



**OPERATIONS AND MAINTENANCE PLAN  
VINCENT PARK  
MARINA BAY PROJECT  
RICHMOND, CALIFORNIA**

This plan has been prepared on behalf of Richmond Community Redevelopment Agency by PES Environmental, Inc. (PES) to describe inspection and maintenance of the surface cover located at Vincent Park, South Shore Areas of the Marina Bay Project in Richmond, California (Plate 1). Vincent Park is currently developed as a public park, with various ground cover including landscaped soil and hardscaped surfaces. Vincent Park is bounded on the north by Richmond Marina Bay, on the west by Ford Channel, on the east by Area V, an undeveloped parcel, and on the south by San Francisco Bay (Plate 2).

Vincent Park was constructed between October 1997 and April 1998. The Final Remedial Action Plan<sup>1</sup> submitted for the subject property included both in-situ encapsulation of contaminated soil and excavation of contaminated soil and encapsulation elsewhere within Vincent Park. Available documentation of implementation of the selected remedy was compiled in PES' Sampling and Analysis Plan<sup>2</sup>, prepared for the subject property. That report indicated that contaminated soil was likely encapsulated beneath a kidney-shaped geosynthetic clay liner (GCL) under a landscaped area as well as beneath a circular hardscaped structure, as shown on Plate 3. However, based on the lack of available documentation regarding the specific excavation and encapsulation activities, an investigation was subsequently performed to document the presence of at least 2 feet of clean fill across the subject property<sup>3</sup>. Based on the evidence indicating the presence of clean fill, the Department of Toxic Substances Control (DTSC) agreed to close the site and place a deed restriction on the entire property. The entire property encompasses an approximate area of 6 acres. Exhibit A to Covenant to Restrict Use of Property<sup>4</sup> provides a detailed description of the location of Vincent Park.

The goal of the inspection and maintenance activities is to maintain the integrity of the soil cover and hardscaped caps at Vincent Park. To accomplish this goal, this plan: (1) details the frequency and procedures for routine operation and maintenance; (2) documents reporting requirements; and (3) details the procedures to be implemented for non-routine operation and maintenance.

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<sup>1</sup> Harding Lawson Associates, 1993. *Final Remedial Action Plan, Marina Bay Development, Richmond, California*. June 25.

<sup>2</sup> PES Environmental, Inc., 2002. *Sampling and Analysis Plan, Post-Remedial Investigation, Vincent Park, South Shore Areas, Marina Bay Redevelopment, Richmond, California*. November 14.

<sup>3</sup> PES Environmental, Inc., 2006. *Post-Remedial Investigation Report, Vincent Park, South Shore Areas, Marina Bay Redevelopment, Richmond, California*. February 3.

<sup>4</sup> Covenant to Restrict Use of Property, Environmental Restriction, Vincent Park, Marina Bay Redevelopment, Richmond, California dated August 13, 2004.

## **ROUTINE INSPECTION AND MAINTENANCE PROCEDURES**

Annually, the site owner will complete inspection and maintenance activities during the month of February (unless an extension of time is obtained from DTSC or its successor). Inspection and maintenance procedures for the landscaped soil and hardscaped portions of Vincent Park are presented below.

### **Soil Cap**

The maintenance of the soil cap will proceed by the following guidelines:

- (1) The soil cap, with particular emphasis in the vicinity of the GCL, will be inspected by a California-registered civil engineer for evidence of wilted vegetation, barren areas, discoloration, and/or burrowing animals in the vegetation that might cause erosion of the soil. The vegetative cover must be maintained in order to preserve a minimum of 2 feet of soil with petroleum hydrocarbon and lead concentrations less than project cleanup goals. Areas with stressed vegetation and bare areas will be evaluated to determine the possible cause or causes. Field notes describing the observations made at the time of inspection will be prepared and will detail the vegetative cover; and
- (2) Areas where distressed vegetation is observed, if any, will be revegetated and/or fertilized within 30 days of the inspection.

