75

ANALYTICAL / ENVIRONMENTAL ASSESSMENT REPORT

MASTER PLAN
FUTURE DEVELOPMENT PLAN

CAMP ZAMA
KANAGAWA, JAPAN

OCT. 31. 1986

FINAL SUBMITTAL

OCTOBER 1986

Prepared for:

US Army Corps of Engineers
Japan Engineer District

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SECTION 1

INTRODUCTION

1.1 PURPOSE OF THIS REPORT

This Analytical/Environmental Assessment Report together with the Future Development Plans and Tabulation of Existing and Required Facilities for Camp Zama, Japan have been prepared in accordance with the requirements of AR 210-20, dated 26 January 1976 and effective 15 March 1976.

The purpose of this report is to provide a narrative analysis of plans providing information not apparent by viewing the plans. The Analytical/Environmental Assessment Report presents basic information on proposed new facilities and upgrading projects and analyzes the probable impact of these facilities on key environmental elements, land uses and utilities.

The Companion Future Development Master Planning Documents are:

Plans for Future Development

- Regional Plan
- Reservation Plan
- General Site Plan

DA Form 2369-2-R (Tabulation of Existing and Required Facilities - Facilities Requirements)

1.2 ORGANIZATION OF THE REPORT

The Analytical/Environmental Assessment Report follows the format set forth in Army Regulation No. 210-20, "Master Planning for Army Installations," effective March 15, 1976. The report has four major sections:

a. Introduction

b. Proposed Projects, Environmental Elements and Expected Impacts

c. Land Use Relationships

d. Utilities Systems

In Sections 2 through 4, the focus is on changes and impacts that will be associated with the implementation of proposed upgrading projects and new facilities. Thus, the report does not repeat data and discussions already covered in the "Analysis of Existing Facilities" Report dated January 1983. This latter report has separate sections devoted to existing environmental conditions, land use relationships and utilities systems. The information contained in the "Analysis of Existing Facilities" provides the basic background data for the environmental impact discussions presented in this report.

1.3 LOCATION AND GENERAL DESCRIPTION

Camp Zama is a U.S. Army installation of approximately 585 acres of level to hilly land. This installation is located approximately 24 miles southwest of Tokyo, in Kanagawa Prefecture. It is situated between the local jurisdictions of Zama City and Sagamihara City.

Camp Zama was established in 1945 on the grounds of a former Japanese army installation.

1.4 MISSION

Camp Zama is the headquarters of the United States Army Japan/IX Corps and the 9th Area Support Group (Provisional) (U.S. Army Garrison, Honshu). The following are the missions of the United States Army Japan:

a. Commands all US Army units assigned or attached to US Army Japan (USARJ) and employs these forces to conduct operations in support of assigned missions and operating plans of Headquarters, US Forces, Japan (HQ USFJ), and other subordinate unified and component commands as required.

b. Maintains war reserve and operational project stocks for contingency purposes.

c. Maintains storage facilities with a capability to expand into a logistical base as required.

d. Provides garrison-type support to US Army units and Government agencies stationed in Japan as required.

e. Provides such theater-wide support and support for other commands, agencies, and activities as may be directed.

f. Maintains liaison program designed to further mutual cooperation and understanding between the US Army and the Japan Ground Self-Defense Force (JGSDF) in the pursuit of common goals.

g. Coordinates with joint and other Service headquarters and, as authorized by the Commander, USFJ, with the US Embassy and appropriate agencies of the Government of Japan (GOJ).

h. Assists HQDA, DQ PACOM, HQ USAWESTCOM, and HQ USFJ in the development and preparation of contingency plans for Japan, and when directed, for Korea and other non-PACOM areas as required.

1.4.1 Changes in Activities

The following changes in activities of the United States Army Japan were implemented since that outlined in the "Analysis of Existing Facilities Environmental Assessment Report" dated January 1983:

a. On 1 January 1983, US Army Regional Personnel Center, Japan, was reassigned from HQ USARJ to USAGH.

b. On 15 January 1984, US Army Aviation Detachment, Japan, was reassigned to USAGH from HQ USARJ.

c. On 2 April 1984, US Army Legal Support Office, Honshu, was established by splitting MACOM Staff Judge Advocate functions into AMHA Staff Judge Advocate functions and support - and service-type legal functions per HQDA direction on reduction of AMHA functions and resources.

d. On 4 April 1984, HQ USARJ/IX Corps Staff Aviation Office was established by transfer of functions from ACofS, G3.

e. On 1 July 1984, Office of Internal Review was established and placed under direct control of Deputy Commander/Chief of Staff, being separated from ACofS, Comptroller, by direction of HQDA.

f. On 1 May 1985, US Army Exercise Support Group, Japan (Provisional) (USAESGJ (Prov)), was established.

g. On 10 September 1985, HQ USARJ/IX Corps was restructured in accordance with internal management action. Separate Deputy Commander and Chief of Staff were established in lieu of /Deputy Commander/Chief of Staff; Assistant Chiefs of Staff (ACofS), G1, G2, G3, G4, Comptroller, and Information Management, and Staff Engineer, were redesignated as Deputy Chiefs of Staff (DCS) for Personnel/G1, Intelligence/G2, Operations/G3, Logistics/G4, Resource Management, Information Management, and Engineer, respectively; Deputy Chiefs of Staff (DCS) for Host Nation Activities/G5, and Reserve Components were newly established; Offices of Adjutant General, Civilian Personnel Director, Chaplain, and Provost Marshal were consolidated with DCSPER/G1 and made its component elements; US Army Civilian Personnel Office, Honshu, and US Army Finance and Accounting Office, Japan, were reassigned to USAGH; and several operational-type functions performed by HQ USARJ/IX Corps staff elements were transferred to subordinate commands and US Army Information System Command-Japan.

h. On 1 November 1985, organization and functions of HQ USARJ/IX Corps were realigned to implement HQDA Manpower Survey of HQ USARJ/IX Corps. Office of Headquarters Commandant, DCSPER/G1, and Exercise Division, DCSOPS/G3, were reassigned to USAESGJ, and several operational-type functions performed by HQ USARJ/IX Corps staff elements were transferred to subordinate commands.

1.5 INTER-RELATIONSHIPS WITH ADJOINING ARMY FACILITIES

In developing the future development documents for Camp Zama, it is necessary to consider the two adjoining Army facilities at Sagami General Depot and the Sagamihara Family Housing Area since the three installations are closely inter-related in terms of housing and community facilities requirements. In particular, the installation strengths of the three facilities will be considered in determining the requirements for DA Form 2369-2-R (Tabulation of Existing and Required Facilities - Facilities Requirements) for housing and community facilities. Certain criteria may be deviated in order to satisfy the unique inter-relationships between the three installations, however, any deviations will be indicated in the tabulations.

SECTION 2

PROPOSED PROJECTS, ENVIRONMENTAL ELEMENTS AND EXPECTED IMPACTS

The Phase I planning report for Camp Zama, "Analysis of Existing Facilities," includes a comprehensive description of existing environmental conditions at this installation. Section 2 of this report will therefore provide: (1) a description of proposed projects, and (2) a basic analysis of the probable impacts, both beneficial and adverse, of these projects on the environment.

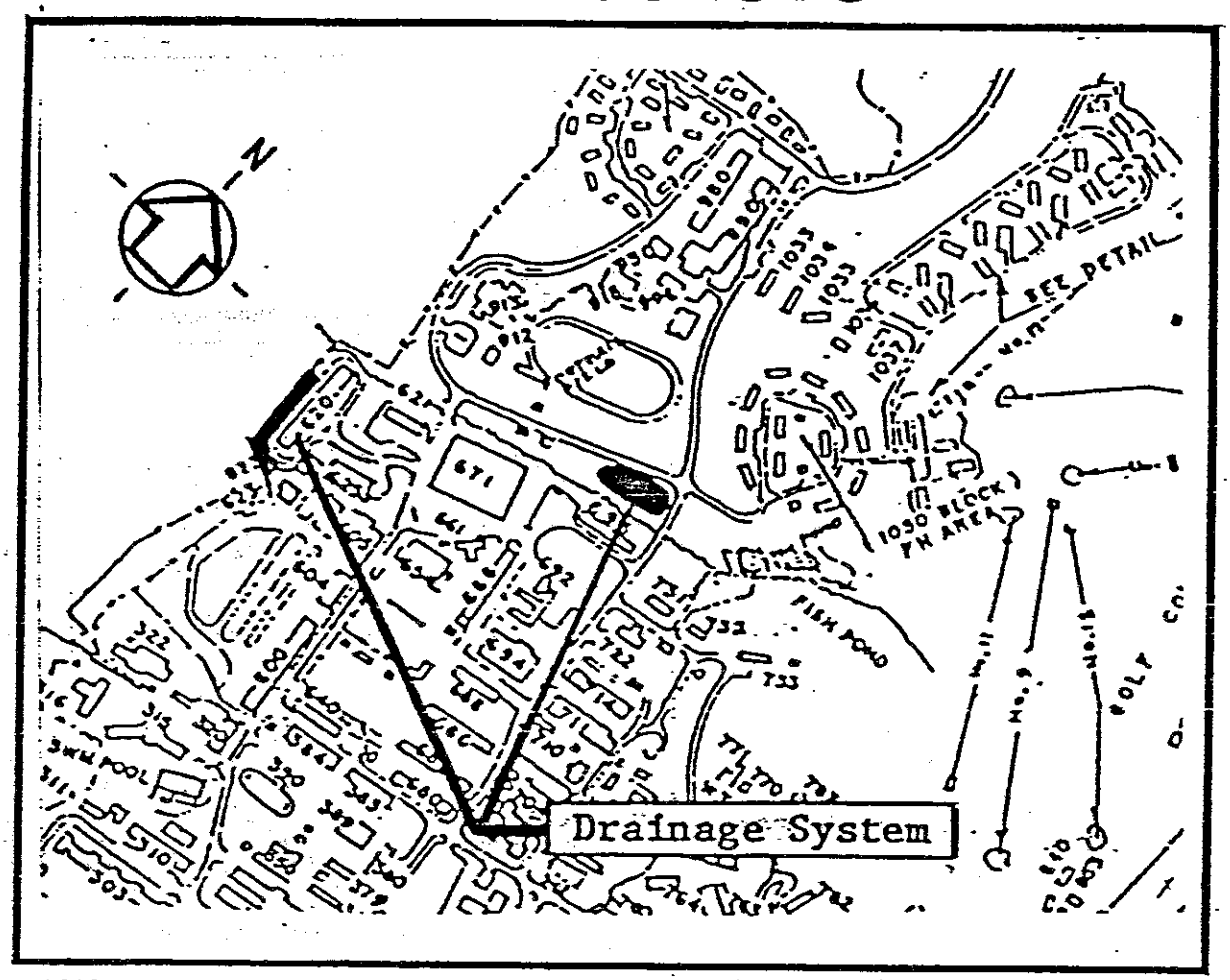
2.1 PROPOSED POJECTS

As of October 1986, there was a total of 40 major projects planned for Camp Zama for the planning period Fiscal Year 1986 through 1992. These projects are briefly described on the following pages, in approximate order of probable implementation. For each project, information is provided relative to purpose, size, proposed location and project description.

MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

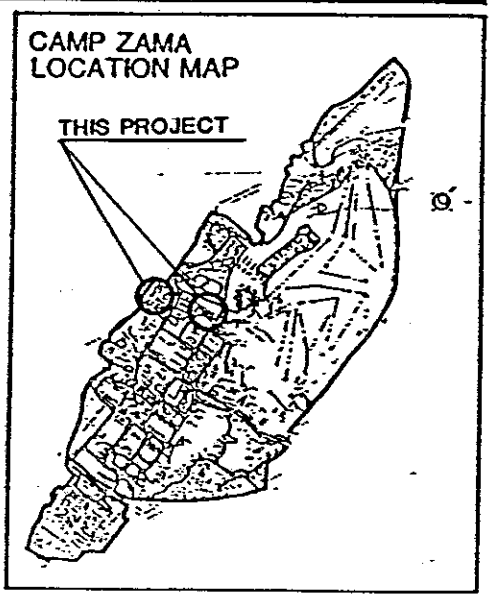
PROPOSED PROJECTS

2.1.1



DATA

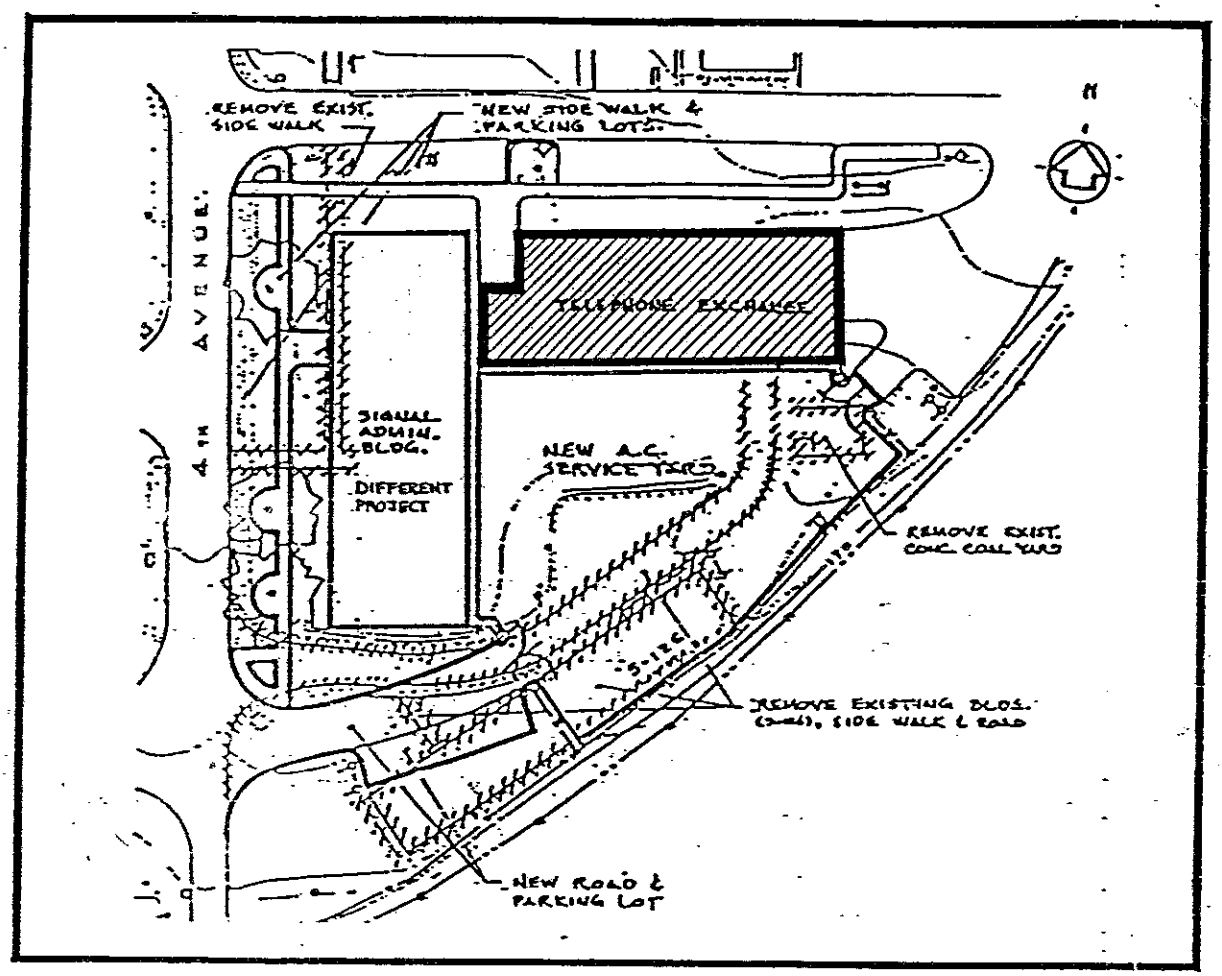
PROJECT TITLE :	DRAINAGE SYSTEM
CATEGORY CODE :	871 10
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1983 (on going)
PROJECT SCOPE :	-
EST. COST :	-
BLDG. DESCRIP :	Construction of a storm drainage system to reduce flood damages to the surrounding Japanese community. Connection between new drainage system and existing off-base system is also required.



MASTER PLAN PHASE I
FUTURE DEVELOPMENT PLAN

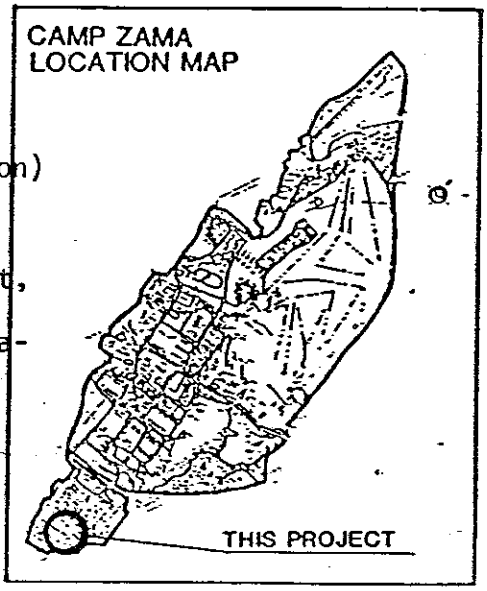
PROPOSED PROJECTS

2.1.2



DATA

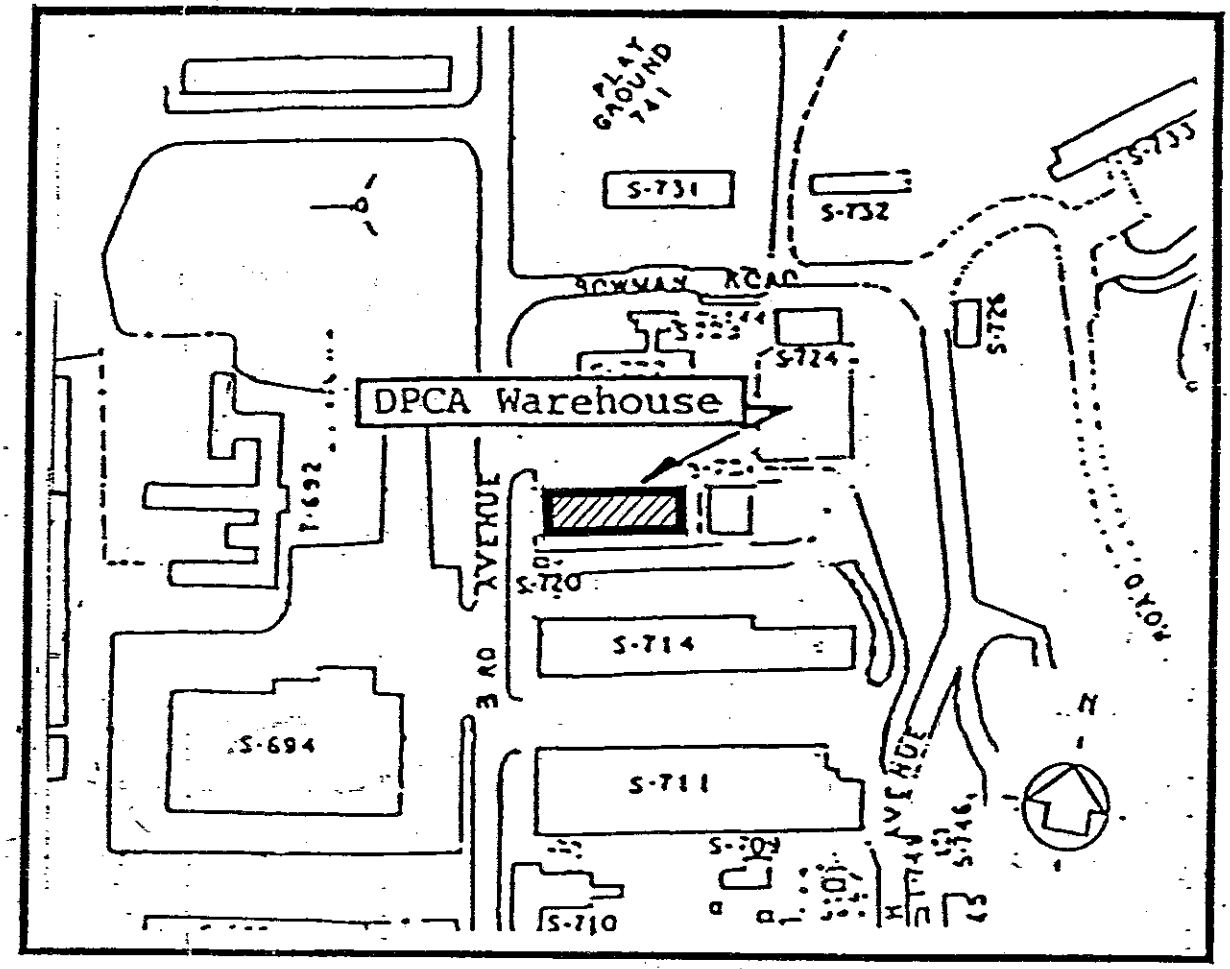
PROJECT TITLE :	TELEPHONE EXCHANGE
CATEGORY CODE :	131 80
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1984 (under construction)
PROJECT SCOPE :	1,486 SM (16,000SF)
EST. COST :	-
BLDG. DESCRIP :	Construction of a permanent, reinforced concrete building to house the administration/tandem telephone exchange system. Project includes utilities and site improvements. (tele. ex. - 7,736 SM & admin. - 8,264 SM)



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

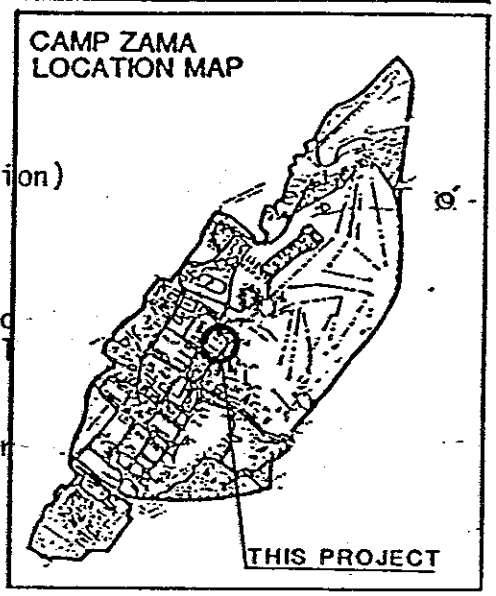
PROPOSED PROJECTS

2.1.3



DATA

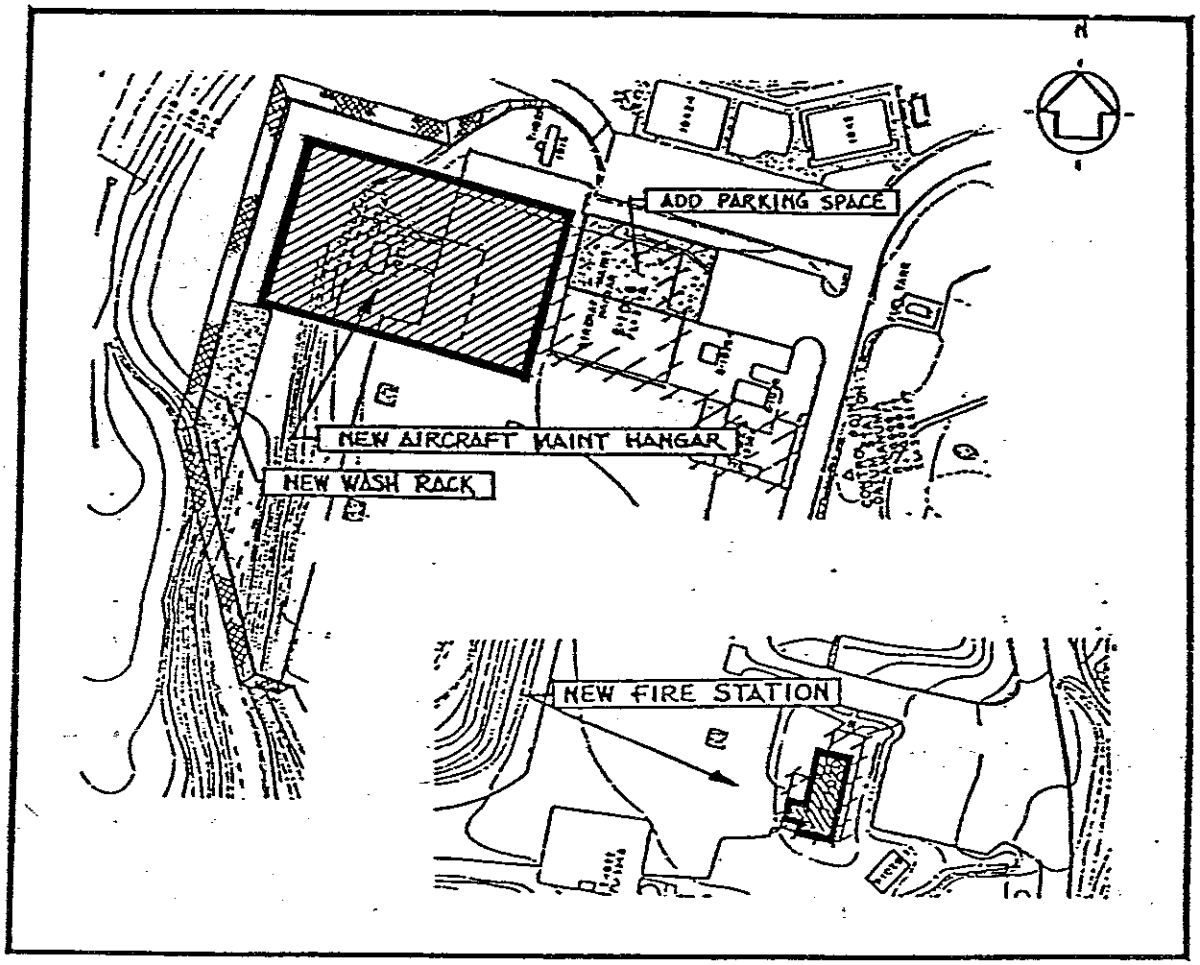
PROJECT TITLE :	DPCA WAREHOUSE
CATEGORY CODE :	442 20
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1985 (under construction)
PROJECT SCOPE :	681 SM (7,330 SF)
EST. COST :	-
BLDG. DESCRIP :	Construction of a permanent, one-story steel rigid frame structure with metal roofing and siding. Building to include storage areas, offices, locker & dressing rooms, etc.



