MAIN/FEC/rn
11000
6 Oct 1981

From: Base Maintenance Officer
To: Public Works Department (Planning Branch)

Subj: FY-84 through FY-88 Five-Year Military Construction (MILCON) Program for Marine Corps Base, Camp Lejeune; request for Preliminary Environmental Assessments (PEAs)

Ref: (a) CG ltr PWO:408:VM:bjd 11000 of 6 Aug 1981

Encl: (1) Preliminary Environmental Assessment (PEA), MCON Project P-786, Cold Storage
(2) Preliminary Environmental Assessment (PEA), MCON Project P-790, Sewage System Improvements

1. As requested in reference (a), enclosures (1) and (2) are provided.

F. E. CONE
By direction

T-11300

PRELIMINARY ENVIRONMENTAL IMPACT ASSESSMENT
MCON PROJECT P-790, SEWAGE SYSTEM IMPROVEMENTS

Prepared by:

F. E. CONE
Utilities Branch
Base Maintenance Division
6 October 1981

1. Action/Project Description. This project will upgrade and expand sewage collection system and treatment facilities. The project will provide eight drying beds, mechanical-type grit removal and mechanical agitation in chlorine contact chamber and oil/grease skimmer at the Hadnot Point Sewage Plant. In addition, the project will extend the force main from Pumping Station S-47, increase the pumping capacity at stations S-4005 and S-2633, and provide a new pump at station FC-315.

2. Consideration of Alternatives and Site Selection. Construction will be accomplished at existing plant and pumping stations. Alternative sites do not apply.

3. Compliance with Federal, State, and Local Environment Regulations and Guidelines

a. Endangered Species. Not Applicable.

b. Clean Water Act. The proposed changes will provide a beneficial impact on sewage treatment at the Hadnot Point Plant. Proposed construction should be reviewed with EPA representatives relative to the NPDES.

c. Clean Air Act. Not Applicable.

d. Coastal Zone Management Act. The proposed construction will not enlarge the plant capacity. Existing permit limitations will not be exceeded. Therefore, the proposed construction does not appear to be applicable.

e. Archaeological and Historical Preservation Act. Not Applicable. Construction is planned for existing sites.

f. North Carolina Erosion and Sedimentation Regulations. An erosion control plan will be included in the plans and specifications.

g. Hazardous Materials and Hazardous Waste Disposal. Oil and grease will be collected by the oil/grease skimmer. Design should address disposal of the oil and grease collected.

h. Protection of Wetlands, Executive Order 11990. This issue should be addressed in discussions with EPA representatives on NPDES Permit.

