ACQUISITION PLAN

Rev. 0
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EMERGENCY OPERATIONS CENTER
ACQUISITION PLAN

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APPROVALS

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1. **Purpose**: This Acquisition Plan documents the plan, means, methods, and controls that will be used to acquire the EOC. The Acquisition Plan has the following purposes:

- describe the features of the EOC that must be acquired
- comply with the requirement of FAR SubPart 7 that flow from DOE 413.3
- document the plans, organization, alternatives, and methodology that will be used to acquire design and construction of EOC culminating in a facility that is ready to operate

This Acquisition Plan is a living document and is required to be updated as often as necessary to ensure that the project is accurate.

2. **Distribution and Revisions**: Once approved, a copy of this Acquisition Plan will be distributed to each member and organization of the EOC Project. Controlled Distribution of the Acquisition Plan will be coordinated by the Los Alamos National Laboratory (LANL) Project Team Leader. The Acquisition Plan will be reviewed and revised according to the milestones given in Section I.A.6

**ACQUISITION PLAN CHANGE LOG**

<table>
<thead>
<tr>
<th>Revision No.</th>
<th>Date</th>
<th>Change Description</th>
<th>Pages Changed</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>6/8/01</td>
<td>Original Issue</td>
<td></td>
</tr>
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</table>
Acronyms and Abbreviations

A/E  Architect / Engineer
AE  Acquisition Executive
AL  Albuquerque Operations Office (DOE)
CD-0  Critical Decision 0 (Start CDR)
CD-1  Critical Decision 1 (Start Prelim. Design)
CD-2  Critical Decision 2 (Start Final Design)
CD-3  Critical Decision 3 (Start Construction)
CDR  Conceptual Design Report
CGRP  Cerro Grande Rehabilitation Project
DBA  Design Basis Accident
DOD  Department of Defense
DOE  U. S. Department of Energy
ECAC  Estimated Cost At Completion
EMT  Emergency Management Team
EM&R  Emergency Management & Response
EOC  Emergency Operations Center
ERO  Emergency response Organization
FAR  Federal Acquisition Regulation
FEMA  Failure Effects and Modes Analysis
FONSI  Finding Of No Significant Impact
G&A  General and Administrative
LAAO  Los Alamos Area Office (DOE)
LAC  Los Alamos County
LANL  Los Alamos National Laboratory
LIG  Laboratory Implementation Guidelines
LIR  Laboratory Implementation Requirements
M&O  Maintenance and Operations
ML  Management Level
NASA  National Aeronautical and Space Administration
NEPA  National Environmental Policy Act
OMB  Office of Management and Budget
OPC  Other Project Costs
PSO  Program Secretarial Officer
ROM  Rough Order of Magnitude
TEC  Total Estimated Cost
UBC  Uniform Building Code
UC  University of California
WBS  Work Breakdown Structure
References

DOE O 413.3  Program and Project Management for the Acquisition of Capital Assets

FAR Part 7  Federal Acquisition Regulations - Acquisition planning

DOE Project Management Practices

EOC Document No. CGRP-0012-001,R0  Mission Need Statement for the Emergency Operations Center

EOC Document No. CGRP-0012-002,R0  Program Requirements Document For The Emergency Operations Center

EOC Document No. CGRP-0012-003,R0  Functional and Operational Requirements for the Emergency Operations Center

EOC Document No. CGRP-0012-005  Design Criteria for the Emergency Operations Center

EOC Document No. CGRP-0012-008,R0  Emergency Operations Center Conceptual Design Report

EOC Document No. CGRP-0012-012,R0  Emergency Operations Center Design-Build Specifications

EOC Document No. CGRP-0012-004,R0  Emergency Operations Center Project Execution Plan

EOC Document No. CGRP-0012-007  Emergency Operations Center Project Quality Management Plan

DOE O 151.1A  Comprehensive Emergency Management System

OMB Circular No. A-76  Performance of Commercial Activities

LANL LIR-220-01-01.4  Construction Project Management

DOE 414.1A  Quality Assurance

LANL LIR-230-01-02.2  Graded Approach to Facilities Work

LANL LIG-230-01-02  Graded Approach to Facilities Work
I Acquisition Background and Objectives

An acquisition plan prepared in accordance with Federal Acquisition Regulation (FAR) Subpart 7.1, Acquisition Plans, is required for every project contract or system of project contracts, that will be accomplished by direct DOE placement, per DOE O 413.3, Program and Project Management for the Acquisition of Capital Assets. The purpose of the plan is to ensure that the government meets its needs in the most effective, economical, and timely manner. It describes the general approach for acquiring the resources required to complete the project and deliver the capital assets. This Acquisition Plan sets out the contractual means by which the project's acquisition strategy will be carried out.

A Program Description

1 Program Authority and Identification

The EOC Project (LANL Project ID 100143) is part of the Cerro Grande Rehabilitation Project, which is an emergency project authorized by the United States Congress following the Cerro Grande Fire.

The EOC Project is an "Other Project" in the terminology of DOE O 413.3 with TEC less than $100 M and greater than $20M. Attachment 2 of the Order indicates that the organization is as follows:

- The Acquisition Executive (AE) duties are delegated to the cognizant Program Manager.
- The DOE-LAAO Field Office Manager has approval authority for the Conceptual Design Report, the Project Execution Plan, the Acquisition Plan. He has Level 2 baseline change approval authority. He appoints the Federal Project Manager from the LAAO staff.
- The Federal Project Manager is an active member of the Integrated Project Team that executes the project.
- The Project Team Leader is a project management specialist drawn from the LANL Project Management Division and appointed by the S-Division leader.

