OPNAV 5216/44A (Rev. 8-81)
S/N 0107-LF-052-2320

DEPARTMENT OF THE NAVY

ESR

Memorandum

DATE: 20 April 1987

FROM: MCAS S-4

TO: PWO (Design Division - T. Hankins)

SUBJ: ESR FOR WATER DISTRIBUTION AT MCAS AND CAMP GEIGER

Ref: (a) LANTDIV ltr 6280 1141JJH of 6 April 1987

Encl: (1) LANTDIV ltr 6280 1141JJH of 6 April 1987 w/enclosure
(2) DD 1391 for FY90 MILCON Project P-489, Headquarters Building
(3) DD 1391 for FY91 MILCON Project P-526, Aircraft Maintenance Hangar

1. Enclosure (1) does not consider the MCON Projects P-489 or P-526. The project data and locations are furnished as enclosures (2) and (3) for your review and consideration in development of repairs or rehabilitation.

F. E. ACOSTA

☆ U.S. GPO 1984 - 705-012/8623

LIST OF ATTACHMENTS

A. Water Rehabilitation Guide

B. Contract Outline

Scope of Work - Valve and Leakage Survey

Cost Estimate

LIST OF ENCLOSURES

(1) C Factor Tests
(2) Water Budget
(3) Skeletonized Water System
(4) Existing MCAS Small Pumps
(5) Existing MCAS and Camp Geiger Plant Pipes
(6a) Improved System - New Line to Camp Geiger Reservoir (Model)
(6b) New Line Connection to Camp Geiger Reservoir - Scheme I
(6c) New Line Connection to Camp Geiger Reservoir (Map) - Scheme I
(7a) New Line Connection to Camp Geiger (Model) - Scheme II
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(8) Modified MCAS Pump Station
(9) New Pumps
(10) Tower Storage Sketches
(11a) 1983 Fire Protection Survey MCAS
(11b) 1985 Fire Protection Survey Camp Geiger
(12a) MOQ Pump House (AS2003)
(12b) MOQ Pump House Typical Fire Pump Curves
(13) NCO Club
(14) MOQ
(15) WHSE AS 3525
(16) Hangar AS 840
(17) Trailer Park
(18) EM Club with C=120
(19) Contaminated Fuel Tanks
(20) O'Club (MCAS)

ENGINEERING SERVICE REQUEST TO STUDY THE POTABLE WATER SYSTEMS AT THE MCAS NEW RIVER AND CAMP GEIGER, CAMP LEJEUNE, NORTH CAROLINA

MARCH 1987

ENVIRONMENTAL QUALITY BRANCH
UTILITIES, ENERGY, AND ENVIRONMENTAL DIVISION
ATLANTIC DIVISION, NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511-6287

Prepared by:

J. J. HARWOOD, P.E.
Environmental Engineer

Encl (1)

(804) 445-2930

6280
1141JJH

6 APR 1987

From: Commander, Atlantic Division, Naval Facilities Engineering Command
To: Commanding General, Marine Corps Base, Camp Lejeune

Subj: ENGINEERING SERVICE REQUEST TO STUDY THE WATER SYSTEMS AT THE MCAS NEW RIVER AND CAMP GEIGER

Encl: (1) ESR Study of the Potable Water Systems at the MCAS New River and Camp Geiger

1. Enclosure (1), the ESR, is forwarded as a preliminary study report. Please review the contents carefully, particularly Attachment B, and address comments and questions to Mr. J. J. Harwood, AUTOVON 565-2930.

J. R. BAILEY
By direction

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1. Introduction

The Marine Corps Base, Camp Lejeune, North Carolina, submitted an Engineering Service Request for a study of the potable water systems of the MCAS, New River and Camp Geiger. Originally, each activity had its own water supply wells, treatment, pumping and storage facilities. An emergency 8-inch line connected both systems. A new water treatment and pumping plant was built at the Air Station which now supplies water to both the Air Station and Camp Geiger via the 8-inch emergency line.

2. Because of concerns about the reliability of the system, parts of which are quite old (1940 era), equipment and operational problems, and the need for a reliable system that will support present needs and future expansion plans, a complete system study in accordance with the Navy water pipe rehabilitation guide is needed (Attachment A). The five steps of the study are:

a. Site visit to collect data and make preliminary tests.

b. Hydraulic Analysis to identify improvements that are needed assuming the existing system is in usable condition.

c. Contracted field examinations to identify parts of the system which are not in usable condition.

d. Design of system improvements from b and c.

e. Two part construction contract to install the designed improvements.

