

# Erler & Kalinowski, Inc.

**Consulting Engineers and Scientists**

1730 South Amphlett Boulevard, Suite 320  
San Mateo, California 94402-2714  
(650) 578-1172  
Fax (650) 578-9131

## MULTIPLE FACSIMILE TRANSMISSION COVER SHEET

**DATE:** 30 January 2001      **FROM:** Derby Davidson, P.E.  
**TIME:** 5:49 PM      **PROJECT:** 64<sup>th</sup> Street Properties/Ryerson  
**NO. OF PAGES (INCL. COVER):** 19      **PROJECT NO:** 990016.03/A00084.00

### TO THE FOLLOWING:

**Name:** Susan Hugo  
**Company:** ACDEH  
**Fax:** 510-337-9335

**Name:** Ravi Arulanantham  
**Company:** RWQCB  
**Fax:** 510-622-2464

**Name:**  
**Company:**  
**Fax:**

**Name:**  
**Company:**  
**Fax:**

**Name:**  
**Company:**  
**Fax:**

**Name:**  
**Company:**  
**Fax:**

For Review and Comment

As Requested

For Approval

For Information and Coordination

**DESCRIPTION:** Addendum Number 1 to the Risk Management Plan

**REMARKS:** You will receive hard copies tomorrow.

**ADDENDUM NUMBER 1  
TO THE FINAL  
RISK MANAGEMENT PLAN FOR  
THE 64<sup>TH</sup> STREET PROPERTIES  
EMERYVILLE, CALIFORNIA**

30 January 2001  
(EKI 990016.00, 990016.03, A00084.00)

# Erler & Kalinowski, Inc.

Consulting Engineers and Scientists

1730 So. Amphlett Blvd., Suite 320  
San Mateo, California 94402  
(650) 578-1172  
Fax (650) 578-9131

30 January 2001

Dr. Ravi Arulanantham  
Regional Water Quality Control Board  
San Francisco Bay Region  
1501 Clay Street  
Suite 1400  
Oakland, California 94612

Ms. Susan L. Hugo  
Alameda County Department of Environmental Health  
1131 Harbor Bay Parkway  
2<sup>nd</sup> Floor  
Alameda, California 94502

Subject: Addendum Number 1 to the Risk Management Plan  
64<sup>th</sup> Street Properties, Emeryville, California  
(EKI 990016.03/A00084.00)

Dear Dr. Arulanantham and Ms. Hugo:

On behalf of SIMEON Commercial Properties ("SIMEON"), Erler & Kalinowski, Inc. ("EKI") is pleased to submit *Addendum Number 1 to the Final Risk Management Plan for the 64<sup>th</sup> Street Properties, Emeryville, California*, dated 30 January 2001 ("Addendum"), for your approval. The Addendum was prepared for the properties on the north side of 64<sup>th</sup> Street, between Bay and Hollis Streets ("64<sup>th</sup> Street properties") and for the Ryerson Steel facility property, which borders the 64<sup>th</sup> Street properties on the north.

The Addendum (1) addresses hydrogen sulfide concentrations found during construction on the 64<sup>th</sup> Street properties; (2) modifies the cap requirements for one portion of the landscaped areas on the 64<sup>th</sup> Street properties; and (3) includes the Ryerson Steel facility property in the *Final Risk Management Plan for the 64<sup>th</sup> Street Properties*, dated 30 August 1999 ("RMP"), so that the RMP will provide risk management protocols for redevelopment of that property.

SIMEON is in the process of purchasing the Ryerson Steel facility property, but needs approval of the Addendum to move forward with the purchase. Consequently, expedited review of the Addendum would be appreciated. We look forward to meeting with you on Friday, 2 February 2001, to discuss the Addendum and any comments that you may have.

Letter to Dr. Arulanantham (RWQCB) and Ms. Hugo (ACDEH)  
30 January 2001  
Page 2 of 2

**Erlar &  
Kalinowski, Inc.**

Thank you for your continuing assistance on this project.

Very truly yours,

ERLER & KALINOWSKI, INC.



Michelle Kriegman King, Ph.D.  
Project Manager



Derby Davidson, P.E.  
Project Engineer

enclosure

cc: Pierson Forbes (SIMEON Commercial Properties)  
John Syage (SIMEON Commercial Properties)  
Meg Rosegay (Pillsbury Winthrop, LLP)

**TABLE OF CONTENTS**

Page

- 1. INTRODUCTION.....1**
- 2. HYDROGEN SULFIDE.....1**
  - 2.1 HYDROGEN SULFIDE ENCOUNTERED DURING REDEVELOPMENT .....2
  - 2.2 POTENTIAL EXPOSURE OF FUTURE SITE OCCUPANTS TO HYDROGEN SULFIDE.....3
  - 2.3 POST-CONSTRUCTION RISK MANAGEMENT OF HYDROGEN SULFIDE .....5
- 3. MODIFIED CAP REQUIREMENTS IN LANDSCAPE AREAS .....5**
- 4. RYERSON STEEL FACILITY PROPERTY.....5**
  - 4.1 RYERSON FACILITY BACKGROUND.....6
  - 4.2 PLANNED REDEVELOPMENT .....7
  - 4.3 TANK CLOSURE .....7
  - 4.4 CONSTRUCTION RISK MANAGEMENT .....7
  - 4.5 POST-CONSTRUCTION RISK MANAGEMENT.....8
- 5. LONG-TERM COMPLIANCE.....8**
- 6. REFERENCES.....9**

## **1. INTRODUCTION**

On behalf of SIMEON Commercial Properties ("SIMEON"), Erler & Kalinowski, Inc. ("EKI") has prepared this Addendum No. 1 to the *Final Risk Management Plan for the 64<sup>th</sup> Street Properties, Emeryville, California*, dated 30 August 1999 ("RMP"). The RMP provides a decision framework to manage residual chemicals of concern ("COCs") in soil and groundwater on the 64<sup>th</sup> Street properties in a manner consistent with planned land use and protective of human health and the environment. The RMP was approved by the California Regional Water Quality Control Board, San Francisco Bay Region ("RWQCB"), and the Alameda County Department of Environmental Health ("ACDEH") in a letter dated 15 October 1999.

The "64<sup>th</sup> Street properties" are bounded to the north by the Ryerson Steel facility, to the west by railroad tracks, to the south by 64<sup>th</sup> Street, and to the east by Hollis Street (Figure 1). SIMEON has recently finished redevelopment of the 64<sup>th</sup> Street properties for commercial/office uses. As discussed in the RMP, the redevelopment involved (a) partial demolition and renovation of the existing building, (b) construction of a new office building, and (c) construction of a new parking structure.

SIMEON is planning to purchase and redevelop the adjacent Ryerson Steel facility property (Figure 1). SIMEON would like to redevelop this property using the same risk management protocols used on the 64<sup>th</sup> Street properties.

This Addendum to the RMP has the following three objectives:

- address hydrogen sulfide concentrations found during construction on the 64<sup>th</sup> Street properties;
- modify the cap requirements for one portion of the landscaped areas on the 64<sup>th</sup> Street properties; and
- include the Ryerson Steel facility property in the RMP so that the RMP will provide risk management protocols for redevelopment of that property.

Once approved by the ACDEH (with RWQCB concurrence), this Addendum will become part of the RMP.

