

4280
MAIN

03 DEC 1987

From: Commanding General, Marine Corps Base, Camp Lejeune
To: Commandant of the Marine Corps (Attn: Capt Nimeth
Code LFF-2B)

Subj: SUPPLEMENTAL M2 PROJECT #LEG18MS, REPAIR/REPLACE BOILERS
AND EQUIPMENT, BLDG BB-9

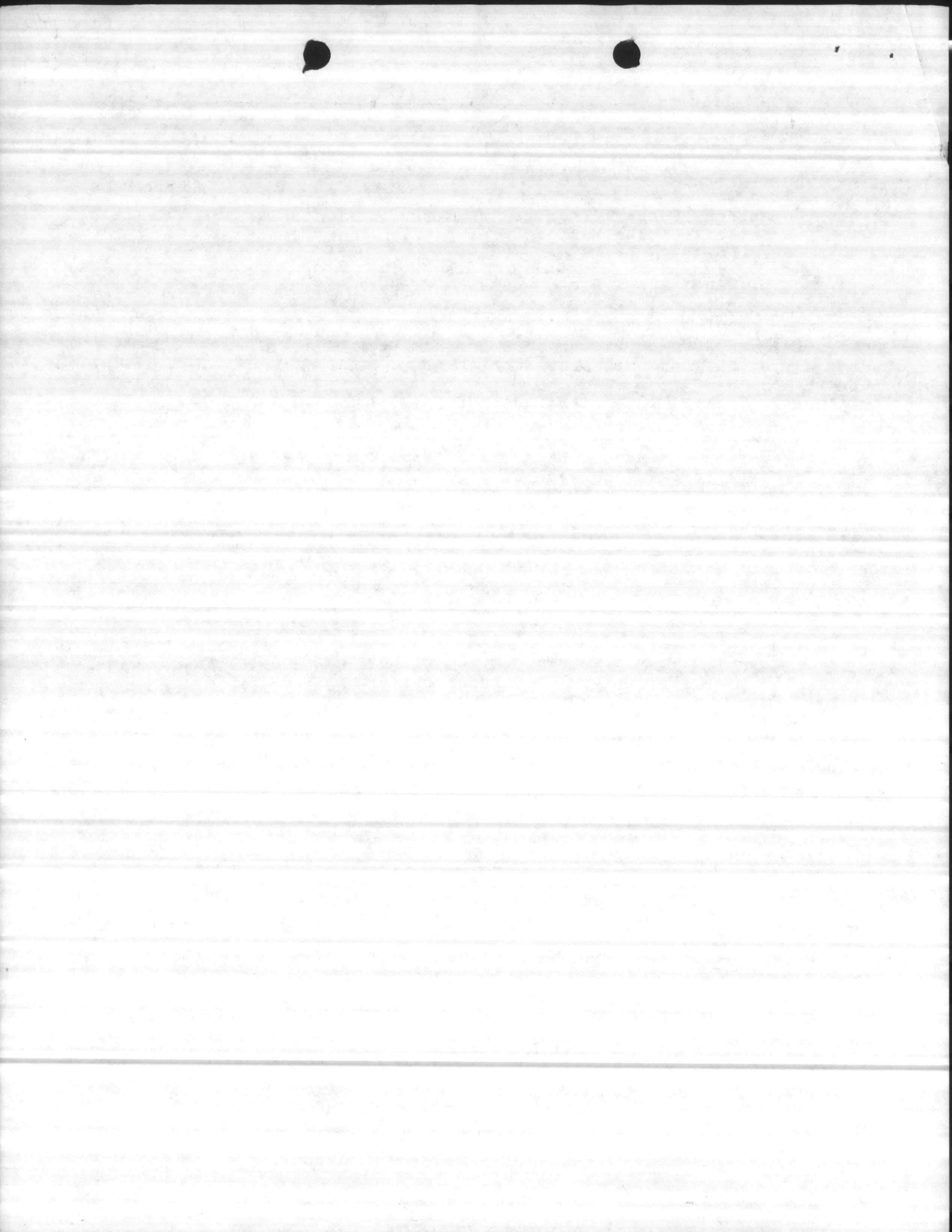
Ref: (a) PHORCON on 21 Oct 87 between Capt Nimeth (LFF-2B),
CMC, and Greg Shoemaker, BMaint, MCB, CLNC

Encl: (1) Updated 1391 with Scope/Estimate Sheets for M2 Project
#LEG18MS

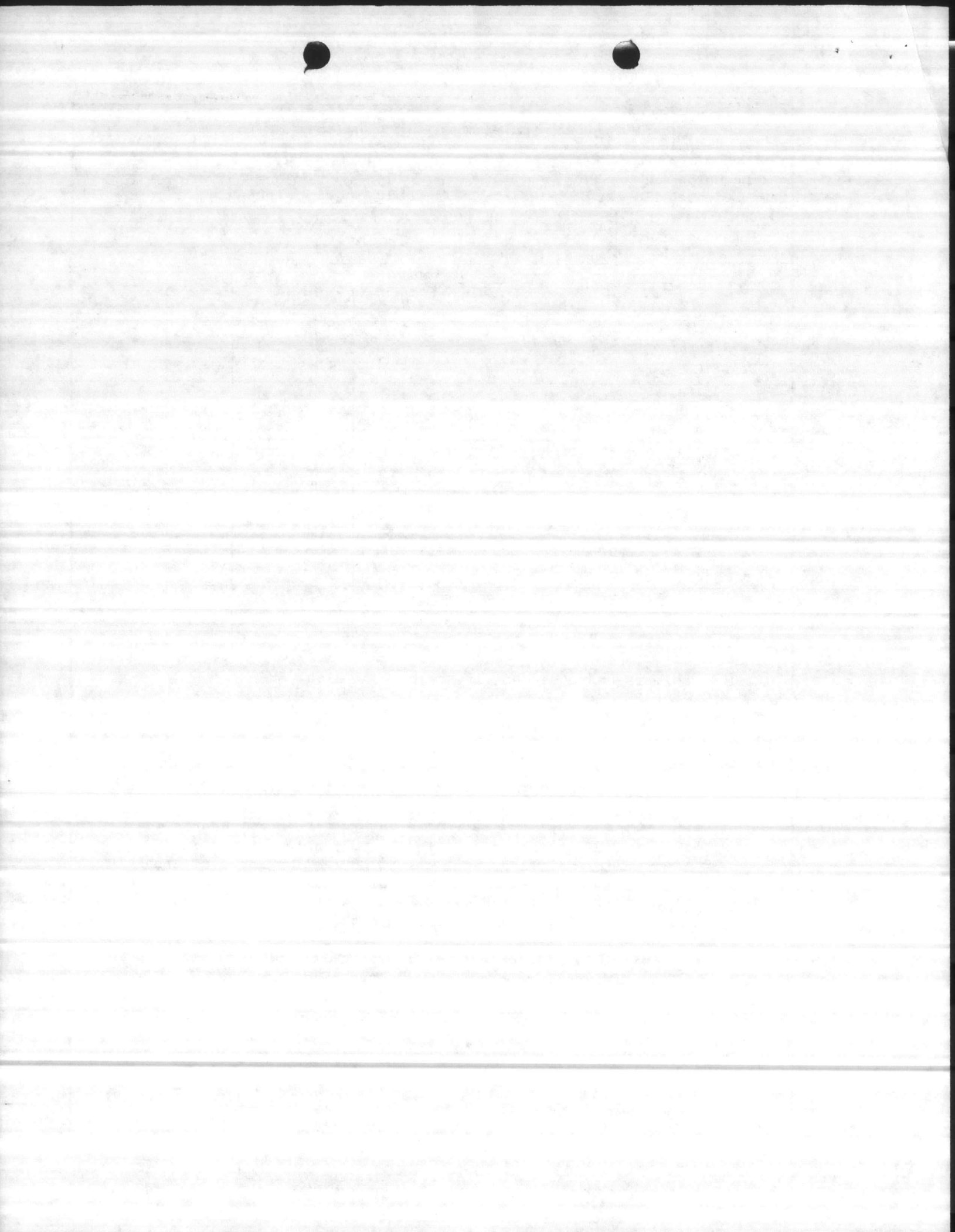
1. As discussed during the reference, the updated supplemental M2 project is forwarded for your approval.
2. Expeditious approval to proceed with designs is respectfully requested.
3. Point of contact at Base Maintenance is Greg Shoemaker, Autovon 484-5794/5796.

M. G. LILLEY
By direction

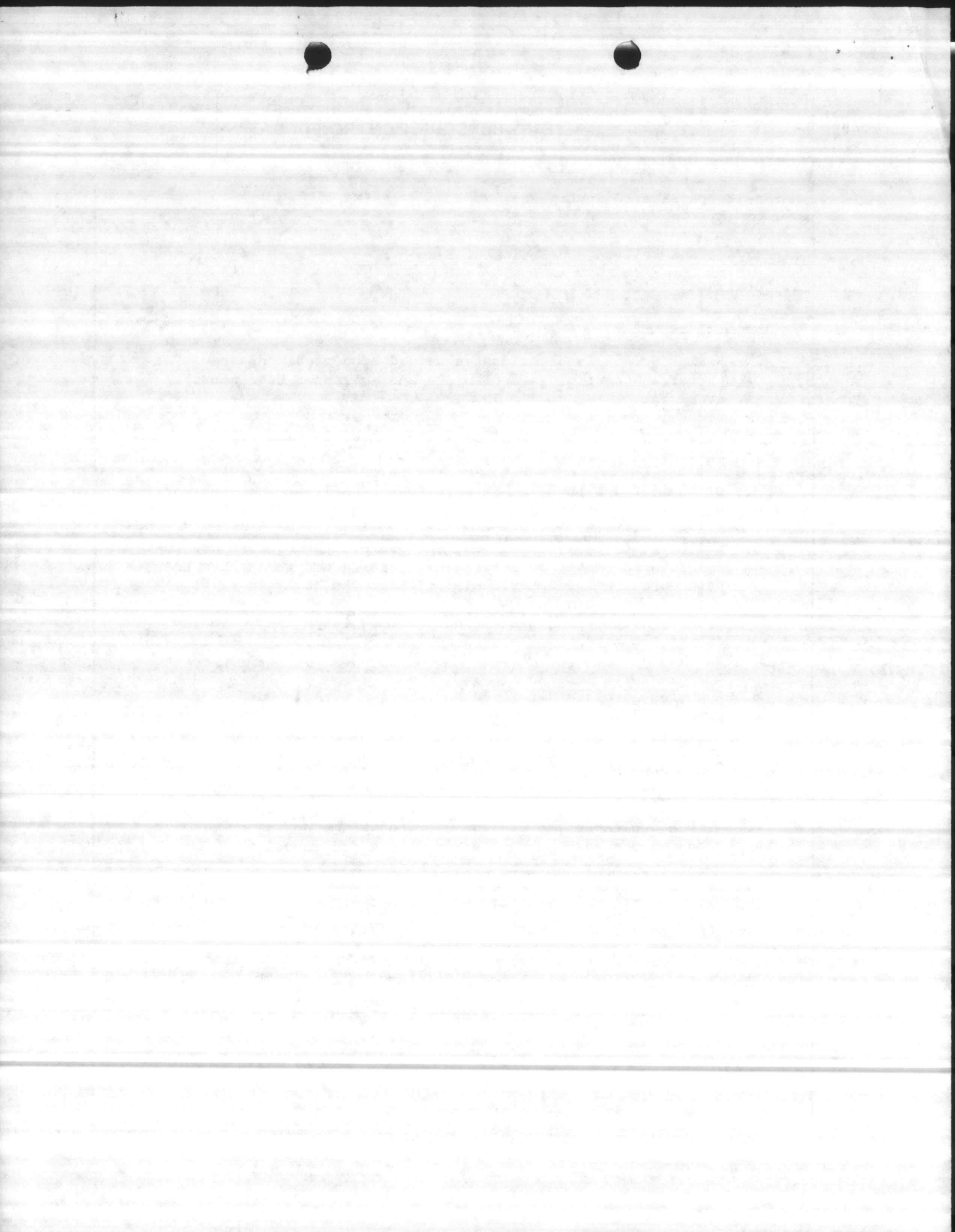
Blind Copy to:
PWO w/enclosure
✓ Dir, UtilBr w/enclosure
Work Reception



1. COMPONENT		FY 1988 MILITARY CONSTRUCTION PROJECT DATA			2. DATE	
					23 Nov. 1987	
3. INSTALLATION AND LOCATION				4. PROJECT TITLE		
Marine Corps Base Camp Lejeune, NC				Repair/Replace Boilers & Equipment BLDG BB-9		
5. PROGRAM ELEMENT		6. CATEGORY CODE	7. PROJECT NUMBER		8. PROJECT COST (\$000)	
		82109	LE818MS		451.	
9. COST ESTIMATES						
ITEM				U/M	QUANTITY	COST (\$000)
Basic Cost				LS	-	410.
Contingency 10%				LS	-	<u>41</u>
Total Project Cost				LS	-	451.
Design 6%				LS	-	<u>27</u>
Total Funds Requested				LS	-	478.
10. DESCRIPTION OF PROPOSED CONSTRUCTION						
Replace boilers and equipment in steam plant Bldg. BB-9						
11. <u>Requirements:</u>						
<p><u>Project:</u> Replace boiler #55, repair boiler #53, replace controls, regulators, guages, oil meters, cat walks, fans piping and other related equipment. Replace oil heater pump set, piping and regulators. Replace deteriorated window panels with roll up doors. Remove asbestos insulation completely. Replace (3) below ground 10,000 gallon oil tanks with one 30,000 gallon above oil tank, with berm, retaining wall, off loading pumps, steam coils and related piping and controls. Transfer pumps, steam flow meters, charts and orifice plates.</p> <p><u>Requirement:</u> The replacement and repair of the boilers and associated equipment is necessary to provide a reliable heating plant for courthouse bay.</p>						



1. COMPONENT	FY 19 <u>88</u> MILITARY CONSTRUCTION PROJECT DATA	2. DATE 23 Nov. 1987
3. INSTALLATION AND LOCATION Marine Corps Base, Camp Lejeune, NC		
4. PROJECT TITLE Repair/Replace Boilers and Equipment Bldg. BB-9	5. PROJECT NUMBER LE818MS	
<p>11. continued</p> <p><u>Current Situation:</u></p> <ol style="list-style-type: none"> 1. Boiler No. 55 is deteriorated beyond economical repairs. The burner and controls are obsolete and no longer have parts available. 2. Blow down tank is excessively pitted and blowdown pipe has been patched. 3. Oil heater and pump set is worn from normal use and does not have the capability of the increased capacity of No. 55 boiler. 4. Boiler gases have leaked past the seals deteriorating the insulation and outer boiler casing. Casing and seals have been patched and welded previously. Boiler was built in 1978. 5. Roll up doors will give the needed room for boiler cleaning during the hot summer months in lieu of replacing deteriorated panels. 6. Asbestos is old and friable and should be replaced due to personnel safety. 7. Oil tanks are old and have the potential of leaking oil into the ground. 8. The existing pump is worn from normal use and should be replaced with a duplex set to prevent plant downtime during pump failure. Also, pump needs to be sized for the added capacity of No. 55 boiler. 9. Existing steam flow meters are old and do not have the turn down ratio for the varying summer/winter loads to give accurate readings. <p><u>Impact If Not Provided:</u> Steam Plant BB-9 will be unable to provide adequate steam to meet the demand for building heating requirements, domestic hot water, and messhall equipment, in the Courthouse Bay area.</p>		



COST ESTIMATE

DATE PREPARED
23 Nov. 1987

SHEET 1 OF 4

ACTIVITY AND LOCATION

Marine Corps Base, Camp Lejeune, NC

PROJECT TITLE

Boiler and Steam Plant Repairs, Bldg. BB-9

CONSTRUCTION CONTRACT NO.

ESTIMATED BY

Huffman

STATUS OF DESIGN

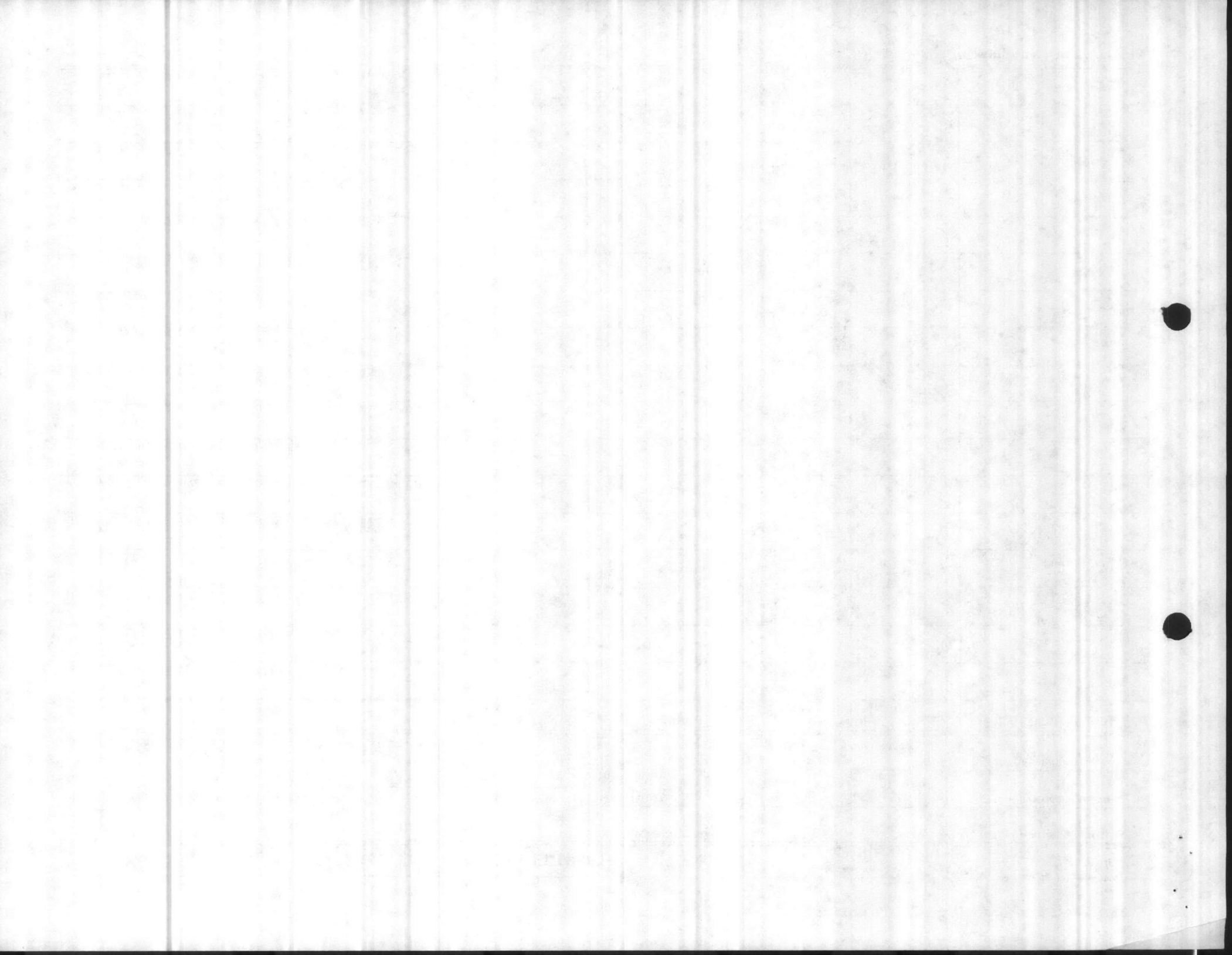
PED 30% 100% FINAL Other (Specify) _____

IDENTIFICATION NUMBER

CATEGORY CODE NUMBER

JOB ORDER NUMBER

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
Work at Steam Plant BB-9 shall include the following items and any other related work necessary to provide a complete and usable facility.								
1. Replace No. 55 boiler, complete with valves, automatic controls, regulators, gauges, oil meters, catwalks, fans, piping and other related equipment to make boiler functional. Boiler should be the water tube type with capacity increased to 20,000 pounds per hour.								
2. Replace boiler blowdown piping from all three boilers to include blowdown tank.								
3. Replace oil heating pump set to include piping and regulators to all three boilers with capacity to accommodate the increased capacity of No. 55 boiler.								



COST ESTIMATE

DATE PREPARED

SHEET 2 OF 4

ACTIVITY AND LOCATION

Marine Corps Base, Camp Lejeune, NC

PROJECT TITLE

Boiler and Steam Plant Repairs, Bldg. BB-9

CONSTRUCTION CONTRACT NO.

ESTIMATED BY

Huffman

STATUS OF DESIGN

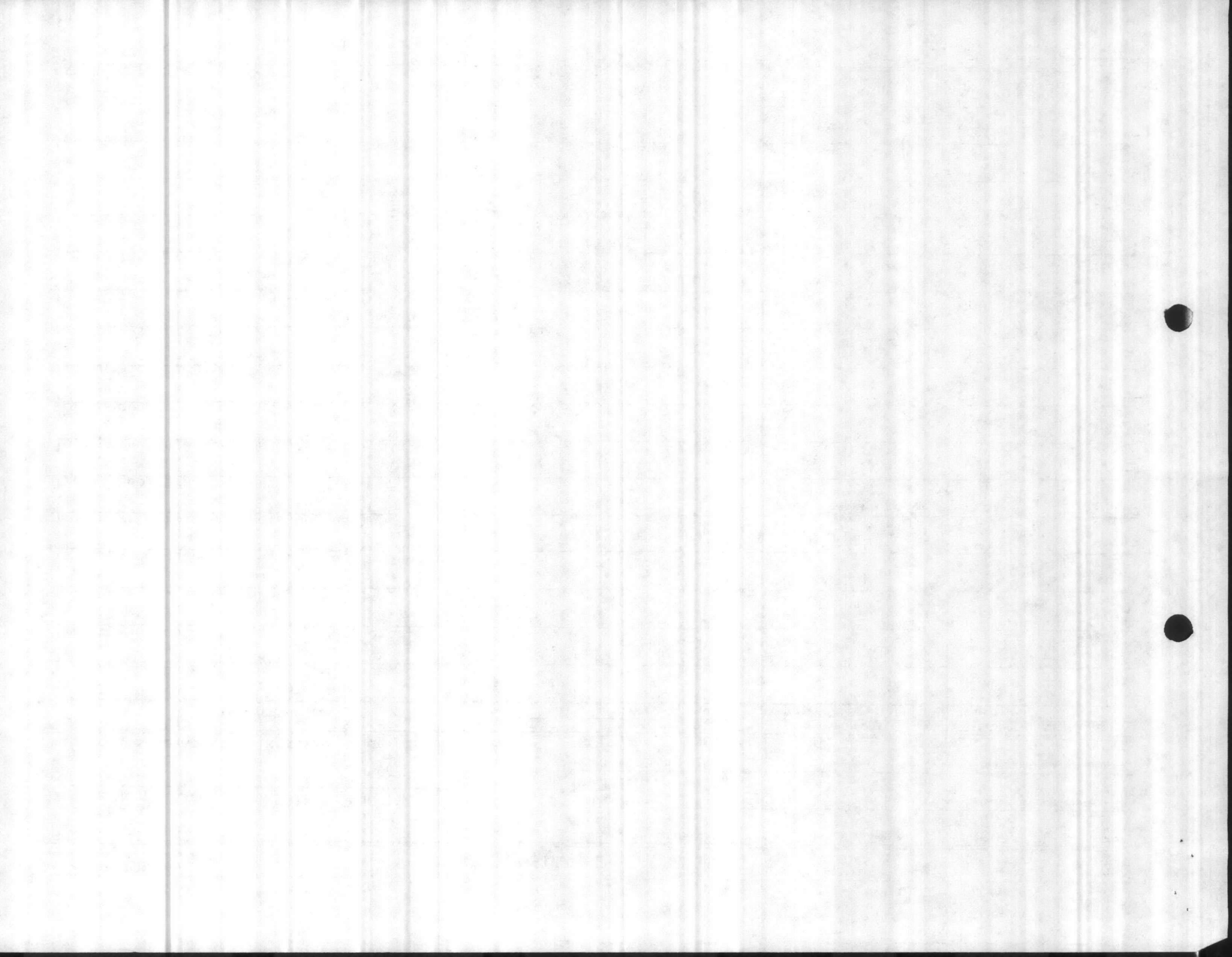
PED 30% 100% FINAL Other (Specify) _____

IDENTIFICATION NUMBER

CATEGORY CODE NUMBER

JOB ORDER NUMBER

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
4. Replace outer casing, insulation, boiler gas seals, burner eye refractor, and paint No. 53 boiler.								
5. Replace deteriorated removable window panels with roll up doors behind Nos. 53, 54, and boilers.								
6. Remove asbestos insulation off all steam, condensate and water lines. Reinsulate with calcium silicate and smooth metal covering.								
7. Replace three 10,000 gallon No. 6 oil tanks with one 30,000 gallon fuel tank. The tank should include a berm type retaining wall with off loading pumps (duplex), steam coils, regulator valves.								
8. Replace the existing boiler water transfer pump and piping with a duplex								



COST ESTIMATE

DATE PREPARED

SHEET 3 OF 4

ACTIVITY AND LOCATION

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

Marine Corps Base, Camp Lejeune, NC

ESTIMATED BY

CATEGORY CODE NUMBER

PROJECT TITLE

Huffman

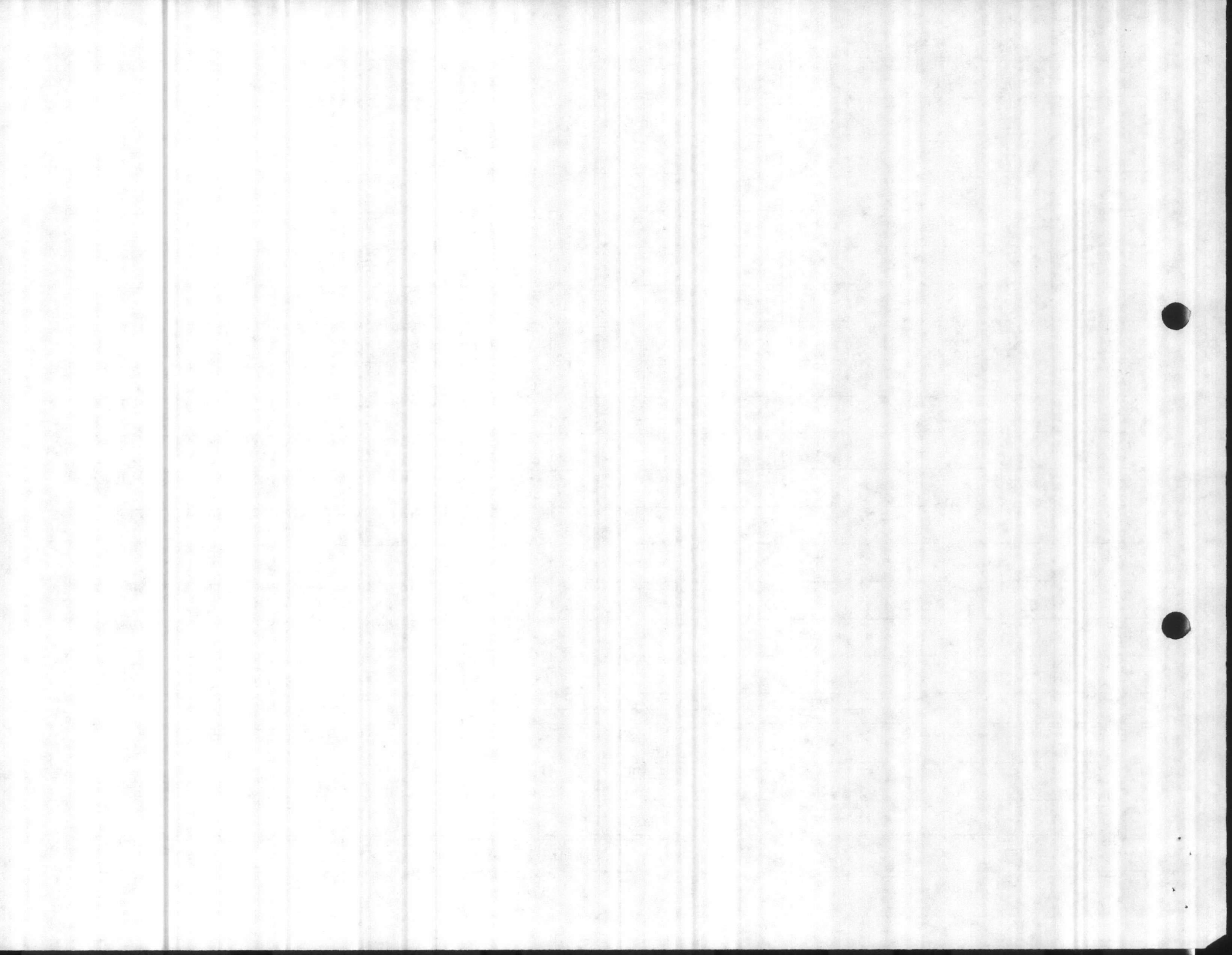
STATUS OF DESIGN

JOB ORDER NUMBER

Boiler and Steam Plant Repairs, Bldg. BB-9

PED 30% 100% FINAL Other (Specify) _____

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
(continued)								
pump set. Provide necessary valves, strainers, regulators, from deaerator to make up tanks.								
9. Replace existing steam flow meters with type that has 10 to 1 turn down ratio, pressure and temperature compensators, 24 hour chart, digital readout, 4-20 M.A. and replace orifice plates on Nos. 53, 54, and 55 boilers.								
Estimated Cost:								



COST ESTIMATE

DATE PREPARED

SHEET 4 OF 4

ACTIVITY AND LOCATION

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

Marine Corps Base, Camp Lejeune, NC

ESTIMATED BY
Huffman

CATEGORY CODE NUMBER

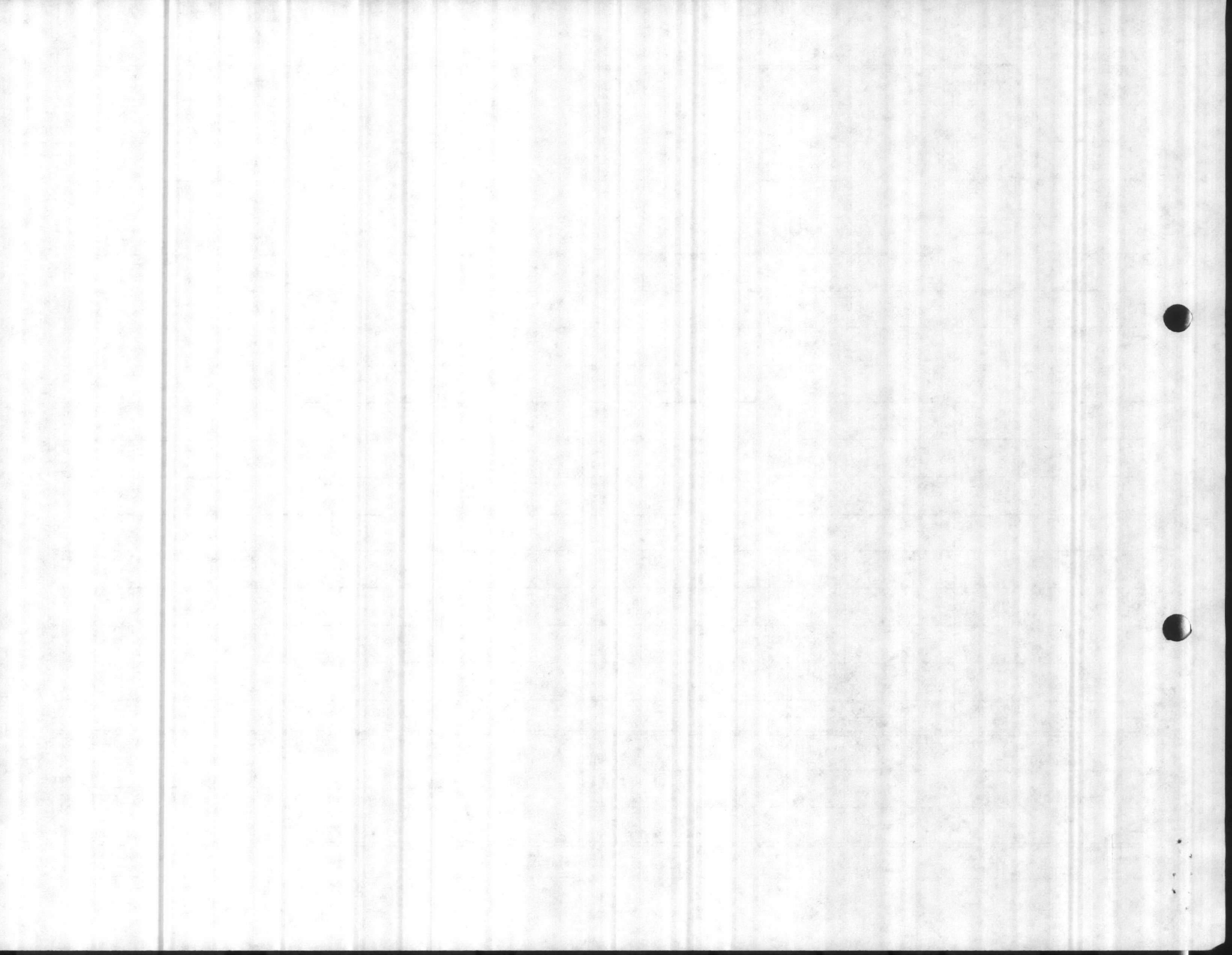
PROJECT TITLE

STATUS OF DESIGN
 PED 30% 100% FINAL Other (Specify) _____

JOB ORDER NUMBER

Boiler and Steam Plant Repairs, Bldg. BB-9

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
Sub-Total				115,000		179,500		295,000
Overhead 15%								44,250
Labor 18%								20,700
Material 5%								8,975
Sub-Total								368,925
Profit 10%								36,892
Sub-Total								405,817
Bond 1%								4,058
Sub-Total								409,875
						ROUNDED (SAX)		410,000





UNITED STATES MARINE CORPS
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542-5001

IN REPLY REFER TO:

11014
MAIN

13 OCT 1987

From: Commanding General, Marine Corps Base, Camp Lejeune
To: Commandant of the Marine Corps (LFF 2B)

Subj: FY88 MAJOR REPAIR PROGRAM (M2)

Encl: (1) M2 Project LES18MS, Repair/Replace Boilers and Equip-
ment BB-9 ~~Bldg 1101~~

1. The enclosure is forwarded requesting approval as a supplemental project under the subject program.
2. This project is necessary to provide a reliable heating plant for the Court House Bay area. The enclosure outlines specific deficiencies necessitating this to be funded in FY88.
3. Point of contact is Greg Shoemaker, Contracts Manager, Auto-
von 484-5794/5799.

M. G. LILLEY
By direction

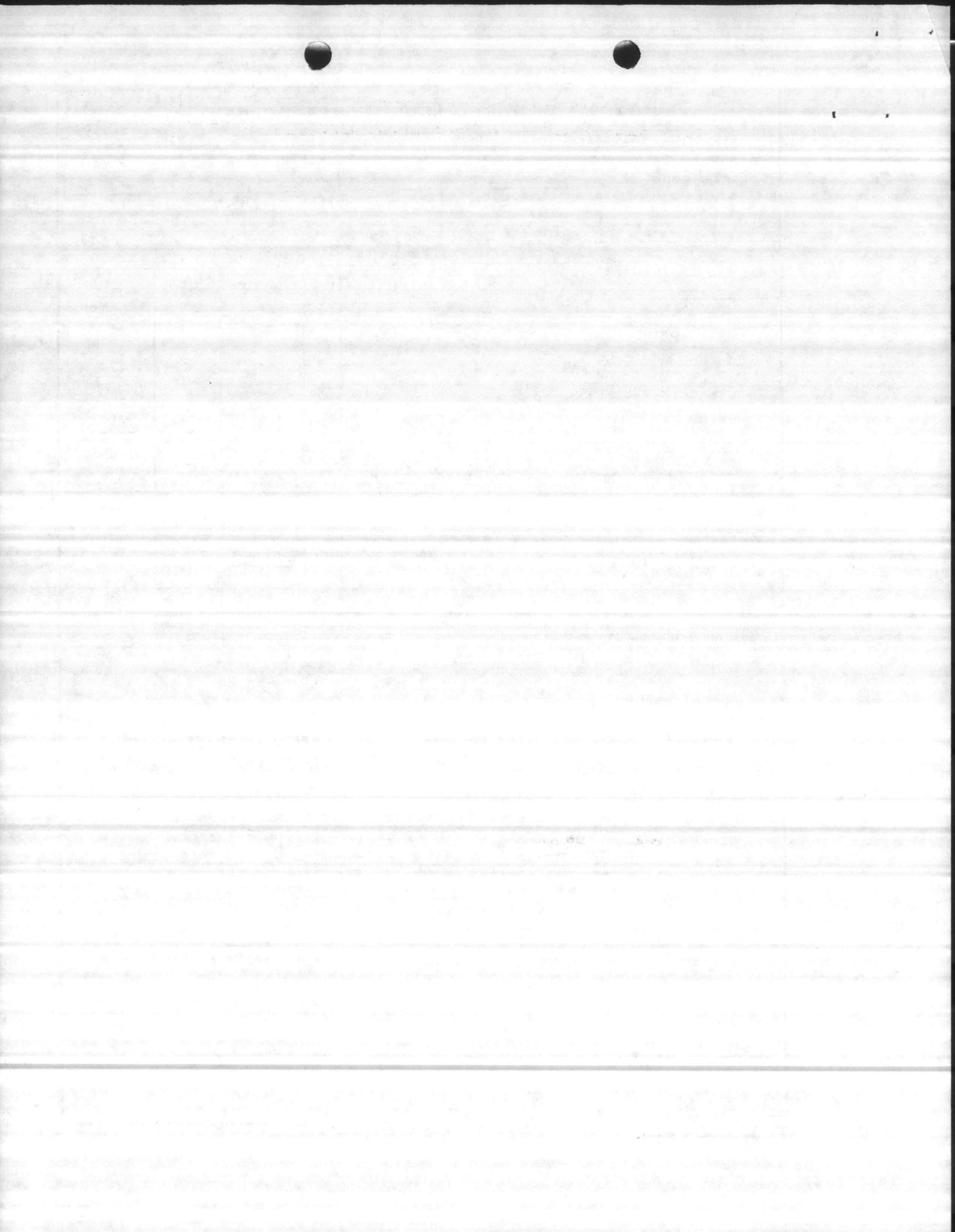
Copy to:
→ Utilities
PWO

*Discussed changes
on fuel tanks w/ Shoe
and he will follow up.
11-13-87
CAF*

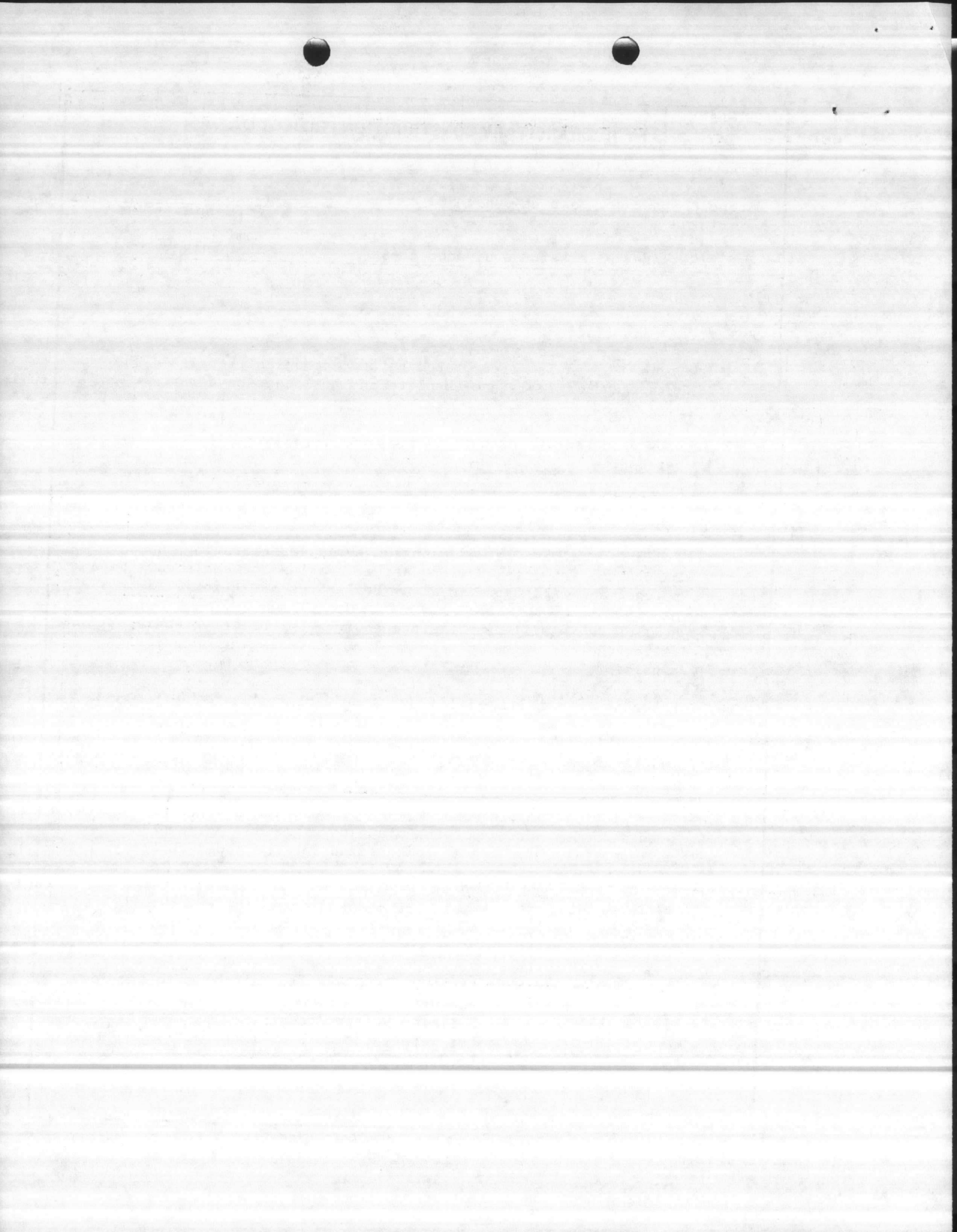
1881 T30 8-1

Copy to
Utilities
1881

1. COMPONENT		FY 1988 MILITARY CONSTRUCTION PROJECT DATA			2. DATE	
					16 Sept. 1987	
3. INSTALLATION AND LOCATION			4. PROJECT TITLE			
Marine Corps Base Camp Lejeune, NC			Repair/Replace Boilers & Equipment BB-9			
5. PROGRAM ELEMENT		6. CATEGORY CODE	7. PROJECT NUMBER		8. PROJECT COST (\$000)	
		82109	LE818MS		525.	
9. COST ESTIMATES						
ITEM			U/M	QUANTITY	UNIT COST	COST (\$000)
Basic Cost			LS	-	-	477
Contengency 10%			LS	-	-	48
Total Project Cost.			LS	-	-	525
Design 6%			LS	-	-	31
Total Funds Requested			LS	-	-	556
10. DESCRIPTION OF PROPOSED CONSTRUCTION						
Replace boilers and equipment in steam plant BB-9						
11. Requirements:						
<p><u>Project:</u> Replace boiler #55, repair boiler #53, replace controls, regulators, guages, oil meters, cat walks, fans piping and other related equipment. Replace oil heater pump set, piping and regulators. Replace window panels with roll up doors. Remove asbestos insulation complete. Replace (3) below ground 10,000 gallon oil tanks with ^{one} two ^{30,000} 75,000 gallon above oil tanks with berm retaining wall, off loading pumps, steam coils and related piping and controls. Transfer pumps, steam flow meters, charts and orifice plates.</p> <p><u>Requirement:</u> The replacement and repair of the boilers and associated equipment is necessary to provide a reliable heating plant for courthouse bay.</p>						



1. COMPONENT	FY 1988 MILITARY CONSTRUCTION PROJECT DATA	2. DATE 16 Sept.87
3. INSTALLATION AND LOCATION Marine Corps Base, Camp Lejeune, NC		
4. PROJECT TITLE Repair/Replace Boilers and equipment BB-9	5. PROJECT NUMBER LE818MS	
<p>11. continued</p> <p><u>Current Situation:</u></p> <ol style="list-style-type: none"> 1. Boiler No. 55 is deteriorated beyond economical repairs. The burner and controls are obsolete and no longer have parts available. 2. Blow down tank is excessively pitted and blowdown pipe has been patched. 3. Oil heater and pump set is worn from normal use and does not have the capability of the increased capacity of No. 55 boiler. 4. Boiler gases have leaked past the seals deteriorating the insulation and outer boiler casing. Casing and seals have been patched and welded previously. Boiler was built in 1978. 5. Roll up doors will give the needed room for boiler cleaning during the hot summer months in lieu of replacing deteriorated panels. 6. Asbestos is old and friable and should be replaced due to personnel safety. 7. Oil tanks are old and have the potential of leaking oil into the ground. 8. The existing pump is worn from normal use and should be replaced with a duplex set to prevent plant downtime during pump failure. Also, pump need to be sized for the added capacity of No. 55 boiler. 9. Existing steam flow meters are old and do not have the turn down ratio for the varing summer/winter loads to give accurate readings. <p><u>Impact If Not Provided:</u> Steam Plant BB-9 will be unable to provide adequate steam to meet the demand for building heating requirements, domestic hot water, and messhall equipment, in the courthouse bay area.</p>		



COST ESTIMATE

DATE PREPARED
16 Sept. 1987

SHEET OF

ACTIVITY AND LOCATION

Marine Corps Base, Camp Lejeune, NC

CONSTRUCTION CONTRACT NO.

