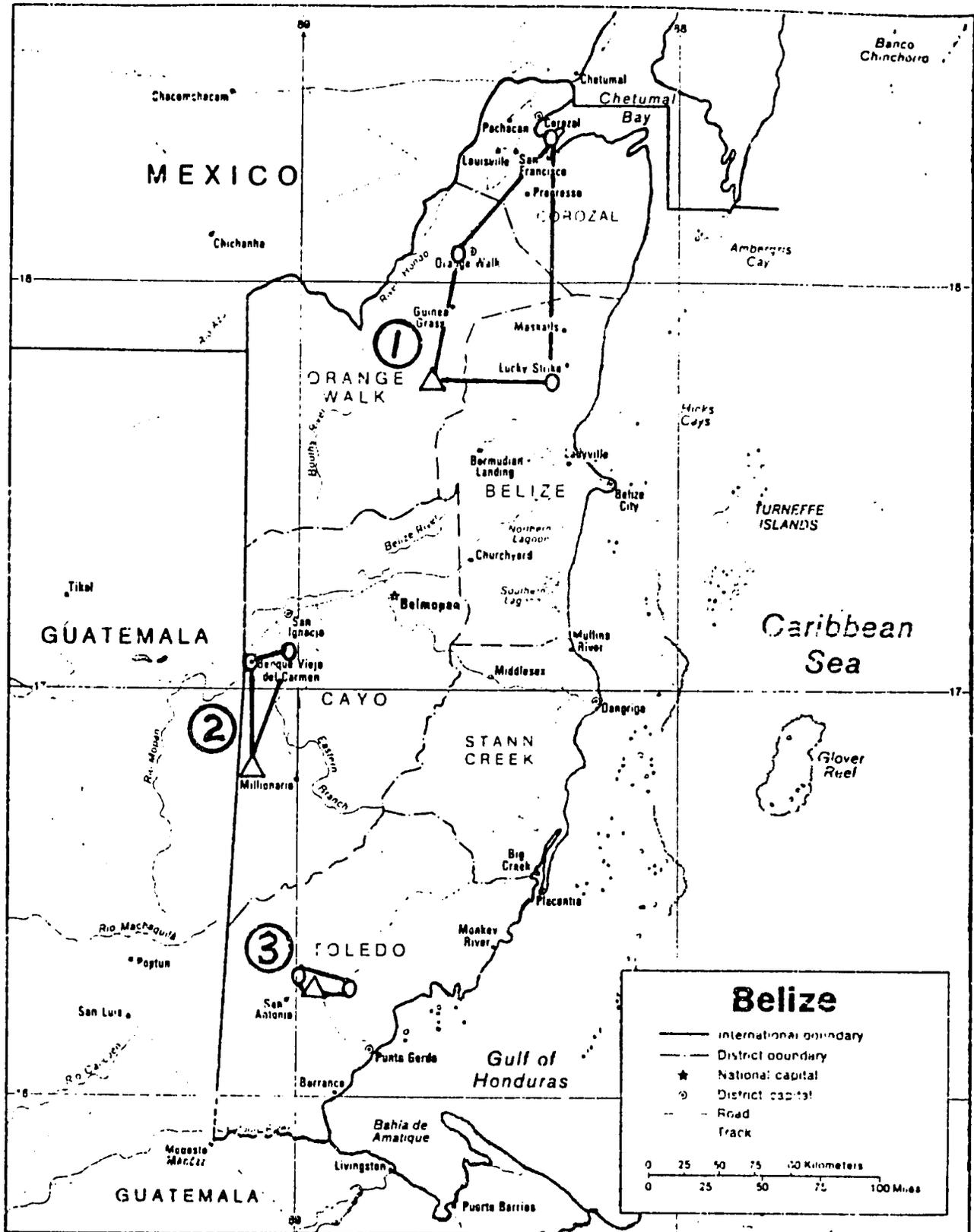
- 1 Santa Rita
- 2 Cerros
- 3 Louisville
- 4 Noh Mul
- 5 Son Estevan
- 6 Yo Creek
- 7 Cuello
- 8 Colha
- 9 Lamanai
- 10 Jabonche
- 11 Altun Ha
- 12 Little Rocky Point

Central Region

- 13 San Jose
- 14 Mun Diego
- 15 Yalbac
- 16 Floral Park
- 17 Baking Pot
- 18 Actuncan
- 19 Buena Vista
- 20 Cahal Pech
- 21 Nohock Ek
- 22 Xunantunich
- 23 San Antonio
- 24 Rio Frio
- 25 Caracol

Southern Region

- 26 Pomona
- 27 Mayflower
- 28 Kendal
- 29 Pusilha
- 30 Blue Creek
- 31 Uxbenka
- 32 Lubaantun
- 33 Nim Li Punit
- 34 Wild Cane Caye



MAP NO. 2 REGIONAL ARCHAEOLOGICAL CLUSTER SITE IDENTIFICATION

- △ Major Site
- Satellite Sites

1. LAMANAI CLUSTER
2. CARACOL CLUSTER
3. DURANTON CLUSTER

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3.2 Site Descriptions

3.2.1 Northern Region

3.2.1.1 **Cerros.** The site is located at the western end of Corozal Bay, five kilometers (in a straight line by water) from the town of Corozal. Although the ruins are accessible by land from Corozal, this can only be accomplished in the dry season and is slower and less comfortable than the one-hour boat ride across the bay.

Cerros is a modest example of the late preclassic Maya period. It served as a coastal fishing and trading center. According to some sources, it was abandoned between 350 BC and 100 AD. However, it was found to be well preserved during excavation.

Cerros' most interesting and visible structures are located on a complex of raised plazas located along the shore, on which two large pyramids -- the tallest rising twenty-one meters above the plaza floor -- and two smaller ones stand among other structures, and probably were used as public buildings. During recent archaeological work, some well-preserved masks and other decorations were found on structures identified as exhibit Nos. 5C-2nd and 29B. A former water canal, which runs around the center of the site and which served as a drainage and water reservoir system, has also been found. There are no reports of stelae or other artwork found at this site.

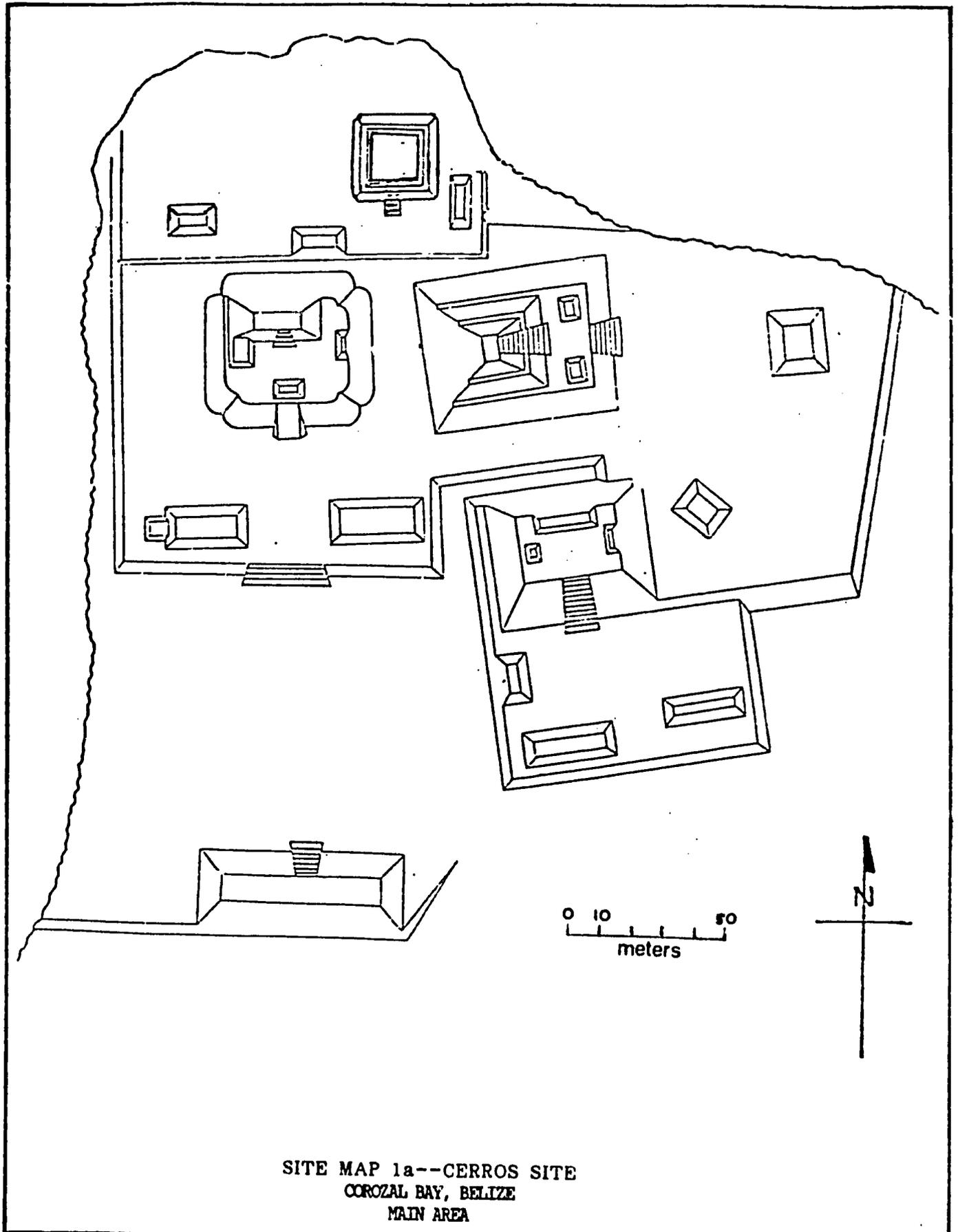
From a tourism point of view, Cerros is a worthwhile destination, due to its attractive setting next to the seashore. It is, however, far less dramatic in its natural surroundings and does not have the white sand cove and clear blue Caribbean waters like the Mexican site of Tulum. The Corozal Bay tends to be gray and murky in color.

The structures at Cerros have been partially dug in some areas to locate tombs. The site offers more archaeological work for investigative purposes than for consolidation.

The RDA team was startled by the apparent disappearance of the two large masks and other engravings that had been photographed on Temple 5, the only structure to receive some restoration work. The caretaker at the site explained that after consolidating and restoring the masks, they were covered with a stone wall to protect them from weather deterioration and possible looting. At the time of the team's visit, large parts of the site were overgrown with shrubbery. The large plaza in front of Temple 4 was, however, clean and open, affording a good view of the site's large expanse.

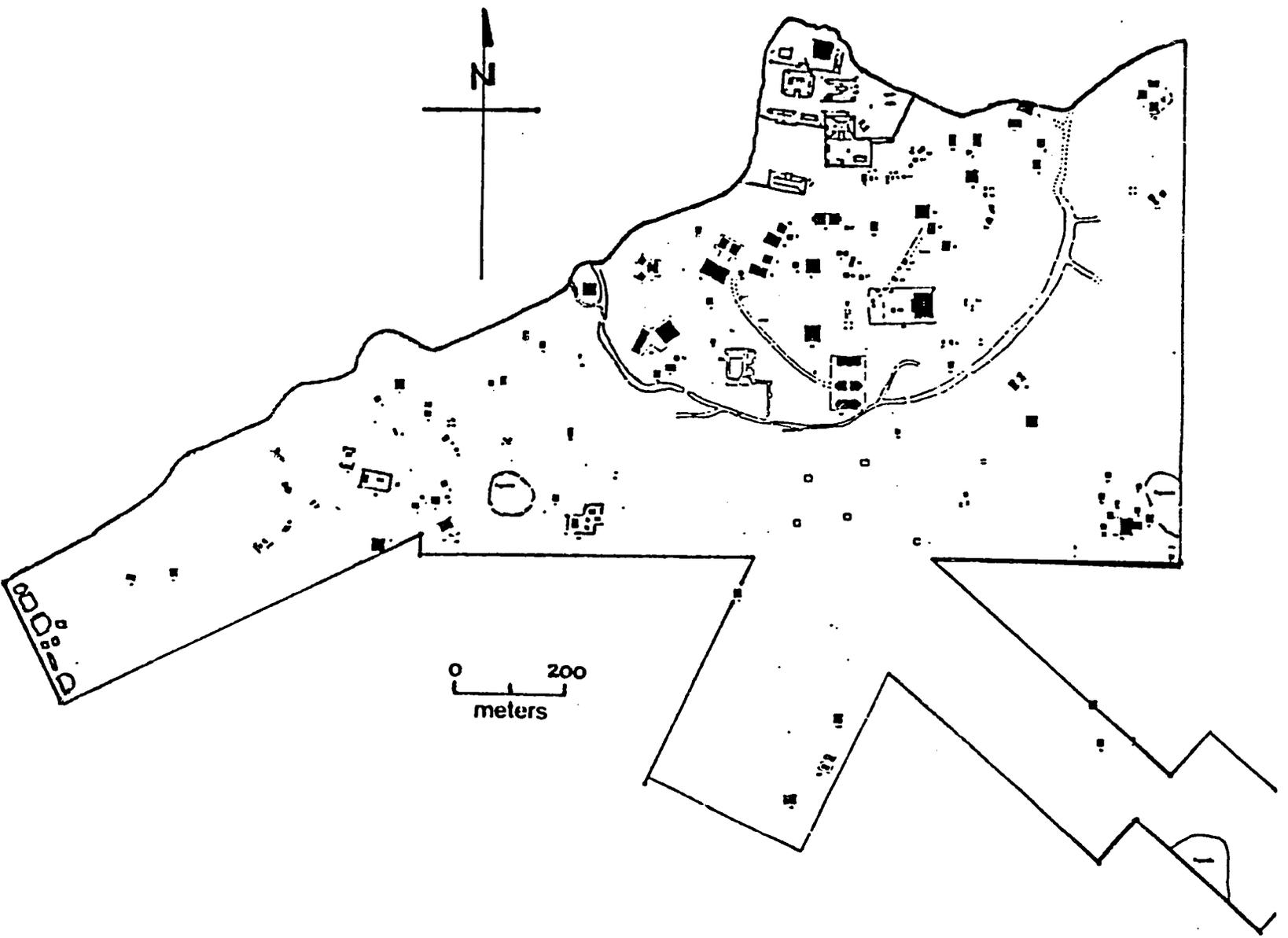
There is also a small docking facility for visitors arriving by boat. At the land entrance a small camp with the caretaker's house has been built.

While at the site, the RDA team checked over the visitor's sign-in book. Most visitors are from the U.S.A., Canada, and the United Kingdom. The daily average for the last three months was ten visitors. The viewing of the whole mall area of the site, including a climb up three of the larger structures, can be completed in one-and-a-half hours.



SITE MAP 1a--CERROS SITE
COROZAL BAY, BELIZE
MAIN AREA

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SITE MAP 1b--CERROS SITE
COROZAL BAY, BELIZE
MONUMENTAL ARCHITECTURE

~250



3.2.1.2 Santa Rita. This site is within the town of Corozal. In fact, the modern town was built on and over part of the site, which consisted of more than 100 structures, most of small size. Archaeological investigation undertaken in the early 1900s divided the site into 16 different quadrangles, covering an area several times larger than the modern town. A large amount of Post-Classic ceramic sculpture was found at the time.

The RDA team visited Quadrangle 5 to gain the required site information. This section of the site consists of a small temple, a plaza, and three other small structures. Archaeological work at the site appears to have concentrated on artifact gathering rather than exposing ancient construction. The temple has been restored somewhat at the top of the mound through the use of false walls acting as buttresses. An exposed wall mask was found to be in very poor shape. With the exception of the small temple, the rest of the site was covered with shrubbery. In general, the site is uninteresting for viewing purposes. The visit was accomplished in one-half hour. The site averages about five visitors per day.

