

# WARNING

## SENSITIVE RECORD

PORTIONS OF THIS RECORD ARE CONSIDERED SENSITIVE AND NOT FOR PUBLIC VIEWING. THIS DOCUMENT CONTAINS THE FOLLOWING TYPE OF SENSITIVE INFORMATION:

- PRIVACY ACT INFORMATION
- ARCHAEOLOGICAL LOCATION COORDINATES OR MAPS
- ATTORNEY / CLIENT DELIBERATIVE PROCESS INFORMATION
- COMMAND INTERNAL RULES AND PRACTICES
- COMMERCIAL TRADE SECRETS OR CONFIDENTIAL COMMERCIAL INFORMATION
- DRAWINGS OF MILITARY STRUCTURES / BUILDINGS OR FEDERAL BUILDINGS
- STREET LEVEL MAP(S) OF MILITARY INSTALLATIONS OR FEDERAL BUILDINGS
- GEOLOGICAL / GEOPHYSICAL INFORMATION / DATA CONCERNING WELLS

**RECORDS OFFICE REMINDER: REVIEW AND SAFEGUARD SENSITIVE INFORMATION CONTAINED IN THE DOCUMENT PRIOR TO PUBLIC ACCESS**

**WORK PLAN**  
**EXCAVATION OF LEAD-CONTAMINATED SOIL AT BUILDING 66**  
**YERBA BUENA ISLAND**  
**NAVAL STATION TREASURE ISLAND**  
**SAN FRANCISCO, CALIFORNIA**

**Environmental Remedial Action**  
**Contract Number N62474-93-D-2151**  
**Delivery Order 0130**

**Document Control Number 2611**  
**Revision 0**

**August 17, 2001.**

Submitted to:

Department of the Navy  
Southwest Division  
Naval Facilities Engineering Command  
Environmental Division  
1220 Pacific Highway  
San Diego, California 92132-5190

Submitted by:

IT Corporation  
4005 Port Chicago Highway  
Concord, California 94520-1120

**WORK PLAN**  
**EXCAVATION OF LEAD-CONTAMINATED SOIL AT BUILDING 66**  
**YERBA BUENA ISLAND**  
**NAVAL STATION TREASURE ISLAND**  
**SAN FRANCISCO, CALIFORNIA**

**Environmental Remedial Action**  
**Contract Number N62474-93-D-2151**  
**Delivery Order 0130**

**Document Control Number 2611**  
**Revision 0**

**August 17, 2001**

Approved by:   
John Baur  
IT Project Manager

Date: 8-14-01



**IT CORPORATION**  
*A Member of The IT Group*

**IT TRANSMITTAL/DELIVERABLE RECEIPT**

**CONTRACT : N62474-93-D-2151**

**DOCUMENT CONTROL NUMBER : 2611.0**

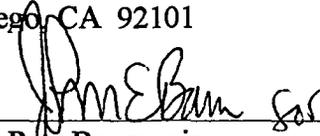
**TO:** Administrative Contract Officer  
 Navy Regional Environmental Contracts  
 NAVFACENGCOM-SWDIV  
 Michelle Crook, 02R1.MC  
 1230 Columbia St., Suite 1100  
 San Diego, CA 92101

**Date :** August 16, 2001

**DO :** 0130

**Location:** Yerba Buena Island

**FROM:**

  
 Pete Bourgeois  
 Project Manager

**DESCRIPTION** *Final Work Plan, Excavation of Lead-Contaminated Soil at Building 66, Dated August 17, 2001*  
**OF**  
**ENCLOSURE :**

**TYPE :**  Deliverable

**VERSION :** Final

**REVISION No :** 0

**ADMIN RECORD :** Yes

**SCHEDULED DELIVERY DATE** August 17, 2001

**ACTUAL DELIVERY DATE** August 16, 2001

**NUMBER OF COPIES SUBMITTED TO THE NAVY:** 1/O, 3/C, 6/E  
 [AS REQUIRED/DIRECTED BY THE SOW]

**COPIES TO :**

**SWDIV**

**IT CORPORATION**

**Other**

Scott Anderson, 06CASA (1C/1E)  
 Basic Contract Files, 02R1 (1O/1E)  
 Diane Silva, 4MGDS (1C/3E)  
 Peter Stroganoff, N7E5.PS (1C/1E)

**Chron**  
 Pete Bourgeois, Concord (1C/1E)  
 Stan Clarke, Concord (1C/1E)  
 Mark Egan, Concord (1C/1E)  
 IT Project File, Concord (1C/1E)  
 Ed Hueston, Concord (1C/1E)  
 Lee Laws, Concord (1C/1E)  
 Treasure Island Library, San Francisco (1C/1E)  
 Concord Library, Concord (1C/1E)

Victor Early, Tetra Tech EMI (1C/1E)  
 Gary Foote, Geomatrix Consultants, Inc. (1C/1E)  
 Sarah Raker, California Regional Water Quality Control Board (1C/1E)  
 Phillip Ramsey, US Environmental Protection Agency (1C/1E)  
 David Rist, Department of Toxic Substances Control (1C/1E)  
 Martha Walters, San Francisco Redevelopment Agency (1C/1E)

Date/Time Received \_\_\_\_\_ / \_\_\_\_\_

N60028\_000257  
TREASURE ISLAND  
SSIC NO. 5090.3

FINAL  
WORK PLAN AND QUALITY CONTROL PLAN FOR  
REMOVAL OF LEAD-CONTAMINATED SOIL  
ADDENDUM

DATED 14 FEBRUARY 2002

IS RECORD NO. N60028\_000666

# Table of Contents

---

List of Figures.....	ii
1.0 Introduction.....	1-1
2.0 Site Description and Background .....	2-1
2.1 Site Description.....	2-1
2.2 Results of Investigations .....	2-1
2.3 Proposed Excavation .....	2-2
2.4 Health and Safety .....	2-3
3.0 Site Preparation.....	3-1
3.1 Mobilization .....	3-1
3.2 Decontamination Facilities .....	3-1
3.3 Site Management Activities.....	3-2
3.3.1 Site Security.....	3-2
3.3.2 Building Protection .....	3-2
3.3.3 Site Layout.....	3-2
3.3.4 Site Traffic.....	3-2
3.3.5 Air Monitoring.....	3-3
4.0 Remedial Action Work Tasks .....	4-1
4.1 Permitting.....	4-1
4.2 Documenting Existing Conditions .....	4-1
4.3 Utility Clearance.....	4-2
4.4 Excavating Contaminated Soil .....	4-2
4.5 Backfilling/Soil Compaction.....	4-2
4.6 Excavation of Contaminated Material Adjacent to Structures .....	4-2
4.7 Site Survey.....	4-3
4.8 Site Restoration .....	4-3
4.9 Transporting and Disposing of Excavated Soil.....	4-3
4.10 Temporary Facility Removal .....	4-3
4.11 Decontamination of Equipment.....	4-4
4.12 Documenting of Postconstruction Conditions.....	4-4
4.13 Demobilization .....	4-4
4.14 Post Construction Submittals .....	4-4
4.15 Schedule.....	4-5
5.0 Environmental Protection Plan .....	5-1
5.1 Conformance with Laws, Regulations, and Permits .....	5-1
5.2 Protection of Air Resources .....	5-1
5.2.1 Air Monitoring.....	5-1
5.2.2 Dust Control.....	5-1
5.2.3 Burning .....	5-2
5.2.4 Noise.....	5-2