The team has been appointed according to the requirements of LANL LIR-220-01-01.4, Construction Project Management. The team includes a Project Team Leader, a Quality Assurance Specialist, a Health Safety and Environment Specialist, a Procurement and Contracts Specialist, a Cost and Schedule Analyst, a Construction Manager, an Emergency Operations Specialist, a Security Specialist, and Project Administrative Support. The Project Team Leader has experience managing special government construction projects and demonstrated experience in all aspects of project planning and execution. The Quality Assurance Specialist is an individual with experience implementing and maintaining project QA Programs in accordance with the requirements of DOE O 414.1A. The Health Safety and Environment Specialist is an individual who has experience writing safety plans and environmental reports and who is familiar with the set of ESH documents that a project must produce. The Procurement and Contracts Specialist is an individual who is experienced in government contracting practices for engineering services, construction contracting, and special equipment purchasing. The Cost and Schedule Analyst is an individual who is experienced in planning engineering and construction project activities and sequences and experienced in analyzing project cost and schedule performance and projections. The Construction Manager is an individual with experience coordinating construction contractors, monitoring and evaluating construction progress, and inspecting construction results. The Emergency Operations Specialist is an individual with
experience developing and operating emergency operations equipment systems. The Security Specialist is an individual with experience in developing security systems at LANL. The Project Administrative Support is an individual with experience in project administration, records management, and computer support.

2 Statement of Need

The statement of need is given in "Mission Need Statement for the Emergency Operation Center" (EOC Document Number CGRP-0012-001,R0).

3 Background

Los Alamos National Laboratory will construct a 25,000 - 30,000 square foot EOC to house an emergency response team comprised of Laboratory, Federal, County, State, and Tribal representatives. The EOC will provide a state-of-the-art facility that is capable of meeting and withstanding any anticipated emergency, including natural phenomenon events, and in which occupants may be sustained for an extended period of time with breathable air, appropriate shielding, and back-up building services.

The new two-story structure will house LANL as well as Los Alamos County (LAC) personnel on a day-to-day basis. Under normal operating conditions, the facility will be the Joint Police, Fire and 911-dispatch center and the administrative offices for the LANL Emergency Management and Response (EM&R) group. When activated for emergencies, the EOC will house these two groups and up to 100 persons on a 24-hour basis for up to 14 days on a “stand alone” basis. Components of the facility include Emergency Operations Centers (both primary and secondary), emergency technical support areas, a secure vault, and administrative support areas consisting of staff offices, meeting rooms, and multi-agency offices.

Site Improvements

Improvements to land, which are part of the EOC Project include:

- State Road 501 will be used for access to the EOC. An existing abandoned road will be reconstructed to provide a means of access / egress for the EOC. The EOC drive will provide access to the fuel tank, emergency generator and communications antenna.
- A 100 vehicle parking area will be constructed.
- Concrete walkways will be constructed.
- The EOC site will be enclosed with a standard 8 foot fence.
- The site will have low maintenance, native landscaping.
- Potable and Fire Water will be obtained from the existing distribution system.
- A sanitary sewer forced main will be extended to the site and a lift station and overflow waste storage tank will be constructed.
- Storm sewers are not required.
- Electrical power for the EOC will be from the existing 13.2 kV overhead distribution system.
- Telephone and communication utilities will be from the existing “S” site duct bank via newly constructed duct systems to the EOC.

Building Features

Salient features of the facility include:

- Foundations that are designed to conform to the recommendations of a Geotechnical investigation specific to the site.
• Basement walls of reinforced cast in place concrete if required.
• Superstructure construction to meet natural phenomenon, functional and operational requirements.
• Building services designed to meet the expected occupancy.

The new EOC will, to the extent practical, be furnished by relocating existing equipment from LANL and LAC facilities.

4 Acquisition Alternatives
The DOE has delegated the acquisition of the EOC to the LANL M&O contractor, the University of California. The Acquisition Alternatives are summarized in the following table.

<table>
<thead>
<tr>
<th>Alternative ID</th>
<th>Alternative Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LANL establishes project criteria, LANL procures design documents for construction from an A/E, LANL contracts with a conventional construction contractor, internal LANL operating groups supply equipment systems and security systems</td>
</tr>
<tr>
<td>2</td>
<td>LANL establishes project criteria, LANL procures design documents for construction from an A/E, LANL contracts with a conventional construction contractor, LANL contracts with a systems integrator to obtain special equipment systems and security systems</td>
</tr>
<tr>
<td>3</td>
<td>LANL establishes project criteria, LANL contracts with design/build firm for conventional construction, LANL internal operating groups supply equipment systems and security systems</td>
</tr>
<tr>
<td>4</td>
<td>LANL establishes project criteria, LANL contracts with design/build firm for conventional construction, LANL contracts with a systems integrator to obtain special equipment systems and security systems</td>
</tr>
<tr>
<td>5</td>
<td>LANL establishes project criteria, LANL contracts for a &quot;turn-key&quot; job</td>
</tr>
</tbody>
</table>

Alternative 1 is the conventional way of doing business at LANL. A LANL project team is established. It develops criteria and specifications and then contracts with an A/E for conventional facilities design documents. The A/E may be one of the captive A/Es that have long term Basic Order Agreements with LANL. For large projects the A/E may be selected through an open competitive bidding process. The design documents are then put out for bid among construction firms. The low bidder of the qualified firms constructs the facilities. The LANL group that will occupy the building is responsible for providing the special systems. The advantages of this approach are: 1) it is known and familiar; 2) it is staged so that LANL organizations have many opportunities to contribute to design and project reviews; 3) it results in definitive construction bids that have the lowest possible contingency. The disadvantages are: 1) the project execution process is slowed by hold-points for multiple design reviews and multiple contracting steps (these delays cost money as well as time); 2) the advantage of allowing the greatest amount of input from LANL organizations can be a disadvantage when those groups do not engage in the process or are late to participate, or when excessive interaction drives A/E costs up.