(1) To replace valves and inspect pipe

(2) Replace pipe (if needed), and construct recommended system improvements.

3. Step a - Site Visit by Mr. J. Harwood, Code 114 was in April 1986.

This is a report of Steps a and b and it makes recommendations and provides cost estimates and scopes of work for Steps c and d which are to be accomplished by contract. Plans and specifications for Step e will be done by Step d.

The report covers operational and hydraulic equipment problems and makes specific improvement recommendations for adequate water flow, pressure and storage for present and future, normal and fire protection needs. It also addresses problems common to aging water systems.

4. Details

Operational and hydraulic equipment problems

a. Each system, Camp Geiger and the Air Station, have two elevated water storage towers. The new Air Station treatment and pumping plant is located at the Air Station near Camp Geiger. Treated water is pumped into lines going to Camp Geiger in one direction and the Air Station in another. Apparently, there is insufficient pumping capacity to fill the Air Station and Camp Geiger tower at the same time during periods of high water usage. The lines to the Air Station must be closed to fill the furthest Camp Geiger tower (STC 606). Water is still stored in a Camp Geiger reservoir and pumped into the system when needed to augment the Air Station pumps, and for emergencies.

b. Other reported problems were insufficient fire protection in the MOQ area; keeping the chlorine residual at the MOQ reservoir; insufficient fire protection for Hangar 840; the pumps at Camp Geiger loose their prime if the water level in the Camp Geiger ground storage reservoir gets too low; Camp Geiger elevated tower STC 1070 overflows before tower STC 606 fills unless the STC 1070 valve in the tower feed line is throttled; and much of the system is old and felt not to be reliable.

c. Recommendations to provide deluge sprinkler water supplies for Hangar 840 were also requested.

This report will provide specific recommendation that address these problems and improve the system to support present needs and future planned expansions.

5.

a. Information about population, water consumption, future plans and operation and facility problems were gathered during the site visit in April 1986. Preliminary tests to determine the condition of the pipe interiors were made and the following "C" factors were measured (enclosure (1)):

MCAS MCAVOY Road - between Campbell and Curtis; C = 119 (Good)

(This line was reported to have been previously cleaned by "pigging").

MCAS - MOQ Longstaff St; C = 111 (Good)
Camp Geiger D Street; C = 74 (Fair)

b. The results hold no surprises. The older Camp Geiger pipes are fair and the newer, probably cement lined, and cleaned pipes are in good condition.

c. A Water budget (enclosure (2)) indicates:

Average demand	= 896 KGPD
Expected usage	= 630 KGPD
Unaccounted for water	= 266 KGPD

$100 \times \frac{266}{890} = 30$ percent

A good part of the 30 percent is probably leakage. This would also be expected from old parts of a water system.

6. a. A skeletonized computer model of the water system was made (enclosure (3)). The two smaller pumps (enclosure (4)) at the existing MCAS and Camp Geiger pumping stations were used, enclosure (5). A 48-hour extended period simulation was made for a maximum day (2.5 x average water usage). The results are graphically presented in Figure 1a for Tower STC 606. Note how the Tower STC 606 empties. This agrees with the operating experience if the Air Station is not valved off during Camp Geiger filling periods. A tower emptying is unacceptable. Notice that it empties about 0700 hours and does not recover during a maximum day of water usage.

b. A second simulation was made for the existing system using the large MCAS pumps (enclosure (4)). The results, shown in Figure 1b, also show Tower STC 606 emptying.

7. Two schemes were analyzed by computer model to resolve the hydraulic problems. Scheme I uses both MCAS and Camp Geiger pump stations and Scheme II uses only the MCAS pump station.

a. Scheme I - The computer model was improved by adding another 8-inch PVC line from the MCAS pump station to Camp Geiger, connecting at the Camp Geiger ground level reservoir, (enclosures (6a) and (7)). The flow rate to the reservoir is controlled by orifice plate (enclosure (6b)). The MCAS pump station was modified as shown in enclosure (8), and three new 6x8x18A Aurora pumps with 15 1/4-inch impellers were installed at the MCAS pump station, and two at the Camp Geiger pump station, (enclosure (9)).