ESTIMATED BY

Huffman

STATUS OF DESIGN
 PED 30% 100% FINAL Other (Specify) _____

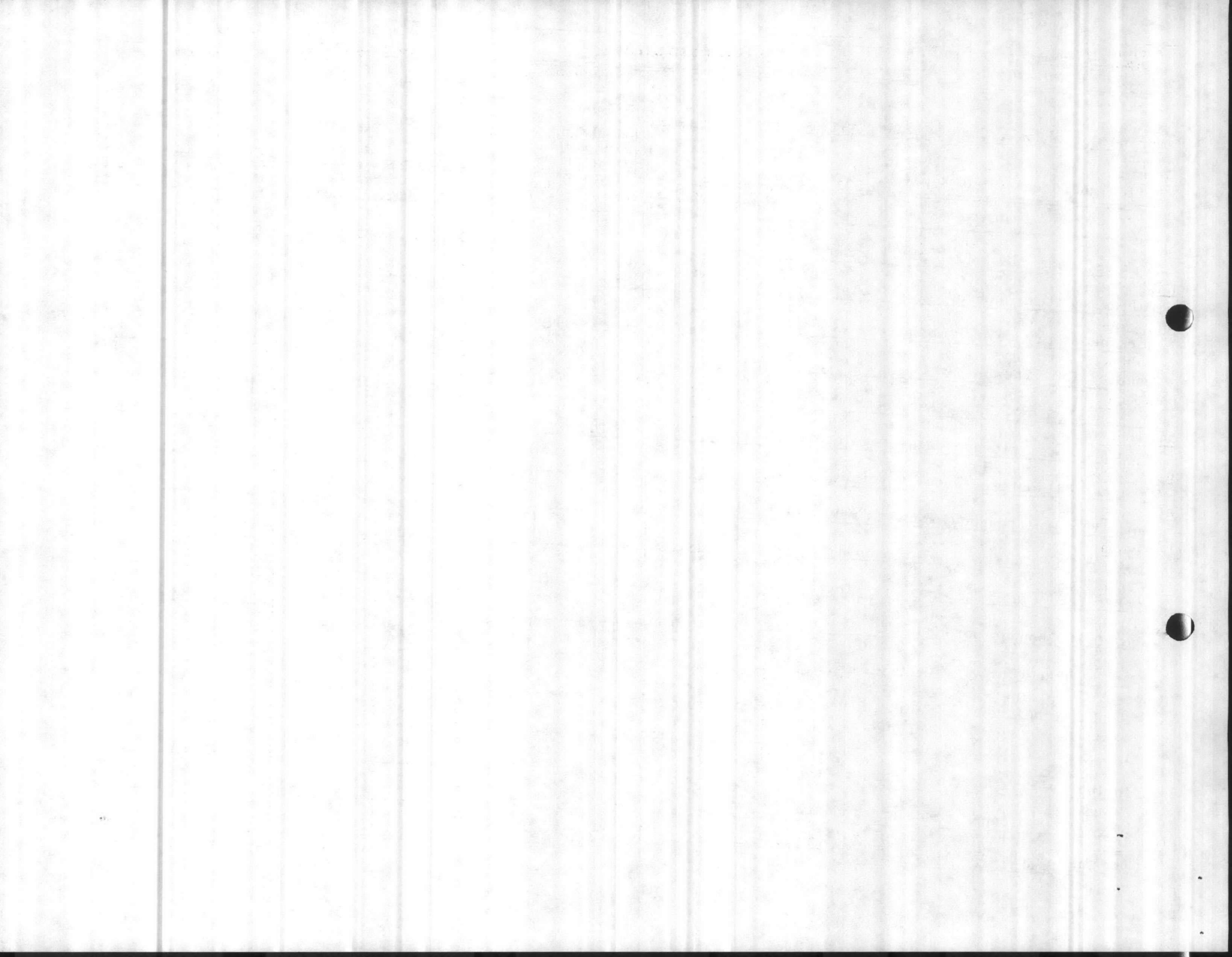
IDENTIFICATION NUMBER

CATEGORY CODE NUMBER

JOB ORDER NUMBER

Boiler and Steam Plant Repairs, BB-9

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
Work at Steam Plant BB-9 shall include the following items and any other related work necessary to provide a complete and usable facility.								
1. Replace No. 55 boiler, complete with valves, automatic controls, regulators, gauges, oil meters, catwalks, fans, piping and other related equipment to make boiler functional. Boiler should be the water tube type with capacity increased to 20,000 pounds per hour.								
2. Replace boiler blowdown piping from all three boilers to include blowdown tank.								
3. Replace oil heating pump set to include piping and regulators to all three boilers with capacity to accommodate the increased capacity of No. 55 boiler.								



COST ESTIMATE

DATE PREPARED
16 Sept. 1987

SHEET OF

ACTIVITY AND LOCATION

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

Marine Corps Base, Camp Lejeune, NC
PROJECT TITLE

ESTIMATED BY

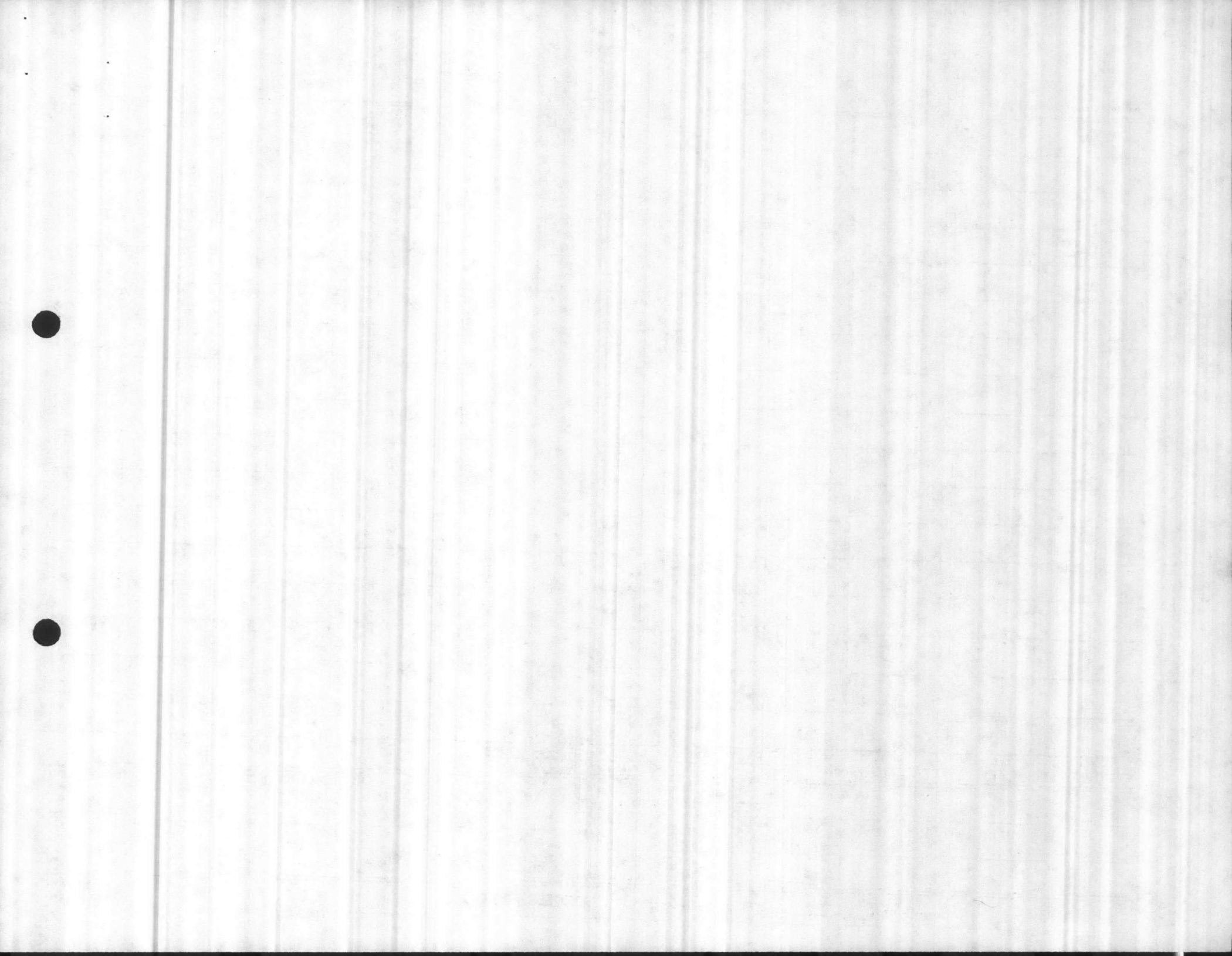
CATEGORY CODE NUMBER

Huffman
STATUS OF DESIGN
 PED 30% 100% FINAL Other (Specify) _____

JOB ORDER NUMBER

Boiler and Steam Plant Repairs BB-9

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
4. Replace outer casing, insulation, boiler gas seals, burner eye refractor, and paint No. 53 boiler.								
5. Replace deteriorated removable window panels with roll up doors behind Nos. 53, 54, and boilers.								
6. Remove asbestos insulation off all steam, condensate and water lines. Reinsulate with calcium silicate and smooth metal covering.								
7. Replace three 10,000 gallon No. 6 oil tanks with two above the ground type. The two new tanks should have a capacity of 75,000 gallons each. The tanks should include a berm type retaining wall with off loading pumps (duplex), steam coils, regulator valves,								



NAVFAC 11013/7 (1-78)
Supersedes NA VDOCKS 2417 and 2417A

COST ESTIMATE

DATE PREPARED
16 Sept. 1987

SHEET OF

ACTIVITY AND LOCATION

Marine Corps Base, Camp Lejeune, NC

CONSTRUCTION CONTRACT NO.

ESTIMATED BY

Huffman

IDENTIFICATION NUMBER

CATEGORY CODE NUMBER

JOB ORDER NUMBER

STATUS OF DESIGN
 PED 30% 100% FINAL Other (Specify) _____

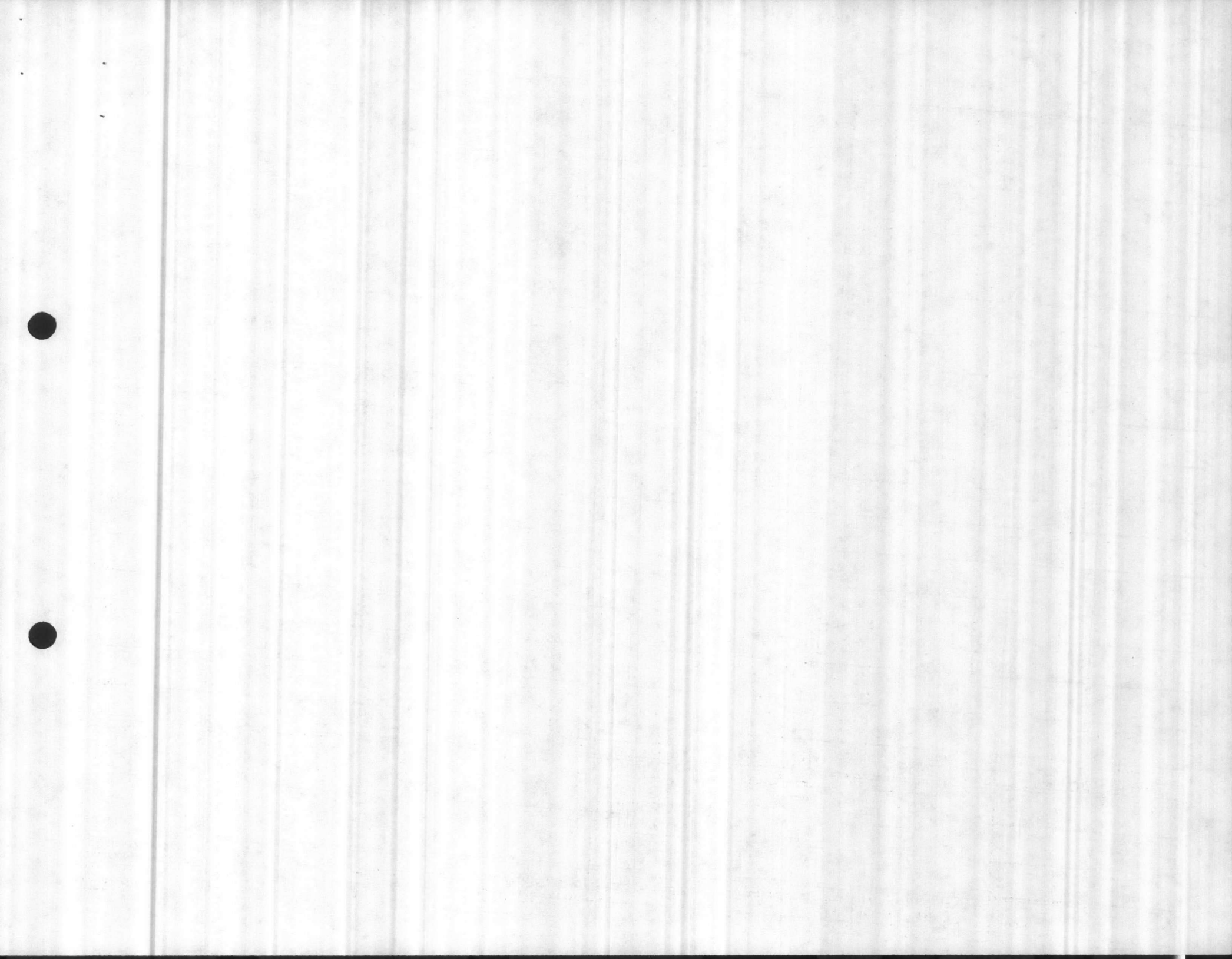
PROJECT TITLE

Boiler and Steam Plant Repairs BB-9

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
(continued)								
7. area lighting and security fence.								
The existing 10,000 gallon oil tanks shall be removed and disposed of by the contractor.								
8. Replace the existing boiler water transfer pump and piping with a duplex pump set. Provide necessary valves, strainers, regulators, from deaerator to make up tanks.								
9. Replace existing steam flow meters with type that has 10 to 1 turn down ratio, pressure and temperature compensators, 24 hour chart, digital readout, 4-20 M.A. and replace orifice plates on Nos. 53, 54, and 55 boilers.								
								\$525,000

Estimated cost:

S/N C105-LF-010-1335



NAVFAC 11013/7 (1-78)
Supersedes NAVDOCKS 2417 and 2417A

COST ESTIMATE

DATE PREPARED
16 Sept. 1987

SHEET OF

ACTIVITY AND LOCATION

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

Marine Corps Base, Camp Lejeune, NC

ESTIMATED BY

Huffman

CATEGORY CODE NUMBER

PROJECT TITLE

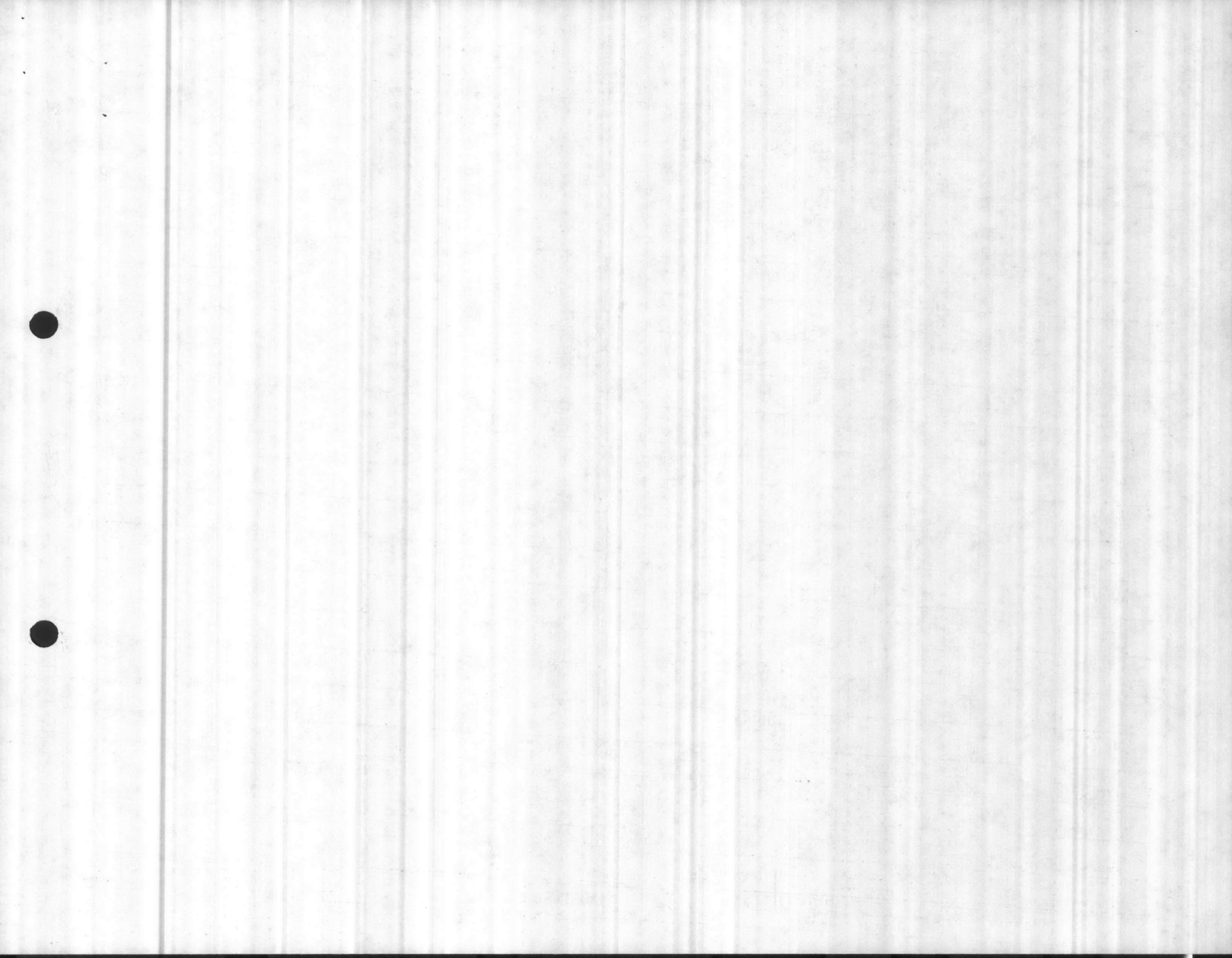
STATUS OF DESIGN

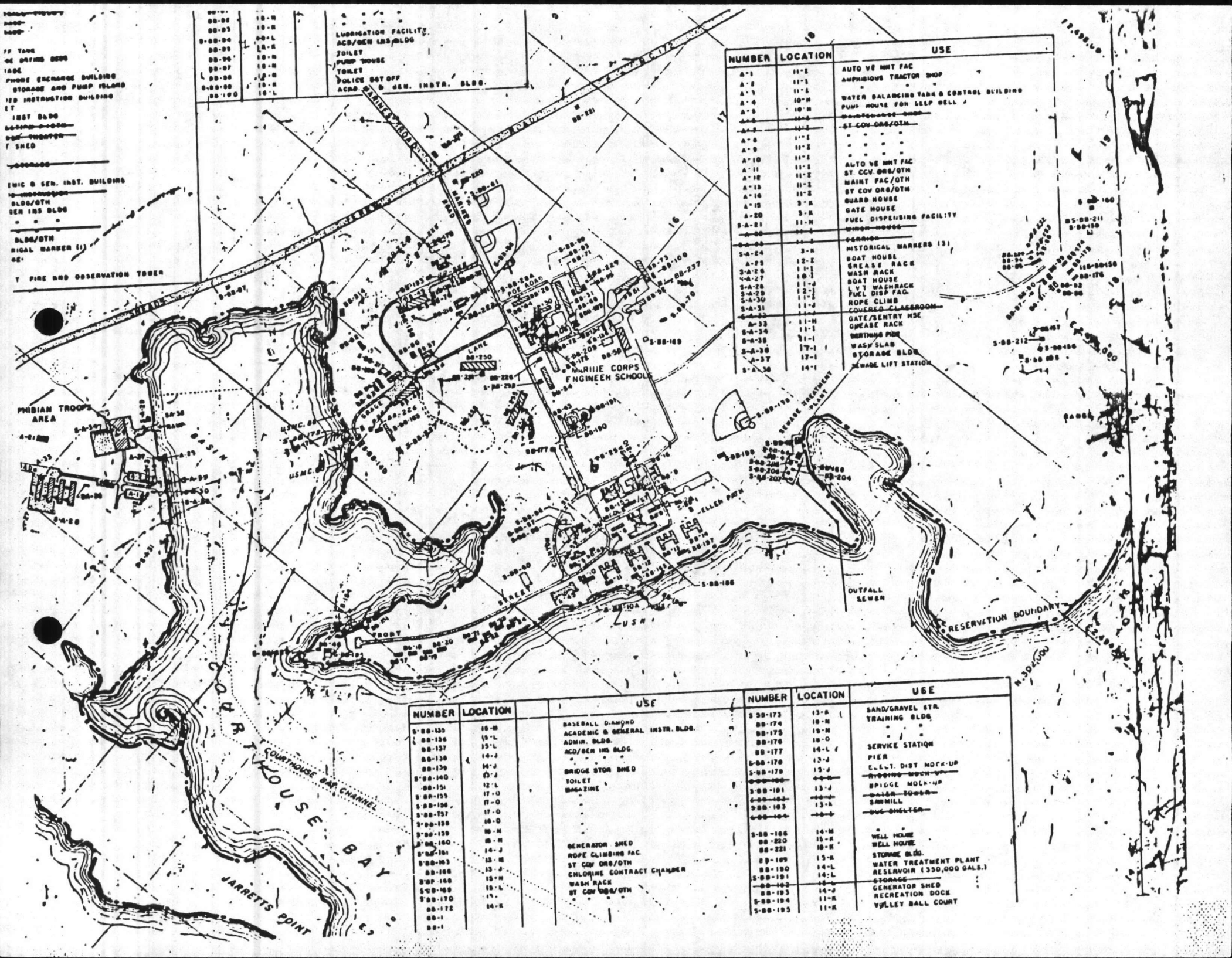
PED 30% 100% FINAL Other (Specify) _____

JOB ORDER NUMBER

Boiler and Steam Plant Repairs, BB-9

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
				132,000		203,500		335,500
Sub-Total								50,325
Overhead 15%								36,630
Labor 18%								6,600
Material 5%								429,055
Sub-Total								42,906
Profit 10%								471,961
Sub-Total								4,720
Bond 1%								476,681
Sub-Total								477,000

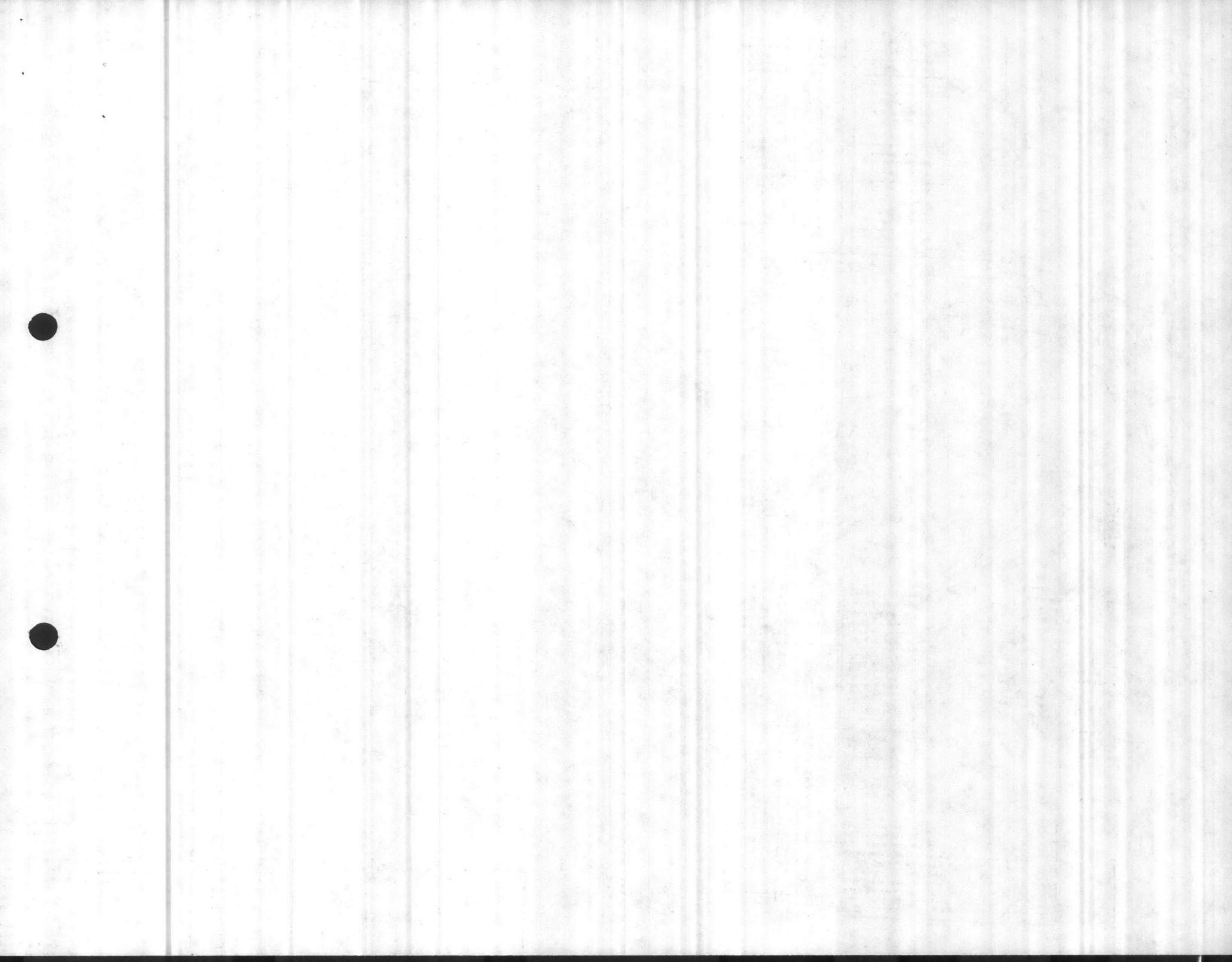


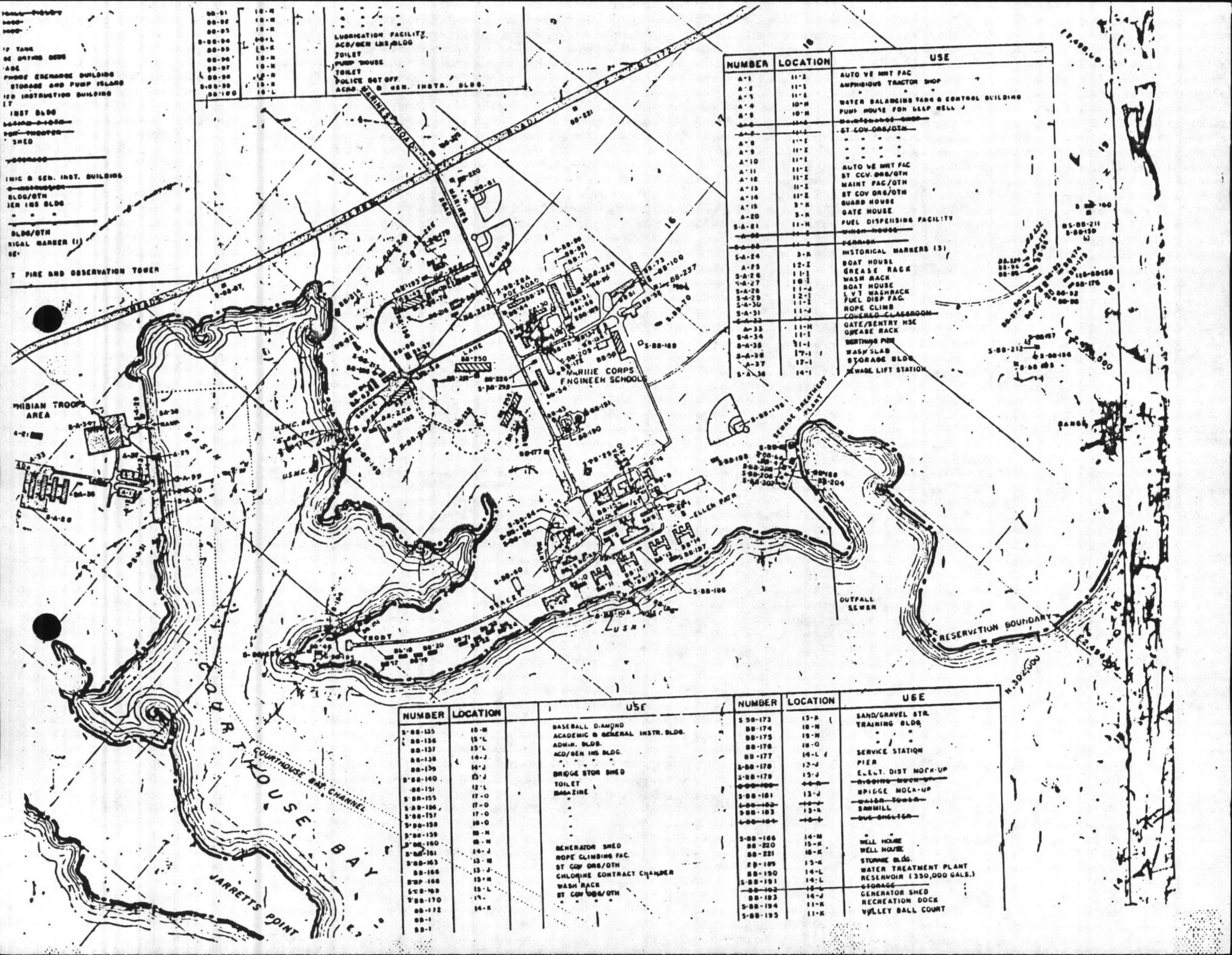


80-01	10-N	LUBRICATION FACILITY
80-02	10-N	ACD/GEN INS BLDG
80-03	10-N	TOILET
80-04	10-N	PUMP HOUSE
80-05	10-N	TOILET
80-06	10-N	POLICE SET OFF
80-07	10-N	ACD/GEN INSTR. BLDG.
80-08	10-N	
80-09	10-N	
80-10	10-N	
80-11	10-N	
80-12	10-N	
80-13	10-N	
80-14	10-N	
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80-16	10-N	
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80-95	10-N	
80-96	10-N	
80-97	10-N	
80-98	10-N	
80-99	10-N	
80-100	10-N	

NUMBER	LOCATION	USE
A-1	11-E	AUTO VE MNT FAC
A-2	11-E	AMPHIBIOUS TRACTOR SHOP
A-3	11-E	
A-4	10-N	WATER BALANCING TANK & CONTROL BUILDING
A-5	10-N	PUMP HOUSE FOR DEEP WELL
A-6	10-N	
A-7	11-E	ST COV ORG/OTH
A-8	11-E	
A-9	11-E	
A-10	11-E	
A-11	11-E	AUTO VE MNT FAC
A-12	11-E	ST COV ORG/OTH
A-13	11-E	MAINT FAC/OTH
A-14	11-E	ST COV ORG/OTH
A-15	3-K	GUARD HOUSE
A-20	3-K	GATE HOUSE
S-A-21	11-N	FUEL DISPENSING FACILITY
S-A-22	11-N	UNION
S-A-23	11-N	SEWER
S-A-24	3-K	HISTORICAL MARKERS (3)
S-A-25	12-E	BOAT HOUSE
S-A-26	11-E	GREASE RACK
S-A-27	10-N	WASH RACK
S-A-28	11-N	BOAT HOUSE
S-A-29	11-N	LYT WASHRACK
S-A-30	11-E	FUEL DISP FAC
S-A-31	11-N	ROPE CLIMBER
S-A-32	11-N	COVERED CLASSROOM
S-A-33	11-N	GATE/ENTRY USE
S-A-34	11-N	GREASE RACK
S-A-35	11-N	BERTHING PIER
S-A-36	17-N	WASH SLAB
S-A-37	17-N	STORAGE BLDG
S-A-38	14-N	SHADE LIFT STATION

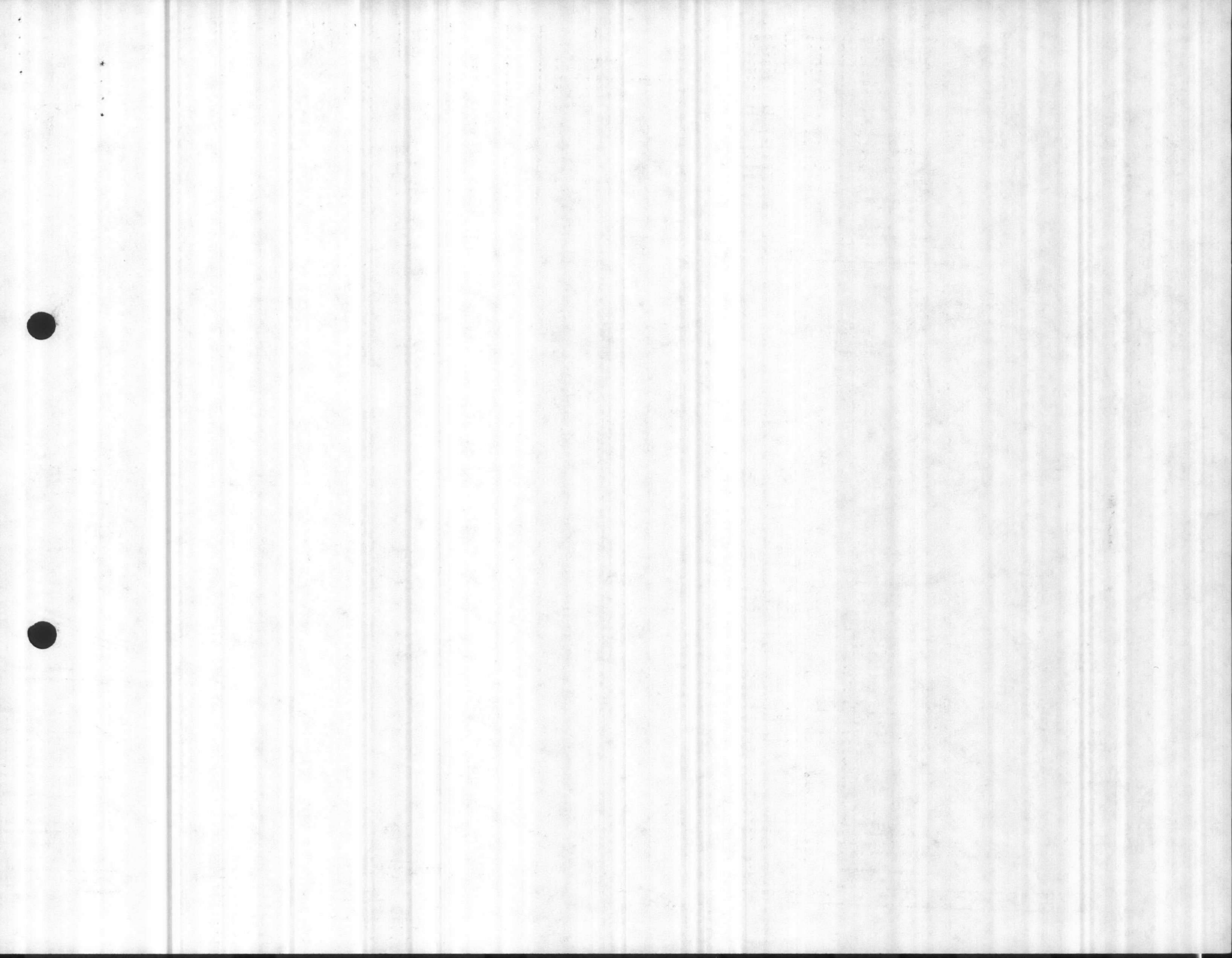
NUMBER	LOCATION	USE	NUMBER	LOCATION	USE
S-88-135	10-N	BASEBALL DIAMOND	S-88-173	13-N	SAND/GRAVEL STR.
S-88-136	15-L	ACADEMIC & GENERAL INSTR. BLDG.	S-88-174	10-N	TRAINING BLDG
S-88-137	15-L	ADMN. BLDG.	S-88-175	10-N	
S-88-138	14-J	ACD/GEN INS BLDG.	S-88-176	10-O	
S-88-139	14-J		S-88-177	14-L	SERVICE STATION
S-88-140	05-J	BRIDGE STOR SHED	S-88-178	13-J	PIER
S-88-151	12-L	TOILET	S-88-179	15-J	ELECT. DIST MCK-UP
S-88-155	17-O	MACHINE	S-88-180	0-O	HYDRO MCK-UP
S-88-156	17-O		S-88-181	13-J	BRIDGE MCK-UP
S-88-157	17-O		S-88-182	10-N	WATER TOWER
S-88-158	10-O		S-88-183	13-N	SAWMILL
S-88-159	10-N		S-88-184	10-O	W.C. SHELTER
S-88-160	10-N		S-88-185	14-N	WELL HOUSE
S-88-161	14-J	GENERATOR SHED	S-88-220	15-N	WELL HOUSE
S-88-162	13-N	ROPE CLIMBING FAC	S-88-221	10-N	STORM BLDG.
S-88-163	13-N	ST COV ORG/OTH	S-88-189	15-N	WATER TREATMENT PLANT
S-88-164	13-J	CHLORINE CONTRACT CHAMBER	S-88-190	14-L	RESERVOIR (350,000 GALS.)
S-88-165	15-N	WASH RACK	S-88-191	14-L	STORAGE
S-88-166	15-L	ST COV ORG/OTH	S-88-192	14-J	GENERATOR SHED
S-88-170	14-N		S-88-193	11-N	RECREATION DOCK
S-88-172	14-N		S-88-194	11-N	VALLEY BALL COURT
S-88-1			S-88-195	11-N	
S-88-2					

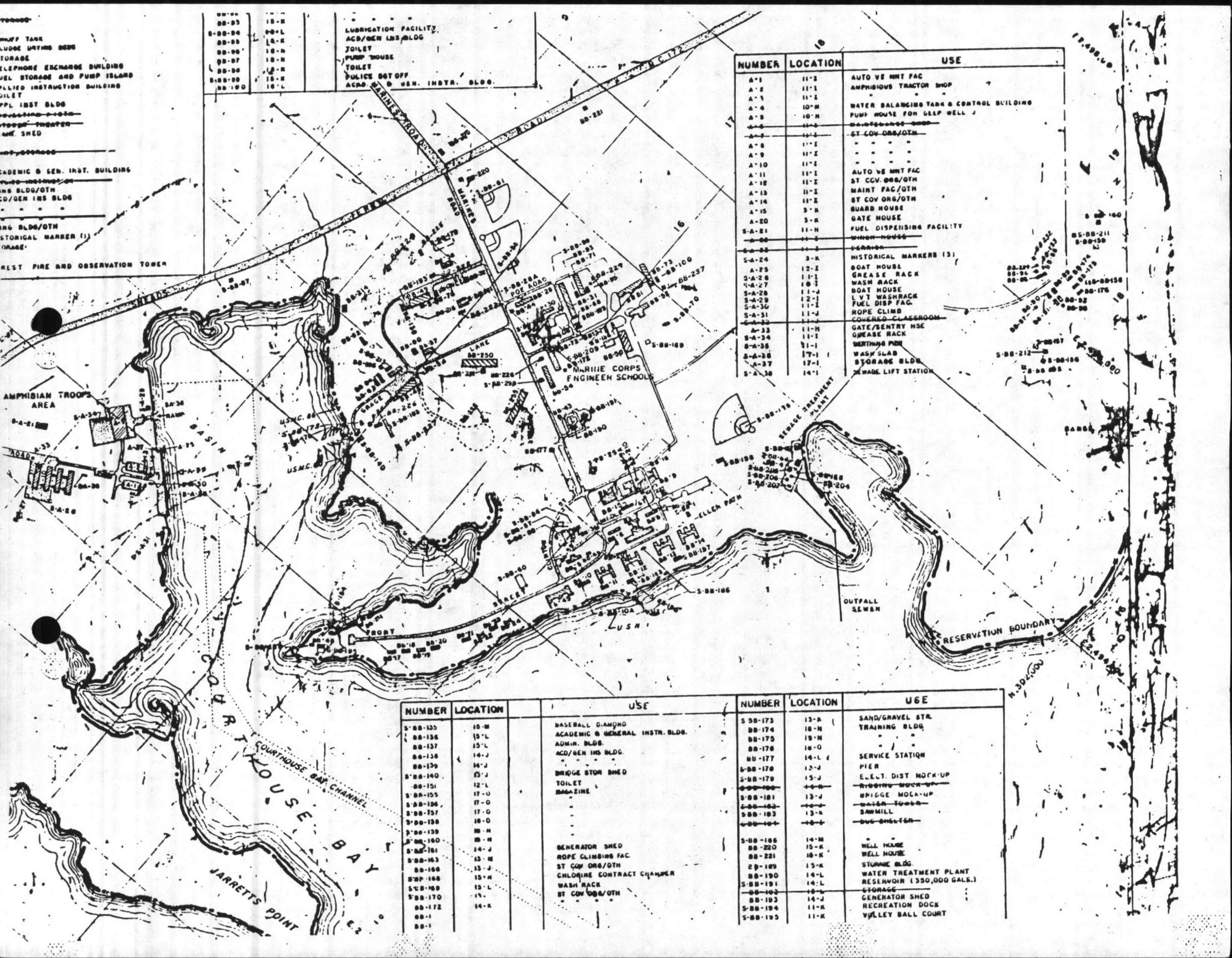




NUMBER	LOCATION	USE
A-1	11-2	AUTO VE WMT FAC
A-2	11-1	AMPHIBIOUS TRACTOR SHOP
A-3	11-6	
A-4	10-N	WATER BALANCING TANK & CONTROL BUILDING
A-5	10-N	PUMP HOUSE FOR WEEP HELL
A-6	10-N	
A-7	11-1	ST COV ORG/OTH
A-8	11-1	
A-9	11-1	
A-10	11-1	AUTO VE WMT FAC
A-11	11-2	ST COV ORG/OTH
A-12	11-2	MAINT FAC/OTH
A-13	11-2	ST COV ORG/OTH
A-14	3-K	GUARD HOUSE
A-15	3-K	GUARD HOUSE
A-20	11-N	FUEL DISPENSING FACILITY
S-A-21	11-2	WAGON HOUSE
S-A-22	11-2	
S-A-23	11-2	
S-A-24	3-K	HISTORICAL MARKERS (3)
A-25	12-1	BOAT HOUSE
S-A-26	10-1	GREASE RACK
S-A-27	10-1	WASH RACK
S-A-28	11-1	BOAT HOUSE
S-A-29	12-1	LVT WASHRACK
S-A-30	11-1	FUEL DISP FAC
S-A-31	11-1	ROPE CLIMB
A-32	11-N	GATE/ENTRY HSE
S-A-33	11-1	GREASE RACK
S-A-34	11-1	BERTHING PIER
S-A-35	17-1	WASH SLAB
S-A-36	17-1	STORAGE BLDG
S-A-37	17-1	STORAGE BLDG
S-A-38	14-1	SEWAGE LIFT STATION