## **2. HYDROGEN SULFIDE**

Based on the results of previous investigations, hydrogen sulfide was not expected to be present on the 64<sup>th</sup> Street properties. Consequently, the RMP did not include hydrogen sulfide as a COC. However, during excavation for footings for the new office building, hydrogen sulfide odors were noted. Worker health and safety issues regarding hydrogen sulfide were addressed by South Bay Construction ("SBC"), the construction contractor,

by monitoring for hydrogen sulfide and requiring appropriate personal protective equipment.

This section (a) presents results of hydrogen sulfide monitoring performed during construction activities, (b) discusses potential exposure of future workers on the 64th Street properties to hydrogen sulfide, and (c) discusses appropriate risk management protocols for hydrogen sulfide.

## 2.1 Hydrogen Sulfide Encountered During Redevelopment

After a rotten-egg odor was noted when performing footing excavations for the new office building in November 1999, measurements of hydrogen sulfide in the breathing zone were made during these excavation activities. Measurements of hydrogen sulfide concentrations were performed by EKI and/or Enviro Group Inc., SBC's industrial hygiene consultant, using direct-reading instruments. Measurements were only performed while excavating for footings for the new office building. According to SBC, hydrogen sulfide odors were not noted while excavating footings for the new parking structure. The approximate locations of footing excavations are shown on Figure 2.

According to SBC, some hydrogen sulfide odors were also noted while performing footing excavations in the central portion and the southeastern corner of the renovated building (see Figure 2). Work was halted when the odors were noted and later resumed while measuring for hydrogen sulfide. However, the odor was no longer present after the resumption of work, and no hydrogen sulfide was detected.

SBC indicated that hydrogen sulfide odors were not noted when excavating trenches for installation of below-grade utilities. The approximate locations of these trenches are shown on Figure 2. In fact, SBC did not note hydrogen sulfide odors after construction of building footings was complete.

The maximum breathing zone concentrations of hydrogen sulfide measured at each foundation excavation for the new office building are shown on Figure 3. The highest concentrations were detected at footing excavations A1 (9 parts per million by volume ("ppmv")), D4-5 (10 ppmv), D7 (10 ppmv), and D11 (7 ppmv). As shown on Figure 3, the distribution of hydrogen sulfide is not contiguous; rather, it appears to be concentrated in specific areas.

The concentrations shown on Figure 3 are peak concentrations; sustained concentrations were lower. Hydrogen sulfide concentrations generally decreased to non-detectable levels within 30 minutes of the cessation of excavation activities. Hydrogen sulfide was only detected in the areas shown on Figure 3, and only when soil excavation was being or had recently been performed.

The origin of the hydrogen sulfide detected on the 64th Street properties is not known. Given that sustained concentrations of hydrogen sulfide were only encountered in the southwestern portion of the 64<sup>th</sup> Street properties (i.e., in the vicinity of the former refinery, see Figure 2), natural degradation of petroleum residuals from the former refinery

is the likely source of the hydrogen sulfide. The southeastern corner of the renovated building, where hydrogen sulfide odors were noted, is in the vicinity of a former underground fuel storage tank. Given that bay mud underlies the fill on the property, sulfate bacteria capable of producing hydrogen sulfide are likely present amongst residual hydrocarbons remaining from this closed tank. Thus, hydrogen sulfide odors in this vicinity may also be the result of natural degradation of petroleum hydrocarbons. It is also possible that natural degradation of organic material within the bay muds underlying the 64th Street properties contributes hydrogen sulfide to the soil gas.

## 2.2 Potential Exposure of Future Site Occupants to Hydrogen Sulfide

Future site occupants will be industrial or commercial office workers and building maintenance personnel. Migration of hydrogen sulfide in soil gas and potential exposure of future occupants to hydrogen sulfide in soil gas at the 64<sup>th</sup> Street properties are not considered significant for the following reasons:

- Hydrogen sulfide concentrations observed during construction were at or below the permissible exposure limit ("PEL") established by the California Occupational Safety and Health Administration ("Cal-OSHA"); however, elevated concentrations observed at the 64<sup>th</sup> Street properties were transient, while the PEL is based on an 8-hour exposure.
- Hydrogen sulfide was not observed unless soil was being or had recently been disturbed, which is likely to be rare after construction is complete.
- Hydrogen sulfide has a very low odor threshold and was not noted previously at the 64th Street properties, indicating that significant airborne concentrations of hydrogen sulfide are not present in the absence of excavation activities.
- The soil under the new office building was lime-treated, which reduces the concentration of hydrogen sulfide in soil gas by raising the pH.
- Under the new office building, a waterproofing membrane was placed between the building slab and the subgrade, which will likely inhibit migration of soil gas through the slab.
- Below-grade utility trenches are unlikely to act as conduits for migration of hydrogen sulfide from soil into buildings because (1) hydrogen sulfide odors were not noted during excavation of the trenches and (2) concrete slabs were poured around utility pipes, leaving no annulus around the pipes.

These reasons are discussed further below.

Future site occupants will be industrial or commercial office workers and building maintenance personnel. Published toxicity data, such as chronic reference doses, are not available for hydrogen sulfide. Thus, EKI compared the hydrogen sulfide concentrations



measured while performing building footing excavations with occupational exposure limits. The PEL, an 8-hour time-weighted average, set by Cal-OSHA for hydrogen sulfide is 10 ppmv (8 CCR 5155). Cal-OSHA has set the short-term exposure limit ("STEL"), a 15-minute time-weighted average, for hydrogen sulfide at 15 ppmv (8 CCR 5155).

The maximum hydrogen sulfide concentration detected at the site is 10 ppmv. As noted above, the PEL is also 10 ppmv; however, the PEL is an 8-hour time-weighted average, while the maximum hydrogen sulfide concentrations shown on Figure 3 were not sustained. In general, hydrogen sulfide concentrations decreased to non-detectable levels within 30 minutes of the cessation of excavation activities. Thus, it is extremely unlikely that future site occupants will be exposed to hydrogen sulfide concentrations on the order of the PEL (i.e., an 8-hour average of 10 ppmv).

Further, hydrogen sulfide odors were noted, and elevated hydrogen sulfide concentrations were measured, only during excavation activities. Hydrogen sulfide odors were not noted in undisturbed areas. Thus, hydrogen sulfide is not expected to be present in the breathing zone unless native soil is disturbed.

The mean odor threshold concentration of hydrogen sulfide is 0.008 ppmv (Cal-EPA, 2000), which is several orders of magnitude below the PEL. Given this low odor threshold, if hydrogen sulfide was migrating from the soil into the breathing zone, it would very likely have been noticed by previous occupants of the 64<sup>th</sup> Street properties. However, prior to the November 1999 excavations, hydrogen sulfide odors had not been noted on the 64<sup>th</sup> Street properties; in particular, hydrogen sulfide odors were not noted inside the existing building, a portion of which was originally located over excavations where some of the higher hydrogen sulfide concentrations were measured. Further, hydrogen sulfide odors were not noted in the buildings during construction.

In addition, as part of the foundation construction, the top 12 inches of native soil underneath the new office building was lime-treated. One effect of lime treatment is elevated soil pH, which decreases hydrogen sulfide gas ( $H_2S$ ) concentrations and increases its ionic, non-gaseous form ( $HS^-$ ). At pH greater than 7, most of the hydrogen sulfide is in its ionic form. Thus, due to the lime treatment, soil gas in the top foot of soil under the new office building will be even less likely to contain hydrogen sulfide than it was during foundation excavation. Further, a composite waterproofing membrane was placed between the building slab and the subgrade under the new office building. This membrane will also likely inhibit migration of chemicals in soil gas, such as hydrogen sulfide, through the slab of the new office building.