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

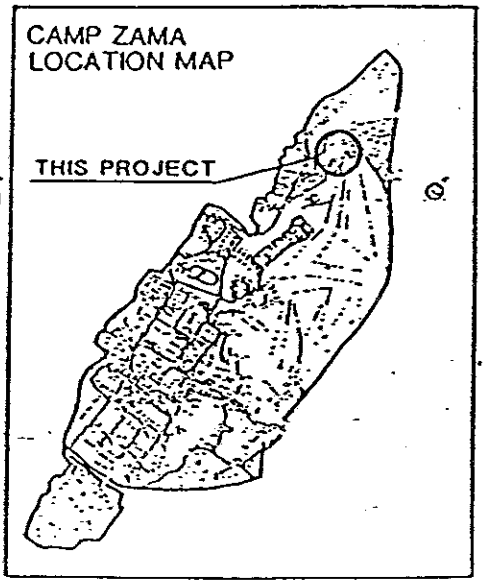
PROPOSED PROJECTS

2.1.4



DATA

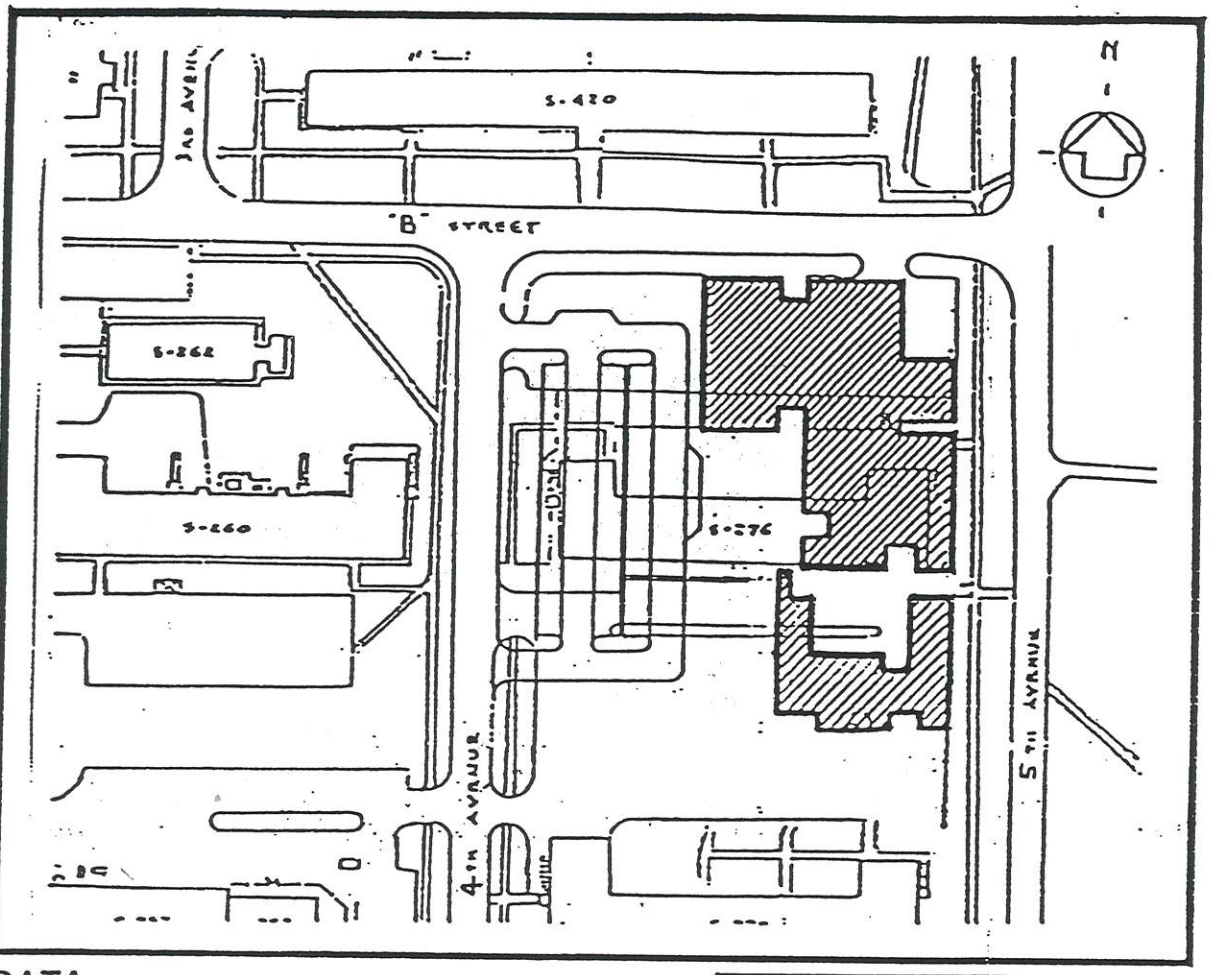
PROJECT TITLE :	MAINT HANGAR/FIRE STN
CATEGORY CODE :	211 10/141 11
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1985 (under construction)
PROJECT SCOPE :	3,253 SM(35,014 SF)
EST. COST :	-
BLDG. DESCRIP :	Construction of a new permanent, fire-resistive standard aircraft maintenance hangar and fire station complete with required utilities and all site improvements. (hangar - 3,038 SM, fire sta. - 215 SM)



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

PROPOSED PROJECTS

2.1.5



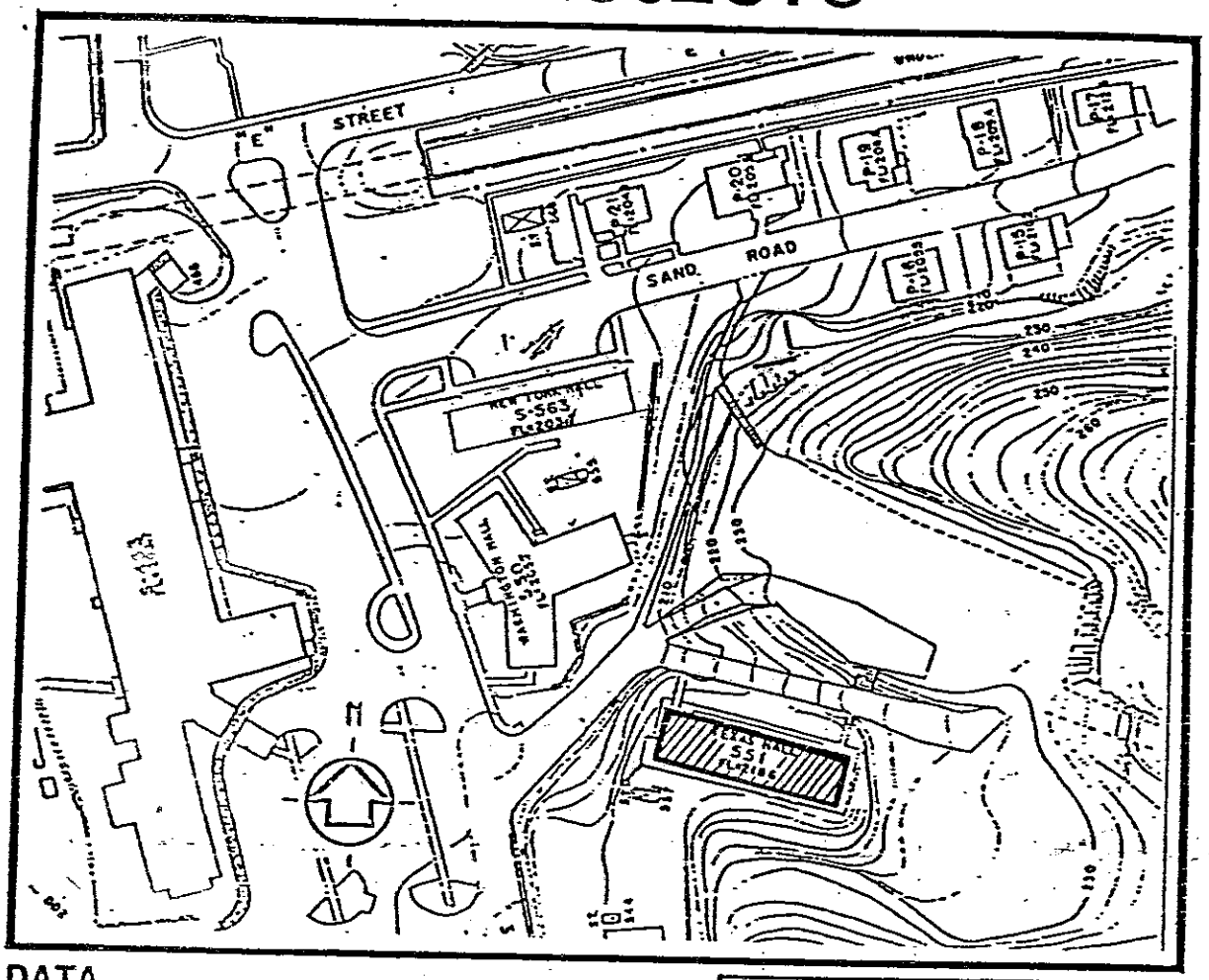
DATA

PROJECT TITLE :	EDUCATION CENTER
CATEGORY CODE :	740 25
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1986 (under construction)
PROJECT SCOPE :	3,131 SM (33,702 SF)
EST. COST :	-
BLDG. DESCRIP :	Construction of a permanent fire-resistive, reinforced concrete structure to house general education center, religious education center and library. Project includes utilities, parking facilities, and site improvement.

MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

PROPOSED PROJECTS

2.1.6



DATA

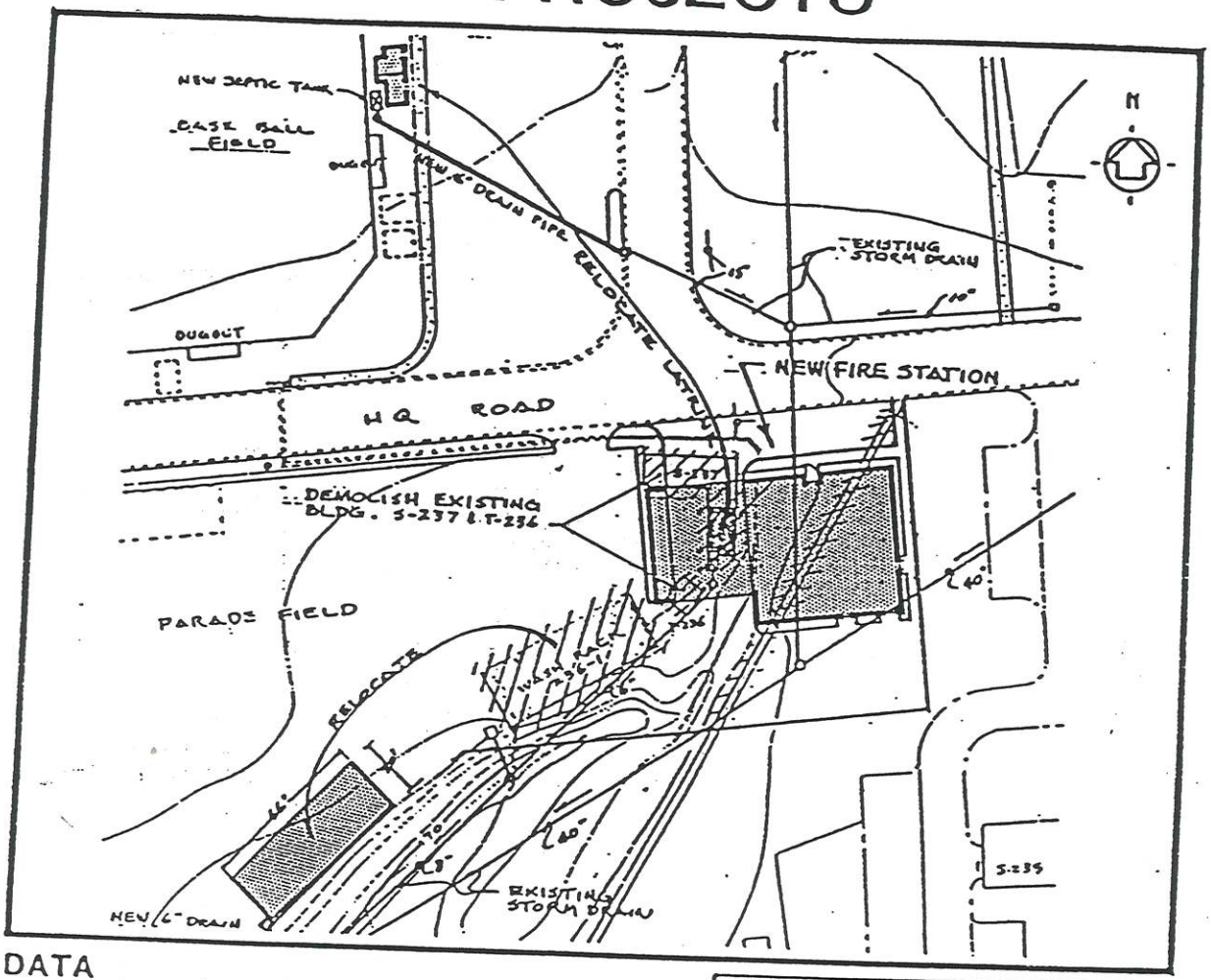
PROJECT TITLE: BOQ MODERNIZATION
CATEGORY CODE: 724 10
FUNDING: GOJ FIP
FY PROGRAM: JFY 1984
PROJECT SCOPE: 16 RM
EST. COST: -
BLDG. DESCRIP: Renovate and upgrade Bldg. 551 (Texas Hall) for use by bachelor officers and U.S. civilians.

CAMP ZAMA
LOCATION MAP

MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

PROPOSED PROJECTS

2.1.7



DATA

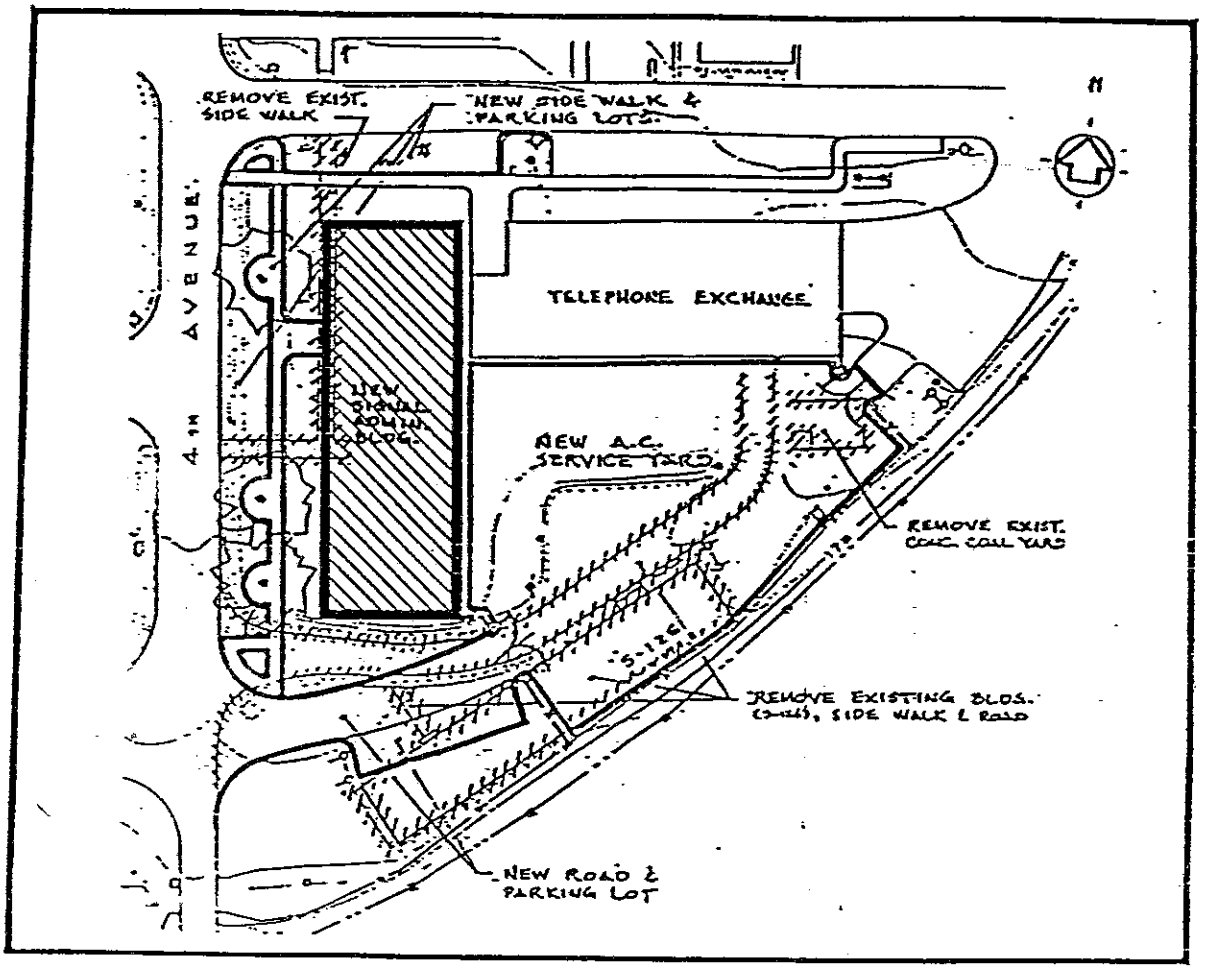
PROJECT TITLE :	FIRE STATION
CATEGORY CODE :	730 10
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1985
PROJECT SCOPE :	490 SM (5,300 SF)
EST. COST :	-
BLDG. DESCRIP :	Construction of a permanent, fire-resistive, reinforced concrete structure and relocation of existing wash rack. Project includes all utilities and site improvement.

CAMP ZAMA
LOCATION MAP

MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

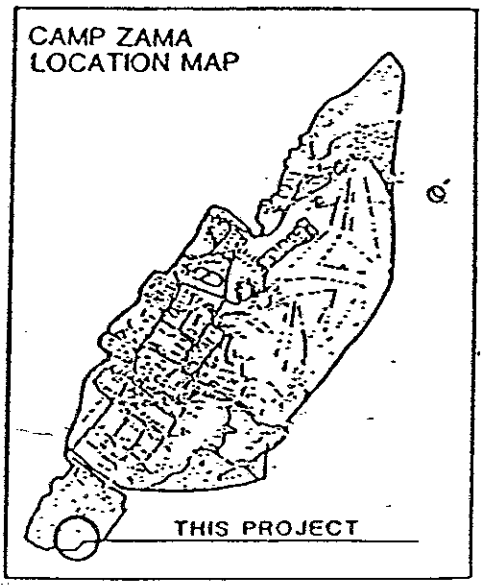
PROPOSED PROJECTS

2.1.8



DATA

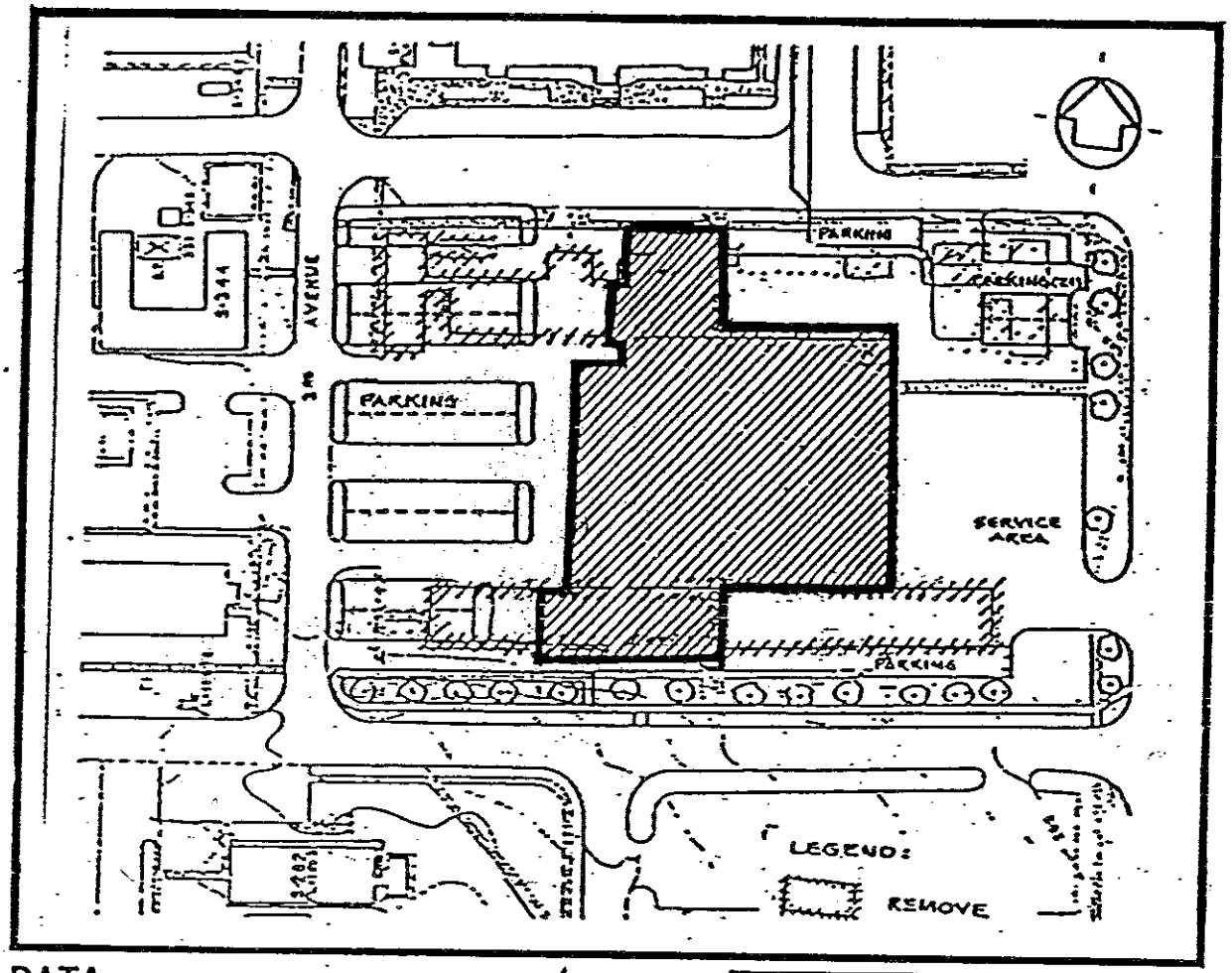
PROJECT TITLE :	SIGNAL ADMIN BLDG.
CATEGORY CODE :	610 24
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1986
PROJECT SCOPE :	1,580 SM (17,000 SF)
EST. COST :	-
BLDG. DESCRIP :	Construct a permanent, fire-resistive reinforced concrete signal administration facility complete with utilities and site improvements. Demolish Bldg. S-126.



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

PROPOSED PROJECTS

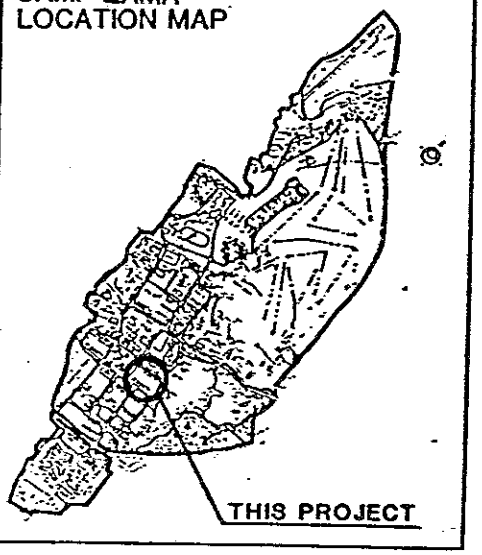
2.1.9



DATA

PROJECT TITLE :	MAIN POST EXCHANGE
CATEGORY CODE :	740 53
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1986
PROJECT SCOPE :	4,785 SM (51,510 SF)
EST. COST :	-
BLDG. DESCRIP :	Construction of a permanent fire-resistive, concrete building to house main post exchange facility, storage area, associated retail and admin spaces. Work includes utilities and site improvements.

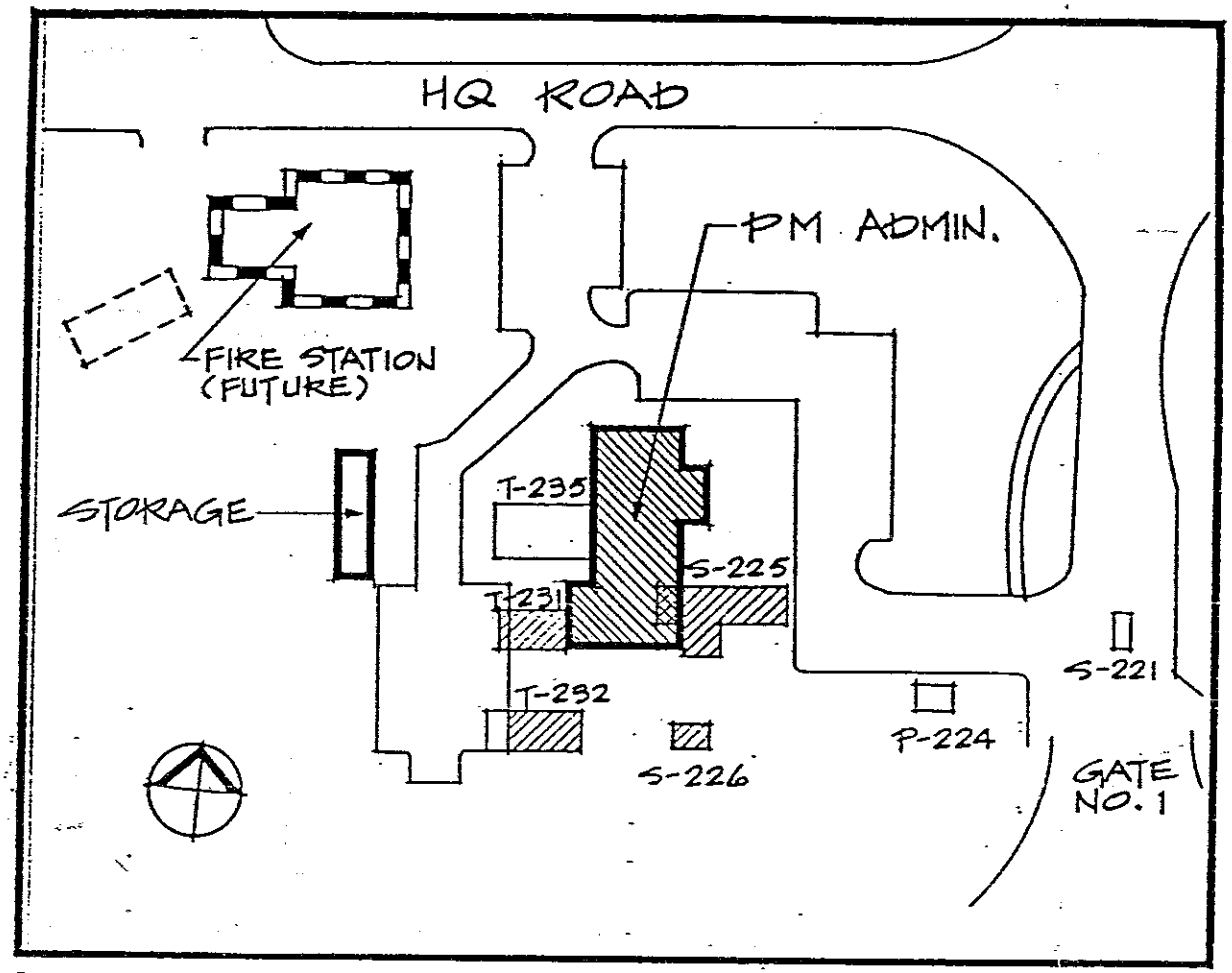
CAMP ZAMA
LOCATION MAP



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

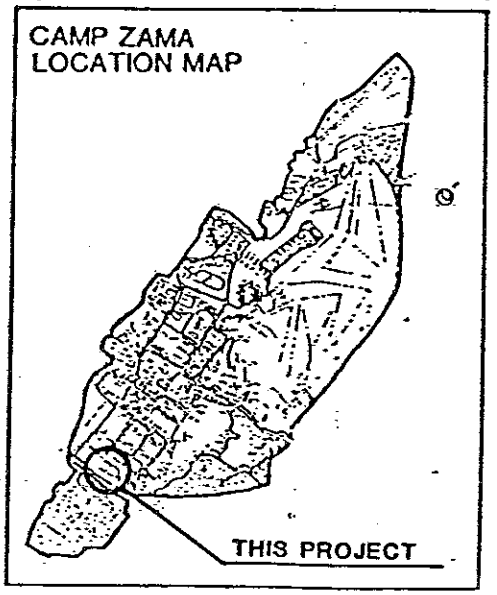
PROPOSED PROJECTS

2.1.10



DATA

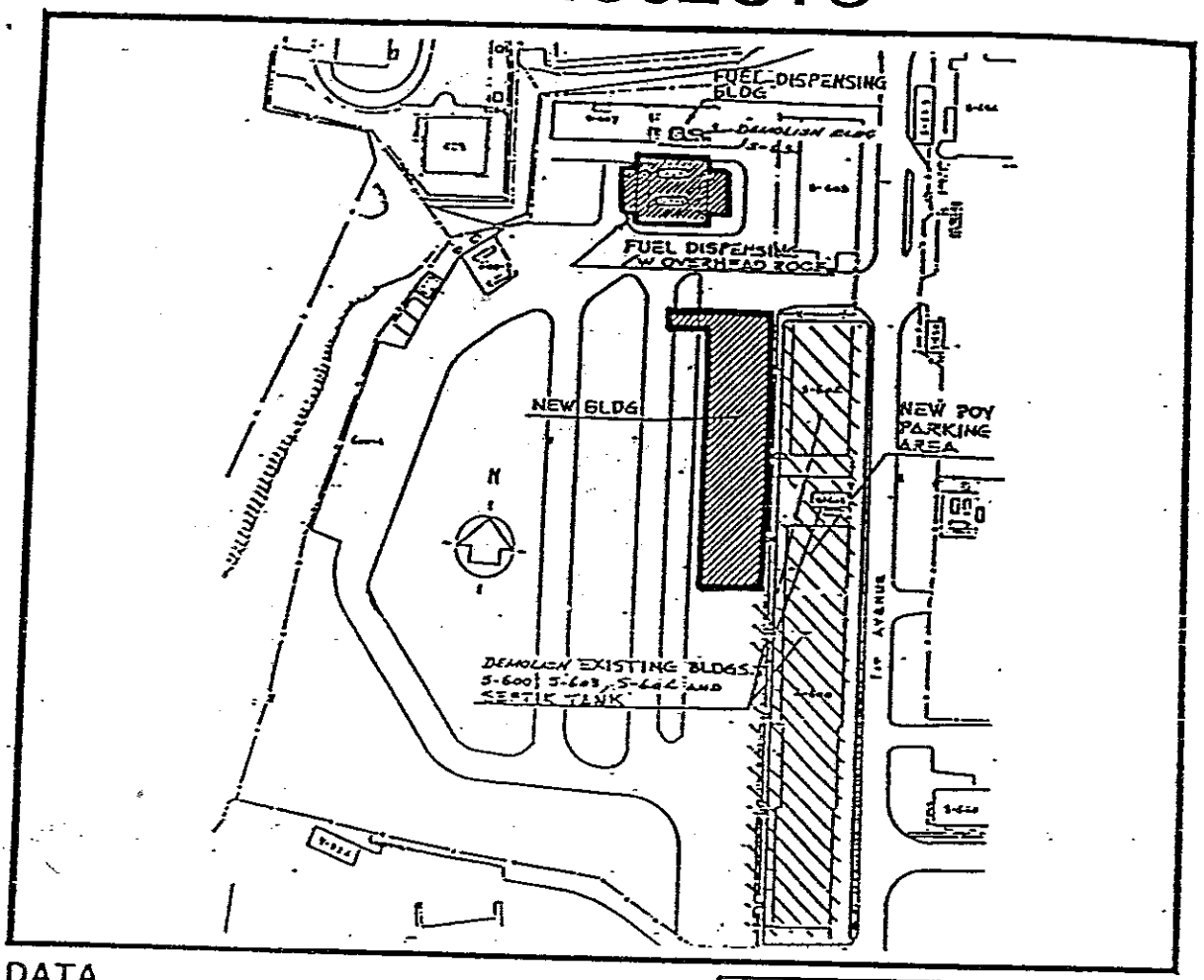
PROJECT TITLE :	PROVOST MARSHAL(PM) ADMIN
CATEGORY CODE :	730 16
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1986
PROJECT SCOPE :	963 SM (10,366 SF)
EST. COST :	-
BLDG. DESCRIP :	Construction of a permanent, fire-resistive, reinforced concrete structure to house Provost Marshall and Military Police functions. Project includes parking facility and demolition.



