

**LENDRUM COURT INCINERATOR AREA LAND USE CONTROL (LUC
AREA C)
SITE-SPECIFIC ADDENDUM TO THE PRESIDIO TRUST LAND USE
CONTROLS MASTER REFERENCE REPORT**

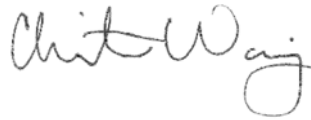
PRESIDIO OF SAN FRANCISCO, CALIFORNIA

The Presidio Trust
103 Montgomery Street, P.O. Box 29052
San Francisco, California 94129-0052

March 2021
For the Presidio Trust by TRC Solutions, Inc.



Justin Hanzel-Durbin, PE
Senior Engineer/Project Manager



Christine Wang, PE
Senior Engineer

**LENDRUM COURT INCINERATOR AREA LAND USE CONTROL (LUC
AREA C)
SITE-SPECIFIC ADDENDUM TO THE PRESIDIO TRUST LAND USE
CONTROLS MASTER REFERENCE REPORT**

Presidio of San Francisco, California

TABLE OF CONTENTS

	Page
1. INTRODUCTION AND DECISION DOCUMENT	1
2. AREAS INCLUDED IN THE LAND USE CONTROL	1
3. REMEDIATION SUMMARY AND REMAINING CHEMICALS OF CONCERN	2
3.1 SITE HISTORY AND REMEDIAL ACTIVITIES	2
3.2 RESIDUAL CHEMICALS THAT NECESSITATE THE LUC	5
4. SITE-SPECIFIC LAND USE RESTRICTIONS	6
5. INSPECTION, MAINTENANCE, AND REPAIR REQUIREMENTS	8
6. REFERENCES	10

Tables:

1. Lendrum Court Land Use Control Area Survey Coordinates
2. Concentrations of COCs Remaining in Lendrum Court LUC Area C Soil

Figures:

1. Incinerator Area LUC and Remaining COC Concentrations in Soils
2. Hook Ramp Drainage Swale Remedial Action Sample Locations, LUC Area C

Attachments:

1. Remedial Action Summary of Soil Sampling Results, LUC Area C
2. *Technical Memorandum for Hook Ramp Drainage Swale Demolished Incinerator Area Cap, Doyle Drive Project, San Francisco, CA*, Terraphase Engineering, May 6, 2015
3. Presidio Trust Standard Operating Procedures

1. INTRODUCTION AND DECISION DOCUMENT

The Lendrum Court Site (Site) was remediated in conformance with the *Final Removal Action Work Plan, Lendrum Court, Presidio of San Francisco, California* (RAWP) (TRC Solutions, Inc. [TRC], 2015), which was approved by the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) on August 5, 2015. DTSC transmitted the *Final RAWP, Approval Record* (DTSC, 2015) to the Presidio Trust (Trust) in a letter dated August 12, 2015. The approved remedy included implementation of land use controls (LUCs). The following outlines the site-specific LUC for the Incinerator Area portion of the Site and is incorporated as an addendum to the *Presidio Trust Land Use Controls Master Reference Report, Presidio of San Francisco, California* (LUCMRR) (Trust, 2009).

2. AREAS INCLUDED IN THE LAND USE CONTROL

The Lendrum Court Site is located in the northwest area of the Presidio of San Francisco, within inland Area B of the Presidio managed by the Trust. Area A is the shoreline portion of the Presidio (outside of the boundaries of the Site), managed by the National Park Service. The Area A and Area B designations of the Presidio are unrelated to the three LUC Area designations described in this section; all of the Site's LUC Areas are located in Area B of the Presidio.

This LUCMRR Addendum is specific to the Incinerator Area portion of the Lendrum Court Site. There are three LUC Areas associated with the Lendrum Court Site: the Lendrum Court Cap Area (LUC Area A), the North of Building 1255/1256 Forest Area (LUC Area B), and the Incinerator Area (LUC Area C). This document is specific to LUC Area C. Figure 1 shows the location and extent of LUC Area C within the Lendrum Court Site, separate from LUC Areas A and B. Survey coordinates for LUC Area C (as north, east, south, and west boundary coordinates of the LUC) are listed in Table 1 and shown on Figure 1. The LUC Area C limits are defined in the RAWP as south of Lendrum Court between Highway 101 and the connector (referred to as the Hook Ramp) of northbound Highway 1 to northbound Highway 101. This area will function as a drainage swale between Highway 101 and the connector ramp from Highway 1 to northbound Highway 101. LUC Area C is maintained by the California Department of Transportation (Caltrans).

The limits of LUC Area A and LUC Area B are defined based on a survey of post-remediation Site conditions as documented in the *Final Construction Completion Report, Lendrum Court, Presidio of San Francisco, California* (TRC, 2019a). The site-specific requirements and restrictions for LUC Area A and LUC Area B are described in a separate LUCMRR Addendum (TRC, 2019b).

3. REMEDIATION SUMMARY AND REMAINING CHEMICALS OF CONCERN

This section describes remedial actions implemented at Lendrum Court and identifies chemicals of concern (COCs) remaining in soil above applicable cleanup levels (CULs) in LUC Area C as provided in the RAWP (TRC, 2015).

3.1 Site History and Remedial Activities

The Site history is described in detail in the *Remedial Investigation Summary Report and Screening Risk Evaluation* (RI) prepared by Erler & Kalinowski, Inc. (EKI) (EKI, 2015). Prior to 1936, the area was generally open space. The US Army operated an incinerator in the southern area of the Site. The incinerator was abandoned in 1936 when Doyle Drive, the predecessor roadway to the present-day Presidio Parkway, was constructed. The Army generally disposed of debris and incinerator ash associated with incinerator operations in piles at the ground surface in the area of present day Lendrum Court. Doyle Drive was constructed above the foundation of the former incinerator, effectively burying the incinerator, debris, and ash beneath the roadway. Debris and ash placed outside the highway footprint in present day Lendrum Court remained in place.

In 1970 and 1971, the Site was developed for residential use by Army personnel. The residential area was graded to create a series of terraces generally sloping to the northeast. Debris and ash associated with the former incinerator was mixed into shallow soils during grading. Buildings 1255, 1256, 1257, 1258, 1259, 1278, 1279, 1280, and 1282, were constructed around present day Lendrum Court. The residential buildings were built on the graded surface and landscaping was installed around the buildings. The northeastern slope, behind Buildings 1259, 1278, and 1279 was planted in orchard style with large trees and a thick understory of smaller statured trees and shrubs. This area is designated as Historic Forest, as described in the *Presidio Trust Management Plan* (Trust, 2002).

The Trust conducted remedial investigations beginning in 2010. The EKI RI report was completed and approved by DTSC in May 2015. The RAWP was completed and approved shortly thereafter in August 2015.

Remedial actions taken at LUC Area C include soil removal and disposal, additional characterization of in-situ soil, spreading and grading of stockpiled soil suitable for reuse, and placement of a 2-foot thick soil cover in early 2015. A portion of the impacted incinerator area has been covered by new highway pavement and landscape plants as part of the Doyle Drive Replacement Project. Documentation of remedy implementation at LUC Area C was provided and approved as Appendix A within the RAWP.