3.2.1.3 Cuello. The Cuello site can be reached from the North Highway by heading west just before the town of Orange Walk on a 3.5 mile graded road. It rests on what is now private property and has been described as a small ceremonial center of Proto-Classic and Archaic age. Occupation dates have been estimated at 2500 BC to 500 AD. The recentness of occupation in itself could make the site interesting to tourists.

Two large groups of structures have been identified at this site. One, which covers platforms Nos. 34 and 39, has been partially excavated and consolidated in and around a small pyramid. At the front of this structure, the RDA team found an enormous, deep trench (obviously intended to show layers of archaeological findings), which had been partially covered again. At the bottom of the trench was a considerable amount of leftover material from the excavations.

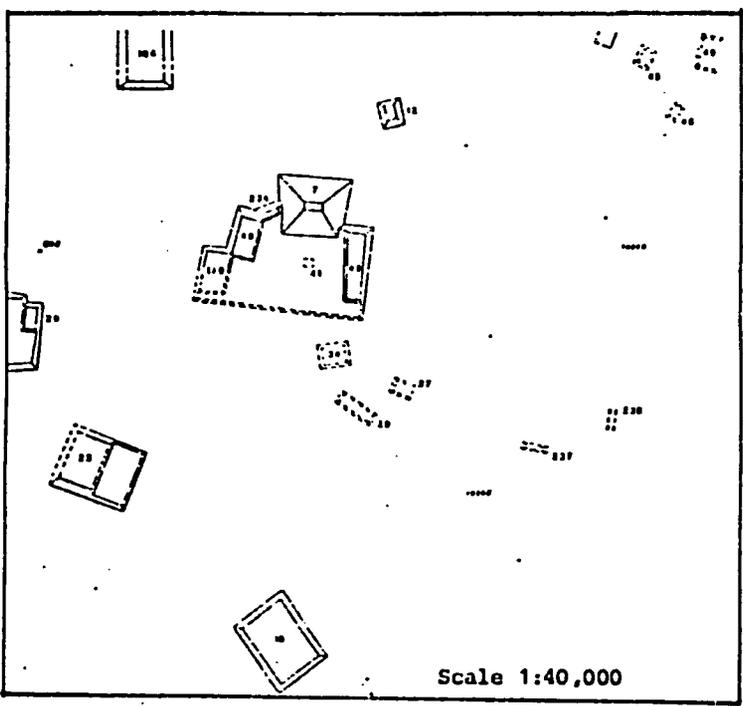
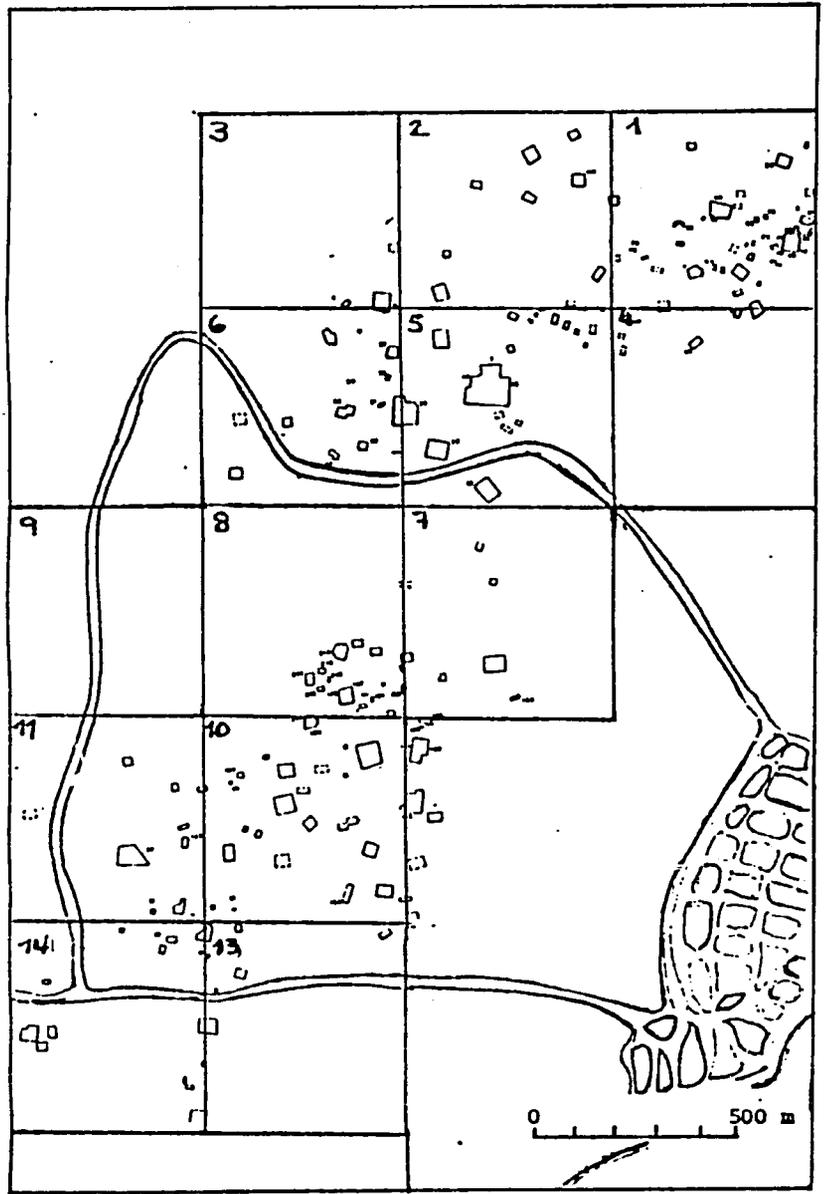
The rest of the site is relatively untouched, except for the usual holes and tunnels at the top and bottom of the pyramids, signs of past archaeological digs. In addition, two large plazas, two good-sized pyramids, and about a dozen other large structures are found. The whole area is located in a very attractive and well-kept forest, which lends an added touch of mystery to the site. The RDA team found the premises generally well cared for, except for obvious traces of cattle pasturing (even on higher pyramid sides).

3.2.1.4 Altun Ha. Altun Ha is located about thirty-one miles from Belize City, near the Northern Highway. After the turn-off point, at a village called Lucky Strike, a drive of about two miles is required on an all-weather road to Rockstone Pond Village, where the site is located.

Altun Ha has been defined as a Classic Period ceremonial center. Because of its relative nearness to the sea (about six miles), it is believed to have been an important trade center and a link between the coast and other numerous centers in the interior. The site has received important archaeological work, to the extent that it is now one of the most consolidated and restored in the northern area.

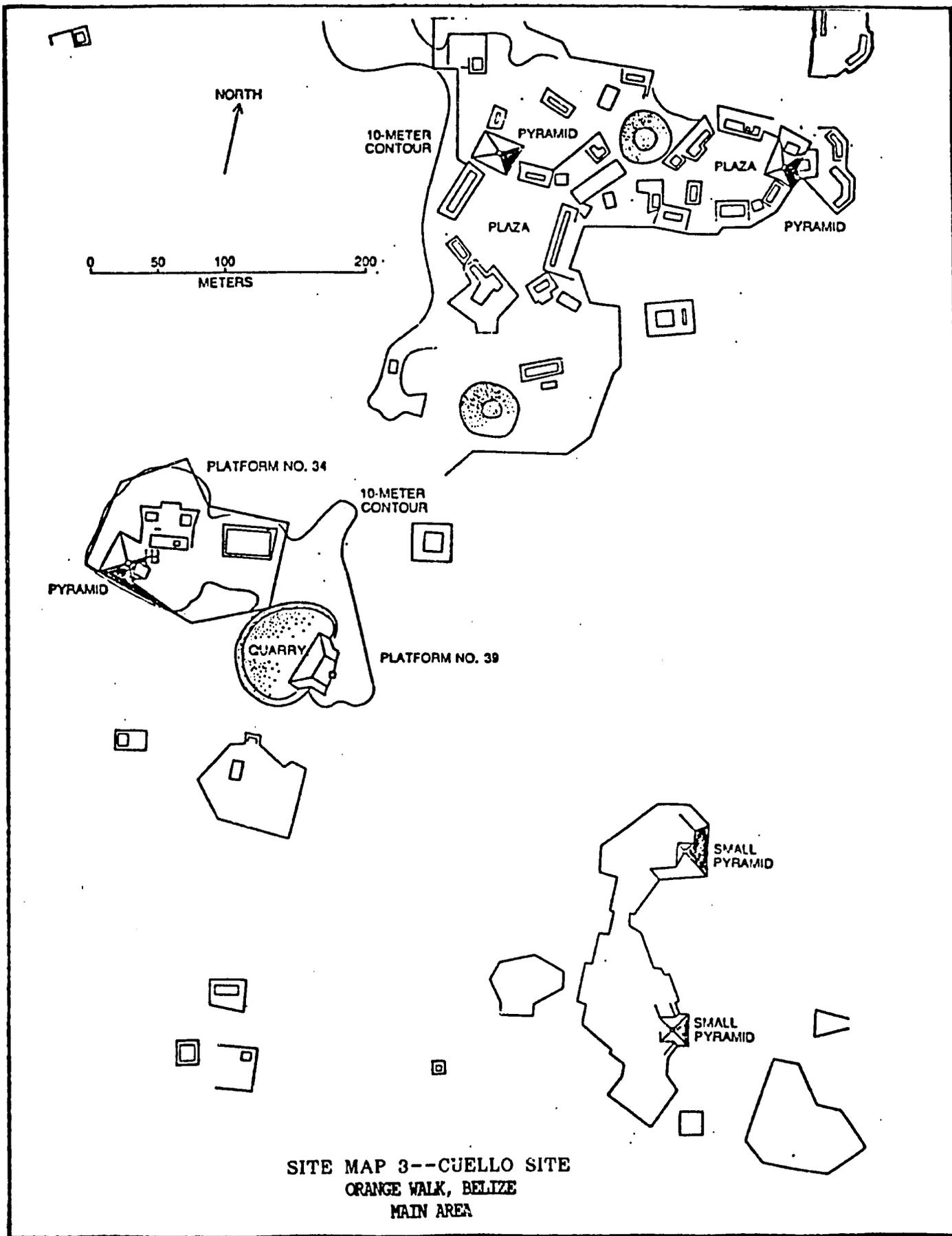


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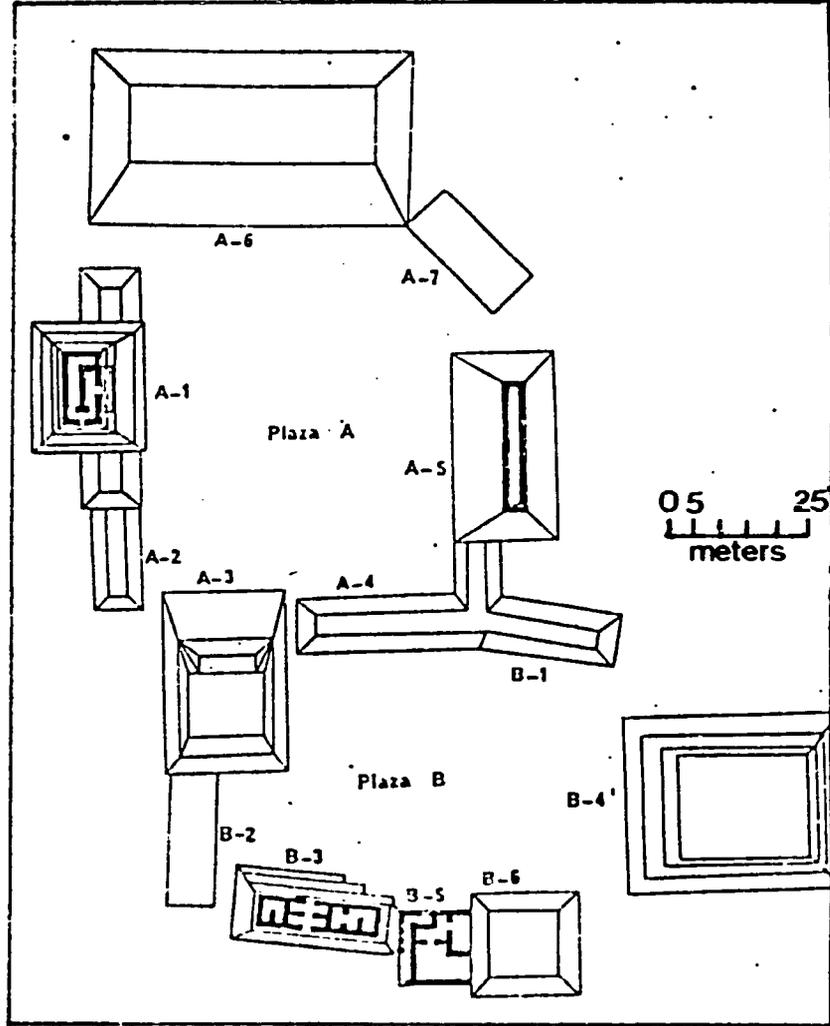
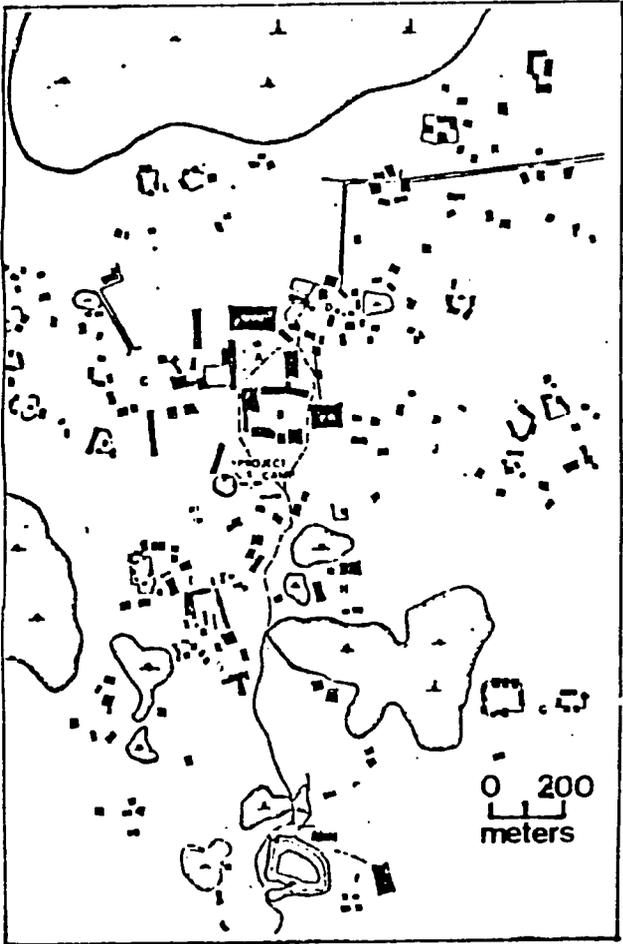
SITE MAP 2---SANTA RITA SITE
COROZAL TOWN, BELIZE
GENERAL MAP AND
QUADRANGLES 5 DETAIL.

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SITE MAP 4--ALPJUN HA SITE
 BELIZE DISTRICT
 GENERAL LAYOUT AND MAIN AREA DETAIL



International, Inc.