Alternative 2 is the same as Alternative 1 except that the project team works with the LANL operating group to specify the special systems so that a contract can be let to a firm that specializes in communications systems, security systems, and systems integration. This contractor designs, supplies and installs the systems. This is a common practice in
Department of Defense (DOD) and National Aeronautics and Space Administration (NASA) projects. OMB Circular No. A-76 lists "Systems Engineering, Installation, Operation, Maintenance, and Testing: Communications systems - voice, message, data, radio, wire, microwave, and satellite" and "Security: systems engineering, installation..." as commercial activities that the government should normally procure. The advantages of this approach are: 1) it is known to be successful; 2) it is staged so that LANL organizations have many opportunities to contribute to design and project reviews; 3) it results in definitive conventional construction bids that have the lowest contingency; 4) it reduces the special systems risk. The disadvantages are: 1) the project execution process is slowed by hold-points for multiple design reviews and multiple contracting steps (these delays cost money as well as time); 2) the advantage of allowing the greatest amount of input from LANL organizations can be a disadvantage when those groups do not engage in the process or are late to participate, or when excessive interaction drives A/E costs up; 3) security system information cannot be made available for use by a contractor.

Alternative 3 is the same as Alternative 1 except that the design and construction are combined into a single contract. The primary advantages to this alternative are: 1) Duration of the project is shortened because the contractor will coordinate design and construction so that they overlap (site work may begin before some building systems design details are completed); 2) discipline in design reviews is enforced because the project pays penalties when the contractor is held-up or scope is altered; 3) risk of cost overrun is transferred from the government to the contractor. The disadvantages are: 1) Bids may be somewhat higher than optimal because construction costs in the bids are based on design concepts rather than definitive designs, and 2) LANL operating groups have not always been diligent about preparing special equipment design documentation, and delivering and installing the equipment in a timely fashion.

Alternative 4 is the same as Alternative 3 except that the project team works with the LANL operating group to specify the special systems so that a contract can be let to a firm that specializes in communications systems and systems integration. Alternative 4 has all the advantages / disadvantages of Alternative 3 and the additional advantage of reducing the special systems risk. Security system information cannot be made available for use by a contractor.

Alternative 5 wraps all aspects of conventional facilities and special systems design and construction into a single contract. The advantage to 5 is that it minimizes contracting. The disadvantage is that it increases overhead by adding another management layer to the contract. Effectively, the contractor becomes an integrator of unrelated activities and project execution costs are transferred to the contractor but oversight costs remain at the DOE and LANL levels.

The preferred Acquisition Approach is Alternative 3. The LANL project team will write performance specifications and other design basis documentation to be used to procure a conventional facilities design / build contract. Special equipment and security systems will be provided by internal LANL groups.

LANL has executed very successful design-build conventional facilities construction projects using this acquisition model in the last few years. Examples include FITS, SCC, NISC, and the Tritium Office Building.
5  Milestone Chart

<table>
<thead>
<tr>
<th>Facility Acquisition Milestone</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquisition Plan Approval</td>
<td>5/31/01</td>
</tr>
<tr>
<td>Performance Specifications Complete</td>
<td>6/12/01</td>
</tr>
<tr>
<td>Conceptual Design Report Complete</td>
<td>5/31/01</td>
</tr>
<tr>
<td>Qualification Criteria Complete</td>
<td>6/1/01</td>
</tr>
<tr>
<td>Issue RFQ</td>
<td>5/18/01</td>
</tr>
<tr>
<td>Select Bidders</td>
<td>6/15/01</td>
</tr>
<tr>
<td>RFP Package Complete</td>
<td>6/19/01</td>
</tr>
<tr>
<td>Selection Procedure Complete</td>
<td>7/15/01</td>
</tr>
<tr>
<td>Proposals Received</td>
<td>7/31/01</td>
</tr>
<tr>
<td>Contract Award</td>
<td>9/14/01</td>
</tr>
<tr>
<td>Preliminary Design Complete</td>
<td>2/14/02</td>
</tr>
<tr>
<td>Construction Start Authorization</td>
<td>5/9/02</td>
</tr>
<tr>
<td>Final Design Complete</td>
<td>7/18/02</td>
</tr>
<tr>
<td>Construction Complete</td>
<td>8/18/03</td>
</tr>
<tr>
<td>Acceptance / Beneficial Occupancy</td>
<td>9/30/03</td>
</tr>
<tr>
<td>Close-out</td>
<td>9/30/03</td>
</tr>
</tbody>
</table>

6  Milestones for Acquisition Plan Updates

The Acquisition plan is a living document that requires updating throughout the lifetime of the project as improved information develops. Rev. 0 is part of the CD-1 package. The plan will be reviewed and revised upon placement of the Facilities Design / Build Contract. Rev. 1 will be part of the CD-2 package. Additional reviews and revisions will be made as needed if there are alterations.

B  Applicable Conditions

The EOC Project is directly related to several other Cerro Grande Rehabilitation Project (CGRP) tasks. The primary interface is with the Site Wide Fire Alarm System Replacement (FARP) project, which will share a joint Los Alamos County Police/Fire Department/911 dispatch area in the EOC. Replacement of the existing fire alarm system and tie-in to the head end equipment in the new EOC will be provided by the FARP project. The Multi-channel Communications (MCC) project will use space provided by the EOC for the new multi-band radio system as well as communications conduits to receive various forms of data. The MCC project will provide the physical radio and data management equipment/integration to all communication devices that are MCC specific. All other CGR project data inputs such as drone and helicopter surveillance, etc. will be coordinated through the MCC task. Definition of these interfaces must be made in detail in order to place the special equipment systems contract.
C Cost
A Conceptual Design Report (CDR) (EOC Document Number CGRP-0012-008,R0) has been completed. The CDR contains a Functions & Operating Requirements Document, a Design Criteria Document, Project Systems Descriptions, Design / Build Performance Specifications, and a design concept. The CDR included a construction cost estimate that is a representative cost for the EOC. The CDR cost estimate will 1) be the basis for CD-1 authorization, 2) be the basis of a design-to-cost contract, and 3) be the Government Estimate.