For the Lendrum Court Site, the preferred remedial alternative consisted of: excavation and consolidation of waste; construction of a soil cap above consolidated waste; revegetation, and post-remediation maintenance; and implementation of LUCs. Waste that could not be consolidated was disposed of off-site. The processes and procedures guiding implementation of the approved remedy were outlined in the *Revised Remedial Design and Implementation Plan (Revised RDIP), Lendrum Court, Presidio of San Francisco, California* (TRC, 2016) which was approved by DTSC on June 2, 2016.

Although the Revised RDIP didn't receive approval until 2016, due to ongoing construction for the Doyle Drive Replacement project, Caltrans implemented the approved remedy at LUC Area C in 2015. The remedial action activities are documented in detail in Appendix A of the RAWP and are summarized below.

- **Waste Excavation, Characterization, and Off-Site Disposal** – Soil containing ash and debris was excavated from the demolished incinerator area during construction of the drainage swale and highway. Three stockpiles of excavated material were generated: SP-202 (1,000 cubic yards [cy]), SP-203 (1,200 cy), and SP-204 (600 cy). The stockpiles were sampled and characterized to determine suitability for reuse or off-site disposal. Stockpile SP-202 was profiled and disposed of as hazardous waste based on total lead concentrations detected above the Total Threshold Limit Concentration of 1,000 milligrams per kilogram. Stockpiles SP-203 and SP-204 were approved for reuse as fill within the demolished incinerator area, beneath a soil cap. Soil remaining in place in the incinerator area following excavation (i.e., in-situ soil) was sampled and characterized to delineate the extents of residual contamination. The confirmation sampling identified three Elevated Lead Areas to be capped in place within LUC Area C.
- **Waste Consolidation and Capping** – The grading plan for the former incinerator area was redesigned during remediation activities to allow for the placement of Stockpiles SP-203 and SP-204 within the demolished incinerator area, along with the residual soil containing elevated lead. A 2-foot cap of clean soil was proposed for placement over the consolidated and graded waste. Caltrans submitted the new grading plan to DTSC for approval. At a soil management meeting on April 16, 2015, Caltrans confirmed that DTSC had approved the design and proposed cap presented in the “Caltrans proposed Capping Plan” (provided in Attachment 2). The soil cap consisted of 2 feet of unrestricted use soil generated from the northbound battery tunnel (horticultural soil; which has since been referenced as North Fort Scott Soil. Additionally, new and existing hardscape elements such as highway pavement and landscaped planting serve as part of the cap. Waste consolidation, grading, and cap construction was completed as designed.
- **Establishment of a LUC** – The approved remedy for the Site includes implementation of site-specific LUCs in areas where waste is left to be managed in place. The LUC for Area C is documented herein.

Table 1 provides survey coordinates for the boundary of LUC Area C; the LUC establishes control measures pertaining to health and safety, soil management, surface cover requirements, and sensitive use. Table 2 presents the range of concentrations of COCs (metals, PAHs, and dioxins/furans) remaining in soil within LUC Area C, compared to their applicable CULs.

Figure 1 provides a plan of the Site showing site features and topography, LUC Areas, and remaining COC concentrations in soil capped within LUC Area C. Figure 2 shows LUC Area C in greater detail, including the extent of cut/fill operations for cap construction, remedial action sample locations within and outside of LUC Area C, and comparison of sampling results to applicable screening criteria used to delineate areas of elevated lead within LUC Area C.

Attachment 1 presents the sample results tables associated with excavation of incinerator waste and disposal or grading for cap construction in the Hook Ramp drainage swale area, prepared by Terraphase Engineering (Terraphase). The tables include sample information (ID, date, survey coordinates, and depth prior to capping) and a comparison of sample results with commercial/industrial and toxicity screening criteria. In-situ confirmation samples (identified with 'CS' in the sample ID) and samples for Stockpiles SP-203 and 204 represent COC concentrations of soil currently capped in place within LUC Area C (Terraphase, 2015a), except for confirmation samples CS14, 15, 16, 17, 21, and 22 which are outside of LUC Area C (see Figure 2 for sample locations). Attachment 2 provides Terraphase's *Technical Memorandum for Hook Ramp Drainage Swale Demolished Incinerator Area Cap* (Technical Memorandum) that describes the LUC Area C cap in detail. The Technical Memorandum presents background information, excavation stockpiling and sampling procedures, delineation of areas with elevated lead, cap construction information, a figure of the capped area (also presented as Figure 2 in this LUC Addendum), a photographic log of cap construction activities, construction field notes, and the DTSC-approved Capping Plan (Terraphase, 2015b).

3.2 Residual Chemicals that Necessitate the LUC

The RI identified the following COCs for debris fill areas at the Site, which also applies to LUC Area C:

- Metals – arsenic, barium, copper, lead, and zinc;
- PAHs – benzo(a)pyrene and dibenzo(a,h)anthracene;
- Dioxins/furans – expressed as tetracholorodibenzo-p-dioxin toxic equivalent (TCDD TEQ)

The RAWP evaluated and retained the COCs that exceed applicable CULs and selected a remedy for LUC Area C: consolidation and capping with LUCs and post-remediation monitoring. Below is a summary of the COCs present in soil beneath the cap at concentrations above the applicable CULs that necessitate the LUC based on planned land use.:

- Protection of Human Health – Commercial/Industrial CULs: Lead is present at concentrations that pose a risk to human health for a commercial worker in LUC Area C; dioxins/furans are below the cleanup level for commercial/industrial workers but above residential cleanup levels (TCDD TEQ conservatively retained as a COC). Concentrations of the other Site COCs are below applicable CULs in LUC Area C.
- Protection of Ecological Receptors – Buffer Zone CULs: Lead poses a potential risk to ecological buffer zone receptors, and dioxins/furans pose an unknown risk (TCDD TEQ conservatively retained as a COC). Concentrations of the other Site COCs are below applicable CULs in LUC Area C.

According to the RI and RAWP, there are no groundwater COCs at this Site.

Figure 1 shows the range of concentrations of COCs remaining in soil at LUC Area C. Table 2 includes the COC concentrations compared to their applicable CULs. Figure 2 shows the sample locations for soil currently remaining in place beneath the 2-foot clean soil cover at LUC Area C. The figure shows 1) specific locations for confirmation samples used to delineate areas of elevated lead following excavation of incinerator waste, and 2) general locations of samples associated with Stockpiles SP-203 and SP-204, used as fill material within the cap. Specific locations for SP-203 and SP-204 samples are unknown, due to re-grading activities for cap construction performed after the sampling. Sample locations associated with Stockpile SP-202 are not shown on Figure 2 because the stockpile was disposed of at an off-site landfill. Attachment 1 includes a summary of all sampling results for the Hook Ramp drainage swale area (which contains LUC Area C), including results for confirmation samples, Stockpiles SP-203 and SP-204 shown on Figure 2, and Stockpile SP-202 disposed of off-site.

4. SITE-SPECIFIC LAND USE RESTRICTIONS

Operators (users or occupants) of LUC Area C must comply with all requirements of the Trust LUCMRR to which this document is added, the specific requirements of this LUCMRR Addendum, and the post-closure *Final Operations and Maintenance (O&M) Plan* for the Lendrum Court Site discussed in Section 5. Operators of LUC Area C include Caltrans personnel and contractors (subject to requirements of the Highway Easement Deed under which LUC Area C falls) and Trust personnel and contractors; no other land users or members of the public are anticipated. Following DTSC approval, a copy of the final documents will be provided to Caltrans via email with a copy to DTSC, including a transmittal letter that clarifies Caltrans' responsibilities pursuant to the Highway Easement Deed.

