

Copy for  
Charles

done

Danny  
F. Black

---

The file under LUMS

JLW

11  
1871  
1872

1873  
1874

1875  
1876

2-11-85



DEPARTMENT OF THE NAVY  
HEADQUARTERS UNITED STATES MARINE CORPS  
WASHINGTON D.C. 20380

And away  
we go  
11015/8  
LPL/3-57  
6 FEB 1985

From: Commandant of the Marine Corps  
To: Commanding General, Marine Corps Base Camp Lejeune, NC  
28542-5001

Subj: LAND USE MANAGEMENT SYSTEMS (LUMS)

Ref: Briefing for CG, MCB Camp Lejeune Engineering Laboratory (NCEL) of 28 Jan 1985

1. As revealed during the reference briefing, this Headquarters plans to install a prototype LUMS computer system at MCB Camp Lejeune. This prototype will be used to evaluate the LUMS operation and to allow the development of the necessary enhancements to adapt the system to Marine Corps requirements. If the evaluation and development are successful the LUMS prototype will be left in place to function as the MCB Camp Lejeune LUMS.
2. On 30 Jan 85, the Assistant Commandant of the Marine Corps authorized the reprogramming of funds for the procurement of the prototype. Currently NCEL is preparing a Request For Proposal (RFP) for procurement. When the first draft of this RFP is completed, a review by Camp Lejeune personnel will be requested to ensure that it addresses all known requirements. This review will be in conjunction with HQMC staffing to provide input for the final RFP.
3. If all actions occur as planned, MCB Camp Lejeune should anticipate LUMS installation during the second quarter of FY-86.
4. To facilitate this effort, MCB Camp Lejeune is requested to take the following actions:
  - a. Designate local points of contact (POC's) for the LUMS development effort.
    - (1) A primary POC is needed for overall LUMS coordination including scheduling, accommodations, appointments, meetings, and project monitoring.
    - (2) Additional POC's are requested in the areas of training, range scheduling, facilities planning and natural resources. Initially these POC's will review and comment on the draft RFP during February or early March 1985. During the course of the contract they will represent the user interests and identify and monitor systems and data base development for their unique requirements. Upon completion they will assume operational responsibility for the system.

REPRODUCED AT GOVERNMENT EXPENSE



2-11-85  
JWW



DEPARTMENT OF THE NAVY  
HEADQUARTERS UNITED STATES MARINE CORPS  
WASHINGTON D.C. 20380

11015/5  
LFL/3-57  
6 FEB 1985

From: Commandant of the Marine Corps  
To: Commanding General, Marine Corps Base, Camp Lejeune, NC  
28542-5001

Subj: LAND USE MANAGEMENT SYSTEMS (LUMS) PROTOTYPE DEVELOPMENT

Ref: Briefing for CG, MCB Camp Lejeune by Naval Civil  
Engineering Laboratory (NCEL) of 26 Sept 1984

1. As revealed during the reference briefing, this Headquarters plans to install a prototype LUMS computer system at MCB Camp Lejeune. This prototype will be used to evaluate the LUMS operation and to allow the development of the necessary enhancements to adapt the system to Marine Corps requirements. If the evaluation and development are successful the LUMS prototype will be left in place to function as the MCB Camp Lejeune LUMS.

2. On 30 Jan 85, the Assistant Commandant of the Marine Corps authorized the reprogramming of funds for the procurement of the prototype. Currently NCEL is preparing a Request For Proposal (RFP) for procurement. When the first draft of this RFP is completed, a review by Camp Lejeune personnel will be requested to ensure that it addresses all known requirements. This review will be in conjunction with HQMC staffing to provide input for the final RFP.

3. If all actions occur as planned, MCB Camp Lejeune should anticipate LUMS installation during the second quarter of FY-86.

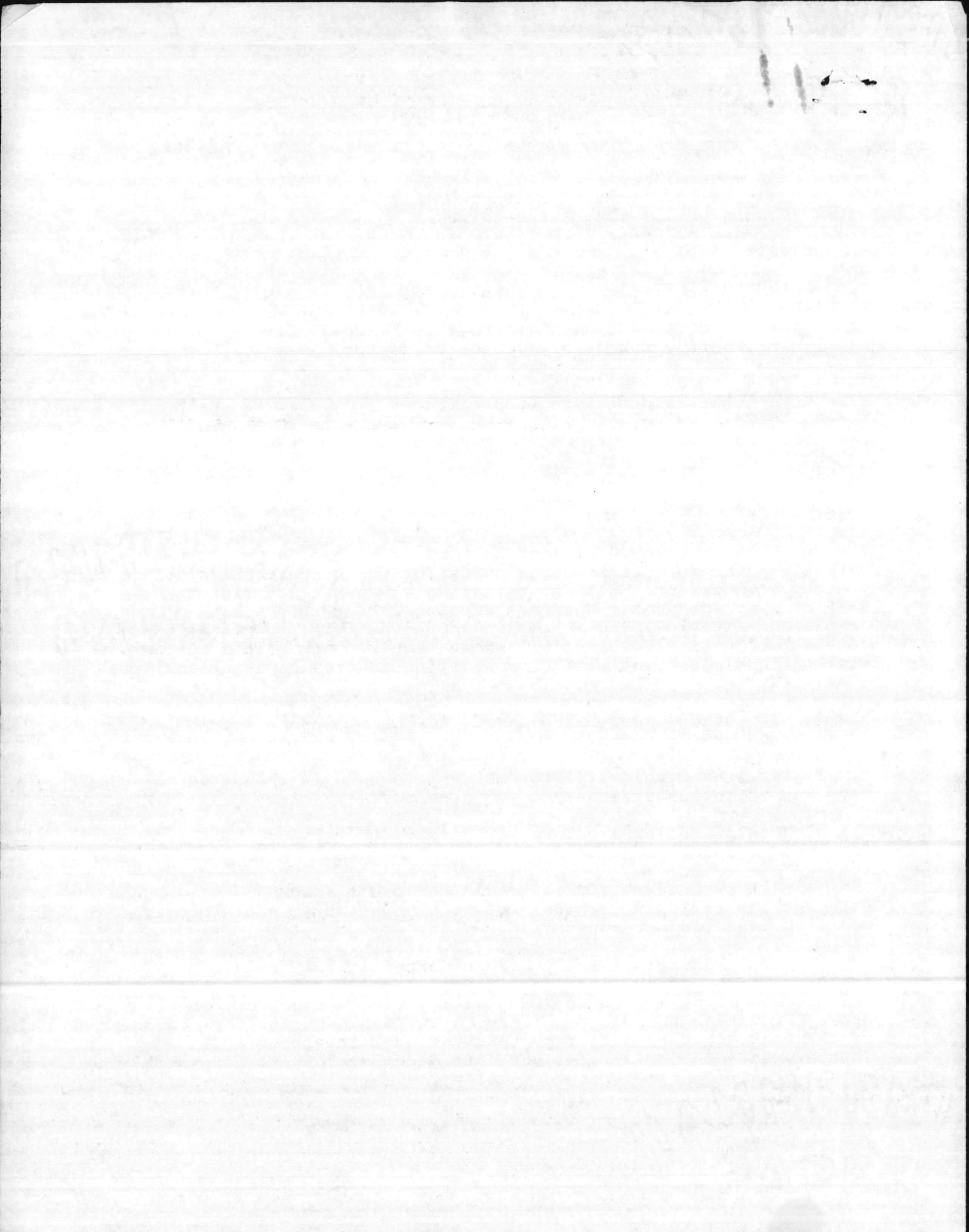
4. To facilitate this effort, MCB Camp Lejeune is requested to take the following actions:

a. Designate local points of contact (POC's) for the LUMS development effort.

