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A. P-790, SEWERAGE SYSTEM ADV: JUN 85 AWD: JUL 86 B. P-612, COMBAT VEHICLE M (TWO-STEP PROCUREMENT; RFP: 7 JUL 86 AWD: MAR 87 C. P-614, FLEET MARINE FOR NORFOLK (TWO-STEP PROCUREMENT;	IMPROVEMENT, MCB CA  MAINTENANCE SHOP, CA  CCMBINED WITH P-614  CCE SUPPORT WAREHOUS	MP LEJEUNE  MP ELMORE, NORFOLK  FOR RFP)  E, CAMP ELMORE,
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DEPARTMENT OF THE NAVY

PROJECT ENGINEERING DOCUMENTATION

## SEWERAGE SYSTEM IMPROVEMENTS

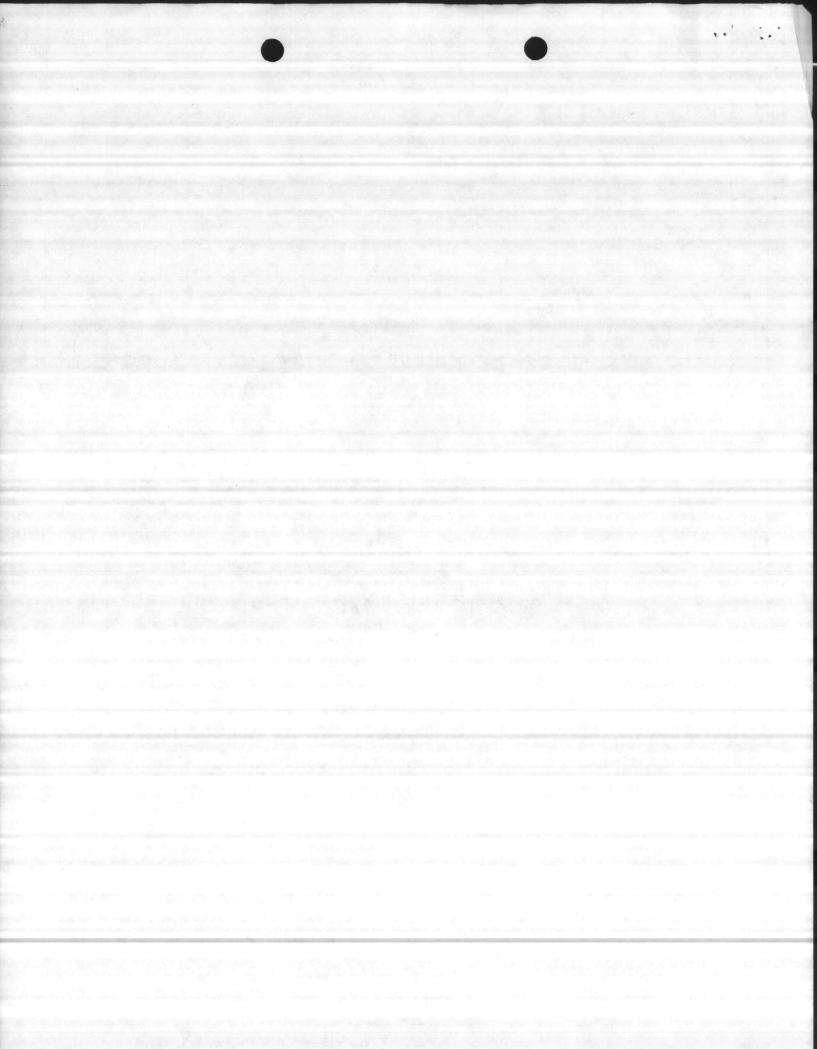
(P - 790)

FY 1986 MCON

MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

PREPARED BY:

ATLANTIC DIVISION NAVAL FACILITIES ENGINEERING COMMAND NORFOLK, VA. 23511



1. COMPONENT NAVY F	Y 19_86MILITARY C	ONSTRUCTIO	N PR	OJECT DA	TA	DATE JULY 1984
3. INSTALLATION AND L MARINE CORPS BAS CAMP LEJENUE, NO	SE			T TITLE		
5. PROGRAM ELEMENT	6. CATEGORY CODE 831-09	7. PROJECT NU		, i	<b>ст со</b> вт	(\$000)
	9. C	OST ESTIMATES			7	100 TO
	ITEM		U/M	QUANTITY	UNIT	COST (\$000)
SEWERAGE SYSTEMS	IMPROVEMENTS					700
3. Camp Geiger SUB-TOTAL CONTINGENCY (10 TOTAL CONTRACT C SUPERVISION, INS TOTAL REQUEST TOTAL REQUEST (R	Pump Station SFC- STP %) OST PECTION & OVERHEAD	(5.5%)	LS LS LS	-		(216) (324) (160) 700 70 770 42 812 800 0

## This project will Provide:

- A. At Hadnot Point STP 8 new sludge drying beds; replace two pumps and electrical control, disconnects, etc. at main pump station; replace one grit pump and provide 150' of 4" force main; and demolish chlorine contact chamber and grit drying beds.
- B. At Pump Station SFC-315 A new pump station with 2-3000 gpm pumps and approximately 3700' of 14" force main from pump station to Hadnot Point STP.
- C. At Camp Geiger STP 8 new sludge drying beds.
- 11. REQUIREMENT:

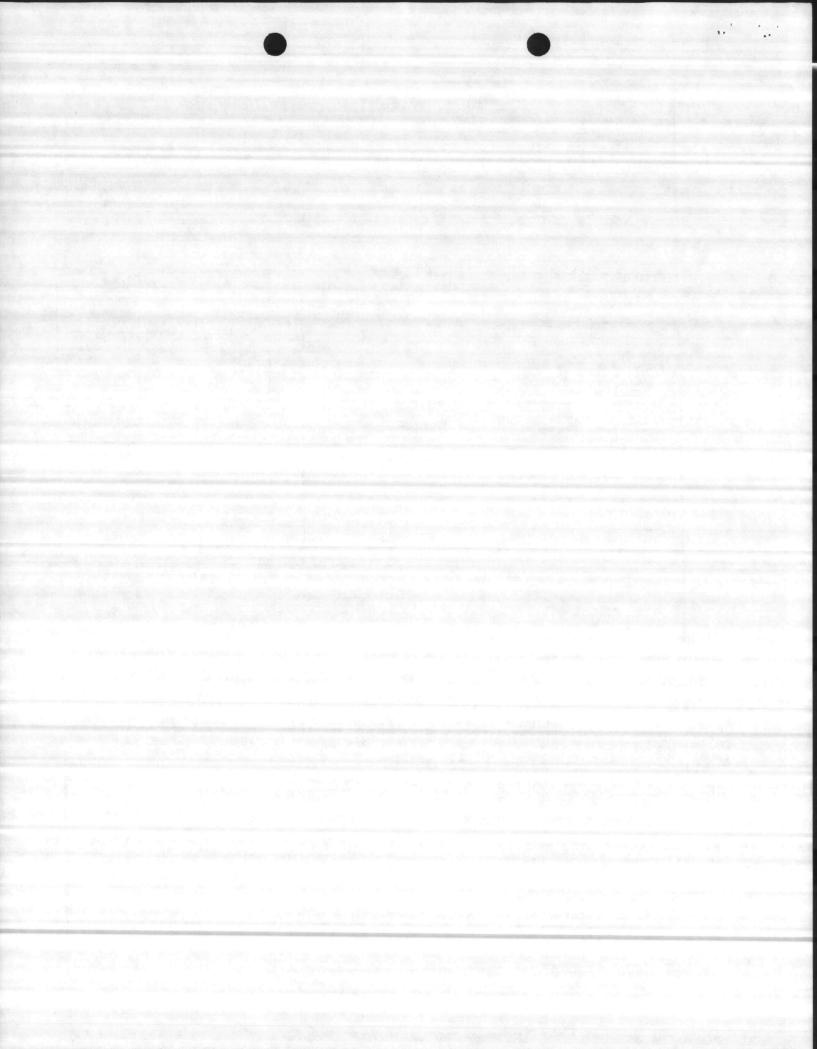
N/A

Adequate: N/A

Substandard: N/A

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.



1. COMPONENT NAVY	FY 19 86 MILITARY CONSTRUCTION PROJECT DATA	2. DATE 1 JULY 1984
3. INSTALLATION	ORPS BASE, CAMP LEJEUNE, NORTH CAROLINA	
4. PROJECT TITLE SEWERAGE	전 사람들은 그리는 이 전하는 맛을 하고 하는 것이라고 하는 것 같아. 그리는 그 그리는 그 모양이 모든 그리고 하다면 그렇다.	790

CURRENT SITUATION: The existing sludge drying beds at Camp Geiger and Hadnot Point STP's are inadequate. The grit pump and two of the pumps at the main pump station at Hadnot Point STP are old and require replacement. Sewage pump station SFC-315 at French Creek is operating at capacity and in urgent need of larger capacity station due to the planned expansion in the near future at French Creek.

## IMPACT IF NOT PROVIDED:

Inadequate and/or malfunctioning equipment could result in surcharging and/or flooding of facilities which could create a potential health hazard and damage to the facilities.

### ENVIRONMENTAL PROTECTION

The project Environmental Assessment has been reviewed, and where required, the design concepts give consideration to eliminating adverse environmental effects consistent with applicable directives.

## PRESERVATION OF HISTORICAL SITES AND STRUCTURES

The project facilities do 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.

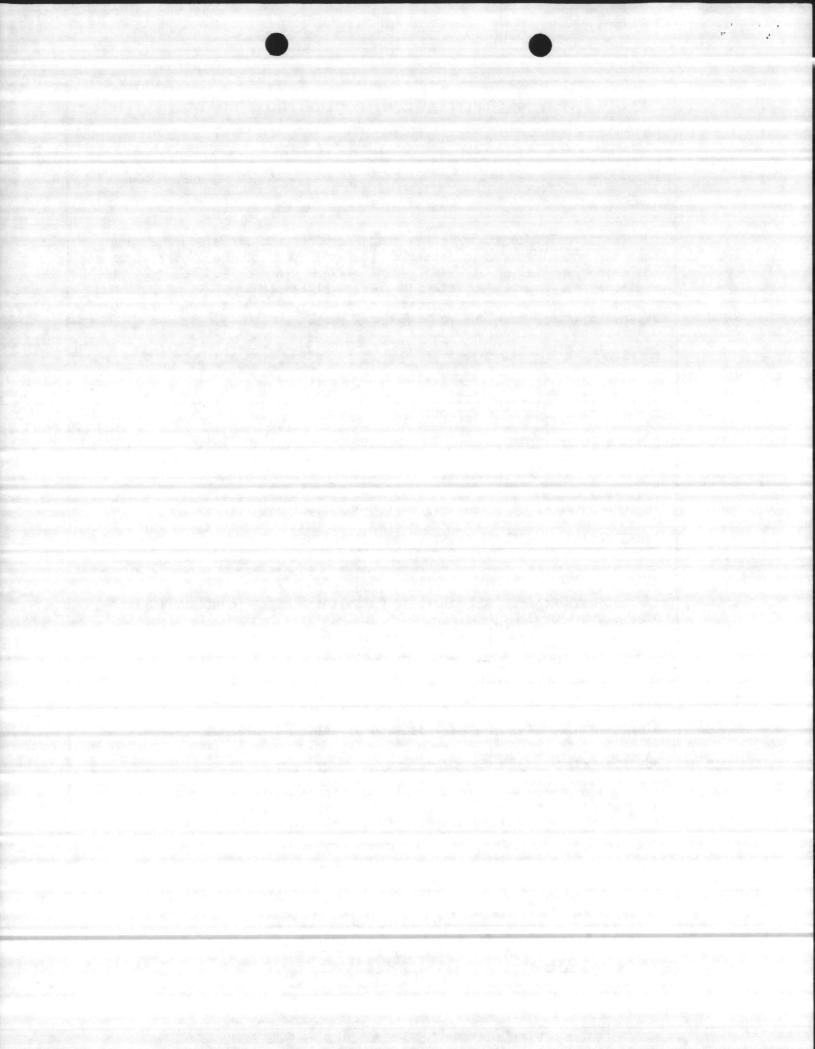
## FLOODPLAIN MANAGEMENT AND WETLANDS PROTECTION

#### FLOOD HAZARDS EVALUATION

Requirements of Executive Order No. 11988 (Floodplain Management) and Executive Order No. 11990 (Protection of Wetlands) are not applicable.

#### COASTAL ZONE MANAGEMENT

In accordance with the Coastal Zone Management Act of 1972 (as amended), this project will not directly affect the coastal zone and a coastal consistency determination is not required.



1. COMPONENT NAVY	FY 1986_MILITARY CONSTRUCTION PROJECT DATA	2. DATE 1 JULY 1984
3. INSTALLATION . MARINES CO	ORPS BASE, CAMP LEJEUNE, NORTH CAROLINA	
4. PROJECT TITLE SEWERAGE S	SYSTEM IMPROVEMENTS P-7	90

## POLLUTION ABATEMENT

This project will not cause additional air or water pollution.

## DESIGN FOR ACCESSIBILITY OF PHYSICALLY HANDICAPPED PERSONNEL

Provisions for physically handicapped personnel are not required in this facility as its use is specifically restricted to able-bodied personnel.

## ENDANGERED SPECIES PROTECTION

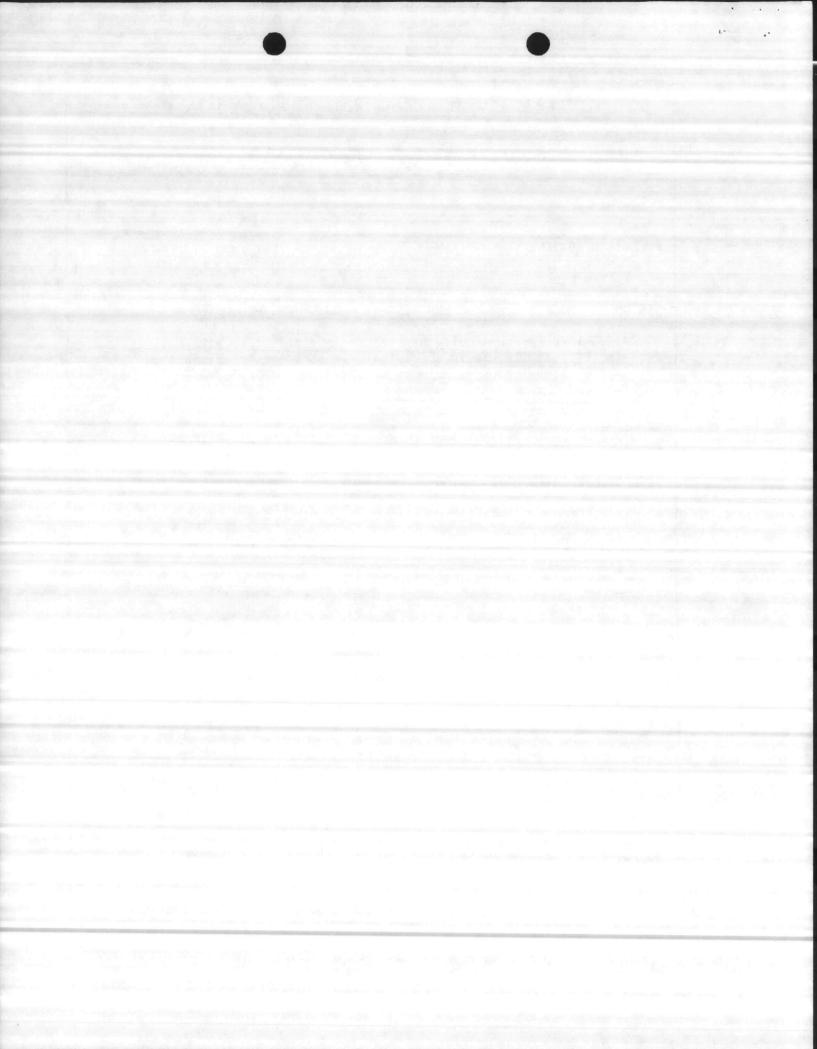
This project will not jeopardize conservation of endangered or threatened species.

## INTERGOVERNMENTAL COORDINATION

No Intergovernmental coordination is required for this project.

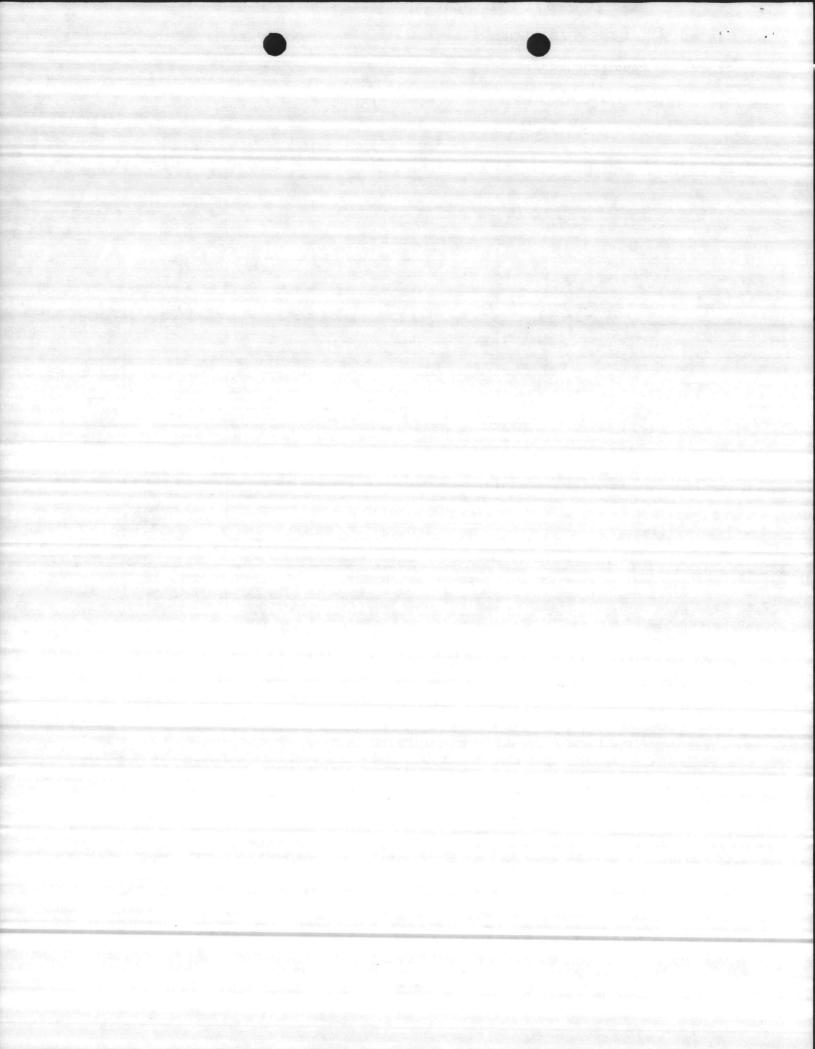
## ECONOMIC ANALYSIS

A secondary economic analysis was not prepared for this project at 35% design.