1 Life Cycle Cost
The CDR included an energy conservation report and a life cycle cost analysis of heating equipment options. Specifications will require that contractors reference the CDR analysis and report energy conservation analysis in the preliminary design package. The award will be made to the firm that offers the best value to the government as limited by the published cost ceiling.

2 Design-to-cost
The CDR cost estimate result will be used to establish a cost ceiling. Bids in excess of that ceiling will be disqualified. The winning firm will be obligated to complete design and construction within the pre-published ceiling according to the features in their proposal.

3 Application of should-cost
The CDR Cost estimate is the Government Estimate of what the project should cost. This cost will be set as an upper limit for the contractor award. The selection criteria will include a functions and design requirements analysis to determine that proposals offer the required content for the proposed cost.

4 Contract Pricing
Contracts will be fixed price and itemized according to phase (design, construction, etc), construction elements, and milestones. Phase, construction element, and milestone completion will determine progress assessment and payment schedules. Contracts will establish labor, overhead, and mark-up rates for use in change order determinations during the contract period.

D Capability or Performance
General Functional Requirements and General Program Requirements are given in "Program Requirements Document For The Emergency Operations Center" (EOC Document No. CGRP-0012-002,R0). Detailed Functions & Operating Requirements (EOC Document Number CGRP-0012-003,R0) and Design Criteria (EOC Document Number CGRP-0012-005) documents are included in the Conceptual Design Report. An EOC Design / Build Performance Specification (EOC Document Number CGRP-0012-012,R0) that will incorporate the Functions and Operating Requirements and the Design Criteria will be the basis document for the facilities design - build contract.

Emergency response at LANL is directed by an Emergency Response Organization (ERO) that functions at three levels, as indicated in DOE O 151.1A. The lowest level is the immediate response team at the facility where an emergency is occurring. The immediate response team takes actions to protect workers, to provide first responder care for the injured, and to mitigate and contain the emergency. The intermediate level is the LANL site / area Emergency Response Team (EMT) that directs the actions of neighboring facility response teams and area resources such as fire and police departments. The EMT has many interfaces with state and
local agencies. The highest response level is the DOE Headquarters Team that can marshal national resources.

The primary objective of the EOC is to provide highly reliable shelter and resources that are necessary to support the work of the intermediate level of the ERO as it responds to Health and Safety emergencies, Environmental emergencies, Security and Safeguards emergencies, Transportation emergencies, and Hazardous Materials emergencies. The primary objective will be achieved by providing the following functions:

- **A building structure.** The building will house a permanent core staff and a large transient population whose make-up may vary according to the qualities of the emergency. The required occupancy will be determined by Hazard Assessment and Emergency Response Analysis supporting the Conceptual Design Report. The arrangement of spaces within the building will be according to emergency response functions such as data collection, assessment, response planning, command, communications, and so forth. The structure will be capable of resisting identified threats including Design Basis Accidents (DBA) and Natural Phenomena as defined by PC-2 criteria given in DOE STD 1021, so that the EOC may perform its function during and after these events. At LANL these events may be earthquakes, wild fires, high winds, terrorist actions, or other events as determined by Vulnerability Analysis and Hazards Assessment. The building structure will also contain adequate radiation shielding materials to protect the occupants in the event of emergencies involving the release of radiation.

- **A site.** The EOC site will be selected so that it is close to senior management, so that it is easily accessible via multiple routes, and so that it is not easily cut-off by the potential emergencies. The site will be located in close proximity to major communications and electrical service trunks, where two independent services can be obtained. The EOC site will be planned so that it buffers the EOC from external threats and weather conditions that might inhibit its operation. The cleared area will be large enough to assure that wildfire cannot threaten the EOC building, any of its outlying support equipment and structures (security systems, utilities equipment, etc.), or any vehicles that responders might require during the emergency. Los Alamos is located in mountainous terrain where the climate ranges from high desert to wet alpine forest. The site will be selected to avoid areas of heavy snow cover, potential flash flood areas, high wind zones, weather extreme zones, and areas with high lightning strike frequency.

- **Life support.** The EOC will be designed to support its staff for an extended period of up to 14 days in an isolated state. It will be equipped with limited food provisions and a back-up potable water supply fed from an on-site tank. It will be designed to filter and scrub its air intake and it will be capable of switching to an isolation mode with 100% air recycling. The EOC will be equipped with back-up power generation capability and an Un-interruptible Power Supply that can supply the power required to operate the life support systems and the equipment required for the emergency support work.

- **Access support.** Site roads and parking areas are required to handle staff vehicles and emergency vehicles. They will be sized for peak traffic flow as determined by assessing emergency response scenarios.

- **Data collection.** The EOC will contain a data collection center that monitors meteorological conditions, radiation detection networks, air quality sampling networks, fire detection networks, seismometers, and other data identified by Hazards Assessment. Data
collection computing systems should be redundant. The data collection center will be fed by data transmission cables and by wireless data transmission.

- **Assessment Information Library.** The EOC will contain a library of documents that may be important in assessing an emergency and planning a response. Examples of important information are topographic maps, drawings of buildings containing hazardous and radioactive materials, hazardous and radioactive materials inventory lists and maps, materials information, medical information, biological information, and so forth. The information will be easily sorted and retrieved rapidly.

- **Communications Equipment.** The EOC should have a variety of communication equipment systems selected to interface with emergency response units (fire stations, police, medical center, etc.), with field teams, with security teams, and with special teams. Communications should include telephone, cell phone, radio, television, computer network, and satellite systems. There should be open channels and secure channels.

- **Command.** The EOC will have a command center where emergency managers can work, meet, track status and activity, make decisions, and issue instructions.

- **Visual Displays.** The EOC will have large format real time display capability so that emergency managers can see displays of status, positions, and activity.

- **Joint Police, Fire, and 911 Dispatch.** The EOC will serve as the dispatch center for LANL and LAC. All emergency calls will be received by and processed through the EOC.

- **Training Center.** The EOC will contain a small auditorium with audio-visual equipment to be used for regular training of emergency response organization members.