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The rather unimposing architecture of the site led investigators to pay more attention to gathering useful ecological information on the period. It was first thought that the site was unlikely to be a source of masterworks of elite art. However, tomb excavations yielded an important array of unusually rich and varied stonework. For instance, the jades from Altun Ha are some of the largest and most artistically rendered in the Mayan area. The finest carved pieces of obsidian so far found in Mesoamerica also come from here. The jade head sculpture of Kinich Ahau (the Sun God), the largest known Mayan carved piece of jade, was found in Altun Ha. Pieces of chipped chert, some classified as "eccentrics" which involved incredible chipping techniques, were also found, although they probably came from nearby Colha.

The RDA team visited three large pyramids and adjoining structures in the main area, around plazas A and B. The site was also viewed from the top of structures B-4 and A-1. Close attention was given to structures A-5, B-3, and B-6. The only currently visible artwork are two rather primitive and decaying wall masks interpreted as Kinich Ahau and Chac.

The site lacks proper care. Shrubbery was seen growing between structures. The exposed stone had an unusually high incidence of moss and lichen growth.

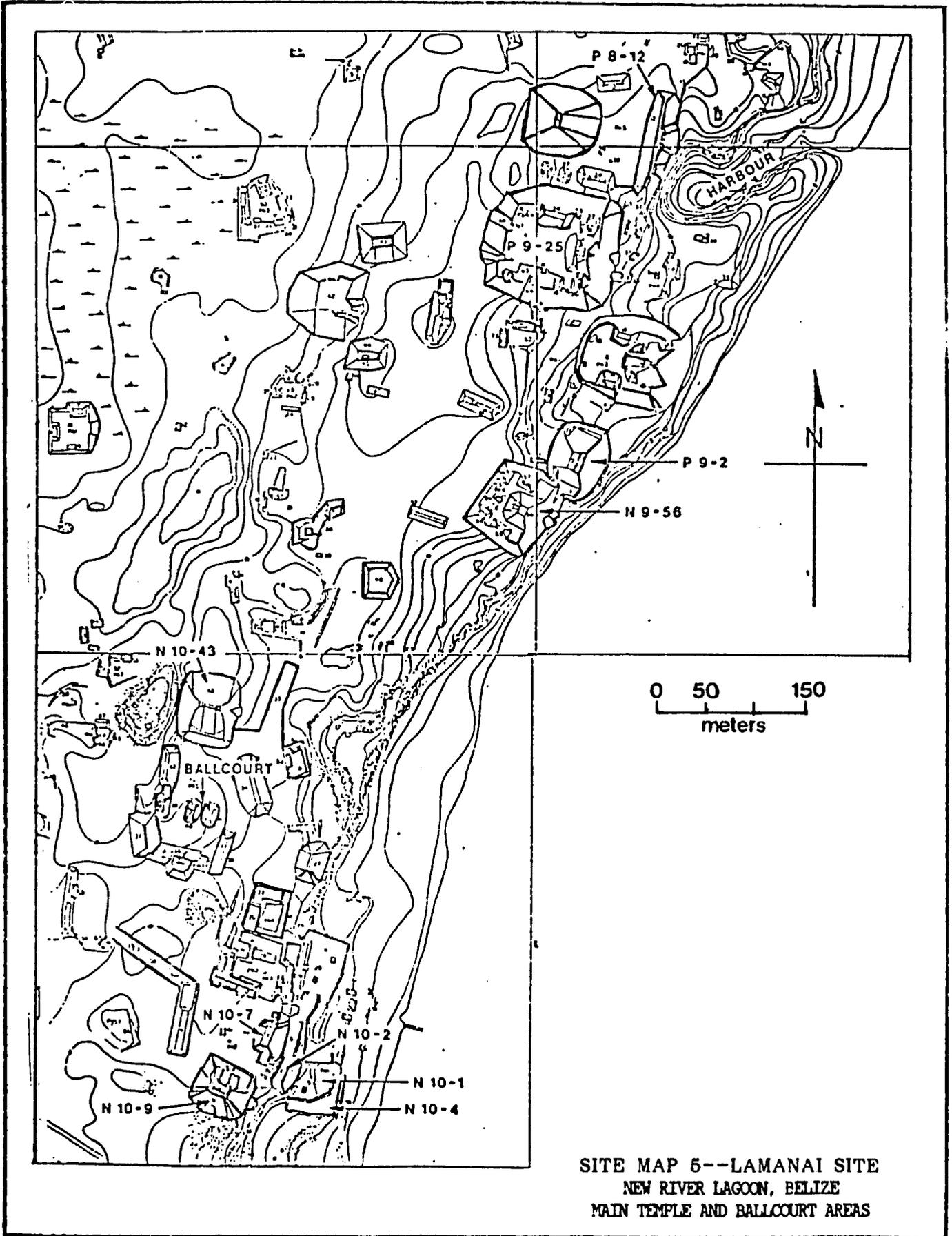
This site has the largest number of visitors in the North Region. The Archaeology Department in Belmopan has done some site improvements, including moving the parking area farther away and building new visitor receiving structures away from the core of the site. These improvements were under way at the time of the team's visit.

The team found that many of the visitors to this site come from San Pedro. They travel via boat to Northern River Lagoon and then up the river to either Bomba or Maskall. From there, they take a "taxi" (mostly wagon-type vehicles), to make the ten-mile trip to the Northern Highway to the site. The one-way trip from San Pedro can take up to two-and-one-half hours. Touring the site can be done in forty-five minutes at the most. To a tourist with any knowledge of Maya culture, the time spent in transit to visit the site is not worth what Altun Ha has to offer. The site averaged fifteen visitors per day.

3.2.1.5 Lamanai. This site can be reached by traveling on the Northern Highway from Belize City and turning west about three miles south of Orange Walk town, immediately after the toll bridge. The drive from the bridge to the site is about twenty miles. At present, a guide is required as it is very easy to get lost due to the many branching lanes leading to farms or logging camps. This drive is rough and unpleasant and can only be made in the dry season, as the road becomes impassable during the rainy season. However, the ruins are on the shores of the New River Lagoon and can also be reached by water. There are several other alternatives to reach the site:

- o The New River reaches the sea at San Roman, on the Corozal Bay and is reportedly navigable by small to medium flat bottom craft from the Bay to Orange Walk town (twenty-five miles) and to Guinea Grass, another ten miles. In theory, Lamanai and Cerros are both reachable by water.
- o Guinea Grass lies on the same road leading to Lamanai five miles from the Northern Highway crossing. Boats are available at Guinea Grass for a seventeen-mile river trip that takes about one hour.

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- o A third alternative is to drive on the same road starting at the Northern Highway junction to Shipyard, a distance of about eleven miles, and from there, take a shorter boat trip (eleven miles) to the site.

Lamanai has been defined as one of Belize's largest ceremonial centers and is believed to have had one of the longest occupation spans, dating from 1500 BC to the 19th century. Additionally, ruins of an old Spanish church dating from the 16th century are found, as well as the remains of a 19th century sugar mill. The site is located along the lagoon shore and is made up of two predominant clusters of buildings. The northern area, around the main structure identified as Pyramid P9-25, is the most massive (13,800 square meters at the base) and tallest (33 meters). Two other interesting structures are the twin Pyramids N9-56 and P9-2.

Some of the features found here include an outstanding mask decorating the front of structure N9-56. Unlike masks at other sites which represent mythological beings, the mask here clearly depicts a very individualized personality with a high artistic realization of personal features. The structure also has a carved stone throne on its lowest excavated front. Structure P9-25 has some very interesting architecture on its crest, with a cleverly designed system of buttresses. A nearby smaller pyramid has a finely carved frieze with glyphs.

The southern group of excavated structures has two main pyramids (N10-43 and N10-9), a ball court (with a marker that has a fascinating story of a buried cache floating on liquid mercury), some outstanding examples of carved stelae and friezes, the housing for nobles' remains, a pyramid with carving and high relief work, and a large plaza surrounded by buildings resembling a structured acropolis.

At the time of the RDA team visit, all of the plaza areas were overgrown with low vegetation. The structures had been kept clean where excavations and consolidation work had been done.

In general, archaeological work done at Lamanai follows the same pattern seen throughout Belize; that is, some consolidation (i.e., at the top of the buildings or in specific areas where digging had been undertaken) and little restoration per se. Pyramid No. 10-9 seems to be an exception, as more of its architecture had been exposed and great care taken to preserve the artwork. The carvings, art, and artifacts that were viewed at the site indicate a predominance of high activity during the Middle and Late Classic periods.

The ruins are surrounded by rain forest, which makes walking from one structure to another on the wide paths a very pleasant experience. The boat landing area, which has no docking facilities, contains several thatch roof structures where the caretaker is housed, as well as a small laboratory containing a collection of artifacts. The laboratory is usually closed to the public.

In general, the RDA team was impressed with the quality of the site in regards to size, architecture, and art. The archaeological work already accomplished at the site has been well done and, as in Altun Ha, a trend to try and expose some architecture is evident. The river trip to the site and the surrounding natural setting are quite attractive.



3.2.1.6 **Other Sites.** Due to time limitations, a number of other sites located within Belize's Northern Region were not visited. These included Colha, Nohmul, Louisville, San Estevan, Yo Creek, Jabonche, and Little Rocky Point.

Colha is known for its very large lithics concentration, having been a large and important center of chert tool production in the late Pre-Classic. Nohmul has received attention since 1982, when an international team of archaeologists started work on the site. The work has focussed on the last phase of occupation, Late Classic to Early Post-Classic. The team is also studying settlement patterns in a four-kilometer area around Nohmul.

Recently, a group from the University of Arizona has been doing some work at San Estevan.

3.2.2 Central Region

3.2.2.1 **Caracol.** This site is located within the Vaca Plateau of the Cayo District. The only access to the site, by land, was the hardest and most complicated that the RDA team experienced during its extensive travels in Belize.

In all, the distance from the Western Highway crossing point at Georgeville to the site is forty-two miles, of which twenty are an all-weather, two-lane graded road, nine are a narrower, bumpier version and the remaining thirteen miles a one-lane, very broken dirt road. The road from Georgeville to Caracol is impassable in the rainy season.

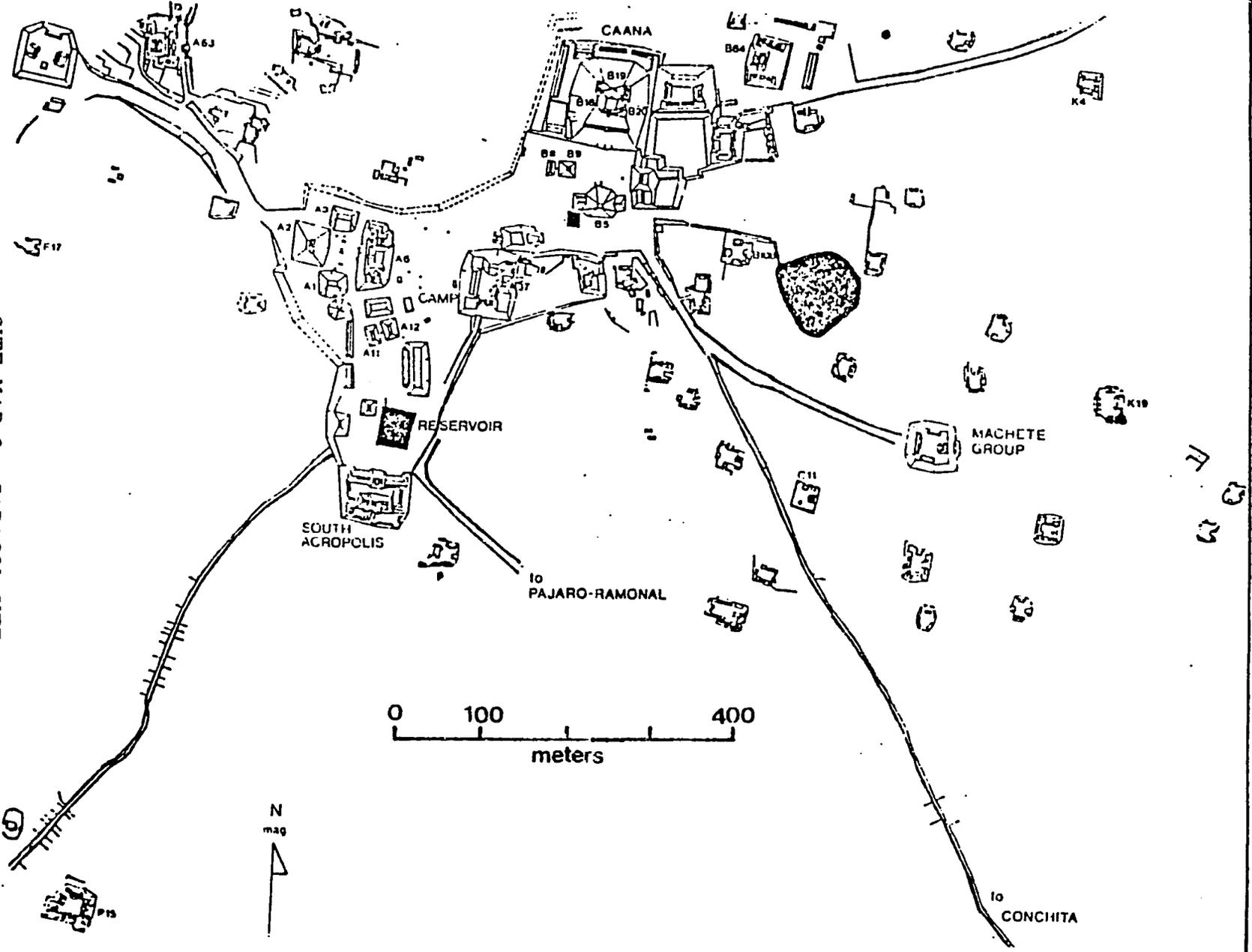
The RDA team spent a full afternoon and most of the next day at the site, a time span that was not awarded to any other site in Belize.

The discovery of Caracol is relatively recent (1938), with archaeological work started in 1950. At that time, thirty-two monuments, two causeways, and five large plazas with major ceremonial structures were recorded. Later work was done at the site in 1956, 1968, and 1971, with the first article published on the site in 1981.

Since 1985, the site has been worked consistently under the sponsorship of the University of Central Florida. Four seasons of work have been carried out. During the first season (1985), most of the work concentrated on cleaning looted areas, and mapping and assessing the site. During the second season, excavation and interpretation of hieroglyphic remains took place. The third and fourth seasons have seen increased excavation and field work, to the extent that during the 1989 season there are approximately 100 people working at the site.

Caracol has large central core buildings, defined as the A and B Courts, a spokewheel design of causeways leading away from this center and groups of structures at the end of each causeway. Court A contains the largest number of stelae and altars found so far, dating from 495 AD to 859 AD. The court has one massive pyramid (rising twenty meters) and eight other structures, including a ball court with a marker containing the longest hieroglyphic text known in Belize. A water reservoir, still used by the archaeological camp, lies within the Court A area. Court B is dominated by the Caana temple which rises forty-two meters and has been reported as the highest structure in Belize. At the southern tip of the Central Core, an acropolis towers over a valley and two causeways. Another acropolis lies almost equidistant from Court A and Court B.

SITE MAP 6--CARACOL SITE
 CAVO DISTRICT, BELIZE
 MAIN GROUP



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Some of the most interesting features of Caracol are the seven causeways leading from the site center to other groups of structures. Two of these causeways are three kilometers in length and one causeway is over four kilometers long.

The site spans a period of Maya prehistory from 300 BC to 1250 AD with its apex during the Classic Period. Caracol probably has the highest potential of all the Southern Lowland Maya area to answer questions related to the nature of transition from Early to Late Classic periods. It also played an important political and economic role in the area and evidence of armed conflict with Tikal has been found. The RDA team found the site to be of major importance, not only in its size and monumental structures, but in the art and carvings that are presently being uncovered.