Due to their relatively greater permeability, utility trenches have the potential to act as conduits for migration of soil gases, including hydrogen sulfide. However, as discussed in Section 2.1, hydrogen sulfide odors were not noted in utility trench excavations. Further, SBC indicated that the building slabs were poured around utility pipes that penetrate the slab, without leaving an annulus around the pipes. For these reasons, the utility trenches are considered unlikely to act as conduits for hydrogen sulfide to enter the buildings.

Therefore, accounting for the conditions under which hydrogen sulfide has been detected at the 64th Street properties and the mitigative measures put in place as part of the new construction, significant migration of hydrogen sulfide and subsequent exposure of future occupants to detectable levels of hydrogen sulfide is not likely to occur.

### 2.3 Post-Construction Risk Management of Hydrogen Sulfide

As discussed above, exposure to hydrogen sulfide from soil on the 64<sup>th</sup> Street properties is very unlikely unless native soil is disturbed during activities such as excavation. Section 5.3 of the RMP requires preparation of a health and safety plan ("H&SP") for future subsurface excavation activities on the 64<sup>th</sup> Street properties in which the cap is removed. The RMP requires that each H&SP include a description of health and safety training requirements for onsite personnel, the level of personal protective equipment to be used, and any other applicable precautions to be undertaken. Because hydrogen sulfide is now an identified COC on the 64<sup>th</sup> Street properties, health and safety concerns related to hydrogen sulfide during excavations on the 64<sup>th</sup> Street properties will be addressed in the relevant H&SPs.

Long-term compliance is discussed in Section 5 below.

## **3. MODIFIED CAP REQUIREMENTS IN LANDSCAPE AREAS**

Due to sloping requirements to prevent undermining building foundations and sidewalks, a portion of the landscape areas south of the new building did not achieve the three feet of clean soil cover specified in the RMP. The landscape area of concern is shown on Figure 4. Within this landscape area, the clean soil cover near the edge (i.e., adjacent to the sidewalk and the building) ranges from 1 to 3 feet in thickness. The width of the soil cover less than 3 feet thick is approximately 2 feet. The clean soil cover thickness varies in a roughly linear fashion, with the thinnest portion being closest to the building and sidewalk. To provide a visual warning of the clean fill boundary, the bottom of the clean fill is marked with plastic, orange fence material in the areas where the clean soil cover is less than 3 feet thick.

As required in Section 5.3 of the RMP, a H&SP will be prepared for future subsurface excavation activities in which the cap is removed. The RMP requires that the H&SPs include a description of health and safety training requirements for onsite personnel, the level of personal protective equipment to be used, and any other applicable precautions to be undertaken. These requirements apply to the cap in the landscape area of concern.

Long-term compliance is discussed in Section 5 below.

## **4. RYERSON STEEL FACILITY PROPERTY**

The Ryerson Steel facility property ("Ryerson property") is bounded by 65<sup>th</sup> Street on the north, Hollis Street on the east, the 64<sup>th</sup> Street properties on the south, and Southern Pacific

Railroad tracks on the west (see Figure 1). SIMEON is in the process of purchasing the Ryerson property. To facilitate the purchase and subsequent redevelopment of the Ryerson property, the RMP for the 64<sup>th</sup> Street properties will be applied to the Ryerson property in order to manage environmental risks on the Ryerson property. This Addendum establishes the application of the RMP to the Ryerson property. Implementation of the RMP on the Ryerson property will occur only if SIMEON purchases and redevelops the Ryerson property.

#### 4.1 Ryerson Facility Background

Presented below is a brief summary of environmental conditions at the Ryerson property. More details (e.g., site use history, investigations and remedial actions) can be found in the EKI report *Final Site Investigation Report for the 64<sup>th</sup> and 65<sup>th</sup> Street Properties*, dated 5 September 1995.

On 11 March 1993, a 10,000-gallon underground diesel storage tank was removed from the south central portion of the Ryerson property (see Figure 5) (EKI, 1999a). Shallow groundwater from a well immediately south of the tank (well RMW-3) was found to be impacted by extractable petroleum hydrocarbons, and a hydrocarbon sheen was noted in that well.

Summarized in Table 1 are petroleum hydrocarbon analytical results from groundwater sampled from three wells surrounding the tank removal excavation. Well locations are shown on Figure 5. Benzene, toluene, ethylbenzene, and methyl tertiary butyl ether ("MTBE"), were not detected in any groundwater samples collected during the latest sampling, which was performed in December 2000. Xylenes were only detected in well RMW-3, at a concentration of 2.5 ug/L. Polynuclear aromatic hydrocarbons ("PAHs") were not detected in samples collected March 1995, the last time groundwater was analyzed for PAHs. Groundwater from well RMW-3 in December 2000 contained total extractable petroleum hydrocarbons ("TEPH") at a concentration of 23,000 ug/L, while TEPH was not detected in groundwater collected from wells RMW-1 and RMW-2. Well RMW-2 is located within the backfill of the tank removal excavation. Given the distribution of hydrocarbons in groundwater, it is uncertain whether the former diesel tank is the source of the hydrocarbons detected in well RMW-3. It is possible that the source of these hydrocarbons could be the refinery formerly (i.e., circa 1911) located immediately to the south.

Previous investigations on the Ryerson property and the 64<sup>th</sup> Street properties indicate that groundwater under the Ryerson property has been impacted by halogenated volatile organic compounds ("HVOCs"). An HVOC source has not been found on the Ryerson property. Data collected during previous investigations and information available in regulatory agency files indicate that these HVOCs originated from one or more sources upgradient of the Ryerson property (EKI, 1999a). HVOC concentrations in groundwater under the Ryerson property and the 64<sup>th</sup> Street properties are similar.

#### 4.2 Planned Redevelopment

SIMEON's current planned redevelopment for the Ryerson property includes (1) renovation of the existing building for office, commercial, and/or industrial use, and (2) construction of a multi-story parking structure. A conceptual plan for the Ryerson property is shown on Figure 5. Plans for the commercial building are still preliminary and will likely be finalized next year.

#### 4.3 Tank Closure

It is EKI's understanding that Ryerson intends to obtain closure of the former underground diesel storage tank from the ACDEH. The tank closure will be pursued separately from the RMP and this Addendum. The rationale for closure of this tank can be summarized as follows:

- the tank has been removed and the tank excavation has been backfilled with clean material;
- measured concentrations of TEPH are stable or declining;
- benzene, MTBE, and PAHs have not been detected in groundwater;
- the tank location will be capped (see Section 4.4); and
- monitoring of downgradient groundwater will be performed (see Section 4.5).

As discussed below, all of the Ryerson property will be covered under the RMP.

#### 4.4 Construction Risk Management

This Addendum applies the RMP to the Ryerson property. Worker protection measures, construction impact mitigation measures, soil management procedures, monitoring well abandonment protocols, and procedures for installation of pilings (if any), as specified in the RMP, will be implemented on the Ryerson property.

