



**National Archives and Records Administration
(NARA)
Electronic Records Archives (ERA)**

**Facilities Plan
CDRL 5**

May 13, 2005

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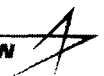
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Change History

Table 1 - Change History

Change Contact	Date	Summary of Change
	April 1, 2005	Initial Issue
	May 13, 2005	Submittal of Final





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Preface

This document was prepared by Lockheed Martin Transportation and Security Solutions (LMTSS) for the National Archives and Records Administration (NARA) Electronic Records Archives Program Office per the Electronic Records Archives (ERA) Performance Work Statement (PWS) dated June 9, 2004. It conforms to Data Item Description (DID) 3.3 specified in the Lockheed Martin ERA Proposal, Appendix B Contract Data Requirements List.

DID traceability is documented in Table 2 – ERA DID Traceability Matrix and PWS compliance is documented in Table 3 – PWS Compliance Matrix.

Table 2 – ERA DID Traceability Matrix

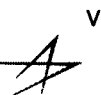
Para No.	DID Paragraph Title	Document Section
1	Introduction	1
2	Development Infrastructure	5
2.1	Process	4
2.2	Timeline	5
3	Operational Facilities	3, 4, 5
3.1	Process	4
3.2	Timeline	4

Table 3 – PWS Compliance Matrix

Para No.	PWS Paragraph Title	Document Section
5500	Facility Build Out	Entire Document

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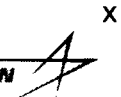
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1. INTRODUCTION

1.1 Purpose

The purpose of the Facilities Plan is to present the Lockheed Martin Team (LM Team) approach to creating, expanding, or retrofitting an ERA facility from facility selection through facility certification and accreditation. The plan provides the operational framework to satisfy ERA facility requirements with industry best practices tailored for the specific needs of the ERA Program.

1.2 Scope

The scope of the Facilities Plan is to present:

- ERA Architectural Overview and its implications for facilities
- Organizational view of the facilities and operations team
- ERA facility selections and criteria
- ERA representative view and design rational
- Process to select, install, expand, retrofit, and maintain facilities
- Proposed facility information

This initial submission of the facilities plan will also present the timeline for the installation of the Lockheed Martin facilities. The current approach to ERA consists of three physical facilities, one at Archives II in College Park, MD (Increment 1) that will house all data classifications; one in middle America that will also house all data classifications (Increment 2); and the third at a contractor owned/operated facility in the Southwest (Increment 1) that will store and process Unclassified/Sensitive but Unclassified (U/SBU) data.

This plan is a living document that will be updated over the life of the contract to reflect all changes to ERA facilities. Changes will be driven by numerous factors such as facility expansion, retrofit, or a new facility to be installed to address new business requirements, significant increase in holdings, and advances in technology. Some additional examples of triggers are: technology refresh, increased volumes of ERA holdings, and new ERA business requirements.

1.3 Document Organization

The Facilities Plan is organized in the following sections:

- Section 1: Introduction
Defines the purpose, scope, Lockheed Martin Team organization, and referenced documents for the facilities plan
- Section 2: ERA Architectural Overview
Provides the context of the overall Lockheed Martin Team solution that the initial facilities will be supporting
- Section 3: Facilities Management and Infrastructure

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This section provides facility organizational structure and the roles and responsibilities of the team as well as the requirements, criteria and a representative design needed to select the three proposed facilities.

- **Section 4: Facilities Installation and Certification Processes**
Presents all of the processes to install, expand, or retrofit a facility to include step deliverables, step frequency and duration as well as a view of NARA's role in the activities.
- **Section 5: Proposed facilities**
Presents information about the three proposed operational facilities and the development facility.
- **Section 6: Facility specific framework**
Captures and organizes future facility specific project work to install, retrofit, and maintain the ERA facilities.

1.4 Intended Audience

The intended audience is the ERA Program Management office (PMO) and designated NARA personnel involved in the facility and facility physical security. The document is also intended for Lockheed Martin Team members involved in creating the ERA solution.

1.5 Referenced Documents

1.5.1 Standards

- National Industry Security Program Operating Manual (NISPOM), dated January 1995
- Director Central Intelligence Directives (DCID)
- Telecommunications Electronics Material Protected from Emanating Spurious Transmissions (TEMPEST) recommendations

1.5.2 NARA Documents

- ERA Requirements Document (RD), NARA ERA Request for Proposal, Section J2, Amendment 001, December 24, 2003
- ERA Use Case Document (UCD v2.2), June 18, 2004
- NARA Enterprise Architecture Overview (Version 3.2), September 13, 2004

1.5.3 Lockheed Martin Team Documents

- Lockheed Martin Appendix B (CDRL) to the ERA Solicitation No. NAMA-03-R-0018
- CDRL 3 - System Architecture and Design Document, Planned for submission April 11, 2005
- CDRL 7 - Operations and Support Plan, Planned for submission April 11, 2005
- CDRL 9 – Risk Management Plan, dated February 25, 2005

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- CDRL 11 - Security Plan, dated March 30, 2005
- CDRL 12 - Certification and Accreditation (C&A) Plan, Planned for submission April 21, 2005
- CDRL 13 - Continuity of Operations Plan, dated March 15, 2005
- CDRL 16 - Updated Cost Price, Planned for submission June 1, 2005
- CDRL 18 - Monthly Status Reports
- CDRL 22 - Cost Performance Report
- CDRL 26 - Earned Value Management Data
- CDRL L39 - ERA System Concept of Operations (CONOPS), Planned for Re-submission April 13, 2005
- CDRL L31 - Master Test Plan, Planned for submission April 20, 2005
- CDRL 35 – Program Management Plan NARA-2004-001, dated October 1, 2004
- CDRL L41 - Training Materials
- CDRL L44 - ERA Commercial Off the Shelf (COTS) Inventory Database
- CDRL L55 – System Administrator Guide

1.5.4 Other Referenced Documents

- Service Component-Based Architectures, Version 2.0, June 2004

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2. ERA ARCHITECTURAL OVERVIEW

NARA is responsible to the American people as the custodian of a diverse and ever expanding array of evidence of the American culture and heritage, and of the actions taken by public servants on behalf of the American citizens. The core mission of NARA is that this essential evidence must be identified, preserved, and made available to the appropriate individuals for as long as these authentic records are required—regardless of their original form (physical and electronic).

The creation and use of an unprecedented and increasing volume of Federal electronic records—in a wide variety of formats, using evolving technologies—poses the fundamental problem that the ERA System must solve. The ERA System will be a comprehensive, systematic, and dynamic means for preserving virtually any kind of electronic record, free from dependence on any specific hardware or software. The ERA System, when operational, will simplify the means and mechanisms for NARA and NARA's customers to preserve and retrieve the appropriate records while not putting an undue burden on the Federal Agencies or any other consumer or producer of electronic records.

In essence NARA's vision is that the ERA System will:

- Authentically preserve and provide access to any kind of electronic record, free from dependency on any specific hardware or software, enabling NARA to carry out its mission now and into the future;
- Address the needs of a large, diverse stakeholder community, while accommodating rapidly changing technology;
- Be flexible, scaleable, and extensible to accommodate the ever changing policy, functionality, and technology infusion that will be required of such a system; and
- Have the capability to be either partially or fully deployed at locations across the United States, such as the National Archives in the Washington area and regional facilities, the Presidential Libraries and the Federal Record Centers.

The following sections briefly introduce the ERA system level functional architecture, the physical ERA architecture, and the user classes and operational aspects of the ERA System to provide a baseline context of the ERA System.

2.1 ERA System Functional Architecture

Figure 1 illustrates the ERA System functional architecture of an ERA Instance. An ERA Instance is a scalable and configurable set of hardware and software that is deployed at a physical facility that provides the business services and functionality necessary to operate an electronic archive. Each ERA Instance belongs to a Federation that contains multiple Instances. Instances grouped into Federation share archive information at the same classification level.

The ERA functional architecture shows the relationship between the set of system-level service packages necessary to operate an Instance as well as the infrastructure to interface to a suite of external systems. The main services and functions that ERA provides as well as a brief description of these system-level services inside an ERA Instance are illustrated below:

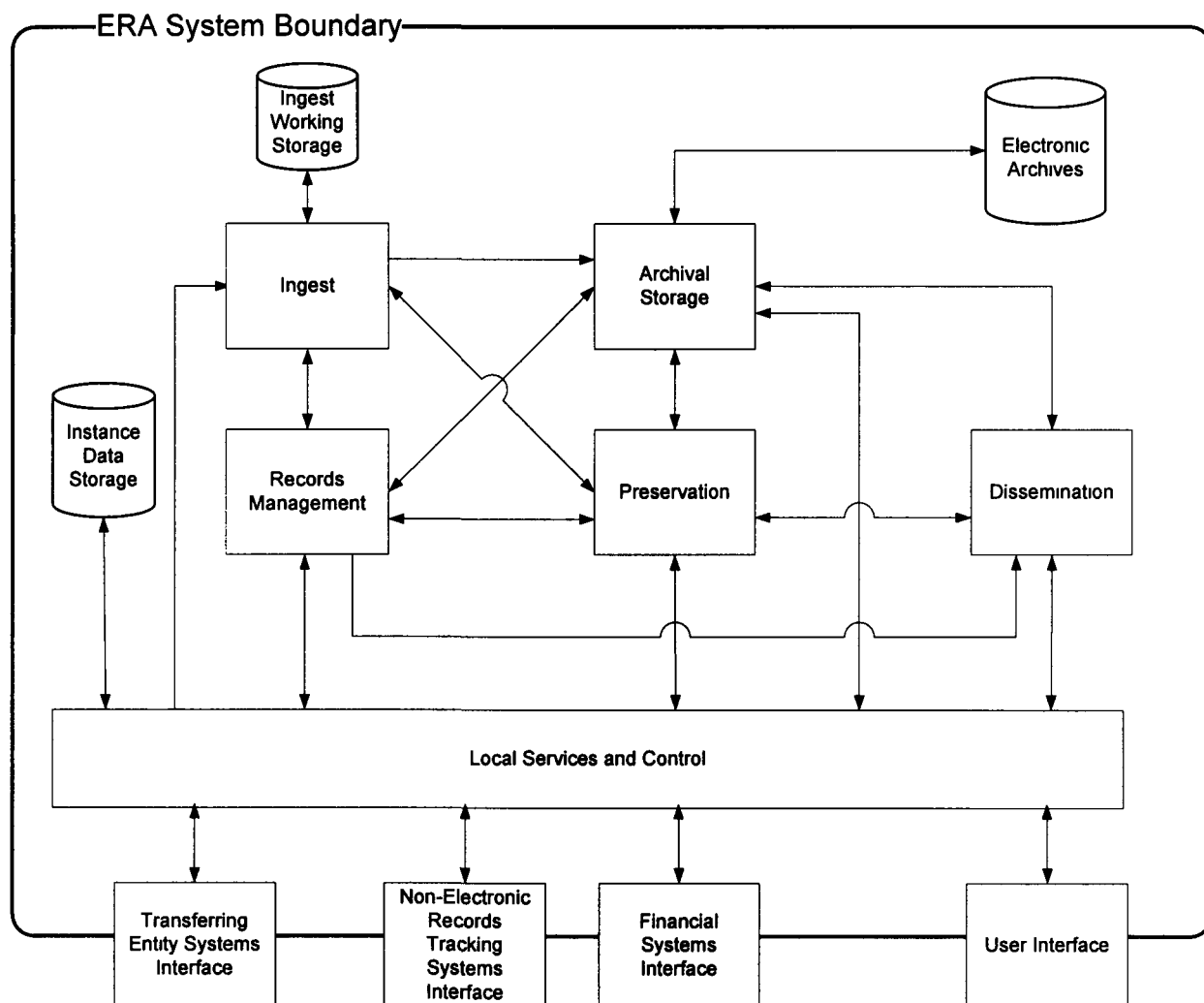
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- Ingest – This system-level service provides the means and mechanisms to receive the electronic records from the transferring entities and prepares those electronic records for storage within the ERA System;
- Records Management - This system-level service provides the services necessary to manage the archival properties and attributes of the electronic records and other assets within the ERA System as well as providing the ability to create and manage new versions of those assets. Records Management includes the management functionality for disposition agreements, disposition instructions, appraisal, transfer agreements, templates, authority sources, records life cycle data, descriptions, and arrangements. In addition, access review, redaction, selected archival management tasks for non-electronic records, such as the scheduling and appraisal functions are also included within the Records Management service.

Figure 1 - ERA System Functional Architecture – Instance



- Preservation – This system-level service provides the services necessary to manage the preservation of the electronic records to ensure their continued existence, accessibility, and

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authenticity over time. The Preservation system-level service also provides the management functionality for preservation assessments, Preservation and Service Level plans, authenticity assessment and digital adaptation of electronic records.

- **Archival Storage** – This system-level service provides the functionality to abstract the details of mass storage from the rest of the system. This abstraction allows this service to be appropriately scaled as well as allow new technology to be introduced independent of the other system-level services according to NARA's business requirements.
- **Dissemination** – This system-level service provides functionality to manage search and access requests for assets within the ERA System. Users have the capability to generate search criteria, execute searches, view search results and select assets for output or presentation. The architecture provides a framework to enable the use of multiple search engines offering a rich choice of searching capabilities across assets and their contents.
- **Local Services and Control (LS&C)** – This system-level service provides all of the functional infrastructure for the ERA instance including a user interface portal, user workflow, security services, external interfaces to NARA and other Government systems as well as the interfaces between ERA Instances.

The ERA System contains a centralized monitoring and management capability called ERA Management. The ERA Management hardware and software operate inside a System Operations Center (SOC) located at an ERA facility. Each SOC manages one or more Federations of Instances based on the classification of the information contained in the Federation. The ERA Management system-level service provides ERA Help Desk functionality, configuration management, and administration of a Federation of Instances.

The ERA system interfaces to various external systems through a series of standard interfaces. These standard interfaces are listed below.

1. Financial Systems;
2. Non-Electronic Records Tracking Systems;
3. Transferring Entity Systems;
4. Help Desk; and
5. The ERA System User Interface.

2.2 ERA Service Oriented Architecture

The ERA System will be implemented using a Service Oriented Architecture (SOA) approach. In a SOA, business functionality is delivered by a set of loosely-coupled services that communicate via request/response interfaces or by message passing. A mediation layer in the architecture provides the communications to the services within an ERA Instance. This mediation layer also communicates across ERA Instances (within the same classification level) to other mediation layers for federated operations. Business processes are implemented as a composition of services through workflow orchestrations and can evolve as policy changes. Key features of a Service Oriented Architecture include:

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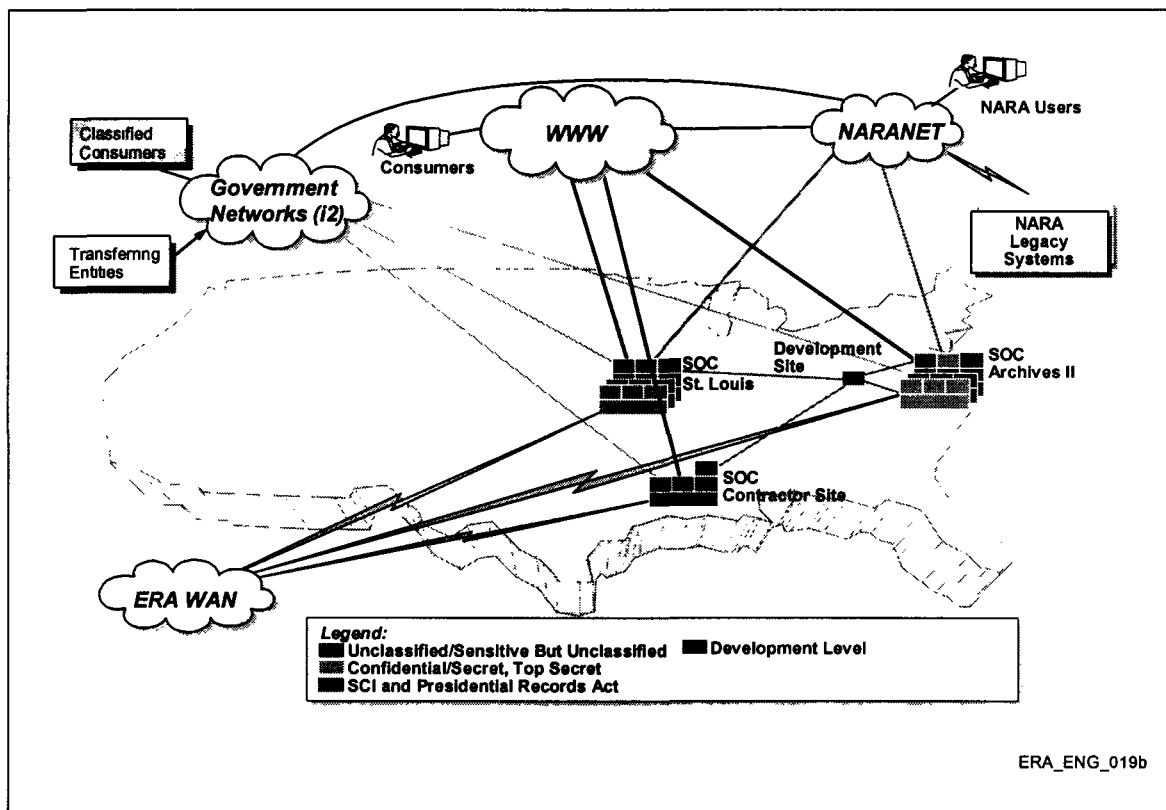
- Business functionality that is encapsulated in independent services, which provide a single business function.
- Access to infrastructure applications for data is mediated by an integration layer within the architecture.
- Business processes are orchestrated through workflow in the mediation layer to create a composite application.