## **Table of Contents (continued)**

---

5.3	Protection of Surface and Groundwater Resources .....	5-2
5.4	Protection of Land Resources .....	5-3
5.4.1	Landscape Protection .....	5-3
5.4.2	Historical and Archeological Finds .....	5-3
5.5	Runoff, Soil Erosion, and Sediment Control .....	5-3
5.6	Post Construction Cleanup .....	5-3
6.0	References .....	6-1

## **List of Figures**

---

Figure 1	Site Location Map
Figure 2	Analytical Results – Buildings 66 and 111
Figure 3	Building 66 Excavation Plan
Figure 4	Building 66 Utility Map
Figure 5	Building 66 Excavation Section

## Acronyms and Abbreviations

---

BAAQMD	Bay Area Air Quality Management District
bgs	below ground surface
CSO	Caretaker Site Office
DHS	Department of Health Services
DO	delivery order
EPP	Environmental Protection Plan
FSP	Field Sampling Plan
ft	foot (feet)
g/m <sup>3</sup>	gram(s) per cubic meter
HDPE	high-density polyethylene
HUD	Department of Housing and Urban Development
IT	IT Corporation
LBP	lead-based paint
mg/kg	milligrams per kilogram
mg/L	milligram(s) per liter
MLLW	mean low low water
NAVSTA TI	Naval Station Treasure Island
OSHA	Occupational Safety and Health Administration
ppm	parts per million
RCRA	Resource Conservation and Recovery Act
ROICC	Resident Officer in Charge of Construction
SHSP	Site Health and Safety Plan
SSPORTS	Superintendent of Shipbuilding, Portsmouth, Virginia
STLC	Soluble Threshold Limit Concentration
TI	Treasure Island
TIDA	Treasure Island Development Authority
TTLIC	Total Threshold Limit Concentration
USA	Underground Service Alert
YBI	Yerba Buena Island

## 1.0 Introduction

---

This Work Plan details IT Corporation's (IT) proposed steps to remove lead-contaminated soil around the perimeter of Building 66 on Yerba Buena Island (YBI), Naval Station Treasure Island (NAVSTA TI), San Francisco, California. Buildings 66 and 111 have both been leased to the Treasure Island Development Authority (TIDA); however, occupancy of these buildings is postponed until all lead hazards have been identified and abated. Lead abatement of the interior and exterior surfaces has been completed at both buildings.

IT performed soil characterization sampling for lead around the perimeters of Building 66 and Building 111 on YBI in March 2001 to identify the need for lead abatement in soil. Results of analyses of samples taken around Building 66 indicated areas that warrant further remediation. Results of analyses of samples taken around Building 111 indicate no further lead-soil remediation is necessary.

Lead-contaminated soil excavation activities will be conducted under Environmental Remedial Action Contract No. N626474-93-D-2151, Delivery Order (DO) 130, for the Department of the Navy, Southwest Division, Naval Facilities Engineering Command, Environmental Division.

The purpose of this Work Plan is to describe the preparations, work sequence, and general procedures necessary to remove and dispose of lead-contaminated soil and to backfill and restore the site. Confirmation samples will be collected by IT to verify that lead-contaminated soil has been removed in accordance with the scope of this investigation (see the attached Field Sampling Plan (FSP) for details). This Work Plan also presents an Environmental Protection Plan (EPP), Section 5.0, which outlines the procedures that IT will use for protection of environmental resources during construction. All Building 66 Lead Excavation activities will be performed in accordance with IT's *Contractor Quality Control Plan, Characterization and Abatement of Lead in Soil* (IT2001a) and *Site Health and Safety Plan, Lead Based Paint and Lead Abatement* (IT2001b).

## **2.0 Site Description and Background**

---

This section describes the site containing Buildings 66 and 111, the results of previous investigations at each building, proposed lead-contaminated soil excavation activities, and health and safety procedures for the proposed activity.

### **2.1 Site Description**

As shown on Figure 1, "Site Location Map," Buildings 66 and 111 are located on YBI in the San Francisco Bay, midway between San Francisco and Oakland, California. YBI is joined by a causeway to the man-made Treasure Island (TI), and is accessed via the San Francisco–Oakland Bay Bridge. The terrain surrounding both buildings is steep; vegetation around the buildings consists mainly of ivy interspersed with grass and weeds.

Lead paint abatement of the interior and exterior surfaces of both buildings has been completed. Some perimeter soil lead abatement at Buildings 66 and 111 was conducted in 1999 by the Superintendent of Shipbuilding, Portsmouth, Virginia (SSPORTS)—Vallejo Detachment.

### **2.2 Results of Investigations**

March 2001 sampling by IT of shallow soils around the Building 111 perimeter identified no concentrations of lead in soil above the action level of 400 parts per million (ppm). The highest concentration of lead detected in Building 111 perimeter soils was 180 ppm; therefore, no lead-contaminated soil excavation activities are deemed necessary for Building 111. The locations of samples collected at Building 111 are shown on Figure 2, "Analytical Results – Buildings 66 and 111."

March 2001 sampling by IT of shallow soils around the Building 66 perimeter identified no concentrations of lead in soil above the action level of 400 ppm. While no individual composite sample location exceeded the lead action level, three adjacent composite sample locations are a cause for concern (sample locations 66-6, 66-7, and 66-9). High lead concentrations were discovered at these locations in soils sampled at the soil surface, just below the turf, and in soil sampled at about 1 foot (ft) below ground surface (bgs). The lead concentrations in these composited samples varied from 270 ppm to 710 ppm.

Since these concentrations were detected in composite samples, it is likely that one or more of the individual elements making up several composite samples have lead concentrations higher than 1,000 ppm. For this reason, the soil in these three locations adjacent to Building 66 will be

excavated for off-site disposal. The locations of samples collected at Building 66 are shown on Figure 2, "Analytical Results – Buildings 66 and 111."

### **2.3 Proposed Excavation**

The action level for lead in soil at this site is 400 milligrams per kilogram (mg/kg). Based on the results of investigations to date and the cleanup criteria, Lead Based Paint (LBP)-contaminated soil will be removed in the area near Building 66 down to a depth of 2 ft bgs, shown on Figure 3, "Building 66 Excavation Plan." Removal activities will include excavation, backfilling, site restoration, and transportation and disposal of waste. The soil investigation data are not considered definitive, and the limits of the excavation may change from those shown on Figure 3. Excavations in areas other than those shown on Figure 3 may extend from 1 to 2 ft bgs, depending on the depth of contamination.

Due to the small area of contamination and the slope of the excavation area near Building 66, soil will be excavated using a backhoe and a small excavator. The excavation is not expected to uncover underground utilities due to the shallow depth of the excavation. Should critical underground utilities, such as electrical, gas, and water lines, be encountered, soil will be removed by hand-digging as required by IT Health and Safety Procedure HS307.

Material will be excavated using loader buckets and transferred directly to bins. The ground around the bins will be protected with 6-mil high-density polyethylene (HDPE) plastic sheeting.