The following site-specific land use restrictions and notifications apply to LUC Area C:

- Development Restrictions – Development for residential use (including mobile homes) and other sensitive uses such as schools, hospitals, and day care centers is prohibited.
- Access Restrictions - Uncontrolled public access to the area is prohibited and enforced through right of way fencing surrounding the operating Highway 1/101.
- Health & Safety Requirements - Personnel potentially exposed to soils in LUC Area C shall follow a site-specific Health and Safety Plan, have the appropriate level of health and safety training, and use the appropriate level of personal protective equipment specified in the Health and Safety Plan (HASP). Minimum training requirements included Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) training for personnel performing work within contaminated soils below the cap, and lead awareness training for work not penetrating the cap. Additional training may be necessary based on the scope of work to be performed, as determined by the health and safety professional preparing the HASP for the work.
- Soil Management Requirements - Soil excavated from LUC Area C shall be managed and/or disposed in accordance with applicable federal, state, and local laws and regulations. Any soil disturbing activity will be performed in accordance with the DTSC-approved Presidio-Wide Soil Management Plan (SMP).
- Surface Cover Requirement – Impacted soil in LUC Area C shall remain covered with a minimum of 24 inches of clean soil, or cement concrete, asphalt concrete, or another appropriate barrier as approved by DTSC and appropriate for highway operations. Operators of the site will be responsible for cap maintenance as described in Section 5, including repair of shallow soil disturbance to maintain the required cap

thickness. Operators of the site will provide the Trust with documentation of any repairs or maintenance performed, which will be submitted to DTSC in the Annual O&M Report.

- Notification Requirements – Any user or occupant of LUC Area C shall provide written notice to DTSC of planned soil-disturbing activity that will penetrate the cap. The requirements for notification and follow-on action are as follows:
 - DTSC notification is required for 1) activities that disturb or penetrate the soil cap more than 18 inches below ground surface, 2) activities that disturb a cap area of greater than 50 square feet at any depth, and 3) activities that disturb hardscape functioning as a cap.
 - The written notice shall be provided to DTSC sixty (60) days in advance of the planned activity.
 - The notice shall include sufficient description of the soil-disturbing activity to determine if any additional requirements, beyond those included in the Presidio-Wide SMP, will be required. The notice shall include air monitoring decisions, evaluated by professional judgement based on factors such as scope and extent of work. If air monitoring is required, the notice shall include the type of air monitoring to be conducted. Air monitoring shall be in accordance with DTSC’s *Community Air Monitoring Plan Guidance* (DTSC, 2020).
 - The user or occupant of LUC Area C must receive written approval or, at a minimum, acknowledgment of notification from DTSC prior to proceeding with soil-disturbing activities.
 - The user or occupant will provide a summary of all soil-disturbing activities in LUC Area C to the Trust by February 28th for the prior year to be included in the Annual O&M Report that gets sent to DTSC each March. .

All work at LUC Area C, including soil-disturbing activities, shall be performed in accordance with the Presidio Trust’s Standard Operating Procedures (SOPs) for environmental site management. The following SOPs are provided as Attachment 3:

- SOP 001: Environmental Health and Safety
- SOP 002: Storm Water Pollution Prevention Plan
- SOP 003: Air and Dust Monitoring and Mitigation Plan
- SOP 004: Dewatering
- SOP 005: Profiling Soil for Disposal
- SOP 006: Profiling Soil for Import and Reuse
- SOP 007: Soil and Stockpile Management
- SOP 008: Traffic Control and Haul Routes

- SOP 009: Dust Prevention and Control
- SOP 010: Disturbance and Replacement of Cap Materials
- SOP 011: Penetration of Cap Materials
- SOP 012: Site Specific Soil Management Plan
- SOP 013: Construction Completion Report

The SOPs may be revised or updated during development of the Presidio-Wide SMP. Updates to the SOPs included in this LUCMRR Addendum will be made by addendum, which will be provided to DTSC as part of the Annual O&M Report or as part of the Presidio-Wide SMP. Updated SOPs will be issued to Caltrans under separate cover via email with a copy to DTSC.

FAILURE OF ANY ENTITY TO COMPLY WITH THE TERMS OF THIS OR ANY LUC
COULD CONSTITUTE A RELEASE AND RESULT IN ENFORCEMENT ACTION
AGAINST THAT ENTITY.

5. INSPECTION, MAINTENANCE, AND REPAIR REQUIREMENTS

The Trust has prepared a *Final O&M Plan* for the Lendrum Court Site outlining post-closure requirements for inspection, maintenance, and repair of the constructed cap, forest area, and former incinerator area (TRC, 2019c). Operators of LUC Area C must comply with all requirements of the O&M Plan, including inspection/monitoring and maintenance/repair described in Table 1 of the O&M Plan. Inspection of the LUC Area C cap is required quarterly and after qualifying storm/seismic events, and must include identification and repair of the following conditions:

- Excessive soil erosion
- Cracking in soil cap materials
- Significant depressions indicative of excessive settlement
- Slope failure
- Rodent activity/burrowing
- Vegetation health

Additionally, all Lendrum Court LUC Areas will be inspected annually by the Trust in accordance with the LUCMRR. Due to the inaccessible nature of LUC Area C, this area will be inspected remotely to ensure that the area is not accessible and that there are no signs of trespassing. Inspections should be performed under the supervision of a California registered

professional engineer or geologist; however, inspection personnel may include Trust or Caltrans staff, qualified consultants, and/or contractors hired by the Trust or Caltrans.

Activities completed as part of post-closure O&M and the results of inspections and maintenance of the Lendrum Court LUC Areas will be summarized in the Annual O&M report submitted to DTSC in March for the prior year in conformance with the approved O&M Agreement (DTSC, 2012).

6. REFERENCES

- California Environmental Protection Agency, Department of Toxic Substances Control (DTSC), 2012. Presidio Operation and Maintenance Agreement. December 3.
- DTSC, 2015. Final Removal Action Work Plan, Lendrum Court, Presidio of San Francisco, California, Approval Record. August 5.
- DTSC, 2020. Community Air Monitoring Plan Guidance. January.
- Erler & Kalinowski, 2015. Remedial Investigation Summary Report and Screening Risk Evaluation, Presidio of San Francisco. May.
- Presidio Trust (Trust), 2002. Presidio Trust Management Plan.
- Trust, 2009. Presidio Trust Land Use Controls Master Reference Report, Presidio of San Francisco, California. September.
- Terraphase Engineering (Terraphase), 2015a. Technical Memorandum - Hook Ramp Drainage Swale Sample Results, Doyle Drive Project, San Francisco, California, March 25.
- Terraphase, 2015b. Technical Memorandum - Hook Ramp Drainage Swale Demolished Incinerator Area Cap, Doyle Drive Project, San Francisco, California, May 6.
- TRC Solutions, Inc. (TRC), 2015. Removal Action Work Plan, Lendrum Court, Presidio of San Francisco, California. July.
- TRC, 2016. Final Remediation Design and Implementation Plan, Lendrum Court, Presidio of San Francisco, California. May.
- TRC, 2019a. Final Construction Completion Report, Lendrum Court, Presidio of San Francisco, California. November.
- TRC, 2019b. Final Lendrum Court Land Use Control Site-Specific Addendum to the Presidio Trust Land Use Controls Master Reference Report, Presidio of San Francisco, California. August.
- TRC, 2019c. Final Operations and Maintenance Plan, Lendrum Court, Presidio of San Francisco, California. November.

