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NVO-9

FACILITIES & SUPPORT REQUIREMENTS PLAN

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PACIFIC AREA

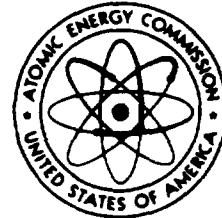
VOLUME I JOHNSTON ATOLL

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JOINT TASK FORCE EIGHT

AND



UNITED STATES
ATOMIC ENERGY COMMISSION

NINTH EDITION
April, 1969

prepared by
HOLMES & NARVER INC
Logistics Planning Group
Las Vegas, Nevada

DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW
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TABLE OF CONTENTS

SECTION I	INTRODUCTION	PAGE
1.1	General	I-1
1.2	Purpose	I-1
1.3	Contents	I-1
1.4	Supersedure	I-2
1.5	Change Pages	I-2
1.6	Changes to Data	I-2
1.7	Procedure for AEC Facility and Logistic Support Approval	I-2
1.8	Procedure for DOD Agency Facility and Logistic Support Approval	I-3

SECTION II	DEFINITIONS AND ABBREVIATIONS	PAGE
2.1	General	
2.2	Definitions	

SECTION III	DOD PROGRAM SUMMARY	PAGE
	General	I-12
	MIGHTY SKY Program	I-13
	MIDGET FLY Program	I-17
	DISTANT WATERS Program	I-19

SECTION IV	FACILITIES	PAGE
4.1	General	I-21
4.2	Tabular Listing of Facilities	I-21
4.3	Narratives and Details	I-21
4.4	Island Site Plans	I-22

SECTION V	FACILITY DESCRIPTION	PAGES
01	Johnston Atoll Scientific	1-1 thru 1-105
02	Johnston Atoll Support	2-1 thru 2-106
03	Johnston Atoll Support	3-1 thru 3-40
04	Johnston Atoll Communications	4-1 thru 4-28
80	Johnston Atoll Project Sharp Nail	80-1 thru 80-3
81	Johnston Atoll Program 437	81-1 thru 81-33
	Unfunded MILCON Projects	M-1 thru M-5



LIST OF TABLES

TABLE	TITLE	PAGE
2-1	Summary of Locations by the First Two Digits of the F&S Number	I-8
2-2	Abbreviations	I-10
5-1	Numerical Index of Active Facility Numbers	O-1

FIGURE	TITLE	PAGE
A-1	Johnston Atoll and Surrounding Area	A-2
A-2	Facilities on Western End of Johnston Island	A-3
A-3	Facilities on Eastern End of Johnston Island	A-4
A-4	Facilities at Sand Island	A-5
A-5	Facilities at Akau Island	A-6
A-6	Facilities at Hikina Island	A-7
A-7	Scientific Station Numbers on Western End of Johnston Island	A-8
A-8	Scientific Station Numbers on Eastern End of Johnston Island	A-9

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SECTION I

INTRODUCTION

1.1 GENERAL

The Facilities and Support Requirements (F&SR) Plan, NVO-9, is prepared and maintained by the Logistics Planning Group (LPG) of Holmes & Narver, Inc. in accordance with guidance furnished in: (1) The U. S. Atomic Energy Commission, Nevada Operations Office, Planning Directive for Off-Continent Activities (OC-10-6-68) FY 1969, dated June 28, 1968; (2) Annex I to Commander Joint Task Force EIGHT, Operations Plan 100 (current edition); and (3) The various Defense Atomic Support Agency Program Documents.

1.2 PURPOSE

This document provides a consolidated plan for engineering, procurement, construction, logistical support and funding requirements necessary to establish and maintain those facilities which will permit timely reaction to a decision to resume nuclear testing in the Pacific Operational Area. It is designed to serve as a basic information document for the U. S. Atomic Energy Commission (AEC), the Defense Atomic Support Agency (DASA) and Joint Task Force EIGHT (JTF-8).

1.3 CONTENTS

This Ninth Edition of the Facilities and Support Requirements Plan, commonly referred to as "The Gray Book", is published in three volumes and is based on currently known requirements submitted by all agencies.

Volume I contains descriptions of field construction related projects or major modifications which have been completed, are under way, or are proposed for accomplishment at Johnston Atoll.

Volume II contains information concerning field construction related projects or major modifications which have been completed, are under way, or are proposed for accomplishment at Kirtland AFB, Albuquerque, New Mexico; within the Hawaiian Islands; and at other Pacific Island locations. These latter locations are usually referred to as the Off-Islands.

Volume III contains information related to support requirements. These include detailed communications, special support personnel,

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space allocation and structure/facility numbers, office furniture and equipment, vehicle and support equipment and transportation requirements. A table of population forecasts at Johnston Atoll and a listing of scientific station numbers are also included.

1.4 SUPERSEDURE

This Ninth Edition of the Facilities and Support Requirements Plan, dated April 1969 supersedes and replaces the Eighth Edition, dated January 1, 1966.

1.5 CHANGE PAGES

This edition will be maintained in a current status through the issuance of periodic change pages providing new information on criteria, status, funding and support. A list of all currently effective pages is furnished with each change as a checklist. A record of changes to all volumes should be maintained in Annex Z of each volume.

1.6 CHANGES TO DATA

Changes or corrections to data contained in this publication should be sent to:

Manager, Logistic Planning Group
Holmes & Narver, Inc.
P. O. Box 14340
Las Vegas, Nevada 89114
Phone: (702) 734-3104

1.7 PROCEDURE FOR AEC FACILITY AND LOGISTIC SUPPORT APPROVAL AND INCORPORATION OF DATA RELATED THERETO IN THE FACILITIES AND SUPPORT REQUIREMENTS PLAN

The LPG is the organization responsible for compiling and maintaining facility and logistic support data in the F&SR Plan. This data will be coordinated directly between the User and the LPG.

The responsibilities of the AEC organizations, involved in nuclear testing in the Pacific Operational Area, with respect to the F&SR Plan are as follows:

The AEC Laboratories and/or contractors (Users) will submit their requirements, with preliminary concept and justification, to the Manager, NVOO, with a copy to the Manager, LPG.

[REDACTED]

Several alternative courses of action are available. For example, the Manager, NVOO, may approve the User's requirement outright; or prior to that action, solicit the recommendations of the Off-Continent Planning Committee (OCPC).

The LPG is then directed to develop the preliminary concept and criteria and obtain planning cost estimates, siting approval, etc., as appropriate. The LPG will obtain the User's approval before submitting the results of their investigations to the Manager, NVOO, CJTF-8 and to other pertinent AEC and DOD agencies for comment and concurrence, as necessary.

Based upon the recommendations of the OCPC, the Manager, NVOO, may either: (1) Disapprove the requirement; (2) Direct LPG to incorporate the requirements in the F&SR Plan as a proposed item pending approval; or (3) Approve the requirement with engineering, procurement and construction authorized in whole or in part.

AEC agencies are responsible for reviewing the F&SR Plan to ascertain accuracy and completeness of all criteria under their cognizance. Desired changes will be reported to NVOO, with a copy to the Manager, LPG.

1.8 PROCEDURE FOR DOD AGENCY FACILITY AND LOGISTIC SUPPORT APPROVAL AND INCORPORATION OF DATA RELATED THERETO IN THE FACILITIES AND SUPPORT REQUIREMENTS PLAN

As in the case with the AEC originated requirements, the LPG is the organization responsible for compiling and maintaining the DOD's facility and logistic support data. However, JTF-8 is the coordinating agency between the various DOD organizations and the LPG in all instances. Upon JTF-8 approval DOD furnished support is included in the F&SR Plan.

The responsibilities of the DOD organizations, involved in nuclear testing in the Pacific Operational Area, with respect to the F&SR Plan are as follows:

All DOD agencies requiring facility and logistic support from JTF-8 shall obtain HQ DASA project approval prior to requesting inclusion of their requirement(s) in the F&SR Plan. Any requirement that is to be included in the F&SR Plan will be submitted through appropriate channels to JTF-8, with a copy to the Manager, LPG, accompanied by a copy of DASA's approval.

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Upon receipt of a requirement from a DOD organization and with JTF-8's concurrence, LPG is authorized direct contact with the requesting organization and others that may be interested. As appropriate, the LPG will develop the preliminary concepts and criteria and obtain planning cost estimates, siting approval, etc. Approval of this study will then be obtained from the requesting DOD agency before the results of the LPG's investigations are submitted to the CJTF-8 for further approval.

At this point, the CJTF-8 may approve the facility study, criteria, etc., outright; or, prior to that action, solicit the recommendations of the Pacific Planning Board. Based upon the recommendation of the Pacific Planning Board, the CJTF-8 will review the LPG's study(s) prior to including the requirement in the F&SR Plan as: (1) An approved item; (2) A proposed item pending approval; or (3) As an approved item with engineering, procurement and construction authorized in whole or in part.

DOD agencies are responsible for reviewing the F&SR Plan to ascertain accuracy and completeness of all criteria under their cognizance. Desired changes will be reported to CJTF-8, with a copy to the Manager, LPG.

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SECTION II

DEFINITIONS AND ABBREVIATIONS

2.1 GENERAL

This section presents the definitions and abbreviations used throughout the three volumes of the F&SR Plan.

2.2 DEFINITIONS

BOD - FOD - These expressions are utilized to indicate the actual calendar date or a relative GO date when a facility will be required for occupancy. "BOD" (Beneficial Occupancy Date) is defined as the date when construction of a facility will reach a stage that will permit concurrent construction or installation of equipment by both the construction contractor and the using agency or its agent. "FOD" (Full Occupancy Date) is defined as the date when the construction of the facility will reach a stage that it may be used for its intended purposes with relatively little interference, restriction or inconvenience from the completion activities of the construction contractor.

If a facility is scheduled for participation in more than one event, the FOD is based upon the earliest scheduled requirement. An exception is in the scheduling of planned facilities for Nuclear Operational System Test (NOST) participation. Established design, procurement and construction schedules will not be adjusted to accommodate NOST participation, except for the facilities at Midway. Certain facilities at Midway are required specifically for NOST participation and have an FOD based on this requirement. If a facility is incomplete on the date of a NOST, an alternate facility may be used.

F&S No. - Facilities and Support number (F&S No.) is a five-digit identification number assigned to a project or facility. The first two-digits reflect the location and intended use of the facility. The exception being the off-island facilities, whereby the first two-digits reflect the location only. Table 2-1 lists a summary of these digits. The last three digits are assigned in line item sequence for each location and intended use.

Once a F&S No. has been assigned to a facility, it will not be re-assigned to another facility or project. However, an assigned F&S No. may become inactive and subsequently be deleted (the facility requirement was rescinded prior to any effort expended), cancelled (the facility requirement was rescinded after some effort was expended) or transferred (the facility requirement was included as part of another project or facility which had an assigned F&S No.). These inactive

[REDACTED]

F&S Numbers will not be included in Table 5-1 of Volumes I and II. Only active F&S Numbers will be included in this Table. Tables 3-4 thru 3-6 of Volume III delineates the relationship between applicable active F&S Nos., building numbers, scientific station numbers and the Users of the various facilities and structures at Johnston Atoll, the Hawaiian Islands and Kirtland AFB. A complete listing of all active and inactive F&S Nos., as a matter of historical reference, is on file with the Logistics Planning Group.

Funding - The term "Funding Agency" indicates the source of funds for the design, procurement and construction of a facility. Funds may be allocated by a single agency or from a combination of agencies, depending upon participation in the particular project. Where funding responsibility for a facility has not yet been resolved, the Funding Agency block will be left blank. Where applicable, DOD funded facilities will include a separate amount for furniture; whereas, the furniture costs will be included in the construction costs for AEC funded facilities. The cost estimate for construction includes the estimated cost of procurement for both DOD and AEC funded facilities. In the listing of costs or estimates, values are in the thousands of dollars.

Prior Costs, as listed in this edition of the F&SR Plan, are defined as that portion of the money expended as of June 30, 1968. For all subsequent changes to the F&SR Plan, Prior Costs are defined as those costs expended as of the last completed fiscal year.

FY 69, FY 70, FY 71 and Post-GO costs are defined as estimated expenditures planned for the applicable time frame.

GO - "GO" is defined as the date Presidential Authorization is given to proceed to test with highest priority in the now prohibited environments. A BOD or FOD of GO+30 indicates that the facility will be required 30 days after "GO".

I. D. No. - Identification number assigned by H&N for cost identification purposes.

Narrative - The narrative section below the title block on the facility or project description page provides the current Pre-GO and Post-GO status of engineering, procurement and construction and includes a description of the facility. Holmes & Narver, Inc., is responsible for all engineering, procurement and construction mentioned in all volumes unless another organization is indicated.

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Participation - As used in the Index, "Participation" indicates the program(s) in which the facility will be used. The abbreviations used to identify the various programs are as follows:

AD	-	AEC Air Drop Program
*BH	-	Baker-Howland
**DW	-	DISTANT WATERS
EX	-	Exercise/Rehearsal
HA	-	High Altitude Program, including MIGHTY SKY Program
**MF	-	MIDGET FLY
**NOST	-	Nuclear Operational Systems Test
S	-	Support
T	-	TAMARIN

*Baker-Howland is a part of the Land Based Program. Only that portion of the Land Based Program which involves facilities located overseas, namely Baker-Howland, is included in this document.

**A part of this program is conducted in the CONUS. Facilities required for the CONUS portion of the program are not included in this document.

A Scientific Station is any land-based facility or installation, either existing or approved for engineering and/or construction, used in a test program, which is required to launch payloads, or to observe, measure, collect, record, or display test results.

Structure/Facility No. - As noted on the individual facility description pages, as well as in the indexes, a Structure/Facility No. is assigned to each facility for record and base identification purposes. See Section III, Volume III, for a complete list of all Structure/Facility Numbers.

Subtask No. - Includes the designation assigned to all DOD/DASA subtasks (formerly projects). The Subtask No's. and titles for the MIGHTY SKY, MIDGET FLY and DISTANT WATERS programs are listed in Section III, of both Volumes I and II.

Title - Proper and official name of the facility or project.

User - The abbreviated title of the primary agency which has a requirement, or the agency having managerial responsibility, for the facility. JTF, in the User block or column, indicates that the facility is available for use by all test participants.

Vol. - Volume containing information concerning the project or facility.

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TABLE 2-1

SUMMARY OF LOCATIONS IDENTIFIED BY
THE FIRST TWO DIGITS OF THE F&S NUMBER

01 - Johnston Atoll - Scientific	21 - Canton
02 - Johnston Atoll - Support	22 - French Frigate Shoals
03 - Johnston Atoll - Support	23 - Kwajalein
04 - Johnston Atoll - Communications	24 - Midway
05 - Oahu - Scientific & Support	25 - Palmyra
06 - Oahu - Communications	26 - Upolu
07 - Hickam AFB - Scientific & Support	27 - Viti Levu, Fiji
08 - Not Used	28 - Wake
09 - NAS, Barbers Point - Scientific	29 - Guam
10 - NAS, Barbers Point - Support	30 - Okinawa
11 - Kauai - Scientific	31 - Japan
12 - Kauai - Support	32 - Washington
13 - Kauai - Communications	33 - Fanning
14 - Maui - Scientific	34 - Penrhyn (Tongareva)
15 - Maui - Support	*35 - Tongatapu
16 - Maui - Communications	*36 - Roratonga
17 - Hawaii - Scientific	37 - Tutuila
18 - Kirtland AFB - Scientific	38 - Christmas
19 - Kirtland AFB - Support	39 - Baker
20 - Off-Islands - Introduction	40 - New Zealand

*No facilities are planned at this time.



- 41 - Tarawa
- 42 - Malden
- 43 - Arorae
- 44 - Aluetians
- 45 - Majuro
- 46 - Ponape
- 47 - Truk
- 48 - Howland
- 49 - Not Used
- 50 - Scientific Facilities On-Board Ship
- 51 - Philippines
- 52 - Vietnam
- 53 - Australia
- 54 - Not Used
- 55 - Baker, Howland and
Canton Test Series
(Previously Published)
- 67
- 80 - Johnston Atoll
Project Sharp Nail
- 81 - Johnston Atoll
Program 437



TABLE 2-2

ABBREVIATIONS

AD	- AEC Air Drop Program
ADC	- Air Defense Command
ADR	- Air Drop Rehearsal
AEC	- Atomic Energy Commission
AFTAC	- Air Force Technical Applications Center
AFWTR	- Air Force Western Test Range
AMICOM	- U. S. Army Missile Command
ARPA	- Advanced Research Projects Agency
BOD	- Beneficial Occupancy Date
BH	- Baker-Howland Program
BTL	- Bell Telephone Laboratories
CAMRON	- Consolidated Aircraft Maintenance Squadron
CGD14	- Coast Guard District Fourteen
DASA	- Defense Atomic Support Agency
DOD	- Department of Defense
DPWO	- District Public Works Office (Officer)
DRL	- Defense Research Laboratory, Division of AC Electronics, General Motors Corporation
DT	- Damon Tract
DTC	- Deseret Test Center
DW	- DISTANT WATERS Test Series
EG&G or TG 8.1.6	- EG&G, Inc. (Formerly Edgerton, Germeshausen & Grier)
ESSA	- Environmental Science Services Administration
EX	- Exercise/Rehearsal
FOD	- Full Occupancy Date
FY	- Fiscal Year
GD	- General Dynamics
GEEIA	- Ground Electronics Engineering - Installation Agency
H&N	- Holmes & Narver, Inc.
HA	- High Altitude Program
HAFB	- Hickam Air Force Base
HATV	- High Altitude Test Vehicle
HQ DASA	- Headquarters, Defense Atomic Support Agency
JHEG	- Joint Hazards Evaluation Group
JTF	- Joint Task Force
JTF-8	- Joint Task Force EIGHT
JTG 8.2 or TG 8.2	- Joint Task Group 8.2 (Army)
JTG 8.3 or TG 8.3	- Joint Task Group 8.3 (Navy)
JTG 8.4 or TG 8.4	- Joint Task Group 8.4 (Air Force)
JTG 8.5 or TG 8.5	- Joint Task Group 8.5 (AEC Logistical Support Group)
JTG 8.6 or TG 8.6	- Joint Task Group 8.6 (Johnston Atoll Base Command)
JTG 8.7 or TG 8.7	- Joint Task Group 8.7 (Safety Advisory Group)

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LASL or TG 8. 1. 1	- Los Alamos Scientific Laboratory
LPG	- Logistics Planning Group, H&N, Inc.
LRL or TG 8. 1. 2	- Lawrence Radiation Laboratory
MILCON	- Military Construction Funds (Department of Defense)
MF	- MIDGET FLY Test Series
MS	- MIGHTY SKY Test Series
NASBP	- Naval Air Station Barbers Point
NFECC	- Naval Facilities Engineering Command Contracts
NOST	- Nuclear Operational Systems Test
OICC-MID PAC	- Officer in Charge of Construction Naval Facilities Engineering Command, Mid Pacific (Formerly District Public Works Officer (DPWO-14thND)
PACGEEIA	- Pacific Region - Ground Electronics Engineering-Installation Agency
PACAF	- Pacific Air Force
PMR or TG 8. 1. 5	- Pacific Missile Range
PRESS	- Pacific Range Electromagnetic Signature Studies
PWC	- Public Works Center
ROAMA	- Rome Air Material Area, Griffiss AFB
RDT&E	- Research, Development, Test and Evaluation (Dept. of Defense)
S	- Support
SAG	- Safety Advisory Group (AEC/NVOO)
SAMSO or TG 8. 1. 7	- Space and Missile Systems Organization
SC or TG 8. 1. 4	- Sandia Corporation
SMAMA	- Sacramento Air Material Area
SRI	- Stanford Research Institute
T	- Tamarin Program
TC or TG 8. 1. 3	- Test Command, Defense Atomic Support Agency
USAF	- United States Air Force
USWB	- U. S. Weather Bureau
UW	- University of Washington
14th INDMAN	- Industrial Manager, 14th Naval District
1957th Comm. GP DET 1)	- 1957th Communications Group, Detachment 1

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SECTION III

DOD PROGRAM SUMMARY

GENERAL The Resource Management System Structure (RMSS), reference DASA Circular 70-4, dated 1 July 1968, requires a coding of each subtask for the purpose of programming, budgeting, reporting, accounting, and logistical control. The new Subtask identification is an 8-digit alpha numeric code. In these 8-digit codes, five (5) alpha letters will precede the three (e) numeric subtask numbers. In the event an alpha letter has not been assigned, the alpha "X" will be used until assignment of an alpha letter is made. This 8-digit identification is abbreviated to the Subproject category and Subtask digits throughout the Facilities and Support Requirements Plan. For example, the 8-digit AAXPX202, described below, will be abbreviated as Subtask A202. The "A" identifies the Subtask as belonging to the MIGHTY SKY Program, and the "202" identifies the title as "Neutron Spectrum as a Function of Time."

For information only, the meanings of various components of the 8-digit alpha numeric code and example (AAXPX202) are as follows:

<u>ITEM</u>	<u>EXAMPLE</u>
SUBPROJECT CATEGORY	MIGHTY SKY _____ A
FUNCTIONAL CATEGORY	Mission Operations _____ A
SUBFUNCTIONAL CATEGORY	None _____ X
PROJECT	Radiation Physics _____ P
TASK	None _____ X
SUBTASK	Neutron Spectrum as a Function of Time _____ 202
A A X P X 202	

Subproject Category - A one-position alpha/numeric code identifying R&D classified subproject data. This category identifies the test programs as "A" - MIGHTY SKY, "B" - MIDGET FLY or "C" - DISTANT WATERS.

Subtask - A three-position numeric code further identifying cost data to an additional level of information below a task category.

The current subtask code, the previous project number and the current title for the various subtasks in the MIGHTY SKY, MIDGET FLY and the DISTANT WATERS Programs are included on the following pages:

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MIGHTY SKY PROGRAM SUMMARY (A)

PROJECT A - MIGHTY SKY

<u>Subtask</u>	<u>Superseded Project Number</u>	<u>Title</u>
A805	8.5	X-ray Effects

PROJECT E - MIGHTY SKY

<u>Subtask</u>	<u>Superseded Project Number</u>	<u>Title</u>
A614	6.14	Measurement of EM Pulse

PROJECT H - MIGHTY SKY

<u>Subtask</u>	<u>Superseded Project Number</u>	<u>Title</u>
A601	6.1	Radar Propagation Through Fire ball & Disturbed D-E Region
A602	6.2	Rocket Borne Gamma Ray Scanner Refraction
A603	6.3	D-Region Attenuation and Refraction
A604	6.4	E & F Region Physical Chemistry
A605	6.5	Ionospheric Soundings & Auroral Observations
A606	6.6	Debris Tracking by Resonant Scattering Equipment
A607	6.7	Debris Expansion Experiment
A608	6.8	Radio Frequency Radiometry
A609	6.9	Radar Observations

[REDACTED]

PROJECT H - MIGHTY SKY (continued)

<u>Subtask</u>	<u>Superseded Project Number</u>	<u>Title</u>
A610	6. 10	Airborne Ionospheric Observatory
A611	6. 11	HF Communications Experiment
A612	6. 12	Satellite Packages
A613	6. 13. 1	Instrumented Ship
A615	6. 15	Measurement of Gamma, Neutron and Visible Radiation from Fission
A616	6. 16	Vertical Soundings of the Ionosphere
A617	6. 17	Incoherent Backscattering
A618 (Not Active)	6. 18	Radar Attenuation in the Vicinity of Low Altitude Nuclear Bursts
A619	6. 19	Satellite Communications
A620	6. 20	Measurement of Effects on VLF and LF Radio Wave Propagation
A625	6. 25	Debris Sampling
A626	6. 26	Gun Fired Probes
A628	6. 28. 1	Riometers
A629	6. 29. 1	Electromagnetic Detection System
A630	6. 13. 2	PMR Island Radars (formerly a part of 613)
A802	8. 2	UV, Visible and IR Radiation Effects
A804	8. 4	Fireball and Debris Cloud Motion Photography
A807	None	Ultraviolet Output Measurements

PROJECT M - MIGHTY SKY

<u>Subtask</u>	<u>Superseded Project Number</u>	<u>Title</u>
A401	4.1	Flashblindness and Chorioretinal Burns from Nuclear Detonations

PROJECT N - MIGHTY SKY

<u>Subtask</u>	<u>Superseded Project Number</u>	<u>Title</u>
A101	1.1	Airborne Free Field Measurements
A103	1.3	Surface Pressure Measurements
A104	1.4	Anti-Ballistic Missile Loading & Response
A105	1.5	Shock Photography
A108	1.8	Blast Wind Measurements
A109	1.9	Smoke Rockets

PROJECT P - MIGHTY SKY

<u>Subtask</u>	<u>Superseded Project Number</u>	<u>Title</u>
A201	2.1	Integrated Radiation Measurements
A202	2.2	Neutron Spectrum as a Function of Time
A203	2.3	Neutron & Gamma Dose Rate Measurements

PROJECT Y - MIGHTY SKY

<u>Subtask</u>	<u>Superseded Project Number</u>	<u>Title</u>
A901	9.1	Atmospheric Parameter Profiles (Formerly 901a)
A902	9.2	Ship Modification
A905	9.5	Unguided Rocket Support
A906	9.6 1.6	Balloon Delivery System (Formerly 106)
A907	N/A	Readiness Studies
A909	9.9	Central Data Handling/Program Response Center
A910	9.10	Test Command Field Support (Formerly 910d)
A913	9.13	Waterborne Recovery Package System
A914	32	STRYPI Warhead Carrier Missile System (Formerly 32)
A915	9.1	Upper Atmospheric Winds (Formerly 901b)
A921	9.10	Documentary Photography (Formerly 910a)
A922	9.10	DASA Technical Film Processing Facility (Formerly 910b)
A931	9.3	Aircraft Modification (Formerly 903a)
A932	9.3	Aircraft Support for Scientific Subtask (Formerly 903b)
A941	9.4	SOSR Missile System
A942	9.4	NIKE-HERCULES Missile System
A943	9.4	Range Safety and Warhead Carrier Tracking

PROJECT Y - MIGHTY SKY (continued)

<u>Subtask</u>	<u>Superseded Project Number</u>	<u>Title</u>
A944	NONE	Shipboard Launch Capability
A945	NONE	THOR Delivery Vehicle
A946	NONE	Central Environmental Data Processing and Distribution
A961	9.6	VHF Telemetry and Tracking System (Formerly 906a and b)
A962	9.6	L-S Band Telemetry and Tracking System (Formerly 906c)
A963	9.6	Ship, Aircraft Locating Equipment (Formerly 906d)

MIDGET FLY PROGRAM SUMMARY (B)

PROJECT E - MIDGET FLY

<u>Subtask</u>	<u>Superseded Project Number</u>	<u>Title</u>
B601	6.1	Electric Field Measurements
B602	6.2	Magnetic Loop Measurements
B603	6.3	Inherent Magnetic Field Measure- ments
B606	6.6	Cable Loop Measurements
B607	6.7	Energy Coupling Experiments
B609	6.9	Correlation of Present & Previous Electric Field Measurements

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PROJECT E - MIDGET FLY

<u>Subtask</u>	<u>Superseded Project Number</u>	<u>Title</u>
B610	6.10	EMP Theoretical Studies
B613	6.13	Hardened Instrument Canisters (WEBS)

PROJECT N - MIDGET FLY

<u>Subtask</u>	<u>Superseded Project Number</u>	<u>Title</u>
B101	1.1	Air Blast Measurements
B102	1.2	Shock Photography (Interfaces M/F Subtask SE 801)
B103	NONE	Underwater Pressure Measure- ments (Provided by DISTANT WATERS Subtask 501)

PROJECT P - MIDGET FLY

<u>Subtask</u>	<u>Superseded Project Number</u>	<u>Title</u>
B202	2.2	Neutron and Gamma Dose Rate
B203	2.3	Integrated Neutron & Gamma Measurements
B701	7.1	Radiological Effects

PROJECT W - MIDGET FLY

<u>Subtask</u>	<u>Superseded Project Number</u>	<u>Title</u>
B801	8.1	Output Characteristics (Provided by MIGHTY SKY Subtask HA 802 and HA 804)

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PROJECT Y - MIDGET FLY

<u>Subtask</u>	<u>Superseded Project Number</u>	<u>Title</u>
B907	9.7	Readiness Studies (Formerly 907a)
B910	9.7	Field Support (Formerly 907c)
B916	9.1	Maintenance and Servicing of Instrumentation Stations (Formerly 901)
B917	9.5	Timing Signals (Formerly 905)
B918	9.6	Communications (Formerly 906)
B919	9.7	Surface Zero Barge and Mooring System (Phase IIC) (Formerly 907b)
B921	9.2 & 9.3	Documentary Photography (Formerly 902 and 903)
B979	NONE	Publication of Reports

DISTANT WATERS PROGRAM SUMMARY (C)

PROJECT N - DISTANT WATERS

<u>Subtask</u>	<u>Superseded Project Number</u>	<u>Title</u>
C501	5.1	Underwater Pressure Measurements
C502	5.2	Air Blast from Underwater Events
C507	5.7	Bulk Cavitation Investigation
C514	5.14	Hydrographic Study of Cratering
C516	5.16	Underwater Explosion Bubble Measurements

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PROJECT P - DISTANT WATERS

<u>Subtask</u>	<u>Superseded Project Number</u>	<u>Title</u>
C701	7.1	Radiological Effects from Water Surface and Underwater Nuclear Explosions
C702	7.2	Residual Radiation/Decontami- nation Studies

PROJECT W - DISTANT WATERS

<u>Subtask</u>	<u>Superseded Project Number</u>	<u>Title</u>
C503	5.3	Surface Phenomena Measurements
C504	5.4	Measurements of the Characteristics of Water Waves
C515	5.15	Oceanographic Environmental & Diffusion Surveys

PROJECT Y - DISTANT WATERS

<u>Subtask</u>	<u>Superseded Project Number</u>	<u>Title</u>
C920	9.1	Ocean Platform Installation (Formerly 901)
C910	9.5	General Support (Formerly 905)

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SECTION IV

FACILITIES

4.1 GENERAL

This volume contains a compilation of field construction and major modifications which have been completed, are underway, or are proposed for accomplishment on Johnston Atoll in support of Pacific Test Operations. Included is an index of scientific, support and communication facilities, plus individual narrative descriptions that provide detailed information pertinent to each project or facility.

Support facilities not directly related to Test Operations, but which are vital to programs other than the nuclear weapons test program, are also included in this publication.

4.2 TABULAR LISTING OF FACILITIES

The numerical index of active facility numbers, Table 5-1, is a listing by F&S Number according to intended use. The F&S Item Number of facilities which have been consolidated or are no longer required have been omitted from this listing and are on record with the Logistics Planning Group (LPG).

4.3 NARRATIVES AND DETAILS

The information concerning each project or facility is presented in F&S Number sequence, with the exception of MILCON base support facilities which have not been funded; these are listed separately. The facility and project descriptions in this volume are presented on various colored pages to emphasize their status as follows:

White Pages - Projects for which all requirements scheduled to be accomplished are completed. If additional work to a completed project or a new project is required for a future fiscal year or after "GO", and if problems as to funding and/or scheduling are not anticipated, said project is so indicated on a white page.

Yellow Pages - Projects for which a requirement has been indicated formally by the User agencies but which, for various reasons, funding, engineering, procurement and/or construction have not been authorized by either AEC or DOD. Projects which have been deferred, or

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for some other reason are being held in abeyance, are also shown on yellow pages. Applicable comments are included.

Green Pages - Projects for which engineering, procurement and/or construction have been authorized and are scheduled in the present fiscal year.

Pink Pages - Projects currently scheduled for a future fiscal year or after "GO" which cannot be completed as scheduled to meet the required occupancy date. Administrative determinations are required to resolve the problems associated with these projects.

4.4 ISLAND SITE PLANS

Appendix A of this volume includes drawings which show the location and physical arrangement of the major facilities at Johnston Atoll.

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TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION										
					AD	BH	DW	EX	HA	MF	NOST	S	T		
01001		90120	SCIENTIFIC Target Rafts	TG 8.3				X							
		90147						X							
01003	711	04075	Rocket Launch Pads	SANDIA					X						
	713	91504													
		91558													
01004	271	04149	Nike-Herc Launch Pads and In-Flight Control - Subtask A942	TC					X						
	273	95029													
	277														
	278														
	279														
	733														
	735														
736															
738															
739															
01005		04022	Instrumented Rocket Launch Pads - Subtask A905	TC				X							

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION									
					AD	BH	DW	EX	HA	MF	NOST	S	T	
01009		04076	Gun Mounts - Subtask A 626	TC						X				
01012	881	12504 04064	Rocket Launch Control and Monitoring Bunker - Subtasks A108, A109, A201, A202, A203, A601, A602, A603, A604, A606, A613, A614, A620, A901, A905, A909, A915 and A962	JTF-8 TC		X				X				
01013	660	12701 599069 91529 91564	Command and Tracking Center	SANDIA						X				
01014	276 737	12503 12705	Nike-Herc Control Bunker and Converter Shelter - Subtasks A941 and A942	TC						X				
01015	724	12912 91500	Payload Checkout Building	SANDIA		X				X			X	

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION											
					AD	BH	DW	EX	HA	MF	NOST	S	T			
01016	884	12303	Warheading Building - Subtasks A101, A104, A601 and A942	TC						X						
01017	722 723	12911 91516	Payload Storage Igloos	SANDIA			X			X						
01019	714 716 720 840	12307 91548 91559	Rocket Assembly Buildings	SANDIA						X						
01020	886	12304	Nike-Hercules Rocket Assembly Building - Subtask A942	TC						X				X		
01021	718	04072	Igniter Checkout Building	SANDIA						X						
01022	980	04088	Rocket Motor Storage Building	SANDIA						X						

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION									
					AD	BH	DW	EX	HA	MF	NOST	S	T	
01023	974 976	04031	Rocket Storage Buildings - Subtasks A905 and C910	TC			X			X				
01024	868	12306 91522 91527	Rocket Assembly Building	LRL	X		X	X		X				
01026	982	12914 91528	Rocket Motor Storage	LRL	X		X	X		X		X		
01027	970 972	04044 04078 04083 91523	Igniter and Squib Storage Bunkers - Subtask A905	SANDIA LRL TC	X		X	X		X		X		
01028		04015 12907	Missile Flight Safety System (Akau Island)	PMR						X			X	

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION									
					AD	BH	DW	EX	HA	MF	NOST	S	T	
01029	742	(5)99078 91525 91531 91561	Angle Measuring Equipment (AME) Field and AME Preamplifier Shelter	SANDIA					X					
01030		(5)99070	Television Camera Mount	SANDIA					X					
01031		(5)99070	Teltrac Antennas and Pedestals (2)	SANDIA					X					
01032		(5)99070	Command Antennas and Pedestals (2)	SANDIA					X					
01034		12709	Angle Measuring Equipment (AME) Field - Subtask A961	TC					X					
01035		04002 96508	Distance Measuring Equipment (DME) and Automatic Gimbaled Antenna Vectoring Equipment (AGAVE) Field - Subtask A961	TC					X					

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION											
					AD	BH	DW	EX	HA	MF	NOST	S	T			
01037	26	12708	Transmitter Building and 86-ft. Diameter Radar Dish - Subtask A617	TC						X						
01038		04019	Interferometer Station - Subtask A601	TC						X						
01039		04020	Riometer Station - Subtask A628	TC						X						
01040		04053 96619	Propagation Antenna Field - Subtasks A602 A603 and A604	TC						X						
01041	93 94	12606 91526 91570	Modification of Optical Station	LASL EG&G						X						
01042		04097 04067 04084	Scientific Platforms and Photo Pads - Subtasks A609, A804, A915, and A963	TC				X								

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION											
					AD	BH	DW	EX	HA	MF	NOST	S	T			
01046	22	04054	Camera Station	SANDIA					X							
01053	190	12309	Scientific Laboratory - Subtasks C501, C502, C503, C504, C507, C515, C516, C701, C702, C910 and C920	TC		X										
01056	280	12503 22805	Field Maintenance Shop - Subtask A942	TC				X								
01058	727 732	12305 91517	Rocket Nosecone Disassembly and Personnel Change Buildings	LRL	X				X	X						
01059			Hot Package Handling Area - Subtask A801	TC					X							
01062		5999074	Wind Radar Trailer System	SANDIA					X							X

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION									
					AD	BH	DW	EX	HA	MF	NOST	S	T	
01065	23	32307 91500	T&F 300-ft. Antenna Tower and Transmitter Building	EG&G			X			X	X	X		
01067		04018	Microbarograph Stations - Subtask A103	TC					X					
01069		04003	Photometer - Subtask A606	TC					X					
01070		04005	Radiometer Station - Subtask A608	TC										
01071		04008	Log Periodic Ionospheric Antennas - Subtask A611	TC						X				
01072		12605 04060 04147	Optical Station (Atop Building 20) - Subtask A804	TC						X				
01074	640		HRT and EM Measurement Bunker	SANDIA									X	

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION											
					AD	BH	DW	EX	HA	MF	NOST	S	T			
01075	204 205	96586	Underground Bunkers	AFTAC						X						
01077		12707	Frequency Interference Control Center	PMR											X	
01081		04004	Radar Van Complex and 86-ft. Diameter Parabolic Antenna - Subtask A609	TC						X						
01082		04004	Optical Support Control Site - Subtask A609	TC						X						
01084	888	04085 04045 91568	Slim John Rocket Assembly Building - Subtask A941	TC LRL						X						
01086		04050	Meteorological Support Site (Wing Blast Measurement) - Subtask A108	TC				X								

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL.

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION											
					AD	BH	DW	EX	HA	MF	NOST	S	T			
01087	977 978 979	04071 96524	Explosive Storage Bunkers - Subtasks A109, A626 and C502	TC			X			X						
01088	758	12917	Biomedical Effects Facility - Subtask A401	TC						X						
01089			Trailer Pad - Subtask A630	TC						X						
01098		12710	Radar Screen - Subtask A942	JTF-8						X						
01104	964 965	04061	Rocket Machine and Paint Shop and Air Compressor Shelter	TC				X		X						X
01105	878 960	04062	Assembly Buildings - Subtask A905	TC				X		X						

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION											
					AD	BH	DW	EX	HA	MF	NOST	S	T			
01106	876 962	04063	Screen Rooms - Subtask A905	TC			X			X						
01109		04091	Helical Antenna	SANDIA						X						
01110	744	04066 91506 (5)99076	Balloon Release Station, Station Relocation	SANDIA						X						
01111			Radiation Source Facility	SANDIA						X						
01113	15	91515	Dynamic Balancing Machine Facility	SANDIA						X						
01114		04122 04557	Deep Ocean Wave Sensor, Type I (Tamarin)	DRL	X											X
01115			Atoll Wave Sensor, Type I (Tamarin)	DRL	X											X

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TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION									
					AD	BH	DW	EX	HA	MF	NOST	S	T	
01116	975	04124 91524	Radiographic Inspection Building	LRL	X				X					
01117			Loop Antennas - Subtask A620	TC					X					
01118		91502	Device Barge	SANDIA						X				
01120	721	04146	SOSR Launch Pad and Catchment - Subtask A941	TC					X					
01121			Laboratory Space	UW										
01122		91505	Anemometer Tower	SANDIA										
01123		96522 96523	Operational TV	EG&G								X		
01124	709	91536	Cleansweep Motor Payload Preparation and Storage Building	LRL	X				X	X			X	

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TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION														
					AD	BH	DW	EX	HA	MF	NOST	S	T						
01125	693	91546	Sandia Electronic Laboratory	SANDIA															
01126	Towers 1, 2b, 3, 4, 5	96653 96654	Low Level Wind System - Subtask A946	TC						X									

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TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION															
					AD	BH	DW	EX	HA	MF	NOST	S	T							
			SUPPORT																	
02001		22101	Aircraft Runway	JTF																X
02002		22102	Aircraft Parking Area	JTF																X
02003	728	22806 91500 91511 91518	Personal Equipment and Storage Building	JTF	X			X		X			X		X					X
02004	535	22909	Aircraft Decontamination - Pad No. 1	TG 8.4	X			X		X			X		X					X
02006	20	04009 04104 04105 22906	Joint Operations Center (JOC)	JTF																

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TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION										
					AD	BH	DW	EX	HA	MF	NOST	S	T		
02006A	20	04120	Joint Operations Center (JOC) Modifications	JTF			X		X	X				X	
		04133													
		04136													
		04139													
		04140													
		04141													
		04153													
		04154													
		04155													
		91520													
91533															
91560															
96509															
96518															
96520															
96527															
96546															
96563															
96588															
02007	316	22801	Base Maintenance Shop	JTF										X	
02008	390 thru 399 Incl.	22802	Warehousing	JTF											X
		22804													
		96109													
		96175													

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION											
					AD	BH	DW	EX	HA	MF	MOST	S	T			
02009			Storage Space	EG&G	X		X			X						
02013		04396 22702 96041 96085 96090 96115	Roadwork and Site Grading	JTF												X
02014		04041	Shore Work Area and Photo Platforms - Subtasks C501, C502, C503, C504, C516 and C701	TC			X									
02016			Harbor Moorings	JTF												
02017		91573	Trailer Space	LASL	X			X		X						
02019	726	12305	Sample Storage Building	LRL	X		X			X						

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION												
					AD	BH	DW	EX	HA	MF	NOST	S	T				
02022			Trailer Space	EG&G			X			X							
02026		22959 22960	Signal Tower	TG 8.3	X		X		X	X			X				
02027	40, 41, and 42	22451	Automotive Maintenance Facilities	TG 8.6													X
02028	47	04329 91500	Tire Repair and Battery Shop	TG 8.6													X
02029	50, 51, 260, 261, 263, 264, 266, 267, and 269	04372 04373 22603 96108 96163 96221 96536	POL System (AVGAS, JP-4 Fuel, Lube Oil, MOGAS, and Diesel Oil)	TG 8.6													X

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION									
					AD	BH	DW	EX	HA	MF	NOST	S	T	
02030	1100	04006	Transmitter Facility	TG 8.6										
	1101	04095											X	
02031	1002	04007	Receiver Facility	TG 8.6										X
	1004	04096												
02032		04016	Transmitter Antenna Foundations	TG 8.6	X		X	X	X					
02033		04017	Receiver Antenna Foundations	TG 8.6									X	
02034			U. S. Weather Bureau Facilities	ESSA									X	
02035			Open Storage Area	TG 8.3									X	
02036	126 128		Waterfront Facilities	JTF									X	

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION											
					AD	BH	DW	EX	HA	MF	NOST	S	T			
02036A		96099 96702	Waterfront Facilities - Replace Small Boat Pier	JTF											X	
02038	287 725	22808	Warehousing Buildings	TG 8.3 TG 8.4	X					X					X	
02039			Dredge and Fill Operations	JTF											X	
02040			Shoreline Protection (Including Unfunded MILCON)	JTF											X	
02041		04135 91575 96519	Joint Trailer Park	TC LASL LRL	X					X			X		X	
02042	512	42733	Camp Operations Building	TG 8.6											X	

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION									
					AD	BH	DW	EX	HA	MF	NOST	S	T	
02044		96517	MAC Passenger and Freight Terminal (Unfunded MILCON)	JTF									X	
02045		96069 96502 96553 96704	Aircraft Taxiways and MAC Terminal Parking Area	JTF									X	
02047	1001	04055	Modification of PMR Spare Parts and Supply Building	PMR									X	
02048			Wing Tank Storage	LASL	X			X				X	X	
02049		04128	AGE, PE and A/C Area Lighting	TG 8.4	X				X					
02050	731	04123 91521	AGE Parking Area and Shelter	TG 8.4	X				X					

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION											
					AD	BH	DW	EX	HA	MF	NOST	S	T			
02051	531	04127 91539 91563	B-57 Hangar	LRL	X				X							
02053	730	04126	Contaminated Equipment Shelter	TG 8.4	X											
02054		04129	Additional Trailers	TG 8.4	X				X							
02055			AGE Parking Area	TG 8.3	X											
02056	729	04131 91519	Administration and Maintenance Building	TG 8.4	X				X							
02058	635 636 638	04402	Base Beacon Facilities	TG 8.6												X

[REDACTED]

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION									
					AD	BH	DW	EX	HA	MF	NOST	S	T	
02059	274	04114 96548	Base TACAN Facility	TG 8.6									X	
02065		91513 91530	Berms, Johnston Island	SANDIA									X	
02066		91516	Berms, Johnston Island	JTF									X	
02068	66	96048	Paint Storage Shed	TG 8.3									X	
02069	925	91535	Aircraft Decontamination Facility Number 2	JTF	X			X				X		
02070			Photo Trailer Complex - Subtask A921	TC									X	
02071	741		Generator Shelter	SANDIA										

[REDACTED]

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION									
					AD	BH	DW	EX	HA	MF	NOST	S	T	
02072	314		Maintenance Material Storage	TG 8.6									X	
02073	73	96048	Paint Storage Building	TG 8.6									X	
02074	25	96110	Security Incinerator Shelter	JTF									X	
02075	2		Tide Gage House	ESSA									X	
02076	30		1957th Communications Group Building	TG 8.6									X	
02077	110		Harbor Control Building	TG 8.3 TG 8.5									X	
02078			Administrative and Operations Building	TG 8.3									X	

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION									
					AD	BH	DW	EX	HA	MF	NOST	S	T	
02079	518		Engineering Office	TG 8.6									X	
02080	202		Headquarters Bunker	TG 8.6									X	
02081	120 west		Cold Storage Plant	TG 8.6									X	
02082			Diesel Fuel Storage (13500 BBL) Unfunded MILCON	JTF									X	
02083	312		Basketball Court	JTF									X	
02084	500		Time Office	TG 8.6									X	
02085	629		Cistern	TG 8.6									X	

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION												
					AD	BH	DW	EX	HA	MF	NOST	S	T				
02086	219		Runway Lighting Control Vault	TG 8.6												X	
02087	207		Camera Station	NONE												X	
02088	300		Pesticide (Paint) Storage Building	TG 8.6												X	
02089	246		Administrative Building	TG 8.6												X	
02090	218		Administrative Building	JTF												X	
02091	221		Bunker	JTF												X	
02092	368		Storage Building	TG 8.6												X	
02093	317		Welding Shed	TG 8.6												X	

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION									
					AD	BH	DW	EX	HA	MF	NOST	S	T	
02094	326		Storage Building	TG 8.6									X	
02095	327		Shop Building	TG 8.6									X	
02096	310		Shed	TG 8.6									X	
02097	302		Warehouse	TG 8.6									X	
02098	303		Warehouse	TC									X	
02099	200		Bunker	TC									X	
02100	201		Bunker	TC									X	
02101	530		Weather Center (USWB)	ESSA									X	

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION									
					AD	BH	DW	EX	HA	MF	NOST	S	T	
02102	130		Waikiki Club	JTF									X	
02103	129		Navy Diving Locker	TG 8.3									X	
02104	1		Commander's Residence - Point House	JTF									X	
02105			Corrosion Control Building (New) (Unfunded MILCON)										X	
02106			Heavy Equipment Shop (New) (Unfunded MILCON)										X	
02107	28	96170	Radio and TV Station	TG 8.6									X	
02108	633		MARS Station Trailer	TG 8.6									X	

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION									
					AD	BH	DW	EX	HA	MF	NOST	S	T	
02109	125		Electronics Shop	TG 8.3										
02110	127		Marine Shop	TG 8.6										
02111	513		Building 513	NONE										
02112	627		Fire Station	TG 8.6										
02113	203		NCO Club	JTF										
02114	505, 506, 507, 508		Air-Ground Communication Facilities	TG 8.6										

CONFIDENTIAL

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION									
					AD	BH	DW	EX	HA	MF	NOST	S	T	
0301A	250, 251, 252	42102	EM Barracks	JTF									X	
0301D	414, 418, 690	42104	EM Barracks	JTF									X	
0301G	16, 18	42103	Professional Barracks	JTF									X	
0301N	290 thru 294 691 692 694 thru 699		Apartments	JTF									X	
0301P	295 296 297		VIP Quarters	JTF									X	

CONFIDENTIAL

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION									
					AD	BH	DW	EX	HA	MF	NOST	S	T	
0301Q	412 420		EM Barracks	JTF									X	
0301R	520 521		EM Barracks	JTF									X	
0301S	290 E		Technical B-57 Crew Rest Quarters	LASL LRL									X	
0302A	519	42201	Mess Hall	JTF									X	
0302B	4	42202 91510	500-Man Mess Hall	JTF									X	
0302C	518	04098 96106	Bakery	TG 8.6									X	

CONFIDENTIAL

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION									
					AD	BH	DW	EX	HA	MF	NOST	S	T	
0303A	650	42641	Freshwater Distribution System	TG 8.6									X	
0303B	3	42641	Saltwater Distribution System	TG 8.6									X	
0303C	44 45	42641	Distillation Plant and Freshwater Treatment Building (Including Unfunded MILCON)	TG 8.6									X	
0303D		42641	Sanitary Sewerage System	TG 8.6									X	
0303G			Construct Water Loop - SW Side of Island (Unfunded MILCON)	TG 8.6										
0303H			Cover Drainage Ditches (Unfunded MILCON)	TG 8.6										

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TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION															
					AD	BH	DW	EX	HA	MF	NOST	S	T							
0303X		42635 42641	Upgrade Distillation, Water Distribution and Sewerage Systems	JTF																
0304A		42621 91500	Power and Telephone Distribution System (Including Unfunded MILCON)	JTF																X
0304C		42622	Inter-Island Power Distribution System	JTF																X
0304D		12910	Akau Island Power Distribution System	JTF																X
0304E	48 49	42621 04366 96566	Power Plant	TG 8.6																X
0304F	1003	04320	Akau Island Power (Temporary)	PMR																X

~~CONFIDENTIAL~~

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION									
					AD	BH	DW	EX	HA	MF	NOST	S	T	
0304G			Sand Island Power	CGD-14 ADC									X	
0304H			Substations, 4160 Volt Power Distribution System	TG 8.6									X	
0305X		22902 22907	Conduits Under Runway	JTF									X	
0306X	510	42401 96649 96703	Laundry	TG 8.6									X	

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TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION									
					AD	BH	DW	EX	HA	MF	NOST	S	T	
0307X	400	42732 42736 96068	Post Office and Warehouse Building	JTF									X	
0308X	405 407 409 416	42311	Dispensa	TG 8.6									X	
0309X	504	42511	Theater	JTF									X	
0310X	206	42530	Office Space	TG 8.6									X	
0311X	401	42735	Base Exchange	JTF									X	
0313X	509	42825	Dairy Bar	JTF									X	

~~CONFIDENTIAL~~

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION									
					AD	BH	DW	EX	HA	MF	NOST	S	T	
0314X		42105	Tent Camp	JTF									X	
0316X	627	96507	Fire Station (Unfunded MILCON)	JTF									X	
0318X	704 705	96550 96555	Swimming Pool and Bath House	JTF									X	
0319X		04349	Ground Improvements	JTF									X	

~~CONFIDENTIAL~~

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION									
					AD	BH	DW	EX	HA	MF	INOST	S	T	
			COMMUNICATIONS											
04002		04014	Teletype Message Center	AEC									X	
04003		04090 96513 96514	Non-Tactical VHF /FM Mobile Radio System	JTF									X	
04006		04010 32501	Signal Cable Plant	JTF									X	
04011		04111	Joint Operations Center Tactical Test Control System	JTF									X	
04012		32504	Rehabilitation of USAF /DCA HF Radio Trunk	JTF									X	
04014		32505	Radio Propagation Sounder	JTF									X	

~~CONFIDENTIAL~~

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION										
					AD	BH	DW	EX	HA	MF	NOST	S	T		
04016		32511	PMR Submarine Cable	PMR										X	
04017		32510	AMICOM Signal Cable - Subtask A942	TC				X							
04018		32512	PMR Signal Cable	PMR										X	
04019		04080	DASA Signal Cable - Subtasks A108, A601, A614, A626, A901, A905, A909 and A962	TC				X							
04020		04074	EG&G Signal Cable	EG&G										X	
04021		04347	Tactical Communications	TG 8.3										X	
04022		04117	Tactical Communications	TG 8.4										X	
04023		04042 04109	Base Telephone Inside Plant	TG 8.6										X	
04024		04110	Base Telephone Outside Plant	TG 8.6										X	

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION										
					AD	BH	DW	EX	HA	MF	NOST	S	T		
04025		04324	Inter-Island Telephone Cable (Not Scientific)	TG 8.6										X	
04026		32951 04143	Disaster Control System	TG 8.6										X	
04027		04112	Fire Alarm System	TG 8.6										X	
04028	505	04113	Airfield Control Tower	TG 8.6										X	
04029			Submarine Cable from Johnston Atoll to Oahu	JTF										X	
04034		04040 04049 04346	JOC Screen Rooms (AFCS, NAVY)	TG 8.6 TG 8.3										X	
04035		04073 91512	Sandia Signal Cable	SANDIA					X					X	

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION											
					AD	BH	DW	EX	HA	MF	NOST	S	T			
04038		04042	Explosion Proof Telephones	JTF/ AEC											X	
04040		04057 04107 04108	Relocate Antennas from Johnston Atoll to Hikina and Akau Islands	TG 8.6											X	
04041	Anten- na 5 & 7	04056	PMR Antennas, Hikina Island	PMR											X	
04042		04089 04094	PMR Signal System, Johnston Island	PMR											X	
04044		04116	CP Telecon	JTF-8											X	
04045		04118	Weather Communications	JTF-8											X	
04046	20	04145	JTF-8 Tactical Communications	JTF												
04048		04144	Base Paging System	TG 8.6												
04049		EG&G	Signal Cable, Distant Waters	EG&G						X						

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION									
					AD	BH	DW	EX	HA	MF	INOST	S	T	
80002	950	12906 12908 96583	SHARP NAIL FACILITIES Mix-Fill Building	DTC										
80003		22201	Power Shed-Boat Pier	DTC										
80004		12906 12908	Wash-Down Pad	DTC										
81001	786	04048 22905 96504	PROGRAM 437 FACILITIES Launch Area Security	ADC						X				
81002	787	04001 12401	Surveillance and Inspection (S&I) Building	ADC										



TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION									
					AD	BH	DW	EX	HA	MF	NOST	S	T	
81003	788	12401	Office Bunker	ADC						X				
81004		12704	Teltrac and Command Antennas	ADC						X				
81005		12603	Baker-Nunn Camera Station	ADC										
81006	119	12302	Missile Transfer Building	ADC						X				
81007	781 thru 785 Incl.	12301	Weapons Storage Igloos	ADC										
81008	700 794	04037 12608 96206T 96207T	Thor Missile Launch Facilities	ADC						X				



~~CONFIDENTIAL~~

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION										
					AD	BH	DW	EX	HA	MF	NOST	S	T		
81009	900	04132	LOX Plant	ADC						X					
	902	12905													
		12913													
		81027													
		96559													
		96561													
		96567													
81010	796	12951	Cryogenic Storage Area	ADC						X					
81011	790	04001 04087 12502	Launch Operations Building (LOB)	ADC						X					

~~CONFIDENTIAL~~

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION																	
					AD	BH	DW	EX	HA	MF	NOST	S	T									
81012	100	04001	ADC Facilities Building																			
	118	04087								X												
		04393																				
		12903																				
		12909																				
		96034																				
81013		96113	ADC Laboratories	ADC																		
		96569																				
		96612																				
81015		04038	Ground Guidance Facility	ADC																		
		22910																				
		96076																				
81018		96257	New Launch Operations Building	ADC																		
		04077																				
		96547																				
	968	96568																				
		96610																				

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION												
					AD	BH	DW	EX	HA	MF	NOST	S	T				
81019			New Thor Missile Launch Pads	ADC													
81020	795	04036	Payload Assembly Building	ADC													
81022		04086 04099	ADC Area Roadways	ADC							X						
81023	T-2060 HAFB	04515 95034	Office and Laboratory Space - Second Floor - Hangar 2 - Building T-2060 Hickam	ADC													
81028		04137	Air Defense Command - Signal Cable	ADC										X			
81029	365 367	96614	RF Test Tower and Equipment Shed	ADC										X			

~~CONFIDENTIAL~~

TABLE 5-1. NUMERICAL INDEX OF ACTIVE FACILITY NUMBERS AT JOHNSTON ATOLL

F & S NO.	STRUC/ FAC. NO.	I.D. NO.	TITLE	USER	PARTICIPATION									
					AD	BH	DW	EX	HA	MF	NOST	S	T	
81030	T-2060 HAFB	04576	Office and Laboratory Space - Third Floor - Hangar 2 - Building T-2060 - Hickam	AFTWR										
81033	789	96027	Equipment and Supply Building	ADC					X					
81034	797 798		Propellant Loading and Storage Area	ADC										
81035	707		"S" Band Telemetry Antenna	ADC					X					
81036	701		Check Station	ADC					X					
81037	791 792 793		Underground Bunkers	ADC					X					
81038	181		Corrosion Control Building	ADC					X					

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LIST OF FACILITY NUMBERS

F & S NO. 01001	TITLE Target Rafts					
USER TG 8.3	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD GO+75
	FOD GO+90					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO					
	Prior Costs		38.1	69.4	107.5	
	FY 69			5.6	5.6	
	SUB-TOTAL		38.1	75.0	113.1	
POST-GO		TO BE DETERMINED				

PRIOR YEARS

ENGINEERING Completed by OICC, Mid Pacific Pearl Harbor, Hawaii.