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

PROPOSED PROJECTS

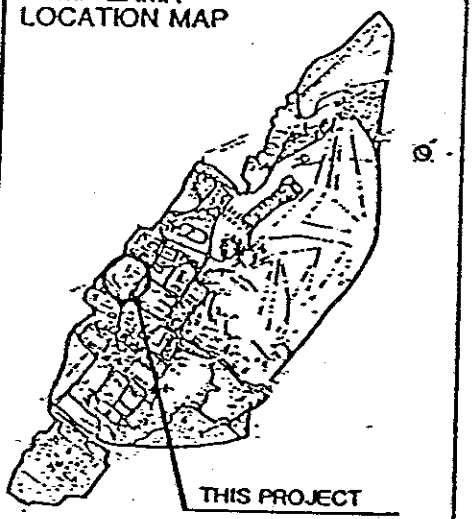
2.1.11



DATA

PROJECT TITLE :	TRANSPORTATION MOTOR POOL
CATEGORY CODE :	872 35
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1986
PROJECT SCOPE :	2,390 SM (25,726 SF)
EST. COST :	-
BLDG. DESCRIP :	Construct a fire-resistive reinforced concrete building to include facilities for heavy and light vehicle maintenance functions. Project includes POV parking spaces, site improvements, and demolition of four buildings.

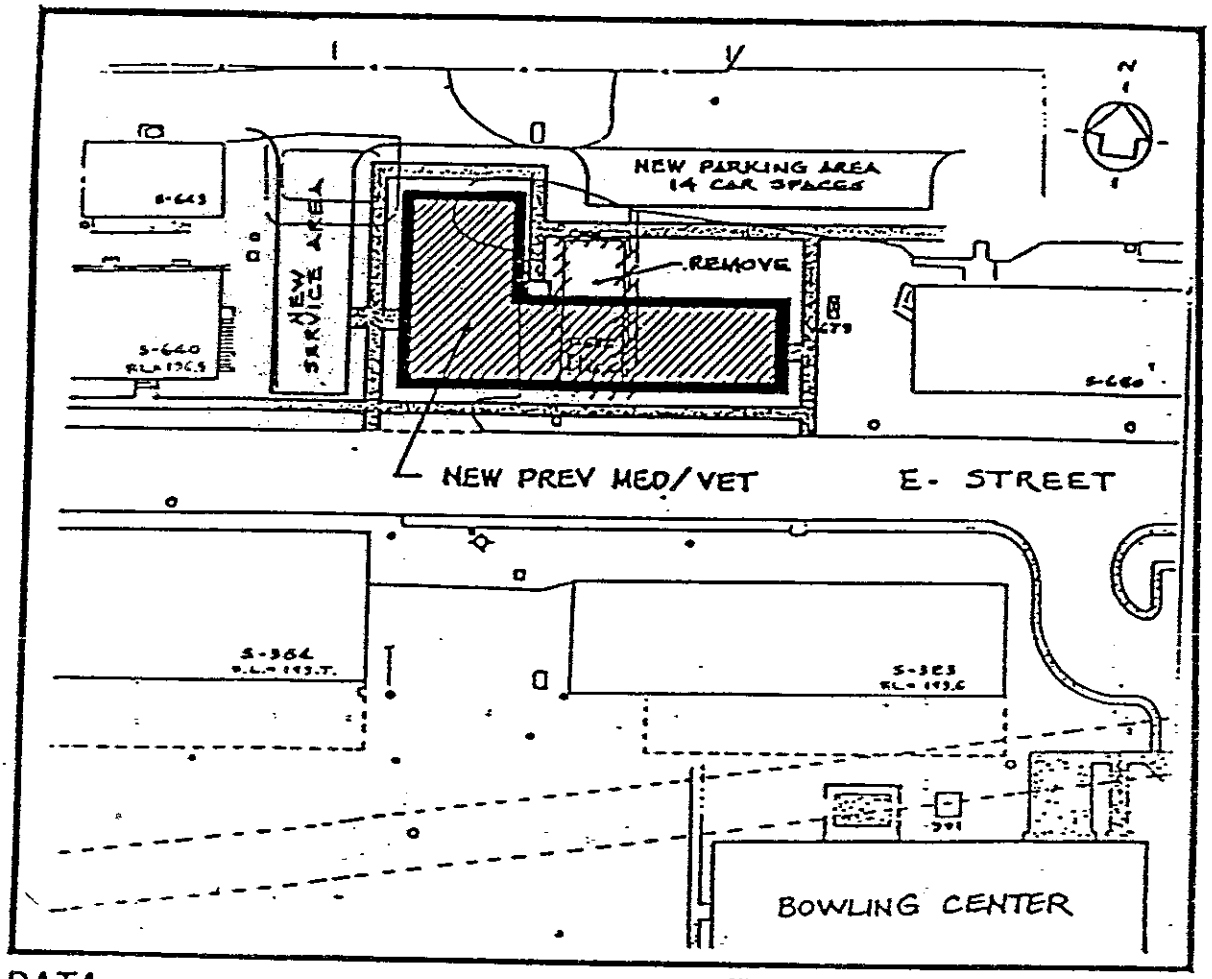
CAMP ZAMA
LOCATION MAP



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

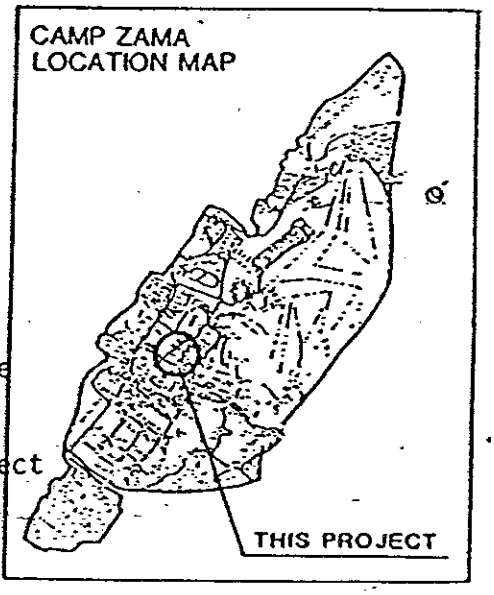
PROPOSED PROJECTS

2.1.12



DATA

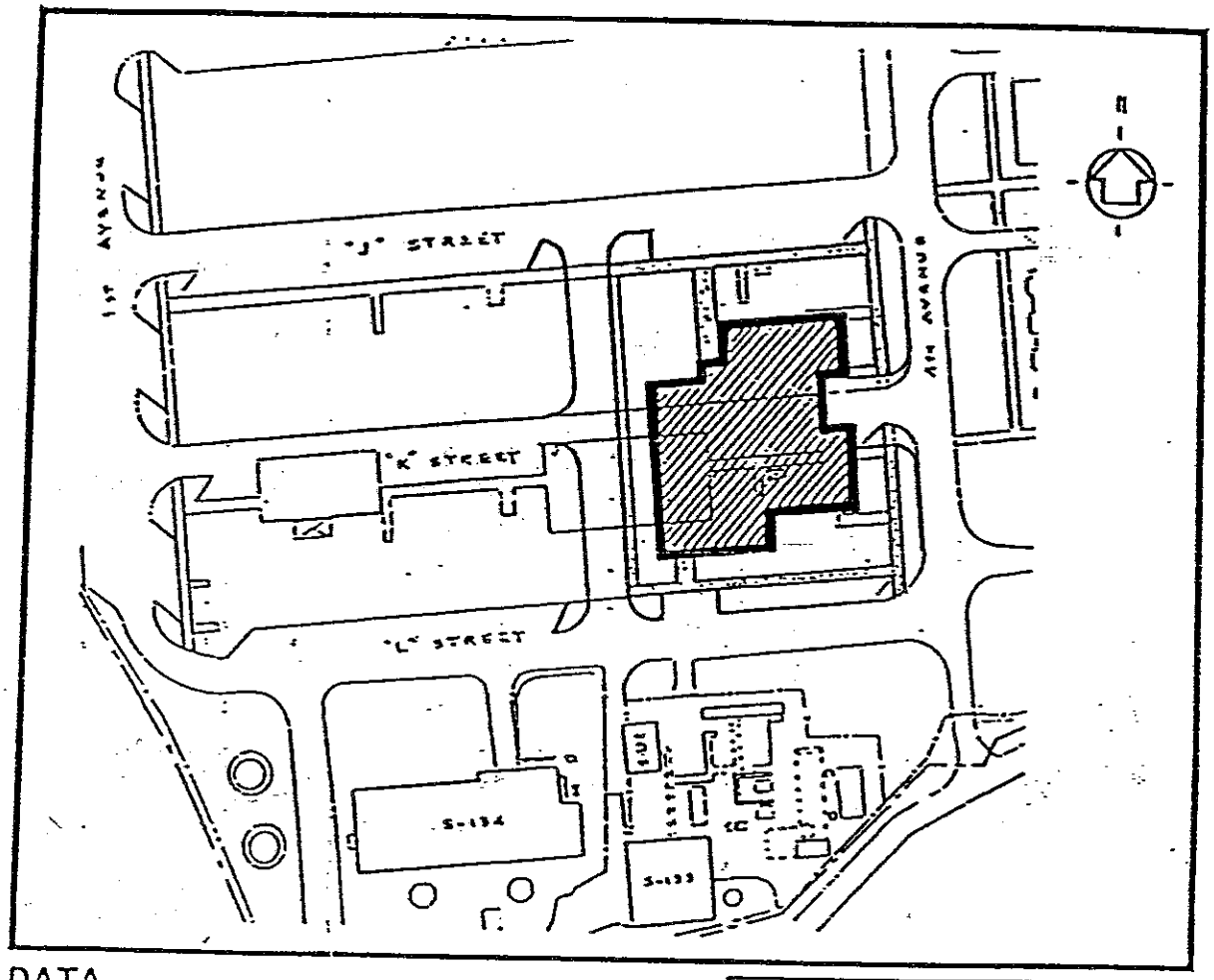
PROJECT TITLE :	PREV MED/VET
CATEGORY CODE :	530 90
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1987
PROJECT SCOPE :	474 SM (5,100 SF)
EST. COST :	-
BLDG. DESCRIP :	Construction of a medical facility which involves preventive medicine and veterinary detachment. The building should be one story, fire-resistive, reinforced concrete. Project includes all required utilities and 14 parking spaces. Demolition of Bldg. T-682.



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

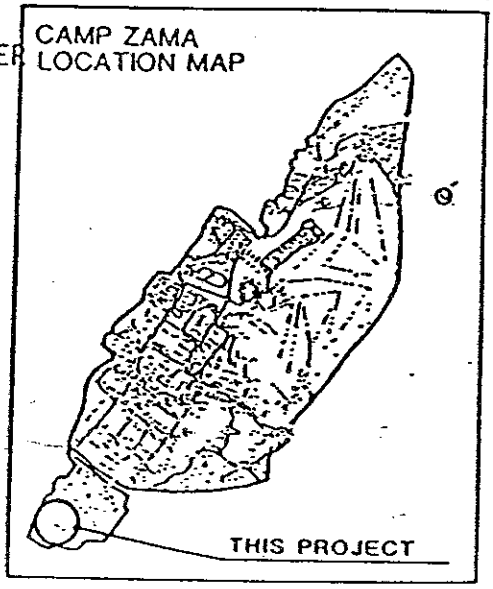
PROPOSED PROJECTS

2.1.13



DATA

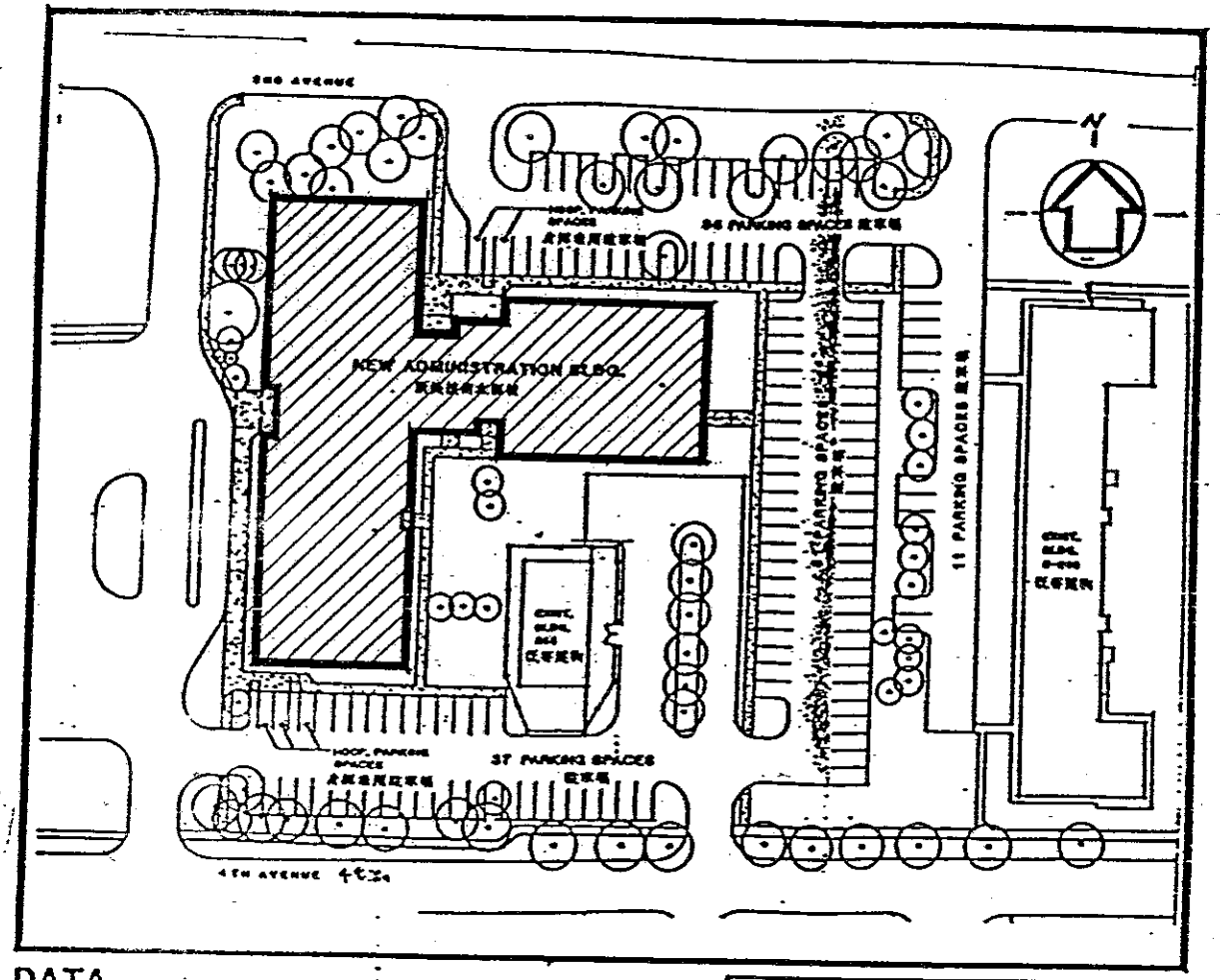
PROJECT TITLE :	TRAINING & AV SUPPORT CENTER
CATEGORY CODE :	171 60
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1987
PROJECT SCOPE :	1,715 SM (18,460 SF)
EST. COST :	-
BLDG. DESCRIP :	Construction of a permanent fire-resistant training and audio-visual support facility for chemical processing of graphic arts, photo development/printing and maintenance of AV training aid equipment. Includes all utilities and site improvments.



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

PROPOSED PROJECTS

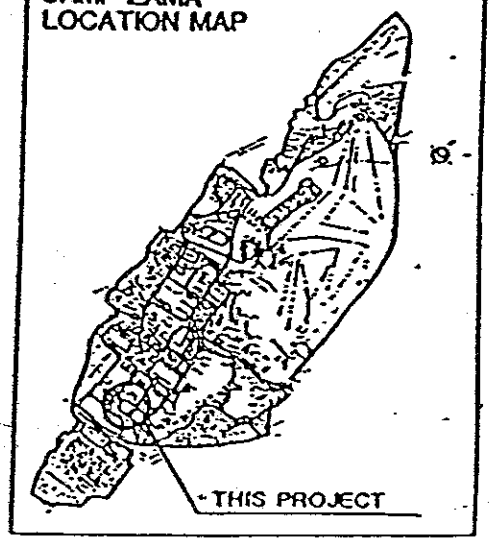
2.1.14



DATA

PROJECT TITLE:	JED ADMIN BLDG
CATEGORY CODE:	610 21
FUNDING:	GOJ FIP
FY PROGRAM:	JFY 1987
PROJECT SCOPE:	4,795 SM (51,610 SF)
EST. COST:	-
BLDG. DESCRIP:	Construction of a new permanent, fire-resistive, reinforced concrete two-story structure with required admin spaces to house Japan Engineering District office. Project includes all utilities and site improvement.

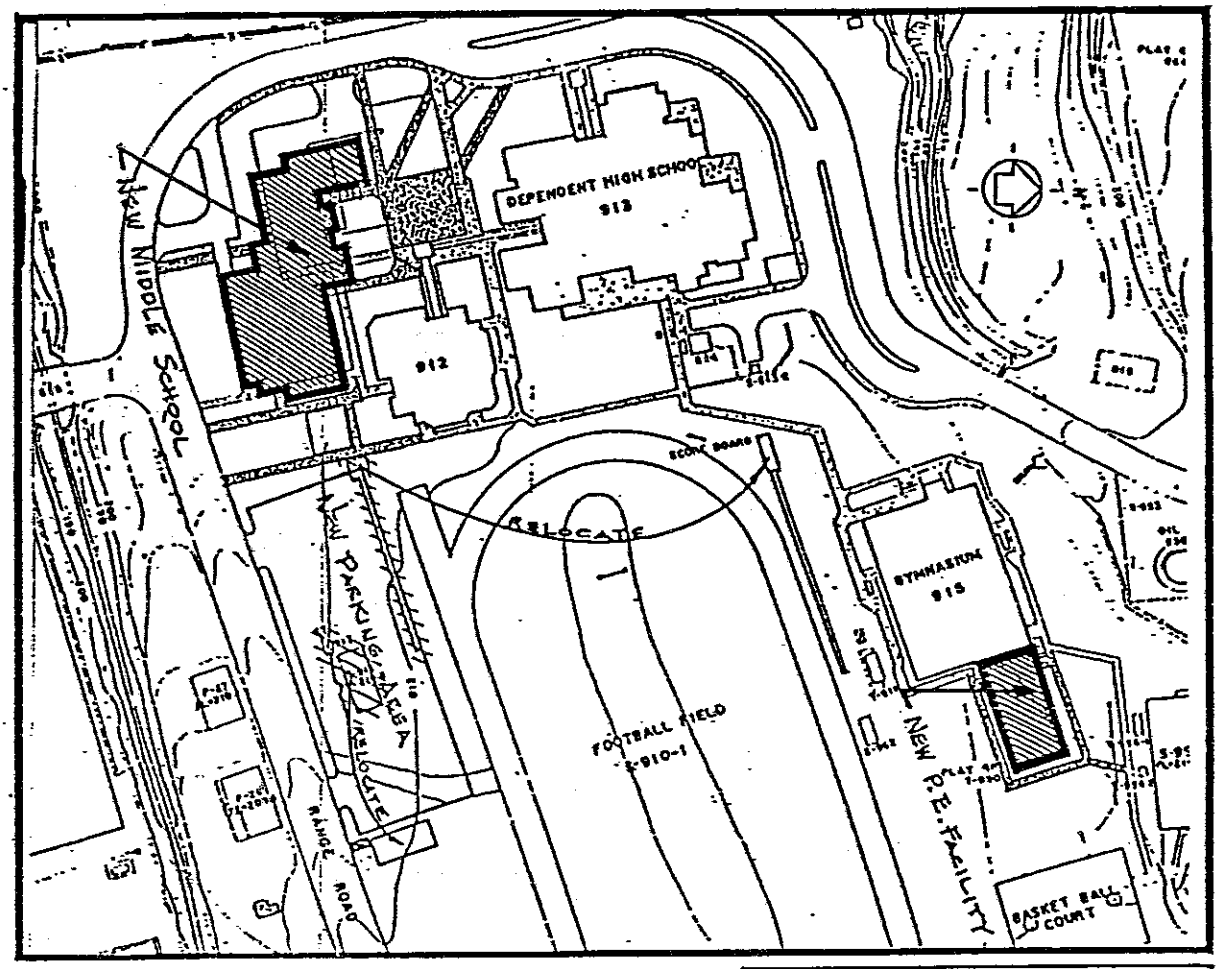
CAMP ZAMA
LOCATION MAP



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

PROPOSED PROJECTS

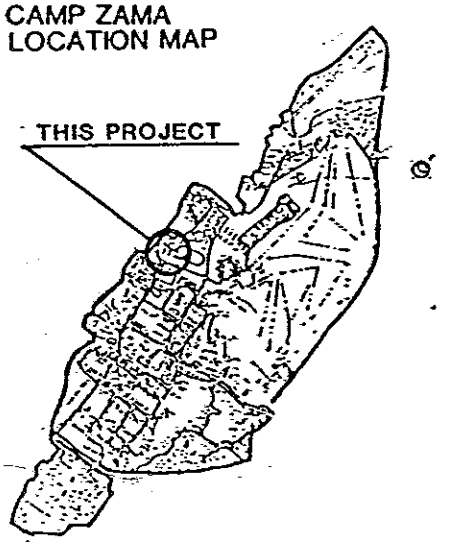
2.1.15



DATA

PROJECT TITLE :	DEPENDENT MIDDLE SCHOOL
CATEGORY CODE :	730 44
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1987
PROJECT SCOPE :	3,456 SM (37,200 SF)
EST. COST :	-
BLDG. DESCRIP :	Construction of a permanent, fire-resistive, reinforced concrete two-story building and one-story physical exercise facility adjoining existing high school gymnasium.

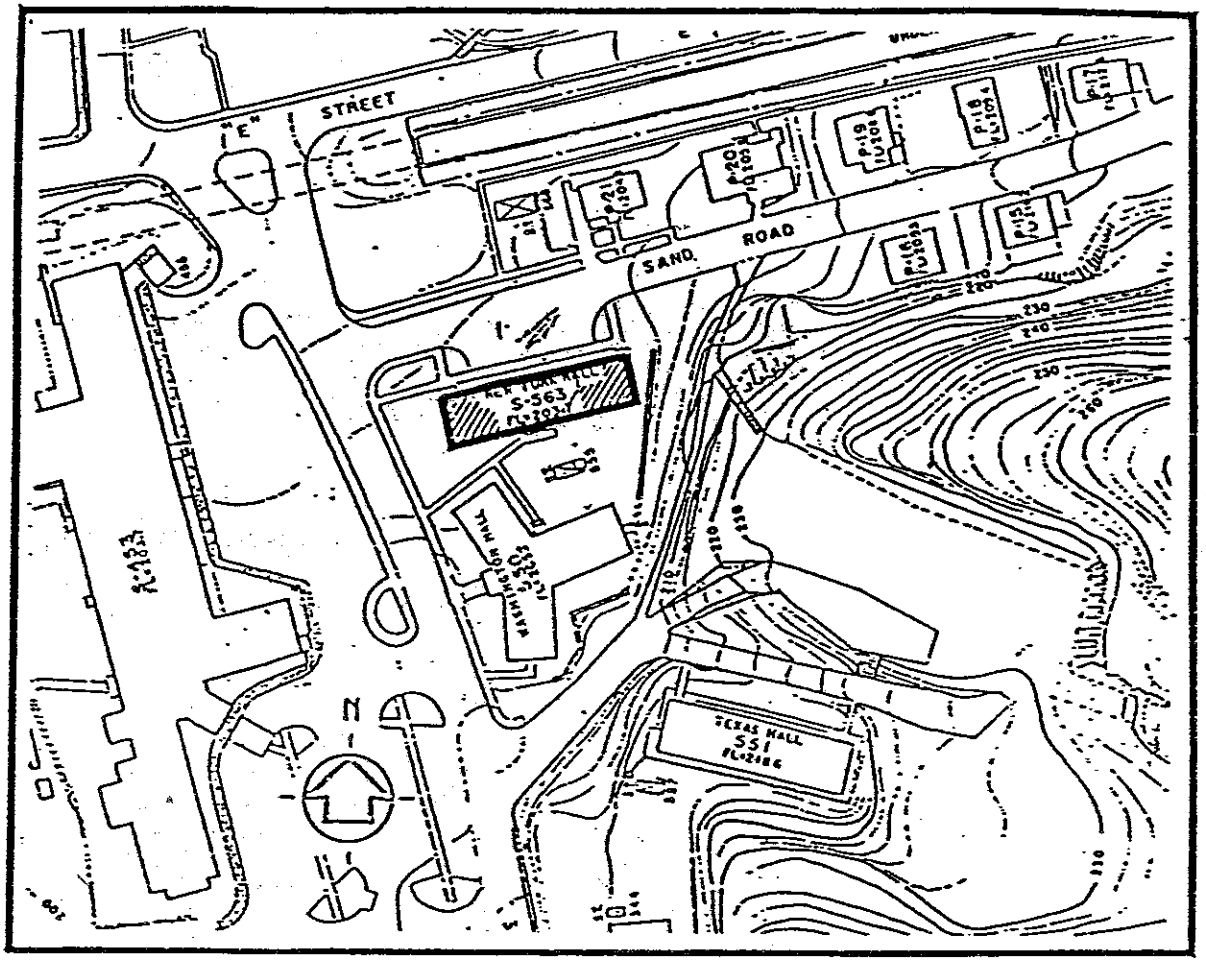
CAMP ZAMA
LOCATION MAP



MASTER PLAN PHASE I
FUTURE DEVELOPMENT PLAN

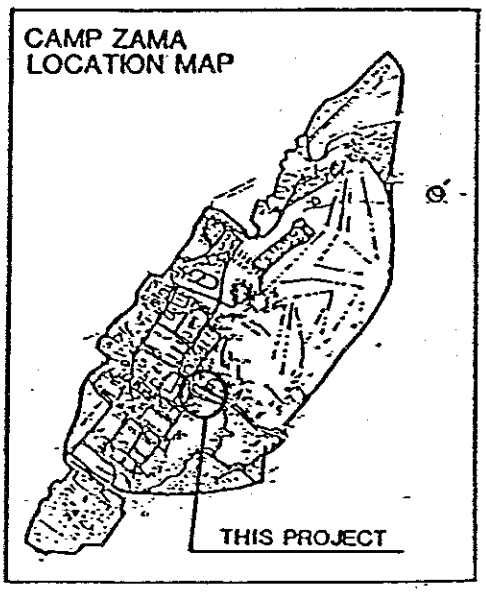
PROPOSED PROJECTS

2.1.16



DATA

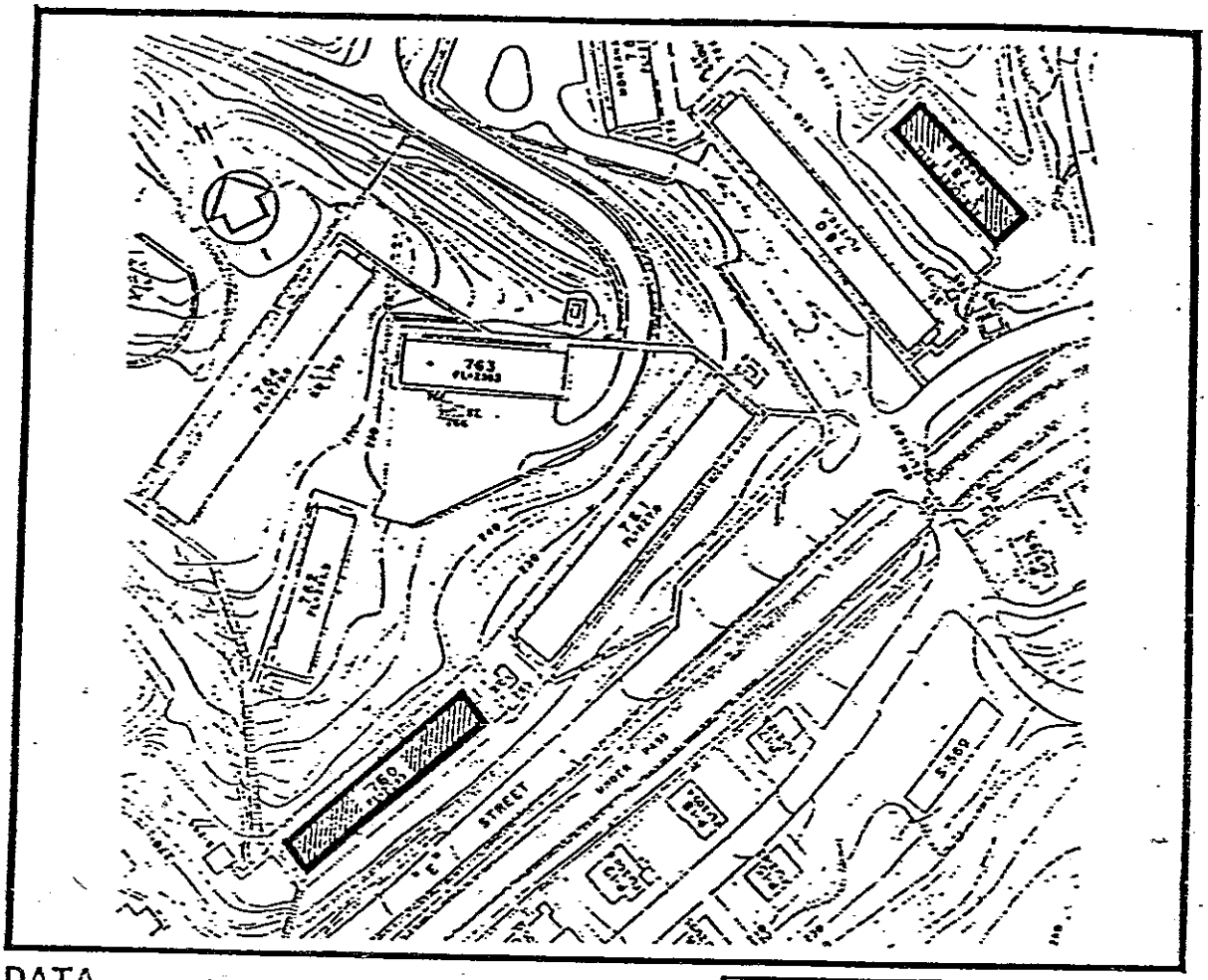
PROJECT TITLE :	VOQ MODERNIZATION
CATEGORY CODE :	724 11
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1987
PROJECT SCOPE :	19 RM
EST. COST :	-
BLDG. DESCRIP :	Modernize VOQ Bldg. No. 563 to include living areas, utilities, site improvements, and consideration for energy conservation.