(1) A primary POC is needed for overall LUMS coordination including scheduling, accommodations, appointments, meetings, and project monitoring.

(2) Additional POC's are requested in the areas of training, range scheduling, facilities planning and natural resources. Initially these POC's will review and comment on the draft RFP during February or early March 1985. During the course of the contract they will represent the user interests and identify and monitor systems and data base development for their unique requirements. Upon completion they will assume operational responsibility for the system.

REPRODUCED AT GOVERNMENT EXPENSE



Subj: LAND USE MANAGEMENT SYSTEMS (LUMS) PROTOTYPE DEVELOPMENT

(3) POC's are requested by names, title and phone number to this Headquarters (LFL) by 20 February 1985.

b. Identify sites for LUMS hardware and work stations.

(1) A site is requested in time for LUMS hardware installation. Projections are that the hardware can operate in regular administrative space in a room sized 15 x 20 feet with air conditioning, lighting, and etc. MCB Camp Lejeune should select potential spaces in coordination with NCEL. More specific specifications will be available as the RFP solicitation progresses. If funds are expected to exceed local availability/approval authority, project planning and programming actions should be forwarded to this Headquarters. Some on-site administrative space will likely be necessary for resident contractor personnel as they proceed with project development and training.

5. Upon contract award, NCEL will serve as this Headquarters' Contracting Officer Technical Representation (COTR) throughout the installation, training and operation of the prototype. NCEL will serve as the primary LUMS representative to coordinate the activities of the contractor, the POC's and the HQMC project team.

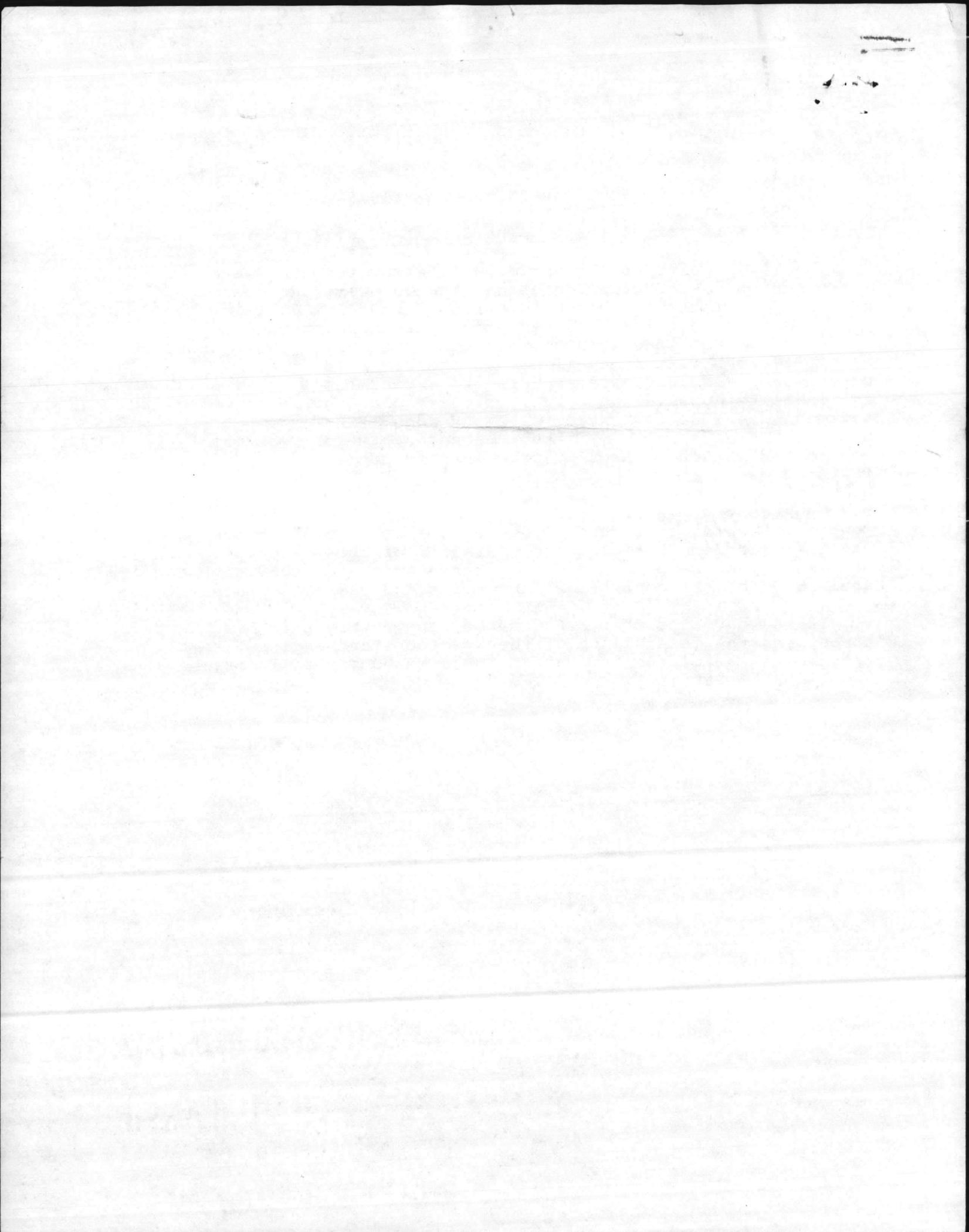
6. It is requested that MCB Camp Lejeune notify this Headquarters concerning the feasibility of these actions and any problem areas anticipated. Point of contact at this Headquarters is Mr. Marlo Acock (LFL), 696-1909.

ROBERT F. WEMMEUER

By direction

Copy to:  
NCEL  
Marine Liaison NCEL

REPRODUCED AT GOVERNMENT EXPENSE



JLW  
Dec 2-11-85

Some of the dates  
on Table 2 have  
slipped. I hope  
the RFP looks good  
when it comes in  
next week



Land Use Management System (LUMS)