Tables

**TABLE 1
LENDRUM COURT LAND USE CONTROL AREA SURVEY COORDINATES**

Site Name (Trust GIS System)	LUCs	Coordinates		LUCMRR Addendum Information	
		Eastings	Northings	Name	Date
LendCt_LUCAREA_C	<ul style="list-style-type: none"> • Health & Safety • Soil Management • Surface Cover requirement • Sensitive Use 	5992081.7877	2121337.7940	Lendrum Court Incinerator Area (LUC Area C)	6/15/2018
		5992354.5804	2121245.5988		
		5992299.2894	2121157.1691		
		5992068.2627	2121314.2909		

Table 1 Notes:

GIS – geographic information system

LUC – land use control

LUCMRR – Land Use Controls Master Reference Report (Trust, 2009)

Trust – Presidio Trust

TABLE 2 CONCENTRATIONS OF COCs REMAINING IN LENDRUM COURT LAND USE CONTROL AREA C SOIL		
COC	LUC Area C – Incinerator Area¹	Site-Specific and Applicable Cleanup Level²
Metals (mg/kg)		
Arsenic	2.2 – 6.6	11
Barium	65 – 160	130,000
Copper	11 – 66	120
Lead	4.2 – 2,600	320
Zinc	43 – 230	570,000
PAHs (mg/kg)		
Benzo(a)pyrene	0.034	0.38
Dibenzo(a,h)anthracene	<0.025	0.38
Dioxins/Furans (pg/g)		
Dioxins and Furans	4.35 – 6.21	17

Table 2 Notes:

¹ See Attachment 1 for summary of COC concentrations remaining in soil at LUC Area C.

² Site-specific cleanup level for lead at LUC Area C, and applicable cleanup levels based on commercial/industrial worker for other COCs (TRC, 2015).

COC – chemical of concern

LUC – land use control

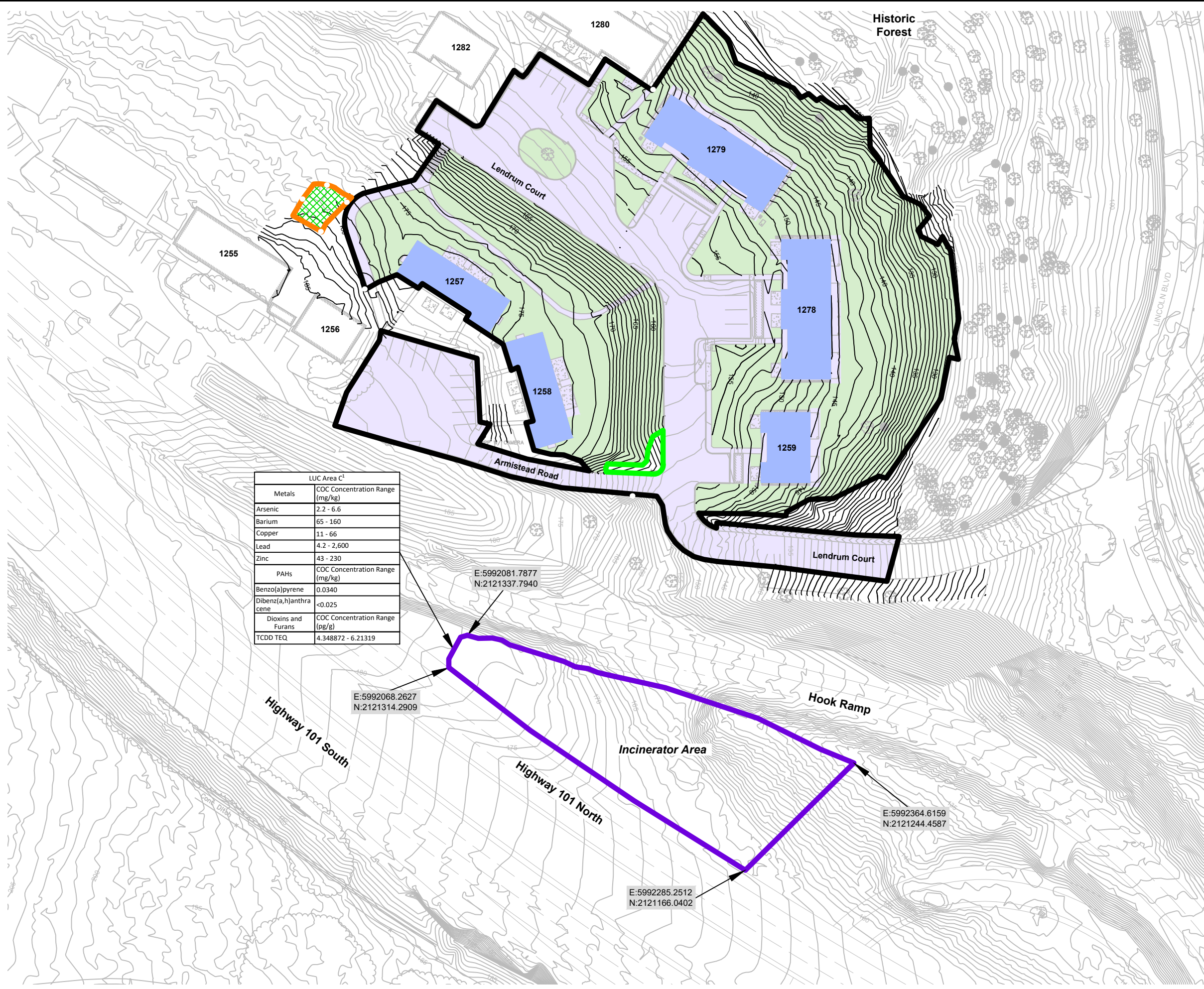
mg/kg – milligrams per kilogram

PAHs – polycyclic aromatic hydrocarbons

pg/g – picograms per gram

Figures

1:17 - USER: D:\Users\DP\Documents - Presidio Trust Projects\229649 - Lendrum Court Incinerator Area - TRC\Working Drafts\LUCMRR Addendum\Figures\Incinerator Area Fig1 Extent of the Lendrum Court Incinerator LUC Area revMAY21.dwg --- PLOT DATE: May 19, 2021 - 1:47PM --- LAYOUT: 11X17L
 DRAWING NAME: C:\Users\DP\Documents - Presidio Trust Projects\229649 - Lendrum Court Incinerator Area - TRC\Working Drafts\LUCMRR Addendum\Figures\Incinerator Area Fig1 Extent of the Lendrum Court Incinerator LUC Area revMAY21.dwg
 Version: 2017-10-21



LUC Area C ¹	
Metals	COC Concentration Range (mg/kg)
Arsenic	2.2 - 6.6
Barium	65 - 160
Copper	11 - 66
Lead	4.2 - 2,600
Zinc	43 - 230
PAHs	COC Concentration Range (mg/kg)
Benzo(a)pyrene	0.0340
Dibenz(a,h)anthracene	<0.025
Dioxins and Furans	COC Concentration Range (pg/g)
TCDD TEQ	4.348872 - 6.21319