- **Rest Areas.** The EOC will have sleeping quarters and break areas to support long term emergency occupation such as was required for the Cerro Grande Fire.

- **Security.** The EOC will have the following security features:
  - Physical protection for the EOC. This will include fences, intrusion detection instrumentation, structural hardening, and a security force.
  - Site access identification and control
  - Protection of communication links so that they cannot be damaged or jammed
  - Protection of classified information stored in the EOC or brought to the EOC during an emergency
  - Stand-alone classified computing
  - Separation of a classified working area
  - Ability to coordinate security force response to vulnerabilities caused by the emergency

### E Delivery or Performance Period Requirements

The Cerro Grande Rehabilitation project, including the EOC Project, is an emergency project. The EOC is planned to be ready for use by 9/30/03. The duration limitation and the intermediate milestones can only be met with an accelerated acquisition process that includes overlapping activities. Design / build contracting where some construction activities, such as permitting, site preparation, and foundation work, proceed while design details are finalized is required.
F  Trade Offs

A Conceptual Design Report has been completed. It includes analysis of site alternatives, functions and operating requirements analysis, and energy conservation analysis including investigation of HVAC and construction alternatives. The design and associated cost represents the best value from among the alternatives that were considered.

Bidders will offer their best design concepts in their proposals. These will be compared to established evaluation criteria. The award will be made to the proposal offering the best value to the government.

Early completion incentives will be included in the contract to encourage the contractor to identify and to take acceleration actions. Liquidated damages will be assessed if the contractor fails to complete the job before the contract date. The contractor will be encouraged to offer design and construction alternatives to achieve schedule improvement. All contractor recommendations will be evaluated and approved or disapproved.

G  Risks

Technical Risk. The EOC technical risk is minimal. The project is not dependent upon technology development or new technology. Construction is standard and special equipment systems are made of standard commercial components. There are no custom designed special equipment systems. There are many operating command centers and emergency operations facilities that can be used as examples and as sources for peer review team members. The project should guard against two technical risk factors. The first is loosely defined performance specifications and design basis documentation upon which the contractor develops the design documentation for construction. The consequences can be; difficulty controlling scope during design, difficulty establishing closure during design, and difficulty determining acceptance of the final system. A critical mutli-discipline review technical review for detail content of the specifications and procurement packages will mitigate this risk factor. This type of line by line review has proven to be very successful in recent LANL design / build procurements. The second is performance degradation due to quality failure. Attention must be paid to Quality Assurance detail and rigor in design checking, materials certification, construction process control, receiving inspection, construction inspection, equipment assembly and installation inspection, testing observation and verification, software validation, and so forth. There will be two strategies to mitigate this risk factor. The first will be to maximize the amount of design and construction work to be performed by contracting organizations that have demonstrated QA programs. The second will be to include a QA Specialist in the project team, to establish a project specific QA program and procedures, and to perform audits of the project program and contractor programs regularly.

Schedule Risk. The EOC schedule risk is the most important to manage. The risk factor that dominates project performance at LANL is resource reliability when the project is dependent upon work by internal groups that do not have primary allegiance to the project. LANL is a loose matrix organization where modest sized projects such as the EOC must obtain fractions of FTEs for short duration from groups that are dedicated to operating missions. Attention to project deliverables, project schedule, cost control, and quality assurance is not the primary mission of these groups. There will be three strategies to mitigate this risk factor. The first is to maximize the amount of contracted work to engineering/design services and construction contractors where schedule performance is accepted practice and payment will be tied to schedule milestones. The second will be to establish “internal contracts” when it is determined that work will be best accomplished within LANL. The third will be to increase the level of project team dedication beyond that which has been traditional so that the project team can expedite resource issues and conflicts.
Cost Risk. The EOC cost risk is secondary to the schedule risk and the technical risk. Most cost risk will be shifted to the Design / Build contractor who will be legally bound to a fixed price. Regular Estimated Cost At Completion (ECAC) analysis will be made throughout the project to identify future cost management problems. Most cost risk management focus will be on internal LANL resource allocation and schedule management.

Lessons Learned. Risk will be minimized by utilizing the experience of other LANL projects that have executed similar design-build contracts.

H Acquisition Streamlining

Acquisition streamlining activities will focus on expediting permits, contractor safety plan approval, and design review processes. LANL organizations that must review and approve design documents, contractor submittals, or who must issue permits to proceed with construction will be notified in advance. Assistance will be given to the contractor so that permit applications and safety plans are approved on the first submission.

II Plan of Action

A Sources

The EOC will be acquired through a design / build contract. The bundling of design with construction into a single contract limits the sources to engineering / construction firms to teams of engineering firms and construction firms. When there is a team, either the engineering company or the construction contractor acts as the prime contractor.

Construction contractors and their construction sub-contractors will be required to have valid New Mexico contractors' licenses.

Each bidder will be required to provide a matrix of major materials suppliers and craft sub-contractors in their bids identifying and locating the small businesses, veteran-owned small businesses, service-disabled veteran owned small businesses, HUBZone small businesses, small disadvantaged businesses, and women owned small business concerns that they intend to use. They shall also identify approximate budget allocations to each identified concern.

B Competition

The Los Alamos National Laboratory has a long history of construction projects so that a community of contractors that understand construction work at LANL exists. LANL has been well served by a number of local and regional construction companies based out of Albuquerque, Denver, and Phoenix, as well as some larger national construction firms. Requests for Interest (RFI) for the conventional facilities design-build contract will be published electronically in the Commerce Business Daily and on the LANL Procurement Web Site. Requests for Qualifications (RFQ) will be sent to those who respond to the RFI. Requests for Proposals (RFP) will be sent to the respondents of the RFQ that meet the qualification criteria.

1 Component Breakout

The EOC is a single entity that will not be broken into components for acquisition purposes.
2 Spares and Repair Parts
The special equipment design/build specification will require the successful contractor to submit a list of recommended spare parts for each system to be acquired with the design package. Identified spares that are not off-the-shelf or that are not readily available will be identified.