b. Altitude values were installed at the towers and the high water levels set at elevations of 168 feet for all the towers. The pumps were set to turn on and off at the following tower water levels:

	Tower	HWL	LWL
MCAS Pump	STC 310	168	162
Camp Geiger Pump	STC 606	168	158

c. The two MCAS tank low water levels (LWL) were set at 162 feet to provide adequate fire reserve stored in the tower. The LWLs were set at 158 feet on the two Camp Geiger tanks because there is not enough storage capacity in the Camp Geiger elevated tanks for normal fluctuating operating demands and fire reserve. The fire reserve for Camp Geiger will have to come from the ground storage tanks. (Please see enclosure (10)).

d. A 48-hour maximum day simulation was made for the improved system and the results show that the tanks do not empty (figure (1-c and d)). The MCAS pump operated for a total of 28 hours out of the 48, and the Camp Geiger pump operated 15 hours.

e. Enclosures (11a) and (11b) are excerpts from the 1983 and 1985 LANTNAVFACENGCOM fire protection surveys for the MCAS and Camp Geiger respectively. They show that fire protection capacity overall is good except for three locations at the MCAS. They are the MOQ area, Warehouse 3525 and the O'Club. The improved system model was used to simulate fire flows at those and other locations of Camp Geiger and the MCAS. The results are summarized as follows:

(FIRE FLOWS) SCHEME 1

Location	JCT	Flow GPM	Resid PSIG	Subtract PSIG	Final PSIG		Comments
1. Hangar AS 4106	24	7000	61	-	61	g.t.	20 OK
2. CG Bldg 10	5	1500	60	-	60	g.t.	20 OK
3. CG BEQ	1	1500	59	-	59	g.t.	20 OK
4. TRL PK	7	1500	55	47	8	l.t.	20 (1)
5. MCAS EM Club	33	1000	61	42	19	a.e.	20 (2)
6. MCAS O'Club	16	1000	49	24	25	g.t.	20 OK
7. Cont. Fuel Tks	24	3000	61	170	-109	l.t.	20 (3)
8. NCO Club		1000	(see encl (13))		40	g.t.	20 OK
9. Officers Housing		1000	(see encl (14))		54	g.t.	20 OK
10. Hangar AS 840		New pump REQ, see encl (16)					
11. Warehouse 3525		New pump and RES REQ, see encl (15)					

g.t. = greater than
l.t. = less than
a.e. = about equal

f. The NCO Club and MOQ are presently supplied fire flows and pressures from reservoir AS 2002 and pump station AS 2003. These locations were done by hand computations shown in enclosures (12), (13), and (14). The MCAS O'Club hand computations are shown in enclosure (20). Warehouse 3525 and Hangar AS 840 are remote and require flow and pressures above the capacities of present equipment. They will require separate storage tanks and booster pumps (please see enclosures (15) and (16)).

Scheme II. For this scheme, in addition to improving the MCAS pump station as shown in enclosure (8), the MCAS to Camp Geiger connection is a 10-inch PVC line from the pump station connecting Camp Geiger near Tower STC 1070 and south of Tower STC 600 (enclosures (7a) and (7b)). Altitude valves were set the same as for Scheme I, and two Aurora 6x8x18a pumps were used in the MCAS pump station. Towers STC 606 and AS 301 did not empty during a 48-hour maximum day simulation (Figure 1e and 1f). The two MCAS pumps operated 17 and 13 hours respectively.

(FIRE FLOWS) SCHEME 2

Location	JCT	Flow GPM	Resid PSIG	Subtract PSIG	Final PSIG		Comments
1. Hangar AS 4106	24	7000	62	-	62	g.t.	20 OK
2. CG Bldg 10	5	1500	57	-	57	g.t.	20 OK
3. CG BEQ	1	1500	46	-	46	g.t.	20 OK
4. TRL PK	7	1500	54	47	7	l.t.	20 (1)
5. MCAS EM Club	33	1000	62	42	20	e.t.	20 OK
6. MCAS O'Club	16	1000	51	24	27	g.t.	20 OK
7. Cont. Fuel Tks	24	3000	63	170	-107	l.t.	20 (3)
8. NCO Club		1000	(see encl (16))				
9. Officers Housing		1000	(see encl (14))				
10. Hangar AS 840		New pump req., see encl (16)					
11. Warehouse 3525		New pump and res. req., see encl (15)					

g.t. = greater than
l.t. = less than
a.e. = about equal
e.t. = equal to

COST COMPARISON

	Scheme I	Scheme II
Improve Pump Station	Same Cost	Same Cost
New Pump w/controllers	5 Pumps at 30K = 150K	3 pumps = 30K = 90K
New PVC Connections	5120'-8" @ 17.25 = 87K	3500'-10" @ 21 = 73.5K
Totals	237K	163.5K

Scheme I is more costly but it affords extra reserve fire protection storage water.