The SOA approach for the ERA System ensures loose-coupling of services and processes to enable an evolvable, scalable, and extensible ERA solution. The internal implementation of each service can be modified as user load grows, as new requirements emerge, or as technology changes, without affecting the remainder of the ERA solution.

2.3 ERA System Physical Architecture

Figure 2 illustrates the initial concept of the Physical Architecture and facility approach of the ERA System. The current approach to ERA consists of three physical facilities, one at Archives II in College Park, MD (Increment 1) that will house all data classifications; one in middle America that will also house all data classifications (Increment 2); and the third at a contractor owned/operated facility in the South West (Increment 1) that will store and process only U/SBU data.

Figure 2 – ERA Facility Locations



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Each of the Instances participates in a Federation with one or more full or partial Instances at the same classification level. While full Instances provide each of the system-level services defined in section 2.1, partial Instances that support a subset of these services can be configured without change to the source release. Each Instance has a Safe-Store location that provides high availability backup to the records it contains. Instances in the same Federation support load balancing of users and system processing as well as retrieval of records located in another Instance in the Federation.

Each one of these facilities will contain one or more Instances, to provide the required functionality for the end user. Two of the ERA facilities will also contain a System Operations Center (SOC). The primary SOC will be physically located at the Archives II facility (Increment 1) while the backup SOC will be physically located at the middle America facility (Increment 2). The physical location of each SOC will contain the entire associated infrastructure that would be required to manage all of the data classifications. While the current deployment plan includes the space for operational personnel performing SOC services in existing facilities, the operations personnel do not necessarily have to be physically co-located with the infrastructure. The operations personnel can operate the SOC remotely provided they have the appropriate network and security classification infrastructure.

ERA supports a broad array of network connectivity. These include the internal ERA Wide Area Network (WAN) and external connections to the world-wide-web, existing NARANET, and other Government networks. The ERA WAN provides connectivity between Federated Instances. Federations below the TS/SCI level share one WAN while federations at Top Secret/ Sensitive Compartmented Information (TS/SCI) and above share a point-to-point WAN connection. The majority of consumers and transferring entities will enter the Unclassified/Sensitive but Unclassified (U/SBU) federation of ERA through the world-wide-web. Transferring entities may also employ existing Government networks (such as i2) to connect to the ERA system to transfer records. ERA is extensible to support connections to Secret Internet Protocol Router Network (SIPRNET), Non-secure Internet Protocol Router Network (NIPRNET), and Joint Worldwide Intelligence Communications System (JWICS) to support classified users access for those who are not on location at ERA facilities. The existing NARANET will provide connectivity to the ERA System for NARA users already attached to the existing infrastructure as well as legacy NARA systems.

2.4 End User Operations

The ERA System operational platform employs a web-based configurable workbench concept. Users log into the ERA System via a web-based portal, and are presented with a configurable workbench that is tailored for the kind of work the user chooses and is authorized to perform. Each workbench contains built-in capabilities ("components") to perform specific business processes. These capabilities include user-interface components, workflow components, and other services required to complete specific operational tasks. Table 4 lists the initial workbenches, and the major business processes supported within each workbench. The workbenches and components available to a user will depend on the user's access privileges. These initial workbenches are based on the NARA Concept of Operations v4.0 (including the user classes and business process).

Table 4 - Sample ERA System Workbenches

Sample Workbenches	Business Processes
Transferring Entity	Makes or receives records, prepares and transfers them to NARA. This class of users primarily consists of records

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Sample Workbenches	Business Processes
	creators, but the name was chosen to indicate the predominate interaction with the system
Appraiser	Assesses the records with respect to informational value, artifactual value, evidential value, associational value, administrative value, and monetary value and recommends which records should be accessioned into NARA's assets and which should be disposed of by the Transferring Entity when no longer needed by the Transferring Entity
Records Processor	Manages transfers of records, identifies arrangements and creates archival descriptions of records, carries out other processes needed to ensure the availability of records, and is responsible for the disposal of temporary records
Preserver	Plans the system approach for maintaining the authentic context, content, and structure of electronic records over time for viewing, use, and downloading. Concisely, the preserver plans processing activities that ensure ability to provide long-term access to electronic records through implementation of the Preservation and Service Level Plan
Access Reviewer	Reviews security classified or otherwise potentially access restricted information in order to determine if the information can be made available to a consumer, facilitating redaction of potentially access restricted information in electronic records. The Access Reviewer reviews records in NARA custody and sets access restrictions
Consumer	Uses the system to search for and access records, to submit FOIA requests, request assistance via mediated searches, communicate with NARA, and invoke system services
Administrative User	Directly supports the overall operations and integrity of ERA and its use, and manages such system activities as user access rights, monitoring system performance, and scheduling reports
NARA Manager	Reviews system recommendations and makes decisions on when and how specific records life-cycle activities occur, and who will perform the work. The manager has ultimate responsibility for the completion of tasks and the quality of the products.

The workbenches use a web-portal framework, which allows new components to be integrated into the operational platform over time as new business process requirements arise and are met. The components encapsulate and provide specific features from COTS products, which allow the NARA-defined business processes to drive the overall design. This encapsulation contributes to the key ERA requirement of hardware and software independence.

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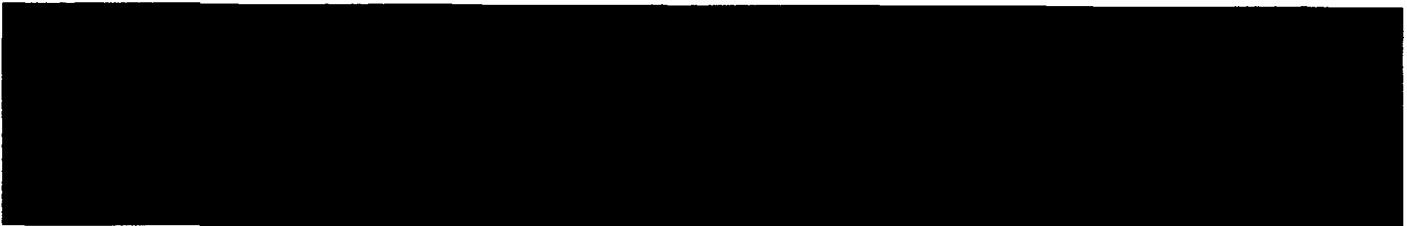
3. FACILITIES MANAGEMENT AND INFRASTRUCTURE

The Lockheed Martin Team's approach to the ERA facilities in the Analysis & Design (A&D) phase was to identify the optimum number of ERA facilities and develop a facilities plan to address processes for the next phase of the program. Based upon the restrictions during the A&D phase, the development contractors could not sign a lease on the facilities. The Lockheed Martin Team's approach is to delay the site surveys until the next phase of the contract. The Lockheed Martin Team developed representative facility layouts showing components of the various ERA facilities, described in Section 3.8 and identified proposed potential ERA facilities. The Lockheed Martin Team will provide detailed information on proposed facilities, and requirements for the Archives II with the Lockheed Martin Team cost proposal. The proposed facilities in this plan can change.

To determine the optimum number of facilities, the Lockheed Martin Team performed a trade study. Section 3.5, Number and location of ERA Facilities, summarizes the process that resulted in a recommendation for three ERA Operational Facilities. ERA facilities provide the data center environment such as secured floor space, communications infrastructure, cooling, and power environmental features that are needed to operate the ERA in a secure stable manner. The NARA facility requirements and the functional, data center and security criteria needed to select an ERA facility are presented in sections 3.6 and 3.7.

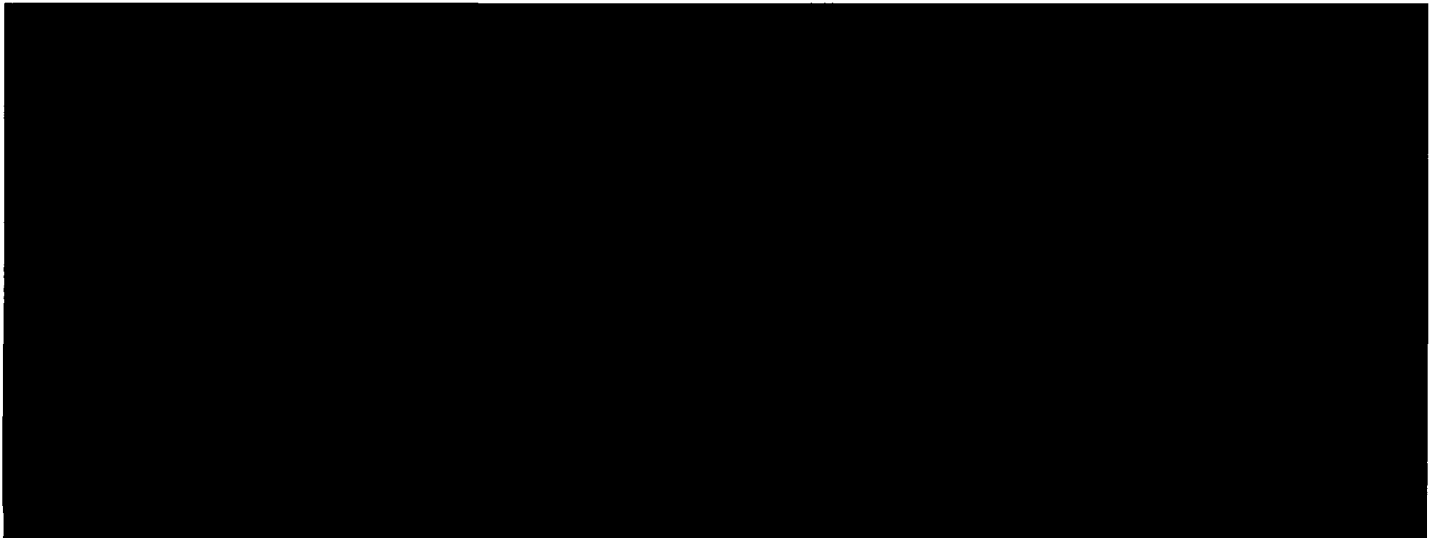
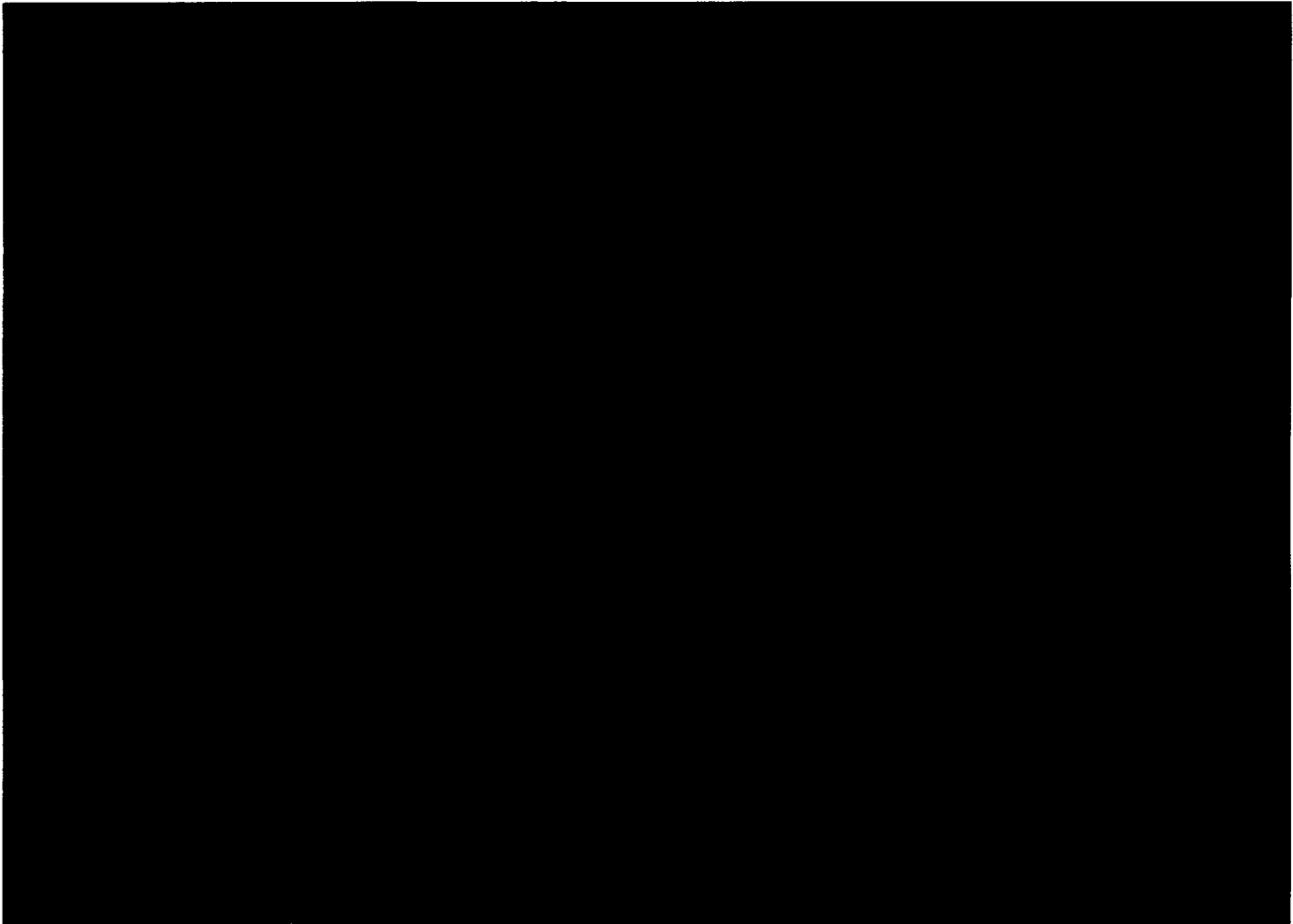
The Lockheed Martin Team established an organizational structure to support the facilities activities from facility selection process to facilities certification and accreditation. Section 3.1 provides facilities management and describes how facilities management is linked to the entire organization.

3.1 Facilities Management



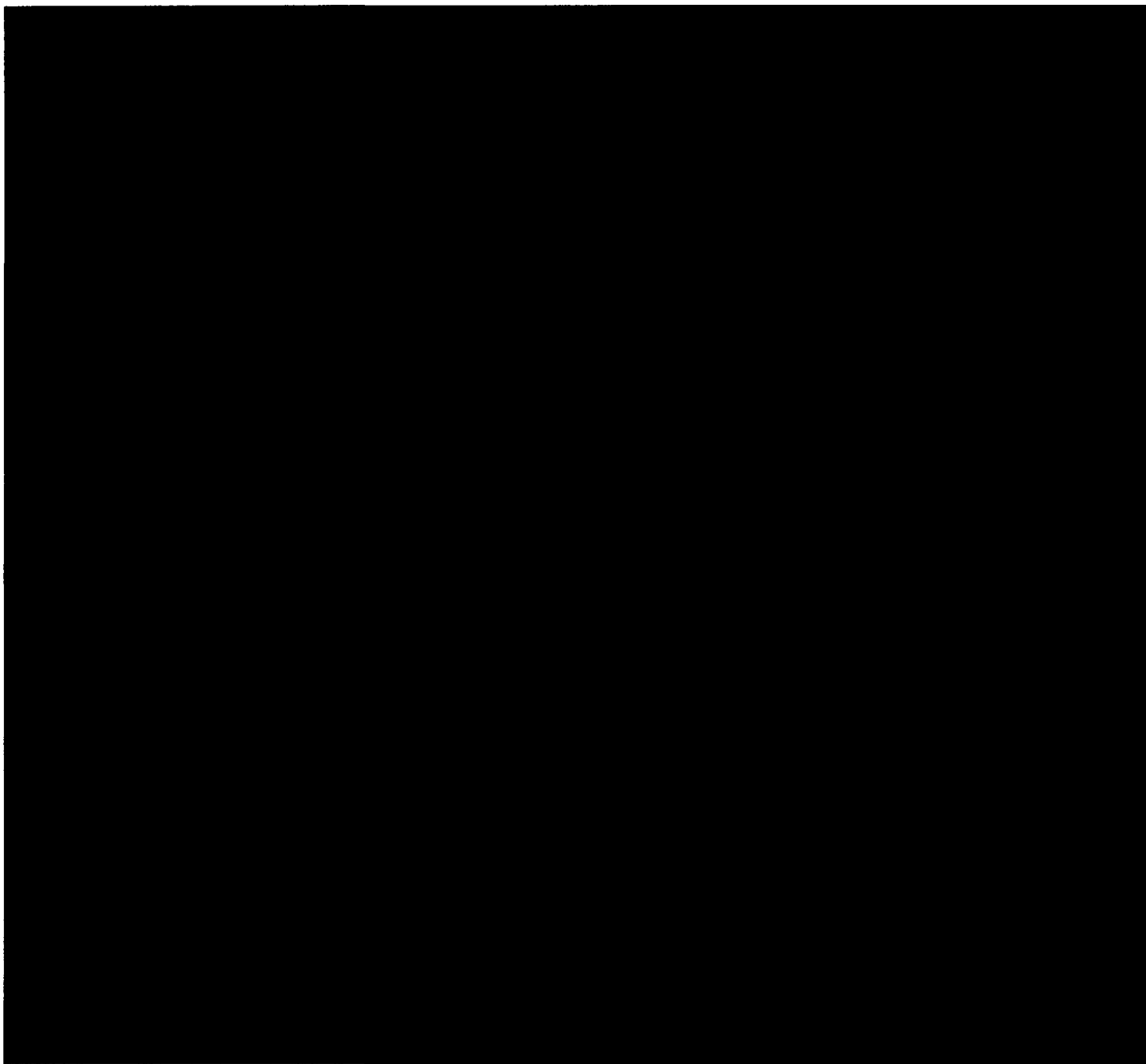
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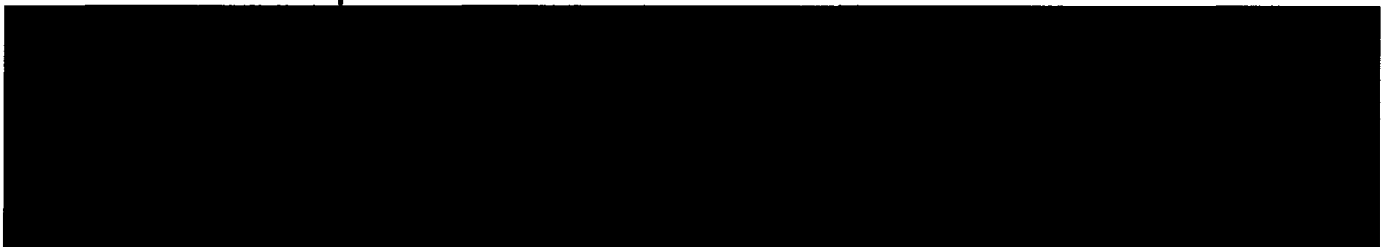