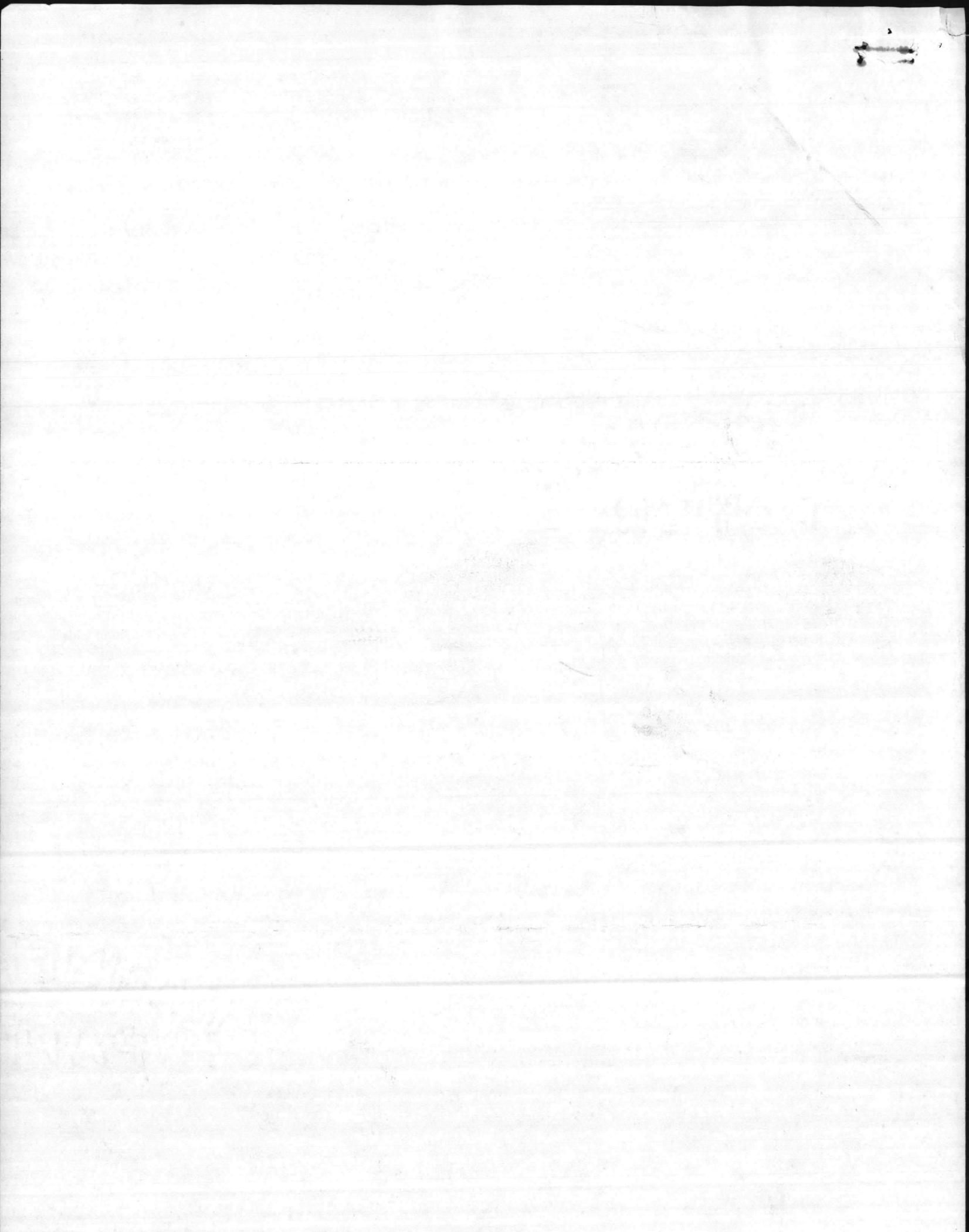
System Decision Paper #1



J.W. Dec 2-11-85

Land Use Management System (LUMS)

System Decision Paper #1



## SECTION 1 EXECUTIVE SUMMARY

1.1 Purpose. The purpose of this paper is to summarize Phase I, Concept Development, and receive Steering Committee and Assistant Commandant of the Marine Corps approval for continued development of a Land Use Management System.

1.2 Discussion. Approval of this System Decision Paper will:

a. Conclude Phase I Concept Development, and initiate work on System Development.

b. Approve a concept for further developmental work with the installation of a prototype LUMS in FY-85.

c. Authorize expenditure of FY-85 funds for continuation of LCM-AIS process.

1.3 Project Initiation. The Mission Elements Needs Statement (MENS) at TAB (B) received Assistant Commandant of the Marine Corps approval on 29 Jun 84. It identified the deficiencies and needs of land use management for multiple use (i.e. Training, Natural Resources) throughout the Marine Corps. The Life Cycle Management (LCM) process was initiated in the second quarter of FY-84 by establishing a project manager, steering committee, and project team. The Project Charter is at TAB (C).

The concept development phase consisted of producing documentation of the Marine Corps' land use management requirements. Included were the Feasibility Study (FS) at TAB (D), and the Economic Analysis (EA) at TAB (E). This phase of LCM is concluded upon the Assistant Commandant's approval.

1.4 Description of Recommended Alternative. The recommended alternative encompasses procuring, tailoring and deploying a commercially available stand alone mini-computer based Geographic Information System (GIS) with an integrated Remote Sensing Image Processing (IP) capability at each major Marine Corps activity (Figure 1). These systems would be known as Automated Processing Centers (APC's) (Figure 2) and would possess the following characteristics.

a. The hardware for each APC would consist of a standard mini-computer with commercially available graphics peripherals. Section 2.2e of the (FS) describes the hardware in detail.



SECTION 1 EXECUTIVE SUMMARY CONT.

b. The application software for each APC would be based on a commercially procured GIS with an integrated IP capability. This basic software will be tailored to meet specific Marine Corps requirements which are documented in the LUMS Requirements Statement (RS), at TAB (F). The tailoring consists of writing executive procedures (macros) for input and output processing functions. These macro programs would be written in a high level data base querying and reporting language. Section 2.2d of the FS describes the software in more detail.

c. The initial data base for each APC will be converted from existing paper products to a digitized machine readable format.

d. Each APC would have a designated system manager.

1.5 Issues.

a. Land use management data volumes have exceeded manual management capacity.

b. A mechanism for integrating diverse data elements within a management framework for timely analysis and response to support operations and training is currently lacking.

c. An automated information system is the most reasonable solution.

d. Off the shelf geographic information system is the only feasible approach to satisfy the issues in the MENS and RS.

10

## SECTION 2 ESSENTIAL ISSUES

2.1 General. The MENS identified current deficiencies and the capabilities necessary for the Marine Corps to respond to operational and legal mandates for land use management. The proposed system meets the functional requirements for making everyday land management decisions as described by the MENS, and the required capabilities established in the Requirements Statement. The characteristics of the APC provide the optimum combination of speed, flexibility, complexity and control of data. The functions of the proposed system encompass the following capabilities from the RS:

- a. Range and Other Land Use Scheduling
- b. Standard Access
- c. Standard Format
- d. Corridor Identification
- e. Rapid Site Plan Analysis
- f. Flexible Data Input
- g. Flexible Data Output
- h. Data Storage
- i. Historical Record

Other alternatives evaluated during the FS failed to provide sufficient capabilities to meet Marine Corps needs.

2.2 Schedule. The events completed during this phase of Life Cycle Management are summarized in Table 1, which also includes the technical support tasks performed. The events planned for Fiscal-year '85 thru FY-87 are contained in Table 2. The LCM process is accelerated, however, there are no increases greater than the threshold established by the Steering Committee.

2.3 Resources. Concept development and associated technical support tasks for LUMS were accomplished by NCEL personnel and contractor support with guidance from HQMC. The next phase will include the System Development effort of LCM-AIS through System Decision Paper III, and the installation of a prototype LUMS APC at Camp Lejeune, MCB. LCM system development work is estimated to cost \$135K. Installation of the prototype is estimated at \$34.5K for administrative preparation up to contract award, and \$117K for supervision of physical installation, evaluation, acceptance, and preliminary use of the APC prototype APC system equipment and software costs are projected at \$800k.

2.4 Problem Areas. Life cycle funding for continuation of the system has not been programmed. Consequently FY-85 funds will be reprogrammed. Failure to fund planned efforts for

11

SECTION 2 ESSENTIAL ISSUES CONT.

FY-85 in a timely manner will result in the project team being disbanded and reassigned to other projects. This creates several problems, including:

- a. Immediate loss of project momentum.
- b. Loss of corporate memory in technical as well as administrative areas.
- c. Significant time delays in resolving Marine Corps wide, and activity specific (e.g. Camp Lejeune), requirements for land use management information.
- d. Chaotic and uncoordinated approaches to compliance and management issues.



## SECTION 3 APPROVAL

3.1 Approval. Approval of this decision paper sanctions continued project team activity. Approval has the following effects:

- a. Immediate loss of
- a. Concludes concept development phase and provides for system development.

Note: To initiate the LUMS Development Effort, environmental management funding (\$56,836 from Code LFL) is available for transfer to the Naval Civil Engineering Laboratory for the preparation of a Request for Proposal (RFP), preparation of Government Estimate for a prototype system, and for the preparation of Evaluation Criteria for selecting a successful contractor.

- b. Establishes initial framework for a land use management system.
- c. Authorizes installation of a prototype system at Camp Lejeune, MCB.
- d. Authorizes FY-85/86 funds to complete life cycle management mandates and implement prototype installation.