After excavation, confirmation soil samples will be collected and analyzed for lead. If confirmation samples indicate attainment of the cleanup criteria, the excavation will be promptly backfilled. Backfill will be compacted using either a hand-compactor or a backhoe with a compaction attachment.

Excavated material will be loaded into bins for temporary storage. Bins will be loaded onto roll-off bin trucks for proper transport and disposal off-island. Soil material with lead concentrations exceeding 50 mg/kg according to California's Total Threshold Limit Concentration (TTLC) analysis and/or exceeding 5 milligrams per liter (mg/L) of lead according to the California's Soluble Threshold Limit Concentration (STLC) analysis will be disposed of as non-Resource Conservation and Recovery Act (RCRA) hazardous waste at a Class 1 landfill. Also, the soil must not otherwise be characterized as hazardous waste under the federal RCRA statutes.

Soil material with lead concentrations below 50 mg/kg according to the TTLC analysis and below 5 mg/kg according to the STLC analysis will be disposed of at a Class 2 landfill as non-RCRA designated waste. The extent of the excavation may be modified in the field based on the results of confirmation samples.

## **2.4 Health and Safety**

During the course of the construction activity, IT will adhere to the requirements of the project Site Health and Safety Plan (SHSP) for protection of workers and nearby residents. Dust monitoring will be performed in accordance with the SHSP.

## **3.0 Site Preparation**

---

Site preparation work shall consist of the following tasks:

- Mobilizing personnel and equipment to the project location
- Setting up temporary support facilities
- Implementing preparatory measures with respect to site health and safety, construction quality control, environmental protection, waste management procedures, and site security controls
- Delineating work zones, the decontamination area, and staging and storage areas
- Conducting utility clearance

### **3.1 Mobilization**

Personnel, construction equipment, testing equipment, and supplies will be mobilized to the site. Mobilization activities will include transportation of personnel and freight-shipment of construction equipment and bulk supplies. Major construction equipment anticipated to be required include the following:

- Backhoe(s)
- Excavator(s)
- Wheeled loader(s)
- Backhoe mounted compactor(s)
- Hand compactor(s)
- Water truck(s) or trailer(s)
- Roll-off bin truck(s)
- Pickup truck(s)
- Pressure washer (and other decontamination equipment)

Additional construction equipment and hand tools may be utilized as needed.

### **3.2 Decontamination Facilities**

Equipment and personnel decontamination facilities will be set up at the excavation site. The personnel decontamination station will be set up at the contaminant reduction zone and is discussed in the SHSP. A dry-broom equipment decontamination station will be set up at the site egress. The decontamination station will be lined with 10-mil polyethylene plastic sheeting to

collect any soil brushed from departing vehicles. The sheeting will be retrieved at the end of each day and during times of rainfall to prevent runoff from contaminating storm drains.

Work will be limited during periods of rainfall to prevent mud generation and the necessity for pressure washing of vehicles.

### **3.3 Site Management Activities**

Site management activities include managing site security, protection of area residents, utility clearance, site layout, staging areas, traffic, and air monitoring.

#### **3.3.1 Site Security**

Building 66 is presently occupied by the John Stewart Company, a property management company. Notification will be made to the John Stewart Construction Manager prior to initiating excavation work at Building 66. Building 66 is also located near occupied housing, and the Tower Park playground is immediately adjacent to Building 66 on the northwest side. Although fencing surrounds the playground, caution tape will be used to cordon off the entrance gate and warning signs will be placed at the playground during excavation activities.

The entire excavation work area including the excavation footprints, soil bins, and staging areas will be surrounded by barricades and caution tape. Warning signs will be posted at the entrances to the work area.

#### **3.3.2 Building Protection**

To control dust generated during construction water will be sprayed on excavation areas. No additional efforts will be needed for the protection of Building 66.

#### **3.3.3 Site Layout**

Appropriate work zones, which will include the excavation footprint, exclusion zones, and contamination reduction zones, will be established at the project site by the Site Superintendent. A site exclusion zone will be installed around the immediate vicinity of any ongoing soil excavation. Exclusion zones will be established around localized excavation efforts and will move as the excavation and backfilling activities progress to allow for efficient operation of workers, equipment, and materials. More detailed descriptions of the exclusion and contamination reduction zones are presented in the SHSP.

#### **3.3.4 Site Traffic**

The down-slope side of the construction area is bounded by a one-way residential exit road. Construction equipment will operate from this road, which will require excluding pedestrians

and residential vehicles from the road during construction activities. Therefore, the road will be blocked with one or more construction barricades at the uphill access to the road.

A sign will be posted that indicates the road is temporarily closed due to construction and local police and fire departments will be notified. The road closing will force residents to exit the area by proceeding the wrong way down the little-used entrance road. Additional signs will be posted at either end of the effected entrance road warning drivers of two-way traffic ahead and to reduce speeds.

Vehicles leaving YBI for the East Bay and beyond must negotiate a stop sign and merge lane at the entrance onto the Bay Bridge. During evening commute hours, backups will likely occur behind trucks waiting to enter onto the Bay Bridge. To minimize inconvenience to island residents, outbound trucks will coordinate departures and will not be allowed to queue up while waiting to enter onto the Bay Bridge.

### **3.3.5 Air Monitoring**

Air monitoring for dust will be conducted within the work area at each site of excavation activities and on the perimeter fenceline as well. Details of the air monitoring are provided in the SHSP.

## **4.0 Remedial Action Work Tasks**

---

The scope of work includes the following tasks:

- Permitting
- Documenting Existing Conditions
- Utility Clearance
- Excavating Contaminated Soil
- Backfilling/Soil Compaction
- Excavation of Contaminated Material Adjacent to Structures
- Site Survey
- Site Restoration
- Transporting and Disposing of Excavated Soil
- Temporary Facility Removal
- Decontamination of Equipment
- Documenting of Postconstruction Conditions
- Demobilization

### **4.1 Permitting**

Work at the site will adhere to California Department of Health Services (DHS) and Housing and Urban Development (HUD) regulations. An air emissions permit from the Bay Area Air Quality Management District (BAAQMD) is not required for the small amount of dust expected to be generated.

Prior to mobilizing on site, IT will obtain excavation work authorization permits from both the San Francisco Utilities Manager on TI and California Occupational Safety and Health Administration (OSHA). This permit alerts TI employees and contractors of the construction location and timetable so that employees can schedule work activities away from the construction site. Underground Service Alert (USA) will be notified a minimum of 2 days prior to excavation so that utility companies can mark underground conduits and pipes.

### **4.2 Documenting Existing Conditions**

Existing site conditions have been documented via photographs and verbal descriptions in the EPP. The location and condition of stairways, walkways, and retaining walls have been documented in the event that they need to be repaired or replaced after the excavation and backfill is complete.

### **4.3 Utility Clearance**

The approximate locations of utilities and buried pipelines are available from the City of San Francisco/TI utilities manager and are shown on Figure 4, "Building 66-Utility Map." The locations of pipelines and underground utilities in the vicinity of the excavation will be identified by an independent geophysical survey.

### **4.4 Excavating Contaminated Soil**

This excavation will remove soil within the limits shown on Figure 3. The excavation limits were developed based on interpretations of analytical data from the March 2001 samples. The excavation is anticipated to generate about 100 cubic yards of waste soil.