PROCUREMENT Completed.

CONSTRUCTION Eight target rafts including one prototype raft, were constructed prior to FY 1969. The eight rafts are stored at Ford Island, Pearl Harbor, Hawaii. Each raft consists of two curved pontoons and a rectangular pontoon utilized for the basic hull structure. The raft is approximately 24-ft. long by 8-ft. wide and weighs approximately 7 1/4 tons. It is designed to be carried aboard a seagoing tug (AFT) or it can be towed in moderate seas at 10 knots. Equipment on each raft includes:

- | | |
|---|--|
| Sea anchor | One APX-25 IFF/SIF identification set |
| Three aluminum radar reflectors | One airborne instrument laboratory transponder |
| One high intensity, variable frequency strobe light | Two 3.0 kw diesel generators |
| One APN-69 radar beacon | One motor generator set |

FY 1969

ENGINEERING Completed.

PROCUREMENT Completed.

CONSTRUCTION Two target rafts were constructed in FY 1969 and are stored at the U. S. Navy CBC Port Hueneme, California. These two rafts are identical to those described under the Prior Years section.

**RETURN TO DOE/NV TECHNICAL INFORMATION
RESOURCE CENTER**

[REDACTED]

JOHNSTON ATOLL (PEARL HARBOR)
01001

SCIENTIFI
Page 2

POST-GO

ENGINEERING Completed.

PROCUREMENT To be accomplished.

CONSTRUCTION Nine additional target rafts, identical to those described under the Prior Years Section, will be required Post-GO. In the event funds become available Pre-GO, a portion or all of the nine additional target rafts mentioned above will be constructed during that period, depending upon the amount of funds authorized.

NOTE: AEC will provide funds for the raft construction and the AIL Transponder. DOD is responsible for all other electronic components. Any rafts expended during NOST are to be replaced in kind by DOD.

[REDACTED]

F & S NO.	TITLE					
01003	Rocket Launch Pads					
USER	STRUCTURE/FACILITY NO.	SCIENTIFIC STATION NO.			BOD	
SANDIA	711 and 713	91-4-19 thru 91-4-47 incl.			FOD GO+120	
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO					
	Prior Cost	8.6	58.2	43.9	110.7	
	FY 69			56.0	56.0	
	FY 71			90.0	90.0	
	SUBTOTAL	8.6	58.2	189.9	256.7	
	POST-GO					
	Est. 3/69	29.7		304.3	334.0	
	TOTAL	38.3	58.2	494.2	590.7	

REQUIREMENTS

A total of twenty-nine (29) Rocket Launch Pads are required. Of this total twenty-one (21) are Instrumented Rocket (HAD), and eight (8) are Universal Pads. Ten (10) HAD Pads are to be situated along the northwest shore of the island north of Building 840. Eleven (11) HAD and eight (8) Universal Pads are required along the south shore of the island west of the west peninsula. Since three of the Universals Pads (91-4-40, 91-4-41 and 91-4-44) might be used for Strypi Launchers in the event of a GO situation, the pads are designated as Universal-Strypi Pads. In this event, some cabling modifications for the three pads will be required.

Power for the launchers will be fed to the Jacking Pad Shelters from (2) existing substations via direct burial cables. The 75 kva, 3 phase substation #2109 will serve the south shore launchers, while the launchers on the north shore will be fed from the existing 225 kva, 3 phase substation #1203. The power cable feeders are to be routed via pull-boxes to terminal panels mounted inside of the jacking pad shelters.

Three 3-lamp light standards will provide area illumination for each launch pad. See F&S No. 0033 for cabling requirements. Two (2) brass survey markers embedded in the surface of each pad provide a reference line for the line of flight.

HAD Foundation

The typical HAD foundation is designed to withstand 300,000 ft.-lbs. of over-turning moment. It is comprised of two reinforced concrete elements, an 18-in. thick octagon with 8-ft. sides, and a 6-in. thick apron slab which abuts 3 faces of the octagon. In plan, the pad measures 20 x 40-ft.

Universal Foundation

The Universal Foundation is designed to withstand 500,000 ft.-lbs. of overturning moment. It is comprised of two reinforced concrete elements, a 32-in. thick octagon with 6-ft. 7 1/2-in. sides and a 6-in. thick slab which surrounds the octagon. In plan, the pad measures overall 24 x 48-ft.

PRIOR YEARS

ENGINEERING Completed.

Drawings:	91-4-19-C1, C3, C4 and C5	91-4-19-W82 thru W86
	91-4-19-S1, S2, S4, S5 and S6	91-4-19-W104, W105, W107 and W108
	91-4-19-E1 thru E8	91-4-19-S101

PROCUREMENT Completed except for perishable material to be procured Post-
GO.

CONSTRUCTION Two (2) Instrumented Rocket (HAD) and one (1) Universal Launch Pads (completed in 1966) are located on the south shore of the island west of the west peninsula. The Universal Pad is similar to the pad describes above in the paragraph "Universal Foundation", except that the octagonal core is 42-in. thick instead of 32-in.

FY 69

CONSTRUCTION Two (2) Instrumented Rocket Launch Pads and one (1) Universal Launch Pads (completed in 1966) are located on the south shore of the island west of the west peninsula. The Universal Pad is similar to the pad described above in the paragraph "Universal Foundation", except that the octagonal core is 42-in. thick instead of 32-in.

Buildings (completed in 1968) are 8 x 11-ft. 6-in. x 8-ft. high concrete block structures with gabled roofs and concrete floors. Each of these buildings is used as a jacking pad shelter. Building 711 is located between Universal Pads 91-4-44 and 91-4-28. Building 712 is located between HAD Pads 91-4-27 and 91-4-28.

CONSTRUCTION Nine (9) additional Rocket Launch Pads will be constructed Pre-
GO, bringing the total to fifteen (15). Included with this construction are the associated jacking pads, jacking pad shelters, conduits, electrical equipment and installation of Sandia-furnished Rocket Launchers.

POST-GO

ENGINEERING To be accomplished.

CONSTRUCTION The remaining fourteen (14) Rocket Launch Pads will be constructed including the associated jacking pads, jacking pad shelters, conduits, electrical equipment, and installation of Sandia furnished Rocket Launchers.

JOHNSTON ATOLL

SCIENTIFIC

F & S NO. 01004	TITLE Nike-Herc Launch Pads and In-Flight Control - Subtask A942					
USER TC	STRUCTURE/FACILITY NO. 271, 273, 277, 278, 279, 733, 735, 736, 738 and 739			SCIENTIFIC STATION NO. 91-3-129 thru 91-3-138 incl.		BOD
	FODGO+60					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AMC-MIPR 00005	PRE-GO Prior Cost			5.8**	5.8	
JTF-8 MILCON CRO 7-64	PRE-GO Prior Cost	12.3		683.0	695.3*	
	POST-GO Est. 8/67			85.0	85.0	
	TOTAL	12.3		773.8	786.1	

PRIOR YEARS

ENGINEERING Completed.

Drawings:	91-276-C1	91-737-E1
	91-276-S2	91-737-E3 thru E7
	91-276-E1	JS 91-276-C100
	91-276-E3 thru E7	JS 91-276-E100
	91-737-C1	JS 91-737-E100

PROCUREMENT Completed except for miscellaneous perishable items to be procured Post-GO.

CONSTRUCTION This facility (completed in 1967) consists of five 75 x 75-ft. x 6-in. thick concrete launch pads located on each of the East and West Peninsulas. The pads are separated by protective berms (see F&S No. 02066) and connected by cabling running to the center of each pad. The center to center distance between pads is 150-185-ft. A signal cable runs adjacent to each row of pads and connects into the island cable trough system. Each pad is equipped with a concrete pull box to provide 60 and 100-cycle electrical power.

The two sets of launch pads were constructed identical to allow the location of In-Flight Control Vans on the East Peninsula during launch from the West Peninsula and vice-versa. Subsequent deletion of the requirement to launch to the East from the East Peninsula has eliminated the requirement for this reversibility.

~~CONFIDENTIAL~~

JOHNSTON ATOLL
01004

SCIENTIFIC
Page 2

POST-GO

CONSTRUCTION Lighting poles and lights will be installed on existing berms to provide 5-ft. -candles of lighting on the berms. Electrical control panels and wiring, TC furnished equipment and material, and a source for a 500 kva, 400 volt, 3 phase standby generator will also be installed.

An area measuring 150 x 400-ft. on the West Peninsula will be utilized for In-Flight Control and will contain TC furnished missile tracking radar, and control vans. Each control van will be air conditioned.

*Includes cost for repair and storage of the AEC-owned 600 kw standby generator to be used with the launch pads and cost incurred under F&S No. 01014 and F&S No. 01056.

**Survey costs for 10 pads.

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F & S NO. 01005	TITLE Instrumented Rocket Launch Pads - Subtask A905					
USER TC	STRUCTURE FACILITY NO. None		SCIENTIFIC STATION NO. See Text			BOD
						GO+105 FOD GO+165
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8	PRE-GO					
MILCON	Prior Cost	13.0	98.4		111.4	
CRO 7-64	POST-GO					
	Est. 12/65			358.5	358.5	
	TOTAL	13.0	98.4	358.5	469.9	

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-3-23-C1 thru C5 91-3-23-S1 thru S3 91-3-23-E1 thru E4

PROCUREMENT Procurement of nonstockpile items for the Rocket Launchers is in progress.

POST-GO

PROCUREMENT The remaining procurement will be accomplished.

CONSTRUCTION A total of thirty-four (34) Rocket Launch Pads will be required for this facility. The FOD for the first pad will be GO+105 and for the last pad GO+165. Minimum spacing of launch pads will be 300-ft. between rows, 200-ft. between large and/or medium pads and any other pads, and 100-ft. between small launch pads. The type, location and fire direction of the pads will be as follows:

<u>NO. OF PADS</u>	<u>SCIENTIFIC STATION NO.</u>	<u>TYPE</u>	<u>LOCATION</u>	<u>DIRECTION OF FIRE</u>
6	91-3-68 thru 91-3-72 incl. and 91-3-124	Medium	NW	North
3	91-3-65 thru 91-3-67 incl.	Small	NW	North
4	91-3-73 thru 91-3-75 incl. and 91-3-123	Large	SW	South
6	91-3-43, 91-3-44 and 91-3-78 thru 91-3-81 inc	Medium	SW	South
<u>15</u>	91-3-45 thru 91-3-59 incl	Small	SW	South
34	TOTAL			

Large Launch Pad Concrete pads are designed for a loading of 70,000 pounds with a vehicle in place. Launchers will be attached to pads by eighteen 1 1/2-inch bolts located on a 6-ft. 6-in. bolt circle. Maximum overturning moment of these single boom launchers will be approximately 600,000 ft.-pounds.

Medium Launch Pads Concrete pads are designed for a loading of 40,000 pounds with a vehicle in place. Launchers will be attached to pads by sixteen 1 1/2-in. bolts located on a 4-ft. 6 1/2-in. bolts circle. Maximum overturning moment of these single boom launchers will be approximately 500,000 ft.-pounds.

Small Launch Pads Concrete pads are designed for a loading of 25,000 pounds with a vehicle in place. Launchers will be attached to pads by six 1 1/2-in. bolts located on a 3-ft. 6-in. bolt circle. Maximum overturning moment of these double boom launchers will be approximately 100,000 ft.-pounds.

Other Requirements All launch pads are 30-ft. diameter inscribed octagons. The south firing pads will be bounded by a 50-ft. wide soil cement strip on the north side. An additional 25-ft. compacted area will be provided on all other sides of the pads. An adjacent dry, 6 x 6 x 3-ft. concrete pit equipped with a 3/8-in., blast proof, steel plate, hinged door will be provided for each pad. Portable area lighting will be provided to allow a safety check of the launch pad area prior to nighttime launches. Chemical latrines will be provided in the area of the launchers.

Power required will be 3.7 kw of 208 volt, 60 cycle, 3 phase per launcher to operate a 5 HP motor. The control system will utilize 110 volts, DC and the firing system will utilize 110 volt, 60 cycle, 3 phase power. A nominal 110 volt, 60 cycle, single phase auxiliary power circuit will also be installed at each launcher pedestal to operate such items as soldering irons, trouble shooting lights, etc.

Control cabling requirements are described in F&S No. 04019.

F & S NO. 01009	TITLE Gun Mounts - Subtask A626					
USER TC	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. 91-3-94 thru 105 incl. 91-3-116 (Antennas)		BOD GO+145
	FOD GO+145					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
DASA/ RDT&E EAO 1106- 4101-61	PRE-GO					
	Prior Cost	2.2	0.5		2.7	
	POST-GO					
	Estimate 5/65			14.9	14.9	
TOTAL		2.2	0.5	14.9	17.6	

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-3-94-C1 91-3-94-E1

PROCUREMENT Completed.

POST-GO

CONSTRUCTION This installation will include eight 5-in. guns and four 7-in. guns to be located on a 58 x 380-ft. leveled and compacted area, approximately 75-ft. from the southwest shoreline, in the vicinity of the large rocket launchers. A clear zone will be required for the sabot impact; this area will range up to 1800 yards on a bearing of 190 degrees true (+ 4 degrees). The 5-in. gun will be mounted on 155 mm carriages weighing 21 tons. These units will be elevated by TC furnished blocks. The 7-in. guns will be mounted on 280 mm carriages, 10 x 38 x 12 1/2-ft. high weighing 45 tons. The overall length will be 84-ft. when the prime mover is attached. These guns will be capable of self elevation.

Twelve 6-ft. diameter tracking antennas will be located on a graded area of approximately 7500 square feet atop Building 881 and directly away from the event. The antennas are portable and will not require special foundations.

Two 10 x 40-ft. TC furnished TM vans and a 10 x 40-ft. TC furnished fire control van will be parked adjacent to the south side of Building 881. The TM vans will each require 20 kw, 208 volts, 60 cycle, 3 phase power. The fire control van will require 10 kw, 208 volt, 60 cycle, 3 phase power. This power will be terminated at switch boxes mounted on 4-ft. poles adjacent to the trailers.

A TC furnished generator will provide 40 kw, 208 volts, 400 cycle, 3 phase power. All connections between the generator and the gun will be TC furnished and installed.

Each gun will be connected by a cable containing 8 shielded pair No. 12 wire to a junction box located near the fire control trailer; this cable will be direct burial. The cables and junction box will be installed as part of F&S No. 04019 (DASA Signal Cable). TC will install the cabling between the junction box and the vans, and between the vans and the antennas.

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F & S NO. 01012	TITLE Rocket Launch Control & Monitoring Bunker - Subtasks A108, A109, A201, A202, A203, A601, A602, A603, A604, A606, A613, A614, A620, A901, A905, A909, A915 and A962					
USER JTF-8 & TC	STRUCTURE FACILITY NO. 881			SCIENTIFIC STATION NO. 91-3-1 and 91-3-18		BOD GO+90
	FOD GO+90*					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8	PRE-GO					
MILCON	Prior Cost	45.2		560.0	605.2	
CRO 7-64	POST-GO					
CRO 7-65	Est. 5/65			**		1.0
	TOTAL	45.2		560.0	605.2	1.0

COMPLETED

DESCRIPTION This facility (completed in 1966) comprises two 54 x 72 x 13-ft. high reinforced concrete, air conditioned, dehumidified bunkers separated by a 28 x 72 x 13-ft. high common mechanical equipment area. Both bunkers have raised floors, suspended ceilings, and latrine facilities. The easterly bunker will be utilized by Subtasks A905 and A909 for rocket launch control. The west-erly bunker will be used by Subtasks A108, A109, A201, A202, A203, A601, A602, A603, A604, A606, A613, A614, A620, A901, A915 and A962 for rocket payload monitoring. The bunkers are designed to withstand overpressures of 6 psi on the sides and 3 psi on the roof. A 500 kva, 4160-480Y/277 volt, 3 phase transformer "T1" provides power for scientific facilities and a similar transformer "T2" provides power for utility purposes. These two transformers may be tied together on the secondary side, if required, through a normally open circuit breaker. An additional transformer on the secondary side provides 120/208 volt, 3 phase power where required. Lighting is RF shielded and provides 75-ft. candles at bench level. Transformer "T2" also provides 45 kva of 480 volt secondary power to Building 868. The existing electrical system provides 200 amps of 28 volt D.C. power; however, the D.C. distribution panel and circuitry will not be installed until firm criteria for this power is establi-shed.

DRAWINGS: 91-881-A1 thru A4 91-881-M1 thru M11 JS 91-881-A100 and A1
 91-881-C1 91-881-E1 thru E7 JS SK 881-M100
 91-881-S1 thru S10 JS 91-881-E100 and E11

*The FOD for the Launch Control Bunker is GO+90, while that for the Monitoring Bunker is GO+135.

**Post-GO requirements, not estimated above, will include contractor support, for installation of TC furnished equipment and scientific cabling.

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F & S NO. 01013	TITLE Command and Tracking Center					
USER SANDIA	STRUCTURE/FACILITY NO. 660			SCIENTIFIC STATION NO. 91-4-1 91-4-2 91-4-3		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO Prior Cost	5.5		56.1	61.6	
SANDIA	PRE-GO Prior Cost	18.5		268.5	287.0	
	TOTAL	24.0		324.6	348.6	

COMPLETED

DESCRIPTION The Command and Tracking Center (completed in 1963) is used by Sandia for free flight Strypi and instrumented rocket operations. The Center is located within three interconnected and buried steel arch bunkers containing about 2880 square feet of floor space. Two bunkers are 17 x 45-ft. and a third is 13 x 45-ft. Ceiling height is 8 1/2-ft. The bunkers are framed inside with wood studs covered with gypsum board. A false floor was constructed over the concrete slab. Toilet facilities are provided in the 13 x 45-ft. bunker. About 70 tons of air-conditioning is used to maintain temperature control of equipment utilized for processing and computing the input of the tracking facilities. Each bunker is furnished with a steel blast door on the south end and an escape chute on the north end. 500 kva of 480 volt, 3 phase utility and lighting power is provided to the bunker. An additional 300 kva of 120/208 volt, 3 phase power is provided to the bunker for incandescent lighting and scientific power. The scientific power system is tied into two Sandia furnished 60 kw, 120/208 volt, 3 phase, engine motor generators, located in Building 741, which provide no-break power. (See F&S No. 02071).

The Center is equipped with heat detectors which include a visual and audio signal connection to the fire station.

- DRAWINGS:
- | | |
|--------------------------|-------------------|
| 91-3200-A1 and A2 | 91-660-A1 thru A3 |
| 91-3200-C1 | 91-660-C1 |
| 91-3200-S5 thru S9 | 91-660-S5 thru S9 |
| 91-3200-M1 and M2 | 91-660-M1 thru M6 |
| 91-3200-E1 thru E7 | 91-660-E1 thru E9 |
| JS 91-3200-S100 and S101 | |

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F & S NO. 01014	TITLE Nike-Herc Control Bunker and Converter Shelter - Subtasks A941, and A942					
USER TC	STRUCTURE FACILITY NO. 276 and 737			SCIENTIFIC STATION NO. 91-3-139 and 91-3-140		BOD
	FOD GO+60					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8 MILCON CRO 7-64	PRE-GO Prior Cost	18.2			18.2*	
	POST-GO Est. 9/67			16.6	16.6	6.0
	TOTAL	18.2		16.6	34.8	6.0

PRIOR YEARS

ENGINEERING Completed.

Drawings:	91-276-C1	91-276-E1 thru E7	JS 91-276-C100
	91-276-A1	91-737-C1	JS 91-276-E100
	91-276-S1 thru S4	91-737-E1 thru E7	JS 91-737-E100
	91-276-M1 and M2		

PROCUREMENT Completed.

CONSTRUCTION A combined control bunker and converter shelter (completed in 1965) is located on each of the two southern peninsulas and in line with the Nike-Herc launch pads (F&S No. 01004). Each building is a 20 x 72 x 8-ft. 4-in. high reinforced concrete structure covered with a minimum of 3-ft. of compacted coral, and separated into two internal areas by a blast protective concrete wall.

The control bunker portion of each building is 20 x 46-ft. long and designed to provide protection from fall-back missiles of 2,273 pounds at 705-ft./second. This protection is mandatory for insuring continuous power. Access is provided by steel blast doors located at each end of the bunker. One of these doors opens directly into the converter shelter. The control bunker is air conditioned to maintain 70°F (+5%). Toilet facilities, fluorescent lighting and telephones are also provided in the bunker. Ventilation and filtration equipment operate on a 24 volt battery power supply in case all other power fails. Both 120/240 and 480 volt, 60 cycle, 3 phase utility power is provided to the bunker. The bunker is also provided with 120/208 volt, 400 cycle, 3 phase power which is supplied by a converter located in the adjacent shelter.

The converter shelter portion of each building is 20 x 26-ft. long. One end of the shelters has been left open for ease of access to the converters. Utility power, lighting and distribution panels are provided.

Deletion of the requirements for east firing rockets has eliminated the need for duplicate facilities on each of the peninsulas. Current plans call for use of Bunker 276 as the Subtask A942 launch control bunker with the in-flight control vans to be located on the east peninsula. Because of the deletion of the Subtask A942 requirement for Bunker 737, it is presently planned to utilize this bunker as the Subtask A941 launch control bunker.

POST-GO

PROCUREMENT Two portable 15 H.P. electric driven compressors and three (3) 70-ft. long wood poles with pole steps will be procured and shipped to Johnston Island Post-GO.

CONSTRUCTION A 15 H.P. compressor will be installed in each converter shelter. Three 70-ft. wood range masts will be erected only on the east peninsula. Four TC furnished electric driven generator converters will be installed Post-GO to provide 400 cycle power. These converters will be transferred to and from each shelter as required.

*Additional construction costs are included under F&S Number 01004.

F & S NO. 01015	TITLE Payload Checkout Building					
USER SANDIA	STRUCTURE FACILITY NO. 724			SCIENTIFIC STATION NO. None		BOD
	FOD GO+120					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO					
	Prior Cost	22.5		194.3	216.8	1.5
	POST-GO					
	Estimate 2/67			42.9	42.9	4.9
	TOTAL	22.5		237.2	259.7	6.4

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-724-C1 91-724-A1 thru A4 91-724-S1 thru S4
 91-724-W1 91-724-M1 thru M4 91-724-E1 thru E5
 JS 91-724-C100 JS 91-724-S100

PROCUREMENT Completed.

CONSTRUCTION The building is a steel rigid frame structure with aluminum siding and concrete floor. It is insulated and vapor proof, and is air conditioned to 76°F. Controls maintain relative humidity to 50 percent. The overall building area is 50 x 56-ft. with a 23 x 50-ft. central high-bay and a 16 x 50-ft. lean-to on each side. One lean-to is used for storage and the other for office and laboratory work. The high-bay area has two motor operated 12 x 12-ft. roll up doors and two bridge cranes. One bridge crane is equipped with a 4-ton, 2 speed electric hoist and the other with a 2-ton hoist. The storage lean-to has a double 8 x 8-ft. metal door located at the front of the building. A 1-ton monorail and hoist and latrine facilities are provided in the office and laboratory area. Power to the building is supplied from a 408 volt, 3 phase, 3 wire main panel situated in the high-bay area. The storage area has a 30-ft. candle lighting level. All other areas are lighted at 80-ft. candle level.

An emergency exhaust system provides an air change every two to three minutes. Controls are provided to activate the exhaust system, open overhead doors and shut down the air conditioning system. The building is protected on three sides by 12-ft. high berms (F&S No. 02065). A stabilized roadway provides access to the storage area and a concrete walk connects Buildings 723 and 724. The entire building and interior appurtenances are grounded.

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01015

SCIENTIFIC
Page 2

POST-GO REQUIREMENTS

ENGINEERING Completed

PROCUREMENT Completed except for furniture requirements.

CONSTRUCTION Security fencing, lighting and a Sandia-furnished sensing system will be installed Post-GO. Two Sandia-furnished trailers will also be installed within the berm area south of building 724.

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F & S NO. 01016	TITLE Warheading Building - Subtasks A101, A104, A601 and A942					
USER TC	STRUCTURE FACILITY NO. 884			SCIENTIFIC STATION NO. None		BODGO+90
	FODGO+90					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8 MILCON CRO 7-64	PRE-GO Prior Cost	28.1		224.1	252.2	
	POST-GO Estimate 3/67			4.9	4.9	1.3
	TOTAL	28.1		229.0	257.1	1.3

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-884-A1 and A2 91-884-M1 and M2 91-030-W21
 91-884-C1 91-884-E1 and E2
 91-884-S1 and S2 91-884-W1 thru W4

PROCUREMENT Completed.

CONSTRUCTION The Warheading Building is a concrete block structure 46 x 82 x 19-ft. high with a lightweight concrete roof.

The interior of the building is divided into four areas:

- a. The Subtask A101 area is a 26 1/2 x 30-ft. screen room with an adjoining 12 x 28-ft. workroom. The workroom is equipped with a 4-ton monorail which extends through 8 x 17-ft. exterior doors to 12-ft. outside the building. Access to the screen room is through 8 x 10-ft. double doors opening into the workroom.
- b. The Subtask A104 area (approximately 30 x 33-ft.) consists of a screen room which is accessible through 8 x 10-ft. double doors in both the screen room and the building exterior.
- c. The Subtask A601 area is a 16 1/2 x 30-ft. screen room with an adjoining 16 1/2 x 12-ft. unscreened workroom, which is equipped with a 4-ton monorail. Access to the screen room is through 8 x 10-ft. double doors opening into the workroom.

- d. In addition to the above, an 11 x 34-ft. area accommodates the power distribution panels, air conditioning and other mechanical equipment.

The two workrooms and the three screen rooms are air conditioned and are equipped with telephones, wall cabinets and workbenches.

Two 120/208 volt, 3 phase, 100 amp receptacles and one 120 volt, single phase, 100 amp receptacle have been installed on the exterior wall of the building to provide power to three TC-furnished trailers which will be installed Post-GO.

Protective berms have been constructed on three sides of the building with the unprotected (north) side facing the runway. (See F&S No. 02066.)

POST-GO

ENGINEERING Design revision required to relocate fence.

PROCUREMENT To be accomplished.

CONSTRUCTION Furniture and three TC-furnished trailers will be installed Post-GO. A 7-ft. high chain link fence will be erected to enclose the building, the adjacent stabilized area and the protective berms.

F & S NO. 01017	TITLE Payload Storage Igloos					
USER SANDIA	STRUCTURE/FACILITY NO. 722 and 723			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	5.8	7.8	29.4	43.0	
TOTAL		5.8	7.8	29.4	43.0	

COMPLETED

DESCRIPTION The Payload Storage Igloos (completed in 1966) are two 8-gage corrugated steel arches. Each igloo is erected on a reinforced concrete slab with thickened footings. Inside dimensions are 11 x 23 x 10-ft. high at the crown of the arch. The igloos are spaced 16-ft. apart and covered with coral to a depth of approximately 3-ft. at the crown. A 10-ft. wide by 9-ft. high steel blast door is provided at one end of each of the igloos for access. A 1-ft. thick reinforced concrete portal wall supports the doors and also retains the coral fill. The opposite end of the igloos is closed off by a 1-ft. thick reinforced concrete wall. A 30-ft. x 68-ft. x 6-in. thick concrete slab is located on the north side of the igloos and in front of the blast doors.

Exterior and interior lighting is provided. A security protective alarm system has also been installed.

Besides being covered with coral, a 12-ft. high coral berm, approximately 100-ft. long, has been constructed 35-ft. north of the igloos.

The igloos will be enclosed, after GO, by an 8-ft. total height security fence. (See F&S No. 01015.)

DRAWINGS: 91-723-S1 and S2 91-724-C1
 91-723-E1 91-724-E1
 91-723-W1

F & S NO. 01019	TITLE Rocket Assembly Buildings					
USER SANDIA	STRUCTURE FACILITY NO. 714, 716, 720 and 840			SCIENTIFIC STATION NO. None		BOD GO+45
	FOD GO+60					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	15.1		177.1	192.2	
	FY 71	3.0		62.0	65.0	
TOTAL		18.1		239.1	257.2	

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-714-C1 and C2 91-714-E1 and E2 91-720-E1
 91-714-A1 and A2 91-714-W1 and W2 JS 91-714-E100
 91-714-S1 91-720-S1 and S2 JS 91-720-M100
 91-714-M1 and M2

PROCUREMENT Completed except for chainlink fencing for Building 720 and minor perishable materials required for completing the interior of Building 840.

CONSTRUCTION Buildings 714 and 716 (completed in 1968) are prefabricated rigid steel frame structures, 36 x 40 x 12-ft. high with corrugated cement asbestos roof and siding, and concrete floor. Each building encloses a 32 x 36-ft. assembly area and an 8 x 9-ft. non-hazardous work area. A roofed storage area 8 x 27-ft. is located on the north side of each building. Eight skylights are provided on the roof and three windows are provided along the southwest side of each building. Two 8 x 8-ft. truck doors and one personnel door provide access at each end of the assembly area. Sloping concrete loading aprons, 6 x 23-ft. long serve as approaches to the doors. There are two parallel 1-ton monorails, 12-ft. apart, extending the full length of the assembly area. Each has a 1-ton chain hoist with a 10-ft. minimum hook height.

The assembly area and non-hazardous work area are insulated, air conditioned and dehumidified. The air conditioning equipment is situated on an exterior concrete pad on the east side of the building.

Each building is provided with 120/208 volt, 60 cycle, 3 phase power. All interior lighting and other receptacles are explosion proof. Exterior lighting is provided at both ends of the assembly areas over the concrete loading ramps and also over the open storage area. The buildings are entirely grounded, including lighting aerials and a grounding strap installed along the interior north and south walls of the buildings. The grounding strap is mounted 5-ft. above the floor and 3/4-in. out from the plywood wainscot. One explosion proof telephone is installed in the assembly area of each building.

Building 840 (completed in 1965) is identical to Buildings 714 and 716 but only the building shell has been constructed. Completion of the interior of the building will be accomplished in FY 71.

Building 720 (completed in 1965) has been provided by relocating old Building 759. This building is a rigid steel frame structure 33 1/2 x 24 x 19-ft. high with corrugated aluminum roof and siding and concrete floor. A 5-ton manually operated bridge crane with a 13-ft. hook height extends the entire length of the building. The building has three windows, six skylights, a personnel door, and on the north side of the building a pair of 10 x 10-ft. bi-parting sliding doors. A 20 x 21 1/2-ft. long sloping reinforced concrete ramp serves as an approach to the sliding doors. The interior walls and roof are insulated and covered with plywood.

The building is air conditioned by a portable unit mounted on a trailer located outside the building. A package unit provides compressed air to two air valves located inside the building. Each valve is equipped with 25-ft. of flexible air hose.

A 30 kva, 480 volt to 120/208 volt, 60 cycle, 3 phase transformer located on the southwest side of the building provides power to the facility. All interior lighting and receptacles are explosion proof. Outside area lighting is installed on the northwest and southwest sides of the building.

Coral berms, 12-ft. high, have been constructed on three sides of each of the four buildings with the openside facing the runway. See F&S No. 02065,

FY-71

ENGINEERING Completed.

PROCUREMENT Minor perishable materials required for completing the interior of Building 840 and chain link fencing material.

CONSTRUCTION The interior of Building 840 will be completed. This construction includes the installation of the insulation, duct work, air conditioning, interior walls and doors, painting, and electrical work.

Approximately 1560 lin. ft. of 7-ft. high chain link security fence, topped with barbed wire, will be erected around Buildings 720, 722, 723 and 724, and will also enclose the coral berms. Only one vehicle gate will be provided in this fence.



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F & S NO. 01020	TITLE Nike-Hercules Rocket Assembly Building - Subtask A942					
USER TC	STRUCTURE/FACILITY NO. 886			SCIENTIFIC STATION NO. None		BOD
	FOD GO+60					
FUNDING AGENCY JTF-8 MILCON CRO7-64	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	23.0	125.3	111.8	260.1	
	POST-GO					
	Estimate 3/67			4.1	4.1	7.0
	TOTAL	23.0	125.3	115.9	264.2	7.0

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-030-W24 91-886 A1 thru A3 91-886-M1 thru M3
 91-097-SS1 91-886-E1 thru E3 91-886-W1 thru W4
 91-884-C1 91-886-S1 thru S4

PROCUREMENT Completed.

CONSTRUCTION The Rocket Assembly Building is a 40 x 60 x 19-ft. high prefabricated structure with a lean-to 12 x 60 x 10-ft. high on the west side. The building has a concrete floor and corrugated asbestos cement siding and roofing. The lean-to area contains a stock room, hydraulic shop, and latrine facilities. Workbenches are provided in the hydraulic shop and shelving is provided in the stock room.

The main structure is the Assembly and Checkout Area. A 15-ft. high, 5-ton explosion proof traveling bridge crane has been installed in this area. Two sliding doors 12 x 15-ft. high at each end of the building provide access to the area. A screen room 17 x 57 x 12-ft. high has been installed in this area on the east side.

The screen room provides shielding protection in accordance with H&N Specification No. H&N-PC-37 and as measured within the limits of the available RFI test equipment. All doors into the screen room are provided with "No Entry" warning lights and panic hardware. A separate unit provides humidity control and air conditioning to the screen room.

All electrical outlets and lights in the building and screen room except the stock room and latrine are explosion proof. Exterior lighting is provided on all four sides of the building. Two TC-furnished motor generator sets provide 400-cycle power to the screen room, the hydraulic shop and the Assembly and Checkout Area.



CONFIDENTIAL

JOHNSTON ATOLL
01020

SCIENTIFIC
Page 2

Explosion proof telephones have been installed in the screen room and Assembly and Checkout Area.

The hydraulic shop is air conditioned. A TC-furnished air compressor provides compressed air to the building.

Protective berms have been constructed on three sides of the building with the unprotected side facing the runway. (See F&S No. 02066.)

POST-GO

ENGINEERING Completed.

PROCUREMENT Procure chain link fence material.

CONSTRUCTION A 7-ft. high chain link security fence will be erected to enclose the building, adjacent stabilized areas and the protective berms. Two 400 cycle MG sets and an air compressor, TC-furnished, will be installed adjacent to the building.

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F & S NO. 01021	TITLE Igniter Checkout Building					
USER SANDIA	STRUCTURE/FACILITY NO. 718		SCIENTIFIC STATION NO. None			BOD
	FOD GO+120					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO					
	Prior Cost	1.6	5.5		7.1	
	POST-GO					
	Est. 12/68	0.5		19.0	19.5	
	TOTAL	2.1	5.5	19.0	26.6	

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-030-W9 and W10

PROCUREMENT Completed. The 8 x 8-ft. RF shielded structure has been procured and is being stored at Johnston Atoll.

POST-GO

CONSTRUCTION The Igniter Checkout Building will be an 8 x 8-ft. RF shielded structure with a double shield mesh type enclosure designed for exterior weather exposure, and will be set on a concrete slab. The building will be air conditioned for corrosion prevention.

A workbench and storage cabinet will be required. Lighting over the workbench will be 50-foot-candles. A 115 volt, single phase, weatherproof, duplex receptacle will be provided at the exterior of the building adjacent to the door. All wiring entering the shielding will be filtered. An igniter test chamber will be fabricated for use in this building.

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SCIENTIFIC

F & S NO. 01022	TITLE Rocket Motor Storage Building					
USER SANDIA	STRUCTURE FACILITY NO. 980			SCIENTIFIC STATION NO. None		BOD GO+45
						FOD GO+60
FUNDING AGENCY AEC	(S000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	4.9	4.2		9.1	
	FY-71		0.5	20.5	21.0	
	TOTAL	4.9	4.7	20.5	30.1	

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-970-C1 91-980-A1 and A2 91-980-E1

PROCUREMENT Completed, except for miscellaneous perishable materials to be procured Post-GO.

FY 71

CONSTRUCTION This building will be a 32 x 50 x 12-ft. high wood frame structure with corrugated cement asbestos roof, and concrete floor. The sides of the building will be covered with canvas which can be rolled up to eave height. Three rotary type gravity vents will be mounted on the roof. A 24 x 10 1/2-ft. high opening, covered with roll up canvas and located at one end of the building, will provide access into the work area.

The building will be bermed on three sides, with the open side toward the ocean. Berms on the south and east side of the building have been constructed Pre-GO; however, the berm on the north side will not be constructed until after the building subgrade is completed. Cost for constructing the berms is included in F&S No. 02066.

There are no electrical requirements for the building; however, exterior area lighting will be provided for the area inside of the berms.

F & S NO. 01023	TITLE Rocket Storage Buildings - Subtask A905 and C910					
USER TC	STRUCTURE/FACILITY NO. 974 and 976			SCIENTIFIC STATION NO. None		BOD
	FODGO+90					
FUNDING AGENCY JTF-8 MILCON CRO 7-64	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost	1.4		44.6	46.0	
	TOTAL	1.4		44.6	46.0	

COMPLETED

DESCRIPTION Each building (completed in 1966) is a 30 x 93-ft. rigid steel frame structure with a 14-ft. minimum inside clear height. The structures are erected on concrete floor slabs. The sides and ends of the structures are open, however, roll up canvas curtains located around the building frames provide protection against the weather. Four rotary type gravity roof vents are located on the aluminum roof of each structure to provide ventilation when the canvas curtains are rolled down.

Overhead lighting is provided inside each building, and outside lighting is provided around the perimeter of each building.

Coral berms have been constructed to the north, south and east of these buildings, except for a portion of the south berm between Buildings 976 and 980 which will be constructed Post-GO after Building 980 is constructed. (See F&S No. 01022)

DRAWINGS: 91-970-C1 91-970-E1 91-974-ES1

F & S NO. 01024	TITLE Rocket Assembly Building					
USER LRL	STRUCTURE / FACILITY NO. 868			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO					
	Prior Cost	7.9	5.0	62.9	75.8	0.2
	TOTAL	7.9	5.0	62.9	75.8	0.2

COMPLETED

DESCRIPTION The Rocket Assembly Building (completed in 1966) is a metal frame structure with corrugated cement asbestos roof and siding and concrete floor. It consists of a 28 x 40-ft. assembly area and a 16 x 22-ft. payload storage facility. The building is air conditioned to maintain 76°F maximum temperature and a relative humidity of 50 percent. Two double doors 9-ft. high 8-ft. wide provide for fork-life access. Both doors are located at the front of the building, one at the assembly area and the other at the storage area. The assembly area has approximately 54 lineal feet of workbenches. The workbench adjacent to the east wall is placed on an 8-ft. wide x 27-ft. long strip of conductive linoleum. The storage facility is provided with storage racks, static conductive flooring and an explosion proof electrical system. All benches are grounded.

Approximately 30 kva of 120/208 volt, 3 phase, power (including power for exterior flood lighting) is provided to the building. A protective berm, 12-ft. high is located 15-ft. south of the building. An exterior weatherproof receptacle (rated at 100 amp, 120/208 volt) is provided on the west wall to accommodate a machine-shop type support trailer.

DRAWINGS: 91-868-A1 thru A3 91-868-S1 and S2 91-097-SS1
 91-868-A5 91-868-M1 JS 91-868-A100
 91-868-C1 91-868-E1 JS 91-868-M100

F & S NO. 01026	TITLE Rocket Motor Storage					
USER LRL	STRUCTURE/FACILITY NO. 982			SCIENTIFIC STATION NO. None		BOD
	FOD GO+30					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	5.9		13.2	19.1	
TOTAL		5.9		13.2	19.1	

COMPLETED

DESCRIPTION The Rocket Motor Storage Building (completed in 1966) is a rigid frame steel structure of approximately 320 square feet, with aluminum roofing, siding and louvers. A double metal door at the south side provides access to the building. The floor is a concrete slab covered partially with duck-board. Ventilation of the building is accomplished by an aluminum rotary gravity type roof ventilator and an exhaust fan in the north wall. Incandescent lighting is provided. Lighting and ventilation systems meet explosion proof standards. The building operations are grounded through brass strips on all four walls. Protective berms are provided around the building.

DRAWINGS: 91-097-SS1 91-970-C1 91-980-E1 91-982-A3

~~CONFIDENTIAL~~

JOHNSTON ATOLL

SCIENTIFIC

F & S NO. 01027	TITLE Igniter and Squib Storage Bunkers - Subtask A905					
USER SANDIA LRL TC	STRUCTURE FACILITY NO. 970 and 972			SCIENTIFIC STATION NO. None		BOD
	FOD GO+60					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	0.4		25.7	26.1	
JTF-8	PRE-GO					
MILCON	Prior Cost	4.2		15.6	19.8	
CRO 7-64						
CRO 7-65	TOTAL	4.6		41.3	45.9	

COMPLETED

DESCRIPTION Two coral covered steel arch bunkers (completed in 1965) provide igniter and squib storage. One bunker (Building 970) is 11 x 23-ft. and will be jointly shared by Sandia and LRL. A wood stud and gypsum board partition separates the two areas providing 200 square feet for Sandia and 50 square feet for LRL. The space assigned to Sandia contains 300 square feet of storage shelves. The other bunker, (Building 972) 11 x 19-ft. with approximately 200 square feet of usable area, is assigned to DASA Subtask A905. Both bunkers have vapor tight lights and ventilation blowers. In addition, the LRL portion of Building 970 is air conditioned, and all electrical switches, receptacles, and lighting fixtures are explosion proof.

DRAWINGS: 91-970-C1 91-970-A1 91-970-S1
91-970-E1 91-970-EM1 JS SK-970-E100

~~CONFIDENTIAL~~

F & S NO. 01028	TITLE Missile Flight Safety System (Akau Island)					
USER PMR	STRUCTURE/FACILITY NO. See Text			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8 MILCON CRO 2-64 CRO 7-64	PRE-GO Prior Cost	68.7		689.8	758.5	
	TOTAL	68.7		689.8	758.5	

COMPLETED

DESCRIPTION Relocation of PMR facilities consisted of creating Akau Island and installing PMR range safety equipment. This island was created by dredge fill and includes a sheet pile wharf area and a small boat landing. PMR equipment on Johnston Island was removed and relocated on the new Akau Island. In addition to the relocation of equipment, several new vans were installed by PMR to augment this equipment. Major PMR facilities now include radar units and their support trailers, a helicopter pad, a 40,000 gallon fresh water storage tank, a 40 x 100-ft. spare parts and supply building (Building 1001 - see F&S No. 02047 for modifications) and a 40 x 150-ft. operations building (Building 1000). A 150-ft. high boresight tower is located on the west side of the island. Above grade earthwork includes five elevated antenna mounts, and a berm around the southeast corner of the island.

Electrical power with 100 percent backup is supplied from the permanent power plant on Johnston Island by means of a submerging cable loop. In addition, submarine cables are used to carry the signals and communications between Johnston Island and Akau Island. (Completed in 1965.)

The following items are available for range operations:

- Two AN/MPS-25 C-band radars
- Three AN/MPS-26 C-band radars
- Two AN/USQ-20 B computers
- One SDS 910 special purpose computer
- One AGAVE antenna
- Ten VHF telemetry receivers
- Plotting boards
- Tape recorders
- IRIG timing system

The functions of the subsystem are as follows:

<u>Subsystem</u>	<u>Function</u>
1. Radar	Acquire and track target
2. Automatic Gimballed Antenna Vectoring Equipment (AGAVE)	Aid in Radar acquisition
3. Telemetry Predetection and Cross Range Velocity correlator	Receiving and record telemetry data from detect cross range velocity com- ponents
4. Computer	Provide data to Operations Control Center for plotting, determine instan- taneous impact predictions and origin- ate automatic destruct commands
5. Operations Control Center	Provide displays and indications from which range safety decisions are made
6. Command Control Subsystem	Transmit OCC command signals to target
7. Timing Operations Center	Provide timing reference to other sub- systems
8. Communications	Inter-island telephone and remote radio (voice and teletype) communications
9. Frequency Interference Control	Identify interfering transmissions
10. Power Distribution	Distribute primary power

The data recording facilities are available at strategic points throughout the data flow system. The general location, record type, and recorded data are as follows:

<u>Location</u>	<u>Type Recording</u>	<u>Data Recorded</u>
1. Radar	Roll Chart Form	Raw Analog Radar Data
2. Computer	Magnetic Tape	Digital Radar Data History
3. Operations Control Center	Roll Chart Form Graph Form	Command Control System Real Time Plots, Tele- metry Displays
4. Predetection and Cross Range Velocity Correlators	Magnetic Tape	Composite Pulse Code Mod- ulation, Telemetry Data, Cross Range Velocity Data FM/FM Telemetry Data
5. Communications	Magnetic Tape	Voice Signals

All recordings are available for post mission analyses. The high speed printer in the computer system can print out the high accuracy radar data for detailed post mission analysis. Timing formats are recorded with all data where applicable.

DRAWINGS:

PMR DWG 06845	116-1000-E1 thru E5
116-002-A1	JS 116-1000-S100 thru S102
116-002-C1 thru C7	JS 116-1000-E100 and E101
116-002-S1 and S2	JS 116-1000-M100
116-002-E1 thru E5	JS 116-1001-A1 thru A3
JS 116-002-C100 and C101	JS 116-1001-S1
JS 116-002-S100	JS 116-1001-S100 thru S102
JS 116-002-E100 thru E103	116-1001-M1 thru M4
JS 116-071-S1 thru S3	116-1001-E1 and E2
JS 116-077-C1	116-1002-A1 thru A4
116-077-S1 thru S3	116-1002-C1
JS 116-077-S100	116-1002-S1
116-079-W1 thru W6	116-1002-M1 thru M3
JS 116-097-S100	116-1002-E1 and E2
JS 116-1000-A1 thru A5	116-1003-A1 and A2
JS 116-1000-S1 thru S3	116-1003-M1
116-1000-A100	116-1003-E1
116-1000-M1 thru M3	

JOHNSTON ATOLL

F & S NO. 01029	TITLE Angle Measuring Equipment (AME) Field and AME Preamp Shelter (Building 742)					
USER SANDIA	STRUCTURE/FACILITY NO. 742			SCIENTIFIC STATION NO. 91-4-12		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
SANDIA	PRE-GO					
	Prior Cost	3.9		30.4	34.3	
AEC	PRE-GO					
	Prior Cost	1.7		37.8	39.5	
	TOTAL	5.6		68.2	73.8	

COMPLETED

DESCRIPTION The Angle Measuring Equipment Field (completed in 1964) for use in Project HA is now also used in conjunction with tracking Sandia instrumented rockets. This facility consists of 17 slaved antennas located in a 400-foot diameter circle which is centered in a 1000-foot diameter cleared area. Signal cables run from the Command and Tracking Center to each antenna.

