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ENVIRONMENTAL PROTECTION PLAN

BUILDING 121 REMEDIATION
U.S. NAVAL STATION ROOSEVELT ROADS
PUERTO RICO

Prepared for:

Department of the Navy Atlantic Division
Naval Facilities Engineering Command
Norfolk, Virginia
LANTDIV RAC Contract No. N62470-93-D-3032

Prepared by:

OHM Remediation Services Corp.
1000 RIDC Plaza - Suite 600
Pittsburgh, Pennsylvania 15238-2928
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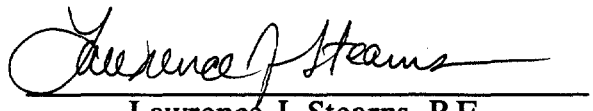

Lawrence J. Stearns, P.E.
Project Manager - Delivery Order No. 004

20 January 1994
OHM Project No. 15591

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1.1 PURPOSE

OHM Remediation Services Corp. (OHM), a subsidiary of OHM Corporation, is contracted by the U.S. Department of the Navy (LANTDIV) to provide remediation of Building 121 at U.S. Naval Station Roosevelt Roads, Cieba, Puerto Rico. Pursuant in part to the Basic Contract: Part 4.4.1 - Environmental Protection Plan, OHM met with the Navy Technical Representative (NTR) on 11 January 1994 for a Pre-construction Conference and exterior inspection of the Building 121 site. The Environmental Conditions Report presents the results of this inspection.

The purpose of this Environmental Protection Plan (EPP) is to present measures for implementation by OHM during the Building 121 remediation work that will provide protection of natural, historical, and archaeological resources. Additional information regarding protection of the natural resources at the project site may be found in the following documents:

- Work Plan
- Waste Transportation and Disposal Plan
- Health and Safety Plan
- Equipment Decontamination Plan.

1.2 WORK DESCRIPTION

The scope of work generally includes: preparation of various pre-construction, construction, and post-construction plans and submittals; attendance and participation at pre-construction and various other meetings; mobilization and demobilization; site preparation; cleaning the interior surfaces of Building 121; various sampling and analyses for air, soil, water, and concrete media; removing a portion of the concrete from the surface of the building floor; excavating contaminated soil outside the building; transportation and disposal of generated hazardous and non-hazardous wastes; erosion and sediment control; health and safety control; quality control; site restoration; and incidental work. Further discussion of the work and its implementation can be found in the OHM Work Plan.

2.0 PROTECTION OF NATURAL RESOURCES

2.1 GENERAL

OHM will preserve the natural resources within the project boundaries and outside the limits of permanent work except as is necessary to implement the required work. The work site will be restored to equivalent or improved condition upon completion of the work. Work activities will be confined to within the limits of the work as specified in the 20 December 1993 Delivery Order 0004; NAVFAC Specification No. 05-93-3199 dated 20 October 1993; NAVFAC Specification No. 05-93-3199 Amendment No. 0001 dated 20 December 1993; project contract drawings T-1, C-1, C-2, and C-3 by Allen & Hoshall dated 29 July 1993; and the OHM Work Plan for this project.

2.2 LAND RESOURCES

Except in areas identified to be cleared, OHM will not remove, cut, deface, injure, or destroy trees or shrubs without the prior approval of the Contracting Officer Technical Representative (COTR) or the NTR. OHM will not fasten or attach ropes, cables, or guys to existing nearby trees for anchorage unless approved by the COTR or NTR.

2.3 PROTECTION

OHM will protect existing trees which are to remain and which may be injured, bruised, defaced, or otherwise damaged by the remediation activities. Displaced rocks will be removed from uncleared areas. With the approval of the COTR or NTR, OHM will remove trees with 30 percent or more of their root systems destroyed.

2.4 REPLACEMENT

OHM will remove trees and other landscape features scarred or damaged by negligent equipment operations or as otherwise required by the contracted scope of work and replace them with equivalent, undamaged trees and landscape features. OHM will obtain the approval of the COTR or NTR prior to replacement.

2.5 TEMPORARY CONSTRUCTION

OHM will remove obvious traces of temporary construction such as new haul roads, work areas, temporary structures and their foundations, stockpiles of excess or waste materials, and other obvious signs of site work. OHM will grade new temporary roads and parking areas, and similar temporarily used areas to conform with surrounding contours.

2.6 STREAM CROSSINGS

There are no known stream crossings required to complete the remediation work at the Building 121 site. Should stream crossings become necessary, OHM will implement the requirements of the Basic Contract: Section 4.5.5 - Stream Crossings.

2.7 FISH AND WILDLIFE RESOURCES

OHM will not disturb fish and wildlife except as essential and incidental to the performance of the contracted work. OHM will not alter water flows or otherwise significantly disturb the native habitat adjacent to the project work site and critical to the survival of fish and wildlife, except as specified in the Delivery Order 0004.