NOTES:
(1) Additional lines will be needed at TRL park - see enclosure (17).
(2) 20 PSIG residual can be obtained by cleaning line - see enclosure (18).
(3) Storage tank and pump will be needed at site - see enclosure (19).

8. Conclusions

a. In addition to adding pipes, pumps, etc., to the system to provide adequate capacity and operation, the condition of the existing system must be inspected, tested and improved to provide reliable service. Appendix B is an outline of steps for contracts to efficiently test the existing system and provide repairs and designs for installing the needed additional equipment identified by the hydraulic analysis. Appendix B pages I through VIII are scopes of work, cost estimates and costing information. The step sequences are based on previous examination of the system to determine what is needed for the next test or examination.

b. Initial flow tests (enclosure (1)) indicate some corrosion/scale build-up inside the pipes, but not enough to seriously affect operation. However, the 8-inch lines along Curtis and Flounder roads are suspect for low "C" factors, and should be tested. If C is less than 90, the pipe should be cleaned by pigging. The Langelier water stablization index is slightly positive, and therefore pigging is an appropriate method for cleaning and restoring low "C" factors. At this point, it suggested that the Navy Rehabilitation Guide, Attachment A, be read for information about rehabilitating older systems.

c. Scheme I affords more automatic reserve water storage with Camp Geiger's reservoirs and pumps. There is, however, sufficient storage available from the MCAS treatment plant reservoirs for daily operations and fire needs. Camp Geiger's reservoir and pump station can still be retained and used manually for its additional capacity.

d. The trailer park area use is minimal at present, and no improvements are recommended.

P-489 - MCAS HEADQUARTERS FY-90
TO BE LOCATED OFF WILSON BLVD.

Recommendations for system improvements excluding the trailer park area:

1. Award a contract to:

a. Manipulate and test about 215 hydrants and hydrant valves and 560 isolation and maintenance valves 6 inches and larger (1). The test will be for condition, proper operation and valve leakage.

b. Perform a sonic leakage survey on all the exterior station pipes. There are about 25 miles of pipe.

c. Perform a soil resistivity/copper sulfate reference (Cathodic Protection) survey of the pipelines.

d. Perform "C" factor flow tests for pipes on Flounder and Curtis Roads by method shown in "Water Rehabilitation Guide", Attachment A.

e. Excavate and inspect the pipes for external condition at locations identified as corrosive from 1c (see Attachment B page VIII).

f. Prepare plans and specifications to replace leaking or inoperative valves hydrants and pipes from paragraphs 1a, 1b and 1c; and the following list of improvements:

LIST OF PROJECTS FOR DESIGN AND CONSTRUCTION

A. Install 10-inch PVC line from MCAS treatment plant to Camp Geiger - Scheme II, see enclosures (7a and 7b).

B. Modify the MCAS pump house piping and install new pumps in MCAS and Camp Geiger pump houses as shown in enclosures (8) and (9). The pumps will be controlled by pressures at Towers STC 606 and AS 310 as shown in the enclosures and in paragraph 6b of this report.

NOTES:
(1) Exclusive of trailer park, valves = about 511 plus 10 percent for counting errors = 560.

C. Provide for an inspection of the AS 2003 pump house and make any needed repairs to place it in proper operation. The pump house has piping to recirculate water through Reservoir AS 2002. Install a chlorinator in the pump house and recirculate chlorinated water through the reservoir in order to keep the chlorine residual.

D. Design and construct a new fire pump house which will take water from Reservoir AS 2002 and service a deluge sprinkler system in Hangar AS 408, (see enclosure (16)). 848

E. Provide a ground level reservoir and fire pump for fire protection at Warehouse AS 3525, and the contaminated fuel tanks, enclosures (15) and (19).

F. Provide Towers STC 606 and STC 1070 with two-way altitude valves. Repair the altitude valves at Towers AS 310 and 4130 if needed. All valves should close at elevation 168 feet.