Hydrogen sulfide odors are not anticipated to be encountered on the Ryerson property since hydrogen sulfide odors were not noted during excavation of footings for the new parking structure on the 64<sup>th</sup> Street properties, which is adjacent to the Ryerson property. Nevertheless, hydrogen sulfide will be considered a COC on the Ryerson property, and construction personnel performing subgrade activities will be notified of the possible presence of hydrogen sulfide. As described in Section 2.3, contractor H&SPs will address potential concerns associated with hydrogen sulfide. If hydrogen sulfide odors are noted during construction, monitoring for hydrogen sulfide will be performed and appropriate health and safety precautions will be taken, based on monitoring results.

With regard to soil management procedures, this Addendum extends Areas A and B onto the Ryerson property as shown on Figure 6. Soil in Area A is presumed to be impacted by

petroleum hydrocarbons and to require a cap, whereas soil in Area B is presumed not to be impacted and not to require a cap. Soil management procedures for Areas A and B (e.g., testing protocols and cap requirements) are described in detail in the RMP.

#### 4.5 Post-Construction Risk Management

This Addendum proposes to use the screening risk analysis in the RMP for the Ryerson property. Potential receptors (i.e., industrial/commercial workers) are the same at both properties. As noted in Section 4.1, HVOC concentrations in groundwater under the Ryerson property and the 64<sup>th</sup> Street properties appear to be similar. Benzene, toluene, ethylbenzene, and xylenes ("BTEX") were detected in groundwater under the 64<sup>th</sup> Street properties, but not under the Ryerson property. Thus, use of the 64<sup>th</sup> Street properties screening risk analysis for the Ryerson property is considered conservative. This risk analysis concludes that COCs detected in groundwater do not pose a significant human health risk to future commercial/industrial workers (i.e., calculated hazard index is less than 1 and total estimated incremental lifetime carcinogenic risk is approximately  $10^{-6}$ ) at the concentrations detected.

Cap requirements (i.e., concrete, asphalt, or 3 feet of clean soil), inspection requirements, protocols for future subsurface activities, and groundwater use restrictions, as specified in the RMP, will be implemented on the Ryerson property. To the extent that the requirement for 3 feet of clean soil cannot be met near building foundations and sidewalks due to concerns about maintaining the integrity of those structures during implementation of the cap, the clean soil thickness may be less than 3 feet in some areas. In such instances, a visual warning of the clean fill boundary will be constructed (see Section 3), the ACDEH and the RWQCB will be notified, and an addendum to the RMP will be prepared which indicates the locations where less than 3 feet of clean soil may be encountered in landscape areas.

The RMP specifies a groundwater monitoring program to confirm that water quality on and downgradient of the 64<sup>th</sup> Street properties is stable or improving after completion of redevelopment. The proposed monitoring includes sampling of three wells to be installed along Bay Street (see Figure 6) and analyses for TEPH and volatile organic compounds ("VOCs"). This Addendum proposes that well SMW-1 be installed approximately 20 feet north of the location shown on Figure 10 of the RMP. Based on the groundwater gradient, this new location of well SMW-1 will be downgradient of the former location of the Ryerson underground tank. In this way, the existing monitoring program will provide data to monitor the stability of TEPH concentrations in groundwater downgradient of this former tank.

Long-term compliance is discussed in Section 5 below.

### **5. LONG-TERM COMPLIANCE**

A deed restriction for the 64th Street properties was recorded in the Alameda County Recorder's office on 6 October 1999. Among other things, the deed restriction requires the

property owner to comply with the RMP. Once approved by the ACDEH (with RWQCB concurrence), this Addendum will become part of the RMP, and SIMEON will record this Addendum in the Alameda County Recorder's office for the 64<sup>th</sup> Street properties. In this way, the amended RMP will inform future land owners about (1) the possible presence of hydrogen sulfide, (2) the required appropriate risk management measures if hydrogen sulfide is encountered, and (3) the thinner cap thickness present in the landscape area discussed in Section 3.

After SIMEON purchases the Ryerson property, a deed restriction for the Ryerson property will also be recorded in the Alameda County Recorder's office. SIMEON and any future purchaser of this property or any portion of this property will be bound by the deed restriction. The deed restriction will require the property owner to comply with the RMP and this Addendum and to contact the ACDEH and the RWQCB if the land use changes from the intended commercial/industrial use.

In addition, the City of Emeryville is developing a tracking system ("one-stop shop") for hazardous materials sites within its jurisdiction. Once in place, this tracking system will allow the building and planning departments of the City of Emeryville to access requirements for and restrictions on work performed at these sites (e.g., when an excavation permit application is received). The RMP and this Addendum will be provided to the City of Emeryville for their inclusion in the tracking system.

## **6. REFERENCES**

8 CCR 5155. California Code of Regulations, Title 8, Section 5155.

Cal-EPA, 2000. California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, *Technical Support Document for the Determination of Noncancer Chronic Reference Exposure Levels*, Batch 1B, April 2000.

EKI, 1999a. Erler & Kalinowski, Inc., *Phase I and Phase II Environmental Site Assessment for 64th Street Properties*, Emeryville, California, 20 May 1999.

EKI, 1999b. Erler & Kalinowski, Inc., *Final Risk Management Plan for the 64<sup>th</sup> Street Properties*, Emeryville, California, 30 August 1999.

**TABLE 1**  
**PETROLEUM HYDROCARBONS, BTEX, MTBE AND PAHS IN GROUNDWATER**  
**1465 65th STREET, EMERYVILLE, CALIFORNIA**

SAMPLE ID	DATE SAMPLED	Petroleum Hydrocarbons		Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	EB ( $\mu\text{g/L}$ )	Xylenes ( $\mu\text{g/L}$ )	MTBE ( $\mu\text{g/L}$ )	PAHs ( $\mu\text{g/L}$ )
		as Gasoline ( $\mu\text{g/L}$ )	as Diesel ( $\mu\text{g/L}$ )						
<i>Former Underground Storage Tank Area</i>									
Excavation Water	3/16/93	-	850	<0.3	<0.3	<0.3	<0.9	-	-
RMW-1	8/11/93	-	<50	<0.5	<0.5	<0.5	<0.5	-	-
	11/24/93	57	-	<0.5	<0.5	<0.5	<0.5	-	-
	3/24/95	<50	210	<0.5	<0.5	<0.5	<0.5	-	ND
	3/24/95 (dupl.)	<50	97	<0.5	<0.5	<0.5	<0.5	-	-
	12/7/00	68	<50	<0.5	<0.5	<0.5	<0.5	<2.0	-
RMW-2	8/11/93	-	<50	1.3	<0.5	<0.5	0.59	-	-
	11/24/93	50	-	<0.5	<0.5	<0.5	<0.5	-	-
	3/24/95	<50	150	<0.5	<0.5	<0.5	<0.5	-	ND
	12/7/00	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.0	-
RMW-3	8/11/93	-(1)	-(1)	-(1)	-(1)	-(1)	-(1)	-(1)	-(1)
	11/24/93	-(1)	-(1)	-(1)	-(1)	-(1)	-(1)	-(1)	-(1)
	3/27/95	11,000	97,000	<10	<10	<10	<10	-	ND
	12/7/00	710	23,000	<0.5	<0.5	<0.5	2.5	<2.0	-

**Notes:**

Petroleum hydrocarbons as diesel was run with a silica gel cleanup.