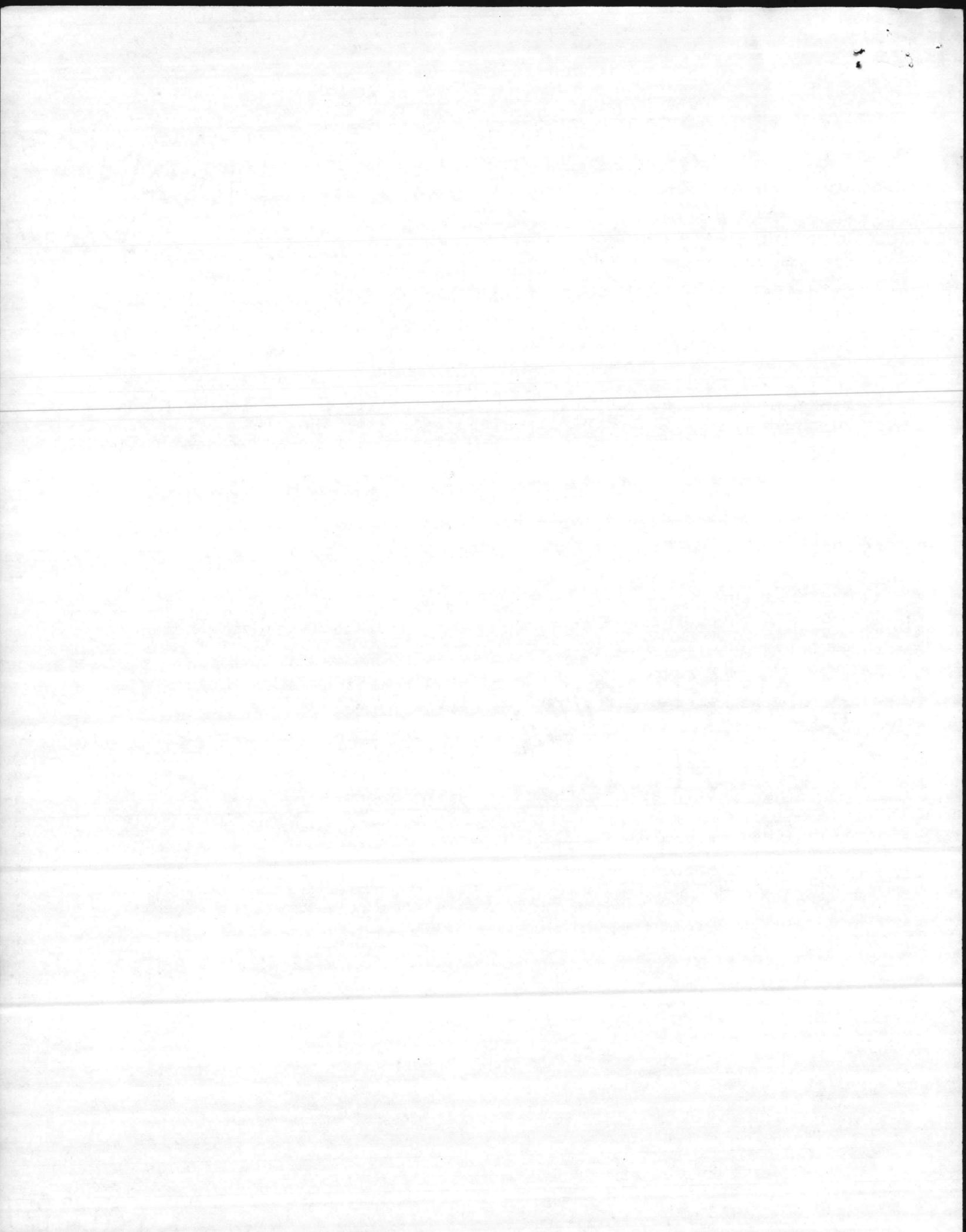
3.2 Disapproval. Disapproval of this decision paper would curtail development of a Marine Corps land use management system.

3.3 Project Manager Recommendation:

That this system decision paper be approved.

3.4 Steering Committee Recommendation:

That a Request for Proposal (RFP) be prepared for a prototype system for MCB Camp Lejeune, and that reprogramming actions to fund the implementation of the prototype system be actively pursued.



*G. B. Crist*

G. B. Crist  
Lieutenant General, USMC  
Deputy Chief of Staff for  
Installations and Logistics

*E. T. Cook Jr.*

E. T. Cook Jr.  
Brigadier General, USMC  
Deputy Chief of Staff for  
Training

Note: To initiate the

*Paul D. Slack*

Paul D. Slack  
Brigadier General, USMC  
Director, C4 Systems  
Division

For Decision by the Assistant Commandant

C/S Recommends

Approval

*9*

Disapproval

D'WAYNE GRAY

ACMC Decision

Approved

*D 1-30-85*

Disapproved

L. K. DAVIS

THE  
OFFICE OF THE  
SECRETARY OF THE  
TREASURY

Table 1

Summary of Events  
Completed During Concept  
Development, LCM-AIS,  
and Technical Support Tasks

<u>EVENT</u>	<u>DATE</u>	<u>AGENCY</u>
Mission Element Needs Statement	1 OCT 83	CMC
Project Management Plan	15 DEC 83	CMC
Project Management Charter	25 JUL 84	CMC
Requirements Statement	15 MAR 84	NCEL
Feasibility Study	1 OCT 84	NCEL
Economic Analysis	1 OCT 84	NCEL
Three-Five Year Plan of Action	15 JAN 84	NCEL
Scope and Enumeration of Camp Lejeune Natural Resources	15 FEB 84	NCEL
Scope and Enumeration of other Marine Corps Bases	30 SEP 84	NCEL
Technology Assessment	30 SEP 84	NCEL