At present, the archaeology being conducted at the site is mostly exploratory with efforts being made on many fronts, including the main center and a number of the outlying building groups. The goal is to uncover as much information as possible. Some consolidation work has been started at the top of the pyramids in Court A, and at least one stairway has been exposed. Consolidation work was also observed on the Caana temple. All other work seen consisted of trenches and excavations seeking tombs or indications of previous structures.

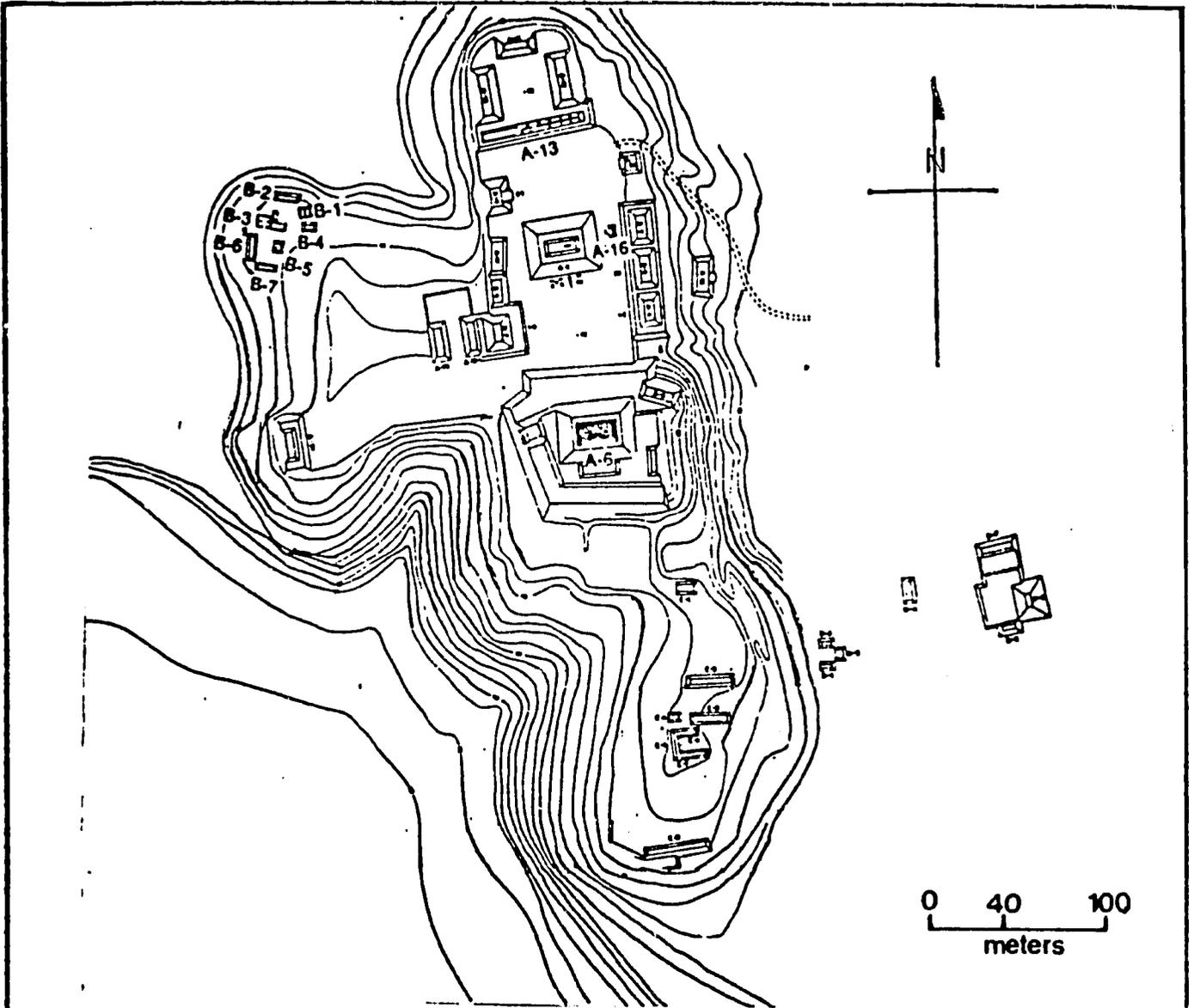
The site, barring the strenuous drive to reach it, can be a fascinating visit for archaeology buffs. It is not a site, however, for the average tourist who must endure eight jarring hours in a vehicle.

3.2.2.2 Xunantunich. This site, formerly known as "Benque Viejo," is easily reached from the Western Highway, about one mile from the Guatemala border. The Belize River has to be crossed by ferry in order to reach the site, which is within walking distance from the ferry landing. Xunantunich consists of a ceremonial center with three large adjoining plazas, built on a level limestone ridge 183 meters high. There are some twenty mounds on these plazas, probably the remains of temples and residences.

The most impressive structure is Pyramid A-6, which rises forty-two meters above the plaza level. The top of this structure has a reconstructed temple. Another temple with a partially rebuilt stucco frieze is on a lower platform. A ball court and some eroded carved stelae are also found at the site. One stela was dated to 830 AD.

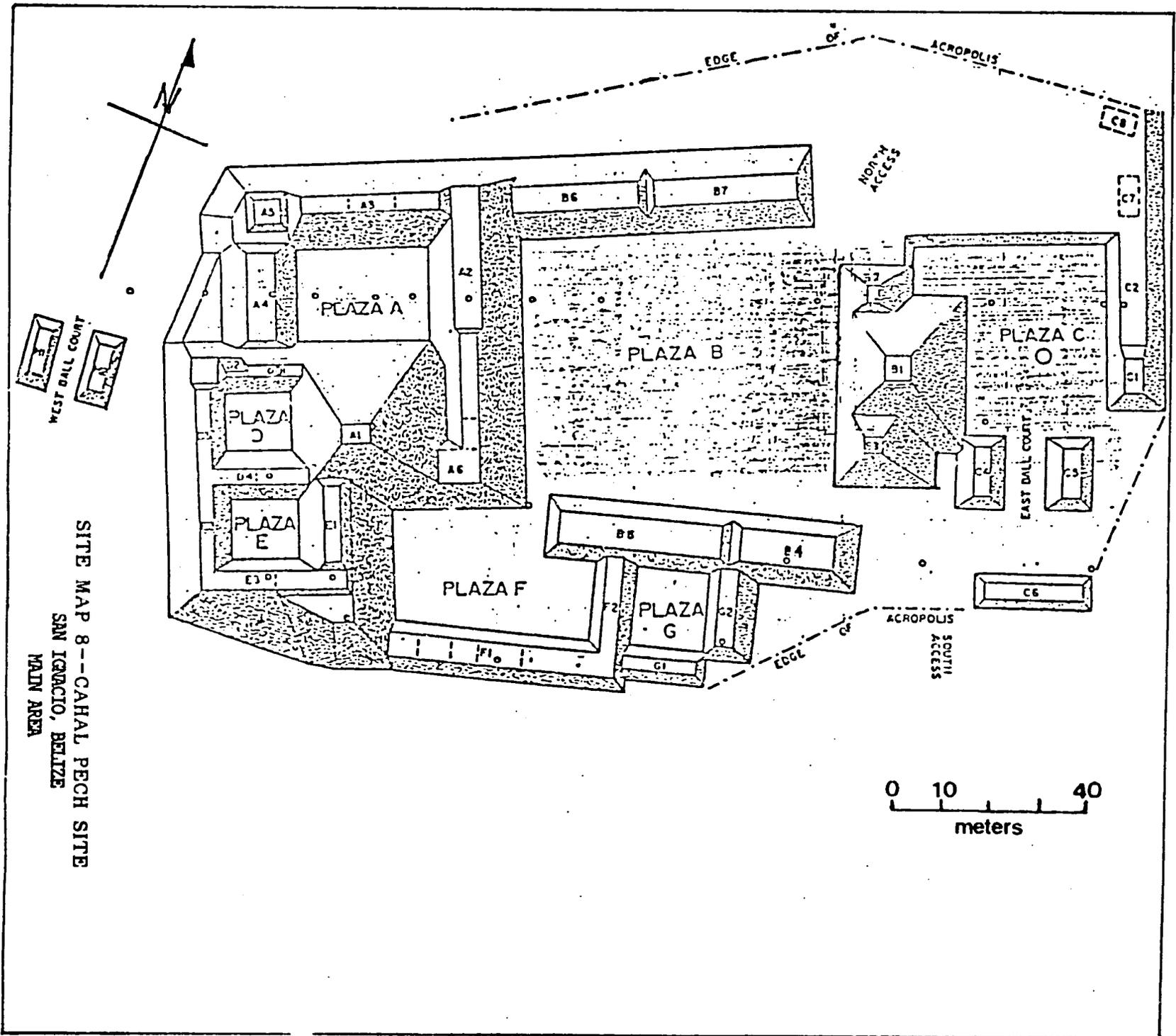
Although most of the monuments remain unexcavated, the restoration that has been completed reveals an interesting ceremonial center. However, most of the architecture is still buried. The RDA team believes this is the most visited archaeological site in Belize. This belief is based on a review of the visitor's book and on the number of visitors (forty) observed within the archaeological area during the team's visit. A thorough visit of the site can be accomplished in approximately one hour.

3.2.2.3 Cahal Pech. This is a small ceremonial center located on a hill overlooking the town of San Ignacio and has easy access. This site has been worked sporadically by archaeologists between 1950 and 1970. It has also been subjected to numerous lootings. A major study of the site was conducted in 1988 through UNESCO funding. The results of the study included a detailed map, a survey and demarcation of the area, some excavation on the larger structures, and a declaration of the site as a national park.



SITE MAP 7--XUNANTUNICH SITE
BENQUE VIEJO, BELIZE
MAIN AREA

4.1



3-19

SITE MAP 8--CAHAL PECH SITE
 SAN IGNACIO, BELIZE
 MAIN AREA

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The site is very attractive and has an architecturally interesting design. The central precinct of Cahal Pech is on an acropolis with a view of San Ignacio. It consists of thirty-four structures built on pyramids (the tallest twenty-three meters) and long residential buildings, all designed around seven courtyards. There are also two ball courts, five plain stelae, and one altar.

3.2.2.4 Other Sites. The Cayo area has a number of other sites (though not viewed for the purposes of this study) worth listing. All of these are west of Belmopan on the Western Highway from Belize City. The sites include Mun Diego, San Jose, Yalbac, Floral Park, and Baking Pot, which are all north of the main highway, with some near the Yalbac hills area. Other sites south of the highway include Nohock Ek, Buena Vista, San Antonio, Actuncan, and Rio Frio Caves.

3.2.3 Southern Region

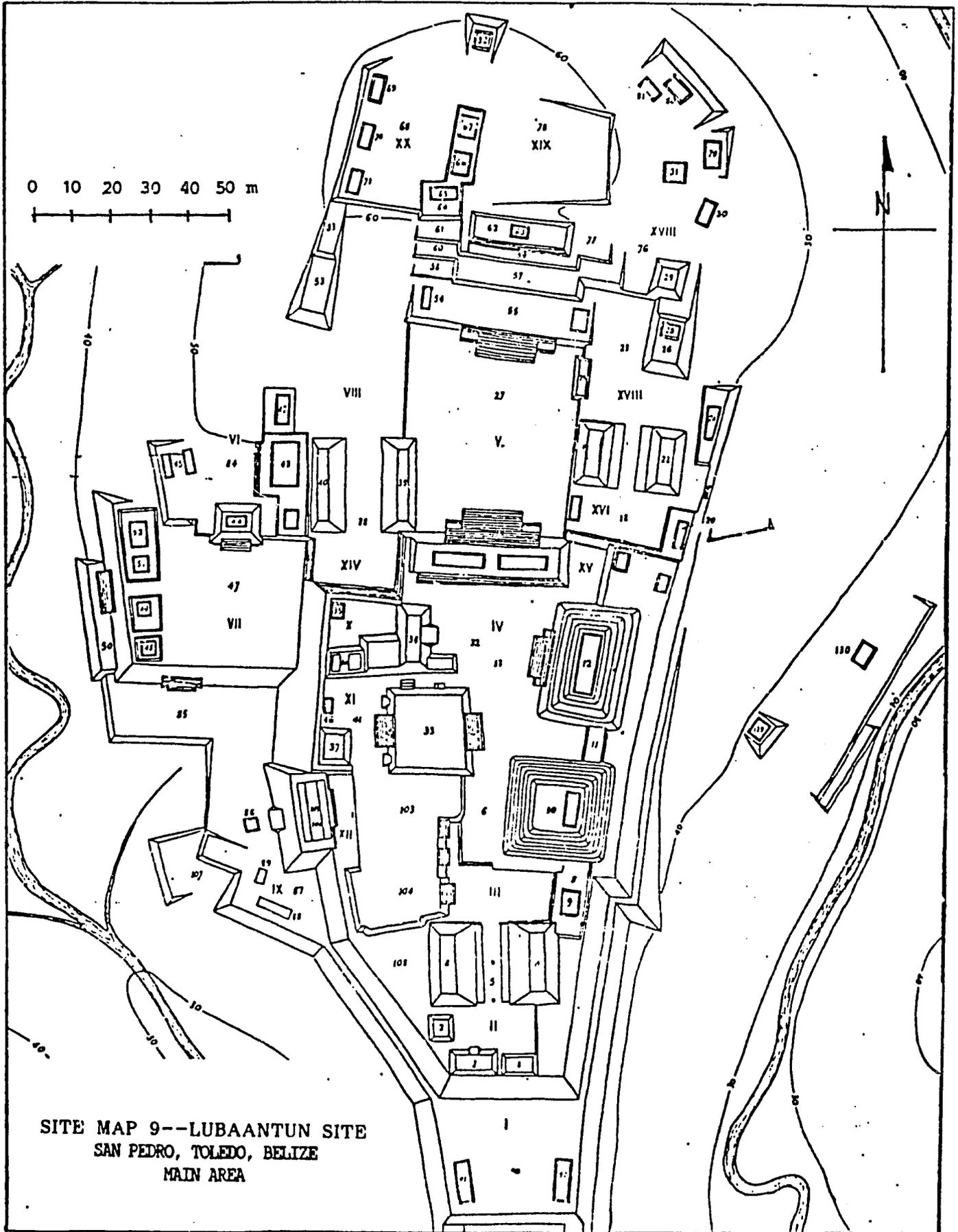
3.2.3.1 Lubaantun. A leisurely automobile trip from Belize City to Lubaantun takes two days. It is more practical to fly to Punta Gorda on one of the frequent, inexpensive daily flights and then travel the final twenty miles by car. (The final one and one-half miles, from the village of San Pedro, presently must be done on foot.) The road reportedly had not received maintenance in over a year and was not safely drivable.

The site is an interesting (and in many ways anomalous) small Maya capital first explored in the 1920s. Lubaantun has a unique construction technique. No mortar was used during construction and walls were built by carefully placing and sometimes interlocking stones which were precisely cut to size. The stone mason craftsmanship seen is amazing and reminiscent of the Incan Machu Picchu site in Peru, with the same smooth, perfectly fitting stone walls.

A restored plan of the final phase of the site's ceremonial center shows a platform built on top of a pointed crest, with the ceremonial center resting dramatically at the end. The structures consist of two pyramids, whose now-flattened top indicates a previous wooden construction and several other buildings and platforms.

The site is also interesting from an architectural point of view for the numerous terraces that form different levels throughout the site. These terraces are reached by a number of wide stone stairways, thus giving the site an appearance of beautifully integrated structured levels rising almost naturally from the hilltop and coming to a dramatic climax at the two pyramids.