3 Subcontracts
The winning contractor will be expected to establish subcontracts to obtain construction materials, construction crafts, engineering services, and specialty services.

4 Multiple Sourcing
The EOC is a single entity that will not be multiple sourced.

C Source Selection Procedures
Source selection will be a two step process. The first step will determine a list of firms qualified to perform the work. A Request For Interest (RFI) will be published in the Commerce Business Daily. RFQs will be provided to firms that respond to the RFI. The RFQ will include electronic access to the CDR, a description of the anticipated bidding process, and the criteria for qualification. Responses to the RFQ will be evaluated against the published criteria.

Qualification criteria will include:
- Past experience designing and building similar facilities
- Past experience with engineering and construction at LANL
- New Mexico Contractor License (Go-no-go criteria)
- Small business involvement
- Local business involvement
- Demonstration of on-time or early project completion including contact references

A Request for Proposal (RFP) will be sent to each respondent who is judged to meet the qualification criteria. The criteria for evaluating proposal will include:
- Functions and operating requirements checklist
- Square footage of the design concept
- Design enhancements
- Adequacy of the proposed quality management program
- Proposed completion date
- Proposed cost

LANL will conduct a pre-award financial audit and a pre-award quality program audit of the top rated bidder. The financial audit will determine that the bidder's accounting program complies with required government accounting practices and will establish labor and overhead rates to be used for change proposals. The quality program audit will determine that the bidder's quality program functions as proposed.

LANL legal review and approval will be required for Request for Proposal Documents, winning bidder determination, and contract documents.

DOE-LAAO will review and approve the selection and contract prior to award by LANL.

A selection procedure will be written and followed for each major contract. The procedure shall define how the bids will be received, how the selection committee will be formed, how
the evaluation criteria will be graded, and how the selection will be approved.

D Contracting Considerations

1 Contract Type
A Fixed-price Incentive Contract is the preferred contract type for the conventional facilities design-build contract. It is expected that the performance specifications will be sufficiently detailed to allow prospective contractors to formulate bids without excessive contingency and allowances. There will be adequate competition to establish a fair market price. The contract award will be based on the best value to the government. This may not be the lowest bid price. The contract will contain incentives (bonuses) to complete the project early. It will also contain liquidated damages to cover LANL costs if the contractor fails to meet the contract completion date. Criteria and the grading scheme will be defined in the selection procedure.

Fixed-price contracting commits the project to a design determination date and limits the potential for extension of the project duration.

2 Warranties
The contractor will provide normal commercial warrantees on materials and construction workmanship.

3 Contract Administration/Management
Contract administration/management activity will be significant. The contractor will be required to make many Submittals and Requests For Information. The contract administrator will be required to receive these, log and record them, route them to the proper LANL party, and return responses to the contractor. The contract administrator will review monthly invoices, obtain Project Team Leader approval, and authorize payment. The contract administrator will negotiate change orders with the contractor when they are necessary.

E Budgeting and Funding

1 Program Funding
Funding for the Cerro Grande Rehabilitation project was authorized by Congress in 2000. The authorization was a lump sum provided up-front. The entire amount is available to the project without annual / incremental authorizations. $20M of the Cerro Grande Rehabilitation project funds are allocated to the EOC project. Authorization for the EOC construction will be transferred to LANL when CD-2/CD-3 is granted by the DOE Acquisition Executive.

2 Contract Funding
The estimate for the facilities design/build contract is:

Engineering / Design (Construction Documents) = $1,295,000
Engineering / Design (Title III) = $288,000
Building Construction = $13,713,000
Escalation = $733,000  
Contingency = $2,191,000  
Total Facilities Design / Build Contract Value Estimate = $18,220,000  

F  Product or Service Descriptions  
The products and services that will be acquired are A/E & Conventional Facilities Construction.  

G  Priorities, Allocations and Allotments  
The acquisition will be a normal priority.  

H  Contractor Versus Government Performance  
FAR Subpart 7.3 prescribes guidance regarding Contractor Versus Government Performance according to the policy in OMB Circular No. A-76, *Performance of Commercial Activities*. The circular provides that when a product or service is not an inherently governmental function then "it is the policy to a) rely generally on private commercial sources ……, b) give appropriate consideration to relative cost in deciding between Government performance and performance under contract…"  

Conventional Facility Design and Construction of the EOC is not an inherently governmental function. Neither the DOE nor LANL possesses the facilities engineering and construction staff to build the EOC. Government performance is not an option. Traditionally, facilities design and construction services at LANL and all other DOE sites have been procured from A/E and construction contractors.  

I  Inherently Governmental Functions  
The purpose of this analysis is to insure that contractors do not perform inherently governmental functions. FAR Subpart 7.5, *Inherently Governmental Functions*, states the following: "Inherently governmental function means, as a matter of policy, a function that is so intimately related to the public interest as to mandate performance by Government employees." "An inherently governmental function includes activities that require either the exercise of discretion in applying Government authority, or the making of value judgments in making decisions for the Government." Based on that definition, the design and construction of the new EOC does not qualify. The Subpart also references an attachment to OMB Circular No. A-76, that is "an authoritative, nonexclusive list of functions which are not inherently governmental functions". Among the functions listed as examples of commercial activities in that attachment, under the subtitle Real Property is “Design, engineering, construction, modification, repair, and maintenance of buildings and structures; building mechanical and electrical equipment and systems”. The EOC project scope does not propose that any inherently governmental functions will be performed by contractors.  