BUDGET ESTIMATE SUMMARY SHEET FOR P- 790

Title: SEWERAGE S	SYSTEM MPRV	т	1	_Come Esc	calated to:_	APRIL 86		
Location: CAMP LE	JEUNE			Escalation: 9%				
Prepared by: SPIC	CHER	Dat	e: 7/20/84	Continger	ncy: 10%			
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COLLATERAL EQUIPMENT REQUIREMENTS (Initial Outfitting)
LANTDIV NORVA 4-11010/6 (Rev.11/81)

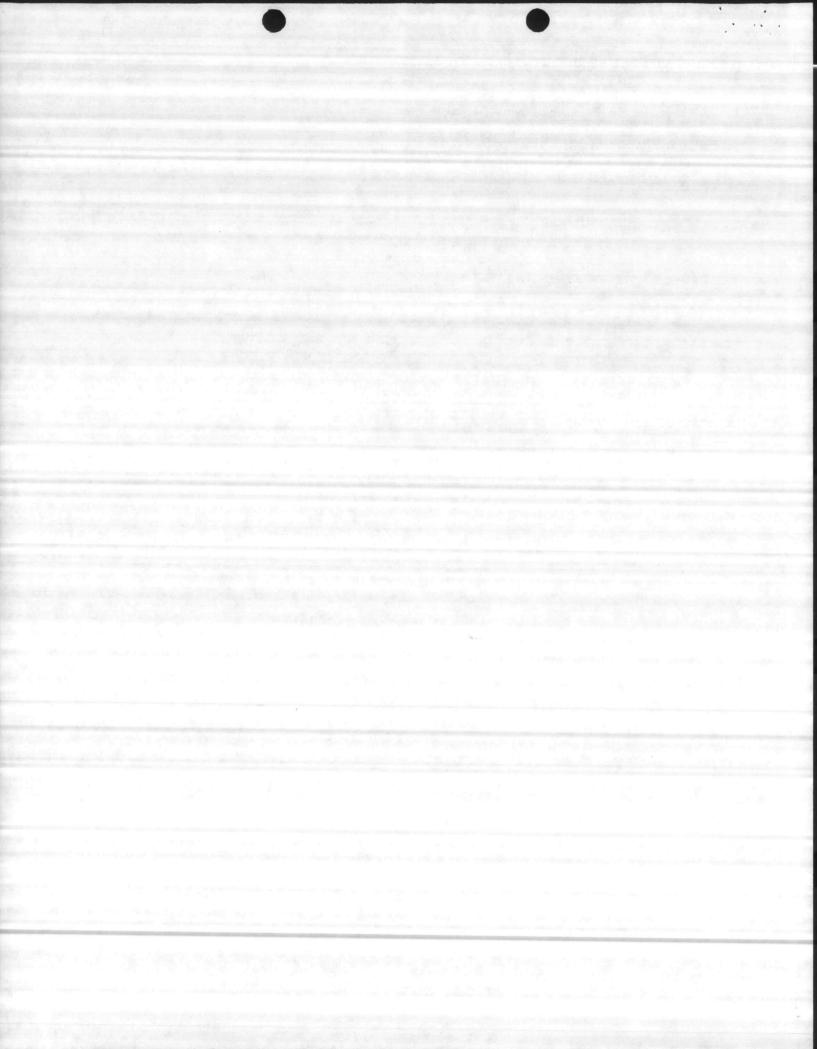
DATE

1 July 1984

1. ACTIVITY (Name and Location)

MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA

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NE CORPS BASE, CAMP LEJEUNE	, NORTH CAROLINA	PROJECT TITLE SEWERAGE	SYSTEM IMP	PROVEMENTS	P- 79	90 DATE	1 July 1984
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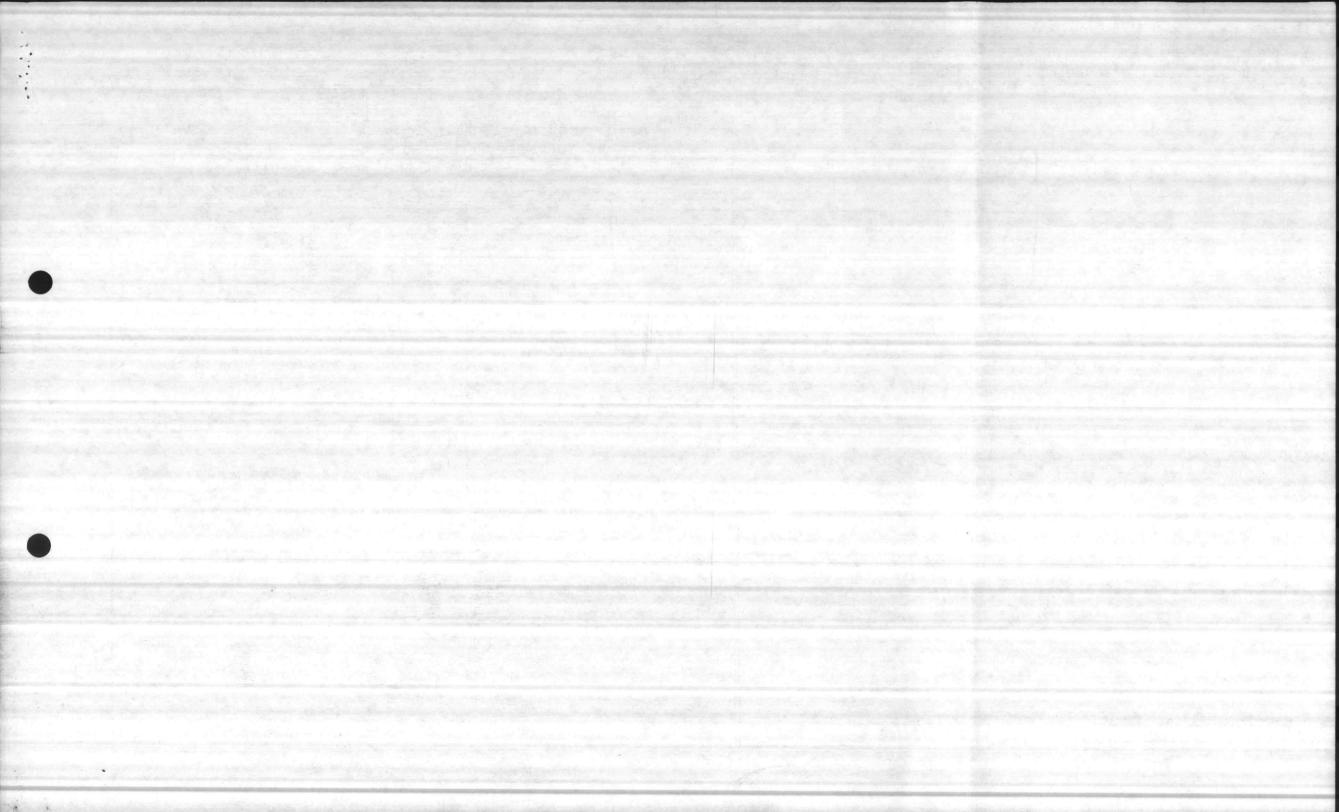
FY PROGRAM: 1986

MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA	SEWERAGE	E SYSTEM IN	MPROVEMENTS	P-	790	DATE	1 July 1984
SKETCH AREA		A&E/GF	PLANS AND SPECIFIC			NSTR	DESIGN PROGRESS INFO PROVIDED CONGRESS
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FY PROGRAM: 1986

MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA	PROJECT TITLE SEWERAGE SYSTE	M IMPROV	/EMENT'S	P- 7	90	1 July 1984
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1 JAN 1986

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COMMENTS:

COPY TO MAC DAVIS

FILE IN 8-790

Sabi wat t AAN TEUR 

6280/5 FAC JAN 3 0 1986

Prom: Commanding General, Marine Corps Base, Camp Lejeune

To: Commander, Atlantic Division, Naval Facilities Engineering

Command, Norfolk, VA 23511-6287 (Code 405)

Subj: SEWAGE FORCE MAIN CROSSING AT COGDELL'S CREEK, P-790,

SEWAGE SYSTEM IMPROVEMENTS

Ref: (a) Onsite mtg btwn Mr. Heine, U.S. Army Corps of Engineers; Mr. Mercer, NC Div of Coastal Mgmt; and Mr. Alexander, MCB EnvEngr. of 9 Jan 86

Encl: (1) USCOE 1tr SAWCO-EP dtd 14 Jan 86

- 1. We are forwarding the enclosure for your use in designing the subject project. As indicated by Messrs. Mercer and Heine, a more favorable construction method would be to lay the pipe on the stream bottom. This practice would avoid undue bottom disturbance and sedimentation.
- 2. We request you forward final construction drawings to the above agencies for their concurrence. For further information, please contact Mr. Bob Alexander, AV 484-3034.

R. A. TIEBOUT By direction

Blind copy to:
BMO
EnvEngr

Copy to: Brock Davis
2/3/86

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DEPARTMENT OF THE ARMY

WILMINGTON DISTRICT, CORPS OF ENGINEERS P.O. BOX 1890 WILMINGTON, NORTH CAROLINA 28402-1890

SAWCO-EP

IN REPLY REFER TO

14 January 1986

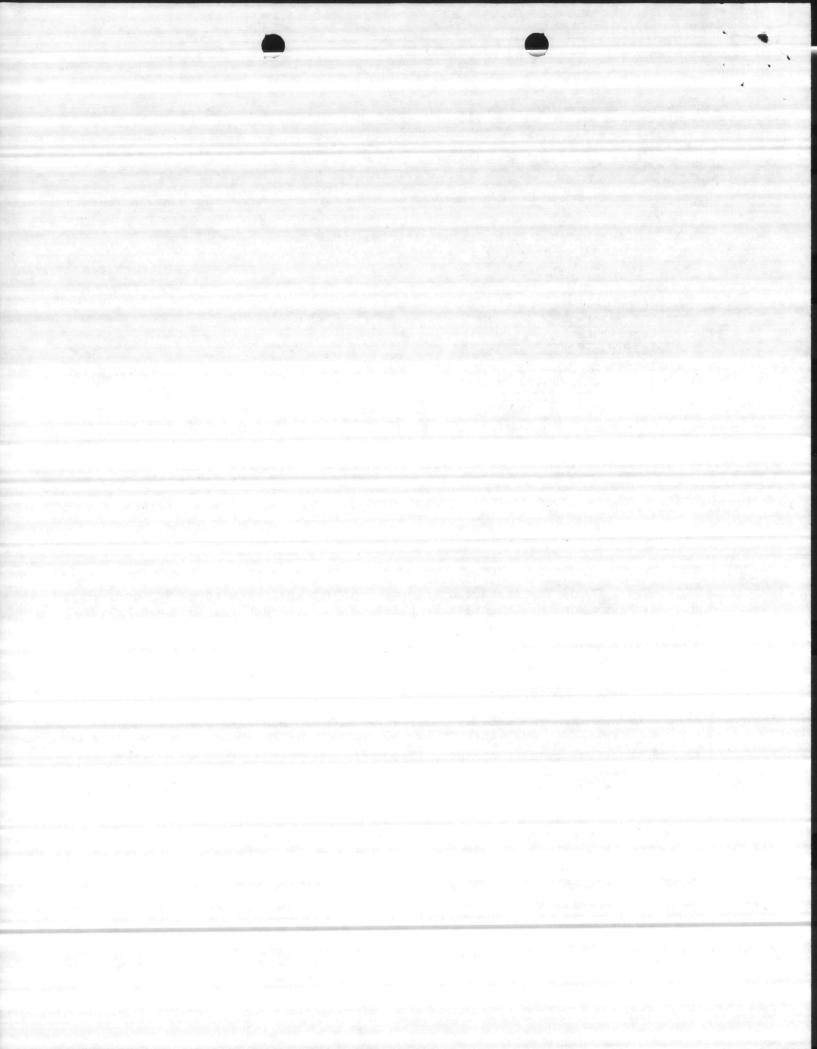
SUBJECT:

Department of the Army Permits Nos. SAWCO86-N-067-0023 and

SAWC082-N-067-0170

Commanding General
Marine Corps Base
ATTN: Assistant Chief of Staff,
Facilities
Camp Lejeune, NC 28542

- 1. On 9 January 1986 Mr. Robert Alexander, Marine Corps Base Environmental Engineer and other members of your staff met with Mr. Hugh Heine of the Corps of Engineers regarding several projects within the Marine Corps Base, Camp Lejeune, Onslow County, North Carolina.
- 2. During this meeting the following sites were visited:
- a. The lift station adjacent to Cogdell's Creek (after-the-fact permit SAWCO86-N-067-0023) was inspected and Lt. Ham, Warren Cook with J. W. Cook, Inc., Mr. Black, and Mr. Vic Yeck were informed of the general and special conditions of the Federal permit. As indicated, all fill material (except the area directly adjacent to the lift station) is to be removed from the wetlands. No parking or any other fill material is to be placed and retained in any wetland area. Also, once construction has been completed, the previously filled wetlands will be restored to their elevation and contour.
- b. The proposed force main crossing (P-790) of Cogdell's Creek adjacent to the existing sewer treatment plant. The pipeline would cross a 10- to 20-foot wide nontidal creek. As indicated, a pile supported pipeline crossing of the creek would not require a Department of the Army permit. Also, if the pipeline is to be placed below the creek bed, this construction technique may require a Department of the Army permit. Before any work is initiated, please provide us with a copy of the construction plans.
- c. The bank stabilization project (Department of the Army permit SAWCO82-N-067-0170) site off the New River was also visited. Your staff was informed that no rock riprap is to be pushed from the top of the bank into the water below. All riprap material will consist of rock, concrete, or other clean



SAWCO-EP

SUBJECT: Department of the Army Permits Nos. SAWC086-N-067-0023 and SAWC082-N-067-0170

building rubble. No asphalt is to be used and no marsh or wetlands will be filled as a result of this work. As indicated, the toe of the riprap will not extend any further than 15 feet waterward of the mean high water (MHW) contour. Where the bank subsided and the river material extends further than 15 feet waterward of the MHW contour, the excess riprap material (further out than 15 feet) will be removed. Also, before any new areas are riprapped, the alignment will be delineated by a representative of the Corps of Engineers.

3. If you have any further questions or comments, please contact Mr. Heine at telephone  $(919)\ 343-4725$  or FTS 671-4725.

FOR THE COMMANDER:

CHARLES W. HOLLIS

Chief, Regulatory Branch

CF:

Mr. Jim Mercer
Division of Coastal Management
North Carolina Department of
Natural Resources and
Community Development
Post Office Box 769
Morehead City, North Carolina 28557



1. COMPONENT			2. DATE				
NAVY	FY 1	TA   1	JULY 1984				
3. INSTALLATION AN MARINE CORPS BA NORTH, CAROLINA	ASE,			4. PROJECT	TTITLE NGE SYSTEM	IMPRO	VEMENTS
5. PROGRAM ELEMEN	IT	6. CATEGORY CODE 831-09	7. PROJECT NUMBER P-790			1,200	
		9. Co	OST ESTIMAT	res			
ESCALATION 9% ESCALATED TO ITEM 1 APR 1986					QUANTITY	UNIT	COST (3000)
SEWERAGE SYSTEMS IMPROVEMENTS							1,070
3. Camp Geiger SUB-TOTAL CONTINGENCY (10 TOTAL CONTRACT SUPERVISION, IN TOTAL REQUEST TOTAL REQUEST	ek Pir STI	ump Station SFC-3 P CTION & OVERHEAD	(5.5%)	LS LS LS	-	-	(586) (324) (160) 1,070 107 1,177 65 1,242 1,200
<b>5</b> 9						Tes es	

10. DESCRIPTION OF PROPOSED CONSTRUCTION
This project will Provide:

- A. At Hadnot Point STP A new equalization lagoon and a new pump station; 8 new sludge drying beds; replace two pumps and electrical control, disconnects, etc. at main pump station; replace one grit pump and provide 150' of 4" force main; and demolish grit drying beds.
- B. At Pump Station SFC-315 A new pump station with 2-3000 gpm pumps and approximately 3700' of 14" force main from pump station to Hadnot Point STP.
- C. At Camp Geiger STP 8 new sludge drying beds.

11.	REQUIREMENT:	N/A	ADEQUATE:	N/A	SUBSTANDARD:	N/A

## PROJECT:

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

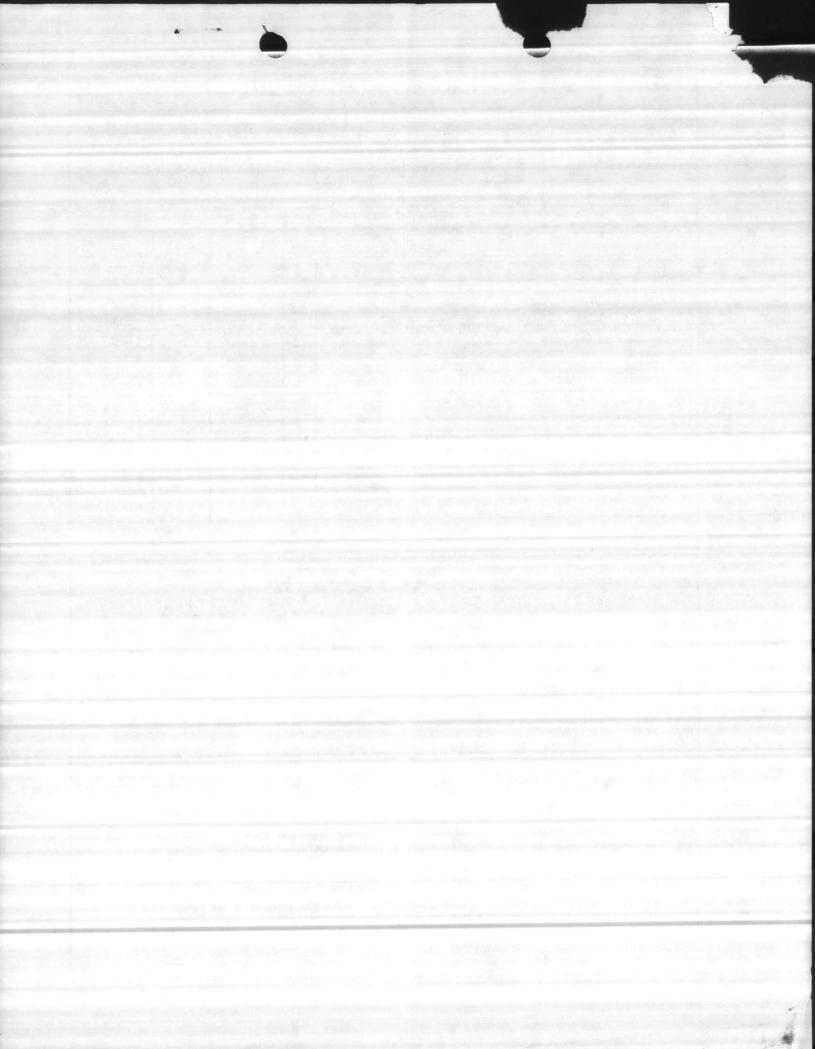
## REQUIREMENT:

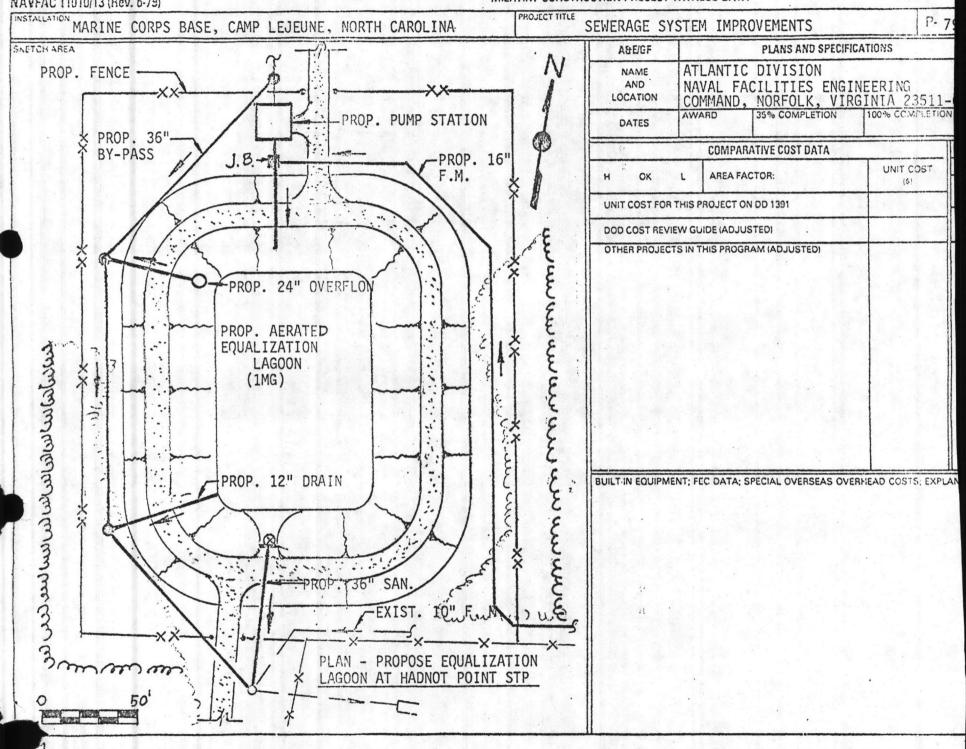
To provide adequate sewage disposal and treatment facilities for the Base to comply with statutory regulations of the Federal Water Pollution Control Act.

DD 1 DEC 76 1391

PREVIOUS EDITIONS MAY BE USED INTERNALLY

PAGE NO.





WILDS PROKE ASH



#### DEPARTMENT OF THE NAVY

ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511

444-9670 IN REPLY REFER TO:

> 11010 09A21B3

2 9 AUG 1984

From: Commander, Atlantic Division, Naval Facilities Engineering Command

To: Commander, Naval Facilities Engineering Command (Code 05)

Subj: FY 1986 PROJECT ENGINEERING DOCUMENTATION (PED) FOR PROJECT P-790, SEWAGE SYSTEM IMPROVEMENTS, MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA

CAROLIN

Ref: (a) NAVFACENGCOM 1tr O512A1/AGT of 13 Oct 1983

(b) NAVFACINST 11010.14N of 4 May 1983

(c) NAVFACINST 11010.32

Encl: (1) Subject PED with Witness Data Sketch (5 copies)

(2) Detailed Engineering Cost Estimate (2 copies)

(3) Project Design and Construction Data

- 1. As requested by reference (a), enclosures (1), (2), and (3), prepared in accordance with reference (b), are submitted.
- 2. It is certified that: (a) the PED has been prepared in accordance with reference (b); (b) project scope and cost are the minimum required to satisfy the operational requirements and are supported by current SFPS documentation in accordance with reference (c); (c) the utilities are adequate to support the additional load imposed by the project (d) the facility design is generally acceptable to the Activity Commanding Officer, and satisfies the Activity's requirements; and (e) the DD Form 1391 has been reviewed by both the Activity and LANTNAVFACENGCOM.
- 3. The budget cost of this project has been reduced to \$800,000 as a result of deleting the Automatic Oil Process Skimming Tank from the scope. Activity concurs that provision of oil separators at pollutant source is a better technical and more economical solution.
- 4. By copy of this letter, the Commandant of the Marine Corps (Code LFF-1); and the Commanding General, Marine Corps Base, Camp Lejeune; are requested to provide any comments directly to NAVFACENGCOM (attention Code 05) with a copy to LANTNAVFACENGCOM (attention Code 09A2). If no comments are submitted within 30 days, concurrence will be assumed.