Attachments C and D are a scope of work and cost estimate for the valve testing and pipe leakage survey.

2. Purchase and stock replacement valves, pipe and pipe repair parts for those valves and pipes identified in recommendations 1a, 1b and 1e. Using plans and specifications from 1e above, award a second contract to excavate and replace the leaking valves and repair the worst pipe leaks identified in 1a and 1b. Attachment B - pages VIII and VII are special specifications for valve repair work, pipe examination and unit costs. When the number of valves that need replacement is known from 1a, the unit costs of Attachment D can be used to develop a cost estimate for this second contract.

3. The excavations and pipe inspections should start at those locations where the soil is most corrosive and the pipe exteriors would be expected to be the worst. These locations will be identified by the cathodic protection survey of 1c. The information from this survey is to be used with the result of 1a and 1b to plan the sequence of valve and pipe excavation replacements/repairs. The pipes, especially the exteriors of the older pipes, should be examined at corrosive soil locations. Leaking valves and attached pipes at these corrosive areas should be the first to be excavated, inspected and the valves replaced. If a pipe or valve, in a corrosive location, is excavated and the exterior of the pipe is in good condition, it can be assumed that other pipes of the same age in a less corrosive location will also be in good condition.

4. Clean by "pigging" those lines found to have internal buildup from inspections of paragraph 3 and "C" factor tests of 1d.

5. Change Order the design contract 1e to provide plans and specs to replace pipes found to be deteriorated from paragraph 3.

6. Award a construction contract to replace pipes of paragraph 5 and make improvements recommended in this report and designed by paragraph 1f.

1. COMPONENT	FY 19 90 MILITARY CONSTRUCTION PROJECT DATA	2. DATE
NAVY		12 SEP 86

3. INSTALLATION AND LOCATION	4. PROJECT TITLE
MARINE CORPS AIR STATION, NEW RIVER, NORTH CAROLINA	OPERATIONAL & TACTICAL CENTER

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
	610-10	P-489	1,400

9. COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
OPERATIONAL & TACTICAL BUILDING.....	SF	15,000	65.00	975
SUPPORTING FACILITIES.....	--	-	-	267
PILE FOUNDATIONS.....	--	-	-	(104)
UTILITIES.....	--	-	-	(72)
PAVING.....	--	-	-	(61)
SITE IMPROVEMENT.....	--	-	-	(20)
DEMOLITION.....	--	-	-	(10)
SUBTOTAL.....	--	-	-	1,242
CONTINGENCY (5%).....	--	-	-	62
TOTAL CONTRACT COST.....	--	-	-	1,304
SUPERVISION, INSPECTION & OVERHEAD (5.5%).....	--	-	-	72
TOTAL REQUEST.....	--	-	-	1,376
TOTAL REQUEST (ROUNDED).....	--	-	-	1,400
EQUIPMENT PROVIDED FROM OTHER APPROPRIATIONS..	--	(NON-ADD)		(0)

10. DESCRIPTION OF PROPOSED CONSTRUCTION

Two-story permanent construction, concrete foundation walls, spread footings, steel and reinforced concrete frame, concrete slab on grade floor, brick and masonry walls, built-up roof and rigid insulation, HVAC, fire protection system, utilities, flagpoles, parking and landscaping. Air conditioning required 60 tons. Current Facility of 3758 SF to be demolished.

11. REQUIREMENT: 31,890 SF ADEQUATE: 12,862 SF SUBSTANDARD: 5,702 SF

PROJECT: Construct building to house support offices for Marine Corps Air Station Operational & Tactical Support Center.

REQUIREMENT: Space is required for the Commanding Officer and his staff. Functions requiring space are CO, XO, Adjutant, Sgt Maj, civilian and Military personnel administrative (S-1), Installations and Logistic (S-4), Management Assistance sections, and Communications section. These sections provide the base operation support to Fleet Marine Force tenant units.