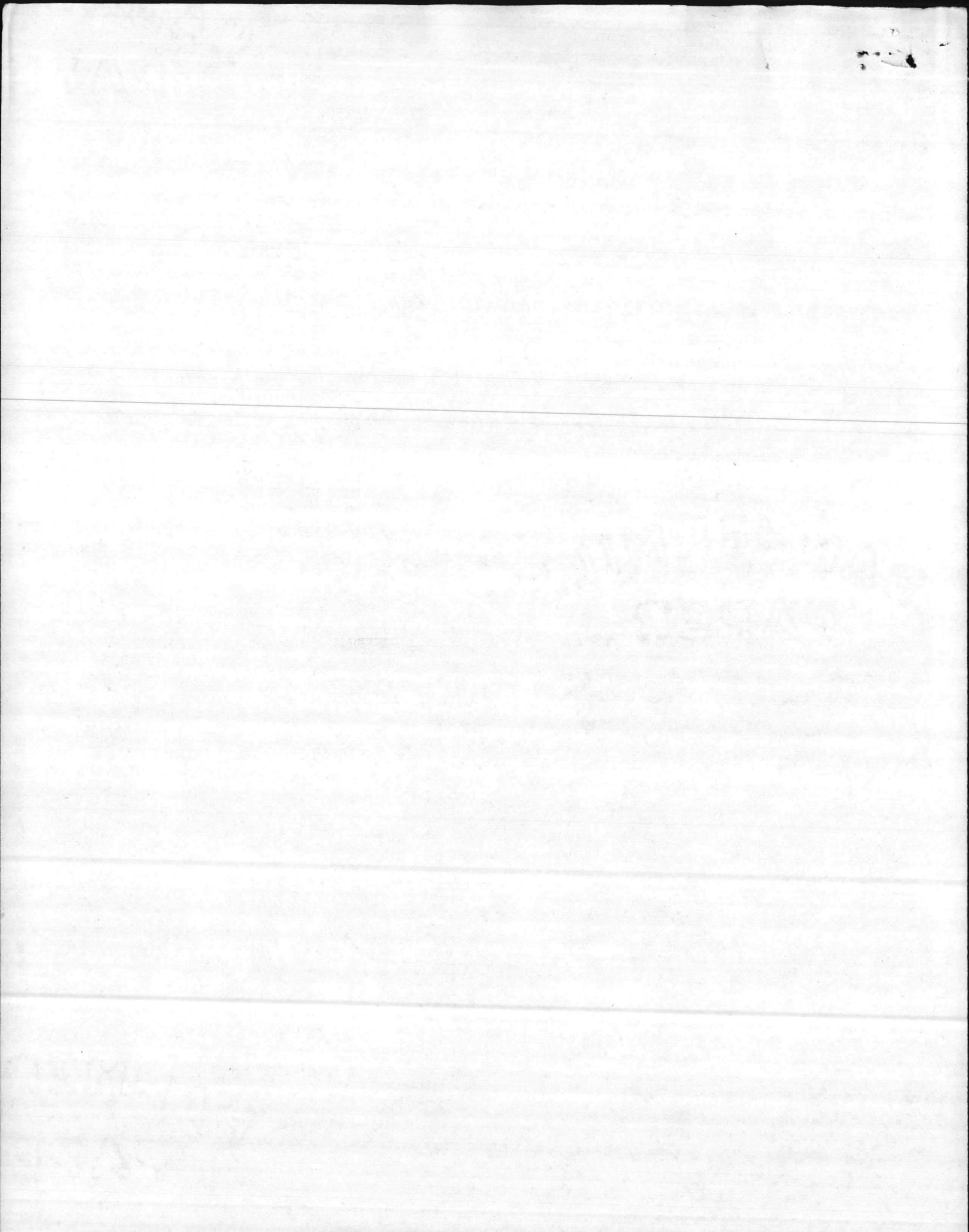


Table 2  
LUMS DEVELOPMENT EFFORT

<u>TASK</u>	<u>APPROXIMATE TIME FRAME</u>
1. RFP for Prototype System	
- prepare Government Estimate	1 DEC 84
- prepare RFP Evaluation Criteria	1 JAN 85
- prepare RFP	1 JAN 85
- advertise	1 SEP 85
- award	1 DEC 85
2. Prototype Installation	
- prepare site at Camp Lejeune	1 DEC 85
- install system	1 JAN 86
- construct data base	1 FEB 86
- training local personnel	1 FEB 86
- adapt to local requirements	1 APR 86
3. Prototype Evaluation	
- operate and evaluate	1 SEP 86
- report results	1 DEC 86
- certify	1 JAN 87
4. Implementation Plan	1 MAY 87
5. SDP III	1 AUG 87
6. Marine Corps Implementation	1 JAN 88

100

*Rough*

UNITED STATES MARINE CORPS  
Marine Corps Base  
Camp Lejeune, North Carolina 28542-5001

1015  
FAC

MEMORANDUM FOR THE COMMANDING GENERAL  
CHIEF OF STAFF

Subj: LUMS DEVELOPMENT

Ref: (a) NCEL 271530Z Dec 84  
(b) Dir, Fac&SvcsDiv, HQMC ltr 1015 LFL dtd 3 Jan 85

1. Reference (a) provided revised milestones for the LUMS Request for Proposal (RFP) and related actions:

Task	Due Date
Gov't estimate for Prototype LUMS	28 Jan 85
RFP completed & <del>published in CBD HQMC</del> <i>Ralph</i>	11 Feb 85 <i>(was Dec '84)</i>
RFP evaluation criteria <i>Lele</i>	4 Mar 85 <i>(was Jan '85)</i>
Advertise for procurement of hardware	Sep 85
Award contract	Dec 85
Site preparation	Dec 85
Installation of hardware	Jan 86
Data base development	Feb-Apr 86
Prototype evaluation	Sep 86
Future implementation plan	Mar 87

2. Reference (a) included technical support requirements which require input by Camp Lejeune:

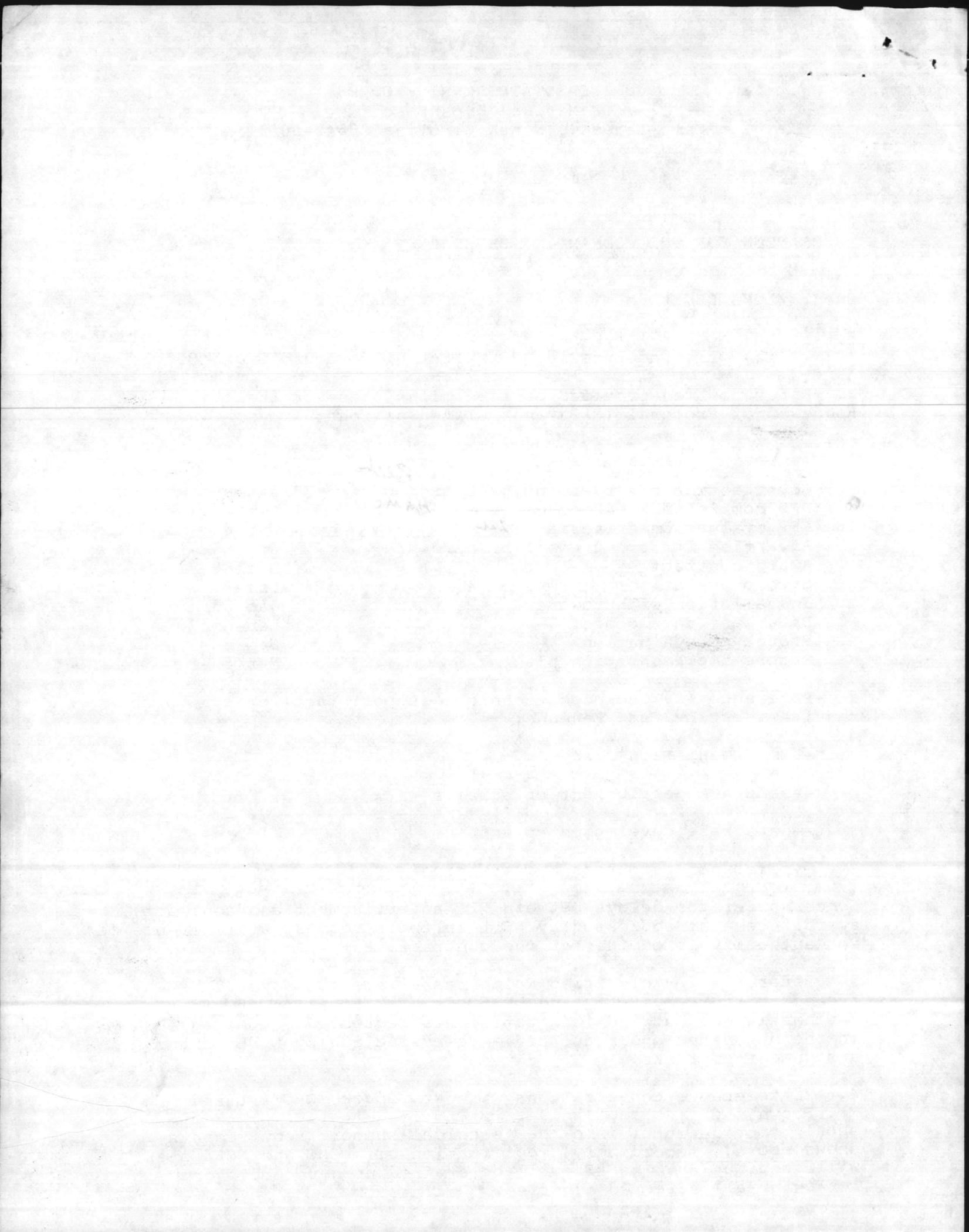
- implementation plan
- software development priorities
- data base development plan
- personnel resources and training

Concerns for the delays between RFP advertisement and contract award were also addressed by NCEL in their request at reference (a) for authority to administer the contract.

