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JUL 31 1987

From: Commanding General, Marine Corps Base, Camp Lejeune
To: Commandant of the Marine Corps (Code LFF-7)
Subj: FY 88 OTHER ENGINEERING SUPPORT (OES) STUDY REQUIREMENTS
Ref: (a) CMC msg 010123Z Jul 87

1. The reference requests candidate study and training items for funding consideration.
2. The following items are submitted in the format requested. The order of listing is the proposed priority within each category stipulated by the reference.

A. ENERGY/UTILITIES--STUDIES

1. Purging of Boilers on Natural Draft, Central Heating Plant, Building 1700. A study is required to determine the safe purge time for firing four 3000 HP boilers on natural draft located at the Central Heating Plant, Building 1700. During electrical power failures, insufficient generation capacity is available to run the required blowers for purging even though the boilers have the capability of switching dampers that start natural draft purging. The study shall include the following: determination of purge time, identification of complete purge conditions and elimination of combustible gases left by channeling effect.

Estimated Cost: \$18,000

2. Installation of Variable Speed Drives on EMCS Controlled Mechanical Equipment. A study is required to determine mechanical equipment, which is currently controlled by the existing EMCS, which can be retrofitted with variable speed drives. This will allow a more graduated shed schedule for controlling the equipment. Energy and maintenance savings should be calculated and the required project documentation completed.

Estimated Cost: \$40,000

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3. Installation of Steam Plants and Distribution System Efficiency Measuring System. A study is required to determine the work required to install a steam plant and distribution efficiency measuring system. This will allow accurate rating of the existing steam system and precise project documentation for improvement projects. The study should include steam production, steam distribution and condensate return systems. Any energy, maintenance or cost savings should be calculated and the required project documentation completed.

Estimated Cost: \$40,000

4. Installation of Small Package Cogeneration Systems to Control Peak Demand Charges. A study is required to determine the feasibility of procuring small cogeneration package equipment to assist in controlling peak demand. This will allow energy controlling without resulting in facility occupant discomfort. Energy, maintenance and cost savings should be calculated and the required project documentation completed.

Estimated Cost: \$30,000

5. Installation of a Waste Oil Boiler. A study is required to determine the feasibility of burning waste oil/fuel to provide a steam/hot water system. This will assist in the Energy Conservation Program and eliminate an environmental hazard. Boiler is to be installed in a facility which is currently equipped with a small oil fired boiler. Energy and cost savings should be calculated and the required project documentation completed.

Estimated Cost: \$40,000

6. Water Softening and Condensate Polishing System at Building 1700. A study is required of the water softening and condensate polishing systems at Building 1700 to determine the most efficient, safest and least costly method for backwashing the condensate polishers and water softeners. Existing condensate polishers are backwashed using heated condensate creating a

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shortage of water for steam generation during peak loads. Existing water softeners are piped in a manner that insufficient backwash water is available for efficient regeneration, and during summer months the flow is insufficient to prevent channeling in the softener allowing hard water to reach the boilers. Also, installation of pumps for providing water through the softeners to the makeup tanks shall be investigated to allow ample supply of water during periods of low water pressure. The study shall include recommendations, scopes of work and cost estimates for alleviating the problems with the Water Softening and Condensate Polishing Systems at Building 1700.

Estimated Cost: \$10,000

NOTE: Estimated Costs are local engineering estimates based on cost of previous studies accelerated to program year FY 88.

B. ENERGY/UTILITIES--TRAINING

<u>Training Courses</u>	<u>Cost</u>
Pump Application for Wastewater Systems	\$1,100
Industrial Ventilation Design and Existing Industrial Ventilation Systems	1,250
Boiler Plant Optimization	1,100
Air Conditioning--Electronic and Direct Digital Controls	1,200
Alternative Sewers	1,000
Fire Protection System Design	1,100
Air Conditioning Piping Systems	1,225
Design and Rehabilitation of Pipelines	800

STATE OF NEW YORK

IN SENATE
January 12, 1910.

REPORT OF THE COMMISSIONERS OF THE LAND OFFICE
IN RESPONSE TO A RESOLUTION PASSED BY THE SENATE
MAY 15, 1909.

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<u>Training Courses</u>	<u>Cost</u>
Energy Technology Conference and Exposition	1,400
Electrical System Design for the Non-electrical Engineer	1,100
ASHRAE Energy Calculation Methods	1,100
Energy Systems	1,250

NOTE: Catalog Cost.

C. REAL PROPERTY FACILITIES MANAGEMENT/ENGINEERING STUDIES

1. Identify and quantify asbestos removal requirements in all buildings to be demolished/renovated.

Estimated Cost: \$100,000

2. Determine warehouse requirements and evaluate existing warehouse assets for MCB, 2d Mar Div, 2d FSSG, 11 MAF and 6th MAB.

Estimated Cost: \$50,000

NOTE: Cost based on local engineering estimates.

D. MWR STUDIES

1. Feasibility of air conditioning Coettge Memorial Field House to allow more use as an auditorium during warm weather. From late May through September, use of the Field House for any thing other than athletics or physical conditioning is impractical due to the heat, day or night.

Estimated Cost: \$25,000

2. Study to determine the facility specification, size and suitable location of a central motor pool for MWR. This facility should support the fleet now serving MCM, CCMS and Special Services and should allow for future expansion. The study

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PHILOSOPHY DEPARTMENT

PHILOSOPHY 101

LECTURE NOTES

BY [Name]

DATE

TOPIC

1. Introduction

2. The Philosophy of Language

3. The Philosophy of Mind

4. The Philosophy of Action

5. The Philosophy of Law

6. The Philosophy of Politics

7. The Philosophy of Economics

8. The Philosophy of Education

9. The Philosophy of Art

10. The Philosophy of Religion

11. The Philosophy of Science

12. The Philosophy of Mathematics

13. The Philosophy of Logic

14. The Philosophy of History

15. The Philosophy of Social Science

16. The Philosophy of Environment

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should be incremented to show what portion of total would serve revenue generating versus non-revenue generating activities so that funding may be split between AF's and NAF's is required.

Estimated Cost: \$10,000

3. Study to determine need, construction requirements, oceanographic anomalies, etc., relating to repairing Riseley Pier to its original size.

Estimated Cost: \$10,000

4. Feasibility and suggested siting for a small fishing pier at Camp Johnson.

Estimated Cost: \$5,000

5. Study to determine optimum size, included amenities, etc., of one or more recreation centers in troop areas of Camp Lejeune.

Estimated Cost: \$10,000

6. Study to determine optimum size, included amenities, etc., of one or more outdoor swimming pools in troop areas and housing areas of Camp Lejeune.

Estimated Cost: \$25,000

NOTE: Cost based on local engineering estimates.

3. Point of contact this command is Al Austin, autovon 484-3034.

T. J. DALZELL
By direction

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