The existing AME Preamp Shelter (completed in 1966) is located six feet east of the Angle Measuring Equipment Field Center. This building is an 8 x 8 x 7 1/2-ft. high wood frame structure with cement asbestos roof and siding, concrete floor, and is dehumidified to 50 percent relative humidity. Lighting at an intensity of 100 foot-candles is provided.

A 60 kw, 208 volt, 60 cycle, 3 phase, Sandia-furnished generator supplies power of 120/208, 3 phase to these facilities.

DRAWINGS: 91-742-W1 and W2 91-3200-E9 and E10
 91-3200-C3 JS 91-3200-C100

F & S NO. 01030	TITLE Television Camera Mount					
USER SANDIA	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. 91-4-13		BOD
	FOD					
FUNDING AGENCY SANDIA	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost	3.9		15.6	19.5	
	TOTAL	3.9		15.6	19.5	

COMPLETED

DESCRIPTION An existing television camera mount (completed in 1963) located on the roof of Apartment Building 699 is now available for use for all Sandia rocket firings. The camera is mounted on a 10-ft. tower.

DRAWINGS: 91-3200-S2 thru S4

F & S NO. 01031	TITLE Teltrac Antennas and Pedestals (2)					
USER SANDIA	STRUCTURE FACILITY NO. None		SCIENTIFIC STATION NO. 91-4-14 and 91-4-15			BOD
	FOD					
FUNDING AGENCY SANDIA	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost	Included in F&S No. 01030				

COMPLETED

DESCRIPTION Two existing Teltrac antennas (completed in 1963) located at the east and west ends of Apartment Building 699 are available for primary tracking. The rotating parts of the antennas are balanced, and are mounted on 24-ft. high steel platforms. The tracking rate on any axis is 20 degrees per second. The supporting structure of the Teltrac is designed so that deflection or rotation from a 30 knot wind will cause an error of less than 0.1 degree in tracking. Slaved to the Teltrac antennas are the command antennas and the AME antennas.

DRAWINGS: JS SK-699-A100 91-3200-S2 thru S4

F & S NO. 01032	TITLE Command Antennas and Pedestals (2)					
USER SANDIA	STRUCTURE/FACILITY NO. None		SCIENTIFIC STATION NO. 91-4-16 & 91-4-17			BOD
FUNDING AGENCY SANDIA	(\$000) PRE-GO	ENGR	PROC	CONST	TOTAL	FURN Cost Included in F&S No. 01030

COMPLETED

DESCRIPTION Two helical-type slaved rotating antennas (completed in 1963) are available for tracking free flight rockets. These antennas are mounted on 12-ft. high steel towers atop the Command and Tracking Center (Building 660). The towers are designed so that deflection or rotation from a 30 knot wind will cause less than 0.1 degree error in tracking. The tracking rate on any axis is 20 degree per second with an acceleration of 5 degrees per second. Signal cables run from the Command and Tracking Center to each antenna.

DRAWINGS: 91-3200-S2 thru S4

F & S NO. 01034	TITLE Angle Measuring Equipment (AME) Field - Subtask A961					
USER TC	STRUCTURE FACILITY NO. None			SCIENTIFIC STATION NO. 91-3-9		BOD GO+90
	FOD GO+90					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
DASA/ RDT&E EAO 1106- 4101-61	PRE-GO					
	Prior Cost	8.6	13.2		21.8	
	POST-GO					
	Estimate 7/68		12.2	40.4	52.6	
	TOTAL	8.6	25.4	40.4	74.4	

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-3-9-A1 91-3-9-S1 91-3-9-W1
 91-3-9-C1 91-3-9-E1 91-097-SS101

PROCUREMENT Long lead items, mostly electrical equipment, have been procured Pre-GO for Post-GO construction.

POST-GO

PROCUREMENT Remaining procurement will be accomplished.

CONSTRUCTION The AME Field will form an isosceles right triangle with 503-ft. legs. Surface material in the AME Field area will be homogeneous to a depth of at least six feet and the surface will be level to within ± 2 inches. Thirteen concrete antenna pedestals will be constructed in recessed concrete pipe wells. TC furnished antennas will be positioned on the pedestals to within first order survey accuracies both horizontally and vertically. Reflecting surfaces may not be located nearer than 200-ft. to the field edge; beyond this, they may not extend more than 2 degrees above the horizon in the north-south and 4 degrees in the east-west directions.

A TC furnished AME Recording Van and a Shop Van will be located approximately 200-ft. north of the field. A multi-plate steel arch, covered with coral, will be erected over the AME Recording Van to provide protection. The arch will be approximately 45-ft. in length and will be open at both ends. The Shop Van will be unprotected.

Two 72 kva, 4160-120/208 volt, 60 cycle, 3 phase transformers will provide utility power and instrument power to the two (2) trailers.

TC furnished power cable and coaxial cable will be installed from the AME Recording Van to all but two (2) of the antenna wells; these two will not require power cables. Power cable and coaxial cable will be installed in the same trenches; however, a 12-in. spacing will be required between the power and the coaxial cables.

JOHNSTON ATOLL

SCIENTIFIC

F & S NO. 01035	TITLE Distance Measuring Equipment (DME) and Automatic Gimbaled Antenna Vectoring Equipment (AGAVE) Field - Subtask A961					
USER TC	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. 91-3-12		BOD
	FOD GO+120					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8 MILCON CRO 7-64	PRE-GO					
	Prior Cost	6.4	16.6		23.0	
	POST-GO					
	Estimate 7/68		56.6	95.3	151.9	
TOTAL		6.4	73.2	95.3	174.9	

IN ORDER TO MEET THE REQUIRED FULL OCCUPANCY DATE AT GO+120, IT IS RECOMMENDED THAT THE MULTI-PLATE STEEL ARCHES FOR THE TRAILER PROTECTION BE PROCURED PRE-GO. ESTIMATED PROCUREMENT COST OF ARCHES IS \$56,600.

PRIOR YEARS

ENGINEERING Completed.

Drawings:	91-3-12-C1	91-3-12-E1 and E2
	91-3-12-M1 and M2	91-097-SS101

PROCUREMENT Complete except for multi-plate steel arches for trailer protection and electrical trailer receptacles, cables and miscellaneous items which are scheduled to be procured Post-GO.

POST-GO

PROCUREMENT To be accomplished Post-GO.

CONSTRUCTION Three AGAVE, three DME and one Computer trailer will be sited on a 200 x 450-ft. compacted area immediately south of existing Storage Area No. 2 on the northwest side of Johnston Island.

Protection for the trailers will be afforded by enclosing them in 10-gauge galvanized multi-plate steel arches over which an earth cover ranging from a minimum of 2-ft. to a maximum of 5-ft. will be placed. The ends of the arches will be open.

The 3 DME trailers will be arranged in tandem and enclosed with 149-ft. of earth covered arch. To the east, the three AGAVE trailers will also be

arranged in tandem and enclosed in a separate 149-ft. earth covered arch. The Computer trailer will lie north of the western-most AGAVE trailer and will be enclosed in 69-ft. of arch but it will share its cover with the AGAVE trailers. The multi-plate arches will have a span of 20-ft. 7-in. and a rise of 17-ft. 9 in.

All the trailers except the Computer trailer will be air conditioned. All trailer enclosures will be provided with lights. Electrical power for the trailer complex will be provided by Substation No. 0403 which will provide 120/208 volt, 3 phase power.

Six AGAVE antennas will be placed on 12 1/2 x 12 1/2-ft. concrete pads. Ten DME antennas will be placed on 6 x 6-ft. concrete pads. An unobstructed view must be provided from the antennas down to 10° above the horizontal in the direction of the bursts. Instrument cables between DME/AGAVE, AME and Command Post will be contractor furnished. Separate services will be required to provide 120 kw for scientific load and 100 kw for air conditioning.

F & S NO. 01037	TITLE Transmitter Building and 86-ft. Diameter Radar Dish - Subtask A617					
USER TC	STRUCTURE/FACILITY NO. 26		SCIENTIFIC STATION NO. 91-3-3			BOD
	FOD GO+90					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8	PRE-GO					
MILCON	Prior Cost	9.8		*77.3	87.1	
CRO 7-64	POST-GO					
	Estimate 11/67			56.3	56.3	
	TOTAL	9.8		133.6	143.4	

PRIOR YEARS

ENGINEERING Completed.

Drawings located at Honolulu are as follows:

- 91-3-3-C1 91-3-3-S1 and S2 91-3-3-E1
- 91-3-3-A1 and A2 91-3-3-M1 SK 91-04713.1-CME1

PROCUREMENT Completed.

CONSTRUCTION The transmitter building (Building 26) is a 32 x 100 x 24-ft. high rigid frame steel structure with corrugated aluminum roof and siding and a concrete floor slab. A roll up door, 12-ft. wide by 18-ft. high, is provided at the north end of the building. A personnel door is located on the east and west sides of the building. A 1 1/2-ton hand operated hoist with a 20-ft. clear hook height is mounted on a 20-ft. long monorail in the building. Latrine facilities are provided in the building. Incandescent ceiling lights and duplex receptacles are provided throughout the building. Utility power to the facility is 120/208 volt, 60 cycle, 3 phase. Additional 4160 volt power is provided to the facility for connecting a TC furnished switchgear assembly. Four (4) copper grounding rods have been installed 6 inches above the floor slab near the center of the building. (Completed in 1966.)

An 18 x 70-ft. stabilized area along the east side of the building is provided for parking a TC furnished van. A 120/208 volt, 60 cycle, 3 phase, 300 amp fused disconnect switch is located on the exterior of the building to provide power to the van.

The radar dish foundation is located 80-ft. west of the transmitter building. This reinforced concrete foundation is 40-ft. in diameter with a center thickness of 4-ft. 3-in. and a circumference thickness of 2-ft. Seventy (70) TC furnished anchor bolts are embedded in the foundation.

POST-GO

PROCUREMENT Completed. The dish antenna, pedestal, control van, and transmitter equipment will be shipped to Johnston Atoll by TC. To meet the FOD the antenna dish and pedestal must be delivered at Johnston Island no later than GO+48 days.

CONSTRUCTION The TC furnished antenna dish and pedestal will be erected on the existing foundation. The TC furnished control van will be located on the stabilized area along the east side of the transmitter building. TC furnished switchgear will be installed in the transmitter building. TC will also furnish and install all power and signal cable required between the transmitter building and the dish antenna.

*Includes Procurement

JOHNSTON ATOLL

SCIENTIFIC

F & S NO. 01038	TITLE Interferometer Station - Subtask A601						
USER TC	STRUCTURE/FACILITY NO. None		SCIENTIFIC STATION NO. 91-3-20			BOD FODGO+120	
	FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
DASA/ RDT&E EAO 1106- 4101-61	PRE-GO Prior Cost	6.6	3.1			9.7	
	POST-GO Estimate-1965			59.4		59.4	
	TOTAL	6.6	3.1	59.4		69.1	

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-3-20-C1 91-3-20-S1 and S2 91-3-20-E1

PROCUREMENT Three transformers have been procured.

POST-GO

PROCUREMENT Remaining items will be procured.

CONSTRUCTION This facility will be located inside a 100 x 250-ft. area and will consist of TC furnished antennas and eight TC furnished support vans located around a 10 x 35 x 4-ft. high wooden platform north of the antennas. Three of the vans will be manned; however, no protection will be required as they will be located in a non-hazardous area. All antennas will have a clear line-of-sight to the south.

Power requirements for this facility will be 195 kw of 120/208 volts, 60 cycle, 3 phase and 40 kw at 400 cycle. The 400 cycle power will be provided from a TC furnished 400 cycle converter to be located adjacent to the substation. The antenna and van parking areas will be illuminated by six 500 watt floodlights mounted on 30-ft. high wooden poles. Additional lighting consisting of ten 150 watt floodlights will be provided along the wooden platform and in front of the vans.

JOHNSTON ATOLL

SCIENTIFIC

F & S NO. 01039	TITLE Riometer Station - Subtask A628					
USER TC	STRUCTURE/FACILITY NO. None		SCIENTIFIC STATION NO. 91-3-21			BOD GO+135
						FOD GO+135
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
DASA/ RDT&E EAO 1106- 4101-61	PRE-GO					
	Prior Cost	1.5			1.5	
	POST-GO					
	Estimate 5/65			15.0	15.0	
	TOTAL	1.5		15.0	16.5	

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-3-21-C1 91-3-21-E1

POST-GO

PROCUREMENT To be accomplished.

CONSTRUCTION The riometer station will consist of a 30-ft. guyed mast for 30 and 90 mc oblique antennas, a 30 mc riometer ring array, a 90 mc riometer ring, a 10 x 30-ft. van with a 90 mc rotating antenna, and a 10 x 40-ft. van, all of which will be TC furnished and located inside of a 170 x 190-ft. cleared area. The facility will require 10 kw of 120/208 volt, 60 cycle, 3 phase electrical power.

F & S NO. 01040	TITLE Propagation Antenna Field - Subtasks A602, A603 and A604					
USER TC	STRUCTURE/FACILITY NO. None		SCIENTIFIC STATION NO. 91-3-119			BODGO+135
						FODGO+135
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
DASA/ RDT&E EAO-1106 4101-61	PRE-GO Prior Cost	2.1			2.1	
	POST-GO Estimate 9/67		35.4	41.1	76.5	
	TOTAL	2.1	35.4	41.1	78.6	

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-3-119-C1 91-3-119-E1 91-097-S101

POST-GO

PROCUREMENT To be accomplished.

CONSTRUCTION This facility will be located on a 200 x 300-ft. level graded area enclosed by a 2 1/2-ft. high wooden rail fence. Four (4) TC furnished instrument trailers, with self-contained air conditioning, will be located at the northwest corner of the field. The trailers will be protected by corrugated metal arches installed side by side, open at both ends and connected by a 3 x 7-ft. passageway. The arches will be covered with 2 to 5 feet of coral. Each trailer will be provided with a 200 amp, 120/208 volt, 60 cycle, 3 phase power receptacle.

Pads, antenna supports, or other construction will not be required since each antenna will be equipped with supports that rest directly on the coral subgrade.

JOHNSTON ATOLL

SCIENTIFIC

F & S NO. 01041	TITLE Modification of Optical Station						
USER LASL EG&G	STRUCTURE/FACILITY NO. 93/94			SCIENTIFIC STATION NO. 91-1-1 (Building 94)		BOD FOD 9/1/70	
	FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO						
	Prior Cost	16.5	45.7	31.4	93.6		
	FY 69	7.8			7.8		
	FY 70	84.4		340.7	425.1		
	FY 71			531.1	531.1		
	TOTAL	108.7	45.7	903.2	1057.6		

PRIOR YEARS

ENGINEERING Completed.

Drawings:	91-93-C1	91-94-C1 and C2
	91-93-S1	91-94-A1 and A2
	91-93-W1	91-94-S1
	91-93-M1 and M2	91-94-M1 and M2
	91-93-E1 and E2	91-94-E1 and E2
	JS 91-93-E100	91-94-W1

PROCUREMENT Completed. Astrodome required for Post-GO installation has been purchased and is currently stored at Damon Tract. Electrical and mechanical equipment and other long lead time items have been procured.

CONSTRUCTION Pre-GO construction is complete and includes installation of the retaining wall and fill, relocation of the 16-in. saltwater line, relocation of Personnel Bunker and demolition of Hardtack Personnel Shelter.

FY 69, 70 and 71

THE FOLLOWING DESCRIPTION OF WORK TO BE ACCOMPLISHED IS BASED UPON PRELIMINARY CRITERIA. FISCAL INFORMATION SHOWN IS FOR PLANNING PURPOSES ONLY; HOWEVER \$7800 HAS BEEN AUTHORIZED FOR ENGINEERING IN FY 1969.

ENGINEERING To be accomplished.

PROCUREMENT To be accomplished.

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JOHNSTON ATOLL
01041

SCIENTIFIC
Page 2

CONSTRUCTION Building 94, as presently planned, will be increased in size by approximately 70%. Existing Building 93 will be demolished in order to provide the necessary space for the Building 94 expansion. Criteria for new Building 93 is presently being developed. Building 94 will be a concrete block structure with an adjoining concrete slab. A hemispherical astrodome, already procured, will be erected on the roof. The building and astrodome will be air conditioned and dehumidified. A spectrographic facility will be provided in conjunction with the Building 93/94 complex.

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F & S NO. 01042	TITLE Scientific Platforms and Photo Pads - Subtasks A609, A804, A915 and A963					
USER TC	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. See Text		BOD
	FOD GO+135					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8 MILCON CRO 7-64 CRO 7-65	PRE-GO Prior Cost	6.5		133.9	140.4	
RDT&E DASA 1106-4101 -61	PRE-GO Prior Cost	12.3		18.5	30.8	
	POST-GO Est. 7/65			113.2	113.2	
	TOTAL	18.8		265.6	284.4	

PRIOR YEARS

ENGINEERING Completed.

Drawings: 124-3-1-S1 and S2 124-3-2-CE1 124-3-2-E1 and E2
 124-3-2-A1 and A2 124-3-2-S1 124-3-2-M1
 124-3-2-CS1

PROCUREMENT Platform procurement complete. Procurement of the support trailers, fuel and water systems and the Subtask A804 astrodome, when authorized, will be accomplished Pre-GO. All other procurement will be accomplished Post-GO.

CONSTRUCTION Each scientific platform consists of a circular sheet pile cofferdam, 55-ft. in diameter and filled with graded coral aggregate. The platforms are provided with a wooden boat landing dock and stairs. Both platforms are located on coral heads and are separated by 6.95 miles. The top of the platforms are 16-ft. above MLLW.

The east platform is located at coordinates N213, 293.90 E222, 755.00 and includes scientific stations 124-3-2 thru 124-3-5 inclusive. The west platform is located at coordinates N194, 134.34 E195, 595.04 and includes scientific stations 125-3-2 thru 125-3-4 inclusive.

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JOHNSTON ATOLL
01042

SCIENTIFIC
Page 2

POST-GO

PROCUREMENT Remaining items.

CONSTRUCTION The following facilities will be required on each of the two scientific platforms:

Subtask A609 This project will require an 8 x 40 x 12-ft. high TC furnished instrument van on each platform. The total weight of the van will be 20,000 pounds. From points two feet above the roof of the van, an unobstructed line-of-sight above the horizon will be required 30° to each side of magnetic north and south. In the remaining 240° of azimuth, a line-of-sight will be required from zenith to within 5° of the horizon.

Each van will require 17 kw of 120/208 volt (+5%), 60 cycle, 3 phase electrical power.

Subtask A804 A contractor furnished 10-ft. diameter astrodome with a motor driven door will be placed on a 2-ft. raised concrete pad on each platform. Five kw, 120 volt, 60 cycle, 3 phase power will be required.

Subtask A963 A TC furnished 50-ft. triangular, self-supporting antenna will be erected on a reinforced concrete pedestal. The pedestal base will be poured in place on coral heads several feet below the water surface. The top of the pedestal or base of the towers will be 12-ft. above MLLW. One antenna will be located SW of the West Scientific Platform, Site 125, and the other located south of the East Scientific Platform, Site 124. Obstruction lights on both antennas will be provided by the contractor.

Subtask A915 A 3 x 3-ft. concrete photo pad will be provided on the east platform. Two similar pads will be provided on Johnston Island; one will be located near the west wharf (91-3-117) and the other will be south of the new POL area (91-3-118). A telephone jack and 1 kw power at 110 volts, single phase will be required at each pad.

In addition to the facilities provided for each project, a contractor furnished personnel trailer will be located on each platform. It will provide latrine and shower facilities and emergency sleeping quarters for eight men. A 4200 gallon capacity galvanized fresh water storage tank, on each platform, will provide water through a package-type hydropneumatic supply system.

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

JOHNSTON ATOLL
01042

SCIENTIFIC
Page 3

Power will be supplied by a 30 kw, 6 pole, 1200 rpm, 120/208 volt, 60 cycle, 3 phase diesel driven engine-generator set, which will be capable of remote control operation. Supplemental power will be provided as required by TC furnished batteries and chargers. A master switch controlling all platform lighting will be provided on each platform. A 1000 gallon fuel oil storage tank will supply diesel fuel by gravity feed.

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SCIENTIFIC

F & S NO. 01046	TITLE Camera Station					
USER Sandia	STRUCTURE/FACILITY NO. 22		SCIENTIFIC STATION NO. 91-4-48			BOD
						FOD GO+120
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost	16.6	25.9		42.5	
	POST-GO Est. 1965			44.9	44.9	0.9
	TOTAL	16.6	25.9	44.9	87.4	0.9

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-22-C1 91-22-S1 and S2 91-22-E1 and E2
 91-22-A1 thru A3 91-22-M1 thru M4

PROCUREMENT Completed.

POST-GO

CONSTRUCTION A 20 x 60 x 8-ft. high building with a mobile roof, located approximately 600-ft. east of Building 20 (JOC), will be provided for high altitude photographic coverage. The building will be comprised of a 20 x 30-ft. Camera Operations Room and a 20 x 30-ft. Shop and Control Room in which will be an 8 x 12 1/2-ft. Darkroom. A removable roof will be required over the Camera Operations Room. The roof will be track mounted, lightweight, weather-proof decking. The Shop and Control Room and Darkroom will be provided with comfort air conditioning. Chilled and filtered water will be required in the Darkroom.

A Sandia furnished 40-ft. Photo Trailer will be parked north of and adjacent to the building. This trailer will require 25 kw peak, and 10 kw continuous, 208 volt, 3 phase, utility power through an Appleton AE 1047 connector. An AEC furnished, 8 x 8-ft. walk-in cooler, with shelves for film storage, will be positioned by the Photo Trailer. Three Sandia furnished 8 x 8-ft. transporters will also be positioned in line with the Trailer and Reefer.

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SCIENTIFIC

F & S NO. 01053	TITLE Scientific Laboratory - Subtasks C501, C502, C503, C504, C507, C515, C516, C701, C702, C910 and C920					
USER TC	STRUCTURE/FACILITY NO. 190			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8 MILCON CRO 7-64 CRO 4-65	PRE-GO Prior Cost	29.0	53.6	200.5	283.1	
	POST-GO Est. 2/65					12.0
	TOTAL	29.0	53.6	200.5	283.1	12.0

COMPLETED

DESCRIPTION This is an 80 x 140-ft. prefabricated steel frame building with corrugated asbestos siding, insulation and a concrete floor slab. The building provides offices and laboratory space for assembly and testing of DW instruments, data analysis and sample counting operations. The interior of the building includes partitions, doors, a 9 1/2-ft. suspended ceiling, toilet facilities and a darkroom. It is air conditioned and climate controlled. Substation SS-0815 provides 300 kva of 480/277 volt, 3-phase secondary power. An additional transformer, in series, provides 75 kva of 120/208 volt power. The building was completed in 1966.

DRAWINGS: 91-190-C1 91-190-E1 thru E4
 91-190-A1 thru A3 91-190-M1 thru M6
 91-190-S1 F 91-190-W1

POST-GO

PROCUREMENT Furniture will be procured.

CONSTRUCTION Workbenches will be installed and receptacle strips will be provided over the workbenches.

F & S NO. 01056	TITLE Field Maintenance Shop - Subtask A942					
USER TC	STRUCTURE/FACILITY NO. 280			SCIENTIFIC STATION NO. None		BOD
	FOD GO+60					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8	PRE-GO					
MILCON	Prior Cost	6.9			6.9	
CRO 7-64	Construction costs are included in F&S No. 01004					
	POST-GO					
	Estimate 2/65			1.7	1.7	4.0
	TOTAL	6.9		1.7	8.6	4.0

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-280-A1 thru A3 91-280-S1 91-280-M1
 91-280-E1 and E2 91-276-C1 91-276-E4

PROCUREMENT Completed

CONSTRUCTION This facility (completed in 1965) is a 40-ft. square prefabricated steel frame building with a clear inside height of 13-ft. The sides and roof of the building are covered with corrugated asbestos cement and the building is erected on a 5-in. thick concrete floor slab. A 20 x 40-ft. area in the north half of the building has been insulated and has a 12-ft. ceiling height. This enclosure is the Guidance Area and storeroom and is air conditioned to provide a temperature of 70° ± 5°. The other half of the building is used as office and shop area and has latrine facilities. A 12 x 13-ft. high sliding door is located at each end of the office and shop area.

Interior lighting provides 50 foot-candles at bench level. Two (2) foot-candles of exterior lighting is provided on all four sides of the building.

Receptacles have been installed to provide 3 kw, 120 volt, 60 cycle power for two Post-GO trailers.

Two 400 cycle converters have been furnished by AMICOM for Post-GO installation at this facility. One converter will provide 400 cycle power to the two battery trailers. The second converter will provide 400 cycle power to duplex outlets located in the Guidance area.

A 13-ft. high coral berm has been constructed on the south and east sides of the building (see F&S No. 02066).

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JOHNSTON ATOLL
01056

SCIENTIFIC
Page 2

POST-GO

CONSTRUCTION Two battery type IV shop trailers will be located in an area on the south side of the building and connected to the existing power outlets. The two 400 cycle converters will also be installed.

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F & S NO. 01058	TITLE Rocket Nosecone Disassembly (Building 727) and Personnel Change (Building 732)					
USER LRL	STRUCTURE/FACILITY NO. 727 and 732		SCIENTIFIC STATION NO. None			BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO					
	Prior Cost	9.1		98.1	107.2	
	TOTAL	9.1		98.1	107.2	

COMPLETED

DESCRIPTION Building 727 (completed in 1965) is a 20 x 39-ft. steel frame structure with corrugated asbestos cement roofing and siding. An I-Beam mono-rail for materials handling is provided. The monorail extends from 18-ft. west of the building, continues thru the building, and follows a "U" shape to two concrete pits 20-ft. south of the building. Each pit is 6-ft. in diameter, 7 1/2-ft. deep, and is equipped with a 2-in. cast iron drain. The building is provided with a water faucet located inside the south entrance, workbenches, utility receptacles, emergency lighting, and an exhaust system.

The building is air conditioned and equipped with fluorescent lighting. The interior walls from the floor to a ceiling height of 8-ft. are covered with Dacron thread, Hypalon impregnated.

Approximately 20 kva of 120/208 volt, 3 phase, 60 cycle power is available to the building.

Building 732 (completed in 1966) is a lighted and ventilated 235 square foot block structure (approximately 15 x 15-ft.) located at the southwest corner of Building 727 near the entrance to the compound. Half of the structure is to be used as a "clean" room suiting area and the remaining half is to be used as a "hot" room for removal of contaminated clothing. Floor covering is such as to allow thorough decontamination. A shower, toilet, and washbasin are provided. A walkway connects this structure and Building 727.

Both buildings and also Building 726, a sample storage building (F&S No. 02019), are located within a security fence.

An 80 x 60-ft. A. C. paved receiving area, with two weatherproof electrical outlets is located approximately 100-ft. west of the security fence. A paved access way from this area through the security gate to the west entrance of Building 727 is provided.

<u>DRAWINGS:</u>	91-727-C1	JS 91-732-M100
	91-727-A1 thru A6	JS 91 SK-727-S100
	91-727-E1	JS 91-727-S100, S101, and S102
	91-727-S1 and S2	JS 91-727-E100
	91-727-M1	JS 91-732-S100
	91-727-W1	JS 91-732-E100

F & S NO. 01059	TITLE Hot Package Handling Area - Subtask A801					
USER TC	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FODGO+150					
FUNDING AGENCY JTF-8 MILCON	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
TO BE DETERMINED						

POST-GO

ENGINEERING To be accomplished.

PROCUREMENT To be accomplished.

CONSTRUCTION The Hot Package Handling Area, located immediately west of Building 960, will consist of six bays approximately 35 x 40-ft. and five bays approximately 40 x 44-ft. The bays will be surrounded by coral berms at least 8-ft. high and 4-ft. wide. A hot storage park will be provided near the north-east corner of the area. Entrance widths to the bays and storage park will be not less than 15-ft. The entire area will be located on compacted coral surfacing surrounded by chain link security fencing. Drainage will be toward the existing swale to the northwest. A coral concrete wash slab, 30 x 100-ft., will be provided and will drain into the swale. Fresh water will be provided to the area. Lighting and 110 volt, 60 cycle, single phase power will be provided to each bay. Telephone service will be required near each end of the area. Sufficient clearance will be provided between the berms and security fence to allow vehicle passage and entrance to any of the bays. Guard stations will be provided at the east and west entrances to the area. These entrances will be provided with a vehicular gate which will be locked when the area is not in use.

F & S NO. 01062	TITLE Wind Radar Trailer System					
USER SANDIA	STRUCTURE/FACILITY NO. None		SCIENTIFIC STATION NO. None			BOD
	FOD GO+120					
FUNDING AGENCY SANDIA	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost			14.2	14.2	
	TOTAL			14.2	14.2	

COMPLETED

DESCRIPTION The wind radar trailer complex consists of six trailers which are located west of Building 660. This system was provided for Project HA.

The wind radar system requires 8,000 to 10,000 cubic feet of helium per month during an operation. In addition, 120/208 volt, 3 phase power is provided at 50 kw for scientific equipment and 25 kw for regular use. A wooden covered platform connects the trailers.

In addition to the above six trailers, a photo trailer is provided which contains a 9 x 12-ft. darkroom with a 3 x 5-ft. darkroom sink, chilled water, hot water mixing valve, utility outlets, darkroom lighting and a window type air conditioner. This trailer is provided with 25 kw power at 120/208 volts, 3 phase.

DRAWINGS: 91-3200-C2 91-3200-E8 91-3200-S10

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SCIENTIFIC

F & S NO. 01065	TITLE T&F 300-ft. Antenna Tower and Transmitter Building					
USER EG&G JTF-8	STRUCTURE/FACILITY NO. 23		SCIENTIFIC STATION NO. 91-6-1, 91-8-1 (on tower)			BOD FOD GO+90
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	9.4		86.5	95.9	0.1
	FY 69	4.2*		22.3**	26.5	
	TOTAL	13.6		108.8	122.4	0.1

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-6-1-C1 JS 91-6-1-S100
 91-6-1-A1 and A2 JS 91-6-1-E100
 91-6-1-S1 thru S4 JS 91-6-1-W100
 91-6-1-W1 thru W3 91-20-E2 and E8

PROCUREMENT Completed.

CONSTRUCTION A 300-ft. guyed antenna tower has been erected approximately 200-ft. east of the Joint Operations Center (Building 20). Ten (10) EG&G furnished whip antennas are mounted on the top of this tower. Guard rails have been installed around each guy wire anchor block.

A transmitter building (Building 23) has been erected adjacent to the tower. This is a 20 x 20-ft. steel frame building, with insulated aluminum roof and siding, erected on a concrete slab. The building is air conditioned and humidity controlled. Two (2) workbenches, 6-ft. in length, with storage cabinets are provided in the building. Cable trays are suspended from the ceiling over transmitter racks.

Power provided is 120/208 volt, 3 phase and 120/208 volt, single phase. The three phase power is used for scientific equipment and tower obstruction lights. The single phase power is for building lighting and duplex outlets.

FY 69

ENGINEERING Completed.

Drawings: 91-079-W98 and W99 91-086-E2
 91-086-S6 thru S8 91-086-W1

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JOHNSTON ATOLL
01065

SCIENTIFIC
Page 2

PROCUREMENT Completed.

CONSTRUCTION New coaxial cable will be installed on the tower. The tower will be structurally modified to accommodate the additional loads imposed by the larger coaxial cable runs, the boresight target, and the bracket sensors, and signal cable for the Low Level Wind System. This tower is utilized as Tower No. 1 in the Low Level Wind System. (Refer to F&S No. 01126).

* Includes \$630 funded by PMR and \$420 funded by JTF-8.

**Includes \$345 funded by PMR and \$230 funded by JTF-8.

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SCIENTIFIC

F & S NO. 01067	TITLE Microbarograph Stations - Subtask A103					
USER TC	STRUCTURE/FACILITY NO. N/A		SCIENTIFIC STATION NO. 91-3-19 92-3-1			BODGO+21
						FODGO+159
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
DASA/ RDT&E EAO 1106- 4101-61	PRE-GO Prior Cost	0.7			0.7	
	POST-GO Estimate 9/67			2.5	2.5	
	TOTAL	0.7		2.5	3.2	

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-3-19-C1 92-3-1-C1

POST-GO

PROCUREMENT None Required

CONSTRUCTION Two Microbarograph Stations will be required. One station will be on Johnston Island located near the Point House and the other station will be on Sand Island near coordinates N 203, 950; E 204, 425. Each station will consist of two tripod mounted transducers which will be installed by the Army Ballistic Research Laboratory who will also provide batteries for power at each station.

F & S NO. 01069	TITLE Photometer - Subtask A606						
USER TC	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. 91-3-11		BOD	
	FODGO+159						
FUNDING AGENCY DASA/ RDT&E EAO 1106- 4101-61	(\$000)	ENGR	PROC	CONST	TOTAL	FURN	
	PRE-GO						
		Prior Cost	2.4			2.4	
	POST-GO						
	Estimate 5/65			17.0	17.0	0.1	
TOTAL		2.4		17.0	19.4	0.1	

PRIOR YEARS

ENGINEERING Completed. Drawings submitted for approval.

Drawings: 91-205-AM1 91-205-CE1 and CE2 91-205-E3

POST-GO

PROCUREMENT To be accomplished.

CONSTRUCTION This project will utilize the west half of Bunker 205 for instrument racks, and will use a 6 x 6-ft. portion of an existing concrete pad as a camera mount foundation. The bunker will be provided with new electrical service and air conditioning systems.

F & S NO. 01070	TITLE Radiometer Station - Subtask A608					
USER TC	STRUCTURE/FACILITY NO. None		SCIENTIFIC STATION NO. 91-3-14			BOD FODGO+150
	FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL FURN
DASA/ RDT&E EAO-1106 4101-61	PRE-GO					
	Prior Cost	2.6			2.6	
	POST-GO					
	Est. 1965			7.7	7.7	
	TOTAL	2.6		7.7	10.3	

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-3-14-C1 91-3-14-S1 91-3-14-E1

POST-GO

PROCUREMENT To be accomplished.

CONSTRUCTION The Radiometer Station will occupy a stabilized area 140 x 170-ft. on the southeast side of J.I. near the POL storage area. A 15-ft. diameter octagonally shaped reinforced concrete pad 2 1/2-ft. thick will be constructed to support a 30-ft. diameter steerable antenna. Two mobile TC furnished antennas (8 x 22-ft.) and two TC furnished instrument vans (8 x 40-ft.) will be located within the stabilized area. Four copper-clad steel grounding rods, 5/8-in. diameter x 8-ft. long, will be placed in a 10-ft. diameter circle near the center of the station. From the station, a clear line-of-sight must be provided to subtend an angle of 15 degrees to each side of all events and to allow an unrestricted view down to 3 degrees above the horizon. Approximately 30 kva of 120/208 volts, 60 cycle, 3 phase power will be provided to the two instrument vans.

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SCIENTIFIC

F & S NO. 01071	TITLE Log Periodic Ionospheric Antennas - Subtask A611					
USER TC	STRUCTURE/FACILITY NO. None		SCIENTIFIC STATION NO. 117-3-1, 2 and 3			BOD
	FOD GO+120					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
DASA/ RDT&E EAO 1106- 4101-61	PRE-GO					
	Prior Cost	3.5			3.5	
	POST-GO Est. 3/65			39.0	39.0	0.8
	TOTAL	3.5		39.0	42.5	0.8

PRIOR YEARS

ENGINEERING Completed.

Drawings:	117-3-1-C1	117-3-E1
	117-3-1-S1	117-1100-E1

POST-GO

PROCUREMENT To be accomplished.

CONSTRUCTION Three Log Periodic Ionospheric Antennas and ground screens, all TC furnished, will be placed on Hikina Island. Each antenna will be 100-ft. high and will have a ground screen of No. 10 copper wire approximately 110 x 300-ft. in plan dimension. Relative location of the three (3) antennas will not be critical; however, the antennas will be oriented 59 degrees true, 190 degrees true and 304 degrees true. The ground screen will extend into the sea. Support will be required to furnish concrete tower bases, longeron pads, guy anchors, wooden antenna anchor poles and to erect the TC furnished antenna kits. The kit includes the main tower, the radiating elements, all guys and embedded items and the ground plane.

One antenna has been loaned to the AFCS by TC for erection and temporary use during the period the permanent AFCS antenna is being relocated from the main island. It has been erected in its permanent location for future use by TC; therefore, only two antennas remain for Post-GO installation.

Two air conditioned 10 x 20-ft. office trailers will be provided; one by TC and one by the contractor. The facility will require 35 kw of 120/208 volt, 60 cycle, 3 phase electrical power.

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F & S NO. 01072	TITLE Optical Station (Atop Building 20) - Subtask A804					
USER TC	STRUCTURE/FACILITY NO. None		SCIENTIFIC STATION NO. 91-3-17			BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8 MILCON CRO 7-64 CRO 7-65 CRO 69-8	PRE-GO Prior Cost FY 69 SUBTOTAL	64.6		445.8 14.2 460.0	510.4 14.2 524.6	5.7
DASA/ RDT&E EAO-1106 4101-61	PRE-GO Prior Cost		6.1	234.2	240.3	
	TOTAL	64.6	6.1	694.2	764.9	5.7

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-3-17-A1 thru A8 91-3-17-M1 thru M15
 91-3-17-S1 thru S5 91-3-17-W1
 91-3-17-E1 thru E5

PROCUREMENT Completed.

CONSTRUCTION The Optical Station (completed in 1966) is an "U" shaped steel frame structure with metal insulated siding and composition roof. This structure is located at the north end, atop Building 20, and contains approximately 7500 square feet of space for spectrograph mounts, instrument maintenance, camera mounts; film handling and analysis, and administrative purposes.

The camera and spectrographic areas, approximately 20 x 40-ft. and 40 x 40-ft., respectively, are provided with a movable roof which permits unobstructed sight down to a minimum of 10° above the horizontal to the south, east and west. A clear line-of-sight is provided between each spectrograph and an azimuth mark which, preferably, will be located on Hikina Island.

Hydraulic camera mounts permit mounting of cameras and spectrographs to a predetermined position. These mounts are capable of adjustments to $\pm 0.1^\circ$ in azimuth.

The station is air conditioned to 70°F (+ 4°) with 50 percent relative humidity. Film storage areas are cooled to 50°F (+ 5°) with 50 percent relative humidity. Power of 277/480 volt, 60 cycle, 3 phase is supplied from a 600 amp. bus duct. Further distribution is also made at 120/208 volt, 60 cycle, 3 phase power.

FY 69

ENGINEERING Completed.

Drawing: 91-3-17-M16

PROCUREMENT Completed.

CONSTRUCTION The weather seals and related problems resulting from wind driven rain penetration of JOC Optical Station will be corrected as follows: Roof jacking stations will be elevated to level position and welded in place; diagonal rods will be installed to roof framing to eliminate racking; existing perimeter seal boots will be removed and replaced with flashings, glide seals, support hardware and appurtenances; all surplus jacking equipment and related piping will be moved back to the nearest pneumatic demand station.

F & S NO. 01074	TITLE HRT and EM Measurement Bunker					
USER SANDIA	STRUCTURE/FACILITY NO. 640		SCIENTIFIC STATION NO. 91-4-49			BOD
	FODGO+120					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	POST-GO Est. 10/68	2.5		19.5	22.0	
	TOTAL	2.5		19.5	22.0	

POST-GO

ENGINEERING To be accomplished.

PROCUREMENT To be accomplished.

CONSTRUCTION The existing Bunker 640 will be rehabilitated and partitioned to provide rooms for HRT and EM stations. The HRT and EM rooms will be provided with 36-inch workbenches and shelves. The HRT room will have fourteen 115 volt, single phase, 20 amp duplex receptacles, distributed about the perimeter of the room. A Sandia furnished electronic rack with a 10 kva heat output will be installed in this room. The EM room will be provided with fifteen of the above mentioned receptacles. Each receptacle in both rooms is to be on a separate circuit. Sandia furnished electronic racks in the EM room will have a 1.5 kva heat output. A Sandia furnished antenna will be mounted on a 4-inch diameter x 16-foot long steel pipe (with concrete footing) located on the west side of the building. This antenna will be connected to the EM room with a cable through the wall. Two 10 x 10-ft. antenna supports will be provided on the high ground south of the bunker. The HRT antennas will be Sandia furnished. Cable from these antennas will enter the HRT room through the south wall of the bunker by way of 8 x 8-inch weatherproof cable troughs. Air conditioning will be provided in this facility.

F & S NO. 01075	TITLE Underground Bunkers					
USER AFTAC	STRUCTURE/FACILITY NO. 204 and 205		SCIENTIFIC STATION NO. 91-11-1 and 91-11-2			BOD
	FOD GO+120					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
USAF	PRE-GO					
MIPR	Prior Cost	1.4			1.4	
67-4	POST-GO					
	Est. 8/68			52.0	52.0	
	TOTAL	1.4		52.0	53.4	

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-205-AM1 91-205-CE1 and CE2 91-205-E3

POST-GO

PROCUREMENT To be accomplished.

CONSTRUCTION Existing Bunker 204 and 1/2 of Bunker 205 will require modification and rehabilitation for use as scientific stations. Two AFTAC furnished technical trailers will be located west of Bunker 205. New air conditioning units will be installed in both bunkers. Bunker 204 will require 15 kw and Bunker 205 will require 20 kw of 120/208 volt, 60 cycle, 3 phase scientific power. An additional 20 kw of utility power will be provided to each bunker. Power receptacles will also be provided for the two technical trailers.

F & S NO. 01077	TITLE Frequency Interference Control Center					
USER PMR	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY JTF-8 MILCON CRO 7-64	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost	1.3		9.3	10.6	
	TOTAL	1.3		9.3	10.6	

COMPLETED

DESCRIPTION This facility consists of a frequency interference control monitoring station, a frequency control van, a frequency monitoring shelter, a frequency interference control center, and an emergency generator.

The frequency interference control monitoring station is located on the roof of Barracks 251. The roof supports a 6-ft. high "T" configured platform designed to support five antennas. These antennas are two AS-571/SLR, one AS-616/SLR, one AS-5-4/URD-4. Space is reserved for a microwave telemetry antenna. Range of the monitor is 10 kc to 19,750 mc. Power at 115 volts, 60 cycle, with 15 amp capacity is supplied for floodlighting.

The frequency control van is located west of the frequency monitoring shelter. Separate power sources for the instrumentation are provided.

The frequency monitoring shelter is located on a concrete pad adjacent to and west of Barracks 251. This shelter will be replaced by a PMR-furnished van.

The frequency interference control center is located in the JOC. This center is operated by PMR under JTF-8/TG 8.6 control. The PMR-furnished emergency generator is located south of the shelter and supplies 30 kw, 120/208 volt, 60 cycle, 3 phase standby power.

DRAWINGS: 91-071-S2 JS 91-071-S100
 91-251-C1 JS 91-251-E100
 91-251-S7 JS-SK-097-S105



F & S NO. 01081	TITLE Radar Van Complex and 86-ft. Diameter Parabolic Antenna Subtask A609					
USER TC	STRUCTURE/FACILITY NO. None		SCIENTIFIC STATION NO. 91-3-13			BOD
	FOD GO+75					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
DASA	PRE-GO					
RDT&E	Prior Cost	3.1	13.8		16.9	
EAO 1106-4101-61	POST-GO					
	Estimate 1/65		9.1	3.6	12.7	
TOTAL		3.1	22.9	3.6	*29.6	

PRIOR YEARS

ENGINEERING Completed except for design of extending power from Substation 0903 to the trailer park area.

Drawings: 91-3-13-C1 and C2 91-3-13-E1

PROCUREMENT Completed.

POST-GO

CONSTRUCTION The Radar Van Complex will consist of five TC furnished trailers and one shop van, which will be situated side-by-side on a 50 x 60-ft. stabilized area approximately 55-ft. east of the existing Parabolic Antenna. The trailer complex will act as an instrumentation center for the Parabolic Antenna which was constructed during OPERATION DOMINIC. A fresh water-line and sanitary sewer will be installed to the area.

Electrical power requirements will be provided by construction of Substation No. 0903; a 500 kva, 120/208 volt, 60 cycle, 3 phase power facility. Test Command will be responsible for installing all cable and electrical wiring to the trailers and to the Parabolic Antenna from the substation. The cost of the substation is included in the estimate for the Radar Van Complex.

Recent inspection of the superstructure of the dish antenna has revealed extensive corrosion. TC has recommended that no further attempt be made to rehabilitate the dish. Present planning indicates that a new dish will be fabricated and stored within CONUS.

*Includes cost for F&S No. 01082

F & S NO. 01082	TITLE Optical Support Control Site - Subtask A609					
USER TC	STRUCTURE/FACILITY NO. None		SCIENTIFIC STATION NO. 91-3-111			BOD
	FODGO+120					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
DASA RDT&E EAO 1106 4101-61	Costs included in F&S No. 01081					

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-3-13-C1 and C2 91-3-13-E1

POST-GO

PROCUREMENT To be accomplished.

CONSTRUCTION The Optical Support Control Site will consist of an Optical Support Control Van and a Shop Van, both TC furnished. The Optical Support Control Van will be a 8 x 30-ft. skid-mounted van, located on the northeastern portion of the Island. Its long axis will be oriented in an east-west direction. Fresh water at the rate of 100 gallons per day and sewage disposal for photographic chemicals will be required for the Optical Support Control Van.

The Optical Support Control Van requires a clear line-of-sight in the sectors listed below:

<u>Sector from Magnetic North</u>	<u>Zenith Angle</u>
330° to 30°	90°
30° to 150°	80°
150° to 210°	90°
210° to 330°	80°

A Shop Van will be located within 100-ft. of the Optical Support Control Van. Each van will require 17 kw of 120/208 volt, 3 phase, 60 cycle, electrical power.

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F & S NO.	TITLE					
01084	SOSR Rocket Assembly and Checkout Buildings - Subtask A941					
USER	STRUCTURE/FACILITY NO.		SCIENTIFIC STATION NO.			BOD
	888		None			FOD GO+150
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8	PRE-GO					
MILCON	Prior Cost	25.9	45.0	244.5	315.4	
CRO 7-64	POST-GO					
CRO 7-65	Est. 3/65					3.0
	SUBTOTAL	25.9	45.0	244.5	315.4	3.0
AEC	PRE-GO					
	FY 69	25.0		* 70.0	95.0	
	FY 70			105.0	105.0	
	SUBTOTAL	25.0		175.0	200.0	
	TOTAL	50.9	45.0	419.5	515.4	3.0

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-884-C1 91-888-E1 thru E3
 91-888-A1 thru A5 91-888-W1 thru W3
 91-888-S1 thru S5 91-030-W22
 91-888-M1 thru M6

PROCUREMENT Completed.

CONSTRUCTION This facility is a 60 x 100-ft. structural steel building with corrugated asbestos cement siding, a built-up roof and a reinforced concrete floor designed to support 100 psi. The interior walls of the building are insulated and covered with gypsum board. The main portion of the building is the assembly and checkout area which consists of an adjoining high bay area and a low bay area. (Completed in 1967.)

The high bay area is 40 x 40 x 45-ft. high. A caged ladder extending from ground level to the roof on the exterior of the building and a catwalk on the roof provide access to 5-ton capacity moment of inertia suspension points. A monorail installed the full width of the high bay area is equipped with a 5-ton hoist having a 40-ft. maximum hook height. A 16-ft. wide x 12-ft. high biparting sliding door provides access to the high bay area from the outside. An 18 x 18-ft. concrete ramp is provided on the exterior side of this door.

*Procurement and Construction Funds

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The low bay area is 40 x 16-ft. high. A monorail is installed the full length of this area and is equipped with two 5-ton hoists with maximum hook height of 12-ft. The interior end of this area is completely open to the high bay area. At the opposite end is a 16-ft. wide by 12-ft. high biparting sliding door. An 18 x 18-ft. concrete ramp is provided on the exterior side of this door. Three 8-ft. long workbenches have been fabricated and installed in this area.

A 14 x 40 x 14-ft. high RF shielded enclosure is located in the low bay area. The RF shielded enclosure (screen room) provides shielding protection in accordance with H&N Specification No. H&N-PC-40 and as measured within the limits of the available RFI Test Equipment. A 12-ft. wide by 10-ft. high biparting door located at one end and a personnel door with panic hardware located on the side provide access to the screen room. Both doors are provided with exterior operated "No Entry" warning lights.

The remaining portion of the building, 18 x 100 x 12-ft. high, is partitioned to provide space for latrine facilities, general assembly area, electrical assembly area, general purpose area, storage room, and mechanical and electrical room. All partition walls are insulated; however, the exterior walls and roof of the mechanical and electrical room are not insulated. The mechanical and electrical room houses the electrical distribution equipment, the air conditioning equipment and an air compressor. Double exterior doors provide the only access to this room. All other rooms in this area have 8-ft. suspended ceilings and have access doors opening directly into the assembly and checkout area. With the exception of the mechanical and electrical room, the entire building is fitted with explosion proof fixtures.

The building is air conditioned to 75° F (+5°) and humidity controlled to 55 percent. Compressed air at 100 psi is provided in the screen room and the assembly and checkout area. Interior lighting provides 50-foot candles in all areas except the high bay area which is 30-foot candles at ground level. Exterior lighting is provided at all exterior doors.

Coral berms, 12-ft. high, have been constructed on three sides of the building with the unprotected side facing the runway. See F&S No. 02066.

FY 69

ENGINEERING In progress.

Drawings:	91-888-C1	91-888-M7
	91-888-A6 and A7	91-888-E4 and E5

PROCUREMENT In progress.

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CONSTRUCTION An additional 5-ton explosion proof hoist, with a 40-ft. hook height, will be installed on the existing monorail in the high bay area. This hoist along with the existing hoist will be used together with an appropriate spreader bar to give a 10-ton lifting capability. The existing 16-ft. wide x 12-ft. high door in the high bay will be enlarged to 16-ft. wide x 35-ft. high. Alcove 103 will be closed off from the assembly area (Room 101) by means of a partition. Room 105 will be converted into a guard station with a door provided between Alcove 103 and Room 105. An alarm system will be provided which will be activated at preset levels to change the ventilation system to "once through operation," sound evacuation alarms and will open the high bay material access door. A security fence will be installed completely enclosing the building and the surrounding protective berms. A guard shack will be constructed inside the fence near the vehicle gate. Area security lighting will be installed and emergency back up power will be provided. All modifications will be nonconflicting to the presently planned AMICOM use of the building. The FOD for these modifications is September 1970.

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F & S NO. 01086	TITLE Meteorological Support Site (Wind Blast Measurement) - Subtask A108					
USER TC	STRUCTURE/FACILITY NO. None		SCIENTIFIC STATION NO. 91-3-112			BOD
	FOD GO+145					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
DASA/ RDT&E EAO 1106- 4101-61	PRE-GO Prior Cost	1.1			1.1	
	POST-GO Estimate 8/65		10.9	15.6	26.5	
	TOTAL	1.1	10.9	15.6	27.6	

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-3-112-CE1 91-080-SE1 91-097-SS1

POST-GO

PROCUREMENT To be accomplished.

CONSTRUCTION Space has been reserved west of the Sandia AME Field for three 8 x 26-ft. atmospheric science lab, White Sands Missile Range (WSMR) furnished trailers. As an integral part, one trailer will have an M-33 radar mounted on top, one will have an AN/GMD-1 telemetry tracking mounted on top and the third will have an AN/GMD-2 telemetry orientation point. The trailers will be used to track and record data from meteorological rockets.