E. W. ATKINSON, P. E.

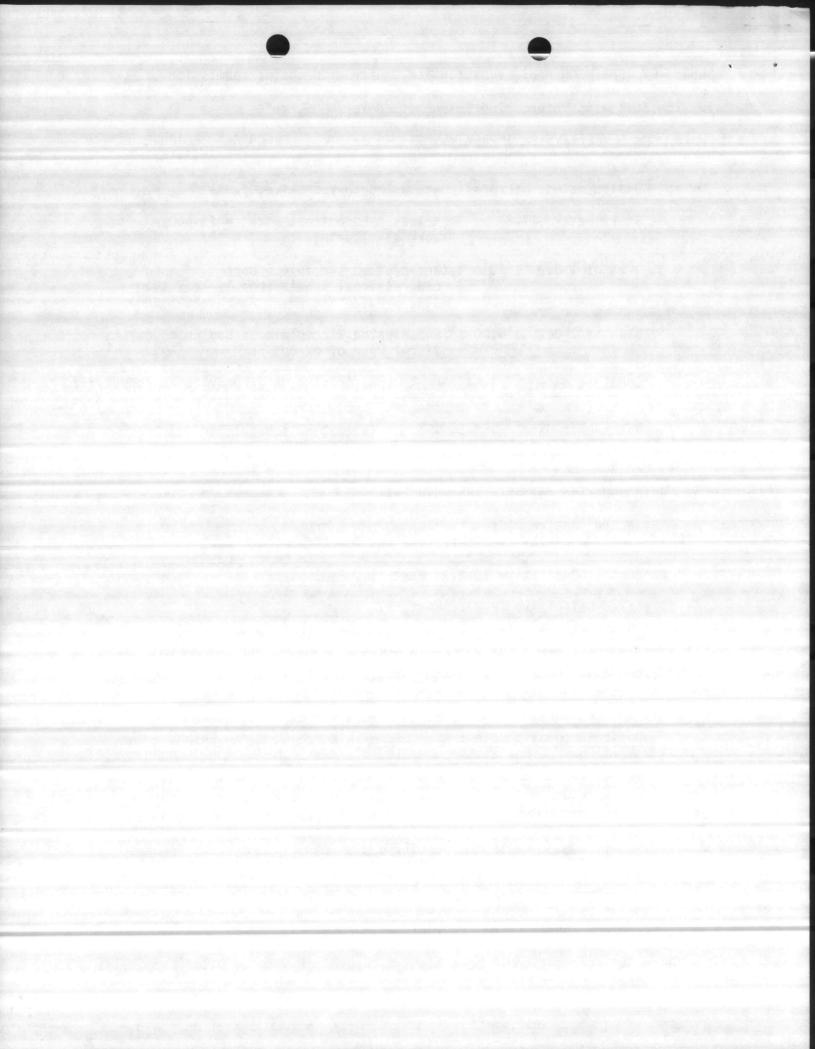
By direction

Copy to: (w/2 copies encl (1))
CMC WASHINGTON
MCB CAMP LEJEUNE





Subj: FY 1986 MCON Project Design and Construction Data; submission of 1. The following information is submitted for MCON Project: P-790 SEWAGE SYSTEM IMPROVEMENTS MCB CAMP LEJEUNE NC P-No. Title Activity a. Design dates: (Express date as month-year, i.e. 1-83) Start Date 11-83 (Actual A/E contract date or in-house work start date) % as of 1 Jan 60 % (anticipated % complete upon congressional submission; if less than 35%, provide statement on reverse side) % as of 1 Oct 100 % (anticipated % complete at beginning of fiscal year of execution Complete date 4-84 (p&s complete and ready to reproduce for advertisement, actual or scheduled date) 35% submit date 8-84 (actual or scheduled date) b. Design type X Unique design for this job only, or "Standard" design. If standard design, indicate type and identify: Conceptual Definitive (P-272, Part I) Detailed Definitive (P-272, Part II) Standard Construction Drawing/Specification (P-34) Site Adaptation (Identify specific definitive or standard as listed in applicable publication, or identify project and location of site adapted design.) c. Design accomplished by: A/E X In-house d. Design Cost (\$000): 1. 29,000 Production of plans and specs (costs included within the six percent statutory cost limitations). 2. 14,000 All other design costs (other A/E costs & In-house costs) 3. 43,000 4. -0-Total (1) + (2) which also equals (4) + (5)All contract costs 5. 43,000 All In-house costs Project construction contract award date: 12-85 The above information is consistent with project Witness Data (Form W-1).



DEPARTMENT OF THE NAVY

PROJECT ENGINEERING DOCUMENTATION

SEWERAGE SYSTEM IMPROVEMENTS

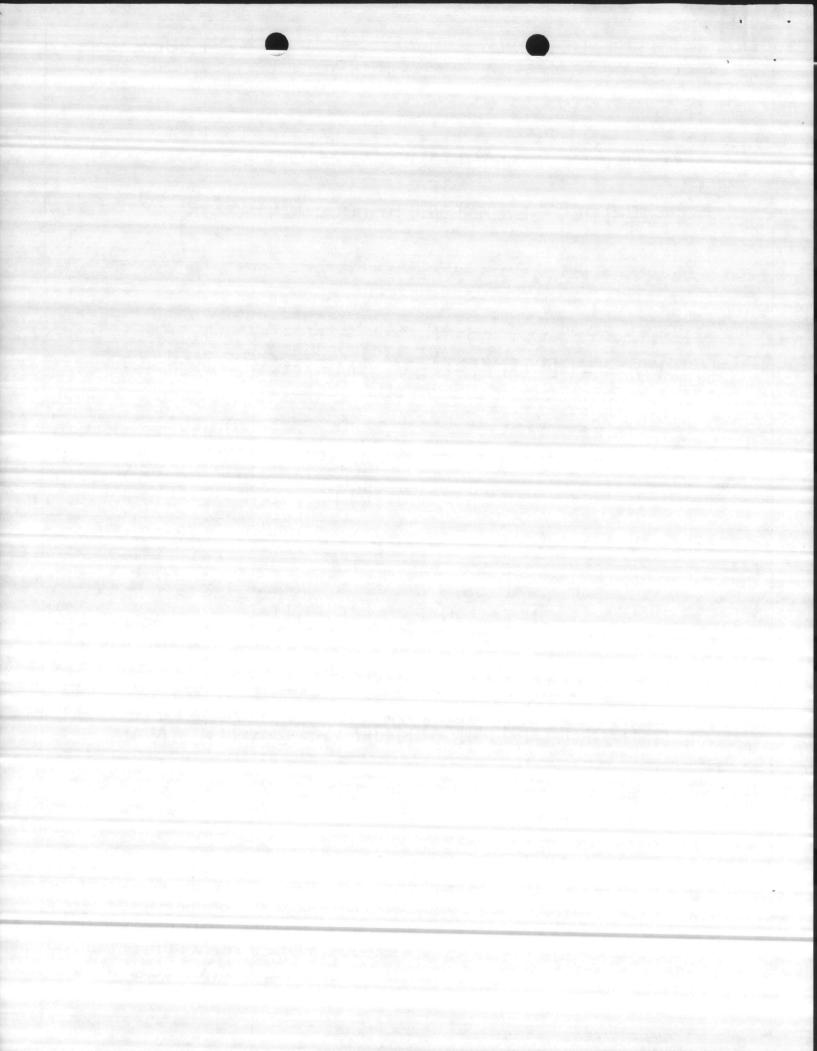
(P - 790)

FY 1986 MCON

MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

PREPARED BY:

ATLANTIC DIVISION NAVAL FACILITIES ENGINEERING COMMAND NORFOLK, VA. 23511



NAVY FY 19_86 MILITARY CONSTRUCTION PROJECT DATA					TA	JULY 1984
3. INSTALLATION AND LO MARINE CORPS BASE CAMP LEJENUE, NOR	Appropriate and the second		4. PROJEC SEWEI	T TITLE	510	Self-line transition
5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT	NUMBER	8. PROJE	CT COST (	\$000)
	831-09		790		800	
	9. C	OST ESTIMATI	ES			
	ITEM		U/M	QUANTITY	UNIT	COST (\$000)
SEWERAGE SYSTEMS	IMPROVEMENTS					700
1. Hadnot Point 2. French Creek 3. Camp Geiger S SUB-TOTAL CONTINGENCY (10 TOTAL CONTRACT CO SUPERVISION, INSP TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST (RO EQUIPMENT PROVIDE	Pump Station SFC- TP  %) ST ECTION & OVERHEAD  UNDED) D FROM OTHER APPR	(5.5%)	LS LS LS			(216) (324) (160) 700 70 770 42 812 800 0

## This project will Provide:

- A. At Hadnot Point STP 8 new sludge drying beds; replace two pumps and electrical control, disconnects, etc. at main pump station; replace one grit pump and provide 150' of 4" force main; and demolish chlorine contact chamber and grit drying beds.
- B. At Pump Station SFC-315 A new pump station with 2-3000 gpm pumps and approximately 3700' of 14" force main from pump station to Hadnot Point STP.
- C. At Camp Geiger STP 8 new sludge drying beds.
- 11. REQUIREMENT:

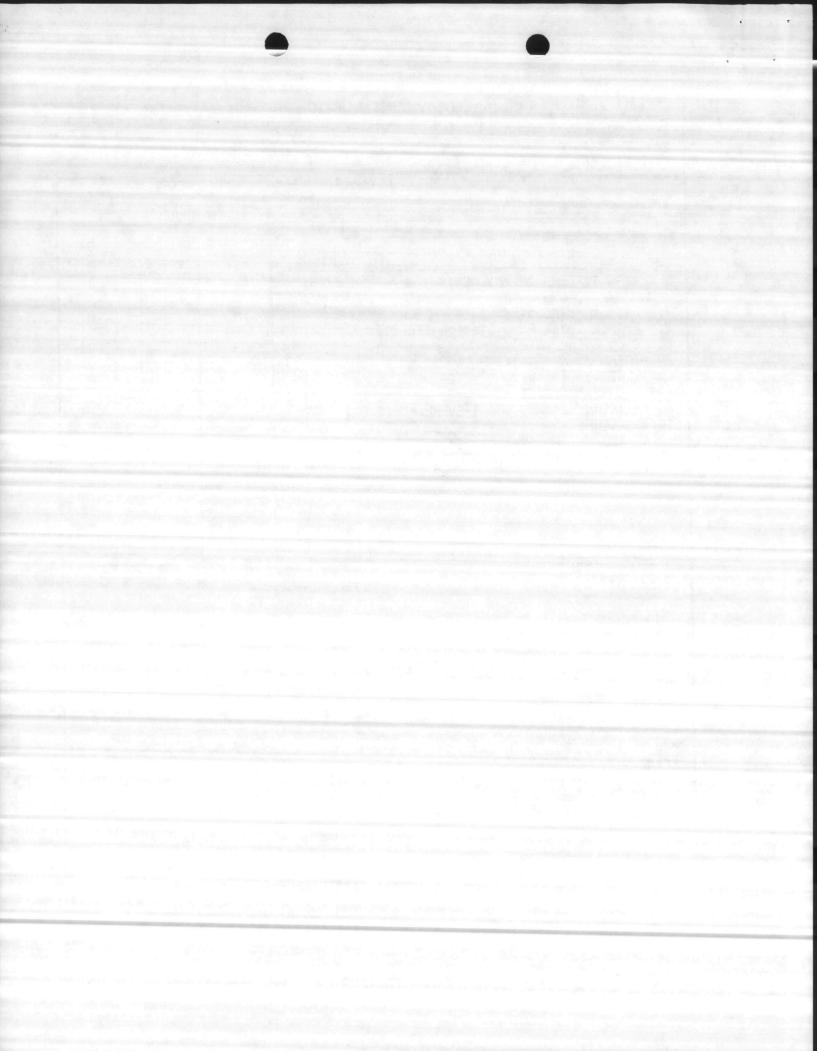
N/A

Adequate: N/A

Substandard: N/A

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.



1. COMPONENT NAVY	FY 19 86 MILITARY CONSTRUCTION PROJECT DATA	1 JULY 1984
3. INSTALLATION		
MARINES C	ORPS BASE, CAMP LEJEUNE, NORTH CAROLINA	
4. PROJECT TITLE	5. PROJE	CT NUMBER
SEWERAGE	SYSTEM IMPROVEMENTS P-	790
	2000 1980 1980 1980 1980 1990 1980 1980 1	

CURRENT SITUATION: The existing sludge drying beds at Camp Geiger and Hadnot Point STP's are inadequate. The grit pump and two of the pumps at the main pump station at Hadnot Point STP are old and require replacement. Sewage pump station SFC-315 at French Creek is operating at capacity and in urgent need of larger capacity station due to the planned expansion in the near future at French Creek.

## IMPACT IF NOT PROVIDED:

Inadequate and/or malfunctioning equipment could result in surcharging and/or flooding of facilities which could create a potential health hazard and damage to the facilities.

#### ENVIRONMENTAL PROTECTION

The project Environmental Assessment has been reviewed, and where required, the design concepts give consideration to eliminating adverse environmental effects consistent with applicable directives.

## PRESERVATION OF HISTORICAL SITES AND STRUCTURES

The project facilities do 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.

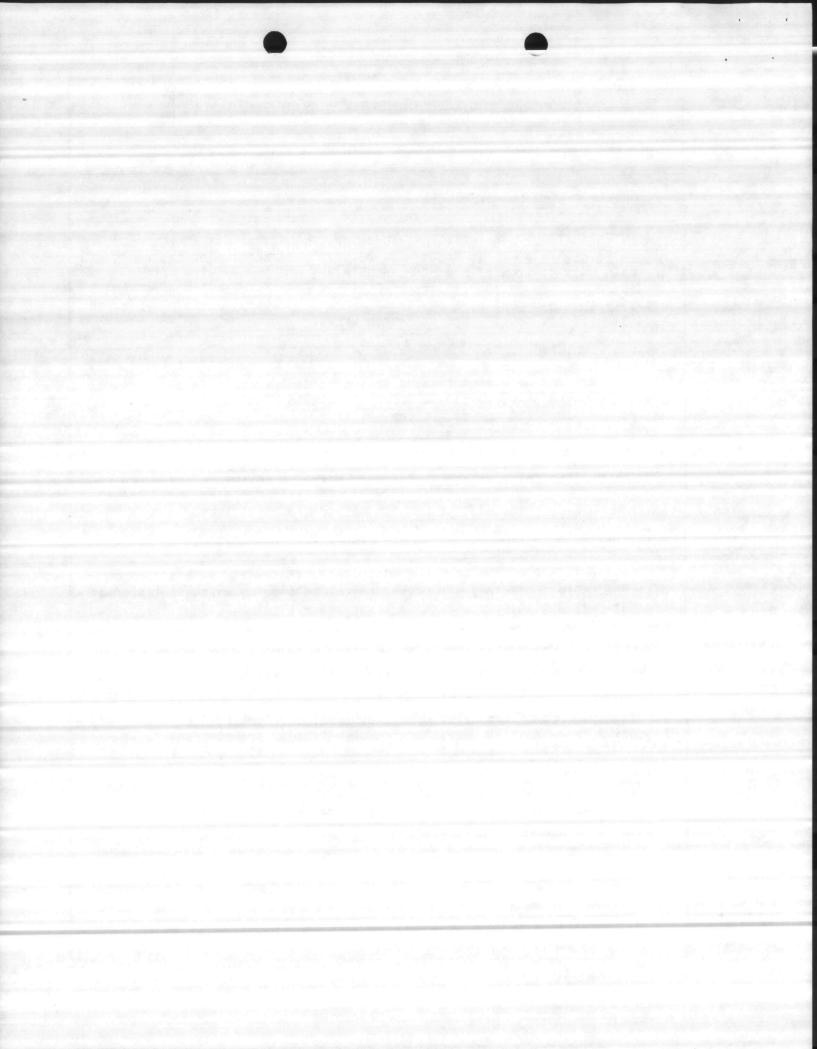
#### FLOODPLAIN MANAGEMENT AND WETLANDS PROTECTION

#### FLOOD HAZARDS EVALUATION

Requirements of Executive Order No. 11988 (Floodplain Management) and Executive Order No. 11990 (Protection of Wetlands) are not applicable.

#### COASTAL ZONE MANAGEMENT

In accordance with the Coastal Zone Management Act of 1972 (as amended), this project will not directly affect the coastal zone and a coastal consistency determination is not required.



1. COMPONENT NAVY	FY 1986_MILITARY CONSTRUCTION PROJECT DATA	2. DATE 1 JULY 1984
3. INSTALLATION MARINES CO	ORPS BASE, CAMP LEJEUNE, NORTH CAROLINA	
4. PROJECT TITLE SEWERAGE S		JECT NUMBER

#### POLLUTION ABATEMENT

This project will not cause additional air or water pollution.

## DESIGN FOR ACCESSIBILITY OF PHYSICALLY HANDICAPPED PERSONNEL

Provisions for physically handicapped personnel are not required in this facility as its use is specifically restricted to able-bodied personnel.

#### **ENDANGERED SPECIES PROTECTION**

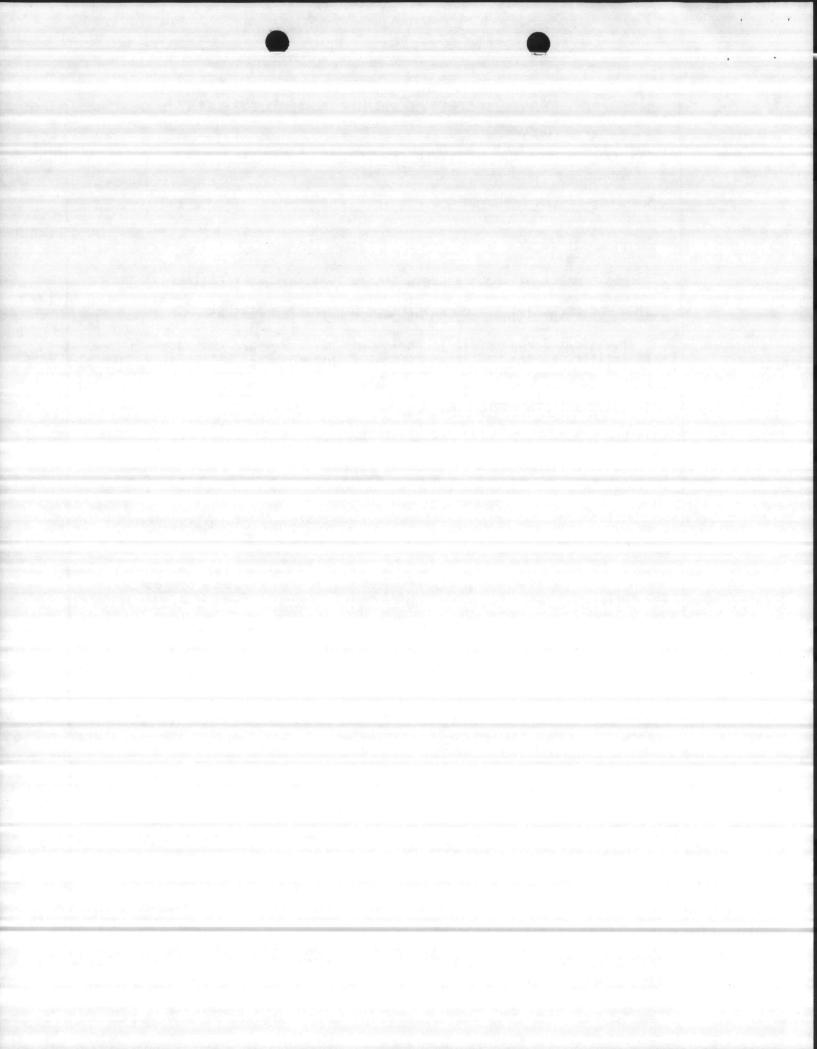
This project will not jeopardize conservation of endangered or threatened species.

#### INTERGOVERNMENTAL COORDINATION

No Intergovernmental coordination is required for this project.

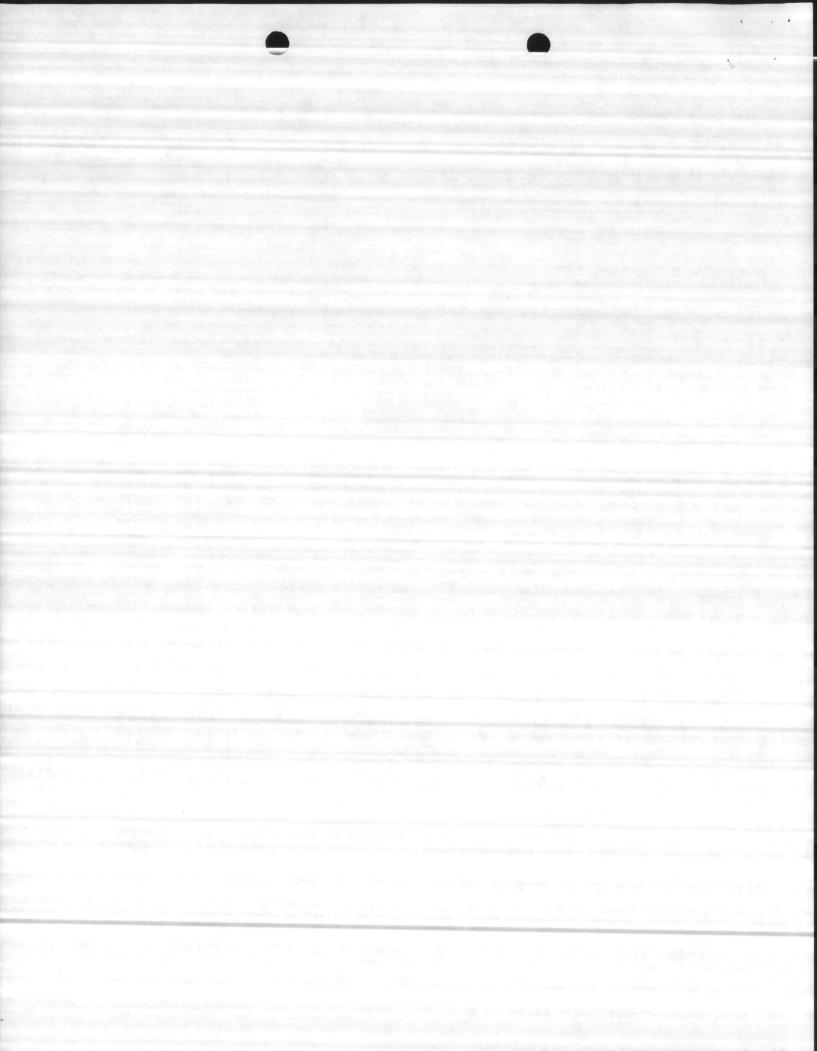
## ECONOMIC ANALYSIS

A secondary economic analysis was not prepared for this project at 35% design.