### **Hardscaped Cap**

- (1) The hardscaped areas, including the concrete park features and asphalt-concrete paved parking area, will be inspected by a California-registered civil engineer for signs of cracking or other degradation which might compromise the integrity of the cap. Field notes describing the observations made at the time of inspection will be prepared and will detail the pavement conditions; and
- (2) Cracks or other degradation of the concrete and/or asphalt will be patched or otherwise repaired within 30 days of the inspection.

## **REPORTING**

### **Annual Reporting**

Annually, the site owner or its designee will submit a report to DTSC within 45 days of the inspection. The report will include the field inspection notes and a description of repairs for the soil and hardscaped surfaces.

### **Five-Year Reporting**

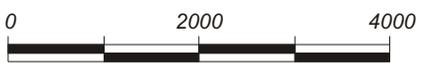
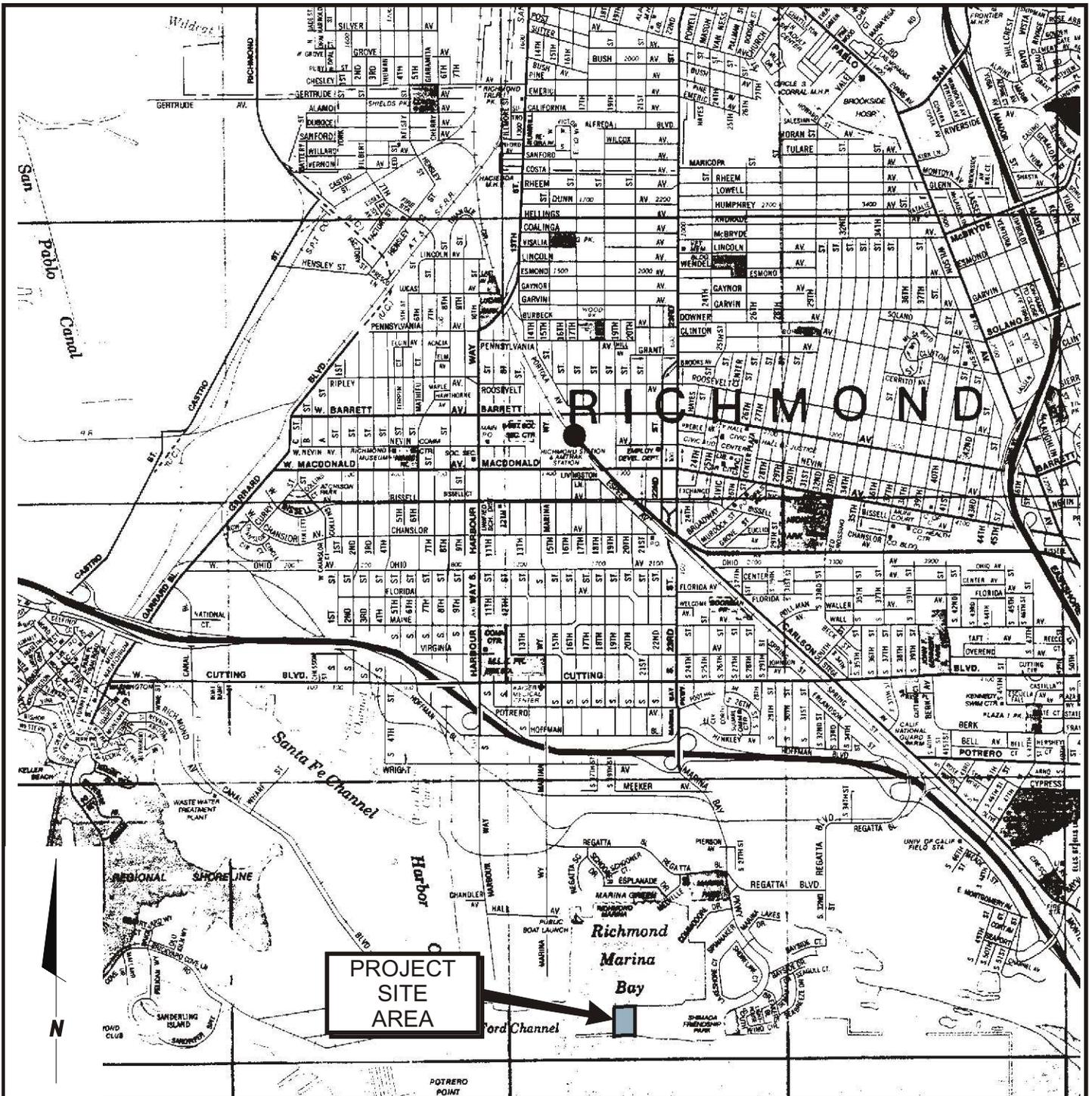
Every 5 years a report will be prepared by a California-registered civil engineer. Ninety days before the end of the 5-year period, the site owner will submit a work plan to DTSC describing how the 5-year review will be conducted. The 5-year review report will be submitted to DTSC 30 days after approval of the work plan. The report will describe the inspection and maintenance activities that were conducted over the past 5 years. The report will include, at a minimum, a review of the status and effectiveness of the cap and if necessary, make recommendations to modify the cap or cap design. A copy of field inspection notes for the prior 5-year period will also be included in the report.