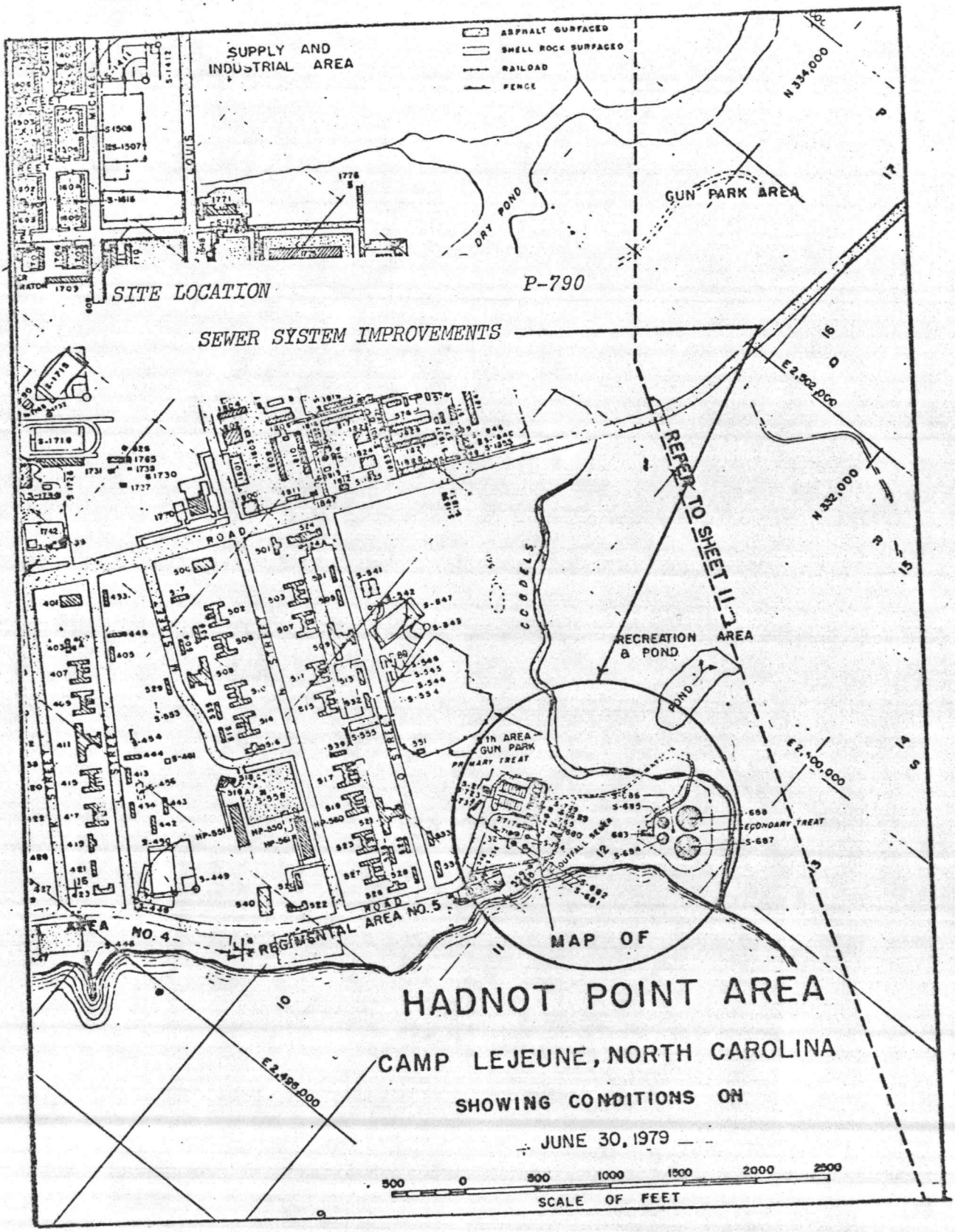
i. Sanitary Waste and Refuse Disposal. Not Applicable.

j. Discuss Other Regulations Applicable. None

k. Permit Requirements. Existing permit limitations will not be exceeded. Proposed construction should be reviewed with EPA.

l. Site Map. See Enclosure (1).

4. How does the Proposed Action Impact on the Other Base Functions and Missions? Proposed construction is consistent with the Camp Lejeune Master Plan. Other base functions should not be affected.


ASPHALT SURFACED
SHELL ROCK SURFACED
RAILROAD
FENCE
SUPPLY AND INDUSTRIAL AREA
GUN PARK AREA
DRY POND
SITE LOCATION
P-790
SEWER SYSTEM IMPROVEMENTS
N 334,000
E 2,502,000
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REFER TO SHEET II
RECREATION AREA & POND
POND
COODELS
K STREET
L STREET
M STREET
N STREET
O STREET
ROAD
AREA NO. 4
REGIMENTAL AREA NO. 5
5th AREA GUN PARK
PRIMARY TREAT
SECONDARY TREAT
OUTFALL SEWER
MAP OF
HADNOT POINT AREA
CAMP LEJEUNE, NORTH CAROLINA
SHOWING CONDITIONS ON
JUNE 30, 1979
500 0 500 1000 1500 2000 2500
SCALE OF FEET

ENCL (1)

1. COMPONENT	FY 1985 MILITARY CONSTRUCTION PROJECT DATA	2. DATE
NAVY		1 Aug 1981

3. INSTALLATION AND LOCATION	4. PROJECT TITLE
MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA 28542	SEWAGE SYSTEM IMPROVEMENTS