E:5992081.7877
N:2121337.7940

E:5992068.2627
N:2121314.2909

E:5992364.6159
N:2121244.4587

E:5992285.2512
N:2121166.0402

LEGEND

- LENDRUM COURT CAP AREA (LUC AREA A)
- LENDRUM COURT FOREST AREA (LUC AREA B)
- INCINERATOR AREA (LUC AREA C) LIMIT OF CAP
- NON-LUC AREA
- SURFACE CONTOURS (OUTSIDE PROJECT AREA)
- FINAL SURFACE CONTOURS
- APPROXIMATE LIMITS OF VEGETATED CAP
- APPROXIMATE AREAS OF BUILDING THAT SERVE AS CAP
- AREAS OF ASPHALT, PAVEMENT AND HARDSCAPE THAT SERVE AS CAP
- VEGETATED LUC (NORTH 1255/1256 FOREST AREA)

- ### NOTES
- COC - CHEMICAL OF CONCERN
 - LUC - LAND USE CONTROL
 - mg/kg - MILLIGRAMS PER KILOGRAM
 - PAHS - POLYCYCLIC AROMATIC HYDROCARBONS
 - pg/g - PICOGRAMS PER GRAM
 - TCDD TEQ - 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN TOXIC EQUIVALENT QUOTIENT
 - ¹COC RESULTS FROM THE TECHNICAL MEMORANDUM HOOK RAMP DRAINAGE SWALE SAMPLE RESULTS, DOYLE DRIVE PROJECT, SAN FRANCISCO, CALIFORNIA (TERRAPHASE, 2015).

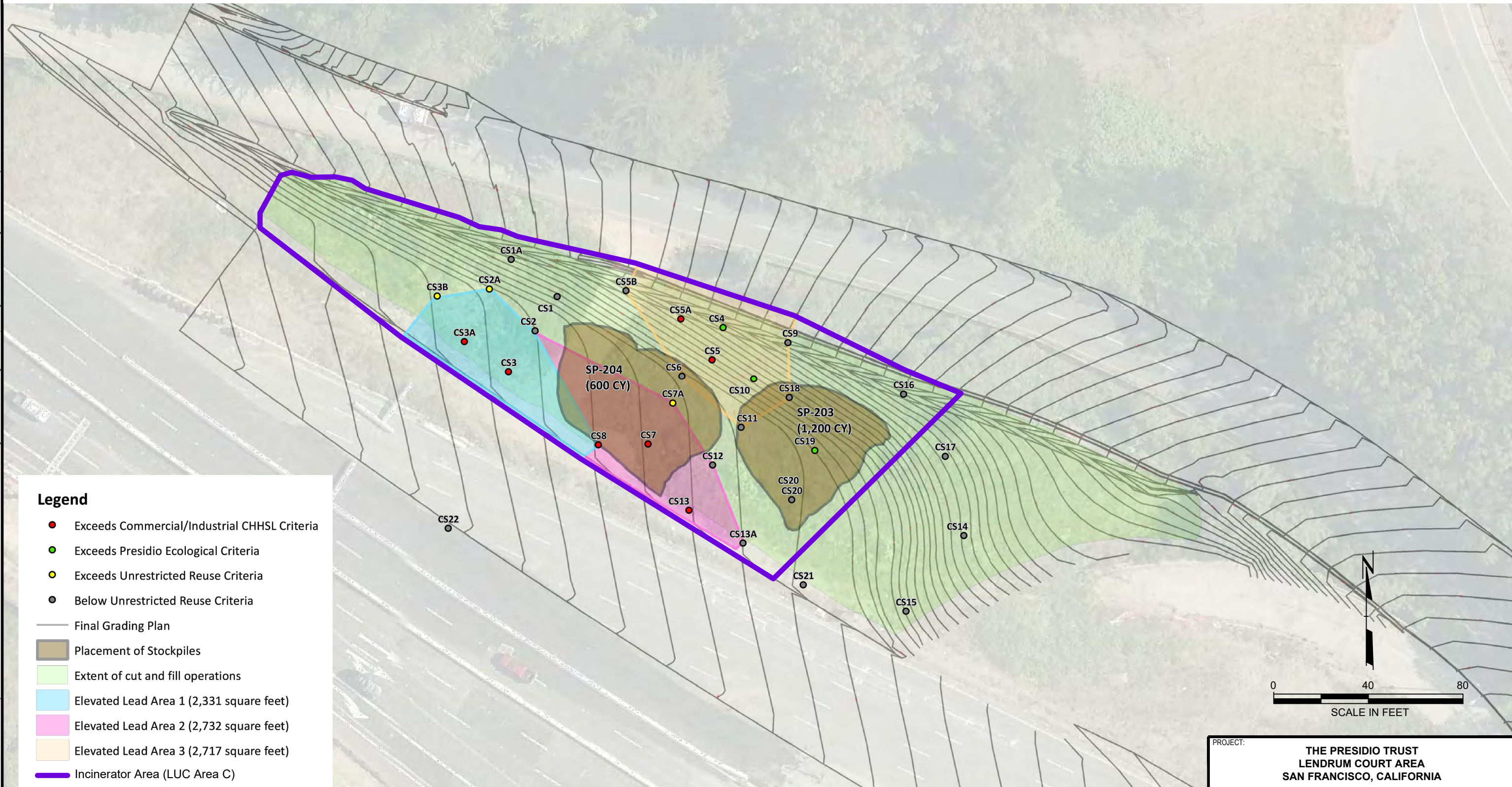
SOURCE: Base map by Towill, Oct.- Nov. 2015, Apr. 2016, May 2017, and Jan. 2018

PROJECT:		THE PRESIDIO TRUST LENRUM COURT AREA SAN FRANCISCO, CALIFORNIA	
TITLE:		INCINERATOR AREA LUC AND REMAINING COC CONCENTRATIONS IN SOILS	
DRAWN BY:	D. PARSONS	PROJ NO.:	229649.00005A.00000D
CHECKED BY:	C. WANG	FIGURE 1	
APPROVED BY:	J. H-D		
DATE:	MAY 2021		

505 Sansome Street
Suite 1600
San Francisco, CA 94111
Phone: 415.434.2600

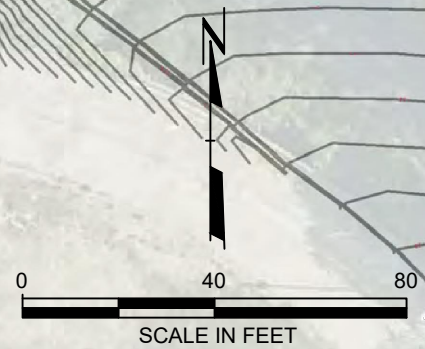
FILE NO.: Fig1 Extent of the Lendrum Court Incinerator LUC Area revMAY21.dwg

11x17 - USER: D:\parsons - ATTACHED IMAGES - DRAWING NAME: C:\Users\jparsons\OneDrive - TRC\Documents - Presidio Trust Projects\228649 Lendrum Court\In\me\9 - TRC\WORKING DRAFTS\LUCMRR Addendum\Figures\Incinerator Area\ Fig2 Hook Ramp Drainage Swale_revised MAY21.dwg -- PLOT DATE: May 19, 2021 - 1:48PM -- LAYOUT: 11X17L
 Version: 2017-10-21