The site is surrounded by heavy forest growth, but has been kept clear in and around the most important buildings. Much of the stone construction is exposed and intact and a rather large amount of trenching and digging to show further deeper layers is well kept and interesting to view. The pyramids, which show rounded corners at the lower exposed edges, are also unusual for Mayan construction of the Late Classic, this site's latest and most prominent occupation.



SITE MAP 9--LUBAANTUN SITE
SAN PEDRO, TOLEDO, BELIZE
MAIN AREA

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Lubaantun is noted for a find made by Anna Mitchell-Hedges in 1927 of a skull carved from crystal rock, probably the largest and best-ever found of its kind in the Mesoamerica area. It is an almost perfect likeness of a human skull, with a detachable jaw bone and certain incisions at the base that indicate it was meant to be suspended and be able to pivot back and forth. Photographs of this unusual artifact were viewed at the Archaeology Department in Belmopan, which is trying to return the piece to Belize from its present location in Canada.

The site was viewed in about one and one-half hours. Registered visitors are scarce, with an average of about six per day.

3.2.3.2 Nim Li Punit. This site is more accessible than Lubaantun because it can be reached directly from the Southern Highway, near the Big Falls bridge, at a distance of 17.5 miles from Punta Gorda. A one-mile walk is necessary, as the final access road is not passable, even in a four-wheel drive vehicle.

This site is smaller than Lubaantun but very similar in its construction, so much so that these two centers must have been built during similar historic periods. Very little restoration and consolidation has been done at this site. Most of the work has concentrated on preserving the more than twenty-five stelae found, of which eight are carved in typical Late Classic style.

One of these stelae pieces is nine meters tall and thus reminds the visitor of Quirigua in Guatemala, which is not far from Nim Li Punit.

The site is located in a spectacular forest, which includes some enormous cottonwood trees among the ruins.

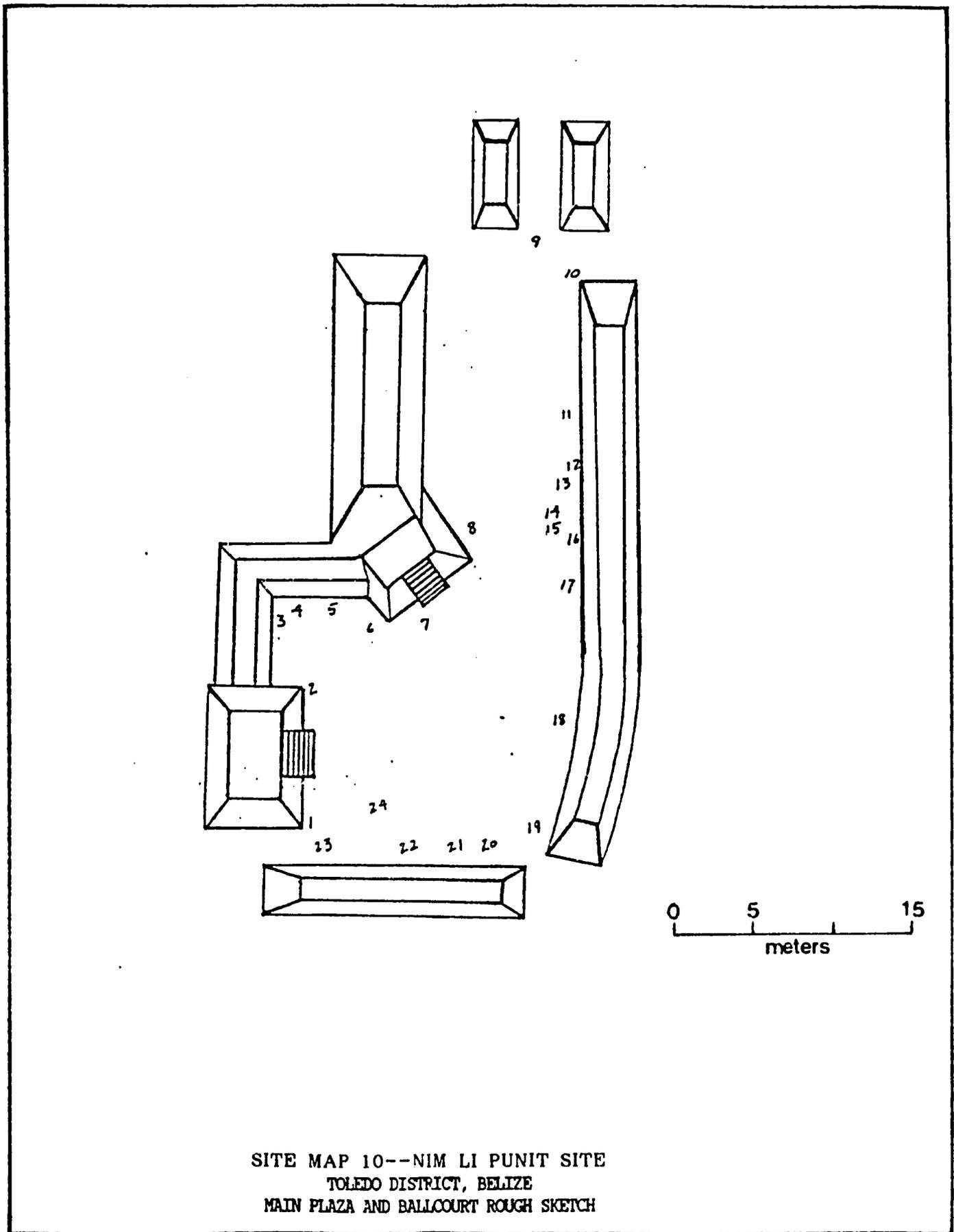
Viewing the ruins took about one and one-half hours. Visitors averaged six per day.

3.2.3.3 Uxbenka. This site is only one mile from Lubaantun and can be reached from the same road.

The site was first brought to notice in 1984. It is still in the initial digging phase, so there are no drawings or plans available, except for some initial survey maps.

The site was built on a ridge which gives a panoramic view of the Mayan Mountains. The prominent building is a temple of regular size. Some encircling mounds form a plaza and acropolis structure. Some digging, in particular of one tomb, has been done. The site has yielded twenty stelae, of which seven are carved. One dates back to the Early Classic period, which is considered rare in both Belize and the rest of the Maya area.

This site was viewed in about forty-five minutes. There is no visitors record.



SITE MAP 10--NIM LI PUNIT SITE
TOLEDO DISTRICT, BELIZE
MAIN PLAZA AND BALLCOURT ROUGH SKETCH

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3.2.3.4 Other Sites. Southwest, near the Guatemalan border, lies Pusilha, which apparently can only be reached on foot. Another ruin close to this site is known as Blue Creek.

There is another site on Wild Cane Caye (about one mile from mainland and some ten miles from Punta Gorda) which has received archaeological attention since the 1930s. This Mayan settlement ranges from Prehistoric to Post-Classic. Its importance rests with artifact finding and dating, and information gathering relating to Maya trade patterns.



4.0 COMPLEMENTARY SITES

While one of the study's main objectives was the inspection of archaeological sites, the RDA team was also able to visit other natural attractions that might be complementary to these sites for tourism purposes. The following is a list of the natural attractions visited by the team, divided by regions.

4.1 Northern Region

4.1.1 Forest Reserves

The GOB has designated significant areas of forest reserves along the country's coastline. These include the Maskall Forest Reserve, the Fresh Water Creek Forest Reserve and the Sarteneja Reserve north of Belize City. Another large natural reserve project, the "Program for Belize" (with strong foreign support and funding), is near the Guatemalan and Mexico borders. Although these reserves were only marginally visited and seen by the team (mostly because of their size and accessibility), their importance as ecological buffer zones for the area was fully appreciated.

4.1.2 Marine Reserves

As the northern islands (and particularly Ambergris) have become the highest points of the tourism industry in Belize, particularly concentrating on the diving activity, the need to establish a marine reserve was recognized a few years ago. Thus the GOB established the Hol Chan Reserve south of San Pedro. Although the RDA team did not have a chance to visit this reserve, the team was able to obtain several reports documenting the improvement in fish and coral life in the reserve area.

4.1.3 Crooked Tree Bird Sanctuary

The RDA team spent one-half day at this site. The sanctuary is centered around Crooked Tree Village, in an area of swamps and lagoons, with Northern Lagoon the most prominent.

The area is rich in bird life and plants, including seasonal nestings of such unusual species as Storks. An interpretation center (which was found to be adequately presented) was also inspected. In general, the reserve is an interesting attraction but lacks personnel and guide aids. Because of this lack of guidance, visitors tend to drive or wonder aimlessly through unmarked lanes or in and around the village, not knowing what to look for or to expect.

4.1.4 The Community Baboon Sanctuary

This site is located near the village of Bermudian Landing and requires a forty-five minute drive off the Northern Highway. The drive, on a relatively well-maintained gravel road which parallels the Belize River, is quite scenic.

The sanctuary has a lot of potential to attract tourism, as it is one of the best organized in Belize. It has an excellent interpretation center with interesting information on the habits and ecology of the "baboon" (howler monkey). The walking paths are well maintained and a large number of monkeys can be observed in their natural habitat. The tour guide is informative and very knowledgeable.



4.2 Central Region

There are a number of natural attractions along the main highway from Belize City to Belmopan and Benque Viejo. These include the Belize Zoo, the Guanacaste Natural Reserve, and the Mountain Pine Ridge Reserve.

Of these three, only the Mountain Pine Ridge Reserve was visited by the RDA team. This reserve includes areas of extensive pine forests, scenic rivers, waterfalls, and caves. The team inspected the One Thousand Foot Falls, several sites along the Rio, and the Rio Frio Cave, all of which are spectacular. It has great potential for tourism-related activities.

A small resort hotel, located near a site called Privassion Camp, was also visited. The facilities include attractive cabana-type rooms overlooking a river, a main activities building done in the Swiss mountain lodge style, and a private airstrip. Unfortunately, the resort was in a state of abandonment.

4.3 Southern Region

The Hummingbird Highway between Belmopan and Dangriga is worth the drive (even over a badly maintained surface). because of the wild scenery of Maya Mountains. Some of the sites that can be visited along this drive are Blue Hole and Herman's Cave. Both have very attractive natural limestone caves, rivers, and pool formations. On the Southern Highway south of Dangriga, one can visit the Cockscomb Basin Wildlife Sanctuary and the Jaguar Reserve.

The Jaguar Reserve is the best organized in Belize. It has a well-designed reception area, an artisan shop, an interpretation center, a park administrative building, camping areas and quarters for overnight stays. The reserve offers several well-marked and -maintained hiking paths. An abundant number of wildlife and botanic species can be viewed, clear rivers and pools can be traversed, and, occasionally, a jaguar can be seen.

5.0 SITE SELECTION

5.1 Methodological Approach

In order to establish a ranking of Belize's archaeological sites, an evaluation system, based on the "touristic value" of each site, as well as the support services required, was adopted. As a result, the twelve initial sites were arranged in groups and further analyzed.

The main consideration in the ranking process was the attractiveness of each site. Special attention was given to scenic beauty, archaeological interest, architectural realization, overall visual impact, existing nearby complementary attractions (or the possibility to develop them), and the quality of the visitor experience. Since the main objective was to determine the value of each site for tourism, site attractiveness was given a double value in the weighing process.

Site evaluation included an analysis of each site's structure and infrastructure needs, operational conditions, general accessibility, accessibility to the site itself, presence of infrastructure services, and availability of accommodations in the surrounding area. The possible availability of funding for archaeological research was also considered.

The following list indicates those aspects included in the overall site evaluation:

- o Attractiveness - (double value)
 - a. Site's scenic beauty
 - b. Archaeological interest
 - c. Overall visual attractiveness
 - d. Complementary attractions
 - e. Quality of the experience

- o Structure and infrastructure - (single value)
 - f. Operational conditions
 - g. General accessibility
 - h. Accessibility to site
 - i. Accommodations availability
 - j. Support services

- o Other aspects - (single value)
 - k. External influences (financing)



The RDA project team rated each of the archaeological sites in Belize as follows:

SITE	A	B	C	D	E	F	G	H	I	J	K	TOTAL
Santa Rita	6	4	4	0	4	3	4	4	3	5	0	37
Cerros	8	8	6	4	6	3	4	4	4	2	9	49
Cuello	6	6	6	0	6	2	4	3	3	4	0	40
Lamanai	10	8	10	6	10	4	4	4	3	1	2	64
Altun Ha	8	6	4	2	10	4	4	4	3	4	0	45
Xunantunich	8	8	6	8	8	4	4	3	4	2	0	55
Cahal Pech	6	6	6	8	6	1	4	3	4	3	1	48
Caracol	10	6	10	8	10	2	4	1	4	1	3	59
Mayflower*	-	-	-	-	-	-	-	-	-	-	-	--
Lubaantun	10	8	10	8	10	2	3	1	3	1	0	52
Nim Li Punit	8	8	8	8	8	3	3	2	3	1	0	52
Xubinka	8	6	6	8	8	1	2	4	2	1	0	47

*Not possible to reach

5.2 Site Prioritization

The twelve sites evaluated include sites presently under excavation and research (i.e., Caracol), sites previously excavated and more or less consolidated (i.e., Xunantunich and Altun Ha), sites previously excavated but without major consolidation work (i.e., Cerros and Lubaantun), and other sites which have been partially excavated, with little or no consolidation work, but accessible and open to the public (i.e., Cuello). Mayflower (in Stann Creek District) was not evaluated due to the difficulties encountered trying to find it.

The sites evaluated can be arranged in three ranking groups. The first group includes those sites considered as "priority sites" most apt for development. The second group comprises sites recommended for future development or to be used as complementary attractions to the first group. The sites in the third group are considered "complementary" to the priority sites, particularly in the packaging that will be required for each one. They are not considered interesting enough by themselves to warrant further development work. The groups and their priority are indicated below.

- o Priority Group
 - Lamanai
 - Caracol
 - Lubaantun

- o Secondary Group
 - Xunantunich
 - Nim Li Punit
 - Cerros
 - Cahal Pech
 - Xubinka

- o Complementary Group
 - Altun Ha
 - Cuello
 - Santa Rita
 - Mayflower*

*Site not evaluated

The Priority Group sites were further analyzed to determine individual site development priority. In addition to the attractiveness of each site (and the surrounding area), and its potential revenue generating capacity, special attention was given to general accessibility, improvements and infrastructure costs, availability of accommodations in the area, operational capacity of the site as a tourist attraction, proximity to other areas of interest, and the possibility of developing additional tourism activities in the local area.

5.3 Top Priority Site -- Lamanai

Lamanai, located on the western bank of the New River Lagoon, south of the village of Guinea Grass, District of Orange Walk, was selected as the top priority site and is recommended for immediate development.

Lamanai offers a combination of conditions and attractiveness difficult to match. It has a group of outstanding Mayan structures rich in architectural detail and decorations, some overlooking the lagoon. The natural conditions that surround Lamanai -- the New River and the lagoon, the abundant fauna and flora in the surrounding jungle setting, the river trip to reach the site, the nearby natural attractions of Crooked Tree Wildlife Sanctuary and the Community Baboon Sanctuary, and the nearby archaeological sites of Altun Ha, Cerros, and Cuello -- give Lamanai the highest touristic value.

Furthermore, Lamanai is easily accessible by road from the Mexican border, the hotel sites at Corozal and Consejo Shores, the nearby attractions and hotels on the Old Northern Highway, the international airport, and the hotels located in Belize City. The landing strip at Orange Walk Town can also serve as the point of arrival for visitors coming from San Pedro, Dangriga, and Punta Gorda.