NUMBER	LOCATION	USE	NUMBER	LOCATION	USE
S-BB-135	10-N	BASEBALL DIAMOND	S-BB-173	13-K	SAND/GRAVEL STR.
S-BB-136	15-L	ACADEMIC & GENERAL INSTR. BLDG.	BB-174	10-N	TRAINING BLDG
BB-137	15-L	ADMN. BLDG.	BB-175	10-N	
BB-138	14-J	ACD/GEN INS BLDG.	BB-176	10-0	
BB-139	14-J		BB-177	14-L	SERVICE STATION
S-BB-140	12-J	BRIDGE STOR SHED	S-BB-178	12-J	PIER
BB-151	12-L	TOILET	S-BB-179	15-J	ELECT. DIST MCK-UP
S-BB-155	17-0	MAGAZINE	S-BB-180	13-J	WIPICGE MCK-UP
S-BB-166	17-0		S-BB-181	13-J	WIPICGE MCK-UP
S-BB-167	17-0		S-BB-182	13-K	WIPICGE MCK-UP
S-BB-168	10-0		S-BB-183	13-K	WIPICGE MCK-UP
S-BB-169	10-N		S-BB-184	14-M	WELL HOUSE
S-BB-170	10-N		BB-220	15-N	WELL HOUSE
S-BB-171	14-J	GENERATOR SHED	BB-221	16-K	STURME BLDG.
S-BB-172	13-N	ROPE CLIMBING FAC.	S-BB-185	15-K	WATER TREATMENT PLANT
S-BB-173	13-J	ST COV ORG/OTH	BB-190	14-L	RESERVOIR (350,000 GALS.)
S-BB-174	13-N	CHLORINE CONTRACT CHAMBER	S-BB-191	14-L	STORAGE
S-BB-175	15-N	WASH RACK	S-BB-192	14-L	STORAGE
S-BB-176	15-L	ST COV ORG/OTH	BB-193	14-J	GENERATOR SHED
S-BB-177	15-L		S-BB-194	11-K	RECREATION DOCK
S-BB-178	14-K		S-BB-195	11-K	VALLEY BALL COURT
BB-1					
BB-1					

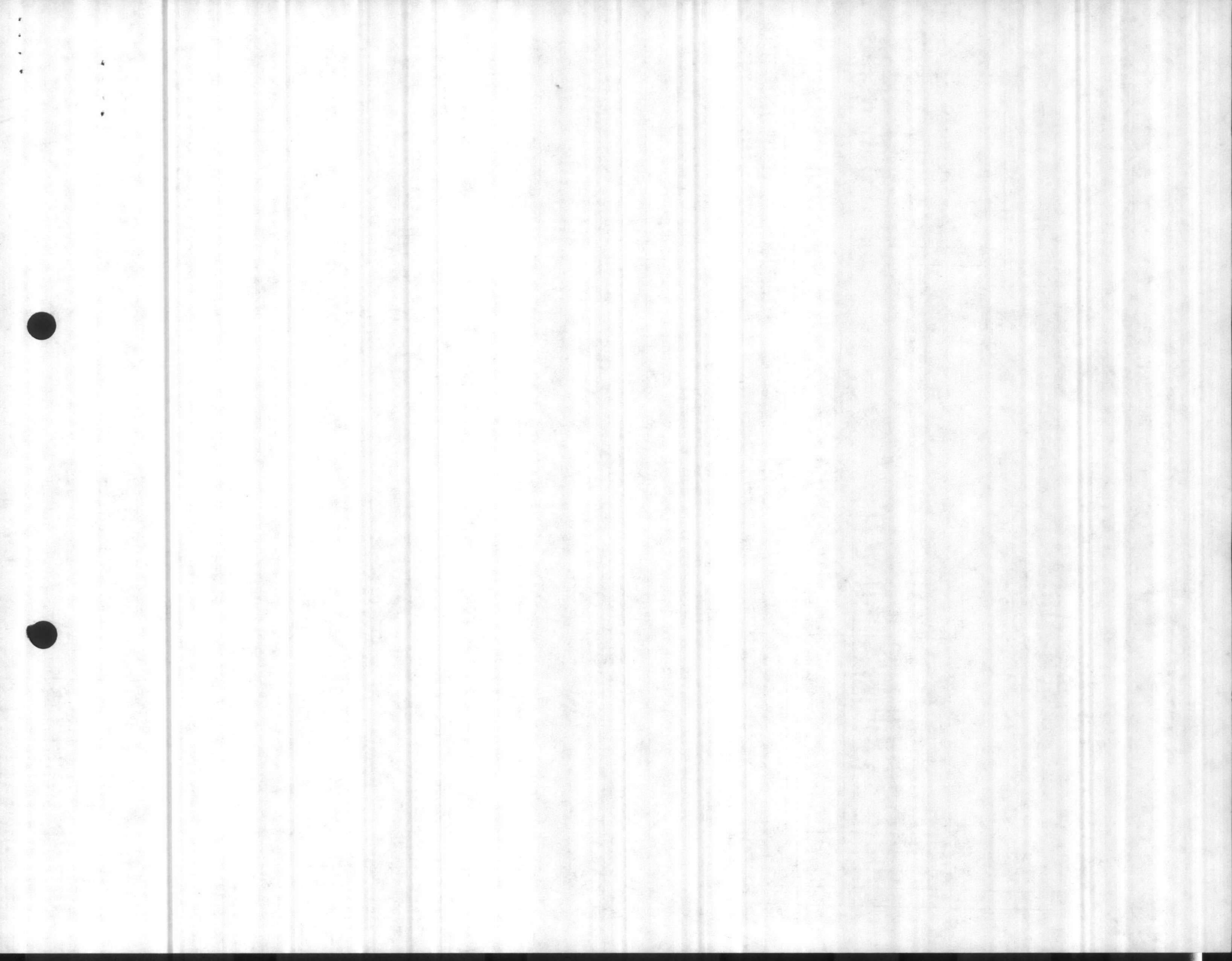




88-03	18-N	LUBRICATION FACILITY
88-04	18-L	ACD/GEN INSR BLDG
88-05	18-N	TOILET
88-06	18-N	PUMP HOUSE
88-07	18-N	TOILET
88-08	18-N	POLICE ST OFF
88-09	18-N	ACAD. & GEN. INSTR. BLDG.
88-100	18-L	

NUMBER	LOCATION	USE
A-1	11-E	AUTO VE MRT FAC
A-2	11-E	AMPHIBIOUS TRACTOR SHOP
A-3	11-E	
A-4	11-E	WATER BALANCING TANK & CONTROL BUILDING
A-5	10-N	PUMP HOUSE FOR DEEP WELL J
A-6	11-E	ST COV ORG/OTH
A-7	11-E	
A-8	11-E	
A-9	11-E	
A-10	11-E	
A-11	11-E	AUTO VE MRT FAC
A-12	11-E	ST COV ORG/OTH
A-13	11-E	MAINT FAC/OTH
A-14	11-E	ST COV ORG/OTH
A-15	3-K	GUARD HOUSE
A-20	3-K	GATE HOUSE
S-A-21	11-N	FUEL DISPENSING FACILITY
A-22	11-E	UNION HOUSE
S-A-23	11-E	CENOTAPH
S-A-24	3-K	HISTORICAL MARKERS (3)
S-A-25	12-E	BOAT HOUSE
S-A-26	11-E	GREASE RACK
S-A-27	10-J	WASH RACK
S-A-28	11-J	BOAT HOUSE
S-A-29	12-E	LVT WASHRACK
S-A-30	11-E	FUEL DISP FAC
S-A-31	11-J	HOPE CLIMB
S-A-32	11-J	COULDRY CLASSROOM
A-33	11-N	GATE/ENTRY HSE
S-A-34	11-E	GREASE RACK
S-A-35	11-E	WERTHING PIER
S-A-36	17-E	WASH SLAB
A-37	17-E	STORAGE BLDG
S-A-38	14-E	SEWAGE LIFT STATION

NUMBER	LOCATION	USE	NUMBER	LOCATION	USE
S-88-135	10-M	BASEBALL DIAMOND	S-88-173	13-A	SAND/GRAVEL STR.
88-136	15-L	ACADEMIC & GENERAL INSTR. BLDG.	88-174	18-N	TRAINING BLDG
88-137	15-L	ADMIN. BLDG.	88-175	18-N	
88-138	14-J	ACD/GEN INSR BLDG.	88-176	18-O	
88-139	14-J		88-177	14-L	SERVICE STATION
S-88-140	15-J	BRIDGE STOR SHED	S-88-178	15-J	PIER
88-151	12-L	TOILET	S-88-179	15-J	ELECT. DIST MCK-UP
S-88-155	17-O	MAGAZINE	88-180	14-O	ROCKING MCK-UP
S-88-156	17-O		S-88-181	13-J	BRIDGE MCK-UP
S-88-157	17-O		88-182	13-J	WATER TOWER
S-88-158	18-O		S-88-183	13-A	SAMMILL
S-88-159	18-N		88-184	14-O	LOG-SHEDDER
S-88-160	18-N	GENERATOR SHED	S-88-186	14-N	
S-88-161	14-J	ROPE CLIMBING FAC.	88-220	15-E	WELL HOUSE
S-88-163	13-N	ST COV ORG/OTH	88-221	18-K	WELL HOUSE
88-166	13-J	CHLORINE CONTRACT CHAMBER	88-189	15-K	STURME BLDG
S-88-168	15-N	WASH RACK	88-190	14-L	WATER TREATMENT PLANT
S-88-169	15-L	ST COV ORG/OTH	S-88-191	14-L	RESERVOIR (350,000 GALS.)
S-88-170	15-L		88-192	15-L	STORAGE
88-172	14-K		88-193	14-J	GENERATOR SHED
88-1			S-88-194	11-K	RECREATION DOCK
88-1			S-88-195	11-K	VILLEY BALL COURT



CAB

BASE MAINTENANCE DIVISION
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

DATE: ~~5 OCT 1987~~

FROM: BASE MAINTENANCE OFFICER, MARINE CORPS BASE, CAMP LEJEUNE, N.C.
TO: PUBLIC WORKS OFFICER, BUILDING 1005, MARINE CORPS BASE, CAMP
LEJEUNE, N.C.

SUBJ: ENGINEERING SERVICE REQUEST FOR PROJECT NUMBER - 8M61CN

ENCL: (A) ESTIMATE WORK SHEET(S) FOR M1 FUNDS
(B)

1. TYPE OF SERVICE REQUESTED:

REPAIR STEAM TUNNELS
(HP) AREA

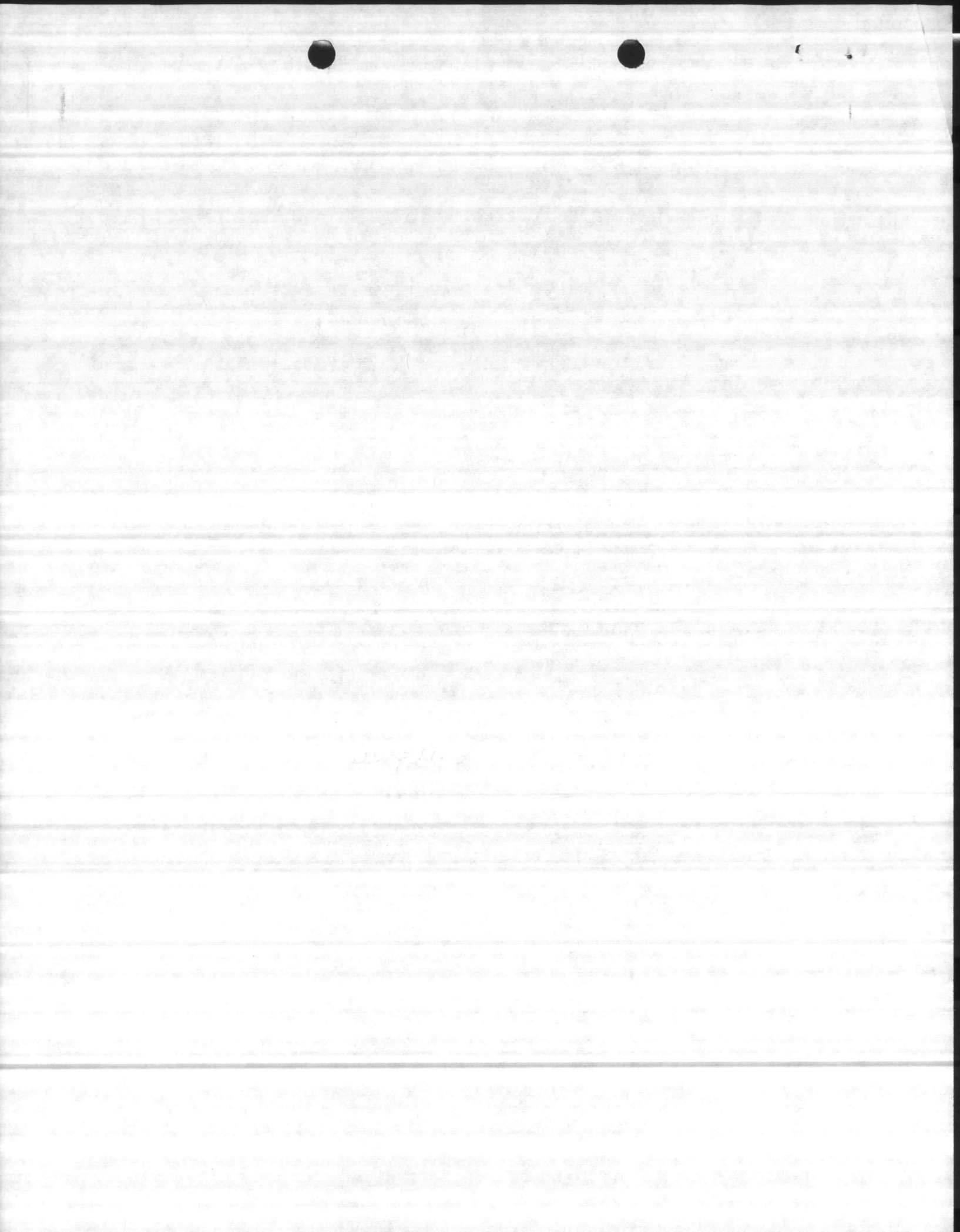
2. DESIRED COMPLETION FISCAL YEAR: 88

3. FUNDS TO BE PROVIDED UNDER SUB-FUNCTIONAL-CATEGORY: M1
BUILDING/FACILITY IDENTIFICATION FOLLOWS: GRD G10A,

ESTIMATE COST IS \$ 381,000.00

4. POINT OF CONTACT IS GREG SHOEMAKER , PHONE 5794

T.D. Jewell
T.D. JEWELL
BY DIRECTION



COST ESTIMATE

DATE PREPARED
9-26-87

SHEET OF

ACTIVITY # AND LOCATION

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

MCB G-10A STEAM TUNNELS

ESTIMATED BY

CATEGORY CODE NUMBER

PROJECT TITLE

REPAIRS TO STEAM TUNNEL

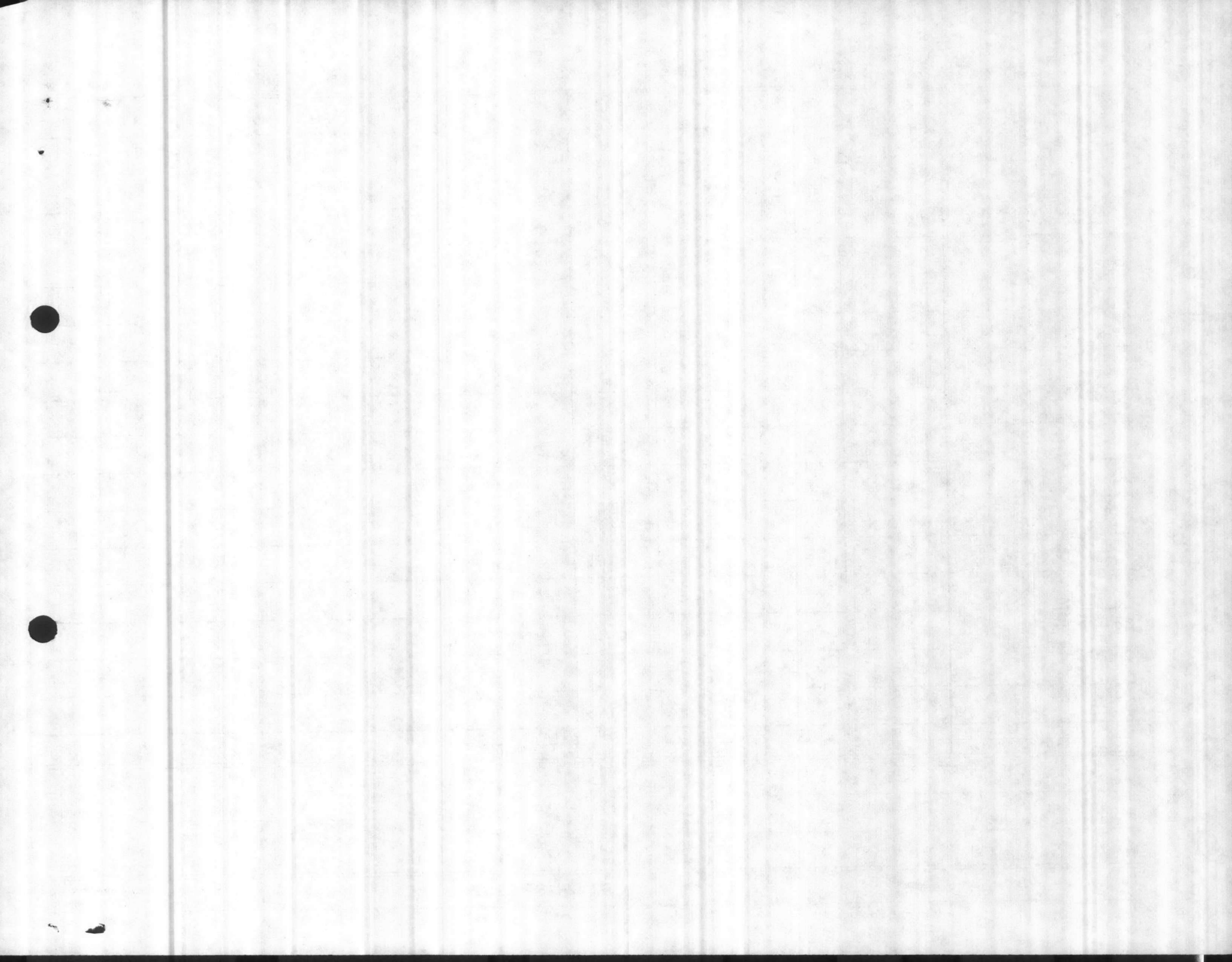
STATUS OF DESIGN

Huffman

JOB ORDER NUMBER

PED 30% 100% FINAL Other (Specify)

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
<i>SUBTOTAL</i>				<i>85,000</i>		<i>170,000</i>		<i>255,000</i>
<i>OVER HEAD 1570</i>								<i>38,250</i>
<i>LABOR 1870</i>								<i>30,600</i>
<i>MATERIAL 590</i>								<i>4,250</i>
<i>SUBTOTAL</i>								<i>328,100</i>
<i>PROFIT 1570</i>								<i>49,215</i>
<i>SUBTOTAL</i>								<i>377,315</i>
<i>BOND 170</i>								<i>3,773</i>
<i>SUBTOTAL</i>								<i>381,088</i>
							<i>SAY</i>	<i>381,000</i>



COST ESTIMATE

DATE PREPARED
8-28-89

SHEET OF

ACTIVITY AND LOCATION

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

PROJECT TITLE
MCB, STEAM TUNNELS IN HADNOT POINT AREA

ESTIMATED BY

CATEGORY CODE NUMBER

Huffman

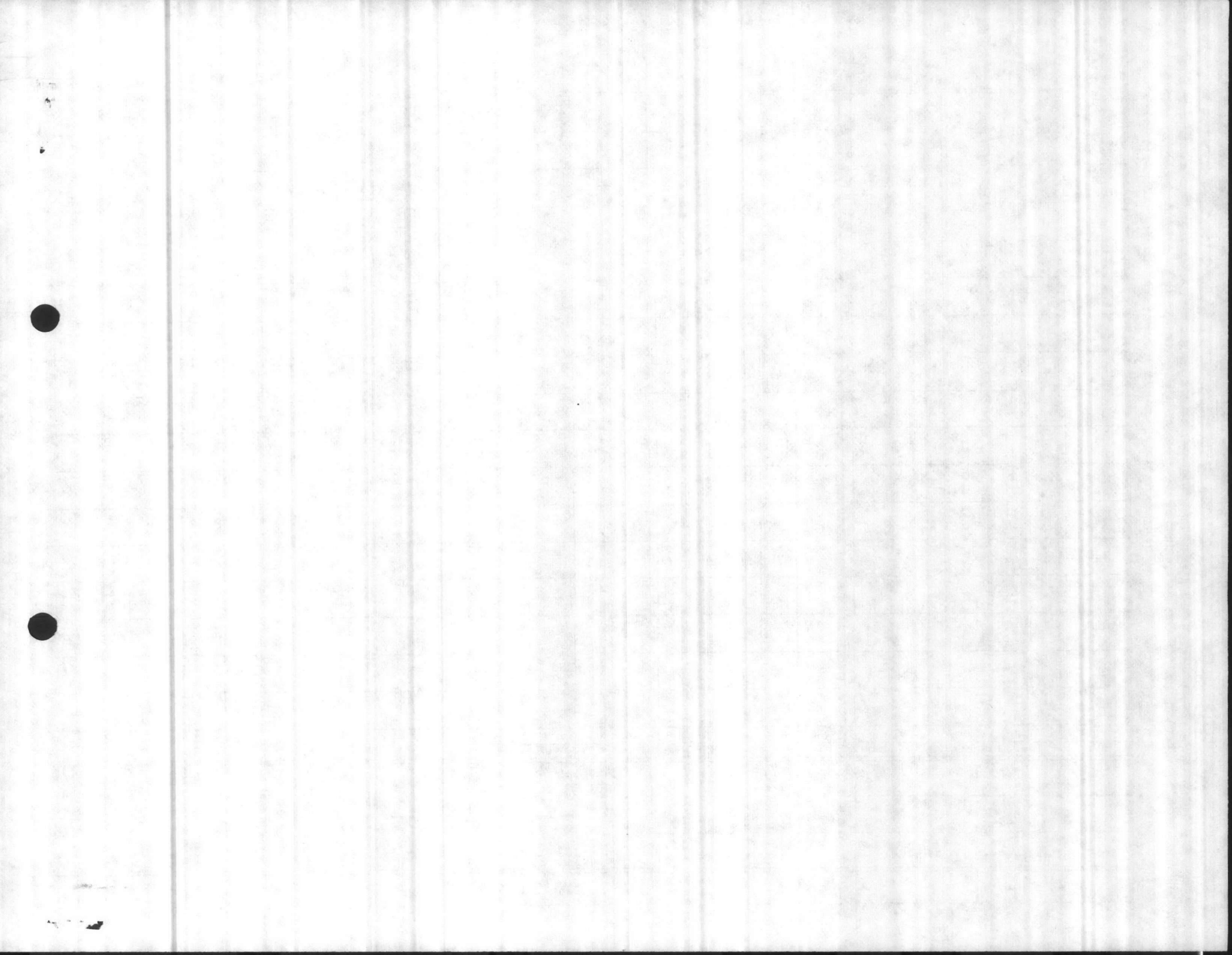
INSPECT, ESTIMATE AND DESIGN FOR REPAIRS/UPGRADE

STATUS OF DESIGN

JOB ORDER NUMBER

30% 100% FINAL Other (Specify)

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
(1) CLEAN ALL WASTE TRASH, MUDD, DEBRIE FROM TUNNEL				85,000		170,000		255,000
(2) UNSTOP ALL DRAINS IN TUNNEL								
(3) REPAIR/REPLACE ALL SUMP PUMPS								
(4) ADD SUMP PUMPS IN LOW AREAS OF TUNNEL TO KEEP IT DRY.								
(5) RAISE ALL TUNNELS EXISTING BELOW GRADE UP TO OR ABOVE GRADE FOR ACCESSABILITY OF TOP REMONTS.								
(6) ALL SUBSTANDARD MANHOLE COVERS TO BE REPLACED AND BROUGHT UP TO SAFTEY STANDARDS.								
(7) REPLACE ALL CRACKED OR DAMAGED CONCRETE TOPS.								
(8) RESEAL ALL CONCRETE TUNNEL TOP COVERS TO PREVENT WATER, MUDD, ECT. FROM ENTERING TUNNEL.								



Memorandum

DATE:

1 OCT 1987

4280

MAIN

FROM:

Base Maintenance Officer, Marine Corps Base, Camp Lejeune

TO:

Public Works Officer, Marine Corps Base, Camp Lejeune

SUBJ:

CONTRACTS M1/R1 PROGRAM, DESIGN AND AWARD FY88

Encl: (1) M1 Project 8M54CN, Replace Steam and Condensate Line
Between Stm., 36.0 HP and Stm. 1.0 FC
(2) R1 Project 8R024, Reroute Steam and Condensate Line
Near FC-202

1. Enclosures (1) and (2) are provided to be accomplished
as one contract in FY88.

2. FY88 M1/R1 Funds will be provided.

3. Point of contact is Greg Shoemaker, Contracts Manager,
X5794.

T. D. JEWELL
By direction

Blind copy to:

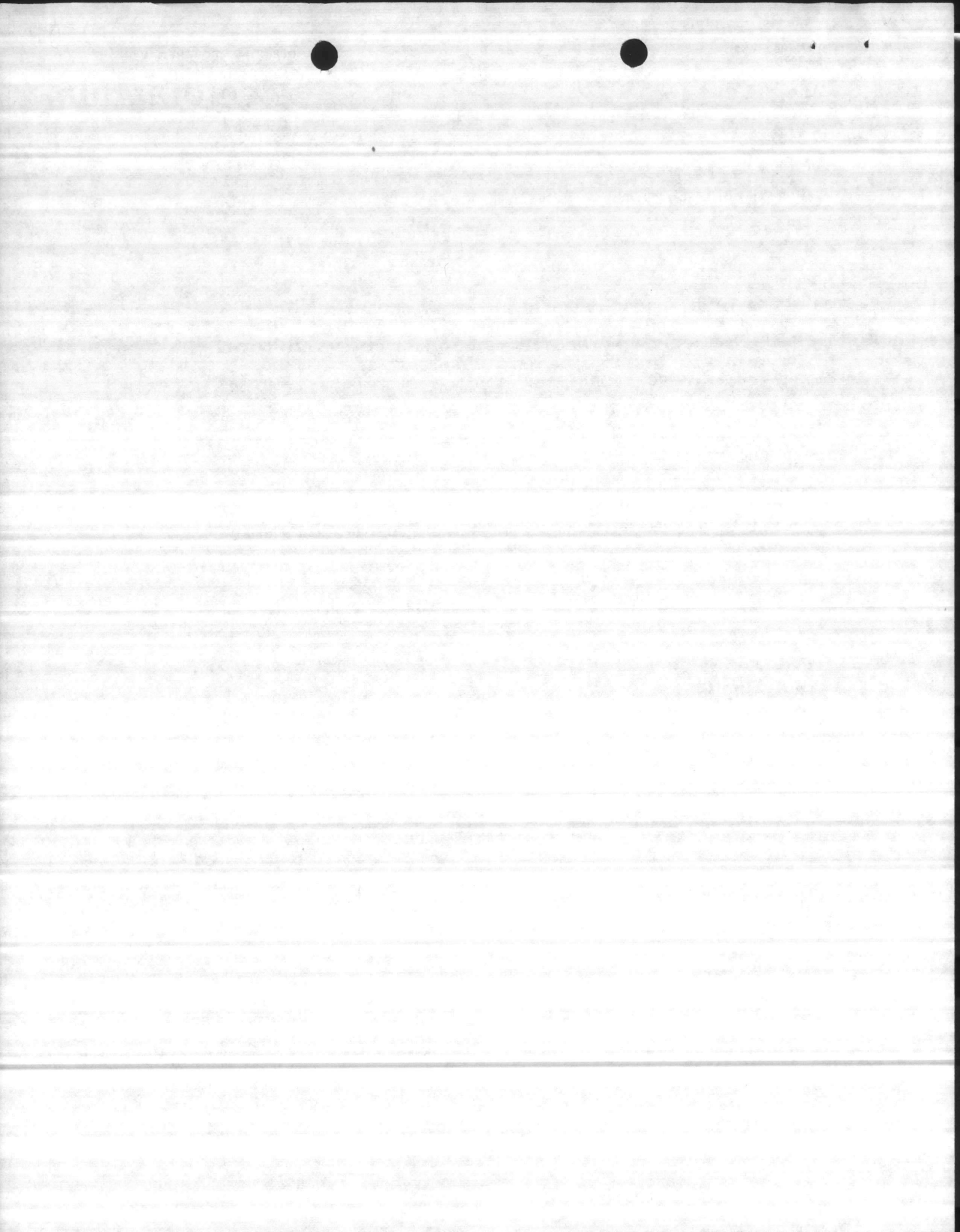
L. Lanier

Shop 38

Utilities

WkR

F&A



BASE MAINTENANCE DIVISION
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

DATE: 1 OCT 1987

FROM: BASE MAINTENANCE OFFICER, MARINE CORPS BASE, CAMP LEJEUNE, N.C.
TO: PUBLIC WORKS OFFICER, BUILDING 1005, MARINE CORPS BASE, CAMP
LEJEUNE, N.C.

SUBJ: ENGINEERING SERVICE REQUEST FOR PROJECT NUMBER - 8M54CN

ENCL: (A) ESTIMATE WORK SHEET(S) FOR M1 FUNDS
(B)

1. TYPE OF SERVICE REQUESTED:

REPLACE STEAM AND CONDENSATE LINES BETWEEN STM.
36.0 HP AND STM. 1.0 FC _____ GRD G10A
INCorp WITH 8R024

2. DESIRED COMPLETION FISCAL YEAR: 88

3. FUNDS TO BE PROVIDED UNDER SUB-FUNCTIONAL-CATEGORY: M1
BUILDING/FACILITY IDENTIFICATION FOLLOWS: GRD G10A,

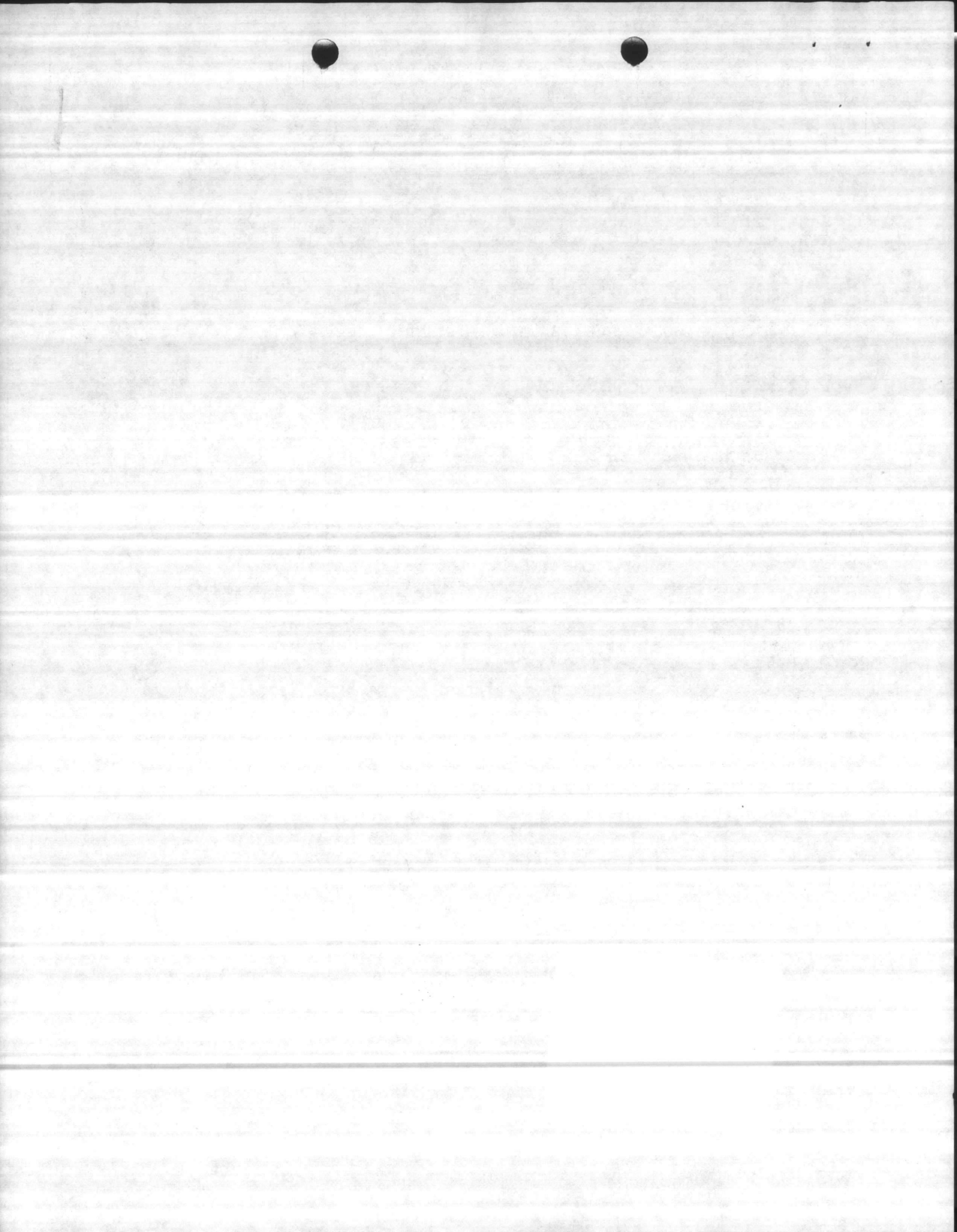
ESTIMATE COST IS \$ 61,000.00

4. POINT OF CONTACT IS GREG SHOEMAKER , PHONE 5794

T.D. JEWELL
BY DIRECTION

Utilities

Enc(1)



BASE MAINTENANCE DIVISION
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

DATE: 1 OCT 1987

FROM: BASE MAINTENANCE OFFICER, MARINE CORPS BASE, CAMP LEJEUNE, N.C.
TO: PUBLIC WORKS OFFICER, BUILDING 1005, MARINE CORPS BASE, CAMP
LEJEUNE, N.C.

SUBJ: ENGINEERING SERVICE REQUEST FOR PROJECT NUMBER - 8M54CN

ENCL: (A) ESTIMATE WORK SHEET(S) FOR M1 FUNDS
(B)

1. TYPE OF SERVICE REQUESTED:

REPLACE STEAM AND CONDENSATE LINES BETWEEN STM.
36.0 HP AND STM. 1.0 FC _____ GRD G10A
INCOMP WITH 8R024

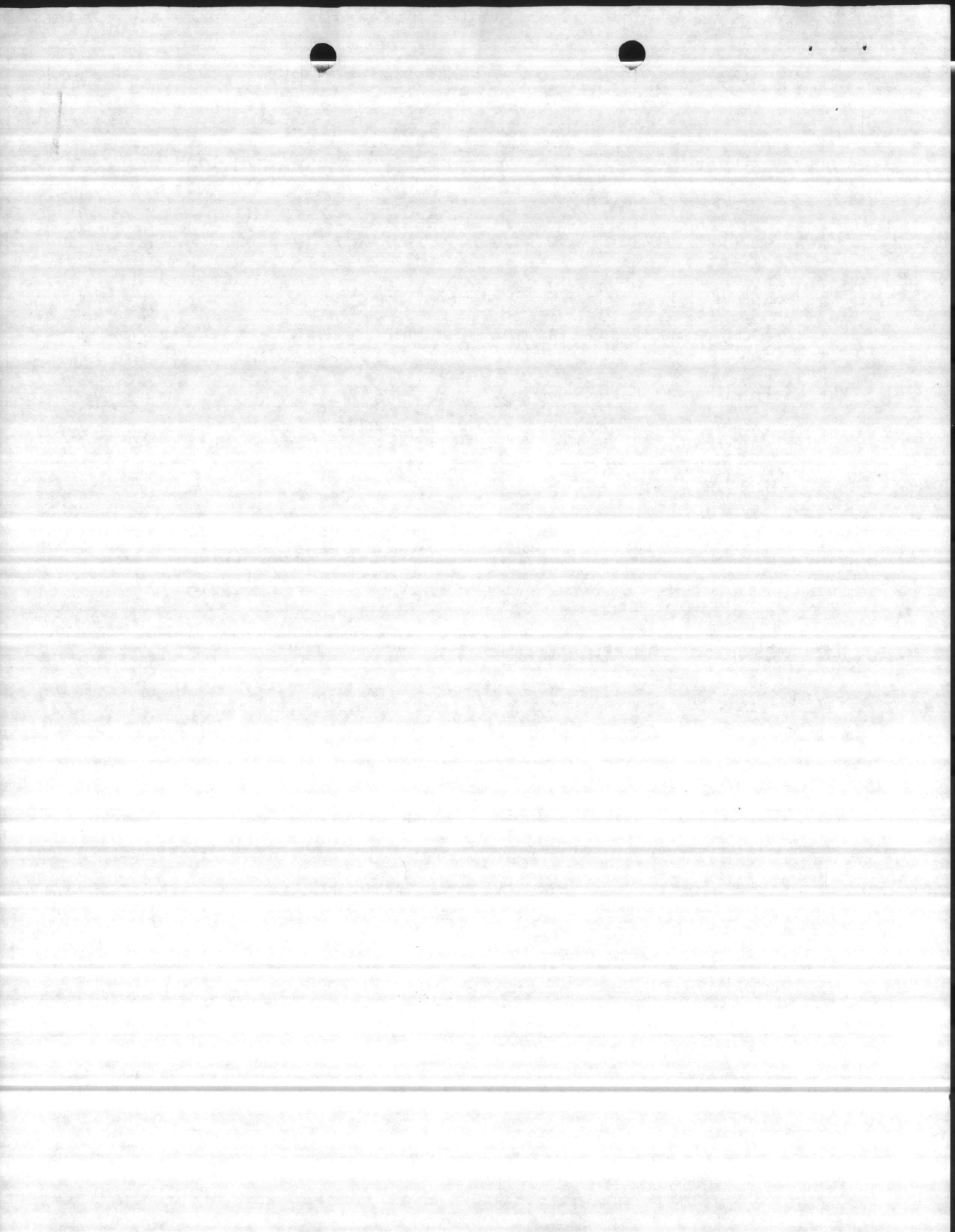
2. DESIRED COMPLETION FISCAL YEAR: 88

3. FUNDS TO BE PROVIDED UNDER SUB-FUNCTIONAL-CATEGORY: M1
BUILDING/FACILITY IDENTIFICATION FOLLOWS: GRD G10A,

ESTIMATE COST IS \$ 61,000.00

4. POINT OF CONTACT IS GREG SHOEMAKER , PHONE 5794

T.D. JEWELL
BY DIRECTION



COST ESTIMATE

DATE PREPARED
9-14-81

SHEET OF

ACTIVITY AND LOCATION

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

MCB - LOCATED BETWEEN STM-36.DHP AND STM-1.DFC.

ESTIMATED BY

Huffman

CATEGORY CODE NUMBER

PROJECT TITLE

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify) _____

JOB ORDER NUMBER

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
STEAM AND CONDENSATE LINES				23,625		13,965		37,590
OVERHEAD	15	%						5,639
LABOR	18	%						2,514
MATERIAL	5	%						1,181
SUBTOTAL								46,924
PROFIT	10	%						4,692
SUBTOTAL								51,616
BOND	1	%						516
SUBTOTAL								52,132
CONTINGENCY	10	%						5,213
SUBTOTAL								57,345
DESIGN	6	%						3,441
TOTAL EST COST								60,786
							SAY	61,000

2



COST ESTIMATE

DATE PREPARED
9-14-87

SHEET **1** OF **2**

ACTIVITY AND LOCATION
STEAM AND CONDENSATE RETURN LINE

LOCATED BETWEEN STM-36.0H AND STM-1.0 FC

PROJECT TITLE

Replace Steam & Condensate Lines

CONSTRUCTION CONTRACT NO.