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3.2 Roles and Responsibilities of Facilities Personnel



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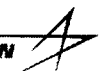


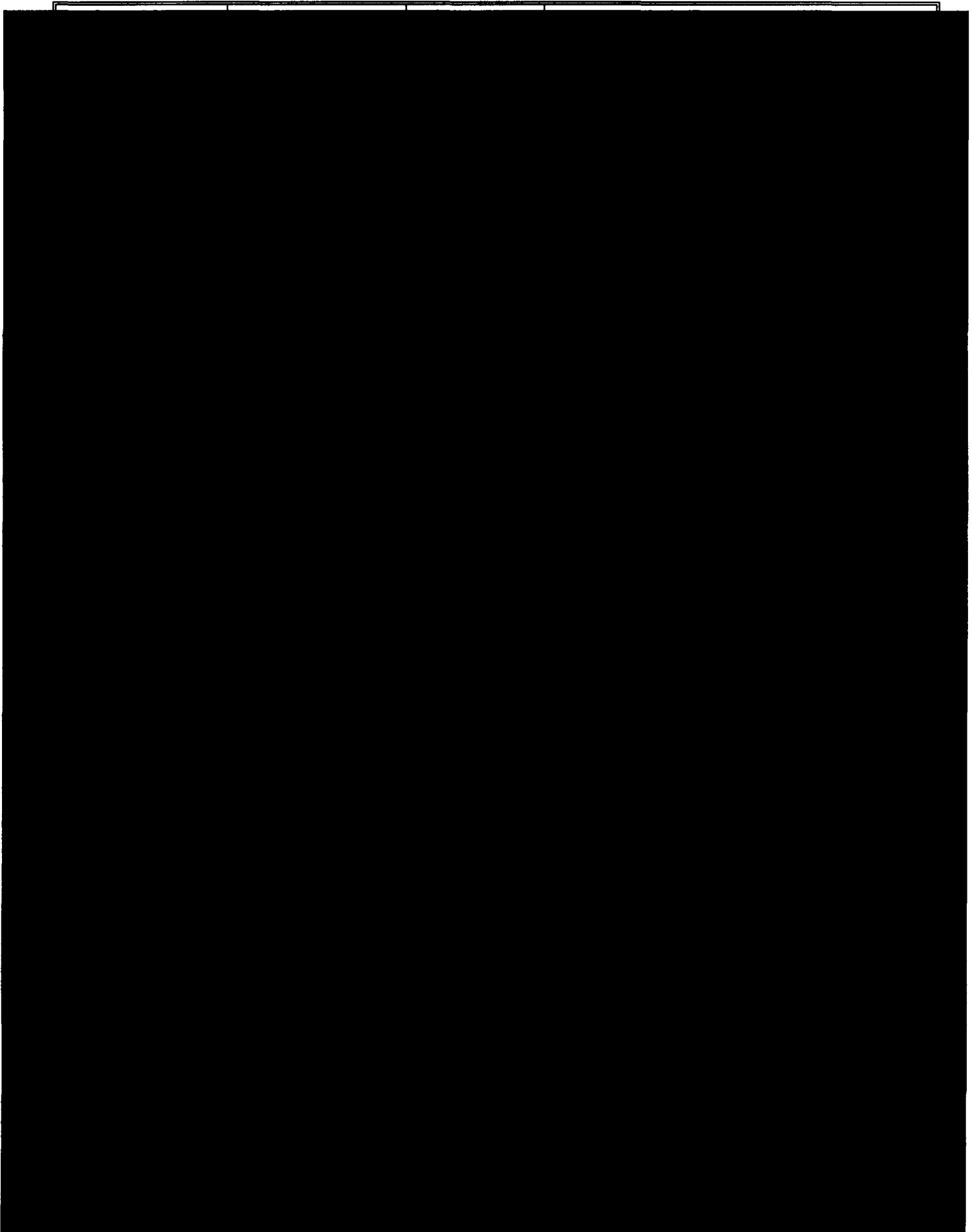


Table 5 – Roles and Responsibilities

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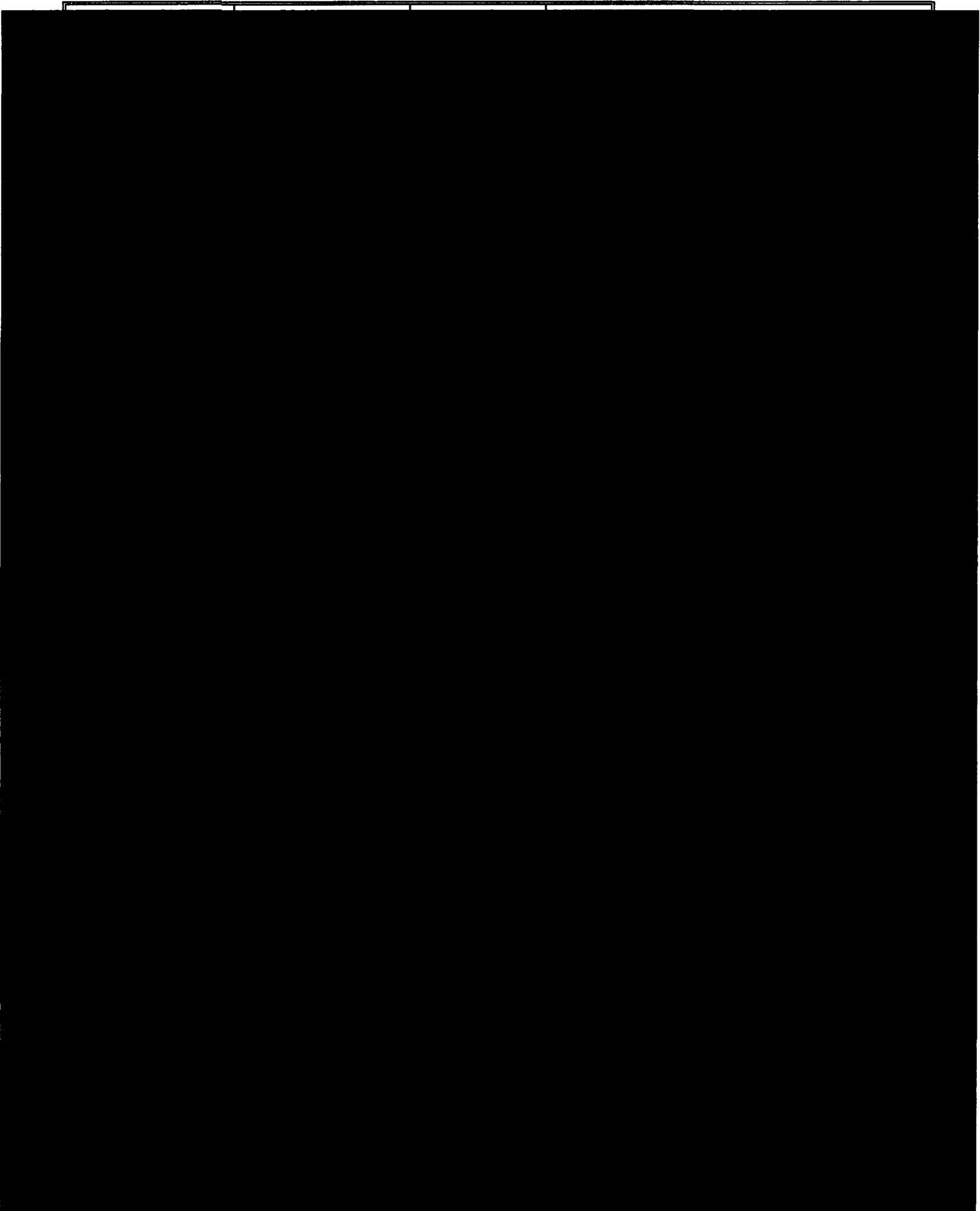


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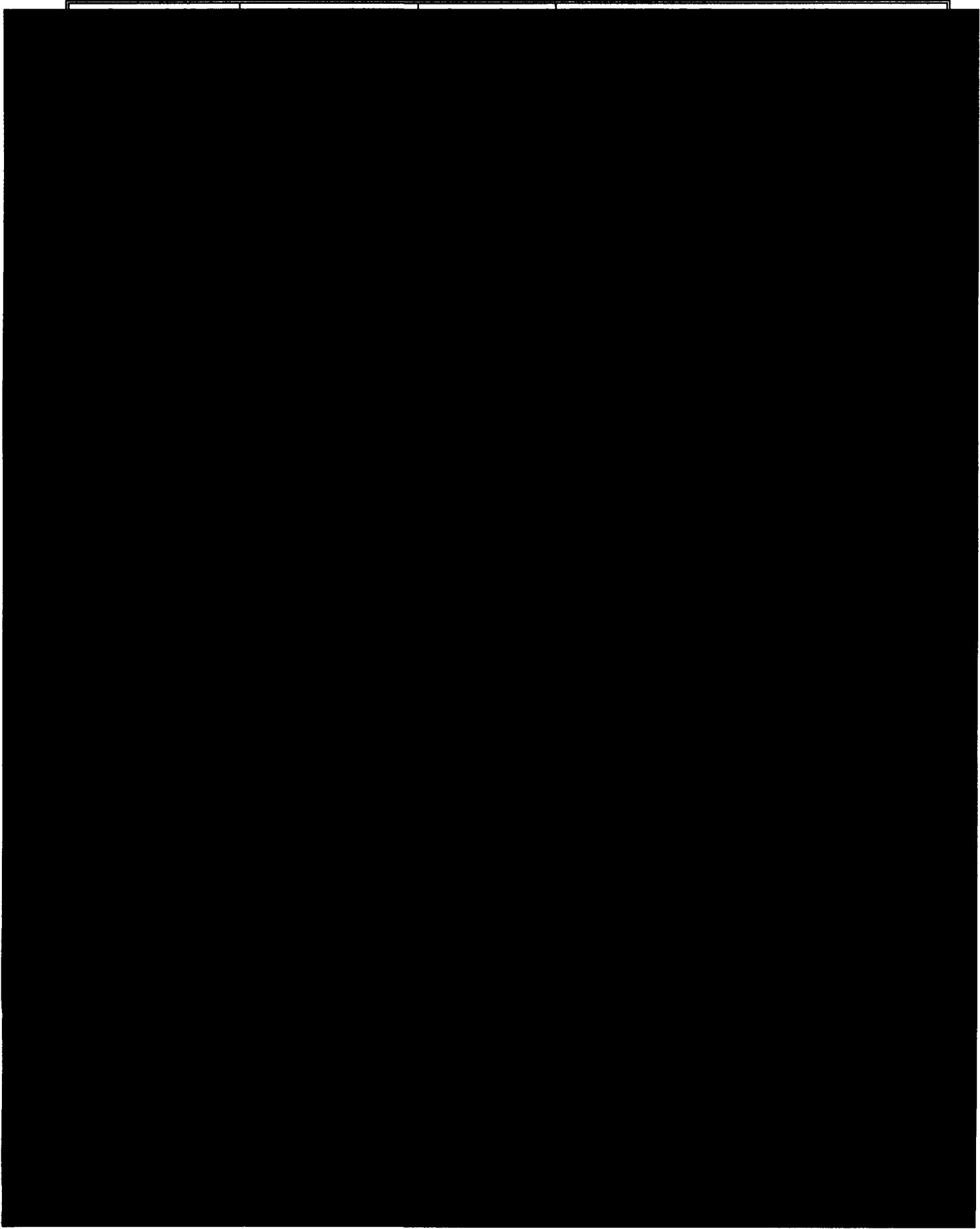


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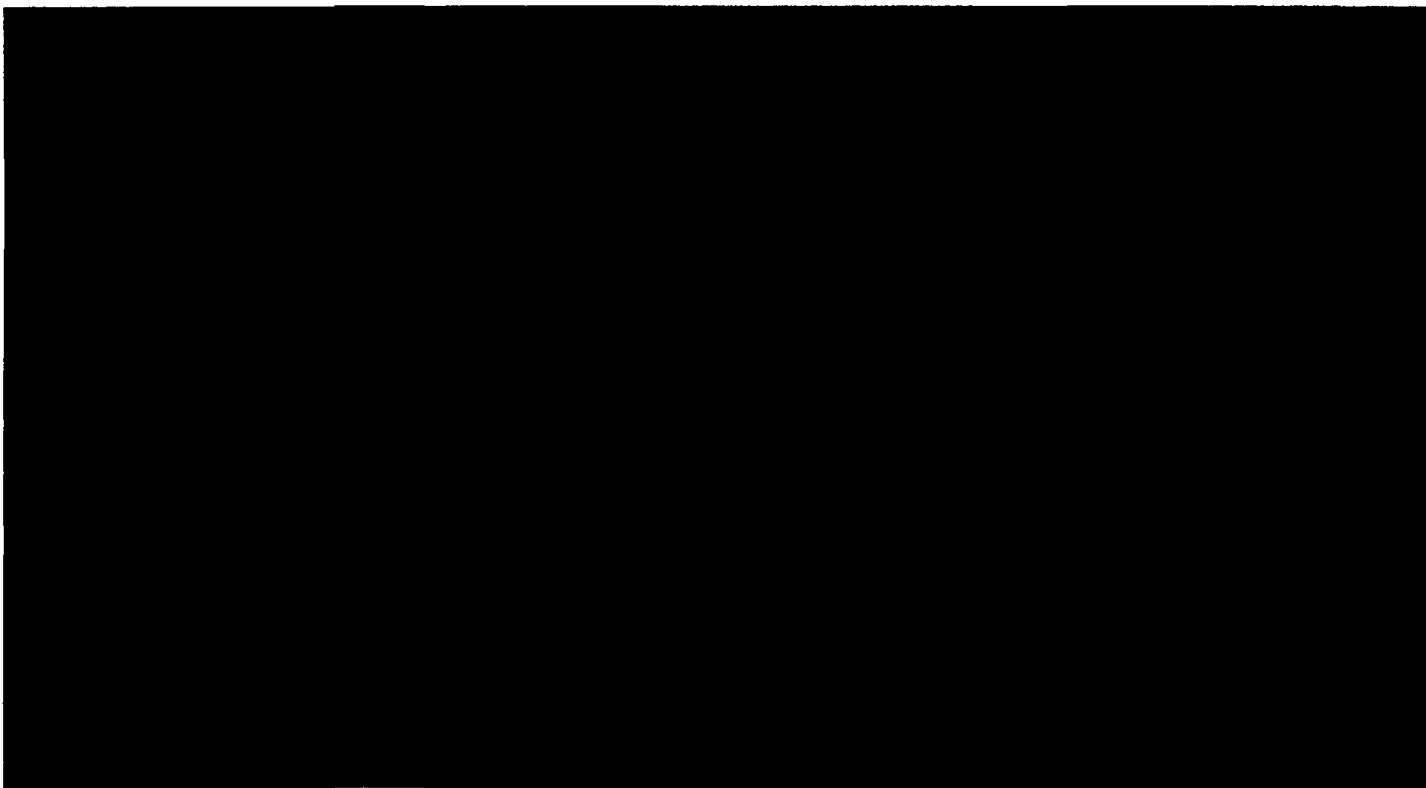


Figure 5 - ERA Risk Management Process



Source Selection Information - See FAR 2.101 and 3.10

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3.4 Reporting and Metrics

[REDACTED]

[REDACTED]



3.4.1 Program Management Reviews

The Deployment and Operations Manager will participate in Program Management Reviews. These meetings include:

- Monthly Status Review
- Cost Schedule Review

At the Subcontract Program Manager Review, items addressed will include:

- Subcontract status
- Subcontract cost and schedule

3.5 Number and location of ERA Facilities

The Lockheed Martin Team presented a Non – CDRL White Paper entitled Optimum ERA Facility Location, dated March 11, 2005 that described in detail the process used to determine the number and location of facilities described in section 2.3 ERA System Physical Architecture of this document.

The following is a summary of that white paper.