# BUDGET ESTIMATE SUMMARY SHEET FOR P- 790

Title: SEWERAGE	The Manager of Street	Π.		_Costs Es	calated to:_	APRIL 86
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Pump Sta SFC - 315 Camp Geiger STP			1 LS 1 LS	324,000		*
camp derger 31F	1		1 L3	160,000	+	1
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ub-Total Supporting Faci	lities	1110 1 1110	*S	700,000		
Total Estimated (			\$ 700,00			
	Continge		\$ 70,00			
	SIOH 5.		\$ 42,00	00		
	Rounded	dget Cost	\$ 812,00	00		



COLLATERAL EQUIPMENT REQUIREMENTS (Initial Outfitting)
LANTDIV NORVA 4-11010/6 (Rev.11/81)

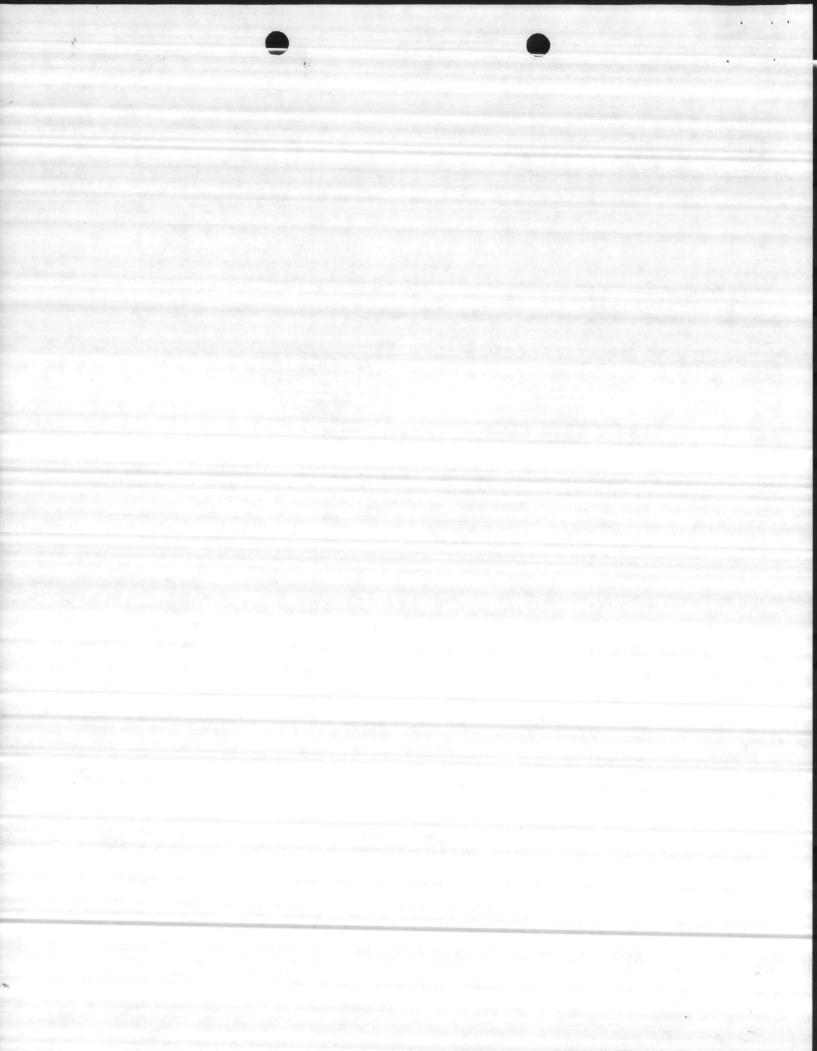
DATE

1 July 1984

1. ACTIVITY (Name and Location)

MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA

EWERAGE SYSTEM IMPROVEME	ENTS			nergy or all Money	P-790
COG. SYMBOL AND FED. STOCK NO. OR OTHER SOURCE	S. SYMBOL AND STOCK NO. OR STEM/EQUIPMENT DESCRIPTION THER SOURCE			UNIT PRICE	TOTAL
lo Collateral Equipment	Required in support of this proje	ect.			
		10000			
					1,425

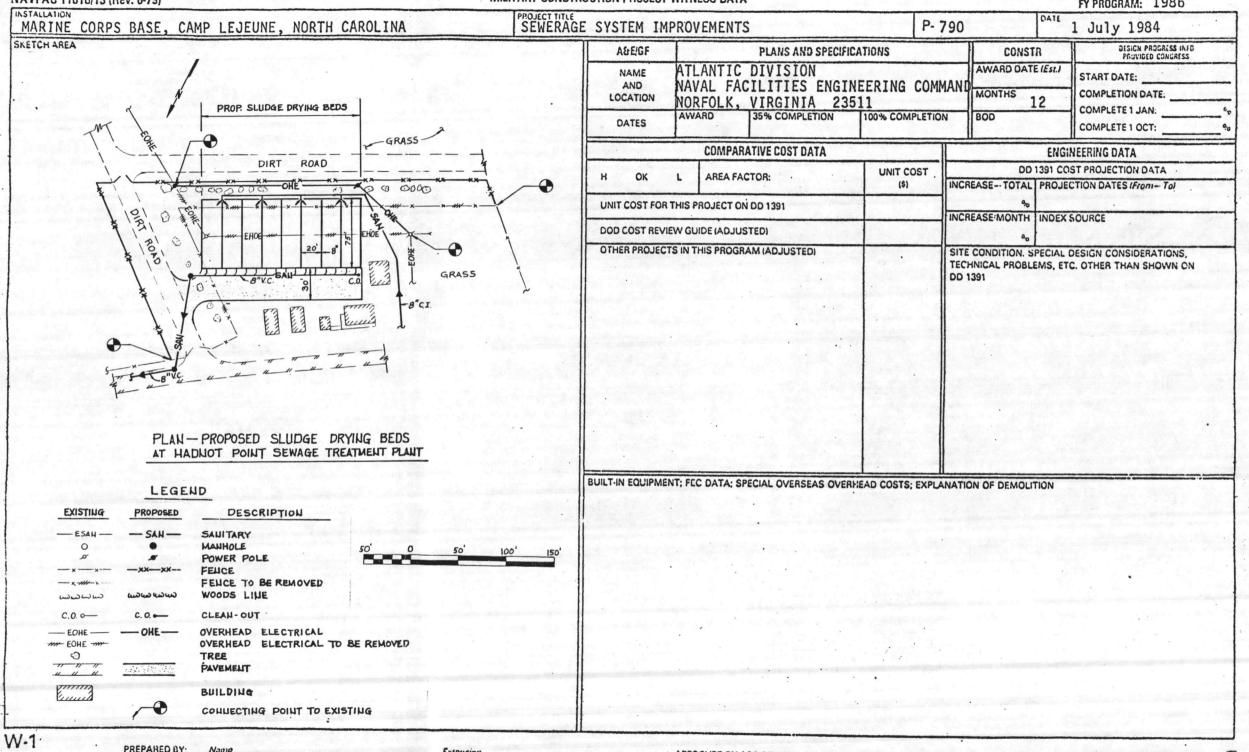


EV PROCRAM: 1936

PROPOSED PROJECT  LOCATION, CAMP GEIGER  PARES MOSPECTATIONS  CONTRA  AND CAMP AND COMPANY TO THE PROJECT OF TH	MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA	PROJECT TITLE	SEWERAGE SY	STEM IMPROVEME	ENTS	P-79	DATE	1 JULY 1984
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FY PROGRAM: 1986



PREPARED BY:

APPROVED BY ASSISTANT DIVISION DIRECTOR: CODE \_\_\_

INITIALS



W-1

PREPARED BY:

Name ...

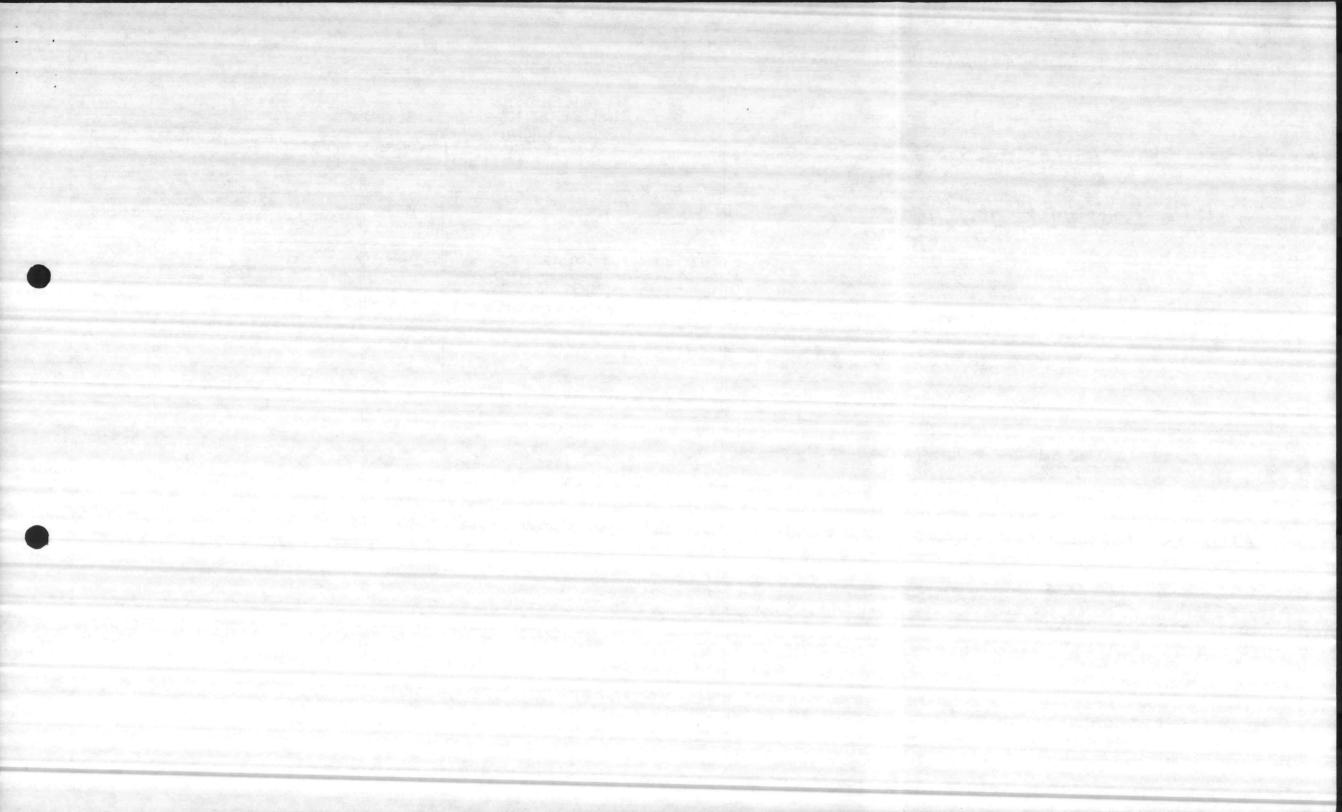
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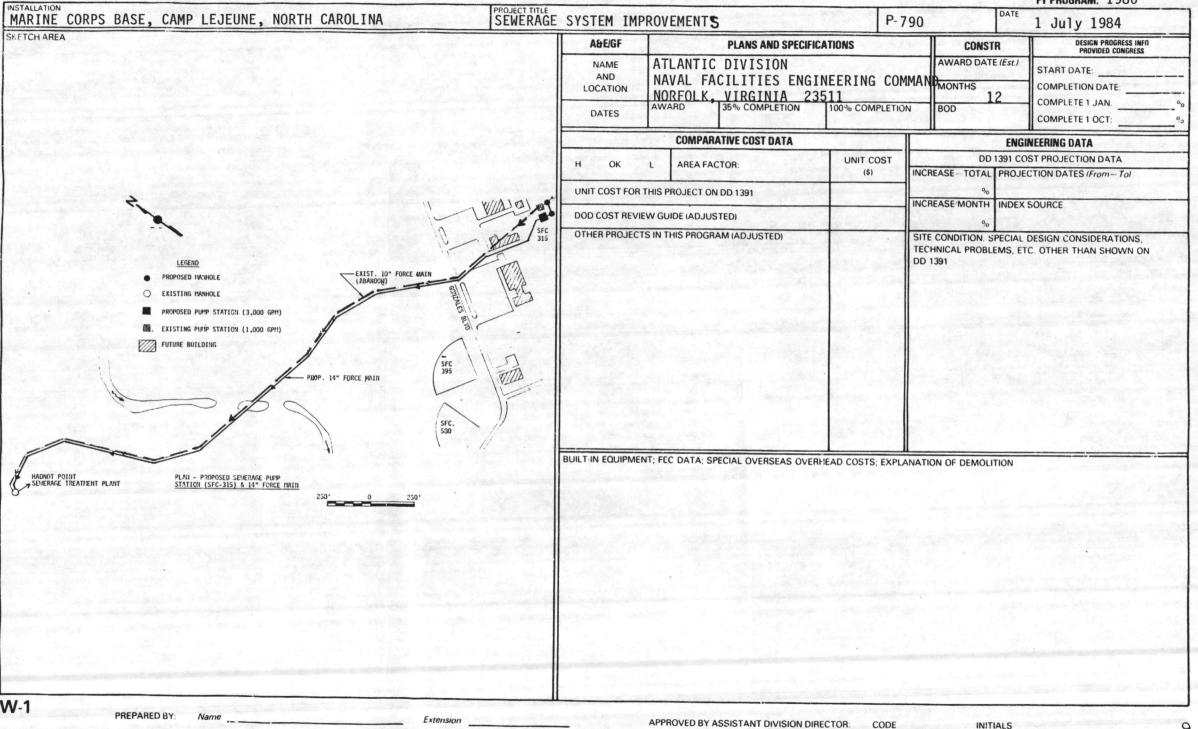
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INITIALS

8



FY PROGRAM: 1986





W-1

PREPARED BY:

Namo .\_\_\_

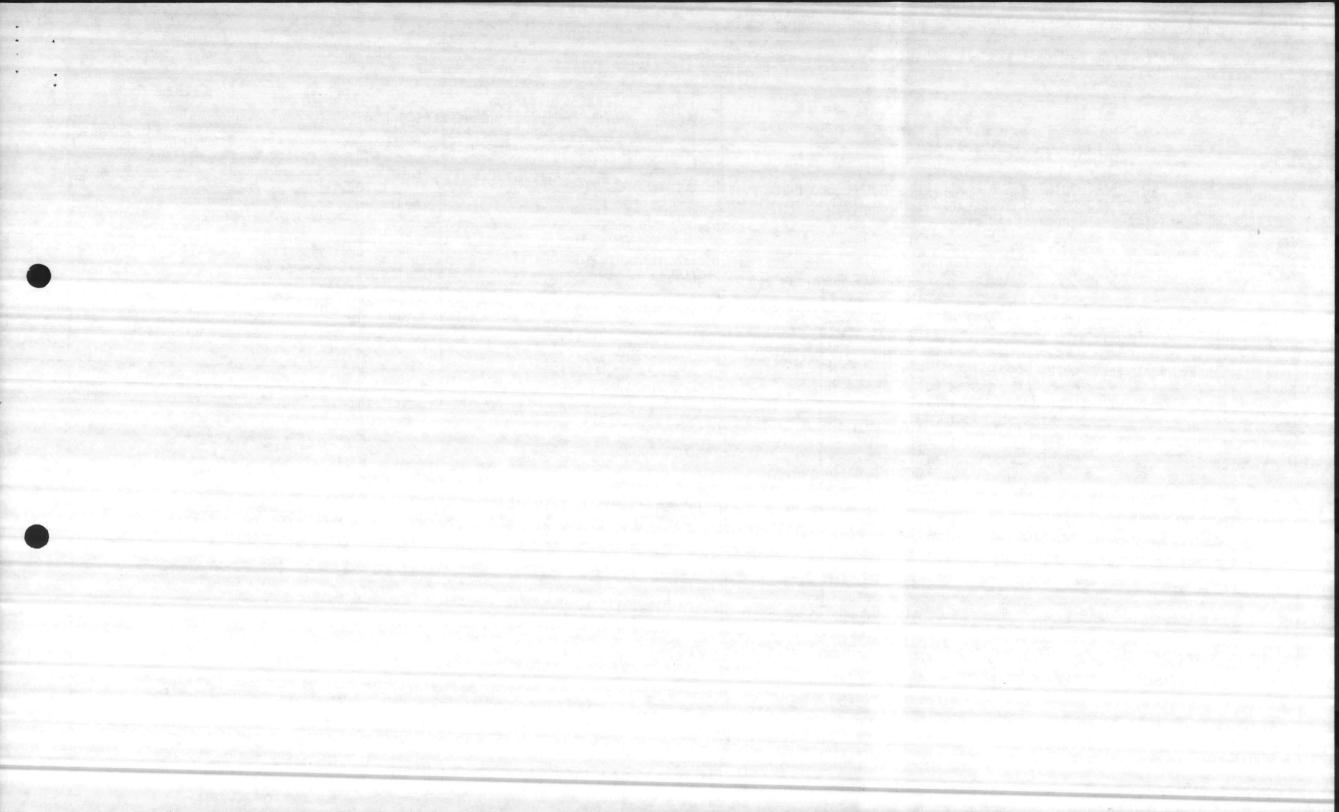
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APPROVED BY ASSISTANT DIVISION DIRECTOR:

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INITIALS \_\_\_\_

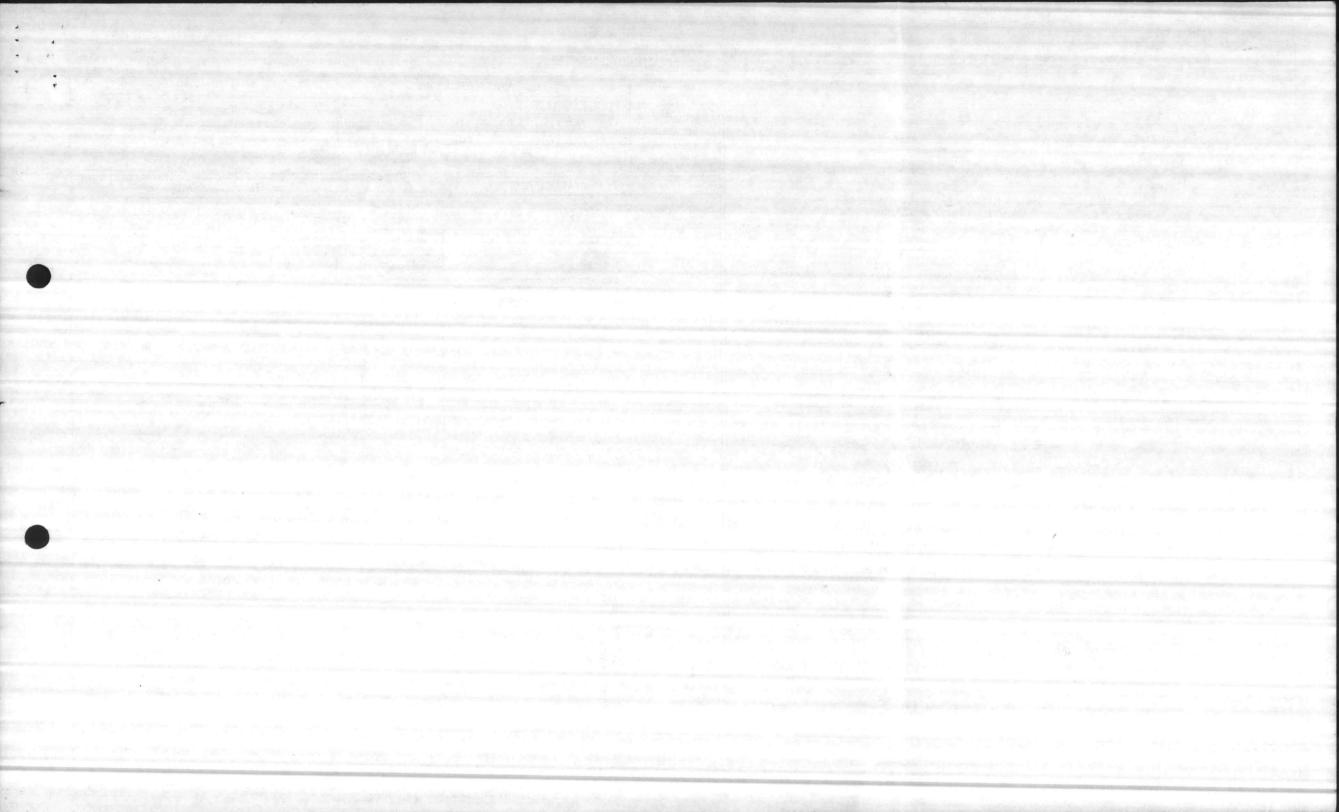
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FY PROGRAM: 1986

RINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA	PROJECT TITLE SEWERAGE SYSTEM A&EGF				790	DATE 1 July 1984
	NAME AND LOCATION	ATLANT NAVAL NORFOL	PLANS AND SPECIFIC DIVISION FACILITIES ENGIRED CONTROL	NEERING COM	Section 1	1 Thornton Commission
	DATES	AWARD	35% COMPLETION	100% COMPLETIO	DN BOD	COMPLETE 1 OCT:
		COM	PARATIVE COST DATA			ENGINEERING DATA
	н ок	L AREA	FACTOR:	UNIT COST		D 1391 COST PROJECTION DATA  L PROJECTION DATES (From - Tol
REMOVE GRIT DRYING BEDS	UNIT COST	OR THIS PROJEC	T ON DD 1391		9,	
	DOD COST F	EVIEW GUIDE (AC	JUSTED)		INCREASE MONTH	INDEX SOURCE
MH (ABANDON) REPLACE GRIT PUMP PROP 4" F M. WITH NEW (110 GPM)  GRIT CHAMBER  TO SI	(ABANDON)		GRAM (ADJUSTED)	HEAD COSTS; EXPL	TECHNICAL PROB	SPECIAL DESIGN CONSIDERATIONS, LEMS, ETC. OTHER THAN SHOWN ON

APPROVED BY ASSISTANT DIVISION DIRECTOR:



## FY 19.86 MILITARY CONSTRUCTION PROJECT DATA

2. DATE 1 Aug 1983

NAVY 3. INSTALLATION AND LOCATION

MARINE CORPS BASE

CAMP LEJEUNE. NORTH CAROLINA 28542

4 PROJECT TITLE

SEWAGE SYSTEM IMPROVEMENTS

8 PROJECT COST (\$000) 7. PROJECT NUMBER 5. PROGRAM ELEMENT 6. CATEGORY CODE

> P-790 831-09

ESCALATED TO APRIL 1986 9. COST ESTIMATES	U/M	QUANTITY	UNIT	COST (\$000)
SEWAGE & INDUSTRIAL WASTE TREATMENT FACILITY	-	9 <u>-</u> - 10-91	-	342
SLUDGE DRYING BEDS w/APPURTENANCES	LS		-	(246)
GRIT & CLORINE CONTACT CHAMBERS	LS	-	_	(96)
SUPPORTING FACILITIES	-		-	206
PUMP STATION ALTERATIONS	EA	2	26,500	
PUMP STATION ELECTRICAL CONTROL WORK	EA	8	3,000	(24)
FORCE MAIN SEWER W/APPURTENANCES	LS	-	-	(123)
SITE IMPROVEMENT AND DEMOLITION	LS	-	-	(6)
STATION FC-315	100	-	-	13
NEW PUMP w/ MOTOR/SHAFTING	LS		-	(9)
PIPING AND FITTINGS	LS	_	-	(1)
ELECTRICAL	LS	-	- 1	(3)
AUTOMATIC OIL/GREASE SKIMMING TANK	-	-	-	296
TANK (250,000 GAL)	LS	8 J 2.14	-	(232)
OIL/GREASE STORAGE TANK (5,000 GAL)	LS	5 4 <b>-</b> 36 4	-	(6)
PIPING, VALVES, OTHER MECHANICAL	LS		-	(41)
ELECTRICAL	LS	_	-	.(17)
SUBTOTAL	1		- TW - 100	857
CONTINGENCY - 10%		4.1		86
TOTAL CONTRACT COST				943
SUPERVISION, INSPECTION, & OVERHEAD - 5.5%				52
TOTAL REQUEST				995
TOTAL REQUEST (ROUNDED)				1,000
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.