3. Reference (b) clarified which tasks were to be performed by the contractor, by NCEL, and by HQMC. Verification of time savings in contract administration was requested. HQMC agreed in the due dates and requested a re-evaluation by NCEL of the assignment of tasks.

4. In telephone conversations with Mr. Acock, CMC/LFL and Mr. Brown, NCEL, Mr. Alexander was advised that Camp Lejeune should provide input into the technical support requirements shown above. Accordingly, coordination with CMC and NCEL staff will continue and the RFP will be staffed upon receipt for review by all affected agencies *at MCB.*

Copy to: A-15 TNG  
AC/S BORMAD  
CEO NREAD  
BMO





DEPARTMENT OF THE NAVY  
HEADQUARTERS UNITED STATES MARINE CORPS  
WASHINGTON, D.C. 20380

IN REPLY REFER TO  
1015  
LFL  
03 JAN 1985

From: Director, Facilities and Services Division  
To: Officer In Charge, Naval Civil Engineering Laboratory,  
Port Hueneme, CA

Subj: LUMS DEVELOPMENT

Ref: (a) Meeting Between Major F.D. Braaten (HQMC CODE LF) and  
Mr. T. Foresman (LUMS Proj. Mgr., NCEL) at 0900 on  
27 Sep 1984  
(b) NCEL Msg 271530Z Dec 84  
(c) NAVCOMPT 2275 DOC M9545-85WR5V390

1. During the reference (a) meeting, a schedule of events for the development of the LUMS system, together with an associated Critical Path Method (CPM) chart, was discussed. It was agreed that this plan should be followed as the LUMS system development progresses through the outyears to final implementation.

2. This plan is reflected in the final draft of the System Decision Paper (SDP) I, now pending signature by the Assistant Commandant, Marine Corps. The plan also contained a series of funding estimates associated with the various tasks and a proposed schedule for the provision of those funds.

3. NCEL advised this Headquarters through reference (a) that this plan was satisfactory for LUMS development and that it was acceptable to NCEL. The funding actions requested by reference (b) reflect the funding schedule of the basic plan. This Headquarters has proceeded over the last three months on the assumption that the development of LUMS was following this course. Consequently, some aspects of the information contained in reference (b) are confusing. There seems to be an overlap between work which was to be accomplished by commercial contractor and that to be accomplished by NCEL.

4. In an effort to clarify tasks, the following is a recap of the work breakdown desired by this Headquarters:

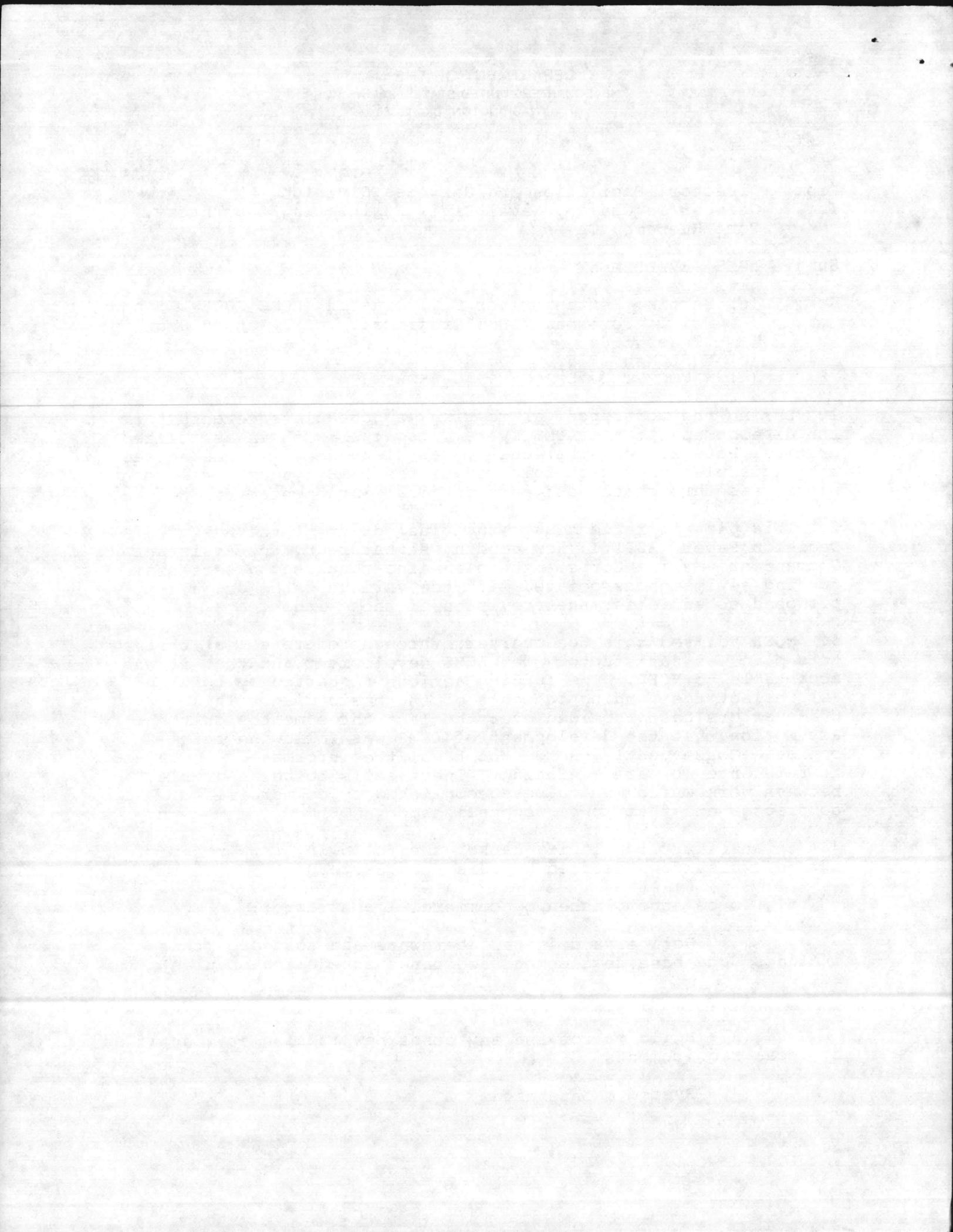
a. To be accomplished by commercial contractor:

(1) Deliver and install hardware and software (this includes data base development and range scheduling modules)