MASTER PLAN PHASE I
FUTURE DEVELOPMENT PLAN

PROPOSED PROJECTS

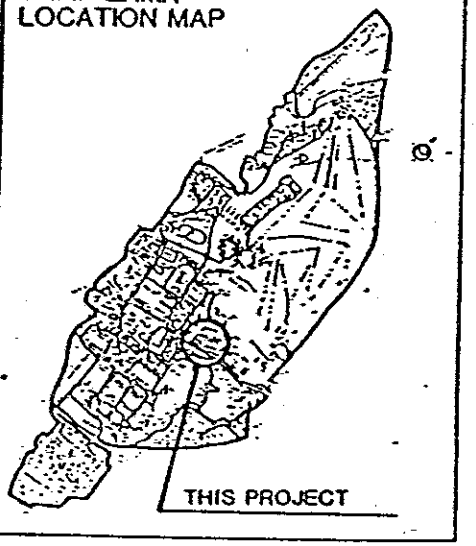
2.1.17



DATA

PROJECT TITLE :	UOPH MODERNIZATION-I
CATEGORY CODE :	724 10
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1987
PROJECT SCOPE :	40 Rooms
EST. COST :	-
BLDG. DESCRIP :	Improve and modernize UOPH Bldgs. 760 and 781 to include living areas, utilities, fire protection, and site improvements. (Bldg. 760 - 24 rooms and Bldg. 781 - 16 rooms)

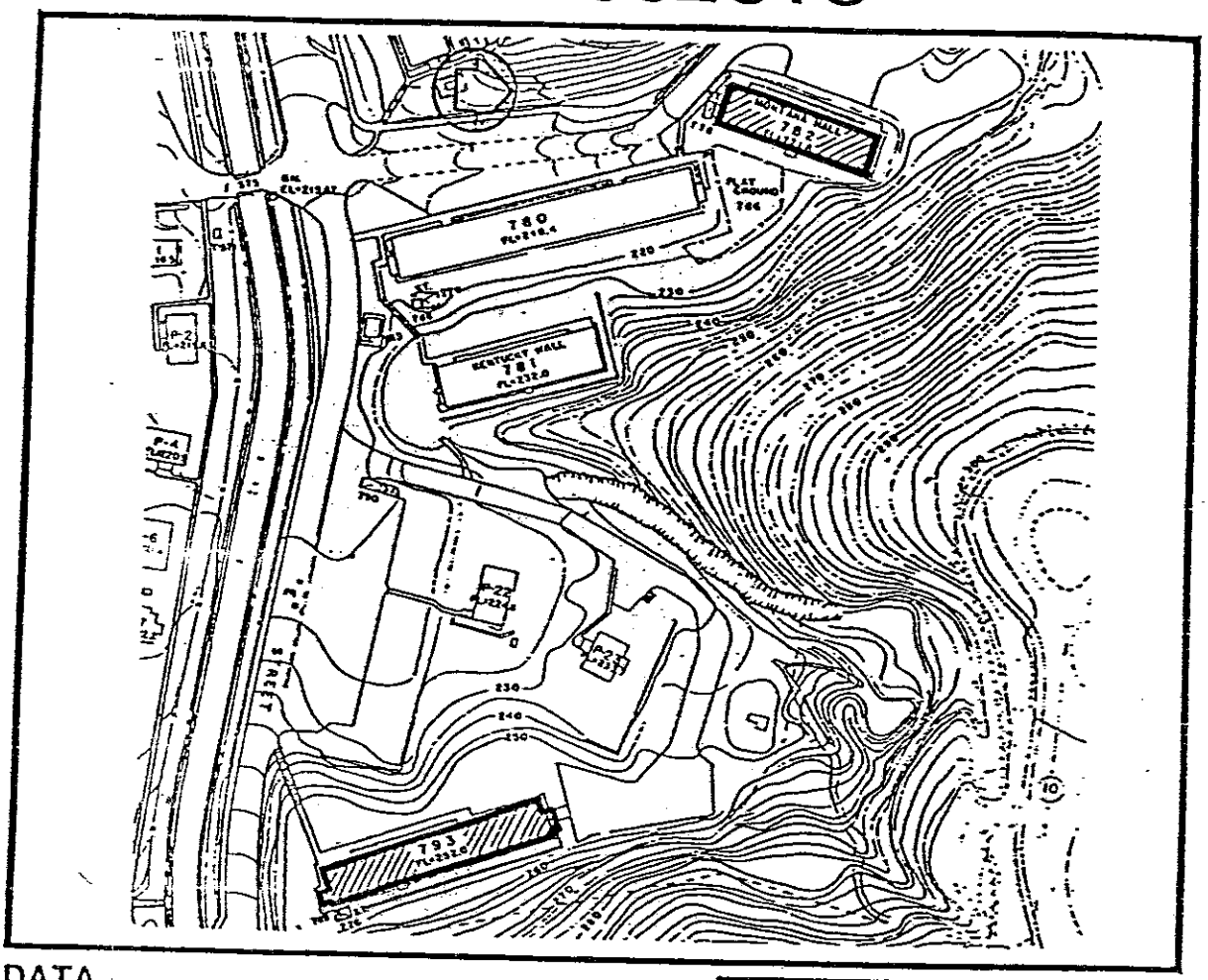
CAMP ZAMA
LOCATION MAP



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

PROPOSED PROJECTS

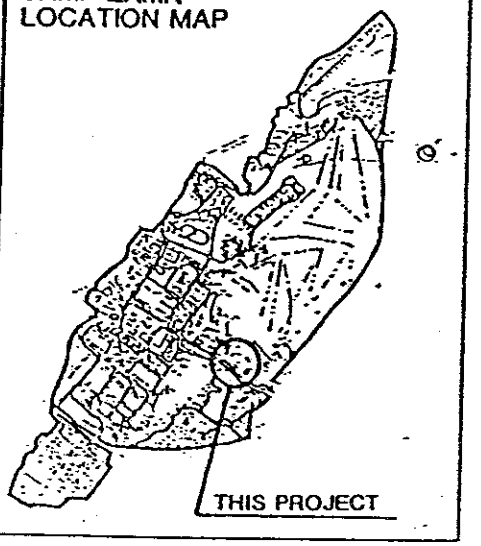
2.1.18



DATA

PROJECT TITLE :	UOPH MODERNIZATION-II
CATEGORY CODE :	724 10
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1987
PROJECT SCOPE :	42 PN
EST. COST :	-
BLDG. DESCRIP :	Improve and modernize existing UOPH Buildings No. 793 and 782 to include living areas, utilities, fire protection, and site improvements.

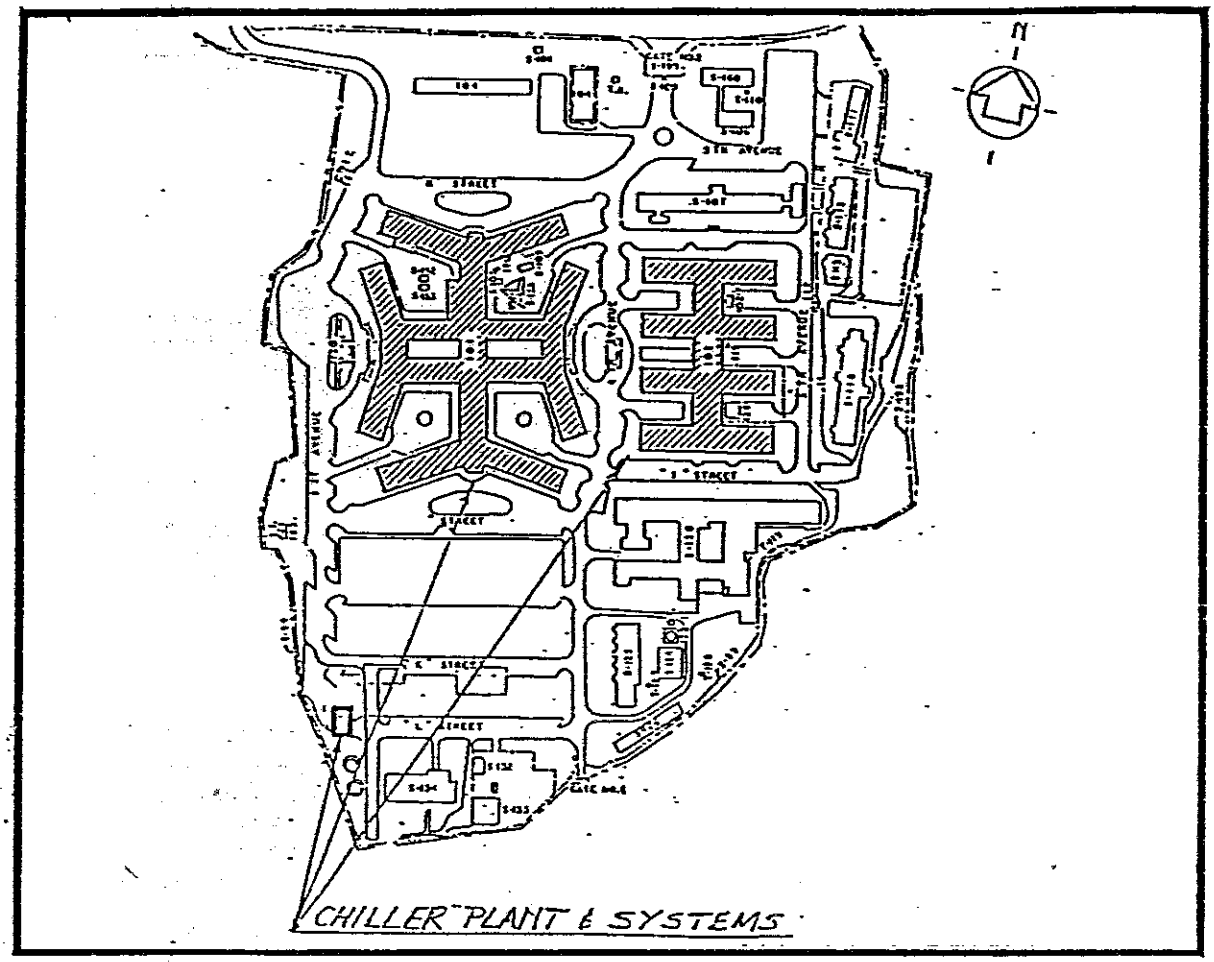
CAMP ZAMA
LOCATION MAP



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

PROPOSED PROJECTS

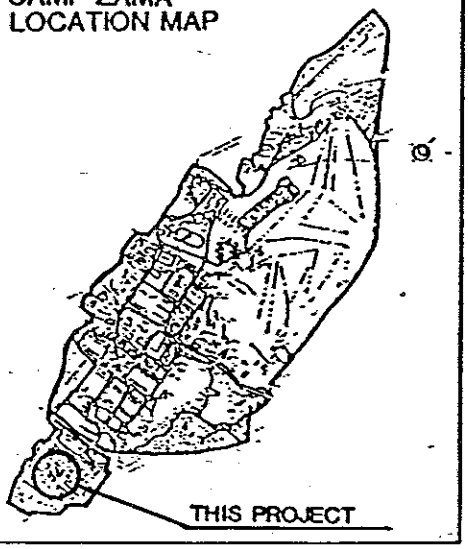
2.1.19



DATA

PROJECT TITLE :	CHILLER PLANT & SYSTEMS
CATEGORY CODE :	826 10
FUNDING :	GOJ FIP/MCA
FY PROGRAM :	JFY 1987/FY 1991
PROJECT SCOPE :	1,000 TONS
EST. COST :	-
BLDG. DESCRIP :	Installation of a central refrigeration plant and related exterior chilled water piping for the fan coil units in Bldgs. 101 and 102. Work includes restoration, repaving, and site improvement.

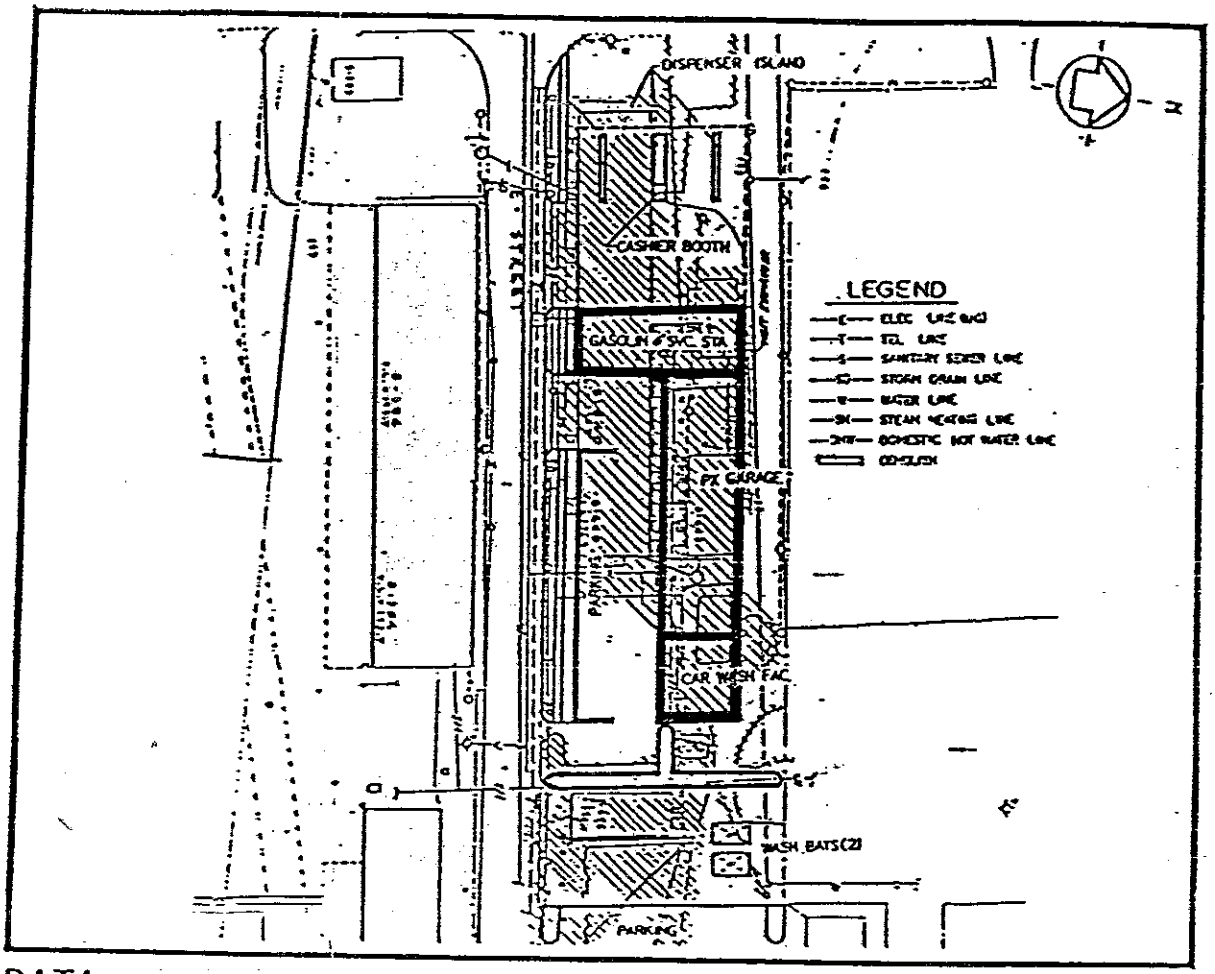
CAMP ZAMA
LOCATION MAP



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

PROPOSED PROJECTS

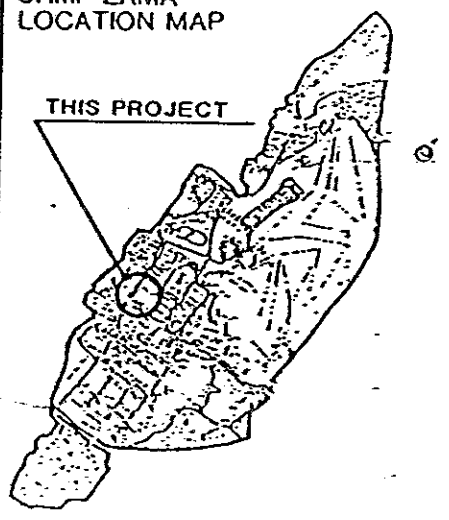
2.1.20



DATA

PROJECT TITLE :	PX GARAGE/SERVICE STATION
CATEGORY CODE :	740 57
FUNDING :	NAF
FY PROGRAM :	-
PROJECT SCOPE :	883 SM (9,505 SF)
EST. COST :	-
BLDG. DESCRIP :	Construction of 3-island (6 pumps) service station, service center, auto parts sales center and car wash facility. Work includes all utilities and site improvement. Demolish Bldgs. S-640, S-641, S-643, S-980, S-208, and T-682.

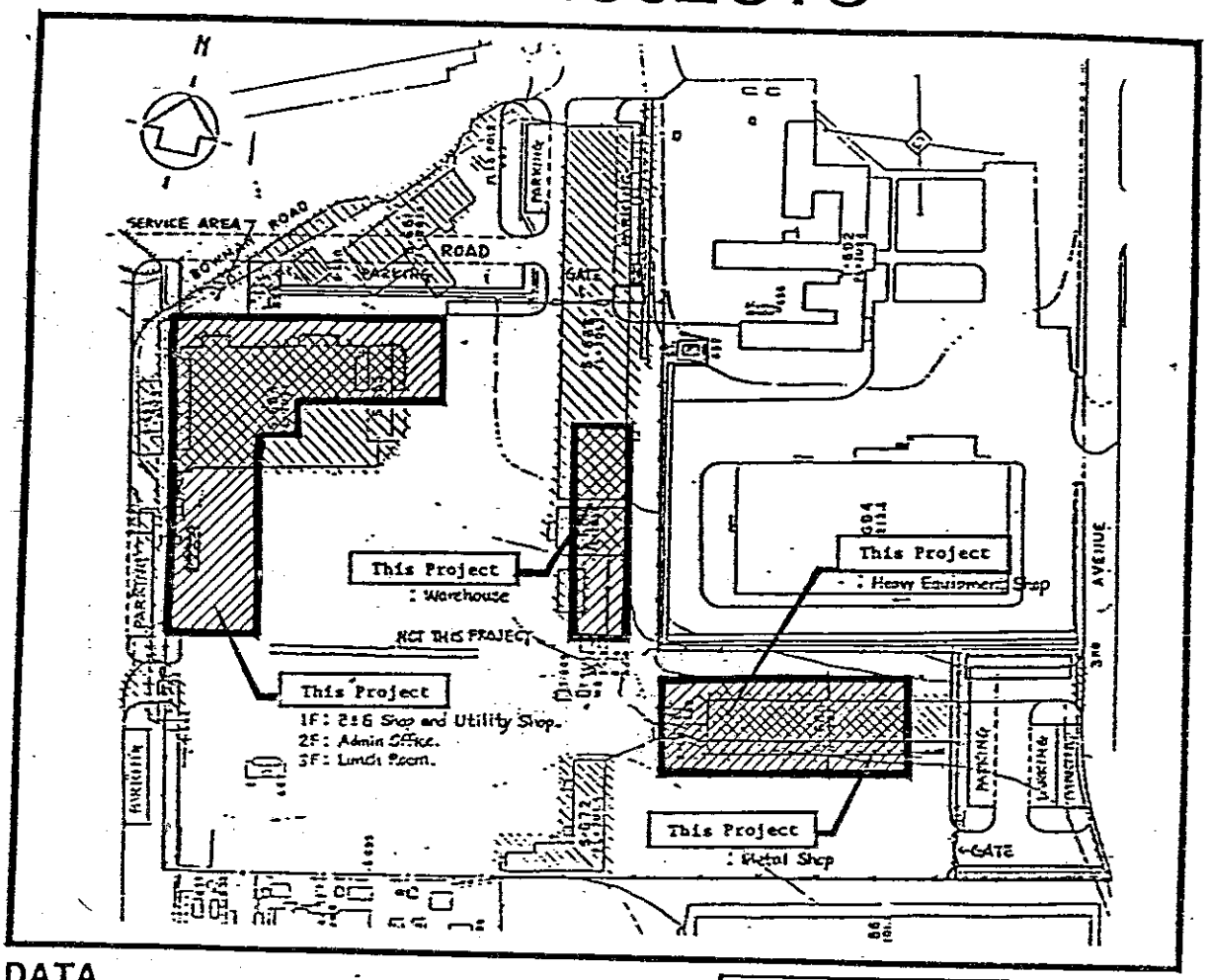
CAMP ZAMA
LOCATION MAP



MASTER PLAN PHASE I
FUTURE DEVELOPMENT PLAN

PROPOSED PROJECTS

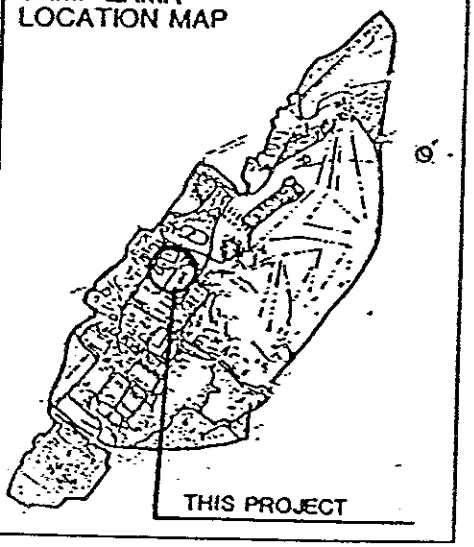
2.1.21



DATA

PROJECT TITLE :	FACILITIES ENGINEER SHOPS
CATEGORY CODE :	219 10 & 219 20
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1988
PROJECT SCOPE :	6,789 SM (73,100 SF)
EST. COST :	-
BLDG. DESCRIP :	Reconstruct the facility engineer complex to include three fire-resistive, reinforced concrete buildings, consisting of admin, shops, and storehouse. Work also includes parking spaces, site improvements, and demolition of existing buildings.

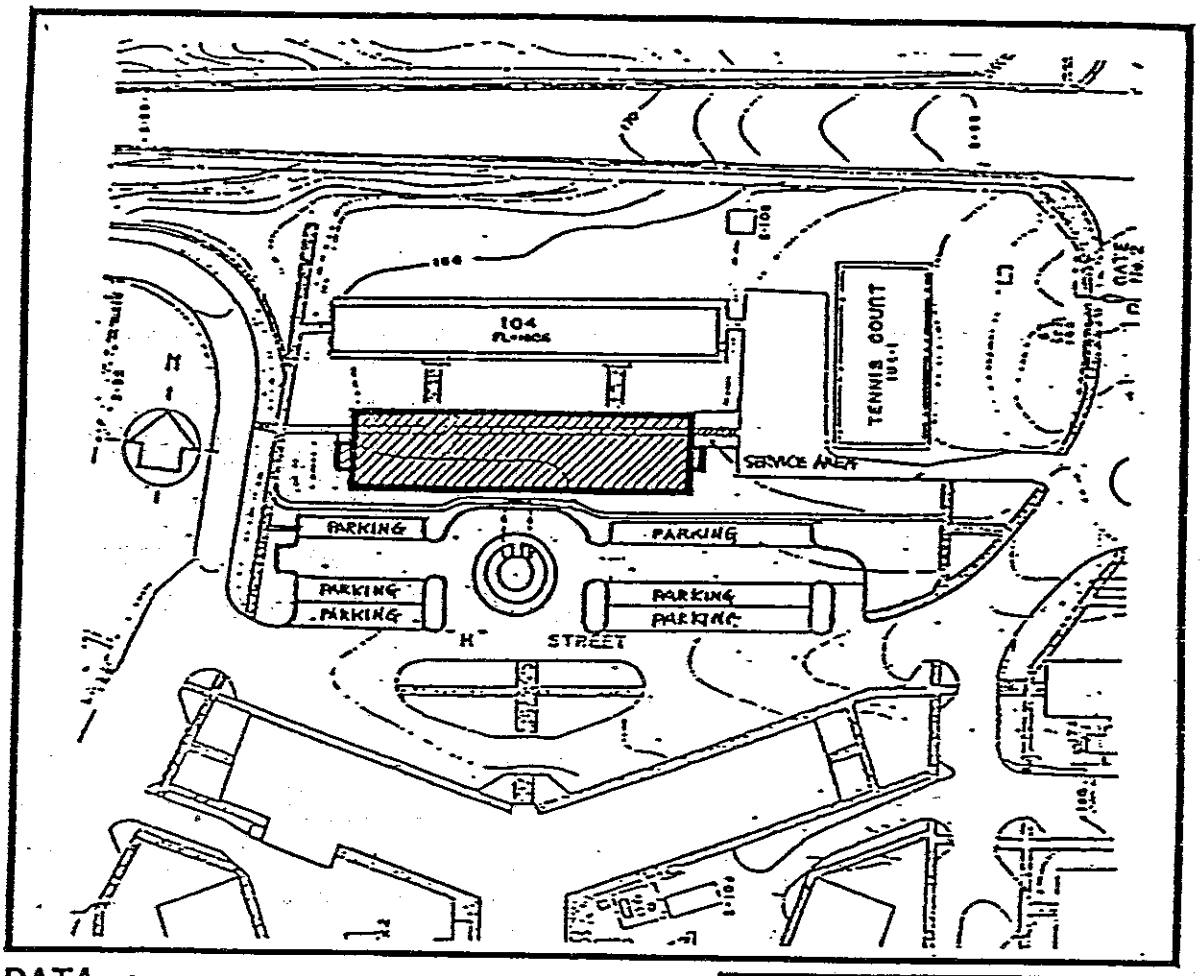
CAMP ZAMA
LOCATION MAP



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

PROPOSED PROJECTS

2.1.22



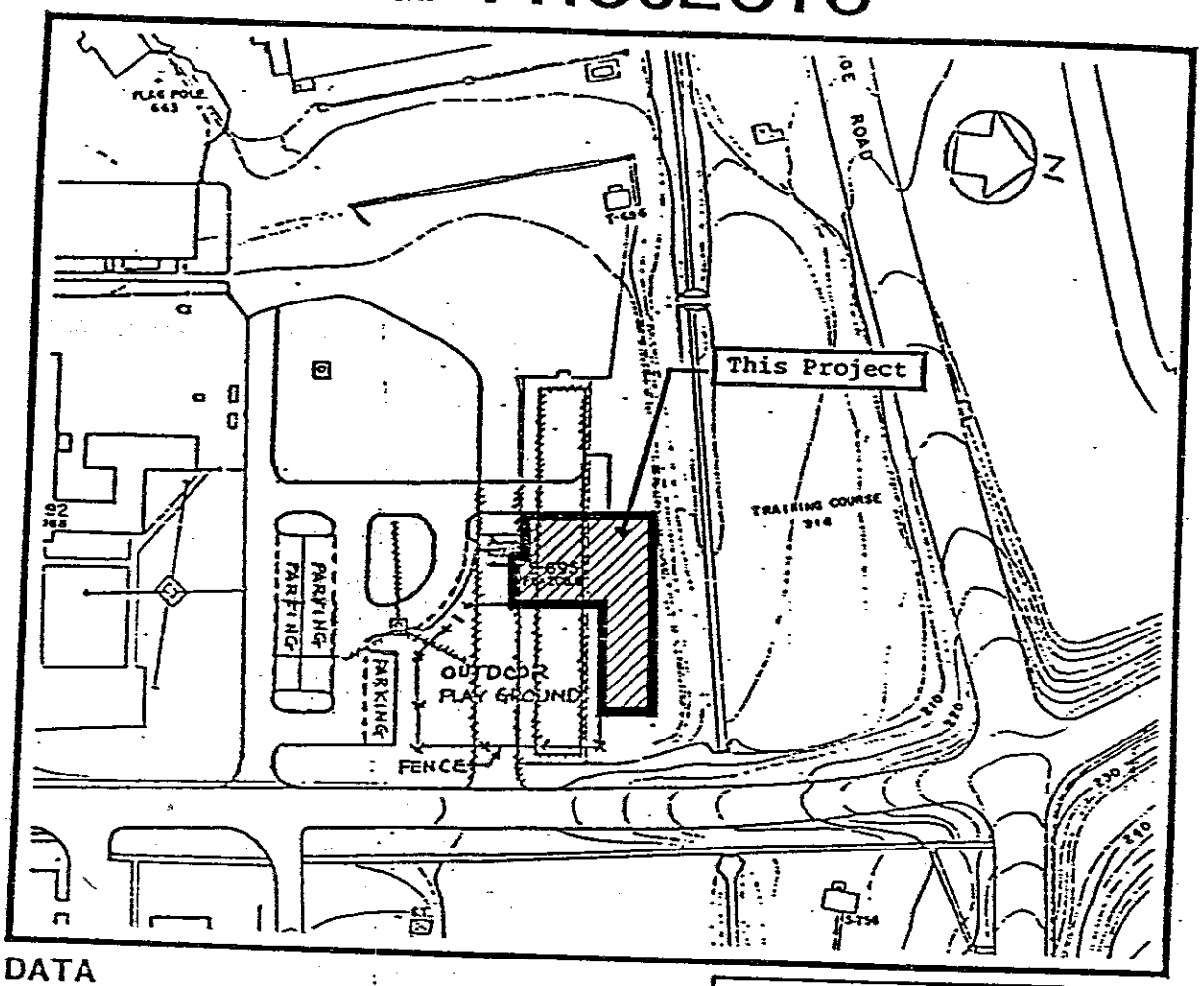
DATA

PROJECT TITLE:	500 MI ADMIN. BLDG.
CATEGORY CODE:	610 41
FUNDING:	GOJ FIP
FY PROGRAM:	JFY 1988
PROJECT SCOPE:	3,095 SM (33,300 SF)
EST. COST:	-
BLDG. DESCRIP:	Construction of a permanent, fire-resistive concrete building to house administrative functions of the 500th MI Group. Project includes parking spaces and site improvements.

MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

PROPOSED PROJECTS

2.1.23



DATA

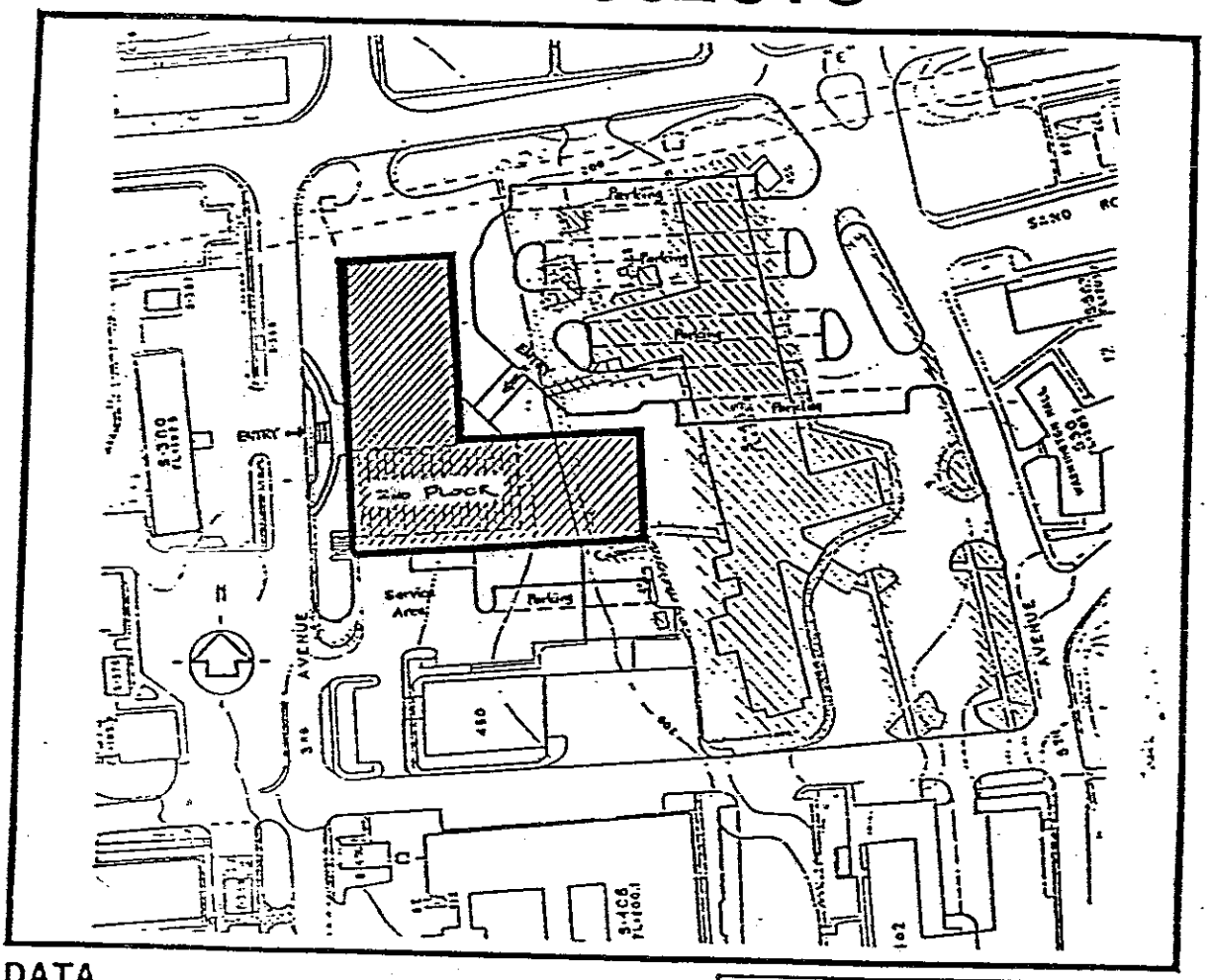
PROJECT TITLE :	CHILD DEVELOPMENT CENTER
CATEGORY CODE :	740 14
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1988
PROJECT SCOPE :	746 SM (8,000 SF)
EST. COST :	-
BLDG. DESCRIP :	Construct a fire-resistive one-story reinforced concrete building to accommodate playroom, food service facilities, offices, lobby, etc. Project includes parking spaces, outdoor play-ground, and demolition of one existing building.

CAMP ZAMA
LOCATION MAP

MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

PROPOSED PROJECTS

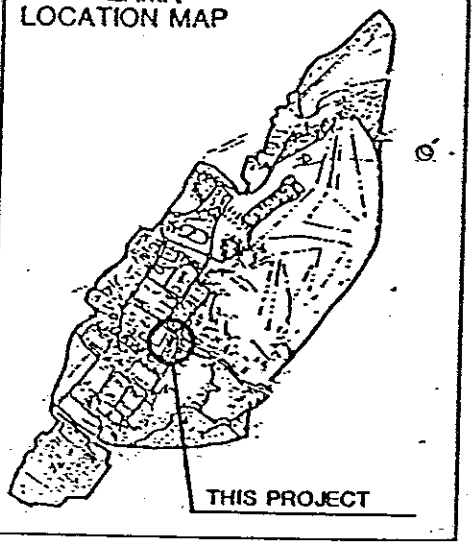
2.1.24



DATA

PROJECT TITLE :	CONSOLIDATED CLUB
CATEGORY CODE :	740 46
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1988
PROJECT SCOPE :	4,200 SM (45,200 SF)
EST. COST :	-
BLDG. DESCRIP :	Construct a two-story fire-resistive reinforced concrete building with dining and multi-purpose rooms, lounges, and other facilities. Project includes parking spaces, site improvement, and demolition of existing club building.

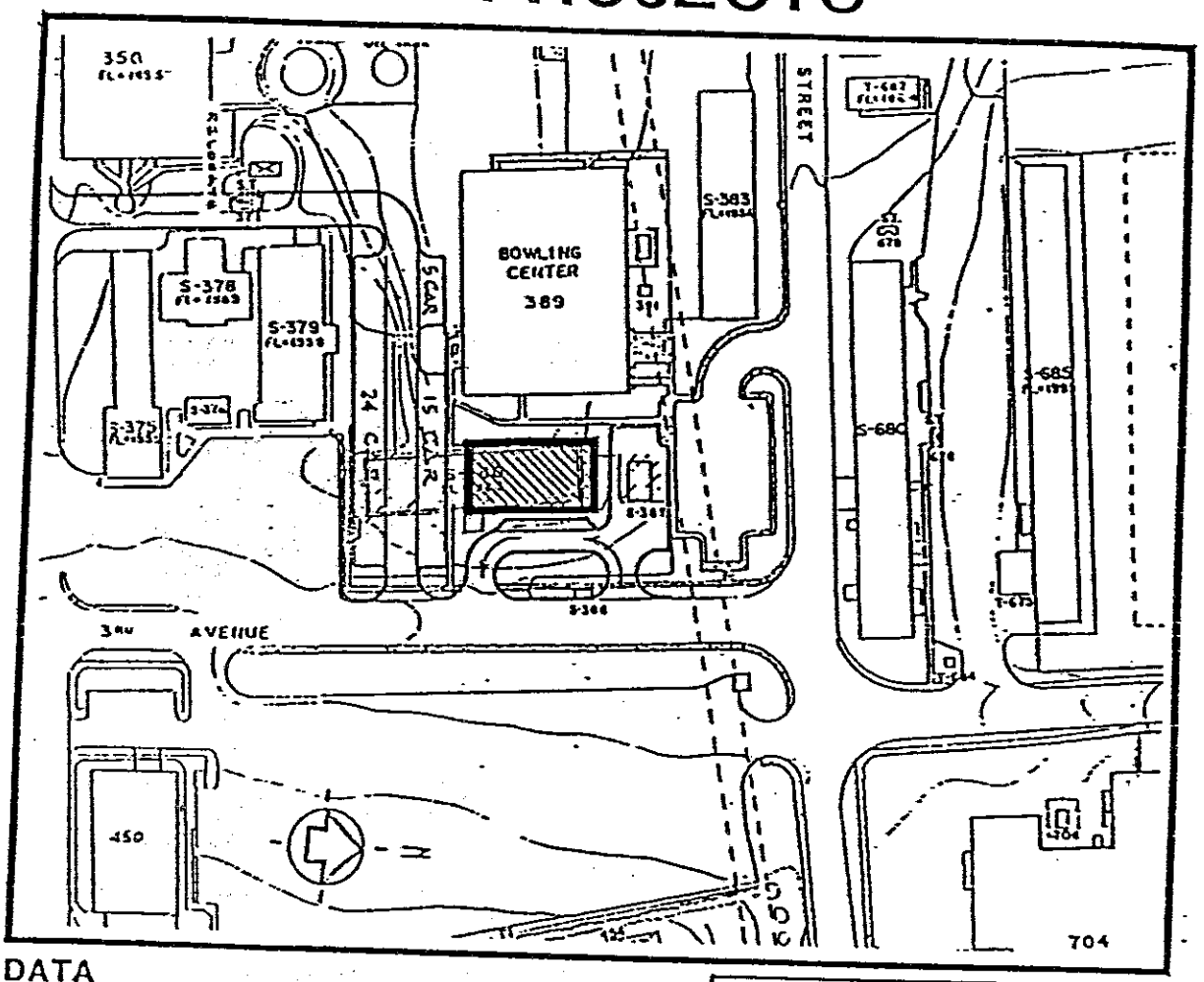
CAMP ZAMA
LOCATION MAP



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

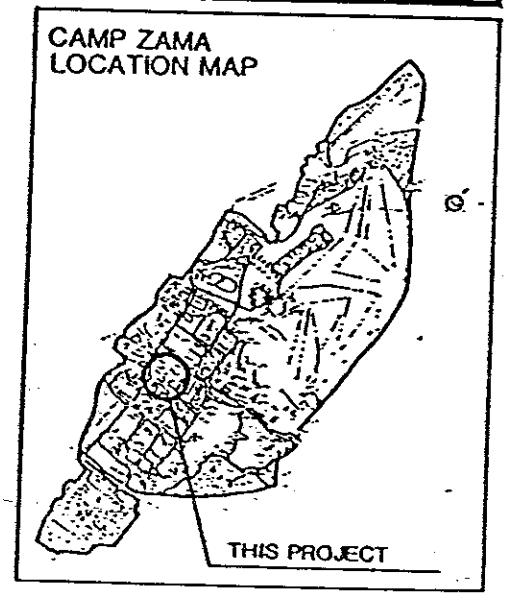
PROPOSED PROJECTS

2.1.25



DATA

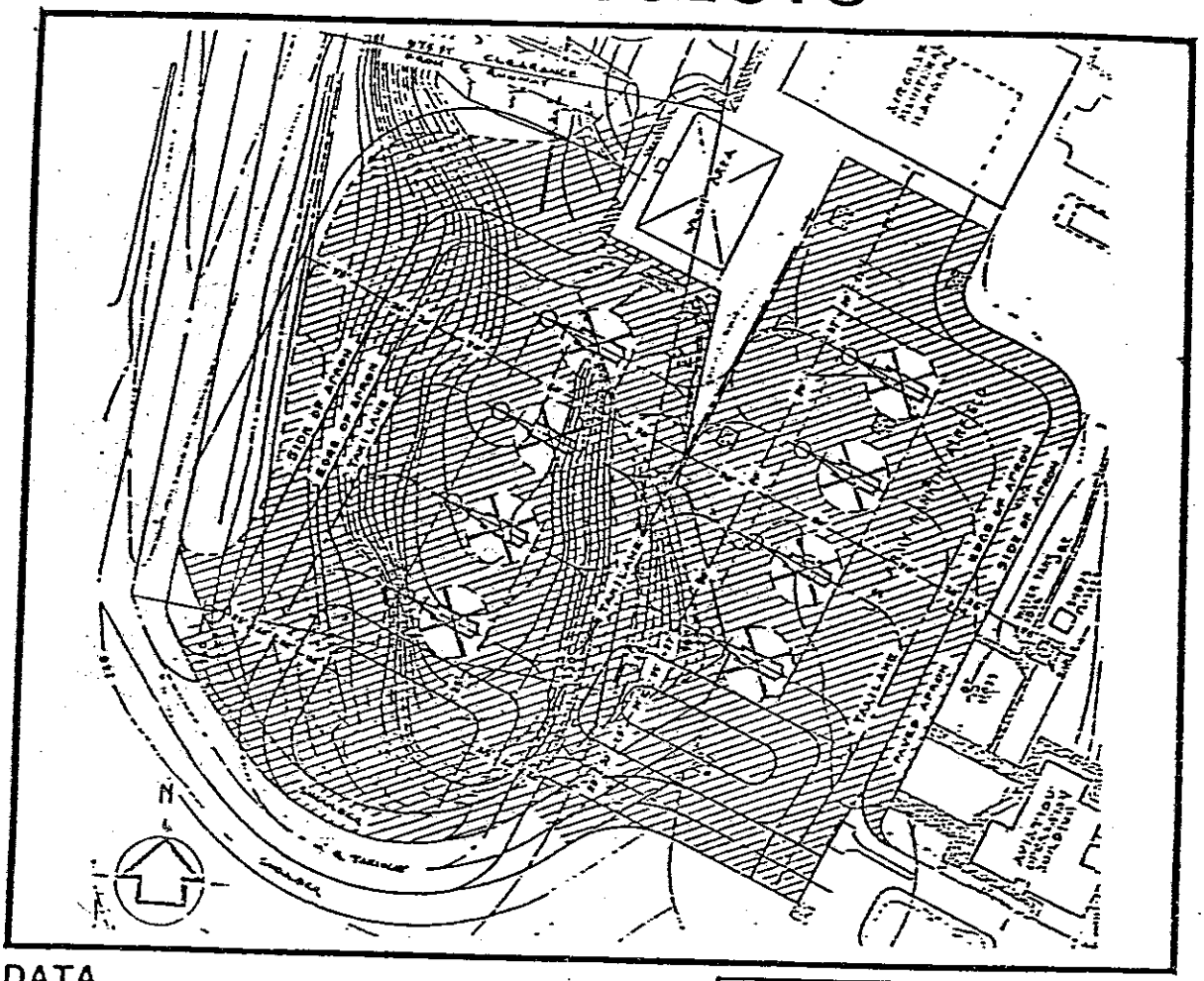
PROJECT TITLE : BANK
CATEGORY CODE : 740 06
FUNDING : GOJ FIP
FY PROGRAM : JFY 1988
PROJECT SCOPE : 364 SM (3,920 SF)
EST. COST : -
BLDG. DESCRIP : Construct a single story, fire-resistive reinforced concrete building to accommodate required banking functions. Project includes parking spaces, site improvements, and demolition of two buildings.



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

PROPOSED PROJECTS

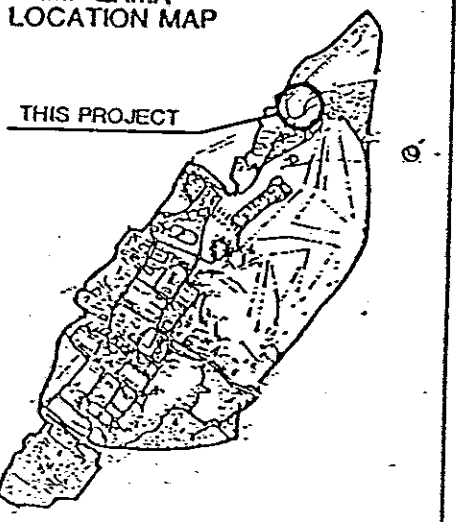
2.1.26



DATA

PROJECT TITLE :	RANKIN AF EXPANSION
CATEGORY CODE :	111 30
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1988
PROJECT SCOPE :	13,000 SM (15,500 SY)
EST. COST :	-
BLDG. DESCRIP :	Expand ramp (parking apron) to accommodate eight new UH-60 helicopters. Work includes excavation and disposal, borrow/fill pit, concrete pavement, storm drainage, marking, tie-downs, etc.

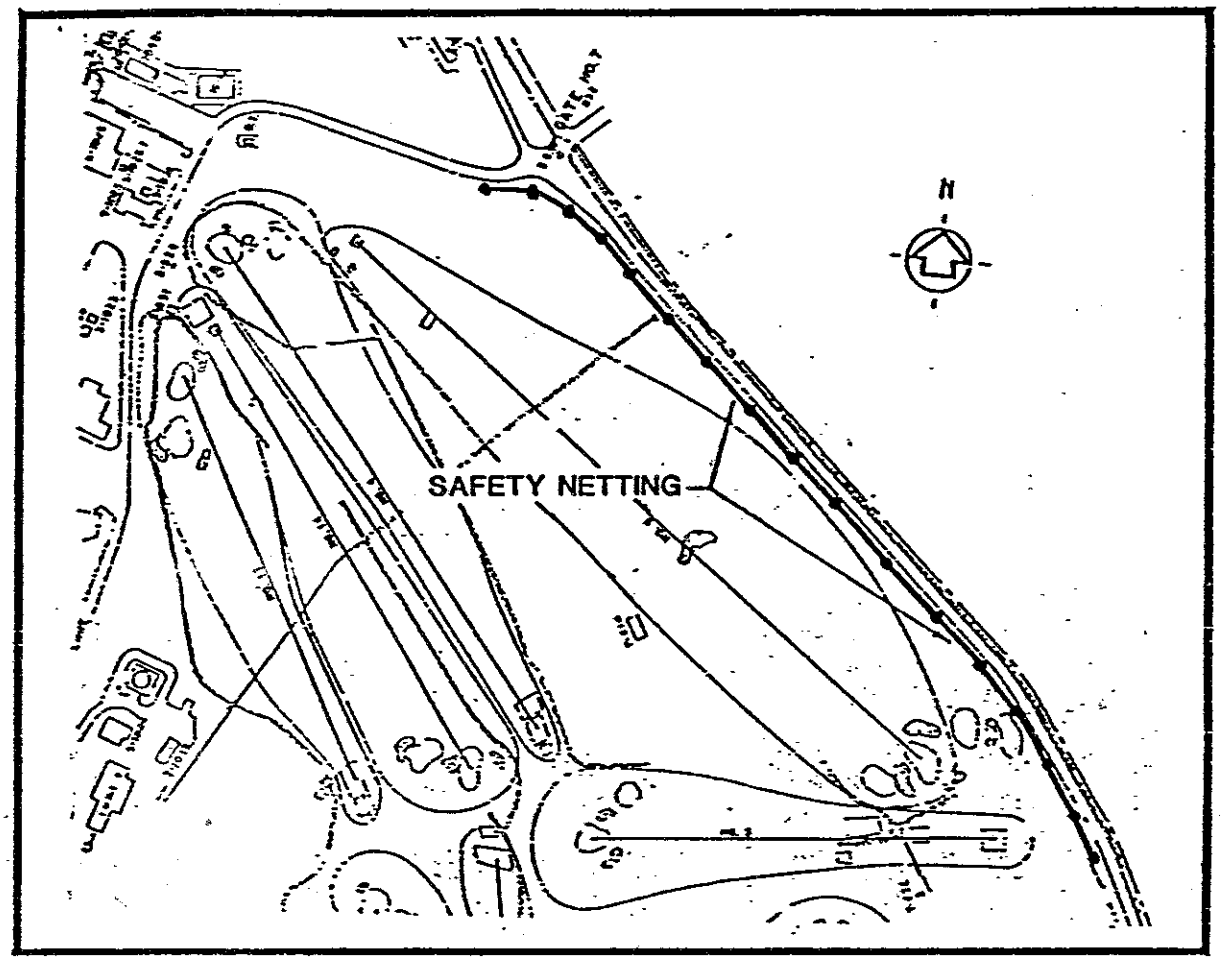
CAMP ZAMA
LOCATION MAP



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

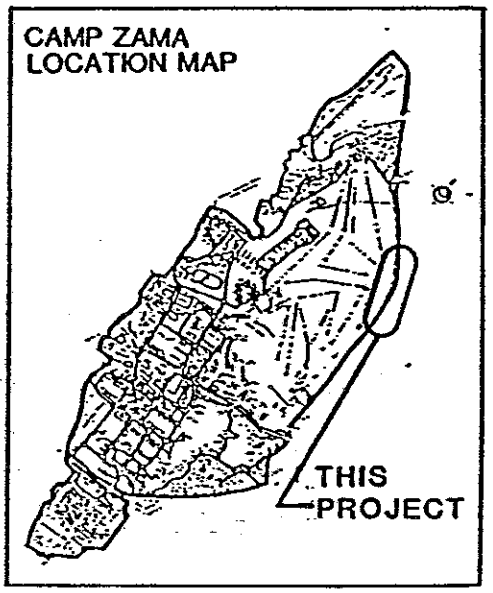
PROPOSED PROJECTS

2.1.27



DATA

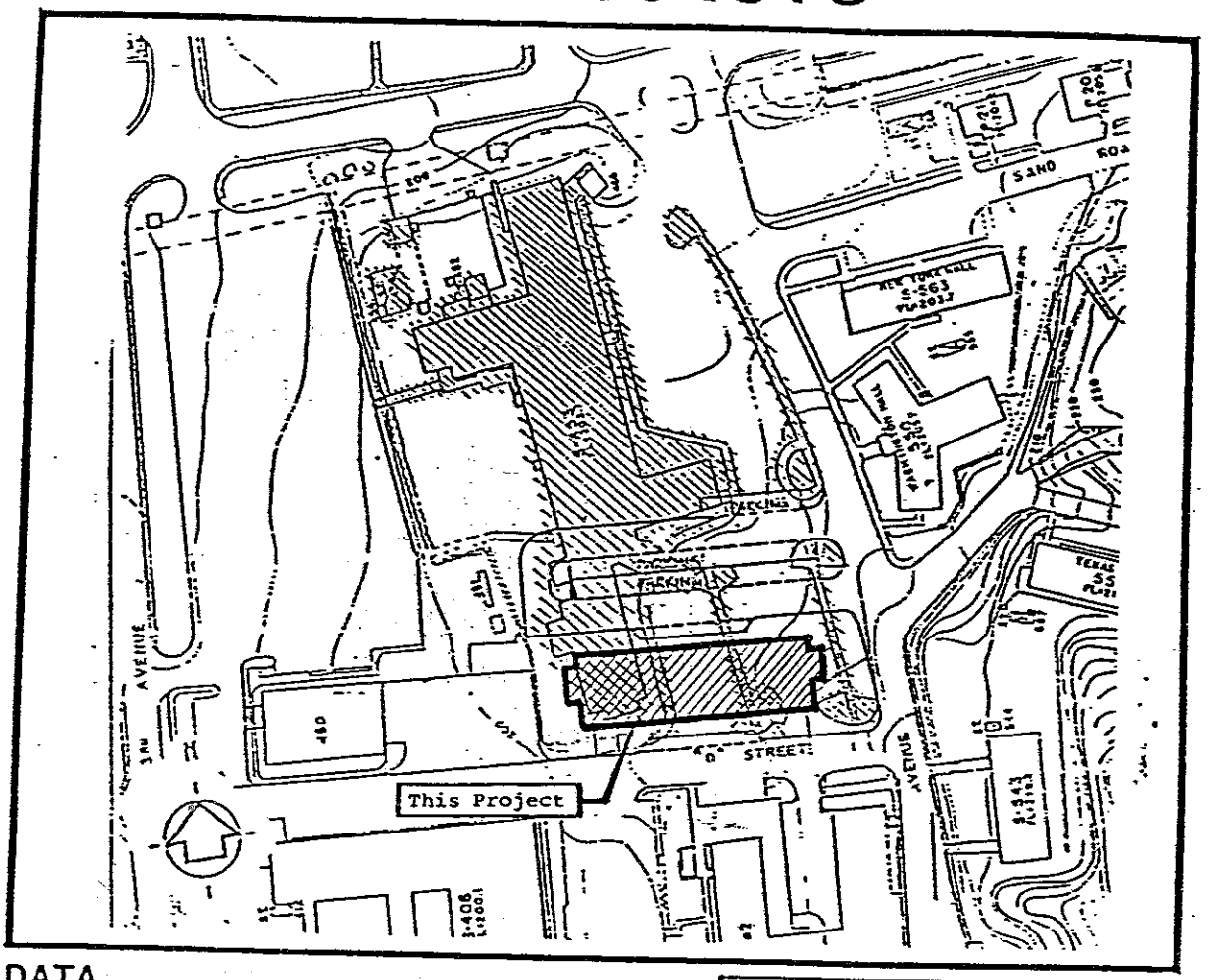
PROJECT TITLE : SAFETY NETTING
CATEGORY CODE : 750 40
FUNDING : GOJ FIP
FY PROGRAM : JFY 1988
PROJECT SCOPE : 610 M (2,000 LF)
EST. COST : -
BLDG. DESCRIP : Construction of a golf ball safety net. The net shall be supported by 20 M high concrete poles. Raising and lowering of the net during typhoons shall be by electric motors. The existing electric line shall be placed underground.



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

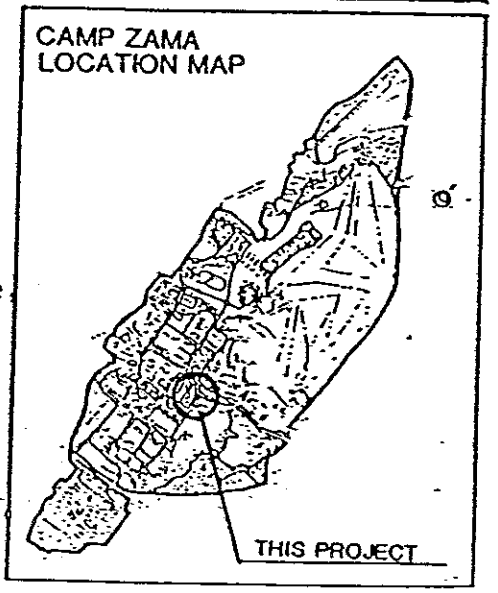
PROPOSED PROJECTS

2.1.28



DATA

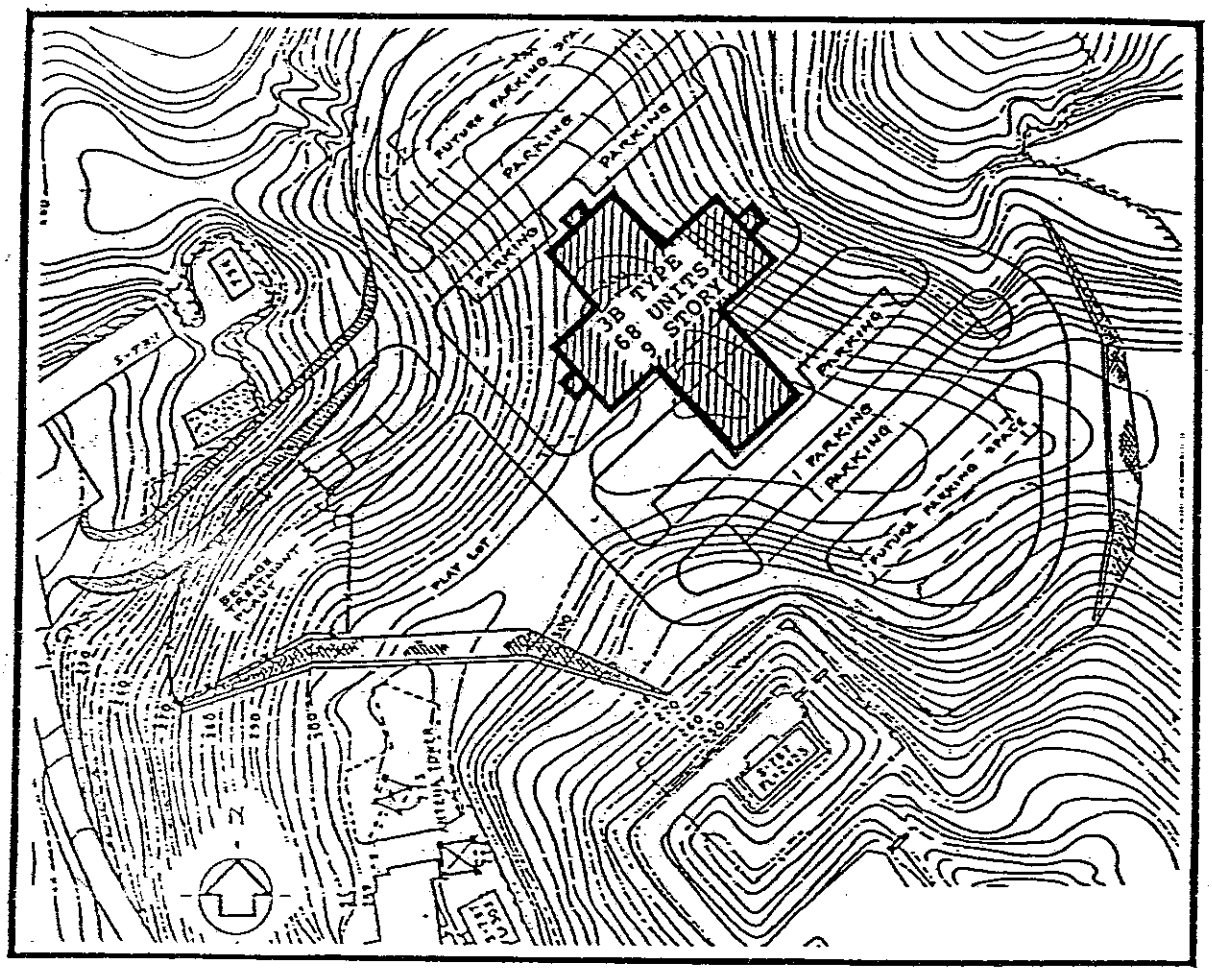
PROJECT TITLE :	GUEST HOUSE
CATEGORY CODE :	740 32
FUNDING :	GOJ FIP
FY PROGRAM :	FJY 1988
PROJECT SCOPE :	2,890 SM (31,100 SF)
EST. COST :	-
BLDG. DESCRIP :	Construct a fire-resistive three story reinforced concrete building with hotel type facilities for the Guest House. Project includes parking spaces, site improvement, and demolition of one existing building.