#### 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, needs 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

UNTIL EXHAUSTED

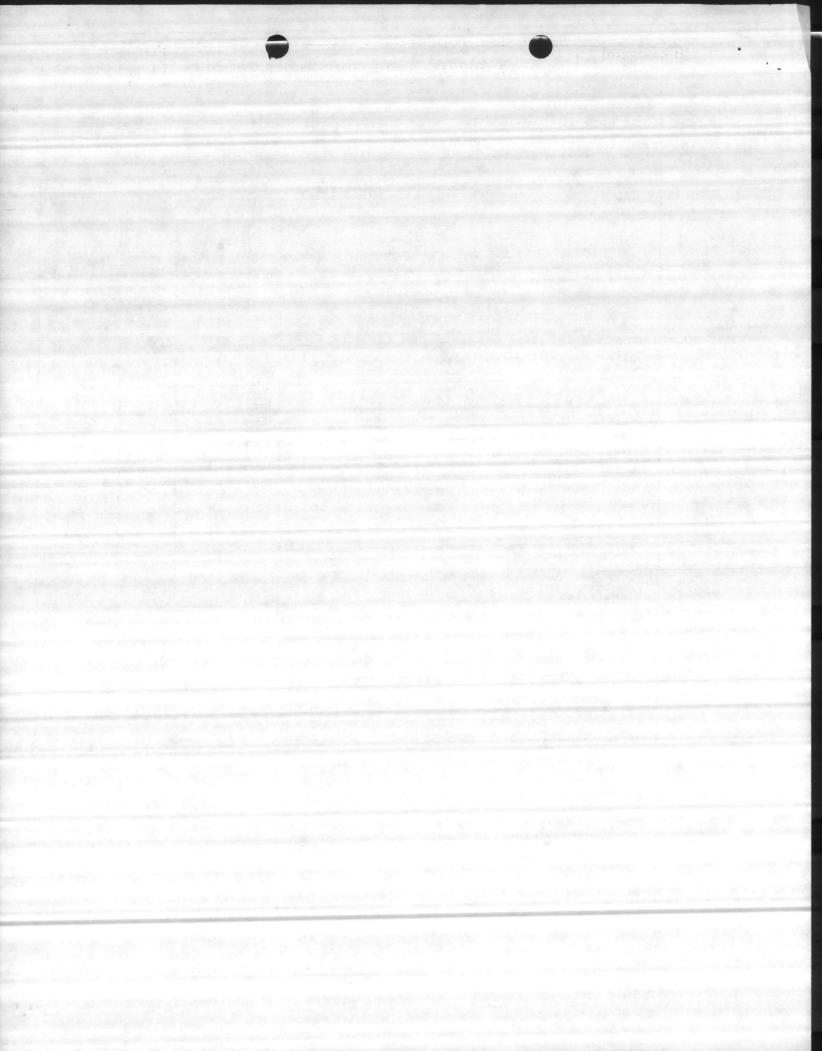
a potential health hazard and damage to the facilities. 10 TORM 1381

±U.S. GOVERNMENT PRINTING OFFICE: 1979-603-076/3959 2-1

PAGE NO. 1 of 2

(FW) 102, LF-001 3910 NEW LIFT STATION (315) TO HAR PLANT

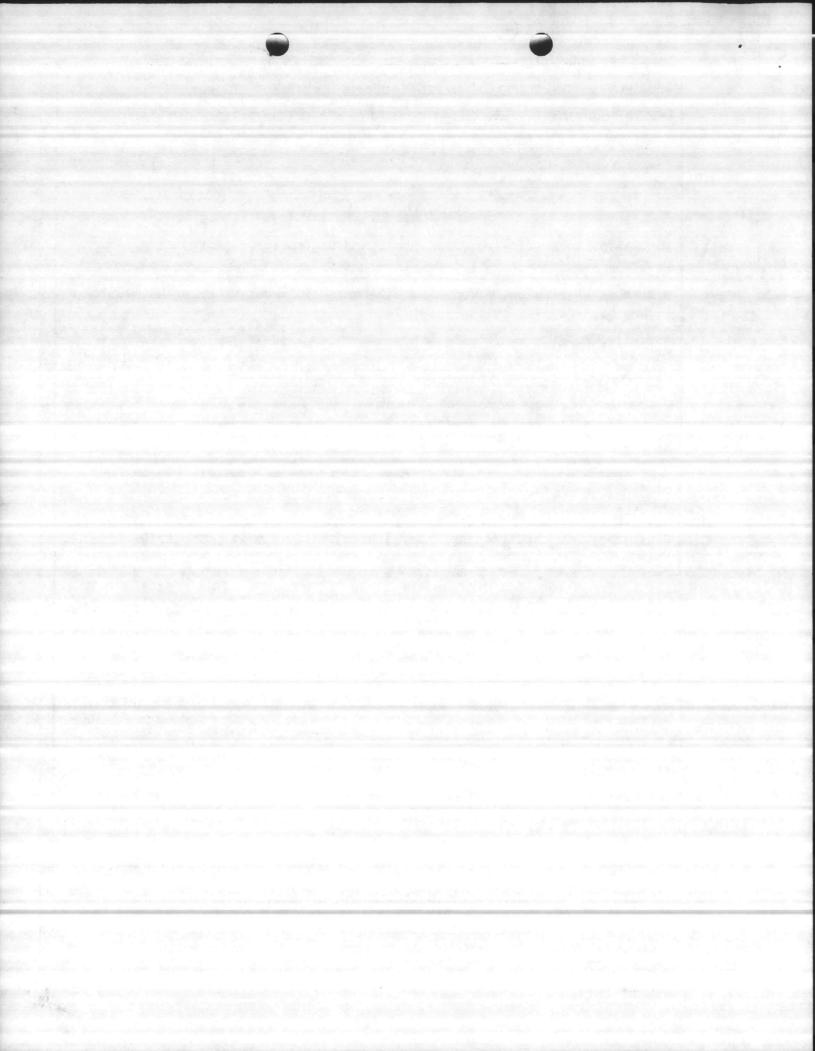
& PARALLEL EXIST 10" REWIRE BLDG. 21 REPLACE PUMPS 2 \$ 3 411 FM FROM GRIT CHIONNEL TO DRYING BEDS 8 NEW SLUBGE DRYING BEDS-4P 8 NEW 1.



. COMPONENT		2 DATE
NAVY	FY 19 87 MILITARY CONSTRUCTION PROJECT DAT	A 1 AUG 1983
INSTALLATION	AND LOCATION	
MARINE CORPS	BASE, CAMP LEJEUNE, NORTH CAROLINA 28542	
. PROJECT TITLE	5. 1	PROJECT NUMBER
SEWAGE SYSTE	M 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.

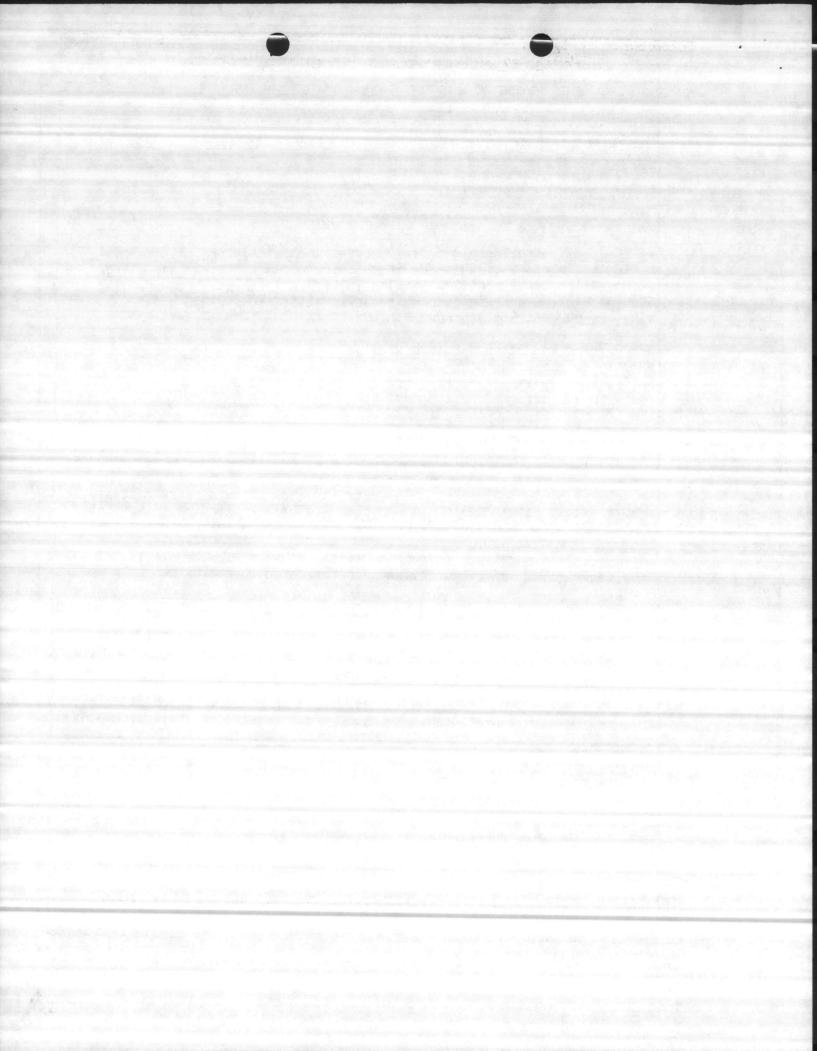


1. COMPONENT	FY 19_87 MILITARY CONSTRUCTION PROJECT DA	TA   AUG 1983
3. INSTALLATION		
MARINE CORP	S BASE, CAMP LEJEUNE, NORTH CAROLINA 28542	PROJECT NUMBER
SEWAGE SYS	TEM IMPROVEMENTS	P-790

#### FACILITY STUDY

- 1. <u>Project.</u> 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 \$54005 and \$52633. Provide new pump at Station FC-315.
- 2. <u>Current and Planned Future Workload with Regard to this Project.</u> 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. <u>Replacement</u>. Project consists of upgrading, expanding, and correcting deficiencies in the Base sewage collection and treatment facilities.
  - c. Description of Work to be Done.
- (1) <u>Primary Facility</u>. 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.



2. DATE

1 AUG 1983

3. INSTALLATION AND LOCATION

MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA 28542

4. PROJECT TITLE

5. PROJECT NUMBER

P-790

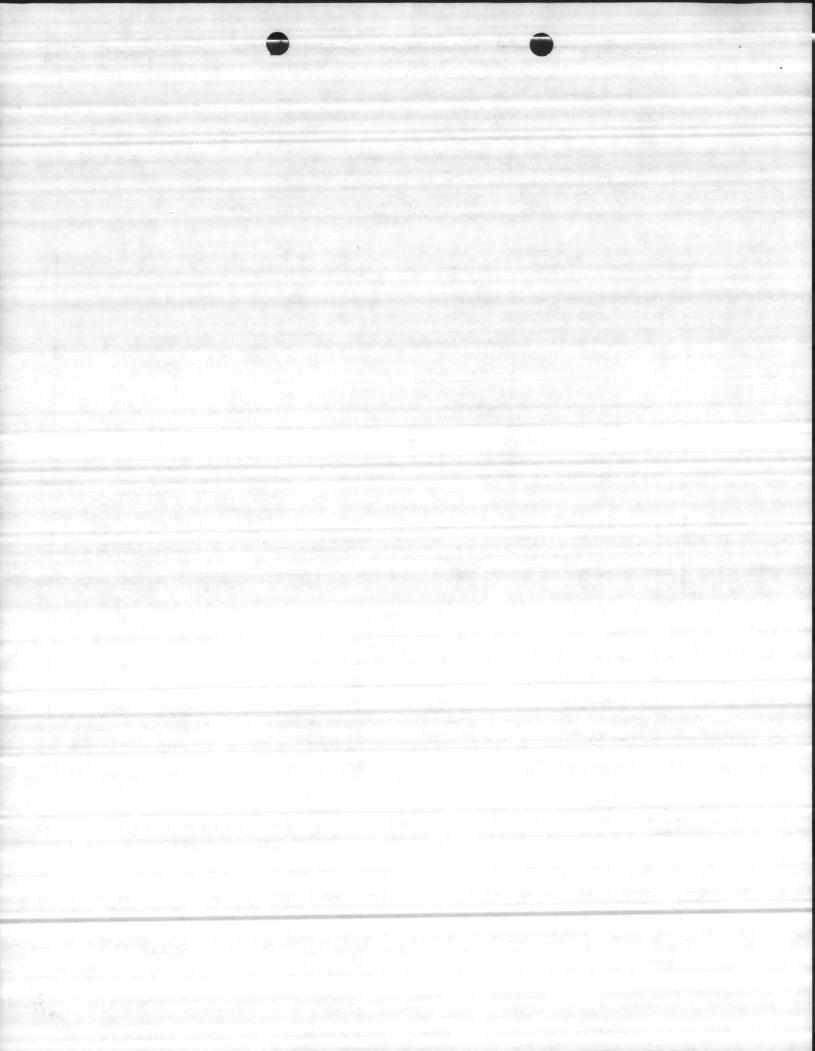
SEWAGE SYSTEM IMPROVEMENTS

\*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-87.
- 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).



OMPONENT	the second of the second big a second of pro-	
NAVY	FY 19 87 MILITARY C	ONSTRUCTION PROJECT DATA

2. DATE

1 AUG 1933

3. INSTALLATION AND LOCATION

MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA 28542

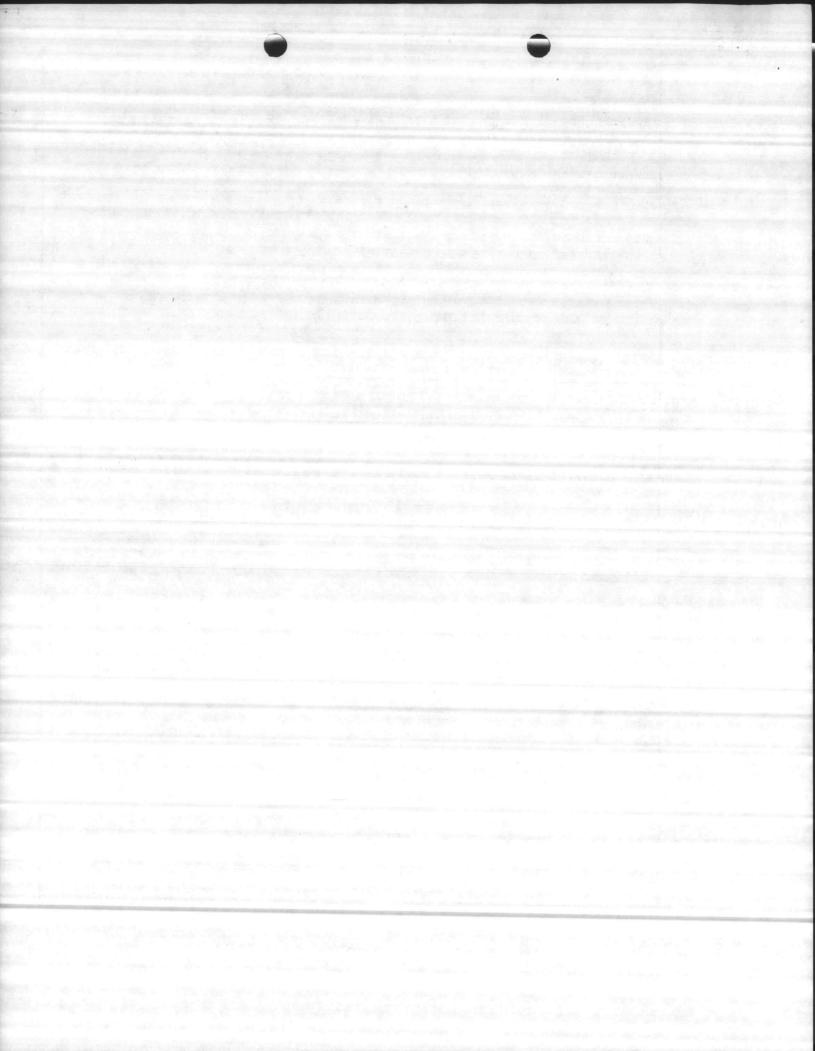
4. PROJECT TITLE

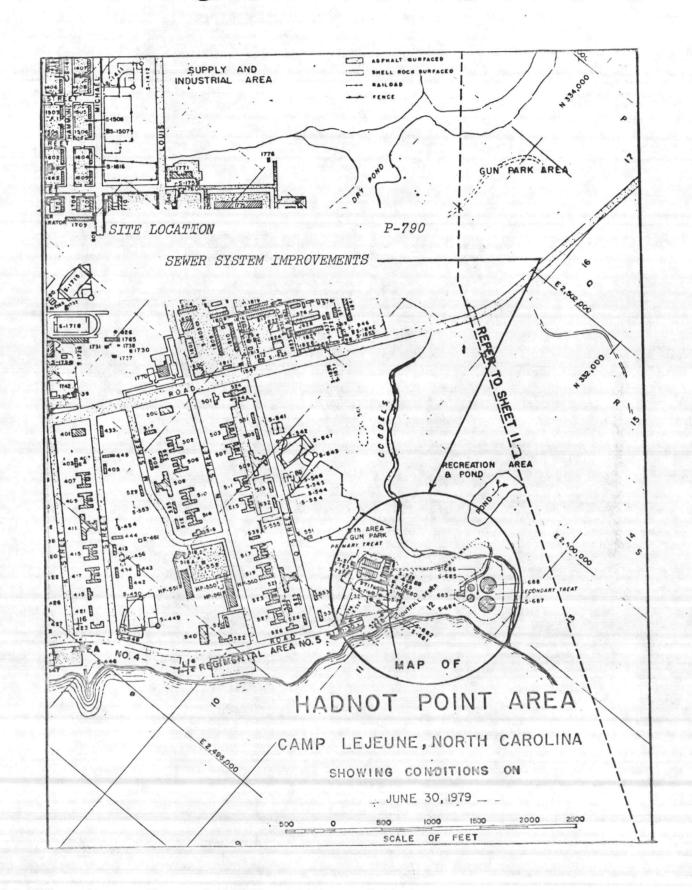
5. PROJECT NUMBER

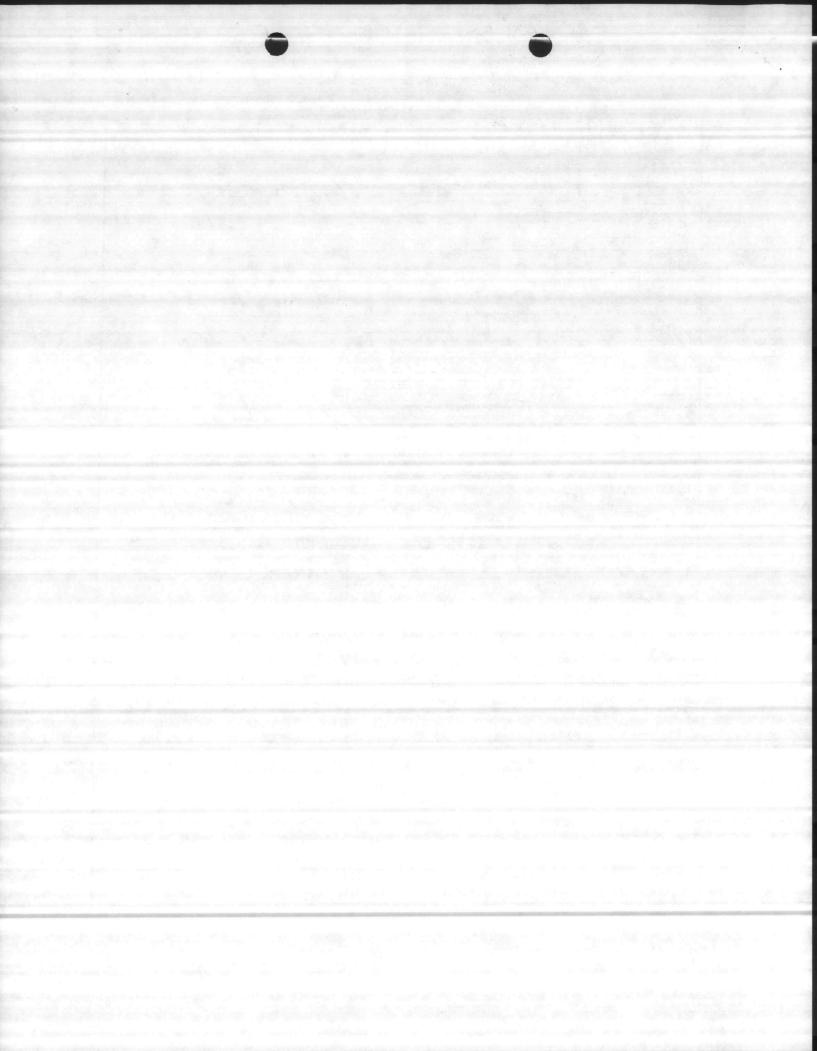
SEWAGE SYSTEM IMPROVEMENTS

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. <u>Environmental Impact</u>. 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.