ESTIMATED BY
OGLESBY

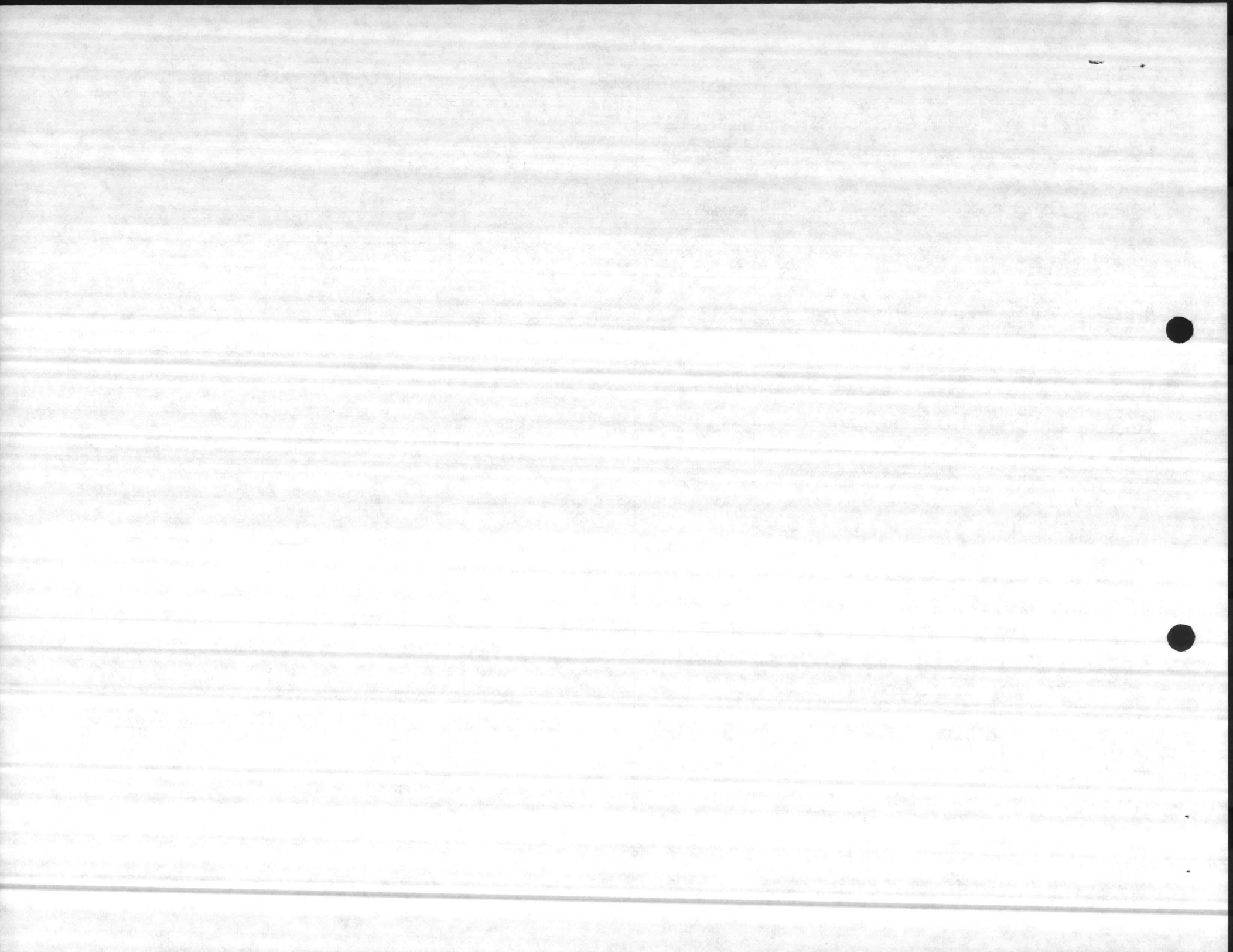
STATUS OF DESIGN
 PED 30% 100% FINAL Other (Specify) _____

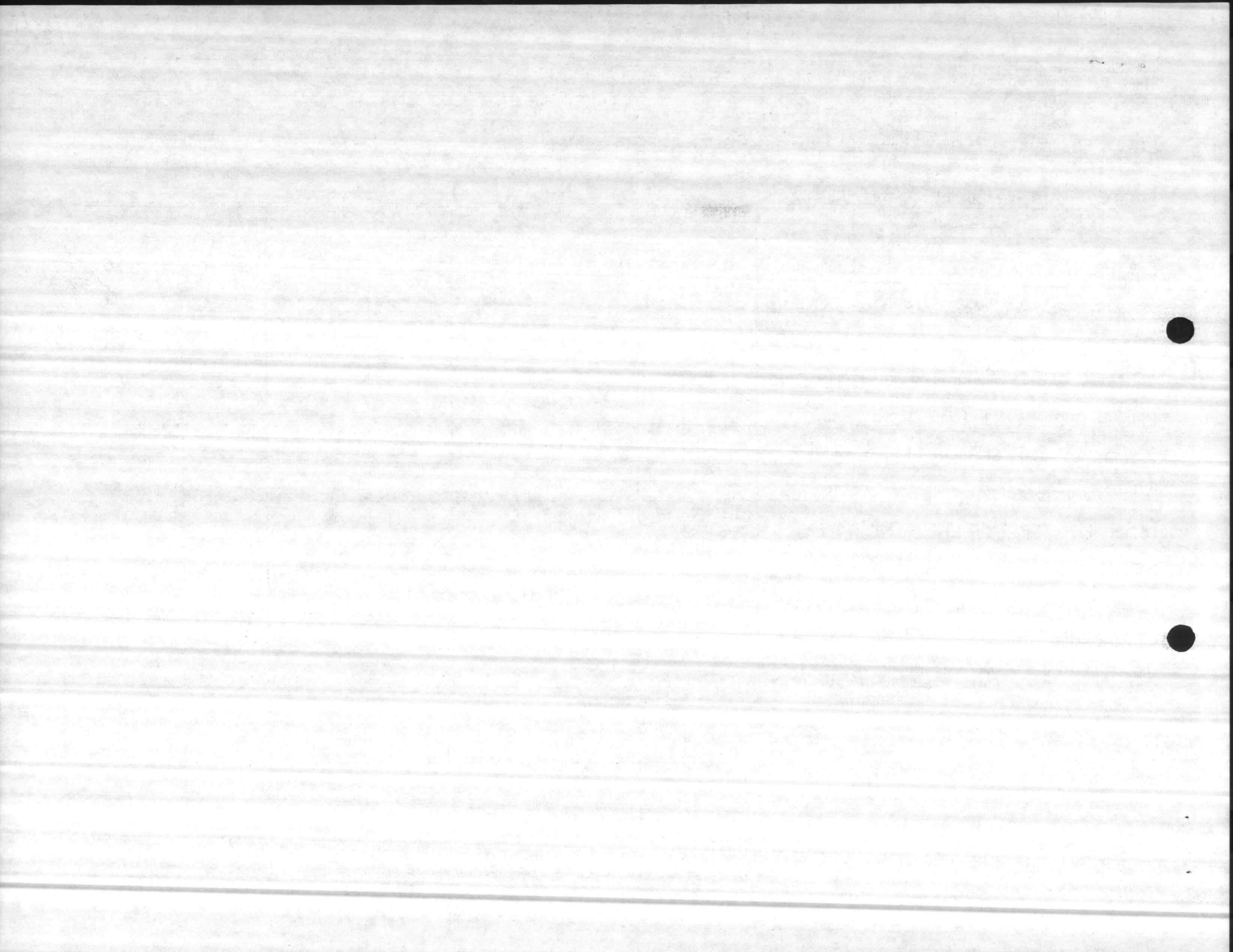
IDENTIFICATION NUMBER

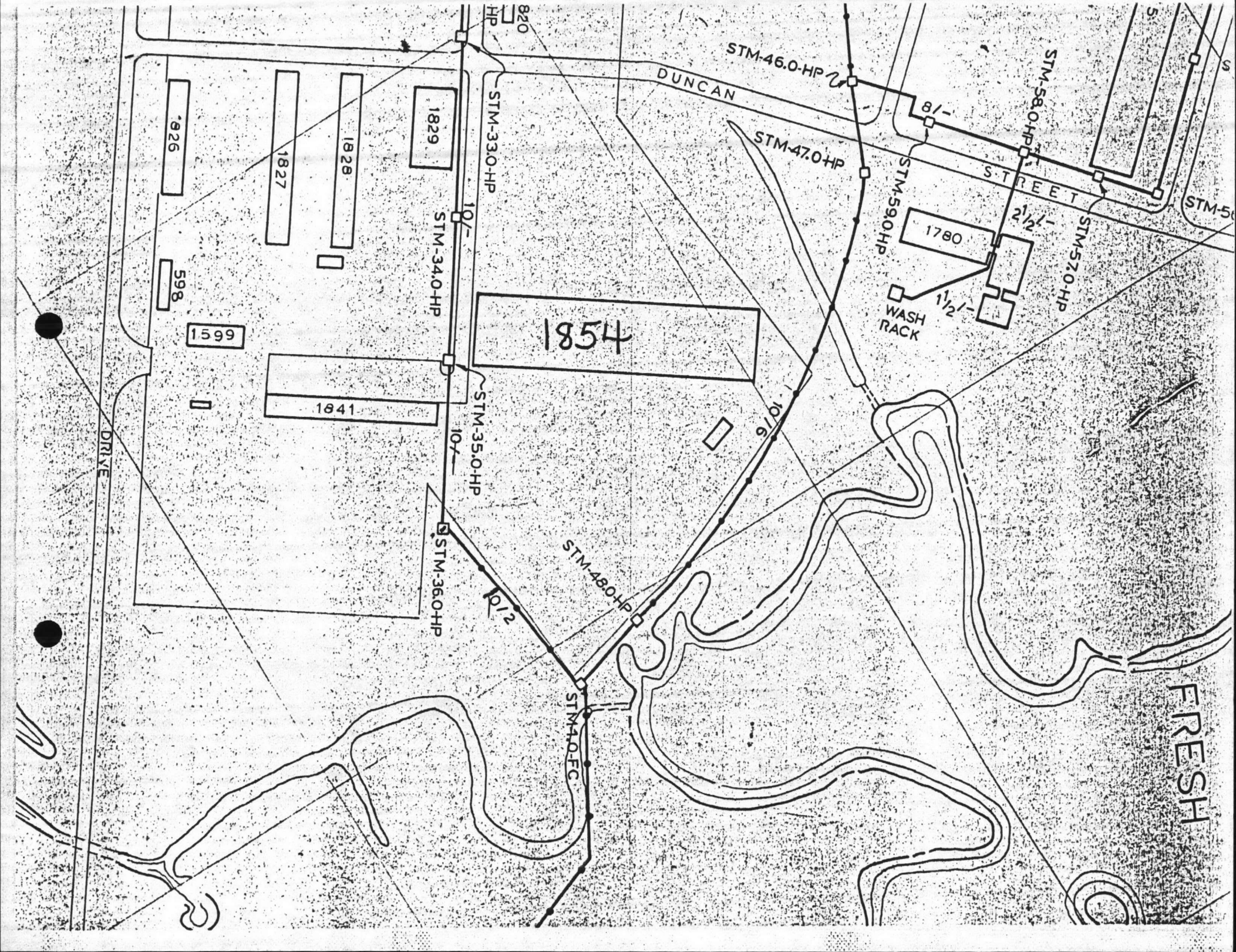
CATEGORY CODE NUMBER

JOB ORDER NUMBER

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
Remove and Replace Approx. 350 ft. of 10" Steam Dist. LINE & 2" Condensate Return LINE between Dist. Pits STM-36.0 HP & STM-1.0 FC behind Bldg 1854. Existing LINES to be removed are partially covered with soil. New LINES to be installed above ground as per diagram. Minimum Insulation ON 10" Steam LINE is 6" inches with weatherproof Aluminum Jacketing. Minimum Insulation ON 2" inch Condensate Return is inches with weatherproof Aluminum Jacketing. Provide pipe supports and rollers and hangers as per								



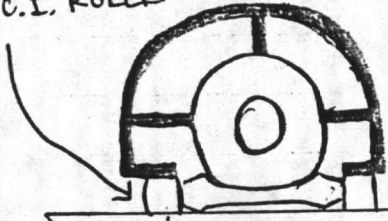






10" STEAM LINE

CHAIR, CARBON STEEL 25.00 EA.
WITH C.I. ROLLER



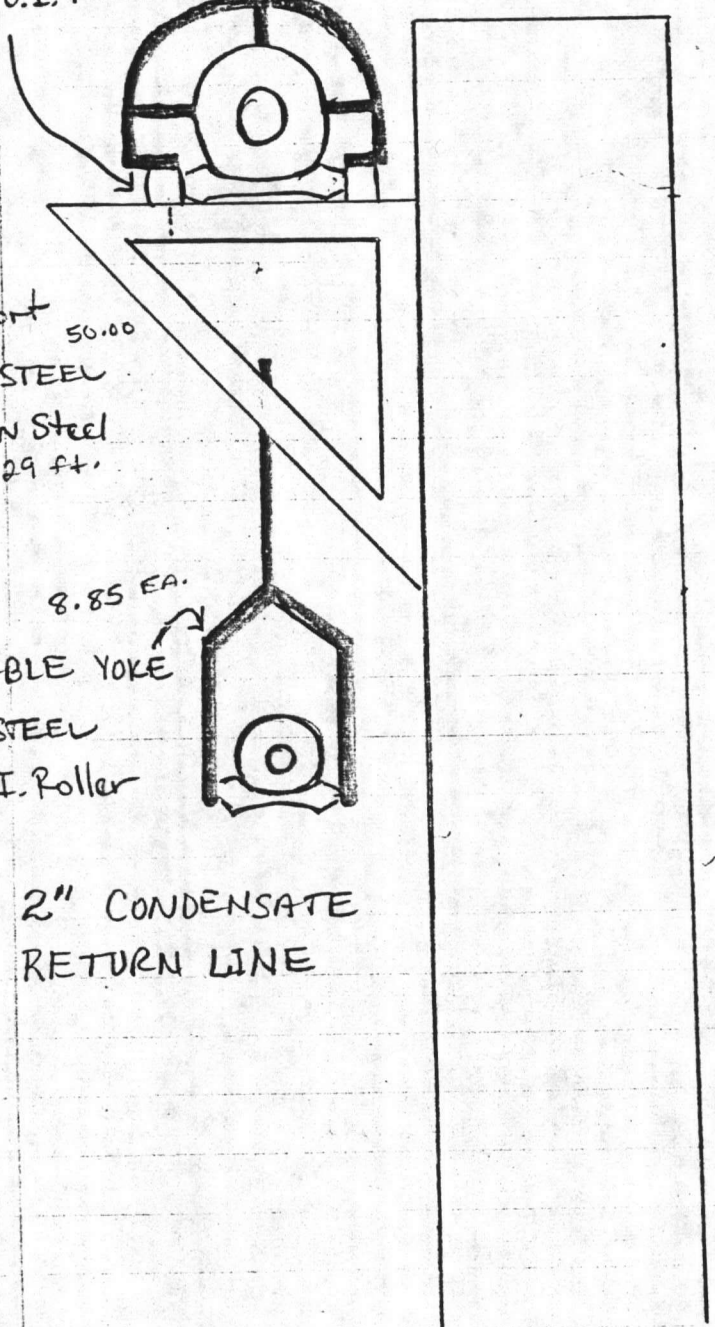
Pipe Support 50.00
WELDED STEEL
1/2" Carbon Steel
Rod .29 ft.

8.85 EA.

ADJUSTABLE YOKE
CARBON STEEL
with C.I. Roller



2" CONDENSATE
RETURN LINE





BASE MAINTENANCE DIVISION
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

DATE: 1 OCT 1987

FROM: BASE MAINTENANCE OFFICER, MARINE CORPS BASE, CAMP LEJEUNE, N.C.
TO: PUBLIC WORKS OFFICER, BUILDING 1005, MARINE CORPS BASE, CAMP
LEJEUNE, N.C.

SUBJ: ENGINEERING SERVICE REQUEST FOR PROJECT NUMBER - 8R024

ENCL: (A) ESTIMATE WORK SHEET(S) FOR R1 FUNDS
(B)

1. TYPE OF SERVICE REQUESTED:

REROUTE STEAM LINES AND CONDENSATE LINES NEAR
FC-202 GRD G10A
INCRP WITH 8M54CN

2. DESIRED COMPLETION FISCAL YEAR: 88

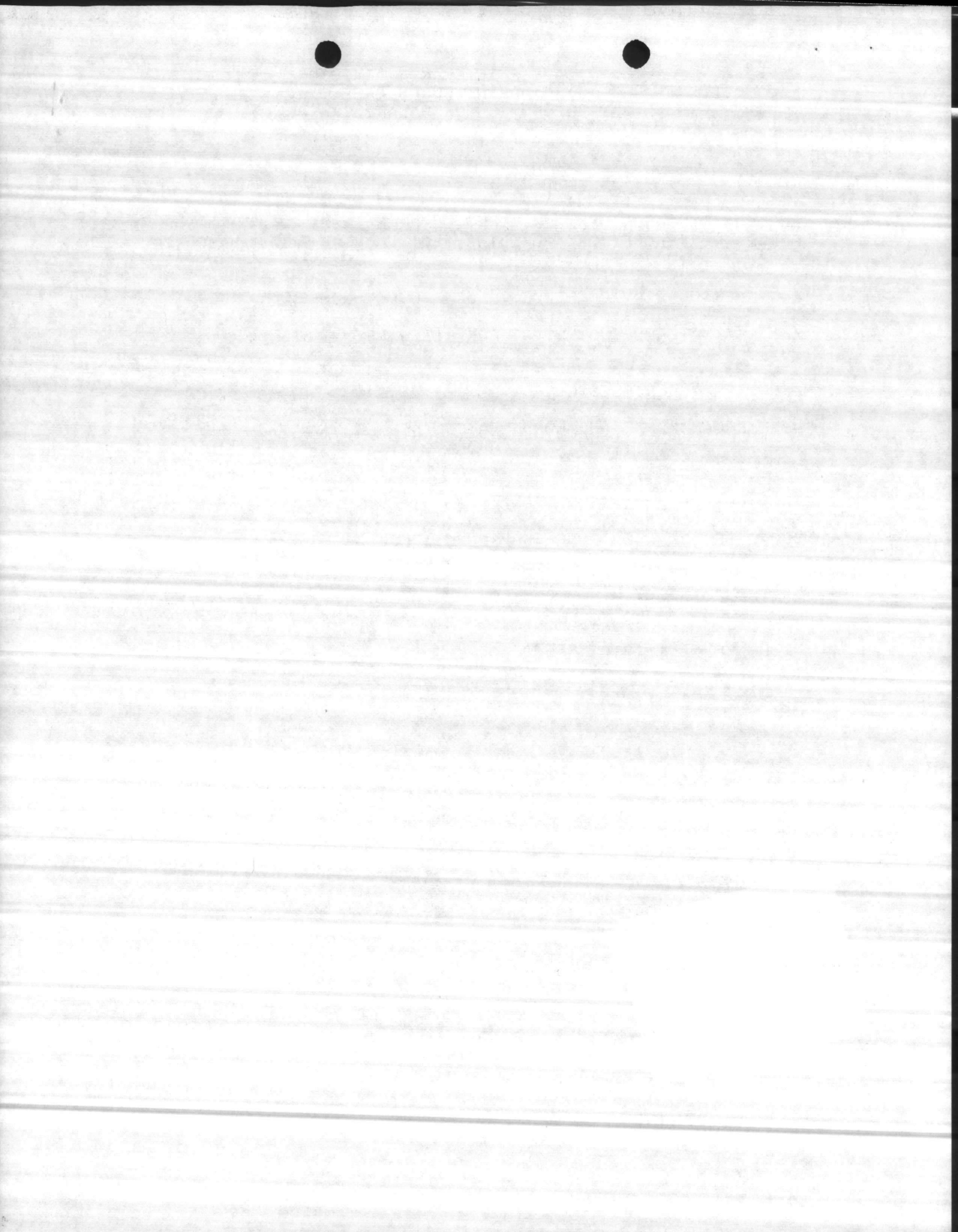
3. FUNDS TO BE PROVIDED UNDER SUB-FUNCTIONAL-CATEGORY: R1
BUILDING/FACILITY IDENTIFICATION FOLLOWS: GRD G10A,

ESTIMATE COST IS \$ 17,000.00

4. POINT OF CONTACT IS GREG SHOEMAKER , PHONE 5794

T.D. JEWELL
BY DIRECTION

Utilities



BASE MAINTENANCE DIVISION
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

DATE: 1 OCT 1987

FROM: BASE MAINTENANCE OFFICER, MARINE CORPS BASE, CAMP LEJEUNE, N.C.
TO: PUBLIC WORKS OFFICER, BUILDING 1005, MARINE CORPS BASE, CAMP
LEJEUNE, N.C.

SUBJ: ENGINEERING SERVICE REQUEST FOR PROJECT NUMBER - BR024

ENCL: (A) ESTIMATE WORK SHEET(S) FOR R1 FUNDS
(B)

1. TYPE OF SERVICE REQUESTED:

REROUTE STEAM LINES AND CONDENSATE LINES NEAR
FC-202 GRD G10A
INCRP WITH 8M54CN

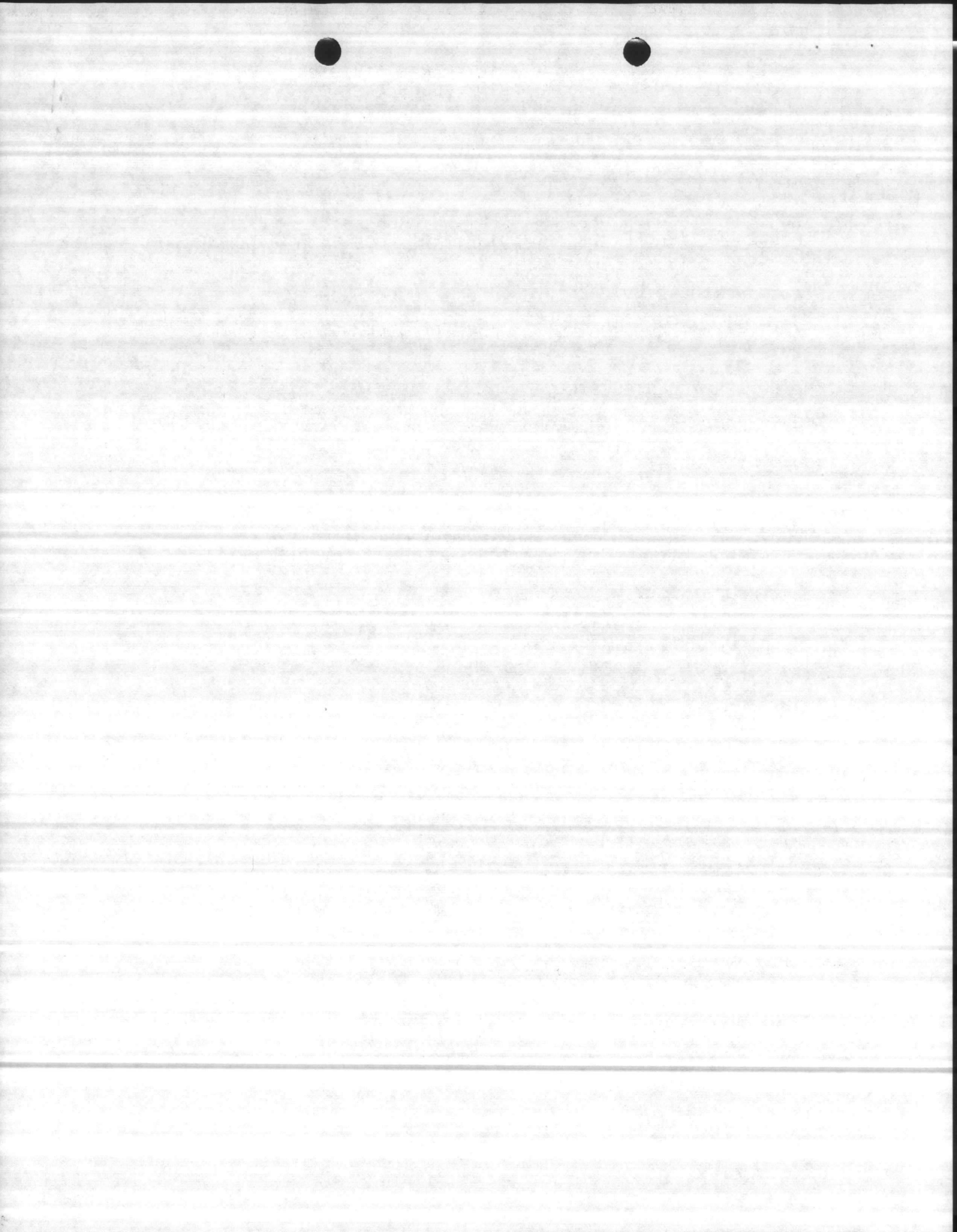
2. DESIRED COMPLETION FISCAL YEAR: 88

3. FUNDS TO BE PROVIDED UNDER SUB-FUNCTIONAL-CATEGORY: R1
BUILDING/FACILITY IDENTIFICATION FOLLOWS: GRD G10A,

ESTIMATE COST IS \$ 17,000.00

4. POINT OF CONTACT IS GREG SHOEMAKER , PHONE 5794

T.D. JEWELL
BY DIRECTION



COST ESTIMATE

DATE PREPARED
9-15-87

SHEET OF

ACTIVITY AND LOCATION

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

NEAR F.C. 202

ESTIMATED BY

Doug Brown

CATEGORY CODE NUMBER

PROJECT TITLE

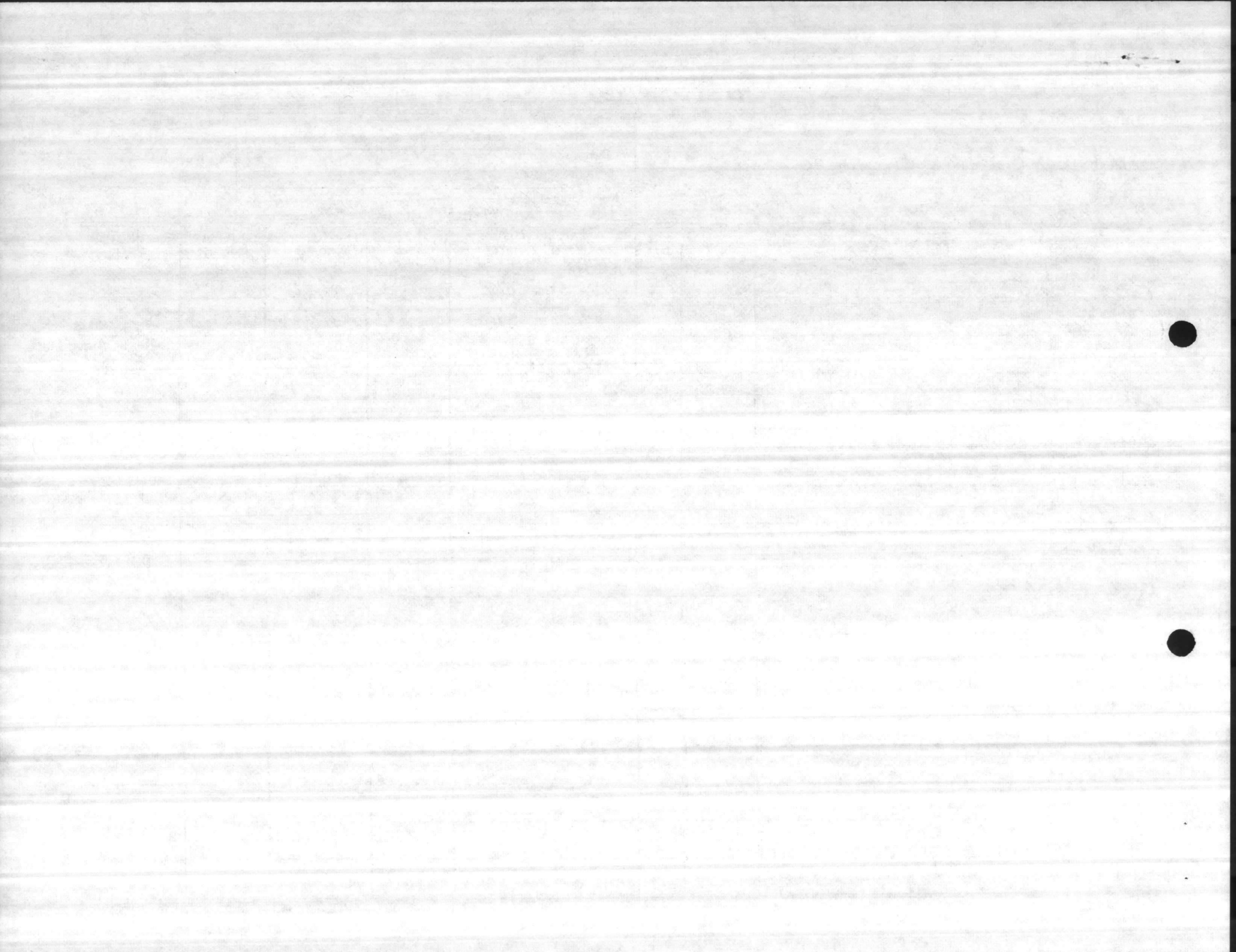
RE-ROUTE STEAM & CONDENSATE LINES

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify) _____

JOB ORDER NUMBER

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
<i>BASIC COST</i>				<i>5400</i>		<i>6600</i>		<i>12000</i>
<i>OVER HEAD + 15%</i>				<i>810</i>		<i>990</i>		<i>1,800</i>
				<i>6210</i>		<i>7590</i>		<i>13,800</i>
<i>LABOR (TAXES, INS S.S.) + 18%</i>								<i>1366</i>
<i>MATERIAL + 4%</i>								<i>248</i>
<i>SUB TOTAL</i>								<i>15,414</i>
<i>PROFIT + 10%</i>								<i>1,541</i>
<i>SUB TOTAL</i>								<i>16,955</i>
<i>BOND + 1%</i>								<i>170</i>
<i>SUB TOTAL</i>								<i>17,125</i>
<i>GRAND TOTAL (Rounded off)</i>							<i>(SAY)</i>	<i>17,000</i>



COST ESTIMATE

DATE PREPARED
9/15/87

SHEET 1 OF 2

ACTIVITY AND LOCATION

near FC 202

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

ESTIMATED BY

Awmed P. Muhammad

CATEGORY CODE NUMBER

PROJECT TITLE

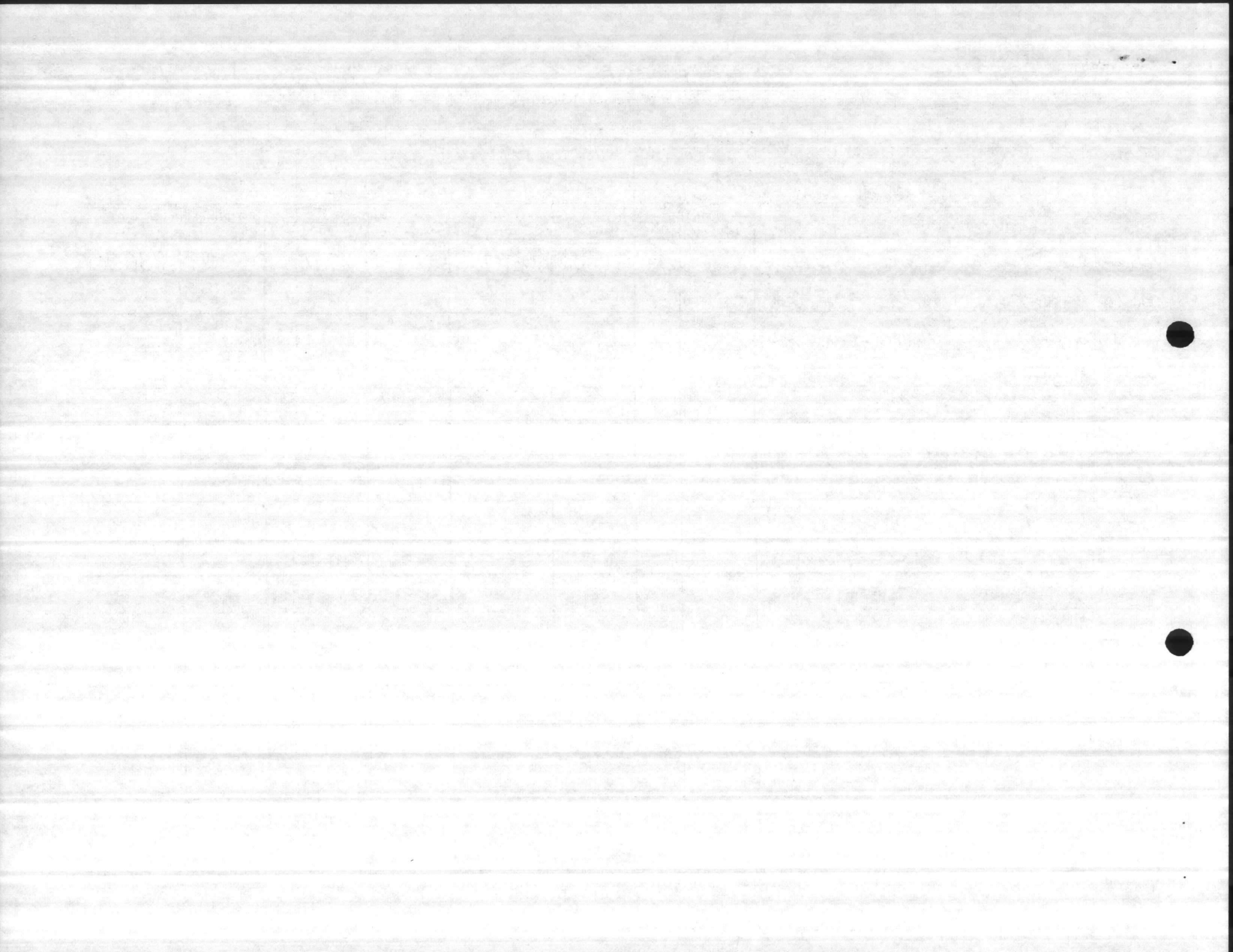
Re-route Steam & Condensate lines

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify)

JOB ORDER NUMBER

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
Disconnect steam and condensate lines from bldg. FC 202 (Heating Plant) and connect to main steam and condensate lines running parallel to main Service Road on French Creek. (note: valves pipe etc., included)				1800		1200		3000



INSPECTION REPORT

MCBCL 11101/16

Area & Facility No. FC 202	Date 9/15/87	Inspector & Time (Hours) Used Muhammad	Sheet # / of Sheets
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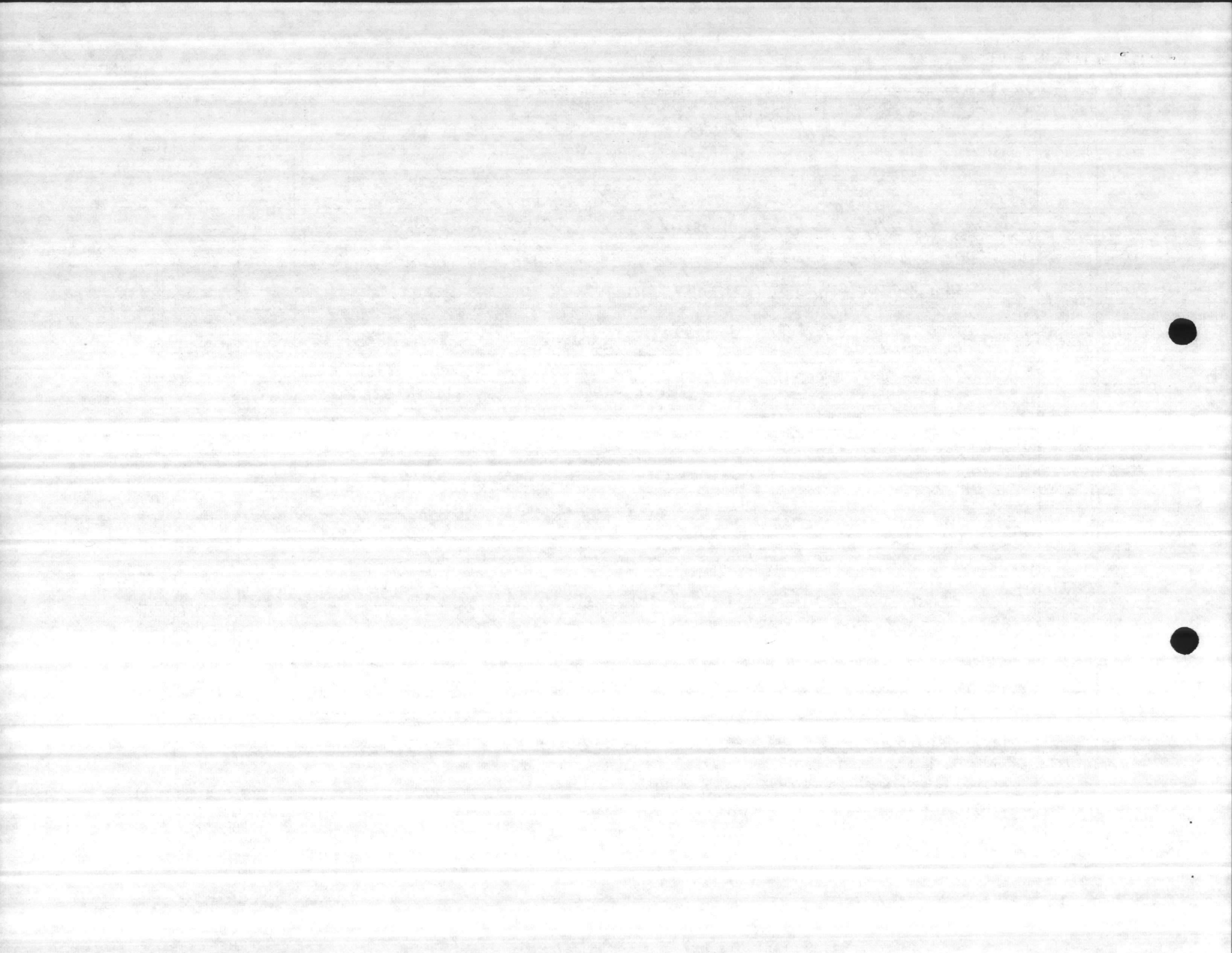
Work Center	Urgency Code *	DEFICIENCIES: Include Size, Sketches, and/or Special Information regarding needed corrections.	*Action Taken	ESTIMATE	
				Man Hours	Total Cost
		Disconnect steam and condensate lines from building FC 202 (Heating Plant), and connect to main steam and condensate lines running parallel to main Service Road in French Creek.			
		1. Excavate and expose steam and condensate lines located underground in front of bldg FC 202. Cut off and cap lines supplying buildings FC 100, FC 190, FC 200, FC 241, and FC 251 in front of bldg FC 202. Tie the three steam and the three condensate lines together in front of FC 202. Fabricate and install steam pits (2 each) with gate valves, sump pumps, ladders, etc. in front of bldg FC 202 and near the entrance, between bldgs. FC 241 and FC 251.			
		2. Re-route existing 3" steam and 1/2" condensate lines crossing main Service Road in front of bldg FC 202 to steam pit located on opposite side of main Service Road. Cut existing steam and condensate lines and connect them to existing 8" steam and 6" condensate mains running parallel to main Service Road.			

* URGENCY CODE: Enter appropriate Code as follows:

- A. Emergency nature, should be corrected as soon as possible.
- B. Essential Maintenance, should be corrected within one (1) year.
- C. Projected Maintenance, correction can wait one or more years, Indicate # of years.

** ACTION TAKEN

- 1. Emergency
- 2. Preventive Maint.
- 3. S. W. O. P.
- 4. Deferred Maintenance



INSPECTION REPORT

MCBCL 11101/16

Area & Facility No. FC 202	Date 9/15/87	Inspector & Time (Hours) Used Muhammad	Sheet # 2 of 2 Sheets
-----------------------------------	------------------------	--	-------------------------------------

Work Center	Urgency Code *	DEFICIENCIES: Include Size, Sketches, and/or Special Information regarding needed corrections.	*Action Taken	ESTIMATE	
				Man Hours	Total Cost
	3.	Excavate and expose 3" steam and 1 1/2" condensate lines located underground near the entrance, between FC 241 and FC 251. Cut and cap (2) two lines coming from FC 202. Tap existing 8" steam and 6" condensate lines running parallel to main Service Road and connect 3" steam line and 1 1/2" condensate line supplying bldgs. FC 241 and FC 251 to steam and condensate mains.			
	4.	Install new pits at FC 202 and at entrance between FC 241 and FC 251.			

* URGENCY CODE: Enter appropriate Code as follows:
 A. Emergency nature, should be corrected as soon as possible.
 B. Essential Maintenance, should be corrected within one (1) year.
 C. Projected Maintenance, correction can wait one or more years, Indicate # of years.

** ACTION TAKEN
 1. Emergency
 2. Preventive Maint.
 3. S. W. O. P.
 4. Deferred Maintenance



COST ESTIMATE

DATE PREPARED
9-14-87

SHEET 2 OF 2

ACTIVITY AND LOCATION

NEAR F.C. 202

PROJECT TITLE

Construct Steam pit

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

ESTIMATED BY

D. C. Brown

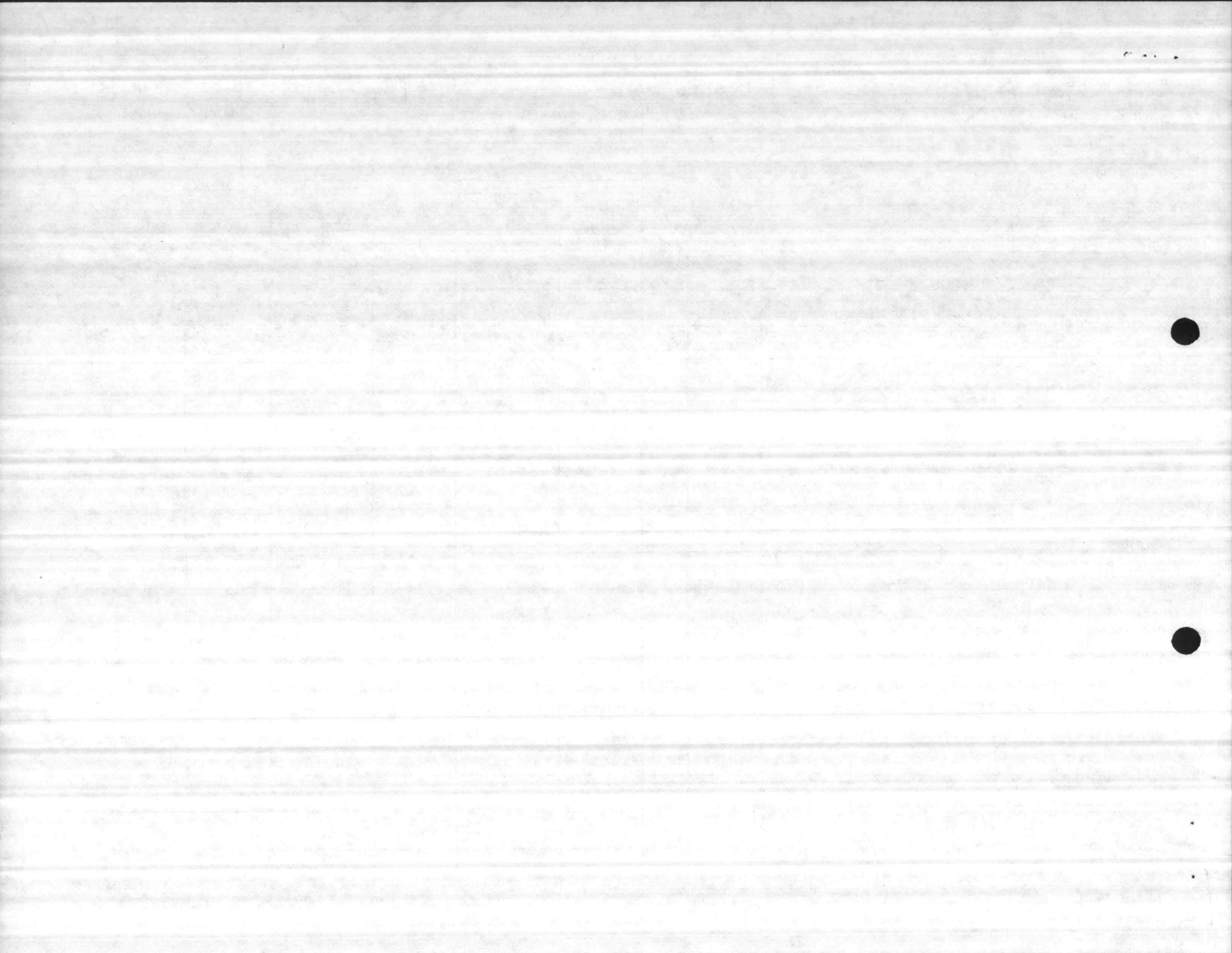
CATEGORY CODE NUMBER

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify) _____

JOB ORDER NUMBER

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
Construct Two Concrete Steam pits	2	ea		3600		5400		9000
NEAR F.C. 200. PITS TO BE								
8' wide x 8' Long x 10' DEEP WITH								
APPROX 2' OF WALLS ABOVE GROUND								
LEVEL. TOP OF PIT TO BE								
OPEN WITH GALVANIZED GRATE								
IN TOP FOR VENTILATION AND								
SAFETY. CONCRETE WALLS BELOW								
GROUND LEVEL TO BE WATER PROOFED								
AND A SUMP PUMP WELL IN								
BOTTOM OF PIT LOCATED IN								
ONE CORNER OF PIT FLOOR.								
Total Structure.	2	ea		3600		5400		9000



MINOR CONSTRUCTION PROJECT VALIDATION FORM

Requestor/Unit UTILITIES BOYS

Work Request # 126-87

Description CONSTRUCT STEAM PIT AND TAP-ON LINE
FC 200 AREA

1. Command Importance:

High	<u>4.0</u>
Medium	2.0
Low	1.0

2. Impact on Mission:

High	<u>4.0</u>
Medium	3.0
Low	2.0
None	1.0

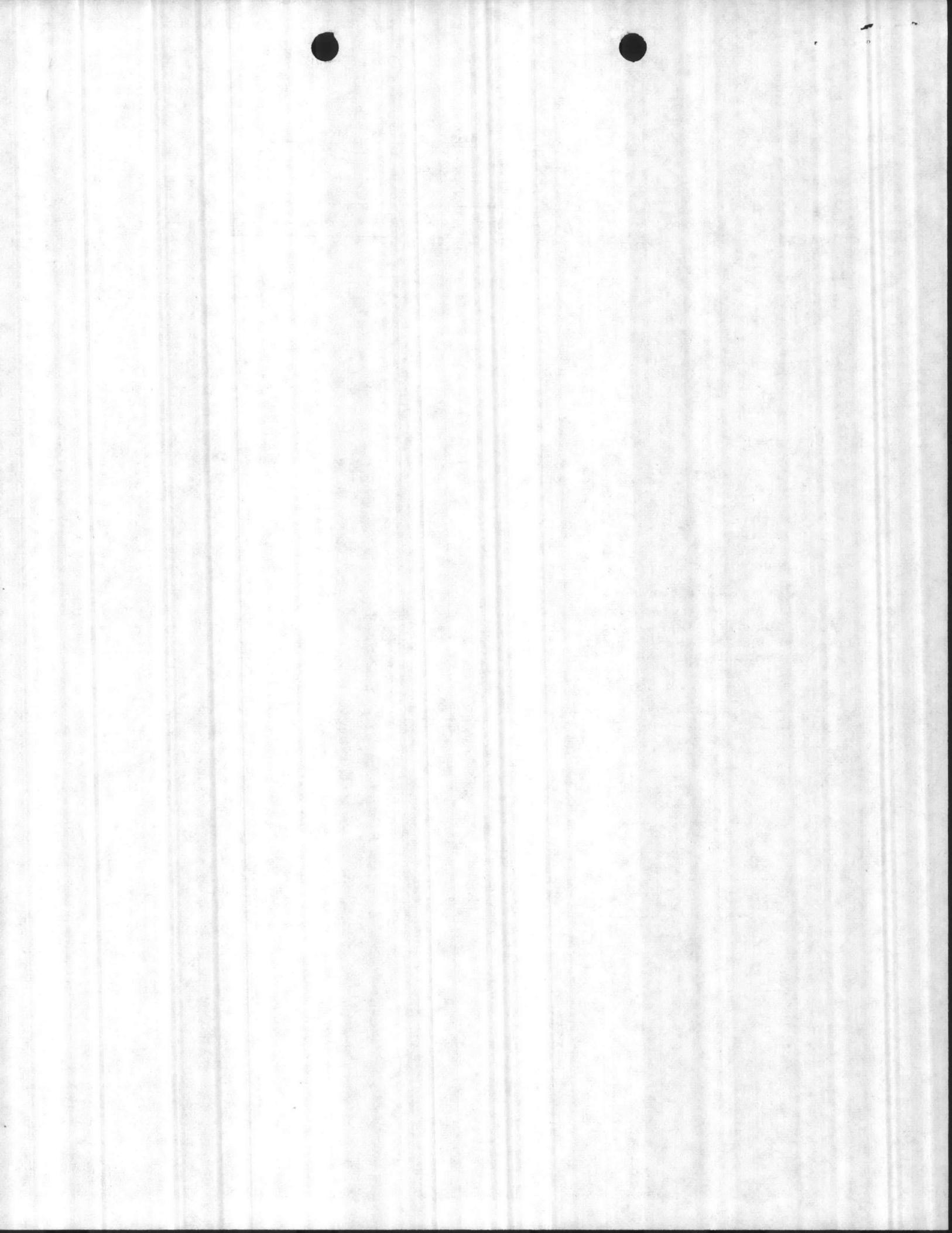
3. Impact on security, habitability, morale/welfare/training, safety, environmental protection or energy conservation.