Legend

- Exceeds Commercial/Industrial CHHSL Criteria
- Exceeds Presidio Ecological Criteria
- Exceeds Unrestricted Reuse Criteria
- Below Unrestricted Reuse Criteria
- Final Grading Plan
- Placement of Stockpiles
- Extent of cut and fill operations
- Elevated Lead Area 1 (2,331 square feet)
- Elevated Lead Area 2 (2,732 square feet)
- Elevated Lead Area 3 (2,717 square feet)
- Incinerator Area (LUC Area C)



NOTES

1. SOURCE: HOOK RAMP DRAINAGE SWALE DEMOLISHED INCINERATOR AREA CAP, DOYLE DRIVE PROJECT, SAN FRANCISCO, CALIFORNIA (TERRAPHASE, 2015)
2. AERIAL IMAGERY CAPTURED IN JULY 2012

PROJECT: THE PRESIDIO TRUST LENDRUM COURT AREA SAN FRANCISCO, CALIFORNIA	
TITLE: HOOK RAMP DRAINAGE SWALE REMEDIAL ACTION SAMPLE LOCATIONS LUC AREA C	
DRAWN BY: D. PARSONS	PROJ NO.: 229649.00005A.00000D
CHECKED BY: C. WANG	FIGURE 2
APPROVED BY: J. H-D	
DATE: MAY 2021	
505 Sansome Street Suite 1600 San Francisco, CA 94111 Phone: 415.434.2600	
FILE NO.:	Fig2 Hook Ramp Drainage Swale_rev MAY21.dwg

Attachment 1

Summary of Sampling Results Hook Ramp Drainage Swale Sample Results Doyle Drive Project, San Francisco, CA

Sample ID	Sample Date	State Plane Coordinate System		Sample Depth (feet)	Total Lead Results (mg/kg)	Total Arsenic Results (mg/kg)	Total Barium Results (mg/kg)	Total Copper Results (mg/kg)	Total Zinc Results (mg/kg)
		Northing	Easting						
CS1-0-3	3/13/2015	5992199.454	2121284.484	0-3	78	--	--	--	--
CS1-3-5	3/13/2015			3-5	10	--	--	--	--
CS1A-0-3	3/13/2015	5992180.057	2121300.154	0-3	42	--	--	--	--
CS2-0-3	3/13/2015	5992190.198	2121270.119	0-3	54	--	--	--	--
CS2-3-5	3/13/2015			3-5	19	--	--	--	--
CS2A-0-3	3/13/2015	5992170.767	2121287.744	0-3	95	--	--	--	--
CS2A-3-5	3/13/2015			3-5	50	--	--	--	--
CS3-0-3	3/13/2015	5992178.911	2121252.824	0-3	380	--	--	--	--
CS3-3-5	3/13/2015			3-5	360	--	--	--	--
CS3A-0-3	3/13/2015	5992160.26	2121265.489	0-3	2,600	--	--	--	--
CS3A-3-5	3/13/2015			3-5	300	--	--	--	--
CS3B-0-3	3/13/2015	5992148.757	2121284.719	0-3	140	--	--	--	--
CS4-0-3	3/13/2015	5992269.62	2121271.428	0-3	190	--	--	--	--
CS5-0-3	3/13/2015	5992264.89	2121257.754	0-3	570	--	--	--	--
CS5-3-5	3/13/2015			3-5	42	--	--	--	--
CS5A-0-3	3/17/2015	5992251.733	2121275.065	0-3	780	--	--	--	--
CS5A-3-5	3/17/2015			3-5	500	--	--	--	--
CS5B-0-3	3/17/2015	5992228.547	2121287.013	0-3	55	--	--	--	--
CS6-0-3	3/13/2015	5992252.206	2121250.814	0-3	4.2	--	--	--	--
CS7-0-3	3/13/2015	5992237.895	2121222.111	0-3	660	--	--	--	--
CS7-3-5	3/13/2015			3-5	12	--	--	--	--
CS7A-0-3	3/17/2015	5992248.282	2121239.423	0-3	140	--	--	--	--
CS8-0-3	3/13/2015	5992216.859	2121221.766	0-3	1,700	--	--	--	--
CS9-0-3	3/13/2015	5992297.032	2121265.112	0-3	22	--	--	--	--
CS10-0-3	3/13/2015	5992282.527	2121249.708	0-3	180	--	--	--	--
CS11-0-3	3/13/2015	5992277.181	2121229.165	0-3	35	--	--	--	--
CS12-0-3	3/13/2015	5992265.202	2121213.279	0-3	9.7	--	--	--	--
CS13-0-3	3/13/2015	5992255.17	2121194.106	0-3	880	--	--	--	--
CS13-3-5	3/13/2015			3-5	750	--	--	--	--
CS13A-0-3	3/17/2015	5992278.021	2121180.257	0-3	52	--	--	--	--
CS13A-3-5	3/17/2015			3-5	76	--	--	--	--
CS14-0-3	3/6/2015	5992371.362	2121183.447	0-3	27	3.1	44	12	41
CS15-0-3	3/6/2015	5992346.91	2121151.496	0-3	20	3	36	9.3	38
CS16-0-3	3/13/2015	5992345.871	2121243.194	0-3	67	--	--	--	--
CS17-0-3	3/13/2015	5992363.517	2121216.92	0-3	16	--	--	--	--
CS18-0-3	3/13/2015	5992297.549	2121241.819	0-3	5.9	--	--	--	--
CS19-0-3	3/13/2015	5992308.379	2121219.424	0-3	190	--	--	--	--
CS20-0-3	3/13/2015	5992298.594	2121198.605	0-3	9.1	--	--	--	--
CS21-0-3	3/13/2015	5992303.495	2121162.674	0-3	12	--	--	--	--
CS22-0-3	3/17/2015	5992153.378	2121186.489	0-3	55	--	--	--	--
CS22-3-5	3/17/2015			3-5	51	--	--	--	--
95% UCL*					754.8	--	--	--	--
Commercial/Industrial CHHSL					320	11	130,000	120	570,000

Notes: -- No Data
mg/Kg = milligrams per kilogram
mg/L = milligrams per liter
Bold Exceeds Commercial/Industrial CHHSL

Summary of Stockpile Lead Results Hook Ramp Drainage Swale Sample Results Doyle Drive Project, San Francisco, CA

Stockpile ID	Sample ID	Sample Date	All Total Lead Results (mg/kg)	All Total Arsenic	All Total Barium	All Total Copper	All Total Zinc	Benzo(a)pyrene	Dibenz(a,h)anthracene
SP-204	HOOKRAMP-VDITCH-SP-3	1/30/2015	54	2.2	66	17	52	--	--
SP-204	HOOKRAMP-VDITCH-SP-3	2/4/2015	86	--	--	--	--	0.034	<0.025
SP-203	HOOKRAMP-VDITCH-SP-2	1/30/2015	1,500	5.6	150	66	230	--	--
SP-202	SP-202-1(A,B,C,D)	2/13/2015	920	6.2	360	65	380	--	--
SP-202	SP-202-2(A,B,C,D)	2/13/2015	370	5.4	190	43	250	--	--
SP-202	SP-202-3(A,B,C,D)	2/13/2015	460	8	180	51	590	--	--
SP-202	SP-202-4(A,B,C,D)	2/13/2015	1,500	11	890	180	1,200	--	--
SP-203	SP-203-1(A,B,C,D)	2/13/2015	85	4.8	71	20	66	--	--
SP-203	SP-203-2(A,B,C,D)	2/13/2015	84	4.9	87	24	77	--	--
SP-203	SP-203-3(A,B,C,D)	2/13/2015	90	5.2	90	24	85	--	--
SP-203	SP-203-4(A,B,C,D)	2/13/2015	110	6.6	110	28	92	--	--
SP-203	SP-203-5(A,B,C,D)	2/13/2015	92	5.4	78	22	70	--	--
SP-203	SP-203-6(A,B,C,D)	2/13/2015	83	6.6	280	82	430	--	--
Commercial/Industrial CHHSL			320	11	130,000	120	570,000	0.38	0.38