It should be pointed out that both Caracol and Lubaantun are also outstanding sites with great potential. Nevertheless, these cannot be developed immediately for a number of reasons. In the case of Caracol, the major drawbacks are the present state of the archaeological research, excavation, and stabilization work, as explained by the archaeologists at the site: the lack of adequate access; and the difficulty of developing the necessary infrastructure services at the site. Lubaantun, on the other hand, is too remote from the other main tourist areas of Belize and lacks adequate access. The main road from Belmopan to this site is not paved and is several years away from being paved.



6.0 LAMANAI DEVELOPMENT STRATEGY

In order to make Lamanai touristically operational, the RDA team has formulated a strategy plan consisting of a series of recommended actions, some of a general nature and others specifically related to the site. The general actions are explained in Section 11, which provides the general framework and guideline for the further development of archaeological sites as tourism attractions in Belize. A Specific Action Plan for the development of Lamanai is given in Section 6.3. The Action Plan includes a series of additional recommendations related to complementary activities. They are included as guidelines to effectively position Lamanai as a viable, major tourist attraction.

6.1 Strategy Objective

The purpose of the strategy will be to develop Lamanai as Belize's first fully--developed archaeological attraction to stimulate tourism. However, while the present objective is to develop the site for tourism, it should be noted that Lamanai is, first and foremost, an important archaeological site where research will continue for years to come.

6.2 General Policies

It should be stressed that Lamanai and the other archaeological sites in Belize are an integral part of the country's cultural and historical heritage. These sites are a portion of the World Patrimony of which the Belizean people are custodians. Any and all development plans based on the use of Belize's archaeological heritage for tourism or other purposes, must conform with protection guidelines and regulations set forth by the GOB and other designated authorities in Belize.

While it is envisioned that Belize's archaeological sites will eventually attract many national and international visitors and constitute an important part of Belize's "tourism product," it must be clearly understood that these sites are not tourist attractions per se nor should they be considered as resorts, recreational facilities, or potential sites for hotel and tourism accommodations. They are unique and valuable remains of previous cultures and must be considered and preserved as such.

In order to develop the country's Mayan sites to stimulate tourism, the following policy actions are recommended:

- a) A national strategy for the development of archaeological sites, complete with policies, priorities, guidelines, and conditions is necessary and should be formulated. The work of the Department of Archaeology will be greatly simplified and enhanced by such a strategy. Strategy formulation should be the prime responsibility of the Department.
- b) Following international standards, archaeological sites opened and developed for visitor use should be designated as "archaeological parks." The national strategy recommended should concentrate on the development of such parks.
- c) The national strategy should emphasize the initial concentration of efforts and resources on a limited number of sites, mainly those of higher



- touristic value. The concentration should include both developmental and marketing efforts.
- d) Every archaeological park to be opened and developed must have an individual master plan. All master plans should be formulated by a professional team including planners, architects, an economist, biologists, park development and management specialists, and tourism experts, with the assistance and cooperation of archaeologists, preferably those who have worked on each specific site.
 - e) The Department of Archaeology should be the government agency responsible for the approval of master plans for archaeological parks, as well as park supervision and administration. The Belize Tourist Bureau should be responsible for their promotion.
 - f) All master plans should follow guidelines as provided in this study. In general, master plans must include all facilities required to provide adequate visitor assistance, authorized to be built within the park proper. A detailed list, complete with construction areas and characteristics, should be part of the master plan guideline.
 - g) The Department of Archaeology will be the agency responsible for defining the area and limits of all archaeological parks, a function that will require the cooperation and support of other government agencies.
 - h) No hotel accommodations, lodging facilities, or air transportation facilities should be built within the designated boundaries and buffer zones of any archaeological park.
 - i) Since it is expected that in certain parks it will be necessary to build some type of facilities (i.e., rest rooms and snack and beverage booths), the park guidelines should define administrative and operational procedures for each type of facility.
 - j) All buildings, shelters and freestanding structures should be in character with the nature of archaeological parks. Architectural design and construction systems should follow specific guidelines and standards.
 - k) To maintain uniformity and visual harmony in Belize's archaeological parks, it is recommended that a standard architectural design be developed and adopted for all park facilities in any given park. Since most sites are located in remote areas where regular construction materials are scarce and costly to transport, it is suggested that each park's architectural style be based on local construction systems and materials. Furthermore, it should be noted that the architectural style should strive to maintain the character of Belize's original architecture directly related to Mayan styles.
 - l) Following the concept of uniformity and harmony, design of other park elements (signs, paths and walkways, shelters, tables, etc.), should also follow a standard design based on local materials and construction systems.



- m) As certain parks will require food and beverage facilities, it is proposed that they be run as concessions. Concessionaires should be local people who would be made responsible for providing the necessary visitor services. Concessionaires should pay a lease or rental fee to be collected by the park's administration.
- n) In order to ensure correct interpretations of the park's attractions, guides need to receive proper training. These guides will be under the direct supervision of the Department of Archaeology. As a prerequisite, candidates for park guides must have an archaeology background. At least two guides should be assigned to each park.
- o) The guides would conduct scheduled tours of the park for groups and individuals, charging a per-person fee. For groups, the Receptive Services Operators would be responsible to the park administration for the collection and payment of the fees.
- p) It is recommended that the entrance fee charged to all visitors be raised and a differential fee system be adopted. Entrance fees should provide the parks with revenue needed for maintenance. The recommended entrance fee level is US\$10.00 for foreign visitors and BZ\$5.00 for Belize nationals.
- q) Income from visitors fees, concessionaires, and other park services should be collected by the park's administration. All revenues should be used for the park maintenance and supplies.

6.3 Strategy Action Plan

For a description of the Lamanai ruins, see Section 3.2.1.5.

The Lamanai Archaeological Park project should consist of three main areas: the archaeological park proper, the natural areas along the river and the lagoon, and the landing and dock facilities required at Guinea Grass.

Although the archaeological park proper presently represents an area of only 2.5 square miles, the possibility of expanding it should be considered immediately. It is recommended that additional areas with important archaeological structures and future research potential be included as part of the park proper.

Because the New River banks and the New River Lagoon are important complementary attractions, it is recommended that a stretch of the New River, from two miles north of Guinea Grass to the southern end of the lagoon, be designated as a natural and scenic reserve. This area would include a buffer zone on all sides of the river and lagoon. It would be an integral part of the park and managed by the park administration.

Since the recommended access to the park will be from Guinea Grass by boat, as part of the overall project it will be necessary to include an area at Guinea Grass for visitor services, dock facilities, and parking. All tours and excursions to the Lamanai Archaeological Park will commence at the Guinea Grass landing.

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6.3.1 Immediate Actions

In order to begin the development process required to make Lamanai a major tourism attraction, the following actions must be carried out:

- a) Define the exact size and limits of the archaeological area in Lamanai, taking into account all existing archaeological structures and nearby sites not yet included as part of the park area.
- b) Prepare and formulate a Master Plan for Lamanai Archaeological Park. This plan should cover the specific aspects as set forth in Appendix A of this report.
- c) Initiate the necessary process to declare the areas along the New River and the New River Lagoon as natural reserves.
- d) Meet with boat operators at Guinea Grass to explain the general program, emphasizing the importance of their participation. They could be organized as a local cooperative to ensure adequate tourist services. Technical assistance and training should be provided as required.
- e) Study possible financial arrangements or credit lines for the purchase of larger and better equipped boats, safety equipment, radios, etc.
- f) Contact Belize's Receptive Services Operators to discuss the inclusion of Lamanai Archaeological Park as part of their services and programs, and identify equipment and training needs among Receptive Services Operators.
- g) Prepare and initiate a Promotion and Public Relations Program among travel agents and hoteliers at San Pedro and the other Cayes, Corozal, Consejo Shores, and Belize City with regard to Lamanai Archaeological Park.
- h) Implement administration policies and systems as defined in the Master Plan. Designate an official within the Department of Archaeology to be responsible for the coordination and the supervision of the park's development and administration.
- i) Establish the necessary guidelines and regulations for the development and administration of the park, as defined in the Master Plan.

One of the major advantages that Lamanai has over any of the other priority sites is that it will be operational with relatively few additions. Its impressive Mayan structures are already an important attraction. The stabilization and restoration work will be an added attraction. However, it will be difficult to develop and establish Lamanai as a major point of interest without a well-coordinated effort which encompasses other areas of the tourism sector.

6.3.2 Additional Recommendations

6.3.2.1 **Accommodations.** No hotels nor any other type of accommodations should be built on or near park grounds. This will help to avoid the difficulties encountered at

Tikal, Guatemala, and Machu Picchu, Peru. Lamanai is within moderate driving time from Corozal and Belize City, and only twenty minutes flying time from San Pedro and other island resorts. There are areas in the country better suited as hotel sites.

6.3.2.2 Role of Receptive Services Operators. Belize's Receptive Services Operators (or Ground Handlers) will play a major role in the success of the park. Lamanai should help keep visitors to Belize in country longer, as it provides an alternative to archaeological sites located in Guatemala and Mexico. Lamanai will help these operators offer a better and more attractive product to wholesalers, travel agents, and special interest travel organizers. Their direct participation and involvement in the packaging and promotion of the park will be paramount. Simultaneously to the formulation of the Master Plan, a cooperative program with the Receptive Service Operators must be initiated.

As many of Belize's hotels organize and sell tours to their guests, they must also be approached. Information about the park, its services and tours should be provided to all hotels in order to make the hotels' clientele aware of the Lamanai Archaeological Park.

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7.0 LAMANAI ARCHAEOLOGICAL PARK: SPECIFIC FUNCTIONAL REQUIREMENTS

The following section describes in detail the physical, infrastructural and operational requirements to make the Lamanai site functional as soon as possible. These requirements are analyzed in regards to initial and recurrent expenses as well as expected direct and social revenue generation, to determine the economic feasibility of the entire operation.

Following are the estimated facilities and services requirements for the three areas of the park. Some preliminary actions to define and plan the park are included, including construction needs per component.

7.1 Lamanai Archaeological Park: Overall Scheme

The overall scheme should include the following preliminary actions:

- o **Master Plan**

It is of paramount importance that a well-developed Master Plan be prepared before commencing any work at Lamanai. This Master Plan will provide the Department of Archaeology and other authorities of Belize with the proper guidelines to conduct the work.

- o **Main Access**

The road from the Northern Highway to Guinea Grass needs to be improved and adequate parking and boat boarding facilities need to be constructed at the village near the river.

7.2 Archaeological Park Proper

The park contains the archaeological area, including structures, walkways, open spaces, restricted areas, and all required visitor facilities. The operational and functional requirements are the following:

- o **Stabilization and Restoration of the Archaeological Ruins**

Stabilization and restoration are necessary activities to bring the main attraction -- the ruins -- to the standard of an international archaeological park. This work must be done by a noted specialist in the field, under the direction of the Department of Archaeology. Past work on the site must also be brought up to standards.

- o **Interpretation Center**

The Interpretation Center's function will be to display the characteristics of the park, provide interpretation of Lamanai related to Mayan history, and explain research and excavations previously undertaken at the site. It should also present information on the natural history of the area.

o **Museum**

A small museum, in conjunction with the Interpretation Center, should put on display the artifacts found during excavations. In addition, photographs and/or replicas of the most important findings, including those stored at Belmopan or in museums around the world, should be included.

o **Lecture Room**

A lecture room should be included in the museum. This facility will provide an independent meeting place where lectures can be conducted in an appropriate environment. The room should include comfortable seating and audiovisual equipment.

o **Information Office**

The information office will provide visitors with materials about the Lamanai site, the various guided tours offered at the park, and other pertinent information. Maps, brochures, and other material should be available for public distribution and/or sale.

o **Administrative Office**

This facility will house the park administrator. It should be furnished and equipped as required.

o **Research Office and Lab**

Since it is expected that research work will continue at Lamanai for some time, an office and laboratory facilities for archaeologists and researchers should be included as part of the park facilities.

o **Snack and Beverage Concession Stand**

The function of the concession stand will be to provide visitors with beverages and light meals and should include a dining area, a cooking area with running water, and proper storage facilities.

o **Souvenir and Handicraft Shop**

The park should have a shop which offers local handicrafts, souvenirs, and written material on Belize tourist attractions.

o **Rest Room Facilities**

Adequate toilet facilities with running water must be provided.

o **Caretaker and Park Employees' Compound**

The caretaker and park employees' compound will consist of living quarters, cooking and dining spaces, bathrooms, and storage facilities.

o Docking Facilities

Docking facilities, i.e., a floating dock and platforms, will be needed at the passenger disembarking area.

o Paths, Walkways, Shelters, Signs, and Restricted Areas

Within the park proper, paths and walkways will be required as well as restricted areas where structures require protection. The park administrator will be responsible for enforcing all restrictions and regulations.

o Infrastructure Services

These include all the required on-site services (i.e., a water system, sewage, and electric power). Use of solar energy should be considered. For communications, a radio system is recommended.

Following are the preliminary recommended space requirements for each for the facilities discussed above.

	<u>Square Feet</u>
Interpretation Center	3,000
Museum	1,800
Lecture Room	2,000
Information Office	300
Administrative Office	500
Research Office and Lab	800
Snack and Beverage Concession Stand	600
Souvenir & Handicraft Shop	200
Rest Room Facilities	300
Caretaker and Park Employees' Compound	7,000

7.3 Nature Observation Areas

The observation areas are to be located along the New River, on where fauna and flora are abundant. These areas should be considered facilities for local boat operators who should be responsible for their proper use.

o Observation Platforms

Observation platforms should be placed at appropriate locations along the New River. Their purpose is to enrich the visitor's experience by offering the opportunity to appreciate the natural setting, thus complementing the visit to the archaeological park. These areas should consist of elevated wooden platforms and walkways, where visitors can leisurely observe the fauna and flora and take photographs.

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o **Sitting Areas, Shelters, and Signs**

These would include thatch roof shelters, picnic tables strategically located, and signs indicating types of flora and fauna to be seen from each location.

o **Docking Facilities**

Includes a floating dock and access facilities as required. The recommended area for each facility:

	<u>Square Feet</u>
Observation Platforms	1,000
Sitting Areas and Shelters	600
Docking Facilities	500

7.4 Landing and Docking Facilities at Guinea Grass

Guinea Grass should serve as the "entrance" to the park. It is located only five miles from the Northern Highway, accessible by a fairly good road. However, it needs adequate docking facilities and minimum visitor services.

o **Parking Area**

A gravel surface parking area for vehicles and large buses should be built within walking distance of the landing area.

o **Open Shelter and Waiting Area**

As visitors may have to wait during boat loading or for boats to arrive, a waiting shelter should be provided. This shelter can also serve as an information center and rest area.

o **Snack and Beverage Concession**

The site should include a small area where beverages and snacks can be purchased.

o **Small Handicrafts Shop**

If local handicrafts are available, a shop where these can be purchased should be included.

o **Rest Room Facilities**

Adequate toilets and wash basins with running water must be provided.



o Docking Facilities and Services

These facilities are required for this type of operation. They should include a floating dock, an area to secure, service, and keep boats, and a storage space.

The recommended areas for each facility:

	<u>Square Feet</u>
Parking Area	30,000
Open Shelter and Waiting Area	1,300
Snack and Beverage Concession	300
Small Handicrafts Shop	300
Rest Room Facilities	120
Docking Facilities and Services	700



8.0 INVESTMENT REQUIRED

The estimated investment requirements are based on the facilities and services detailed under the Strategic Action Plan.

The figures below are preliminary and intended to provide a general guide to and summary of the investment amounts required to make Lamanai Archaeological Park operational. More detailed information can be found in Appendix B.