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

PROPOSED PROJECTS

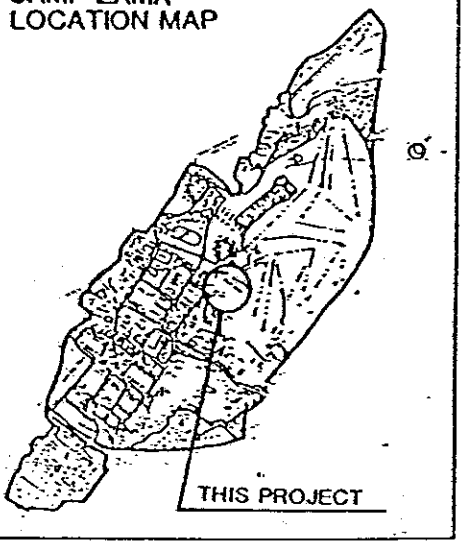
2.1.29



DATA

PROJECT TITLE :	CONSTRUCT FAM HSG (PH II)
CATEGORY CODE :	711 00
FUNDING :	GOJ FIP
FY PROGRAM :	FJY 1988
PROJECT SCOPE :	68 Units (3-bedroom type)
EST. COST :	-
BLDG. DESCRIP :	Construct a 9-story fire-resistive, reinforced concrete building to include 68 family units and associated facilities. Project includes utilities, site improvements, and parking spaces.

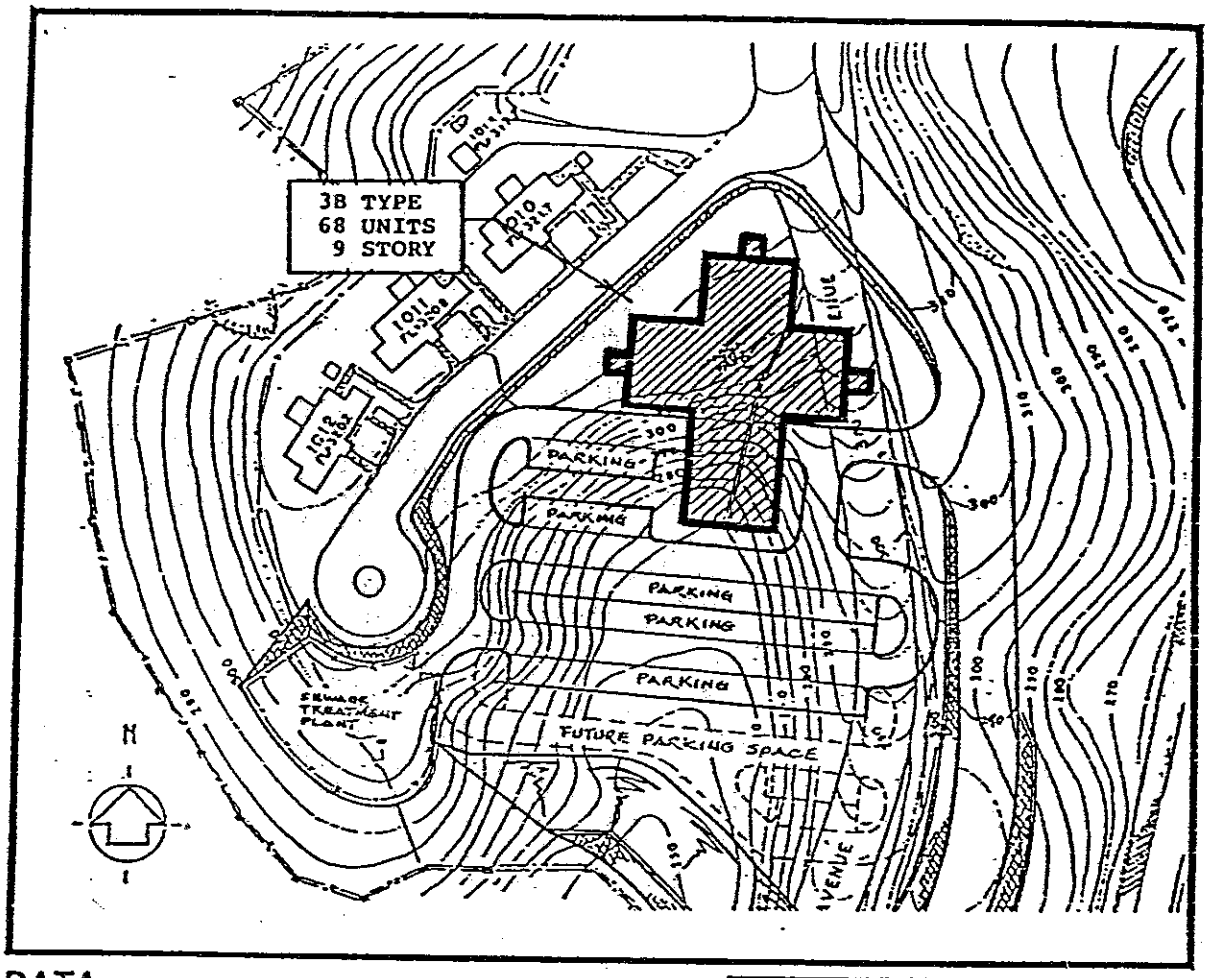
CAMP ZAMA
LOCATION MAP



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

PROPOSED PROJECTS

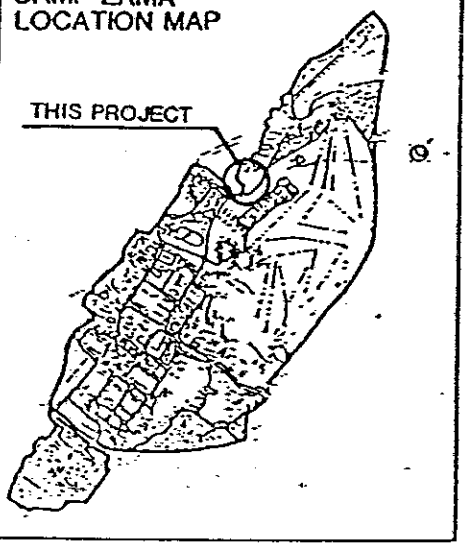
2.1.30



DATA

PROJECT TITLE :	CONSTRUCT FAM HSG (PH III)
CATEGORY CODE :	711 00
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1988
PROJECT SCOPE :	68 Units (3-bedroom type)
EST. COST :	-
BLDG. DESCRIP :	Construct a 9-story fire-resistive, reinforced concrete building to include 68 family units and associated facilities. Project includes utilities, site improvements, and parking spaces.

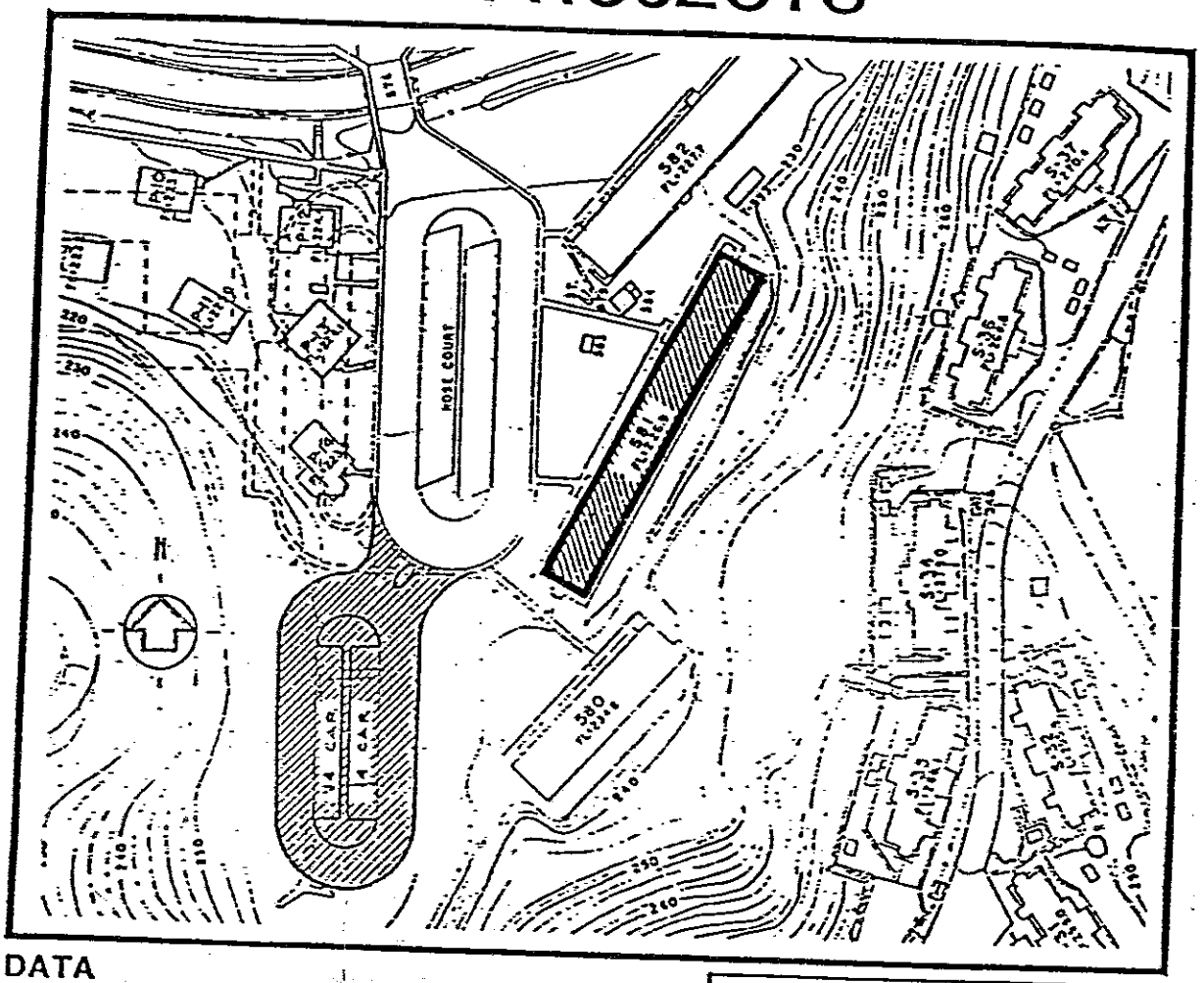
CAMP ZAMA
LOCATION MAP



MASTER PLAN PHASE I
FUTURE DEVELOPMENT PLAN

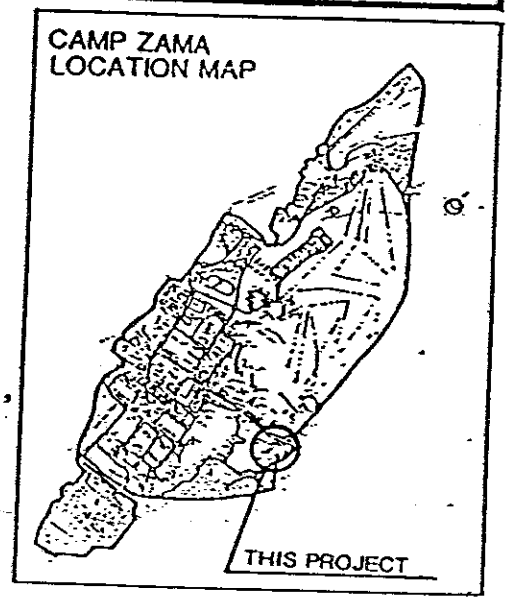
PROPOSED PROJECTS

2.1.31



DATA

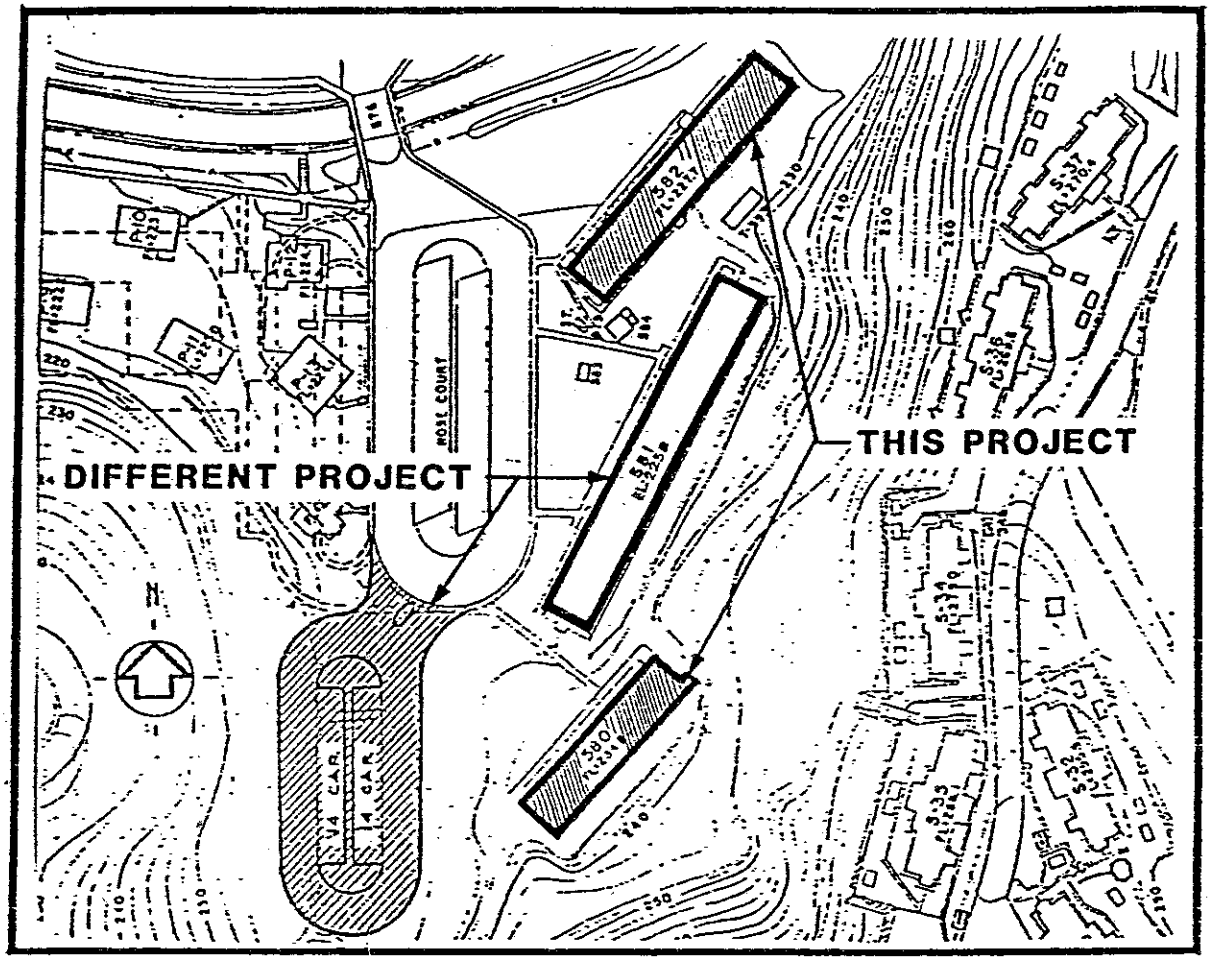
PROJECT TITLE :	UEPH MODERNIZATION-I
CATEGORY CODE :	721 11
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1988
PROJECT SCOPE :	2,279 SM (24,536 SF)
EST. COST :	-
BLDG. DESCRIP :	Improve and modernize UEPH Bldg. No. 581 including 44 rooms, utilities, fire protection, site improvements, and new parking spaces.



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

PROPOSED PROJECTS

2.1.32



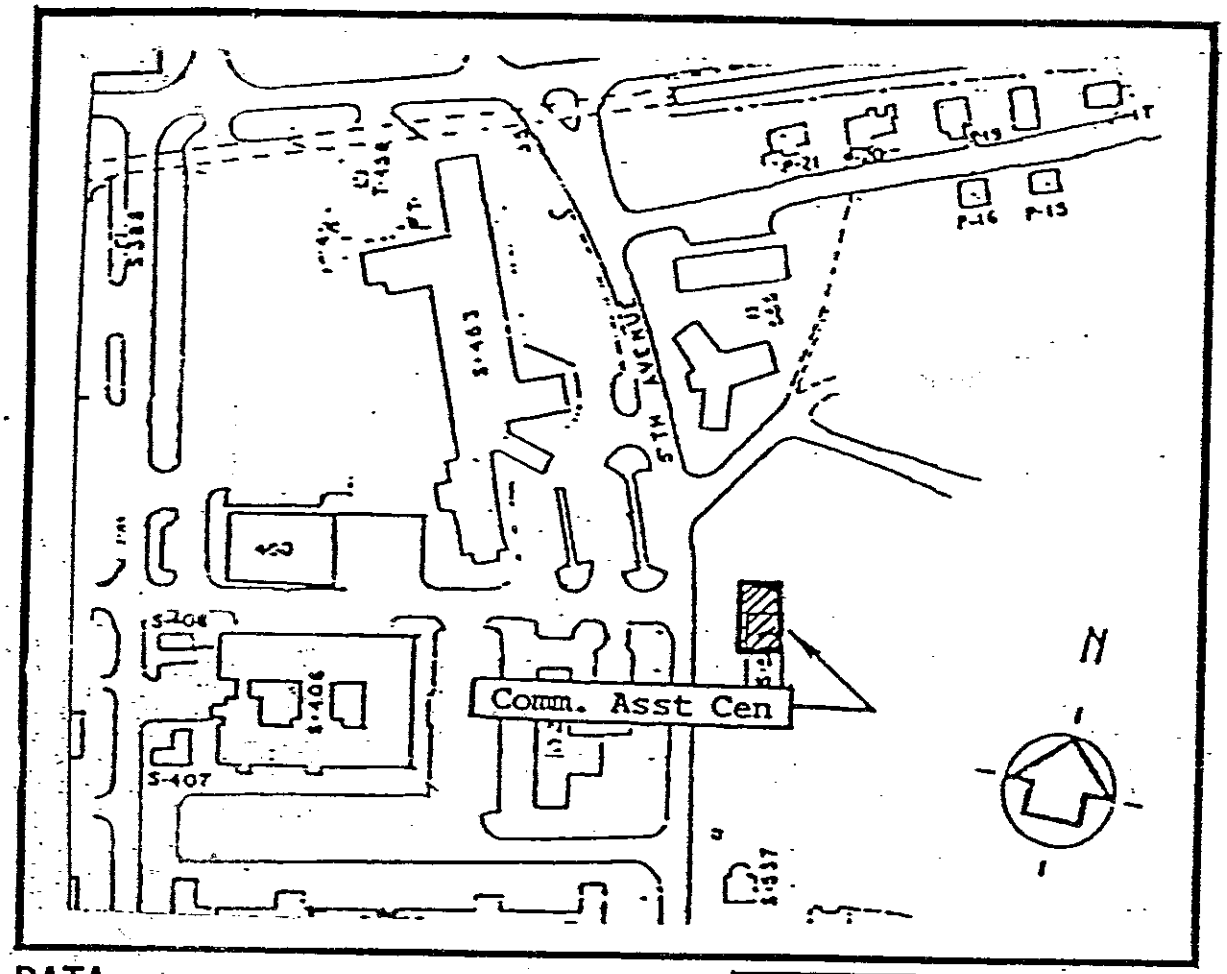
DATA

PROJECT TITLE :	UEPH MODERNIZATION-II
CATEGORY CODE :	721 11
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1989
PROJECT SCOPE :	2,941 SM (31,658 SF)
EST. COST :	-
BLDG. DESCRIP :	Renovate and upgrade two unaccompanied enlisted personnel dormitories - Bldg. 580 (1,201 SM) and Bldg. 582 (1,740 SM).

MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

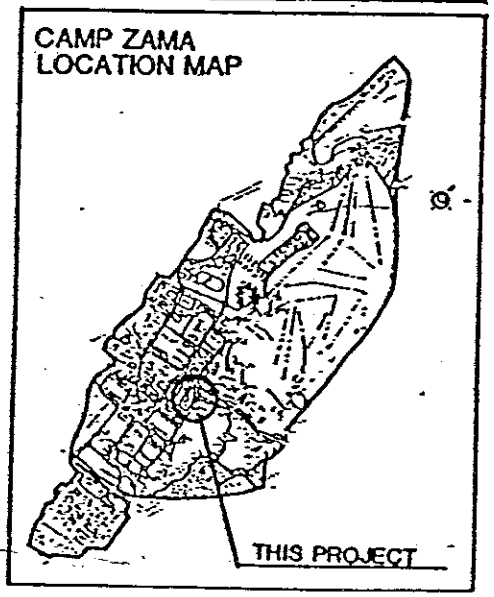
PROPOSED PROJECTS

2.1.33



DATA

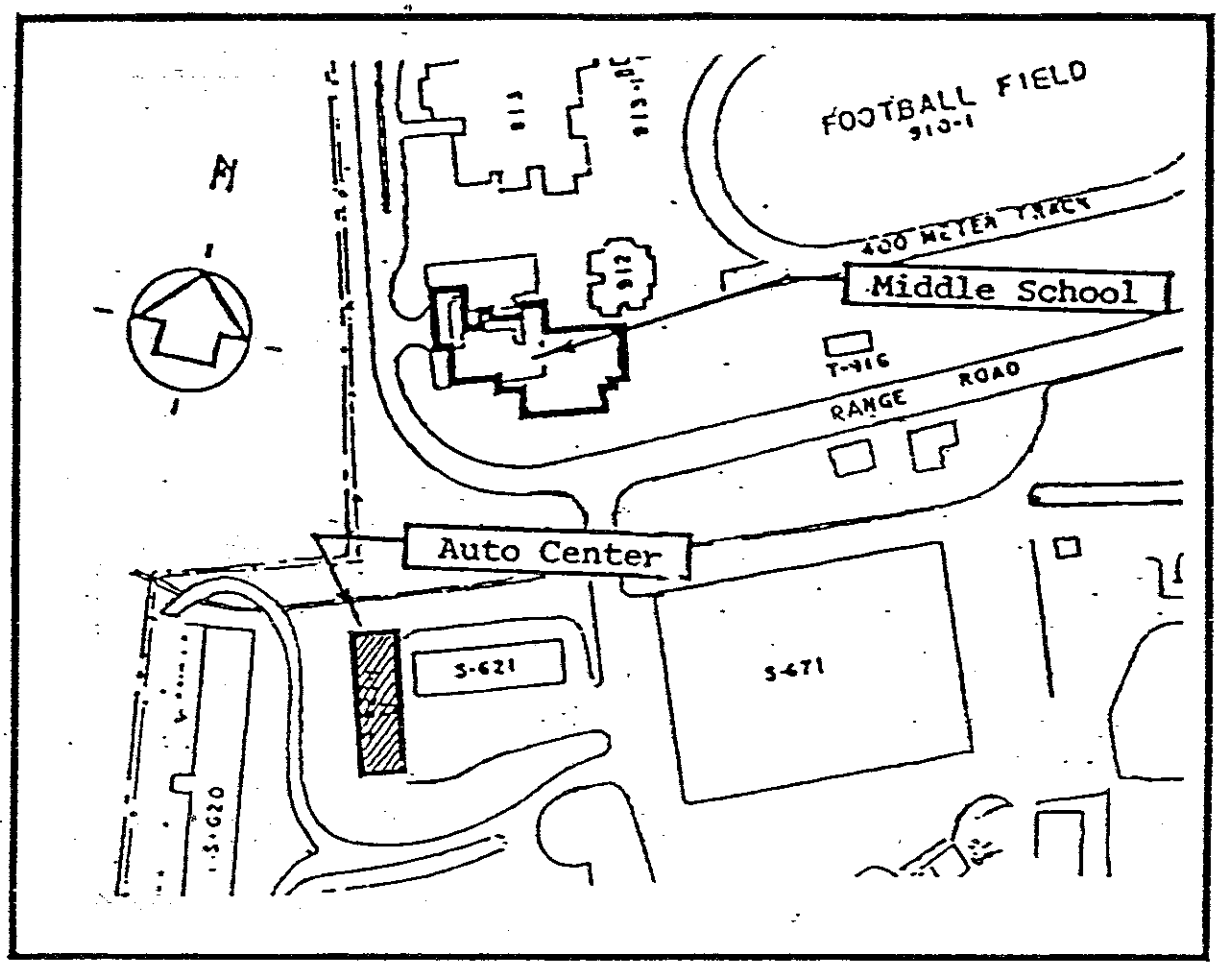
PROJECT TITLE :	COMMUNITY ASSISTANCE CTR.
CATEGORY CODE :	740 33
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1989
PROJECT SCOPE :	279 SM (3,000 SF)
EST. COST :	-
BLDG. DESCRIP :	Construction of a permanent structure to replace the existing substandard Center (S-420)



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

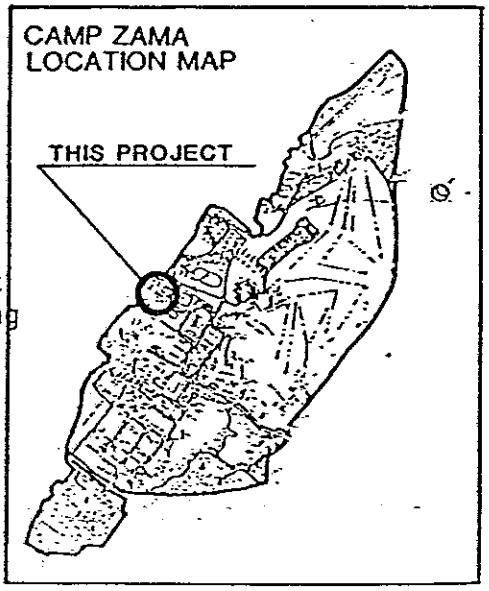
PROPOSED PROJECTS

2.1.34



DATA

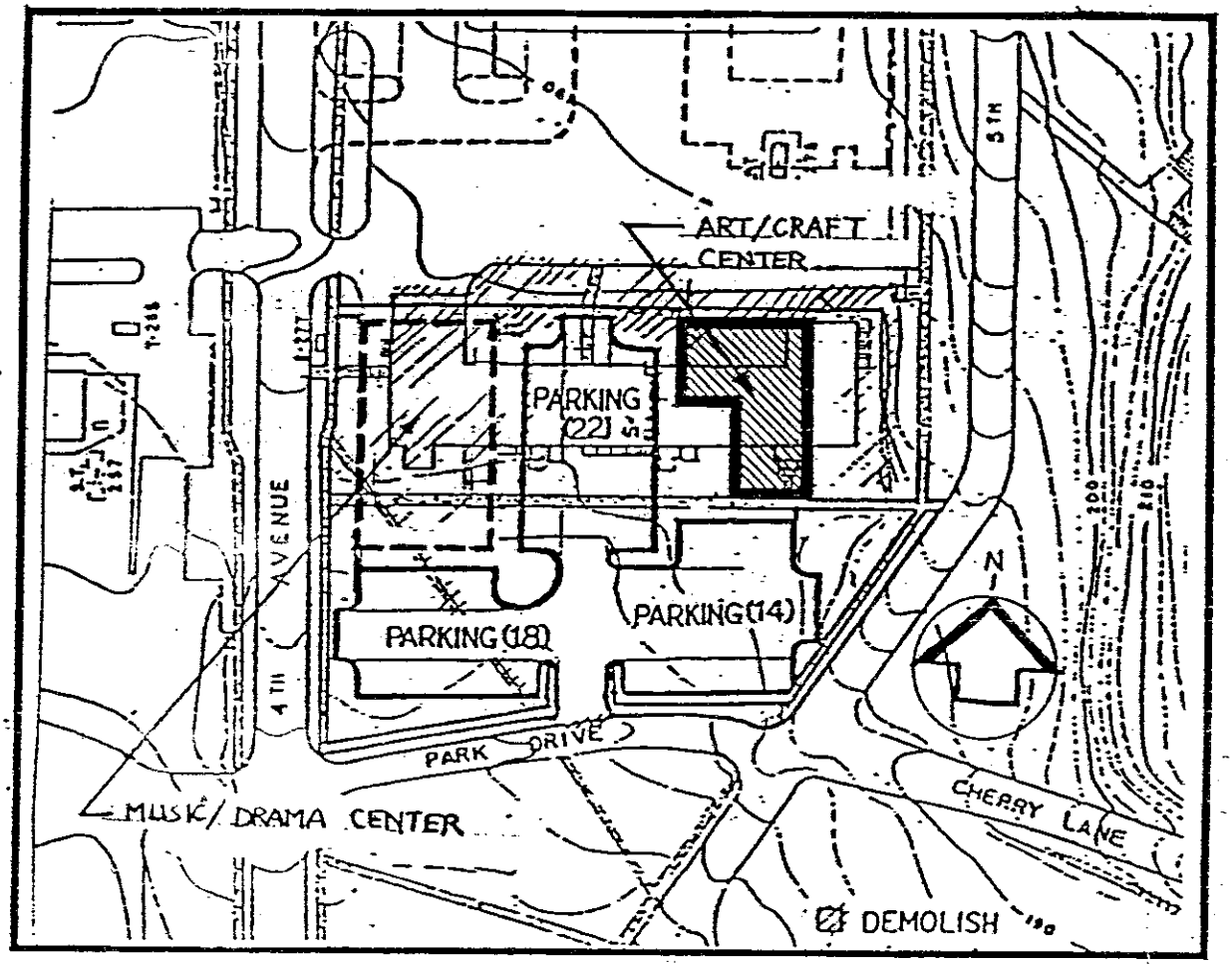
PROJECT TITLE :	AUTO CENTER
CATEGORY CODE :	740 24
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1989
PROJECT SCOPE :	836 SM (9,000 SF)
EST. COST :	-
BLDG. DESCRIP :	Construction of a permanent reinforced concrete building for use as an 8-stall self-help auto shop to replace existing facility.