Three options were considered:

1. A total of five (5) ERA processing facilities, three (3) processing U/SBU holdings only and two (2) processing ERA holdings classified as Confidential & /Secret/Top Secret/Sensitive Compartmented Information (S/TS/SCI)
2. Two facilities that could each accommodate all classification levels of NARA holdings
3. A total of three (3) facilities, of which two (2) can process all classifications of holdings and one (1) facility that processes SBU holdings only.

Striking the proper balance between cost considerations of the ERA facilities configuration and performance criteria is the key to establishing value. Accordingly, the ERA facilities white paper separated cost considerations from all of the other selection criteria used to determine the proper number of ERA facilities. The first step considered various technical performance and human factors to quantify the three different facility configuration options. That was accomplished by describing each option, discussing its relative pros and cons, and applying weighted scoring criteria to technical proficiency, customer preference, Safe-Store proficiency, and schedule considerations. Option 3 scored the highest and is a very balanced option providing solid technical merits with Safe-Store and inter-facility load balancing being major deciding considerations.

The selected option provides three (3) facilities, of which two (2) can process all classifications of holdings and one facility that processes U/SBU holdings only. The Lockheed Martin Team currently proposes the following three (3) facilities but will present the final facility selections with CDRL 16, Updated Cost Price:

- Facility 1 - Archives II in College Park, MD, a NARA facility to be installed during Increment 1 that will process at all data classifications
- Facility 2 - Contractor owned facility that will be leased to NARA located at 1925 John Carpenter Freeway, Suite 425, Irving, TX to be installed in Increment 1 that will process U/SBU data only
- Facility 3 - A commercial facility that will be leased to NARA located at 210 North Tucker, Suite 800, St Louis, MO, to be installed during increment 2 that will process at all data classifications.

Source Selection Information - See FAR 2.101 and 3.10

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The cost reduction implications caused by reducing the number of facilities are dramatic. The most significant savings is realized with the two facility configuration. The cost difference between a two (2) and three (3) facility configuration though tangible, is close enough to merit the 3 facility configuration as the ultimate solution due to active Safe-Store, and inter-facility load balancing advantages.

The white paper recommendation was that one of the ERA facilities should be on government owned or leased space located on the East Coast within easy access of greater Metropolitan DC, but not in the District. The second and third major ERA facilities should be geographically dispersed so that they are in areas of the country that have different weather patterns. This classic approach to having data centers dispersed in different areas of the country is taken because it affords protection against multiple facilities being impacted by a single disaster. Since presenting the white paper, facilities have been selected in St. Louis, MO, and Irving, TX based upon consideration of availability and cost of a technical labor pool, cost of facilities, availability of robust communication networks, and proximity to the Federal Record Center. NARA named the Archives II facility in College Park, MD as an ERA facility in guidance that is summarized in the following section:

3.6 NARA Provided Facilities Constraints and Assumptions

The contracting officer, Sylvia E. Edwards, sent a letter on January 5, 2005 that documented Facilities Constraints and Assumptions as a change to be incorporated into the National Archives and Records Administration contract number NARA-04-C-0007 for the Electronic Record Archive (ERA) Program. The following is a summary of the guidance provided in that letter:

- The ERA approach includes active Safe-Store and a group of instances
- At least one copy of all ERA holdings of electronic records is stored in facilities controlled by NARA
- For purposes of CDRL 16 "Updated Cost Price" that the NARA controlled Instance will be located at Archives II in College Park, Maryland in Increment 1
- The contractor should assume that NARA will incur all build-out and facilities costs for the facility at Archives II
- The contractors updated proposal should contain projected facility requirements for Archives II (i.e., estimated power needs, raised floor space, cooling etc.), as well as estimated operations personnel (space and facility), space, requirements, etc
- The contractor should include communication costs to Archives II
- The contractor should include any employee costs (other than space and facilities) for operational personnel that will be stationed at Archives II
- The contractor shall include in their price all cost for other facilities proposed
- Geographic separation of at least 100 miles is required for any 2 instances that are Safe-Store of data of each other
- There are no constraints precluding 2 or more instances from occupying the same facility as long as other constraints are met.

The Lockheed Martin Team understands that the ERA Statement of Objectives (SOO) constraints and concepts still apply except where overridden by a constraint or assumption presented in the letter.

Source Selection Information - See FAR 2.101 and 3.10

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3.7 Facility Criteria

The Lockheed Martin Team established facility criteria and representative facility layouts for all three ERA operational facilities to facilitate the selection of the most appropriate facilities. The criteria and layouts were prepared during the requirements and early design phase. The criteria and representative facility layouts were then provided to Lockheed Martin Team facility specialists who worked with real estate brokers to provide potential addresses for ERA Facility consideration. The proposed facilities were chosen from those lists. Section 3.7 describes the facility criteria and section 3.8 provides the representative facility layouts used in the facility search. Final ERA operational facility selections will be named in CDRL 16, Updated Cost Price, which will also include the finalized criteria and representative facility layouts that will reflect updates based upon the completed Systems Architecture and Design document and ERA equipment Bill of Materials (BOM).

There are three (3) categories of criteria:

- Section 3.7.1 Functional, supplies criteria required of the facility to support the ERA functions to be performed at that facility
- Section 3.7.2 Data Center, supplies the technical data center criteria required
- Section 3.7.3 Security, supplies security criteria in general terms to avoid the need to classify the criteria and this version of the Facility Plan

The listed criteria is not an absolute check list where one non-conformance would eliminate a facility from further consideration. The most obvious example is that a facility should not be eliminated from consideration if it is not currently an operating data center. The cost for leasing an existing data center space that meets all of the criteria must be balanced against lease plus build out costs for space in a facility that is suitable to support a data center.

Accordingly, the following types of facilities are all legitimate options for consideration: an existing operating data center, a closed down data center, and a facility that can be modified to become a data center. All of these options would need to undergo some level of construction to meet the ERA criteria and representative facility layouts presented in 3.8 of this document. Constructing a new facility was not considered to be a viable option at this time due to cost and schedule constraints.

3.7.1 Functional

The functional requirements presented in Table 6 - Functional Criteria provides the context for the space usage and separate areas/rooms that will need to exist within the space. These criteria describe general function that in most cases apply to all three facilities. An "x" in the column for a particular facility indicates a function that is required at that particular facility. Specific square footage will be available at the completion of design phase and will be documented in the Bill of Material within the cost proposal. Specific criteria that are driven by the handling of ERA holdings with S/TS and TS/SCI classifications will be listed in section 3.7.3 Security.

Table 6 - Functional Criteria

Functional Criteria	Facility 1	Facility 2	Facility 3
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Source Selection Information - See FAR 2.101 and 3.10

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Functional Criteria	Facility 1	Facility 2	Facility 3
Ability to lease between 15,000 and 21,000 square feet, exact footage to be determined at completion of design, and creation of Bill of Material BOM	X	X	X
Sole Tenant on that floor and section/wing of facility with ability to control access from elevator to ERA area	X	X	X
Space for computer equipment (server racks, tape silos, Disk units) Square Feet (Sq Ft) = To Be Determined (tbd)	X	X	X
Space available to conveniently receive deliveries from postal or courier delivery vehicles (loading dock access a preference). 1) Could be several boxes a day containing computer media so would prefer an area for easy offloading of boxes and close proximity to storing area or easy access to freight or heavy duty elevators 2) Must accommodate ERA System (computers and technical equipment) component deliveries. Sq Ft = tbd	X	X	X
Room to open packages, inventory contents, enter into an asset management system and attach asset management tags that is separate from unopened packages and containers at mail receipt area. Must be able to control particle contamination and dust of packing containers from the data center floor. Sq Ft = tbd	X	X	X
Room to assemble system components that is separated from the main data floor to control particle contamination and dust of system component shipping containers Sq Ft = tbd	X	X	X
Space for workstations and media reader devices for users to mount media (tapes/disks etc.) and load the media contents into the ERA to make it ready for ingest. Anticipated maximum storage requirement for the media is a 0 to 3 days. Deliveries of media containing ERA records will be coordinated and planned for so the holding area demand is predictable. This space is included in the gross square footage provided and will be placed in the room to receive deliveries and within close proximity of the workstations to process media.	X	X	X
Spare parts room	X	X	X

Source Selection Information - See FAR 2.101 and 3.10

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Functional Criteria	Facility 1	Facility 2	Facility 3
Sq Ft = tbd			
Work space for loading media types into drives for moving data files from media into the ERA system within cages in the data center. Sq Ft = tbd	X	X	X
Space for a U/SBU SOC Sq Ft = tbd	X		X
Space for a S/TS SOC Sq Ft = tbd	X		X
Space for a TS/SCI SOC Sq Ft = tbd	X		X
Freight or other heavy duty elevator service to the floor top accommodate movement of computer equipment including tape storage robotic units	X	X	X

3.7.2 Data Center

Table 7 - Data Center Criteria presents the Lockheed Martin Team's data center requirements. Each data center requirement applies to all three facilities. Data center facilities meeting these criteria provide a very stable processing environment that, combined with the Safe-Store and auto fail over architecture, will meet ERA availability performance requirements. A facility meeting these requirements provides a high level of performance without the significant expense of duplicating all electrical switchgear, Uninterrupted Power Supply (UPS), alternate power generator, and power distribution systems.

Table 7 - Data Center Criteria

Data Center Criteria	Facility 1	Facility 2	Facility 3
Dedicated close-control air conditioning with back-up	X	X	X
System Monitors with remote notifications	X	X	X
Facility access controls and surveillance systems	X	X	X
Fire detection and suppression	X	X	X
Lightening protection	X	X	X
Equipment grounding	X	X	X
Electric switch gear and power distribution units	X	X	X
½ hour UPS capabilities	X	X	X
Power back-up via standby generator	X	X	X

Source Selection Information - See FAR 2.101 and 3.10

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Data Center Criteria	Facility 1	Facility 2	Facility 3
Transient voltage surge protection	X	X	X
Facilities with secure perimeter walls	X	X	X
Facility to withstand 150mile/hr wind loading	X	X	X
Facility power to accommodate data center functions. Target of 65 watts/SF Must have the ability to scale watts /sq ft as needed by final BOM and design density	X	X	X
Separation from hazardous facilities, RR yards, fuel storage, hurricanes and tornado zones, and has good facility drainage	X	X	X
Facility free of hazardous materials and waste	X	X	X
Lease entire space. Availability to expand per program plan	X	X	X
Secured exterior yard space, or interior space, for condenser units, generators, transformers, electrical & mechanical infrastructures shall be available	X	X	X
Permitting review and issuing within reasonable time schedules	X	X	X
Unused telecommunications fiber (dark fiber) to the facility	X	X	X
Parking provided	X	X	X
Multiple power utility sources	X	X	X
Multiple Telecommunication sources	X	X	X

3.7.3 Security

Security requirements affect all ERA facilities but are particularly important in facilities 1 and 3 which will house and process ERA holdings at all levels of classification. ERA facilities handling classified electronic records must meet the DCID requirements for Sensitive Compartmented Information Facility (SCIF) and collateral materials area construction and TEMPEST recommendations for preventing the intercept of electronic emanations. To accurately assess a facility's ability to cost effectively meet the

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DCID, NISPOM, and TEMPEST standards, a site survey of the facility must be performed by Physical Security Subject Matter Expert (PS/SME). However, screening facilities for consideration in the facility selection process according to the following criteria, will focus site survey resources on those facilities that have a higher likelihood of being selected. Table 8 - Security Criteria presents the security requirements the Lockheed Martin Team used to locate the proposed facilities.

Table 8 - Security Criteria

Security Criteria	Facility 1	Facility 2	Facility 3
Ability to receive courier service of media containing classified material	X		X
Space for a location to sanitize media	X		X
Space for a location to destroy media	X	X	X
Space for document control to distribute classified media within the classified Instance area	X		X
Space must be capable of handling system instances at all security classification levels U/SBU/S/TS/TSSCI can meet DCID 6/9 and TEMPEST security recommendations (Note: this requirement requires a facility visit by Industrial Security Office to determine)	X		X
Facility provides or allows 24x7 controlled access via Armed Guards within the facility	X	X	X
Response force (facility armed guard) capable of responding to an alarm within 5 minutes	X	X	X
Reserve response force available to assist the responding force (includes local law enforcement or Private security force)	X	X	X
Facility allows continuous operating mode of the data center 24x7	X	X	X
Raised floor isn't a system requirement	X	X	X
However if raised floor exists, it is required to have 1 foot or more of observable floors space beneath the floor. This can be through monitors or by placing the cables or fiber inside a pressure conduit that would detect someone tampering with the cables/fibers	X		X
Facility must provide a SCIF or the ability to build a SCIF	X		X

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Security Criteria	Facility 1	Facility 2	Facility 3
to DCID 6/9 Standards			
Facility must provide a collateral area or the ability to build a collateral area to DCID 6/9 Standards	X		X
Facility must provide, or provide the ability to create, a fiber pure environment within the SCIF to eliminate the need for separation from the power runs like a copper category 5 cable equipped facility	X		X
Concrete floors	X	X	X
Above the 3 rd floor	X		X
Minimum ceiling height of 9 feet	X	X	X
Stand alone single tenant facility with 100 meters of observable space around entire facility perimeter	X		X
Ability to install numerous sophisticated locked doorways providing meeting DCID standards between Classified areas as illustrated on the logical facility drawing	X		X
Ability to construct physical constraining barriers between multiple areas of the facility such as walls and locked cages or meshed wire walls.	X	X	X
Ability to put line filters on all power lines.	X		X

3.8 Representative Facility Layout

The Lockheed Martin Team developed a representative facilities layout for each of the three proposed facilities. The facility layouts were based upon extensive experience in facilities and knowing the US Government certification and accreditation processes. These representative layouts provide the ERA PMO a thorough understanding of ERA requirements and the Lockheed Martin Team's approach to facilities design. During the next phase of the program, the Lockheed Martin Team will select the actual facilities for the ERA system. During this phase of the program, the representative facility layouts need to be flexible enough to be implemented in various types of facility scenarios, such as:

- Standalone single tenant facility with perimeter fence
- Wing of a facility
- A floor within a facility with external elevator access

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3.8.1 Facility 1 – Archives II

ERA PMO provided guidance that one of the ERA facilities will be at the NARA Archives II facility. The Lockheed Martin Team has assigned Archives II to be Facility 1. This facility will house Instances at all levels of classification, the Primary SOC, and the ERA Help Desk. The Archives II facility will provide ERA PMO easy access to operations and it provides close proximity to the Lockheed Martin Team.

Until the facility in increment 2 is operational, this facility at Archives II will house an active or Safe-Store copy of all ERA electronic holdings. After increment 2 is deployed this facility will serve as the Safe-Store for facility 3 classified electronic holdings and one half of facility 2 U/SBU electronic holdings. Easy access for cleared NARA archivists is the reason the Archives II facility will be used as the ingest facility, and holder of the active copy, for all classified holdings under normal operating conditions

Figure 6 - Facility 1 Representative Facility Layout shows the representative layout for Archives II. It is referred to as a representative layout because it is a conceptual view of the functions supported by the facility, not an actual floor plan drawn to scale. The drawing in Figure 6 - Facility 1 Representative Facility Layout illustrates the Facility has 3 major sections: Unclassified surrounding the perimeter of the building, SCIF area to handle TS/SCI Instances, and a Collateral area to handle S/TS Instances. The areas are marked for the convenience of the reader and are color coded for the Lockheed Martin Team facility specialists who use these documents to better understand the facility criteria. This representative floor plan will be enhanced to scale and to show common areas such as Facility Manager Office, bathrooms, and break area after the design phase and BOM are completed for use during the creation of the Cost proposal. Architectural facility drawings will be created after Down Select.



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The Lockheed Martin facility design approach first evaluated the receiving rooms for physical items. The design team categorized two major types of receipts: system equipment and media. For system equipment, the design had to accommodate the arrival of large Information Technology (IT) systems that could be inventoried and accounted for quickly, assembled and tested conveniently, then moved into the operational location for permanent placement. A flow pattern was developed on the left portion of the facility for these tasks. A controlled environment was established to minimize particle contamination to ensure the longest life for all computing resources. The receipt of media can be performed at assembly area or by the armed guard in the main entry reception area. The unclassified media would be opened in the assembly area to control dust and then taken to the appropriate system equipment for loading. Receipt of classified media would be controlled by a cleared armed guard who would escort the courier or cleared user to the appropriate classified location.

The floor design had to be convenient for operation and maintenance activities. Our design allocated all the computing resources close to the receipt and assembly room. This will allow for convenient removal of components and limit the access for vendors. The components can be installed directly into position or removed and brought to a convenient egress door to turn over to the vendor for evacuation back to a higher level of maintenance support. Minimal disruption to the facility was one of the design goals.

Our design also evaluated the flow of human traffic. All visitors follow sign in procedures at the reception station and are escorted to the armed Guard station. The armed guard will monitor the U/SBU area. The armed guard will also collect electronic devices, initiate positive control and escort visitors requiring access to the SCIF and Collateral area. Industrial Security Officers inside the SCIF and Collateral areas will maintain positive control of all visitors and ensure that all access/egress, system use, and document control will conform to DCID and NISPOM standards.