Notes: -- No Data

mg/Kg = milligrams per kilogram

mg/L = milligrams per liter

Bold Exceeds Commercial/Industrial CHHSL

Summary of Dioxins and Furans Results Hook Ramp Drainage Swale Sample Results Doyle Drive Project, San Francisco, CA

CS9-GRAB			
Dioxins			
Compound	2005 TEF	Concentration (pg/g)	TEQ (pg/g)
2,3,7,8-TCDD	1	0.545	0.545
1,2,3,7,8-PeCDD	1	0.618	0.618
1,2,3,4,7,8-HxCDD	0.1	0.536	0.0536
1,2,3,6,7,8-HxCDD	0.1	0.895	0.0895
1,2,3,7,8,9-HxCDD	0.1	0.99	0.099
1,2,3,4,6,7,8-HpCDD	0.01	9.34	0.0934
1,2,3,4,6,7,8,9-OCDD	0.0003	67.7	0.02031
Sum			1.51881

Furans			
Compound	2005 TEF	Concentration (pg/g)	TEQ (pg/g)
2,3,7,8-TCDF	0.1	3.59	0.359
1,2,3,7,8-PeCDF	0.03	1.56	0.0468
2,3,4,7,8-PeCDF	0.3	4.79	1.437
1,2,3,4,7,8-HxCDF	0.1	2.09	0.209
1,2,3,6,7,8-HxCDF	0.1	2.31	0.231
2,3,4,6,7,8-HxCDF	0.1	3.69	0.369
1,2,3,7,8,9-HxCDF	0.1	0.702	0.0702
1,2,3,4,6,7,8-HpCDF	0.01	9.44	0.0944
1,2,3,4,7,8,9-HpCDF	0.01	1.11	0.0111
1,2,3,4,6,7,8,9-OCDF	0.0003	8.54	0.002562
Sum			2.830062
Dioxins + Furans (pg/g)			4.348872
Urban Background (pg/g)			7-20

Notes

pg/g = picograms per gram

TEQ = Toxicity Equivalence

Terraphase Engineering, Inc. , 2015

CS8-GRAB			
Dioxins			
Compound	2005 TEF	Concentration (pg/g)	TEQ (pg/g)
2,3,7,8-TCDD	1	0.656	0.656
1,2,3,7,8-PeCDD	1	1.03	1.03
1,2,3,4,7,8-HxCDD	0.1	0.641	0.0641
1,2,3,6,7,8-HxCDD	0.1	1.14	0.114
1,2,3,7,8,9-HxCDD	0.1	1.02	0.102
1,2,3,4,6,7,8-HpCDD	0.01	9.65	0.0965
1,2,3,4,6,7,8,9-OCDD	0.0003	56.6	0.01698
Sum			2.07958

Furans			
Compound	2005 TEF	Concentration (pg/g)	TEQ (pg/g)
2,3,7,8-TCDF	0.1	4.56	0.456
1,2,3,7,8-PeCDF	0.03	2.3	0.069
2,3,4,7,8-PeCDF	0.3	7.43	2.229
1,2,3,4,7,8-HxCDF	0.1	3.3	0.33
1,2,3,6,7,8-HxCDF	0.1	3.41	0.341
2,3,4,6,7,8-HxCDF	0.1	4.66	0.466
1,2,3,7,8,9-HxCDF	0.1	0.869	0.0869
1,2,3,4,6,7,8-HpCDF	0.01	14	0.14
1,2,3,4,7,8,9-HpCDF	0.01	1.25	0.0125
1,2,3,4,6,7,8,9-OCDF	0.0003	10.7	0.00321
Sum			4.13361
Dioxins + Furans			6.21319
Urban Background			7-20

Attachment 2



Technical Memorandum

To: Caltrans Department of Transportation
To: Jason Phillips, Dave Mitchell, and Kelly Dehn (FKJV)
From: Jeff Raines, P.E. (C51120), G.E. (2762), Andrea Brown, P.E. (C83327), and Kara Quan-Montgomery
Date: May 6, 2015
Subject: Hook Ramp Drainage Swale Demolished Incinerator Area Cap, Doyle Drive Project, San Francisco, California

At the direction of Flatiron/Kiewit, Joint Venture (FKJV), Terraphase Engineering Inc. (Terraphase) has prepared this technical memorandum to fulfill the California Department of Transportation's (Caltrans) request to summarize the capping of the demolished incinerator area within the Hook Ramp drainage swale in the West Parkway (WP) area of the Doyle Drive Project (the Site).

Background

FKJV uncovered demolition debris and ash near the location of an incinerator shown on maps of the Presidio drawn in the 1920s. Most of the debris and ash excavated during construction of the drainage swale were classified as Class I (non-RCRA) California hazardous waste as the total lead detected in samples of the ash exceeded the Total Threshold Limit Concentration (TTLIC) of 1,000 milligrams per kilogram (mg/kg). Class I soil in stockpile SP-202 was disposed of at an appropriate landfill. In March 2015 the soil remaining in place was further characterized to better understand the lateral and horizontal extent of the soil containing elevated lead concentrations. Samples were collected from up to 6.5 feet below the existing grade and analyzed for lead. Three different elevated lead areas were identified (Terraphase 2015). The highest lead concentrations were contained within Elevated Lead Area 1 as shown in Figure 1.

The grading plan for the former incinerator area was redesigned to allow for the placement of stockpiles SP-203 and SP-204 and the proposed two foot cap of unrestricted soil within the demolished incinerator area. Caltrans submitted the new grading plan to the Department of Toxic Substances Control (DTSC) for approval. Caltrans representative David Yam gave confirmation that DTSC had approved the design and proposed cap at the April 16, 2015 weekly Soil Management meeting. He also presented the "Caltrans Proposed Capping Plan" (Capping Plan) which is included as Attachment 4 to this memorandum. Due to the extended delay of construction in this area of Hook Ramp caused by the discovery of the incinerator ash, it was imperative that FKJV begin capping the area immediately, so on April 16, 2015 FKJV began backfilling in accordance with the Caltrans Capping Plan.

Stockpiles SP-203 and SP-204

Stockpiles SP-203 and SP-204 were formed during the excavation of the demolished incinerator area during implementation of the original grading plan for the drainage swale area. The excavated soil was stockpiled after being screened using an x-ray fluorescence (XRF) analyzer as described in Terraphase's memo "Hook Ramp Drainage Swale Sample Results" dated March 25, 2015. Composite confirmation samples were collected from the stockpiles and submitted to an analytical laboratory. Analytical results were included in the Terraphase March 25, 2015 memo, which was submitted to DTSC by Caltrans. DTSC approved the reuse of stockpiles SP-203 and SP-204 within the demolished incinerator area in an email from George Chow to David Yam on April 15, 2015.