IT will use the results of the confirmation sampling to direct any expansion of the excavation. If results indicate nonattainment of the cleanup criteria, the excavation will be enlarged.

Soil will be removed by one or more hydraulic excavators or backhoes, or in tight quarters by hand. Excavation details and typical sections are shown on Figure 5, "Building 66 Excavation Section." A licensed professional engineer will periodically inspect the excavation side slopes during the removal process and consult with the excavation crews about side slope concerns.

### **4.5 Backfilling/Soil Compaction**

The excavation will be backfilled with uncontaminated native soil or clean imported fill. Along alignments of sanitary sewers and storm drains, a minimum of 1 foot of backfill will be placed above the pipes to protect the pipes from construction equipment traffic. Clean backfill material will be at least as structurally competent as the original soil. The backfill will be on the sloping excavation in up to 8-inch lifts using an excavator or backhoe. Soil compaction shall be performed using hand-guided or backhoe-mounted compaction equipment. The backfill will be compacted by making a minimum of two passes with compaction equipment over the entire surface of each lift of backfill. Because the soils afford no structural benefit, no numerical compaction criteria are required. The top 2-inch lift of backfill will be clean topsoil material and will be graded but not compacted in preparation for revegetation.

### **4.6 Excavation of Contaminated Material Adjacent to Structures**

On the north side of Building 66, the pavement is supported by the soil that will be excavated. Since the soil is being excavated to 2 ft bgs, sloping may be necessary to maintain the structural stability of the pavement. The slope will be initially excavated at a ratio of 0.5:1. Excavations will not be sloped where the excavation depth does not extend past 1 ft bgs. If soils below the pavement become loose and start to spall, the slope will be decreased.

#### **4.7 Site Survey**

The lateral excavation limits will be measured for inclusion with as-built drawings in the final report. Depth measurements will be made in comparison to undisturbed ground at the nearby edges of the excavation. Excavation limits will be field measured by IT personnel with accuracy of  $\pm 0.2$  feet vertical (with a hand-held level or laser level) and  $\pm 2$  feet horizontal (by pacing) for purposes of inclusion with the as-built drawings. When applicable, underground utilities that are exposed during excavation will be located to horizontal accuracies of  $\pm 0.2$  feet (by tape measure).

#### **4.8 Site Restoration**

Site restoration activities will include grading the backfilled areas to prevent ponding and other drainage problems, cleaning areas used for temporary facilities, and if necessary implementing erosion control measures. Slopes on either side of Building 66 will be filled with 2 inches of topsoil and hydroseeded. Lawn maintenance responsibilities, including watering, will be left to the Navy Caretaker Site Office (CSO) or to the City's landscape maintenance contractor.

#### **4.9 Transporting and Disposing of Excavated Soil**

With the results of waste characterization analyses, disposal will be coordinated with both a Class 1 and a Class 2 disposal facility, which will issue IT letters of waste acceptance. With waste acceptance, contaminated soil will be loaded into bins and onto roll-off bin trucks for off-site disposal at the approved disposal facility.

A trucking and disposal coordinator will receive and dispatch trucks and manage waste shipment manifesting. The coordinator will direct and track shipments (i.e., the Class 1 and Class 2 disposal facilities), tonnage, and make necessary daily reports to the Construction Quality Control Manager.

#### **4.10 Temporary Facility Removal**

Temporary facilities, including staging and stockpile areas, fencing, and temporary utilities, will be removed from the work area upon completion of field activities. The immediate work area will be inspected by an IT field representative to verify that all project-related equipment, trash, and debris have been collected and properly disposed of. As applicable, utility disconnects will be coordinated with the CSO, including compliance with utility lockout/tag-out procedures.

#### **4.11 Decontamination of Equipment**

All equipment and vehicles that are in contact with contaminated soil or liquids will be decontaminated in the equipment decontamination facility prior to demobilization from NAVSTA TI. Dry brushing or wiping will be the primary decontamination methods used to minimize the volume of rinsate water requiring treatment or disposal. If necessary during rainfall or when heavier contamination is present, equipment and vehicles (especially tires) will be washed with a pressure washer. The equipment and vehicles will be decontaminated over a lined area. Decontamination will proceed until soil and residues are removed. Rinsate from the decontamination activities shall be collected and used to control dust on excavation stockpiles. Any remnant rinsate will be collected, characterized, and properly disposed of.

#### **4.12 Documenting of Postconstruction Conditions**

Prior to demobilizing from the work site, IT and the Navy will survey areas adjacent to the excavations to assess any indications of structural distress possibly caused by the work. The pavement will be observed for evidence of structural distress and cracks as compared to observations made prior to construction. Any recent indications of distress will be repaired to preconstruction conditions. IT will take documentation photographs of as-built conditions of the site prior to demobilizing.

#### **4.13 Demobilization**

Upon completion of the site work, including final decontamination, heavy equipment will be transported from the site, and other field supplies will be returned to IT's equipment warehouse.

#### **4.14 Postconstruction Submittals**

IT will submit a Draft Remedial Activity Report to the Navy for comment upon completion of site work. This report will summarize the work performed and provide site investigation results, sample results, disposal records, profiles, manifests, volume calculations, photographs, and other documents related to the removal action activities. An as-built drawing will also be prepared to document the boundaries and grades of the final excavation.

Once comments have been received from the Navy, a Draft Final Remedial Activity Report will be produced and distributed for regulatory agency comments. Based on resolution of any agency comments, a Final Remedial Activity Summary Report will be prepared and submitted.

#### **4.15 Schedule**

Excavation activities at Building 66 will begin after acceptance of this Work Plan by the Navy and regulatory agencies, following response to comments.

On-site work hours will be limited to Monday through Friday, 8:00 a.m. to 6:30 p.m. These hours do not pertain to off-site activities such as office work, mobile lab work, morning safety meetings, or off-hours trucking and disposal. With agreement from the Navy and proper notification to the residents, workdays may be extended into the weekend.

Excavation, backfilling, collection of confirmation samples, and trucking and disposal of contaminated soil are scheduled for within about two weeks of notice to proceed. Site restoration activities, including site surveying, debris disposal, and revegetation, are scheduled for within about 3 weeks of notice to proceed. Demobilization is scheduled for within about 3 weeks of notice to proceed.

## **5.0 Environmental Protection Plan**

---

This EPP was specifically developed to meet the requirements of performing the work described in this Work Plan in a manner that protects the environment during the contract period. Environmental protection, for the purpose of this project, is defined as maintaining the environment in its natural state and the enhancement and/or restoration of the appearance of disturbed sites after construction is completed.

To accomplish environmental protection, consideration will be given to air, water, and land resources including management of visual aesthetics; natural, historical, and archeological resources; noise; solid waste; and other pollutants. The IT Project Manager will implement the EPP so that all work is performed in a manner that minimizes the pollution of air, water, and land resources and complies with federal, state, and local regulations.

### **5.1 Conformance with Laws, Regulations, and Permits**

The IT Project Manager will verify that all work is performed in accordance with applicable and relevant federal, state, or local environmental regulations. All hazardous wastes will be characterized and disposed of in accordance with the RCRA.