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

PROPOSED PROJECTS

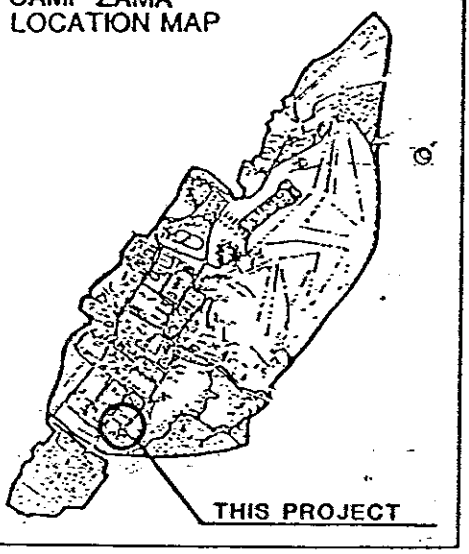
2.1.35



DATA

PROJECT TITLE :	ARTS AND CRAFTS CENTER
CATEGORY CODE :	740 22
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1989
PROJECT SCOPE :	697 SM (7,500 SF)
EST. COST :	-
BLDG. DESCRIP :	Construction of a permanent, fire-resistive, concrete structure to house all functions required for an arts and crafts center. Project includes all utilities and site improvement.

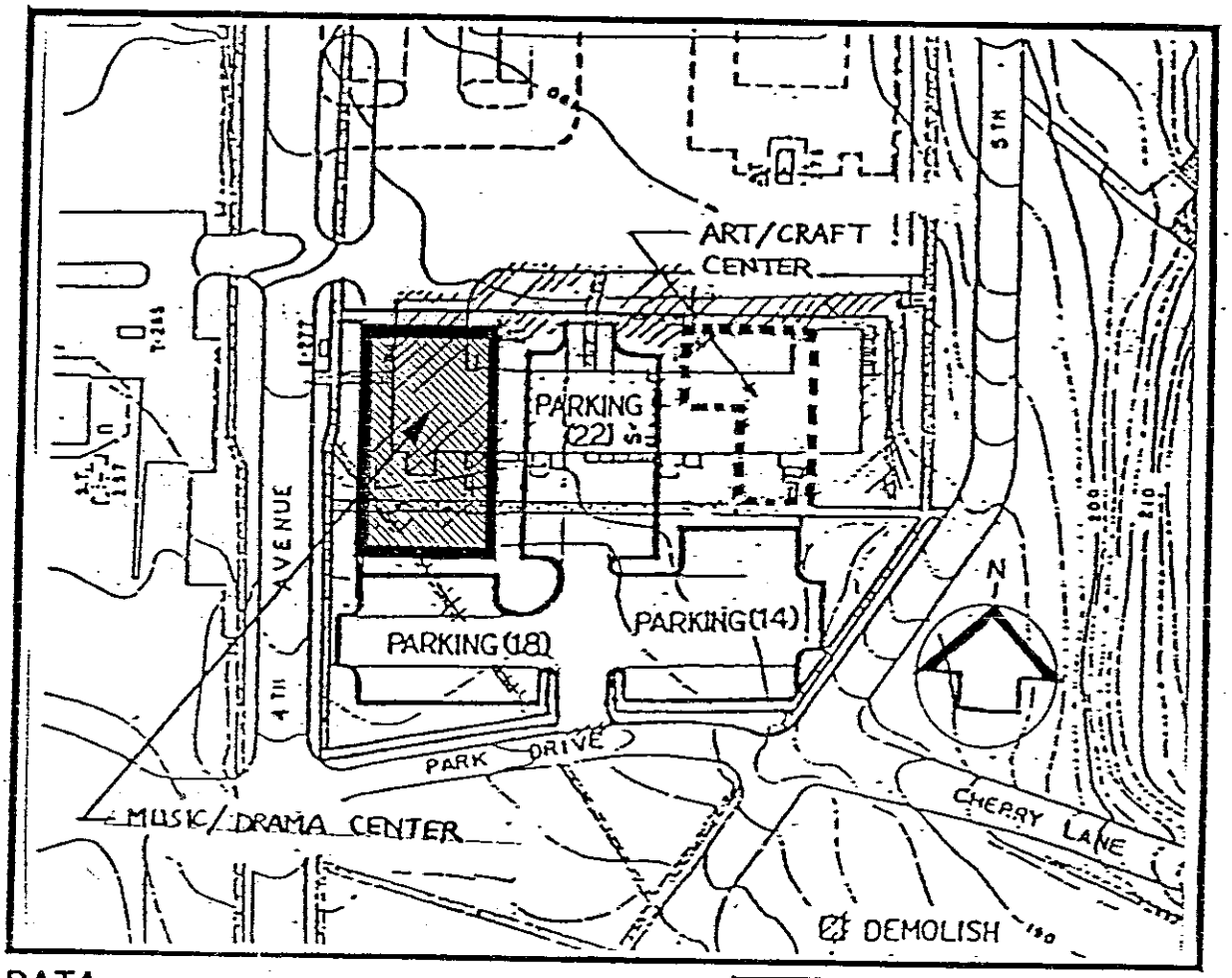
CAMP ZAMA
LOCATION MAP



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

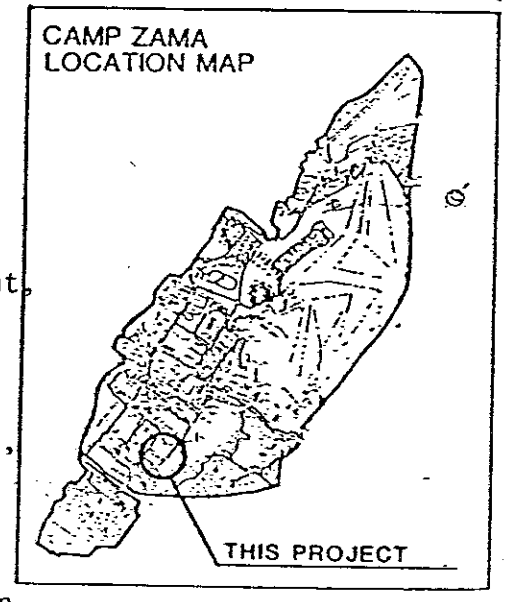
PROPOSED PROJECTS

2.1.36



DATA

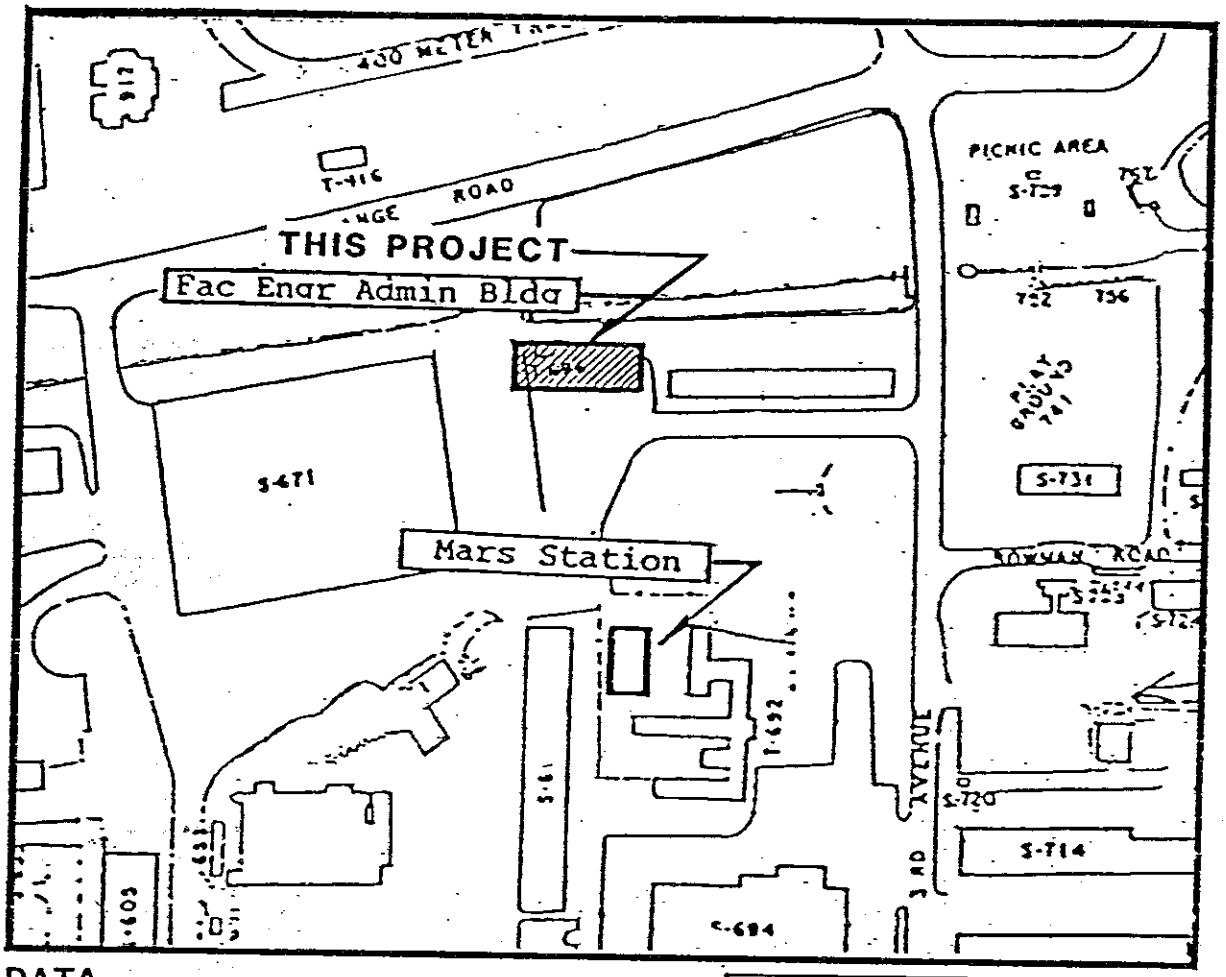
PROJECT TITLE : MUSIC DRAMA CENTER
CATEGORY CODE : 740 26
FUNDING : GOJ FIP
FY PROGRAM : JFY 1989
PROJECT SCOPE : 836 SM (9,000 SF)
EST. COST : -
BLDG. DESCRIP : Construction of a permanent, fire-resistive, one-story, reinforced concrete building with tape room, admin office, workshop, auditorium, dressing room, lobby, stage, classrooms, and rest rooms. Work includes all exterior utilities, site improvement, landscaping, and demolition of existing building.



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

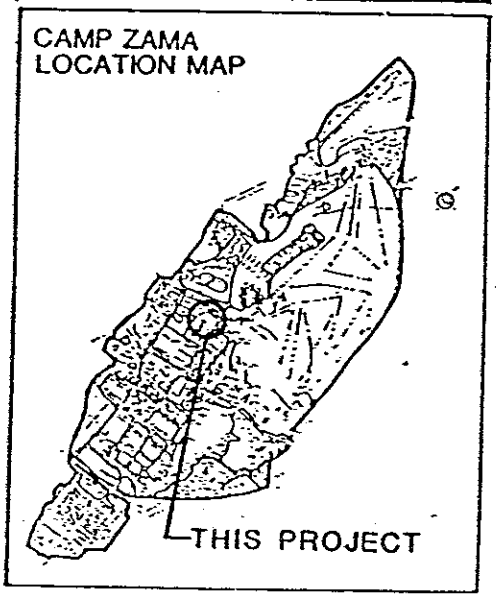
PROPOSED PROJECTS

2.1.37



DATA

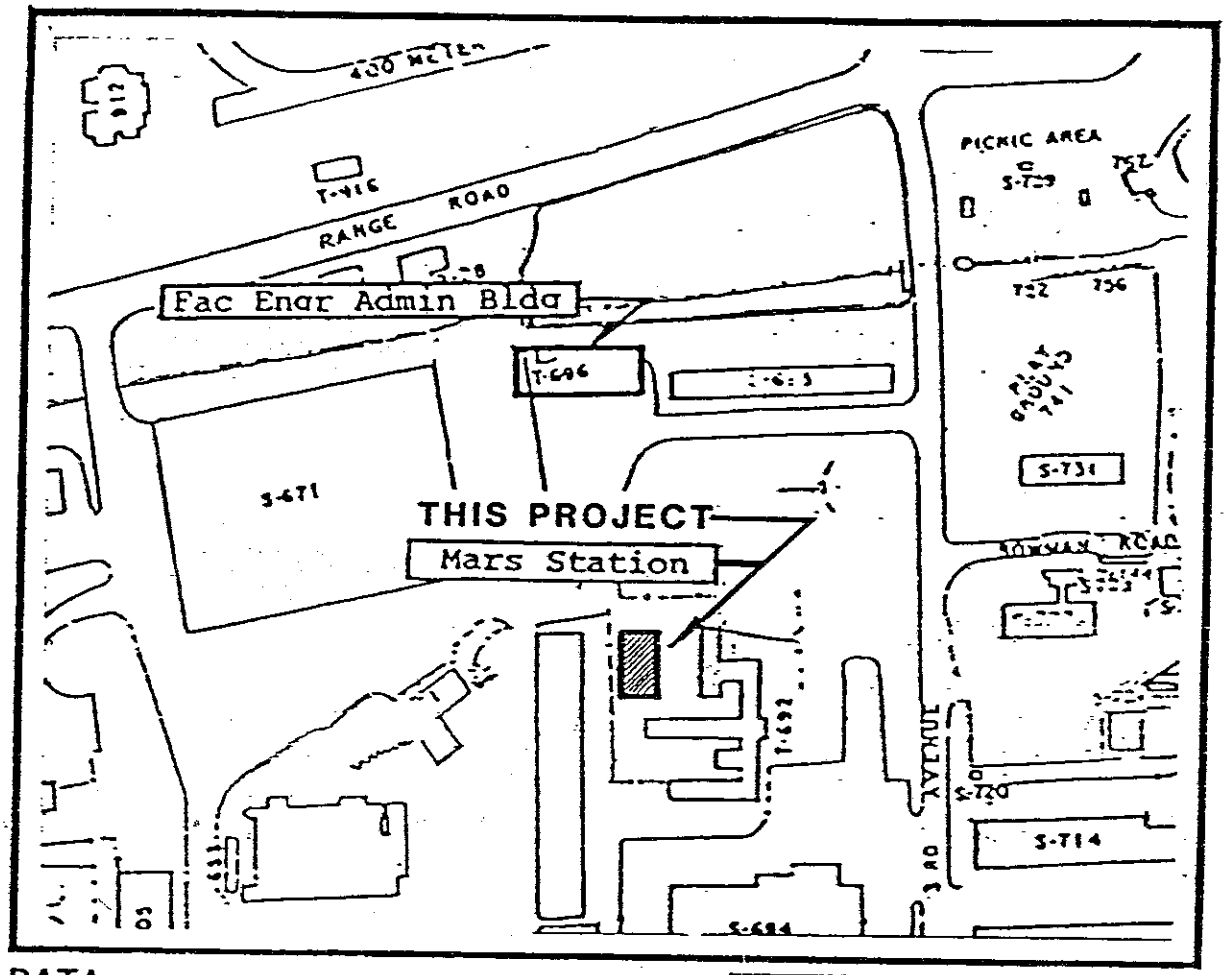
PROJECT TITLE : FAC. ENGR. ADMIN. BLDG.
CATEGORY CODE : 610 21
FUNDING : GOJ FIP
FY PROGRAM : JFY 1989
PROJECT SCOPE : 2,880 SM (31,000 SF)
EST. COST : -
BLDG. DESCRIP : Construction of a permanent three-story reinforced concrete office building to include air-conditioning, parking, roads, utilities, and site improvements.



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

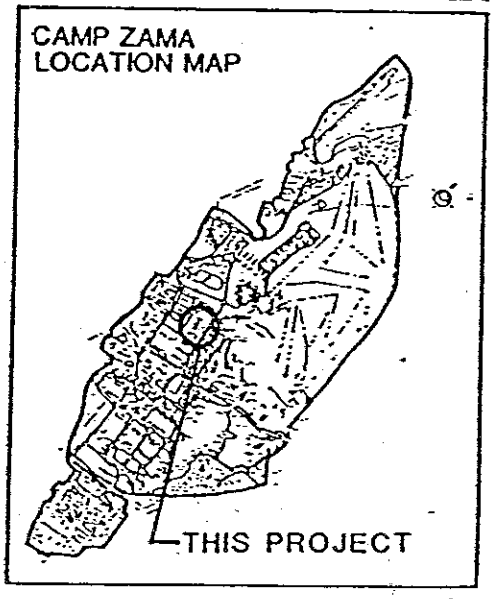
PROPOSED PROJECTS

2.1.38



DATA

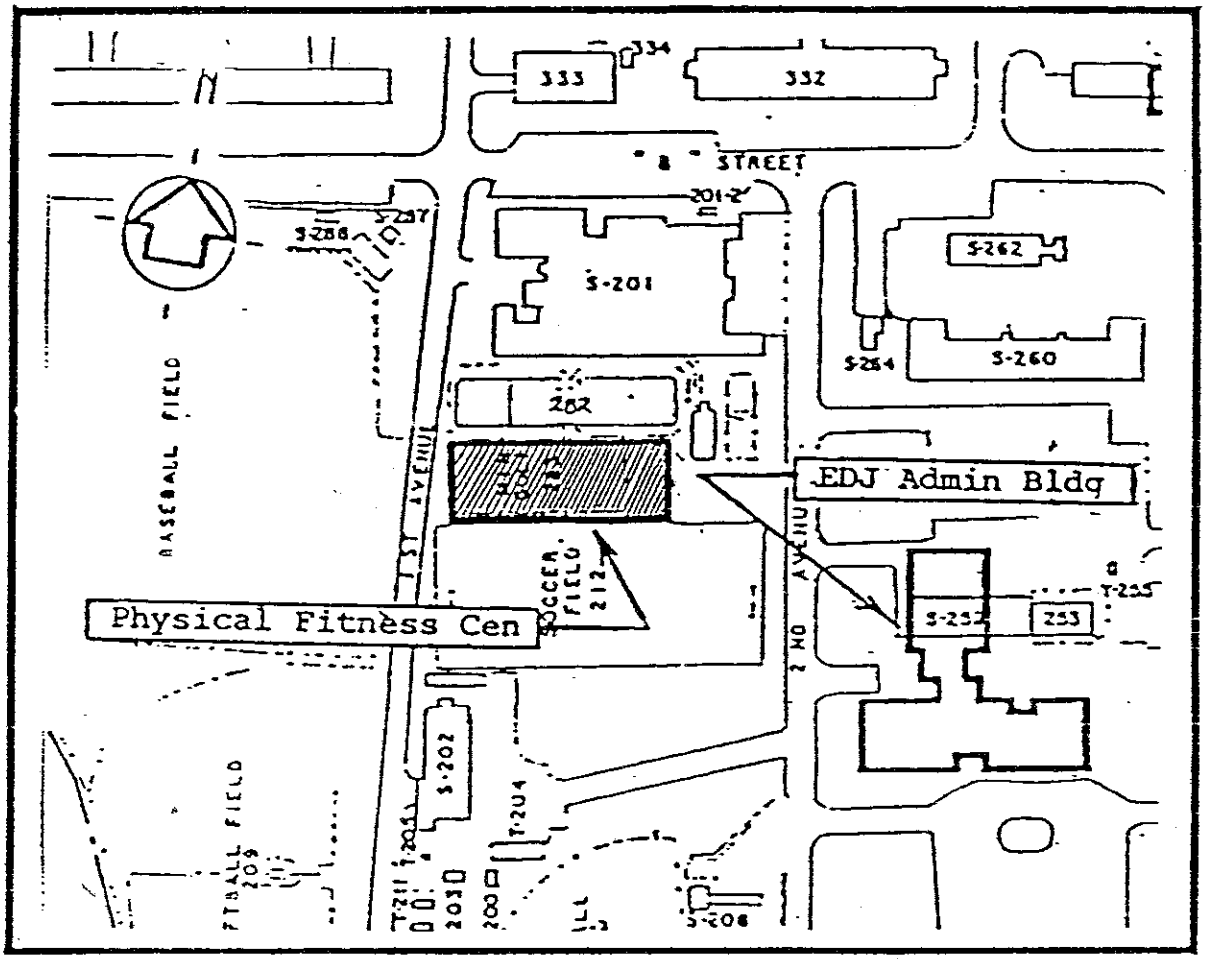
PROJECT TITLE : MARS STATION
CATEGORY CODE : 131 25
FUNDING : GOJ FIP
FY PROGRAM : JFY 1990
PROJECT SCOPE : 280 SM (3,010 SF)
EST. COST : -
BLDG. DESCRIP : Construction of a Military Affiliate Radio System(MARS) building.



MASTER PLAN PHASE II
FUTURE DEVELOPMENT PLAN

PROPOSED PROJECTS

2.1.39



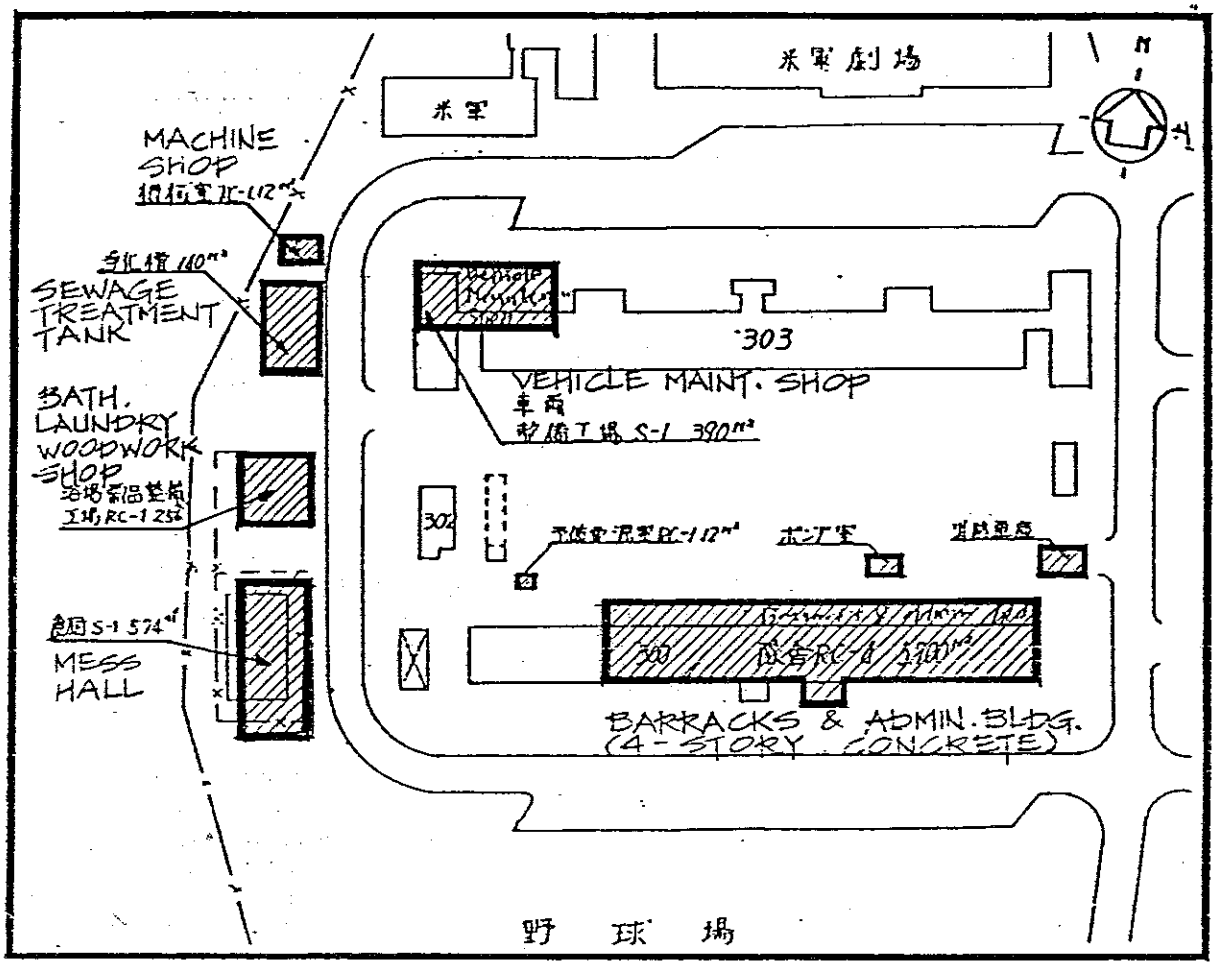
DATA

PROJECT TITLE :	PHYSICAL FITNESS CENTER
CATEGORY CODE :	740 28
FUNDING :	GOJ FIP
FY PROGRAM :	JFY 1992
PROJECT SCOPE :	2,044 SM (22,000 SF)
EST. COST :	-
BLDG. DESCRIP :	Construction of a permanent, fire-resistive structure to replace existing gymnasium.

MASTER PLAN PHASE Ⅱ
FUTURE DEVELOPMENT PLAN

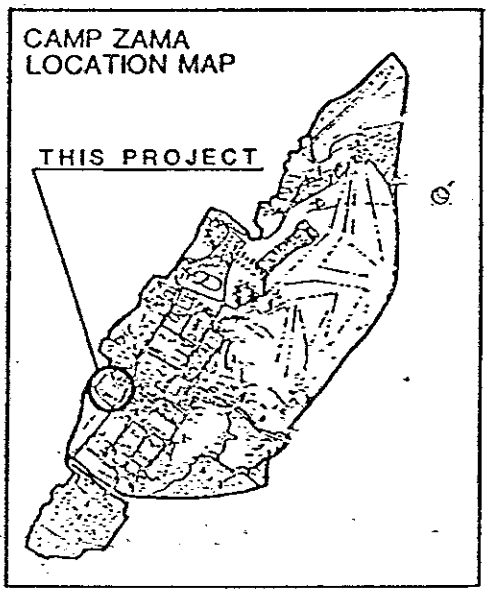
PROPOSED PROJECTS

2.1.40



DATA

PROJECT TITLE :	GSDF FACILITIES
CATEGORY CODE :	VARIOUS
FUNDING :	GOJ
FY PROGRAM :	GOJ PLAN
PROJECT SCOPE :	9 BUILDINGS
EST. COST :	-
BLDG. DESCRIP :	GOJ PLAN



2.2 ENVIRONMENTAL ELEMENTS AND EXPECTED IMPACTS

This part of Section 2 of the Analytical/Environmental Assessment Report provides a basic analysis of the expected environmental impacts of proposed projects. It should be noted that many of the proposed projects involve renovating or replacing inadequate facilities, and that construction activities will occur by and large on already "disturbed" sites. Generally, then, it can be expected that there will be relatively few adverse impacts in the major environmental impact areas of concern.