CURRENT SITUATION: The existing facility was constructed in 1942 as an operations building. The 3,758 SF provides approximately one-fourth of the space required to support the Commander and his staff. As a result, sections are dispersed throughout the base creating daily inefficiencies through communication delays. Additionally, utilities and structural conditions are substandard. Electrical panels, for example, still operate with screw-in type fuses. Electrical requirements have

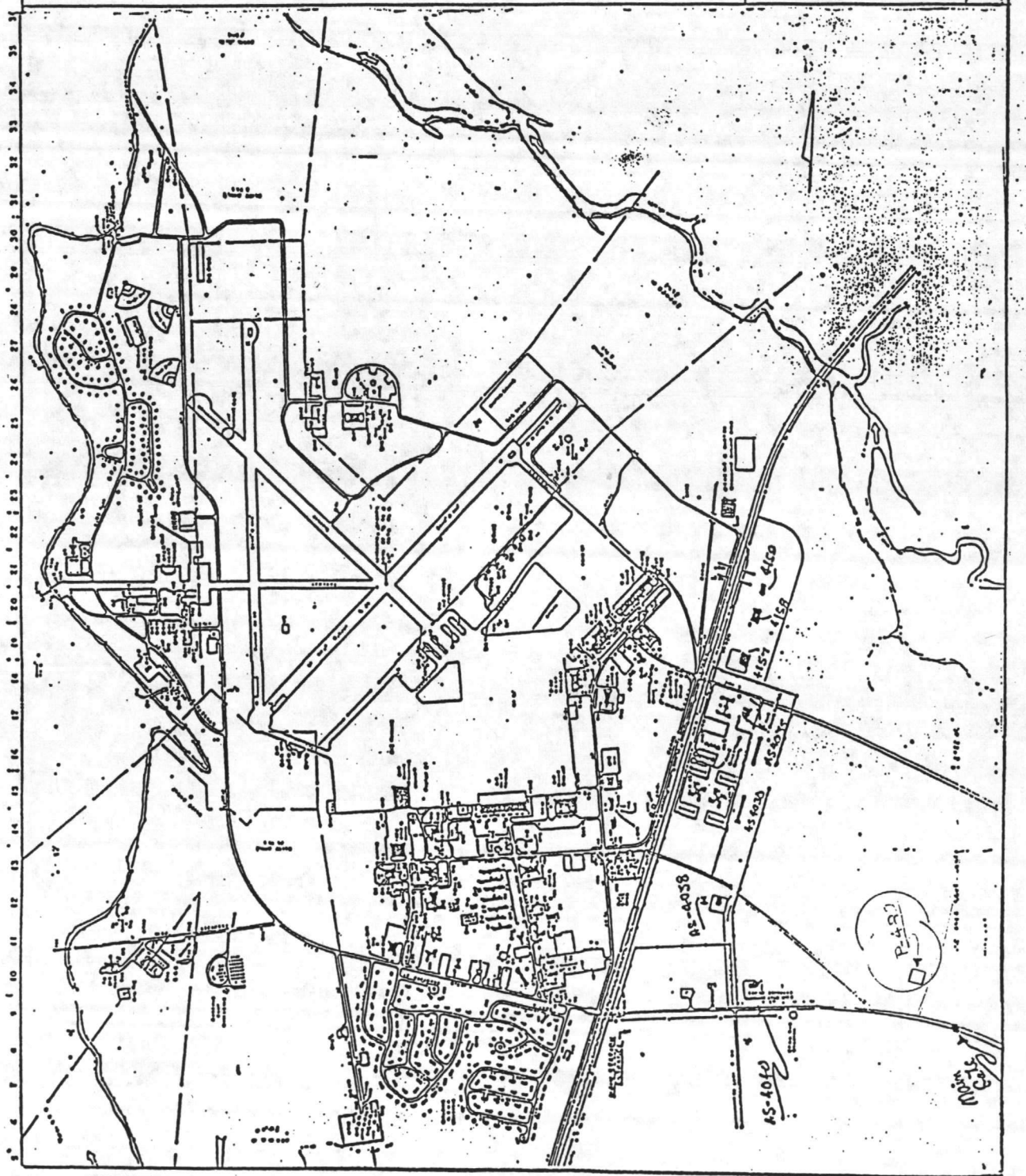
☆ U.S. Government Printing Office: 1983—605-010/6848 2-1

1. COMPONENT	FY 19 90 MILITARY CONSTRUCTION PROJECT DATA	2. DATE
NAVY		8 May 1987

3. INSTALLATION AND LOCATION

MARINE CORPS AIR STATION, NEW RIVER, NORTH CAROLINA

4. PROJECT TITLE	5. PROJECT NUMBER
OPERATIONAL & TACTICAL CENTER	P-489



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1. COMPONENT	FY 19 91 MILITARY CONSTRUCTION PROJECT DATA	2. DATE
NAVY		11 FEB 87