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
	831-09	P-790	850

9. COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
SEWAGE & INDUSTRIAL WASTE TREATMENT FACILITY	-	-	-	295
SLUDGE DRYING BEDS W/APPURTENANCES	LS	-	-	(212)
GRIT & CHLORINE CONTACT CHAMBERS	LS	-	-	(83)
SUPPORTING FACILITIES	-	-	-	178
PUMP STATION ALTERATIONS	EA	2	23,100	(46)
PUMP STATION ELECTRICAL CONTROL WORK	EA	8	2,600	(21)
FORCE MAIN SEWER W/APPURTENANCES	LS	-	-	(106)
SITE IMPROVEMENT AND DEMOLITION	LS	-	-	(5)
STATION FC-315	-	-	-	11
NEW PUMP W/MOTOR/SHAFTING	LS	-	-	(8)
PIPING AND FITTINGS	LS	-	-	(1)
ELECTRICAL	LS	-	-	(2)
AUTOMATIC OIL/GREASE SKIMMING TANK	-	-	-	255
TANK (250,000 GAL)	LS	-	-	(200)
OIL/GREASE STORAGE TANK (5,000 GAL)	LS	-	-	(5)
PIPING, VALVES, OTHER MECHANICAL	LS	-	-	(35)
ELECTRICAL	LS	-	-	(15)
SUBTOTAL				739
CONTINGENCY - 10%				74
TOTAL CONTRACT COST				813
SUPERVISION, INSPECTION, & OVERHEAD - 5.5%				45
TOTAL REQUEST				858
TOTAL REQUEST (ROUNDED)				850
EQUIPMENT PROVIDED FROM OTHER APPROPRIATIONS				-

10. DESCRIPTION OF PROPOSED CONSTRUCTION

Provide construction, alterations, minor demolition, site improvements, and related work to the Base sewage system (i.e., new sludge drying beds, grit removal equipment, modification to pumping stations, new force mains, oil/grease skimmer, electrical controls, etc.

11. REQUIREMENTS:

PROJECT: Upgrade and expand the sewage collection system and treatment facilities. Provide new construction, alterations, and improvements.

REQUIREMENTS: To provide adequate sewage disposal and treatment facilities for the Base to comply with statutory regulations of the Federal Water Pollution Control Act.

CURRENT SITUATION: The treatment plant requires additions and alterations to provide proper treatment of sewage waste. Existing equipment in pumping and lift stations, as well as electrical controls and/or sewer systems, need upgrading, alterations, and other related work.

IMPACT IF NOT PROVIDED: Inadequate and/or malfunctioning equipment could result in surcharging and/or flooding of the facilities, which could create a potential health hazard and damage to the facilities.

☆U. S. Government Printing Office: 1979—603-076/6547 2-1

1. COMPONENT	FY 19 85 MILITARY CONSTRUCTION PROJECT DATA	2. DATE
NAVY		1 AUG 1981

3. INSTALLATION AND LOCATION

MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA 28542

4. PROJECT TITLE	5. PROJECT NUMBER
SEWAGE SYSTEM IMPROVEMENTS	P-790

SPECIAL CONSIDERATIONS

1. Pollution Prevention, Abatement, and Control: This project will not cause additional air or water pollution.

2. Flood Hazard Evaluation: Requirements of Executive Order No. 11296 (Flood Hazards) are not applicable.

3. Environmental Impact: The project Environmental Impact Assessment is being written and will be processed through the local EIA Review Board. No adverse environmental impact is anticipated.

4. Fallout Shelter Construction: Fallout shelter protection is not incorporated in this project.

5. Design for Accessibility of Physically Handicapped Personnel: Provisions for physically handicapped personnel are not required in this project.

6. Use of Air Conditioning: Ceiling "U" factors will be made to conform WITH DOD 4270.1-M.

7. Preservation of Historical Sites and Structures: This project does not directly or indirectly affect a district, site, building, structure, object, or setting which is listed in the National Register or otherwise possesses a significant quality of American history.

8. "New Start" Criteria for Commercial or Industrial Activities Program (OMB Circular A-76): Not applicable.

☆U.S. GOVERNMENT PRINTING OFFICE: 1978 — 703-173/34312-1

1. COMPONENT	FY 1985 MILITARY CONSTRUCTION PROJECT DATA	2. DATE
NAVY		1 AUG 1981

3. INSTALLATION AND LOCATION

MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA 28542

4. PROJECT TITLE

SEWAGE SYSTEM IMPROVEMENTS

5. PROJECT NUMBER

P-790

FACILITY STUDY

1. Project. Provide eight drying beds, mechanical-type grit removal system and mechanical agitator in chlorine contact chamber and oil/grease skimmer at Hadnot Point Sewage Plant. Extend force main from Pumping Station S-47. Increase pumping capacity at Stations S4005 and S2633. Provide new pump at Station FC-315.

2. Current and Planned Future Workload with Regard to this Project. The duration of need is indefinite, and the facilities will be utilized 24-hours daily, seven days per week. There is no projected decrease in the requirements to be performed by the facilities.