J  Management Information Requirements  
The EOC project has published a Project Execution Plan (PEP) (EOC Document CGRP-0012-004-R0) that describes the project's management information requirements. The PEP will be maintained throughout the project.
The EOC project will have an integrated and proven project controls system to provide effective planning and reporting, as well as day-to-day management capabilities. This system will:

- Identify and organize all of the work scope required to complete the project.
- Provide the means to break the work scope into tasks, with a time-phased budget and resource plan.
- Measure and report actual costs and commitments against the approved task plans and established baselines.
- Generate and maintain the cost and schedule baseline estimates for the project.
- Forecast future budget requirements.
- Provide the basis for project budget submissions and validations.
- Monitor and control procurement and contracting activities and commitments.

The Project Controls and reporting management systems will be developed to meet or exceed the requirements stated DOE 413.3. The processes discussed in this section will be proceduralized by the project team with additional operational details.

The EOC Project will use Primavera Project Planner scheduling software along with PRISM Cost Management software to plan, track and report on this project. The system will be based on the requirement to have all elements of work associated with the EOC to have a scope definition, budget, schedule, unique identifier, and person responsible for completing the assignment. There will be three primary titles used to describe who is responsible for getting work done under this system: the Project Team Leader, the Project Leader, and the Cost Account Manager. The Project Team Leader will be responsible for the entire project and will ultimately be responsible for completing the entire project (WBS Level 1 and 2 responsibility). He will delegate much of the work to Project Leaders (typically WBS Level 3 responsibilities). A Project Leader may, in turn, assign a portion of their work to the Cost Account and Work Package Managers.

A systematic approach will be used for authorizing work. Work authorization will begin with the receipt of project authorization from DOE and continue through successively more detailed levels of the WBS to the control account level. The work will be authorized at the control account level by approval of a work package that includes the project baseline summary that defines technical baselines, control-account budget, and control-account schedule start and completion dates. Lower-level control account documents include purchase orders, subcontracts, work orders, and similar documents within the management control system.

The control account documentation (work package) will be the fundamental tool for authorizing work. It will be a negotiated agreement for accomplishing tasks at Levels 3 and 4. The Project Team Leader and the Project Leader will negotiate the work package with the Cost Account Manager, who will actually accomplish the work. All parties must agree on the scope, schedule, and resources for the assigned scope of work before work will be authorized to begin. For the conventional facilities design-build contractor, the contract will be the assigned control account documentation.

Each month, based on the current month and cumulative actual and planned data, the responsible Cost Account Manager will prepare a status report for approval by the cognizant Project Leader. If variance thresholds are exceeded, the status report will include a variance analysis. The variance report will identify the nature of the variance, the cause of the variance, the expected impact on the project, a recovery plan, and a current estimate-to-complete the remaining work. The EOC Project Controls function summarizes the variance reports and maintains an estimate-at-completion for each work breakdown structure element. Subcontractors are primarily equivalent to WBS Managers for this discussion. This variance analysis will be performed at the lowest level of the WBS (Levels 3 and 4, see Section 6).
Exceptions will be documented. WBS Level 3 or 4 cost variances exceeding 5% or $100K will be analyzed and reported along with schedule variances exceeding 15 calendar days.

The EOC Project Controls office will prepare and distribute monthly and quarterly reports to the DOE based on the integration of monthly information obtained from all project participants. These reports will be distributed by the 23rd of each month for the previous month’s report.

The schedule, which will also contain a critical path network, will be maintained as a project planning and measurement tool. The individual tasks in the network will support the effort and budgets on the cost account plans. At the end of every month, each Cost Account Manager will provide a schedule update, including changes to planned activity durations, changes to planned start and completion dates, actual start and completion dates, additions and deletion of activities, logic changes, and budget changes.

Establishment and maintenance of baselines are the most important aspects of project control. Technical, cost, and schedule baselines will be established and managed per the requirements of LANL LIR-220-01-01.4, Construction Project Management. Changes to baselines will be carefully controlled to avoid loss of control and distortion in performance reporting. The purpose of the project change control system is to assure that:

- The cost, schedule, and technical impacts of proposed changes are developed and considered by all appropriate parties.
- The collected evaluations are considered in the approval or rejection of the proposed changes.
- All appropriate parties are informed of proposed changes and their disposition.
- Baseline documentation is controlled and updated as appropriate to reflect approved changes.
- Action on all change requests is deliberate and without undue delay, but carried out without interfering disproportionately with project progress.

The Design / Build contractor will be expected to maintain a resource loaded schedule using Primavera P3. The Design / Build contractor's schedule will be incorporated into the master project schedule. Each month the Design / Build contractor will assess % completion of each task in the schedule and report these data to LANL for inclusion in the project's monthly report. Bidders will be expected to demonstrate experience with these scheduling and progress reporting requirements in their proposals.

K Make or Buy

No make or buy analysis will be performed because neither LANL nor the DOE possesses the capability to construct the facility using in-house resources. A cost estimate has been developed as part of the Conceptual Design Report. This government produced cost estimate will be a benchmark to determine that contractor bids are reasonable.

L Test and Evaluation

A competitively bid contract will be let in order to design and build the entire facility. Detailed procurement specifications will be developed for this contract. The specifications will require the contractor to provide a final design deliverable, which must include a document that illustrates how each of the design criteria has been met, and how all of the functions and requirements are achieved by the design. Included in the specifications will be a requirement to schedule and budget for the following:

- Construction Acceptance Tests (CATs) on installed structures and components in order to verify installation is completed as designed. Test documentation will be reviewed and approved by the construction manager or his/her designee.
Operational tests to verify that each installed system operates per design. Tests shall be witnessed, and the final acceptance of the test results signed by the construction manager or his/her designee.

M Logistics Considerations

1 Assumptions Concerning Contractor or Agency Support
LANL / DOE will support the acquisition as follows. 1) LANL will provide a project management team which will coordinate LANL actions that are required. 2) LANL will provide all design criteria needed by the Design / Build contractor. 3) LANL will complete design reviews on-schedule (as set out in the contract). 4) LANL will assist and approve contractor safety plans, security plans, etc. in place so that they do not hold up the contractor. DOE will complete the Environmental Assessment before the contract is awarded. 5) Funding for the project is not reprogrammed. 6) LANL will provide inspection services at the construction site daily. 7) LANL will expedite review of contractor submittals and requests for information. 8) LANL will complete financial and quality program pre-award audits in a timely manner. 9) LANL legal review of contract documents will be completed in a timely manner.