Having two cleared armed guards allows for achieving a continuous operation status even when there is not an Industrial Security Officer or SOC technician present in the SCIF and for coverage at the reception area, and for security coverage when one armed guard is on a roving patrol or break. A continuous operation status allows for drywall construction for the SCIF. Internal to the classified area and the SCI classified area, workstations were located close to their respective SOC providing an extra element of security through mere presence and proximity. Additionally, the classified sections were centralized and grouped together to limit the emanation intercept threat. Use of fiber cabling within the classified areas meets TEMPEST recommendations with the least amount of separation possible. The classified workstations were grouped together and located on the perimeter of the classified areas to provide a short inspectable distance for cabling between processing equipment and locked user rooms which provide a measure of security from emanation intercept. Placing the classified video monitors, which are the greatest source of potential intercept, close together and close to the wall means that any eavesdropping antennas and systems would have to be able to pickup and sort out which emanation belonged to which terminal and would have to sort through two layers.

Next, all classified equipment was grouped together to keep the number of TEMPEST required devices to a minimum. The Power Distribution Units (PDU) that might require in-line power filters were grouped close by to minimize the number of exposed lines. The racks were centralized to minimize the number of security devices that would be needed to provide encryption or a controlled interface to be able to converge the networks as described by the security decisions.

The consideration and use of dry wall to separate the instances of the classified ERA and user rooms was examined closely. Dry wall, while providing a level of comfort for those looking for visual security,

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does pose problems with ventilation and cooling efficiency. IT systems of this magnitude give off enormous quantities of heat. Heat is detrimental to any computer system and as such, the computer systems must be cooled efficiently. Otherwise, the maintenance problems of the systems would hinder the ability to meet the required system availability performance goals. The Lockheed Martin Team approach is to use heavy duty wire meshed cages around the processing equipment to provide following benefits:

Improve circulation - Cool air around all heat generating components

Provide flexibility - Should the estimates for floor space be inaccurate, wire meshed cage walls are much easier to relocate or move and they do not produce the dust that is created when dry wall must be dismantled and moved. The particle control is much better with a caged environment as well as thermal control.

3.8.2 Facility 2 – Irving, TX

The Lockheed Martin Team's approach for Facility 2 is to house 100 percent of all U/SBU data; 50 percent active, and 50 percent Safe-Store of facility 1 and facility 3 unclassified data. Facility 1 and facility 3, which are both government controlled facilities will each provide Safe-Store for the facility 2 unclassified data. This configuration meets the requirement to house 100 percent of all electronic ERA holdings on Government controlled space while providing the ability to house significant proportions of all ERA holdings in a facility that is not constrained by the cost and inflexibility of SCIF construction and physical access control requirements for classified holdings. This approach provides a cost effective solution and the flexibility for facility 2 to be a contractor controlled facility.

The following representative design for facility 2 followed the same concepts as facility 1 including reception of equipment, people and security. The flow of people and ease of access were the drivers for this design.

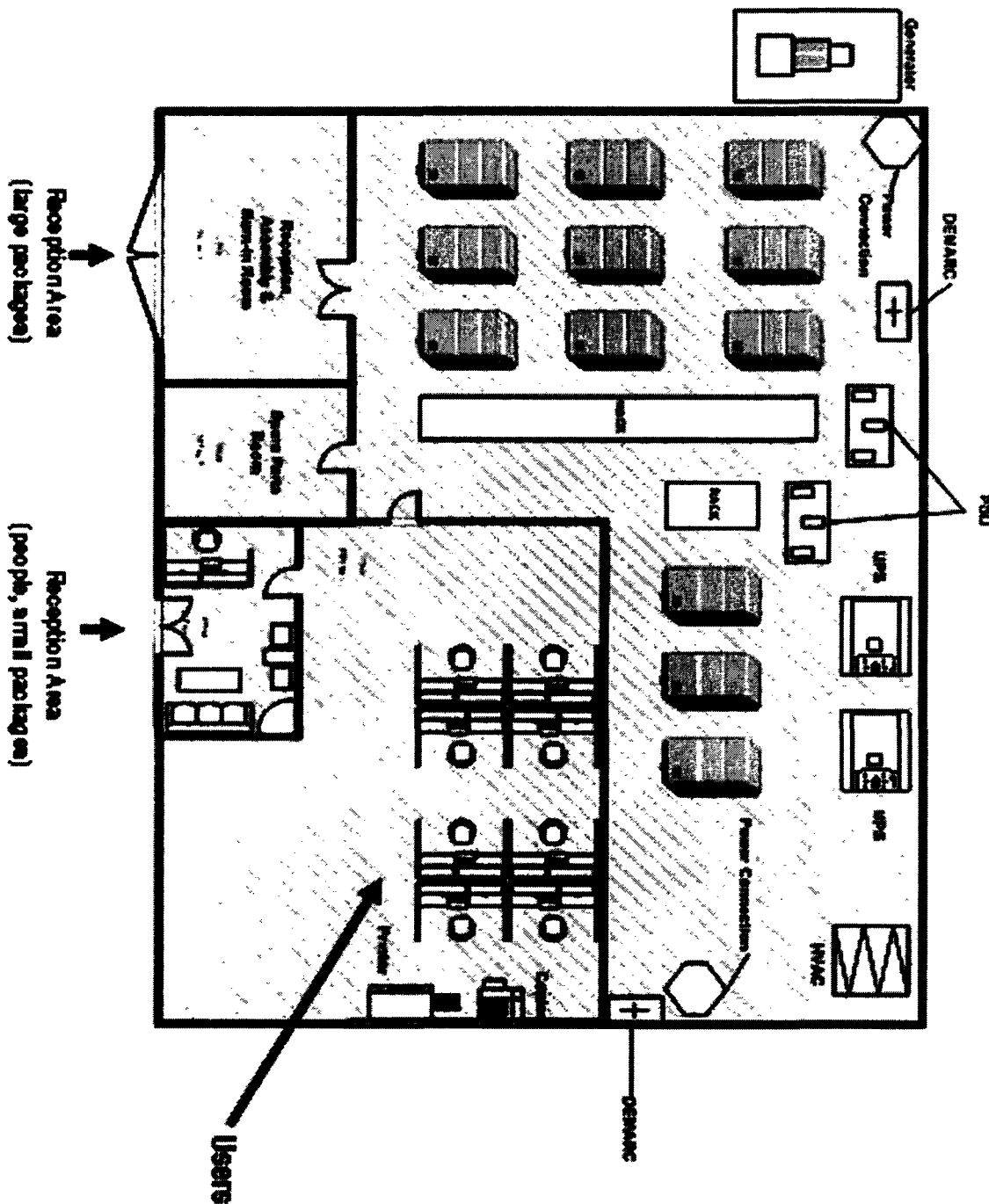


Figure 7 - Facility 2 Representation Facility Layout

Equipment receipt would be performed in the assembly area. This would provide easy access to the equipment room. The same consideration on the placement of racks and PDUs for the computational

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equipment was applied as for facility 1. However, since this is an unclassified facility, there will be no DCID 6/9 facility construction standards for SCIF or classified collateral areas construction which allows for optimum space to house the processing and storage devices.

The personnel entry would be through the secured area with an armed guard to meet NARA controlled access requirements. Our design provides for ERA user workstations at the facility which are in close proximity to the armed guard desk allowing the armed guard easy access to monitor the users.

3.8.3 Facility 3 – St Louis, MO

The Lockheed Martin Team's approach to that of facility 3 was similar to facility 1. Facility 3 would house ERA instances of all classifications of data. This facility will serve as the Safe-Store for facility 1 classified and U/SBU electronic holdings and one half of facility 2 U/SBU electronic holdings. Facility 3 will have the capability to ingest and house active classified holdings the same as Archives II if needed. The identical design criteria used for facility 1 was applied to the facility 3 design with the following practical differences between the facilities:

- Facility 3 provides backup SOC
- Facility 3 provides backup help desk
- Facility 3 provides limited number of user workstations

The Lockheed Martin Team's goal was to provide backup capabilities in facility 3 to protect against interruptions in service caused by disaster situations.

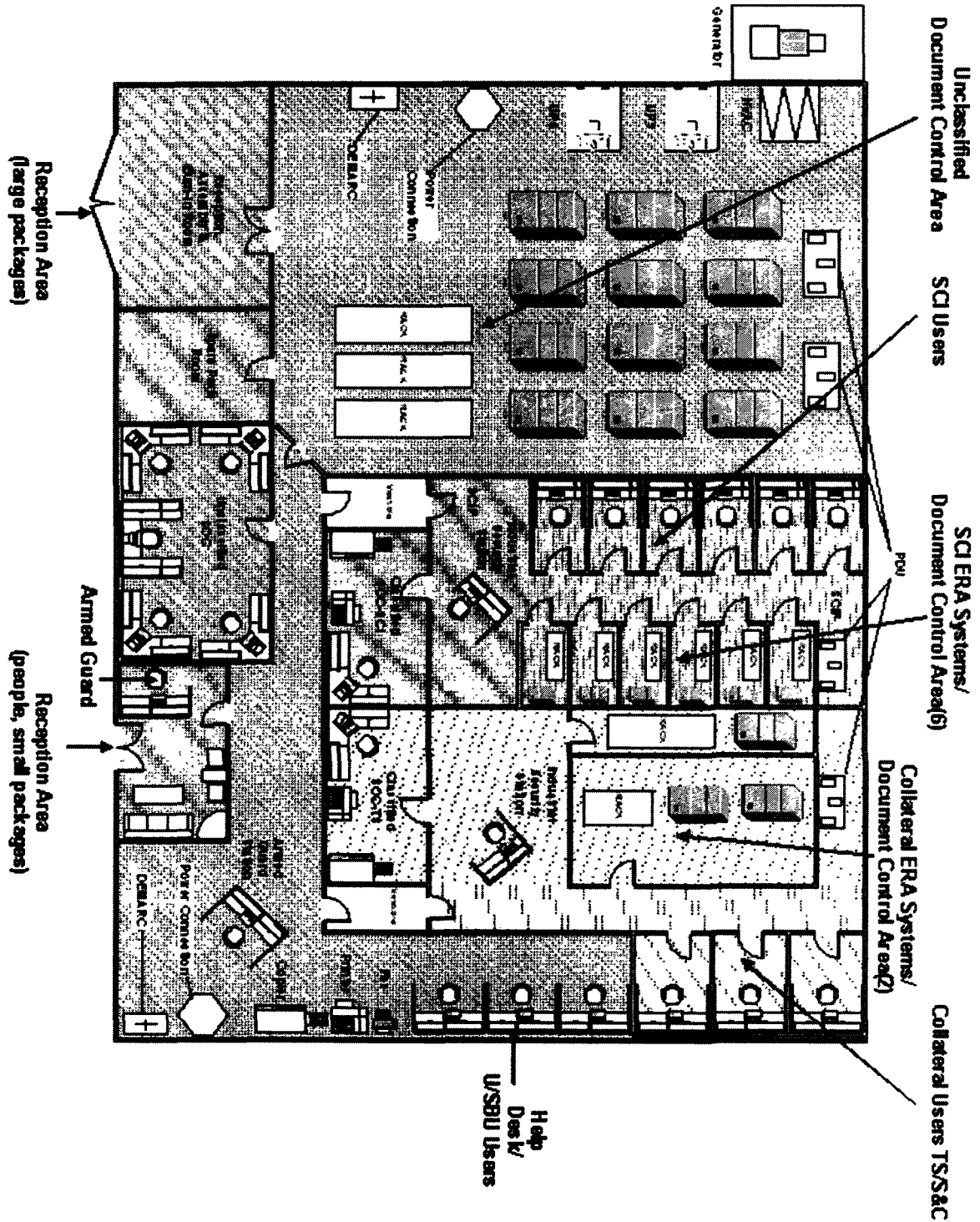


Figure 8 - Facility 3 Representative Facility Layout

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4. FACILITIES INSTALLATION AND CERTIFICATION PROCESSES

Lockheed Martin ERA facilities will provide the environment to support the deployment of the ERA solution and the Lockheed Martin Team. As such the total ERA facilities environment must provide:

- Stability to provide a safe effective workplace
- Reliability to meet availability performance requirements
- Flexibility to accommodate the wide array of functional requirements
- Security by meeting physical facility and system regulations.

To ensure that outcome, the Lockheed Martin Team has created an approach for facility installation and certification that is process driven to that includes:

- Involvement of the right subject matter experts through an IPT approach
- Integration into the overall Lockheed Martin ERA Program Management Plan
- Comprehensive management and control of the process
- Creation and use of tools to help subcontract vendors perform to expectation
- Encouragement of NARA active participation in the IPT to gain perspective and guidance
- Incorporation of checkpoints for ERA PMO approval at project milestones
- Consideration of facility certification and accreditation requirements every day of the project
- Security authenticating authority pre-approvals of work products at checkpoints
- Adherence to facility data center criteria that produces a known standard of performance
- Risk identification and risk management activities.

The processes described in Section 4 apply to all ERA Operational Facilities. The Lockheed Martin Team Development and Test facility shall adhere to standard Lockheed Martin facility processes for facility operations and maintenance. Section 5.1 Lockheed Martin Team Development and Test Facility provides a description of the development and test facility.

The Lockheed Martin Team processes to install, deploy, retrofit, and maintain an ERA data center are provided in sections 4.3 through 4.5 of this document. The core process is described in section 4.3.1, Project Planning and Control Process; 4.3.2 Facility Selection Process; and section 4.3.3 Facility Build Out Process. The detailed process steps contained in these three sections encompass the activities required to install and certify an ERA facility that processes holdings of all classification levels. This process requires 18 months from beginning of requirements gathering through achieving certification. The process and the timeframes for detailed steps is a guideline for the installation of an ERA classified facility to be used for the installation of any ERA facility at any point in time. The application of the general process for the installation of a specific facility will result in a tailored timeline within the integrated schedule. Adjustments can be made to the general installation process. An example of an adjustment is installing a new U/SBU facility is less time consuming than installing a facility to handle all classification levels.



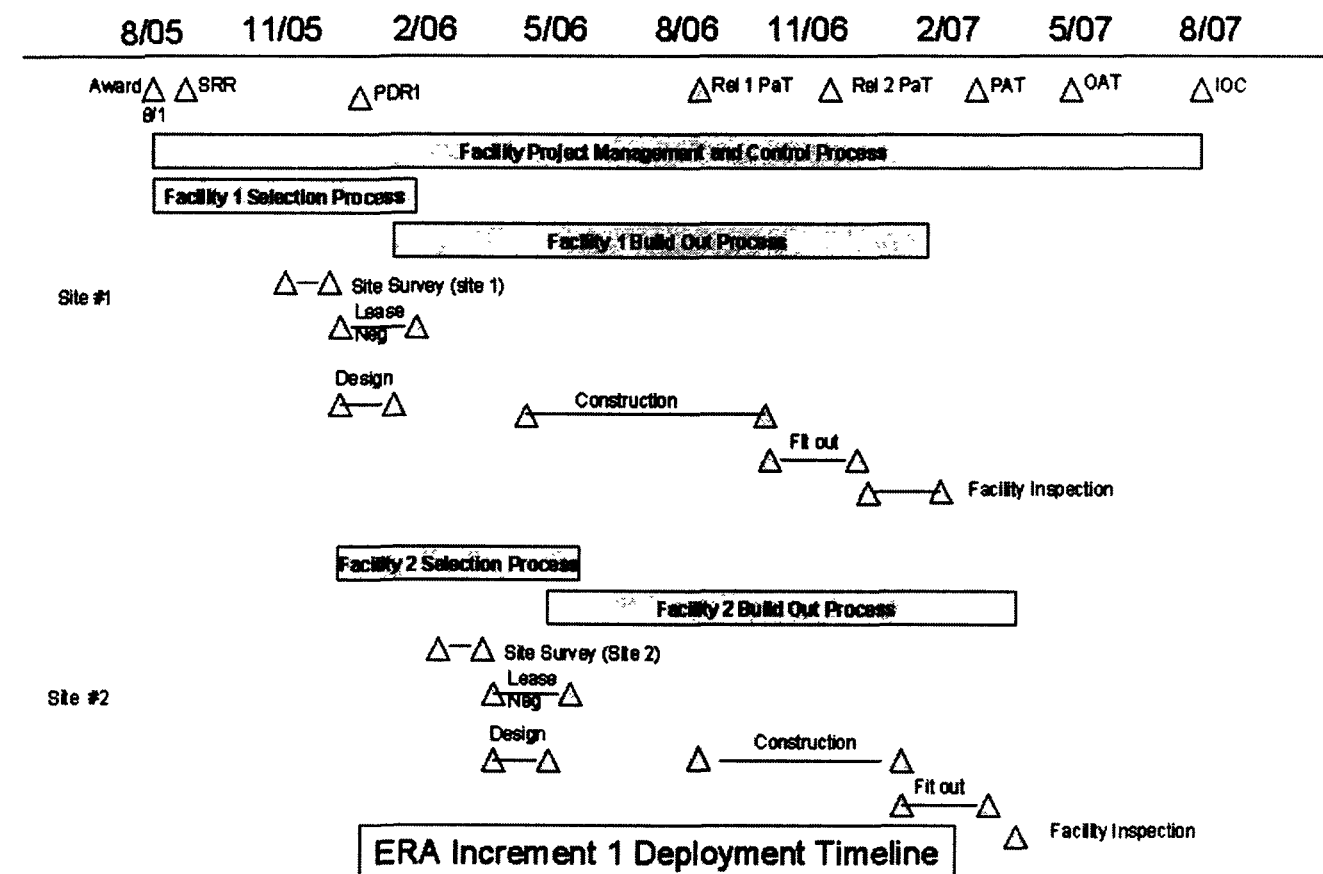
4.1 Operational Facilities Timeline

The following timelines for Increment 1 displayed in

Figure 9 – Increment 1 Timeline, and

Figure 10 – Increment 2 Timeline graphically depict the Lockheed Martin timeframes for installation of the initial three ERA Operational Facilities. Each figure reflects the two elements; Process phase represented as continuous bars, and significant facility activities represented as plot points.