3. Description of Proposed Construction.

a. Type of Construction.

(1) Eight permanent sludge drying beds of reinforced concrete, grit removal equipment in collection chamber, chlorine mixing equipment, alterations to and construction of force mains, and oil/grease skimming tank.

(2) Alterations to pumping stations' electrical controls, minor demolition, site improvements, and other related work.

b. Replacement. Project consists of upgrading, expanding, and correcting deficiencies in the Base sewage collection and treatment facilities.

c. Description of Work to be Done.

(1) Primary Facility. Addition of reinforced concrete sludge drying beds, grit removal equipment, oil/grease skimming tank, chlorine mixing equipment at the sewage treatment plant and pump at lift station FC-315.

(2) Energy Conservation. Energy-efficient equipment will be utilized.

(3) Collateral Equipment.

(a) Built-in MCON Funded.

* Electrical alteration control systems, with monitors.

* Chlorine agitation/mixing equipment.

*Equipment with associated installation costs.

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S/N 0102-LF-001-3915

PREVIOUS EDITIONS MAY BE USED INTERNALLY UNTIL EXHAUSTED

☆U.S. GOVERNMENT PRINTING OFFICE: 1979—603-076/7127 2-1

*Grit removal equipment for Grit Chamber

*Sewage force mains

*Electric force main pumps

(b) Expense Items: None

(c) Investment Items: None

4. Cost Estimate: Area Cost Factor for Camp Lejeune, N. C. is 0.95, taken from an A&E study prepared by Henry Von Olsen and Associates in April 1979 and escalated to FY-83.

5. Justification for Project and for Scope of Project:

a. Justification for Project:

(1) Project: Proposed project is required to provide an adequate and functional sewage disposal system for the main Base areas.

(2) Current Situation: Filter beds are not sufficient to treat and dry solids during winter months and periods of adverse weather. Grit chambers and chlorination processes are inadequate. Pumps require alternation controls and/or replacement. Increasing amounts of grease and oil require excessive cleaning and hinder plant operations.

(3) Impact If Not Provided: Malfunction of a pumping station or overload of the sludge drying beds could result in flooding and contamination of the surrounding areas.

b. Justification for Scope of Project. The project scope is the minimum that can meet the deficiencies and requirements to support existing and proposed facilities in the main Base areas.

6. Equipment Provided from Other Appropriations: Not applicable.

7. Common Support Facilities: Not applicable.

8. Effect on Other Resources: No additional personnel will be required to operate the proposed facilities, and only a minimal increase in electricity charges will be required to operate the new facilities.

9. Siting of the Project: The facilities will be located in the main Base area of Camp Lejeune. See enclosure (1).

1. COMPONENT	FY 1985 MILITARY CONSTRUCTION PROJECT DATA	2. DATE
NAVY		1 AUG 1981

3. INSTALLATION AND LOCATION

MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA 28542

4. PROJECT TITLE	5. PROJECT NUMBER
SEWAGE SYSTEM IMPROVEMENTS	P-790

10. Other Graphic Presentations, including Photographs. None.

11. Economic Analysis. No analysis has been made. Requirements are as specified and cannot be met by any other means.

12. Environmental Impact. An Environmental Impact Assessment (EIA) is being written and will be processed through the local EIA Review Board. No adverse environmental impact is anticipated.