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

ENVIRONMENTAL IMPACT/ENVIRONMENTAL ENHANCEMENT REVIEW BOARD MEETING OF

13 Jan 1982.

ADDENDUM TO PRELIMINARY ENVIRONMENTAL ASSESSMENT (PEA)

SUBJ: PEA - Project P-709, Sewage System Improvements

BOARD ACTION

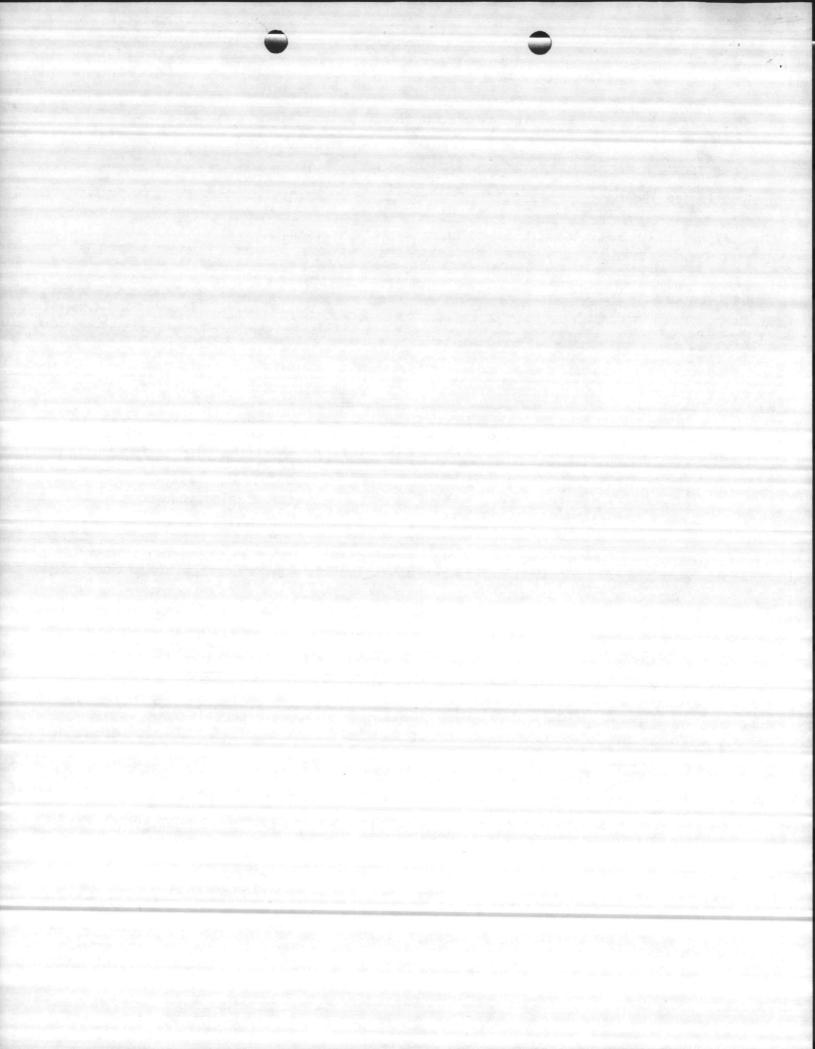
The Board agreed there appears to be no significant environmental impact or controversy associated with this project.

X

The Board agreed there appears to be no significant environmental impact or controversy associated with this project provided:
The requirements of NPDES Permit No. NC0003239 and related regulations are addressed during all phases of planning and design for the project.

The Board agreed there is potential environmental impact with the

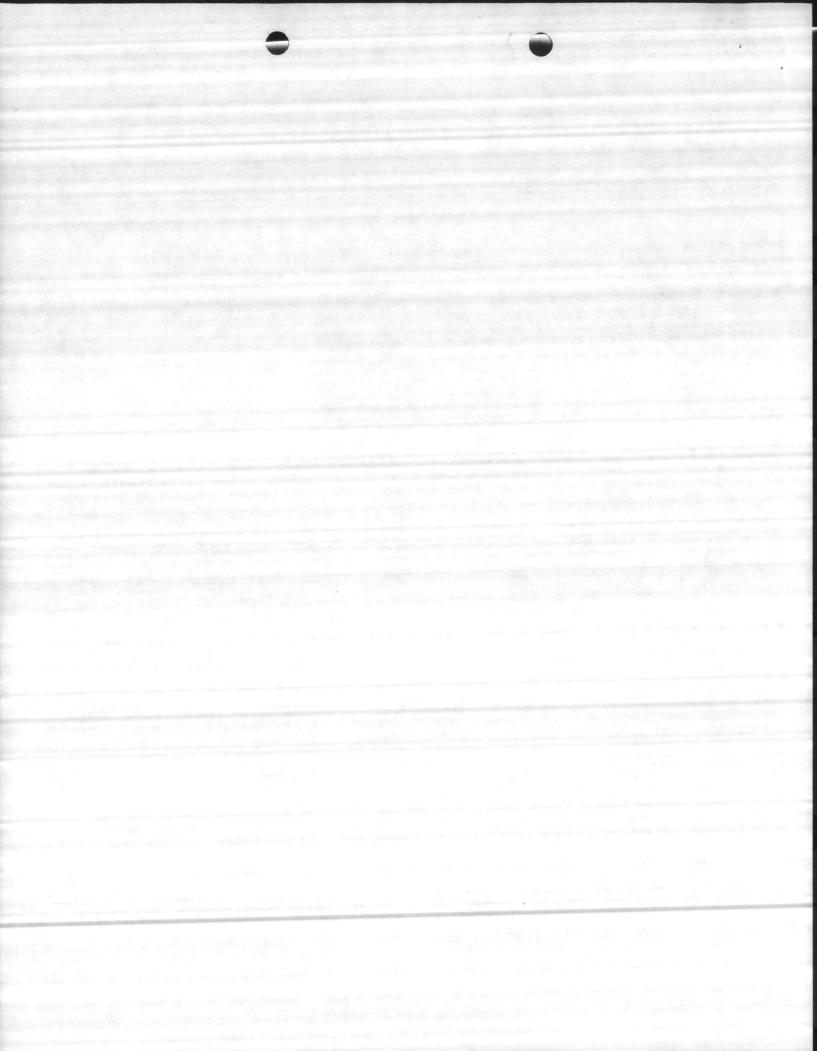
project and recommends the following:



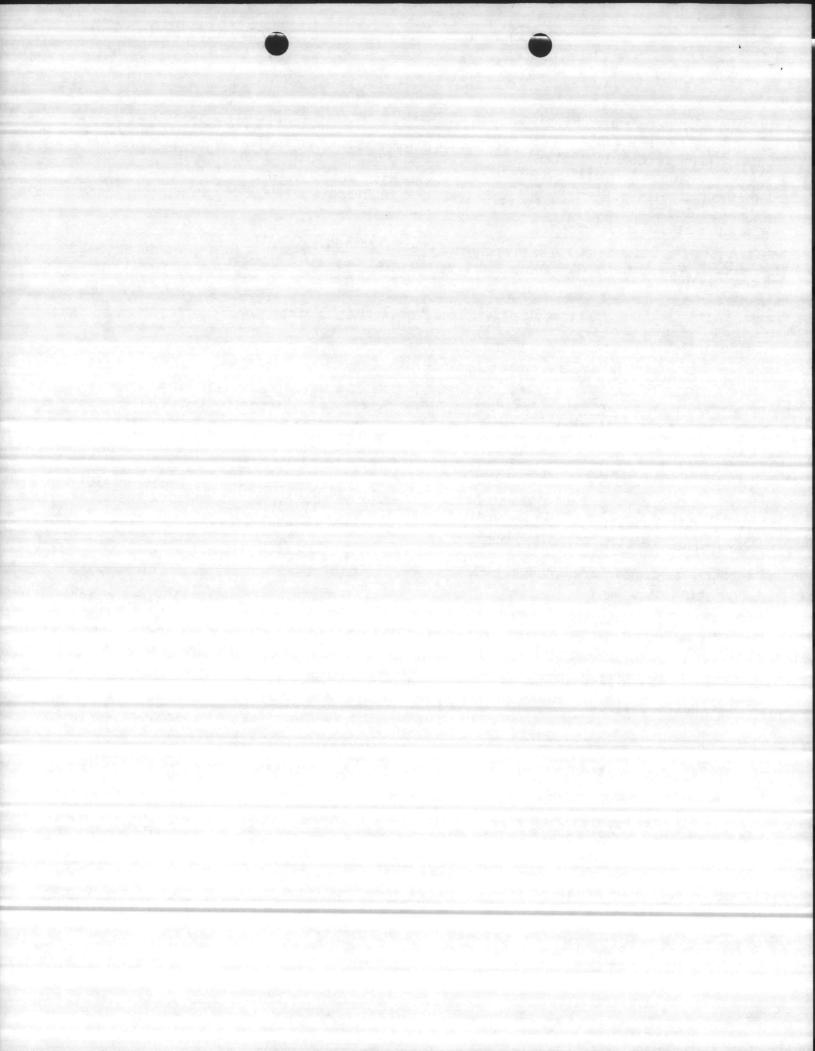
PRELIMINARY ENVIRONMENTAL IMPACT ASSESSMENT MCON PROJECT P-790, SEWAGE SYSTEM IMPROVEMENTS

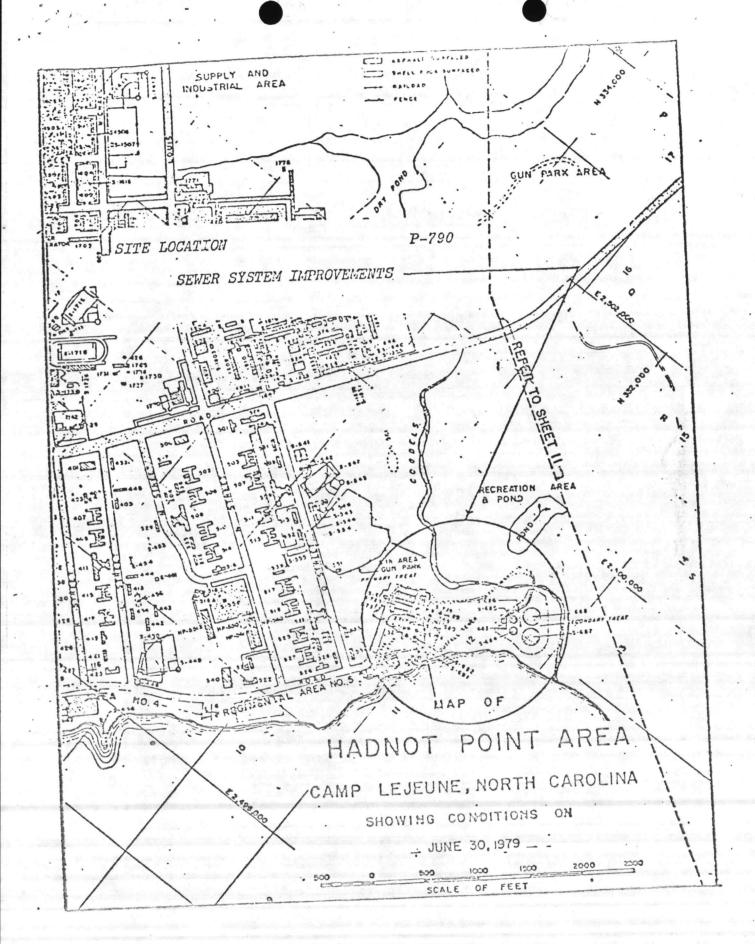
Prepared by:

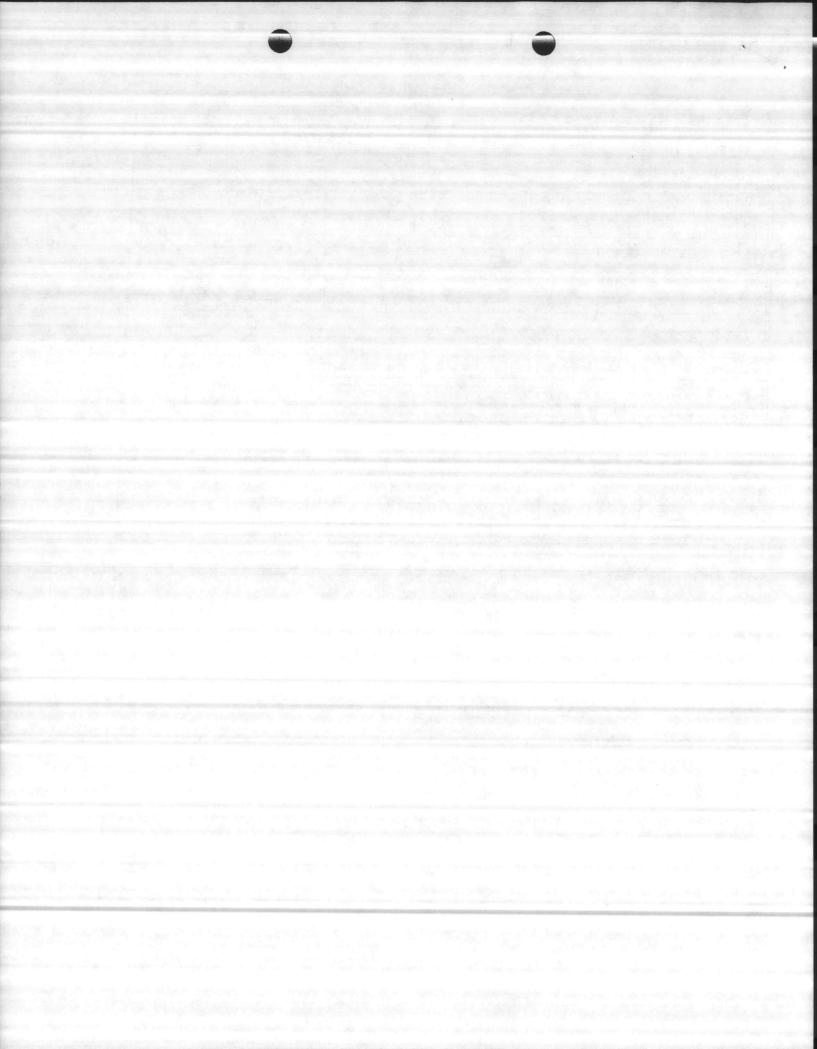
F. E. CONE Utilities Branch Base Maintenance Division 6 October 1981



- 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 3. Compliance with Federal, State, and Local Environment Regulations and Guidelines 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 Permit. 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 Refuæ 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.
      - 1. 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. base functions should not be affected.







- 1) REPLACE TWO WET WELL FUNDS

  A) FUND & Z (EXIST.) 1500 gpm (New) 2000 gpm

  B) Fund & 3 (") 2800 gpm (") 3000 gpm
- 2) RENOVE EXISTING DRYING TORDS INSTALLED 1945

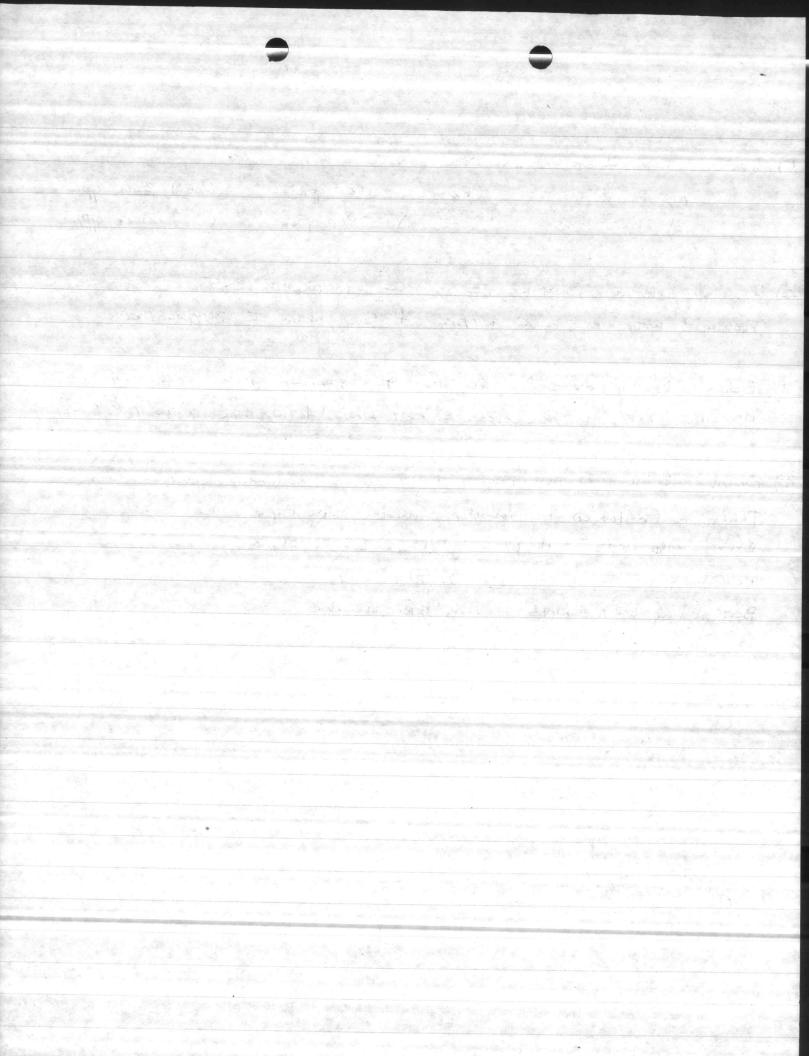
  KEPLACK WITH NEW PUMP W/BEW 41 FORCE MAIN TO DRYING BEDS
- 3) BUILD NEW LIFE STOTION &C 315 TO PARALLEL EXIST. FC315 LIFT STATION ABIANDON EXIST. 10" ASBESTOS CRIMENT LINE \$ IN STIAL DEW 16" FM
- 4) PROVIDE & NEW SLUDGE DRYING BEDS BEHIND MECHANICS BUILDING

  PRINT IS DESTUDIED TO HONDLE &MED CADACITY.