The three trailers, oriented in a true north-south direction, must remain level during operations; therefore, two 8 x 45-ft. concrete pads will be constructed to support jacks required for leveling the trailers. Second order survey accuracy will be required to level and align the trailers.

One 18 pair #19 gauge cable will be required from the trailer site to Building 881. This cable is included in the DASA Signal Cable Plan, (F&S No. 04019).

Power to each trailer will be approximately 20 kw of 120/208 volt, 60 cycle, 3 phase. A 60 amp fused disconnect switch will be provided for power to each trailer. A 400 amp disconnect switch will be installed to provide power for a WSMR furnished 30 kw, 208/416 volt, 60-400 cycle, 3 phase converter. A 6-ft. square concrete pad will be constructed to support the converter. Power cables from the disconnect switches to the trailers and the converter will be furnished by WSMR.

F & S NO. 01087	TITLE Explosive Storage Bunkers - Subtasks A109, A626 and C502					
USER TC	STRUCTURE/FACILITY NO. 977, 978 and 979			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY JTF MILCON CRO 7-64 CRO 7-65	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost	3.7		17.5	21.2	
	TOTAL	3.7		17.5	21.2	

COMPLETED

DESCRIPTION These three standard military magazines (completed in 1966) are located in the berm east of the Rocket Storage Buildings 974 and 976. The bunkers are 16 x 18-ft. high at center and protected with a coral cover. An 11-ft. high berm, situated 25-ft. east of the front of the buildings, provides additional protection (see F&S No. 02066). All electrical installations within the bunkers are explosion proof. Gravity roof ventilation is provided.

These buildings are assigned as follows:

- Building 977 to Subtasks A109 and C502 for smoke chemicals.
- Building 978 to Subtask A626 for powder storage.
- Building 979 to Subtask A626 for work area.

DRAWINGS: 91-970-C1 91-977-S1
 91-970-E1 91-977-E1



F & S NO. 01088	TITLE Biomedical Effects Facility - Subtask A401					
USER TC	STRUCTURE/FACILITY NO. 758		SCIENTIFIC STATION NO. 91-3-15			BOD
	FOD GO+150					
FUNDING AGENCY DASA/ RDT&E EAO 1106- 4101-61	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	2.2	8.0		10.2	
	POST-GO					
Estimate 6/65		1.9	14.6	16.5		
TOTAL		2.2	9.9	14.6	26.7	

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-3-15-A1 91-3-15-C1 91-3-15-E1

PROCUREMENT Procurement of long lead items has been accomplished.

POST-GO

PROCUREMENT Remaining items will be procured.

CONSTRUCTION The facility will consist of two TC furnished trailers, an exposure pad, an animal shelter building (Building 758) and a leach pit. The 8 x 30-ft. trailers will be separated by a maximum of 20 feet. A 20 x 20-ft. concrete pad designed for a 500 psf loading is required. The pad will have a removable tent-type cover with removable supports, and will be located between the trailers and the burst; not more than 20 feet from the trailers. A clear line-of-sight is required from the pad to the burst. The 350 square-foot animal shelter building, housing TC furnished animal cages, will be located downwind from the trailers.

Fresh and salt water and 50 kw power at 120/208 volts will be provided.



F & S NO. 01089	TITLE Trailer Pad - Subtask A630					
USER TC	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD GO+150					
FUNDING AGENCY PMR	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	POST-GO					
	Estimate 8/68	.9	2.1	7.0	10.0	
TOTAL		.9	2.1	7.0	10.0	

POST-GO

ENGINEERING To be accomplished.

PROCUREMENT To be accomplished.

CONSTRUCTION Space on Akau Island will be provided for parking two PMR furnished 8 x 35-ft. trailers. The trailers will be placed on concrete pads centered around coordinates N 209, 950; E 204, 320. The long axis of the trailers will be oriented in a north-south direction with the power outlets on the east side of the trailers. Each trailer will require approximately .10 kw of 120/208 volt, 60 cycle, 3 phase power. An isolation transformer located within the trailer will provide instrumentation power. PMR will furnish the power cable required between the trailers and the power source, Substation No. 5-3.

F & S NO. 01098	TITLE Radar Screen - Subtask A942					
USER JTF-8	STRUCTURE/FACILITY NO. None		SCIENTIFIC STATION NO. None			BOD
	FODGO+90					
FUNDING AGENCY AMICOM RDT&E MIPR 00005	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	14.6	22.0	80.0	116.6	
	POST-GO					
Estimate 8/67		4.6	83.4	88.0		
TOTAL						
		14.6	26.6	163.4	204.6	

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-7-17-S1 thru S4

PROCUREMENT Completed including most Post-GO construction material.

CONSTRUCTION Two rows of 10 BP 42 piling have been installed perpendicular to the south shoreline and approximately midway between the east and west peninsulas. The two rows are parallel and 21-ft. apart with the piles in each row driven vertically and spaced 45-ft. apart, forming 21-ft. wide bents and twenty (20) 45-ft. long bays. Each row is 900-ft. long and extends out into the ocean approximately 800-ft. Each pile has been embedded a minimum of 10-ft. below an "assumed firm material" horizon which varies in depth from 5 to 8-ft. below mean lower low water (MLLW) and each pile rises to a height of approximately 23 1/4-ft. above MLLW. One anchor block with a short pile has been installed at each end of the two rows. The Post-GO longitudinal supports for each row of piles will be tied off to these anchors. Before erection, each pile was sandblasted, painted with metal primer, and then two coats of coal tar epoxy were applied.

POST-GO

PROCUREMENT All material for the main screen assembly has been procured Pre-GO. Material to be procured Post-GO is that required for construction of the "baffle" screen.

CONSTRUCTION A steel Pratt type truss 12 1/2-ft. deep will be erected between the piles at each 21-ft. wide bent for supporting the screen supports. The piles in each row will be longitudinally braced using 1-in. diameter

steel tie rods with a turnbuckle at one end. The tie rods will be located approximately 11-ft. above the waterline and attached to the inside flange.

The screen will be supported by two steel cables attached to the center of the trusses, between each bent. The cables will extend the full length of each bay.

The screen system which will be aluminum, #3 mesh, wire size 0.625-in. with clear openings of 0.27 x 0.27-in. will be attached, by wire stitching, to the two steel cables. The full height of the screen will be approximately 21 1/2-ft.; however, the lower 1 1/2-ft. of the screen will be below MLLW. The lower half of the screen will be fabricated and hinged to allow the screen to move with the ocean currents. All screen joints and openings will be overlapped with screen to eliminate any penetration in the screen system. In the last four shoreward bays the bottom of the screen will be field adjusted to conform with the sloping contour of the shallow lagoon bottom and shore.

Subsequent to the issuance of the original criteria, it was concluded that there was a possibility of some radar beam leakage below the screen in the last four shoreward bays. To provide adequate shielding a "baffle" screen will be erected parallel to the main screen in the last four bays. This "baffle" screen will be 21-in. high and will be suspended from 1/4-in. steel cable attached to 3-in. diameter pipe supports spaced 9-ft. on center and embedded a minimum of 4-ft. The screen material will be the same as the main screen and similarly attached to the support cables. The "baffle" screen will overlap the main screen a minimum of 12-in. in the vertical direction.

F & S NO. 01104	TITLE Rocket Machine and Paint Shop (Building 964) and Air Compressor Shelter (Building 965) - Subtask A905					
USER TC	STRUCTURE/FACILITY NO. 964 and 965			SCIENTIFIC STATION NO. None		BOD
	FODGO-150					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8 MILCON CRO7-64	PRE-GO Prior Cost	16.4	31.4	78.0	125.8	
	TOTAL	16.4	31.4	78.0	125.8	

COMPLETED

DESCRIPTION The rocket machine and paint shop (completed in 1966) is a 40 x 80 x 17-ft. 10-in. high concrete block structure with steel framed built up roof, and concrete floor. The building consists of a 40 x 44-ft. small rocket assembly area, a 20 x 36-ft. paint shop, and a 20 x 36-ft. machine shop.

A monorail with an explosion proof 2 ton hoist extends the full length of the assembly area. Double sliding doors, 16 x 12 1/2-ft. high, are provided in the south wall of the assembly area for monorail operations. The paint shop includes a 14 x 28 x 12-ft. high paint booth and an automatic sprinkler system. The machine shop will be equipped with the following TC furnished equipment to be installed Post-GO:

- | | | |
|----------------------------------|---------------------|---------------------|
| 1 Lath | 3 Metal bandsaws | 1 Sheet metal brake |
| 2 Bench vises | 1 Sheet-metal shear | 1 Bench grinder |
| 1 Belt sander
(Bench mounted) | 2 Drill presses | 1 Milling machine |

The air compressor shelter (completed in 1966) is located east of the rocket machine and paint shop. The shelter is a 10 x 24 x 7-ft. high wood frame structure with corrugated aluminum roof and siding. A 6 x 18-ft. concrete pad foundation is provided for the compressor. The air compressor delivers 250 cfm of air at 90-100 psi to Buildings 876, 878, 960, 962 and 964.

Protective berms are provided on three sides of the buildings, with the unprotected side facing the runway (see F&S No. 02066).

DRAWINGS:

91-960-A2	91-960-E1	91-964-M1
91-960-C1	91-960-W1	91-964-E1
91-960-S2	91-964-A1	JS 91-964-A100
91-960-M1 and M2	91-964-S1	JS SK-960-S100

F & S NO. 01105	TITLE Assembly Buildings - Subtask A905					
USER TC	STRUCTURE/FACILITY NO. 878 and 960			SCIENTIFIC STATION NO. None		BOD
	FODGO+135					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8 MILCON CRO 7-64	PRE-GO Prior Cost	7.7		177.2	184.9	
	POST-GO Estimate 3/65					0.3
	TOTAL	7.7		177.2	184.9	0.3

COMPLETED

DESCRIPTION These two buildings (completed in 1966) are 40 x 50 x 20 1/2-ft. high concrete block structures with steel framed built up roofs, and concrete floors. Double sliding doors, 16 x 19-ft. high, are provided in the south wall for monorail operations. The monorail has a 6-ton explosion proof hoist with a minimum hook height of 15-ft. and extends to approximately 20-ft. outside of each building.

All interior electrical installations are explosion proof. The main distribution panel is externally mounted in a weathertight enclosure. Ground clips are provided on 15-ft. centers. A central compressed air system located near Building 964 will provide 230 cfm of air at 90-100 psi.

Protective berms are provided on three sides of each building with the unprotected side facing the runway. (See F&S No. 02066.)

DRAWINGS: 91-960-A1 and A2 91-960-M1 and M2
 91-960-C1 91-960-E1 and E2
 91-960-S1 and S2 91-960-W1

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F & S NO. 01106	TITLE Screen Rooms - Subtask A905					
USER TC	STRUCTURE/FACILITY NO. 876 and 962			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF MILCON CRO 9-64	PRE-GO Prior Cost	16.4		294.0	310.4	
	TOTAL	16.4		294.0	310.4	

COMPLETED

DESCRIPTION These two buildings (completed in 1967) are 40 x 90-ft. concrete block structures with steel framed built-up roofs, and concrete floors. Each building consists of a 40 x 58 x 20 1/2-ft. high assembly area and a 32 x 40 x 16 1/2-ft. high area which contains a 20 x 30 x 14-ft. high RF shielded enclosure (screen room), a mechanical equipment room, a tool storage room, and a latrine. The screen room, assembly area, and equipment room have floors coated with spark-proof paint.

Double sliding doors, 16-ft. 8 in. x 19-ft. 2-in. high, are provided in the south wall of the assembly area for monorail operations. The monorail has a 6-ton hoist with a minimum hook height of 15-ft. and extends the width of the assembly area plus approximately 19-ft. outside of the building. The screen room provides shielding protection in accordance with H&N-PC-38 and is the only portion of the building that is air conditioned and dehumidified. The remainder of the building is ventilated by roof mounted, gravity type explosion proof units. Wall mounted exhaust fans are also provided.

Each building is provided with 480 volt, 60 cycle, 3 phase power for operating the air conditioning and dehumidifying unit, the exhaust fans, and the monorail hoists. A 45 kva, 3 phase transformer provides 120/208 volt, 3 phase power for lighting and other low-voltage requirements. All interior electrical installations in the assembly area, screen room, and tool storage room are explosion proof. Ground clips are provided at all exterior doors. A central compressed air system located in Building 965 will provide 250 cfm of air at 90-100 psi. Protective berms are provided on three sides of each building with the unprotected side facing the runway (see F&S No. 02066).

DRAWINGS: 91-960-A2 91-960-E1 91-962-M1
 91-960-C1 91-960-W1 91-962-E1
 91-960-S2 91-962-A1 91-030-W6, W7 and W23
 91-960-M1 and M2 91-962-S1 91-097-SS1 and SS2

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F & S NO. 01109	TITLE Helical Antenna					
USER SANDIA	STRUCTURE/FACILITY NO. None		SCIENTIFIC STATION NO. 91-4-51			BOD
	FOD GO+120					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO					
	Prior Cost	0.4			0.4	
	POST-GO					
	Estimate 10/68			4.5	4.5	
TOTAL		0.4		4.5	4.9	

PRIOR YEARS

ENGINEERING Completed.

Drawing: 91-4-51-W1

POST-GO

PROCUREMENT To be accomplished.

CONSTRUCTION A 4-turn helical antenna will be mounted on the west wall, near the southwest corner of Building 20 (JOC) at the roof level. The antenna will be AEC furnished and will be a TACO (Technical Appliance Company, Sherburne, New York) 4-turn helical, type H-042 or equal. It will have line-of-sight to SANDIA'S north and south shore launchers with the element sighted S 65° W.

RG-8 A/U cable will be run a maximum of 200 feet within the building from the antenna to the center of the south wall of the first floor SANDIA lab area. The cable will be terminated in a type "N" connector.

F & S NO. 01110	TITLE Balloon Release Station, Station Relocation					
USER SANDIA	STRUCTURE/FACILITY NO. 744			SCIENTIFIC STATION NO. 91-4-53		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO					
	Prior Cost	0.5		9.5	10.0	
SANDIA	PRE-GO					
	Prior Cost			9.3	9.3	
	TOTAL	0.5		18.8	19.3	

COMPLETED

DESCRIPTION The Balloon Release Station is located just west of the SANDIA AME Field. A 50-ft. nonmetallic collapsible pole is provided and allows the pole to be lowered to ground level during nonuse periods. The pole is located downwind and within 30-ft. of the shelter, and is equipped with a "flag pole" type halyard system for raising and releasing inflated weather balloons. The manifold system and gas bottles for balloon inflation are installed in the shelter. Five kw of electrical power is provided by a Sandia furnished generator. A clear line-of-sight is provided from the wind radar trailers to the top of the pole. (Completed in 1966.)

DRAWINGS: 91-071-S2 and S3 JS 91-3200-S104

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F & S NO. 01111	TITLE Radiation Source Facility					
USER SANDIA	STRUCTURE/FACILITY NO. None		SCIENTIFIC STATION NO. None			BOD GO+90
	FOD GO+120					
FUNDING AGENCY AEC	(0000)	ENGR	PROC	CONST	TOTAL	FURN
	POST-GO Estimate 10/68			2.5	2.5	
	TOTAL			2.5	2.5	

POST-GO

ENGINEERING None required.

PROCUREMENT None required.

CONSTRUCTION A Sandia furnished 8 x 40-ft. trailer van will be equipped with three main and one auxiliary calibration devices to provide pre-flight input for SANDIA payloads. The trailer will be located within close proximity of the HRT/EM Measurements Facility (Bunker 640). The trailer will be positioned so that a "safety zone" can be provided around the trailer. Total connected utility and electronic power will be 20 kva.

~~CONFIDENTIAL~~

F & S NO. 01113	TITLE Dynamic Balancing Machine Facility					
USER SANDIA	STRUCTURE/FACILITY NO. 15		SCIENTIFIC STATION NO. None			BOD
	FOD GO+120					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	2.9	43.2	*23.8	69.9	
	TOTAL	2.9	43.2	*23.8	69.9	

COMPLETED

DESCRIPTION An air conditioned, humidity controlled steel framed building with aluminum roof and siding approximately 32 x 24 x 23-ft. high (completed in 1966) provides a shelter for the Sandia furnished Treble Dynamic Balancing Machine. The building is designed to support a 2-ton capacity monorail and chain fall which has a hook height of 14-ft above the balancing machine. A concrete isolation pad 196 x 200 x 36-inches deep was constructed as a base for the machine.

A control console, enclosed by a wooden frame with plywood partitions and double paned safety glass, and a workbench equipped with a 110 volt, single phase 60 cycle power receptacle is situated on the wooden deck. A Sandia furnished 40 hp motor generator set provides a maximum of 30 kva, 440 volt, 3 phase, 60 cycle electrical power to the control console.

A warning red light is provided over the access doors. A flashing red light indicates "TEST IN PROGRESS - DO NOT ENTER" when the balancing machine is in operation.

DRAWINGS: 91-15-C1 91-15-A1 and A2 91-15-S1 thru S4
 91-15-E1 and E2 91-058-C1 91-15-M1

* Excludes cost transferred to Joint Trailer Park (F&S 02041) for installation of the primary power system.

F & S NO. 01114	TITLE Deep Ocean Wave Sensor, Type I (Tamarin)					
USER DRL	STRUCTURE/FACILITY NO. None		SCIENTIFIC STATION NO. None			BOD *
	FOD *					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO Prior Cost Included in F&S No. 05027 POST-GO Estimate TO BE DETERMINED					

PRIOR YEARS

ENGINEERING None required.

PROCUREMENT An AEC furnished 8 x 8 x 10-ft. transportainer stocked with Type I equipment and spare parts is located at Defense Research Laboratory (DRL), Santa Barbara, California.

POST-GO

PROCUREMENT To be accomplished.

CONSTRUCTION The AEC furnished Type I wave sensor equipped installations are to be located over a wide geographic area of the Pacific Ocean. The primary objective is to measure and record the amplitude and time of arrival of long period waves over a predetermined period and to coordinate this data with that collected at Type II and Type III Tamarin sites. The equipment will be emplaced, after initial surveys by DRL personnel, at three deep ocean sites between JA, Palmyra, Canton and Wake. The Type I recording instruments will be put afloat in a small surface follower buoy, which replaces the skiff formerly used at Type I sites.

The three Type I systems will be replaced with a new system as funds become available. The present system includes a taut wire instrument buoy system that is moored in deep ocean. The submerged instrumented buoy is connected to electrical conductors within a polypropylene line to a surface follower buoy that contains the recorders, batteries, and necessary timing devices. Each installation contains a differential sensor, data logging system, and an armored cable connecting the implanted wave sensing transducer with the completely self-contained data logging system. All devices will be installed by DRL personnel from a U. S. Navy ATF vessel that is to be outfitted and partially loaded in the Pearl Harbor Naval Shipyard. The remainder of the equipment will be loaded at Johnston Atoll.

DRL will provide 6 men to be stationed aboard the ATF who will install equipment during the initial installation and a 4 man operating team to service equipment, including the Early Warning System, at Type I sites. The first week will be used by the DRL installation team, ships officers, and deck crew for a training period in dockside trials and crew training, including coordination of effort and understanding of handling problems with the specialized equipment. Training and ship modification is scheduled from GO+28 to GO+56. The Navy vessel (ATF) will have provisions for HF voice communications with the DRL Damon Tract office. The ATF will remain in the vicinity of the Type I sites to act as tender, service ship, and recovery vessel upon completion of the exercise.

*BOD and FOD Schedule for Deep Ocean Wave Sensor Type I, Scientific Sites

<u>Site No.</u>	<u>BOD</u>	<u>FOD</u>
1	GO+57	GO+63
2	GO+64	GO+66
3	GO+69	GO+71

SUMMARY OF PERSONNEL AND OTHER REQUIREMENTS

<u>Type I Systems Requirements</u>	<u>Time Scheduling</u>	<u>Source</u>
a. Installation team (6 men)	GO+29 to GO+75	DRL
b. Operating team (4 men)	GO+75 to completion	DRL
c. Ships crew, as required	GO+28 to completion	JTF-8
d. PHNSY** personnel, as required	GO+28 to GO+56	JTF-8
e. Equipment handling crew, Damon Tract	GO+30, GO+34, GO+64	H&N
f. Equipment handling crew, and 1000 sq. ft. open storage area on or adjacent to the wharf, JA.	GO+46 to GO+69	H&N
g. PDR*** and Loran C installers at PHNSY	GO+29 to GO+42	JTF-8

For a summary of Tamarin installations, see F&S No. 05027.

**Pearl Harbor Naval Ship Yard

***Precision Depth Recorder (Fathometer)

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JOHNSTON ATOLL

SCIENTIFIC

F & S NO. 01115	TITLE Atoll Wave Sensor, Type II (Tamarin)					
USER DRL	STRUCTURE/FACILITY NO. None		SCIENTIFIC STATION NO. 91-13-1 and 91-13-2			BOD *
						FOD *
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	POST-GO Estimate	TO BE DETERMINED				

PRIOR YEARS

ENGINEERING None required.

PROCUREMENT Two (2) AEC furnished 7 x 17-ft. Model 16 Northwest camper trailers, for use at the Johnston Atoll Tamarin sites (see F&S No. 05007), are on standby at Damon Tract, Oahu, Hawaii.

POST-GO

CONSTRUCTION The AEC furnished Type II wave sensor equipped installations are to be located on the perimeter of Johnston Atoll. The primary objective of these scientific sites is to measure and record for Tsunami studies the amplitude and time of arrival of long period waves over a predetermined period. The underwater equipment will be emplaced by Defense Research Laboratory (DRL) personnel at two undetermined offshore locations on JA. The auxiliary equipment will also be installed by DRL personnel in the two AEC camper trailers.

Each of the two installations will contain a differential sensor, data logging system, and an armored cable connecting the implanted wave sensing transducer with the completely self-contained data logging system. The transducer and sensor will be installed by DRL scuba divers in approximately 30 to 50-ft. of water, located in a position to eliminate as much shore-induced phenomena as possible.

DRL personnel will assemble at Damon Tract to prepare equipment prior to deployment. A DRL Type II installation team of 6 persons, including scuba divers and technical personnel, will emplace and roll up equipment; 1 man will operate and maintain the equipment for the duration of the program.

~~CONFIDENTIAL~~

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JOHNSTON ATOLL
01115

SCIENTIFIC
Page 2

*BOD AND FOD SCHEDULE FOR TYPE II JA SITES

<u>Site No.</u>	<u>BOD</u>	<u>FOD</u>
J1	GO+40	GO+47
J2	GO+48	GO+54

For a summation of Tamarin installations see F&S No. 05027.

~~CONFIDENTIAL~~

F & S NO. 01116	TITLE Radiographic Inspection Building					
USER LRL	STRUCTURE/FACILITY NO. 975			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost	6.8		37.4	44.2	
	TOTAL	6.8		37.4	44.2	

COMPLETED

DESCRIPTION Building 975 (completed in 1965) is a 16 x 16-ft. concrete block structure with a built up roof and a 10-ft. ceiling height. The floor is a concrete slab capable of supporting a 1-ton forklift and covered with conductive linoleum which is connected to the existing ground system. The building doors consist of an 8 x 8-ft. double door in front, offset 1-ft. to the right, and two 3 x 7-ft. personnel doors at rear in the side walls. The latter two doors are equipped with panic hardware.

All lighting, electrical convenience outlets and the telephone outside the building are explosion proof. Two 220-volt, 20 amp convenience outlets and sixteen 110-volt, 20 amp convenience outlets are available. There are four exterior lights, one over each personnel door and one on each side of the 8-ft. main door, warning lights over each entrance, an intermittent chime on the south wall and a rotating warning light on the roof. The building operations are electrically grounded through brass strips on all four walls.

The building is air conditioned to 60°F (+2°) and 50 percent relative humidity by means of an exterior mounted air conditioner. The 4 x 6-ft. darkroom inside of the building is ventilated by light-tight louvers and has a double, light-tight door arrangement. A cover below the exhaust fan in the darkroom prevents light penetration. One 6-ft. work bench was provided within the building.

A dry well for a daily disposal of 30 gallons of radiographic film processing solutions and a 15 x 6 x 7 1/2-ft. wooden shelter for the storage of radiographic inspection cooling system and associated equipment are included. The shelter located at the exterior north side of Building 975 has a concrete floor slab and full 6-ft. wide doors at the east and west sides.

A concrete walkway connects the east and west entrance door pads. Permanent pipe stanchions supporting substantial barrier chains that can be hooked and locked in place at the west, south and north entrances to Building 975 and Building 982 berm enclosed areas are provided. Protective earth berms, 9-ft. high, are located at a minimum distance of 16-ft. from the building.

JOHNSTON ATOLL
01116

SCIENTIFIC
Page 2

<u>DRAWINGS:</u>	91-058-C1	91-058-E1	JS 91-058-E1
	91-975-A1 and A2	91-970-C1	JS 91-975-A100
	91-975-M1		91-975-E1 and E2

JOHNSTON ATOLL

SCIENTIFIC

F & S NO. 01117	TITLE Loop Antennas - Subtask A620					
USER TC	STRUCTURE/FACILITY NO. None		SCIENTIFIC STATION NO. 91-3-126 and 127			BOD
	FOD GO+135					
FUNDING AGENCY JTF-8/ RDT&E	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	POST-GO					
	Estimate 4/68	1.5	5.2	9.7	16.4	
	TOTAL	1.5	5.2	9.7	16.4	

POST-GO

ENGINEERING To be accomplished.

PROCUREMENT To be accomplished.

CONSTRUCTION This facility will consist of two 10-ft. diameter loop antennas placed approximately 5,300-ft. apart and two project electronic equipment racks located in the monitor half of the Launch Control and Monitor Bunker. The antennas, racks and cables will be TC furnished. At present, it is planned to locate the loop antennas at the following coordinates: N 197,250; E 198, 300 and N 197,350; E 193, 000. The exact location of the antennas is not critical except that it is important to place each antenna at least 50-ft. away from any large metal structure.

The antenna support for each antenna will consist of a 4-in. diameter pipe approximately 6-ft. long and threaded on one end. The pipe will be buried in the ground in a vertical position with a maximum of 2-ft. of the threaded end of the pipe exposed above grade.

One run of RG-22U cable, or electrical equivalent, will be required from each of the two antennas to the project electronic equipment racks in Building 881. Installation of this cable will be accomplished concurrently with the other TC Signal Cable (F&S No. 04019) and the cable will be installed in the existing cable troughs. Cable lengths are not critical but must be measured to within \pm 1-ft.

A maximum of 5 kw, 110 volt, 60 cycle power will be required for the two electronic equipment racks in Building 881.

JOHNSTON ATOLL

SCIENTIFIC

F & S NO. 01118	TITLE Device Barge					
USER SANDIA	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost	0.5		11.1	11.6	
	TOTAL	0.5		11.1	11.6	

COMPLETED

DESCRIPTION A 21 x 30-ft. barge was modified in 1965 to provide a rehearsal-type device barge. The barge was equipped with a cabin and wooden structural supports which held a cannister, seven antennas and a secured beacon approximately 20-ft. above mean sea level. The antenna array and equipment controls were located in the cabin. Power was provided from two 10 kw, 120/208 volt diesel generators. A 15-gallon tank was provided from the storage of fresh-water.

DRAWINGS: 91-005-A1 91-005-S1 thru S3

F & S NO. 01120	TITLE SOSR Launch Pad & Catchment - Subtask A941						
USER TC	STRUCTURE/FACILITY NO. 721			SCIENTIFIC STATION NO. 3-1-41		BOD FODGO+140	
	FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8/ MILCON CRO 7-64	PRE-GO						
	Prior Cost	0.6				0.6	
	POST-GO						
	Est. 3/68	3.2	11.7	20.1	35.0		
	TOTAL	3.8	11.7	20.1	35.6		

IN ORDER TO MEET THE REQUIRED FULL OCCUPANCY DATE AT GO+140, IT IS RECOMMENDED THAT THE ENGINEERING DESIGN AND THE PROCUREMENT OF OVERALL SHIELDED AND INDIVIDUALLY SHIELDED CABLES BE ACCOMPLISHED PRE-GO. ESTIMATED ENGINEERING AND PRE-GO PROCUREMENT COSTS ARE \$7,200.

POST-GO


ENGINEERING To be accomplished; however, all design is recommended to be accomplished Pre-GO.

PROCUREMENT To be accomplished; however, the overall shielded and individually shielded cables are recommended to be procured Pre-GO.

CONSTRUCTION The 587 mm SOSR Launch Pad will be a reinforced concrete structure consisting of a 2-ft. thick rectangular foundation, three individual vertical piers 15-ft. high and a 2-ft. thick upper cap which connects the three piers at the top. Located on the foundation and behind the piers will be a 30-inch high Rear Pivot Pedestal, and behind the pedestal will be a 6-ft. deep Spin Motor Pit. An electrical alcove will be located on the east side of the east pier. The launch pad will be oriented on a true azimuth of S 11° W. Five survey markers will be required 50-ft. to the rear of the Rear Pivot Pedestal and on a line normal to the azimuth of the launch pad.

The launch control console for firing will be located in the Control Bunker and Converter Shelter Building No. 737. All cabling from the electrical alcove to the launch control console will be installed in conduit.

A grounding system will be installed completely around the launch pad with grounding cable extending to critical points on the launch pad. Power to the electrical alcove will consist of 110 volt, 60 cycle, single phase and is required for: area lighting, 110 volt power outlets, and remote power relays. The area lighting will consist of 35-foot high floodlights located on each side of the launch pad.


JOHNSTON ATOLL
01120

SCIENTIFIC
Page 2

JTF-8 will furnish a 60 kw engine generator to provide 440/220 volt, 60 cycle, 3 phase power. A voltage regulator or rheostat is required on the engine generator to reduce the voltage to 410 volts. This power is required for the spin drive mechanism and for the firing system.

Signal cabling design, procurement and installation costs are included in the above estimate.

~~CONFIDENTIAL~~

JOHNSTON ATOLL

SCIENTIFIC

F & S NO. 01121	TITLE Laboratory Space					
USER Univ. of Wash.	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	TO BE DETERMINED					

PROPOSED

ENGINEERING To be determined.

PROCUREMENT To be determined.

CONSTRUCTION This facility will require a minimum of 200 square feet of laboratory space, 16 cubic feet of reefer space at 0° F, and 12 cubic feet at 35° F. Power requirements will be 5 kw at 110 volts, 60 cycle. Dry storage of 1,000 cubic feet will also be required. Space requirements are not finalized, however, this facility will utilize existing space if available.

1-99
~~CONFIDENTIAL~~



JOHNSTON ATOLL

SCIENTIFIC

F & S NO. 01122	TITLE Anemometer Tower					
USER SANDIA	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO					
	Prior Cost	0.5		2.1	2.6	
	TOTAL	0.5		2.1	2.6	

COMPLETED

DESCRIPTION This tower is a guyed metal pole, 54-ft. high with an instrument mount for a Sandia furnished instrument which is used for tracking and missile checkout. (Completed in 1966)

DRAWINGS: 91-071-S4 91-079-W108



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JOHNSTON ATOLL

SCIENTIFIC

F & S NO. 01123	TITLE Operational TV					
USER EG&G	STRUCTURE/FACILITY NO. None		SCIENTIFIC STATION NO. None			BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF	PRE-GO					
RDT&E	Prior Cost	0.1		14.1	14.2	
CRO 8-65	POST-GO		TO BE DETERMINED			

PRIOR YEARS

DESCRIPTION A television system of cameras, monitor screens, display screens, camera control consoles along with plotting board systems, status indicators and local time displays is provided as an information source to the Command Post, OCC No. 1, NAVOPCENTER and the Frequency Interference Control Center in the JOC. Television cameras are currently located at: (1) the southwest corner of the roof of the JOC, (2) Display No. 1 and Display No. 2 in OCC No. 1 and, (3) Weather Control. Input from the PMR cameras located on North Island may be viewed in this system. Direction and control of the displays in the Command Post is exercised from the TV console located in Room 410 of the JOC, adjacent to the Command Post. A viewing window between these two spaces is provided for the TV console operator to monitor the Command Post displays. A master monitor and video tape recorder along with the TV terminal and control equipment are located in Room 309, of the JOC. The island contractor provided support assistance to EG&G for installation of equipment.

DRAWING: JS SK-20-S114

POST-GO

Additional cameras will be positioned at: (1) the northeast and southeast corners of the roof of the JOC, (2) Cameras No. 3 and No. 4 in the NAVOPCENTER, (3) atop Building 881 and, (4) atop Building 699. Further equipment expansion will be accomplished by providing Cameras Controls No. 3 and No. 4 and viewfinders No. 3 and No. 4 in the NAVOPCENTER. Consideration is being given to adding a subsystem of cameras, monitors and switching modules in the DASA Technical Operations Center.

~~CONFIDENTIAL~~

F & S NO. 01124	TITLE Cleansweep Motor Payload Preparation and Storage Building					
USER LRL	STRUCTURE/FACILITY NO. 709		SCIENTIFIC STATION NO. None			BOD GO+30
						FOD GO+60
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO					
	Prior Cost	20.0			20.0	
	Estimate 11/67	1.0		*232.2	233.2	
	TOTAL	21.0		232.2	253.2	

FACILITY IS IN HOLD STATUS PENDING DETERMINATION OF NEED BY LRL

ENGINEERING Preliminary design drawings have been reviewed by LRL. Comments received remain to be incorporated on drawings and resubmitted to LRL for approval. No action will be taken while facility is in hold status.

PROCUREMENT To be determined

CONSTRUCTION This building will be irregular in shape and consist of approximately 5130-sq. ft. of roofed area. The maximum dimensions of the building are 101-ft. and 86-ft. with an average ceiling height of 14-ft. The exterior walls and interior partitions will be constructed of 1-ft. thick reinforced concrete. The roof will be steel frame with wood joists covered with 1-in. sheathing and built-up roofing. A monorail system with a clear height of 12-ft. will extend throughout the building and to covered loading platforms on the east and west side of the building. Three dual speed electrified one ton hoists will be mounted on the monorail system. All doors in the building shall be equipped with panic hardware.

The entire facility will be air conditioned and dehumidified with all ducts entering the rooms through the roof.

Approximately 75 kva of 120/208 volt, 3 phase, 60 cycle power will be required. Grounding bars will be mounted on all interior walls and also at the two loading platforms for truck grounding. Fluorescent lights with retainer screens mounted throughout the building shall be dual-rated Class I and IIA through G types. The floor of the motor payload mating and igniter fin installation rooms will be covered with conductive linoleum. All other floors will have a smooth concrete finish. The building will be fitted with adequate lightning protection and explosion proof telephones.

DRAWINGS: 91-709-C1 91-709-S1 and S2 91-709-E1 thru E6
 91-709-A1 thru A5 91-709-M1 thru M4 91-709-W1

*Includes \$11,800 for construction of a berm on three sides of Building 709.



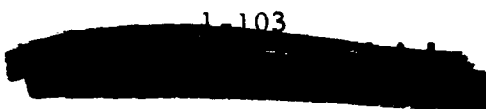
F & S NO. 01125	TITLE Sandia Electronic Laboratory					
USER SANDIA	STRUCTURE/FACILITY NO. 693			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost	4.2		25.3	29.5	
	TOTAL	4.2		25.3	29.5	

COMPLETED

DESCRIPTION Building 693 (completed in 1968) is a 20 x 40-ft. concrete block structure with a reinforced concrete floor and roof; ceiling height is 9-ft. 4-in. The interior of the building is separated into 3 areas by 6-ft. high partitions. The areas are a machine shop, electronics laboratory and parts storage area. Workbenches are provided on two sides of the electronics laboratory, and shelving is provided in the parts storage area. Sandia furnished machine shop equipment is to be installed in the shop area. Two sets of double metal doors, 3 x 6-ft. 8-in. provide access to the shop area and the storage area. This building, replaced Sandia's requirements for Building 315. The building is air conditioned and dehumidified using existing equipment obtained from Building 315.

The building is provided with 75 kva, 120/208 volt, 60 cycle, 3 phase, power. Overhead fluorescent lighting is provided in each area of the building. In addition to the duplex receptacles located in the shop and electronics laboratory, 240 volt, 15 amp, 3 phase circuit breakers have been installed in the shop area for connecting the machine shop equipment.

DRAWINGS: 91-693-C1 91-693-A1 and A2 91-693-S1
 91-693-M1 91-693-E1



JOHNSTON ATOLL

SCIENTIFIC

F & S NO. 01126	TITLE Low Level Wind System - Subtask A946					
USER TC	STRUCTURE/FACILITY NO. Tower Nos. 1, 2b, 3, 4 and 5		SCIENTIFIC STATION NO. 91-8-1 thru 91-8-5 incl.			BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
DASA/ RDT&E EAO 1106 4101-61 JTF-8/ RDT&E CRO 68-15	PRE-GO FY 69*	10.0		53.7	63.7	
	POST-GO Estimate		TO BE DETERMINED			
	TOTAL	10.0		53.7	63.7	

FY 1969

ENGINEERING Design of Tower Nos. 1, 3 and 4 is complete. Design of Tower Nos. 2b and 5 is in progress.

Drawings:	91-064-71	91-086-S4, S6, S7 and S8
	91-079-W98 and W99	91-086-E2
	91-086-C2	91-086-W1

PROCUREMENT In progress. Tower Nos. 2b and 3 (90-ft. High) and Tower No. 4 (85-ft. high) have been procured and will be fabricated from portions of a 200-ft. self-supporting tower and a 200-ft. guyed tower which were originally purchased for the Meteorological Tower (F&S No. 01119).

CONSTRUCTION The Low Level Wind System will provide the MIGHTY SKY program with continuous low level wind data at strategic locations on Johnston Island. The system will consist of five towers on which wind speed and direction sensors will be mounted. Tower No. 1 (the existing EG&G 300-ft. tower) will be structurally modified and will be instrumented with TC furnished wind sensors at the 80-ft., 145-ft. and 280-ft. levels. Tower No. 3 (90-ft. tower) will be fabricated and erected at coordinates N 196, 840 and E 197, 135. TC furnished instruments will be mounted on Tower No. 3 at the 12-ft., 22.5-ft., 43-ft. and 80-ft. levels. A Sandia furnished 3-ft. diameter radome covered parabolic dish will be mounted at the 90-ft. level of Tower No. 3.

POST-GO

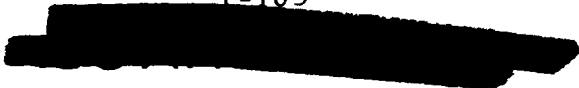
PROCUREMENT To be accomplished.

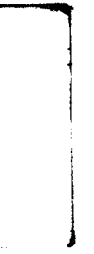
JOHNSTON ATOLL
01126

SCIENTIFIC
Page 2

CONSTRUCTION Tower No. 5 (the existing 90-ft. RF test tower Building 966) will be instrumented with TC furnished equipment at the 12-ft. , 22.5-ft. , 43-ft. and 80-ft. levels. Tower Nos. 2b (90-ft.) and 4 (85-ft.) will be erected and TC furnished instruments will be mounted at the same levels as those mentioned for Tower No. 5 above. Tower No. 2b will be located at coordinates N 199, 455 and E 202, 520 and Tower No. 4 will be at N 197, 700 and E 194, 135.

*Refer to F&S No. 01065 for costs of structural modifications to Tower No. 1.





F & S NO. 02001	TITLE Aircraft Runway					
USER JTF	STRUCTURE FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(5000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO					
	Prior Cost	17.0		1013.2	1030.2	
	TOTAL	17.0		1013.2	1030.2	

COMPLETED

DESCRIPTION The existing aircraft runway was extended from approximately 6,000-ft. long to approximately 9,000-ft. long in an east-west direction. (Completed in 1965.) The runway is 150-ft. wide with 150-ft. wide stabilized shoulders on each side. The first 500-ft. of the westerly end is paved with concrete and the remainder of the runway with asphaltic concrete. Asphaltic concrete paved turn-around areas, and 150 x 300-ft. concrete blast pads adjoin both ends. A 900-ft. long stabilized overrun area joins the easterly blast pad and continues easterly to the shoreline.

The runway is lighted with frangible type lights. Traffic lights at each end control vehicular movement across the runway. Visual glide indicators are provided for approaches from the west.

Located south of the west end of the runway is an asphaltic concrete paved area approximately 11,500 square yards. This area is accessible from the runway and is used for aircraft parking during and after loading and arming of aircraft cloud sampling rockets. High strength tie-downs are provided for engine run-up. The turn-around area north of the westerly end of the runway is used by operating aircraft when the arming pad is occupied.

DRAWINGS: 91-003-C1 thru C10 91-003-E1 thru E8
 91-003-C103 JS 91-003-E100
 91-003-S100

RETURN TO DOE/AV TECHNICAL INFORMATION
 RESOURCE CENTER

F & S NO. 02002	TITLE Aircraft Parking Area					
USER JTF	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO					
	Prior Cost	8.4		936.7	945.1	
	TOTAL	8.4		936.7	945.1	

COMPLETED

DESCRIPTION This facility (completed in 1965) includes approximately 140,000 square yards of asphaltic concrete paved aircraft parking area. Three rows of aircraft tie-downs spaced 30-ft. apart are provided along the north and south edges of the parking area. The tie-downs are spaced at 15-ft. intervals.

DRAWINGS: 91-003-C1 and C2 91-003-C11 thru C15
 91-003-E1 thru E8 91-097-SS1

F & S NO. 02003	TITLE Personal Equipment and Storage Building					
USER JTF	STRUCTURE/FACILITY NO. 728		SCIENTIFIC STATION NO. None			BOD
	FOD					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	24.9		313.5	338.4	0.6
TOTAL		24.9		313.5	338.4	0.6

COMPLETED

DESCRIPTION This building (completed in 1965) is a metal frame structure with corrugated asbestos roofing and siding and concrete floor. It is comprised of a 40 x 170-ft. main building and a 18 x 40-ft. mechanical equipment room. The main building contains Rad-Safe operations, personal equipment storage, personnel decontamination, and instrument repair facilities. Approximately 1400 square ft. of space is provided for Rad-Safe operations. The flight gear storage and dressing room has an area of 2215 square ft. The personnel decontamination facility includes 2000 square ft. of space allocated for a contaminated undressing area, shower, decontaminated dressing area, laundry room and equipment for handling contaminated clothing, and office space. The instrument repair and storage area, isolated from the rest of the building, has an area of 450 square ft. and is used by LASL. An additional 460 square ft. is provided for TG 8.4 electronic repair. A 10 x 10-ft. concrete decontamination pad is located immediately adjacent to the LASL repair area.

The entire building is air conditioned, dehumidified and fireproof. A distribution panel located in the mechanical equipment room provides the building with 120/208 volt, 3 phase electrical power.

A 5 x 9-ft. lean-to on the south side of the building and adjacent to the decontamination pad encloses a 5 kw, 208 volt, 3 phase, 400 cycle motor generator. Power to this generator and rooms 103/108 is supplied by a 120/208 volt, 3 phase outdoor electrical panel.

Two 240 volt power outlets are available for two TG 8.4 mobile ready room vans that will be parked along the east side of the building. An asphaltic concrete apron joins the aircraft parking area and the AGE Shelter with the front of the building.

JOHNSTON ATOLL
02003

SUPPORT
Page 2

DRAWINGS:

91-075-C42	JS 91-728-A100 and A101
91-728-A1 thru A6	JS 91-728-C100
91-728-C1	JS 91-728-S100 thru S102
91-728-S1	JS 91-728-E100
91-728-M1 thru M5	JS 91-094-C105
91-728-E1 thru E3	JS 91-095-E113
91-728-W1	JS SK-728-S100
	JS SK-728-M101

F & S NO. 02004	TITLE Aircraft Decontamination Pad No. 1					
USER TG 8.4	STRUCTURE FACILITY NO. 535			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO					
	Prior Cost	4.7		45.1	49.8	
	TOTAL	4.7		45.1	49.8	

COMPLETED

DESCRIPTION The aircraft decontamination pad (completed in 1965) is a 70 x 300-ft. concrete pad located adjacent to the new aircraft parking area (F&S No. 02002). The pad has been provided with four, 1 1/2-in. fresh water hydrants equipped with hoses, nozzles and hose reels. Two of the fresh water hydrants are located in a pit in the center of the pad, and one each is located at both the east and west ends. All hose reels, hose, etc, are stored in a steel covered pit which is flush to the decontamination pad surface.

Additional wash-down equipment at the pad includes portable decontamination tanks and an automotive type engine cleaning steam generator.

DRAWINGS: 91-003-C20 thru C23 91-003-E20

F & S NO. 02006	TITLE Joint Operations Center (JOC)					
USER JTF	STRUCTURE FACILITY NO. 20			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO Prior Cost			2830.3	2830.3	233.0
JTF-8 MILCON CRO 7-64	PRE-GO Prior Cost	209.8		1334.8	1544.6	
	POST-GO					75.0
	TOTAL	209.8		4165.1	4374.9	308.0

COMPLETED

DESCRIPTION The Joint Operations Center is located in the northeast corner of Johnston Island. This building is a four story, steel frame structure with prefabricated concrete panel sides and a hardened roof to provide protection against falling objects. The building was initially completed in 1965.

The building is 142 x 190-ft. and provides approximately 27,000 square feet of space per floor. This space is air conditioned with humidity control.

There is approximately 46,000 square feet of office space, approximately 21,000 square feet of laboratory space, and approximately 27,000 square feet of operational control area. The remainder of the space is required for passageways, latrine facilities, cable and duct shafts, and utility closets.

Concrete block interior walls form a central core from the first through the fourth floor which provides space for the timing and firing center, control posts, technical operations, and communications facilities.

An equipment room (within the core) on the first floor contains electrical switchgear, power generating equipment, and air conditioning equipment. The space outside the central core is divided into individual offices and rooms by moveable full height and partial height partitions. The building air conditioning system provides temperature and humidity control by automatic and manual control in individual areas. The air conditioning units provide a combined refrigeration capacity of approximately 600 tons.

A double ended substation connected to the 4160 volt electrical feeders 7 and 8 provides 2000 kva of 277/480 volt power for distribution throughout the building. Step-down transformers are located in the building to provide power at the voltages required by the various Users.

A 100 kw no-break (uninterrupted power supply, UPS) power unit on the first floor provides 120/208 volt, 60 cycle, 3 phase power for Users that demand UPS power for their projects. A second 100 kw no-break power unit (UPS) operating in parallel with the existing unit will be utilized primarily by the Subtask A909 Computer Facility. An Optical Station (refer to F&S Number 01072) and numerous antennas are located on the roof of the JOC.

Equipment handbooks have been prepared that describe in detail the operational capabilities of all utility and equipment systems in the JOC.

<u>DRAWINGS:</u>	91-20-A1 thru A27	JS SK-20-E107 and E121 thru E126
	91-20-C1 and C2	JS SK-20-E131 thru E133
	91-20-S1 thru S14	JS SK-20-W105 thru W107
	91-20-M1 thru M38	JS 91-20-A100 and A101
	91-20-E1 thru E24	JS 91-20-A104 thru A117
	91-20-E26 thru E36	JS 91-20-S100 thru S110
	91-20-AA1 thru AA5	JS 91-20-S114 and S115
	91-20-W1 thru W10	JS 91-20-M100 and M102 thru M104
	91-030-W8	JS 91-20-E100 and E102 thru E104
	91-030-W11 thru W19	JS 91-20-E107 and E108
	91-030-W20 and W25	JS 91-20-E111 thru E113
	91 SK-01-Sheets 1 thru 5	JS 91-20-E115, E118 and E119
	JS SK-20-A103	JS 91-20-E122 and E123
	JS SK-20-S119	JS 91-20-AA100 thru AA103
	JS SK-20-M116 and M117	JS 91-20-W101 thru W119

POST-GO

PROCUREMENT Additional furniture will be procured.

F & S NO. 02006A	TITLE Joint Operations Center (JOC) - Modifications					
USER JTF	STRUCTURE/FACILITY NO. 20			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost			8.3	8.3	
JTF-8	PRE-GO					
MILCON	Prior Cost	28.6		483.1	511.7	
CRO 7-64						
CRO 4-65	POST-GO		TO BE DETERMINED			
CRO 8-65						
MIPR-R- 65-030- 61756	TOTAL		28.6	491.4	520.0	

PRIOR YEARS

The following is a listing of miscellaneous modifications to the Joint Operations Center that were completed in the time period 1965 to 1968 and were formerly listed under the F&S No. 02057 series

MODIFICATION A - Partitions, Electrical and Telephone Outlets

Partitions, electrical wiring, and telephone outlets were installed in areas on the first and second floors to accommodate the relocation of JTG 8.6, AEC and contractor support offices. Movable partitions, electrical wiring, and telephone outlets were installed in the FIC area on the third floor and in the DASA areas on the fourth floor. These areas are available for temporary use, on a 30-day revocable basis, by PMR and SAMSO. Additional required partitions and associated hardware have been procured and are stored on J. A.

Drawings:	91-20-E4, E5, E7, E18, E23 and E28	JS 91-20-A112 and A113
	91-SK-01-Sheets 1 thru 5	JS 91-20-E100, E102 and E103
	JS 91-20-A106 thru A109	JS 91-20-E122 and E123

MODIFICATION B - Operations Control Center No. 1, and Display Support Room

The Operations Control Center No. 1, located on the fourth floor, was modified to provide a raised floor over approximately one-half of the area. Additional

MODIFICATION F - No-Break Power Unit

A second 100 kw no-break power unit was installed in the generator room on the first floor of the JOC. This unit, which can be operated independently or in parallel with the other unit, provides 100 kw of 120/208 volt, 60 cycle, 3 phase power to the Subtask A909 Computer Area.

Drawings: 91-20-M34 JS 91-20-E104
91-20-E31

MODIFICATION G - Laboratory Room

A 10 x 12-ft. shielded enclosure was installed in the first floor TC laboratory area. This enclosure will provide an RF free environment for payload checkout. This facility was formerly listed under F&S No. 01107.

Drawing: 91-030-W8

MODIFICATION H - Minor Modifications

1. A pressure regulating damper was installed in the duct running to the telephone room on the second floor.

Drawing: 91-20-M10

2. Room numbers were stencilled on doors. Acoustical tile was installed in various locations and a door and wall were removed. Duplex strainers were installed in the Salt waterlines.

Drawings: Miscellaneous

3. Plotting boards were provided for the TG 8.3 Operations Control Center, Room 318, on the third floor of the JOC.

Drawings: None

4. Air conditioning was installed in the Radar Penthouse.

Drawings: JS 91-20-M102 JS 91-20-E118

5. A WWV antenna was installed on the roof of the JOC. A support pole for the installation of a user furnished VLF antenna was provided. Ten pairs of shielded audio cable was provided from the Transmitter Shack, Building 23, to the T&F center, Room 430, on the fourth floor of the JOC.

Drawing: 91-20-W9

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JOHNSTON ATOLL
02006A

SUPPORT
Page 4

6. A hoist and trolley system was installed in Room 117 on the first floor of the JOC.

Drawing: 91-20-M39

7. A key system telephone main frame was installed on the third floor of the JOC.

Drawing: JS 91-20-S115

POST-GO

ENGINEERING Design of electrical wiring, power panel schedules and circuit breaker assignments will be accomplished. The locations of electrical and telephone outlets will be as indicated on Drawing 91-SK-01 sheets 1 through 4.

PROCUREMENT Available jobsite electrical materials will be utilized as much as possible and will be supplemented as required.

CONSTRUCTION Partitions and electrical and telephone outlets will be installed as indicated on Drawing 91-SK-01 sheets 1 through 4. Computer installation and checkout will be accomplished in the Subtask A909 Computer Area, Room 102.