### **5.2 Protection of Air Resources**

Construction activities associated with this project will be conducted in a manner that minimizes the release of airborne particulates within or outside the project boundary. Dust control will be practiced according to the requirements described in Section 5.2.2. Offsite additional dust emissions will be limited to less than 1 gram per cubic meter ( $\text{g}/\text{m}^3$ ), BAAQMD Regulation 11, Rule 1, by suppressing wind borne dust using water spray.

#### **5.2.1 Air Monitoring**

Air monitoring will be performed to protect site workers and nearby residents. The attached SHSP provides air monitoring details.

#### **5.2.2 Dust Control**

Construction activities associated with this project may result in release of respirable dust particulates. The work procedures will be designed to control, prevent, and minimize these releases. Dust suppression will be implemented at the direction of the Site Superintendent to control observed dust emissions or as a preventative measure based on observation of site and work conditions, as well as ambient weather conditions.

Fugitive dust emissions generated during excavation or demolition activities will be controlled by spraying water from a water truck, water trailer, or nearby fire hydrant. Spraying will be conducted as needed on the excavation areas during the day. At the end of each workday, the work areas will be swept or washed as appropriate to minimize the potential for fugitive dust during the evening hours. Control measures will be implemented for dust particles from all construction activities during normal working hours. Care will be taken to control overspraying and to minimize discharge of dust control spray water to the storm drain system.

### **5.2.3 Burning**

No hot work permits are anticipated for this work; however, any work requiring an open flame or posing a potential fire hazard will be coordinated with the fire department(s) as detailed in the SHSP.

### **5.2.4 Noise**

Noise receptors are not anticipated at this site. IT will comply with OSHA and applicable local noise standards. Equipment operators, contractors, and other personnel will be required to wear appropriate hearing protection when necessary as detailed in the SHSP.

## **5.3 Protection of Surface and Groundwater Resources**

Construction activities associated with this project will be conducted so as to prevent the discharge of pollutants and to minimize the impact to water resources within and outside the project boundaries.

Project activities will be conducted in compliance with all appropriate federal, state, and local laws regarding potential and actual contamination of surface and groundwater. In addition, activities will be performed in a manner so as to prevent the discharge of pollutants into any existing waterways.

No bulk liquids storage is anticipated as part of this project. As necessary, excavation and stockpile areas will be bermed and/or ditched as needed to prevent surface runoff. Runoff from the work area will be managed to minimize erosion and siltation damage through the use of flow control structures constructed of straw bales, sandbags, or other appropriate materials. Storm drain inlets will be covered to prevent excavated soil from inadvertently being introduced to the storm drain system. The excavation will be dewatered of surface inflow as needed. Rinsate water collected in the sump of the equipment decontamination facility will be pumped to a tanker truck and used for dust control.

If air monitoring indicates unhealthy levels of lead-contaminated dust and mist in areas where rinsate water is being used for spray fogging, the practice will be discontinued and the Navy will be consulted regarding a change in scope for disposal of rinsate water.

#### **5.4 Protection of Land Resources**

Construction activities associated with this project will be conducted in a manner that minimizes the impact to land resources within and outside the project boundaries. Project activities will be coordinated with the CSO and the Resident Officer in Charge of Construction (ROICC) to minimize impact to land resources. All areas disturbed during construction will be restored to pre construction conditions as detailed within the Work Plan.

##### **5.4.1 Landscape Protection**

IT will coordinate with the CSO and the ROICC prior to remediation activities at the site to identify any land resources to be preserved within the work area. IT personnel will mark the areas to be preserved and provide fencing, barriers, or other physical protection. IT will make a reasonable effort to minimize damage of land resources within and outside the project work area and will repair any inadvertent damage to land resources.

##### **5.4.2 Historical and Archeological Finds**

IT is not aware of any structure(s) and/or artifact(s) of historical importance within the work area. Items discovered during construction activities that could be of historical or archeological interest will be carefully preserved in an undisturbed state. The Site Superintendent will immediately report any findings to the CSO and the ROICC so that the proper authorities may be notified.

#### **5.5 Runoff, Soil Erosion, and Sediment Control**

In accordance with the Work Plan, any excavated soil will be placed in covered roll-off bins. As necessary to protect work features from runoff, temporary diversion ditches or berms will be installed as required to control runoff and sediment migration. Backfill soil will be compacted and graded to minimize erosion. Erosion and sediment control measures, such as sediment traps or stabilized drainage ways, will be installed as needed and maintained throughout during the project.

#### **5.6 Post Construction Cleanup**

Upon completion and subject to input from the CSO and ROICC, IT will perform the final site cleanup and will leave the work site in a suitably restored condition.

## 6.0 References

---

IT Corporation, 2001a, *Contractor Quality Control Plan, Characterization and Abatement of Lead in Soil*, April 2001.

IT Corporation, 2001b, *Site Health and Safety Plan, Lead-Based Paint and Lead in Soil Abatement*, April 2001.

## FIGURES

DRAWING NUMBER 775012-A6

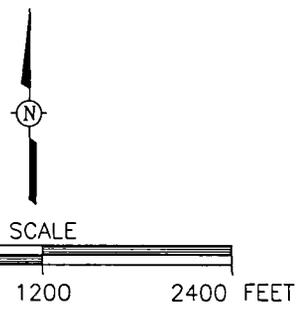
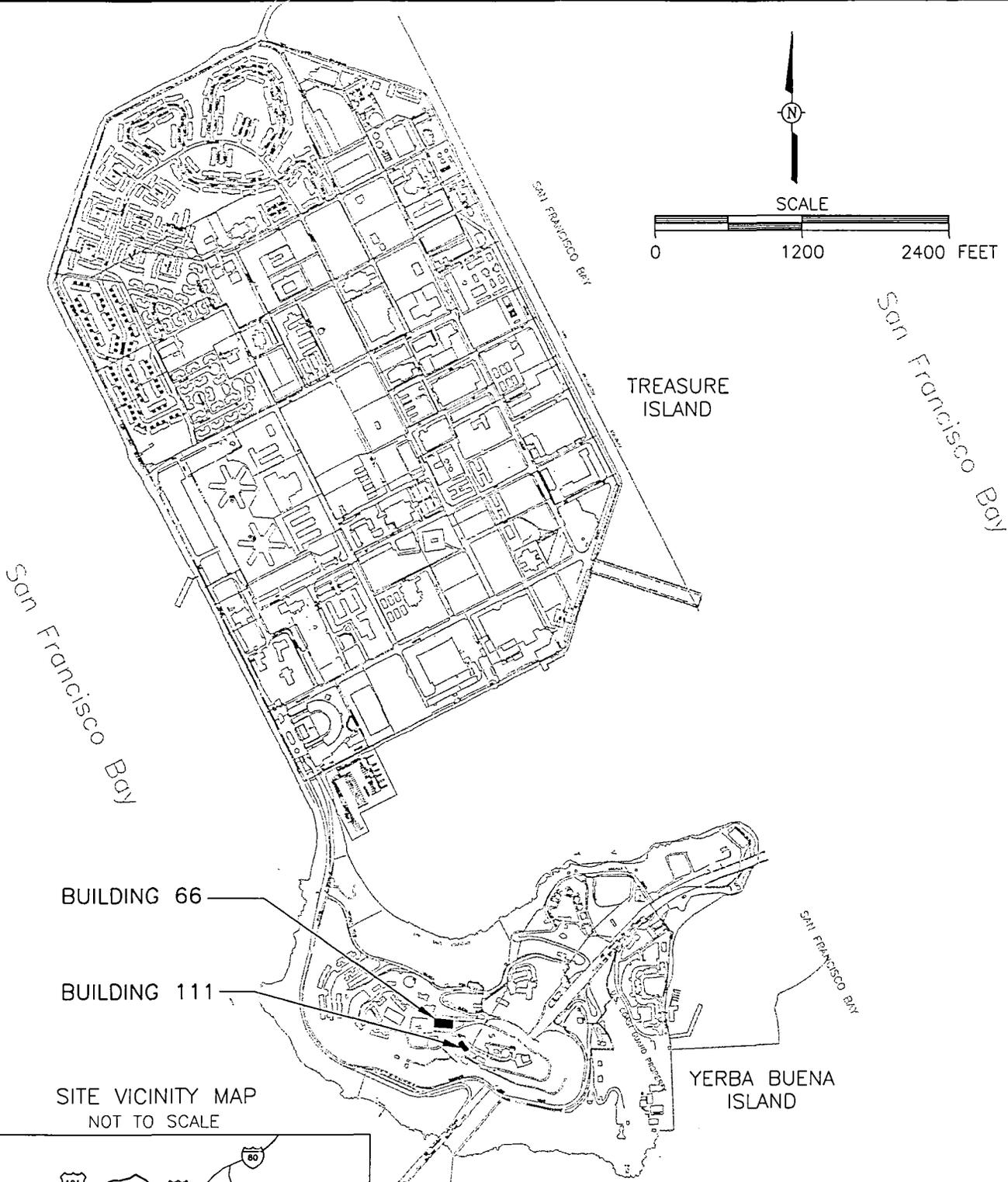
APPROVED BY DEB 4/30/01