  EXIST. 18 BEDS, HOLDING & BEDS TO EMPTY DIGESTOR

  NORMALLY IT TAKES ~ GWES TO PRY OWY

  BUT DURING WET PICKIODS IT MAY TREE LOWGER



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)

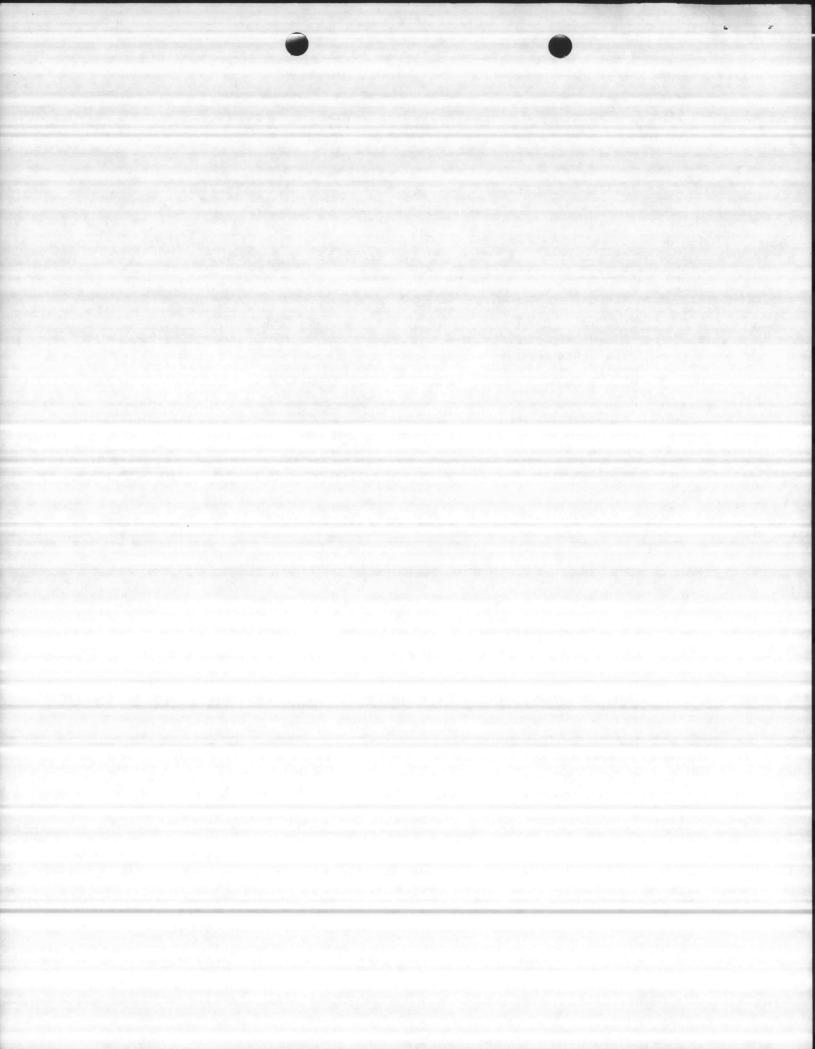
Ref: (a) CG 1tr PNO:403:VM:bjd 11000 of 6 Aug 1981

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

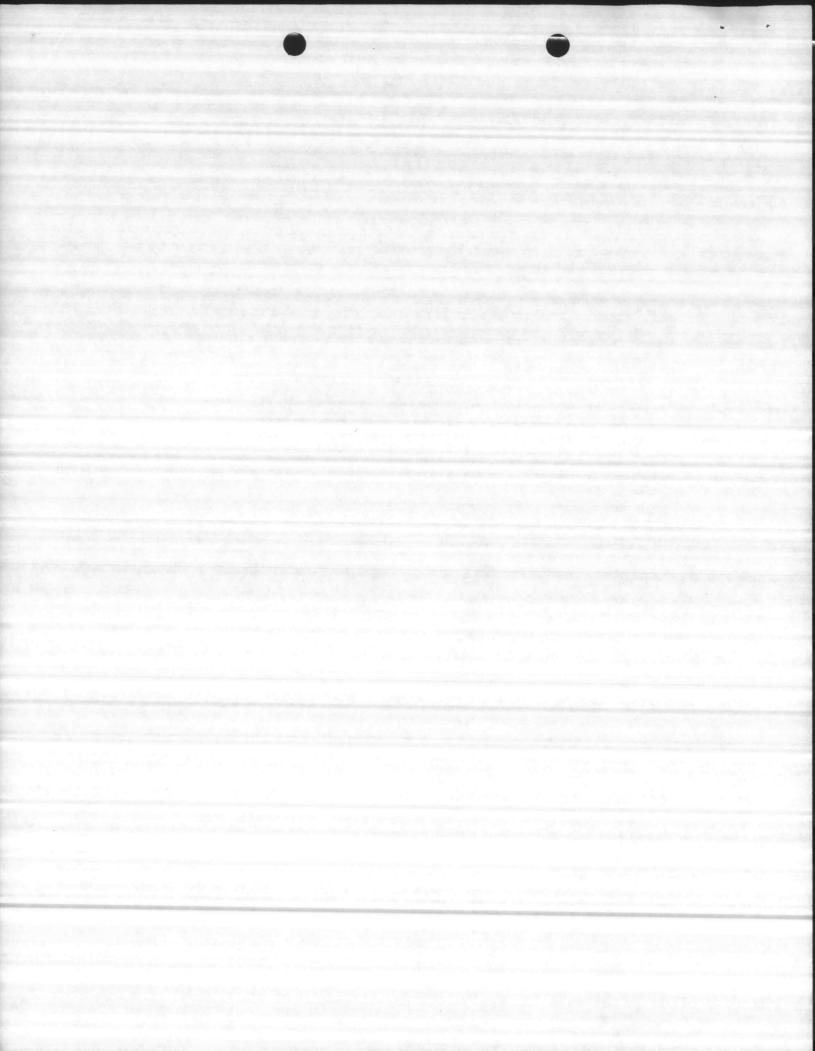


PRELIMINARY ENVIRONMENTAL IMPACT ASSESSMENT MCON PROJECT P-790, SEWAGE SYSTEM IMPROVEMENTS

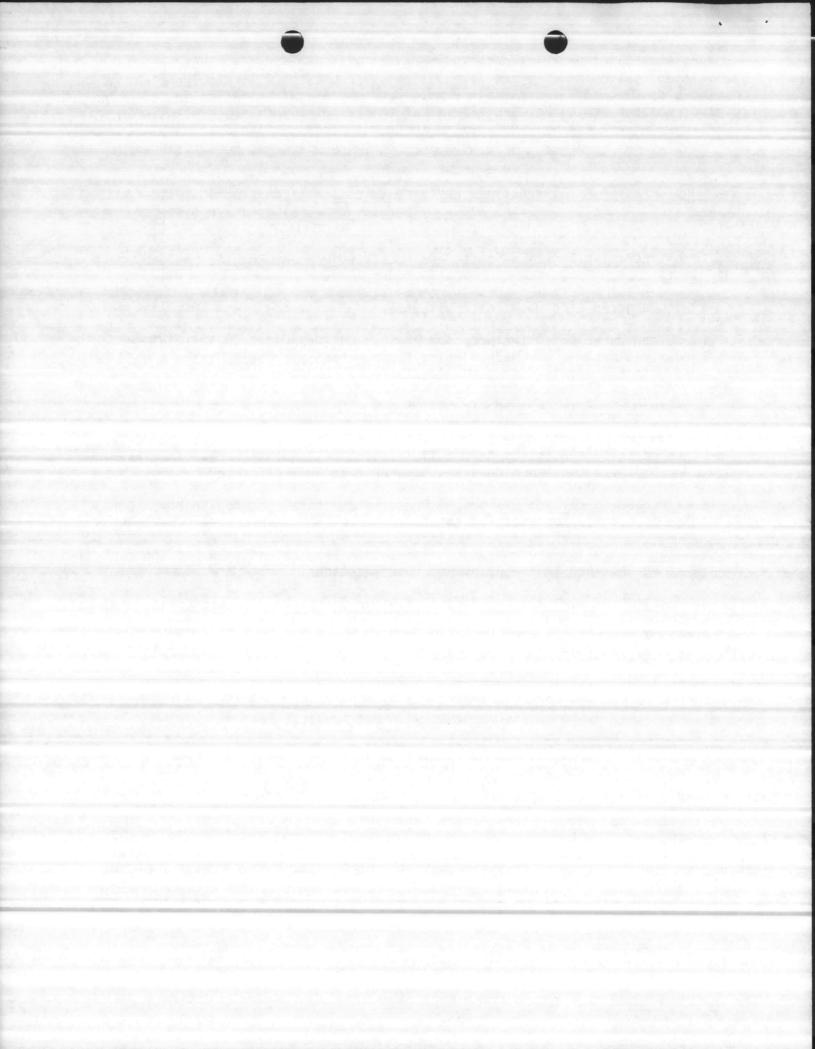
Charlie Shee 804-444-9937

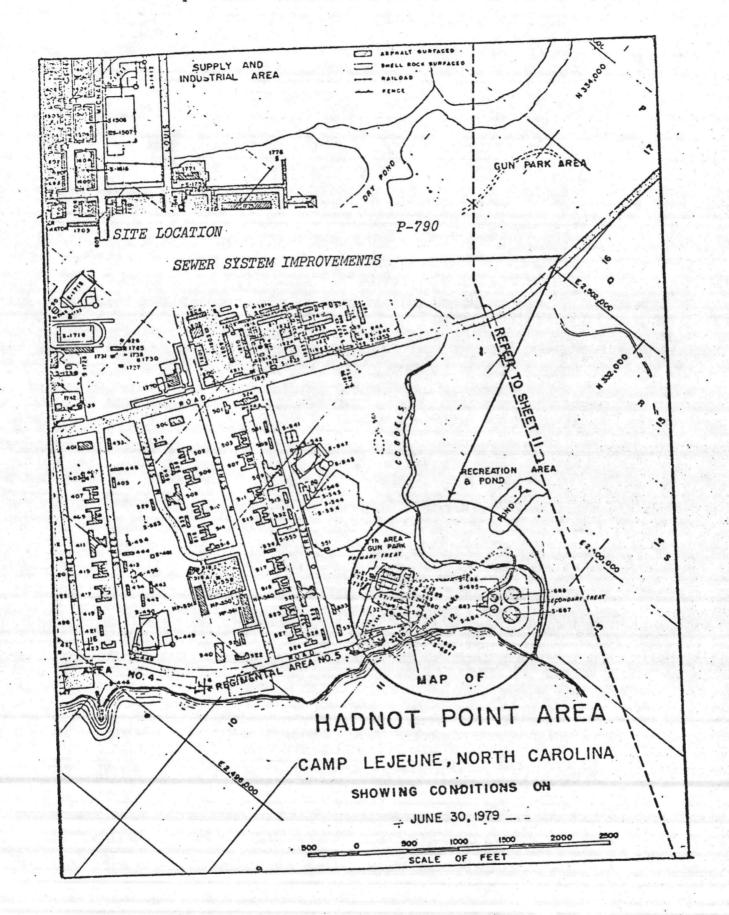
Prepared by:

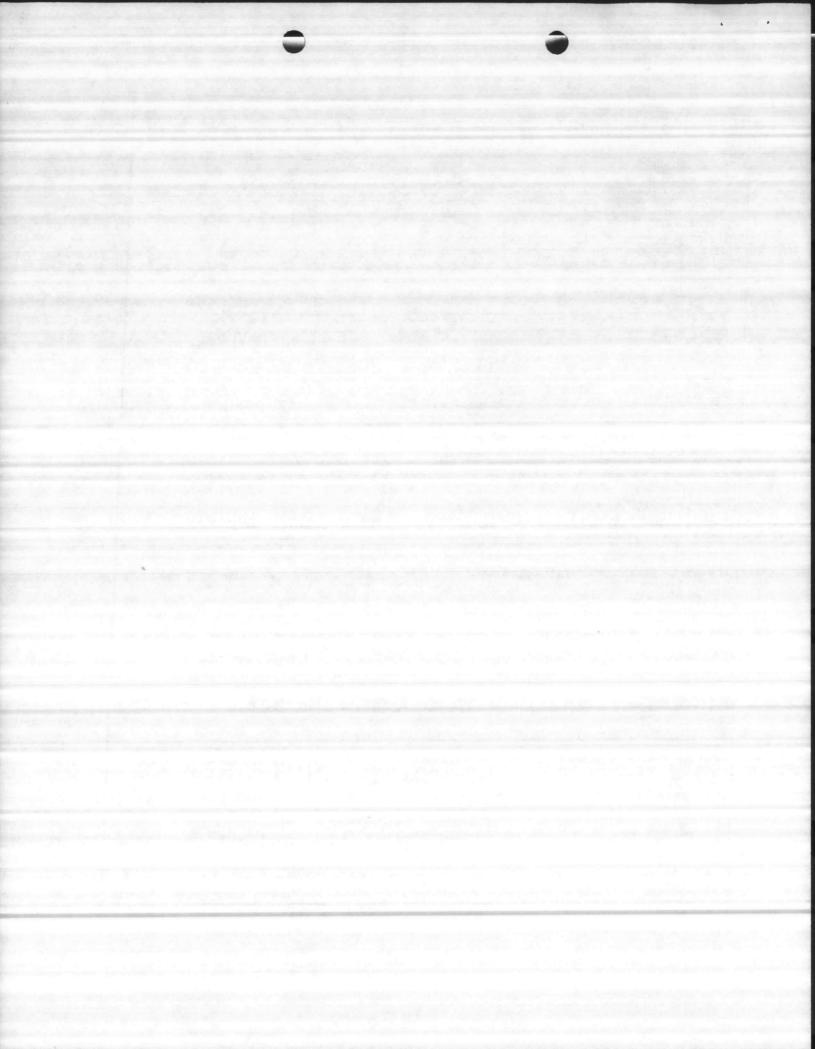
F. E. CONE Utilities Branch Base Maintenance Division 6 October 1981



- 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. <u>Consideration of Alternatives and Site Selection</u>. Construction will be accomplished at existing plant and pumping stations. Alternative sites do not apply.
- 3. <u>Compliance with Federal, State, and Local Environment Regulations and Guidelines</u>
  - a. Endangered Species. Not Applicable.
- b. <u>Clean Water Act</u>. 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. <u>Clean Air Act</u>. Not Applicable.
- d. <u>Coastal Zone Management Act</u>. 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. <u>Archaeological and Historical Preservation Act</u>. 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. <u>Hazardous Materials and Hazardous Waste Disposal</u>. Oil and grease will be collected by the oil/grease skimmer. Design should address disposal of the oil and grease collected.
- h. <u>Protection of Wetlands, Executive Order 11990</u>. This issue should be addressed in discussions with EPA representatives on NPDES Permit.
  - i. Sanitary Waste and Refuse Disposal. Not Applicable.
  - j. <u>Discuss Other Regulations Applicable</u>. None
- k. Permit Requirements. Existing permit limitations will not be exceeded. Proposed construction should be reviewed with EPA.
  - 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.







1. COMPONENT 2. DATE FY 19 85 MILITARY CONSTRUCTION PROJECT DATA NAVY Aug 1981 3. INSTALLATION AND LOCATION 4. PROJECT TITLE MARINE CORPS BASE SEWAGE SYSTEM IMPROVEMENTS CAMP LEJEUNE, NORTH CAROLINA 28542 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 (\$000)
SEWAGE & INDUSTRIAL WASTE TREATMENT FACILITY SLUDGE DRYING BEDS W/APPURTENANCES GRIT & CHLORINE CONTACT CHAMBERS SUPPORTING FACILITIES PUMP STATION ALTERATIONS PUMP STATION ELECTRICAL CONTROL WORK FORCE MAIN SEWER W/APPURTENANCES SITE IMPROVEMENT AND DEMOLITION STATION FC-315 NEW PUMP W/MOTOR/SHAFTING PIPING AND FITTINGS ELECTRICAL AUTOMATIC OIL/GREASE SKIMMING TANK TANK (250,000 GAL) OIL/GREASE STORAGE TANK (5,000 GAL) PIPING, VALVES, OTHER MECHANICAL ELECTRICAL SUBTOTAL CONTINGENCY - 10% TOTAL CONTRACT COST SUPERVISION, INSPECTION, & OVERHEAD - 5.5% TOTAL REQUEST TOTAL REQUEST TOTAL REQUEST (ROUNDED) EQUIPMENT. PROVIDED FROM OTHER APPROPRIATIONS	- LS LS - LS	2 8	- - - 23,100 2,600 - - - - - - -	295 (212) (83) 178 (46) (21) (106) (5) 11 (8) (1) (2) 255 (200) (5) (35) (15) 739 74 813 45 858 850

10. DESCRIPT ON 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.

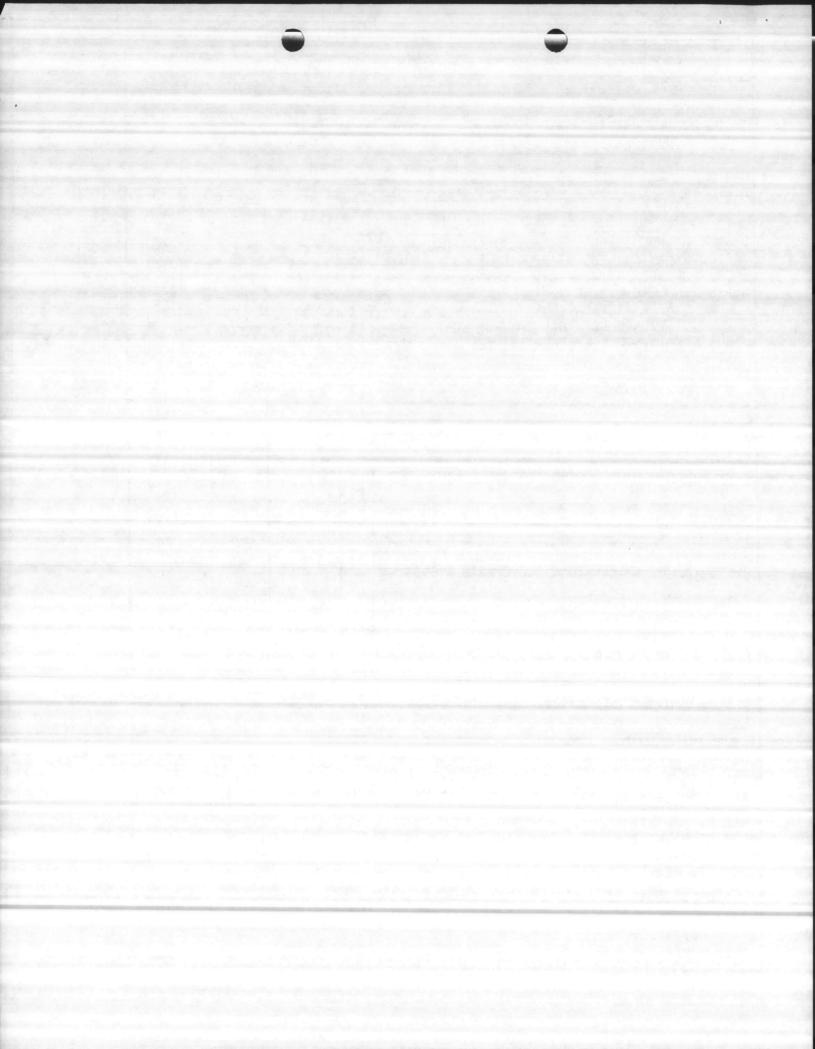
#### 11. REQUIREMENTS:

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.



1.	COMPON	ε	N.	ĭ

NAVY

85 MILITARY CONSTRUCTION PR LECT DATA

1 AUG 1981.

2. DATE

3. INSTALLATION AND LOCATION

MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA 28542

4. PROJECT TITLE

5. PROJECT NUMBER

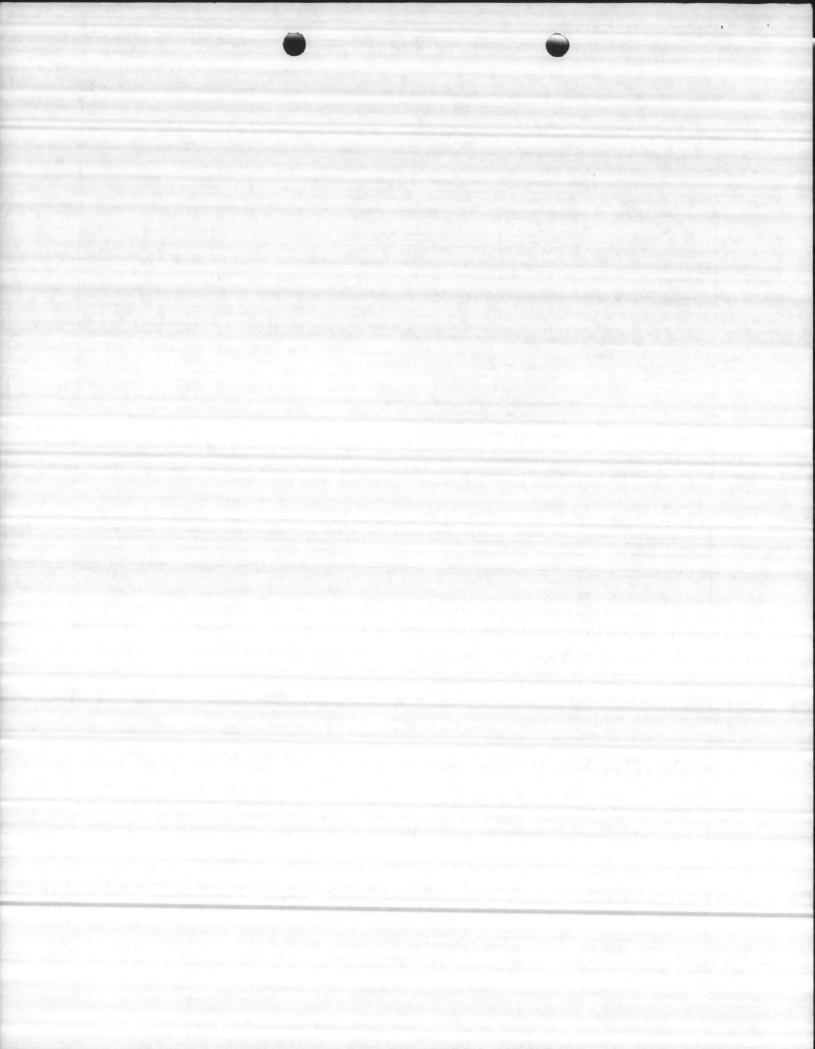
P-790

SEWAGE SYSTEM IMPROVEMENTS

#### 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.
- 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 polsesses a significant quality of American history.
- 8. "New Start" Criteria for Commercial or Industrial Activities Program (OMB Circular A-76): Not applicable.

S/N 0102-L F-001-3915



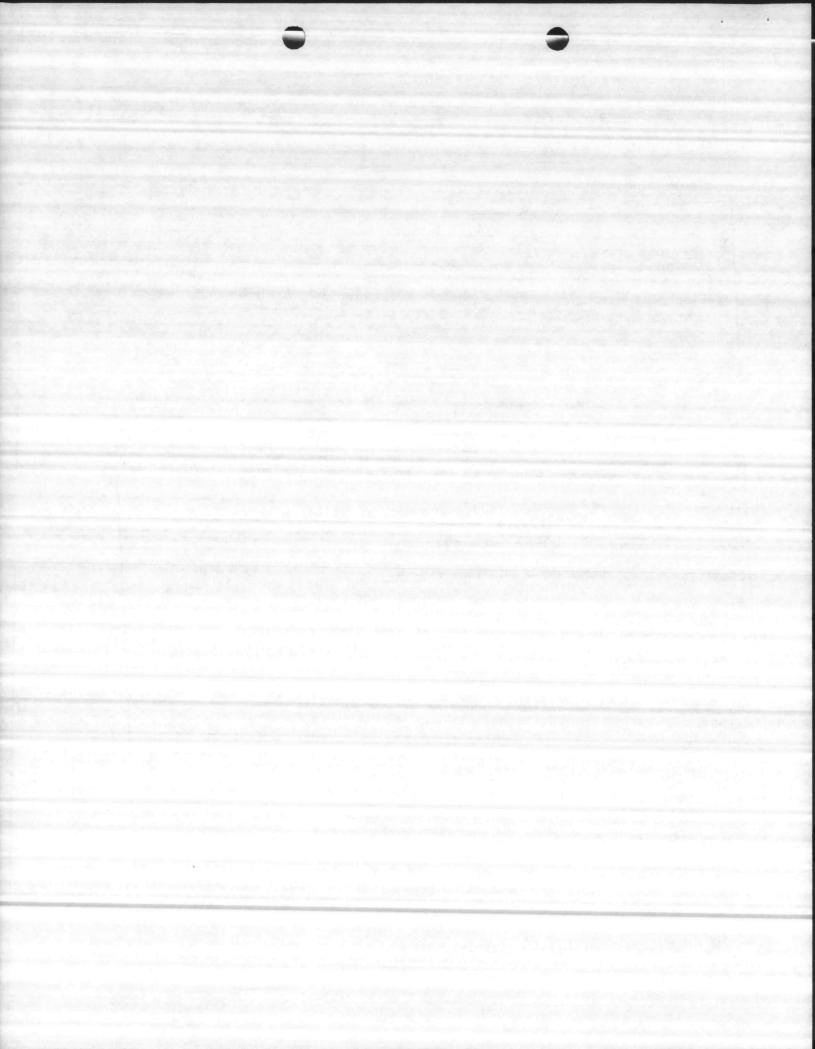
1. COMPONENT FY 19.85 MILITARY CONSTRUCTION PROJECT DATA 2. DATE NAVY 3. INSTALLATION AND LOCATION 1 AUG 1981 MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA 28542 4. PROJECT TITLE 5. PROJECT NUMBER SEWAGE SYSTEM IMPROVEMENTS P-790

## FACILITY STUDY

- 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 54005 and \$2633. Pro-
- Current and Planned Future Workload with Regard to this Project. 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 require-
- 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.
- Replacement. Project consists of upgrading, expanding, and correcting deficiencies in the Base sewage collection and treatment facilities.
  - 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.
- Energy Conservation. Energy-efficient equipment will be
  - (3) Collateral Equipment.
    - (a) Built-in MCON Funded.
      - \* Electrical alteration control systems, with monitors.
      - \* Chlorine agitation/mixing equipment.