2.8 WETLAND AREAS

OHM will not intentionally disturb any known wetland areas unless authorized by the COTR or the NTR.

OHM is not qualified or capable of identifying wetland areas and notes that no wetland area have been identified in the Delivery Order 0004 contract documents or have been otherwise brought to the attention of OHM regarding the remediation of the Building 121 site.

2.9 OILY WASTES

OHM will implement all reasonable precautions to prevent oily or other hazardous substances from entering the ground, drainage areas, or local bodies of water. Temporary fuel oil or petroleum storage vessels will be surrounded with a temporary earth berm of sufficient volume capacity and strength to contain at least 110 percent of the aggregate volume of storage vessels and it will be fully lined with 4-mil polyethylene sheet. Equipment and storage vessels containing oils and fuels will be visually inspected prior to site entry and daily thereafter for leakage, drips, or other preventable releases and will be immediately repaired or removed from the site until capable of no release. Releases of oily wastes will be cleaned up upon observation and impacted materials disposed of appropriately. OHM will immediately notify the NTR of any oily spills.

2.10 SEDIMENT BASINS

OHM will trap sediment from the soil excavation activities within the silt fence surrounding the excavation area and install silt fence as sediment basins in other locations of the project work site as necessary to trap sediment from cleared and grubbed areas, and backfill stockpiles. OHM will remove accumulated sediment from sediment basins after each storm event for subsequent and appropriate disposal. Where appropriate, a perforated vertical pipe will be installed for overflow.

3.0 HISTORICAL AND ARCHAEOLOGICAL RESOURCES

3.1 GENERAL

OHM will carefully preserve and report immediately to the NTR any recognizable historical or archaeological items or human skeletal remains discovered in the course of the work. OHM will immediately stop all work in the local vicinity of the discovery until directed by the COTR or NTR to resume work. OHM will protect all known monuments, markers, and works of art encountered during the implementation of the contracted work.

To date, OHM has not been notified of the existence of any known historical or archaeological resources at the Building 121 site and none were recognized during the 11 January 1994 site inspection.

4.0 EROSION AND SEDIMENT CONTROL MEASURES

4.1 GENERAL

On 14 January 1994, OHM submitted an Erosion and Sedimentation Control Plan (ESCP) to the EQB for review and approval pursuant to Section 01010: Part 3.5.1 - Environmental Quality Board (EQB) Permits of the NAVFAC Specification No. 05-93-3199 as amended. A copy of this submittal is provided in Appendix A. The following discussion is supplemental to the submitted ESCP.

4.2 BURNOFF

OHM will not burnoff the ground cover at the project site.

4.3 BORROW PIT AREAS

Borrow for backfilling the soil excavation area will be obtained from off-base sources. The management of off-base borrow sources will be the responsibility of the vendor supplying the backfill to OHM.

4.4 PROTECTION OF ERODIBLE SOILS

The Humacao Field Office of the U.S. Department of Agriculture - Soil Conservation Service (SCS) indicates that the native soils at the Building 121 site are probably of the Descalabrado clay loam (DeC2) series with capability unit IVs-2. This is a well-drained, neutral, shallow soil derived from volcanic rock on moderate slopes. It is not particularly susceptible to erosion.

OHM will plan and conduct the excavation and backfill of the contaminated soil area to minimize the duration of exposure of unprotected soil. OHM anticipates that the contaminated soil excavation, backfilling, seeding, and mulching activities will be completed within a 2-working-day period.

4.5 TEMPORARY PROTECTION OF ERODIBLE SOILS

OHM will mechanically control the rate of run-on to the soil excavation/backfill area with silt fence and a shallow ditch or low berm north of the excavation area to divert run-on around the excavation. Run-off will be captured within the silt fence surrounding the excavation. OHM will use vegetation and mulching to control erosion in the contaminated soil excavation and backfill area. The area will be re-seeded and mulched as described in the ESCP (Appendix A).

5.0 CONTROL AND DISPOSAL OF SOLID AND SANITARY WASTES

5.1 GENERAL

OHM will collect solid wastes (i.e., non-hazardous, non-~~TOSCA~~ TSCA, non-industrial wastes) in containers which are regularly emptied at intervals to prevent the attraction of rodents or disease vectors. OHM intends to subcontract this service to the same vendor who currently provides similar services for the naval station. OHM will not prepare, cook, or dispose of food on the project site. OHM will prevent contamination of the site and related areas when handling and disposing of wastes. Upon completion of the work, OHM will leave the site areas clean of solid wastes. Refer to the Waste Transportation and Disposal Plan for additional information.

6.0 HAZARDOUS WASTE MANAGEMENT PLAN

6.1 GENERAL

The hazardous wastes which may potentially be generated during the remediation of Building 121 are:

- Cleaning waters from decontamination of the building interior surfaces
- Existing contaminated soil outside and adjacent to the east side of the building
- Expended personnel protective equipment (PPE)
- Materials contaminated by spills of fuel, oil or other petroleum products
- Decontamination pad materials
- Equipment decontamination waters.