EB = ethylbenzene

MTBE = methyl tertiary butyl ether

PAHs = polynuclear aromatic hydrocarbons

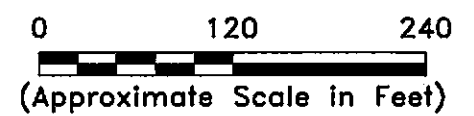
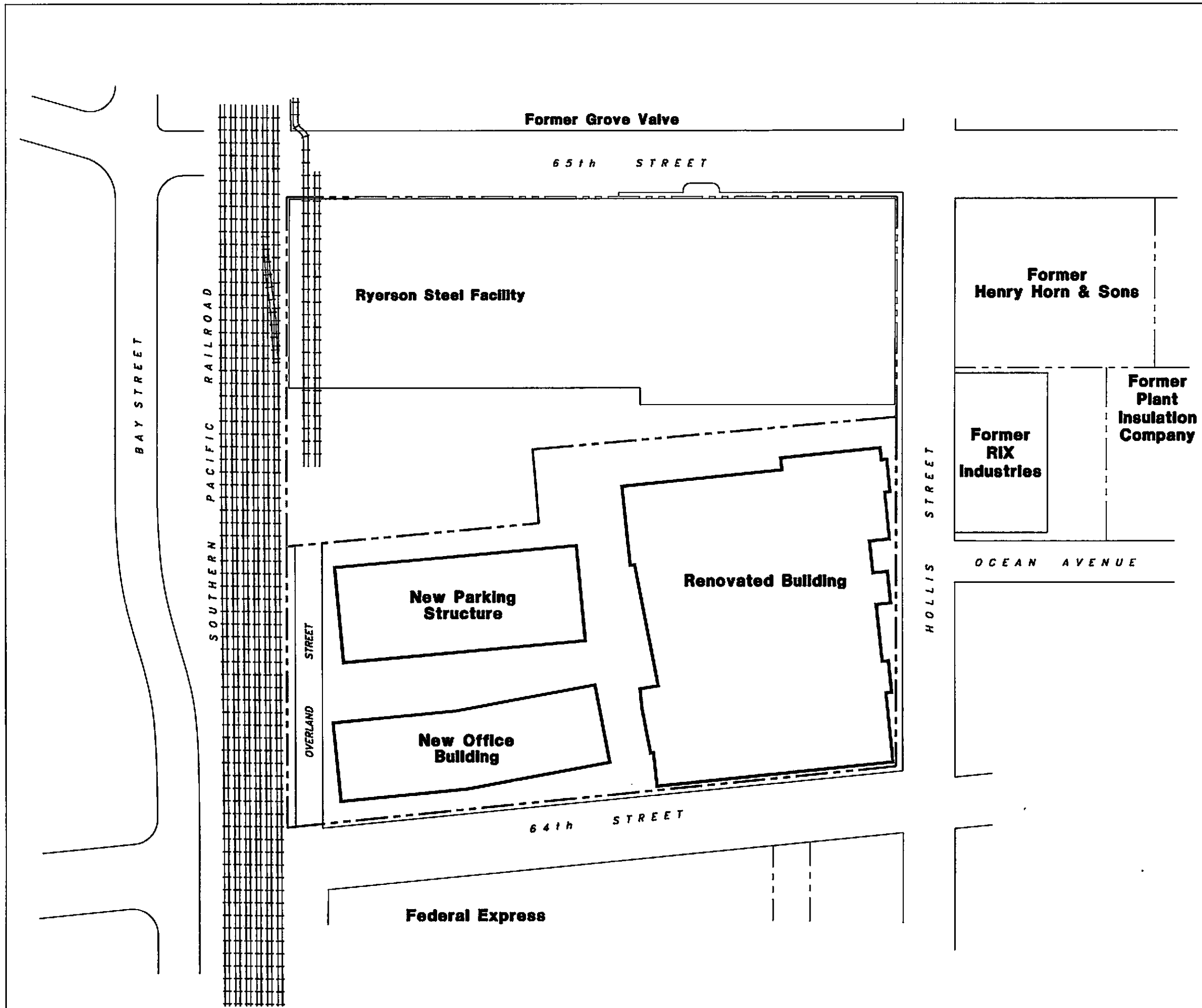
"ND" indicates the compounds were not detected above laboratory reporting limits.

"<" indicates the compound was not detected above the laboratory reporting limit shown.

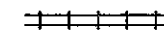

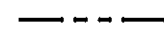
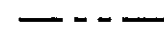
"-" indicates the sample was not analyzed for that compound.

(1) Sample was not collected, but floating product was observed.

(2) Petroleum hydrocarbons as diesel was run with a silica gel cleanup.



**LEGEND**

-  Railroad Tracks
-  Approximate Property Boundary
-  Boundary of 64th Street Properties
-  Boundary of Ryerson Steel Facility Property

**Notes:**

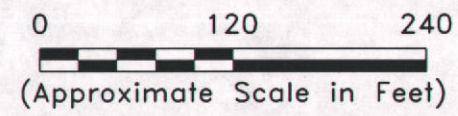
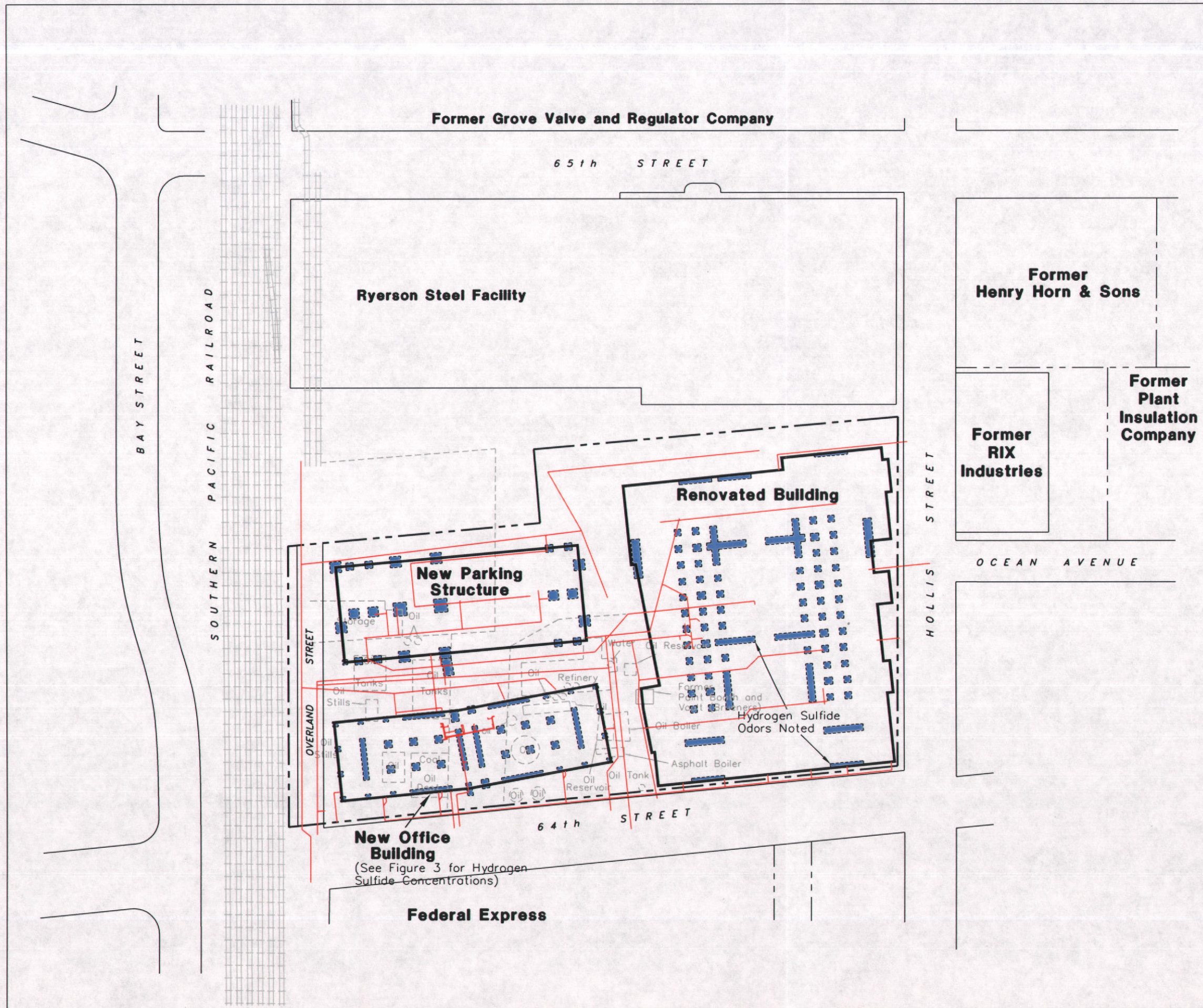
- 1. All locations are approximate.