	<u>BZ\$</u>	<u>%</u>
Lamanai Archaeological Park -		
Overall Scheme	300,000	7.2
Guinea Grass Landing Unit	328,100	7.9
Nature Observation Area	52,500	1.3
Archaeological Park Proper	<u>3,470,500</u>	<u>83.6</u>
 TOTAL	 4,151,100	 100.0

The following is a breakdown per investment cost category:

	<u>BZ\$</u>	<u>%</u>
Archaeology Work	2,000,000	48.2
Park Facilities	1,541,100	37.1
Master Plan	300,000	7.2
Main Access and Parking	210,000	5.1
Training	<u>100,000</u>	<u>2.5</u>
 TOTAL	 4,151,100	 100.0

Archaeology work has been estimated to be undertaken over a period of three years. In all probability -- and the final word must come from the specialist -- the real expenditure breakdown could spread over one or two additional years.

Detailed investment requirements are presented in Table 7.

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TABLE 7. INVESTMENT REQUIREMENTS FOR LAMANAI ARCHAEOLOGICAL PARK - BZ\$4,151,100 TOTAL

DESCRIPTION	Quantity	Units	Unit Value	Total Structure Value	Site Subtotals
1. COMPREHENSIVE MASTER PLAN PREPARATION	1	plan	300,000	300,000	300,000
2. GUINEA GRASS LANDING					328,100
2.1 Access and Parking Area					210,000
Access road from Northern Highway	6	miles	20,000	120,000	
Parking area	30,000	sq.ft.	3	90,000	
2.2 Facilities					88,200
Sheltered area	1,300	sq.ft.	30	39,000	
Snack and beverage	300	sq.ft.	70	21,000	
Handicraft shop	300	sq.ft.	70	21,000	
Rest rooms	120	sq.ft.	60	7,200	
2.3 Dock Services					29,900
Services	120	sq.ft.	70	8,400	
Radio communications	1	unit	4,000	4,000	
Dock facilities	700	sq.ft.	25	17,500	
3. NATURE OBSERVATION AREA					52,500
3.1 Observation Platforms	1,000	sq.ft.	25	25,000	
3.2 Shelters, Sitting Areas	600	sq.ft.	25	15,000	
3.3 Docks	500	sq.ft.	25	12,500	
4. ARCHAEOLOGICAL PARK PROPER					3,470,500
4.1 Archaeology Stabilization/Restoration					2,000,000
Year 1	1	year	6,000	600,000	
Year 2	1	year	6,000	600,000	
Year 3	1	year	8,000	800,000	
4.2 Facilities					1,070,000
Interpretation center	3,000	sq.ft.	60	180,000	
Museum	1,800	sq.ft.	70	126,000	
Lecture room	2,000	sq.ft.	60	120,000	
Information office	300	sq.ft.	50	15,000	
Administration office	500	sq.ft.	50	25,000	
Research office and lab	800	sq.ft.	50	40,000	
Snack and beverage	600	sq.ft.	70	42,000	
Handicraft shop	200	sq.ft.	70	14,000	
Rest rooms	300	sq.ft.	60	18,000	
Caretaker/park employees compound/housing	7,000	sq.ft.	70	490,000	
4.3 Furniture and Equipment					109,000
Radio communications unit	1	unit	4,000	4,000	
Furniture	1	unit	30,000	30,000	
Motor boat	1	unit	25,000	25,000	
Other equipment	1	unit	30,000	30,000	
Supplies	1	unit	20,000	20,000	
4.4 Park Areas					38,000
Walkways, paths, observation areas	1	unit	15,000	15,000	
Shelter areas	5	unit	3,000	15,000	
Signs	1	unit	8,000	8,000	



4.5 Dock and Platform Facilities	700	sq.ft.	25	17,500	17,500
4. ARCHAEOLOGICAL PARK PROPER (continued)					
4.6 Utilities					86,000
Electric power	1	unit	50,000	50,000	
Water cistern and distribution	1	unit	36,000	36,000	
4.7 Training					100,000
Park personnel training	4	unit	20,000	80,000	
Workshops with operators	1	unit	20,000	20,000	
4.8 Unforeseen and Miscellaneous	1	unit	50,000	50,000	50,000

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9.0 OPERATIONAL EXPENSES

9.1 Guinea Grass Landing

At the Guinea Grass Landing, the snack and beverage service and handicraft shop should be operated as concessions. The maintenance of these concessions should be the responsibility of the concessionaire.

The dock facilities, dock areas, storage, and sheltered areas should be maintained directly by park personnel. Maintenance for these areas are estimated at BZ\$18,000 per year.

Although the access road should be maintained by the GOB Public Road Department, BZ\$20,000 has been budgeted for occasional emergency and parking facilities maintenance.

9.2 Nature Observation Areas

These facilities should require only occasional maintenance and be the responsibility of the park management. The yearly maintenance cost has been budgeted at BZ\$8,000.

9.3 Archaeological Park Proper

All food and beverage services should be run by concessionaires. All other facilities will be under park responsibility.

Two types of recurrent expenses have to be taken into account for the operation and upkeep to the park proper:

- o The maintenance of the archaeological monuments, which will become recurrent from year four, when the archaeology program here proposed will be finalized.
- o The operation and maintenance of the park facilities, which will start at year four.

The following is a summary of these costs:

	<u>BZ\$/Year</u>
Archaeological Monument Maintenance	30,000
Staff	209,300
General Maintenance	110,850
Promotion	<u>20,000</u>
TOTAL	370,150

Detailed costs include:

	<u>BZ\$/Year</u>
A. Archaeological Monument Maintenance of monuments, 1.5% of consolidation and restoration BZ\$2,000,000.00	30,000.00
B. Staff	
Park Manager	30,000.00
Assistant Manager	20,000.00
Information Officer	15,000.00
Park Caretaker	18,000.00
Assistant Caretaker	15,000.00
Support Staff (5)	45,000.00
Accountant	18,000.00
Forest Guard	7,500.00
Security Guards (4)	28,800.00
Part-time advisor (Museum curator, biologist, etc.)	<u>12,000.00</u>
	209,300.00
C. Maintenance	
Overall park upkeep	25,000.00
Camp and installation maintenance, 2% of BZ\$1,070,000.00	21,400.00
Equipment maintenance, 5% of BZ\$109,000.00	5,450.00
Fuel, oil, etc.	35,000.00
Miscellaneous	<u>24,000.00</u>
	110,850.00
D. Promotional Expenses	20,000.00
TOTAL PARK RECURRENT OPERATION COST	370,150.00



10.0 ECONOMIC IMPACT OF PROPOSED PROJECT

The Lamanai Archaeological Park should be developed in stages. The first task will be to draft a Master Plan which will specifically define all activities to be subsequently completed. The following projections may be revised in accordance with the Master Plan and any additional information which is obtained in the meantime.

The projections presented here should be useful to the GOB and USAID when evaluating the appropriate allocation of funds for development of the Lamanai Archaeological Park.

10.1 Assumptions of Visitor Behavior

The 1983-1988 tourism figures indicate that 66% of tourists to Belize have the northern Cayes as their final destination. Assuming that these figures are correct, by 1992 approximately 63,000 visitors annually may come to the vicinity of the Lamanai Archaeological Park. It is assumed that the number of yearly visitors will increase by 8% annually thereafter. The percentage of these visitors attracted to Lamanai will depend on the promotion effort and the ground operator capacity.

Three scenarios are presented to project the economic impact of the project. (See Table 8). The first scenario assumes that 10% of the visitors with the northern Cayes as their final destination will visit Lamanai. The second and third scenarios assume that 15 and 20%, respectively, will visit Lamanai. A proportional number of local visitors are also projected for each scenario.

For all scenarios, it is assumed that tourists who visit Lamanai will extend their stay in Belize. Initially, one night has been added to the "average" length stay. It is assumed that visitors to the park will stay an additional two nights above the average in later years.

10.2 Investment and Operating Costs

All direct investment expenditures are to be disbursed in years one through three. Only recurrent expenses (to operate and maintain the whole area) are calculated for years four through fifteen. (See Table 9).

Investment, recurrent cost, and revenue figures include cash outlays only. Non-cash expenses such as depreciation and capital opportunity cost are implicitly incorporated in the internal rate of return. Capital cost (interest) is similarly treated, since it is assumed that funds used for this project will not be returned by the project.

10.3 Revenues to the Project and to the Country as a Whole

Visitors will spend money in and around the park, as well as for other in-country services including travel to and from the park, and food and lodging outside the park. Park revenues will be derived from an initial foreign visitor entrance fee of US\$10.00. This will be increased to US\$15.00 after year seven. Local visitor fees are set at BZ\$5.00, to be increased after year seven to BZ\$10.00. Income from profits on brochure and map sales, rentals, and other fees is also included. (See Table 10). For the days which have been added to a visitor's stay to visit Lamanai, it is assumed that approximately 45% will be spent within the project area and 55% in other areas of Belize.

TABLE 8. PROJECTED NUMBER OF VISITORS TO LAMANAI ARCHAEOLOGICAL PARK
YEARS

	1-3	4	5	6	7	8	9	10	11	12	13	14	15
Number of Visitors to Belize	Total	95,833	103,500	111,780	120,722	130,380	140,810	152,075	164,241	177,380	191,571	206,896	223,448
Number of Visitors to Region	66.00%	63,250	68,310	73,775	79,677	86,051	92,935	100,369	108,399	117,071	126,437	136,552	147,476
Number of Regional Visitors to Park													
Alternative A	10.00%	6,325	6,831	7,377	7,968	8,605	9,293	10,037	10,840	11,707	12,644	13,655	14,748
Alternative B	15.00%	9,487	10,246	11,066	11,951	12,908	13,940	15,055	16,260	17,561	18,965	20,483	22,121
Alternative C	20.00%	12,650	13,662	14,755	15,935	17,210	18,587	20,074	21,680	23,414	25,287	27,310	29,495
Additional Nights/Visitor		1	1	1	1	1	1	2	2	2	2	2	2
Number of Local Visitors to Park													
Alternative A		2,087	2,254	2,435	2,629	2,840	3,067	3,312	3,577	3,863	4,172	4,506	4,867
Alternative B		3,131	3,381	3,652	3,944	4,260	4,600	4,968	5,366	5,795	6,259	6,759	7,300
Alternative C		4,174	4,508	4,869	5,259	5,679	6,134	6,624	7,154	7,727	8,345	9,012	9,733

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TABLE 9. PROJECTED EXPENSES (BZS)

	YEARS													
	1-3	4	5	6	7	8	9	10	11	12	13	14	15	
DIRECT INVESTMENT EXPENDITURE														
1. Park Facilities	1,541,100													
2. Archaeological Work	2,000,000													
3. Main Access and Parking	210,000													
4. Master Plan Development	300,000													
5. Training	100,000													
TOTAL	4,151,100													
RECURRENT EXPENSES														
1. Guinea Grass Maintenance	38,000	38,000	38,760	39,520	39,520	41,040	41,040	41,040	42,560	42,560	42,560	44,080		
2. Nature Area Maintenance	8,000	8,000	8,160	8,320	8,320	8,640	8,640	8,640	8,960	8,960	8,960	9,280		
3. Archeo. Monuments Maint.	30,000	31,200	32,400	33,600	34,800	36,000	37,200	38,400	39,600	40,800	42,000	43,200		
4. Staff Cost	209,300	209,300	209,300	219,765	219,765	219,765	230,230	230,230	230,230	230,230	240,695	240,695		
5. General Park Maintenance	110,850	110,850	110,850	115,284	115,284	115,284	119,718	119,718	119,718	124,152	124,152	124,152		
6. Promotional Expenses	20,000	21,800	23,600	25,400	27,200	29,000	30,800	32,600	34,400	36,200	38,000	39,800		
TOTAL	416,150	419,150	423,070	441,889	444,889	449,729	467,628	470,628	475,468	482,902	496,367	501,207		

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TABLE 10. PROJECTED ECONOMIC RETURNS TO DEVELOPMENT OF LAMANAI ARCHAEOLOGICAL PARK (BZ\$)

	Year												
	4	5	6	7	8	9	10	11	12	13	14	15	
PROJECTED REVENUE RECEIVED DIRECTLY FROM LAMANAI ARCHAEOLOGICAL PARK ACTIVITIES													
Alternative A													
Foreign Visitor Entrance Fee	126,500	136,620	147,549	159,353	258,152	278,804	301,108	325,197	351,213	379,310	409,655	442,427	
Local Visitor Entrance Fee	10,436	11,271	12,173	13,147	28,397	30,668	33,122	35,772	38,633	41,724	45,062	48,667	
Brochure & Map Sales	5,895	6,366	6,838	7,310	7,781	8,253	8,724	9,196	9,668	10,139	10,611	11,082	
Other Fees	14,283	15,426	16,568	17,711	28,580	30,312	32,044	33,777	35,509	37,241	38,973	40,705	
Concession Rentals	38,400	39,936	41,472	43,008	44,544	46,080	47,616	49,152	50,688	52,224	53,760	55,296	
TOTAL ALTERNATIVE A	195,514	209,619	224,600	240,529	367,454	394,117	422,614	453,094	485,711	520,638	558,061	598,177	
Alternative B													
Foreign Visitor Entrance Fee	189,749	204,929	221,324	239,030	387,228	418,206	451,663	487,796	526,819	568,965	614,482	663,640	
Local Visitor Entrance Fee	15,654	16,907	18,259	19,720	42,595	46,003	49,683	53,658	57,950	62,586	67,593	73,000	
Brochure & Map Sales	8,843	9,549	10,257	10,965	11,672	12,380	13,096	13,794	14,502	15,209	15,917	16,623	
Other Fees	21,425	23,139	24,852	26,567	42,870	45,468	48,066	50,666	53,264	55,862	58,460	61,058	
Concession Rentals	38,400	39,936	41,472	43,008	44,544	46,080	47,616	49,152	50,688	52,224	53,760	55,296	
TOTAL ALTERNATIVE B	274,071	294,460	316,164	339,289	528,908	568,136	610,113	655,065	703,223	754,845	810,211	869,617	
Alternative C													
Foreign Visitor Entrance Fee	252,999	273,239	295,098	318,706	516,304	557,608	602,217	650,394	702,426	758,620	819,309	884,854	
Local Visitor Entrance Fee	20,872	22,542	24,346	26,293	56,793	61,337	66,244	71,543	77,267	83,448	90,124	97,334	
Brochure & Map Sales	11,790	12,732	13,676	14,620	15,562	16,506	17,448	18,392	19,336	20,278	21,222	22,164	
Other Fees	28,566	30,852	33,136	35,422	57,160	60,624	64,088	67,554	71,018	74,482	77,946	81,410	
Concession Rentals	38,400	39,936	41,472	43,008	44,544	46,080	47,616	49,152	50,688	52,224	53,760	55,296	
TOTAL ALTERNATIVE C	352,628	379,301	407,728	438,049	690,363	742,155	797,613	857,035	920,734	989,052	1,062,361	1,141,058	

PROJECTED ADDITIONAL REVENUE FOR COUNTRY

Assuming average expenditure of BZ\$129.82 per night per visitor

Assuming 4.00% annual inflation

Expenditures of Additional Nights by Visitors (includes money spent at Lamanai Archaeological Park)

Alternative A	821,109	922,269	1,035,893	1,163,515	1,306,860	1,467,865	1,648,706	1,851,826	2,079,971	2,336,224	2,624,047	2,947,329
Alternative B	1,231,663	1,383,404	1,553,839	1,745,272	1,960,290	2,201,797	2,473,059	2,777,740	3,119,957	3,504,336	3,936,070	4,420,994
Alternative C	1,642,217	1,844,538	2,071,786	2,327,030	2,613,720	2,935,730	3,297,412	3,703,653	4,159,943	4,672,448	5,248,094	5,894,659

Total Generated Income (assuming 3.5 multiplier)

Alternative A	2,873,880	3,227,942	3,625,625	4,072,302	4,574,009	5,137,527	5,770,471	6,481,393	7,279,900	8,176,784	9,184,164	10,315,653
Alternative B	4,310,820	4,841,913	5,438,437	6,108,453	6,861,014	7,706,291	8,655,706	9,722,089	10,919,850	12,265,176	13,776,246	15,473,479
Alternative C	5,747,761	6,455,885	7,251,250	8,144,604	9,148,019	10,275,055	11,540,941	12,962,785	14,559,800	16,353,568	18,368,327	20,631,305

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Additional nights imply additional money spent by the visitors; the average estimated daily expenditure of US\$64.91 increases by 4% annually (Belize's expected rate of inflation) and is added to total visitor expenditure for each additional night in Belize.