OHM will manage generated hazardous waste in accordance with 40 CFR 260-270; Commonwealth of Puerto Rico, and local rules and regulations; and the NAVFAC Specification No. 05-93-3199 (as amended) Section 02223 - Transportation and Disposal of Contaminated Material and Section 02225 - Remediation of Pesticide Contaminated Materials. Submittals, including SD-08 statements and manifests, will be provided as required by the NAVFAC Specification No. 05-93-3199 as amended. Refer to the Waste Transportation and Disposal Plan and Equipment Decontamination Plan for further information.

7.0 DUST CONTROL

7.1 GENERAL

OHM will minimize dust emissions at all times during the remediation work including non-working periods. As necessary, water will be sprinkled on potential dust generation surfaces such as the site access road and contaminated soil excavation area. Water will be obtained from the nearest available fire hydrant. Refer to the Health and Safety Plan for additional information.

8.0 NOISE AND BLASTING

8.1 NOISE

OHM will make the maximum use of low-noise emission equipment as certified by the Environmental Protection Agency. In general, internal combustion engines will have mufflers or otherwise be equipped to meet the requirements of the Health and Safety Plan.

8.2 BLASTING

OHM will not make use of blasting or explosives for the remediation of Building 121 without the written permission of the COTR or NTR.

APPENDIX A

EROSION AND SEDIMENTATION CONTROL PLAN

OHM Remediation Services Corp.

January 14, 1994

Mr. Roberto Berberena
Director
Land Pollution Control Area
Junta de Calidad Ambiental
Office of the Board: National Bank Plaza
431 Ponce De Leon Ave.
Hato Rey, Puerto Rico 00917

Dear Mr. Berberena:

Enclosed is the Erosion and Sedimentation Control Plan (ESP) for the Building 121 Remediation at U.S. Naval Station Roosevelt Roads. In order to complete the project by the 1 March 1994 deadline established by the U.S. Environmental Protection Agency (USEPA), it will be necessary to begin field work by 1 February 1994. Since approval of this ESP is required prior to initiating the field work, we respectfully request your urgent attention to this matter and apologize for the short lead time.

If you need additional information or have any questions, please contact me at (412) 963-2300 at your earliest convenience. Thank you for your assistance in this matter.

Very truly yours,

Lawrence J. Stearns, P.E.
Project Manager

Enclosure

cc: G. Krauter - OHM
B. Kilkenny - OHM
I. Rosado - NTR

EROSION AND SEDIMENTATION CONTROL PLAN

BUILDING 121 REMEDIATION
U.S. NAVAL STATION
ROOSEVELT ROADS, P.R.

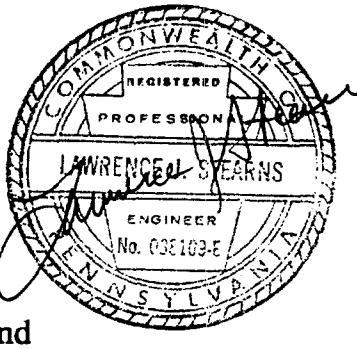
CONTRACT NO. N62470-93-D-3032
DELIVERY ORDER NO. 004

Prepared for:

Junta de Calidad Ambiental
Santurce, Puerto Rico

Prepared by:

OHM Remediation Services Corporation
1000 RIDC Plaza, Suite 600
Pittsburgh, Pennsylvania 15238-2928



On behalf of:

Department of the Navy
Atlantic Division - Naval Facilities Command

December 22, 1993
OHM Proposal No. 0107099

1.0 INTRODUCTION

This document will define the erosion and sedimentation control measures to be implemented during the remediation of Building 121 at U.S. Naval Station Roosevelt Roads, Ceiba, Puerto Rico. The location of Building 121 is shown in Figures 1, 2, and 3. This building was used to store pesticides and pesticide containers. No additional materials have been stored in this building since 1980. OHM Remediation Services Corp. (OHM), a wholly owned subsidiary of OHM Corporation, has been contracted by the U.S. Navy to remediate Building 121.

2.0 DESCRIPTION OF REMEDIATION

The remediation of Building 121 includes the following general tasks:

- Sampling and analysis of interior surfaces
- Decontamination of interior surfaces
- Sampling and analysis of soils adjacent to Building 121 (Figure 4)
- Excavation of impacted soils
- Backfill, compaction, and revegetation of excavated area
- Transportation and disposal of generated wastes.

3.0 EROSION AND SEDIMENTATION CONTROL MEASURES

The U.S. Department of Agriculture - Soil Conservation Service indicates that the existing site soils are probably the Descalabrado Clay Loam (DeC2) series with capability unit IVs-2. Erosion and sedimentation control measures will be implemented prior to the excavation of impacted soils and will include the following:

- Install silt fence (Figure 5) around the excavation area
- Revegetate the backfilled excavation.