Facility 1 represents the total process time of 18 months for a facility that processes ERA holdings at all classification levels. Adjustments from the general process timeframes for a shorter duration for facility 2 and facility 3 are reflected because the Lockheed Martin Team is assuming that the use of the same General Contractor and SCIF Contractor, thus reducing eliminating the contractor bid process time for those facilities. Additionally Facility 2 does not process Classified records. The SCIF and Collateral areas will be constructed in increment 1 for Facility 1 but a second fit out and certification timeframe in increment 2 is needed to coincide with the ERA classified records processing release. It is more cost effective to construct the SCIF at the same time as the rest of the facility. However, placing the actual computer equipment needed to process classified records into the facility one year earlier than they are needed would be unwise due to the rate of technology evolution. Facility 2 will have a normal technology refresh in Increment 2.



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Figure 9 – Increment 1 Timeline

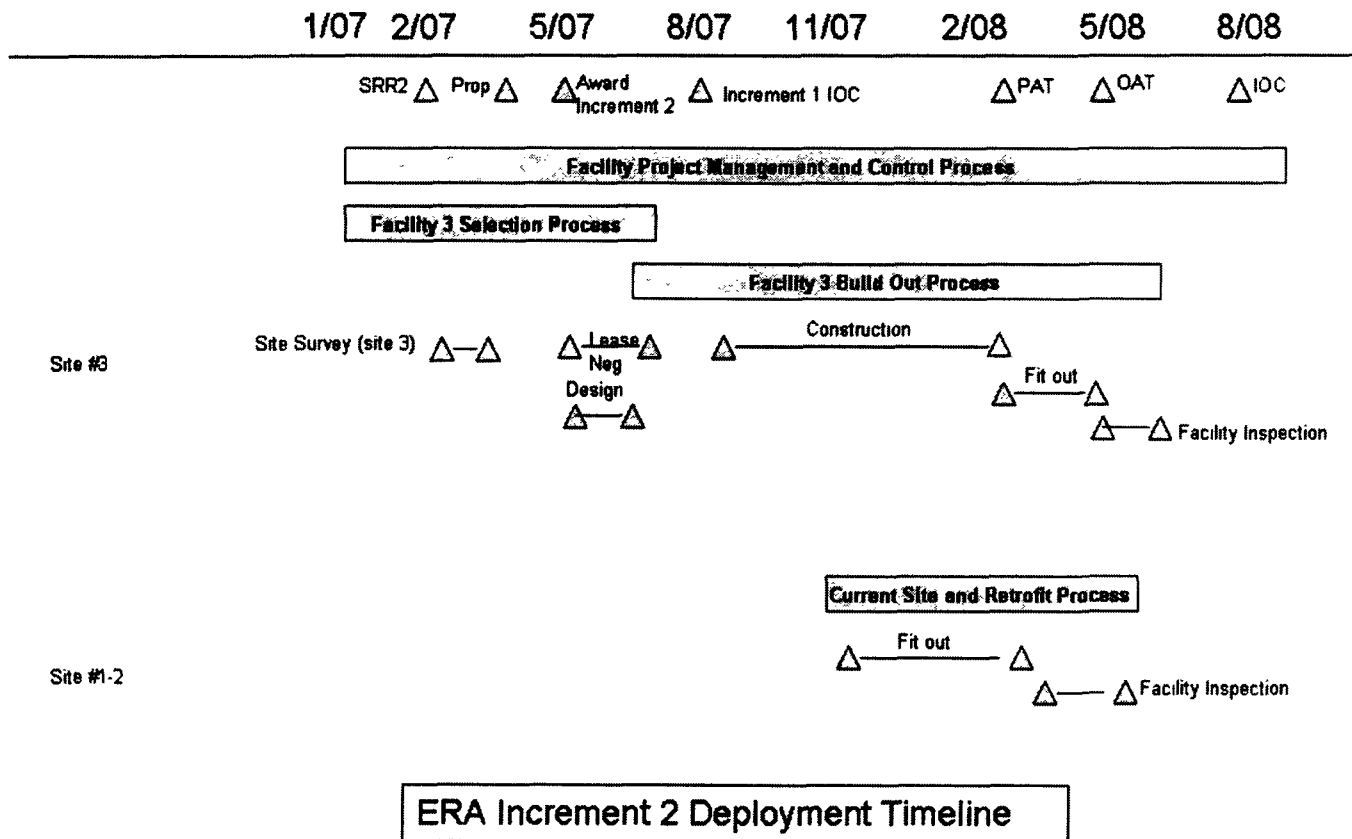


Figure 10 – Increment 2 Timeline

Figures 9 and 10 illustrate that the Facility 1 installation project begins immediately upon award of Increment 1, while the facility 2 installation process begins approximately four months later in December of 2005. The installation process for Facility 3 will begin in January, 2007 which is approximately seven months before the end of Increment 1, to accommodate the overall time required to install that facility. However, the lease will not be signed until August of 2007, the anticipated beginning of the Increment 2 contract period. Each facility installation process is completed through certification before operating capability for the applicable facility is achieved.



4.2 Facilities Processes

The facilities process provides an orderly step-by-step repeatable way to install, retrofit, and maintain Lockheed Martin Team ERA Operational Facilities. They were created by the Lockheed Martin Team Field Operations Manager, and as part of the CDRL 5, Facilities Plan are approved by the Lockheed Martin Program Director and ERA PMO through the standard CDRL submission process. The process will be revised based upon lessons learned installing ERA Facilities and will be submitted for approval once per increment.

The facilities process is comprised of three phases: Project planning and control, facility selection, and facility build out. Project planning and control is a continuous activity with specific tasks for the activities involved with the installation, retrofit, and maintenance tasks for each facility.

This Facilities Processes Section defines the activities, deliverables, and deliverable frequency of tasks the Lockheed Martin Team will perform to install, retrofit, certify and maintain ERA facilities. NARA responsibilities that support those activities will also be described. Each process section will provide a high level description of that process to provide context, and two tables listing detailed process steps. The first table will list the Lockheed Martin Team activities for the specific facility process. The second will provide the NARA responsibilities to support those activities. In general terms, the role of the Lockheed Martin Team is to perform the activities to install, retrofit, certify, and maintain facilities under the oversight and approving authority of NARA. That general rule is true for the facility processes with a few exceptions that will be noted within the NARA responsibilities tables.

Within the tables we will follow two conventions to save space and make the document easier to read:

1. CDRL numbers and names will not be repeated in the NARA responsibility tables. The term CDRL will refer to all CDRLs that are work products for that process step in the Lockheed Martin Team responsibilities table.
2. The acronym PS/SME will be used to refer to the Lockheed Martin Team and NARA Security experts who are involved in the Certification and Accreditation (C&A) process to abide by the DCID, NISPOM, and TEMPEST requirements and guidelines. The individual project plan will name the specific offices and personnel at the time of the project. However, they would include appropriate members from contractor and NARA Industrial Security Offices (ISO), Designating Authority at NARA, NARA Cognizant Security Authority (CSA), Facility Security Officers (FSO), Communications Security (COMSEC) personnel, and NARA CSA interface with the Central Intelligence Agency (CIA) Cognizant Security Office (CSO).

4.3 Initial Facility Installation

Initial facility installation is the work to install an ERA facility. It encompasses three major process steps: Project planning and control, facility selection, and facility build out. Accordingly the initial facility installation processes are organized into three sections, one for each major process step.

The initial facility installation requires that every process step defined in the activities tables will need to be performed. The Lockheed Martin Team will ensure that all required resources to install a new facility will be deployed to the project early in the project life cycle to ensure proper planning, and that will be demonstrated by the individual process steps presented in the tables. As an example the various

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resources from Lockheed Martin Team, NARA and authenticating agencies who will be responsible to Certify and Accredite the facility will be involved in the beginning of the project by providing guidance and approval of facility selection and facility engineering drawings, and inspections throughout the entire life-cycle of the project to mitigate the risk of surprises at the certification step at the end of the facility installation process.

4.3.1 Project Planning and Control Process

An initial facility installation is a large project and as with all major projects the Planning and Control processes are key to achieving success. Accordingly each facility installation will have a dedicated Lockheed Martin Team project manager responsible for installing a single facility under the guidance, direction, and control of the Field Operations Manager, Operation and Support Manager, and Lockheed Martin Team Program Director. The Project Manager will be the Facility Manager who will operate the facility. Each ERA installation shall have a project IPT assigned to the project that will have representatives from the ERA PMO, PS/SME, construction prime contractor and sub contractor vendors performing specific tasks, OEM vendors, and all areas of the Lockheed Martin Team. All facility project planning and control steps work within the framework of the Lockheed Martin Team management processes as described in CDRL L35, Program Management Plan to include operating under Earned Value Management.

Table 9 presents the process steps the Lockheed Martin Team will follow to plan and control an initial facility installation project. The following narrative explains the content of each column of Table 9. The Activity number column will be numbered sequentially and is the activity number for the Lockheed Martin Team activity. The Activity column lists the activity. The Work Product column provides the CDRL deliverable, on Non-CDRL work products associated with that activity. The Frequency column describes the production frequency of the work product.

Table 9 – Lockheed Martin Project Planning and Control Activities

Activity #	Activity	Work Product	Frequency
1	Plan, organize, and control the facility installation, retrofit, and system maintenance related work	CDRL 18, Monthly Status Reports	
2	Provide information and support to program management reviews Produce input to minutes of Monthly Program Management Reviews	CDRL 17, Monthly Status review	
3	Assess and measure progress	CDRL 18, Monthly Status Reports CDRL 22, Cost Performance Report CDRL 26, Earned Value Management Data	

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Activity #	Activity	Work Product	Frequency
4	Designate the Facility Manager as project IPT Lead to plan, direct, and control all aspects of the project	Naming IPT lead and creation of team	After Down Select
5	<p>Establish a project IPT to perform the tasks of the project.</p> <p>This will include PS/SME, and the naming of a construction company that specializes in SCIF construction.</p>	<p>Updates to activity 1 and 2 deliverables and Facilities Plan baseline</p> <p>Signed subcontract with SCIF specialized construction company</p>	Within 1 month after Down Select
6	<p>Develop and submit CDRL 5 Facilities Plan that is the project plan that addresses project objectives and how they will be accomplished. Include project organization, relationships, coordination requirements, budget, risk assessment/risk management, roles and responsibilities, metrics and reporting.</p> <p>Update the project plan baseline throughout each step of the initial facility installation process, or the current facility retrofit and expansion process as the project progresses through the phases of facility selection, facility build out, and makes provision for ongoing maintenance of facility equipment such as UPS, Heating Ventilation Air Conditioning (HVAC), generators, and physical security counter measures.</p>	CDRL 5, Facilities Plan	<p>Within 6 months after Down Select</p> <p>Weekly throughout the project with emphasis on checkpoint activities</p>
7	<p>Develop and update a project schedule to include tasks, timelines, and dependencies. At a minimum detailed tasks will be included for the following categories: management and control, trade studies, facility selection, site survey, build out, deploy, configure, and certification and accreditation</p> <p>Also insert scheduled maintenance windows into the IS throughout the increments.</p>	Integrated Schedule (IS)	3 rd business day after end of accounting month
8	Coordinate and conduct Facility Design Reviews	Design Review	Monthly

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Activity #	Activity	Work Product	Frequency
		Document	according to Integrated Schedule
9	Conduct regular in process reviews	Deployment Review Document	According to Integrated Schedule
10	Prepare inputs to higher level integration and test documentation	CDRL L31, Master Test Plan	Once per Increment according to Integrated Schedule
11	Prepare input to NARA User training	CDRL L41, Training Materials	Once per facility project according to Integrated Schedule
12	Deliver training to ERA operations staff and NARA employees	Training attendance sheet and completion status	1 month prior to initial operating capability
13	Develop, report, and use metrics indicating the status and progress of the deployment activities	Metrics to be established in activity 4 Project Plan	Integrated into activities 1, 2, and 3
14	Conduct Project IPT status meeting	Meeting minutes Updates to Facilities Plan baseline	Weekly

Table 10 - NARA Project Planning and Control Responsibilities provide the specific proposed responsibilities of NARA in regards to projects to install an ERA facility. Timely execution of these responsibilities will facilitate compliance with the IS. The Activity Number column will be numbered sequentially and is the activity number for the NARA responsibilities. The Responsibilities column lists the supported activity from the Sample Lockheed Martin Activities Table and the role NARA has in supporting that activity. The Supported Activity column contains the activity number cross referenced to Table 9 – Lockheed Martin Project Planning and Control Activities.

Table 10 – NARA Project Planning and Control Responsibilities

Activity #	Responsibilities	Supported Activity
1	Monthly status reports – Review and approve CDRL	1
2	Program Management Reviews - NARA will have appropriate representation at the Program Management reviews (participate) and	2

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Activity #	Responsibilities	Supported Activity
	approve minutes and CDRL.	
3	Assess and measure progress – Review and approve CDRL 's	3
4	Project plan – Review and approve CDRL at checkpoints, and approve SCIF construction sub contractor	5,6
5	Integrated schedule – Participate in creation through reviews	7
6	Facility design reviews – Participate and approve the design	8
7	In process reviews – Participate and approve minutes	9
8	Integration and test documentation – Review and approve CDRL	10
9	Training Input – Review and approve CDRL 41, Training Materials	11
10	Weekly Project IPT status meeting – Participate and approve minutes	14

4.3.2 Facility Selection Process

The facility selection process establishes much of the basis for successful deployment and support. Within this step requirements are gathered, onsite surveys are conducted, and architectural drawings are created. Active participation of Lockheed Martin Team facility professionals and PS/SME in this phase is critical to ensure that facilities that will process classified holdings are suited to cost effective implementation of physical security requirements. The onsite survey is the most important step in selecting a facility that is suited to become an ERA facility. The following narrative describes the major functions performed in this process step.

The facilities site survey allows for a systematic study of real property's suitability to host the enterprise operations. Functional, operational, and physical security criteria establish the facility search parameters for the site survey. Factors of facility preparation time, size, availability of local staff and services, improvement cost, and flexibility.

The assessment will identify solution options with pros, cons and financial analysis for each facility. Finalist properties must be adaptable to the project's stated requirements and criteria. To become a candidate facility, a facility must show the ability to meet or exceed established standards of operational availability, security, robust construction, and other superior performance characteristics.

The IPT will review all candidate facility survey results, evaluate each report, and validate the recommendations. The IPT will present their recommendation to the ERA PMO for approval if the assessment assumptions remain valid and new information does not change the analysis and the cost models. Upon approval the IPT authorize the detailed floor plan design.

Architecture and design of the floor space will be performed at end of this step with the actual locations of all cubes, walls, equipment, hardware, people space, furniture, storage rooms, bathrooms, closets, security measures and anything that makes up the physical space drawn up on blue prints to be presented for final approval to proceed at the Build Out Process checkpoint. The detailed process steps for facility selection are presented in Table 11 – Lockheed Martin Facility Selection Activities:

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Table 11 – Lockheed Martin Facility Selection Activities

Activity #	Activity	Deliverable	Frequency
1	<p>Conduct preliminary facilities requirements analysis</p> <p>Receive final DD Form 254</p> <p>Receive physical security consolidated levels of concern confidentiality, integrity and availability indicators</p> <p>Start preparing the Fixed Facility Checklist, Annex A (FFC)</p> <p>Involve the PS/SME</p>	Updates to Facilities Plan baseline	<p>Updates to baseline occur routinely upon change activity</p> <p>Submission is once per increment per the Integrated Schedule</p>
2	<p>Develop facility-specific requirements in the form of survey objectives and criteria to include facility mission, availability criteria, functional view of activities to be performed at the facility, headcounts, demographics, specific space characteristics, specific security characteristics, and cost drivers</p> <p>Required input is ERA system BOM or assumed hardware configuration to process ERA</p>	Updates to Facilities Plan baseline	After Down Select and upon change activity
3	Gain approval at project requirements/project plan checkpoint	Updates to Facilities Plan baseline	Once within 1 month after Down Select
4	Issue facility-specific requirements to Government Services Administration (GSA) and/or commercial real estate brokers	Updates to Facilities Plan baseline	Once upon approval of requirements and criteria
5	Create candidate facility list from GSA and/or commercial brokers search results	Updates to Facilities Plan baseline	Once within 6 weeks of requirements approval
6	Review candidate list, make recommendation, and select facilities to perform site surveys upon	Updates to Facilities Plan baseline	Once within 3 months after Down Select
7	<p>Conduct facility visits to determine availability and suitability of facilities</p> <p>Conduct onsite interviews and physical survey to assess facility and facility installation requirements</p>	Updates to Facilities Plan baseline with facility assessment report(s), facility financial analysis,	<p>According to Integrated Schedule</p> <p>Once within 4</p>

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Activity #	Activity	Deliverable	Frequency
	against the criteria Collect existing facility documentation such as blueprints and previous survey results Conduct onsite Industrial Security Office Analysis with SCIF construction sub contractor	physical security analysis, and facility selection recommendations	months after Down Select
8	Analyze completed survey documentation	Updates to Facilities Plan baseline	According to Integrated Schedule
9	Identify installation risks and mitigations	Updates to Facilities Plan baseline	According to Integrated Schedule
10	Identify recommended facility(s) by address	Updates to Facilities Plan baseline	According to Integrated Schedule
11	Gain approval at project facility selection checkpoint	Authority to proceed with lease negotiation letter Updates to Facilities Plan baseline	Upon NARA decision Once within 5 months after Down Select
12	Negotiate lease for facility	Executed Lease	Within 7 months after Down Select
13	Update ERA COTS Inventory Database	CDRL L44, ERA COTS Inventory Database	Within 7 months after Down Select
14	Develop/update preliminary installation plan to include: floor plans, detailed component list, detailed furniture list, detailed IT BOM, labor estimates and construction timeline updates, updated cost estimates, and plans for facility maintenance agreements and maintenance windows	Updates to Facilities Plan baseline Updates to integrated schedule	Within 7 months after Down Select
15	Develop facility design	Architectural Drawings to include floor plans, diagrams of electrical, communications, HVAC, connections, counter measure security equipment layouts to include location of intrusion	Within 6 months after Down Select

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Activity #	Activity	Deliverable	Frequency
		detection devices etc. Updates to Facilities Plan baseline	
16	Submit an Fixed Facility Checklist (FFC) to the NARA CSA for all Collateral area, and SCIF construction	Architectural drawings	Once within 6 months after Down Select
17	Gain approval at facility build out checkpoint from PS/SME and ERA PMO to proceed with facility build out based upon lease, installation plan, FFC, and design	Authority to proceed with facility build out letter Updates to Facilities Plan baseline Pre-approved FFC	Upon NARA decision Once within 7 months after Down Select

Table 12 - NARA Facility Selection Responsibilities identifies the specific proposed responsibilities of NARA in regards to selecting facilities that will become ERA facilities. Active NARA participation on the IPT throughout this phase will ultimately result in a facility that provides superior support to the system and an easier decision process.