3. INSTALLATION AND LOCATION	4. PROJECT TITLE
MARINE CORPS AIR STATION, NEW RIVER, JACKSONVILLE, NC	MAINTENANCE HANGAR

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
	211-05	P-526	20,000

9. COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
AIRCRAFT MAINTENANCE HANGAR				
BUILDING	SF	82,169	75.58	6,211
211-05	SF	47,409	60.00	(2,845)
211-06	SF	17,380	71.51	(1,243)
211-07	SF	17,380	71.51	(1,243)
BUILT-IN EQUIPMENT	LS	-	-	(800)
OMSI	LS	-	-	(80)
SUPPORTING FACILITIES	--	-	-	11,865
AIRFIELD/ROADS & MISC PAVEMENTS	LS	-	-	(5,010)
SECURITY FENCING & LIGHTING	LS	-	-	(510)
RINSE FACILITY	LS	-	-	(160)
SITE IMPROVEMENTS	LS	-	-	(4,525)
UTILITIES	LS			
ELECT DIST/COMM/DIST/MMV HOOK-UPS	LS	-	-	(320)
STORM SEWER	LS	-	-	(300)
SANITARY	LS	-	-	(250)
WATER	LS	-	-	(400)
PILING	LS	-	-	(140)
DEMO/RELOCATE EXISTING FACILITIES	LS	-	-	(250)
SUBTOTAL	--	-	-	18,076
CONTINGENCY (5%)	--	-	-	904
TOTAL CONTRACT COST	--	-	-	18,980
SUPERVISION, INSPECTION & OVERHEAD (5.5%)	--	-	-	1,044
TOTAL REQUEST	--	-	-	20,024
TOTAL REQUEST (ROUNDED)	--	-	-	20,000
EQUIPMENT PROVIDED FROM OTHER APPROPRIATIONS	--	(LIST NOT AVAILABLE)		

10. DESCRIPTION OF PROPOSED CONSTRUCTION

Construct an organizational maintenance hangar to provide OH, O1, and O2 working space in support of MV-22 aircraft squadrons. Construction to be masonry building on pile foundation and truss type with cantilever framing, built-up roof on rigid insulation, masonry units and corrugated walls, concrete floor with grid grounding systems, fire protection, telephone, HVAC, oil/water separator and floor drainage system for the hangar deck area. Adequate van and POV parking and aircraft parking aprons, taxiway systems, rinse facility, road and utility service relocations. (Air conditioning for admninistrative spaces and selected maintenance areas: 150 tons).

* U.S. Government Printing Office: 1983—605-010/6848 2-1

ENCLOSURE (1)

1. COMPONENT	FY 1991 MILITARY CONSTRUCTION PROJECT DATA	2. DATE
NAVY		11 FEB 87

3. INSTALLATION AND LOCATION

MARINE CORPS AIR STATION, NEW RIVER, JACKSONVILLE, NC

4. PROJECT TITLE	5. PROJECT NUMBER
MAINTENANCE HANGAR	P-526

11. REQUIREMENTS: 360,469 SF ADEQUATE: 202,451 SF SUBSTANDARD: 67,680 SF

PROJECT: Construct a permanent maintenance hangar to house new MV-22 aircraft squadrons. This hangar will provide maintenance and administration spaces for one operating squadron plus a training maintenance organization. The Fleet Readiness Aircraft Maintenance Program (FRAMP) is comparable to an operating squadron in size.

REQUIREMENT: To provide a facility capable of accommodating aircraft squadron requirements in support of FMF missions.

CURRENT SITUATION. Currently the existing hangars at New River are extremely overcrowded. The P-404 Maintenance Hangar project along with P-451 and P-507 Maintenance Hangar renovation projects will partially alleviate critical space shortages. New mission requirements are being implemented to position MV-22 aircraft at New River. No facilities exist at New River that meet the requirements to house the Fleet Readiness Aircraft Maintenance Program (FRAMP) organization.