2 Quality Assurance, Reliability and Maintainability Warranties
The Design / Build contractor will be required to implement a commercial quality program addressing design control, material control, and construction process control that meets the requirements of DOE 414.1A. LANL will perform a pre-award audit and will periodically audit the contractor's quality program. All project work, including procurement activities, will conform to the requirements of the EOC Project Quality Management Plan (EOC Document Number CGRP-0012-007,R0).

3 Requirements for Contractor Data
The Design / Build contractor will deliver a number of submittals throughout the contract performance period. These submittals and their due dates will be listed in the specifications. Submittals will include design documents, schedule and progress information, materials data sheets, non-conformance reports, requests for information, engineering change notices, test procedures and results, etc.

4 Standardization Concepts
The contractor will be required to follow LANL Facilities Engineering Standards. The specifications will require that the contractor seek to standardize details that are repeated in the EOC design.

5 Continuous Acquisition and Life Cycle and Support
The EOC must be a single step acquisition. It is not amenable to being constructed in stages or continuously.

N Government Furnished Property
LANL will supply certain security system components and their installation. The contractor will make provisions for this equipment according to design data provided by LANL, but LANL will install the security equipment after the construction is completed. Details are provided in the Design-Build Specifications.
O Government Furnished Information
No government furnished information outside of the performance specification and contract terms is anticipated. LANL will mark-up the facility construction drawings, prior to issuance, to indicate how security system conduits, boxes, and wiring is to be provided.

P Environmental and energy conservation objectives
An environmental assessment will be prepared by DOE. Upon completion, DOE will either prepare an Environmental Impact Statement (EIS) if necessary, or issue a Finding of No Significant Impact (FONSI). Given the minimal environmental impact of this project, it is expected that a FONSI will be issued. Completion of the EA is anticipated in August, 2001.

Part 1, Section J of the Conceptual Design Report (CDR) provides details of the environmental considerations concerning this project. The following are the results presented in that section:
ESH-18 determined that the site would not be affected by storm events equal to or less than the 100-year rainfall event. The proposed location is not within any known wetlands.
ESH-20 determined that the proposed EOC site is not within any known sensitive habitat.
ESH-20 determined that there is an archaeological site in the vicinity of the proposed location. However, the site will not be impacted by the construction of the new EOC.
ESH-3 determined that there are no Potential Release Sites (PRSs) in the vicinity of the proposed location.


The Energy Conservation Report in the CDR focuses on the heating, ventilating, and air-conditioning (HVAC) system. Three systems were compared. The results show that the system with a variable volume air handler, economizer controls, and temperature set-back control capabilities to be both the most energy efficient and the most cost effective. The data and the conclusions from this analysis will be provided to the facility design/build bidders as design reference information.

Q Security Considerations
Security systems will be required at the new EOC in order to limit facility access to authorized personnel, to maintain property protection, and to protect the classified vault. The facility will be surrounded by a perimeter fence that will encompass all facility buildings, structures, and parking lots. Access for vehicles and personnel will be through gates actuated by access control hardware or remotely controlled from the Administrative Area or the Dispatch Center. The perimeter of the facility and the parking areas will have security lighting. The communication tower will be inside a separately fenced area within the outer perimeter fence. Building access will be controlled with access control hardware at the main entry doors.

Interior spaces of the EOC will be divided into three major security areas:

1. LANL Spaces
2. Los Alamos County Spaces
3. Common or Shared Spaces

Access to the LANL spaces will be controlled as necessary and limited to personnel with the proper access authorization. The classified vault area will be constructed and controlled to meet DOE security requirements. The Los Alamos County spaces will also be configured so that
access into these spaces can be controlled as necessary and limited to personnel with the proper access authorization.

Except as discussed below regarding the design and construction of the security systems for the facility, security clearances will not be required for the design or the construction contractors. All contractor personnel will wear uncleared badges and will be U.S. citizens or foreign nationals pre-approved by DOE. During design and construction, escorts must be provided for personnel that require access to the utilities and utility tie-in points that are behind the existing site security fence. The contractor shall provide the qualified escorts. PTLA will provide guards and security as needed when the security fence must be opened to construct the utilities.

LANL security staff will mark the facility construction drawings to indicate how provisions are to be made for security instruments, cameras, signal wiring, etc. Hold points will be incorporated in the contractor's plan to allow for inspection of security provisions such as conduit before they are covered. The conventional facilities construction contractor will not be responsible for installation of security system equipment.

R Contract Administration

Contracts will be administered following practices that are common for LANL construction projects. The facilities design / build contract will require a set of milestones, inspections, and acceptance tests. These will determine the progress made by the contractor and the acceptance of the contractor's work. Payment will be scheduled according to milestone completion. 15% of the contract value will be withheld for 90 days after the beneficial occupancy milestone. Milestones should be scheduled every four to six weeks so that the contractor receives regular payment. Milestone completion payment is preferable to progress payment because it promotes attention to schedule. The milestone schedule should be proposed by the contractor and negotiated. The tentative milestone list is:
- Preliminary design delivered
- Final site and foundation design package delivered
- Site preparation work completed
- Utility rough-in completed
- Foundation completed
- Final design completed
- Framing completed
- Roofing completed
- Mechanical rough-in completed
- Electrical rough-in completed
- Rough exterior completed
- Rough interior completed
- Exterior finish completed
- Interior finish completed
- Final mechanical completed
- Final electrical completed
- Final inspection
- Beneficial Occupancy
- Final acceptance

LANL will have construction inspectors on site every day. They will verify work quality and milestone completion.

S Other Considerations

There are no other considerations.
T  Milestones for the Acquisition Cycle

See Section I.A.5.