(2) Orient and train users

(3) Build macros and any other new modules as identified by local requirements

(4) System maintenance



Subj: LUMS DEVELOPMENT

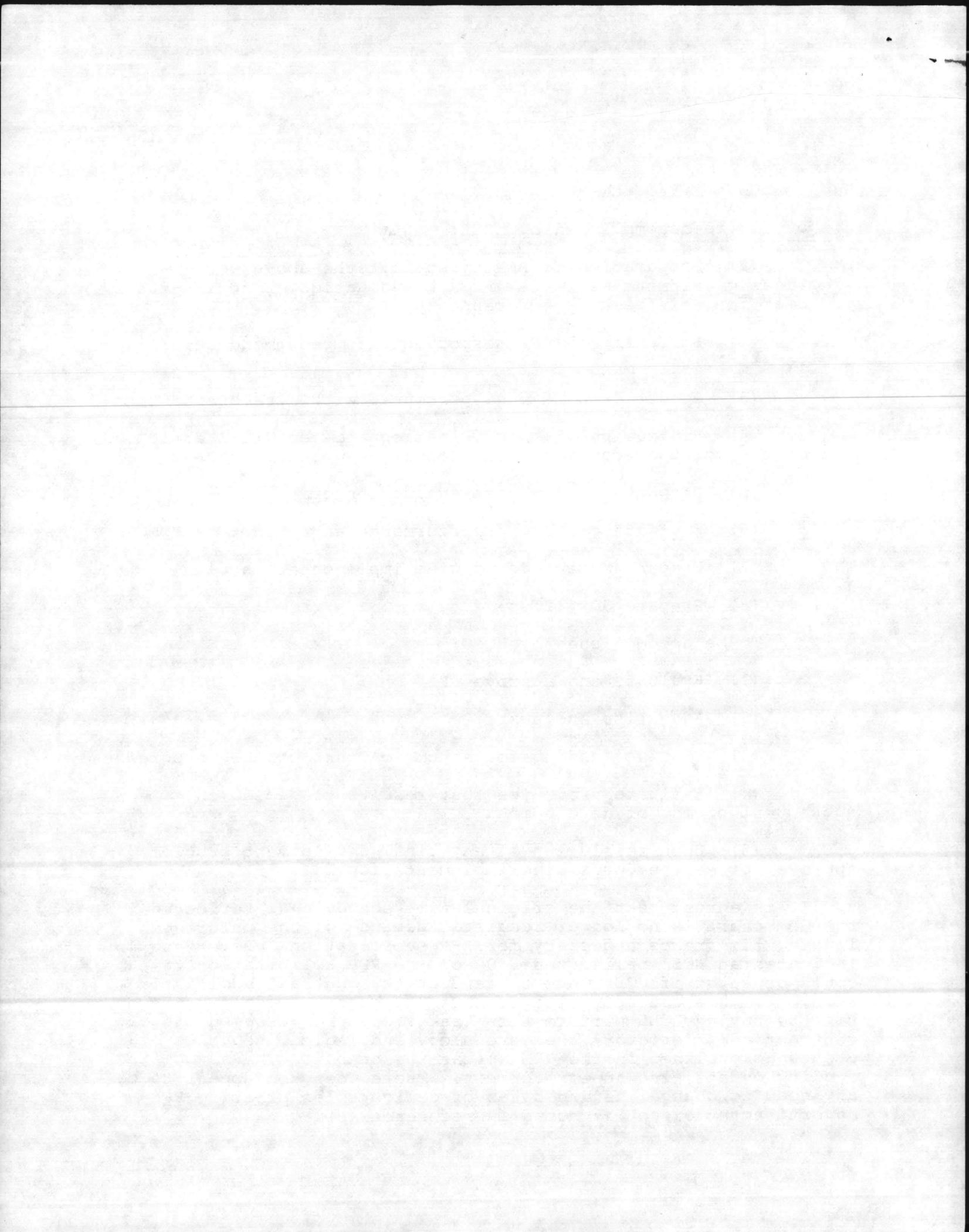
b. To be accomplished by NCEL:

- (1) Preparation of RFP to solicit the above work (includes government estimate and RFP evaluation criteria--funds provided for this task by reference (c))
- (2) Screening of RFP respondents to recommend selection choice
- (3) Assist Camp Lejeune personnel with site preparation
- (4) Provide on-site coordination and technical advice as contractor point of contact while prototype work progresses
- (5) Prepare on-site test evaluation criteria
- (6) Evaluate prototype performance and report to HQMC
- (7) Prepare Marine Corps wide implementation plan
- (8) Prepare SDP III

c. To be accomplished by HQMC:

- (1) Evaluate and approve RFP
- (2) Advertise and award
- (3) Provide funding for specific tasks as work progresses
- (4) Evaluate prototype test results to decide on subsequent course of development
- (5) Upon resolution of any final development problems, approve for Marine Corps wide implementation

5. It is agreed that the original time schedule as reflected in the CPM chart is no longer realistic because of the unforeseen lengthy timeframes necessary for RFP solicitation. Reference (b) indicates an NCEL belief that 40% of the RFP solicitation time could be saved if NCEL were to conduct the contract administration. If this can be verified, this Headquarters would be receptive to having NCEL perform this task vice HQMC. Regardless of contract administrator, the chronology and logical sequence of events as outlined in the CPM appear reasonable. The associated funding events also appear correct. There does not appear to be any need to change the due dates of deliverables prior to RFP advertisement except as noted in reference (b).



11015  
LFL

Subj: LUMS DEVELOPMENT

6. There is concern at this Headquarters over the request for funds in reference (b). Many of the events, particularly items in subparagraphs b, d, e, and g, should be accomplished by contractor as a part of the original RFP. The request in reference (b) indicates that these items are not being included in the RFP now being written by NCEL.

7. The \$15,000 for travel referred to in reference (b) was intended for on-site visits by NCEL personnel to assist in site-preparation work and permit liaison with Camp Lejeune personnel as the RFP progresses. The \$80,672 originally included in the CPM is to fund work associated with RFP advertising, on-site test criteria development and RFP evaluation. It is not intended for Life Cycle Management documentation as indicated by reference (b). The next Life Cycle Management documentation required will be contingent on prototype test results.

8. This Headquarters requests a reevaluation by NCEL concerning the outline of work contained in paragraph 4 above. If the taskings are not appropriate or acceptable or milestone dates of the CPM cannot be met, this Headquarters should be so advised, to allow reconsideration and continued planning. Subsequent funding actions by this Headquarters will be contingent on response to this letter and resultant planning changes, if any.