High	<u>2.5</u>
Medium	2.0
Low	1.5
None	1.0

4. Requirement generated by:

CMC direction	2.5
Support equipment installation	2.0
Concurrent with repair project	<u>1.5</u>
Other	1.0

(1) 4.0 x (2) 4.0 x (3) 2.5 x (4) 1.5 = 60 (Total)



WORK REQUEST (MAINTENANCE MANAGEMENT)
 NAVFAC 9-11014/20 REV. 2-68) S/N 0105-LF-002-7510
 Supersedes NAVDOCKS 2351

(PW Department see Instructions
 in NAVFAC MO-321)

FY-88 MINOR CONSTRUCTION

Requestor see Instructions on Reverse Side

UTILITIES

PART I—REQUEST (Filled out by Requestor)		B045
1. FROM Director, Utilities Branch	2. REQUEST NO. 126-87 <i>Pr: 5</i>	
3. TO Director, Operations Branch	4. DATE OF REQUEST 17 Apr 87	
5. REQUEST FOR <input type="checkbox"/> COST ESTIMATE <input checked="" type="checkbox"/> PERFORMANCE OF WORK		5a. REQUEST WORK START
6. FOR FURTHER INFORMATION CALL C. H. Baker, 5161		7. SKETCH/PLAN ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

GRD G10A

8. DESCRIPTION OF WORK AND JUSTIFICATION (Including location, type, size, quantity, etc.)

1. Construct a new steam pit at FC-202 and provide necessary valves, pumps, and piping to tie in Bldgs FC100, FC200, FC241, and FC251 to the 8" steam main along Main Service Road.

Justification: The boilers and auxiliary equipment at FC202 Steam Plant require extensive repairs due to age and operate on No. 2 oil. Providing a tie in to the main steam line along Main Service Road will eliminate the need for FC202 Steam Plant and reduce operating cost due to steam requirement being met by coal burning in lieu of No. 2 oil which is more expensive.

Estimated Cost: \$20,000

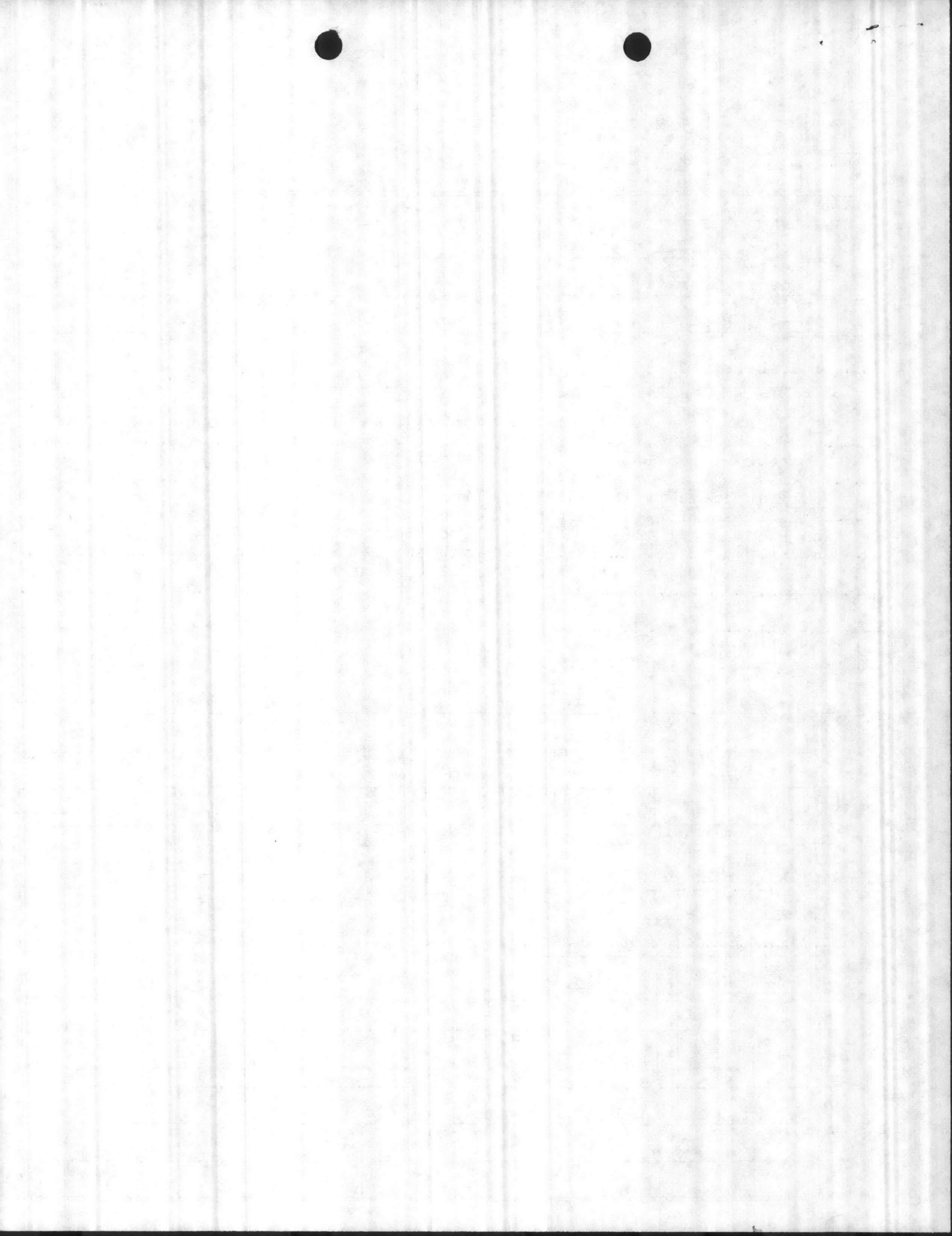
9. FUNDS CHARGEABLE	10. SIGNATURE (Requesting Official)  C. H. BAKER
---------------------	--

PART II—COST ESTIMATE
 (Filled out by Maintenance Control Division if estimate requested)

11. TO:	12. ESTIMATE NO.														
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: left;">13. COST ESTIMATE</th> </tr> <tr> <td style="width: 80%;">a. Labor</td> <td style="width: 20%;">\$</td> </tr> <tr> <td>b. Material</td> <td>\$</td> </tr> <tr> <td>c. Overhead and/or Surcharge</td> <td>\$</td> </tr> <tr> <td>d. Equipment Rental/Usage</td> <td>\$</td> </tr> <tr> <td>e. Contingency</td> <td>\$</td> </tr> <tr> <td>f. TOTAL</td> <td>\$</td> </tr> </table>	13. COST ESTIMATE		a. Labor	\$	b. Material	\$	c. Overhead and/or Surcharge	\$	d. Equipment Rental/Usage	\$	e. Contingency	\$	f. TOTAL	\$	14. SKETCH/PLAN ATTACHED <input type="checkbox"/> YES <input type="checkbox"/> NO
13. COST ESTIMATE															
a. Labor	\$														
b. Material	\$														
c. Overhead and/or Surcharge	\$														
d. Equipment Rental/Usage	\$														
e. Contingency	\$														
f. TOTAL	\$														
15. <input type="checkbox"/> APPROVED. PROGRAMMING TO START IN _____ <input type="checkbox"/> APPROVED. BASED ON PRESENT WORKLOAD, THIS JOB CAN BE PROGRAMMED TO START IN _____, IF AUTHORIZED BY 25TH OF _____ AND FUNDS ARE MADE AVAILABLE. <input type="checkbox"/> DISAPPROVED. (See Reverse Side)															
16. SIGNATURE															
17. DATE															

PART III—ACTION (Filled out by Requestor)

18. TO:	20. WORK REQUESTED
19. AUTHORIZATION TO PROCEED IS ATTACHED (Check one if other than PW funds are involved) <input type="checkbox"/> NAVCOMPT 140 <input type="checkbox"/> OTHER	<input type="checkbox"/> HAS BEEN CANCELLED <input type="checkbox"/> HAS BEEN DEFERRED <input type="checkbox"/> WILL BE PERFORMED BY OTHERS
21. SIGNATURE	22. DATE



1. PRI 2. JOB ORDER NO 3. AMEND NO 4. REQUEST NO

5. CUSTOMER

UTILITIES B045

6. BRIEF TITLE

CONSTRUCT NEW STEAM PIT

7. SOURCE	8.	9. HOURS	10. UNIT	11. QTY	12. MATERIAL COSTS	13. LABOR COSTS	14. TOTAL COSTS
	<input checked="" type="checkbox"/> STRUCTURAL <input checked="" type="checkbox"/> MECHANICAL <input type="checkbox"/> ELECTRICAL WORK DESCRIPTION						
	<i>STEAM PIT CONSTRUCTION</i>						<i>20,000</i>
	<i>TO ELIMINATE FC202</i>						
	<i>STEAM PLANT</i>						
	<i>TO INCLUDE ALL NECESSARY</i>						
	<i>VALVES, PUMPS, & PIPING + CONCRETE</i>						
	<i>WORK TO TAP ONTO EXISTING</i>						
	<i>STEAM LINE FROM MAIN</i>						
	<i>STEAM PLANT</i>						

15. RECOMMENDED ACCOMPLISHMENT OF WORK

- A. IN HOUSE
- B. CONTRACT
- C. COMBINATION A&B

16. TOTAL THIS PAGE

TOTAL FOLLOWING PAGES(S)

SUBTOTAL

CONTINGENCY

TOTAL ESTIMATE *20,000*

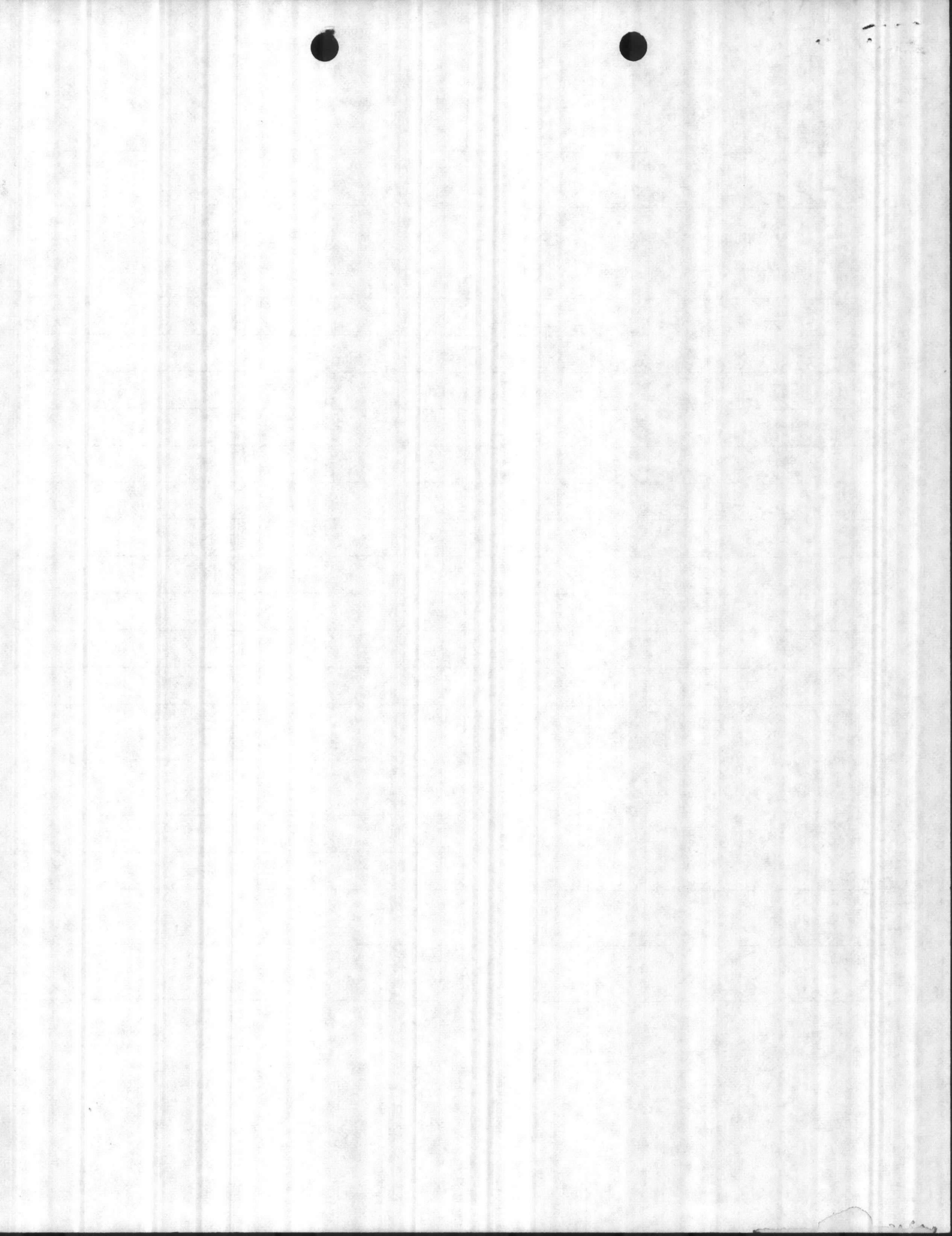
PREPARED BY

[Signature]

RECEIVED BY

DATE

8-24-87



BASE MAINTENANCE DIVISION
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

DATE: 24 JUN 1987

FROM: BASE MAINTENANCE OFFICER, MARINE CORPS BASE, CAMP LEJEUNE, N.C.
TO: PUBLIC WORKS OFFICER, BUILDING 1005, MARINE CORPS BASE, CAMP
LEJEUNE, N.C.

SUBJ: ENGINEERING SERVICE REQUEST FOR PROJECT NUMBER - 8M34CN

ENCL: (A) ESTIMATE WORK SHEET(S) FOR M1 FUNDS
(B)

1. TYPE OF SERVICE REQUESTED:

REPLACE BOILER AND MECH REPAIRS
BLDGS BA106 AND M230

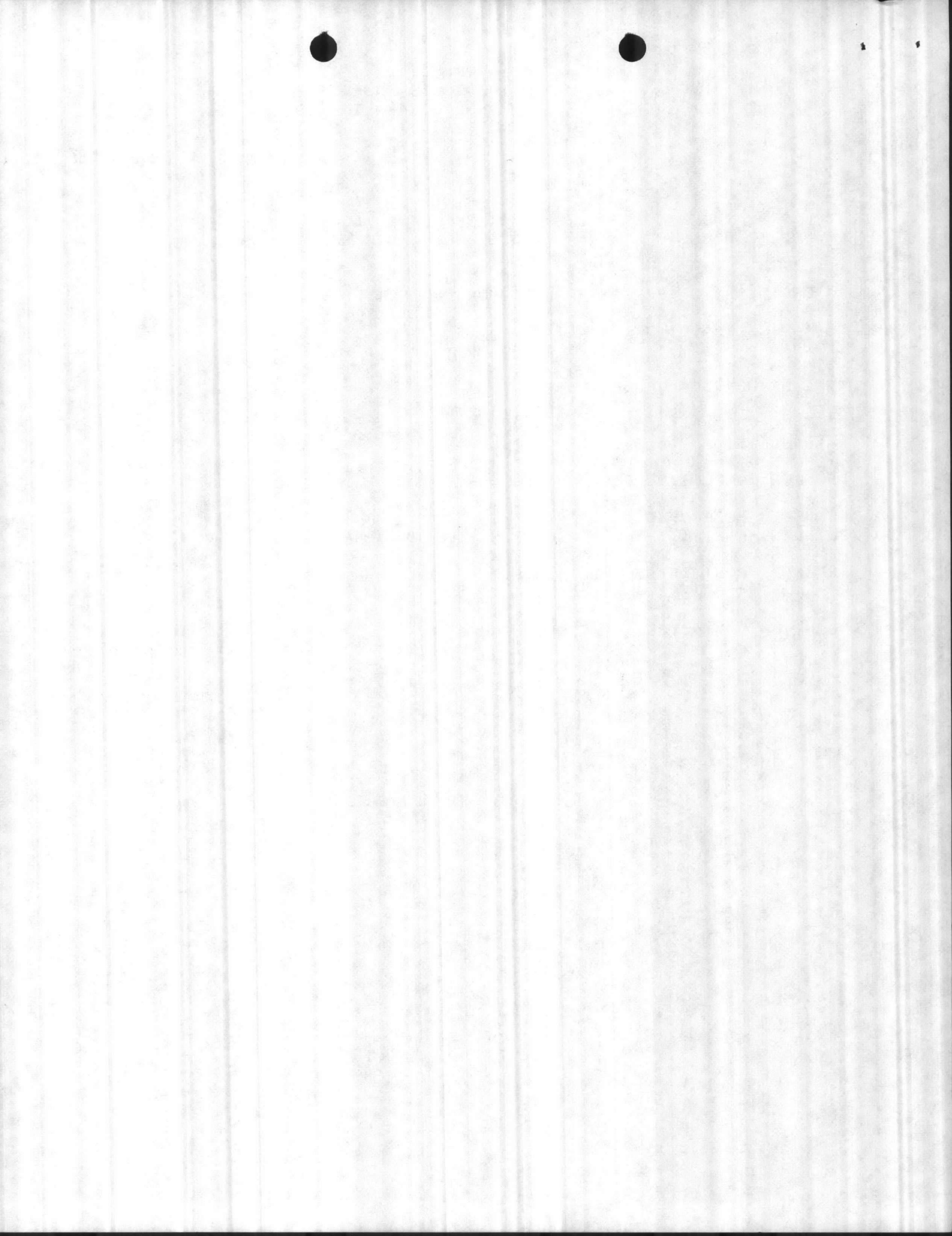
2. DESIRED COMPLETION FISCAL YEAR: 88

3. FUNDS TO BE PROVIDED UNDER SUB-FUNCTIONAL-CATEGORY: M1
BUILDING/FACILITY IDENTIFICATION FOLLOWS: BA106, M230,

ESTIMATE COST IS \$ 566,155.00

4. POINT OF CONTACT IS GREG SHOEMAKER , PHONE 5794

T.D. JEWELL
BY DIRECTION



COST ESTIMATE

DATE PREPARED
5-20-87

SHEET OF

ACTIVITY AND LOCATION

BA-106

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

ESTIMATED BY

R.B. Hoffman

CATEGORY CODE NUMBER

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify) _____

JOB ORDER NUMBER

PROJECT TITLE

REPAIRS TO STRUCT, ELECT, MECH, PLBG

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
PAINT				302		600		900
ELECTRICAL				12500		12500		25,000
MECH - PLBG.				41,000		93,000		134,000
SUB TOTAL				53,800		106,100		159,900
OVERHEAD 15%								23,985
LABOR 18%								19,098
MATERIAL 5%								2,690
SUBTOTAL								205,673
PROFIT 10%								20,567
SUBTOTAL								226,240
BOND 1%								2,262
SUBTOTAL								228,502
CONTINGENCY -10%								22,850
BASIC CONTR. COST								251,352
DESIGN 6%								15,081
TOTAL EST COST								266,433



COST ESTIMATE

DATE PREPARED

SHEET OF

ACTIVITY AND LOCATION

BA-106

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

PROJECT TITLE

ESTIMATED BY

RBAuffman

CATEGORY CODE NUMBER

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify)

JOB ORDER NUMBER

REPLACE BOILER, FUEL TANK, RELATED EQUIP

ITEM DESCRIPTION

QUANTITY

MATERIAL COST

LABOR COST

ENGINEERING ESTIMATE

NUMBER UNIT

UNIT COST TOTAL

UNIT COST TOTAL

UNIT COST TOTAL

(1) REPLACE BOILER #64 TO INCLUDE WATER PUMPS, VALVES, OIL PUMPS, OIL METERS, PIPING AND OTHER AUXILIARIES TO MAKE BOILER COMPLETELY FUNCTIONAL FOR AN UNMANNED STEAM PLANT.

41,000

9,000

134,000

(2) REPLACE UNDER GROUND OIL TANK WITH AN ABOVE GROUND TANK COMPLETE WITH RETAINING BERM, OFF LOADING PUMPS, OIL WATER SEPERATOR ECT. REMOVE OLD TANK FROM GROUND AND DISPOSE OF IT.

(3) REPLACE CONDENSATE RECEIVER/ MAKE UP TANK TO INCLUDE STEAM HEATER COILS, GAUGES, REGULATORS, THERMOMETERS, VALVES, PIPING, CONT SH #2



COST ESTIMATE

DATE PREPARED
6-8-87

SHEET OF

ACTIVITY AND LOCATION

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

PROJECT TITLE

ESTIMATED BY

CATEGORY CODE NUMBER

BA-106
RPL, BOILER, FUEL TANK, AND RELATED EQUIPMENT.

R.B. Hoffman

STATUS OF DESIGN

JOB ORDER NUMBER

PED 30% 100% FINAL Other (Specify)

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
CONT. FROM SH#1 - AND FLOAT CONTROLS.								
TANKS TO BE LINED TO PREVENT								
COOROSION.								
(4) REPLACE EXISTING STEAM FLOW								
METERS WITH THE TYPE THAT HAS								
24 HOUR CHART RECORDER, DIGITAL								
READOUT, 4-20 M.A. SIGNAL AND								
10 TO 1 TURN DOWN RATIO.								
(5) REMOVE ASBESTOS INSULATION								
FROM MAIN STEAM HEADER AND								
OTHER AUXILIARY PIPING AND REPLACE								
WITH CALCIUM SILICATE INSULATION								
WITH SMOOTH METAL COVERING.								
(6) REPLACE EXISTING PLANT MONITORING								
EQUIPMENT WITH UP TO DATE MINI-								
COMPUTER FOR OPERATION OF UNMANNED								
STEAM - CONT. SH#3								





COST ESTIMATE

DATE PREPARED
5-21-81

SHEET OF

ACTIVITY AND LOCATION

M-230

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

ESTIMATED BY

R. B. Hoffman

CATEGORY CODE NUMBER

PROJECT TITLE

MECH. REPAIRS TO BOILERS AND EQUIP.

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify) _____

JOB ORDER NUMBER

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
<i>MECHANICAL</i>				<i>72,000</i>		<i>109,000</i>		<i>181,000</i>
<i>SUBTOTAL</i>				<i>72,000</i>		<i>109,000</i>		<i>181,000</i>
<i>OVERHEAD 15%</i>								<i>27,150</i>
<i>LABOR 18%</i>								<i>19,620</i>
<i>MATERIAL 5%</i>								<i>3,600</i>
<i>SUBTOTAL</i>								<i>231,370</i>
<i>PROFIT 10%</i>								<i>23,137</i>
<i>SUBTOTAL</i>								<i>254,507</i>
<i>Bond 1%</i>								<i>2,545</i>
<i>SUBTOTAL</i>								<i>257,052</i>
<i>CONTINGENCY 10%</i>								<i>25,705</i>
<i>BASIC CONTR. COST</i>								<i>282,757</i>
<i>DESIGN 6%</i>								<i>16,965</i>
<i>TOT EST COST.</i>								<i>299,722</i>



COST ESTIMATE

DATE PREPARED

6-8-87

SHEET OF

ACTIVITY AND LOCATION

M-230

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

ESTIMATED BY

R. C. Hoffman

CATEGORY CODE NUMBER

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify) _____

JOB ORDER NUMBER

PROJECT TITLE
RETUBE BOILERS AND MECH. REPAIRS

ITEM DESCRIPTION

QUANTITY

MATERIAL COST

LABOR COST

ENGINEERING ESTIMATE

NUMBER UNIT

UNIT COST TOTAL

UNIT COST TOTAL

UNIT COST TOTAL

(1) RETUBE BOILERS #38, 39, 40 TO
INCLUDE REPLACING REFACTORY AND
DOOR GASKETS. REPLACE HEADER STOP
VALVE AND NONRETURN VALVE ON
EACH OF THE THREE BOILERS. REMOVE
OUTER CASINGS AND INSULATION ON
EACH BOILER. REMOVE RUST AND
PAINT OUTER BOILER SHELLS AND
PIPING WITH RUST INHIBITED HIGH
TEMPERATURE PAINT. INSULATE
BOILER SHELL WITH CALCIUM
SILICATE AND COVER WITH SMOOTH
METAL JACKET, PAINT WITH HEAT
RESISANT PAINT.

72,000

109,000

181,000

(2) REPLACE EXISTING DEAERATOR
AND THREE BOILER FEED WATER

CONT SH #2



COST ESTIMATE

DATE PREPARED
6-8-87

SHEET OF

ACTIVITY AND LOCATION

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

PROJECT TITLE

ESTIMATED BY

CATEGORY CODE NUMBER

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify) _____

JOB ORDER NUMBER

M-230
RETUBE BOILERS AND MECH REPAIRS

RB Huffman

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
(2) CONT. FROM SH #1 - PUMPS TO INCLUDE PIPING, VALVES, GAUGES, AND REGULATORS. THE NEW DEAERATOR SHOULD BE LOWERED TO PREVENT SYPHONING. INTO THE STEAM HEADER UPON POWER FAILURES.								
(3) REPLACE CONDENSATE RECEIVER/MAKE UP TANK, PIPING ALONG WITH TRANSFER PUMP TO INCLUDE CONTROLS, REGULATORS, GAUGES, AND VALVES. EXISTING TRANSFER PUMP TO BE REPLACED WITH A DUPLEX UNIT TO PREVENT PLANT DOWNTIME DUE TO THE SINGLE PUMP FAILURE.								
(4) REPLACE BLOWDOWN LINES FROM EACH BOILER TO INCLUDE BLOWDOWN PIT - CONTS #3								



(3)

COST ESTIMATE

DATE PREPARED
6-8-87

SHEET OF

ACTIVITY AND LOCATION

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

PROJECT TITLE

ESTIMATED BY

CATEGORY CODE NUMBER

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify)

JOB ORDER NUMBER

M-230

R. Hoffmann

RETUBE BOILERS, AND MECH REPAIRS

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
CONT FROM SA # 2 AND TIE RUN OFF INTO SANITARY SEWER.								
(5) REMOVE ALL ASBESTOS INSULATION OFF OF STEAM, CONDENSATE, AND WATER LINES. RE INSULATE WITH CALCIUM SILICATE WITH SMOOTH METAL COVERING.								
(6) REPLACE EXISTING PLANT MONITORING EQUIPMENT WITH UP TO DATE MINI- COMPUTER FOR SAFE OPERATION OF UNMANNED STEAM PLANT WITH REMOTE MONITORING AT BUILDING 1700.								
(7) REPLACE STEAM FLOW METERS WITH THE TYPE THAT HAS 24-HOUR CHART RECORDER, DIGITAL READOUT, 4-20 M.A. SIGNAL AND 10 TO 1 DOWN RATIO.								



Project: Repairs to Steam Plants BA-106 and ~~BA-106~~

BA-106:

1. Replace No. 64 boiler to include water pumps, valves, oil pumps, oil meters, piping and other auxiliaries to make boiler completely functional for an unmanned steam plant.
2. Replace underground oil tank with an aboveground tank complete with retaining berm, off loading pumps, oil water separator, etc.
3. Replace condensate receiver/make-up tank to include steam heater coil, gauges, regulators, thermometers, valves, piping, and float controls. Tank to be lined to prevent corrosion.
4. Replace existing steam flow meters with the type that has 24-hour chart recorder, digital readout, 4-20 M.A. signal and 10 to 1 turn down ratio.
5. Remove asbestos insulation from main stem header and other auxiliary piping and replace with calcium silicate insulation with smooth metal covering.
6. Replace existing plant monitoring equipment with up-to-date minicomputer for operation of unmanned steam plant with remote monitoring at Building 1700.
7. Paint interior walls.

8- REWIRE AND RELIGHT BUILDING (BA-106) COMPLETE WITH STATE OF THE ART ELECTRIC EQUIPMENT AS PER NATIONAL ELECTRIC CODE,
EST. COST \$ 266,433



M-230:

1. Retube Nos. 38, 39, and 40 boilers to include replacing refractory and door gaskets. Replace header stop valve and nonreturn valve on each of the three boilers. Remove outer casing and insulation on each boiler. Remove rust and paint outer boiler shells and piping with rust inhibited high temperature paint. Insulate boiler shell with calcium silicate and cover with smooth metal jacket. Paint with heat resistant paint.
2. Replace existing deaerator and three boiler feedwater pumps to include piping, valves, gauges, and regulators. The new deaerator should be lowered to prevent syphoning into the steam header upon power failures.
3. Replace condensate receiver/ make-up tank, piping along with transfer pump to include controls regulators, gauges and valves. Existing transfer pump should be replaced with a duplex unit to prevent plant downtime due to the single pump failure.
4. Replace blowdown lines from each boiler to include blowdown pit and tie runoff into sanitary sewer.
5. Remove all asbestos insulation off of steam, condensate, and water lines. Reinsulate with calcium silicate with smooth metal covering.
6. Replace existing plant monitoring equipment with up-to-date minicomputer for safe operation of unmanned steam plant with remote monitoring at Building 1700.
7. Replace existing steam flow meters with the type that has 24-hour chart recorder, digital readout, 4-20 M.A. signal and 10 to 1 down ratio.

TOT EST - \$299,722



111

7

BASE MAINTENANCE DIVISION
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

DATE: 24 JUN 1987

FROM: BASE MAINTENANCE OFFICER, MARINE CORPS BASE, CAMP LEJEUNE, N.C.
TO: PUBLIC WORKS OFFICER, BUILDING 1005, MARINE CORPS BASE, CAMP
LEJEUNE, N.C.

SUBJ: ENGINEERING SERVICE REQUEST FOR PROJECT NUMBER - 8M35CN

ENCL: (A) ESTIMATE WORK SHEET(S) FOR M1 FUNDS
(B)

1. TYPE OF SERVICE REQUESTED:

REMOVE ASBESTOS INSULATION AND MECH. REPAIRS
BLDGS 1700, AS3502, AS710, AS705

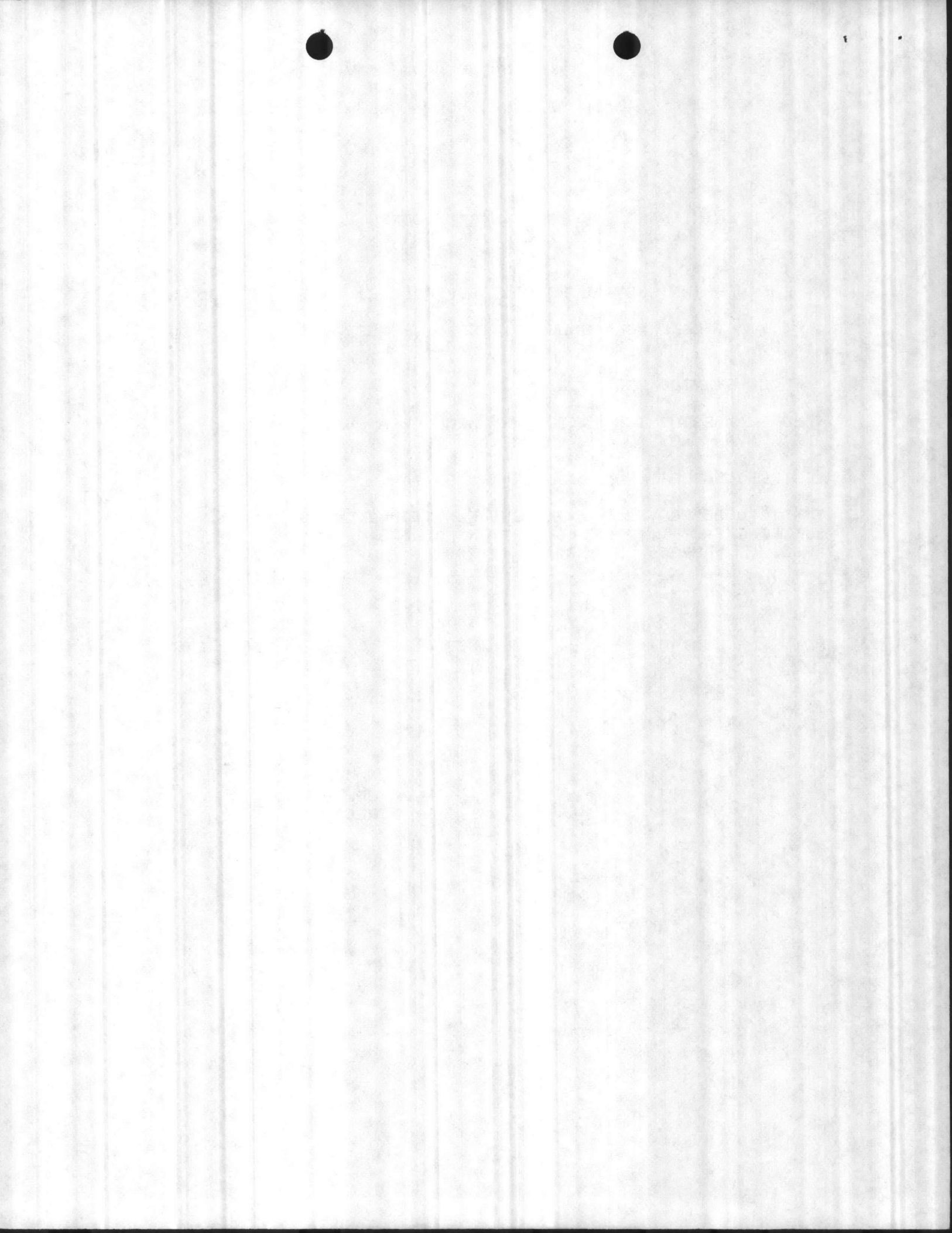
2. DESIRED COMPLETION FISCAL YEAR: 88

3. FUNDS TO BE PROVIDED UNDER SUB-FUNCTIONAL-CATEGORY: M1
BUILDING/FACILITY IDENTIFICATION FOLLOWS:
AS3502, AS705, AS710, 1700,

ESTIMATE COST IS \$ 327,665.00

3. POINT OF CONTACT IS GREG SHOEMAKER , PHONE 5794

T.D. JEWELL
BY DIRECTION



COST ESTIMATE

DATE PREPARED

SHEET OF

ACTIVITY AND LOCATION

1700

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

ESTIMATED BY

R.B. Huffman

CATEGORY CODE NUMBER

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify) _____

JOB ORDER NUMBER

PROJECT TITLE

REPLACE ASBESTOS INSUL, MECH. REPAIRS

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
MECHANICAL				80,000		118,000		198,000
SUBTOTAL				80,000		118,000		198,000
QUERHEAD 1570								29,700
LABOR 1870								21,240
MATERIAL 590								4,000
SUBTOTAL								252,940
PROFIT 1070								25,294
SUBTOTAL								278,234
BOND 170								2,782
SUBTOTAL								281,016
CONTINGENCY 1070								28,102
BASIC CONTR. COST								309,118
DESIGN 670								18,547
TOTAL EST COST								327,665



COST ESTIMATE

DATE PREPARED
6-9-87

SHEET OF

ACTIVITY AND LOCATION

1700

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

ESTIMATED BY

R.B. Hoffman

CATEGORY CODE NUMBER

PROJECT TITLE

REPAIRS TO STEAM PLANT

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify) _____

JOB ORDER NUMBER

ITEM DESCRIPTION

QUANTITY

MATERIAL COST

LABOR COST

ENGINEERING ESTIMATE

NUMBER

UNIT

UNIT COST

TOTAL

UNIT COST

TOTAL

UNIT COST

TOTAL

(1) REPLACE DETERIORATED STEEL ASH
HOPPERS INCLUDING CYCLONE HOPPERS.
REPLACEMENT INCLUDES REMOVAL OF

APPROXIMATELY 4800 SQUARE FEET
OF ASBESTOS INSULATION AND REPLACEMENT
WITH CALCIUM SILICATE.

80,000

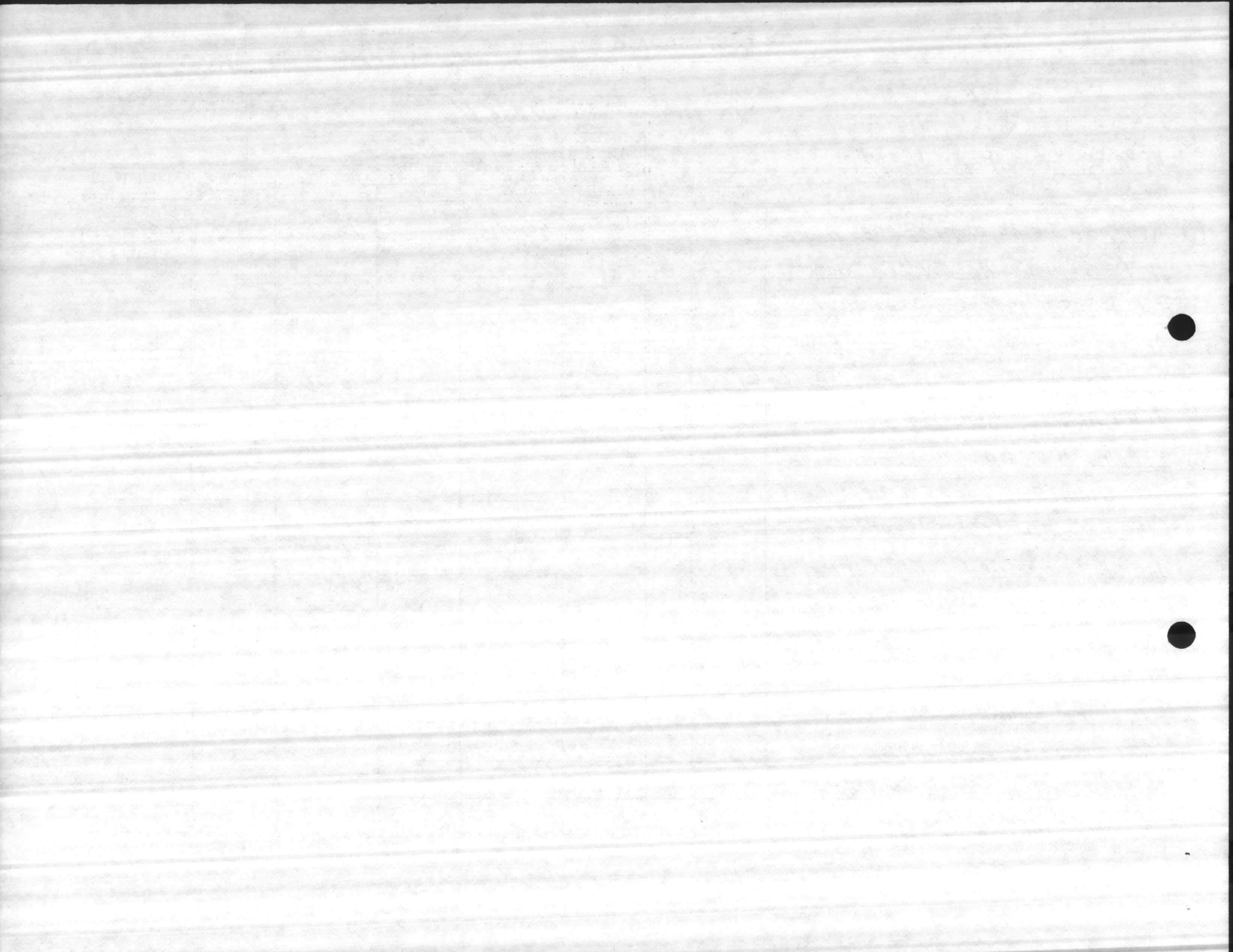
118,000

198,000

PM 35CM

(2) REMOVE ASBESTOS INSULATION FROM
APPROXIMATELY 200 FEET OF SIGNAL
LINE ON MAIN STEAM HEADER TO
BOILER COMBUSTION CONTROL AND
REPLACE WITH CALCIUM SILICATE.