### **NON-ROUTINE OPERATION AND MAINTENANCE**

This plan is intended to describe only those procedures for routine inspection and maintenance of the cap. If it is determined by the site owner that major cover repairs, or other subsurface construction activities, are needed at Vincent Park that will result in penetration of the hardscaped surfaces and/or penetration of the cover to depths greater than 2 feet, then: (1) all applicable regulations to provide protection of worker safety and health will be followed; (2) a Soil Management Plan including a Health and Safety Plan will be submitted to DTSC for review and approval prior to any construction activity; and (3) DTSC will be notified prior to commencement of work.

Attachments: Plate 1 – Site Location Map  
Plate 2 – Vicinity Map  
Plate 3 – Site Plan

**ATTACHMENTS**



Scale in Feet

Ref. California State Automobile Association Map; Richmond, Ca.; 4/94



Site Location Map  
 Vincent Park O&M Plan  
 Marina Bay Project  
 Richmond, California

PLATE  
**1**

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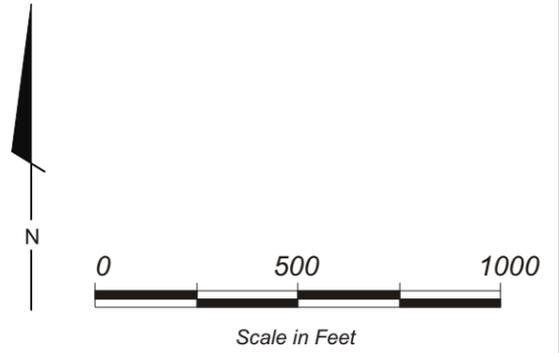
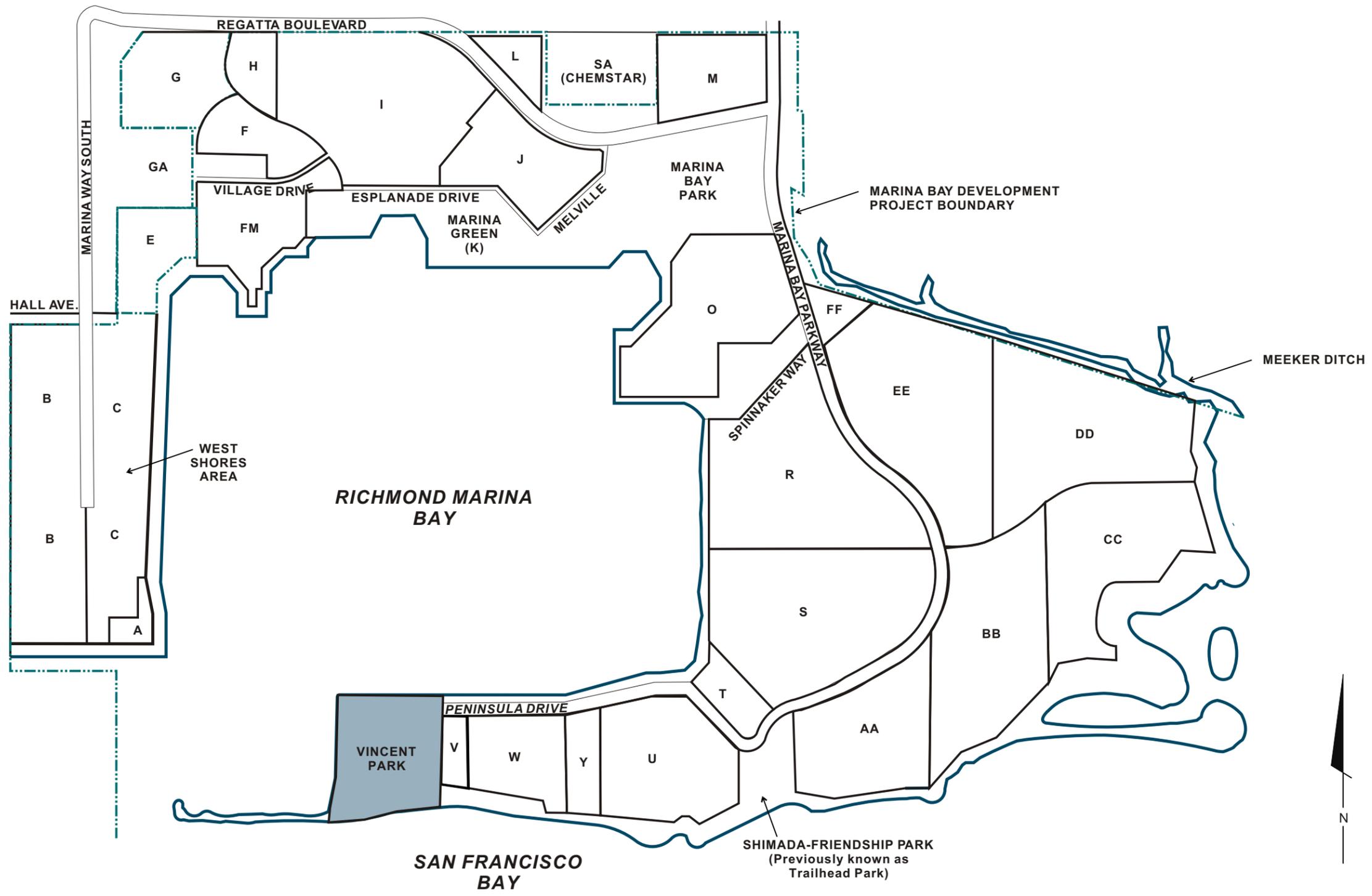
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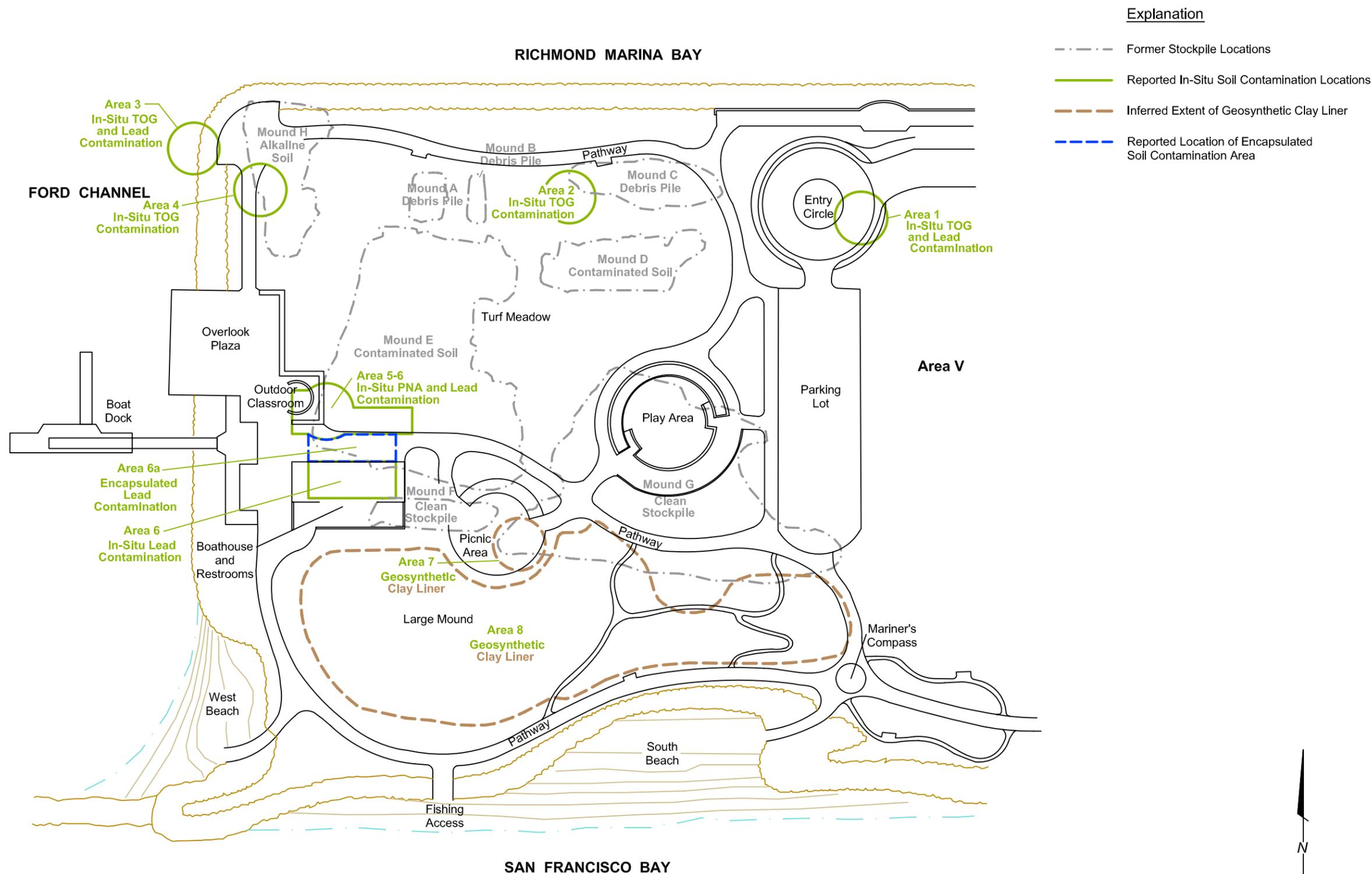
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**EXPLANATION**  
 Area of Investigation

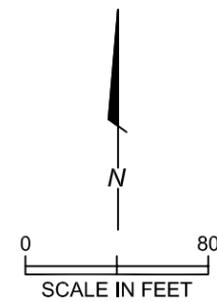


RICHMOND MARINA BAY



Explanation

- - - - Former Stockpile Locations
- Reported In-Situ Soil Contamination Locations
- - - - Inferred Extent of Geosynthetic Clay Liner
- - - - Reported Location of Encapsulated Soil Contamination Area



References:  
 Harding Lawson Associates, 1997. *Engineering Drawings, Barbara & Jay Vincent Park (HLA Job No. 644.003.01.002)* April 23.  
 Richmond Redevelopment Agency and Royston Hanamoto Alley & Abey, 1996. *Master Plan, Vincent Park, Marina Bay, Richmond, California.* May.