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SUPPORT

F & S NO. 02007	TITLE Base Maintenance Shop					
USER JTG 8.6	STRUCTURE/FACILITY NO. 316			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	*Prior Cost 9.6				199.4	209.0
TOTAL		9.6		199.4	209.0	

COMPLETED

DESCRIPTION The Base Maintenance Shop (completed in 1965) is a 40 x 260 x 18-ft. high steel frame building with metal siding. The building contains the generator and transformer shop, motor rewind shop, electrical repair shop, refrigeration shop, air conditioning shop, pipe and plumbing shops, office machine repair shop, bicycle repair shop, sheet metal shop, the welding shop and the maintenance office. Two 2-ton capacity bridge cranes are provided in the building.

DRAWINGS:

91-316-A1 and A2	JS 91-316-A101 and A105
91-316-C1	JS 91-316-S100 thru S103
91-316-S1 thru S4	JS 91-316-S105
91-316-M1	JS 91-316-E101
91-316-E1 thru E4	JS 91-316-E103 thru E105
91-097-SS1	

*Does not include cost for addition of 20 x 40-ft. bay required for welding shop facilities. (See F&S No. 02028.)

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F & S NO. 02008	TITLE Warehousing Buildings					
USER JTF	STRUCTURE/FACILITY NO. 390 thru 399 inclusive			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO Prior Cost 10.1			342.1	352.2	2.0
JTF-8 RDT&E CRO 2-66 CRO 2-67	Prior Cost			34.6	34.6	
SSD	Prior Cost 4.9			132.4	137.3	
	TOTAL	15.0		509.1	524.1	2.0

COMPLETED

DESCRIPTION Warehousing Buildings 390 thru 399 (completed in 1965*) contain approximately 40,000 square feet of space, including office and latrine facilities in Building 397. Each building is a steel frame structure 40 x 100 x 14-ft. high with galvanized steel roofing and siding, and overhead lighting. Concrete floors are provided in all buildings except in Building 393; the floor of Building 393 is the existing coral base pavement.

Warehouses 392 thru 399 are located west of the MAC terminal within a 170,000 square foot compound enclosed by a 7-ft. high barbed wire fence. Overhead street lights around the perimeter of the compound provides area and security lighting. A coral base access road joins this area with the taxiway. Warehouses 390 and 391 are located outside of the main fenced-in warehouse complex, adjacent and east of the MAC parking apron.

The warehousing space allocated for Post-GO is as follows:

<u>USER</u>	<u>SQUARE FOOTAGE</u>
LASL	3,000
LRL	2,000
SANDIA	1,500
EG&G	3,000
PMR	4,000
TG 8.6	8,000
H&N	18,500
Total	40,000

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JOHNSTON ATOLL
02008

SUPPORT
Page 2

<u>DRAWINGS:</u>	91-390-S1 and S2	91-397-A1 and A2
	91-390-E1	JS 91-390-E100
	91-394-A1 thru A3	JS 91-391-E100
	91-394-C1	JS 91-392-S100
	91-394-E1 and E2	JS 91-392-E100

*All buildings were completed in 1965 except Building 393, which was completed in 1967.

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SUPPORT

F & S NO. 02009	TITLE Storage Space					
USER EG&G	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD GO+60					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO *FY-71	2.2		44.8	47.0	
	TOTAL	2.2		44.8	47.0	

FY-71

ENGINEERING To be accomplished.

PROCUREMENT To be accomplished.

CONSTRUCTION A total of 5,750 square feet of storage space will be provided for EG&G and will be allocated as follows:

Timing and Firing A 750 square foot area will be provided in the JOC.

Photo Space Two 16 x 32-ft. standard tents will be located near Building 93 and as close as possible to the Film Loading Trailer (F&S No. 02022). Space for a 6 x 6-ft. film storage reefer will be provided in the tents.

Shipping and Receiving 3,000 square feet will be provided in a 40 x 100-ft. warehouse building probably located in the warehousing area listed under F&S No. 02008.

*Estimate 11/68

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SUPPORT

F & S NO. 02013	TITLE Roadwork and Site Grading					
USER JTF	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO Prior Cost	63.6		417.5	481.1	
JTF-8 MILCON CRO 2-65 CRO 2-66 CRO 4-66	PRE-GO Prior Cost			86.0	86.0	
	TOTAL	63.6		503.5	567.1	

COMPLETED

DESCRIPTION The basic road system (completed in 1965) consists of a 20-ft. wide paved roadway which follows the periphery of the island and permits access to the major facilities. This road system includes Mitchell Avenue, Arnold Avenue, Kelly Avenue and Tinker Drive and connects with the ADC road network. Drainage ditches, catch basins, culverts, and flap gates necessary to handle the island storm water runoff are provided. Sidewalks (completed in 1966) are provided for Arnold Avenue and Mitchell Avenue.

DRAWINGS: 91-075-C1 thru C36 JS 91-075-C107 thru C112
 91-075-C40 and C41 JS-SK-F-094-C100

F & S NO. 02014	TITLE Shore Work Area and Photo Platforms - Subtasks C501, C502, C503, C504, C516 and C701					
USER TC	STRUCTURE/FACILITY NO. None		SCIENTIFIC STATION NO. None			BODGO+90
	FODGO+105					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
DASA/ RDT&E EAO -1106 4346-62	PRE-GO Prior Cost	2.8	2.1		4.9	
	POST-GO Estimate 5/65			28.0	28.0	
	TOTAL	2.8	2.1	28.0	32.9	

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-3-92-C1 91-3-92-E1 and E2

POST-GO

PROCUREMENT To be accomplished. The major items are:

- One 75 kva 480-208 wye/120 volt dry type transformer.
- One 15 kva 480-208 wye/120 volt dry type transformer.
- Two electrical distribution boxes.

CONSTRUCTION The Distant Waters shore work area will consist of a compacted area of approximately 17,000 square feet adjacent to the scientific laboratory (Building 190) and approximately 17,500 square feet adjacent to the existing concrete pad located approximately 100-ft. south of the wharf on the north side of J. I. Specific space requirements will be as follows:

- a. Subtask C501 A 20 x 335-ft. area will be needed for cable checkout. Cables up to 3000-ft. in length will be laid out in this area for checkout.
- b. Subtask C502 A 50 x 120-ft. area will be required adjacent to existing concrete pad for work on 35-ft. long buoys. Two TC furnished helium trailers will be parked adjacent to the area. Power will not be required.
- c. Subtask C504 A 1200 square foot area will be required for outside work area. This area will be located north of the trailers which are adjacent to Building 190.

- d. Subtask C516 A 10 x 100-ft. area will be required for probe checkout. This area will be located between Building 190 and the trailers, or on the south side of Building 190, depending on area congestion during the operational period.
- e. Subtask C701 A 40 x 120-ft. area will be required to provide access to 30 transportainers. This space will be adjacent to the existing concrete pad. In addition, 300 square feet of dockside space adjacent to the Distant Waters Barge Berth will be required to work on two or three coracles.

The following TC furnished trailers will be located north of the Scientific Laboratory (Building 190):

- a. Subtask C504 One 10 x 30 x 12-ft. high laboratory trailer requiring 5 kw of 220 volt, 60 cycle, single phase utility power and 5 kw of 115 volt, 60 cycle, single phase instrument power.
- b. Subtask C701 Five trailers having a total power requirements of 75 kw of 208 volt, 60 cycle, three phase. Any water required in the trailer area will be provided from the hose bibs on the exterior of Building 190.

Two photo platforms for Subtask C502 will be provided at opposite ends of the island. The platforms will be 3 feet in diameter, 5 feet deep, concrete pads with a 5 foot diameter concrete walkway isolated from the platform by a 1 inch thick felt insulator. A hardwire timing connection and a telephone jack will be required at each location.

An additional photo platform for Subtask C503 will be obtained by using a 10 x 15 foot space on top of Barracks 250. This space will provide an unobstructed view to the south and southwest. A conduit for running five pairs of timing wires will be provided for the photo platform.

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SUPPORT

F & S NO. 02017	TITLE Trailer Space					
USER LASL	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD GO+120
						FOD GO+150
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	POST-GO Estimate 3/65			22.0	22.0	
	TOTAL			22.0	22.0	

POST-GO

ENGINEERING To be accomplished.

PROCUREMENT Seven LASL-furnished trailers will be shipped to Johnston Island.

CONSTRUCTION Concrete pads for seven trailers will be constructed. Three of the pads will be located near Building 728, three will be near Building 93 and the other pad will be near the Decontamination Pad No. 1. The power requirement for each trailer are 10 kw, 120/208 volt. The trailer near the Decontamination Facility is required for AD Rehearsals.

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F & S NO. 02019	TITLE Sample Storage Building					
USER LRL	STRUCTURE FACILITY NO. 726		SCIENTIFIC STATION NO. None			BOD
	FOD GO+30					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
PRE-GO Cost Included in F&S No. 01058						

COMPLETED

DESCRIPTION The Sample Storage Building is used for the storage of hot samples, lead pigs, containers and miscellaneous equipment. This building is a steel frame structure 10 x 15-ft., with concrete floor and corrugated asbestos cement roofing and siding. Ventilation of the building is accomplished by aluminum fixed blade louvers in the east and west walls and a 630-cfm exhaust fan in the north wall. Interior lighting is provided by two incandescent standard dome reflector-type fixtures. Power for the lights and exhaust fan is supplied by a single 110 volt, single-phase circuit from the Rocket Nosecone Disassembly Building (Building 727). Both buildings are enclosed within a security fence. The Sample Storage Building was completed in 1965.

DRAWINGS: 91-727-A6 91-727-C1 91-727-E1 91-727-W1

F & S NO. 02022	TITLE Trailer Space					
USER EG&G	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FODGO+60					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	POST-GO	TO BE DETERMINED				

POST-GO

ENGINEERING To be accomplished.

PROCUREMENT To be accomplished.

CONSTRUCTION Three concrete pads will be constructed adjacent to Building 94 for the parking of three EG&G furnished trailers. The trailers are a Photo Loading trailer, a Photo Maintenance/Processing trailer and a Camera Mount Control trailer. Power requirements for the Camera Mount Control trailer are two lines of 208 volt, 60 cycle, 3 phase, 200 amps per phase and one line of 115 volt, 60 cycle, 3 phase, 100 amps per phase. The camera mounts are EG&G supplied.

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SUPPORT

F & S NO. 02026	TITLE Signal Tower					
USER TG 8.3	STRUCTURE/FACILITY NO. None		SCIENTIFIC STATION NO. None			BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8 MILCON CRO 7-64	PRE-GO Costs included in Minor Construction Support					

COMPLETED

DESCRIPTION The signal tower (completed in 1964) is an 8 x 8 x 8 1/2-ft. high platform located on the north end of the roof of the 320 man EM barracks (Building 252). The signal tower is provided with a partial roof, vapor proof lights, and a 30-ft. high mast with two blinker signal lights and an obstruction light. Power receptacles rated at 2.5 kw are provided for each signal light. Power for the lights and receptacles is supplied by a 50 amp lighting panel which is mounted on one of the supports for the steel platform.

DRAWING: 91-071.1-S1

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SUPPORT

F & S NO. 02027	TITLE Automotive Maintenance Facilities					
USER TG 8.6	STRUCTURE FACILITY NO. 40, 41 and 42			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY JTF-8 MILCON CRO 7-64	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost			8.3	8.3*	
	TOTAL			8.3	8.3	

COMPLETED

DESCRIPTION The Automotive Maintenance Shop (Building 40) is a 38 x 100 x 16-ft. high concrete block structure. The building is equipped with four aluminum roll up doors which are located in the south wall (completed prior to 1963).

The car wash facility (Building 41), located east of the automotive maintenance shop is a 2 x 4 x 6-ft. high wood frame building erected on the center of a 12 x 30-ft. concrete slab. This facility is equipped with soap solution drums and dual water hose bibs. (Completed in 1967 with minor construction funds.)

A concrete grease pit (Building 42) for servicing island vehicles is provided just west of the automotive maintenance shop. The pit is approximately 2 1/2 x 4-ft. deep and is located on a 9 x 39-ft. concrete apron. (Completed in 1964.)

<u>DRAWINGS:</u>	JS 91-40-A101	JS 91-097-S103
	JS 91-42-S103	JS 91-097-S122
	JS 91-42-E100	JS 91-097-E100

*Costs shown are for construction of Building 42.

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F & S NO. 02028	TITLE Tire Repair and Battery Shop					
USER TG 8.6	STRUCTURE / FACILITY NO. 47			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost*			38.9	38.9	
	TOTAL			38.9	38.9	

COMPLETED

DESCRIPTION The Tire Repair and Battery Shop (completed in 1966) is a steel frame structure with corrugated aluminum roofing and siding. The building is 20 x 40-ft. and is constructed on a new concrete pad located adjacent to the existing Building 46 concrete pad. The old (demolished Building 46) concrete pad is utilized as a tire repair area. Air lines, quick disconnects, and an air compressor were relocated from the old tire repair area (adjacent to Building 315). Approximately 75 kva of 120/208 volt, 60 cycle, 3 phase power is provided for lighting and battery chargers that were relocated from Building 40.

DRAWINGS: JS 91-47-A100 thru A103 JS 91-47-E101
 JS 91-47-S100 thru S102 91-097-SS1
 JS 91-47-M100

*Includes cost for addition of 20 x 40-ft. bay to the east end of Building 316 for welding shop facilities. (See F&S No. 02007)

F & S NO.	TITLE					
02029	POL System (AVGAS, JP-4 Fuel, Lube Oil, MOGAS and Diesel Oil)					
USER	STRUCTURE/FACILITY NO.			SCIENTIFIC STATION NO.		BOD
	TG 8.6 50, 51, 260, 261, 263, 264, 266, 267 and 269			None		FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8	PRE-GO					
MILCON	Prior Cost	50.7		533.2	583.9	
CRO 7-64	FY-69			20.3	20.3	
CRO 2-65						
CRO 2-66						
CRO 2-68						
TOTAL		50.7		553.5	604.2	

PRIOR YEARS

ENGINEERING Completed. Drawings are as follows:

91-068-A1	91-068-C42 and C43	JS 91-068-M100 thru M106
91-068-C1 and C2	91-068-M1 thru M8	JS 91-068-M108
91-068-C8 and C9	91-068-M104 and M105	JS 91-081-M3
91-068-C17 and C18	91-068-E1 thru E4	JS 91-081-M100
91-068-C23	91-097-SS1	JS-SK-068-E100
91-068-C26	JS 91-068-S100 and S101	SK-91-068-M1

PROCUREMENT Completed.

CONSTRUCTION The MOGAS and Diesel Oil portion of the POL facilities are located in the northeastern area of Johnston Island, east of the Distillation Plant, and consists of a tank farm, a tank truck loading assembly area, a tank truck loading pump and a vehicle fueling pump (Building 51). The tank farm (Building 50) includes four 13,500 barrel tanks for MOGAS, and two 13,500 barrel tanks for diesel oil. A concrete berm wall enclosing the tanks provides fire protection. Access to the tanks is accomplished by a steel walkway, spanning between the east and west berm walls.

The AVGAS, JP-4 Fuel and Lube Oil portion of the POL facilities are located in the southeastern area of Johnston Island and consists of a tank farm, a tank truck loading assembly area, an electrical equipment building, a pump complex, and a propellant and lube storage area. The tank farm includes two 13,500 barrel tanks, (Buildings 260 and 261), and two 1,500 barrel tanks (Buildings 263 and 264), one each for the storage of AVGAS and JP-4 Fuel. Protective berms are provided around the tanks.

The electrical equipment building (Building 266), is an 11 x 7 1/2 x 9-ft. high concrete block structure with concrete floor and roof. (Completed in 1965.)

A 26 x 40 x 12-ft. high metal frame structure (Building 267) with corrugated aluminum roof and open sides shelters the lube storage area. (Completed in 1967.)

An 11 x 40 x 8-ft. high metal frame shelter (Building 269) with corrugated aluminum roof and siding houses the POL Pump Complex. (Completed in 1966.)

FY 1969

ENGINEERING In progress.

PROCUREMENT In progress.

CONSTRUCTION A fire extinguishing foam system will be installed atop the POL storage tanks.

F & S NO. 02031	TITLE Receiver Facility					
USER TG 8.6	STRUCTURE/FACILITY NO. 1002 and 1004			SCIENTIFIC STATION NO. None		BOD
	FOO					
FUNDING AGENCY	(5000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8 MILCON CRO 7-64	PRE-GO Prior Cost	10.4		121.6	132.0	
AEC	PRE-GO Prior Cost			2.9	2.9	
	TOTAL	10.4		124.5	134.9	

COMPLETED

DESCRIPTION The Receiver Building No. 1102 (completed in 1965) is located adjacent to the antenna field on Akau Island. This building is 40 x 40-ft. and houses a prefabricated 24 x 34-ft. RF shielded room, emergency living quarters for three men, latrine, storage area for small electronic parts, and an air conditioning equipment room. Power requirements of 60 kw (plus 100 percent backup) are provided by the Johnston Atoll distribution system. An additional 100 percent backup is provided by a 150 kw standby generator sheltered by a 12 x 22-ft. shed (Building No. 1004) adjacent to the Receiver Building. A 1000-gallon horizontal tank in the area is used for storing diesel fuel for the generator. The receiver and generator buildings are steel frame structures, covered with corrugated asbestos cement siding and roofing.

DRAWINGS:

116-1002-A1 thru A4	116-1002-E1 and E2
116-1002-C1	116-1003-A1 and A2
116-1002-S1	116-1003-M1
116-1002-M1 thru M3	116-1003-E1
	JS 116-1002-W100

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JOHNSTON ATOLL

SUPPORT

F & S NO. 02032	TITLE Transmitter Antenna Foundations					
USER TG 8.6	STRUCTURE / FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8 MILCON CRO 7-64	PRE-GO Prior Cost	3.4		25.0	28.4	
	TOTAL	3.4		25.0	28.4	

COMPLETED

DESCRIPTION Concrete foundations located on Hikina Island accommodate the the transmitter antennas listed under F&S No. 04032. Power lines are provided for tower lighting; these lines tie-into the technical power lines in the transmitter building, see F&S No. 02030. (Completed in 1965)

DRAWINGS: 117-077-C1 117-077-S1 thru S5 JS 117-077-S100

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JOHNSTON ATOLL

SUPPORT

F & S NO. 02033	TITLE Receiver Antenna Foundations					
USER TG 8.6	STRUCTURE/FACILITY NO. None		SCIENTIFIC STATION NO. None			BOD
						FOD
FUNDING AGENCY JTF-8 MILCON CRO 7-64	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost	2.2		21.7	23.9	
	TOTAL	2.2		21.7	23.9	

COMPLETED

DESCRIPTION Concrete foundations on Akau Island accommodate the antennas listed under F&S No. 04031. Power lines are provided for tower lighting; these lines tie into the technical power lines in the receiver building, see F&S No. 02031. (Completed in 1965)

DRAWINGS:

116-071-C1
JS 116-077-S100

116-077-C1
116-077-S1 thru S4

JOHNSTON ATOLL

SUPPORT

F & S NO. 02034	TITLE U. S. Weather Bureau Facilities					
USER ESSA	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY JTF-8 MILCON CRO 69-11	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO FY 69	28.0		428.5	456.5	
	TOTAL	28.0		428.5	456.5	

FY 69

ENGINEERING In progress.

PROCUREMENT To be accomplished.

CONSTRUCTION A modified standard type Rawinsonde Weather Bureau will be constructed and will be similar to those used by the Department of Commerce, Weather Bureau (ESSA) in the Pacific Region. The facility will be located north-east of Building 280 and will consist of an Office and Observatory Building and a Balloon Inflation Building. The buildings will be aligned in a north-south orientation with the Office and Observatory Building approximately 130-ft. north of the Balloon Inflation Building.

The Office and Observatory Building will be 30 x 40 x 10-ft. high. A 250 square foot area will be provided on one side of the building to house the generators associated with the facility. The building will be constructed of reinforced concrete block walls, concrete floor and a concrete roof with built-up roofing. The building will provide space for the observation room, electronics shop, offices, hot lockers and latrine facilities.

The Balloon Inflation Building will be 21 x 21 x 23-ft. high and provided with a radome on the roof and exterior stairs for access to the radome and roof. A nonmetallic safety rail will be provided around the perimeter of the roof. The building will be constructed of reinforced concrete block walls, concrete floor and concrete roof with built-up roofing.

Radar equipment, balloon inflation equipment and other technical material will be furnished by ESSA. Communication lines are required from this facility to the JOC for real time inputs to Subtask A909. Communication lines are also required from the automatic observing equipment, located at the west end of the runway, to the Office and Observatory Building and the control tower.

~~CONFIDENTIAL~~

JOHNSTON ATOLL
02034

SUPPORT
Page 2

POST-GO

A 10 x 10-ft. concrete pad with a ground rod in the center will be constructed Post-GO for installing a GMD-4 radar dome. The GMD-4 pad will be located approximately 65-ft. west of the Office and Observatory Building.

~~CONFIDENTIAL~~

F & S NO. 02035	TITLE Open Storage Area					
USER TG 8.3	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD GO+0					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	NO COST					

PROPOSED

ENGINEERING None required.

PROCUREMENT None required.

CONSTRUCTION Approximately 100,000 square feet is required for the open storage of mooring equipment. The area should be compacted and well drained. Open storage area number 2, presently occupied by Holmes & Narver, Inc. is reserved for this purpose.

JOHNSTON ATOLL

SUPPORT

F & S NO. 02036	TITLE Waterfront Facilities					
USER JTF	STRUCTURE/FACILITY NO. See Text			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
DPWO CONTRACT NBY 54833	PRE-GO Prior Cost				1,380.5	
	TOTAL				1,380.5	

COMPLETED

DESCRIPTION Improvements to Waterfront Facilities were completed in 1965, under contract NBY 54833, and include the following:

- a. Transformer Building An 18 x 24-ft. masonry building (Building 128) was constructed adjacent to the shop building (Building 127). This building houses a 50 kw motor generator set, a 150 kva transformer, and electrical controls and panels.
- b. New Pier A wooden pier, providing 360-ft. of new frontage was constructed on concrete piles just west of the existing small boat piers. The pier is equipped with floodlighting, rubber bumpers, diesel and freshwater lines, railings, and two walkways to the island.
- c. Dolphins Twenty-one (21) timber pile dolphins were located in the Johnston Island wharf area.
- d. Fender Systems Rubber and wood fender systems were installed on bulkheads 1 and 2 on Johnston Island, bulkhead 3 on Akau Island and bulkhead 4 on Hikina Island.
- e. CJTG 8.6 Quarters Sheet pile bulkhead was constructed on the north and west sides of the area occupied by the CJTG 8.6 Quarters (Building 1) on Johnston Island. The new piling was tied into the original piling. A wooden pier, 20-ft. long was constructed at the face of the piling on the west side.
- f. Small Boat Piers Wooden piers about 100-ft. long and 7-ft. wide were provided on Akau and Hikina Islands. Both piers were equipped with four 3 pile wood dolphins.
- g. Channel Markers Permanent channel markers were placed in the Johnston Atoll area channels.

~~CONFIDENTIAL~~

JOHNSTON ATOLL
02036

SUPPORT
Page 2

- h. Bulkhead No. 1 Improvements Improvements to the bulkhead included a new 9-in. thick concrete slab, approximately 320 x 570-ft.; mooring fittings, saltwater fire protection system, freshwater and fuel oil lines, and two steel ramps about 22-ft. long supported by concrete piers. Electrical work including floodlighting, manholes, and concrete encased ducts was accomplished.

- i. TG 8.3 Shop The TG 8.3 Boat Group Repair Shop, (Building 126), a 20 x 50-ft. prefabricated, rigid frame steel building was constructed in the vicinity of the small boat piers.

DRAWINGS: Naval Facilities Engineering Command Numbers.

1018162 and 1018163	1038138	1038739
1018482 thru 1018489	1038146 thru 1038150	1038757 thru 1038759
1038126	1038688	1068953

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JOHNSTON ATOLL

SUPPORT

F & S NO. 02036A	TITLE Waterfront Facilities - Replace Small Boat Pier					
USER JTF	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8/ MILCON	PRE-GO Prior Cost			20.5	20.5	
CRO 4-66 CRO 69-9	FY-69	12.0		188.1	200.1	
TOTAL		12.0		208.6	220.6	

PRIOR YEARS

ENGINEERING Completed.

Drawings: JS SK-F-066-S100 JS SK-WM562

PROCUREMENT Completed.

CONSTRUCTION Miscellaneous and minor emergency repairs were performed on the existing pier to keep it operational.

FY 1969

ENGINEERING In progress.

PROCUREMENT To be accomplished.

CONSTRUCTION The existing small boat pier will be removed and a new pier will be constructed in the same location. The existing steel piles supporting the pier structure will be trimmed and cleaned to remove the corroded upper sections and then will be encased in concrete. New concrete pile caps and new timber fenders will be installed. Timber decking will be reused as feasible and defective deck members will be replaced. The new pier will be 375-ft. in length with six finger piers 50-ft. in length. All of the pier decks will be 8-ft. wide.

F & S NO. 02038	TITLE Warehousing Buildings					
USER TG 8.3 TG 8.4	STRUCTURE FACILITY NO. 287 and 725			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO					
	Prior Cost	8.2		135.1	143.3	18.4
	TOTAL	8.2		135.1	143.3	18.4

COMPLETED

DESCRIPTION These two buildings contain a total of approximately 13,000 sq. ft. of warehousing space.

Warehouse Building 287 (completed in 1965) is located at the east end of the aircraft parking area and is used by TG 8.3. It is an 80 x 100 x 14-ft. minimum clear height steel frame building, with corrugated asbestos cement roof and siding, and concrete floor. There are four 12 x 13-ft. 7-in. high sliding doors; two each located in the east and west walls.

The building is provided with: latrine facilities; 120/208 volt, 3 phase, 60 cycle power; duplex receptacles, six in each the north and south walls; and pendant incandescent fixtures for interior lighting.

Warehouse Building 725 (completed in 1965) is located at the west end of the aircraft parking area and is used by TG 8.4. It is a 40 x 120 x 14-ft. minimum clear height steel frame building, with corrugated asbestos cement roof and siding, and concrete floor. There are two 12 x 13-ft. 7-in. high sliding doors; one each located in the east and west walls.

The building is provided with: latrine facilities; 120/208 volt, 3 phase, 60 cycle power; duplex receptacles, seven in each the north and south walls; and pendant incandescent fixtures for interior lighting.

- DRAWINGS:
- | | |
|--------------------|------------------|
| 91-097-SS1 and SS2 | 91-725-A1 and A2 |
| 91-287-A1 | 91-725-C1 |
| 91-287-C1 | 91-725-S1 |
| 91-287-S1 | 91-725-E1 |
| 91-287-E1 | |

F & S NO. 02039	TITLE Dredge and Fill Operations					
USER JTF	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY JTF-8 MILCON DPWO CON TRACTS NBY 54888 & NBY 59908	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost				27,618.0	
	TOTAL				27,618.0	

COMPLETED

DESCRIPTION Johnston Island has been increased in size from approximately 200 acres to a total of 591 acres, by dredging and filling. Two new islands were created nearby. The largest of the new islands, Akau Island, has an area of 24 acres and the other, Hikina Island, has 17.3 acres. About 16,000,000 cubic yards of material was deposited; of this total, approximately 463,300 cubic yards provide coral stockpiles on Johnston and Akau Island. (Completed in 1964)

Sheet piling was driven to form bulkheads for shoreline protection and docking facilities as follows:

- a. Johnston Island A new wharf (Bulkhead 2) is located at the west end of the island. The wharf is formed by steel piling enclosing a coral back-fill and provides about 180 feet of mooring space fronting on a 15-foot deep channel area.
- b. Akau Island A wharf (Bulkhead 3) is constructed of steel piling to provide about 350 feet of frontage. The area behind the piling is back-filled with coral and equipped with mooring fixtures.
- c. Hikina Island A wharf (Bulkhead 4) similar to the Akau Island facility is available.
- d. Sand Island. Two steel sheet pile bulkheads are located on the west end of Sand Island. Over 800 feet of shoreline is now lined by piling. In addition, a total of about 7,500 square yards of coral fill area was placed adjacent to the island causeway connecting the Baker-Nunn Camera Facility.

DRAWINGS: Naval Facilities Engineering Command Numbers, 998593 thru 998603, 1018440, 1038172 and 1038173, 1038922 and 1039017

JOHNSTON ATOLL

SUPPORT

F & S NO. 02040	TITLE Shoreline Protection					
USER JTF	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8/ MILCON MIPR	PRE-GO					
21-65	Prior Cost			5,266.0	5,266.0	
27-66	FY-69			1,092.0	1,092.0	
28-67 & DASA/ MIPR (1968)	TOTAL			6,358.0	6,358.0	

PRIOR YEARS

ENGINEERING Completed.

Drawings: Naval Facilities Engineering Command Numbers:

1069359 thru 1069361
1069339 and 10693671069494 thru 1069497
1103889 thru 1103907PROCUREMENT Completed.

CONSTRUCTION Concrete sheet piling was driven along the tips of the East and West peninsulas on Johnston Island to prevent erosion of the shoreline. A continuous concrete cap was placed on top of the piling. A 25-ft. wide area behind the piling was paved with 4-in. thick concrete.

The length of the piling and paving around the tip of the East peninsula is approximately 700-lin. ft. Precast concrete block rip-rap has been placed along the shoreline extending from the end of the piling, 150-ft. along the west side of the East peninsula and 300-ft. along the east side. The length of the piling and paving around the tip of the West peninsula is approximately 1,100-lin. ft. Precast concrete block rip-rap has been placed along the shoreline extending from the end of the piling, 100-ft. along the east side of the West peninsula and 30-ft. along the west side.

In addition, concrete revetments, steel sheet piling and/or rip-rap were placed at the following locations on Johnston Atoll to protect areas subject to undesirable wave action:

- a) On the south shore extending westward approximately 2,700-lin. ft. from the western peninsula to a point south of the Test Command launchers.
- b) Approximately 440-lin. ft. at the southwest corner.
- c) On the west shore extending northward approximately 2,050-lin. ft. from the wharf to the LOX storage area.
- d) On the north shore extending eastward approximately 3,000-lin. ft. from a point north of Launch Pad No. 1 to a point north of the warehousing area.
- e) On the north shore approximately 140-lin. ft. north of Building 100, 270-lin. ft. on the Point House peninsula, 200-lin. ft. north of the Power Plant and 1,200-lin. ft. around the wharfing area.
- f) Approximately 1,700-lin. ft. on Akau Island and 800-lin. ft. on Hikina Island.

FY 1969

ENGINEERING Completed.

Drawings: Naval Facilities Engineering Command Numbers:

1229668 thru 1229678

PROCUREMENT Completed.

CONSTRUCTION Shoreline protection is presently being accomplished at the following locations on Johnston Island:

- a) Approximately 800-lin. ft. of concrete revetment on the western-most unprotected section of the south shore.
- b) Approximately 1,125-lin. ft. of concrete revetment on the north-west peninsula.
- c) Approximately 700-lin. ft. of concrete revetment on the northeast corner.
- d) Approximately 250-lin. ft. east of and 180-lin. ft. west of the old seaplane ramp with steel sheet piling capped with concrete.

The completion of the shoreline protection work in FY 1969 will provide a total of approximately 18,000-lin. ft. of protected area at Johnston Atoll. Additional shoreline protection work is presently planned in the unfunded MILCON program for FY 1970, 1971 and 1974.

JOHNSTON ATOLL

SUPPORT

F & S NO. 02041	TITLE Trailer Park					
USER TC LASL LRL	OFFICE/FACILITY NO. None		SCIENTIFIC STATION NO. None			BOD GO+120
						FOD GO+120
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8	PRE-GO					
RDT&E	Prior Cost	3.4		11.3	14.7	
EAO 1106-4101-61	POST-GO Est. 7/65			21.6	21.6	
MILCON						
CRO 7-64	SUBTOTAL	3.4		32.9	36.3	
AEC	PRE-GO FY 69	1.0		4.0	5.0	
	TOTAL	4.4		36.9	41.3	

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-058-C1 91-058-E1 91-058-AE1

PROCUREMENT Completed.

CONSTRUCTION A primary feeder system was installed in 1966 to serve the trailer park.

FY 69

ENGINEERING Completed.

Drawing: 91-058-E118

PROCUREMENT In progress.

CONSTRUCTION LRL furnished technical trailers will each be provided with 60 amps of 110/208, 60 cycle, 3 phase power.

POST-GO

PROCUREMENT To be accomplished.

CONSTRUCTION A compacted and fenced area of approximately 36,400 square feet will be provided adjacent to the east side of the JOC. It will provide secure parking for the following trailers:

<u>USE</u>	<u>SIZE</u>	<u>FURNISHED BY</u>	<u>POWER REQUIRED</u>	<u>USE</u>
Subtask A601	8 x 30	User	15 kw	Control
Subtask A201	8 x 38	User	50 kw	Instrument
	8 x 38	User	35 kw	Instrument
LASL	8 x 40	User	10 kw	Technical Support
LASL	8 x 40	User	10 kw	Technical Support
LRL	8 x 40	User	50 kw to be provided from JOC for both LRL	Laboratory-
LRL	8 x 40	User	trailers	Laboratory

The existing Dynamic Balancing Facility (F&S No. 01113) will also be enclosed within the fenced area. A common substation containing a total capacity of 300 kva will supply the trailers, the Dynamic Balancing Machine Facility and will provide capacity for approximately seven additional trailers. Perimeter lighting will be provided along the fence.

JOHNSTON ATOLL

SUPPORT

F & S NO. 02042	TITLE Camp Operations Building					
USER TG 8.6	STRUCTURE/FACILITY NO. 512			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost			55.0	55.0	
TOTAL				55.0	55.0	

COMPLETED

DESCRIPTION The Camp Operations Building (completed in 1964) is a 40 x 100-ft. prefabricated steel frame structure, with corrugated aluminum siding and roofing and a concrete floor. A portion of the building is now being used for communications offices, and a shop area. The remainder of the building is utilized to satisfy space requirements associated with camp operations. Present planning indicates that the communications facilities will be moved to Building 316.

DRAWINGS: JS 91-512-A100, A101 and A104
JS 91-512-M100
JS 91-512-E100

F & S NO. 02045	TITLE Aircraft Taxiways and MAC Terminal Parking Area					
USER JTF	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8	PRE-GO					
MILCON	Prior Cost	18.6		495.8	514.4*	
CRO 10-65	FY 69			324.5	324.5	
CRO 7-66						
CRO 69-11	TOTAL	18.6		820.3	838.9	

PRIOR YEARS

ENGINEERING Completed. Drawings are as follows:

91-003-C1 and C2	91-006-E1 and E2
91-003-C24 thru C35	JS 91-003-C101 and C103
91-003-E9 thru E11	JS SK-003-C105 and C106
91-006-C1 thru C3	JS 91-003-E100

PROCUREMENT Completed.

CONSTRUCTION The Aircraft Taxiway System consists of a south taxiway (east and west sections only) and a north taxiway.

The east and west sections of the south taxiway were completed in 1967. These two completed sections which are approximately 5900-ft. in length, are located parallel to, and approximately 350-ft. south of the aircraft runway. This taxiway is a 75-ft. wide asphaltic concrete pavement with 50-ft. wide stabilized shoulders on each side. The west section of the Taxiway is approximately 4,100-ft. in length and extends from the west end of the runway to the crossover at the west end of the aircraft parking area. An intermediate crossover joins the west section with the runway. The east section of the taxiway is approximately 1,800-ft. in length and extends from the crossover at the east end of the aircraft parking area to the east end of the runway. Flush marker lights, 200-ft. on centers, are provided along each side of the taxiway and crossovers.

The north taxiway (resurfaced in 1967) is of asphaltic concrete pavement 75-ft. wide and approximately 6,000-ft. in length. It extends from the east end of the runway approximately 2,000-ft. in a westerly direction to a point approximately 900-ft. north of the runway and then in a southwesterly direction for about 4,000-ft. until it rejoins the runway approximately 3,000-ft. east of the west end.

The MAC terminal parking area (resurfaced in 1967) is located west of the MAC

terminal (Building T-307) and adjoins the north taxiway. The parking area comprises approximately 33,000 square yards of asphaltic concrete pavement.

FY-69

ENGINEERING In progress.

PROCUREMENT In progress.

CONSTRUCTION Approximately 25,000 square yards of parallel taxiway (center section of south taxiway) with the necessary lighting system will be constructed. The taxiway will be a 75-ft. wide asphaltic concrete pavement with 50-ft. wide stabilized shoulders on each side.

*Prior costs are for construction of south parallel taxiway (east and west sections). The remainder of the taxiway system was constructed prior to 1962.

F & S NO. 02047	TITLE Modification of PMR Spare Parts and Supply Building					
USER PMR	STRUCTURE/FACILITY NO. 1001			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY PMR	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	2.5		20.6	23.1	
	TOTAL	2.5		20.6	23.1	

COMPLETED

DESCRIPTION The PMR Spare Parts and Supply Building (Building 1001) on Akau Island is a 40 x 100 x 14-ft. high structure (completed in 1965) which provides an air conditioned environment for the storage of spare parts. Modifications included the enclosing of a 20 x 60-ft. spare parts area with partitions, providing the area with a suspended ceiling, full insulation and installation of a 7 1/2-ton air conditioning unit.

DRAWINGS: 116-1001-A1 and A3 116-1001-E1 and E2
 116-1001-M1 thru M4 116-002-E3 thru E5

F & S NO. 02048	TITLE Wing Tank Storage					
USER LASL	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD GO+60					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	POST-GO Planning Est. 3/65			3.0	3.0	
	TOTAL			3.0	3.0	

PROPOSED

ENGINEERING None Required

PROCUREMENT None Required.

CONSTRUCTION A 25 x 120-ft. compacted and well-drained area located south of Warehouse Building 725 will be used for the storage of sampler pods. This facility will replace the former Wing Tank Storage area (F&S No. 02010).

JOHNSTON ATOLL

SUPPORT

F & S NO. 02049	TITLE AGE, PE and A/C Area Lighting					
USER TG 8.4	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost	1.9		17.8	19.7	
	TOTAL	1.9		17.8	19.7	

COMPLETED

DESCRIPTION Aerospace ground equipment (AGE), personal equipment (PE), and aircraft ramp areas are provided with lighting sufficient for ground safety and to allow a view of personnel who may be entering a "hot area." All lights are mounted on 20-ft. high poles which are placed at approximately 100-ft. centers along the western half of the ramp (east of the AGE and PE areas). The poles are located a minimum of 65-ft. from the edge of the ramp, and are equipped with 500 to 1000 watt mercury vapor lamps. The lighting units along the west edge of the ramp are dual-directional, in order to provide lighting for both the aircraft ramp area and the personal equipment area. (Completed in 1965)

DRAWING: 91-095-CE1

F & S NO. 02050	TITLE AGE Parking Area and Shelter					
USER TG 8.4	STRUCTURE/FACILITY NO. 731			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	1.9		22.1	24.0	
	TOTAL	1.9		22.1	24.0	

COMPLETED

DESCRIPTION The aerospace ground equipment parking area is located south of the AF Warehouse (Building 725). The pad is 30 x 140-ft. of seal coated asphaltic concrete, and is of sufficient thickness to support a group of vehicles, the largest of which is a 4 wheeled (pneumatic tire) vehicle of 16,000 pounds, gross weight. (Completed in 1965.)

A 15 x 30 x 7-ft. high wood frame shelter, with corrugated asbestos siding and roof, is situated at the southwest corner of the AGE pad and is placed directly on the pad surface. Interior lighting and a workbench are provided in the building. The workbench, 2 1/2 ft. wide, extends along the east side of the wall. Three 110 volt duplex wall receptacles above the workbench are available.

The area joining the aircraft parking area with the personal equipment and storage building (Building 728), the future contaminated shelter (Building 730) and the AGE shelter is paved with asphaltic concrete. This paved area drains the water runoff caused by washdown of AGE equipment. (Completed in 1966.)

DRAWINGS: 91-075-C42 91-731-C1
 91-731-A1 91-097-SS1

F & S NO. 02051	TITLE B-57 Hangar					
USER LRL	STRUCTURE/FACILITY NO. 531			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	6.0		122.2	128.2	
	TOTAL	6.0		122.2	128.2	

COMPLETED

DESCRIPTION The hangar is a 52 x 76 x 20-ft. high steel frame building (completed in 1966) with asbestos cement siding and roof. The floor is a concrete slab equipped with tie downs and wheel chocks. Wing slots are located in the sides of the building to permit entry of an aircraft with longer wing span than the B-57C. The main opening of the hangar has a roll up canvas curtain capable of being lowered and secured after the aircraft is positioned in the hangar. The rope for lowering and securing the roll up curtain is made of a non-stretching synthetic material to reduce cable chafing of the curtain.

The interior of the building includes fluorescent lighting, floodlighting and electrical receptacles, plus electrical grounds in the concrete floor. One telephone is installed.

A paved area between the building and the aircraft parking area has been constructed. At the rear of the hangar, power driven double sliding doors, 8 x 10-ft. over a 16 x 25-ft. ramp are provided for use by AGE equipment after the aircraft is towed into the hangar. In addition there is a 6-in. wide painted strip on the hangar slab and down the taxiway centerline to facilitate ground towing of the aircraft.

DRAWINGS: F 91-531-C1 F 91-531-E1 and E2 JS 91-531-A100
F 91-531-M1 F 91-531-S1 thru S5

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JOHNSTON ATOLL

SUPPORT

F & S NO. 02053	TITLE Contaminated Equipment Shelter					
USER TG 8.4	STRUCTURE/FACILITY NO. 730			SCIENTIFIC STATION NO. None		BOD
	FOD GO+30					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	0.9	1.2		2.1	
	POST-GO					
	Est. 5/65			6.2	6.2	
	TOTAL	0.9	1.2	6.2	8.3	

PRIOR YEARS

ENGINEERING Completed.

Drawing: 91-730-A1

PROCUREMENT Completed.

POST-GO

CONSTRUCTION A 12 x 27 x 7-ft. high shelter with storage bins, 12 x 12 x 19-in. deep, 3 shelves high and 4 shelves wide for storage of "hot" aircraft parts will be constructed just west of the southwest corner of the Aircraft Parking Area. The shelter will be wood frame with corrugated asbestos siding and roof. The east and west ends require louvered walls for air flow. The east end will have a 6 x 6-ft. louvered door. The floor will be asphaltic cement and will be capable of supporting vehicles, the largest of which is 4 wheeled (pneumatic tire type) 6000-pounds gross weight.

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JOHNSTON ATOLL

SUPPORT

F & S NO. 02054	TITLE Additional Trailers					
USER TG 8.4	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost	2.2		13.8	16.0	1.7
	TOTAL	2.2		13.8	16.0	1.7

COMPLETED

DESCRIPTION Two (2) AEC-furnished 10 x 50-ft. trailers are being utilized for aircraft maintenance purposes. The trailers are air conditioned and provided with 120/208 volt power. One of the trailers which is partitioned and equipped with latrine facilities is tied into the existing utilities and sewer lines. (Completed in 1965.)

DRAWINGS: 91-058-A1 JS 91-058-E1

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F & S NO. 02055	TITLE AGE Parking Area					
USER TG 8.3	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD GO+30					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8 RDT&E	POST-GO Est. 1965	1.0		4.0	5.0	
	TOTAL	1.0		4.0	5.0	

POST-GO

ENGINEERING To be accomplished.

PROCUREMENT To be accomplished.

CONSTRUCTION A ground equipment parking area approximately 20 x 100-ft. will be required south of Building 287. The area will be concrete and of sufficient thickness to support a group of vehicles; the largest of which will be a 4 wheeled vehicle of 10,000 pounds gross weight. The parking areas will be connected to existing road work with a 12-ft. wide paved roadway.

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JOHNSTON ATOLL

SUPPORT

F & S NO. 02056	TITLE Administration and Maintenance Building					
USER TG 8.4	STRUCTURE FACILITY NO. 729		SCIENTIFIC STATION NO. None			BOD
	FOD					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	8.8			89.4	98.2
	TOTAL	8.8		89.4	98.2	8.3

COMPLETED

DESCRIPTION This building (completed in 1965) is a 40 x 120 x 14-ft. high steel frame structure with corrugated asbestos cement roof and siding. The concrete floor conforms to normal office standards, except for a 4000 pound wheel load capacity in the maintenance area. The maintenance shop is a 30 x 40-ft. area located at the west end of the building and separated from the rest of the building by a full height partition wall. The west wall of this area has a 10 x 10-ft. sliding door, and also one personnel door with lock and panic hardware. Three 10 x 10-ft. rooms and six 2 1/2 x 6 x 3-ft. high workbenches are provided. The remainder of the building is divided into office spaces and latrine facilities. All areas, except the maintenance shop, have 10-ft. high suspended ceilings, gypsum board walls, and are fully insulated. The interior of the building is illuminated by fluorescent lighting to an intensity of 40-ft. candles.

A drinking fountain is provided in the hallway outside the flight surgeons office. Rooms 103 and 104 only are air conditioned with window type units. A 14,000 cfm ventilating unit and ducting system provide ventilation to the remaining offices.

A concrete block walkway with corrugated asbestos roofing, and concrete floor connects the east entrance of Building 729 with the west end of Building 728. The stabilized parking area located south of the building provides parking space for ten vehicles.

DRAWINGS: 91-729-A1 thru A4 91-729-M1 and M2
 91-729-C1 91-729-E1 and E2
 91-729-S100 thru S102 JS 91-729-S104 and S105

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JOHNSTON ATOLL

SUPPORT

F & S NO. 02059	TITLE Base TACAN Facility					
USER TG 8.6	STRUCTURE FACILITY NO. 274			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8/ MILCON CRO 7-65	PRE-GO Prior Cost	2.0		39.8	41.8	
JTF-8/ RDT&E CRO 3-65						
	TOTAL	2.0		39.8	41.8	

COMPLETED

DESCRIPTION A new building to house equipment for the TACAN unit was constructed at the east end of Johnston Island south of the runway. The building is a 15 1/2 x 27-ft. wood frame structure on a concrete slab and is covered with corrugated asbestos cement siding and built-up roofing. The building was partitioned to provide approximately 178 square feet of space for a 30 kw standby generator. The remaining 244 square feet of the building provides air conditioned space to house TACAN equipment. A 30-ft. antenna tower was placed adjacent to the building. The Base TACAN Building is connected into the island electrical system and requires approximately 30 kw power for critical equipment and 15 kw for noncritical purposes.

DRAWINGS: JS 91-274-A100 and A101 JS 91-274-M100
 JS 91-274-C100 JS 91-274-E100
 JS 91-274-S100

JOHNSTON ATOLL

SUPPORT

F & S NO. 02065	TITLE Berms - Johnston Island					
USER SANDIA	STRUCTURE / FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO Prior Cost*			22.2	22.2	
	TOTAL			22.2	22.2	

COMPLETED

DESCRIPTION Berms have been constructed as follows:

<u>F&S NO.</u>	<u>BLDG. NO.</u>	<u>FACILITY</u>	<u>USER</u>
01015	724	Payload Checkout Building	SANDIA
01017	722	Payload Storage Igloos	SANDIA
01017	723	Payload Storage Igloos	SANDIA
01019	714	Rocket Assembly Building	SANDIA
01019	716	Rocket Assembly Building	SANDIA
01019	720	Rocket Assembly Building	SANDIA
01019	840	Rocket Assembly Building	SANDIA

Drawings: For drawings, refer to the above listed F&S Numbers.

*Engineering costs for berm design are included with the engineering cost for each facility.

JOHNSTON ATOLL

SUPPORT

F & S NO. 02066	TITLE Berms - Johnston Island					
USER JTF	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8/ MILCON CRO 7-65	PRE-GO Prior Cost*			58.4	58.4	
	POST-GO Est. 10/67			1.7	1.7	
TOTAL				60.1	60.1	

PRIOR YEARS

DESCRIPTION Berms have been constructed as follows:

<u>F&S NO.</u>	<u>BLDG. NO.</u>	
01004		AMICOM Launch Pads - East Peninsula
01004		AMICOM Launch Pads - West Peninsula
01012	881	Rocket Launch Control & Monitoring Bunker
01016	884	Warheading Building
01020	886	Nike Hercules Rocket Assembly Building
01023	974 & 976	Rocket Storage
01027	970 & 972	Igniter & Squib Storage Bunkers
01056	280	Field Maintenance & Battery Shop
01084	888	SOSR Rocket Assembly Building
01087	977, 978 & 979	Explosives Storage Bunkers
01104	964	Machine & Paint Shop
01105	878 & 960	Assembly Buildings
01106	876 & 962	Screen Rooms

Drawings: For drawings, refer to the above listed F&S Numbers.

POST-GO

ENGINEERING Completed.

CONSTRUCTION Construction of the berm located south of Building 976 (F&S No. 01023) and north of Post-GO Building 980 (F&S No. 01022) will be accomplished after subgrade preparation for Building 980 is complete.

*Engineering costs for berm design are included with the engineering cost for each facility.

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JOHNSTON ATOLL

SUPPORT

F & S NO. 02068	TITLE Paint Storage Shed					
USER TG 8.3	STRUCTURE/FACILITY NO. 66		SCIENTIFIC STATION NO. None			BOD
						FOD
FUNDING AGENCY JTF-8/ MILCON CRO 2-66	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost			14.8	14.8	
	TOTAL			14.8	14.8	

COMPLETED

DESCRIPTION The Paint Storage Shed (completed in 1966) is a prefabricated, 20 x 32-ft. metal building. Double doors, 6 x 7-ft. are provided at opposite ends of the building. Electrical power at 120/208 volts is provided for lighting and exhaust fan operation. The west two-thirds of the building is a storage area and east one-third is a paint mixing area. The two areas are separated by a full height steel stud and gypsum board wall.

DRAWING: JS 91-66-A100

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F & S NO. 02069	TITLE Aircraft Decontamination Facility Number 2					
USER JTF	STRUCTURE/FACILITY NO. 925			SCIENTIFIC STATION NO. None		BODGO+30
	FODGO+60					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO					
	Prior Cost	11.4	23.0		34.4	
	POST-GO					
	Est. 4/67			268.0	268.0*	
	TOTAL	11.4	23.0	268.0	302.4	

IN ORDER TO MEET THE REQUIRED FULL OCCUPANCY DATE AT GO+60, IT IS RECOMMENDED THAT ALL PROCUREMENT AND CONSTRUCTION BE ACCOMPLISHED PRE-GO.

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-925-C1 thru C5 91-925-E1 and E5

PROCUREMENT Procurement of long lead time items has been accomplished.

POST-GO

PROCUREMENT Procure remaining materials of construction.

CONSTRUCTION The Aircraft Decontamination Facility No. 2 will be located on the west end of the island between the runway center line and the west wharf. The decontamination facility will be a 125 x 300-ft. reinforced concrete pad 12-inches thick and will accommodate two RB-57F aircraft simultaneously. A 75-ft. wide ramp between the decon pad and the existing warm-up apron will enable either aircraft to be moved on or off the pad independently of the other.

The facility will be provided with three fresh water and three saltwater hydrants equipped with hoses, nozzles, and hose reels. These hydrants will be located in three pits equally spaced along the east edge of the decon pad. The fresh water-lines will be used to fill pump trucks for aircraft decontamination and the salt-water lines will be used for wash down of the decon pad. Waterproof power receptacles will be installed around the pad for portable lights. Aircraft tie-down and static electricity groundings will be imbedded in the concrete pad.