(3) REMOVE ASBESTOS INSULATION FROM
APPROXIMATELY 100 FEET OF 3"
HIGH PRESSURE STEAM TRAP LINES
FROM MAIN STEAM HEADER TO
DEAERATOR TANK AND REPLACE WITH
CALCIUM SILICATE. (CONT SH #2)



COST ESTIMATE

DATE PREPARED
6-9-87

SHEET OF

ACTIVITY AND LOCATION

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

PROJECT TITLE

ESTIMATED BY

CATEGORY CODE NUMBER

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify) _____

JOB ORDER NUMBER

1700

RB Huffman

REPAIRS TO STEAM PLANT

ITEM DESCRIPTION

QUANTITY

MATERIAL COST

LABOR COST

ENGINEERING ESTIMATE

NUMBER

UNIT

UNIT COST

TOTAL

UNIT COST

TOTAL

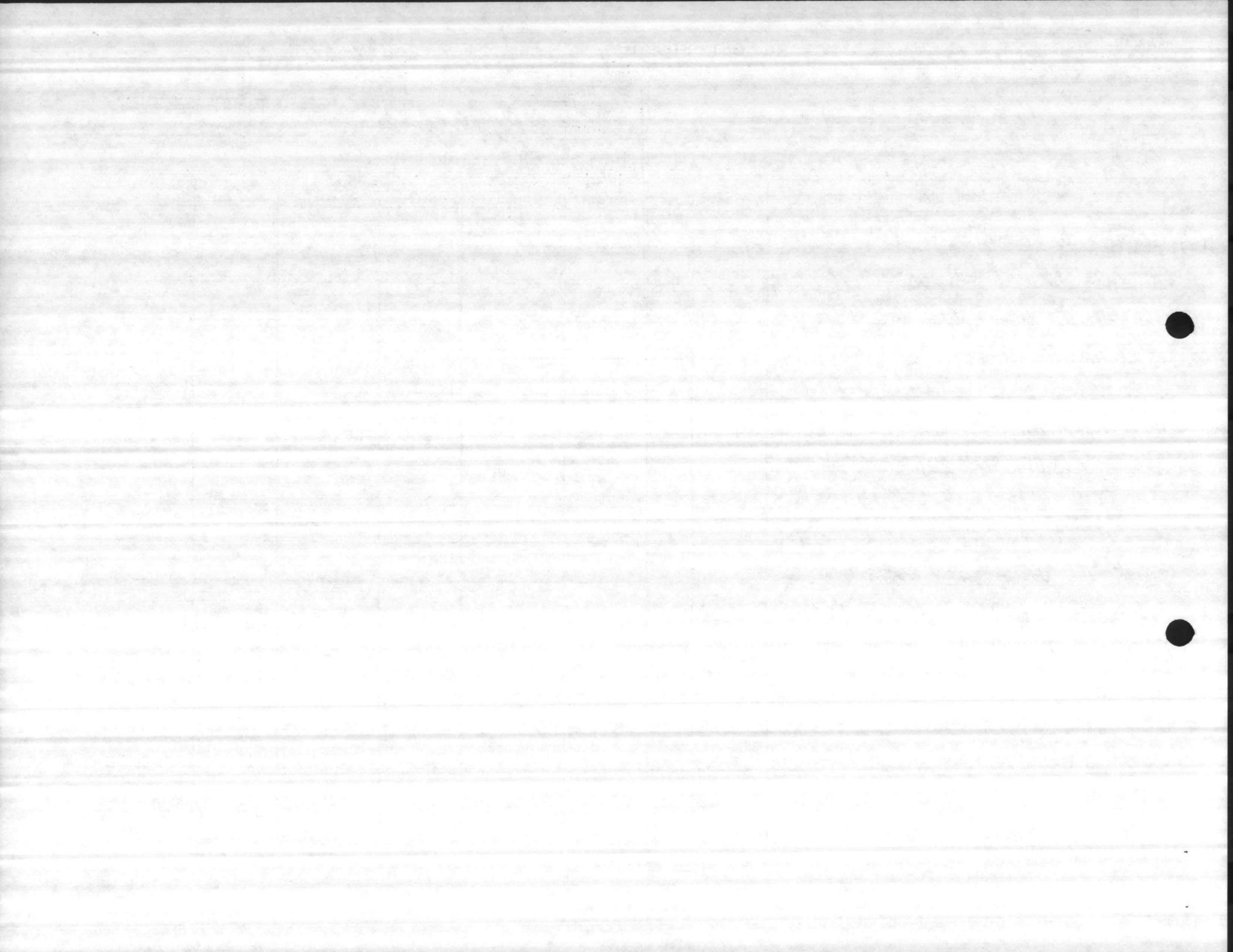
UNIT COST

TOTAL

(4) CONT. FROM SH # 1 — REPLACE LOW
PRESSURE DRIP TANK INCLUDING
RELATED PIPING, TRAPS, AND PUMPS.

(5) REPLACE STATIONARY VACUUM
CLEANER SYSTEM INCLUDING PIPING
AND AUXILIARIES.

(6) CLEAN ALGAE AND OTHER CONTAMIN-
ENTS OUT OF 420,000 GALLON NO.
6 OIL STORAGE TANK AND REPAIR
TANK AS NECESSARY AFTER
COMPLETE VISUAL AND ULTRASONIC
TESTING IS PERFORMED.



COST ESTIMATE

DATE PREPARED
 5-21-87

SHEET OF

ACTIVITY AND LOCATION

AS-705

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

ESTIMATED BY

RR Huffman

CATEGORY CODE NUMBER

STATUS OF DESIGN

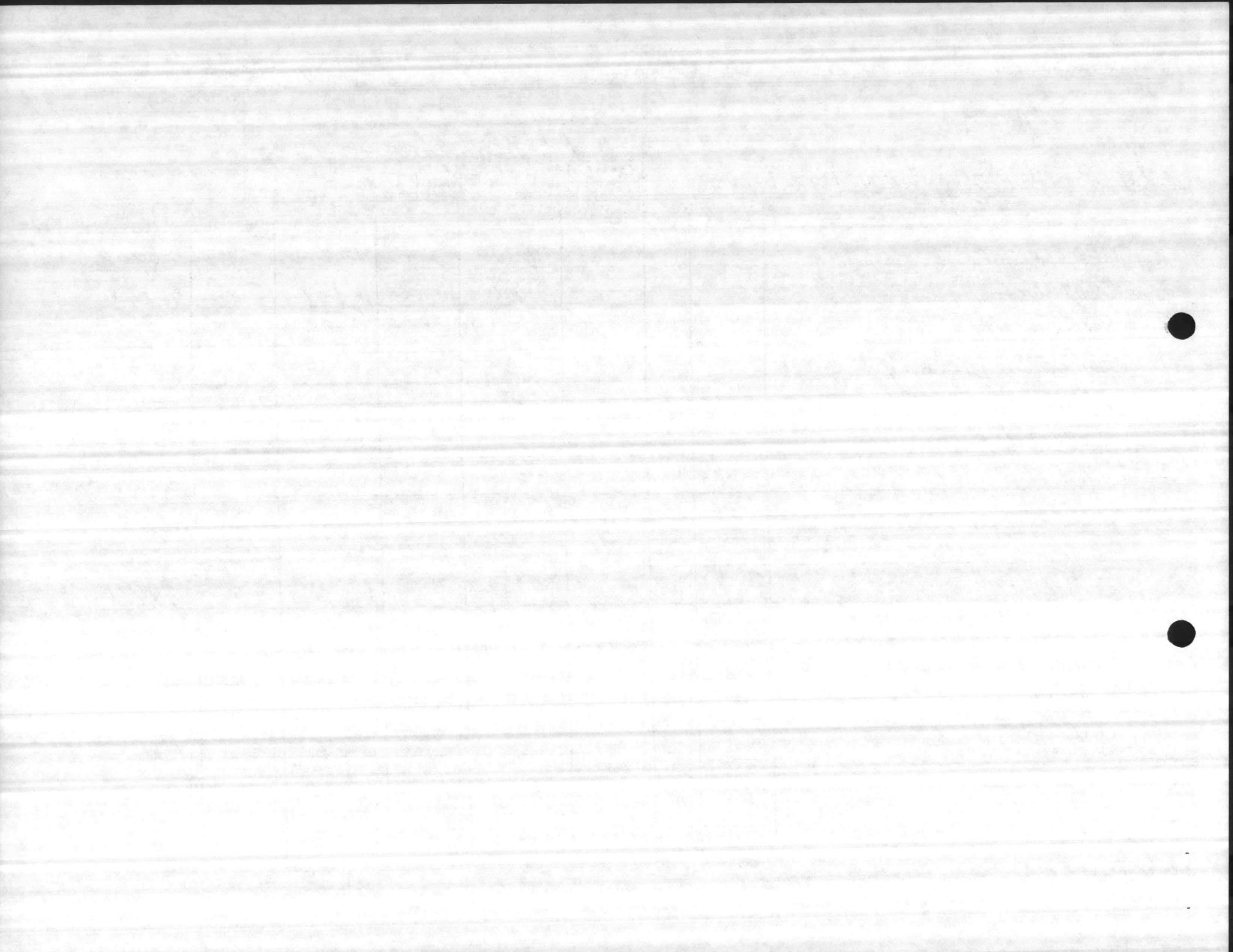
PED 30% 100% FINAL Other (Specify)

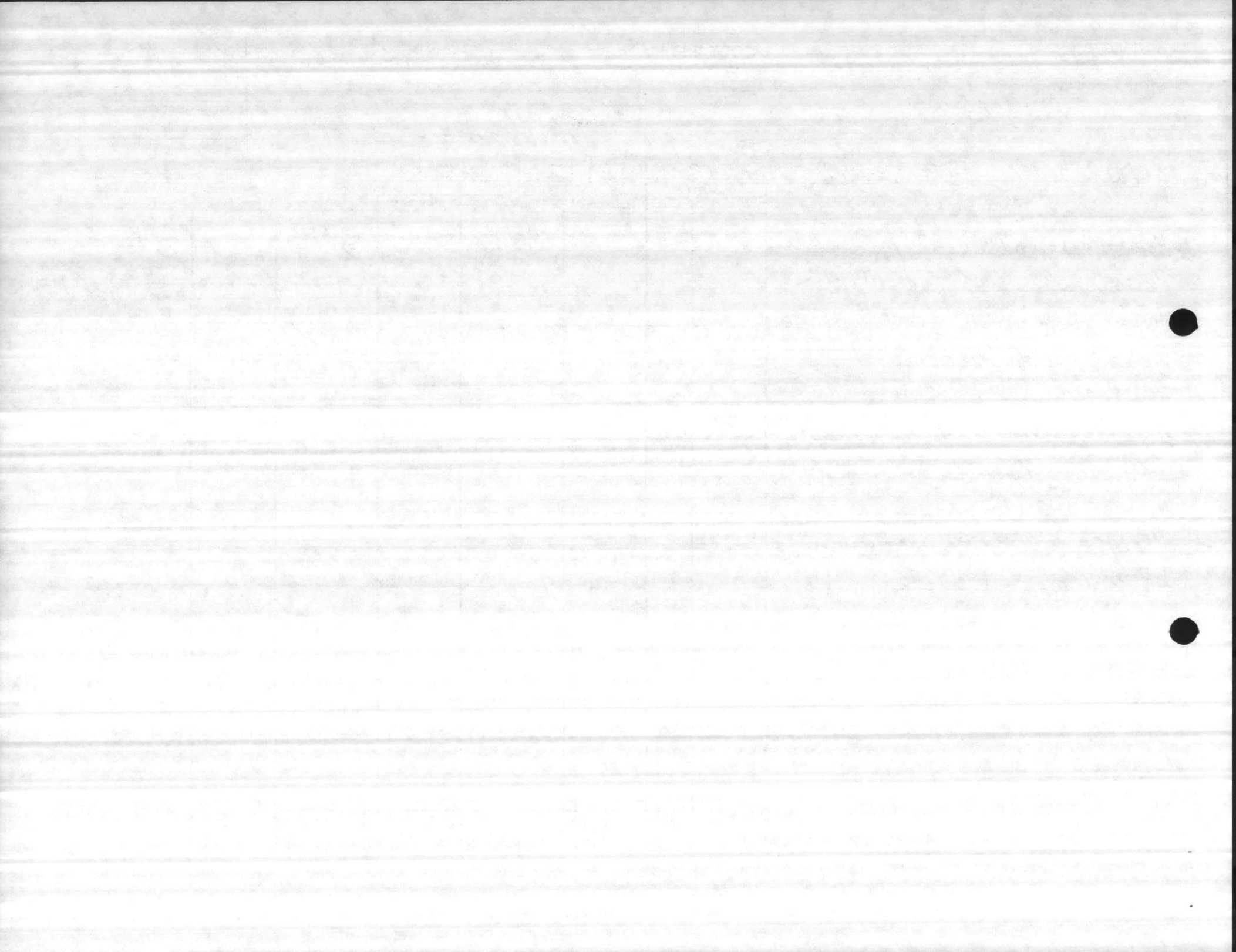
JOB ORDER NUMBER

PROJECT TITLE

REPLACE BOILER INSUL & WATER SOFTNER

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
MECHANICAL				10,400		15,600		26,000
SUBTOTAL				10,400		15,600		26,000
OVERHEAD 15%								3,900
LABOR 18%								2,808
MATERIAL 5%								520
SUBTOTAL								33,228
PROFIT 10%								3,323
SUBTOTAL								36,551
BOND 1%								366
SUBTOTAL								36,916
CONTINGENCY 10%								3,692
BASIC CONTR. COST								40,608
DESIGN 6%								2,436
TOTAL EST COST								43,044





COST ESTIMATE

DATE PREPARED
 6-9-87

SHEET 1 OF 1

ACTIVITY AND LOCATION

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

PROJECT TITLE

ESTIMATED BY

CATEGORY CODE NUMBER

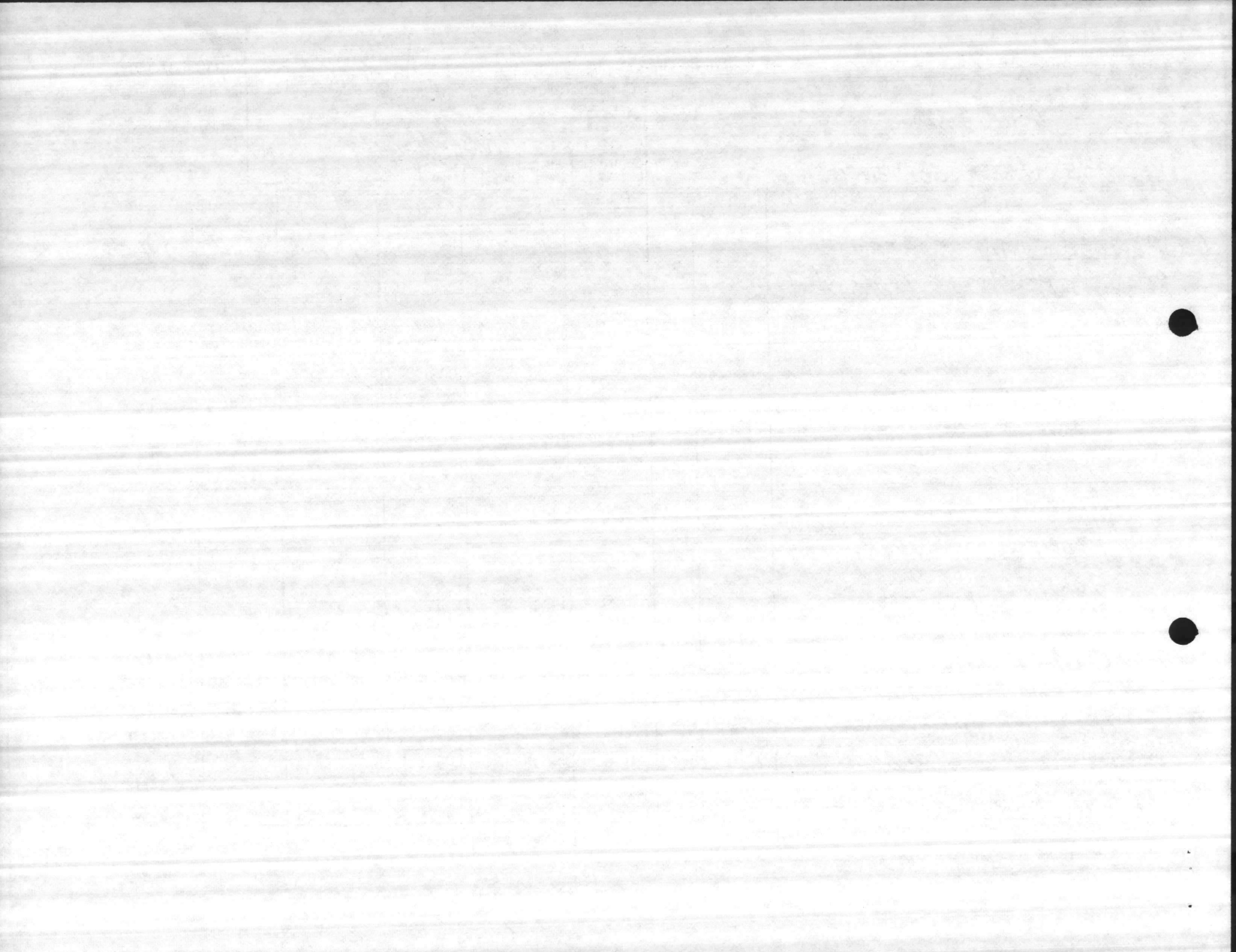
AS-3502
 REPLACE WATER SOFTENERS

STATUS OF DESIGN

JOB ORDER NUMBER

PED 30% 100% FINAL Other (Specify)

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
U1 REPLACE WATER SOFTENERS, REGULATORS, BRINE TANKS AND PIPING.				1,000		1,400		2,400
SUBTOTAL				1,000		1,400		2,400
OVERHEAD 15%								360
LABOR 18%								252
MATERIAL 5%								50
SUBTOTAL								3,062
PROFIT 10%								306
SUBTOTAL								3,368
BOND 1%								34
SUBTOTAL								3,402
CONTINGENCY 10%								340
BASIC CONTRACT COST								3,742
DESIGN 6%								225
TOTAL EST COST								3,967



COST ESTIMATE

DATE PREPARED
6-9-87

SHEET **OF**

ACTIVITY AND LOCATION

AS-710

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

ESTIMATED BY

RB Hoffman

CATEGORY CODE NUMBER

PROJECT TITLE

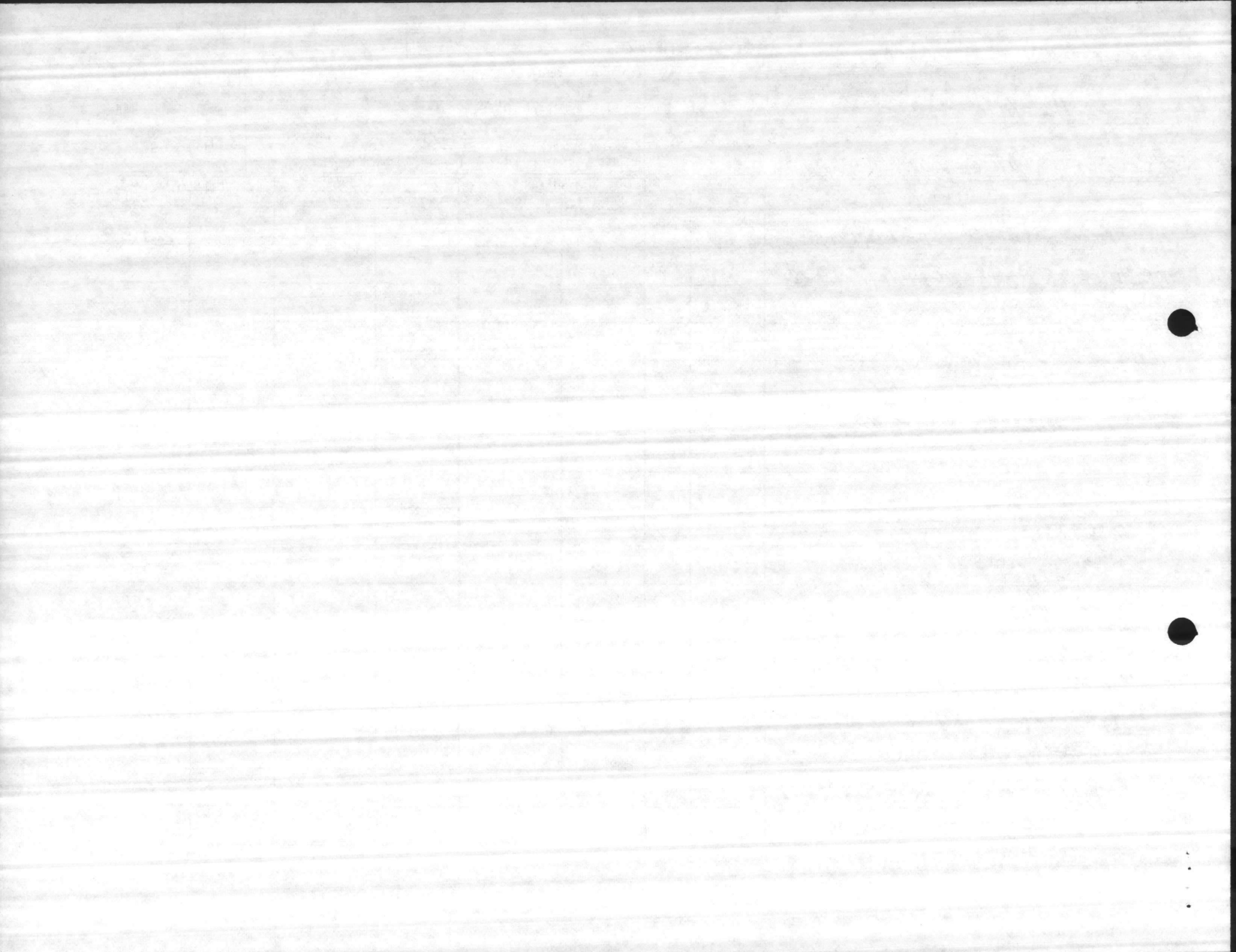
REPLACE WATER SOFTENERS

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify)

JOB ORDER NUMBER

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
(1) REPLACE WATER SOFTENERS, REGULATORS, BRINE TANKS AND PIPING.				1,000		1,400		2,400
SUBTOTAL				1,000		1,400		2,400
OVERHEAD 15%								360
LABOR 18%								252
MATERIAL 5%								50
SUBTOTAL								3,062
PROFIT 10%								306
SUBTOTAL								3,368
BOND 1%								34
SUBTOTAL								3,402
CONTINGENCY 10%								340
BASIC CONTRACT COST								3,742
DESIGN 6%								225
TOTAL EST COST								3,967



Project: Repairs to Steam Plants 1700, AS-3502, AS-710, and AS-705

Description of Work: Work shall include but not be limited to the following items to provide a complete and usable facility:

1700:

1. Replace deteriorated steel ash hoppers including cyclone hoppers. Replacement includes removal of approximately 4800 square feet of asbestos insulation and replacement with calcium silicate.
2. Remove asbestos insulation from approximately 200 feet of signal line on main steam header to boiler combustion control and replace with calcium silicate.
3. Remove asbestos insulation from approximately 100 feet of 3" high pressure steam trap lines from main steam header to deaerator tank and replace with calcium silicate.
4. Replace low pressure drip tank including related piping, traps, and pumps.
5. Replace stationary vacuum cleaner system including piping and auxiliaries.
6. Clean algae and other contaminants out of 420,000 gallon No. 6 oil storage tank and repair tank as necessary after complete visual and ultrasonic testing is performed.

AS-705:

1. Remove deteriorated insulation, possibly asbestos, from No. 11 boiler, sand and remove rust from boiler shell, apply heat resistant rust inhibitor paint, and reinsulate with calcium silicate protected with smooth metal jacket.
2. Replace water softeners, regulators, brine tank and piping.

Buildings AS-710 and AS-3502:

1. Replace water softeners, regulators, brine tanks and piping.

Estimated Cost: ~~\$370,000~~



BASE MAINTENANCE DIVISION
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

DATE: 24 JUN 1987

FROM: BASE MAINTENANCE OFFICER, MARINE CORPS BASE, CAMP LEJEUNE, N.C.
TO: PUBLIC WORKS OFFICER, BUILDING 1005, MARINE CORPS BASE, CAMP LEJEUNE, N.C.

SUBJ: ENGINEERING SERVICE REQUEST FOR PROJECT NUMBER - 8M33CN

ENCL: (A) ESTIMATE WORK SHEET(S) FOR M1 FUNDS
(B)

1. TYPE OF SERVICE REQUESTED:

UTILITIES PROJECT - STRUCT, MECH, AND ELECT

BLDGS 20,22,32,670,BA138,RR15,RR85,BB190 & STT39A

2. DESIRED COMPLETION FISCAL YEAR: 88

3. FUNDS TO BE PROVIDED UNDER SUB-FUNCTIONAL-CATEGORY: M1

BUILDING/FACILITY IDENTIFICATION FOLLOWS:

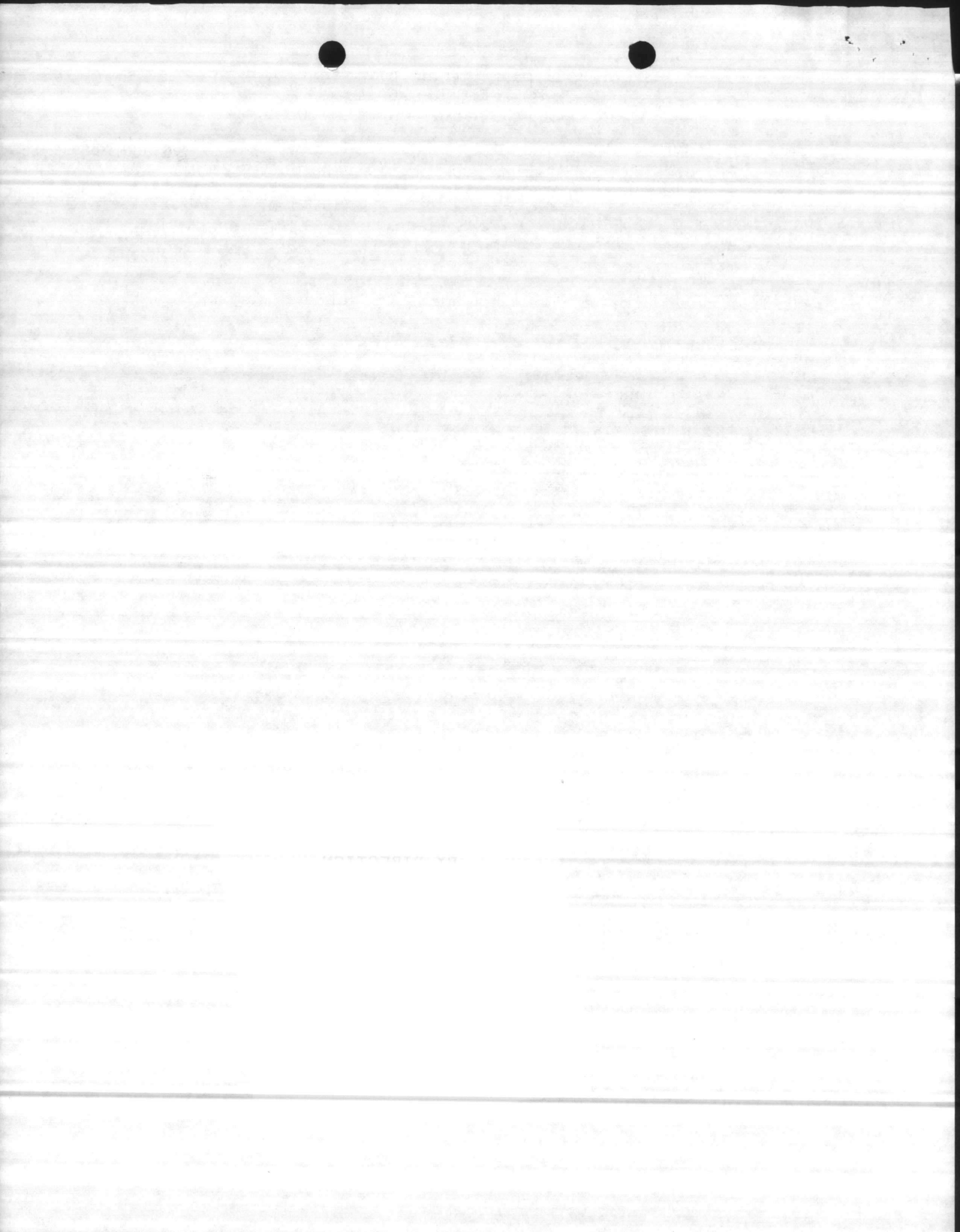
BA138, BB190, RR15, RR85, STT39A, 20, 22,
32, 670,

ESTIMATE COST IS \$ 344,715.00

3. POINT OF CONTACT IS GREG SHOEMAKER , PHONE 5794

32 Baiter/Dgestor
21 L.S. Down Hill
765 Shop,
AOP

Delite
22
Area waste
Wed. 10:30



BASE MAINTENANCE DIVISION
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

DATE: 24 JUN 1987

FROM: BASE MAINTENANCE OFFICER, MARINE CORPS BASE, CAMP LEJEUNE, N.C.
TO: PUBLIC WORKS OFFICER, BUILDING 1005, MARINE CORPS BASE, CAMP
LEJEUNE, N.C.

SUBJ: ENGINEERING SERVICE REQUEST FOR PROJECT NUMBER - 8M33CN

ENCL: (A) ESTIMATE WORK SHEET(S) FOR M1 FUNDS
(B)

1. TYPE OF SERVICE REQUESTED:

UTILITIES PROJECT - STRUCT, MECH, AND ELECT

BLDGS 20,22,32,670,BA138,RR15,RR85,BB190 & STT39A

2. DESIRED COMPLETION FISCAL YEAR: 88

3. FUNDS TO BE PROVIDED UNDER SUB-FUNCTIONAL-CATEGORY: M1

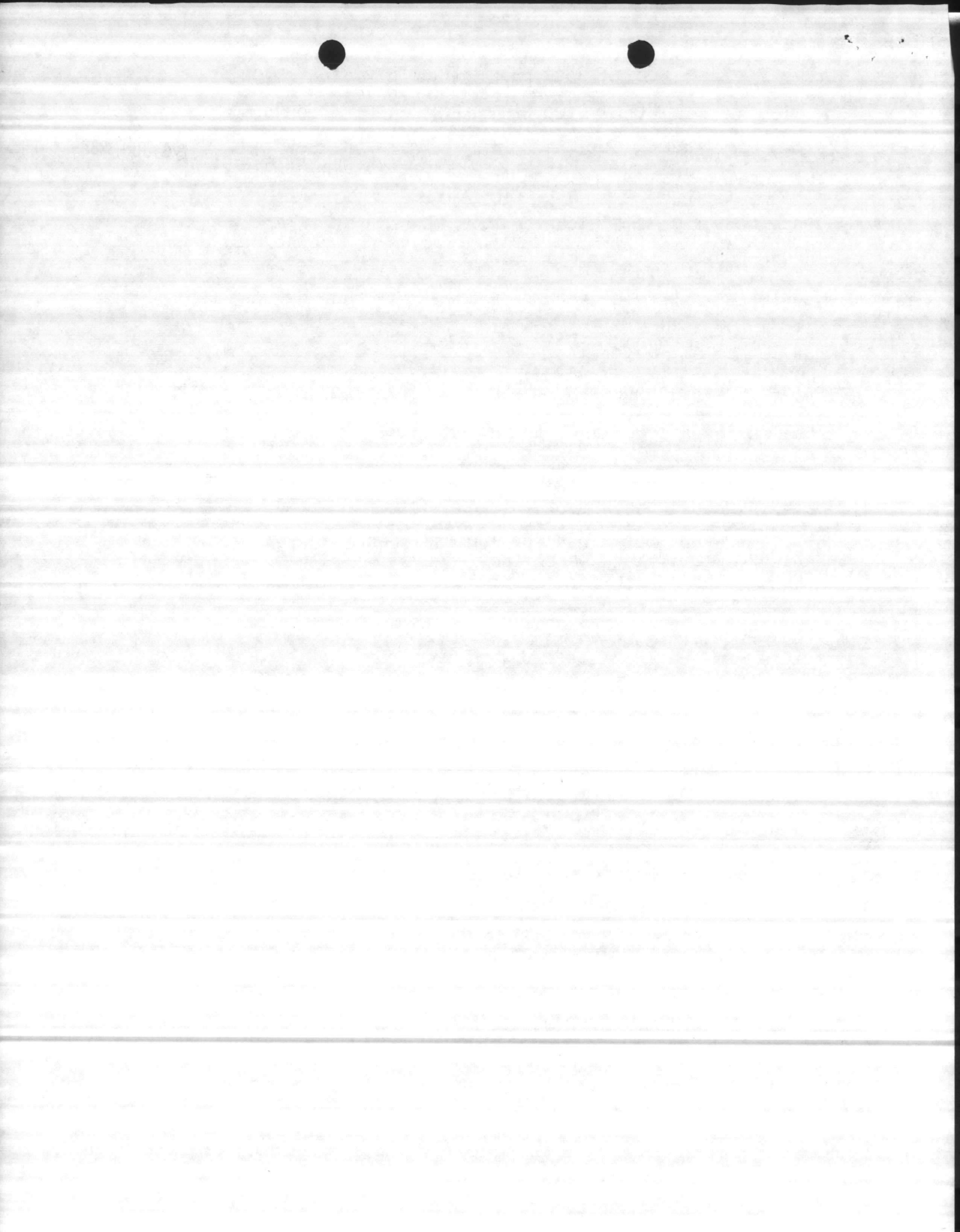
BUILDING/FACILITY IDENTIFICATION FOLLOWS:

BA138, BB190, RR15, RR85, STT39A, 20, 22,
32, 670,

ESTIMATE COST IS \$ 344,715.00

3. POINT OF CONTACT IS GREG SHOEMAKER , PHONE 5794

T.D. JEWELL
BY DIRECTION





COST ESTIMATE

DATE PREPARED
6-3-87

SHEET OF

ACTIVITY AND LOCATION

22

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

ESTIMATED BY

R.B. Huffman

CATEGORY CODE NUMBER

PROJECT TITLE

STRUCT. RPRS. AND REWIRE + RELIGHT

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify) _____

JOB ORDER NUMBER

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
<i>REPLACE WINDOWS, FRAMES, AND SCREENS WITH NEW ALUMINUM TYPE, REPLACE EXTERIOR DOORS AND FRAMES WITH STATE OF THE ART STEEL TYPE WITH GLASS INSERTS.</i>				<i>3,200</i>		<i>4,800</i>		<i>8,000</i>
<i>REWIRE AND RELIGHT BUILDING AND EQUIPMENT COMPLETE WITH STATE OF THE ART EXPLOSION PROOF LIGHTS, PANELS AND MATERIAL AS PER NATIONAL ELECTRIC CODE</i>				<i>8,000</i>		<i>12,000</i>		<i>20,000</i>
<i>SUBTOTAL</i>				<i>11,200</i>		<i>16,800</i>		<i>28,000</i>



COST ESTIMATE

DATE PREPARED
5-26-87

SHEET **OF**

ACTIVITY AND LOCATION

22

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

PROJECT TITLE

ESTIMATED BY

RB Hoffman

CATEGORY CODE NUMBER

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify)

JOB ORDER NUMBER

REWIRE, RELIGHT COMP, STRUCT RPR'S.

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
STRUCT				<i>3,200</i>		<i>4,800</i>		<i>8,000</i>
ELECT.				<i>8,000</i>		<i>12,000</i>		<i>20,000</i>
SUBTOTAL				<i>11,200</i>		<i>16,800</i>		<i>28,000</i>
OVERHEAD <i>15%</i>								<i>4,200</i>
LABOR <i>18%</i>								<i>3,024</i>
MATERIAL <i>5%</i>								<i>560</i>
SUBTOTAL								<i>35,784</i>
PROFIT <i>10%</i>								<i>3,578</i>
SUBTOTAL								<i>39,362</i>
Bond <i>1%</i>								<i>394</i>
SUBTOTAL								<i>39,756</i>
CONTINGENCY <i>10%</i>								<i>3,976</i>
TOT EST CONTR COST								<i>43,732</i>
DESIGN <i>6%</i>								<i>2,624</i>
TOT EST COST								<i>46,356</i>



COST ESTIMATE

DATE PREPARED

SHEET OF

ACTIVITY AND LOCATION

32

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

ESTIMATED BY

R.B. Huffman

CATEGORY CODE NUMBER

PROJECT TITLE

STRUCT. REPAIRS AND REWIRE AND RELIGHT

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify)

JOB ORDER NUMBER

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
REPLACE WINDOWS, FRAMES, AND SCREENS WITH NEW ALUMINUM TYPE. REPLACE EXTERIOR DOORS AND FRAMES WITH STATE OF THE ART STEEL TYPE WITH GLASS INSERTS.				1600		2400		4000
REWIRE AND RELIGHT BUILDING AND EQUIPMENT COMPLETE WITH STATE OF THE ART EXPLOSION PROOF LIGHTS, PANELS AND MATERIAL AS PER NATIONAL ELECTRIC CODE.				12,000		18,000		30000
INSTALL AN EXHAUST FAN AND/OR VENTILATION SYSTEM IN SUPERNATANT ROOM #516 TO REMOVE GASES FROM DEGESTOR TUNNEL				3,200		4800		8,000

SUBTOTAL

16,800

25,200

42,000



COST ESTIMATE

DATE PREPARED
5-26-87

SHEET OF

ACTIVITY AND LOCATION

32

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

ESTIMATED BY

R.B. Huffman

CATEGORY CODE NUMBER

PROJECT TITLE

STRUCT, ELECT, MECH REPAIRS

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify)

JOB ORDER NUMBER

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
STRUCT				1,600		2,400		4,000
ELECT				12,000		18,000		30,000
MECH.				3,200		4,800		8,000
SUBTOTAL				16,800		25,200		42,000
OVERHEAD 15%								6,300
LABOR 18%								4,536
MATERIAL 5%								840
SUBTOTAL								53,676
PROFIT 10%								5,368
SUBTOTAL								59,044
BOND 1%								590
SUBTOTAL								59,634
CONTINGENCY 10%								5,963
TOT EST CONTR COST								65,597
DESIGN 6%								3,936
TOT EST COST								69,533



COST ESTIMATE

DATE PREPARED
6-2-87

SHEET OF

ACTIVITY AND LOCATION

670

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

ESTIMATED BY

R. A. Huffman

CATEGORY CODE NUMBER

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify) _____

JOB ORDER NUMBER

PROJECT TITLE

MECH. AND ELECTRIC REPAIRS

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
REPLACE FIVE SIMPLEX FLOW TRANSMITTERS FOR RAW WATER, DELIVERED WATER, RATE OF FLOW FOR FILTERS # 1 AND 2, AND BACKWASH RATE OF FLOW. NEW TRANSMITTERS SHALL CONTAIN NO HAZARDOUS MATERIALS, BE CONNECTED TO AND COMPATIBLE WITH EXISTING RECEIVERS, BE PROPERLY LABELED, HAVE 3-15PSI PNEUMATIC SIGNAL OUTPUT, MEASURE DIFFERENTIAL PRESSURE FROM PRIMARY DEVICES AND PROTECTED IN CORROSION PROOF HOUSINGS. EXISTING TRANSMITTERS CONTAIN MERCURY.				16,000		24,000		49,000

CONT SHEET #2





COST ESTIMATE

DATE PREPARED
5-26-87

SHEET OF

ACTIVITY AND LOCATION

670

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

ESTIMATED BY

R.B. Huffman

CATEGORY CODE NUMBER

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify) _____

JOB ORDER NUMBER

PROJECT TITLE

MECH AND ELECT REPAIRS

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
MECH & ELECT REPAIRS				16,000		24,000		40,000
OVERHEAD 1590								6,000
LABOR 1890								4,320
MATERIAL 590								800
SUBTOTAL								5,120
PROFIT 1090								5112
SUBTOTAL								56,232
BOND 190								562
SUBTOTAL								56,794
CONTINGENCY 1090								5,679
TOT EST CONTR COST								62,474
DESIGN 690								3,748
TOT EST COST								66,222



COST ESTIMATE

DATE PREPARED
6-2-87

SHEET OF

ACTIVITY AND LOCATION

BA-138

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

ESTIMATED BY

R. Ruffin

CATEGORY CODE NUMBER

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify) _____

JOB ORDER NUMBER

PROJECT TITLE

STRUCT, ELECT, MECH REPAIRS

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
REPLACE WINDOWS, FRAMES, AND SCREENS WITH NEW ALUMINUM TYPE. REPLACE EXTERIOR DOORS AND FRAMES WITH STATE OF THE ART STEEL TYPE WITH GLASS INSERTS.	-			49,000		73,000		122,000
REWIRE AND RELIGHT INTERIOR AND EXTERIOR COMPLETE WITH MOISTURE PROOF PANELS, CONDUIT LIGHTS ECT. AS PER NATIONAL ELECTRIC CODE.	-			8,000		12,000		20,000
REPLACE FOUR METERS FOR RAW WATER, DELIVERED WATER, RESERVOIR LEVEL, AND ELEVATED TANK LEVEL. NEW METERS SHALL	-			8,000		12,000		20,000
CONT. SH#2								



(2)

NAVFAC 11013/7 (1-78)
Supersedes NAVDOCKS 2417 and 2417A

COST ESTIMATE

DATE PREPARED
6-2-87

SHEET OF

ACTIVITY AND LOCATION

BA-138

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

PROJECT TITLE

ESTIMATED BY

RB Huffman

CATEGORY CODE NUMBER

STRUCT, ELECT, MECH REPAIRS

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify)

JOB ORDER NUMBER

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
CONT. FROM SH#1 -								
CONTAIN NO HAZARDOUS								
MATERIALS, HAVE A 4-20 MA								
SIGNAL TO RECIEVER, AND								
HAVE 24-HOUR CHART RECORDERS,								
DIFFERENTIAL PRESSURE TRANS-								
MITTERS SHALL BE USED FOR								
FLOW AND LEVEL MEASUREMENT,								
THE ELEVATED TANK LEVEL INDICATOR								
SHALL USE RAVIDID TELEMETRY FROM								
THE TANK TO WATER PLANT. RAW								
WATER AND DELIVERED WATER METER								
SHALL HAVE TOTALIZED FLOW IN								
100 GALLON PER MINUTE. ALL METERS								
SHALL BE HOUSED IN CORROSION AND WATER								
PROOF CABINETS.								
SUBTOTAL				29,900		31,300		52,200



COST ESTIMATE

DATE PREPARED
5-22-87

SHEET OF

ACTIVITY AND LOCATION

BA-138

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

ESTIMATED BY

R. A. Hoffman

CATEGORY CODE NUMBER

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify)

JOB ORDER NUMBER

PROJECT TITLE

REPAIRS TO STRUCT, ELECT, MECH, PLBG

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
STRUCTURAL				4,900		7,300		12,200
ELECTRICAL				8,000		12,000		20,000
MECH - PLBG.				8,000		12,000		20,000
SUB TOTAL				20,900		31,300		52,200
OVERHEAD 15%								7,830
LABOR 18%								5,634
MATERIAL 5%								1,045
SUBTOTAL								66,709
PROFIT 10%								6,671
SUBTOTAL								73,380
BOND 1%								734
SUBTOTAL								73,114
CONTINGENCY -10%								7,411
BASIC CONTR. COST								8,152.5
DESIGN 6%								4,892
TOTAL EST COST								86,417