Table 12 – NARA Facility Selection Responsibilities

Activity #	Responsibilities	Supported Activity
1	Facilities requirements analysis – participate and provide requirements guidance, final form DD254 and approve/provide consolidated levels of concern indicators	1
2	Requirements Checkpoint – Participate and approve	3
3	Issue requirements to GSA or broker – Participate with GSA	4
4	Review candidate list and select facilities – Review and select	6
5	Facility selection checkpoint – Review and select	11
6	Negotiate lease – Participate and execute	12
7	FFC – Review, provide construction advise and pre-approve	16
8	Facility build out checkpoint - Participate and approve	17

4.3.3 Facility Build Out Process

Facility build out covers the creation and certification phase of the new ERA facility from the selection of a prime contractor, finalizing facility design, approval to proceed, construction, design of server rack elevations, configuration and installation of IT equipment, and the facility inspection and certification. The construction phase will accomplish constructing the facility improvements per the approved design. Build out project phase drivers will be cost containment, quality of design and workmanship, safety, and schedule compliance. At the completion of the build out process the facility is certified and

Source Selection Information - See FAR 2.101 and 3.10

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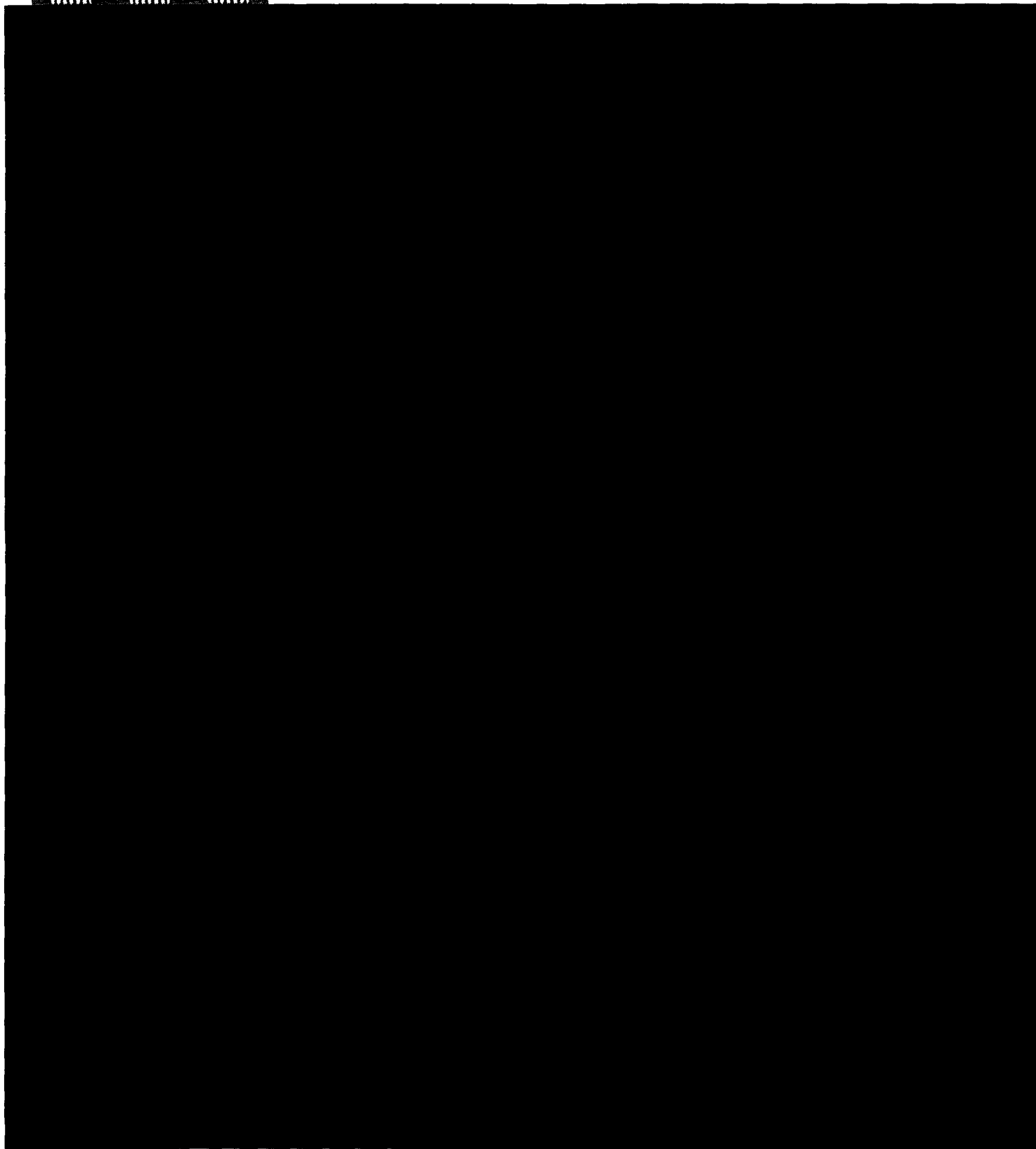
available to the Lockheed Martin Team engineering, development, testing, CM and operational teams to deploy ERA to the new facility. Table 13 below presents the detailed process steps to be performed during facility build out.

Table 13 – Lockheed Martin Facility Build Out Activities

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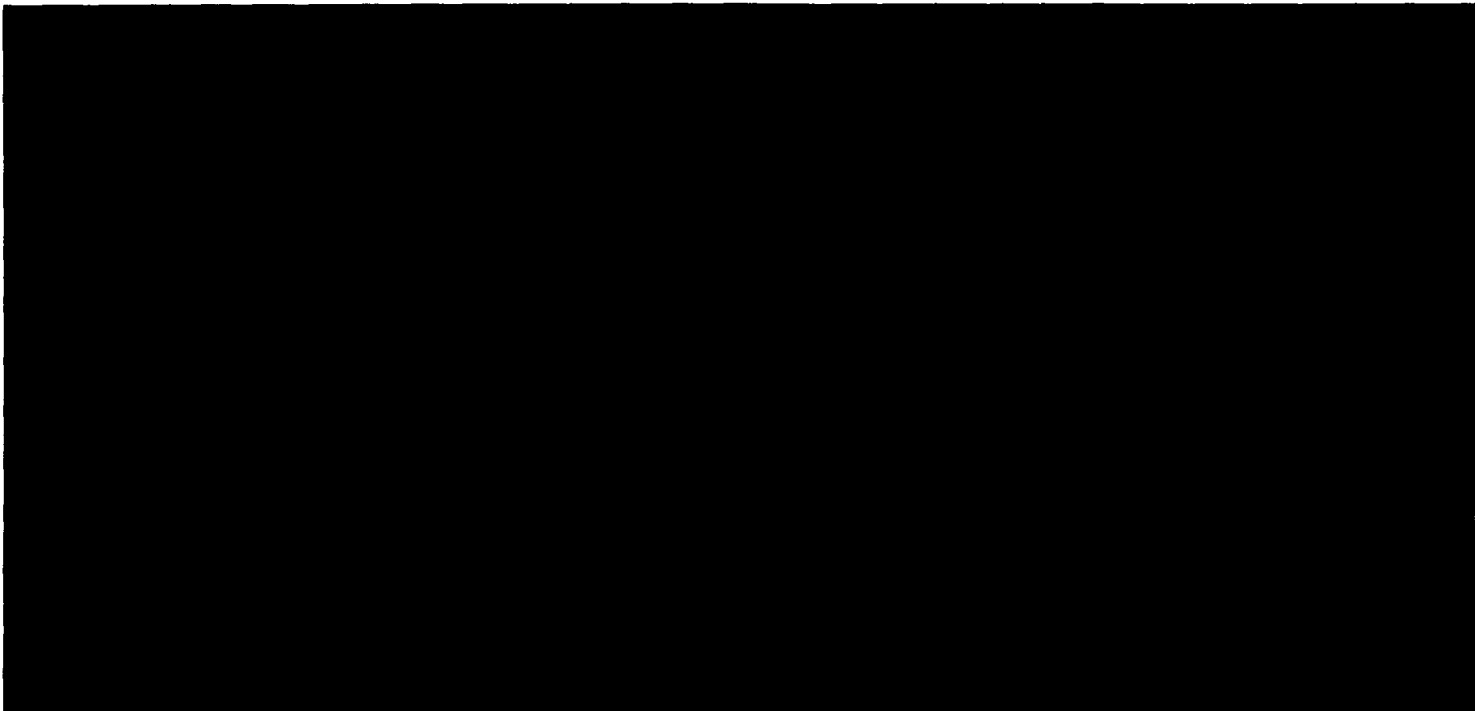


Table 14 – NARA Facility Build Out Responsibilities



4.3.4 Deploy and Configure the Facility

Section 4.3.3 Facility Build Out completes the process of creating and certifying an ERA facility. After facility certification is achieved, the facility is ready to support deployment of the ERA system by combined efforts of the Lockheed Martin Team engineering, development, testing, CM and operational teams to support various testing activities leading to eventual ERA certification as being ready for operations. The processes of deploying ERA to the facility are presented in CDRL 8, Configuration Management plan, CDRL 7, Operations and Support Plan, and CDRL L31 Master test Plan.

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4.4 Manage Facility Maintenance and Support Process

Facility Maintenance is provided by OEM vendors, utility companies, and a facility cleaning vendor under the management and supervision of the Facility Manager. Service level agreements will be established for each vendor and the performance against those agreements will be monitored and captured as metrics. During the course of the initial facility installation project the facility maintenance activities will be documented in the Facility plan and integrated schedule. Specifically, the functions that will be captured are:

- Maintenance agreements on the physical facility equipment such as UPS, HVAC, power generators, and physical security vendors
- Schedule for cycles of preventive and routine scheduled maintenance on physical facility equipment
- Responsibilities of Lockheed Martin Team Field Operations Manager to maintain the facilities in operational condition through monitoring, and participation in the operation and support break fix activities when an IT component malfunctions.

4.5 Current Facility Retrofit and Expansion

The Lockheed Martin Team will follow the same process for retrofit and expansion of a current facility as it does for the creation of a new ERA facility. This approach is being used because the functions that need to occur and the project management level documentation and CDRLs are identical between creating a new facility and expanding an existing facility with the exception of detailed process steps that actually select a facility. Accordingly a facility expansion and retrofit project would document in the Facility Project Plan that certain facility selection detailed process steps are not being performed.

Many factors can impact the timeline for a facility retrofit or expansion project such as whether a facility needs to be expanded which involves construction, or whether an instance processing classified ERA holdings is altered to the point that the SCIF needs to be expanded which requires specialized construction and extensive certification process steps. However, the Lockheed Martin Facilities Plan is based upon the assumption that initial build out of the ERA Operational Facilities will accommodate the projected volume of records.

The benefits of following the same process for installing a new facility, or retrofitting and expanding a new facility are:

- Simplicity of repeating a known process increases the quality of execution
- Rigor of consciously deciding that a detailed process step is not needed reduces errors caused by oversight
- Consistent Facility Plan Project documentation



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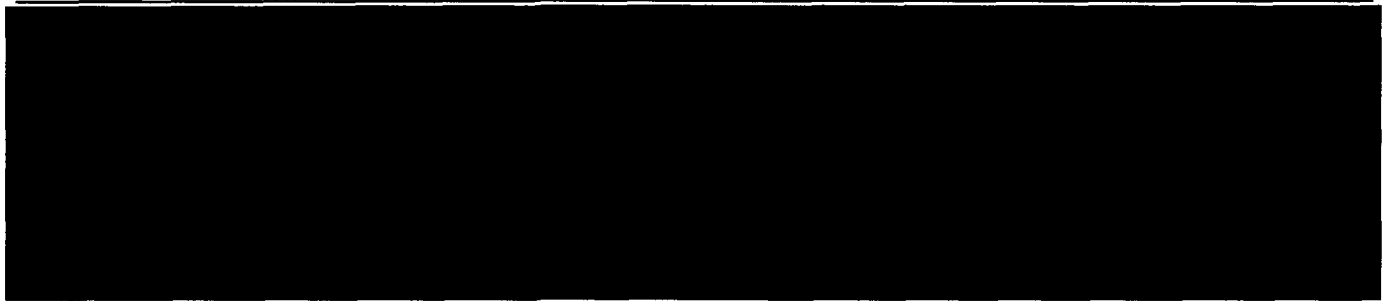
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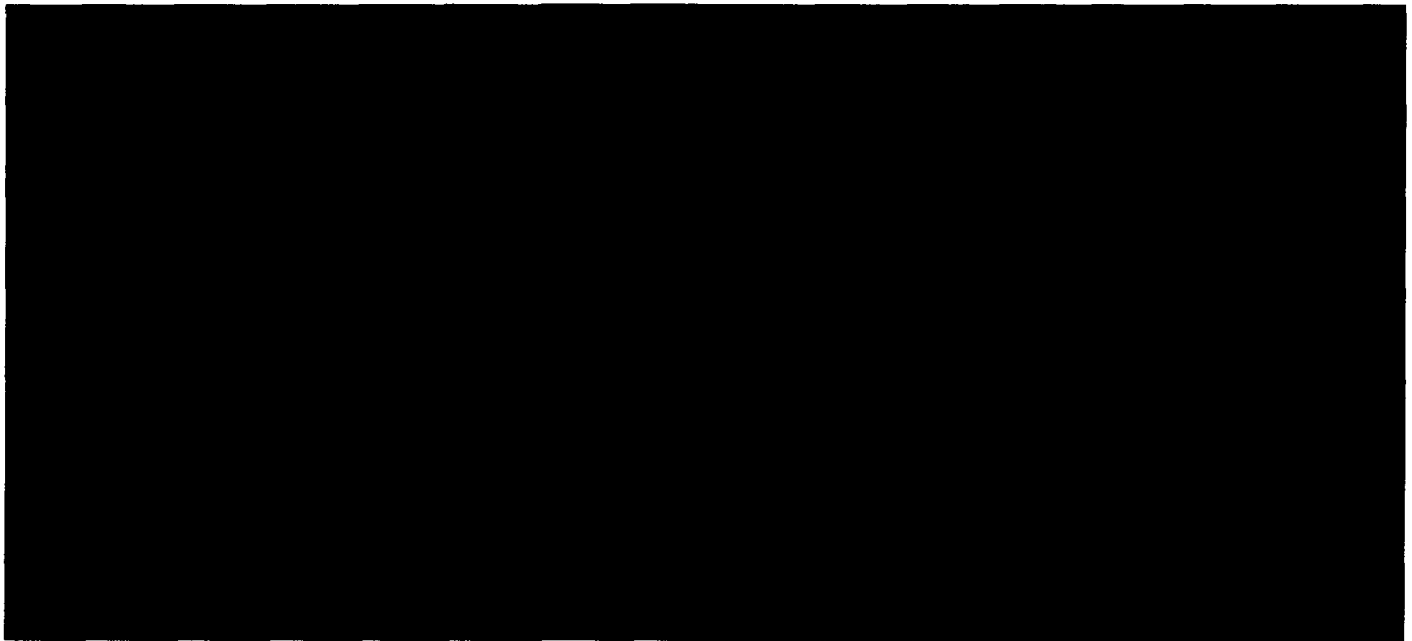
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5. PROPOSED FACILITIES



5.1 Lockheed Martin Team Development and Test Facility



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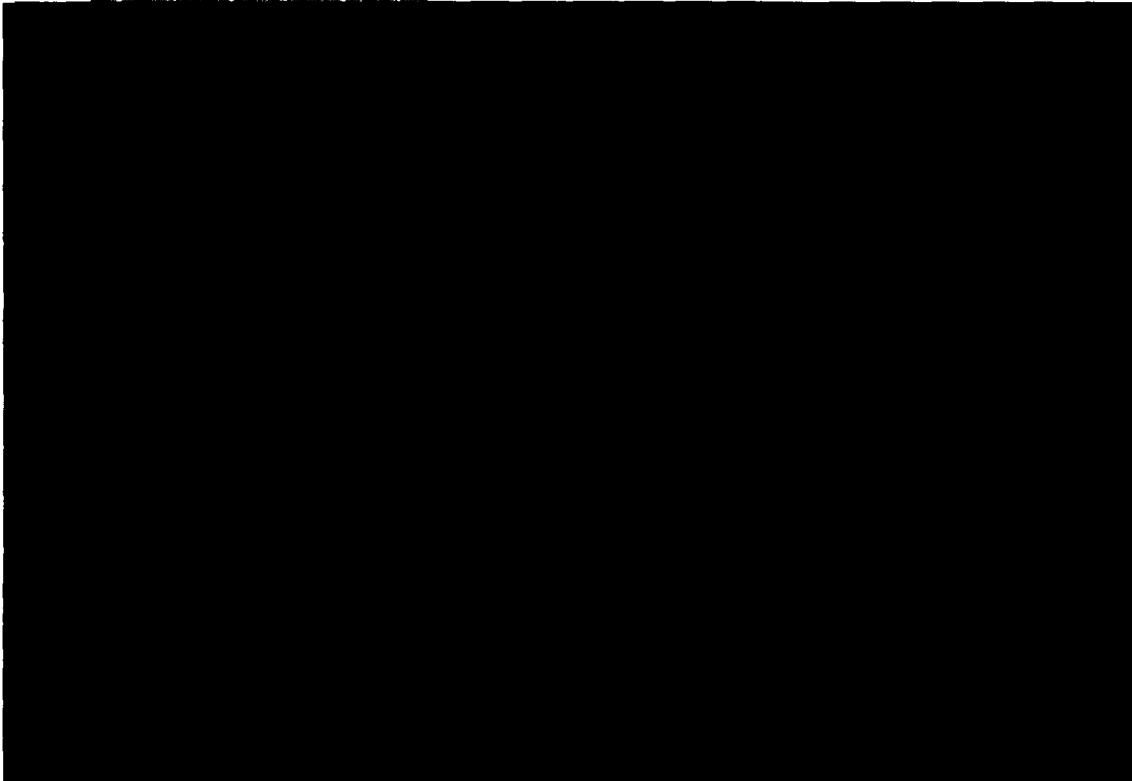


Figure 11 ERA Development and Test Facility Location



5.1.1 Disaster Recovery Provisions

The Lockheed Martin Team's standard office environment provides regular back-up of office and lab environments. Personnel will store work products within the Workgroup Collaboration environment to ensure that they are backed-up and recoverable. The Program Director ensures that the back-up and recovery mechanisms remain current and functional by periodically requesting a demonstration of selected product files.