\*Equipment with associated installation costs.

of 3



2. DATE

1 AUG 1981

NAVY

3. INSTALLATION AND LOCATION

MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA

4 BROJECT TITLE

5. PROJECT NUMBER

SEWAGE SYSTEM IMPROVEMENTS

P-790

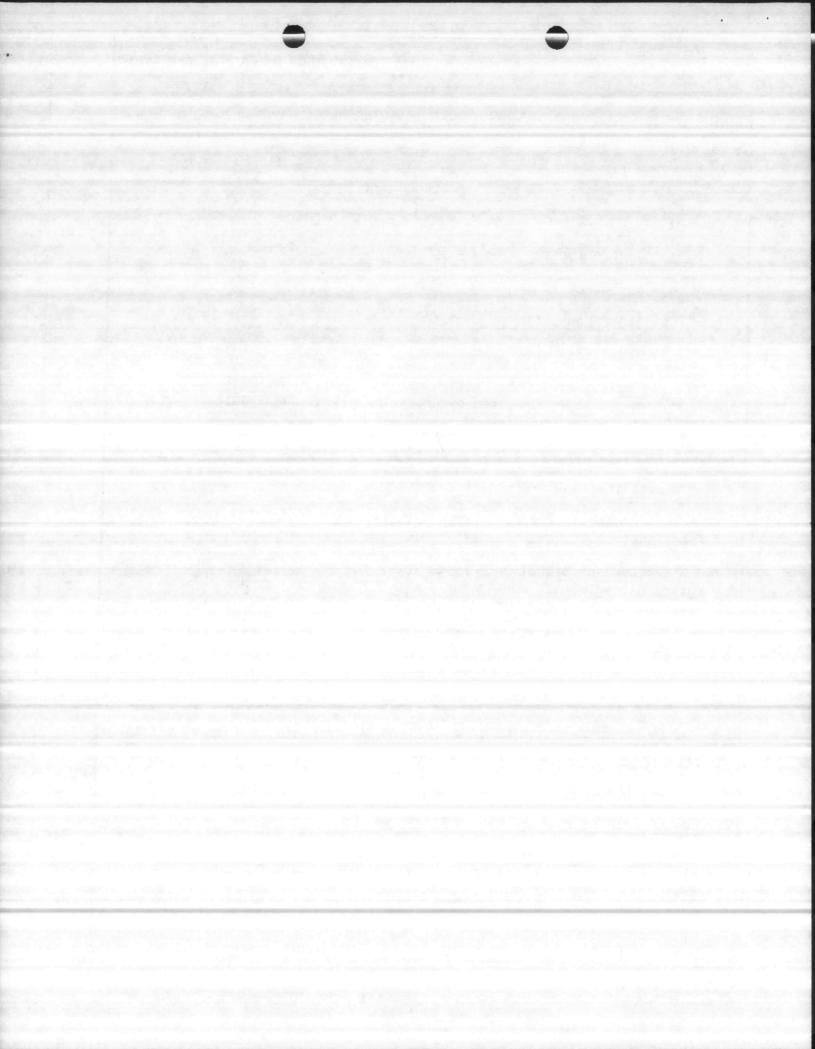
\*Grit removal equipment for Grit Chamber

\*Sewage force mains

\*Electric force main pumps

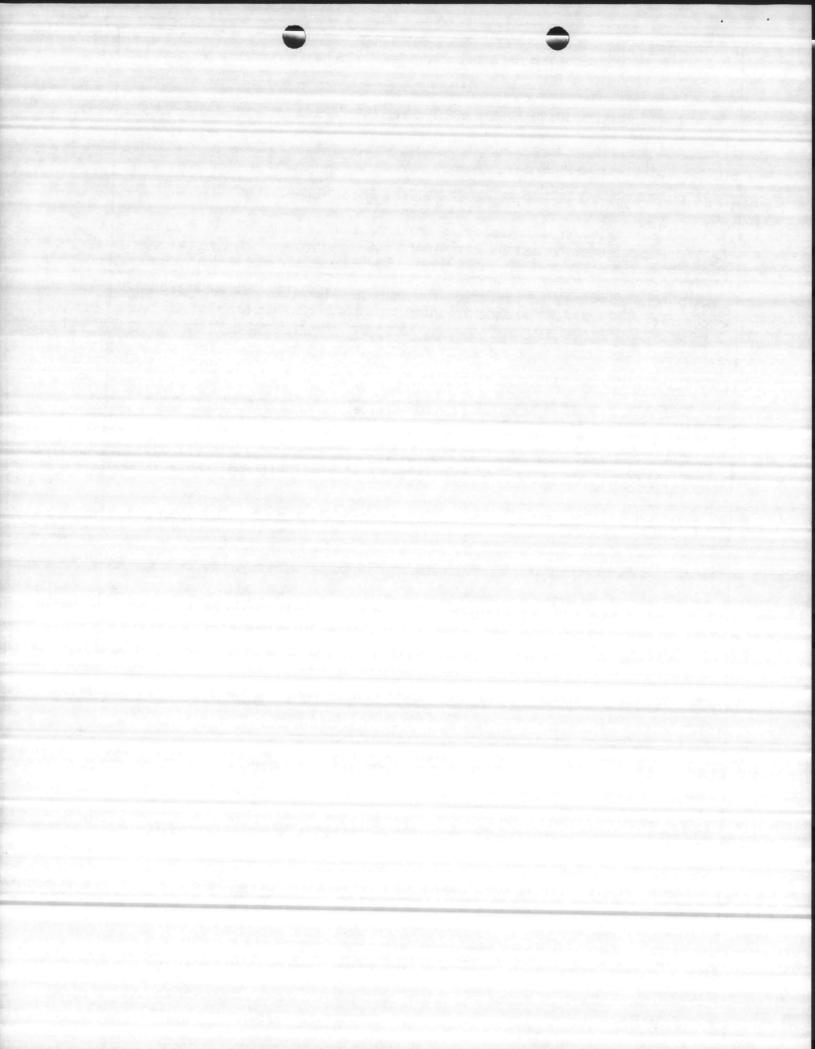
- (b) Expense Items: None
- (c) Investment Items: None
- 4. Cost Estimate: Area Cost Factor for Camp Lejeune, N. C. is 0.95, taken from an A&E study prepared by Henry Von Olsen and Associates in April 1979 and escalated to FY-83.
- 5. Justification for Project and for Scope of Project:
  - Justification 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. <u>Justification for Scope of Project</u>. 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).

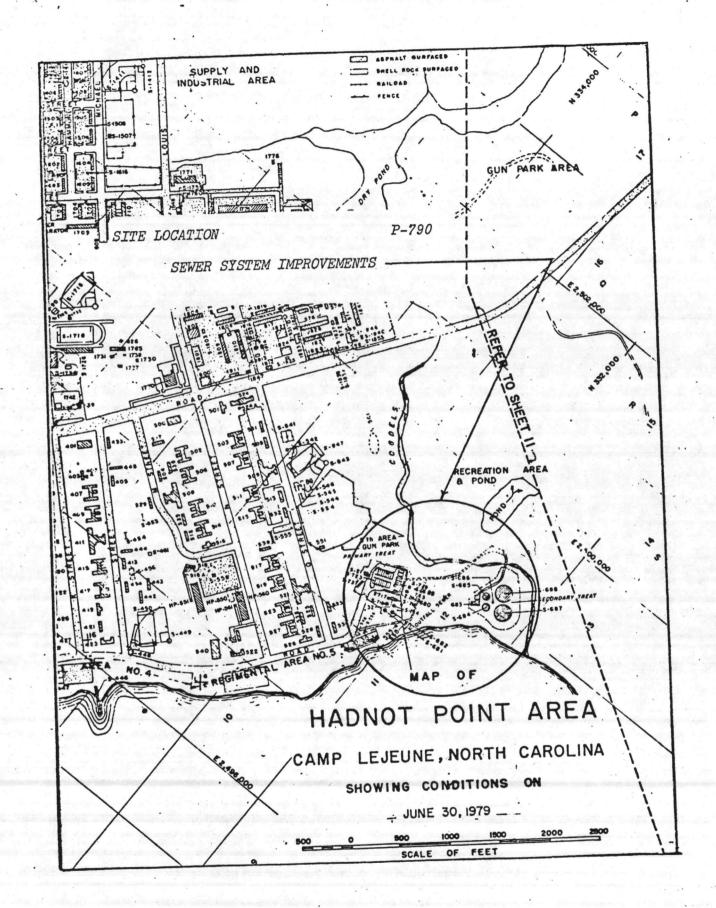
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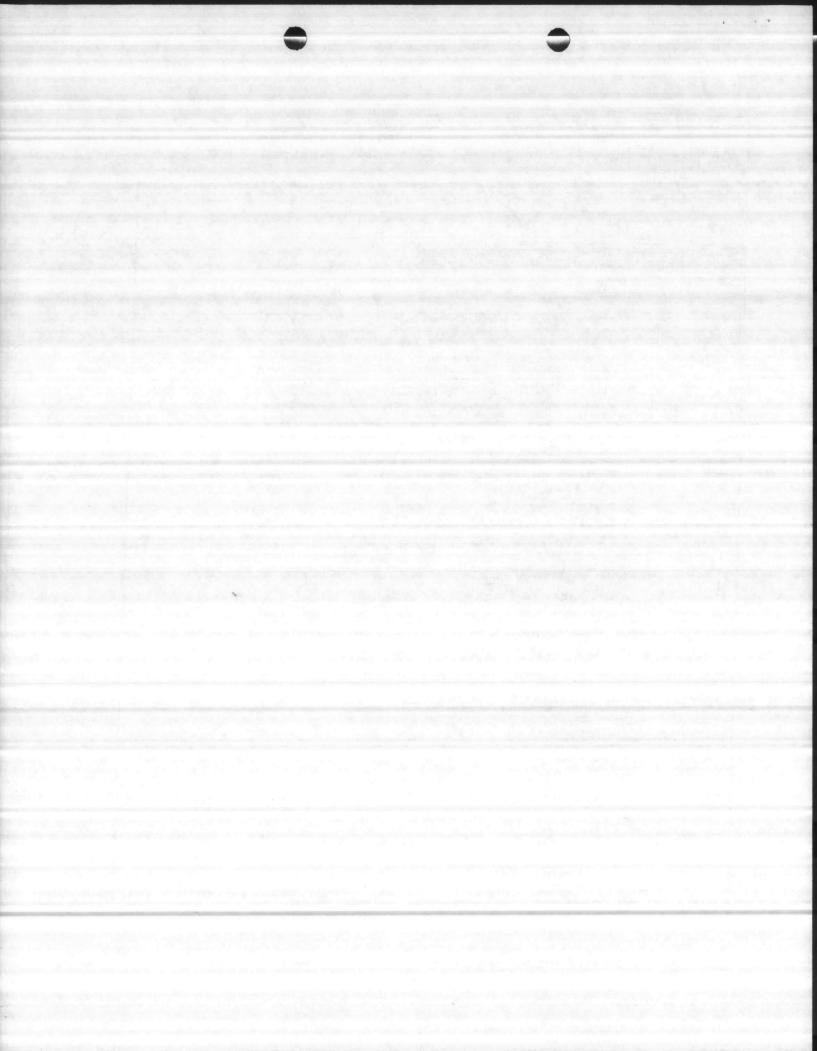


NAVY	FY 19 85 MILITARY CONSTRUCTION PROJECT DATA	1 AUG 1981
MARINE CORPS	BASE, CAMP LEJEUNE, NORTH CAROLINA 28542	JECT NUMBER
4. PROJECT TITLE		790

- 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. <u>Environmental Impact</u>. 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.







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 btwm 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, Hologab Boulevard and Hadnot Point Mater Treatment Plants

(3) Additions to HCON Project P-790, Hadnot Point Sewage Treatment Plant

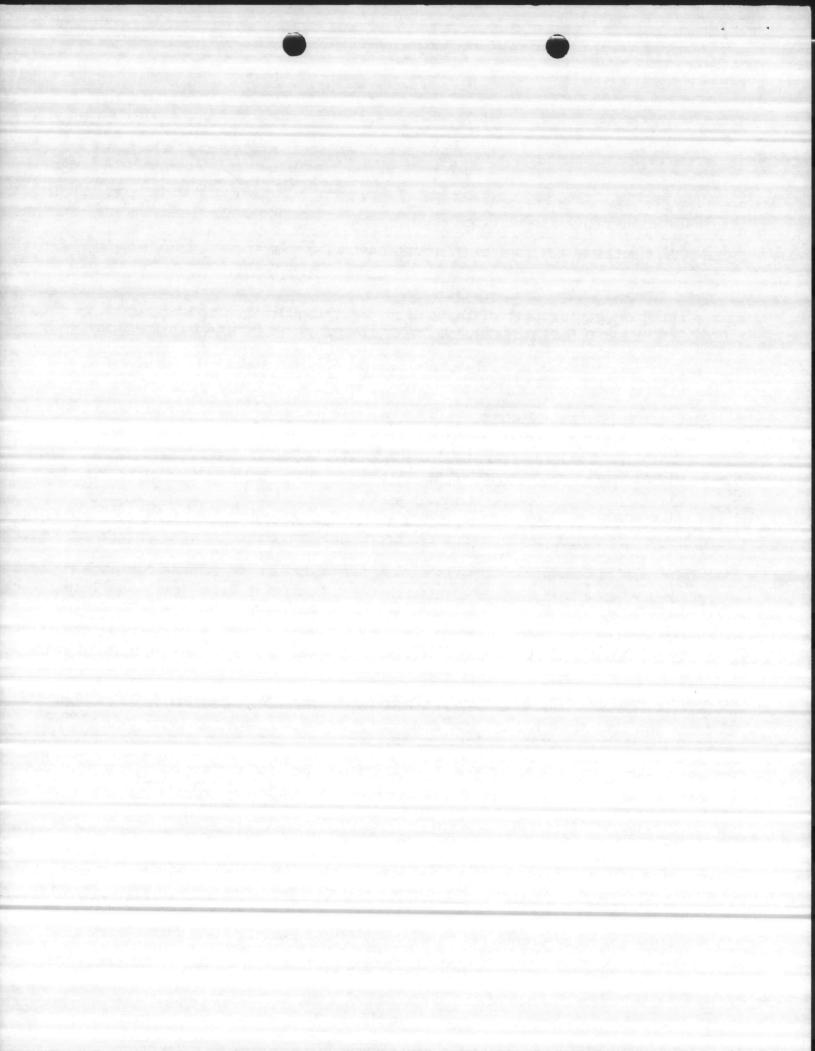
(4) French Creek Utility Distribution System Expansion

- 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 Nater 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. Mater Trunk Main, Holcomb Boulevard and Hadnot Point Nater 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 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-31 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.

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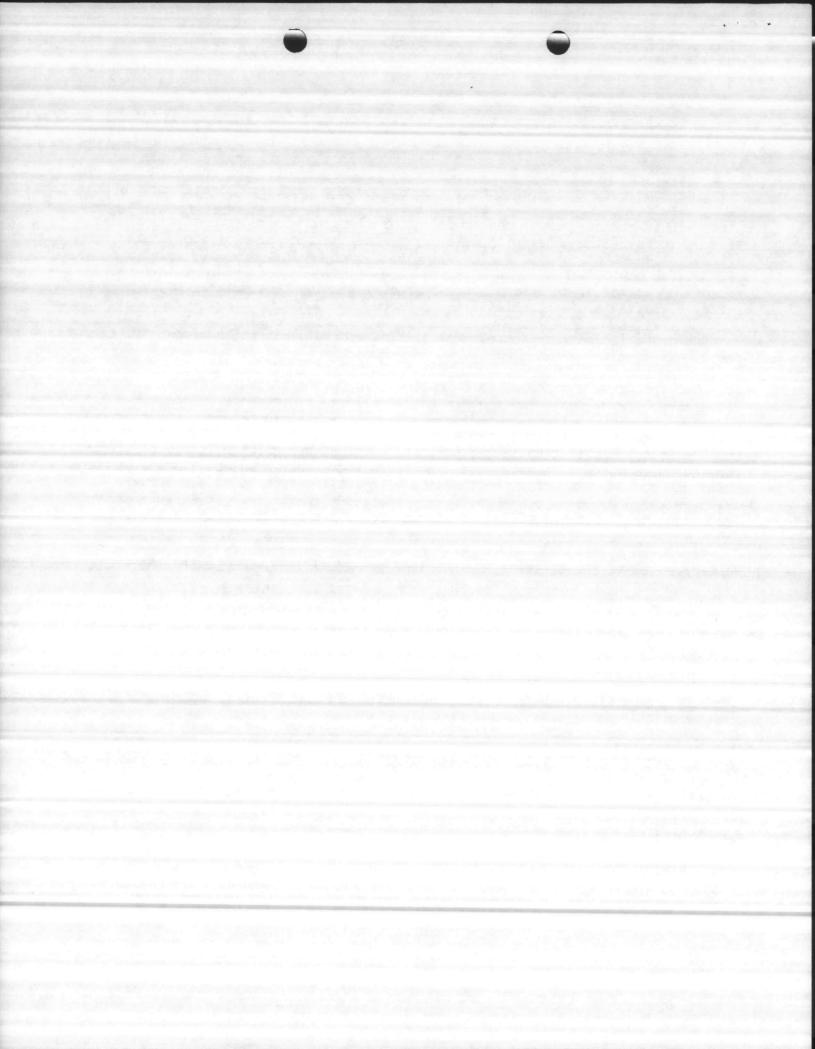
MAIN/TH/rn

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-21 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. 80-3-3801, for construction of the plant is presently underway. Dased 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 Tooped 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.

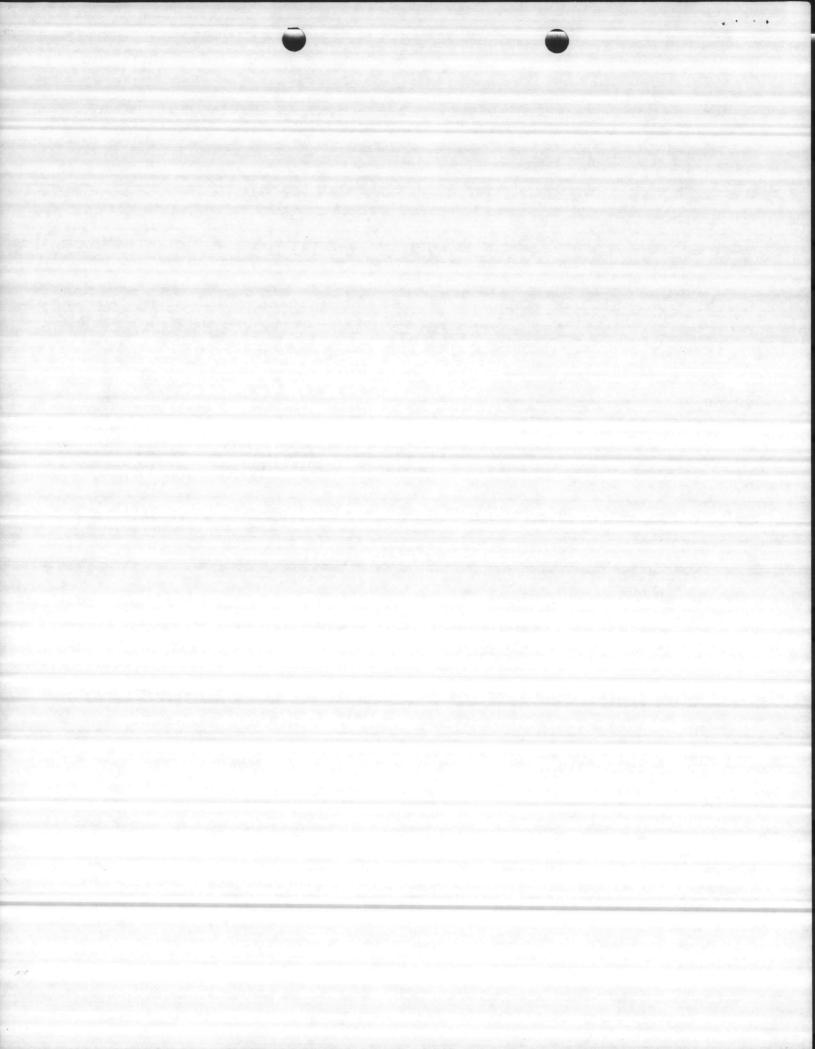


5. For additional information on subject additions to the MCON Program, contact Terry Hatcher, Director, Utilities Division, ext. 5161.

F. H. MOUNT

elemente de l'activat de l'activation

3



## Station FC 315

\$ 8,000
1,500
1,700
. \$11,200
616
1,182
\$12,998
780
\$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