A multiplier effect of 3.5 for visitor expenditures is assumed. Since it was not possible to obtain an estimate of the tourism multiplier for Belize, the average conservative figure used in several Central American countries has been applied.

The multiplier methodology is applicable for measuring the economic impact of tourist expenditures. Authors such as Dr. Ernest W. Swanson (1969), Robert Edminster (1962), and Neil Newton (1975) used the concept of the Keynesian multiplier effect in studies on national park economics in the United States and Central America. The multiplier is used to determine the derivative or indirect income that is generated from each basic or direct tourist dollar, since portions of each dollar spent by tourists in Belize, whether on food, lodging, or transportation, are in turn spent and respent before "leaking" from the economy.

The projected additional revenue for the country does not include the multiplier effect on the BZ\$4.1 million which would be invested in the initial three-year period, nor the yearly budget of recurrent park expenses, which will in great measure go to the area in and around the park. Money spent by local visitors has not been included either.

10.4 Economic Implications: Internal Rate of Return of Development of Lamanai Archaeological Park

The internal rate of return (IRR) of any project is defined as the discount rate which causes the net present value of the project to be zero. A private investor would not be interested in investing in the development of this park because the revenue collected directly by park activities result in a negative net present value, even with a discount rate which approaches zero.

Revenue directly Recoverable by the Project

Cash Balance	Discount Rate	NPV after 15 Years
Alternative A	0.01%	(4,968,884)
Alternative B	0.01%	(2,917,126)
Alternative C	0.01%	(865,369)

Appendix B gives further information on the annual cash balance. The project only begins to meet its operating expenses in year twelve for Alternative A, or year eight in Alternatives B and C. Nonetheless, this project has significant positive externalities -- benefits to the country which a private investor could not personally recuperate. The additional revenue generated by the project can be broken down into two parts. Additional visitor expenditures (55% of which are assumed to be outside the project area) would be foreign exchange. The multiplier effect comprises income from increased economic activity within the country. The resulting IRR makes the project very favorable for the country as a whole.

Revenue Generated for the Country

Cash Balance	Discount Rate	NPV after 15 Years
Alternative A	49.84%	464
Alternative B	65.07%	295
Alternative C	77.69%	144

11.0 CONCLUSIONS AND RECOMMENDATIONS FOR DEVELOPMENT OF ARCHAEOLOGICAL SITES FOR TOURISM IN BELIZE

In addition to the specific recommendation for development of an archaeological park at Lamanai, the RDA team has some general recommendations for guiding the continued development of archaeological sites and tourism in Belize.

11.1 Establish a Goal for the Total Number of Tourists

Belize is a relatively small country of 23,000 square miles with a population estimated at 170,000. Most of the country's tourism attractions -- the coral reef, the forest and nature reserves, and the archaeological sites -- are fragile resources that may be adversely affected by a large increase in the number of visitors to Belize. To avoid the possible destruction of these unique resources and to lessen the impact on the country's population, the GOB should determine the maximum number of tourists the country can reasonably accommodate each year. Several factors should be considered when estimating an optimum number of tourists, including the country's capability to provide additional food supplies, competition within the country for scarce financial resources, and limitations of existing infrastructure to accommodate additional people. Similarly, the number of visitors to each tourist attraction should also be controlled to avoid overtaxing resources at any given site.

At present, approximately 60,000 tourists visit Belize each year. When defining targets for a maximum acceptable number of tourists for future years, the following methods may be used:

- o Base the number of tourists on a percentage of the country's population. For Belize, the total number of visitors should not exceed 50%.
- o Establish an outright goal of 100,000 tourists for a given future year (such as 1995) and gradually work up to this goal in intervening years.

Manageable targets will result in the orderly growth and expansion of the country's tourism industry. Mass tourism should be avoided.

11.2 Plan for the Expansion of the Hotel Industry to Provide Adequate Accommodations for the Expected Number of Visitors

Part of the country's unique charm is due to the character of its accommodations: small inns and hotels with personalized services. This feature should be maintained and encouraged, as it differentiates the country from competing destinations. One of the major limitations to the growth of Belize's tourism sector is the number of hotel rooms suitable for international tourism. Construction of new hotels is expensive and time consuming. Large hotels are not feasible nor are they the answer to Belize's needs, since they tend to encourage massive tourism. Consequently, it is recommended that priority be given to the expansion and improvement of existing hotels and guest houses. Credit lines should be made accessible to present hotel owners. The new rooms at the San Ignacio Hotel serve as one expansion model.

Quality standards need to be adopted. The existing 600 rooms meet only minimum standards. The adoption of a "Belize Facilities Standard" (BFS) is recommended since

most of Belize's facilities cannot be rated according to established international norms because of their size and character. A minimum acceptable BFS rating would be granted to facilities which are equal to or better than Ramon's Village, Journeys End, and Victoria House in San Pedro; Adventure Inn and Don Quixote in Consejo Shores; and Chaa Creek Cottages in San Ignacio. For restaurants and other food facilities, the Grill Chateau, Caribbean Hotel, and Four Fort Street in Belize City illustrate the minimum acceptable BFS quality level.

11.3 Train Belizeans for Work in the Hotel Industry and Tourism Sector

Should the targets of the plan be met, no less than 3,500 newcomers to the travel and accommodations industry must be trained, in addition to more than 5,000 already employed who need updating and retraining. All personnel working in the tourism sector, private and public sector alike, are in urgent need of proper training. The following outline illustrates existing training requirements in Belize's tourism sector:

- | | |
|--|---|
| <p>A - TOURISM PROMOTION
 General awareness
 Tourism development</p> | <p>D - HOTEL MANAGEMENT
 Managers
 Accounting
 Cost control
 Marketing
 Food and Beverage
 Cost control
 Middle Management
 General supervision
 Specialized skills
 Employees
 Service procedures</p> |
| <p>B - RECEPTIVE SERVICES OPERATORS
 Managers
 Administration/management
 Cost control
 Marketing
 Packaging
 Product design
 Middle Management
 Group handling
 Packaging
 Product design
 Operations
 Supervision
 Tour Guides
 Guiding techniques
 Psychology of groups</p> | <p>E - TRAVEL AGENCIES
 Managers
 Administration
 Cost control
 Marketing
 Middle Management
 Destination knowledge
 Fares
 Public relations</p> |
| <p>C - ATTRACTION OPERATORS
 Archaeological Parks
 Park management
 Guiding techniques
 Group handling</p> | |

Receptive services and attraction operators are key individuals in any successful travel industry. Their absence or weakness will delay the growth of tourism at a given destination and create opportunities for foreign operators to take over a function that should be in the hands of local business people. In Belize today, the presence of Mexican and Guatemalan operators is quite noticeable. Their presence in the country is a result of the lack of strong and well-equipped national operators.

At present, tours and excursions within the country are arranged and offered by hoteliers, receptive services operators, and some attraction operators. The number of receptive services operators is limited and, although they seem willing to work and



expand their services, they do face certain constraints. Their technical knowledge is limited as most have not had formal training in receptive operation, product design, packaging, and administration.

The first step toward establishing a local cadre of tourism professionals should be to conduct a training needs assessment at the national level. A training needs assessment can provide complete information, including job profiles, quality levels, and numbers per position. This assessment should be carried out by professionals knowledgeable of the modern structure of the tourism activity and the human resources it requires.

From the results of the training needs assessment, a national tourism training strategy should be formulated. This strategy ought to consider updating those presently employed as well as newcomers to the industry in every sector or activity area, including the archaeology sector as it relates to tourism. The present concern on whether or not foreign investors and personnel should be allowed to continue entering Belize's tourism activity can be resolved by providing Belizeans the competitive edge they need to properly confront the challenge they face without having to use regulatory measures to avoid competition. An adequate and realistic training program, complementing all other actions, should provide the country with the necessary human resources to avoid having to import foreign labor.

An initial step in the implementation of a training program should be a trainer's program. The objective of such a program will be to create a group of national trainers who will conduct the required training and updating at the various destinations. This group should then be the foundation of a strong and well-designed training system. The trainer's training program can be organized and conducted with the cooperation of specialized training institutions.

11.4 Market Belize's Archaeological Tourism Products

A well-defined tourism theme is necessary to obtain a proper product definition. Belize's tourism product consists of its people, the country's archaeological and cultural heritage, attractive and exceptional natural areas, accommodations of unique character, and its tourism services. Although it is marketable as is, it must be enhanced and improved if a higher yield is expected.

Recent attempts show a tendency toward defining Belize's tourism product as ecotourism, following in the footsteps of successful Costa Rica. However, a more fitting approach would be to define it as ecocultural tourism, a concept that better describes and serves to differentiate the country's tourism resources. The ecocultural concept will also serve to better structure and prepare the country's product. The proper mix of attractions should include natural sites and archaeological parks, with additional elements such as art, events and festivals, folklore, handicrafts, history, local cuisine, and music.

By redefining its tourism theme, enhancing its services and attractions, and restructuring and improving the quality of its overall product, Belize will obtain a competitive advantage that should allow the country to become an exclusive destination offering quality travel experiences to special interest groups, today's most attractive travel markets. Direct and intensive marketing efforts are required using the proper media and distribution channels. General promotional efforts will be inadequate; specific market targeting will be necessary.

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It is also recommended that an awareness campaign at a national level be planned and conducted with the participation of both public and private sectors, with the aim of creating the necessary awareness among all Belizeans of the importance of the Belize heritage and its potential role in the country's development while stressing the importance of protecting Belize's unique and irreplaceable cultural heritage, mainly its archaeological past. This should be a long-term campaign with the active participation of the communications media, industry, trade, tourism, and all government offices. Belize's educational system should emphasize and include courses dealing with its unique and valuable cultural heritage within its regular curricula.

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APPENDIX A

COMPONENTS OF A MASTER PLAN

A Master Plan for each archaeological site should be formulated for the protection and use of each site and its surrounding habitat. The plan should take into account Belizean conservationist policies and their application to reserve areas and respective buffer zones.

The Master Plan should cover:

- a) A description of the natural attributes and limitations of the proposed park area
- b) Basic concepts for the use, management, and development of the area
- c) A delineation of park boundaries and buffer zones
- d) A delineation of different management areas within the park
- e) A specific program of archaeological resource management, including:
 - o Consolidation and restoration of ruins
 - o Preservation of cultural property
 - o Interpretation of the visitor's experience
 - o Budget estimates on general construction, ruins consolidation, and maintenance
- f) Public use programs, including an engineering plan, drawings, and on-site construction and budget estimates
- g) A specific program for the management of natural resources
- h) An operations program
- i) An integrated development program

Suggested Master Plan Team Formulation

It is recommended that each Master Plan be developed by a team of professionals consisting of:

- o A general coordinator
- o An archaeologist
- o An architect, specialized in monument restoration
- o A biologist/ecologist
- o An expert in Park Development Services
- o A civil engineer with experience in hydraulics
- o An economist
- o A tourism specialist

APPENDIX B. CALCULATIONS OF NET PRESENT VALUE AND INTERNAL RATE OF RETURN TO INVESTMENT IN LANANAI ARCHAEOLOGICAL PARK (BZS)

	Year														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Expenses	1,383,700	1,383,700	1,383,700	416,150	419,150	423,070	441,889	444,889	449,729	467,628	470,628	475,468	482,902	496,367	501,207
REVENUE TO PROJECT															
Alternative A				195,514	209,619	224,600	240,529	367,454	394,117	422,614	453,094	485,711	520,638	558,061	598,177
Alternative B				274,071	294,460	316,164	339,289	528,908	568,136	610,113	655,065	703,223	754,845	810,211	869,617
Alternative C				352,628	379,301	407,728	438,049	690,363	742,155	797,613	857,035	920,734	989,052	1,062,361	1,141,058
Cash Balance															
Alternative A	(1,383,700)	(1,383,700)	(1,383,700)	(220,636)	(209,531)	(198,470)	(201,360)	(77,435)	(55,612)	(45,014)	(17,534)	10,243	37,736	61,694	96,970
Alternative B	(1,383,700)	(1,383,700)	(1,383,700)	(142,079)	(124,690)	(106,906)	(102,600)	84,019	118,407	142,485	184,437	227,755	271,943	313,844	368,410
Alternative C	(1,383,700)	(1,383,700)	(1,383,700)	(63,522)	(39,849)	(15,342)	(3,840)	245,474	292,426	329,985	386,407	445,266	506,150	565,994	639,851
REVENUE TO COUNTRY (includes revenue to project)															
Alternative A				2,873,880	3,227,942	3,625,625	4,072,302	4,574,009	5,137,527	5,770,471	6,481,393	7,279,900	8,176,784	9,184,154	10,315,653
Alternative B				4,310,820	4,841,913	5,438,437	6,108,453	6,861,014	7,706,291	8,655,706	9,722,089	10,919,850	12,265,176	13,776,246	15,475,479
Alternative C				5,747,761	6,455,885	7,251,250	8,144,604	9,148,019	10,275,055	11,540,941	12,962,785	14,559,800	16,353,568	18,368,327	20,631,305
Cash Balance															
Alternative A	(1,383,700)	(1,383,700)	(1,383,700)	2,457,730	2,808,792	3,202,555	3,630,413	4,129,120	4,687,798	5,302,843	6,010,765	6,804,432	7,693,882	8,687,797	9,814,446
Alternative B	(1,383,700)	(1,383,700)	(1,383,700)	3,894,670	4,422,763	5,015,367	5,666,564	6,416,125	7,256,562	8,188,078	9,251,461	10,444,382	11,782,274	13,279,879	14,972,272
Alternative C	(1,383,700)	(1,383,700)	(1,383,700)	5,331,611	6,036,735	6,828,180	7,702,715	8,703,130	9,825,326	11,073,313	12,492,157	14,084,332	15,870,666	17,871,960	20,130,098

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APPENDIX C

FOOTNOTES

- (1) A University of California study classifies the reef in Northern, Middle, Southern, and Deep Sea Banks regions.
- (2) The RDA team found several sources of figures which were contradictory. Based on the reliability of the source, the figures' firmness in standing up to cross-checking, and the experience gained in interviewing, this report has tried to work with those figures that seem closest to perceived reality.
- (3) Tourism Sector Development Draft Plan. 1990-1994.
- (4) USAID/BELIZE "Belize Macroeconomic Assessment." The figure is estimated using current prices.
- (5) Some discrepancies have also been found in this figure, as presented by different sources. For this report the US\$690.00 per stay average in the Caribbean at 10.63 nights was taken as a base for an average daily expenditure of US\$64.91. This was applied to the average stay in Belize, which is also discussed in this study.
- (6) Tourism, British military forces stationed in the country and banking services are the principal components of the nonfactor services account. Banking services are estimated at BZ\$15.0 million in 1989. If the military is estimated at 2,000 individuals with each one affording BZ\$1,500/month as actual in-country expenditure, the total would be BZ\$58.6 million or 53.5%.
- (7) One of the most exclusive and luxurious hotels in Belize is found in the Orange Walk District.
- (8) Market Strategy and Public Relations Plan for Belize, Central America. Pannell Kerr Forster. Washington, D.C.

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