5.2 ERA Proposed Facilities

As discussed in Section 3 of this plan, the Lockheed Martin Team performed a trade study to determine the optimum number of facilities for ERA. Based upon those results, Lockheed Martin Team proposes three ERA facilities.

- Facility 1 – Archives II
- Facility 2 – Irving, TX

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- Facility 3 – Saint Louis, MO

At this point of the program, the Lockheed Martin Team has developed criteria for the facilities along with a representative facility layout. The final requirements for the facility will be provided with the cost proposal. The information on the facilities in this section is based upon initial analysis and could change during the cost proposal and during the next phase of the program. The final facility selection will be finalized in the next phase of the program.

5.2.1 Facility 1 Archives II

The ERA PMO provided guidance to the Lockheed Martin Team that Archives II will serve as one of the ERA facilities as shown in Figure 12. The logical facility layout for facility 1 is presented in section 1. The ERA Facility 1 will provide full ERA capability and house all classification of data. The SOC and ERA Help Desk will be located at Archives II. This will provide ERA PMO easy access to the system operations.

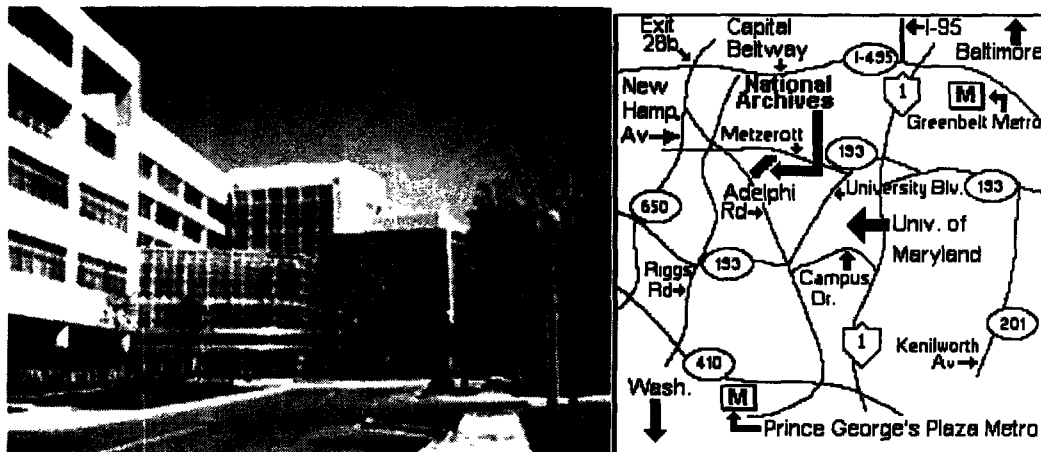


Figure 12 – Facility 1 Archives II Facility

The Archives II facilities requirements will be provided to the ERA PMO with the Lockheed Martin Team cost proposal. The facilities requirements will cover all infrastructure and build out requirements. During the next phase of the program, the Lockheed Martin Team will develop the facility layout for Archives II.

5.2.2 Facility 2 Irving, TX

The Lockheed Martin Team has selected Facility 2 in Irving, TX. This is an Lockheed Martin Team facility and will be leased to NARA for the ERA program. The facility is located at 1925 John Carpenter Freeway, Suite 425, Irving, TX, 75063 shown in Figure 13. This facility meets, or can be modified to meet, all of the requirements identified in section 3.7. The ERA system would be on the 4th floor of the facility. This facility already provides data center capability for one Lockheed Martin Team customer. Therefore, much of the infrastructure is already at the facility.

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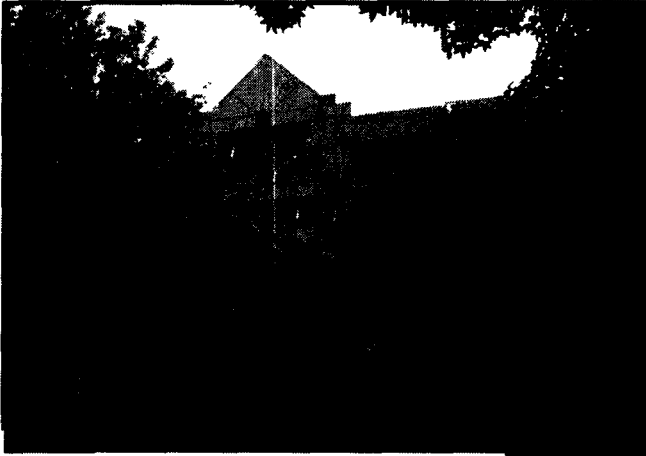


Figure 13 - Facility 2 Irving, TX

The ERA system will be housed on the 4th floor in the East wing shown below in Figure 14 - Facility 2 Floor Layout.

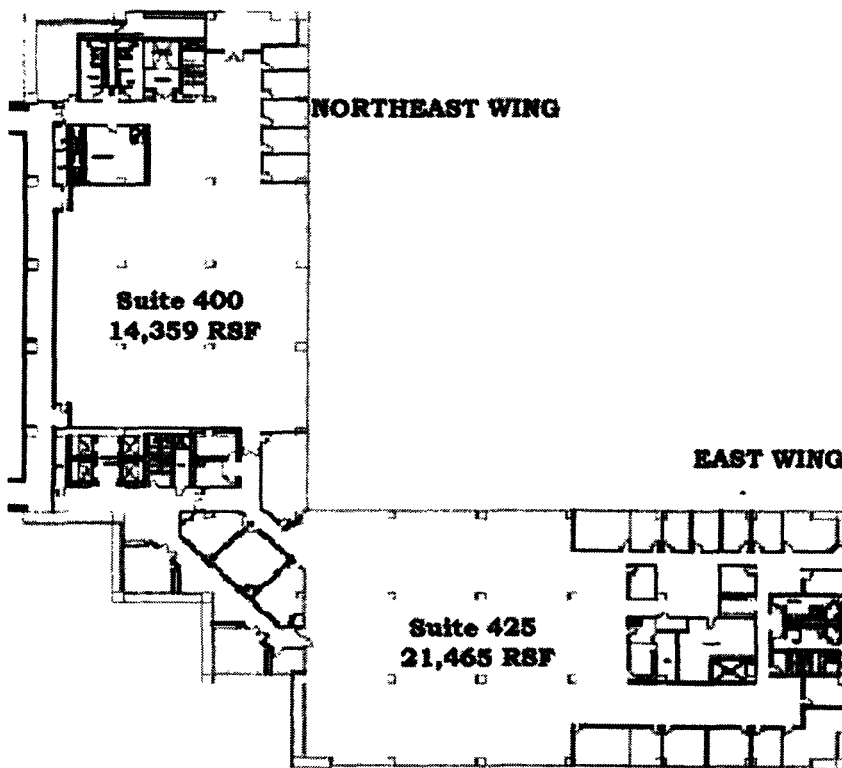


Figure 14 - Facility 2 Floor Layout

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The following are the list of benefits of this facility.

Easy Access – The Dallas Fort Worth Airport with in 10 minutes of the facility.

Security – Facility is a secure Lockheed Martin Team facility. Code key access required for all non-public portions of the facilities. Facility staff with security armed guards 24x7. Security card key access required. There is onsite facilities management.

Existing Infrastructure – This facility contains a functioning data center. Accordingly, there is existing infrastructure such as generators, utility power grid, and standard cooling system that can be leveraged for ERA. All of the facility systems can be started manually.

Telecommunication – Existing duplicate telecommunication infrastructure to the Lockheed Martin Team in the facility from Southwestern Bell Corporation, and MCI.

Existing Lockheed Martin Team Resources – Lockheed Martin Team currently supports customers at this facility. There are existing Lockheed Martin Team employees that could support the deployment and operations of ERA at this facility.

NARA Southwest Regional Facility – The proposed Lockheed Martin Irving facility is a convenient 31 miles from the NARA Southwest Regional facility in Fort Worth.

5.2.3 Facility 3 Saint Louis MO

The Lockheed Martin Team has selected 210 North Tucker, Suite 800, Saint Louis, MO 63101 as ERA Facility 3. This will be leased to NARA for the ERA program. Figure 15 shows the front exterior of the facility. This facility meets, or can be modified to meet, all of the requirements identified in section 3.7. The ERA system would be on the 8th floor of the facility. This facility was constructed to support data centers and already provides data center capability for many other customers. Therefore, most of the infrastructure exists at the facility and will be leveraged. The ERA system would be separate from other customers by occupying the entire 8th floor.

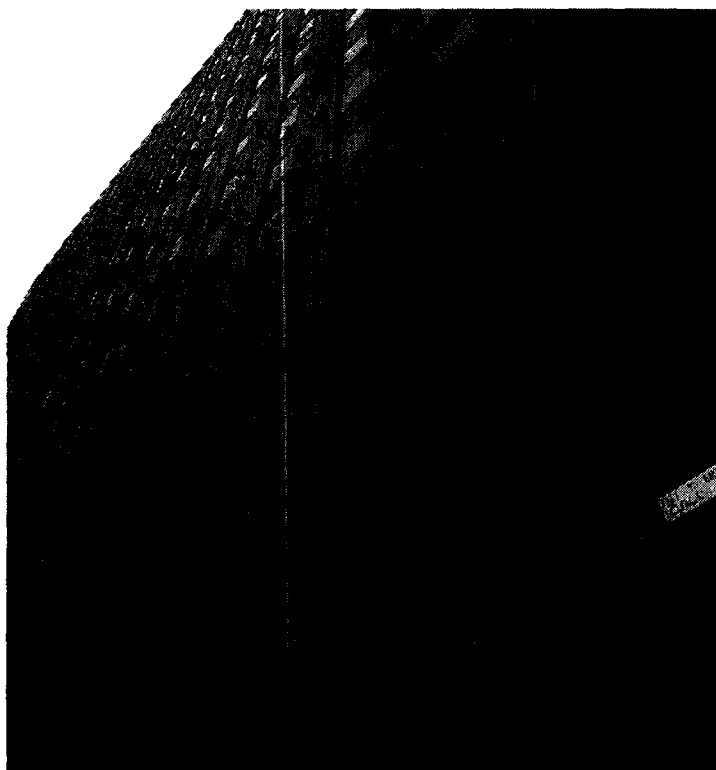


Figure 15 Facility 3 Saint Louis, MO

The Bandwidth Exchange facility at 210 N. Tucker is a 18-story structure consisting of approximately 466,000 gross square feet designed and constructed by the U.S. Army Corps of Engineers in 1970 for use as a government data center and back office operation. Approximately 33% of the Facility's rentable square footage is occupied. The tenants are both government and commercial.

The following are the list of benefits of this facility.

Easy Access – The facility is within easy access to the Saint Louis International Airport.

Security – Code key access is required after hours and the facility's entrances are manned by security guards during normal business hours. The ERA suite will have elevator control for the entire suite and armed guards onsite 24x7. The entire Bandwidth Exchange facility at 210 North Tucker has camera monitoring, and closely located Local and Federal police protection. Other higher levels of security for specific tenant areas such as biometric scanners, card key access system and digi-eye security system can be installed at the facility.

Telecommunication – Close proximity to Southwestern Primary Central Office Switch near the St. Louis City Emergency Management Agency headquarters, City Hall, City Library, Civil Courts Facility etc.

Existing Infrastructure - Served by a reliable spot network of three different transformers each attached to a different utility power grid. The facilities power is further backed up by a 1.5 megawatt diesel generator as well as a smaller generator dedicated as specific tenant use. In addition to the

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facility's standard cooling system, a condenser loop system makes condensed water available to tenants stand alone and redundant cooling systems.

Close proximity to the Personnel Records DOD and Civilian – This facility is in close proximity to the Personnel records kept at the US Army facility in Saint Louis. This provides NARA the opportunity to leverage existing NARA staff for the ERA program.

Existing Lockheed Martin Team Resources – The Lockheed Martin Team currently supports the US Army in Saint Louis on multiple contracts. There are existing Lockheed Martin Team employees that could support the deployment and operations of ERA.

Expandability – Currently only 33% of the usable floor space is occupied by tenants. This allows the potential opportunity to expand into other areas of the facility.

5.2.4 Next Steps for the ERA Facilities

The Lockheed Martin Team has developed representative facility drawings for all three facilities. These are included in Section 3.8. The ERA system design and the Bill of Materials (BOM) in the Analysis and Design phase will drive the final facility design and requirements. The facilities requirements will be provided to ERA PMO with the cost proposal with all of the assumptions. During the next phase of the ERA program, the Lockheed Martin Team will proceed with the facilities approach as discussed in Section 4.





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6. FACILITY SPECIFIC FRAMEWORK

During the next phase of the program, the Lockheed Martin Team will incorporate facility specific information to this section.

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LIST OF ABBREVIATIONS

Table 15 – List of Abbreviations

Abbreviation	Meaning
BOM	Bill of Materials
CCB	Configuration Control Board
CDRL	Contract Data Requirements List
CIA	Central Intelligence Agency
CM	Change Management or Configuration Management
COMSEC	Communications Security
ConOps	Concept of Operations
COTS	Commercial Off The Shelf
CSA	Cognizant Security Authority
CSO	Cognizant Security Office
C&A	Certification and Accreditation
DBA	Data Base Administrator
DCID	Director Central Intelligence Agency
DID	Data Item Description
ERA	Electronic Records Archives
FFC	Fixed Facility Checklist
FSO	Facility Security Officers
GSA	Government Services Administration
HVAC	Heating Ventilation Air Conditioning
IOC	Initial Operating Capability
IS	Integrated Schedule
ISO	Industrial Security Offices
IPT	Integrated Product Team
IT	Information Technology
JWICS	Joint Worldwide Intelligence Communications System
LAN	Local Area Network
LM Team	Lockheed Martin Team
LMTSS	Lockheed Martin Transportation and Security Solutions
LS&C	Local Services and Control
O&S	Operations and Support
NARA	National Archives and Records Administration
NIPRNET	Non-secure Internet Protocol Router Network
NISPOM	National Security Program Operating Manual
OEM	Original Equipment Manufacturer
PDU	Power Distribution Unit
PMO	Program Management Office
PS/SME	Physical Security Subject Matter Expert

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Abbreviation	Meaning
PWS	Performance Work Statement
RD	Requirements Document
SCIF	Sensitive Compartmented Information Facility
SBU	Sensitive But Unclassified
SCIF	Sensitive Compartmented Information Facility
SIPRNET	Secret Internet Protocol Router Network
SLA	Service Level Agreement
SME	Subject Matter Expert
SOA	Service Oriented Architecture
SOC	System Operation Center
SOO	Statement of Objectives
S/TS	Confidential & Secret/Top Secret
S/TS/SCI	Confidential & Secret/Top Secret/ Sensitive Compartmented Information
TBD	To Be Determined
TEMPEST	Telecommunications Electronics Material Protected From Emanating Spurious Transmissions
TS	Top Secret
TS/SCI	Top Secret/Sensitive Compartmented Information
UCD	Use Case Document
UPS	Uninterrupted Power Supply
U/SBU	Unclassified/Sensitive but Unclassified
WAN	Wide Area Network

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