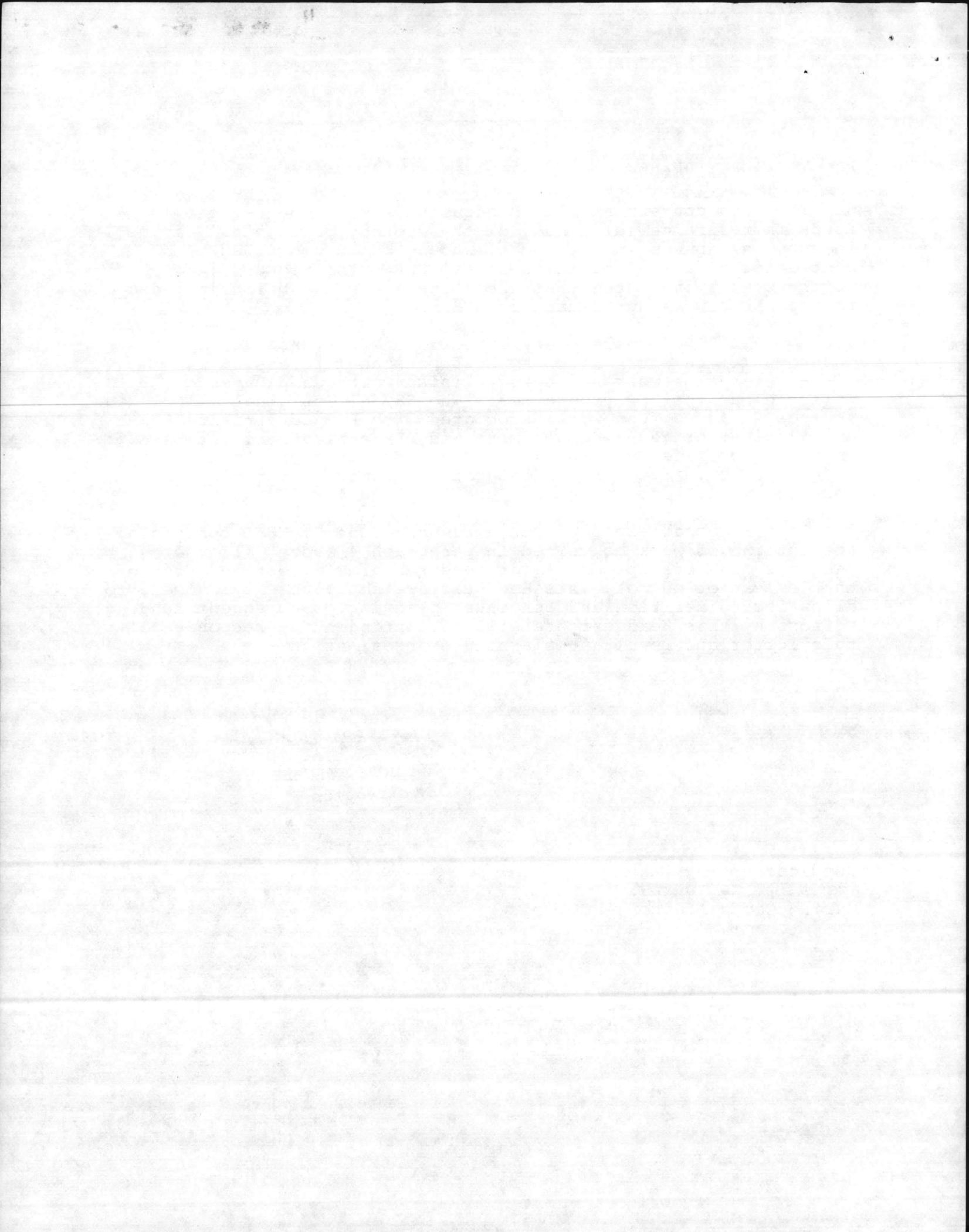


ROBERT F. WEMHEUER  
By direction

Copy to:

  
Marine Corps Liaison, NCEL

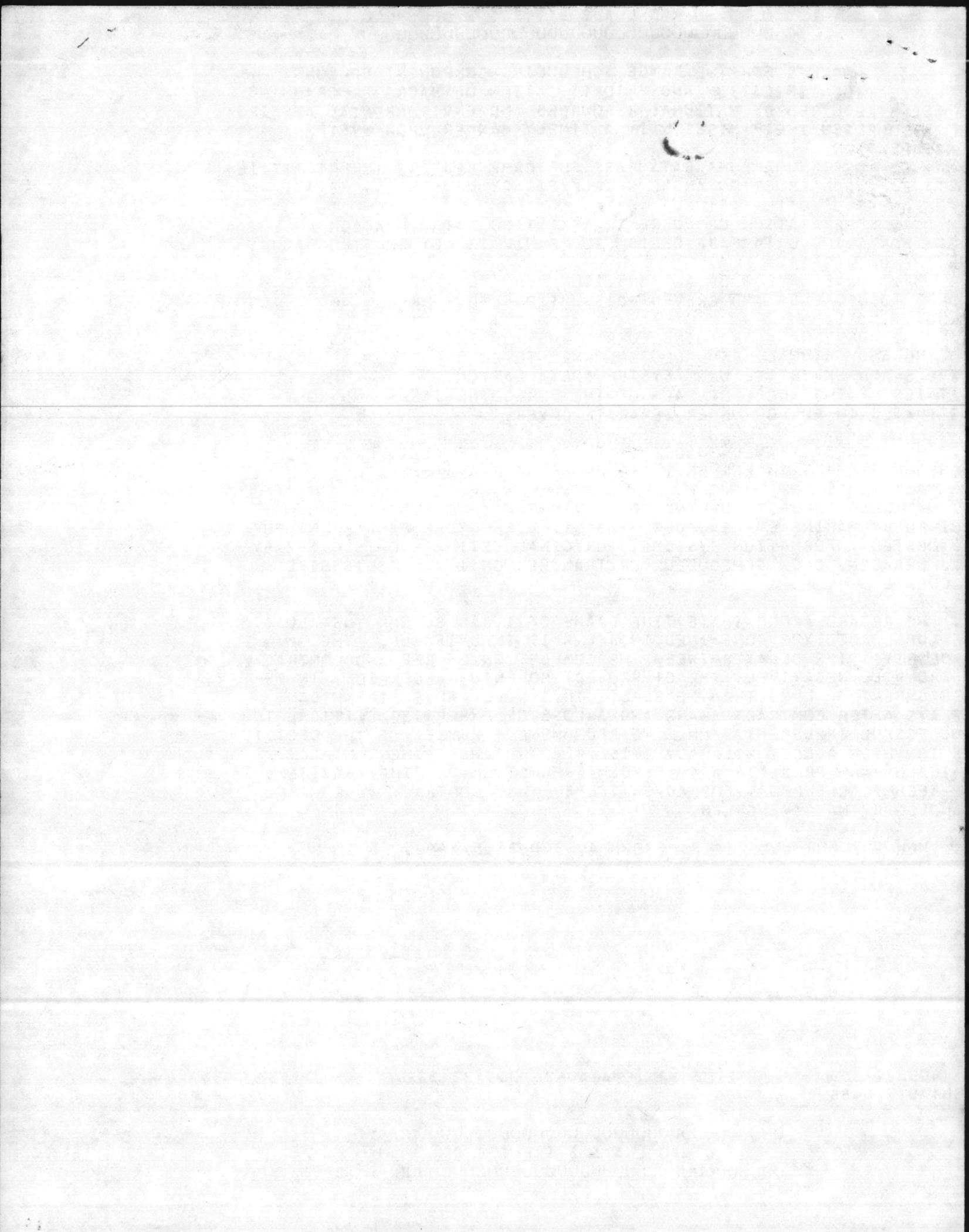
GOVERNMENT EXPENSE











Not a pre arranged Scheduled

File LUMS

3-4-85

HQMC needs 45 days from 11 Feb to review + approve the RFP

TO CBD - If interested in providing GIS request

Site preparation Camp Lijune ready to receive the equipment

RFP → HQMC 11 Feb

30 Jan 85

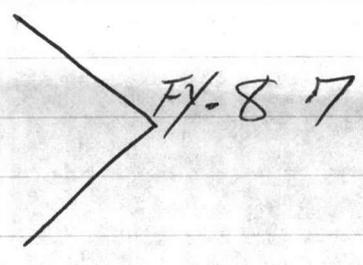
\* meeting with H D in Christ yesterday He approved LUMS for 5 other <sup>bases</sup> if it works out at C.R.

Camp E + W

Camp Pundulo

Quantic

29 Plans



FY-87

Part <sup>LUMS</sup> at HQMC FY 88

1.  $\frac{1}{x^2} = x^{-2}$

$$\frac{d}{dx} x^{-2} = -2x^{-3} = -\frac{2}{x^3}$$

2.  $\frac{1}{x^3} = x^{-3}$

$$\frac{d}{dx} x^{-3} = -3x^{-4} = -\frac{3}{x^4}$$

3.  $\frac{1}{x^4} = x^{-4}$

$$\frac{d}{dx} x^{-4} = -4x^{-5} = -\frac{4}{x^5}$$

4.  $\frac{1}{x^5} = x^{-5}$

$$\frac{d}{dx} x^{-5} = -5x^{-6} = -\frac{5}{x^6}$$

Ralph

360-3115/4496

LUMS

Request for Proposal due at HQMC  
11 Feb 85 Naval Civil Eng Lab, Port Huamene<sup>Cal</sup>

HQMC + CL will review/approval RFP  
45 days

Advertise in Commerce Business Daily for  
those interested in a GIS for MEBCL  
May 85

Advertise for procurement Sept 85

Award Contract > Dec 85  
Site Preparation

Installation of Hardware Jan 86

HQMC Letter will be coming soon

4. Requesting Base designate a local POC
1. Select a Site for System
2. Identify Utility Requirements
3. Funding Req

On Tuesday LT Gen Christ approved LUMS for  
5 other Bases if the CL system works

1. Camp Pendleton
2. Quantico
3. 29 Plan
4. COMCAB E
5. COMCAB W

FY-87