A 16-inch wide, grating-covered trench, for collecting runoff water will extend the entire length of the decon pad along the west side. From this trench, uncontaminated water runoff will be gravity drained directly to the lagoon north of the west wharf. The contaminated water originating from the aircraft wash down operations will be bypassed to a sump pit adjacent to a 6000-gallon reinforced concrete and plastic-lined holding tank. A sump pump will elevate the contaminated water into the holding tank. When the radioactive decay of the contaminated water has progressed satisfactorily, and the tide conditions in the west channel are favorable, the contaminated water in the holding tank can be released into the lagoon by opening a 6-inch valve. The uncontaminated and contaminated water are emptied into the lagoon via the same drain line. All existing facilities within 60 feet of the decontamination facility must be removed or relocated.

*This estimate includes:

1. A new substation
2. Resiting of Building 950
3. Blast paving of shoulders
4. Relocation of Asphalt Plant
5. Post-GO Procurement

JOHNSTON ATOLL

SUPPORT

F & S NO. 02070	TITLE Photo Trailer Complex - Subtask A 921					
USER TC	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD GO+45					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
DASA	POST-GO					
	Est. 2/68	2.8	10.1	18.1	31.0	
	TOTAL	2.8	10.1	18.1	31.0	

POST-GO

ENGINEERING To be accomplished.

PROCUREMENT To be accomplished.

CONSTRUCTION This facility will consist of a TC furnished 50-ft. photo trailer, two TC furnished 50-ft. office trailers and an 8 x 8-ft. walk-in refrigerator. The three trailers will be arranged in a "U" shaped layout located in an area adjacent to and west of the JOC. Approximately 400 amps of 220 volt, 60 cycle, 3 phase power is required for the complex. The photo trailer requires fresh water at the maximum rate of 10 gallons per minute with suitable drainage.

F & S NO. 02071	TITLE Generator Shelter					
USER SANDIA	STRUCTURE/FACILITY NO. 741			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
Cost incurred under minor construction funds.						

COMPLETED

DESCRIPTION The Generator Shelter (completed in 1964) is located west of the Command and Tracking Center (Building 660). The shelter is a 36 x 36 x 10-ft. high, wood frame structure with plywood siding, corrugated aluminum roof and concrete floor. This building houses two Sandia-furnished engine driven no-break power generators which supply scientific power to Building 660. The shelter was modified in 1967 to include a Sandia furnished dehumidifier for protection of the generators.

DRAWINGS: 91-660-E6 JS 91-660-S103 JS 91-660-E100



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JOHNSTON ATOLL

SUPPORT

F & S NO. 02072	TITLE Maintenance Material Storage Building					
USER TG 8.6	STRUCTURE / FACILITY NO. 314		SCIENTIFIC STATION NO. None			BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION The building is located in the vicinity of the Base Maintenance and Welding Shop (Building 316) and is used primarily for the temporary storage of combustible maintenance liquids, such as paint. The building is of all metal construction with steel frame and corrugated aluminum siding and roofing. The floor is concrete. The structural dimensions are 18.5 x 27-ft. with an eave height of 11.5-ft.

DRAWING: JS 91-314-A100.0

F & S NO. 02073	TITLE Paint Storage Building					
USER TG 8.6	STRUCTURE/FACILITY NO. S-73			SCIENTIFIC STATION NO.		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8 CRO 2-66	PRE-GO Prior Cost			14.8	14.8	
	TOTAL			14.8	14.8	

COMPLETED

DESCRIPTION The Paint Storage Building is a 7 x 12-ft. wood frame structure with asbestos siding and roof and concrete floor.

DRAWING: JS 91-73-A100.0

JOHNSTON ATOLL

SUPPORT

F & S NO. 02074	TITLE Security Incinerator Shelter					
USER JTF	STRUCTURE FACILITY NO. 25		SCIENTIFIC STATION NO.			BOD
	FOD					
FUNDING AGENCY JTF-8 CRO 2-66	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost			*13.6	13.6	
TOTAL				*13.6	13.6	

COMPLETED

DESCRIPTION The incinerator, located just west of Building 20 (JOC), is housed in a 13 x 17-ft. steel frame structure with corrugated asbestos roof and partial height walls. The incinerator is a gas fired commercial furnace approximately 7 x 8-ft. (Completed in 1967)

DRAWING: JS 92-020-S100A

*Includes procurement of incinerator

F & S NO. 02075	TITLE Tide Gage House					
USER ESSA	STRUCTURE/FACILITY NO. 2		SCIENTIFIC STATION NO.			BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION The existing Tide Gage House is a 6 x 6-ft. wood frame building situated at the end of a 30-ft. pier over the open ocean. Inside the building is the upper end of a 12-in. pipe that extends from the ocean bottom and is used for obtaining steady tide level readings. Approximately 8-ft. of the lower end of the pipe is perforated with holes, above which is a 1-in. orifice plate.

DRAWINGS: JS 91-038-S2.A JS 91-038-S3.A JS 91-038-S100.A

JOHNSTON ATOLL

SUPPORT

F & S NO. 02076	TITLE 1957 th Communications Group Building					
USER TG 8.6	STRUCTURE/FACILITY NO. 30			SCIENTIFIC STATION NO.		BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION The building is of concrete construction and is 21 x 97-ft. with a small wing addition 16 x 18-ft. The building is utilized as an administration office. It is air conditioned throughout.

DRAWINGS:

JS 91-30-AE-100.A	JS 91-30-M-100.C
JS 91-30-E100.C	JS 91-30-M-101.B
JS 91-30-E101.A	JS 91-30-S-100.C
JS 91-30-E102.A	JS 91-30-S-101.A

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JOHNSTON ATOLL

SUPPORT

F & S NO. 02077	TITLE Harbor Control Building					
USER TG 8.3 TG 8.5	STRUCTURE/FACILITY NO. 110		SCIENTIFIC STATION NO. None			BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
Costs prior to 1963						

COMPLETED

DESCRIPTION The building, completed prior to 1963, is 25 x 60-ft. and is a two (2) story, wood frame structure. An outside stairway and balcony provide access to the second story level. The second floor is presently being utilized by TG 8.3 for administrative offices; at GO TG 8.5 will occupy these offices. The ground floor provides space for storage and workshop. Unit air conditioners are utilized in various rooms.

DRAWINGS: JS 91-110-M100

JS 91-110-S100

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F & S NO. 02078	TITLE Administration and Operations Building					
USER TG 8.3	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	POST-GO Est. 3/69			139.0	139.0	
	TOTAL			139.0	139.0	

POST-GO

ENGINEERING To be initiated upon approval and availability of funds.

PROCUREMENT To be initiated upon availability of funds.

CONSTRUCTION This building will be located south of Warehousing Building 287. A 40 x 120 x 14-ft. high steel frame structure with corrugated asbestos cement roof and siding will be constructed. The concrete floor will conform to normal office standards except for a 4000 pound wheel load capacity requirement in the maintenance area. The maintenance shop will be a 30 x 40-ft. area located at the west end of the building and separated from the rest of the building by a full height partition wall. The west wall of this area will have a 10 x 10-ft. sliding door, and also one personnel door with lock and panic hardware. Three 10 x 10-ft. rooms and six 2 1/2 x 6 x 3-ft. high workbenches will be provided. The remainder of the building will be divided into office spaces and latrine facilities. All areas, except the maintenance shop will be fully insulated and will have 10-ft. high suspended ceilings and gypsum board walls. The interior of the building will be illuminated to an intensity of 40-ft. candles.

F & S NO. 02079	TITLE Engineering Office					
USER JTG 8.6	STRUCTURE/FACILITY NO. 518		SCIENTIFIC STATION NO. None			BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION Building 518 is a 66 x 112-ft. structure with wood frame and siding, corrugated asbestos cement roof, and a concrete floor. The building was constructed prior to 1960 with the interior remodeled a number of times since. The Holmes & Narver, Inc. engineering office occupies the east 67-ft. of the building. Included within the engineering office space is a Reproduction Room equipped with both Bruning and Ozalid print machines for drawings reproduction. With the exception of one 15 x 31-ft. room in the southeast corner of the area, the entire engineering office space is air conditioned. The Reproduction Room has its own air conditioning system. The west 45-ft. of the building is not air conditioned and is used at present for miscellaneous purposes; including a Reproduction Shop, and a Survey and Soil Testing Laboratory. It is planned to convert the west 45-ft. of the building into a Central Bakery (refer to F&S No. 0302C). A 30-ft. wide strip between Building 518 and the sidewalk adjacent to Arnold Avenue is asphalt paved to provide vehicle parking space.

DRAWINGS: JS 91-518-A102 thru A104 JS 91-518-M100 and M101
 JS 91-518-E100, E101, E103 District File 105-10-1 Sheet 30

[REDACTED]

JOHNSTON ATOLL

SUPPORT

F & S NO. 02080	TITLE Headquarters Bunker					
USER TG 8.6	STRUCTURE/FACILITY NO. 202		SCIENTIFIC STATION NO. None			BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
Costs prior to 1963						

COMPLETED

DESCRIPTION This structure is a 41 x 51-ft. reinforced concrete, earth covered bunker with a concrete floor. The building is equipped to provide administrative space and is completely air conditioned.

DRAWINGS: JS 91-202-A100 JS 91-202-M101
 JS 91-202-E100 JS 91-202-M102
 JS 91-202-E101 JS 91-202-S100
 JS 91-202-M100

[REDACTED]

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JOHNSTON ATOLL

SUPPORT

F & S NO. 02081	TITLE Cold Storage Plant					
USER TG 8.6	STRUCTURE FACILITY NO. 120 (west)			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION: The Island Cold Storage Plant is utilized for the storage of perishable food and is located in a space measuring 80 x 120-ft. at the west end of Building 120. The space includes a Machine Room for the refrigeration equipment, an Ice Room, a Freezer Room, a Dairy Chill Room, a Fruit and Vegetable Chill Room, a Meat Cutting Room, a Meat Freezer Room, and an Issue Room. An 11 x 16-ft. office is located on the loading ramp outside the building proper. Supplementary Cold Storage space is obtained by utilizing portable reefer units located just west of Building 120. A corrugated aluminum roof has been erected over the reefers to provide shade from the sun. Building 120 was erected prior to 1960. The walls are concrete block and the roof is corrugated asbestos cement. An insulated concrete block partition wall separates the cold storage area from the ADC Laboratories located in the east half of the building. The east portion of the building is described under F&S No. 81013.

<u>DRAWINGS:</u>	JS 91-120-A100	JS 91-120-S101	JS 91-120-E102
	JS 91-120-A104	JS 91-120-M100	JS 91-120-E105
	JS 91-120-A106	JS 91-120-M106	JS 91-120-E106
		JS 91-120-E100	JS 91-120-E107

District File No. 105-10-1, Sheets 21 and 22

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[REDACTED]

JOHNSTON ATOLL

SUPPORT

F & S NO. 02083	TITLE Basketball Court					
USER JTF	STRUCTURE/FACILITY NO. 312			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION The basketball court is a standard 50 x 84-ft. outdoor facility. The surface is concrete paved. Spectator seating is provided by a wooden bench grandstand adjacent to the court. The facility is floodlighted.

DRAWING: JS 91-312-A100

[REDACTED]

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JOHNSTON ATOLL

SUPPORT

F & S NO. 02084	TITLE Time Office					
USER TG 8.6	STRUCTURE/FACILITY NO. 500			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION This is a 19 x 29-ft. wood frame building with wooden walls, corrugated metal roofing and concrete floor. At present, the structure is being utilized by Holmes & Narver, Inc. as a Timekeepers' Office.

DRAWING: District File 105-10-1, Sheet No. 27 JS 91-500-E100A

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F & S NO. 02085	TITLE Cistern					
USER TG 8.6	STRUCTURE/FACILITY NO. 629		SCIENTIFIC STATION NO. None			BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION This is a 16-ft. diameter x 8-ft. high (13,000 gallon capacity) metal water storage tank mounted on a concrete base. The tank is located adjacent to Fire Station, Building 627 and is used to collect rainwater draining from the roofs of Buildings 627 and 692. The water is used for filling fire engine tanks, flushing foam tanks, and other miscellaneous purposes.

DRAWING: JS 91-508-A100.0

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JOHNSTON ATOLL

F & S NO. 02086	TITLE Runway Lighting Control Vault					
USER TG 8.6	STRUCTURE/FACILITY NO. 219		SCIENTIFIC STATION NO. None			BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION The structure is an "L" shaped reinforced concrete underground bunker. The leg of the "L" measures 12 x 21-ft. with the foot measuring 12 x 13-ft. (406 square feet of interior space). The bunker is almost completely filled with runway lighting control equipment and a 60 kw standby diesel generator.

DRAWINGS: JS 91-219-S101.0 JS 91-219-E101.A

~~CONFIDENTIAL~~

F & S NO. 02088	TITLE Pesticide (Paint) Storage Building					
USER TG 8.6	STRUCTURE/FACILITY NO. 300			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
Costs prior to 1963						

COMPLETED

DESCRIPTION The building is located inside and at the west end of the fenced-in warehouse area. The structure is 14 x 50-ft. with an inside height of 13-ft. The roof is corrugated aluminum. The siding is canvas, reinforced with wooden strips. One of the four bays is open at the front. The floor is unsurfaced and consists of natural coral aggregate.

DRAWING: JS 91-300-A100.0

~~CONFIDENTIAL~~

JOHNSTON ATOLL

SUPPORT

F & S NO. 02089	TITLE Administrative Building					
USER TG 8.6	STRUCTURE/FACILITY NO. 246		SCIENTIFIC STATION NO. None			BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION The building is of temporary construction, 31 x 54-ft., wood framed walls and floor and a corrugated metal roof. The building has been used as an Administrative headquarters and has lighting and partitions normal for that activity. The building is not air conditioned; however, window units have been employed in some rooms.

DRAWING: JS 91-246-A100

~~CONFIDENTIAL~~

F & S NO. 02090	TITLE Administrative Building					
USER JTF	STRUCTURE/FACILITY NO. 218		SCIENTIFIC STATION NO. None			BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
Costs prior to 1963						

COMPLETED

DESCRIPTION The building is a 24 x 105 x 10-ft. high wood frame structure with wood floors and siding and corrugated metal roof. The building has been employed as an Administrative Building and has partitions and lighting normal for that activity. The building is not air conditioned; however, window units have been employed in some rooms.

DRAWINGS: JS 91-218-A100 JS 91-218-E100
District File 105-10-1, Sheet #37

~~CONFIDENTIAL~~

JOHNSTON ATOLL

SUPPORT

F & S NO. 02091	TITLE Bunker					
USER JTF	STRUCTURE FACILITY NO. 221		SCIENTIFIC STATION NO. None			BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION The structure is a hemispherical reinforced concrete underground bunker. Inside space measures 25 x 48 x 12-ft. 6-in. high.

DRAWINGS: District File No. 105-10-1 Sheet 38

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

JOHNSTON ATOLL

SUPPORT

F & S NO. 02092	TITLE Storage Building					
USER TG 8.6	STRUCTURE/FACILITY NO. 368			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION The building is a wood frame and sided structure attached to the Carpenter Shop Building 327. Building dimensions are 45 x 50-ft. The building at present is being used as a canvas storage and repair shop

~~CONFIDENTIAL~~

JOHNSTON ATOLL

SUPPORT

F & S NO. 02093	TITLE Welding Shed					
USER TG 8.6	STRUCTURE/FACILITY NO. 317		SCIENTIFIC STATION NO. None			BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION The structure is located in the vicinity of the main Base Maintenance and Welding Shop and has been employed as a supplemental Welding Shop. The structure is of all metal construction with a steel frame and corrugated aluminum roof; the sides are open; the floor is concrete. Building dimensions are 24 x 40-ft. with an eave height of 12-ft.

DRAWING: JS 91-317-A101.0

~~CONFIDENTIAL~~

JOHNSTON ATOLL

SUPPORT

F & S NO. 02094	TITLE Storage Building					
USER TG 8.6	STRUCTURE/FACILITY NO. 326			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION This building is a 14 x 14-ft. structure with concrete floor, walls and roof. It is currently used for the storage of roofing material.

~~CONFIDENTIAL~~

F & S NO. 02095	TITLE Shop Building					
USER TG 8.6	STRUCTURE/FACILITY NO. 327			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
Costs prior to 1963						

COMPLETED

DESCRIPTION The building at present is being used as a carpenter shop. Overall dimensions of the structure are 62 x 100-ft. The eave height of the 30-ft. wide center high bay area is 20-ft. The eave height of the two 16-ft. wide wings is 9-ft. 10-in. The building frame and walls are wood. The roof is covered with rolled roofing paper. The floor is concrete.

DRAWINGS: JS 91-327-S102.B JS 91-327-E101.A
 JS 91-327-S103.0 JS 91-327-E102.0
 JS 91-327-E100.A

~~CONFIDENTIAL~~

JOHNSTON ATOLL

SUPPORT

F & S NO. 02096	TITLE Equipment Shed					
USER TG 8.6	STRUCTURE/FACILITY NO. 310			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION The shed is located just off the parking apron near the MAC terminal. The shed has been employed for housing fire extinguishers and miscellaneous small tools and equipment required for loading and unloading airplanes. The structure is 6 x 30 x 5.5-ft. high with a 4-ft. roof overhanging on the apron side. The building frame is wood; the siding and roofing are corrugated aluminum; and the floor is concrete. The front of the building is open.

~~CONFIDENTIAL~~

F & S NO. 02097	TITLE Warehouse					
USER TG 8.6	STRUCTURE/FACILITY NO. 302		SCIENTIFIC STATION NO. None			BOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
Costs prior to 1963						

COMPLETED

DESCRIPTION This building is a 40 x 100-ft. wood frame and siding structure with eave height of 13-ft. The roof is covered with rolled roofing paper. The floor is concrete.

DRAWINGS: District File No. 105-10-1, Sheet 24.



JOHNSTON ATOLL

SUPPORT

F & S NO. 02098	TITLE Warehouse					
USER TC	STRUCTURE FACILITY NO. 303			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION This building is a 40 x 100-ft. wood frame and siding structure with eave height of 13-ft. The roof is covered with rolled roofing paper. The floor is concrete.

DRAWINGS: U. S. Navy Public Works Drawing A-11-5

The building is similar to Building No. 302 which is described in District File No. 105-10-1, Sheet 24.



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JOHNSTON ATOLL

SUPPORT

F & S NO. 02099	TITLE Bunker					
USER TC	STRUCTURE / FACILITY NO. 200			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION This facility was built prior to 1963 and is located on the high ground area of J. I. north of the runway. It is approximately 20 x 73-ft. and is a poured in place, reinforced concrete structure. The interior is partitioned into four (4) rooms. The bunker has access from both the north and south sides. Air conditioning, lighting and power are provided. The facility has not been in use since 1963 and is in need of repair.

DRAWINGS: JS 91-200-S1 JS 91-200-M1 JS 91-200-E1 and E2

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JOHNSTON ATOLL

SUPPORT

F & S NO. 02100	TITLE Bunker					
USER TC	STRUCTURE/FACILITY NO. 201			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION This underground bunker (completed prior to 1963) is a 9 x 18-ft. reinforced concrete structure. It is presently being used for paint storage.

DRAWINGS: None Available.

~~CONFIDENTIAL~~

JOHNSTON ATOLL

SUPPORT

F & S NO. 02101	TITLE Weather Center, U. S. Weather Bureau (USWB)					
USER ESSA	STRUCTURE FACILITY NO. Building 530			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION The present weather facilities (completed prior to 1963) are located south of the runway approximately 3,000-ft. from the east end of the island. The 21 x 35-ft. building, including a balloon inflation shelter, has a concrete floor, concrete block walls, a built-up wood frame roof and a 16-ft. fiberglass enclosed radar dome. An emergency generator is housed in a 9 x 12-ft. generator shed. Utilities include fresh and saltwater, sewer, 110/220 volt power, four window type air conditioners, telephone and teletype. Technical equipment consists of radiosonde receiver, GMD-radar unit, theodolite units, rain gages and other related instruments. Six U. S. W. B personnel man this facility on a 24 hour schedule. This facility is scheduled to be relocated; refer to F&S No. 02034 for a description of the new installation.

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JOHNSTON ATOLL

SUPPORT

F & S NO. 02102	TITLE Waikiki Club					
USER JTF	STRUCTURE/FACILITY NO. T-130			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION The Waikiki Club, situated adjacent to the shoreline on the north side of the island, provides a recreational facility that dispenses food, drinks and games. The structure is approximately 64 x 71-ft., the majority of which is a patio area and is covered with a corrugated translucent plastic roof. The sides around the patio area are either open or enclosed with partial height vertical louvers. One end of the facility is equipped with a kitchen in which there is a charcoal broiler, grill, deep fry, food warmers, reefers, sinks and serving counter. There is also a toilet and janitors maintenance room.

DRAWINGS: JS 91-130-A102 JS 91-130-M100
 JS 91-130-S100 thru S103 JS 91-130-E100 and E101

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JOHNSTON ATOLL

SUPPORT

F & S NO. 02103	TITLE Navy Diving Locker					
USER TG 8.3	STRUCTURE/FACILITY NO. 129		SCIENTIFIC STATION NO. None			BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION This wood framed building is 8 x 17-ft. with plywood siding, corrugated aluminum roof and a concrete floor.

DRAWING: JS 91-128-A100.0

~~CONFIDENTIAL~~

F & S NO. 02104	TITLE Commander's Residence - Point House					
USER JTF	STRUCTURE/FACILITY NO. T-1			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
Costs prior to 1963						

COMPLETED

DESCRIPTION The Commander's residence is a one story, wood-frame, asbestos shingle, gable roofed building with 3 bedrooms, living room, kitchen and two bathrooms. This 1,219 square foot building is built on a promontory which projects into the turning basin on the northeast side of Johnston Island, north of the saltwater pump station and the new mess hall. Because of the location on the promontory, it is often referred to as the Point House.

DRAWINGS: JS SK-F-012-A102 and A103

JOHNSTON ATOLL

SUPPORT

F & S NO. 02107	TITLE Radio and TV Station					
USER TG 8.6	STRUCTURE FACILITY NO. 28			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY JTF-8/ RDT&E CRO 2-67	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO FY-69			24.3	24.3	
	TOTAL			24.3	24.3	

COMPLETED

DESCRIPTION The Radio and TV Station is a 29 x 42-ft. building of wood frame construction with exterior walls of asbestos cement board. The building has the following rooms:

- 101 TV Control Room
- 102 Film Library
- 103 Recorder Library
- 104 Radio Transmitter Room
- 105 Announcers' Booth
- 106 Master Control
- 107 Radio Control
- 108 Latrine

The building is air conditioned and dehumidified and provided with electrical power at 120/208 volt, 60 cycle, 3 phase. A 110-ft. tower for antennas is located adjacent to the building. (Completed in October 1968).

DRAWINGS: JS 91-28-A102 JS 91-28-E101, E102 and E103
JS 91-28-M100

F & S NO. 02108	TITLE MARS Station Trailer					
USER TG 8.6	STRUCTURE/FACILITY NO. 633		SCIENTIFIC STATION NO. None			BOD
	FOD					
FUNDING AGENCY JTF-8 MILCON CRO 2-67	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
Costs included in F&S No. 02107						

COMPLETED

DESCRIPTION The MARS (Military Affiliate Radio System) Station was formerly located in Building 634, which has been relocated and redesignated as Building 28. The MARS Station is now located in a 10 x 30-ft. trailer located immediately east of the Base Beacon Tower (Building 635). The trailer and associated modifications were completed in 1968. Ham radio facilities and a shop area are located in the trailer.

DRAWINGS: None Available.

[REDACTED]

JOHNSTON ATOLL

SUPPORT

F & S NO. 02109	TITLE Electronics Shop					
USER TG 8.3	STRUCTURE/FACILITY NO. 125		SCIENTIFIC STATION NO. None			BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION The Electronics Shop (completed prior to 1963) is a 17 x 33 x 8-ft. high structure with concrete floor, walls and roof. The building is utilized for the repair of electronics equipment.

DRAWINGS: District File No. 105-10-1 Sheet 70.

[REDACTED]

~~CONFIDENTIAL~~

JOHNSTON ATOLL

SUPPORT

F & S 02110	TITLE Marine Shop					
USER TG 8.6	STRUCTURE/FACILITY NO. 127			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963.					

COMPLETED

DESCRIPTION The Marine Shop (completed prior to 1963) is a 21 x 32 x 11-ft. high structure with concrete block walls, a concrete floor and cement asbestos roofing. The building is utilized as a boat repair shop.

DRAWINGS: District File No. 105-10-1 Sheet 51.

2-101
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JOHNSTON ATOLL

SUPPORT

F & S NO. 02111	TITLE Building 513					
USER None	STRUCTURE/FACILITY NO. 513		SCIENTIFIC STATION NO. None			BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963.					

COMPLETED

DESCRIPTION The building (completed prior to 1963) is an irregular shaped wood framed structure providing approximately 5,000 square feet of space. It has plywood and corrugated metal siding, a concrete floor and corrugated metal roofing. The building was formerly used as the Machine and Sheet Metal Shop and is at present unoccupied.

DRAWINGS: JS 91-513-S100 District File 105-10-1 Sheet 48.
JS 91-513-E100

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JOHNSTON ATOLL

SUPPORT

F & S NO. 02112	TITLE Fire Station					
USER TG 8. 6	STRUCTURE/FACILITY NO. 627		SCIENTIFIC STATION NO. None			BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION The Fire Station (completed prior to 1963) is a 37 x 100 x 13-ft. high wood framed structure with corrugated aluminum siding and roofing and a concrete floor. The building houses a garage for the parking of fire fighting apparatus, a lounge area, a repair shop and storage rooms. Four 12 x 12-ft. openings are provided on the south side of the building for ingress and egress of the fire fighting apparatus.

DRAWINGS: District File 105-10-1 Sheet 36.

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JOHNSTON ATOLL

SUPPORT

F & S NO. 02113	TITLE NCO Club					
USER JTF	STRUCTURE FACILITY NO. T-203			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY JTF-8 CRO 2-65	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost			10.0	10.0*	
	TOTAL			10.0	10.0	

COMPLETED

DESCRIPTION This building (originally completed prior to 1963) is a wood frame structure containing 12,200 square feet of recreational facilities. The recreation facilities consist of a cocktail lounge, a game room, an office, a latrine and a covered patio (lanai). The lanai (completed in 1966) is a 48 x 86 x 8-ft. high patio area sheltered by a wood frame roof covered with translucent corrugated plastic panels, and enclosed by a 3-ft. high concrete block wall.

DRAWINGS: JS 91-203-A103 thru A106 JS 91-203-E101 thru E105
 JS 91-203-A108 thru A110 JS 91-203-M100

*Costs shown are for modifications only. Original cost of building was incurred prior to 1963.

~~CONFIDENTIAL~~

F & S NO. 02114	TITLE Air/Ground Communications Facilities					
USER TG 8.6	STRUCTURE/FACILITY NO. 505, 506, 507 and 508			SCIENTIFIC STATION NO.		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8/ RDT&E CRO 3-65	PRE-GO Prior Cost			18.4	18.4*	
	TOTAL			18.4	18.4	

COMPLETED

DESCRIPTION The Control Tower (Building 505) is an 18 x 21 x 62-ft. high structure (completed prior to 1963). The tower has six floor levels as follows: a ground floor; two (2) intermediate floors; a junction room floor; an equipment room floor and a control room floor. A steel platform with guard rails is provided around the perimeter of the tower approximately 3-ft. below the control room floor. The control room is hexagonally shaped and is glazed with double paned glass set in aluminum sash. Steel pipe railing is provided around the perimeter of the roof on which is located antennas and warning lights. Metal stairs and handrails, located within the tower, provide access to all floor levels.

The tower is basically a steel frame structure with concrete block walls on the lower level; exposed steel frame walls on the middle levels; corrugated asbestos cement walls from the junction room level to the steel platform; and insulated metal panel walls from the platform to the control room windows. The roof is constructed of built-up roofing. The ground floor provides space for a generator room, cable trenches and the steel stairs. Both intermediate floors contain the stairs, rest platforms and raceways for ducting. The junction room and equipment room floors provide space for equipment associated with control of aircraft. The control room provides space for traffic controllers and communications equipment.

A wood frame 53-ft. high antenna tower (Building 506), measuring 20 x 20-ft. in plan, is located on the west side of Building 507. A 10-ft. high pole with crossarm is provided on top of the tower on which is mounted a tactical communications antenna. The tower was completed in 1965.

The Air/Ground Tactical Communications Building (Building 507) is a 24 x 68 x 10-ft. high structure with a 13 x 34 x 10-ft. high extension located on the south side of the main structure. The building (completed prior to 1963) is constructed of concrete block walls with a concrete floor and corrugated asbestos cement roof.



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JOHNSTON ATOLL
02114

SUPPORT
Page 2

The building houses office space, the Air/Ground equipment room, an air conditioning room and a communications annex. Cable trays and associated equipment were installed in 1965.

The Generator Shed (Building 508) is a 17 x 22 x 12-ft. high wood framed structure (completed prior to 1963) with a concrete floor and corrugated aluminum siding and roofing. The building houses two (2) 60 kw emergency generators which provide backup power for the equipment in Building 507.

DRAWINGS: JS 91-507-S102 JS 91-508-A100
 JS 91-507-W100 District File 105-10-1 Sheets 28 and 29

*Costs shown are for Building 506 (Antenna Tower), the modifications to Building 507 plus those items listed under F&S No. 04022 only. All other costs were incurred prior to 1963.

~~CONFIDENTIAL~~

F & S NO. 0301A	TITLE EM Barracks					
USER JTF	STRUCTURE/FACILITY NO. 250, 251 and 252			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	69.5		3225.7	3295.2	96.0
	TOTAL	69.5		3225.7	3295.2	96.0

COMPLETED

DESCRIPTION The barracks are 4-story buildings and were completed in 1964. Buildings 251 and 252 are 32 x 300 x 42-ft. high and Building 250 is 32 x 280 x 42-ft. high. The building frames, and walls, first and basement floors, and interior shear walls are of reinforced poured in place concrete. The upper floors and roof are topped precast prestressed concrete "double T" members. The walls of the central latrines and shower facilities on each floor, other than those constituted by the poured concrete shear walls, are of concrete block. The side walls of the living quarters and the Recreation Room located on the first floor are covered with adjustable sash of aluminum and glass. A 58-ft. long basement is included at the north end of each building, largely occupied by the hot water heating, storage, and distribution facilities. Semi-movable partitions divide the living spaces into 2-man cubicles, each provided with a washbasin.

The designed capacity of Building 250 is 288 men and 320 men for each of Buildings 251 and 252.

DRAWINGS:

91-250-C1 thru C4	91-251-C1 thru C4
91-250-A1 thru A6	91-251-A1 thru A6
91-250-S1 thru S19	91-251-S1 thru S19
91-250-M1 thru M12	91-251-M1 thru M12
91-250-E1 thru E6	91-251-E1 thru E6
JS 91-250-E100	JS 91-251-E101 and E102

F & S NO. 0301D	TITLE EM Barracks					
USER JTF	STRUCTURE/FACILITY NO. 414, 418 and 690			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	45.3		2023.8	2069.1	213.5
	TOTAL	45.3		2023.8	2069.1	213.5

COMPLETED

DESCRIPTION These barracks (completed in 1964) are 4-story buildings with reinforced concrete frames and concrete block walls. The roof is designed to support 50 psf live loads. A recreation room is provided on the first floor. Semi-movable partitions divide the living space into 2-man cubicles, each provided with a washbasin. Central latrine and shower facilities are provided on each floor. Buildings 414 and 418 are 32 x 162 x 42-ft. high; Building 690 is 32 x 162 x 42-ft. high.

Buildings 414 and 418 each provide living quarters for 212 men; Building 690 accommodates 168 men.

DRAWINGS:

- | | |
|-------------------------|---------------------|
| 91-414-C1 and C2 | 91-690-C1 |
| 91-414-A1 thru A6 | 91-690-A1 thru A6 |
| 91-414-S1 thru S4 | 91-690-S1 thru S3 |
| 91-414-SS2 thru SS4 | 91-690-SS2 thru SS4 |
| 91-414-M1 thru M12 | 91-690-M1 thru M12 |
| 91-414-E1 thru E5 | 91-690-E1 thru E5 |
| JS 91-414-C100 | JS 91-690-W100 |
| JS 91-414-S102 and S103 | |

F & S NO. 0301G	TITLE Professional Barracks					
USER JTF	STRUCTURE/FACILITY NO. 16 and 18			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost	43.1		2311.3	2354.4	118.2
	TOTAL	43.1		2311.3	2354.4	118.2

COMPLETED

DESCRIPTION These barracks are 41 x 241 x 40-ft. high 4-story structures with reinforced concrete frames. Each floor contains 2-man rooms with louvered glass exteriors. Access is from an open balcony. Each pair of rooms shares two built-in closets, a shower and lavatory and toilet facilities. The roof is designed to support 100 psf live loads. A recreational lounge is provided on the first floor. Building 16 was completed in 1964 and Building 18 was completed in 1965, each provide living quarters for 232 men.

DRAWINGS: 91-16-C1 91-16-S1 thru S3 91-16-M1 thru M10
 91-16-A1 thru A8 91-16-SS2 thru SS4 91-16-E1 thru E5



JOHNSTON ATOLL

SUPPORT

F & S NO. 0301N	TITLE Apartments					
USER JTF	STRUCTURE FACILITY NO. 290, 291, 293, 294, 691, 692, 694, 695, 696, 697, 698, 699			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY N/A	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
Costs prior to 1963						

COMPLETED

DESCRIPTION These facilities were completed prior to 1963. Twelve 25 x 150-ft., 2 story, concrete block apartment buildings were converted to officer/professional type accommodations and house 30 men per building. Each building has 6-3 bedroom units with approximately 1500 sq. ft. of area per unit; three apartments are on the first level and three on the second level. Each apartment is complete with kitchen, bath and a combination living and dining area.

DRAWINGS: 25-28-01 Sheets 3, 4, 9, 10, 10A, 11, 12, 12A, 12B, 13 & 14
District File No. 105-10-1



F & S NO. 0301P	TITLE V. I. P. Quarters					
USER JTF	STRUCTURE/FACILITY NO. 295, 296 and 297			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY N/A	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
Costs prior to 1963						

COMPLETED

DESCRIPTION These facilities were completed prior to 1963. The three 25 x 50-ft., single-story 3 bedroom V. I. P. quarters house 3 men per building. The quarters are complete with kitchen, bath and living/dining room facilities.

DRAWINGS: 25-28-01 Sheets 6, 7, and 8 District File No. 105-10-1

F & S NO. 0301Q	TITLE EM Barracks					
USER JTF	STRUCTURE/FACILITY NO. S-412 and S-420			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY N/A	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
Cost prior to 1963						

COMPLETED

DESCRIPTION These 2 story, H-shaped, wood framed, wood sheathed barracks were previously used to accommodate 220 enlisted men in each building. The dormitory type accommodations (2 man cubicles) included centrally located latrines on each floor. A recreation lounge was located on the first floor of each barracks; storage, janitorial and equipment space was also provided.

The two structures have deteriorated to the extent that they are now considered unfit for use as dormitories and are beyond economical repair. No further rehabilitation or repair is planned. Both buildings are currently in use to a limited degree only; Building 412 for recreational purposes and Building 420 for storage.

DRAWINGS: 25-28-01 Sheets 22 and 23 District Files No. 105-10-1

F & S NO. 0301R	TITLE EM Barracks					
USER JTF	STRUCTURE/FACILITY NO. 520 and 521			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION These barracks are 3-story buildings, 37 x 220 x 30-ft. high, of concrete block construction. Each floor contains 24-2 man rooms, for a total of 144 men per barracks; centrally located latrines; a recreational lounge; and laundry facilities. Each barrack is also provided with storage, janitorial, and equipment space.

DRAWINGS: 25-28-01 Sheets #30 and 31, District File No. 105-10-1.

F & S NO. 0301S	TITLE Technical B-57 Crew Rest Quarters					
USER LASL LRL	STRUCTURE/FACILITY NO. 290E			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO					
	Prior Cost	0.1	0.9		1.0	
	FY 69			1.7	1.7	
	TOTAL	0.1	0.9	1.7	2.7	

PRIOR YEARS

ENGINEERING Completed.

Drawing: JS 91-290-A104

PROCUREMENT Completed.

FY 69

CONSTRUCTION Space is required in apartment 290E for crew rest quarters. This apartment has three (3) bedrooms, living room, and kitchen, and is located on the second floor of Building 290 (F&S No. 0301N). Window air conditioning units and blackout curtains will be provided.

F & S NO. 0302A	TITLE Mess Hall					
USER JTF	STRUCTURE FACILITY NO. 519			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO					
	Prior Cost	23.2		306.0	329.2	
	TOTAL	23.2		306.0	329.2	

COMPLETED

DESCRIPTION The Mess Hall originally completed prior to 1963, is a 113 x 152 x 10-ft. high wood framed, plywood sided building with a concrete floor and built-up roofing. The existing facility was expanded in 1964 to provide a 1000 man seating capacity. Other facilities located in the building include a kitchen, bakery, dishwashing room, boiler room, latrine and other associated messing areas.

DRAWINGS:

- | | |
|-------------------------|--------------------------------|
| 91-519-C1 | JS 91-519-C101 |
| 91-519-A1 thru A8 | JS 91-519-A101 thru A105 |
| 91-519-S1 thru S4 | JS 91-519-S100, S103 thru S105 |
| 91-519-M1 thru M5 | JS 91-519-M100, M107 thru M109 |
| 91-519-E1 thru E7 | JS 91-510-M111 thru M114 |
| JS SK-519-A105 | JS 91-519-E100, E104 and E105 |
| JS SK-519-M103 | JS 91-519-E107 thru E109, E111 |
| JS SK-519-M115 and M116 | JS SK-519-E102 and E103 |



JOHNSTON ATOLL

SUPPORT

F & S NO. 0302B	TITLE 500 Man Mess Hall					
USER JTF	STRUCTURE FACILITY NO. 4			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	105.4*		1031.8	1137.2	93.8*
	TOTAL	105.4		1031.8	1137.2	93.8

COMPLETED

DESCRIPTION A 500 man mess hall designed for cafeteria style feeding is located in the area of the professional barracks. The building is concrete block construction with precast concrete framing members. It contains approximately 20,000 square feet, of which 8,000 square feet is dining area. (Completed in 1966.)

DRAWINGS:

91-4-C1 thru C3	91-4-S1 thru S7	JS 91-4-E100.0
91-4-A1 thru A12	91-4-M1 thru M10	JS 91-4-W1.0
JS 91-4-A100.0	91-4-E1 thru E8	91-097-SS1

*Engineering and furniture costs include Item 0302C.

JOHNSTON ATOLL

SUPPORT

F & S NO. 0302C	TITLE Bakery					
USER TG 8.6	STRUCTURE FACILITY NO. 518			SCIENTIFIC STATION NO. None		BOD GO+90
	FOD GO+90					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost		77.7		77.7	
	POST-GO					
	Est. 1965			98.8	98.8	
	TOTAL	*	77.7	98.8	176.5	*

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-518-A1 thru A3 91-518-M1 thru M4 91-518-E1 thru E3

PROCUREMENT Some material has been procured.

POST-GO

PROCUREMENT The material to be procured is as follows:

<u>QTY</u>	<u>DESCRIPTION</u>
10 Gal	Sealer, Curing Membrane
15 Pr	Hinges, Ball Bearing 4 1/2 x 4-inches
1 Set	Bolt, Panic
2 Sets	Bolt, Panic
5 Ea	Plates, Kick
5 Ea	Stops, Cast Bronze
4 Ea	Stop and Holder, Cast Bronze
1 Ea	Lockset, Entrance
4 Ea	Latchset
9 Ea	Door Closers
25 Gal	Paint, Interior, Sealer
45 Gal	Paint, Interior, Color 13578
2 Gal	Paint, Interior, Undercoat

*Engineering and furniture costs are included in F&S No. 0302B.

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JOHNSTON ATOLL
0302C

SUPPORT
Page 2

CONSTRUCTION The west 45 feet of Building 518 will be renovated to provide central bakery facilities. This will be accomplished by installing gypsum board on the interior of the existing building. This 45 x 66-ft. baking area will include space for: bread storage, baking, ice cream storage, flour and miscellaneous dry storage, office, freezing, and loading. A latrine will also be provided. Floor drains will be provided in the ice cream and bake rooms. A chilled water system with two refrigeration units will service this area. Five exhaust ventilators will be provided on the roof. A fuel oil system will be provided for operation of the ovens. Steam will be provided from the boiler room in the mess hall. Utilities will include cold and hot water, saltwater, and electrical power. The mess hall power panel will provide 208 volt, 60 cycle power to the bakery. Normal lighting will be provided. For a description of the remainder of the building, refer to F&S No. 02079.

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F & S NO. 0303A	TITLE Fresh Water Distribution System					
USER TG 8.6	STRUCTURE/FACILITY NO. 650			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
Cost included in F&S No. 0303X.						

COMPLETED

DESCRIPTION The existing system has been expanded to service new facilities on the Island. In order to provide a controlled pressure system, the elevated tank has been replaced by pumps. A fresh water pump house (Building 650) was constructed adjacent to the existing underground reservoirs. The pump house is 16 x 32-ft. and is a steel frame structure covered with corrugated aluminum sheeting. The building houses four pumps which provide domestic water service for the Island. A 200,000 gallon and a 500,000 gallon capacity reservoir, and two 20,000 gallon capacity storage tanks provide a reserve of fresh water for the Atoll. This is constantly being replenished by the Atoll Distillation Plant. (Completed in 1965).

DRAWINGS:

91-062-N1	91-650-C1 and C2
91-082-C1 thru C32	91-650-S1
91-082-C40 and C41	91-650-E1 and E2
91-082-S1	JS 91-650-A100
91-082-E1	JS 91-650-M100
91-082-SC1 and SC2	JS 91-650-E100 thru E102
JS 91-082-M100	

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JOHNSTON ATOLL

SUPPORT

F & S NO. 0303B	TITLE Saltwater Distribution System					
USER TG 8.6	STRUCTURE/FACILITY NO. 3		SCIENTIFIC STATION NO. None			BOD
	FOD					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
Costs Included in F&S No. 0303X						

COMPLETED

DESCRIPTION The Saltwater Distribution System has been extended to serve new facilities on the Island. A saltwater pump house (Building 3) has been constructed on the north shore of the island. The pump house is 24 x 60-ft. and is a steel frame structure covered with aluminum sheeting. The pump house is supplied by three 24-in. lines which provide water from the ocean to five pumps, each having a capacity of 2320 GPM. The pumps provide saltwater for fire protection, domestic purposes, the distillation plant and various air conditioning systems. (Completed in 1965.)

DRAWINGS:

91-3-C1 thru C4	JS 91-3-E106
91-3-S1 and S2	91-062-W1
91-3-E1 thru E3	91-083-C1 thru C30
JS 91-3-A100	91-083-C40 and C41
JS 91-3-M100 and M101	91-083-SC1 and SC2
JS 91-3-E100 thru E104	

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F & S NO. 0303C	TITLE Distillation Plant and Freshwater Treatment Building					
USER TG 8.6	STRUCTURE/FACILITY NO. 44 and 45		SCIENTIFIC STATION NO. None			BOD
						FOD
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
		Costs included in F&S No. 0303X				

COMPLETED

DESCRIPTION Existing Building 45 was altered and reconditioned to provide approximately 5,700 square feet of inside space for a new 150,000 GPD distillation unit, two existing 800 GPH Griscom-Russell units, two new 300 hp boilers, and related equipment. Nine Cleaver-Brooks units rated at 600 GPH were relocated from the existing plant and placed adjacent to the building. The total capacity of the new plant is 250,000 GPD. This figure is based on the rated capacity of the new unit and the service records of the nine relocated units. (Completed in 1965.)

The Freshwater Treatment Plant (Building 44) is a 12 x 24 x 10-ft. high pre-fabricated steel frame structure with corrugated aluminum siding and roofing and a concrete floor. The building (completed in 1965) is utilized to house the freshwater pump station, the soda-ash treating room and the chlorination room.

DRAWINGS:

91-45-C1 and C2	JS 91-45-S101 thru S103
91-45-S1 thru S6	JS 91-45-M100 thru M103
91-45-M1 thru M9	JS 91-45-E100, E101 and E103
91-45-E1 thru E5	91-082-S1
91-45-A100 and A101	91-082-E1

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JOHNSTON ATOLL

SUPPORT

F & S NO. 0303D	TITLE Sanitary Sewerage System					
USER TG 8.6	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Cost Included in F&S No. 0303X					

COMPLETED

DESCRIPTION The sewerage system has been expanded to service the new facilities. A series of lift stations are strategically placed to provide adequate flow. An outfall line extends approximately 520-ft. offshore from the South Central Peninsula. (Completed in 1965.)

DRAWINGS: 91-078-C1 thru C38 91-078-SC1
 91-078-C40 and C41 JS 91-078-C100
 91-078-S1 thru S7 JS 91-078-E100, E102 and E103
 91-078-E6 thru E9 SK 91-078-C110

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SUPPORT

F & S NO. 0303X	TITLE Upgrade Distillation, Water Distribution and Sewerage Systems					
USER JTF	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	260.4		3224.9	3485.3	
	TOTAL	260.4		3224.9	3485.3	

The funding totals listed above represent the combined expenditures for the following systems:

<u>F&S NO.</u>	<u>TITLE</u>
0303A	Fresh Water Distribution System
0303B	Saltwater Distribution
0303C	Distillation Plant, Phase I, 250,000 GPD
0303D	Sanitary Sewerage System

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SUPPORT

F & S NO. 0304A	TITLE Power and Telephone Distribution System					
USER JTF	STRUCTURE / FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	236.5		5083.3	5319.8	
TOTAL		236.5		5083.3	*5319.8	

COMPLETED

DESCRIPTION Electrical and telephone service has been modified to provide service to all portions of the island as follows:

- a. Electrical power distribution is at 4160 volts, AC, 3 phase.
- b. A modified loop radial distribution system has been provided.
- c. Electrical and telephone cables have been installed in a common underground duct bank using conventional manhole and duct configuration.

Refer to F&S Number 0304H for description of Island substations.

DRAWINGS:

91-080-S1 thru S6	91-080-SE1 and SE2
91-080-E1 thru E41	JS 91-080-E105 thru E108
91-080-E51 thru E53	

*Costs shown include construction of Power Plant (Building 48) and Fuel Tank (Building 49) see F&S No. 0304E.

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SUPPORT

F & S NO. 0304D	TITLE Akau Island Power Distribution System					
USER JTF	STRUCTURE FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY AEC	(000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost			145.0	145.0	
	TOTAL			145.0	145.0	

COMPLETED

DESCRIPTION Power is distributed at 480 volts by a radial system to facilities on Akau Island. This system was completed in 1964.

DRAWINGS: 116-002-E1 thru E5 JS 116-002-E100 thru E103

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SUPPORT

F & S NO. 0304E	TITLE Power Plant					
USER TG 8.6	STRUCTURE FACILITY NO. 48 and 49			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(5000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO Prior Cost			5.2	5.2*	
ADC ORDER NO.S-66-1A5	PRE-GO Prior Cost		8.2	492.3	500.5**	
	TOTAL		8.2	497.5	505.7	

COMPLETED

DESCRIPTION Building 48 is a single story, rigid steel frame structure with corrugated asbestos cement siding and roof, and contains approximately 16,000 square feet. The power plant houses six 1375 kw and one 1400 kw diesel driven generators. A 5-ton traveling crane is provided. Silencers are provided for all engines to reduce objectionable engine noise. A 13,500-barrel capacity cone roof fuel tank, (Building 49) 50-ft. in diameter and 40-ft. high, is located north of the powerhouse to provide a 45-day fuel supply for the power plant, the distillation plant and the new mess hall. (Completed in 1965.)

The Control Room (Room 106) of the Power Plant Building has been air conditioned by the addition of a 5-ton, self-contained thermostatically controlled air conditioning unit. A continuous line (adjustable) supply air diffuser has been installed along the east wall approximately 8-ft. above the floor, and two return air registers have been installed in the suspended ceiling near the north and south ends of the west wall.

The additional 1400 kw diesel driven generator, distribution equipment, auxiliary gear and mechanical equipment were installed to provide power to the Air Force Logistic Command furnished 25 ton LOX generating equipment and other facilities as required. Electrical and communications requirements were also installed from MH 0304 to existing SS 4103 (completed in 1968).

Piping, roofing and ventilation modifications are presently being accomplished with maintenance funds.

*Cost shown is for air conditioning installation only. Building costs are included with F&S No. 0304A.

**Cost shown is for additon of 1400 kw diesel driven generator.

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JOHNSTON ATOLL
0304E

SUPPORT
Page 2

DRAWINGS:

91-48-C1 thru C4 and C7	91-48-M63 and M64
91-48-A1 thru A7	91-48-E1 thru E21 and E 1
91-48-A13 thru A15 and A17	JS 91-48-S102 and S104
91-48-S1 thru S11 and S17	JS 91-48-M100 and M103
91-48-M1 thru M28	thru M106
91-48-M36, M37, M39 and M40	JS 91-48-E100 thru E105
91-48-M44 thru M50	JS-SK-48-A100

F & S NO. 0304F	TITLE Akau Island Power (Temporary)					
USER PMR	STRUCTURE FACILITY NO. 1003			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost			5.7	5.7	
	TOTAL			5.7	5.7	

COMPLETED

DESCRIPTION Four 300 kw generators which were formerly on Johnston Island, were installed on Akau Island (completed in 1964). The generators were used to provide PMR facilities with power until the inter-island submarine power cable was in operation. The generators were tied into the existing Akau Island distribution system to provide all Akau Island demands plus 100 percent backup (800 kw demand). A concrete pad supported the generators and a wooden shelter was erected over the units. This generator building is noted on the Akau Island Plot Plan as Building 1003.

The installation of a permanent inter-island power distribution system (F&S 0304C) negated the need for the above four generators as a source of primary power.

DRAWING: 116-1003-E1

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SUPPORT

F & S NO. 0304G	TITLE Sand Island Power					
USER ADC CGD 14	STRUCTURE/FACILITY NO. None		SCIENTIFIC STATION NO. None			BOD
						FOD
FUNDING AGENCY CGD 14	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO FY 69			17.2	17.2	
	TOTAL			17.2	17.2	

COMPLETED

DESCRIPTION The submarine power cable from Johnston Island has been tapped to provide power to Sand Island facilities as follows:

- a. Coast Guard Installations 235 kw
- b. Baker-Nunn Camera (ADC) 70 kw
- c. Future Expansion 95 kw

Feeders in underground conduit are run to the Powerhouse, the Signal Building, the Transmitter Building and the Baker-Nunn Camera Station. A 450 kva sub-station is located in the Powerhouse and is equipped with switchgear to permit the cutoff of the Sand Island power demand in the event of a transmission failure in any leg of the submarine cable loop. The existing generators in the Coast Guard Powerhouse were placed on standby. (Completed in December 1968.)

DRAWINGS: 91-084-E6 and E7

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F & S NO. 0304H	TITLE Substations, 4160 Volt Distribution System					
USER TG 8.6	STRUCTURE FACILITY NO. Listed Below			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN

PRIOR YEARS

ENGINEERING The typical substation constructed since 1964 is shown on H&N Drawings 91-080-SE1. The typical substation built between 1951 and 1964 is shown on the Law and Wilson drawing made for the Corps of Engineers, Honolulu area, and identified as Drawing No. Johnston 71-03-02.

Drawings: 91-080-E1 thru E41 JS 91-027-A100 thru A103
 91-080-E51 thru E53 JS 91-027-E100
 91-080-S1 thru S6 JS 91-080-E105 thru E108
 91-080-SE1 25-28-01 Sheets 70 thru 74,
 F 91-080-E53 District File No. 105-10-1

CONSTRUCTION The outgoing 4160 volt, 3 phase, 3 wire circuits, thirteen in number, serve Johnston Island, Akau (North) Island, Hikina (East) Island and Sand Island loads through a distribution system of eleven feeders. Two outgoing circuits terminate at transformers outside of the power plant. These transformers serve the various power plant auxiliary equipment and the power plant utility loads.