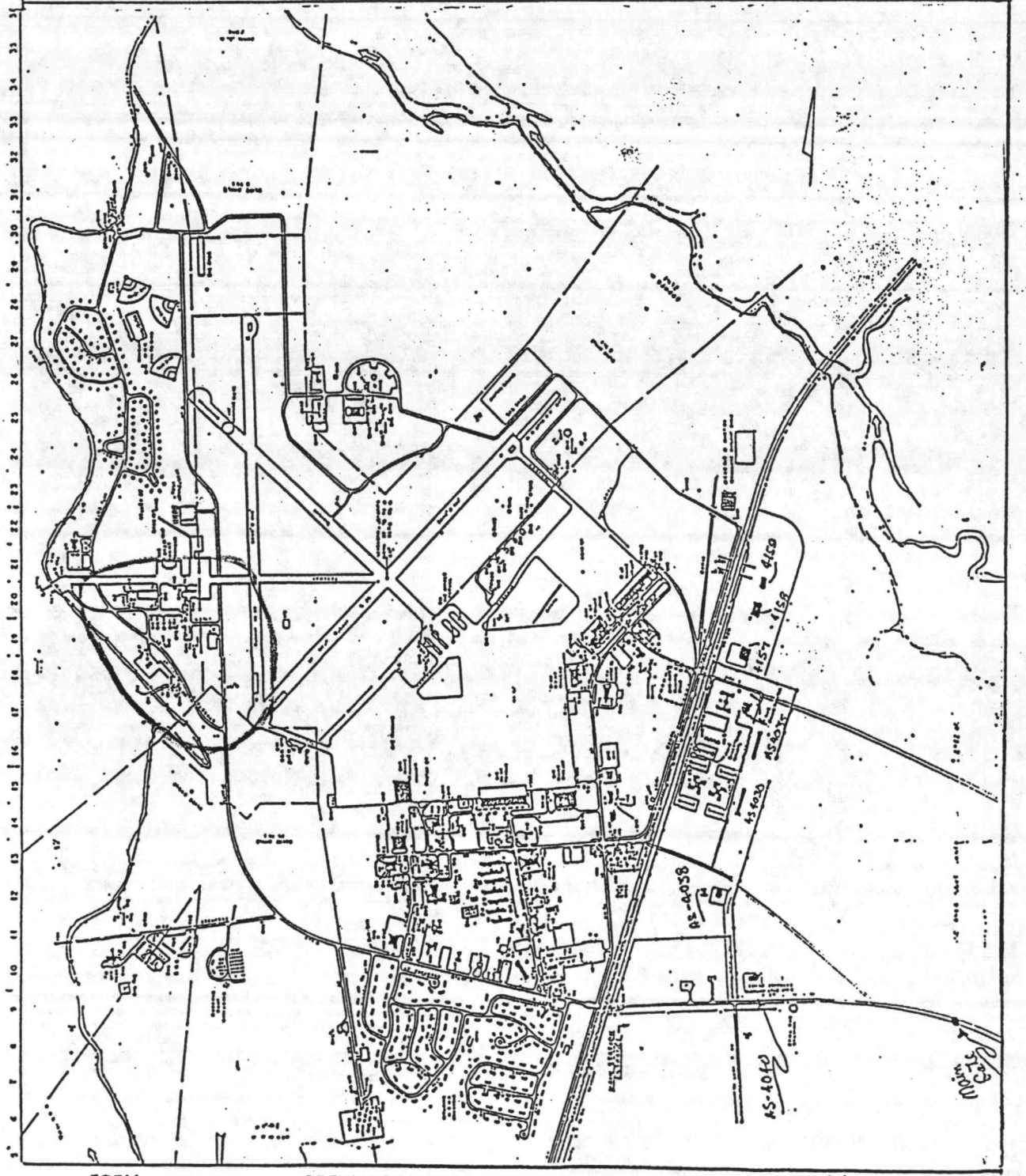
IMPACT IF NOT PROVIDED. New River will not be able to adequately support the new FMF mission requirements for the MV-22 squadrons and combat effectiveness and efficiency will suffer. The new mission requirements to implement the MV-22 aircraft will create not only hangar deficiency situations that are operationally unsatisfactory, but aircraft parking and taxiway travel that will be a hazard to aviation safety.

1. COMPONENT	FY 19 91 MILITARY CONSTRUCTION PROJECT DATA	2. DATE
NAVY		8 May 1987

3. INSTALLATION AND LOCATION

MARINE CORPS AIR STATION, NEW RIVER, NORTH CAROLINA

4. PROJECT TITLE	5. PROJECT NUMBER
MAINTENANCE HANGAR	P-526



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