The silt fence will be installed prior to excavation of impacted soils. Excavation will be in a 30-foot-by-30-foot area adjacent to Building 121 (Figure 4) to a depth of 1 foot. Soils will be excavated with a backhoe stationed outside the silt fence. Excavated soils will be loaded directly into an intermodal container box with a cover. Excavation, backfilling, and seeding and mulching are anticipated to be completed in a 2-day period.

4.0 SILT FENCE MATERIAL

The silt fence material will be Type 955 manufactured by Synthetic Industries, Inc. of Chatanooga, Tennessee. It is a woven, polypropylene fabric with stabilizers to make the fabric resistant to ultraviolet degradation. The fabric has the following properties:

- Minimum tensile strength (ASTM-D4632): 235-lb x 205-lb
- Minimum elongation (ASTM-D4632): 25% x 25%
- Minimum Mullen burst strength (ASTM-D3786): 490-psi
- A.O.S. (ASTM-D4751): 30 to 40.

The fabric will be attached to 1-inch-by-2-inch wooden posts, or 1-pound-per-linear-foot steel posts, spaced 3 feet apart on-center. The fabric will be stapled or tied to the posts and installed as shown on Figure 5.

5.0 COMMON SOIL BACKFILL MATERIAL

The common soil backfill material will be a natural, friable soil borrowed from the local area off of the naval station base, and will have the following properties:

- ASTM-D2487 Classification: GW, GP, GM, GC, SW, SP, SM or SC
- ASTM-D4318 Maximum Liquid Limit: 35
- ASTM-D4318 Maximum Plasticity Index: 12
- ASTM-D1140 Maximum passing No. 200 Sieve: 25 percent by weight.

This common soil backfill will be placed in a 6-inch lift and lightly compacted with a walk-behind vibratory plate compactor prior to placement of the topsoil layer.