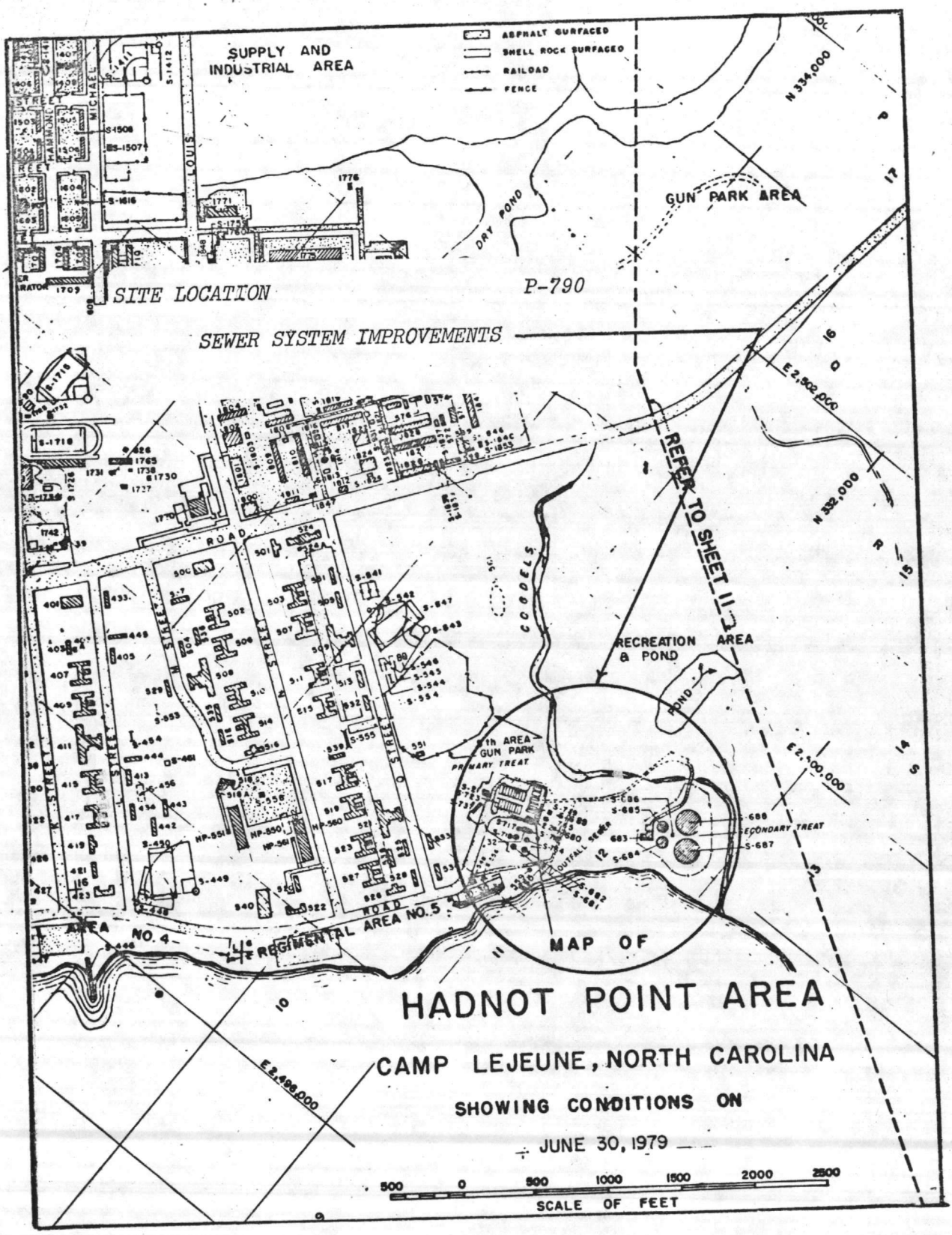
13. Quantitative Data. Not applicable.

14. Maintenance Facility. Not applicable.

15. Morale, Welfare, and Recreation Facilities. Not applicable.

16. Relocation Facilities. Not applicable.

17. Hazard Identification, Assessment and Analysis. Not applicable.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SCALE OF FEET

ENCL (1)

T-11300/3

MAIN/TH/rn
11300

JUN 0 2 1981

From: Base Maintenance Officer
To: Assistant Chief of Staff, Facilities

Subj: Modifications/Additions to Military Construction Program

Ref: FONECON btwn T. Hatcher, BMaintDept, and Al Austin, Fac, on 8 May 1981

Encl: (1) Expansion of Well Field, Hadnot Point Water Treatment Plant
(2) Water Trunk Main, Holcomb Boulevard and Hadnot Point Water Treatment Plants
(3) Additions to MCON Project P-790, Hadnot Point Sewage Treatment Plant
(4) French Creek Utility Distribution System Expansion

1. As discussed during reference (a), there are a number of utilities projects that need to be added to the subject Military Construction Program:

a. Expansion of Well Field, Hadnot Point Water Treatment Plant. A rapid decline in production from the existing well field at the Hadnot Point plant has resulted in significant reduction in raw water availability and the over-pumping of existing producing wells. Approximately 10 new wells, along with associated transport lines, will be required to restore the well field to an acceptable capacity of 150 percent of the plant capacity. Enclosure (1) contains a listing of the elements and associated FY-81 costs for this project.

b. Water Trunk Main, Holcomb Boulevard and Hadnot Point Water Treatment Plants. The trunk main system between the two plants needs to be reinforced. Due to the congested condition and lack of space in the vicinity of the Hadnot Point plant, no major expansion of this plant can occur. Accordingly, all future increases in water requirements for the Hadnot Point area will have to occur at the Holcomb Boulevard plant, which is scheduled for expansion in MCON Project P-785. The trunk system should be sized to allow delivery of approximately 5 million gallons per day from either area to the other in emergency conditions. This can be accomplished by one 24-inch line laid along Holcomb Boulevard. Enclosure (2) contains an element breakdown of the project along with FY-81 costs.