CHECKED BY T.A. 4/30/01

DRAWN BY S.J.Z. 4/12/01

OFFICE Concord

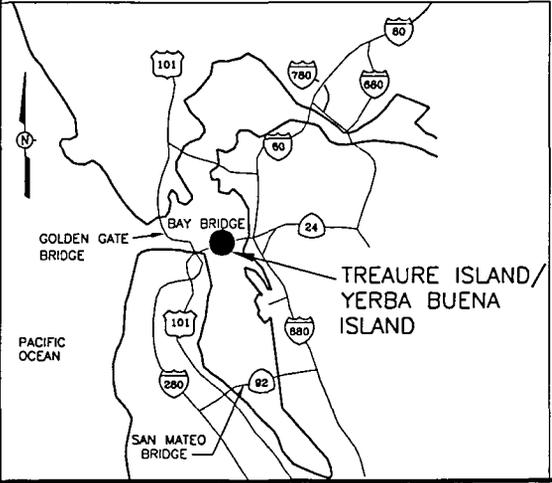
X-REF ---  
IMAGE ---



BUILDING 66

BUILDING 111

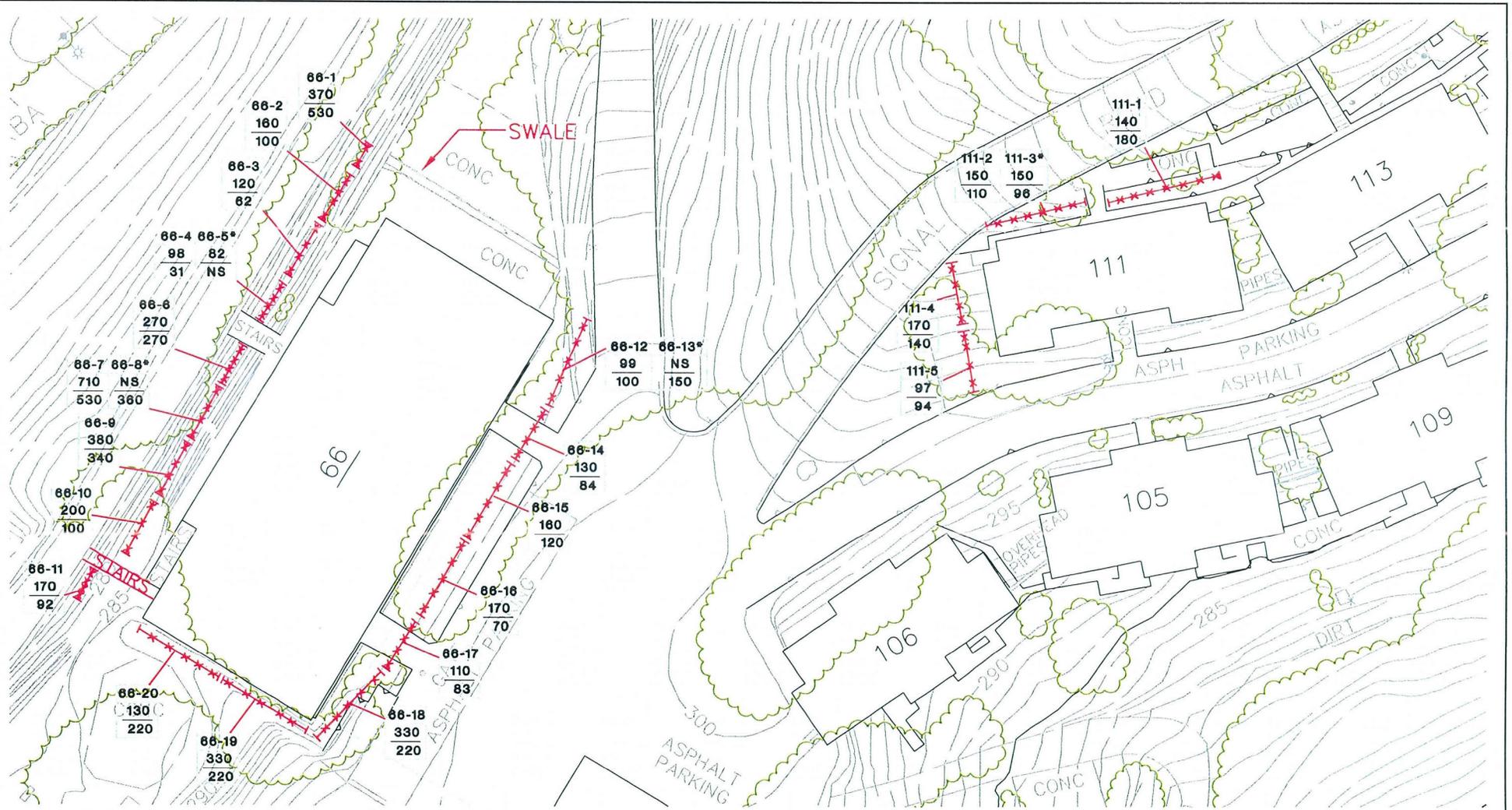
SITE VICINITY MAP  
NOT TO SCALE



DEPARTMENT OF THE NAVY  
SOUTHWEST DIVISION  
NAVAL FACILITIES ENGINEERING COMMAND  
SAN DIEGO, CALIFORNIA

FIGURE 1  
SITE LOCATION MAP  
NAVAL STATION TREASURE ISLAND  
YERBA BUENA ISLAND

OFFICE: BOTHELL  
 DRAWN BY: JA  
 CHECKED BY: PZ  
 APPROVED BY: S/V/a  
 DRAWING NUMBER: 775012-B4



LEGEND:

XXXXX Composite Sample Location (Showing Individual Composite Elements)

- 66-14** Sample ID
- 130** Lead in mg/kg @ 3" bgs
- 84** Lead in mg/kg @ 12" bgs
- \* Duplicate Sample
- NS** Not Sampled



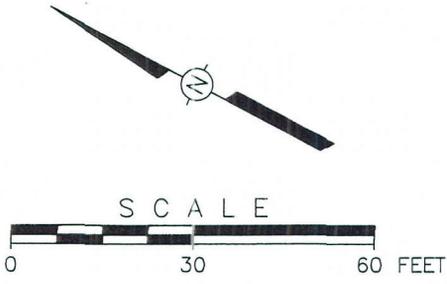
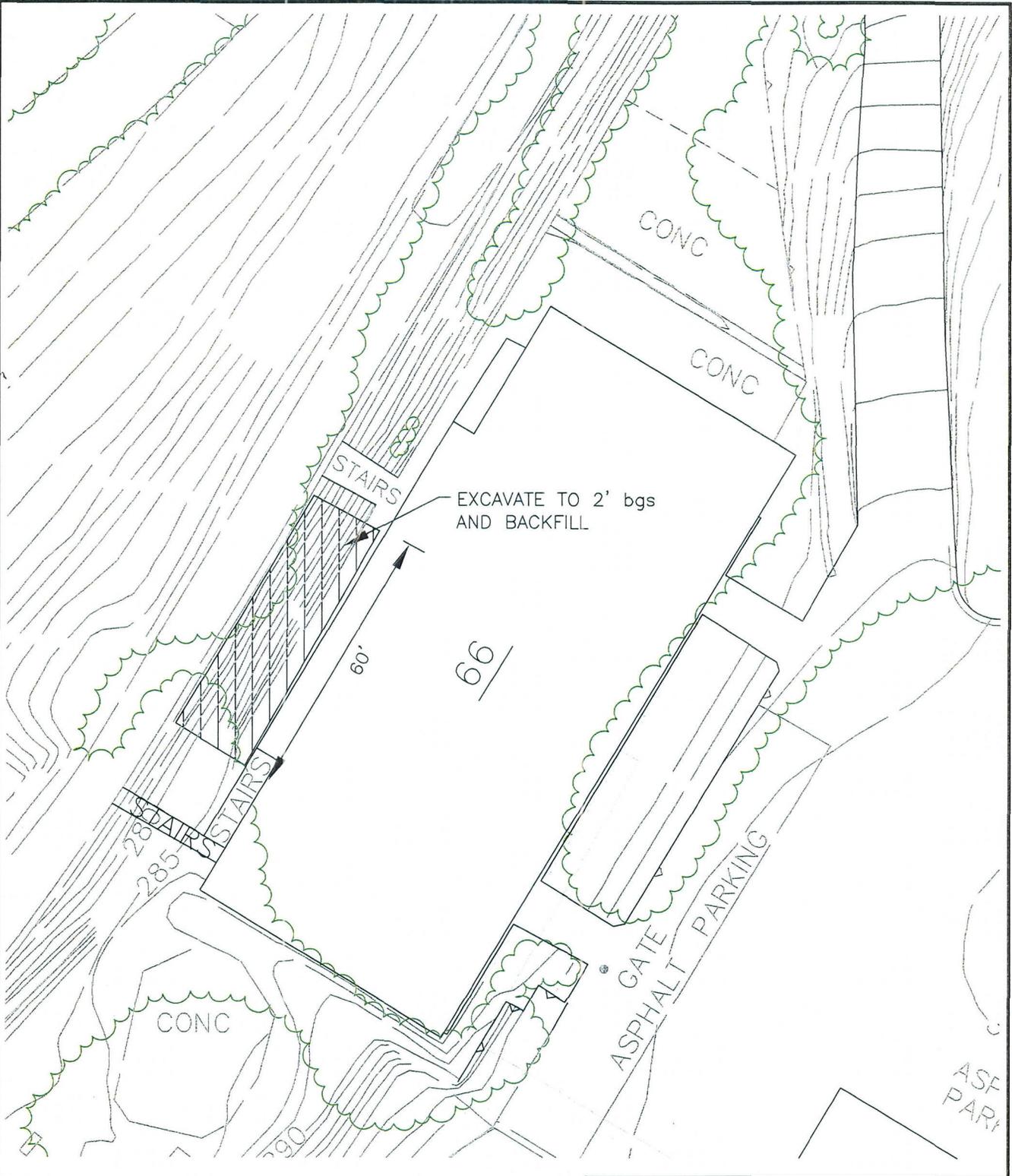
BASIS: Dry (Lead Concentrations are corrected for moisture content)