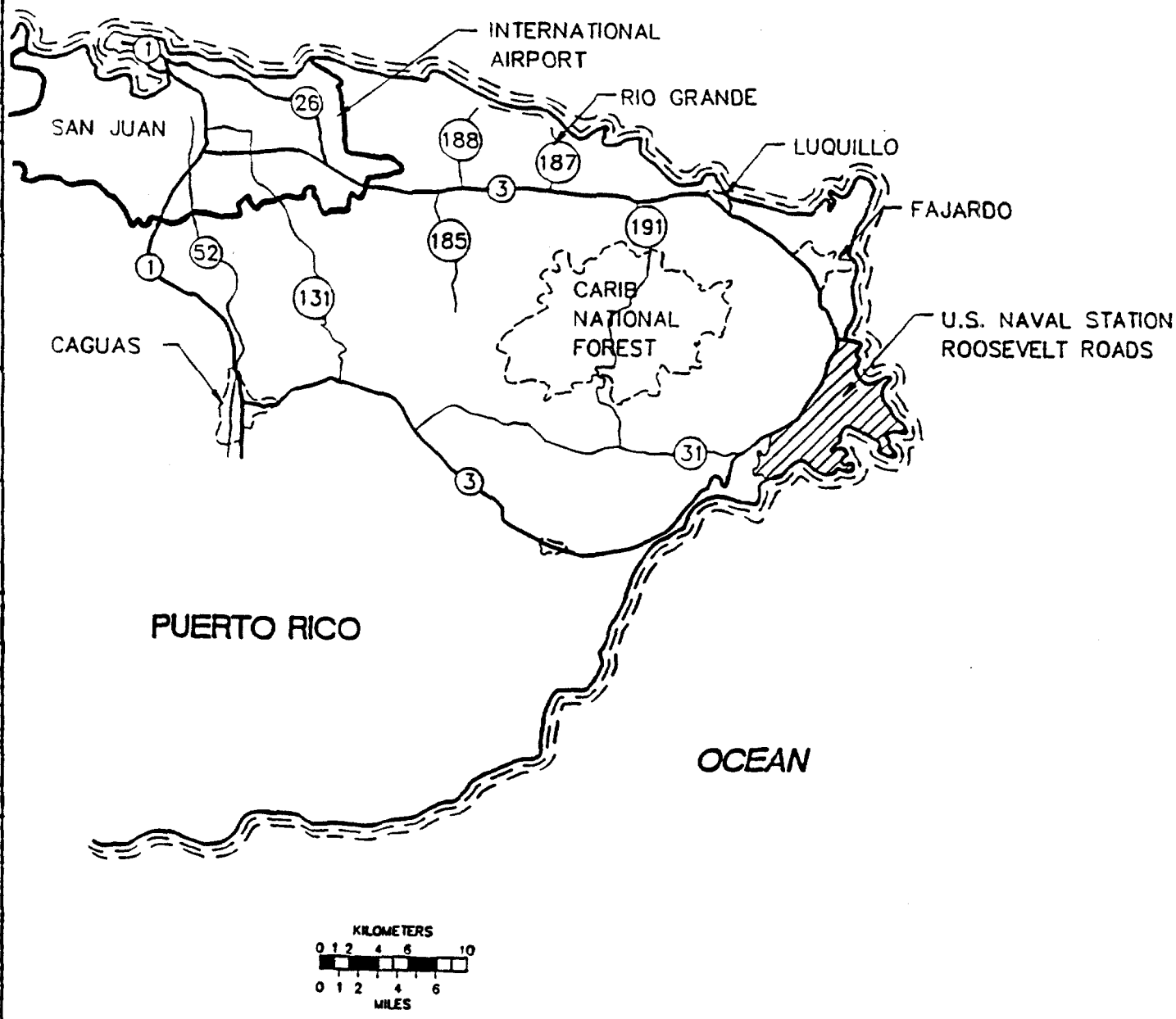
6.0 TOPSOIL

The topsoil material will be a natural, friable soil representative of productive, well-drained soils in the area, free of subsoil, stumps, rocks larger than 1 inch diameter, brush, weeds, toxic substances, and other material detrimental to plant growth. The topsoil pH will be in the range of 5.5 to 7.0 standard units and will be amended if necessary. Topsoil will be obtained locally from off of the naval station base. Topsoil will be placed 6 inches deep on top of the common soil backfill, lightly compacted, and raked to form a seed bed.

7.0 SEED AND MULCH

A good seed bed will be prepared by hand raking the area and hand spreading 5 pounds of 15-5-10 fertilizer and 80 pounds of calcium carbonate. Common burmuda grass (unhulled) seed will be uniformly hand spread at a rate of 80 pounds per acre (total 1.6-pound seed) and lightly raked into the seedbed surface. After seeding, the seedbed will be firmed with a single, quick pass of the vibratory plate compactor. The seedbed will be watered daily to keep it moist until demobilization from the site.

Mulch material will be the existing native vegetation (primarily tall grasses) which will be cut down during site preparation work. This material will be stacked and allowed to dry prior to use as a mulch. It will be spread to uniformly cover the seedbed. The silt fence will remain in place until after the vegetation is established.



DRAWING NUMBER 107099-A1

APPROVED BY

CHECKED BY

DRAWN BY A.C.Smith 12/8/93

OHM CORPORATION PITTSBURGH, PA

PLOT SCALE: 1" = 1'