**Erlar & Kalinowski, Inc.**

Site Plan

64th Street Properties  
 Emeryville, CA  
 January 2001  
 EKI 990016.03  
 Figure 1





**LEGEND**

- Railroad Tracks
- Approximate Property Boundary
- Boundary of 64th Street Properties
- Building Outline
- Historical Site Features (1911 Sanborne Map)
- Underground Utilities
- Excavation for Building Footing

**Notes:**

1. All locations are approximate.

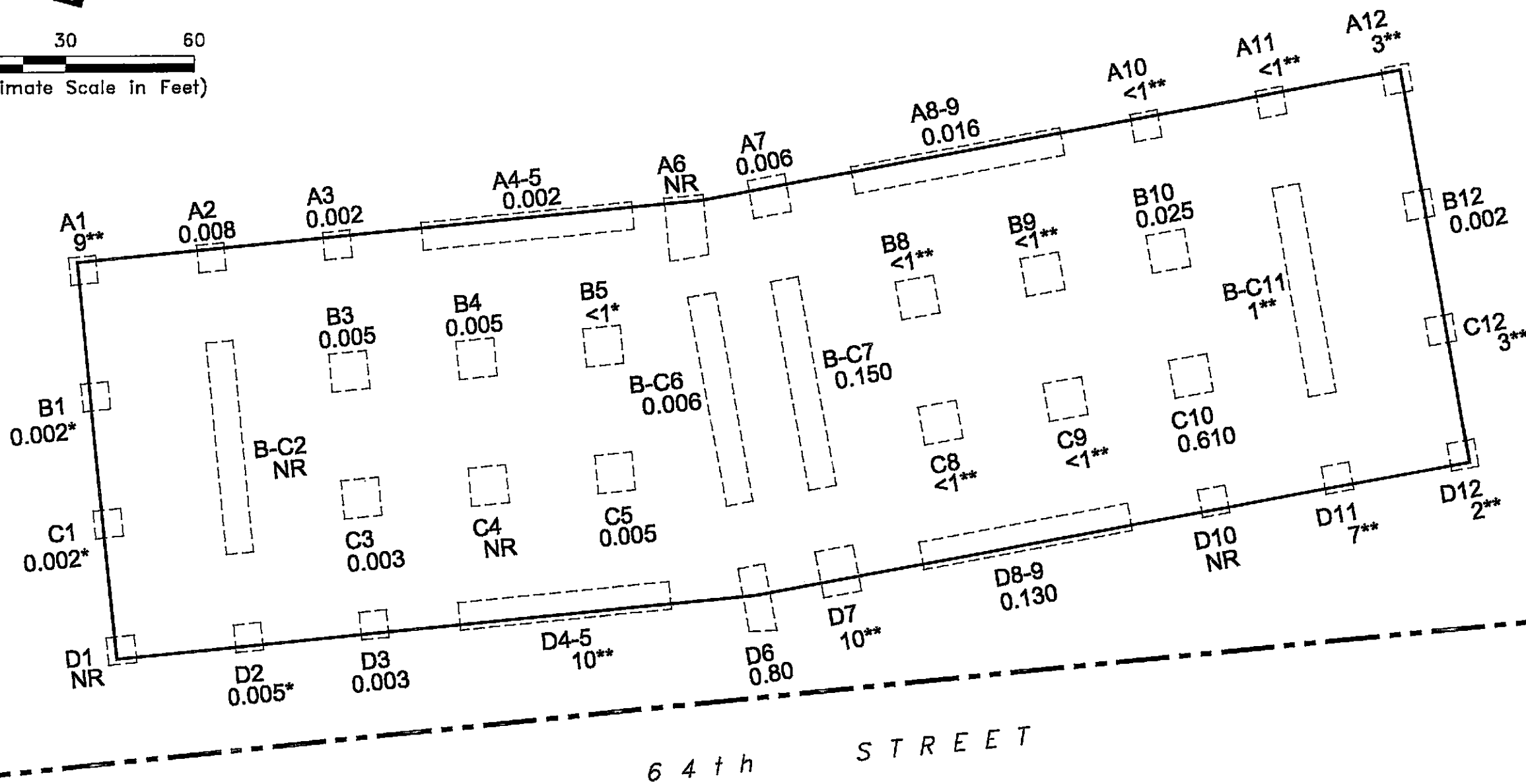
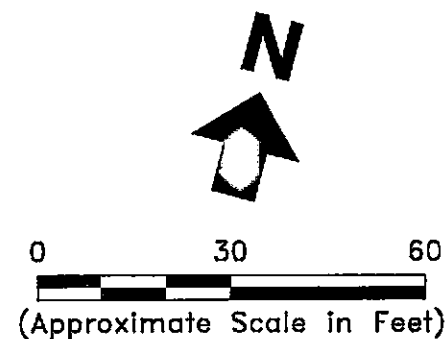
**Erler & Kalinowski, Inc.**

Building Footing Excavations and Underground Utilities

64th Street Properties  
 Emeryville, CA  
 January 2001  
 EKI 990016.03  
 Figure 2



SOUTHERN PACIFIC RAILROAD



**Legend:**

- New Office Building Outline
- Boundary of 64th Street Properties
- Foundation Excavation Designation
- 0.002** Breathing Zone Hydrogen Sulfide Concentration (PPMV)
- NR** No Reading Recorded