DEPARTMENT OF THE NAVY  
 SOUTHWEST DIVISION  
 ENGINEERING FIELD ACTIVITIES COMMAND  
 SAN DIEGO, CALIFORNIA

FIGURE 2  
**ANALYTICAL RESULTS - BUILDINGS 66 AND 111**  
 NAVAL STATION TREASURE ISLAND  
 YERBA BUENA ISLAND

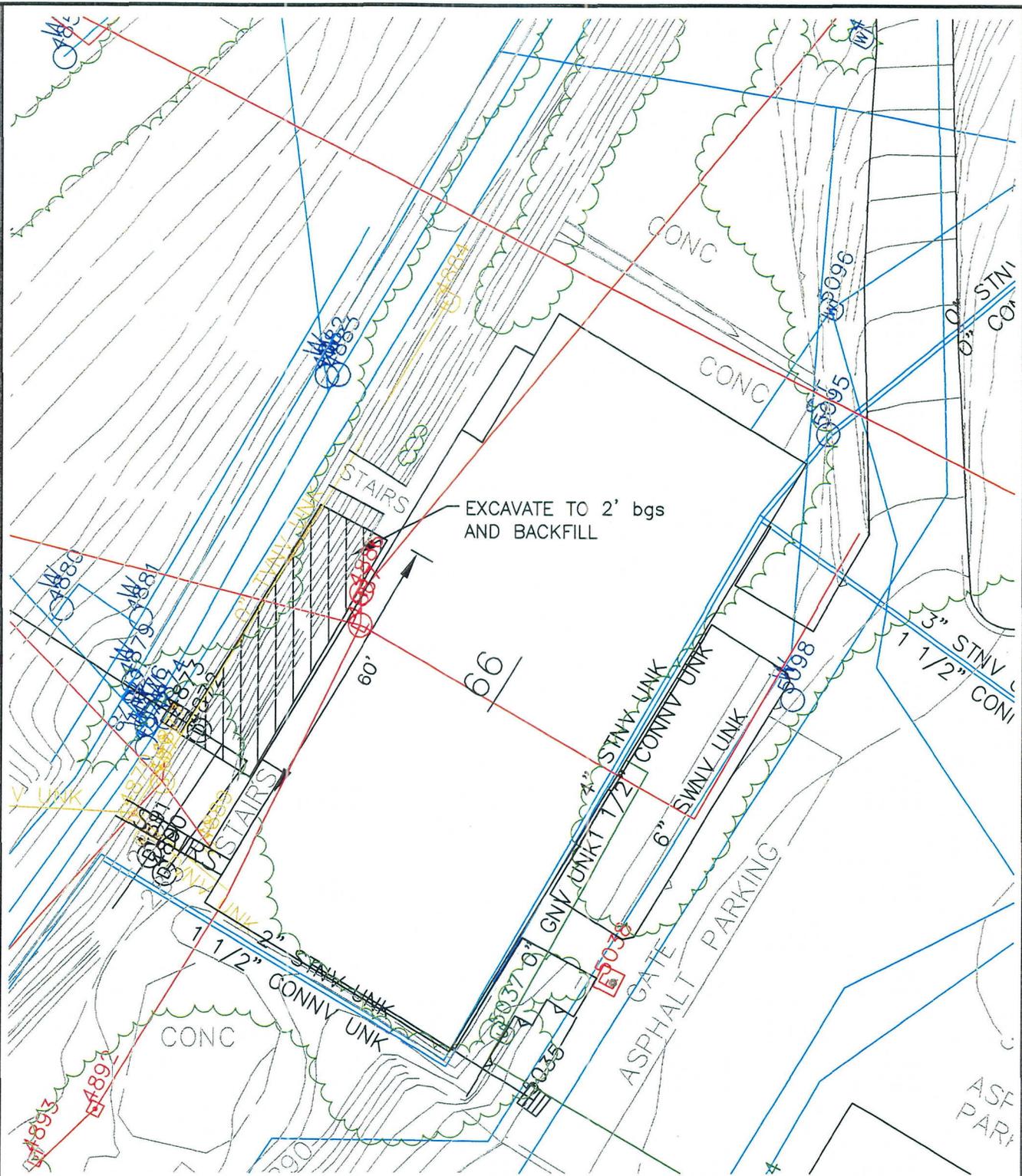
OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING
BOTHELL	SJZ	PJM	8/14/01	NUMBER
	4/12/01	8-14-01		775012-A10



 <b>ITT CORPORATION</b>	DEPARTMENT OF THE NAVY SOUTHWEST DIVISION ENGINEERING FIELD ACTIVITIES COMMAND SAN DIEGO, CALIFORNIA
--	---

FIGURE 3  
 BUILDING 66 EXCAVATION PLAN  
 NAVAL STATION TREASURE ISLAND  
 YERBA BUENA ISLAND

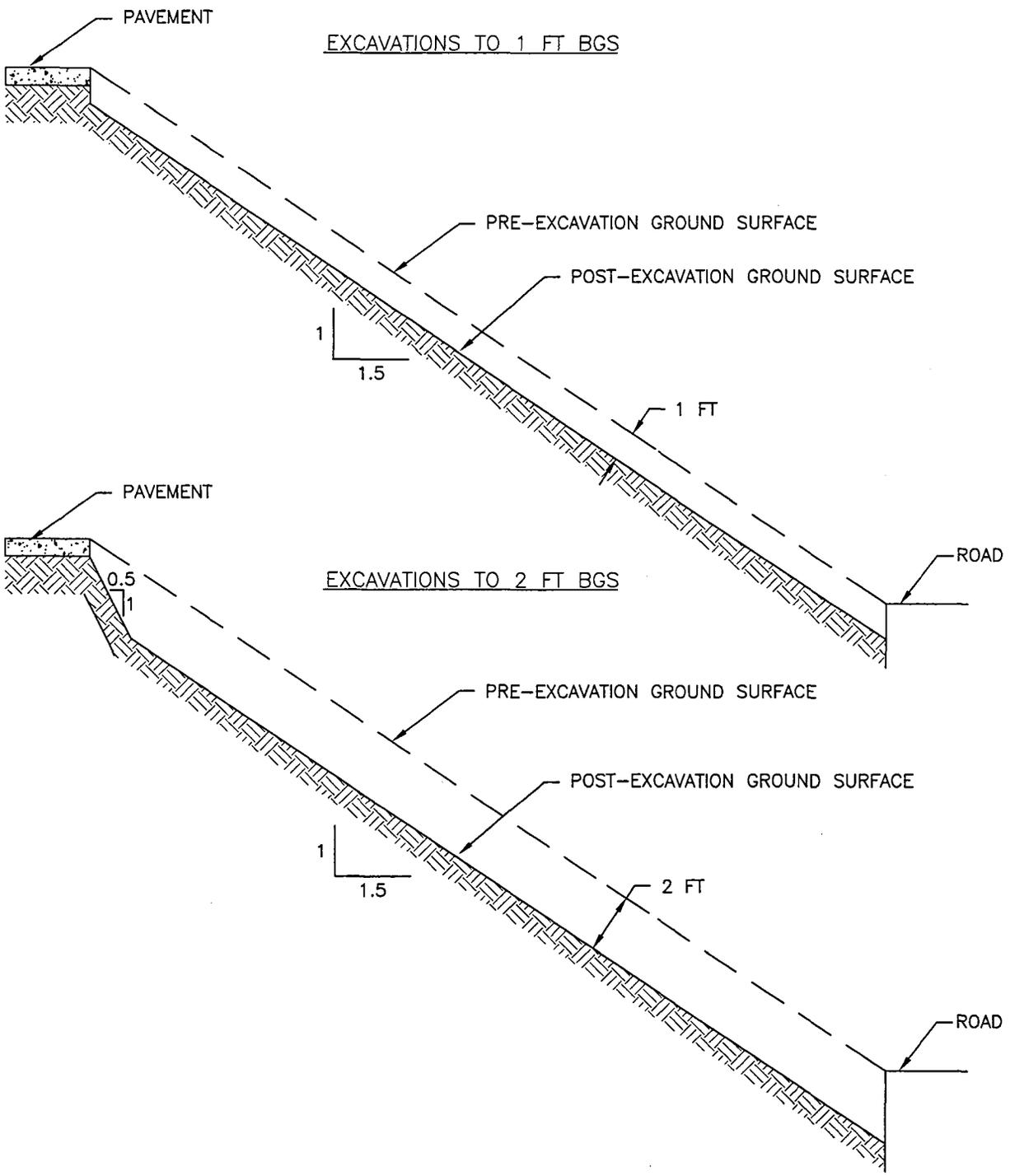
OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
BOTHELL	SJZ	DM	8/14/01	775012-A11
	4/12/01	8-14-01	8/14/01	



DEPARTMENT OF THE NAVY  
SOUTHWEST DIVISION  
ENGINEERING FIELD ACTIVITIES COMMAND  
SAN DIEGO, CALIFORNIA

FIGURE 4  
BUILDING 66 UTILITY MAP  
NAVAL STATION TREASURE ISLAND  
YERBA BUENA ISLAND

IMAGE	X-REF	OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
---	---	Concord	RB	04/12/01	8-14-01	775012-A9
					8/14/01	



DEPARTMENT OF THE NAVY  
 SOUTHWEST DIVISION  
 ENGINEERING FIELD ACTIVITIES COMMAND  
 SAN DIEGO, CALIFORNIA

FIGURE 5  
 BUILDING 66  
 EXCAVATION SECTION  
 NAVAL STATION TREASURE ISLAND  
 YERBA BUENA ISLAND