COST ESTIMATE

DATE PREPARED
6-2-87

SHEET OF

ACTIVITY AND LOCATION

RR-15

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

PROJECT TITLE

ESTIMATED BY

R.B. Huffman

CATEGORY CODE NUMBER

REPLACE WINDOWS AND DOORS

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify) _____

JOB ORDER NUMBER

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
STRUCTURAL SUBTOTAL				6,000		10,000		16,000
OVERHEAD 15%								2,400
LABOR 18%								1,800
MATERIAL 5%								300
SUBTOTAL								20,500
PROFIT 15%								3,075
SUBTOTAL								23,575
BOND 1%								236
SUBTOTAL								23,811
CONTINGENCY 10%								2,381
TOT CONTR. COST								26,192
DESIGN 6%								1,572
TOT EST COST.								27,763



COST ESTIMATE

DATE PREPARED

6-2-87

SHEET OF

ACTIVITY AND LOCATION

RR-85

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

PROJECT TITLE

REPLACE EXTERIOR WINDOWS AND DOORS

ESTIMATED BY

R. B. Hoffman

CATEGORY CODE NUMBER

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify) _____

JOB ORDER NUMBER

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
REPLACE WINDOWS, FRAMES, AND SCREENS WITH NEW ALUMINUM TYPE. REPLACE EXTERIOR DOORS AND FRAMES WITH STATE OF THE ART STEEL TYPE WITH GLASS INSERTS.				3,000		5,000		8,000



COST ESTIMATE

DATE PREPARED
5-22-87

SHEET OF

ACTIVITY AND LOCATION

RR-85

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

PROJECT TITLE

REPLACE EXT. WINDOWS AND DOORS

ESTIMATED BY

R.R. Hoffman

CATEGORY CODE NUMBER

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify)

JOB ORDER NUMBER

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
STRUCTURAL				3,000		5,000		8,000
SUB TOTAL				3,000		5,000		8,000
OVERHEAD 15%								1,200
LABOR 18%								900
MATERIAL 5%								150
SUB TOTAL								10,250
PROFIT 15%								1,538
SUB TOTAL								11,788
BOND 1%								118
SUB TOTAL								11,905
CONTINGENCY 10%								1,191
TOT CONTR COST								13,096
DESIGN 6%								786
TOT EST COST								13,882





COST ESTIMATE

DATE PREPARED
5-26-87

SHEET OF

ACTIVITY AND LOCATION

BB-190

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

ESTIMATED BY

R.B. Hoffman

CATEGORY CODE NUMBER

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify) _____

JOB ORDER NUMBER

PROJECT TITLE

REPLACE WINDOWS AND DOORS

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
<i>STRUCTURAL SUBTOTAL</i>				<i>2,800</i>		<i>4,200</i>		<i>7,000</i>
<i>OVERHEAD 15%</i>								<i>1,050</i>
<i>LABOR 18%</i>								<i>756</i>
<i>MATERIAL 5%</i>								<i>140</i>
<i>SUBTOTAL</i>								<i>8,944</i>
<i>PROFIT 10%</i>								<i>984</i>
<i>SUBTOTAL</i>								<i>18,787</i>
<i>Bond 1%</i>								<i>188</i>
<i>SUBTOTAL</i>								<i>18,975</i>
<i>CONTINGENCY 10%</i>								<i>1,897</i>
<i>TOT CONTR COST</i>								<i>20,872</i>
<i>DESIGN 6%</i>								<i>1,252</i>
<i>TOT EST COST</i>								<i>22,125</i>





COST ESTIMATE

DATE PREPARED
5-26-87

SHEET OF

ACTIVITY AND LOCATION

TT39A

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

ESTIMATED BY

RR Huffman

CATEGORY CODE NUMBER

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify) _____

JOB ORDER NUMBER

PROJECT TITLE

STRUCT REPAIRS

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
STRUCT. SUBTOTAL				1800		2700		4500
QUER HEAD 1590								675
LABOR 1890								486
MATERIAL 590								90
SUBTOTAL								5751
PROFIT 1090								575
SUBTOTAL								6326
BOND 190								63
SUBTOTAL								6389
CONTINGENCY 1090								639
TOT EST CONTR. COST								7028
DESIGN 690								422
TOT EST COST								7450



SCOPE OF WORK

Project: Repairs to Utilities Buildings

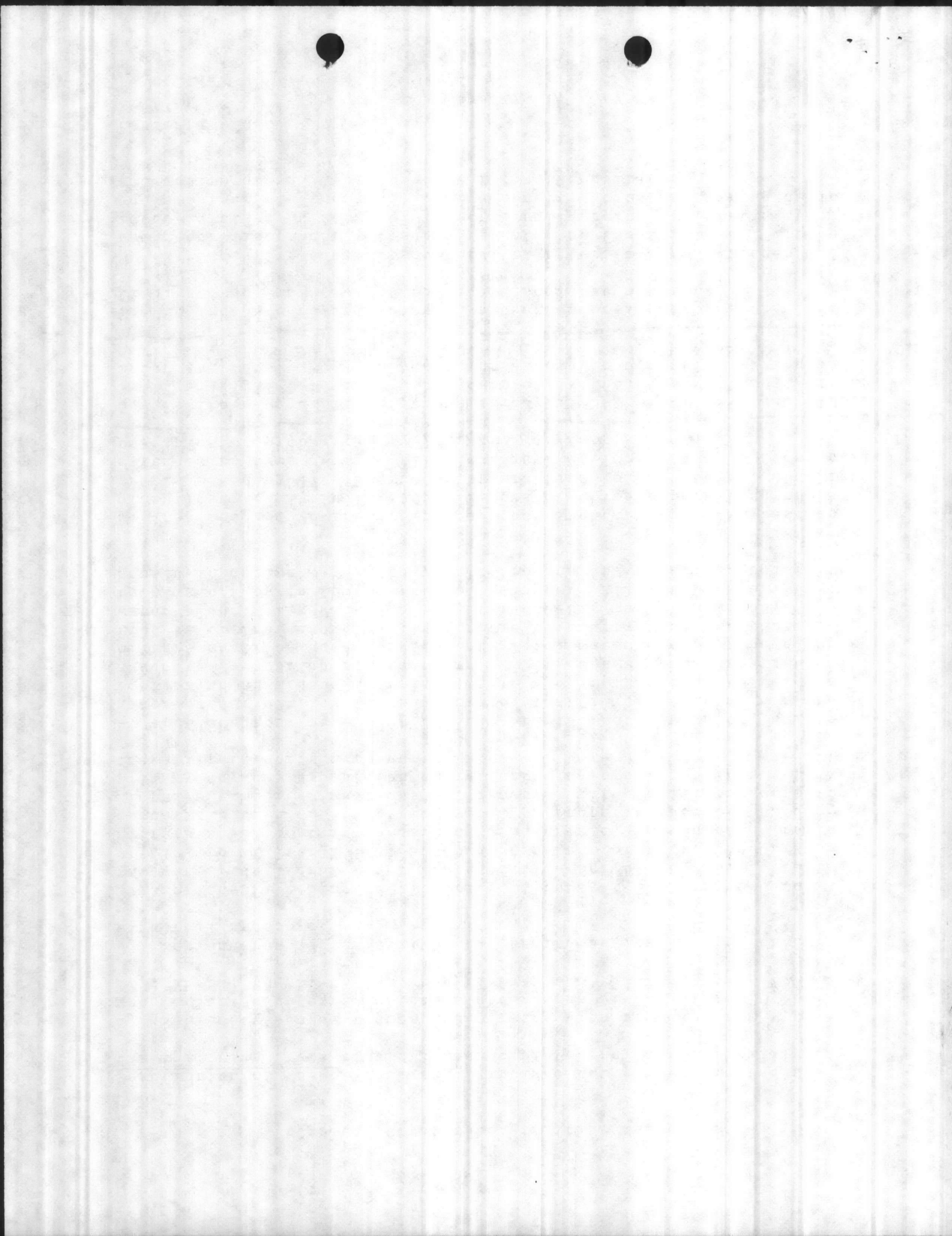
J-4

Description of Work: Work shall include but not be limited to the following items to provide a complete and usable facility:

1. Replace windows, frames and screens with new aluminum type and replace ~~with~~ exterior doors and frames at Buildings 20, BA-138, RR-85, RR-15, BB-190, and TT-39A. *22, 32 - BLOC #20 DOORS ONLY.*
2. Replace removable metal panels behind boiler Nos. 46 and 47 with roll up doors. *RR-15*
3. Replace five Simplex flow transmitters at Building 670 for raw water, delivered water, rate of flow for filter No. 1, rate of flow for filter No. 2, and backwash rate of flow. New transmitters shall contain no hazardous materials, be connected to and compatible with existing receivers, be properly labeled, have 3-15 psi pneumatic signal output, measure differential pressure from primary devices and protected in corrosion proof housings. Existing transmitters contain mercury.
4. Replace four meters at Building BA-138 for raw water, delivered water, reservoir level, and elevated tank level. New meters shall contain no hazardous materials, have a 4-20 ma signal to receiver, and have 24-hour chart recorders. Differential pressure transmitters shall be used for flow and level measurement. The elevated tank level indicator shall use radio telemetry from the tank to water plant. Raw water and delivered water meter shall have totalized flow in 100 gallons per minute. All meters shall be housed in cabinets resistant to corrosion and water vapor infiltration.
5. Replace and rewire explosion proof light fixtures in basement of Building 22 including upper floors of three supernating rooms and in Building 32. Rewire motor starters, switch boxes, and light switches in same areas. All electrical equipment and devices shall be explosion proof. *REWIRE BUILDINGS COMPLETE AS PER N.E.C.*
6. Rewire sewage lift stations TT-32, TT-34, M-241, S-E-23, 2100, S-47, S-46, TC-563, and TC-565 completely including internal wiring, motor starters, H-O-A switches and automatic operation wiring and devices. *DELETE FROM PROJECT ITEM 6 will be accomplished in house*
7. Replace and rewire interior and exterior lighting at BA-138. Also, replace main switch box and associated conduit. *REWIRE BUILDING COMPLETE AS PER N.E.C.*
8. Replace five control starters, eight start/stop switches and two motor disconnects presently located on the flume wall in the lower level of Building 670. Work shall include relocating the equipment to the front wall, new conduit, boxes and wiring devices and equipment shall be suitable for wet conditions.

Estimated Cost: *\$ 344,715*

9- INSTALL AN EXHAUST FAN AND/OR VENTILATION SYSTEM IN SUPERNATANT ROOM NO. 516, BUILDING #32 TO REMOVE GASES FROM DEGESTOR TUNNEL



BASE MAINTENANCE DIVISION
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

DATE: 24 JUN 1987

FROM: BASE MAINTENANCE OFFICER, MARINE CORPS BASE, CAMP LEJEUNE, N.C.
TO: PUBLIC WORKS OFFICER, BUILDING 1005, MARINE CORPS BASE, CAMP
LEJEUNE, N.C.

SUBJ: ENGINEERING SERVICE REQUEST FOR PROJECT NUMBER - 8M36CN

ENCL: (A) ESTIMATE WORK SHEET(S) FOR M1 FUNDS
(B)

1. TYPE OF SERVICE REQUESTED:

REPLACE SEWER MAINS
VARIOUS LOCATIONS TC, HP, MP AND MCAS

2. DESIRED COMPLETION FISCAL YEAR: 88

3. FUNDS TO BE PROVIDED UNDER SUB-FUNCTIONAL-CATEGORY: M1
BUILDING/FACILITY IDENTIFICATION FOLLOWS:
GRD G24, S687, S688,

ESTIMATE COST IS \$ 245,467.00

3. POINT OF CONTACT IS GREG SHOEMAKER, PHONE 5794

T.D. Jewell
T.D. JEWELL
BY DIRECTION

9896
9891 - 35%

10/1/19

COST ESTIMATE

DATE PREPARED
6-4-87

SHEET OF

ACTIVITY AND LOCATION

5687

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

ESTIMATED BY

R.B. Hoffman

CATEGORY CODE NUMBER

STATUS OF DESIGN

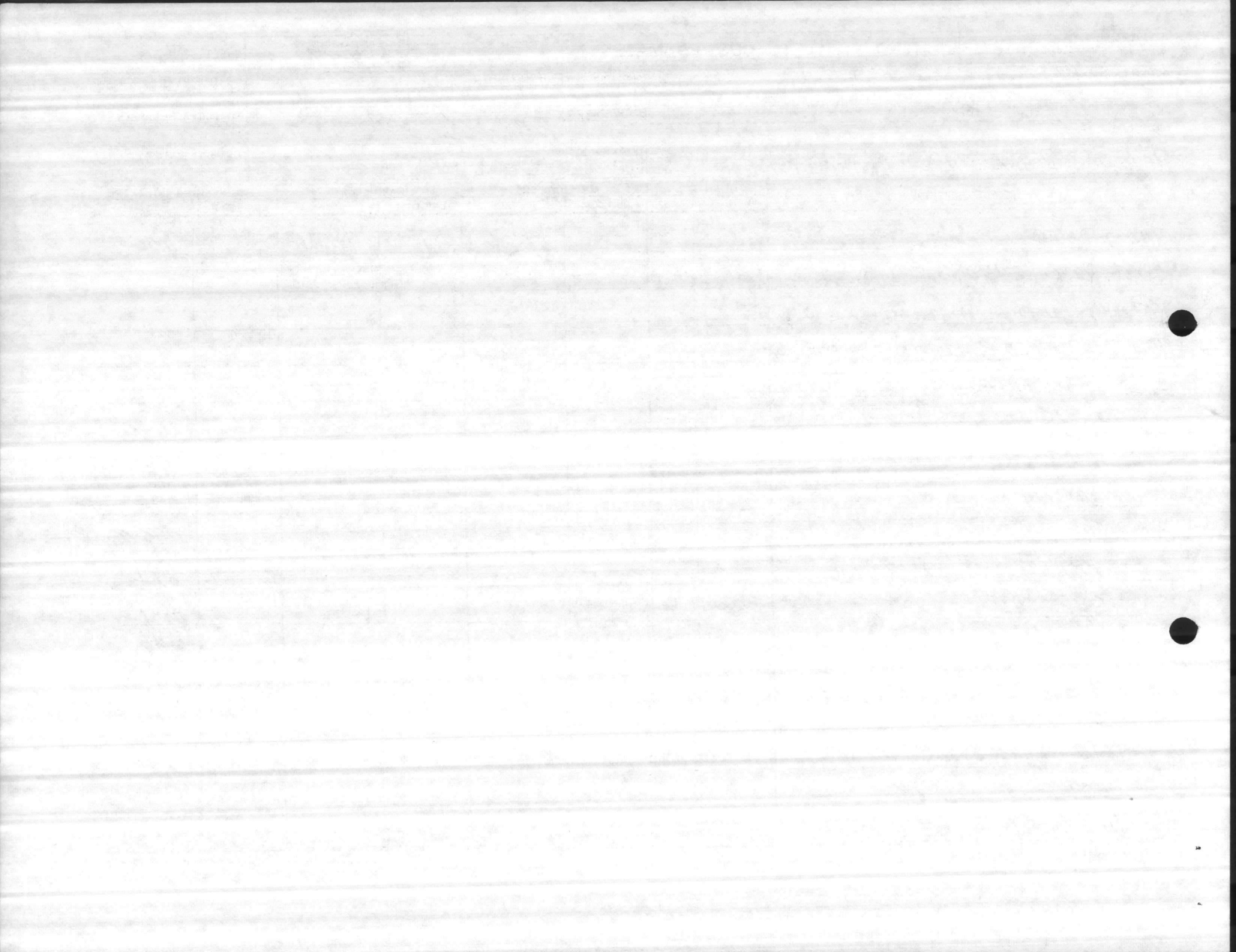
PED 30% 100% FINAL Other (Specify)

JOB ORDER NUMBER

PROJECT TITLE

REPLACE ROTARY FILTER DISTRIBUTOR

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
HADNOT PRINT SEWAGE TREATMENT PLANT, REPLACE 170 FOOT DIAMETER ROTARY FILTER DISTRIBUTORS WITH NEW HOT DIPPED GALVINIZED DISTRIBUTOR				3,000		4,000		7,000
SUBTOTAL				3,000		4,000		7,000
OVER HEAD 15%								1,050
LABOR 18%								720
MATERIAL 5%								150
SUBTOTAL								8,920
PROFIT 10%								892
SUBTOTAL								9,812
BOND 1%								98
SUBTOTAL								9,910
CONTINGENCY 10%								991
TOT CONTR COST								10,901
DESIGN 6%								654
TOT EST COST								11,555



COST ESTIMATE

DATE PREPARED
 6-4-89

SHEET OF

ACTIVITY AND LOCATION

5688

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

PROJECT TITLE

ESTIMATED BY

R.B. Hoffman

CATEGORY CODE NUMBER

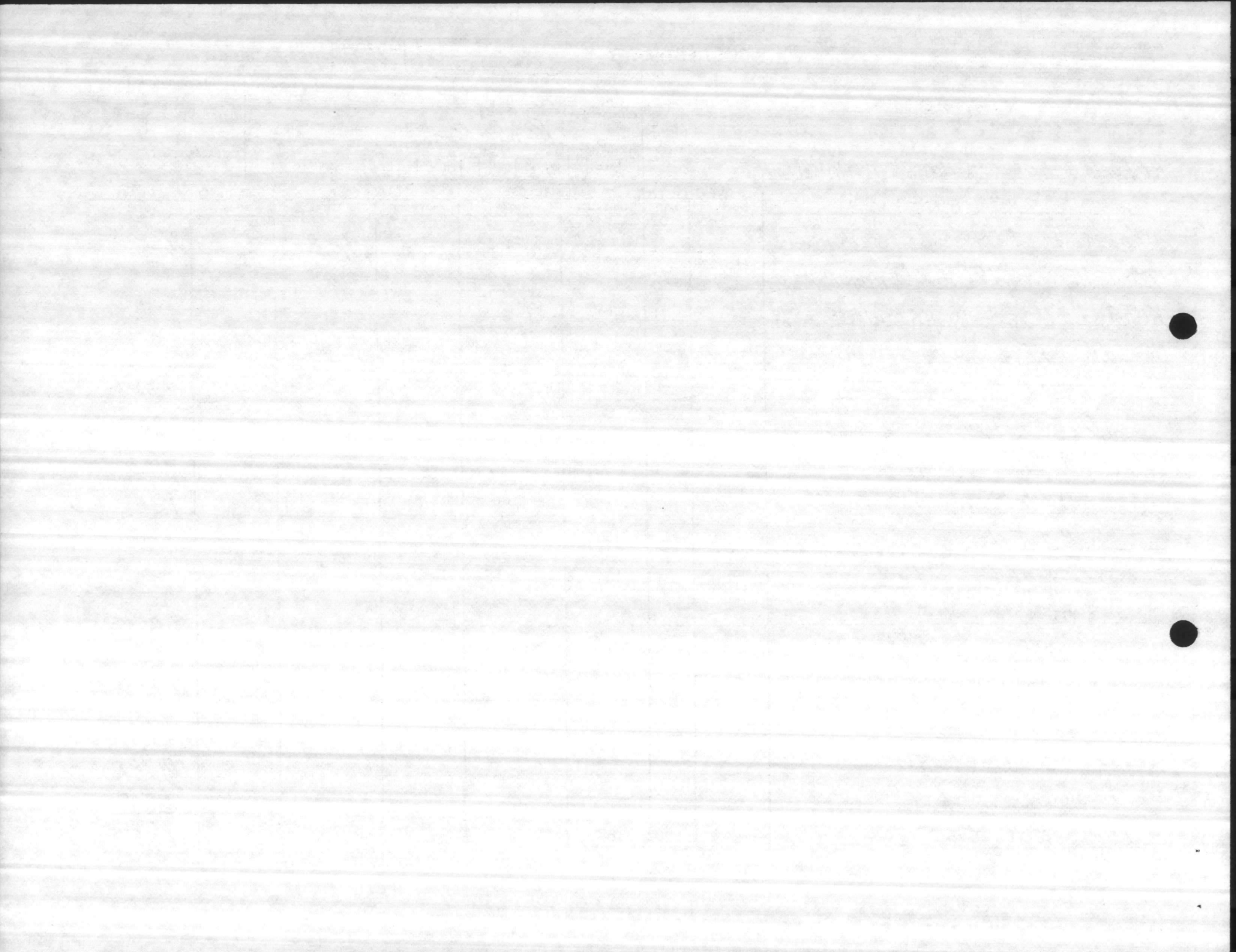
REPLACE ROTARY FILTER DISTRIBUTOR

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify)

JOB ORDER NUMBER

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
HADNOT PRINT SEWAGE TREATMENT PLANT, REPLACE 170 FOOT DIAMETER ROTARY FILTER DISTRIBUTORS WITH NEW HOT DIPPED GALVANIZED DISTRIBUTOR				3,000		4,000		7,000
SUBTOTAL				3,000		4,000		7,000
OVER HEAD 15%								1,050
LABOR 18%								720
MATERIAL 5%								150
SUBTOTAL								8,920
PROFIT 10%								892
SUBTOTAL								9,812
BOND 1%								98
SUBTOTAL								9,910
CRNTING ENCY 10%								991
TOT CONTR COST								10,901
DESIGN 6%								654
TOT EST COST								11,555



COST ESTIMATE

DATE PREPARED
6-4-87

SHEET **OF**

ACTIVITY AND LOCATION

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

FROM 1500 TO TC 1141

ESTIMATED BY

R.B. Huffman

CATEGORY CODE NUMBER

PROJECT TITLE

REPLACE SEWER MAIN AND MAN HOLES

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify)

JOB ORDER NUMBER

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
REPLACE APPROXIMATELY 650 FEET OF 6 INCH AND 1050 FEET OF 8 INCH SEWER MAIN WITH 12 INCH PVC SEWER PIPE. WORK SHALL BEGIN AT THE SEWER MANHOLE IN FRONT OF DELAID ELEMENTARY SCHOOL (TC. 1500) AND END AT SEWER MANHOLE SOUTH EAST OF BUILDING TC-1141. WORK SHALL INCLUDE REPAIR/ REPLACEMENT OF SIX MANHOLES ALONG THE EXISTING LINES. REPAIR/REPLACE ALL DAMAGED OR REMOVED ASPHALT. RESEED AREAS OF DITCH LINE.				14,960		14,735		28695



COST ESTIMATE

DATE PREPARED
6-4-87

SHEET OF

ACTIVITY AND LOCATION

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

FROM TC-1500 TO TC 1141

ESTIMATED BY

RR Huffman

CATEGORY CODE NUMBER

PROJECT TITLE

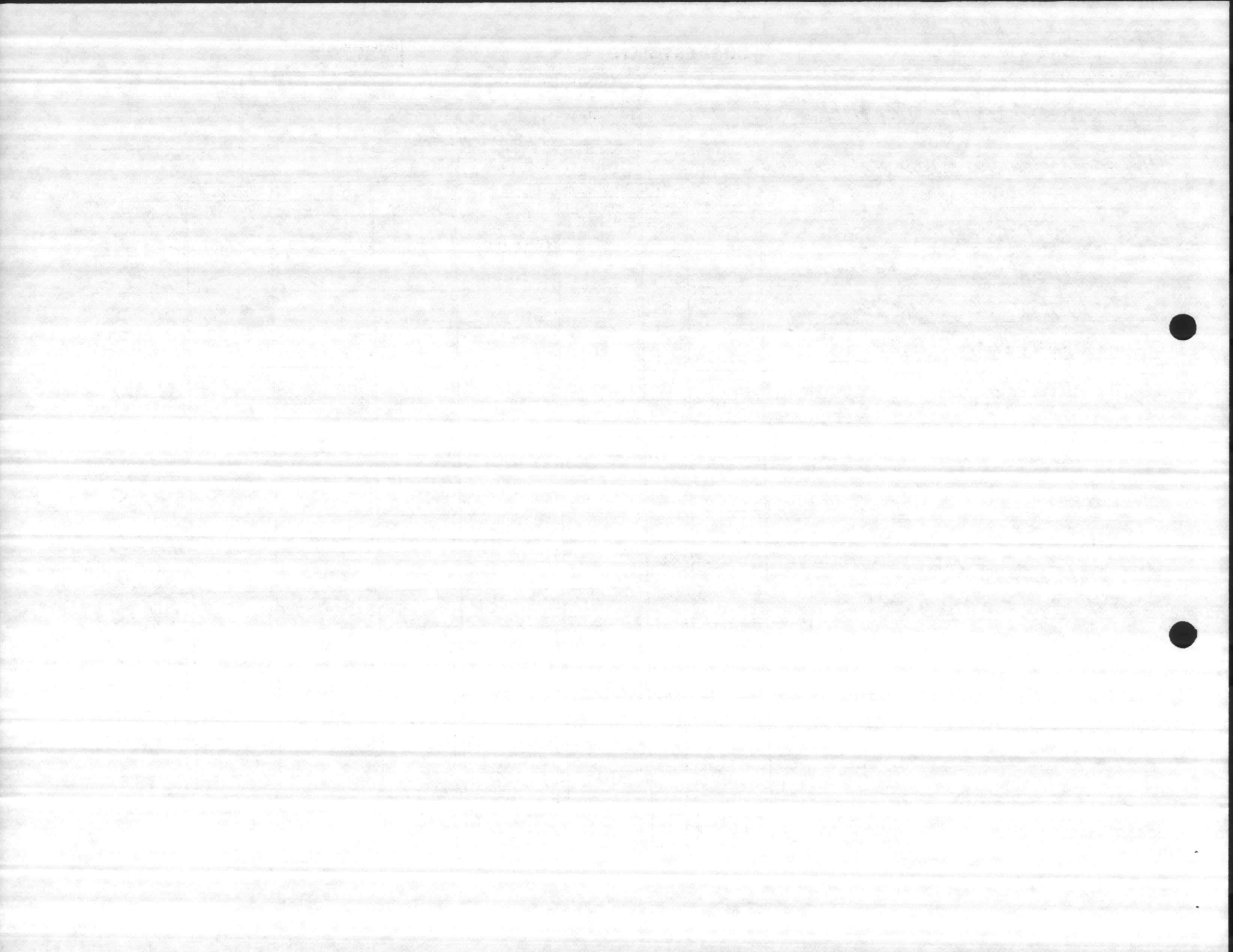
STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify)

JOB ORDER NUMBER

REPLACE SEWER MAIN AND MANHOLES

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
SUBTOTAL				14,960		13,735		28,695
OVERHEAD 15%								4,304
LABOR 18%								2,472
MATERIAL 5%								748
SUBTOTAL								36,219
PROFIT 10%								3,622
SUBTOTAL								39,841
BOND 1%								398
SUBTOTAL								40,239
CONTINGENCY 10%								4,024
TOT CONT EST COST								44,263
DESIGN 6%								2,656
TOT EST COST								46,919



COST ESTIMATE

DATE PREPARED
6-18-87

SHEET OF

ACTIVITY AND LOCATION

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

BREWSTER BOULEVARD

ESTIMATED BY

CATEGORY CODE NUMBER

PROJECT TITLE

R.D. Huffman

REPLACE SEWER MAIN AND MANHOLES

STATUS OF DESIGN

JOB ORDER NUMBER

PED 30% 100% FINAL Other (Specify) _____

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
<i>SUBTOTAL</i>				<i>12,400</i>		<i>38,658</i>		<i>51,058</i>
<i>OVERHEAD 15%</i>								<i>7,659</i>
<i>LABOR 18%</i>								<i>6,958</i>
<i>MATERIAL 5%</i>								<i>620</i>
<i>SUBTOTAL</i>								<i>66,295</i>
<i>PROFIT 10%</i>								<i>6,630</i>
<i>SUBTOTAL</i>								<i>72,925</i>
<i>Bond 1%</i>								<i>729</i>
<i>SUBTOTAL</i>								<i>73,654</i>
<i>CONTINGENCY 10%</i>								<i>7,365</i>
<i>TOT. CONTR. EST COST</i>								<i>81,019</i>
<i>DESIGN 6%</i>								<i>4,861</i>
<i>TOT EST COST</i>								<i>85,880</i>



COST ESTIMATE

DATE PREPARED
 6-4-87

SHEET OF

ACTIVITY AND LOCATION

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

PROJECT TITLE

ESTIMATED BY

CATEGORY CODE NUMBER

BREWSTER BOULEVARD
 REPLACE SEWER MAINS AND MANHOLES

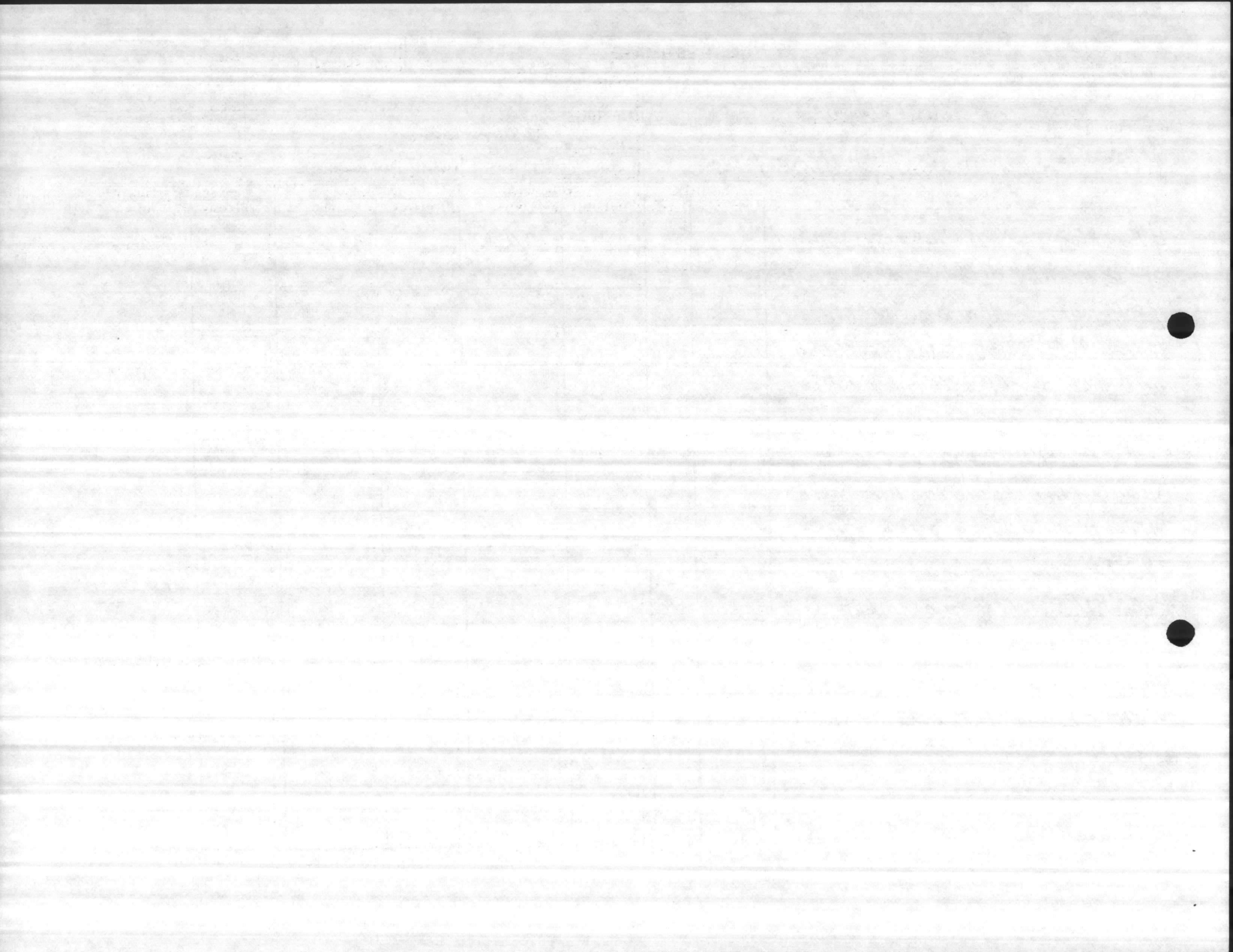
RR Hoffman

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify)

JOB ORDER NUMBER

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
AT BREWSTER BOULEVARD MAIN GATE AREAS, REPLACE APPROXIMATELY 400 FT OF 12 INCH SEWER MAIN ALONG BREWSTER BOULEVARD FROM MANHOLE # 848L THROUGH 847L TO MANHOLE 275A WITH PVC PIPE, REPLACE APPROX. 2,000 FEET OF 15 INCH SEWER MAIN FROM MANHOLE 275A THROUGH MANHOLES 276A, 277A, 278A, 279 TO MANHOLE # 280A WITH PVC PIPE. WORK TO INCLUDE REPAIR/REPLACEMENT OF EIGHT MANHOLES, REPAIR/REPLACE ALL DAMAGED ASPHALT AND RESEED AREA.				12,400		38,658		51,058





COST ESTIMATE

DATE PREPARED
6-4-87

SHEET OF

ACTIVITY AND LOCATION

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

PROJECT TITLE

ESTIMATED BY

CATEGORY CODE NUMBER

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify)

JOB ORDER NUMBER

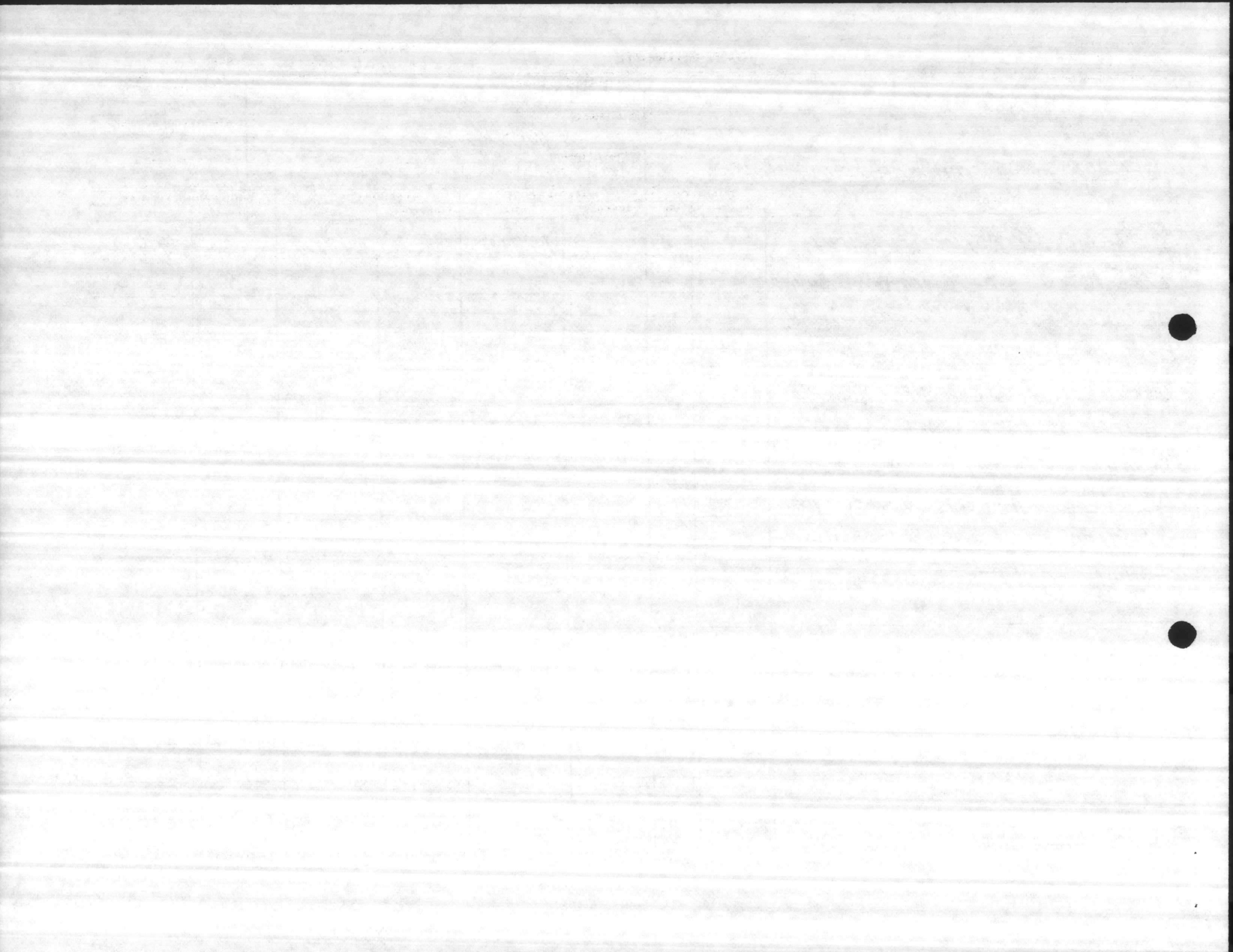
MIDWAY PARK (LCH)

REPLACE SEWER MAIN AND MANHOLES

R. Hoffman

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
SUBTOTAL				4,425		6,882		11,307
OVERHEAD 15%								1,696
LABOR 18%								1,239
MATERIAL 5%								221
SUBTOTAL								14,463
PROFIT 10%								1,446
SUBTOTAL								15,909
BOND 1%								159
SUBTOTAL								16,068
CONTINGENCY 10%								1,607
TOT CONTR EST COST								17,675
DESIGN 6%								1,061
TOT EST COST								18,736





COST ESTIMATE

DATE PREPARED
 6-4-87

SHEET OF

ACTIVITY AND LOCATION

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

MCAS

ESTIMATED BY

R.B. Huffman

CATEGORY CODE NUMBER

PROJECT TITLE

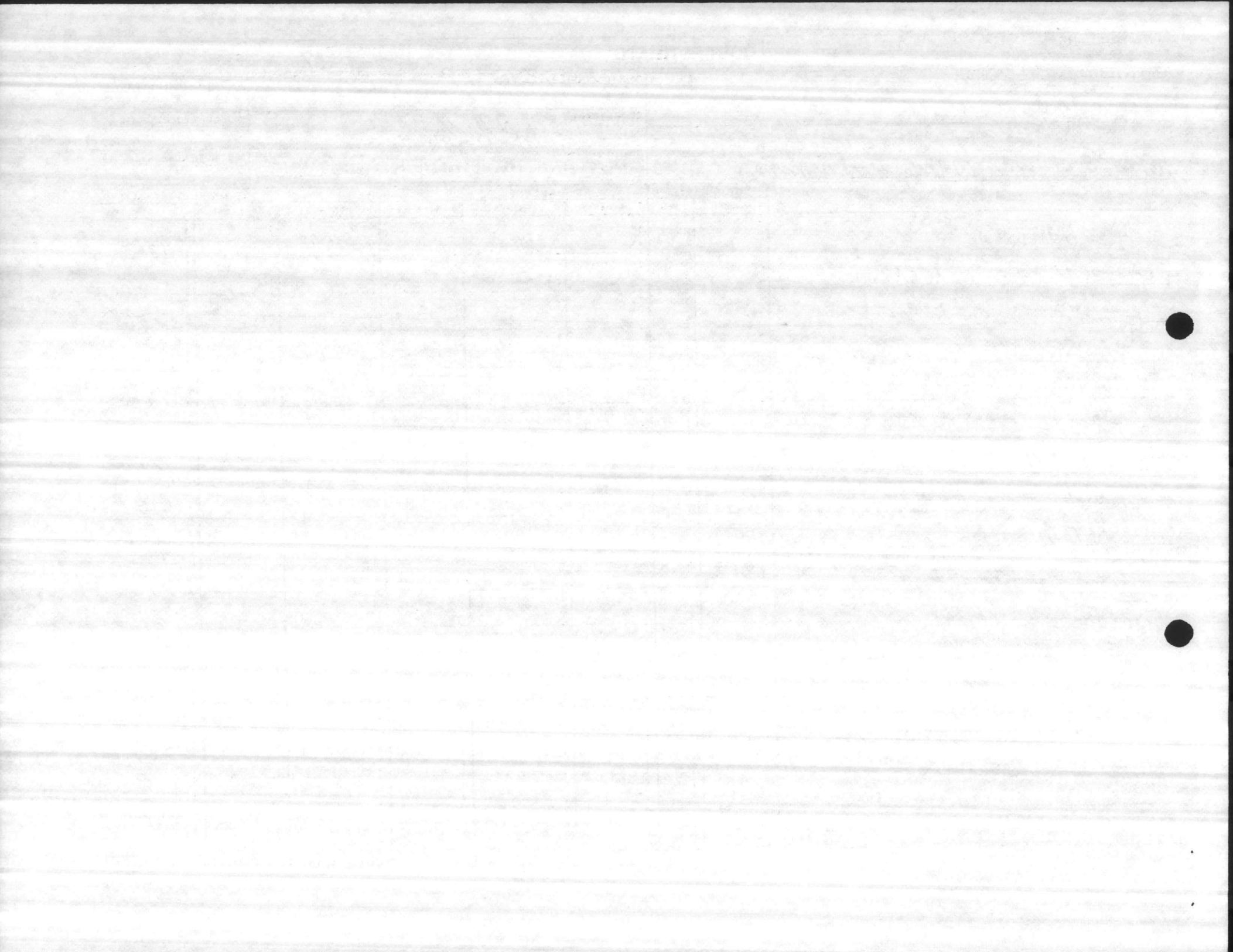
REPLACE SEWER MAINS AND MANHOLE

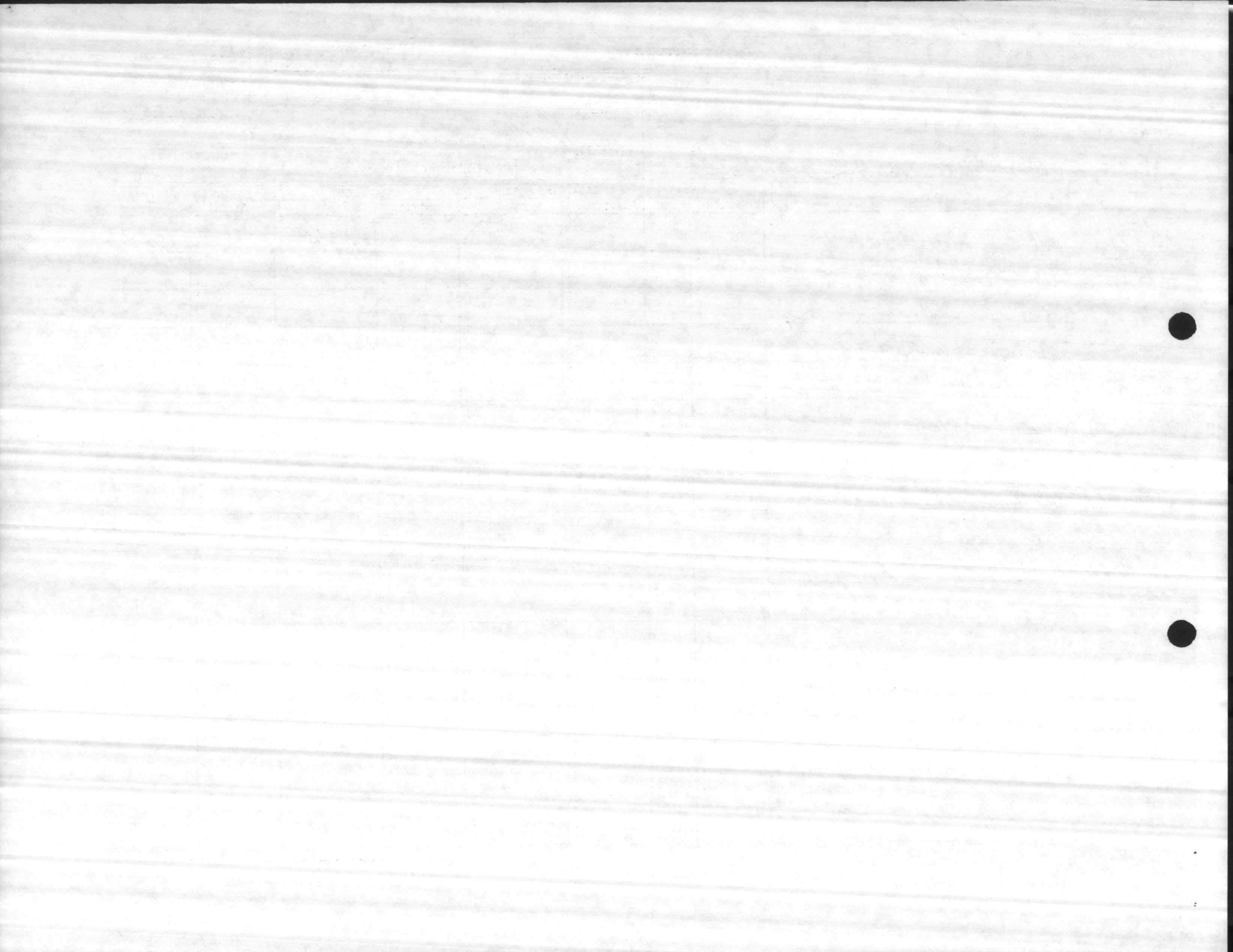
STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify) _____

JOB ORDER NUMBER

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
SUBTOTAL				13,770		16,142		29,912
OVERHEAD 15%								4,487
LABOR 18%								3,906
MATERIAL 5%								689
SUBTOTAL								37,994
PROFIT 10%								3,799
SUBTOTAL								41,793
BOND 1%								418
SUBTOTAL								42,211
CONTINGENCY 10%								4,221
TOT EST CONTR COST								46,432
DESIGN 6%								2,784
TOT EST COST								49,218





COST ESTIMATE

DATE PREPARED
6-4-87

SHEET OF

ACTIVITY AND LOCATION

CONSTRUCTION CONTRACT NO.