FIGURE 1

VICINITY MAP
BUILDING 121 REMEDIATION
U.S. NAVAL STATION – ROOSEVELT ROADS

PREPARED FOR

DEPARTMENT OF THE NAVY
ATLANTIC DIVISION – NAVFAC
NORFOLK, VIRGINIA

OHM Corporation

PLOT SCALE: 1" = 1"	OHM CORPORATION PITTSBURGH, PA	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
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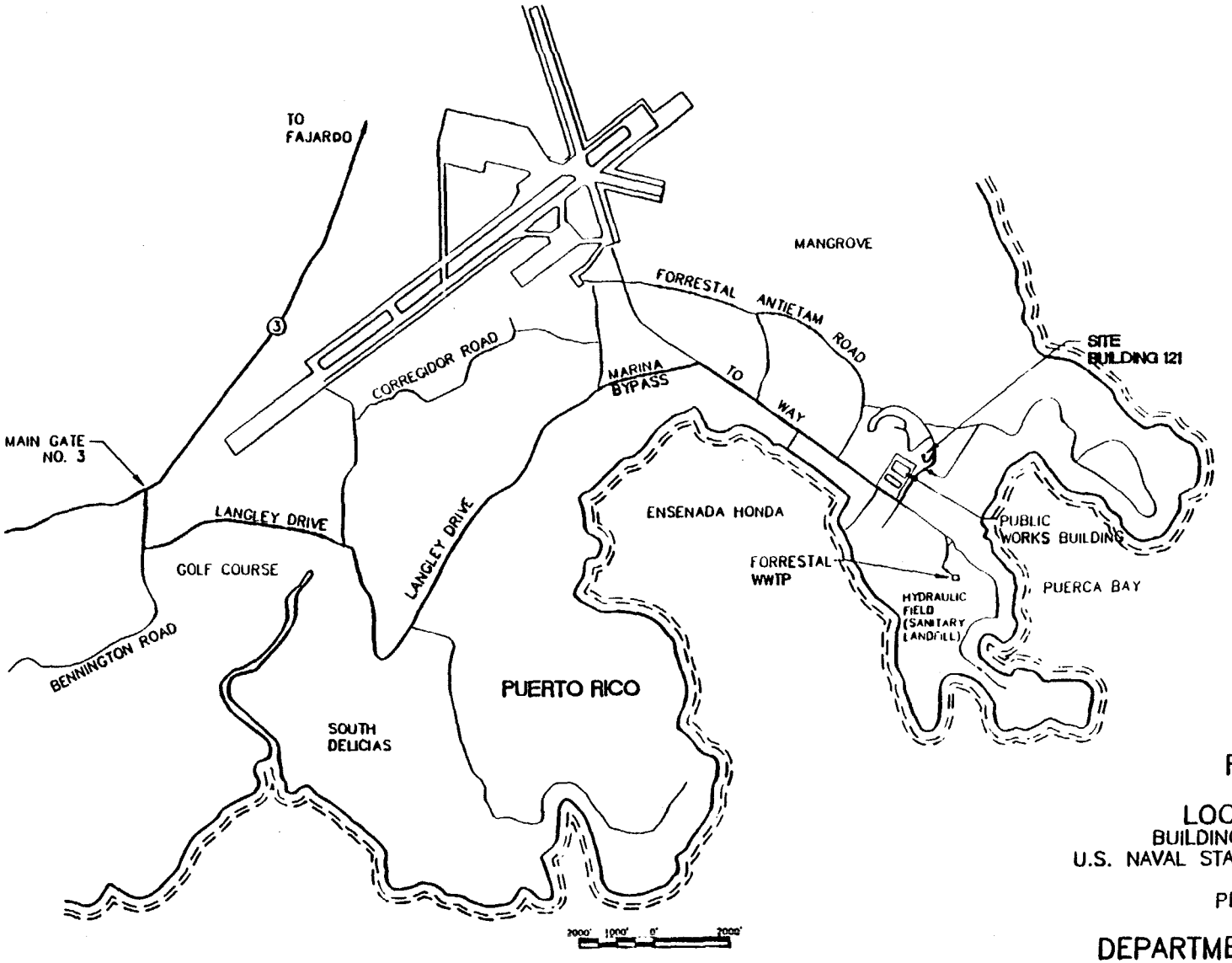

FIGURE 2

LOCATION PLAN
BUILDING 121 REMEDIATION
U.S. NAVAL STATION – ROOSEVELT ROADS

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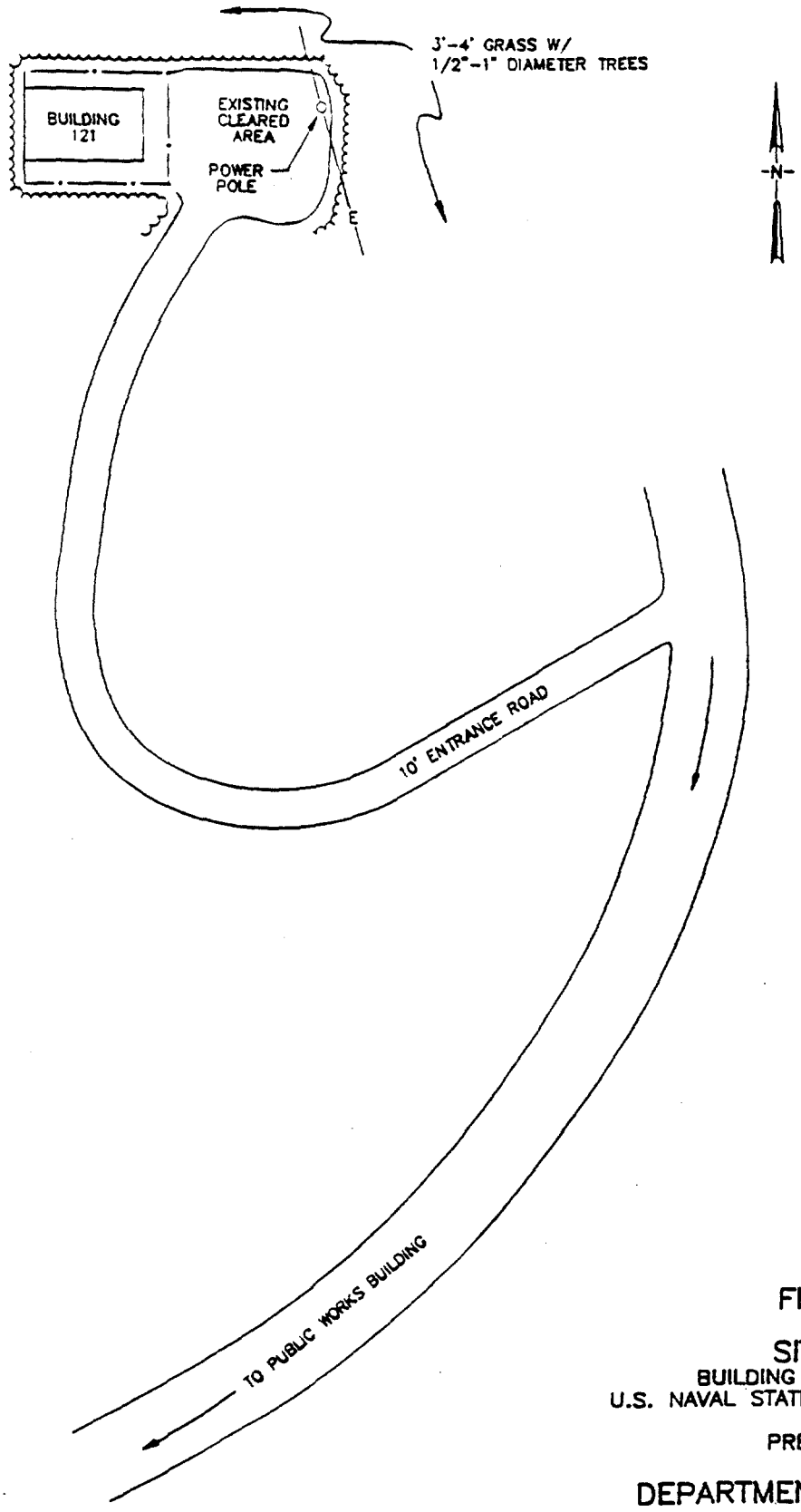