The existing electrical distribution system on Johnston Island is a modified Loop Radial configuration. This system has been operational for approximately three years. Flexibility is afforded the existing distribution system by the presence of eleven manually operated, oil-immersed, sectionalizing switches, rated at 400 amperes. The distribution voltage is 4160 volt, 3 phase, 3 wire with 500-mcm conductors; one per phase. The distribution system feeder conductors are routed to their substations through a network of underground concrete-encased duct banks. The sectionalizing switches are located in fenced enclosures. Two of the feeders, Numbers 9 and 10, have a loop configuration through submarine cables, and presently energize the Akau and Hikina Island loads. The feeder routing to Hikina Island is directed through a manhole on Sand Island (U. S. Coast Guard). The Sand Island load has recently been connected to the Johnston Island distribution system. Feeder No. 11 is utilized to feed the LOX Plant 900 HP compressors only.

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JOHNSTON ATOLL
0304H

SUPPORT
Page 2

The capacities of the 81 existing substation, the 14 substations for which engineering is completed, and facilities in the proposal stage, are shown in the tabulation of the associated feeders of the island distribution system listed below.

<u>FEEDER NO. 1</u>		<u>FEEDER NO. 2</u>	
<u>Substation Number</u>	<u>Capacity KVA</u>	<u>Substation Number</u>	<u>Capacity KVA</u>
0609-C	600	0609E	150
0613	38	0609F	75
0617	150	0635	75
0617A	225	0703	150
0819	150	0709	150
0905	300	0717	150
0919A	300	0811	300
0919B	150	0811A	300
0937	150	0811B	150
0939	225	0811C	150
1335	150	0815	300
0919-C	100	0873	75
		0911	500
		0923A	300
		0935	300

<u>FEEDER NO. 3</u>		<u>FEEDER NO. 3 (continued)</u>	
<u>Substation Number</u>	<u>Capacity KVA</u>	<u>Substation Number</u>	<u>Capacity KVA</u>
0507	150	<u>Future SS</u>	
1203	225	2109	75
1905	75	2009	75
1907	550	1903	15
2003	150	2209A	75
2005	75	0305	150
2103	300	0403	300
2105	1,000	0505	225
2107	15		
2209	75		
4103	150		

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FEEDER NO. 4

<u>Substation Number</u>	<u>Capacity KVA</u>
0839	75
0841-A	150
0841	150
0843	150
0853	120
0857	150
0869	225
0729	75
0733	225
1537	75
<u>Future SS</u>	
0841B	150

FEEDER NO. 5

<u>Substation Number</u>	<u>Capacity KVA</u>
1537B	500
1537A	300
1407	150
1519	75
1511	75
1509	75
1505	500
1621	125
1613	150
1705	300
<u>Future SS</u>	
1403	75

FEEDER NO. 6

<u>Substation Number</u>	<u>Capacity KVA</u>
1627	150
2203	500
2205	225
2311	150
2315	225
2313	750
2405	75
2611	300
2609	225
2703	750
4005	75
<u>Future SS</u>	
1439	225
1645	150
2707	75

FEEDER NO. 7

<u>Substation Number</u>	<u>Capacity KVA</u>
0923B	1,000
0929	500
1003	150
1005	225
1007	75
1017	225
1807	1,000
<u>Future SS</u>	
1003A	1,000
4017	300

FEEDER NO. 8

<u>Substation Number</u>	<u>Capacity KVA</u>
1805	1,000
<u>Future SS</u>	
0903	500

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JOHNSTON ATOLL
0304H

SUPPORT
Page 4

JOHNSTON ATOLL

FEEDERS 9 AND 10 SUBMARINE LOOP

Feeders 9 and 10, forming a closed loop in their normal configuration, presently serve Akau Island and Hikina Island loads. The Coast Guard and Baker-Nunn facilities at Sand Island have recently been connected to this loop

The connected loads are:

	<u>Substation Number</u>	<u>Capacity KVA</u>
Hikina Island	0201E	2,000
Akau Island	0101N	2,000
Sand Island	-----	500

JOHNSTON ATOLL

FEEDER NO. 11

Feeder No. 11 serves the three (3) 900 HP synchronous motors located at the LOX Plant (Building 990). Two of the above motors are usually in operation together, with an average current of 80 amps each, at 4160 volt.

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JOHNSTON ATOLL

SUPPORT

F & S NO. 0305X	TITLE Conduits Under Runway					
USER JTF	STRUCTURE FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY AEC	(S000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost			104.5	104.5	
DPWO Letter Order 3551	PRE-GO Prior Cost			11.6	11.6	
	TOTAL			116.1	116.1	

COMPLETED

DESCRIPTION The following conduits (completed in 1964) are routed under the runway at coordinate E 197,300 at the runway centerline:

- a. Four 4-inch diameter conduits for electrical power cables.
- b. Four 4-inch diameter conduits for communication cables.
- c. One 10-inch diameter freshwater conduit.
- d. One 16-inch diameter saltwater conduit.
- e. Three 24-inch diameter conduits for signal cable.
- f. Two 36-inch diameter conduits as spares for future utility requirements.

All conduits are approximately 300 feet long, installed in one trench 26 feet wide and backfilled with concrete. The top of each conduit is at least one foot below the surface of the runway. Two reinforced concrete manholes are provided on each side of the runway. The electrical power conduits terminate in one set of manholes and the communication and signal cable conduits terminate in the other.

DRAWINGS: 91-079-C1 and C2

JOHNSTON ATOLL

SUPPORT

F & S NO.	TITLE					
0306X	Laundry					
USER	STRUCTURE/FACILITY NO.			SCIENTIFIC STATION NO.		BOD
TG 8.6	510			None		
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO Prior Cost	22.9		231.6	254.5	
JTF-8 MILCON	PRE-GO Prior Cost			7.1	7.1	
CRO 4-66	FY 69	9.6		152.0	161.6	
CRO 68-13						
CRO 68-14	SUBTOTAL	9.6		159.1	168.7	
	TOTAL	32.5		390.7	423.2	

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-510-C1 91-510-E1 and E2
 91-510-A1 thru A3 JS 91-510-M101
 91-510-S1 JS 91-510-E100 and E101
 91-510-M1 thru M3

PROCUREMENT Completed.

CONSTRUCTION The laundry (completed in 1964) is a 40 x 100-ft. steel frame building with metal siding and a 10 x 25-ft. lean-to. The boilers are in a separate 25 x 40-ft. building. In general, the laundry consists of marking and receiving, washing and extracting, drying, pressing, wrapping and office areas. The laundry is equipped to serve 1800 persons per six-day week on a nine-hour shift basis. Several iron pipes have been removed and replaced with plastic and copper.

FY 69

ENGINEERING Completed.

Drawings: 91-510-C2 91-510-M6 thru M8 and M10
 91-510-A4 and A5 JS 91-510-M103 thru M106
 91-510-S2 and S3 JS 91-510-E102 thru E105

PROCUREMENT In progress.

CONSTRUCTION A 30 x 50-ft. addition to the existing building will be constructed. The addition will be of similar construction to the existing facility. Overhead fluorescent fixtures will be provided. A portion of the existing laundry equipment will be relocated in the new building; the remaining equipment is to be removed. The new equipment required will be procured from operations and maintenance funds.

JOHNSTON ATOLL

SUPPORT

F & S NO. 0307X	TITLE Post Office and Warehouse Building					
USER JTF	STRUCTURE / FACILITY NO. 400			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO Prior Cost	3.2		0.8	4.0	
JTF-8 MILCON CRO 2-65 CRO 4-66	PRE-GO Prior Cost			32.2	32.2	
	TOTAL	3.2		33.0	36.2	

COMPLETED

DESCRIPTION Building 400 is an 80 x 195 x 10-ft. high wood framed structure with corrugated aluminum siding and roofing. Miscellaneous structural and electrical modifications have been performed on the building which was originally constructed prior to 1963. The building houses the Atoll Post Office (2,480 sq. ft.), a BX warehouse (3,000 sq. ft.), a medical warehouse (2,400 sq. ft.), a subsistence warehouse (7,200 sq. ft.) and office and latrine facilities. (Completed in 1965.)

DRAWINGS: JS 91-400-A104 JS 91-400-A106 thru A109
JS 91-400-E100 and E102

JOHNSTON ATOLL

SUPPORT

F & S NO. 0308X	TITLE Dispensary					
USER TG 8.6	STRUCTURE FACILITY NO. 405, 407, 409, 416			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO Prior Cost 21.6			271.1	292.7	
	TOTAL	21.6		271.1	292.7	

COMPLETED

DESCRIPTION Building 405 is an underground "T" shaped reinforced concrete bunker with approximately 5,000 square feet of usable floor space. The bunker was constructed prior to 1962 and rehabilitated and remodeled in 1962 for Operation DOMINIC and again in 1963 and 1964 for dispensary use.

Facilities are similar to those of a clinic or small hospital and include rooms for minor and/or emergency surgery, examination and treatment, x-ray and associated darkroom equipment, isolation, 20-bed ward, offices, laboratory, storage, waiting room, and latrine. In addition, a dental operating room and lab are provided.

Space for the air conditioning equipment is provided for in a separate 12 x 20-ft. wood frame building (Building 407) located atop the earth fill over the dispensary bunker. The structure has aluminum siding and roofing and a concrete floor.

The Oxygen Storage Building (Building 409) is a 4 x 6 x 6-ft. high structure with plywood siding, a concrete floor and corrugated aluminum roofing. It is utilized to store oxygen bottles used in conjunction with the Dispensary.

Emergency power is provided the Dispensary by a 60 kw diesel generator housed in a separate above ground building (Building 416). The structure is a 10 x 15-ft. wood frame building with corrugated aluminum roofing, plywood siding and concrete floor.

Buildings 407, 409, and 416 were completed in 1964.

DRAWINGS:

91-405-A1 thru A8	JS 91-405-E102
91-405-M1 thru M6	91-405-W1
JS 91-405-M100	JS 91-405-S100
91-405-E1 thru E4	JS 91-069-S102

JOHNSTON ATOLL

SUPPORT

F & S NO. 0309X	TITLE Theater					
USER JTF	STRUCTURE FACILITY NO. 504			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO					
	Prior Cost	13.0		121.9	134.9	
	TOTAL	13.0		121.9	134.9	

COMPLETED

DESCRIPTION A fenced outdoor theater (completed in 1964) with a seating capacity of 1000 people has been provided. The facility is equipped with an air conditioned projection booth, wide screen, and a stage for the presentation of live entertainment.

DRAWINGS:

91-504-C1 and C2	JS 91-504-A100
91-504-A1 thru A3	JS 91-504-S100
91-504-S1 thru S5	JS 91-504-M100
91-504-M1	JS 91-504-E100
91-504-E1	

JOHNSTON ATOLL

SUPPORT

F & S NO. 0310X	TITLE Office Space					
USER TG 8.6	STRUCTURE/FACILITY NO. 206			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO Prior Cost			18.0	18.0	
	TOTAL			18.0	18.0	

COMPLETED

DESCRIPTION This 40 x 100-ft. metal frame building (completed in 1965) was formerly occupied by the dredging contractor and is now utilized by TG 8.6 as office space. After GO, 525 square feet of this building will be used by J-1 of JTF-8.

DRAWINGS: JS 91-206-C100 JS 91-206-M100
 JS 91-206-A100 JS 91-206-E100 thru E102



JOHNSTON ATOLL

SUPPORT

F & S NO. 0311X	TITLE Base Exchange					
USER JTF	STRUCTURE/FACILITY NO. 401			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO Prior Cost			123.2	123.2	
TOTAL				123.2	123.2	

COMPLETED

DESCRIPTION The Base Exchange (completed in 1964) is a rigid steel frame building with aluminum siding and a total area of 8800 square feet. This building is located immediately north of the dispensary. The Base Exchange contains a barber and tailor shop, retail sales area, storage, and latrine facility.

DRAWINGS: JS 91-401-A100 thru A105 JS 91-401-M100
 JS 91-401-S100 JS 91-401-E100

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JOHNSTON ATOLL

SUPPORT

F & S NO. 0313X	TITLE Dairy Bar					
USER JTF	STRUCTURE FACILITY NO. 509			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY JTF MILCON CRO 7-64	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost			12.7	12.7	
	TOTAL			12.7	12.7	

COMPLETED

DESCRIPTION The Dairy Bar located at the south end of the theater is a 20 x 45 x 10-ft. high wood frame structure with corrugated aluminum siding and roofing and a concrete floor; one side of the building is open. Equipment include grill, reefers, malt machines, coffee urn, dishwashing facilities and a hot water tank. (Completed in 1964.)

DRAWINGS: JS 91-013-A101 JS 91-013-E100 JS 91-509-E100

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F & S NO. 0314X	TITLE Tent Camp					
USER JTF	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	1.0		97.4	98.4	
	TOTAL	1.0		97.4	98.4	

COMPLETED

DESCRIPTION A tent camp (completed in 1964) with latrine facilities was provided to house 208 men. The tent camp, which was formerly located immediately south of the new mess hall (Building 4), has now been demolished. The latrine facility (Building 32) which is still in existence, is a 24 x 48-ft. wood frame structure with plywood siding, corrugated aluminum roofing and a concrete floor.

DRAWINGS: 91-023-C1 91-023-M1
 91-023-S1 91-023-E1

PROPOSED

ENGINEERING To be accomplished.

PROCUREMENT To be accomplished.

CONSTRUCTION A new tent camp with latrine facilities may be required Post-GO. The tents will be 16 x 32-ft. with wood framing and decking. The location of this tent camp is at present undetermined.

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JOHNSTON ATOLL

SUPPORT

F & S NO. 0319X	TITLE Ground Improvements					
USER JTF	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF RDT&E CRO 2-65	PRE-GO Prior Cost				*17.2	
	TOTAL				17.2	

COMPLETED

DESCRIPTION Johnston Atoll is being landscaped according to the U. S. Navy, District Public Works Office Land Management Plan. The initial phase for controlling erosion by wind and water and the improvement of grounds conditions has been completed. The first phase (completed in 1966) included the following.

1. Grass planted around Buildings 250, 251 and 252.
2. Grass planted around Buildings 414, 418 and 690.
3. Grass planted around Buildings 16, 18 and 20.
4. Grass replanted in the area surrounded by the east-west taxiway and the runway.

Future landscaping will be accomplished as funds become available in conjunction with the development of new facilities.

*Costs in excess of \$17.2K charged to M&O funds.

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JOHNSTON ATOLL

COMMUNICATIONS

F & S NO. 04002	TITLE Teletype Message Center					
USER AEC	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE -GO					
	Prior Cost	2.5		28.8	31.3	
	TOTAL	2.5		28.8	31.3	

COMPLETED

DESCRIPTION A 14 x 27-ft. shielded enclosure was installed on the first floor of the Joint Operations Center, Building 20. (Completed in 1965). Modifications to the enclosure by installation of red and black power panels and filters was accomplished in 1967.

DRAWINGS: 91-030-E1, M1, W1 91-030-W25

RETURN TO DOE/AV TECHNICAL INFORMATION
RESOURCE CENTER

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JOHNSTON ATOLL

COMMUNICATIONS

F & S NO. 04003	TITLE Non-Tactical VHF/FM Mobile Radio System					
USER JTF	STRUCTURE FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY JTF-8/ RDT&E CRO 3-65	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost		103.2		103.2	
	TOTAL		103.2		103.2	

COMPLETED

DESCRIPTION The equipment for this system, initially, was leased. Leases were terminated and the equipment was purchased in 1965. Additional equipment was also purchased to provide sufficient assets to meet known requirements. The system consisting of Base Stations, Remote Stations and Portable Stations, service and support the following functions:

- Air/Sea Rescue
- Port Control
- Base Operations
- Crash/Fire
- Rad Safe
- Security
- Construction and Maintenance
- Camp Operations
- LRL Scientific
- LASL Scientific
- Sandia Scientific
- Sandia Radar Balloon
- Sandia "H" Net Extension
- EG&G Scientific

The 10th ADS VHF/FM system is not included in the above system; it is funded separately.

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JOHNSTON ATOLL

COMMUNICATIONS

F & S NO. 04011	TITLE Joint Operations Center Tactical Test Control System					
USER JTF	STRUCTURE FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8 RDT&E CRO 3-65	PRE-GO Prior Cost			2.2	2.2	
USAF	PRE-GO Prior Cost		212.0		212.0	
	TOTAL		212.0	2.2	214.2	

COMPLETED

DESCRIPTION This system provides real time control between the operations centers in the Joint Operations Center and various critical island facilities such as weather control, rocket control bunkers, launch facilities, instrumentation and scientific projects. This system was engineered, furnished and installed by the USAF. The island contractor furnished field support. (Completed in 1966)

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F & S NO. 04012	TITLE Rehabilitation of USAF-DCA HF Radio Trunk					
USER JTF	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY SSD	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost	9.2		150.7	159.9	
	TOTAL	9.2		150.7	159.9	

COMPLETED

DESCRIPTION The existing USAF-DCA HF long haul radio trunk to Hawaii was rehabilitated in 1965 and a new trunk to McClellan AFB, California was added. The old system was replaced with a new, more efficient antenna system. An antenna multigraph system provides pilot frequency operation by simultaneously utilizing two transmit antennas for four transmitters. The low power transmitter equipment was replaced with new higher power transmitters and new test equipment.

DRAWINGS: 91-077-C1 thru C3 91-077-S2, S4, S6 91-077-W3 thru W6

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JOHNSTON ATOLL

COMMUNICATIONS

F & S NO. 04014	TITLE Radio Propagation Sounder					
USER JTF	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
USAF CRO 2-64	PRE-GO					
	Prior Cost	0.9		22.4	23.3	
	TOTAL	0.9		22.4	23.3	

COMPLETED

DESCRIPTION Transmitting and receiving facilities for making radio sounder observations were installed on Johnston Island (completed in 1963). The antenna was subsequently moved to Akau Island in 1965.

DRAWINGS: 91-077-W7 & W8 91-077-S7 & S8

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JOHNSTON ATOLL

COMMUNICATIONS

F & S NO. 04016	TITLE PMR Submarine Cable					
USER PMR	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY JTF-8 CRO 8-64	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost			242.9	242.9	
	TOTAL			242.9	242.9	

COMPLETED

DESCRIPTION Two 50 pair cables and one composite cable consisting of 26 pair plus 4 pair video were procured and installed between Johnston Island and Akau Island. In addition, three identical cables were procured and installed between Akau Island and Johnston Island and are routed in the vicinity of Sand Island. (Completed in 1964)

DRAWINGS: 91-084-C1 thru C4 91-084-W1 and W2

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JOHNSTON ATOLL

COMMUNICATIONS

F & S NO. 04017	TITLE AMICOM Signal Cable-Subtask A942					
USER TC	STRUCTURE FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
						FODGO+120
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AMICOM	PRE-GO					
MIPR	Prior Cost	0.2	22.2		22.4	
1-64	POST-GO					
	Estimate 3/65			9.7	9.7	
	TOTAL	0.2	22.2	9.7	32.1	

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-079-W28, W29, and W32.

PROCUREMENT Completed. Material is stored on Johnston Island.

POST-GO

CONSTRUCTION Signal cable between Launch Control Bunkers 276 and 737 and their associated Launch Pads, E1 thru E5 and W1 thru W5, will be installed and laid in the signal cable trough. Signal cable will also be laid in the signal cable trough between the east and west peninsulas.

F & S NO. 04018	TITLE PMR Signal Cable					
USER PMR	STRUCTURE FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD In Use					
FUNDING AGENCY PMR 0791-99819	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost	4.0		140.3	144.3	
	TOTAL	4.0		140.3	144.3	

COMPLETED

DESCRIPTION Signal cable was procured and installed on Akau Island. A Combination Distribution Frame (CDF) was installed in the Operation Building (Building 1000). Scientific site cable was installed and terminated at this CDF. The PMR submarine cable was also terminated at this frame. (Completed in 1964)

DRAWINGS: 116-079-W1 thru W6

JOHNSTON ATOLL

COMMUNICATIONS

F & S NO.	TITLE					
04019	Radio Signal Cable - Subtasks A108, A601, A614, A626, A901 A909 and A962					
USER TC	STATION/FACILITY NO.			SCIENTIFIC STATION NO.		BOD
	None			None		FOD *
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
DASA	PRE-GO					
RDT&E	Prior Cost	40.8	412.4		453.2	
EAO 1106-	FY-69	54.3	104.9		159.2	
4101-61	SUBTOTAL	95.1	517.3		612.4	
	POST-GO	TO BE DETERMINED				

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-079-W113 thru W163

PROCUREMENT Bulk cable for runs from Building 881 to launchers, together with long lead special cables, has been procured. This includes cable runs for Subtasks A108, A601, A614, A626, A901, A905, A909 and A962.

FY 69

ENGINEERING Cable design will be accomplished in Las Vegas for Subtask A962, Launch Pad, Scientific Station 91-3-59 and Launch Pad, Scientific Station 91-3-79, including cable from pad pits to pedestals, cable from Building 881 to Building 20, and cable within Building 881.

Drawings: 91-079-W188 thru W201 91-079-W251
91-079-W223 91-079-W253 thru 260
91-079-W239 thru W249 91-079-W262 thru 276

PROCUREMENT Cable assemblies and cabinets for activation of Launch Pad, Scientific Station 91-3-59 and Launch Pad, Scientific Station 91-3-79 will be procured during FY 69. DASA will furnish cable assembly types 1001 thru 1006, 1016, 1019, 1020 and 1022.

CONSTRUCTION During FY 69, preparations will be made for installation of cable for Launch Pad, Scientific Station 91-3-59 and Launch Pad, Scientific Station 91-3-79, and from pad pits to pedestals, within Building 881, from Building 881 to Building 20, and from the AME/AGAVE Field, Subtask A962, to Buildings 881 and 20 for Exercise LAPWING.

POST-GO

PROCUREMENT Additional cable assemblies for interconnecting consoles and cabinets within Building 881 and cables from the pit at the pads to the pedestals need to be procured. This procurement is under advisement and may be accomplished Pre-GO.

CONSTRUCTION Signal cable will be laid in the signal cable trough system, cable within Building 881 will be installed and terminated, and cable from the pad pits to the launcher pedestals will be installed for 34 launch pads. DASA will provide consoles and ancillary equipment. Cable installation schedules will conform to launch pad construction schedules.

*See F&S No. 01003 for FOD.

JOHNSTON ATOLL

COMMUNICATIONS

F & S NO. 04020	TITLE EG&G Signal Cable					
USER EG&G	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD GO+30
	FOD GO+30					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
AEC	PRE-GO					
Financial	Prior Cost	2.8		111.6	114.4	
Plan	FY-69	3.0		37.0	40.0	
	POST-GO					
	Estimate 5/65			39.7	39.7	
	TOTAL	5.8		188.3	194.1	

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-079-W87 thru W90, W96

PROCUREMENT All signal cable has been procured and is located at Johnston Island.

CONSTRUCTION Signal cable has been installed in the trough system from the JOC to constructed facilities which require timing and firing services.

FY-69

ENGINEERING Completed.

Drawing: 91-079-W97

PROCUREMENT Completed.

CONSTRUCTION Preparations are being made for installation of T&F signal cable in the cable trough system in anticipation of Exercise LAPWING as follows:

	FROM	TO
(1) 100 Pair Signal Cable	Bldg. 20, Room 430	Bldg. 16, TB-3
(2) 12 Pair Audio Cable	Bldg. 20, Room 430	Bldg. 16, TB-3
(1) 75 Pair Signal Cable	Bldg. 16, TB-3	Bldg. 93, TB-3.1 & TB-3A.1
(1) 12 Pair Audio Cable	Bldg. 16, TB-3	Bldg. 93, TB-3.1 & TB-3A.1

	<u>FROM</u>	<u>TO</u>
(1) 100 Pair Signal Cable	Bldg. 20, Room 430	Bldg. 790, TB
(2) 12 Pair Audio Cable	Bldg. 20, Room 430	Bldg. 790, TB
(1) 100 Pair Signal Cable	Bldg. 20, Room 430	Bldg. 20, Room 508 TB-13

Additionally, an existing 100 Pair Signal Cable and (2) 12 Pair Audio Cable between Building 20 and Building 881 will be terminated on TB-11 and TB-11A, located in Building 881.

POST-GO

CONSTRUCTION The balance of the signal cable will be installed in the trough system after GO on completion of each facility that requires timing and firing services.

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JOHNSTON ATOLL

COMMUNICATIONS

F & S NO. 04021	TITLE Tactical Communications					
USER TG 8.3	STRUCTURE FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY JTF-8/ RDT&E 14th INDMAN MIPR 20-65	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost			99.7	99.7	
	TOTAL			99.7	99.7	

COMPLETED

DESCRIPTION A Communication Center and Tactical Radio facilities are located on the third floor of the JOC. Antennas and associated equipment are located on Akau Island, Hikina Island and atop the JOC. These facilities were engineered and installed by the Navy. The Contractor provided local assistance at Johnston Atoll.

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F & S NO. 04022	TITLE Tactical Communications					
USER TG 8.4	STRUCTURE FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY JTF-8/ RDT&E CRO 3-65	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs included in F&S No. 02114					
TOTAL				18.4	18.4	

COMPLETED

DESCRIPTION Tactical Communication facilities were installed in the JOC, third and fourth floors, and on Akau and Hikina Islands. Facilities consist of a Communication Center, secure Teletype Teleconference System, Air-to-Ground HF Single Sideband and VHF and UHF Radio Systems. These systems were engineered, furnished and installed by the USAF. The support contractor provided local assistance on Johnston Atoll. (Completed in 1965)

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JOHNSTON ATOLL

COMMUNICATIONS

F & S NO. 04023	TITLE Base Telephone Inside Plant					
USER TG8.6	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
RDT&E CRO 3-65 MIPR 33-64 MIPR 12-65	PRE-GO Prior Cost		248.3	8.7	257.0	
	TOTAL		248.3	8.7	257.0	

COMPLETED

DESCRIPTION An 1000 line automatic dial exchange was installed on the second floor of the JOC. This system replaced the exchange located in Building 507 and provides on-atoll administrative telephone service, off-island dialing to Oahu military operators, monitor facilities, hot lines and radio telephone patching facilities. This facility was engineered, furnished and installed by the USAF. It became operational in May 1965. The support contractor provided local assistance on Johnston Atoll.

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JOHNSTON ATOLL

COMMUNICATIONS

F & S NO. 04024	TITLE Base Telephone Outside Plant					
USER TG8.6	STRUCTURE / FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY JTF/ RDT&E CRO 3-65	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Costs			9.4	9.4	
	TOTAL			9.4	9.4	

COMPLETED

DESCRIPTION The on-island telephone cable was replaced. New cable was also installed to meet added telephone requirements. Lateral cables will be installed as required to support future construction. Engineering, procurement and installation was accomplished by the USAF. The support contractor provided local assistance on Johnston Atoll. (Completed in 1966).

DRAWINGS: PACGEEIA KM 0011 04 0065A, Sheets 1, 2 and 3

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JOHNSTON ATOLL

COMMUNICATIONS

F & S NO. 04025	TITLE Inter-Island Telephone Cable (Not Scientific)					
USER TG 8.6	STRUCTURE FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
RDT&E	PRE-GO					
CRO 3-65	Prior Cost		344.1	122.4	466.5	
MIPR 20-64						
MIPR 14-64						
MIPR 31-64	TOTAL		344.1	122.4	466.5	

COMPLETED

DESCRIPTION Telephone submarine cable was laid between Akau, Hikina, Sand and Johnston Islands. A manhole and signal building was constructed on Sand Island to facilitate entry and routing of cable across Sand Island from Johnston Island to Akau and Hikina Islands. The support contractor provided support to PACGEEIA and DPWO. (Completed in 1965.)

DRAWING: PACGEEIA LVPH 660011 04 0065B

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JOHNSTON ATOLL

COMMUNICATIONS

F & S NO. 04026	TITLE Disaster Control System					
USER TG 8.6	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
PWC MIPR 34-64	PRE-GO Prior Cost		55.0		55.0	
JTF/ RDT&E CRO 9-64 CRO 3-65	PRE-GO Prior Cost	0.5		38.7	39.2	
	TOTAL	0.5	55.0	38.7	94.2	

COMPLETED

DESCRIPTION Outdoor speakers on poles strategically placed throughout Johnston, Akau, Hikina and Sand Islands provide speaker coverage for Johnston Atoll (completed in 1966). The purpose of this system is safety, security, countdown and personnel control.

DRAWINGS: JS 91-050-W100 thru W104 117-050-W1 and W2
116-050-W1 and W2 92-050-W1 and W2

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JOHNSTON ATOLL

COMMUNICATIONS

F & S NO. 04027	TITLE Fire Alarm System					
USER TG 8.6	STRUCTURE/FACILITY NO.			SCIENTIFIC STATION NO.		BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF/ RDT&E CRO 3-65	PRE-GO					
	Prior Cost			0.1	0.1	
	TOTAL			0.1	0.1	

COMPLETED

DESCRIPTION The Fire Alarm System was augmented and modernized. The system covers new facilities and land areas. A 32 station annunciator was installed in the Fire Station with direct lines from pull boxes in the following buildings:

4	250	520	878
16	251	521	960
18	252	660	962
20	405	690	964
100E	412	741	990
100W	414	786	(6 spares)
120	418	876	

The operation of the pull box trips the annunciator station and activates a klaxon horn and locator board in the Fire Station. Additionally, an 18 positive call director is installed in the Fire Station with direct lines from 10 fire phones strategically located throughout the island. The contractor provided limited field support. Installation and modernization was accomplished by PACGEEIA. (Completed in 1968.)

DRAWINGS: JS 91-076-W100 and W101

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F & S NO. 04028	TITLE Airfield Control Tower					
USER TG 8.6	STRUCTURE FACILITY NO. 505		SCIENTIFIC STATION NO. None			BOD
						FOD
FUNDING AGENCY JTF-8 RDT&E CRO 3-65	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost			1.2	1.2	
TOTAL				1.2	1.2	

COMPLETED

DESCRIPTION The Airfield Control Tower console was modernized and augmented, and the Air/Ground Radio equipment was relocated to Building 507. Minor procurement and construction assistance was provided to TG 8.6/PACGEEIA by the support contract. Completed in 1965.

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JOHNSTON ATOLL

COMMUNICATIONS

F & S NO. 04029	TITLE Submarine Cable From Johnston Atoll To Oahu					
USER JTF	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY USAF	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Funded by others					

COMPLETED

DESCRIPTION A 60 channel (4 KC) submarine cable for voice, teletype, and data was laid between Johnston Atoll and Oahu. The cable head on Johnston Atoll is located in the JOC on the first floor. The cable termination bays, test and maintenance, and submarine cable rooms are located on the second floor of the JOC. The cable head on Oahu is located at Makua. The code name for this USAF Project was Wet Wash Subsystem "C"-484N. (Completed in 1966.)

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JOHNSTON ATOLL

COMMUNICATIONS

F & S NO. 04034	TITLE JOC Screen Rooms (AFCS, NAVY)					
USER TG 8.3 TG 8.6	STRUCTURE FACILITY NO. None		SCIENTIFIC STATION NO. None			BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF -8 MILCON CRO 7-64 CRO 3-65	PRE-GO Prior Cost	1.8		60.6	62.4	
AEC	PRE-GO Prior Cost	1.5		7.8	9.3	
	TOTAL	3.3		68.4	71.7	

COMPLETED

DESCRIPTION A 14 x 32-ft. shielded enclosure was installed on the second floor of the JOC for the AFCS (DCS) communication center, and a 20 x 20-ft. shielded enclosure was installed on the third floor of the JOC for the TG 8.3 communication center. The DCS Communication Center which was located in Building 100 was moved to the second floor of the JOC (completed in 1965).

Other shielded enclosures in the JOC are described under the following F&S Numbers:

<u>F&S No.</u>	<u>TITLE</u>	<u>ROOM</u>
02006A	Computer Area - Subtask A909	102
02006A	Submarine Cable Head	217
02006A	Laboratory Room - TC/DASA	129
04002	Teletype Message Center - AEC	109

DRAWINGS: 91-030-W2 thru W5

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JOHNSTON ATOLL

COMMUNICATIONS

F & S NO. 04035	TITLE Sandia Signal Cable					
USER SANDIA	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		DOB
	FOB					
FUNDING AGENCY AEC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	8.6	179.2	51.9	239.7	
	FY 69	2.5	13.0	41.4	56.9	
	FY 70			43.0	43.0	
	FY 71			51.5	51.5	
	SUBTOTAL	11.1	192.2	187.8	391.1	
	POST-GO	Included in F&S Number 01003				

PRIOR YEARS

ENGINEERING Completed.

PROCUREMENT Signal cable for 29 launch pads and interconnecting control stations was procured and stored at Johnston Atoll. Rework of this cable was completed in 1968.

CONSTRUCTION Signal cable was installed to serve three launch pads, Scientific Stations 91-4-23, 91-4-24 and 91-4-40 (completed in 1963). The launch pads are described in F&S Number 01003. Cable was additionally installed from Building 660 to Building 720, 742, Transponder Tower and Wind Radar Trailers; from Building 20 to Building 315; and from the Balloon Release Station to the Wind Radar Trailers.

FY 1969

ENGINEERING Being accomplished for FY 70 installation.

PROCUREMENT Being accomplished for FY 70 installation.

CONSTRUCTION Signal cable was installed to serve two HAD launch pads, Scientific Stations 91-4-27 and 91-4-28, and one Universal launch pad, Scientific Station 91-4-44 (completed in 1968).

FY 1970

CONSTRUCTION Signal cable will be installed between Building 660 and Building 790, between Building 660 and Building 20, and between Building 660 and Buildings 693, 714, 716, 720, 840 and Trailer G-7.

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FY 1971

CONSTRUCTION Nine launch pads will be constructed Pre-GO, making a total of fifteen completed launch pads. Cabling for these pads will be installed as the pads are completed.

POST-GO

CONSTRUCTION The remaining fourteen launch pads will be constructed and the signal cable installed. The estimate for installation of signal cable is included in F&S Number 01003, under Post-GO.

Drawings: 91-079-W82 thru W86 91-079-W102 thru W112

JOHNSTON ATOLL

COMMUNICATIONS

F & S NO. 04038	TITLE Explosion Proof Telephone					
USER JTF/ AEC	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY JTF/ RDT&E CRO 3-65	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs included in F&S No. 04023					

COMPLETED

DESCRIPTION Explosion proof telephones were procured and installed in the following locations (completed in 1966):

<u>BUILDING NUMBER</u>	<u>TITLE</u>	<u>NUMBER OF TELEPHONES</u>
714	SANDIA Rocket Assembly	1
716	SANDIA Rocket Assembly	1
720	SANDIA Rocket Assembly	1
840	SANDIA Rocket Assembly	1
876	Subtask A905 Assembly	1
878	Subtask A905 Assembly	1
886	Subtask A941 Assembly	2
888	Subtask A941 Assembly and Checkout	2
960	Subtask A905 Assembly	1
962	Subtask A905 Screen Room	1

DRAWINGS: 91-714-W1 and W2 91-888-W1
 91-886-W4 91-960-W1

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JOHNSTON ATOLL

F & S NO. 04040	TITLE Relocate Antennas From Johnston Island To Hikina and Akau Islands					
USER TG8.6	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY JTF/ RDT&E CRO 3-65	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost	0.6		31.7	32.3	
	TOTAL	0.6		31.7	32.3	

COMPLETED

DESCRIPTION Antennas located on Johnston Island were dismantled and re-habilitated by USAF personnel and erected on Hikina and Akau Islands. These antenna fields serve the following requirements:

- Defense Communications Service (DCS)
- Joint Task Group 8.4
- Joint Task Group 8.3
- Stanford Research Institute
- Backup Antennas for frequencies above 6.5 MHz

The antenna towers were equipped with obstruction lights. Antenna foundations and electrical power were provided as specified in F&S Nos. 02032 and 02033. Field support was provided by the contractor. The move was completed in 1965.

DRAWINGS: 116-002-C7 117-002-C1

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JOHNSTON ATOLL

COMMUNICATIONS

F & S NO. 04041	TITLE PMR Antennas - Hikina Island					
USER PMR	STRUCTURE FACILITY NO. Antennas No. 5 and No. 7			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
PMR/ MIPR R-65-026- 61756	PRE-GO Prior Cost	0.8		6.1	6.9	
	TOTAL	0.8		6.1	6.9	

COMPLETED

DESCRIPTION Two foundations were constructed for PMR furnished antennas (completed in 1966). The Granger 753C-3 conical monopole antenna, on a 37-ft. tower (Antenna No. 5), is equipped with obstruction lights. A 105-ft. tower (Antenna No. 7) was provided for a Collins 237A-1 rotatable log periodic antenna; the antenna is not installed, neither does the tower have obstruction lights. Two FRT-39 transmitters were installed. Power wiring plus control and antenna cabling to PACGEEIA installed patch facilities were also provided. Outside co-axial cable was installed by PACGEEIA.

DRAWINGS: 117-002-C1 117-077-S4 and S5
 117-077-C1 JS 117-077-S100

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JOHNSTON ATOLL

COMMUNICATIONS

F & S NO. 04042	TITLE PMR Signal System - Johnston Island					
USER PMR	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
PMR/ MIPR R-65-027- 61756 & R-65-021- 61756	PRE-GO Prior Cost	2.2	37.8	32.8	72.8	
	TOTAL	2.2	37.8	32.8	72.8	

COMPLETED

DESCRIPTION A combination distributing frame (CDF) was procured and installed on the third floor of the JOC (completed in 1966). Cable for voice and data transmission are provided from the CDF to NH Batteries 1 and 2 and to the Frequency Interference Control Center. The PMR submarine cable, both primary and redundant, is terminated at the CDF.

DRAWINGS: 91-079-W91 thru W93 JS 91-084-W100 and W101

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JOHNSTON ATOLL

COMMUNICATIONS

F & S NO. 04044	TITLE CP Telecon					
USER JTF-8	STRUCTURE FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8 RDT&E CRO 3-65	PRE-GO Prior Cost			.5	.5	
	TOTAL			.5	.5	

COMPLETED

DESCRIPTION Teletype Teleconference Facilities are installed in Room 406, JOC. The viewing screens may be read from the command post; the printer projector equipment is located in Room 406. The island contractor provided limited assistance during installation. (Completed in 1966.)

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F & S NO. 04045	TITLE Weather Communications					
USER JTF-8	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY JTF-8 RDT&E CRO 3-65	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost			.5	.5	
TOTAL				.5	.5	

COMPLETED

DESCRIPTION Weather communication equipment is installed in Room 411 adjacent to JTF-8 weather central in the JOC. The island contractor provided limited assistance during installation. (Completed in 1966.)

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JOHNSTON ATOLL

COMMUNICATIONS

F & S NO. 04046	TITLE JTF-8 Tactical Communications					
USER JTF	STRUCTURE FACILITY NO. 20			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF-8/ RDT&E CRO 3-65 CRO 3-66	PRE-GO Prior Cost		37.7		37.7	
	TOTAL		37.7		37.7	

COMPLETED

DESCRIPTION Six KWM-2A transceivers were procured (completed in 1966). Each transceiver consists of a full set of crystals, 30 L-1 amplifiers, antennas and associated accessories. One of the transceivers is a fixed station in the JOC (Building 20) and the other five are portable. A 35-ft. high whip type antenna was installed on the roof of the JOC. Electronic control equipment was also provided. Five portable antenna units consisting of a whip antenna, base insulator and remote tuning box were procured for use with the KWM-2A transceivers.

DRAWINGS: 91-20-W6 and W7

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JOHNSTON ATOLL

COMMUNICATIONS

F & S NO. 04048	TITLE Base Paging System					
USER TG 8.6	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF/ RDT&E CRO 3-65	PRE-GO					
	Prior Years	1.1		12.1	13.2	
	TOTAL	1.1		12.1	13.2	

COMPLETED

DESCRIPTION The Base Paging System consists of 11 interior loudspeaker systems. Each system contains an amplifier with 6 speakers per amplifier. Systems have been installed in Buildings 20, 202, 405, 507, 660 and 881. One system is being held as a spare. A central control console is located in Room 212, Building 20 (Telephone Central). Remote control units are located in Room 125 (Security Police) and Room 43 (EG&G Timing & Firing) of Building 20. This system was engineered, furnished and installed by the USAF. The island contractor provided field support. (Completed in 1966.)

DRAWINGS: 91-050-W1 thru W11

F & S NO. 04049	TITLE EG&G Signal Cable, DISTANT WATERS					
USER EG&G	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Estimate 7/65				226.5	

PROPOSED

ENGINEERING Conceptual design only has been accomplished.

PROCUREMENT To be determined.

CONSTRUCTION A study has been made on submarine cable as the transmission method for timing and firing signals to the DISTANT WATERS off-shore array. The cable would make a conventional landfall on the southwestern corner of Johnston Atoll. The cable would enter the signal trough system at the nearest point and follow the trough system to the EG&G Terminal Board 11 adjacent to Building 881. At Terminal Board 11, the cable would cross connect into the existing timing and firing system for completion of the circuits to the JOC timing and firing center. Phase I would be procurement of major material, including cable and power reel Pre-GO. Phase II would be laying the cable from an LCU Post-GO.

F & S NO. 80002	TITLE Mix Fill Building					
USER DTC	STRUCTURE/FACILITY NO. 950			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY DTC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	19.9		145.7	*165.6	
	TOTAL	19.9		145.7	165.6	

COMPLETED

DESCRIPTION Building 950 is presently unoccupied; however, the DTC modified and occupied the building during their stay on J. A. in 1965. It is planned to move the structure to make space for Decon Pad No. 2 (see F&S No. 02069).

The building is a 20 x 40 x 8-ft. high wood framed structure with a concrete slab, plywood siding, and a plywood roof with composition roofing. The building is positioned on a 100 x 100-ft. stabilized area which is enclosed by a security fence. A reefer van is built into the west side of the building.

An air conditioning and breathing air system is installed in the building. Power is provided by a 60 kw diesel generator with a duplicate unit provided as backup. Freshwater is pumped into the building from an adjacent 10,000 gallon storage tank. Saltwater is provided from the island distribution system. Sewage is piped into a septic tank and chemical wastes drain into a waste tank; both sewage and chemical effluents are then piped into the ocean. A boiler, feedwater unit, two sterilizing units and an air compressor for the breathing air system are located adjacent to the building on an 18 x 25-ft. concrete pad.

DRAWINGS: 91-950-C1 and C2 91-950-E1, E3 and E4
 91-950-A1 JS 91-950-E100
 91-950-M1 thru M3 JS 91-950-W100

*Includes cost for F&S No. 80004.

RETURN TO DOE/AV TECHNICAL INFORMATION
 RESOURCE CENTER
 80-1

VOL I
 April 1969

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JOHNSTON ATOLL

PROJECT SHARP NAIL

F & S NO. 80003	TITLE Power Shed - Boat Pier					
USER DTC	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY DTC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost			3.0	3.0	
	TOTAL			3.0	3.0	

COMPLETED

DESCRIPTION A 9 x 10 x 8-ft. high wood framed structure, located on the boat pier, is utilized to house a 160 kw rectifier. The rectifier converts 480 volt island power to 115 volt DC power. The DC power is provided to 16 outdoor type receptacles at various dockside locations. Number 4/10, 4 conductor cables are provided to transmit the power from the receptacles to ships. The building was completed in 1965.

DRAWINGS: JS 91-066-S100 JS 91-066-E100, E101 and E103

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F & S NO. 80004	TITLE Wash Down Pad					
USER DTC	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY DTC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
Cost included in F&S No. 80002						

COMPLETED

DESCRIPTION A 100 x 100-ft. concrete pad was constructed adjacent to the Mix-Fill Building in the southwest corner of the island. The pad has a minimum thickness of 7 inches and is sloped 1 percent to one side to a drainage ditch which is channeled to a rip-rap outfall in the ocean. Six power outlets for floodlights are provided at the periphery of the pad. Power is supplied from the Mix-Fill Building bus. One 3/4-inch hose bib for saltwater is located at the edge of the pad; a second 3/4-inch bib provides freshwater. The water supply is piped from the Mix-Fill Building area.

DRAWINGS: 91-950-C1 and C2 91-950-E3 JS 91-950-E100

F & S NO. 81001	TITLE Launch Area Security					
USER ADC	STRUCTURE/FACILITY NO. 786			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
SSD (04-695) 64-10	PRE-GO					
	Prior Cost	13.6		206.5	220.1	
JTF-8 CRO 5-66	PRE-GO					
	Prior Cost			6.0	6.0	
	TOTAL	13.6		212.5	226.1	

COMPLETED

DESCRIPTION The security guardhouse controls traffic into the area. This building (completed in 1964) is a 22 x 24 x 8-ft. high wood frame structure with aluminum siding, and concrete floor. Space is provided for a control room, ready room, battery room, and latrine. Intrusion alarm systems are provided in the S&I Building, Launch Operations Building, Weapons Storage Igloos, and Launch Pads Nos. 1 and 2.

Security fencing (completed in 1964) encloses the entire launch area and the explosive storage and processing areas. The fence is a 7-ft. high chain link, topped with 3 strands of barbed wire. Swing gates are provided at access roads; however, main access into the area is through a motorized sliding gate located at the entrance to the security guardhouse.

Security lighting is located inside the perimeter fence. The light is provided by twin floodlights of 6000 lumens each, mounted about 10-ft. above the ground on poles spaced a maximum of 125-ft. apart.

DRAWINGS: JS 91-056-C103 91-786A-EM1
 91-075-C6 91-787-C1 and C2
 91-786-A1 91-787-W1 and W2
 91-786-M1 91-787-W6
 91-786-E1 thru E4

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F & S NO. 81002	TITLE Surveillance and Inspection (S&I) Building					
USER ADC	STRUCTURE/FACILITY NO. 787			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY SSD	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	20.9		184.4	205.3*	
	TOTAL**	20.9		184.4	205.3	

COMPLETED

DESCRIPTION This building (completed in 1964) is a 40 x 55-ft. steel frame structure with corrugated cement asbestos roof and siding, and concrete floor. The building consists of high bay area, and a storage and parts area. The high bay area is 31 x 40 x 22-ft. high and contains a 5-ton movable bridge crane with a 15-ft. hook height. The bridge crane is mounted on rails and moves in an easterly and westerly direction. A trolley permits northerly and southerly positioning of the hook. An overhead 12 x 12-ft. electrically operated metal door provides access into the high bay. The storage and parts area is 24 x 40 x 12 1/2-ft. high and is provided with a 10 x 10-ft. metal door.

The entire building is fully insulated and air conditioned. Air conditioning units located outside of the building provide a total of 6500 cfm of air. Electrical power of 120/208, 60 cycle, 3 phase is supplied from a panel located inside of the building.

DRAWINGS:

91-787-A1 and A2	91-787-M1 and M3
91-787-C1	91-787-E2 thru E4
91-787-S1 thru S3	91-787A-M1 and M2
	91-787-W1, W2 and W6

*Cost for air conditioning is included under F&S No. 81012.

**Includes cost for office bunker F&S No. 81003.

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F & S NO. 81003	TITLE Office Bunker					
USER ADC	STRUCTURE / FACILITY NO. 788			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY SSD	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
Costs included in F&S No. 81002						

COMPLETED

DESCRIPTION The 25 x 40-ft. steel arch bunker (Building 788) is located adjacent to the S&I Building in the launch area. The bunker has reinforced concrete end walls and is equipped with blast doors designed for 30 psi overpressures. The bunker is air conditioned, has exterior lighting and also has a separate 140 cfm air supply and exhaust system. (Completed in 1964.)

DRAWINGS:

91-787-C2 thru C4	91-788-A1
91-787-M2 and M3	91-788-S1 thru S3
91-787-E1 thru E4	91-788-E1
91-787-W1, W2 and W6	



[REDACTED]

JOHNSTON ATOLL

PROGRAM 437

F & S NO. 81004	TITLE Teltrac and Command Antennas					
USER ADC	STRUCTURE FACILITY NO. None			SCIENTIFIC STATION NO. See Below		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
SSD (04-695) 64-10	PRE-GO					
	Prior Cost	1.1		16.9	18.0	
	TOTAL	1.1		16.9	18.0	

COMPLETED

DESCRIPTION Two Teltrac antennas and two Command antennas were erected in an area north of the Launch Operation Building. The antennas are mounted on platforms 12-ft. square and atop structural towers 11 1/2-ft. square and 24-ft. high. Above ground cable trays carry cabling from the antennas into the Launch Operations Building (Building 790). (Completed in 1964).

DRAWINGS: 91-787-C1 91-6121-S1 JS 91-6121-S100

Scientific Stations:

Teltrac Antennas	91-7-28
	91-7-29
Command Antennas	91-7-30
	91-7-31

[REDACTED]

F & S NO. 81005	TITLE Baker-Nunn Camera Station					
USER ADC	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. 92-7-1		BOD
	FOD					
FUNDING AGENCY SSD	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO					
	Prior Cost	2.2		18.0	20.2	
TOTAL		2.2		18.0	20.2	

COMPLETED

DESCRIPTION A 14 x 21-ft. shed addition was made to the existing 21 x 35-ft. camera building on Sand Island. The structure is an RF shielded wood frame, covered with corrugated aluminum sheeting. The addition houses a supply and maintenance area and a comparator room. Additional air conditioning equipment was installed to serve the new portion of the building. (Completed in 1964).

DRAWINGS:

92-6140-A1 thru A4	JS 92-6140-A101 and A102
92-6140-C1	JS 92-6140-M100 thru M104
92-6140-S1 thru S4	JS 92-6140-E100, E102 and E103
92-6140-M1 thru M4	JS 92-6140-W100
92-6140-E1 thru E4	

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JOHNSTON ATOLL

PROGRAM 437

F & S NO. 81006	TITLE Missile Transfer Building					
USER ADC	STRUCTURE FACILITY NO. 119			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY SSD (04-695) 64-10	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost	3.0		54.8	57.8	
	TOTAL	3.0		54.8	57.8	

COMPLETED

DESCRIPTION A 40 x 100-ft. steel frame structure is located between Buildings 100 and 120. The building was erected on 5-ft. high concrete piers and is bolstered internally to accommodate three (3) HP hoists with a hook height of 18-ft. (Completed in 1964.)

DRAWINGS: 91-119-S1 and S2 91-119-E1

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F & S NO. 81007	TITLE Weapons Storage Igloos					
USER ADC	STRUCTURE FACILITY NO. 781 to 785			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY SSD (04-695) 64-10	(S000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost	5.3		76.8	82.1	
	TOTAL	5.3		76.8	82.1	

COMPLETED

DESCRIPTION Five corrugated steel arch igloos, 11 x 17 x 9-ft. high at the crown, are located on concrete slabs in a row facing the north shore of Johnston Island. The igloos (Buildings 781 to 785) have 8-ft. high and 10-ft. wide blast doors facing the north shore of the island. Each igloo provides about 190 square feet of magazine area and the steel arch is covered with coral fill with a minimum thickness of 2-ft. The igloos are vented and equipped with interior and exterior lighting. (Completed in 1965.)

DRAWINGS: 91-781-S1 thru S4 91-781-E1

F & S NO.	TITLE					
81008	Thor Missile Launch Facilities					
USER	STRUCTURE/FACILITY NO.			SCIENTIFIC STATION NO.		BOD
	700 and 794			91-7-18 and 91-7-19		FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
SSD	PRE-GO					
	Prior Cost	6.8		60.5	67.3	
JTF-8 CRO 68-9	PRE-GO					
	FY-69	7.0		89.1	96.1	
AEC	PRE-GO					
	FY-69	57.0			57.0	
	FY-70			275.0	275.0	
TOTAL		70.8		424.6	495.4*	

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-6100-S13 JS 91-6100-S103 and S104
 91-6100-M1 thru M7 JS 91-6100-M100, M101 and M112
 91-6200-E1 thru E5 JS 91-6100-E100 thru E102
 91-6200A-E1 and E2

PROCUREMENT Completed.