IDENTIFICATION NUMBER

PROJECT TITLE

ESTIMATED BY

CATEGORY CODE NUMBER

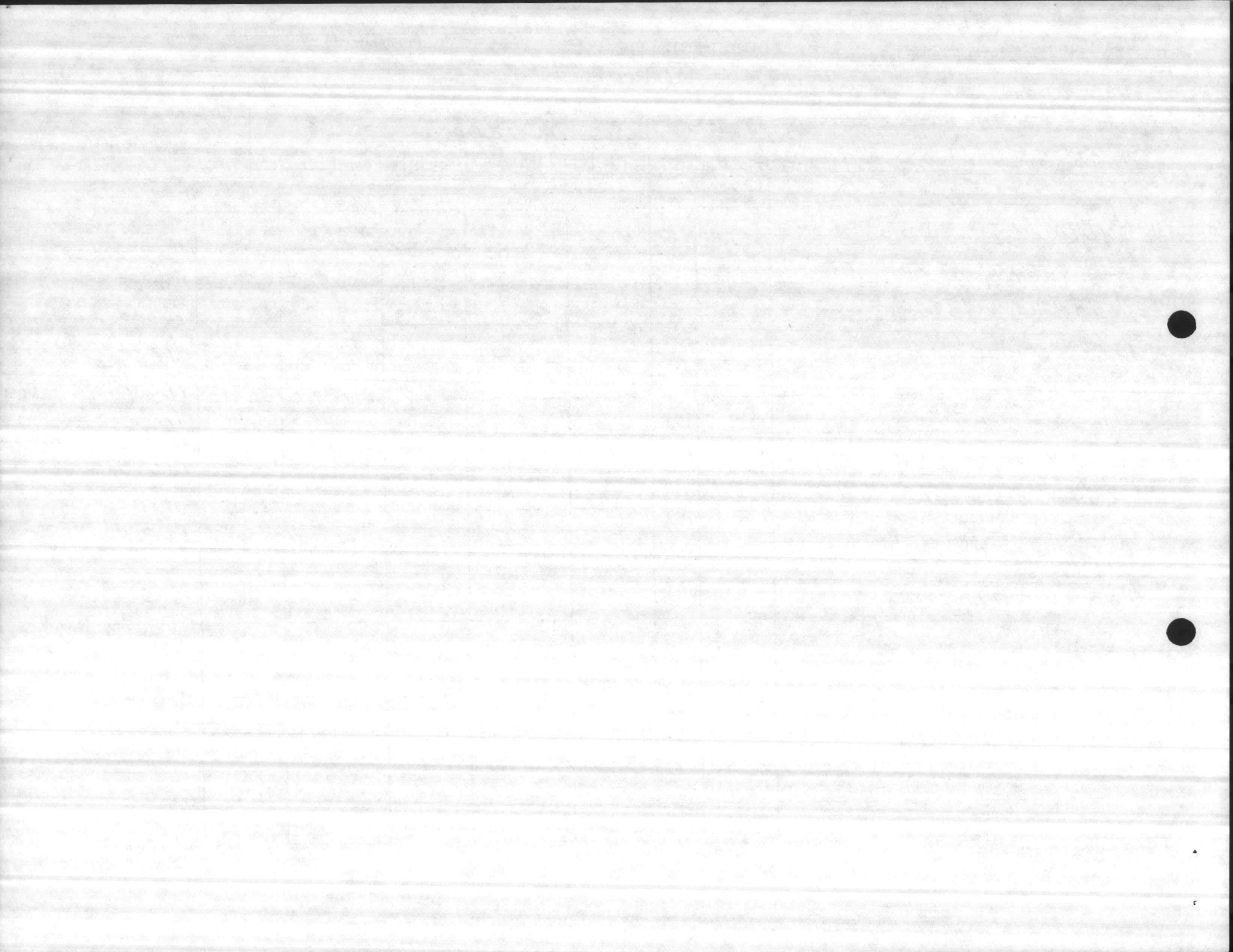
MCAS
REPLACE SEWER MAINS AND MANHOLES

STATUS OF DESIGN

PED 30% 100% FINAL Other (Specify)

JOB ORDER NUMBER

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
SUBTOTAL				3,515		9,368		12,883
QUERHEAD 1570								1,932
LABOR 1870								1,686
MATERIAL 570								176
SUBTOTAL								16,677
BANK 1970								1,668
SUBTOTAL								18,345
CONTINGENCY 1070								183
TOT EST CONTR COST								18,528
DESIGN 670								1,853
TOT EST COST								20,381
								1,223
								21,604



Project: Sewerage System Repairs

Description of Work:

- ITEM #* *HADNOT POINT*
1. At ~~Camp Geiger~~ Sewage Treatment Plant, replace two 170 foot diameter rotary filter distributors at structure ~~S-687~~ and ~~S-688~~ with new hot dipped galvanized distributors. *5-687* *5-688* *CHB*
 2. At MCAS, New River, replace approximately 650 feet of 6-inch sewer main and approximately 1,050 feet of 8-inch main with 12-inch PVC sewer pipe. Work shall begin at the sewer manhole in front of Delalio Elementary School, TC-1500, and end at the sewer manhole southeast of Building TC-1141. Work shall include repair/replacement of six manholes along the existing lines.
 3. At Brewster Boulevard Main Gate areas, replace approximately 400 feet of 12-inch sewer main along Brewster Boulevard from manhole 848L through manhole 847L to manhole 275A with PVC pipe and replace 2,000 feet of 15-inch sewer main from manhole 275A through manholes 276A, 27A, 278A, 279 to manhole 280A with PVC pipe. Work shall repair/replacement of eight manholes along the existing line.
 4. In Midway Park, replace approximately 350 feet of 8-inch sewer main from manhole 598L at MEQ LCH 1408 to manhole 978L at MEQ 1509 and approximately 150 feet of 10-inch sewer main from manhole 978L to manhole 979L at MEQ 1511. Work shall include repair/replacement of four manholes along the existing line.
 5. At MCAS, New River, replace approximately 1100 feet of 8-inch sewer main beginning at manhole A-7.6L located southeast of MEQ AS-1173 and ending at manhole A-7L southwest pump station AS-1001. Work shall include repair/replacement of seven manholes along the existing line.
 6. At MCAS, New River replace approximately 700 feet of 6-inch and 8-inch sewer main with 6-inch and 8-inch PVC beginning at manhole A-3.9L located southwest of MEQ 1257 and ending at manhole A-3.7L located west of MEQ 1269. Work shall include repair/replacement of three sewer manholes and replacement of laterals on the sewer main to be replaced.

Justification: Existing lines leak, fail, and require frequent repairs.

Estimated Cost: ~~\$218,000~~

\$ 245,467



4280
MAIN
01 OCT 1986

From: Commanding General, Marine Corps Base, Camp Lejeune
To: Commandant of the Marine Corps (Code LFF-2)

Subj: SUPPLEMENTAL M2/R2 PROJECTS FY-87 AND FY-88

- Encl: (1) M2 Project LE703MS, Replace PCB Contaminated Transformers (Basewide)
(2) M2 Project LE704MS, Repair Interior/Exterior Bldg 2615
(3) M2 Project LE705MS, Repair Interior/Exterior Warehouses 106, 107, 226, 408 and 509
(4) R2 Project LE7100RS, Improvements to Warehouses 106, 107, 226, 408 and 509
(5) M2 Project LE706MS, Replace Piping Insulation On Dual Temperature and Chill Water Lines (HP-100 Area and HP-500 Area Barracks)
(6) M2 Project LE707MS, Replace Piping Insulation on Dual Temperature and Chill Water Lines (FC-400 Area Barracks)
(7) M2 Project LE708MS, Replace Steam and Condensate Lines (Mainside)
(8) M2 Project LE709MS, Replace Sewer Main From Montford Point To Knox Trailer Park
(9) M2 Project LE811MS, Interior/Exterior Repair Bldg 115, 201, 300, 401

1. As discussed during the telephone conversation on 24 September 1986, between Mr. Ben Bond of LFF-2 and Greg Shoemaker of Base Maintenance, Marine Corps Base, Camp Lejeune, enclosures (1) through (9) are being forwarded for approval as late submission projects.

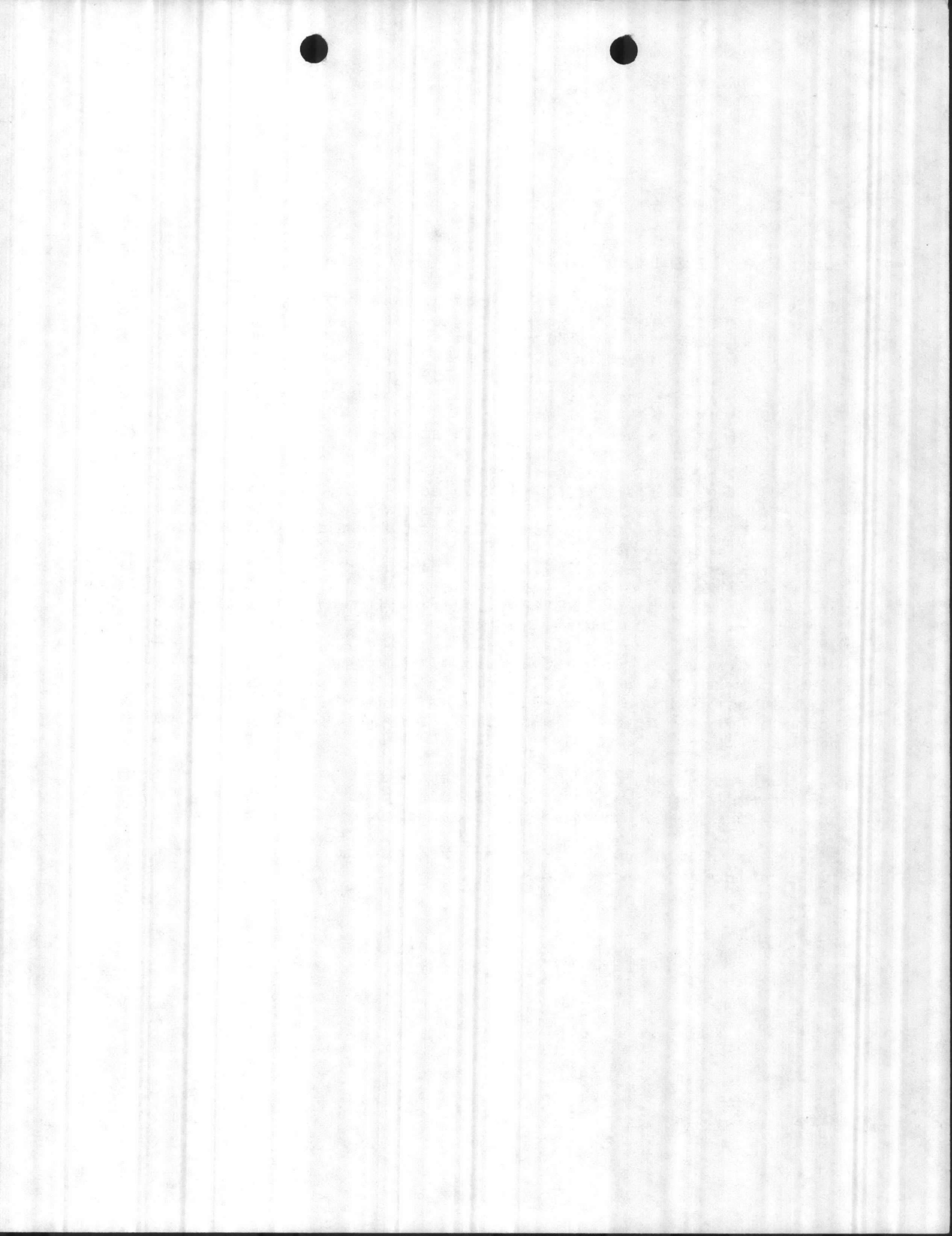
2. Justification for the immediate need of repairs is outlined in the enclosed 1391 Forms and Scopes of Work. Enclosures (3) and (4) are to be designed and awarded as a single project.

3. Point of contact for further information is Greg Shoemaker (919) 451-5796 AV 484-5796.

M. G. LILLEY
By direction

Copy to:
PWO

Writer: G. Shoemaker, OPS, X1580
Typist: S. Schmitz, 29 Sep 86



11300
MAIN

8 Sep 86

Director, Utilities Branch

Director, Operations Branch (Attn: Greg Shoemaker)

PROPOSED M-1 PROJECTS

Encl: (1) List of Projects

1. The list of M-1 projects is forwarded in the enclosure for your use.

G. S. JOHNSON, JR.

1130
1951

2 Sep 56

Director, Utilities Branch

Director, Operations Branch (Asst. Dir. Operations)

Enclosed M-1 Project

(1) List of projects

The first of M-1 projects is forwarded in the enclosure for your use.

W. S. Johnson, Jr.

LIST OF PROJECTS

1. Bldg 20

- NO
- a. Paint exterior of building.
 - b. Paint spiractors and associating piping.
 - c. Block up interior door of Chlorine Room identified as a hazard by PMU.

2. AS-110

- NO
- a. Paint spiractors.
 - b. Paint filter piping.

INT PAINTED ON
85-6326

X 3. Bldg 22

- NO
- a. Paint basement/digestor tunnel.

? 4. TT-39A

- a. Replace existing corrugated asbestos sheathing.

~~NO~~ X 5. TT-38

- a. Replace existing doors and windows.
- b. Replace existing rollup doors.

✓ 6. TT-35

- a. Replace existing doors and windows.
- b. Point up exterior brick work.

~~NO~~ 7. TC-563

- a. Paint exterior.
- b. Replace doors and windows.

✓ 8. TC-567 *WRONG BLDG #*

TC 22

TC 566

- a. Replace building.

9. Demolish:

- NO
- a. Filters and spiractors - Bldg TT-38^x.
 - b. Wells TT-30^v and TT-53^x.
 - c. Wells M-142^x, M-197^x, M-267^x, M-628[?], M-629^x and M-630^x.

ESTIMATED COST: \$120,000

10. AS-202

- NO
- a. Move Chlorinator Room to front of Filter Room. Existing room located in back corner stays wet and creates a hazardous condition. Existing chlorinators must be moved and a new exhaust



fan installed.

ESTIMATED COST: \$35,000

X 12. 1700

(NO) a. Remove asbestos from ash hoppers (chain and wall hopper); 14" steam distribution header; aux. steam loop line; boilers 1-4 steam header from nonreturn to distribution header; area distribution steam lines from 14 steam distribution header to ground floor (to include Area 1, 2, 3, line, Area 4 and 5 line, industrial line and industrial bypass line) boiler feedwater line from feedwater pump header to drop on #1 boiler; steam line for plant master control located beneath main header.

ESTIMATED COST: \$200,000

(NO) 13. BA-138

a. Replace existing meters:

Replace raw water meter (receiver, transmitter, orifice plate).

Replace delivered water meter (transmitter and receiver).

Replace reservoir meter (transmitter and receiver).

Replace elevated tank meter (transmitter and receiver) Transmitter should work on 4-20 MA.

Reduce range on raw and delivered water meters.

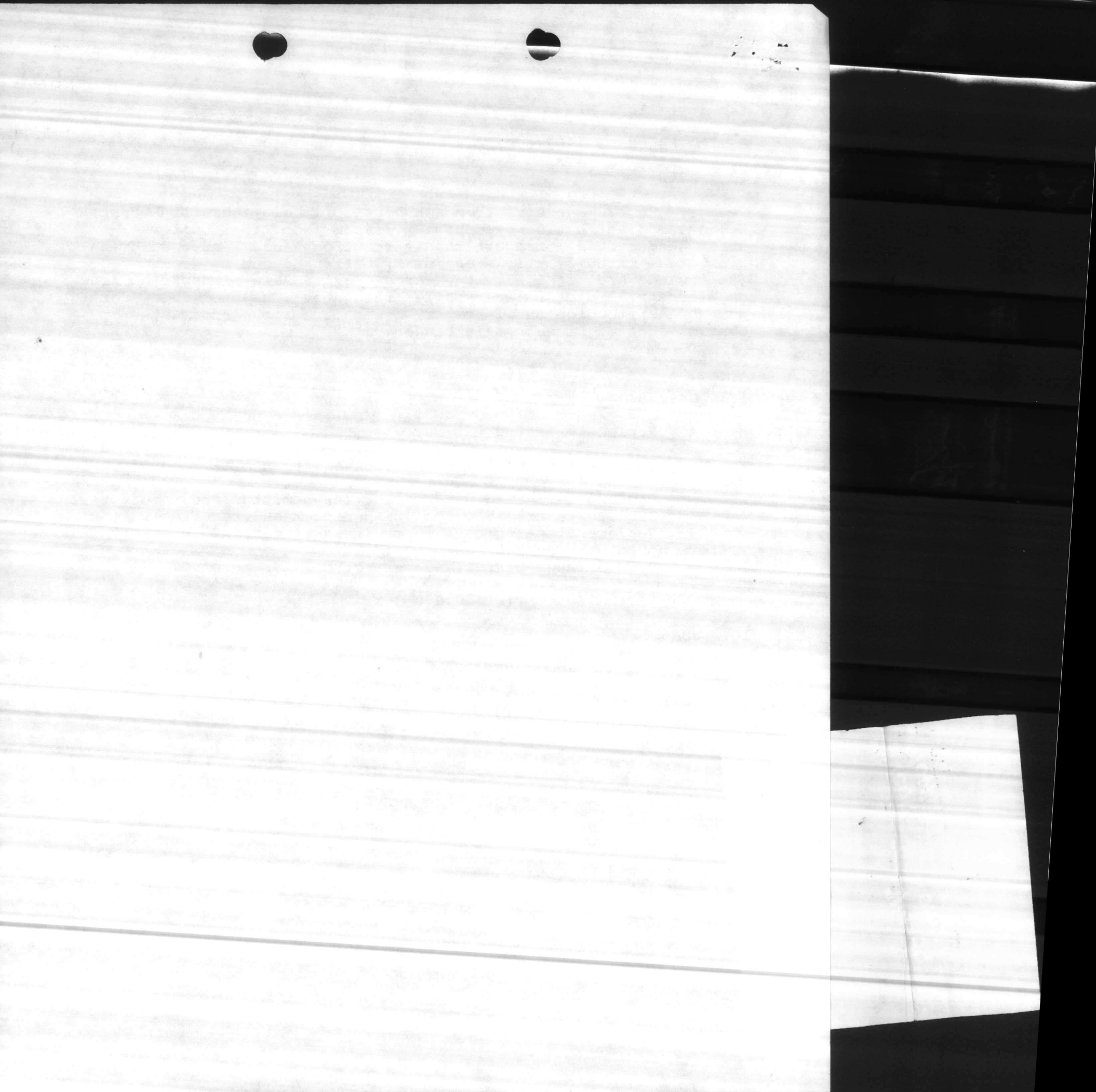
ESTIMATED COST: \$30,000

(NO) 14. SBA-160

Replace parshall flume and meter.

Funded

ESTIMATED COST: \$20,000



fan installed.

ESTIMATED COST: \$35,000

X 12. 1700

(NO) a. Remove asbestos from ash hoppers (chain and wall hopper); 14" steam distribution header; aux. steam loop line; boilers 1-4 steam header from nonreturn to distribution header; area distribution steam lines from 14 steam distribution header to ground floor (to include Area 1, 2, 3, line, Area 4 and 5 line, industrial line and industrial bypass line) boiler feedwater line from feedwater pump header to drop on #1 boiler; steam line for plant master control located beneath main header.

ESTIMATED COST: \$200,000

(NO) 13. BA-138

a. Replace existing meters:

Replace raw water meter (receiver, transmitter, orifice plate).

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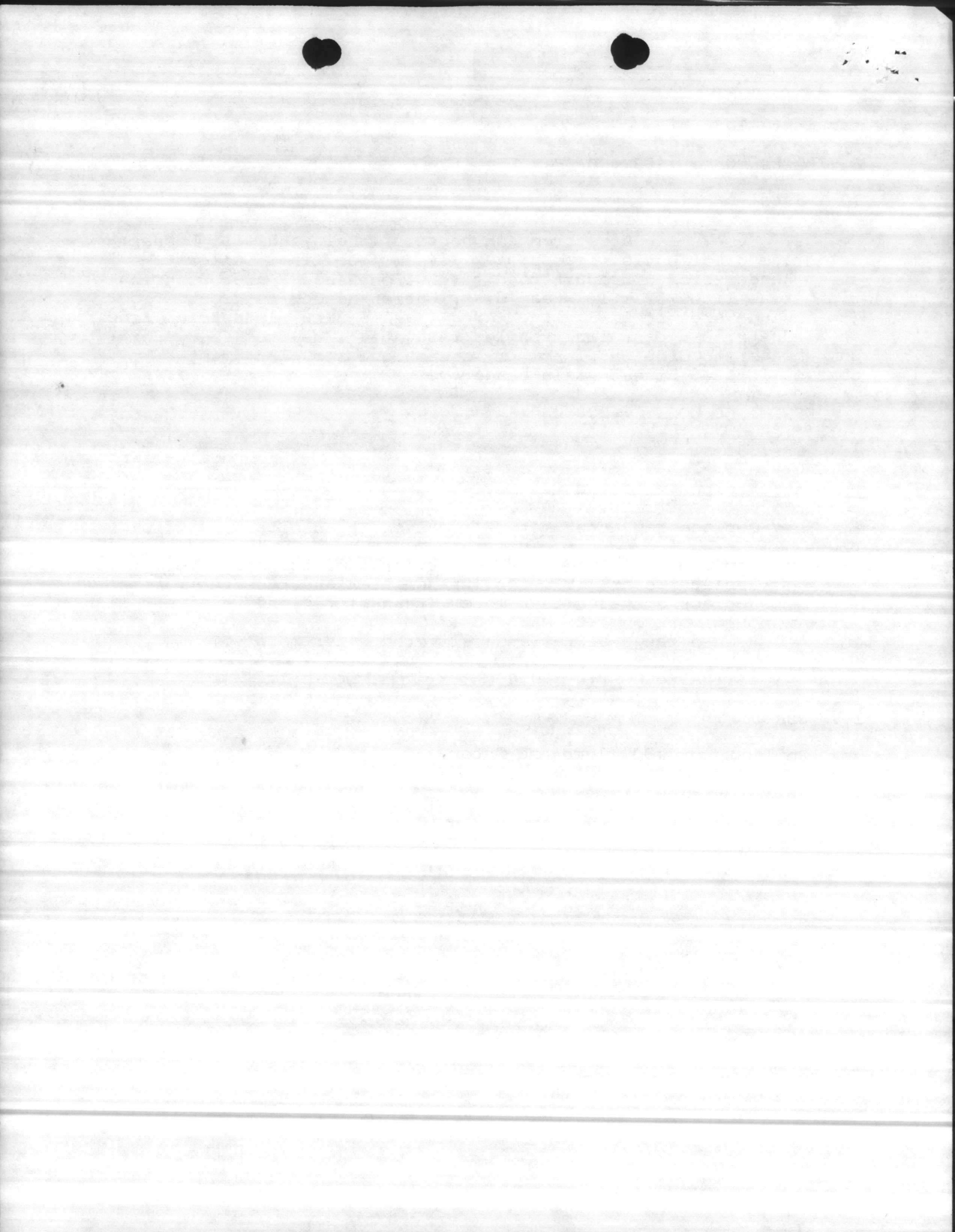
ESTIMATED COST: \$30,000

(NO) 14. SBA-160

Replace parshall flume and meter.

Funded

ESTIMATED COST: \$20,000



BLDG. 1700

INSTALL EMERGENCY EXIT FROM OFFICE TO GROUND ($\pm 18'$)
(REMOVE WINDOWS)

$\pm 77'$
 $3\frac{1}{4}" H_2O$

REMOVE EXIST. FENCE

COOLING PIT
BOILER
BLOWDOWN

$\pm 64'$

NEW POLE
W/LIGHT

$\pm 89'$

INSTALL
STEPS

NEW
FENCE

BULK
CHEMICAL
TANKS

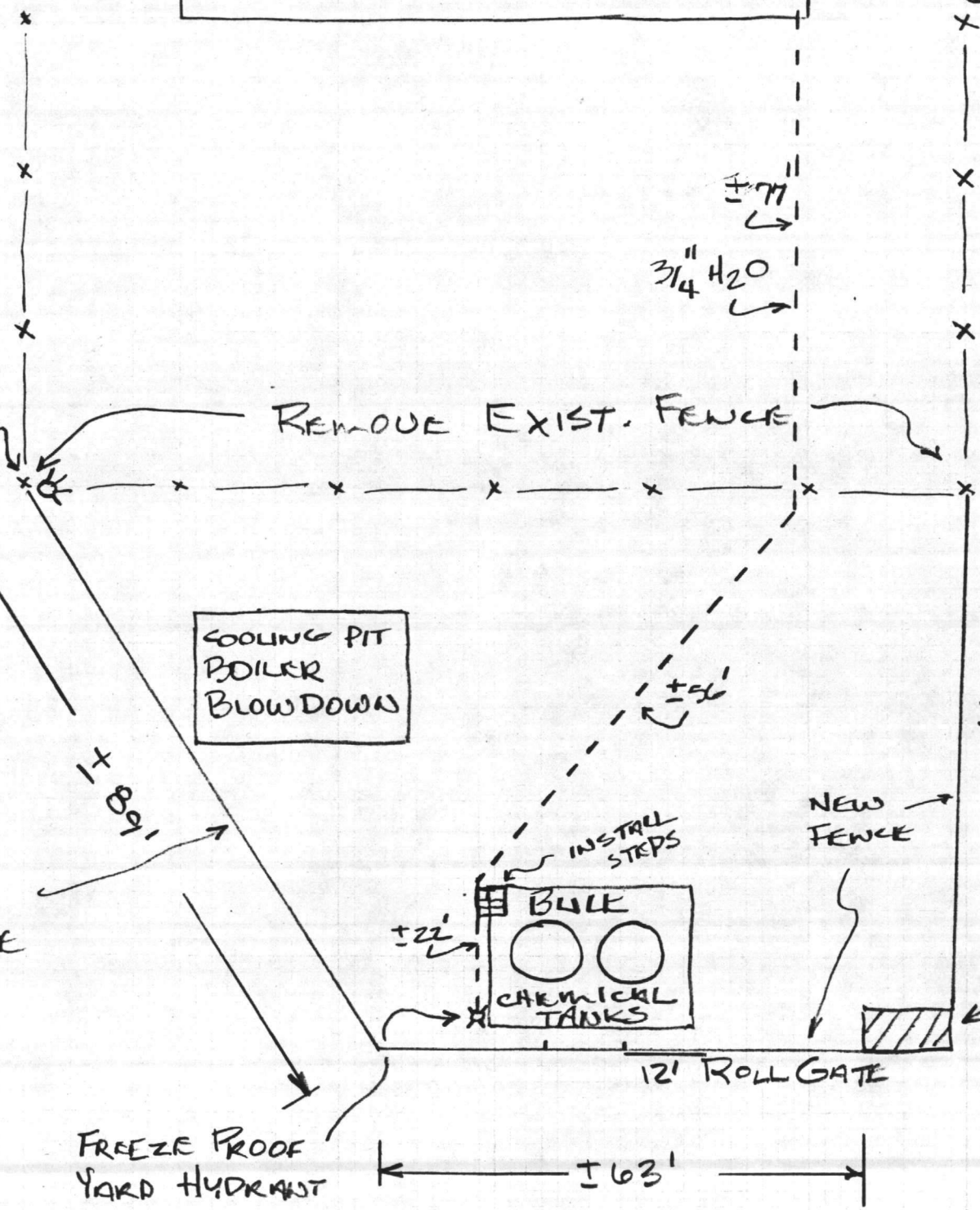
NEW
FENCE

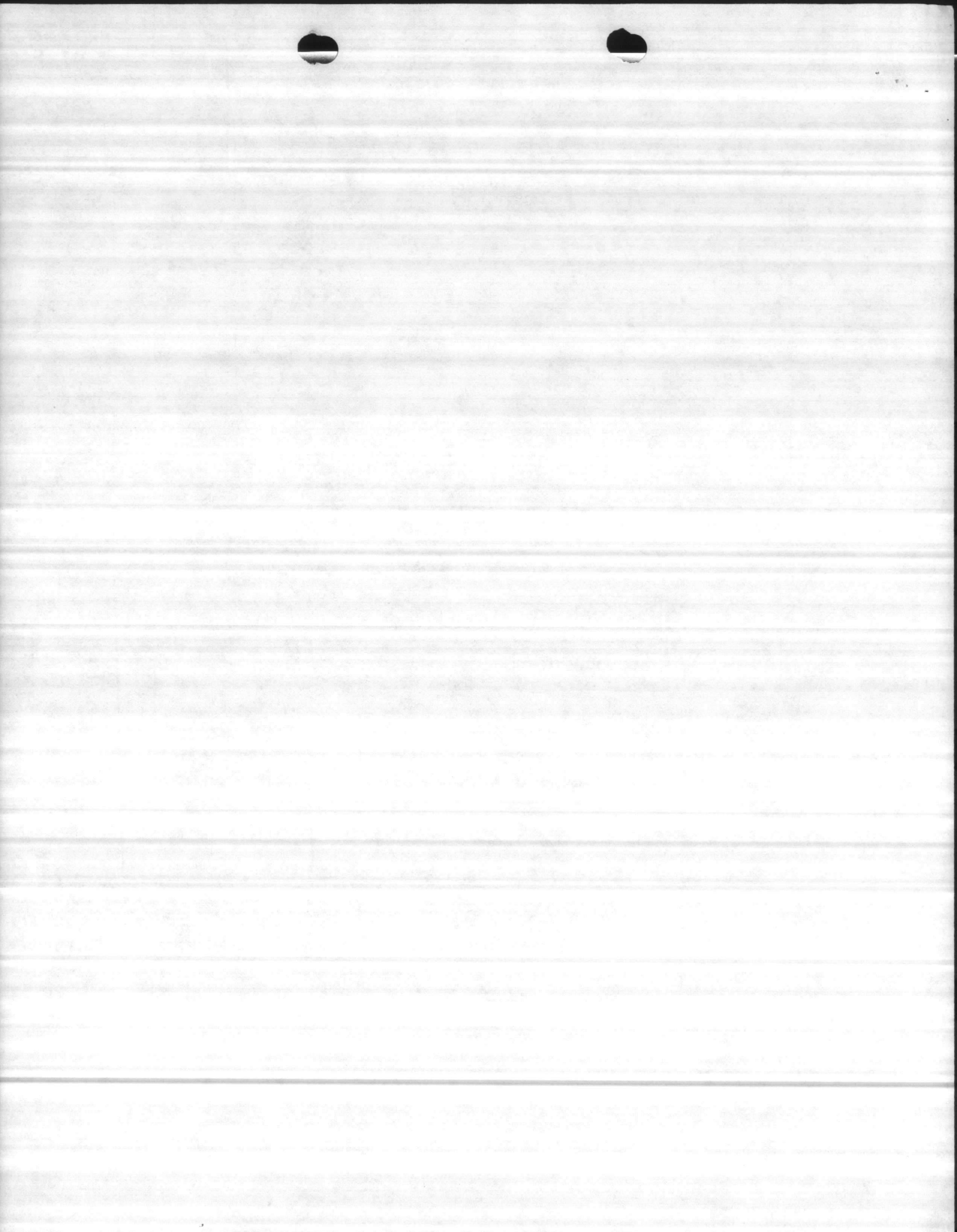
COAL
SAMPLE
HOUSE

12' ROLL GATE

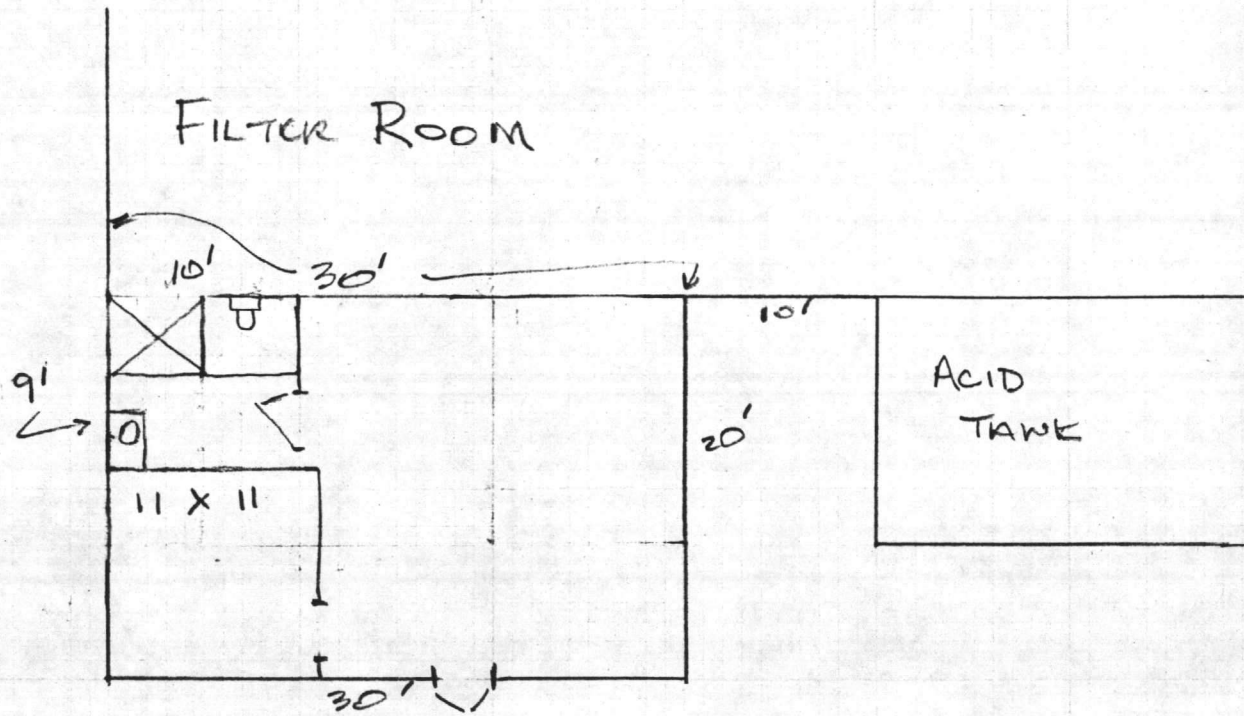
FREEZE PROOF
YARD HYDRANT
AND EYE
WASH / SHOWER
STATION

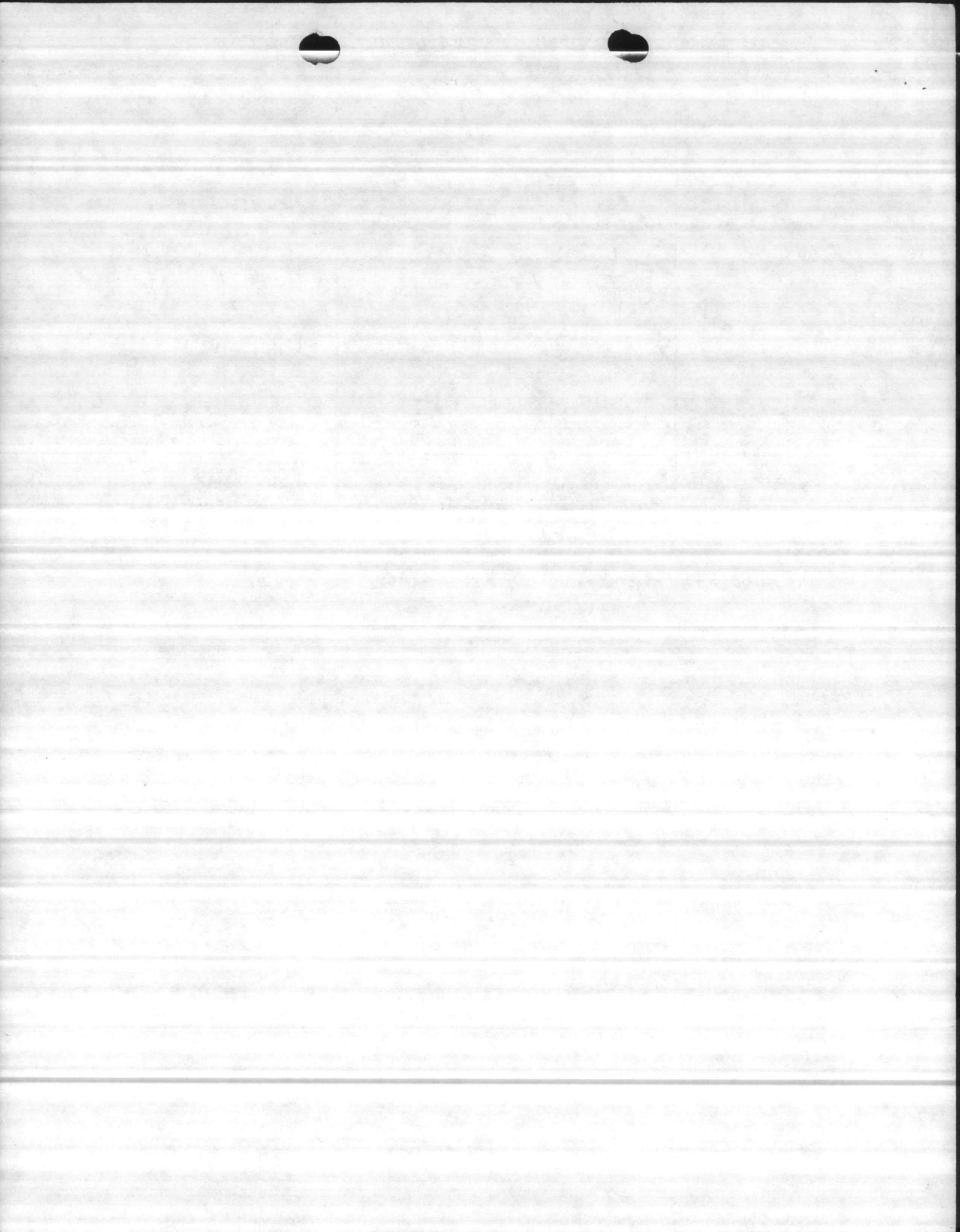
$\pm 63'$



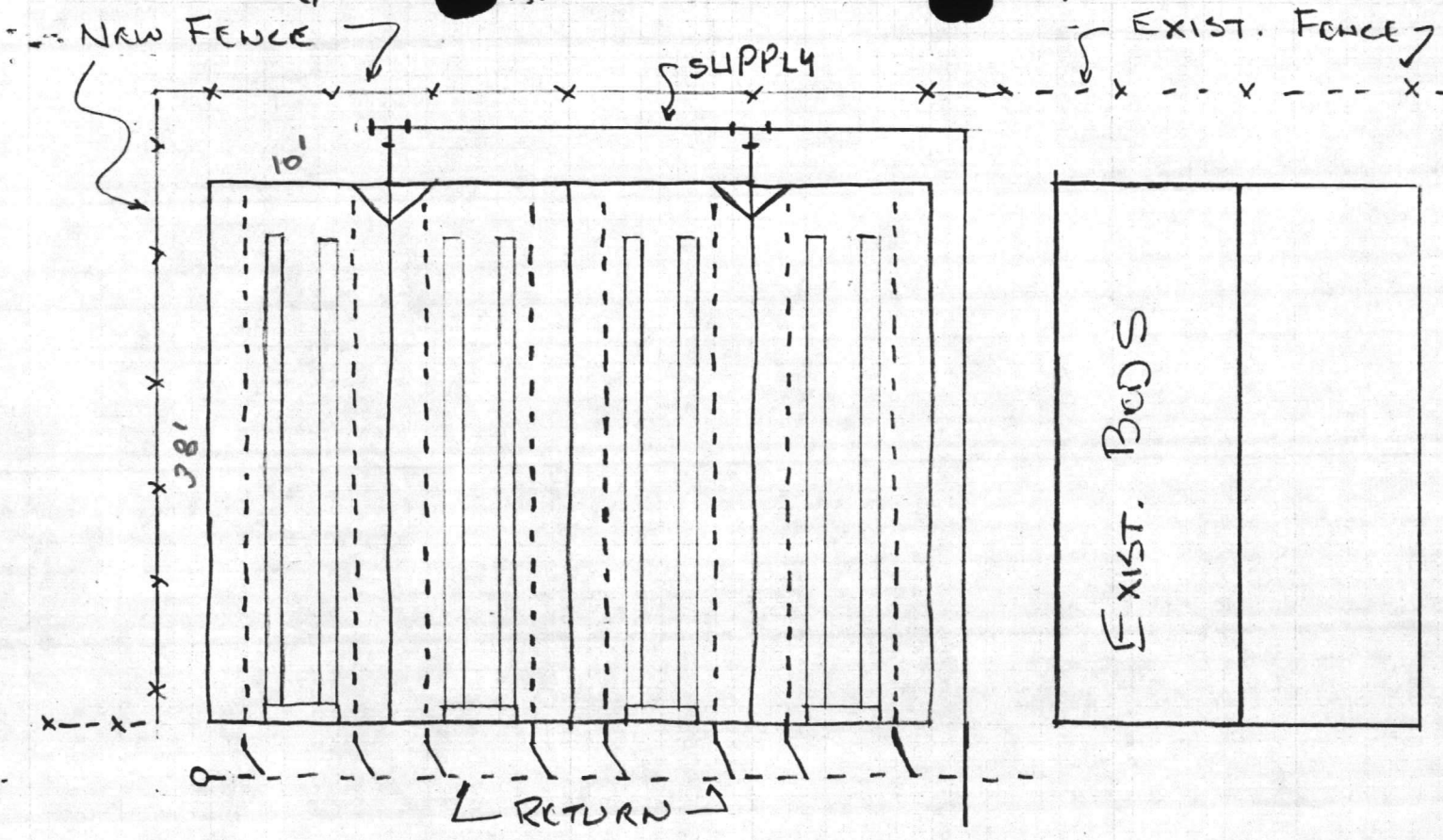


ADDITION TO BLDG. 67





TARAWA TERRACE SEWAGE PLANT



INSTALL FOUR NEW SLUDGE DRYING BEDS