FIGURE 3

SITE PLAN
BUILDING 121 REMEDIATION
U.S. NAVAL STATION – ROOSEVELT ROADS

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PLOT SCALE: 1" = 1'

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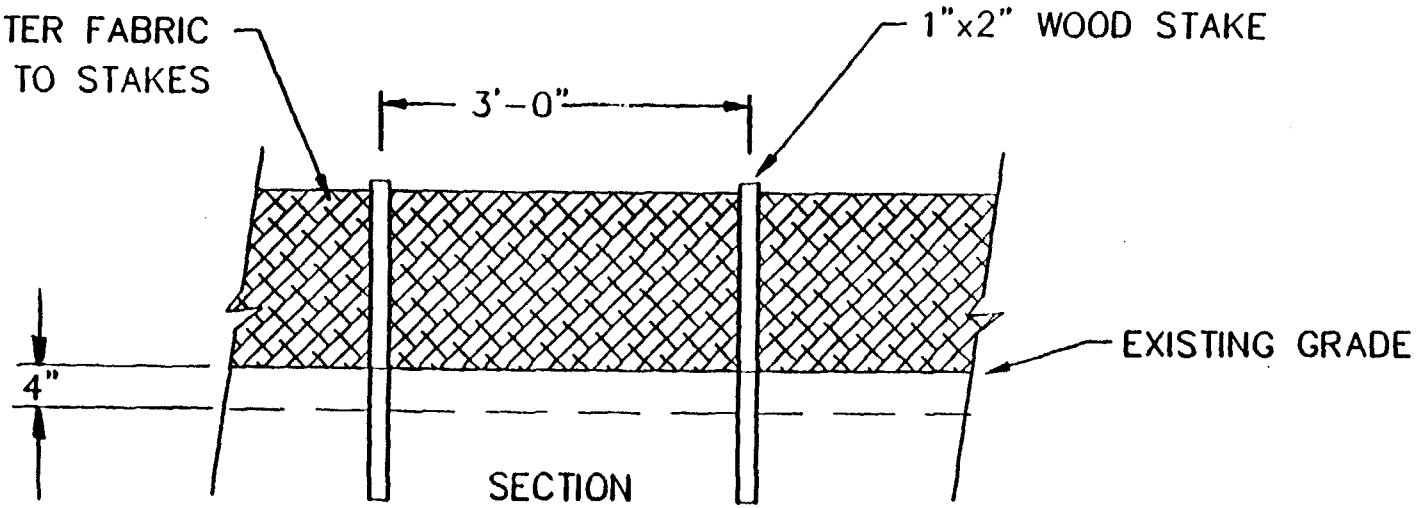