2.2.1 Historical Elements

There are a number of historical sites and monuments at Camp Zama that are protected and maintained. None of the proposed projects - whether upgrading, new construction or demolition - will damage, disturb or otherwise adversely affect any of these historical elements.

2.2.2 Cultural Elements

a. Population Density and Trends

As previously mentioned in paragraph 1.5, installation strength for Camp Zama will take into consideration strengths at the two adjoining Army facilities at Sagami General Depot and the Sagamihara Family Housing Area since the three installations are closely inter-related in terms of shared housing and community facilities requirements.

Assigned and attached Army populations at the three installations as of 31 March 1986 are attached herewith as reference.

Changes in installation strengths at any of the three installations would depend on a great extent to changes in assigned mission, functions, workload, utilization of resources, or operational methods.

The current population as of 31 December 1985 reflects the realignment of the organization and functions of HQ USARJ/IX Corps on 1 November 1985 to implement HQDA Manpower Survey of HQ USARJ/IX Corps.

Therefore, presently, there are no significant increase or decrease in the authorized strengths at the three installations. However, for the purposes of our Future Master Plan Development it is anticipated that a five per cent increase in the installation strengths can be assumed during the 20-year period starting from January 1986 to January 2006. This assumption is based on a peace-time situation and does not take into account war-time contingency situations that may arise during the 20-year period.

In addition, the Third Engineer Group of the Japanese Ground Self Defense Force (GSDF) jointly occupies part of Camp Zama since 1971. There are approximately 250 GSDF personnel on post and their population is anticipated to remain constant during the 20-year period.

The GSDF population information will impact only those facilities which they are authorized for joint use with the U.S. Army, such as the gymnasium, clubs, and other recreational facilities.

b. Regional Development

The proposed projects, while of importance to the efficient functioning and quality of life at Camp Zama, do not expect to have a significant impact, either positive or negative, on regional development plans of Zama and Sagamihara cities since the installation and the proposed facilities are not inter-related with the local community.

The local city government has developed its own comprehensive future master plan exclusive of all land areas currently leased by the U.S. Government.

According to projections, the population of Sagamihara city will reach in the excess of 600,000 in the 21st century. On the basis of this projection, a comprehensive regional city master plan is being developed for the coming years 1986 - 2001. In this plan, entitled "Plans for Sagamihara Towards the 21st Century", the city is envisioned to become a "high technology city" with a high concentration of advanced technology industries in the fields of electronics, mechatronics, aviation, and aerospace. Agricultural land will be preserved and considered as a "Green Space" in harmony with the city functions and contributing to the development of the local society.

Also in the plan, former sites of military facilities returned to the local jurisdiction will be slowly transformed into centers of education, culture, and health. One of the centers recently completed is the Institute of Space and Astronautical Science of the Ministry of Education. A baseball stadium, National Museum of Modern Arts, and Film Center will be constructed soon at

Fuchinobe Park. At the former site of the U.S. Army Hospital at Sagami Ono, a culture complex with a public library will be constructed. In addition, there is the "Sagami River Project" to preserve nature and protect the environment.

Although the future Sagamihara master plan is not forseen to have any direct or significant impact on the future development of Camp Zama, any new developments by the Government of Japan Facilities Improvement Program (FIP) will be of concern to the two city governments.

The existing land at Camp Zama is zoned as a "Controlled Development Area" on the regional development maps of both city governments. This indicates that Zama and Sagamihara cities will provide close scrutiny to the future development plans of Camp Zama especially in regards to political and environmental aspects.

Politically it is anticipated that continuous deployment and any increase in Japanese GSDF personnel at Camp Zama will be of concern, as well as any significant increase in the U.S. forces personnel which will undermine the eventual return of land to the two cities.

Environmentally it is anticipated that any further developments impacting on existing nature, such as indiscriminate cutting of trees and, safety, such as aircraft operations and ordance facilities, will be of great concern to their regional development.

ONUMA AND ONUMA ASSOCIATES, INC.
ARCHITECTS ENGINEERS PLANNERS
4-32-4 NISHI-SHINJUKU, SHINJUKU-KU, TOKYO

JOB NO	SHEET NO
DESIGNED BY	DATE
CHECKED	DATE

ASSIGNED & ATTACHED ARMY POPULATIONS - ZAMA

Based on AJ Form 2289, 31 March 1986

ZAMA

Category	Assigned Auth.	Assigned (Actual)	Attached Auth.	Attached (Actual)	Total Auth.	Total (Actual)
Officers	113	(110)	16	(17)	129	(127)
Warrant Off.	18	(25)	12	(12)	30	(37)
Enlisted	423	(454)	91	(101)	514	(555)
U.S. Civilian	328	(388)	232	(279)	560	(659)
MLC* - Japanese	977	(952)	295	(290)	1,272	(1,242)
Military F.M.*	-	(840)	-	(333)	-	(1,173)
Civ. F.M.*	-	(293)	-	(271)	-	(564)
Totals	1,859	(3,054)	646	(1,303)	2,505	(4,357)
Japanese	977	(952)	295	(290)	1,272	(1,242)
U.S.	882	(2,102)	351	(1,013)	1,233	(3,115)

* MLC - Master Labor Contract
F.M. - Family Member

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DESIGNED BY	DATE
CHECKED	DATE

ASSIGNED & ATTACHED ARMY POPULATIONS - SAGAMI DEPOT

Based on AJ Form 2289, 31 March 1986

SAGAMI DEPOT

Category	Assigned Auth. (Actual)	Attached Auth. (Actual)	Total Auth. (Actual)
Officers	14 (14)	0 (0)	14 (14)
Warrant Off.	0 (0)	0 (0)	0 (0)
Enlisted	61 (67)	12 (13)	73 (80)
U.S. Civilian	59 (56)	5 (5)	64 (61)
MLC* - Japanese	517 (571)	44 (42)	561 (613)
Military F.M.*	- (111)	- (34)	- (145)
Civ. F.M.	- (53)	- (5)	- (58)
Totals	651 (872)	61 (99)	712 (971)
Japanese	517 (571)	44 (42)	561 (613)
U.S.	134 (301)	17 (57)	151 (358)

* MLC - Master Labor Contract
F.M. - Family Member

ONUMA AND ONUMA ASSOCIATES, INC.
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4-32-4 NISHI-SHINJUKU, SHINJUKU-KU. TOKYO

JOB NO	SHEET NO
DESIGNED BY	DATE
CHECKED	DATE

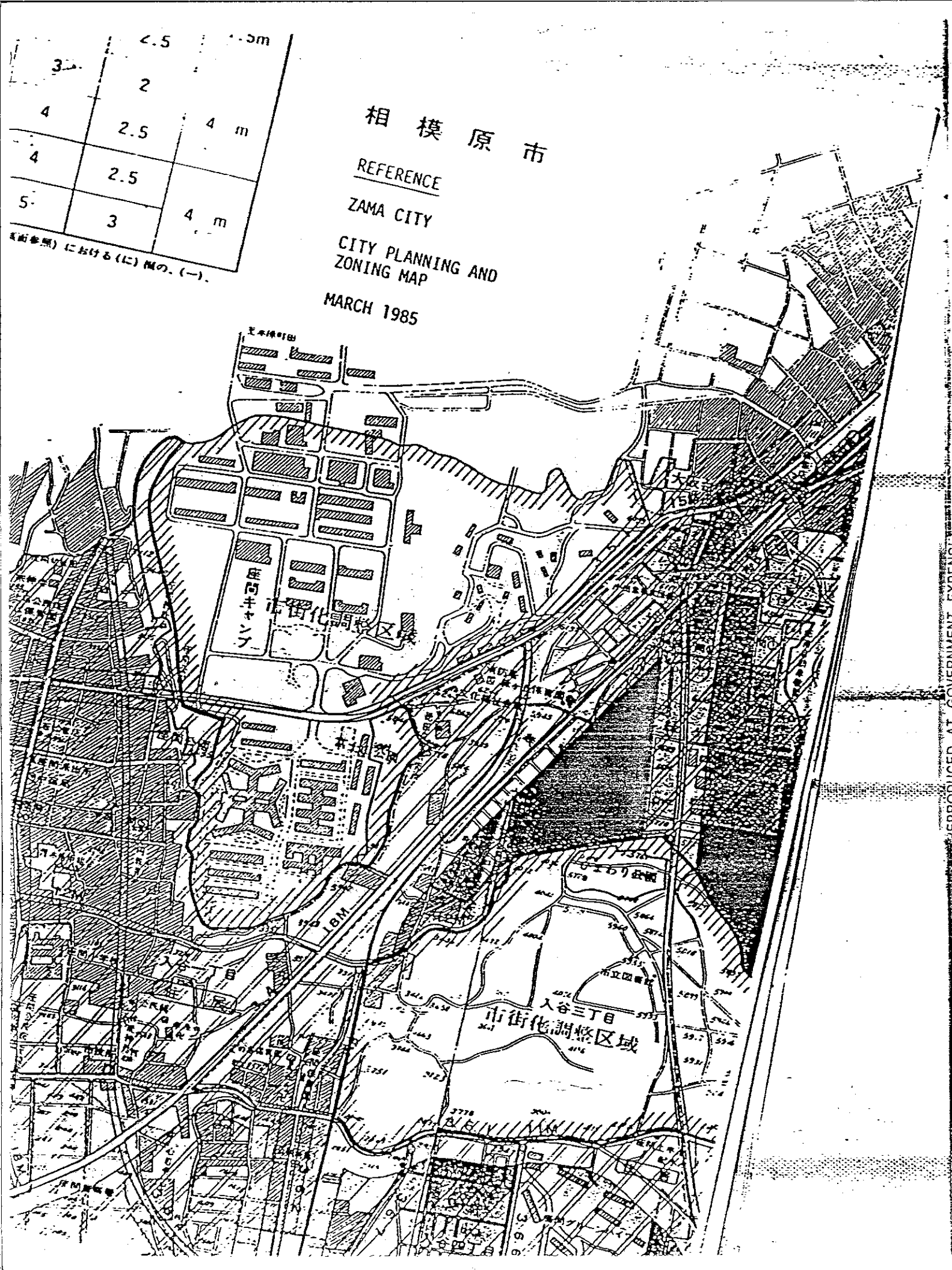
ASSIGNED & ATTACHED ARMY POPULATIONS - SAGAMIHARA

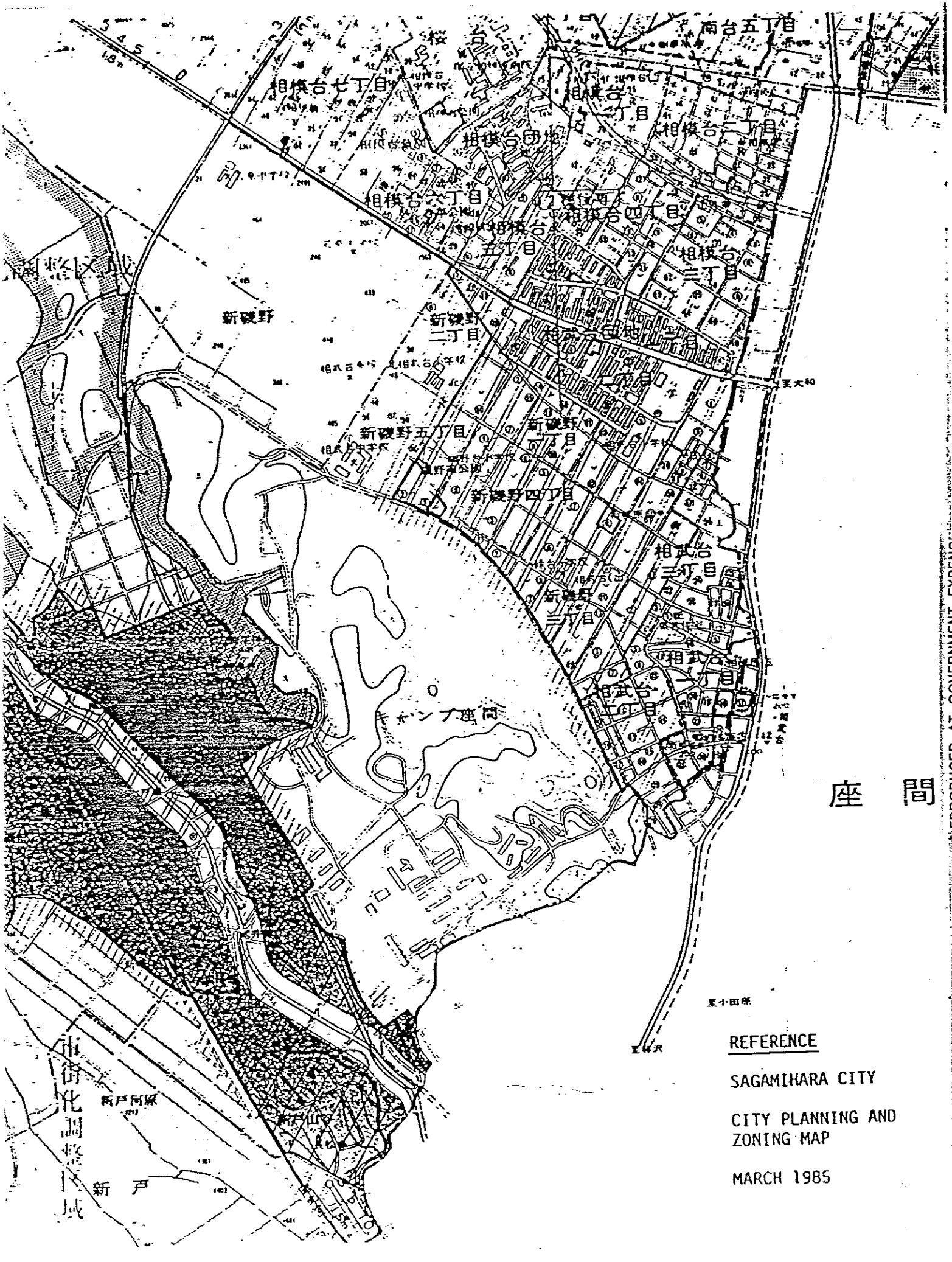
Based on AJ Form 2289, 31 March 1986

SAGAMIHARA

Category	Assigned Auth.	Assigned (Actual)	Attached Auth.	Attached (Actual)	Total Auth.	Total (Actual)
Officers	0	(0)	0	(0)	0	(0)
Warrant Off.	0	(0)	0	(0)	0	(0)
Enlisted	4	(4)	1	(1)	5	(5)
U.S. Civilian	5	(20)	11	(10)	16	(30)
MLC* - Japanese	30	(30)	51	(45)	81	(75)
Military F.M.*	-	(22)	-	(0)	-	(22)
Civ. F.M.	-	(3)	-	(5)	-	(8)
Totals	39	(79)	63	(61)	102	(140)
Japanese	30	(30)	51	(45)	81	(75)
U.S.	9	(49)	12	(16)	21	(65)

* MLC - Master Labor Contract
F.M. - Family Member





c. Transportation Systems

Vehicular Traffic

Among the proposed projects, the newly planned community facilities area may generate significant increase in vehicular traffic and cause changes in existing vehicular circulation flow and patterns. The new community facilities include the Music/Drama Center, Arts and Craft Center, Education Center, Main Poot Exchange, Personal Service Bldg., Community Service Center, Commissary Annex, and Post Office.

It is anticipated that existing streets leading into the parking areas of these new facilities, mainly 4th and 3rd Avenues, and "B" and "C" Streets, will become congested during peak hours. Vehicles avoiding the community facilities will continue to use 1st and 5th Avenues as main inter-post routes connecting the north and south areas of Camp Zama.

Of particular concern is the new Japan Engineering District Bldg. located between 2nd and 3rd Avenues. Existing JED offices are scattered throughout various buildings at South Camp. The relocation of all JED functions to North Camp will alleviate chronic parking shortages around existing Buildings 102, S-102, and S-116 at South Camp, however will increase traffic volume at North Camp on 2nd and 3rd Avenues.

It is recommended that a detailed traffic study be made for the above-mentioned areas in order to forsee any problem areas in vehicular circulation.

The other planned projects are not expected to cause any significant changes to existing on-base vehicular traffic.

Air Access

It is anticipated that Rankin Airfield, located on the north area of the Post, will continue to be used for USARJ mission requirements including medical evacuations. The airfield will be limited to helicopter traffic including UH-1 and newer UH-60 type helicopters. Existing air access is not expected to change in the future.

d. Cultural Patterns

The new on-post cultural facilities to include the Music/Drama Center, Arts, and Craft Center, and the Education Center are expected to improve, develop, and enhance the cultural activities at Camp Zama when completed.

e. Socio-Economic Conditions

The proposed new community facilities should improve the welfare and morale of the military and civilian population at Camp Zama. The new community facilities and other proposed projects should increase new full-time and part-time jobs for military dependents and local Japanese civilians.

f. Existing Community Area Facilities

Many of the planned facilities are part of Camp Zama's on-going Community Center Development Program which provide for the welfare and morale of the Camp Zama community. The new community facilities will have a significant effect in terms of improving the quality of life at Camp Zama for the U.S. Army personnel, U.S. civilian employees, and dependents living at Camp Zama.

2.2.3 HEALTH

a. Air Quality

The proposed new facilities will not measurably increase the installation's impact on ambient air quality. Overall, Camp Zama has a negligible impact on air quality in this heavily industrialized region. The main source of emissions in the area are off-post industrial facilities and automobile emissions. Construction activities will probably have a minor, short-term negative effect on local air quality.

b. Water Purity and Adequacy

There will be no significant effect on the quality of area groundwater or surface waters. Planned projects will not result in a significant increase in demand for potable water. The existing potable water supply system can support a population of about 10,000 people. It is more than adequate to meet current and planned future needs.

c. Wasterwater Disposal

The planned projects will not have a significant impact on wastewater disposal systems.

d. Solid Wastes

Conventional solid wastes generated by operations and housing areas at Camp Zama are processed at the new incinerator that came on-line in April 1985. Proposed new facilities are not expected to result in a significant increase in the volume of solid wastes produced at this installation. Debris resulting from the demolition of obsolete buildings will be hauled to an approved off-base landfill site.

e. Insecticides and Herbicides

There will be no significant increase in the use of insecticides and herbicides at Camp Zama in the future.

2.2.4 SAFETY

a. Aircraft Operations

The proposed new aircraft facilities for Rankin Air Field and the deployment of new UH-60 Blackhawk helicopters should improve and enhance the safety of aircraft operations.

The proposed new aircraft facilities include the Aircraft Maintenance Hanger, Aviation Operations Building, and Fire Station. These new facilities replace existing outdated and functionally inadequate facilities, therefore, should enhance the safety of aircraft operations.

The new UH-60 Blackhawk helicopters deployed at Rankin Airfield are equipped with two aircraft engines that can sustain safe flight even with failure of one its engines, as compared to single-engine older UH-1 Huey helicopters.

b. Explosives

None of the proposed facilities is for the storage or testing of explosive substances.

c. Hazards

Some proposed projects will result in the demolition of existing buildings which may contain asbestos-containing material (ACM) and pose a significant environmental concern. During demolition activities any disturbance or damage to ACM may result in releasing of asbestos fiber creating air borne asbestos contamination and a potential hazard to workers. It is therefore recommended that U.S. Government regulations governing the handling and disposal of asbestos be strictly followed including early detection and identification of ACM prior to demolition of structures.

There are no nuclear or biological hazards associated with the proposed projects.

2.2.5 SIGHT

a. Topography

The planned Rankin Airfield expansion will require filling of an exisitng gulley approximately forty feet deep located between the runway and the aircraft apron. The area to be filled and paved is a somewhat enclosed, bottlenecked gully. The existing runoff pattern involves channeling the surface drainage through a narrow area between the existing airstrip and ash pit. The runoff generated due to the new paved area will constitute a significant increase over runoff from the present vegetated area, however, the largely undeveloped vegitated area down slope from the airfield expansion should be able to accommodate this. Further study should be conducted to evaluate this change and to consider the feasibility of using subsurface drainage structures.

All of the other planned facilities will be built on relatively level sites located in the lower elevations of Camp Zama. The proposed projects are not expected to have an adverse effect on topographic conditions and no significant erosion problems are expected. The new facilities should have a positive effect on the visual quality of Camp Zama.

b. Tree and Vegetative Cover

Some of the areas within Camp Zama are well landscaped with large deciduous and coniferous trees, shrubs and lawns. There are some natural woodlands at the higher elevations. Some of the planned projects will require the removal of existing plant material. In general, however, beneficial impacts can be expected, especially in terms of new plantings and landscaping that are likely to be associated with the various upgraded or expanded community facilities.

However, a significant amount of vegetation is anticipated to be removed from the gully to be filled for the Rankin Airfield apron expansion. The removal of vegetation from this area, though, will not constitute a significant threat to the overall environmental setting. This area is a small percentage of the high elevation vegetated terrain throughout the greater area. Being enclosed with airfield pavement on three sides and ash pit berms to the north, the lot is inaccessible to the general public and restrictive to wildlife and thus unsuitable as a nature sanctuary.

c. Streams, Lakes and Mountains

Streams, lakes and mountains are not present at Camp Zama. Thus, there will be no adverse impacts on resources of this kind.

2.2.6 NOISE

a. Aircraft Operations

The planned Rankin Airfield expansion will increase the existing helicopter parking apron and consequently will be able to accommodate more helicopters in the future. An increase in the total number of aircraft at Rankin Airfield will definitely increase aircraft operations and its associated noise level in the future.

Although no noise measurement comparisons have been made, the deployment of new UH-60 Blackhawk helicopters at Rankin Airfield may affect the noise level as compared to the older UH-1 Huey helicopters.

Helicopter noise at Rankin Airfield should be evaluated in regards to its potential impact on the surrounding local civilian community of Zama and Sagamihara Cities. Recommendations should be made to minimize the noise level should it exceed the Government of Japan aircraft noise limits.

SECTION 3

LAND USE RELATIONSHIPS

This section of the Analytical/Environmental Assessment Report focuses on land use relationships in terms of:

- Criteria for proposed siting of new facilities.
- Significant changes in land use and land use relationships that are expected to result from the implementation of planned projects.
- Significant adverse impacts that may result from these changes.

3.1 PROPOSED LAND AREA ALLOCATIONS.

The General Reservation Plan is one of the companion documents to this report. This plan illustrates proposed future land uses by general areas and zones. The major areas shown on the Reservation Plan are as follows:

TABLE 3-1

FUTURE LAND USE AREAS

Land Use	Proposed Facilities
Covered Supply & Storage	DPCA Warehouse
Warehouse	
Open Supply & Storage	
Maintenance	Aircraft Maintenance Hanger Facilities
	Engineer Complex

Housing & Community Support Facilities	Guest House Mod; UOPH/UEPH/VOQ Modernization; Fire Station; Middle School; Personal Service Bldg; Commissary Annex; Main Post Exchange; Education Center; Arts & Craft Center; Music/Drama Center; Auto Center; PX Garage & Service Station; Physical fitness Center; Consolidated Club; Youth Center; Golf Club House
Operation & Training	Training & Audio Visual Center; Telephone Exchange; 500 MI Group Ops Center; Mp Ops Center; Aviation Ops Center; Rankin Airfield Expansion

Research & Testing	None
Administrative Facilities	Signal Admin Bldg; JED Admin Bldg.
Utilities & Grounds Facilities	Chiller Plant & Systems; Diesel Storage Tank; Upgrade Heating Plant; Water Storage & Pump Facility; Drain Improvement
Hospital & Medical Facilities	Preventive Med/Vet Physical Therapy Bldg.
Roads	
Unused/Unassigned	

Generally, the proposed siting of future facilities has not been constrained by special circumstances relating to climate, topography, retention of historic places, or other important environmental factors. However, Camp Zama is a fairly densely developed installation. New facilities will thus often require the demolition of old, obsolete facilities.

3.2 LAND USE IMPACTS

Planned projects for Camp Zama are based on the continued use of this installation as the headquarters of the USARJ/IX CORPS and the 9th Area Support Group (Provisional) (U.S. Army Garrison, Honshu).

In accordance with the instructions of AR 210-20, the discussion of land use relationships in this section is organized in three subsections:

- Open Operational Areas
- Built-Up Cantonment Area
- Transportation Facilities

3.2.1 Open Operational Areas

Open operational areas of Camp Zama include the Parade Field (S-233), Motor Pool, and the Helicopter Parking Pad at Rankin Airfield. No further increase or decrease in size of existing open operational areas is anticipated in the future for the Parade Field and the Motor Pool. Expansion of the helicopter parking Pad at Rankin Airfield is planned and will require filling of the existing gulley. The planned expansion will significantly increase the open operational area at Rankin Airfield.

3.2.2 Built-Up Cantonment Areas

Approximately 90 percent of Camp Zama's land area is occupied by built-up cantonment areas, i.e., administraton facilities, community facilitis, housing areas, etc.

Generally, the proposed new land uses and new facilities have been planned to relate to these existing built-up areas with a minimum of disruption. Nevertheless, most of the new facilities will require the demolition of existing obsolete buildings.

Most of the planned projects are community facilities that have been sited in accordance with the ongoing Community Development Program for Camp Zama. These facilities will thus be clustered in the south central sector of the installation, and will all be within easy walking distance of each other.

The planned MP Operation Center and Fire Station are consolidated at an area near Gate No. 1. The MP Operation Center would handle matters relating to security and issuance of gate passes which would be convenient at this location. The Fire Station is located at a close distance to serve South Camp in case of emergency.

The proposed Training and Audio Visual Center, Telephone Exchange, Signal Administration Building, and 500th MI Group Operations Center are all sited on South Camp due to their functional requirement to be near the Headquaters Building or their existing facilities.

New facilities related to equipment and vehicle maintenance and servicing - the Facilities Engineer Complex, the PX Garage and Service Station and the Auto Self-Help Garage - will be sited in the west central sector of Camp Zama, in the vicinity of the new transportation motor pool and generally well removed from potentially conflicting land uses such as housing areas, community facilities and office buildings.

The new Middle School/Cafeteria/Gym project, which is one of the largest of the planned projects, has been logically sited adjacent to the existing high school. This site is easily accessible to most of the family housing areas at Camp Zama.

Generally, then, the planned projects will relate well with, and not have a negative impact on built-up cantonment areas of Camp Zama.

3.2.3 Transportation Facilities and Traffic Control Roads

None of the planned projects relates directly to transportation facilities within the installation. Final engineering plans for some of the planned facilities may require minor modification of short sections of existing streets and roads. As previously mentioned, a traffic study should be made for the planned new community facilities complex due to anticipated increase in vehicular traffic within a relatively concentrated area of Camp Zama.

SECTION 4

UTILITIES SYSTEMS

4.1 WATER SUPPLY SYSTEM

Generally, planned facilities at Camp Zama will not have a negative impact on the existing water supply system, and increase in water demand will be relatively insignificant. Existing water supply wells located off-post of Camp Zama can supply sufficient water to support an effective installation population of 10,000 at average demand - about 1.5 times the current effective population. Capacity of existing wells under 70% of safe yield with a maximum operation of 16 hours per day is 1,300 gpm or 1,248,000 gal per day, while the current consumption is 800,000 gal per day. The existing storage system with reservoirs and elevated tanks has a 1,197,000 gallon capacity which is adequate to handle the daily demand of 981,000 gallons (see "Tabulation of Existing and Required Facilities") which includes fire demand and a capacity factor. Parts of the Camp Zama water distribution system are antiquated, however upgrading of existing water systems are progressing under the Government of Japan's Facilities Improvement Program (FIP) and includes water source, pumping and storage facilities, distribution and service mains.

4.2 SANITARY SEWER AND WASTEWATER TREATMENT SYSTEMS

The existing sewer collection and wastewater treatment systems are generally adequate for existing facilities. Much of the base relies on septic tanks and there is an existing treatment plant serving 740 persons in the northern part of the base and a localized plant for an effective population of 250 persons is under construction (FIP) in the southern part of the base.

Most of the new facilities will not create a sizable increase in the total wastewater load. The planned PX Garage and Service station, though, is to have a car wash facility which will generate a significant amount of wastewater. Water from the car wash will be treated via an oil interceptor prior to discharge into the storm sewer system.

The two new planned high-rise family housing unit facilities, with 68 units each, will each have a new wastewater treatment plant.

Other new facilities will either tie into existing collection/treatment systems or provide new septic tanks or other more advanced treatment systems as necessary.

4.3 STORM DRAINAGE

Existing storm drainage systems should be adequate to handle storm runoff generated by the planned facilities. since many of the new facilities will be replacing obsolete existing facilities, the net increase in impervious surfaces, i.e., roof tops, parking lots, roads and walkways, will be much less than in the case of new buildings being sited on heretofore undeveloped land. Nevertheless, the design of these new facilities should take into account the capacity of the site-related storm drain systems.

4.4 SOLID WASTE DISPOSAL

Generally, the planned facilities will not result in a significant increase in the volume of solid waste generated by Camp Zama uses and users. The new solid waste incinerator has adequate capacity to handle future solid waste loads from Camp Zama and from the nearby Sagami General Depot and Sagamihara Dependent Housing Area.

4.5 ELECTRICAL SYSTEM

Electric power is supplied by the Tokyo Electric Co. The overall system at Camp Zama has a 10,500 KVA Capacity - significantly greater than the presently contracted demand of 5,800 KW. The total electrical power demand of all of the planned facilities has not been calculated. However, it is reasonable to assume that these facilities, especially the Air Conditioning Plant for Buildings 101 and 102, will result in a net increase in power demand. Phase III planning studies should include a thorough study of upgrading and expansion needs for the installation's Electrical Power System.