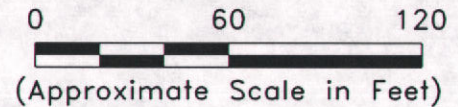
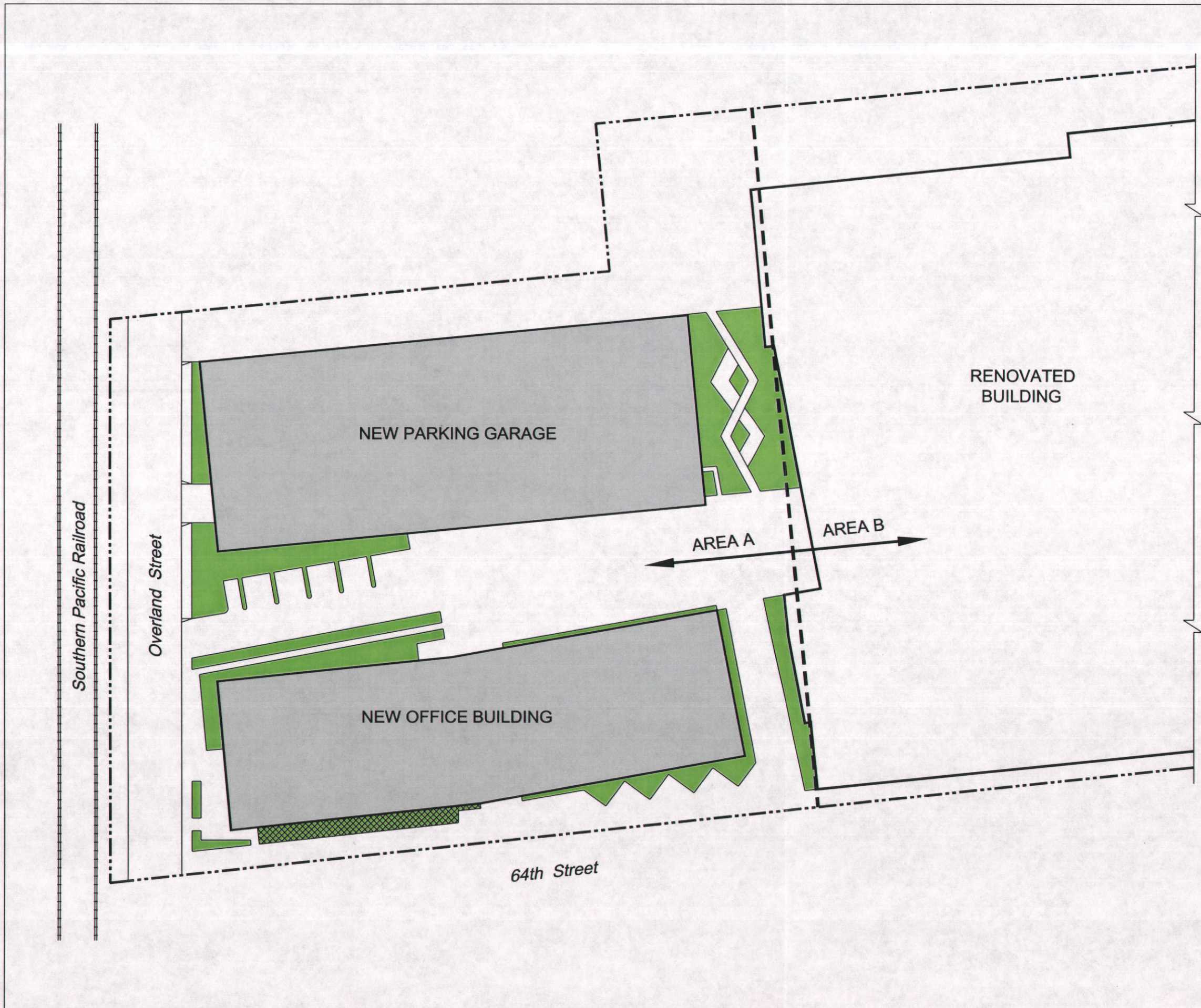
**Notes:**

1. Unless otherwise noted, concentrations were measured by EKI.
2. "\*\*" = EKI reading taken 1/2-2 hours after excavation.
3. "\*\*\*" = Concentration measured by Enviro Group. Enviro Group instrument measured concentrations greater than or equal to 1 PPMV.
4. Hydrogen sulfide concentration measurements were taken during foundation excavation for the new office building only.

**Erler & Kalinowski, Inc.**

Maximum Breathing Zone Hydrogen Sulfide Concentrations Measured During Construction  
 64th Street Properties  
 Emeryville, CA  
 January 2001  
 EKI 990016.03  
 Figure 3





**LEGEND**

- Boundary of 64th Street Properties
- Area A Boundary
- Building Outline
- Railroad Tracks
- Landscape Area
- Landscape Area Which Does Not Have 3 Feet of Clean Cover Everywhere (Note 2)

**Notes:**

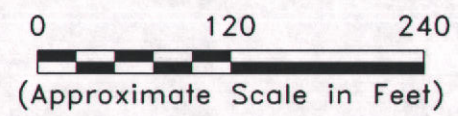
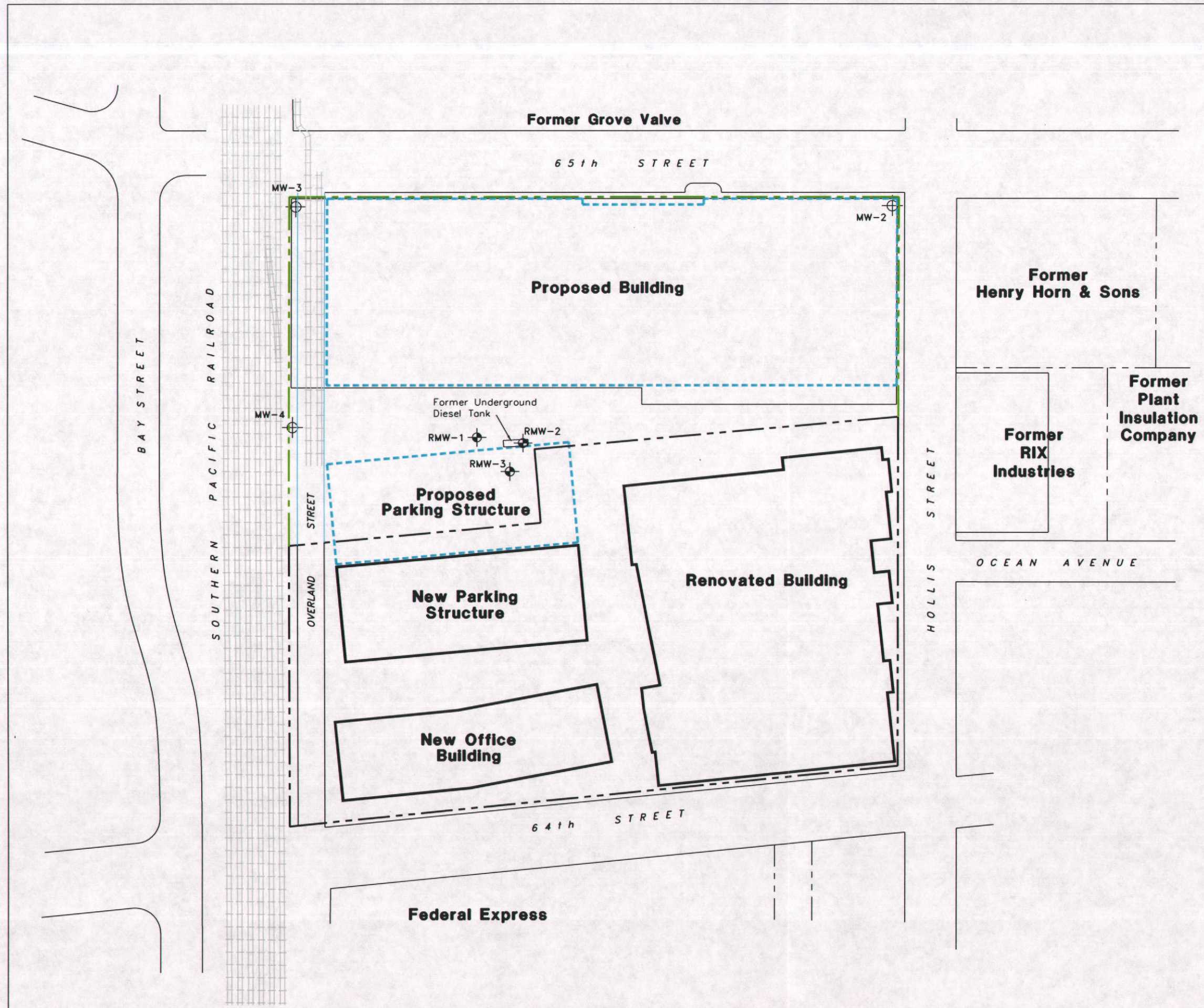
1. All locations are approximate.
2. Within 2 feet of the edges, clean fill thickness varies between 1 and 3 feet. Clean fill is thinnest at the edge of this landscape area.