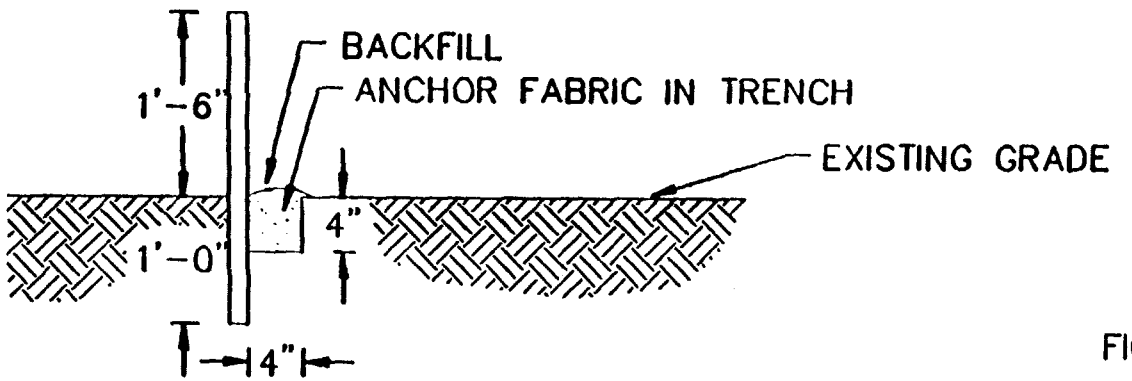

FIGURE 5

TYPICAL SILT FENCE DETAIL
BUILDING 121 REMEDIATION
U.S. NAVAL STATION - ROOSEVELT ROADS

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NORFOLK, VIRGINIA

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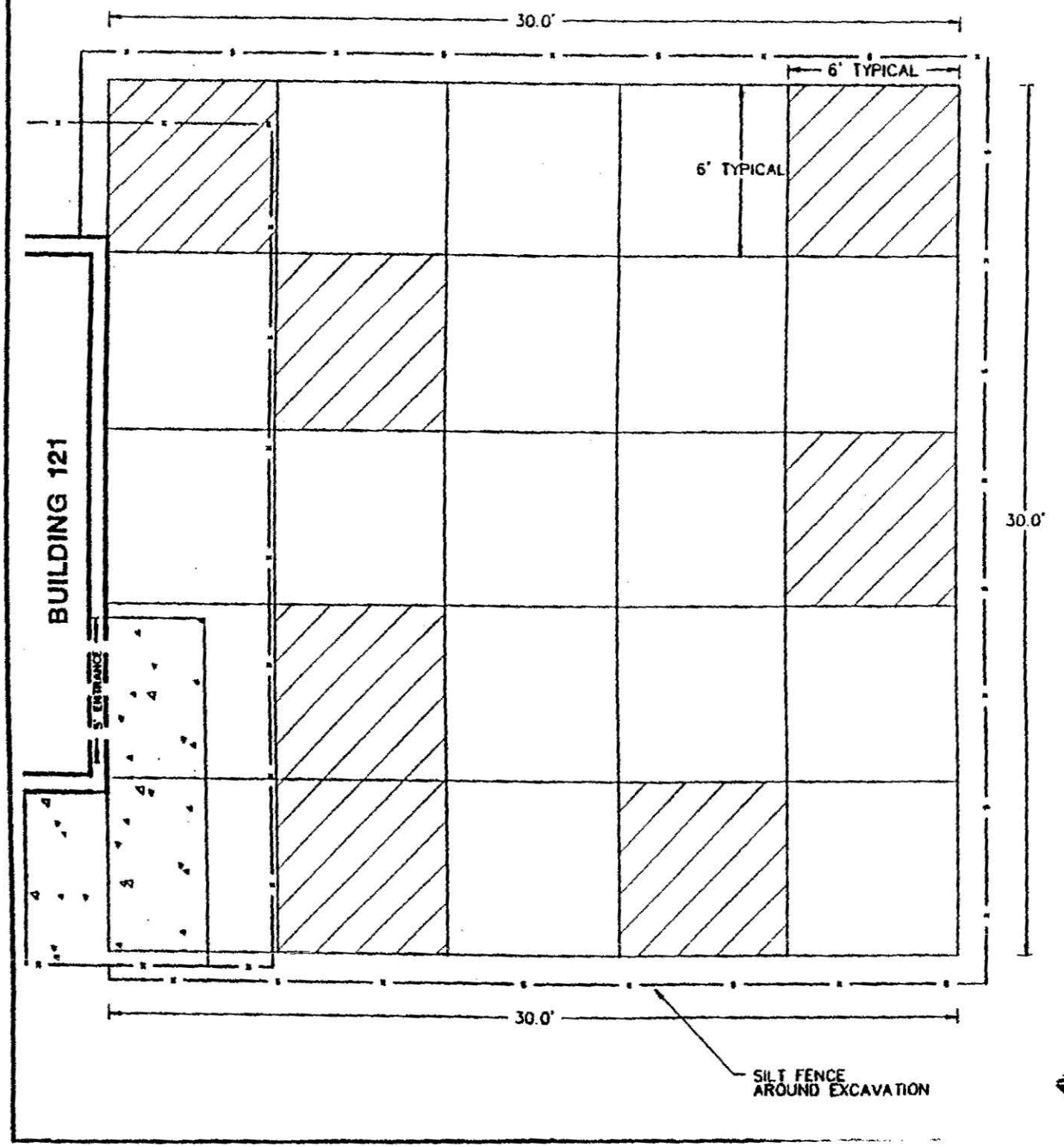

FIGURE 4

EXCAVATION PLAN
BUILDING 121 REMEDIATION
U.S. NAVAL STATION – ROOSEVELT ROADS

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