CONSTRUCTION The two Thor Missile Launch Facilities are located within the ADC secured (fenced in) area on the north central shore of the island. The launch facilities are situated for the Thor Type DSV-2J missile with a revetted trailer and equipment shelter to either side and a roll-back missile shelter. The liquid oxygen fuel tanks are in open pits at opposite sides of the launch pads. The missile, when erected, is adequately lighted for night television viewing and photography. Other areas, such as the LOX tank and the LOX and fuel lines, are lighted for television surveillance. Each launch facility is equipped with a Firex system, supplied with approximately 40,000 gallons of stored freshwater plus an unlimited back up of saltwater pumped directly from the adjacent lagoon. Signal cables to the launch facilities are carried in above ground cable trays, where practicable, and in cable troughs or trenches under the road network. All traffic in and out of the secured area passes through the security gates at the Guardhouse (Building 786). Security lighting is provided at the launch facilities

and perimeter fence (F&S No. 81001). The launch and other major facilities within the secured area are served by an asphalt paved road network (F&S No. 81022). Launch control is accomplished from the Launch Operations Building 790. Other structures within the secured area serving the launch facilities include the S&I Building 787 (F&S No. 81002), missile storage bunkers, 779 through 785 (F&S No. 81007), Payload Assembly Building 795 (F&S No. 81020) and Teltrac and Command antennas (F&S No. 81004). Missile guidance is accomplished from either the Ground Guidance facilities at Building 100 (F&S No. 81012) or Building 990 (F&S No. 81015).

FY 1969

FIREX MODIFICATIONS - Completed

DESCRIPTION The Launcher Firex System has been rehabilitated and modified. Modifications include installation of a new 14-inch diameter firex line and a new 4-inch diameter freshwater line. Four new 18,700 gallon polyester tanks and associated piping were also provided (completed in 1968).

DRAWINGS: 91-6200-M3 and M4 JS 91-6100-M107 thru M112

FY 1969 AND FY 1970

PAYLOAD SERVICE TOWER

ENGINEERING Drawings have been issued for approval.

Drawings: 91-086-A1 thru A3 91-086-M1 thru M6
91-086-C5 and C6 91-086-E3 thru E7
91-086-S9 thru S18

PROCUREMENT To be accomplished.

CONSTRUCTION An aluminum tower with service platforms will be constructed to provide working access at various levels on the elevated Thor missile. The tower will be 119-feet high for use with the short tank Thor. A 9-ft. long section of tower will be added for use with the long tank Thor. The tower is provided with a cantilevered trolley beam and 10 ton crane block to facilitate mating the High Altitude Test Vehicle with the elevated Thor. The tower will be capable of being used on both Launch Pad No. 1 and No. 2. The tower will be trucked to either launch pad and erected utilizing the Thor erection mechanism. An elevator is provided within the tower shaft.

*All costs indicated are for modifications after 1964 only.

F & S NO. 81009	TITLE LOX Plant					
USER ADC	STRUCTURE FACILITY NO. 900 and 902			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
SSD	PRE-GO Prior Cost			102.5	102.5	
ADC	PRE-GO Prior Cost	7.1		101.5	108.6	
SAAMA	PRE-GO Prior Cost	0.1		56.5	56.6	
JTF-8 CRO 7-64 CRO 7-65	PRE-GO Prior Cost	23.5		150.0	173.5	
	TOTAL	30.7		410.5	441.2	

COMPLETED

DESCRIPTION This facility (completed in 1964) is located within a fenced area on the northwest corner of Johnston Island and is used for the production of liquid oxygen. The complex includes a Liquid Oxygen (LOX) Plant, an equipment area, a storage shed, a 500 barrel fuel oil tank, and an underground 1000 gallon capacity dirty lube oil tank.

The LOX Plant (Building 900) is a metal frame structure with corrugated cement asbestos roof and siding, and concrete floor. The building consists of a two story 50 x 62 x 22-ft. high area, and a single story 26-ft. wide x 12-ft. high, L-shaped area adjoining the west and south sides of the two story area. The single story bay contains a soundproofed area employed for offices, a latrine, and a "break" room, and additional space for a toolroom, spare parts, and bulk storage. The two story bay area contains a LOX trailer repair area served by a 2 ton overhead hoist, and a 20 x 25-ft. storage room. This storage room is located on the second floor and is accessible by means of a stairway and a catwalk.

The building was modified in 1967 to accommodate the installation of a 25 ton LOX generating plant. The LOX generators are electrically driven.



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JOHNSTON ATOLL
81009

PROGRAM 437
Page 2

The equipment area is provided with a 91 x 192-ft. concrete slab to support 6 air source trailers, 3 column trailers and 3 heat exchangers.

The storage shed (Building 902) is a 15 x 30 x 7-ft. high wood frame structure with corrugated metal roof and siding, and concrete floor. This building is utilized for the storage of tools and materials used in connection with LOX production.

The 500 barrel fuel oil tank is located within a bermed area. This tank supplies fuel to the air source trailers.

The 1000 gallon underground tank receives dirty lube oil from the air source trailers. An oil drain located under each trailer connects to a manifold drain system which discharges into the tank.

<u>DRAWINGS:</u>	91-900-A1 thru A4	91-900-M1	JS 91-900-S101
	91-900-C1 and C2	91-900-E1 thru E4	JS 91-900-M101
	91-900-S1 thru S5	JS 91-900-A100	JS 91-902-A100

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F & S NO. 81010	TITLE Cryogenic Storage Area					
USER ADC	STRUCTURE/FACILITY NO. 796			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY SSD	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost			37.8	37.8	
	TOTAL			37.8	37.8	

COMPLETED

DESCRIPTION The principal features of the Cryogenic Storage Area are four 67.5 ton and two 35 ton capacity cryogenic blimps for the storage of liquid oxygen (LOX). The tanks rest horizontally on saddles supported by reinforced concrete foundations. Each tank is surrounded by a 16-inch minimum height coral berm. A 22-ft. wide concrete paved strip in front of the row of storage tanks serves as the LOX transfer area. The slab is designed to confine LOX spillage during transfers.

The complex includes four 10 x 50-ft. concrete paved LOX trailer pads. To confine LOX spillage, there is a 15-ft. wide curbed strip on one side of the pad and a 7.5-ft. wide curbed strip on the other side. There is a 9-ft. square concrete paved slab to support the LOX transfer equipment. The area is flood-lighted. Electrical power receptacles and other electrical installations in the hazardous area are of explosion proof design. Two personnel safety showers with eyewashers are located within the complex.

The Cryogenic Storage will be relocated by July 1, 1969 to an area northwest of the LOX Plant (Building 900).

DRAWINGS: JS 91-094-C100 and C101 JS 91-095-E101, E102, E103 and E114

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F & S NO. 81011	TITLE Launch Operations Building (LOB)					
USER ADC	STRUCTURE/FACILITY NO. 790			SCIENTIFIC STATION NO. 91-7-27		BOD
	FOD					
FUNDING AGENCY ADC (04-695) 64-10	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost	7.9*		45.9*	53.8*	
	TOTAL	7.9*		45.9*	53.8	

COMPLETED

DESCRIPTION The Launch Operations Building serves the two Thor Missile Launch pads and is located within the ADC secured (fenced-in) area at the north central part of the island. The building is a 54 x 72 x 13-ft. high reinforced concrete earth covered bunker. The concrete front of the bunker facing away from the launchers, is exposed. The interior is provided with suspended ceilings. The entire floor of the building with the exception of the latrine and corridor is "false" raised flooring. The bulk of the interior space is occupied by the Launch Control Area with the remainder divided into a Crew Briefing Room, two Payload Rooms, and Instrument Maintenance Communication and Storage Room, and a Latrine.

Air conditioning equipment is located in two lean-to shelters at the front of the building. The shelters measure 12 x 22-ft. and 12 x 14-ft. and have corrugated aluminum roofs, concrete floors, and wood louvered sides. The electrical substation serving the LOB is located within the adjacent Bunker 791. A 51 x 94-ft. concrete pad is located above and to the rear of the LOB and is utilized to support the associated diesel generator units.

DRAWINGS:

91-790-A1, A2 and A4	91-790-E1 thru E9
91-790-C1 thru C3	91-790A-E1 and E2
91-790-S1 thru S5	JS 91-790-M100
91-790-M1 thru M3	91-787-W1 and W2
91-790A-M1	

*Costs indicated are for modifications completed in the years 1964, and 1965 only and do not reflect costs prior to that time.

F & S NO. 81012	TITLE ADC Facilities Building					
USER ADC	STRUCTURE/FACILITY NO. 100 and 118			SCIENTIFIC STATION NO. 91-7-21 and 91-7-22		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
SSD	PRE-GO Prior Cost 35.1			191.7	226.8*	
ADC	PRE-GO Prior Cost 21.1			147.2**	168.3	
JTF-8 CRO 5-66 CRO 2-65	PRE-GO Prior Cost 2.6			35.3	37.9	
	TOTAL	58.8		374.2	***433.0	

COMPLETED

DESCRIPTION Building 100 was constructed prior to 1963 and was designed and originally used as a warehouse. The building was later modified to accommodate a BTL Guidance System with associated activities and offices serving the Thor Missile System. Building 100 and the adjacent radar antenna tower were modified in 1967 to accommodate a change to the Titan I Guidance System. The building is 80 x 320 x 15-ft. from floor to roof joists with concrete block walls, tar paper roof and a concrete floor. A concrete block fire wall divides the building at midpoint. One passageway with fire door is provided through the fire wall. The west 184-ft. of the 320-ft. long building is finished off and includes the Titan I Guidance Facilities, Direction Center, Test and Evaluation Center, Communications Center, and a number of offices. The floor of the Radar and Computer Area (2,348 square foot) is false (raised) flooring. The entire west end of the building is air conditioned.

The east 136-ft. end of the building is a warehouse area and is not finished off or air conditioned except for a 39 x 82-ft. enclosed dehumidified storage area in the northeast corner. The dehumidified storage area is served by a separate air conditioning system with equipment housed in a 7 x 11-ft. lean-to structure located outside the north wall of the building. Outside the south wall of Building 100, opposite the Radar and Computer Area, is a 22 x 32-ft. lean-to equipment room housing MG sets, controllers and part of the air conditioning equipment. This lean-to structure has concrete block walls, rolled roofing paper roof and concrete floor.

CONFIDENTIAL

JOHNSTON ATOLL
81012

PROGRAM 437
Page 2

The Bell Telephone Laboratory Radar Antenna (Building 118) serving the Titan I Guidance System is supported on a 20 x 20 x 25-ft. high tower located 75-ft. south of the southwest corner of the building. The base of the tower is enclosed with concrete block. A cable trench connects the radar tower with Building 100. The radar antenna tower, cable trench, and the lean-to equipment room are enclosed in a chain link fence. Adjacent to the east end of Building 100 is a 55 x 76-ft. concrete paved and fenced-in area for portable electrical generation equipment. The RF Test Tower serving this guidance facility is described under F&S No. 81029.

<u>DRAWINGS:</u>	91-100-A1 thru A4	JS 91-100-M101
	91-100-S1 thru S3	JS 91-100-E102 thru E106
	91-100-M1 thru M3	91-6130-C1 and C2
	91-100-E1 thru E12	91-6130-A1 thru A12
	91-100-W5, W6 and W9	91-6130-M1 thru M5 and M11
	91-100A-M3	91-6130A-M1 thru M3
	91-100A-E1	JS 91-6130-S100
	JS 91-100-A106 thru A111	JS 91-6130-M1 and M2
	JS 91-100-S105 and S106	JS 91-6130-E6 and E11
	DPWO File 105-10-1 Sheets 19 and 20	

*Includes air conditioning costs for S&I Building (F&S No. 81002).

**Includes construction costs for RF Test Tower Foundation (F&S No. 81029).

***Costs shown are for modifications after 1964 only and do not include any cost incurred prior to that time.

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F & S NO.	TITLE					
81013	ADC Laboratories					
USER	STRUCTURE/FACILITY NO.			SCIENTIFIC STATION NO.		BOD
	120 (East)			None		FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
ADC	PRE-GO					
	Prior Cost	9.9		154.0	163.9	
JTF-8 CRO 4-66 CRO 69-5	PRE-GO					
	Prior Cost			15.4	15.4	
	FY 69			24.9	24.9	
	SUBTOTAL			40.3	40.3	
TOTAL		9.9		194.3	204.2*	

PRIOR YEARS

ENGINEERING Completed.

Drawings: 91-120-M1 thru M5 JS 91-120-S100 and S102 thru S108
 91-120-E1 and E2 JS 91-120-M103 and M104
 91-120-W1 JS 91-120-E102, E103, E110 and
 JS 91-120-A103 and A106 E112
 District File No. 105-10-1 Sheets 21 and 22

PROCUREMENT Completed.

CONSTRUCTION The ADC Laboratory area occupies the east half (100 x 120-ft.) of Building 120. The space includes a Mechanical Maintenance Room, a Preclean and LOX Clean Laboratory, a Hydraulics Laboratory, an Electrical Repair Clean Laboratory, Calibration Laboratory, QC Room, Ozalid Reproduction Room, Technical Library, Precision Measurements Equipment Laboratory (PMEL) Rooms, Radio Maintenance Room, Television Room, Photography Laboratory, Parts Storage, Latrine and office space. Air conditioning equipment is located in a lean-to shelter to the south of the building. An air compressor is housed in a shelter next to the south wall. The air conditioning system is capable of providing the PMEL, Calibration Laboratory and "clean" areas with a closely controlled environments, including temperature, humidity and dust particle control. Building 120 was erected prior to 1960 and modified extensively at different times, particularly in 1964 and 1965. The outer walls are concrete block and the roof is corrugated asbestos cement. The partition walls and ceilings are gypsum plasterboard over wood framing. The wall between this ADC area and the cold storage plant occupying the west half of the building is concrete block and is insulated. The west portion of the building is described under F&S No. 02081.

FY 1969

ENGINEERING Completed.

Drawings: JS 91-120-A114 thru A116 JS 91-120-E114 and E115
JS 91-120-M108 and M110

PROCUREMENT Completed.

CONSTRUCTION The building modifications scheduled for FY 1969 provide for the enlarging of the LOX Clean/Preclean Laboratory area at the expense of the Mechanical Maintenance Room.

*Costs indicated are for the modifications only and do not reflect the original cost of the building.

F & S NO.	TITLE					
81015	Ground Guidance Facility					
USER	STRUCTURE FACILITY NO.			SCIENTIFIC STATION NO.		BOD
	990, 966, 968			See Text		FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
SSD	PRE-GO					
	Prior Cost	49.1		418.2	467.3	
ADC	PRE-GO					
	Prior Cost	10.7		94.7	105.4	
	TOTAL	59.8		512.9	572.7	

COMPLETED

DESCRIPTION The Ground Guidance facility is housed in a 72 x 98-ft. building located in the southwest corner of Johnston Island. The building contains space for computers, technical storage, laboratories, mechanical equipment, power room, offices and a latrine. In the northeast corner a 20 x 20 x 28-ft. high tower houses a radar unit. The walls of the building are concrete block and the roof is "built up" over metal decking and insulation. The building is air conditioned.

The following exterior features are included in the facility:

- 1) A 56 x 74-ft. concrete paved, fenced in floodlighted area adjacent to Building 990 for air conditioning units and portable power generation equipment.
- 2) 750-ft. from Building 990 in a fenced in enclosure, are the following:
 - (a) A 90-ft. high unguyed RF test tower (Structure No. 966)
 - (b) An equipment building serving the tower (Building 968). The building is a 6.5 x 6.5-ft. wood frame structure with plywood walls, rolled paper roof, and concrete floor.
 - (c) An 8-ft. high monolith or bench mark.

The initial construction was completed in 1965 with major revisions to accommodate the Titan I Guidance System completed in 1967.

JOHNSTON ATOLL
81015

PROGRAM 437
Page 2

<u>DRAWINGS:</u>	91-990-C1	91-990-E1 thru E7
	91-990-A1 thru A7	JS 91-990-E100 and E101
	91-990-S1 thru S5	91-990-W1 thru W3
	91-990-M1 thru M8	

Scientific Stations:

Building 990 - Ground Guidance	91-7-24
BTL Antenna	91-7-25
Structure 966 - RF Test Tower	91-7-26

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F & S NO. 81018	TITLE Launch Operations Building					
USER ADC	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN

PROPOSED

ENGINEERING To be determined.

PROCUREMENT To be determined.

CONSTRUCTION A new Launch Operations Building (LOB) will be constructed within a secured area between proposed Launch Pads No. 3 and No. 4. The new LOB will be similar to the existing LOB (Building 790) now being used by ADC.

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PROGRAM 437

F & S NO. 81019	TITLE New Thor Missile Launch Pads					
USER ADC	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN

PROPOSED

ENGINEERING To be determined.

PROCUREMENT To be determined.

CONSTRUCTION Two new launch pads are planned for construction within a secured area on the northwest shore of Johnston Island. The new pads (No. 3 and No. 4) will be similar to the existing Thor Pads (No. 1 and No. 2) now in use by ADC.

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PROGRAM 437

F & S NO. 81020	TITLE Payload Assembly Building					
USER ADC	STRUCTURE/FACILITY NO. 795		SCIENTIFIC STATION NO. None			BOD
						FOD
FUNDING AGENCY ADC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost	28.0		239.0	267.0	
	TOTAL	28.0		239.0	267.0	

COMPLETED

DESCRIPTION The Payload Assembly Building is located within the ADC secured area on the north central part of Johnston Island and just north of the Launch Operations Building 790. The dimensions of the building are 40 x 71-ft. A 24 x 42-ft. mezzanine is included within the structure. The walls of the building are concrete block; the roof is "composition" over insulation and metal decking; the floors, including the mezzanine, are concrete. The building houses technical areas and provides space for parts storage, guardroom, mechanical equipment, and has a latrine on the first floor. The mezzanine has space for a laboratory, latrine and offices. The high bay area is approximately 23-ft. high and contains a 5-ton hoist with a 15-ft. hook height. The building is air conditioned.

DRAWINGS:

91-795-C1	91-795-E1 thru E3
91-795-A1 thru A5	91-795-SE 1 and SE 2
91-795-S1 and S2	91-795-W1 thru W4
91-795-SS1 and SS2	JS 91-795-S100 and S101
91-795-M1 thru M4	

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F & S NO. 81022	TITLE ADC Area Roadways					
USER ADC	STRUCTURE FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY ADC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost			32.2	32.2	
	TOTAL			32.2	32.2	

COMPLETED

DESCRIPTION This description applies to the roadways within the secured (fenced in) ADC area, generally located between the north taxiway and the island north shore and from the east side of Thor Launch Pad No. 2 to the west side of Storage Igloo, Building 785. All major facilities within the complex are connected by approximately 4,430 lineal feet of asphalt paved roadway. The roadway width is 16-ft. minimum with generally 3-ft. of unpaved shoulders. Paving thickness is 2 1/2 inch minimum over a compacted coral base. Roadway and area drainage facilities are included as required. Minor facilities are connected by unpaved roadways of varying degrees of improvement but usually constructed of a compacted select grade of crushed coral. The ADC road network connects to the main island system (refer to F&S No. 02013) at the Security Gate and Guardhouse (Building 786). There are two other unpaved connecting roadways, opposite each of the two Thor launch facilities; however, the gates are normally kept closed and locked.

DRAWINGS: 91-075-C5 thru C7 91-075-C13 and C14 91-075-C30

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HICKAM AFB

PROGRAM 437

F & S NO. 81023	TITLE ADC Office and Laboratory Space - Hickam AFB					
USER ADC	STRUCTURE/FACILITY NO. Hangar 2-Building T-2060			SCIENTIFIC STATION NO. None		BOD
	FOD					
FUNDING AGENCY ADC	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost	76.0	26.8	564.4	667.2	
	TOTAL	76.0	26.8	564.4	667.2	

COMPLETED

DESCRIPTION The second floor of Building T-2060 at Hickam AFB was constructed to provide a facility to support ADC operations. This floor consists of 27,500 square foot of air conditioned administrative space. Minor structural and electrical modifications were performed in the single story center section between Hangars 2 and 4. An air conditioning system and structural and electrical alterations were installed in the lean-to next to Hangar 4.

Refer to F&S No. 07018 for additional information.

DRAWINGS: 95-2060.2-A1 thru A10 95-2060.2-E1 thru E10
 95-2060.2-S1 thru S4 95-2060.2-W1 thru W4
 95-2060.2-M1 thru M13

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PROGRAM 437

F & S NO. 81028	TITLE Air Defense Command - Signal Cable					
USER ADC	STRUCTURE/FACILITY NO. None			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY SSD	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost			56.5	56.5	
	TOTAL			56.5	56.5	

COMPLETED

DESCRIPTION A total of 10,800 lineal feet of cable trough is available for installation of signal cable. Approximately 34,000 lineal feet of signal cable is installed for voice, data and telemetry purposes between the Ground Guidance Facility (Building 990) and other related ADC facilities.

DRAWINGS: 91-079-W94 and W95 91-990-W1

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SUPPORT

F & S NO. 81029	TITLE RF Test Tower and Equipment Shed					
USER ADC	STRUCTURE FACILITY NO. 365 and 367			SCIENTIFIC STATION NO. 91-7-23 (Structure 365)		BOD
						FOD
FUNDING AGENCY SMAMA - EAO FO 4606 - 67-M-5273	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Cost			11.8	11.8*	
	TOTAL			11.8	11.8	

COMPLETED

DESCRIPTION The RF Test Tower, Structure 365, is a 90-ft. high, 16-ft. square steel unguyed tower supported on concrete capped pile foundations. The tower is equipped with obstruction lights and lightning and grounding rods. The tower and equipment shed, Building 367, are located north of Building 400. The wooden shed is 8x8x 7 1/2-ft. high with plywood walls and roof and a concrete floor.

DRAWINGS: 91-100-A4 Flint Steel Corporation 65-70-3BSS (11 Sheets)

*Tower foundation costs are included with F&S No. 81012.

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HICKAM AFB

PROGRAM 437

F & S NO. 81030	TITLE AFWTR - Office and Laboratory Space - Hickam AFB					
USER AFWTR	STRUCTURE FACILITY NO. Hangar 2 - Building T-2060			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY AFWTR	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	PRE-GO Prior Costs	2.1		23.6	25.7	
	TOTAL	2.1		23.6	25.7	

COMPLETED

DESCRIPTION A total of 2,500 square foot of office space is provided on the third floor of Hangar 2. The office area is air conditioned and is equipped with a sprinkling system. There are 6 partitioned offices, a conference room and a latrine.

Refer to F&S Number 07018 for additional information including drawing numbers.

81-27

VOL I
April 1969

~~CONFIDENTIAL~~

JOHNSTON ATOLL

PROGRAM 437

F & S NO. 81033	TITLE Equipment and Supply Building					
USER ADC	STRUCTURE/FACILITY NO. 789			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
JTF/ RDT&E CRO 2-65	PRE-GO Prior Cost			10.5	10.5	
	TOTAL			10.5	10.5	

COMPLETED

DESCRIPTION This building is a 16 x 80 x 11-ft. high, wood framed storage shed. The building is covered on three sides with asbestos cement siding and has a corrugated aluminum roof. The west side of the building is open and provides access to five 16-ft. wide storage and equipment stalls.

DRAWINGS: JS 91-789-A100 thru A102

F & S NO. 81034	TITLE Propellant Loading and Storage Area					
USER ADC	STRUCTURE/FACILITY NO. 797 - 798			SCIENTIFIC STATION NO. None		BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
SAMSO MIPR FN-2822- 9-101	PRE-GO FY 69	18.0			18.0	
	TOTAL	18.0			18.0	

FY 1969

ENGINEERING In progress. Concept drawings have been issued for approval.

Drawings: 91-797-C1 and C2 91-797-E1 thru E4
 91-797-A1 thru A3 91-797-M1
 91-797-S1

PROCUREMENT In progress.

CONSTRUCTION This facility will be located west of the Assembly Building (Building 795). Building 797 will be a 36 x 52 x 16-ft. high steel rigid frame structure with aluminum roof, concrete floor and open sides. This building will be divided into three bays as follows: A 25 x 36-ft. propellant service area, a 13-ft. 6-in. x 36-ft. fuel ready storage area, and a 13-ft. 6-in. x 36-ft. LOX ready storage area. Concrete walls, 16-ft. high will separate the propellant service bay from the other two bays. The A. C. Trailer Shelter (Building 798) will be a 21 x 23 x 12-ft. high steel rigid frame structure with aluminum roof, concrete floor, and open sides. This shelter will be located adjacent to Building 797 to provide protection for two air conditioning trailers.

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JOHNSTON ATOLL

PROGRAM 437

F & S NO. 81036	TITLE Check Station					
USER ADC	STRUCTURE/FACILITY NO. 701		SCIENTIFIC STATION NO. None			BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED

DESCRIPTION This is a 25 x 40-ft. building with concrete block walls, corrugated asbestos cement roof, and concrete floor.

DRAWINGS: Law & Wilson Drawings - AF 38-12-01 Sheets 1 to 8 inclusive

~~CONFIDENTIAL~~

F & S NO. 81037	TITLE Underground Bunkers					
USER ADC	STRUCTURE FACILITY NO. 791, 792, 793		SCIENTIFIC STATION NO. None			BOD
	FOD					
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
Costs prior to 1963						

COMPLETED

DESCRIPTION The three earth covered bunkers are located side by side adjacent to the Launch Operations Building 790. The bunker construction consists of "Armco Multiplate Vehicular Underpass" sections of sizes noted below. The backs of the bunkers are wooden bulkheads which also retain the earth cover. The fronts of the bunkers, which also serve as bulkheads to retain the earth cover, are also of wood and include large double doors. The corrugated underpass floors are covered with a leveling course of compacted coral sand.

Bunkers Number 791 and 792

The underpass section has a 16-ft. 5-in. span and a 15-ft. 4-in. rise. The gauge of the Multiplate is #10. Inside length is 32-ft. Door clear opening is 11-ft. 6-in. high x 11-ft. wide. The bunkers are provided with forced air ventilation. At present, Bunker No. 791 houses an electrical substation serving the Launch Operations Building (refer to Drawings 91-790-E1 and E5). Bunker No. 792 is being used for Air Force storage.

Bunker Number 793

The underpass section has a 20-ft. 3-in. span and a 17-ft. rise. The gauge of the Multiplate is #8. Inside length is 40-ft. The door clear opening is 13-ft. 6-in. high x 11-ft. wide. The bunker is air conditioned. At present, the bunker is being used as a "pellet range".

DRAWINGS:

91-791-C1	91-791-S4
91-791-S1	91-791-M1
91-791-S2	JS 91-791-M100
97-791-S3	91-791-E1

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JOHNSTON ATOLL

PROGRAM 437

F & S NO. 81038	TITLE Corrosion Control Building					
USER ADC	STRUCTURE FACILITY NO. 181		SCIENTIFIC STATION NO. None			BOD
						FOD
FUNDING AGENCY	(\$000)	ENGR	PROC	CONST	TOTAL	FURN
	Costs prior to 1963					

COMPLETED


DESCRIPTION The building is a 25 x 34 x 10-ft. high wood frame structure with wood flooring, plywood siding and tar paper roof. The building was constructed prior to 1963 and was originally utilized as a screen room. The building is skid-mounted to facilitate moving. Utilities consist of electrical lighting only.

81-33

~~CONFIDENTIAL~~

VOL I
April 1969




UNFUNDED MILCON PROJECTS

FISCAL YEAR 1970

All costs shown are preliminary planning estimates.

1) F&S No. 02044 - Air Passenger and Freight Terminal

Existing Quonset Huts T-307 and T-308 will be demolished and replaced by two 40 x 100-ft. steel frame buildings located south of Building 287 and east of the Aircraft Parking area. The buildings will be constructed with concrete block walls, built up roofing, and concrete floors. Space within the buildings will be provided for Flight Operations Offices, Security Offices, Warehousing, Waiting Rooms, and Latrine Facilities. A covered 40 x 100-ft. patio will be provided for waiting passengers. The JTF-8 preliminary planning estimate for this facility is \$279,000.

2) F&S No. 02040 - Shoreline Protection

Provide erosion protection through construction of bulkheads and revetments on approximately 5440 lineal feet of shoreline at Johnston Atoll. The JTF-8 preliminary planning estimate for this work is \$1,624,000.


UNFUNDED MILCON PROJECTS

FISCAL YEAR 1971

1) F&S No. 02040 - Shoreline Protection

Provide erosion protection through construction of bulkheads and revetments on approximately 2440 lineal feet of shoreline at Johnston Island. The JTF-8 preliminary planning estimate for this work is \$930,000.

2) F&S No. 0303C - Replace Distillation Equipment

- 1) Remove two temporary distillation units (Griscom-Russell).
- 2) Construct 1400 square feet addition to Building 45, designed to house new distillation units.
- 3) Install two new 75,000 GPD distillation units complete with associated equipment.
- 4) Remove existing 300 gallon fuel oil tank and replace with 1000 gallon tank.
- 5) Extend reinforced concrete saltwater reservoir for additional 168,000 gallon capacity.
- 6) Electrical and mechanical modifications/additions as required

The JTF-8 preliminary planning estimate for this work is \$800,000.

[REDACTED]

UNFUNDED MILCON PROJECTS

FISCAL YEAR 1972

1) F&S No. 0316X - Fire Station

The new Fire Station will be a 70 x 194-ft. concrete block structure with air conditioned living space. Eight vehicle stalls, quarters for 40 men, and latrine facilities will be provided. Adequate space for the maintenance of extinguisher equipment will also be provided. This will include scales, bottle racks and piping necessary for recharging emergency type fire extinguishers. This new station is proposed as a replacement for the existing station and will be located in the same general location.

2) F&S No. 02106 - Heavy Equipment Shop


Construct new addition to match architecture and physical dimensions of existing Automotive Maintenance Building 40. The concrete foundations will be spread footing, with reinforced slab on grade. The superstructure will have reinforced concrete frame, with concrete masonry block filler walls. Corrugated cement asbestos roofing will be supported on structural steel trusses. The existing grease rack will be roofed over. The storage area will be air conditioned. Associated utilities will include water, sewer, and electrical.

3) F&S No. 0303G - Construct Water Loop - Southwest Side of Island

4) F&S No. 0303H - Cover Drainage Ditches

5) F&S No. 02105 - Corrosion Control Building

A prefab steel frame structure with masonry block exterior walls and cement asbestos roofing will be constructed. Interior partitions will be fireproof cinder or pumice block. Associated utilities will include water, sewer, and electrical.


UNFUNDED MILCON PROJECTS

FISCAL YEAR 1973

- 1) F&S No. 02082 - Diesel Fuel Storage (13,500 Barrel)
- 2) F&S No. 0304A - Power Distribution System

Install 1,500 lineal feet of underground distribution duct and 4,500 lineal feet of high voltage cable to complete back-feed Loop No. 3. Install seven sectionalizing switch stations in Feeders 1, 2, 3, and 5. The work will also include the modification of existing manholes, construction of new pull boxes and approximately 50 high voltage splices.

[REDACTED]

UNFUNDED MILCON PROJECTS

FISCAL YEAR 1974

- 1) F&S No. 02040 - Shoreline Protection



**APPENDIX A
SITE PLANS**

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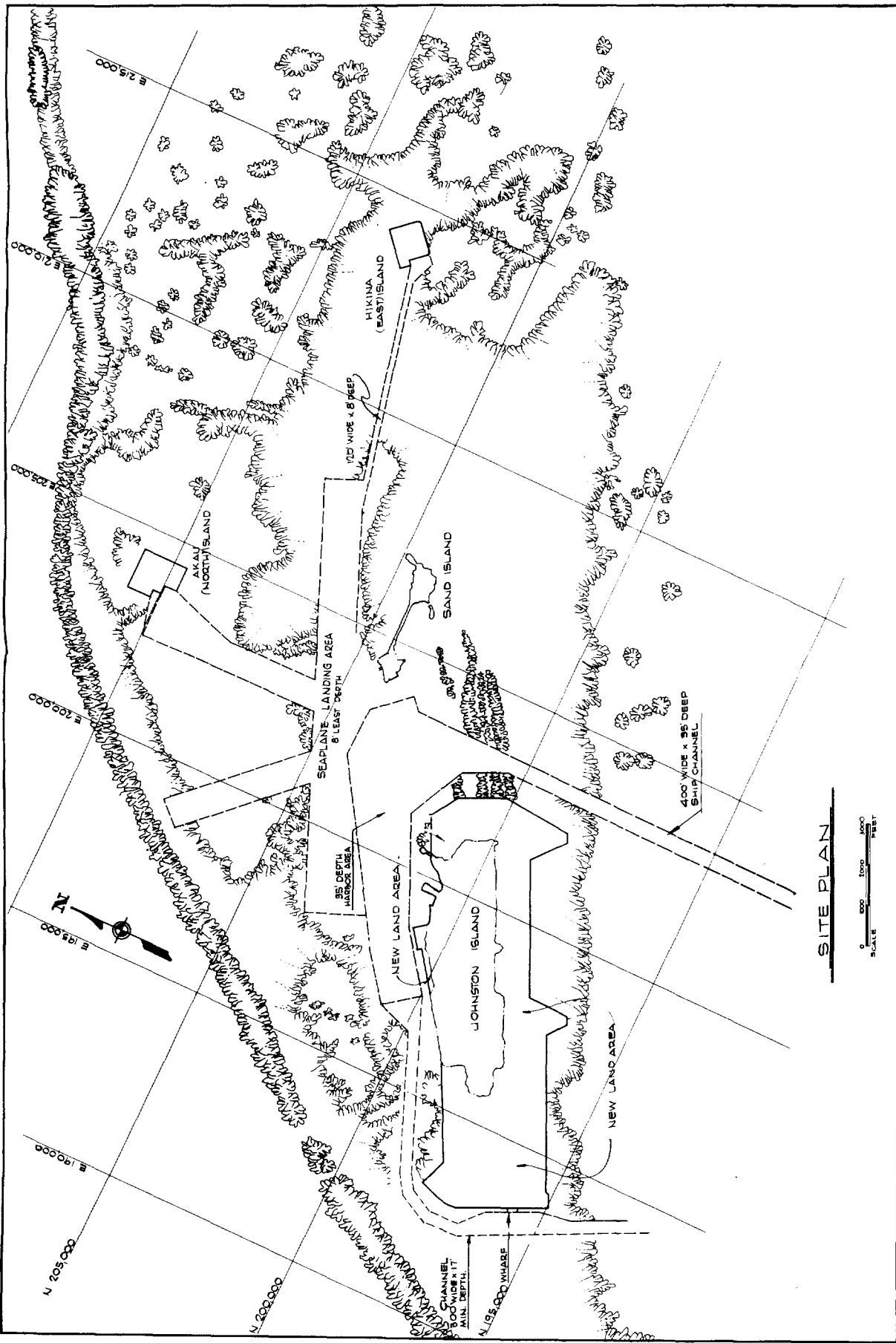
APPENDIX A

SITE PLANS

A.1 GENERAL

Site plans for Johnston Atoll are presented in this section. This supplemental information to the facility descriptions shows the locations and physical arrangement of the facility or facilities.

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VOL I
April 1969

FIGURE A-1. JOHNSTON ATOLL AND SURROUNDING AREA

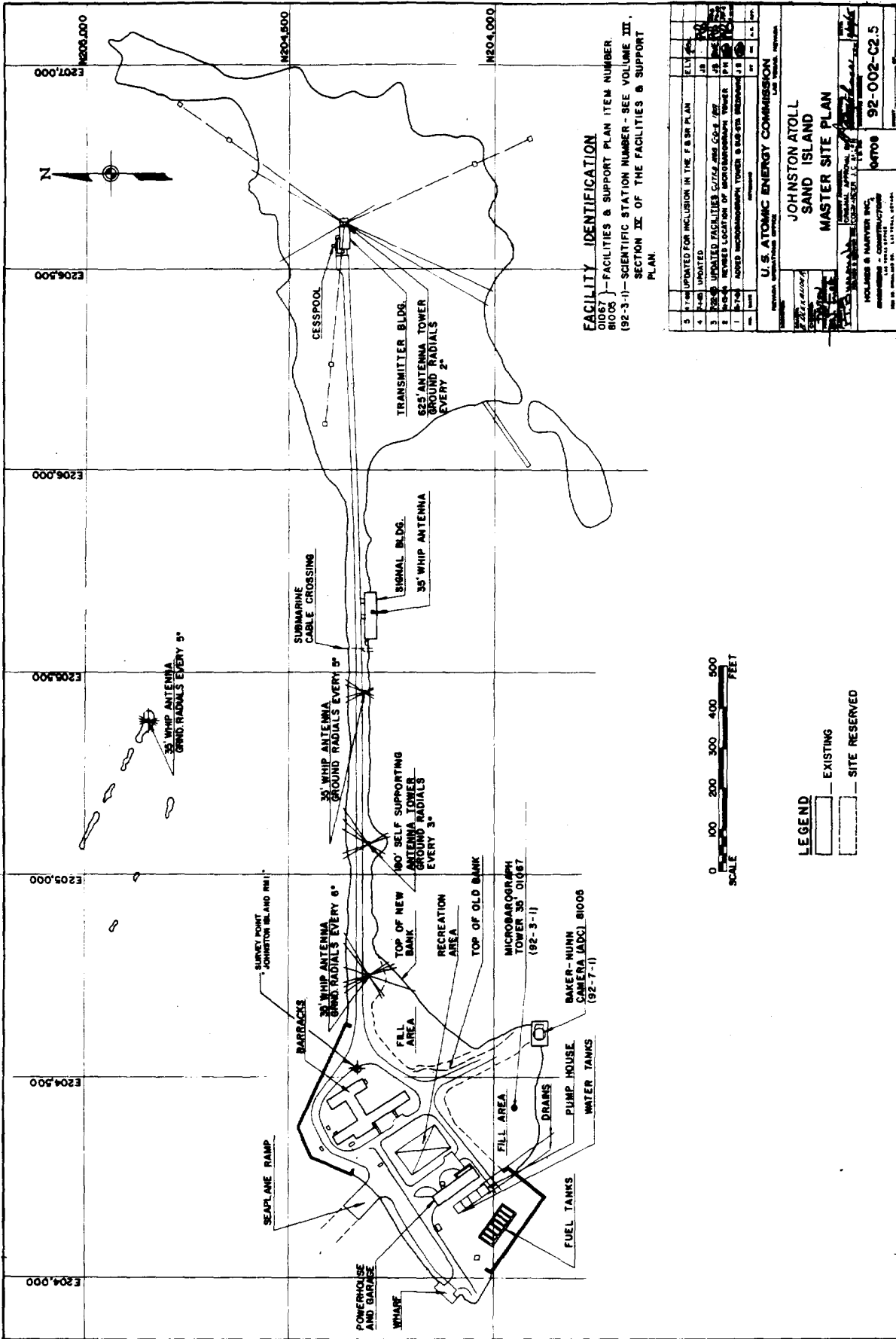


FIGURE A-4. FACILITIES AT SAND ISLAND

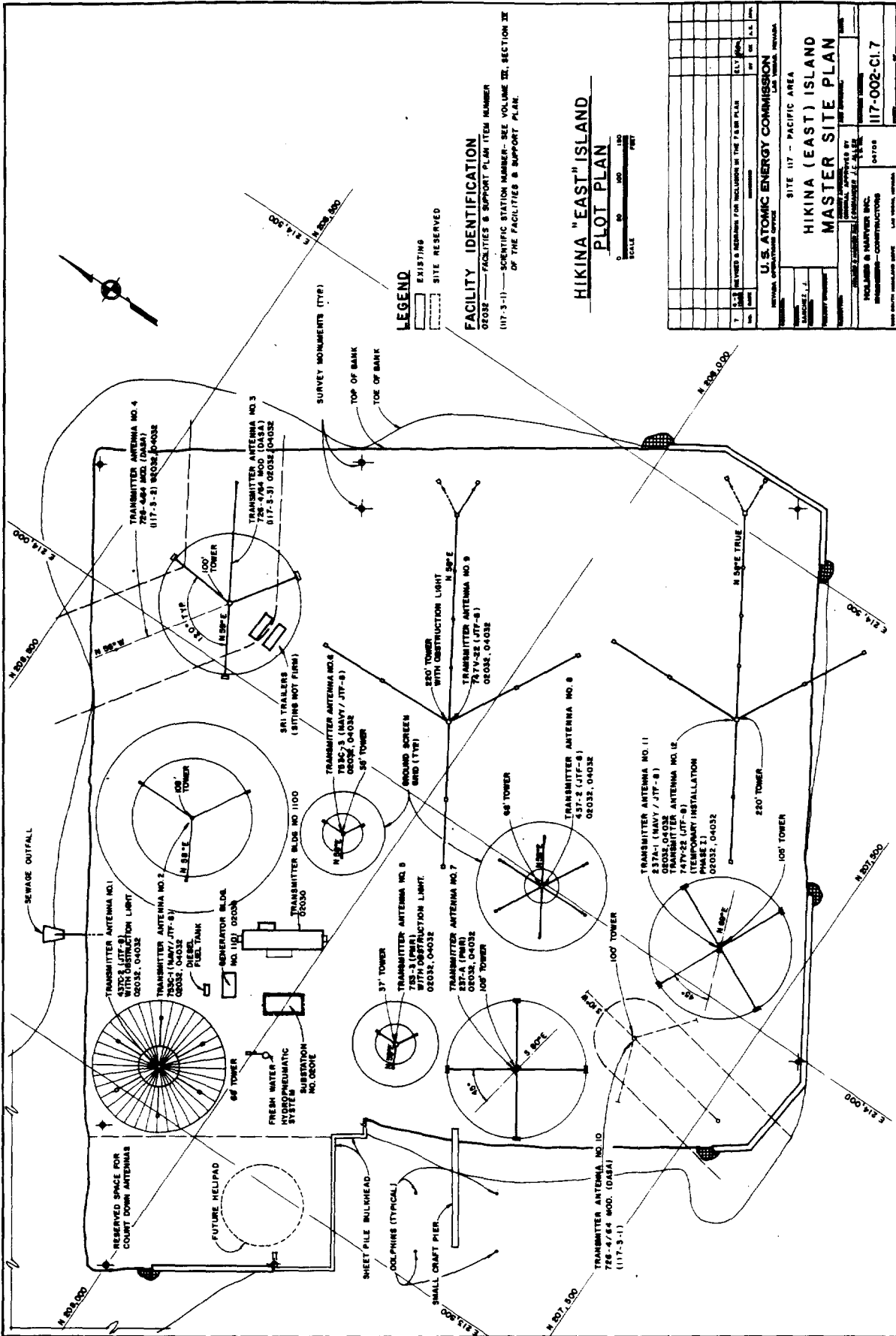


FIGURE A-6. FACILITIES AT HIKINA ISLAND

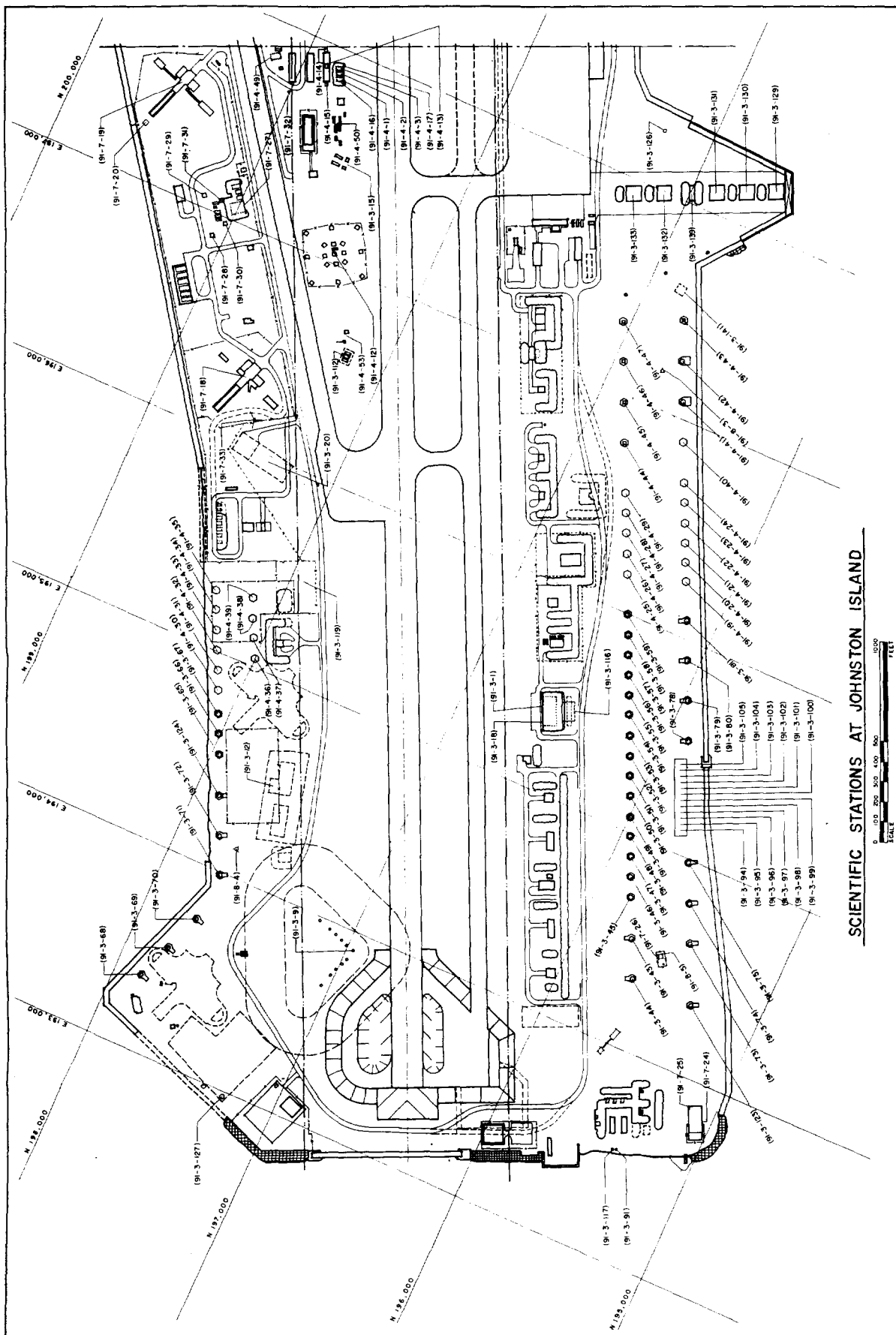
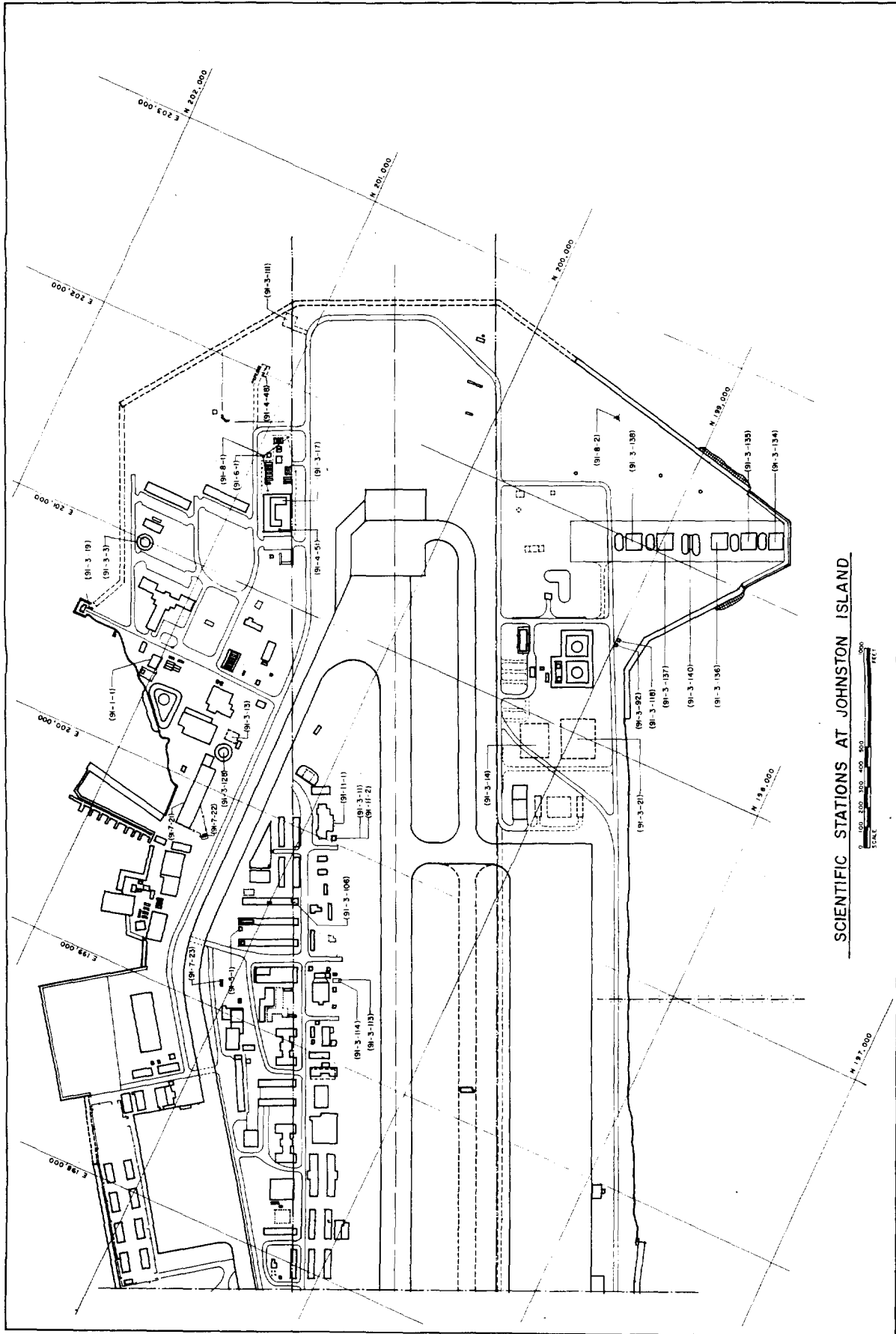


FIGURE A-7. SCIENTIFIC STATIONS ON WESTERN END OF JOHNSTON ATOLL
 VOL I
 April 1969



SCIENTIFIC STATIONS AT JOHNSTON ISLAND



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ANNEX Z
RECORD OF CHANGES
FACILITIES AND SUPPORT REQUIREMENTS PLAN
VOLUME I

Z.1 GENERAL

The Facilities & Support Requirements Plan will be updated by the issuance of revised pages to replace existing pages or additional pages to add new requirements. These CHANGE PAGES will be transmitted to all holders of the F&SR Plan with a transmittal letter giving detailed instructions relative to the required changes. Each package of Change Pages transmitted will be assigned to CHANGE NUMBER which is to be recorded in the CHANGE REGISTER. The date of issuance of the change package will be indicated on the lower outside corner of each page. The volume number in which the page is to be inserted will appear on each change page immediately above the date.

Z.2 CHANGE REGISTER

Retain this page and insert it as the last page in this volume. Make an entry in the CHANGE REGISTER recording incorporation of each change page package.

CHANGE NO.	DATE OF CHANGE	DATE ENTERED	BY WHOM ENTERED	REMARKS
	Aug. 27, 1969	9-15-69	E. Bershenzi	

Z-1
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