**Erler & Kalinowski, Inc.**

Area A Landscape Areas

64th Street Properties  
 Emeryville, CA  
 January 2001  
 EKI 990016.00  
 Figure 4





**LEGEND**

- Railroad Tracks
- Approximate Property Boundary
- Boundary of 64th Street Properties
- Boundary of Ryerson Steel Facility Property
- Future Features (Conceptual Plan)
- Existing Monitoring Well Installed by EKI, 1995
- Monitoring Well Installed by Others

**Notes:**

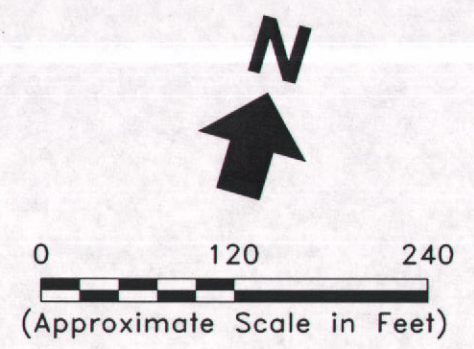
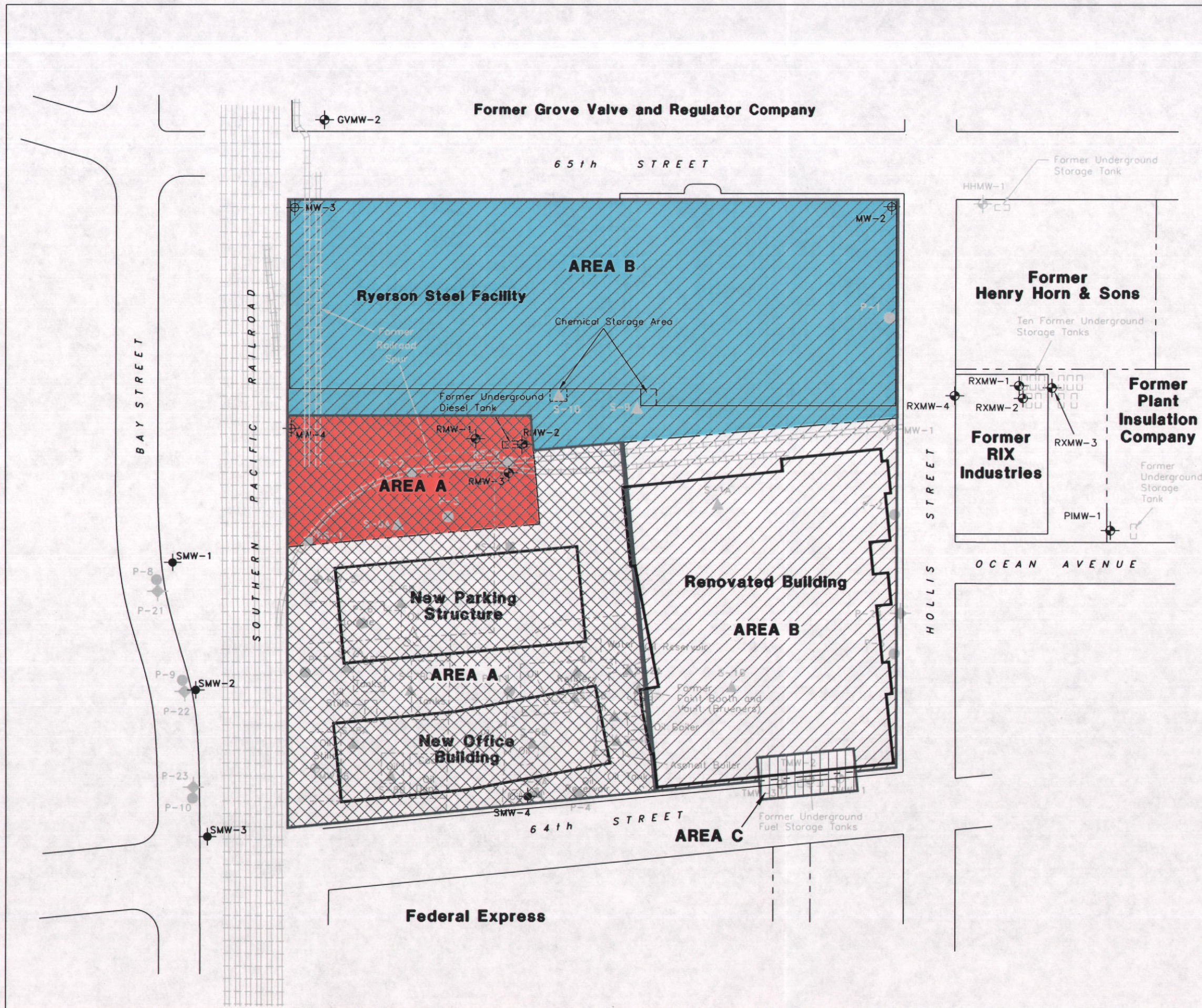
1. All locations are approximate.

**Erler & Kalinowski, Inc.**

Overlay of Conceptual Plans  
on Current Ryerson Property

Ryerson Property  
Emeryville, CA  
January 2001  
EKI A00084.00  
Figure 5





**LEGEND**

- Railroad Tracks
- Approximate Property Boundary
- Historical Site Features (1911 Sanborn Map)
- Existing Monitoring Well Installed by EKI, 1995
- Monitoring Well Installed by Others
- Proposed Location of Perimeter Monitoring Well
- Shallow Soil Boring Installed by EKI, 1995
- Destroyed Monitoring Well
- Soil and Grab Groundwater Sampling Location Collected by Others
- Soil/Grab Groundwater Sampling Location Collected by EKI, July 1995
- Grab Groundwater Sampling Location Collected by EKI, 1999
- Area-A (Added Area in Color)
- Area-B (Added Area in Color)
- Area-C

**Notes:**

1. All locations are approximate.
2. Basemap taken from Sanborn maps dated 1911 and 1967.

**Erler & Kalinowski, Inc.**

Soil Management Areas for Earthwork Activities

Ryerson Property  
Emeryville, CA  
January 2001  
EKI A00084.00  
Figure 6