Either of the two water system upgrade projects can stand alone as MCON projects. However, combined with MCON Project P-785, Expansion of Holcomb Boulevard Water Treatment Plant, all of the present and future needs of the Hadnot Point area water supply will be satisfied in one project.

2. An update review of MCON Project P-790, Upgrade of the Hadnot Point Sewage Treatment Plant, indicates the need for several additions to the project:

a. Lift Station FC-315 receives sanitary waste from the entire French Creek Area and pumps it directly to the Hadnot Point Sewage Treatment Plant. Both of the 1000 gallons per minute pumps are required to handle peak influent flows into the station. A third 1000 gallons per minute pump is needed to serve as an alternate and as a reserve during periods when the other pumps are down for maintenance or repair.

b. Increasing amounts of grease and oil coming into the Hadnot Point Sewage Treatment Plant is creating operational problems at the plant. Under the present system, the oil and grease that can be skimmed from the primary tanks are pumped into the digesters. The growing volumes of grease and oil have created a requirement for frequent pumping of the digesters, and the increasing presence of oil and grease in other parts of the plant has further hindered plant operation. Project P-996, presently under construction, provides for collection of runoff from various areas of the base, with delivery to the sanitary sewer system. Although oil/water separators are being installed as a part of this project, additional oil residue can be expected to appear at the plant. In order to maintain satisfactory operation of the plant, an oil grease/skimming tank, with automatic skimmers, and a holding tank will be required.

Enclosure (3) contains an element listing of the project along with FY-81 costs.

4. The final area that needs to be reviewed for project development is the French Creek Area. Based on the proposed development between FY-82 and FY-87, 21 buildings will be added to the existing utility distribution system, creating a level of demand that cannot be met by the existing distribution system. Further complicating the situation is the possibility of construction of a new plant for burning solid waste and waste wood. A feasibility study by J. E. Sirrine Company, Contract No. 80-B-3801, for construction of the plant is presently underway. Based on known proposed construction and the need for spare capacity for future expansion, the following utility system upgrades are needed:

a. Steam Distribution System. Provision must be made for a new 10-inch steam line parallel to the existing 10-inch line from Building 1700, Central Heating Plant, to the French Creek Area, and a condensate return piping system from the French Creek Area to the existing 6-inch condensate return line. In order to provide utility service to the proposed development between Main Service Road and Sneads Ferry Road, an 8-inch steam line and a 4-inch condensate return line will be required.

b. Water Distribution System. The existing water distribution system should be expanded and looped within the French Creek Area to provide adequate domestic and industrial water supply, and fire protection.

c. Sanitary Sewer System. Gravity sewage collection systems for each of the French Creek areas where construction is to occur will be required. To meet the future growth, three new lift stations must be constructed, and the capacity of existing station FC-203 must be increased to handle the increased flow. A new combination 6-inch, 10-inch gravity line to existing FC-315 will be required to provide discharge from FC-203.

Enclosure (4) contains an element breakdown of the project along with FY-81 costs.

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5. For additional information on subject additions to the MCON Program, contact Terry Hatcher, Director, Utilities Division, ext. 5161.

F. H. MOUNT

Additions to MCON P-790 - Hadnot Point Sewage Treatment Plant

Station FC 315

New Pump with Motor/shafting	$ 8,000
Piping and Fittings	1,500
Electrical	1,700
Total Construction	$11,200
SIOH (5.5%)	616
Contingency (10%)	1,182
Total CWE	$12,998
Design (6%)	780
Total	$13,778

Automatic Oil/Grease Skimming Tank

Tank (250,000 gal)	$200,000
Oil/Grease Storage Tank (5000 gal)	5,200
Piping, valves, other mechanical	35,000
Electrical	15,000
Total Construction	$255,200
SIOH (5.5%)	14,036
Contingency (10%)	26,924
Total CWE	$296,160
Design (6%)	17,769
Total	$313,929