On April 16, 2015, FKJV began capping the demolished incinerator area by placing stockpiles SP-203 and SP-204 in the areas delineated in Figure 1. Cell 4 of SP-203 was separated and placed at the bottom of the fill area, which was approximately 10 feet below final grade. The total lead result for Cell 4 of SP-203 was 110 milligrams per kilogram (mg/kg), which is below the Presidio Ecological Criteria of 160 mg/kg. The remaining stockpiled soil was placed across the demolished incinerator area at depths approximately 2 to 10 feet below final grade. Caltrans representatives were on site April 17, 2015 to observe the capping of the demolished incinerator area.

Elevated Lead Area 1

Terraphase staked out Elevated Lead Area 1 using a sub-meter accurate Global Positioning System (GPS) meter prior to the commencement of cut and fill operations. In order to allow for a two foot cap, two feet of soil was excavated from the southwestern section of Elevated Lead Area 1 and placed on the northern side of Elevated Lead Area 1. The soil from Elevated Lead Area 1 was placed approximately 10 feet beyond its original footprint on the northern side. The southern side of Elevated Lead Area 1 is bounded by the constructed highway. As displayed in the attached Photographic Log, high visibility orange mesh fabric was installed over Elevated Lead Area 1 including the newly extended area.

Final Cap

A cap of at least two feet of unrestricted soil (horticultural soil) was placed on top of the entire drainage swale area. This included Elevated Lead Areas 1, 2, and 3 as well as the areas where stockpiles SP-203 and SP-204 were placed.

Please contact Jason Phillips (jphillips@flatironcorp.com) with any additional questions or comments.

References

Terraphase Engineering Inc. Hook Ramp Drainage Swale Sample Results, Doyle Drive Project, San Francisco, CA. March 25, 2015.

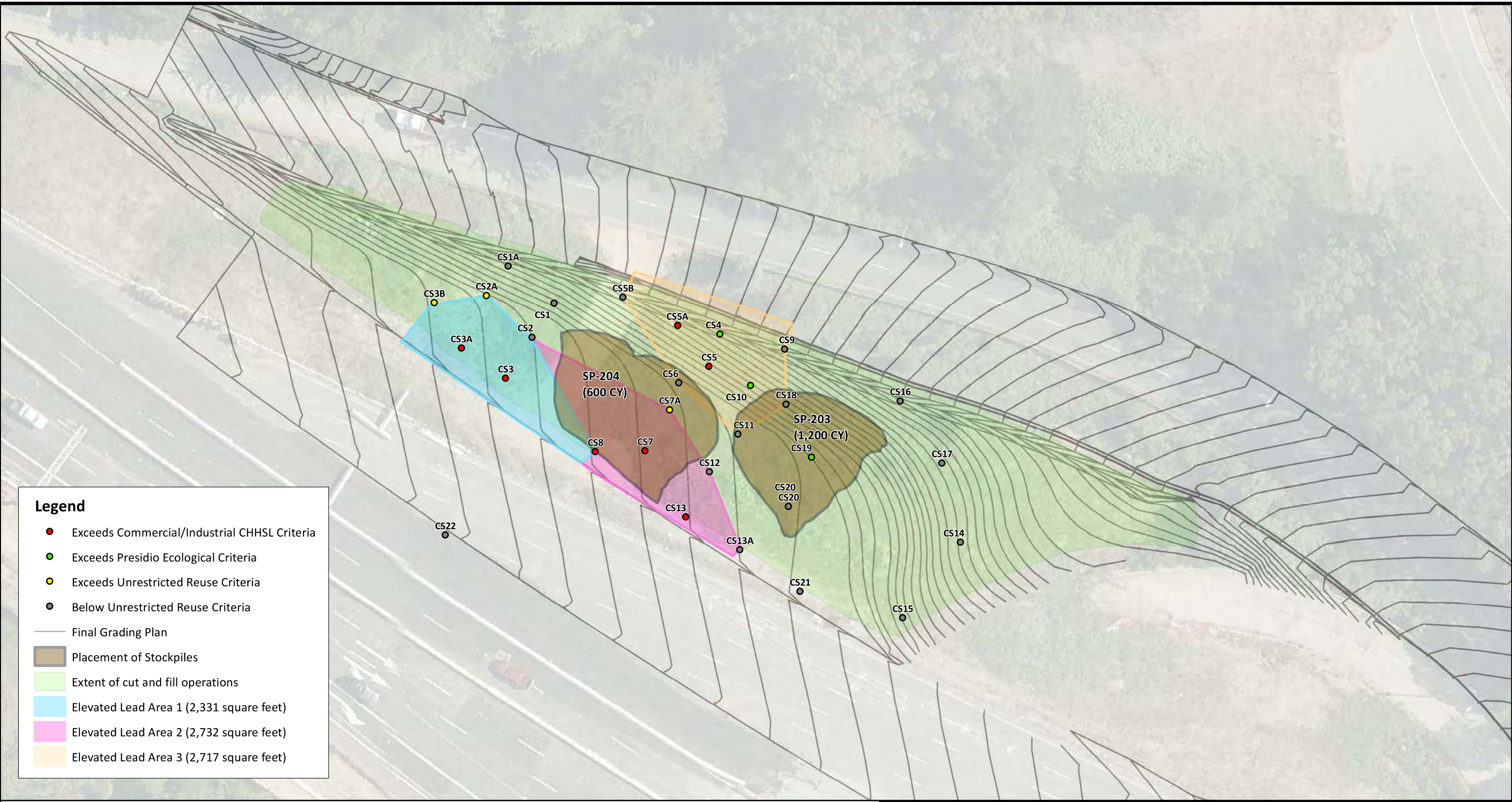
Attachments

1. Figure 1
2. Photographic Log
3. Field Notes
4. Capping Plan

Figure 1

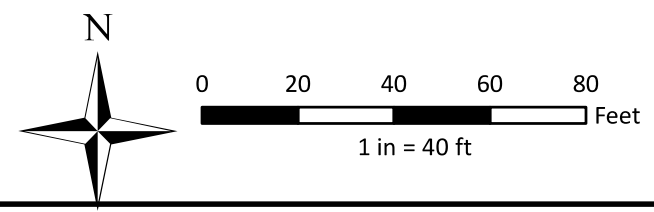
THIS PAGE LEFT INTENTIONALLY BLANK

File: J:\GIS Backup\GIS Data\0068 Flatiron\Excavations\Hook Ramp V-Ditch\Fig-presidio-Drainage-Swale-Sampling.Plan_0068.001.012-stepouts.mxd 5/6/2015 Created by: JK Checked by: AB



Legend

- Exceeds Commercial/Industrial CHHSL Criteria
- Exceeds Presidio Ecological Criteria
- Exceeds Unrestricted Reuse Criteria
- Below Unrestricted Reuse Criteria
- Final Grading Plan
- Placement of Stockpiles
- Extent of cut and fill operations
- Elevated Lead Area 1 (2,331 square feet)
- Elevated Lead Area 2 (2,732 square feet)
- Elevated Lead Area 3 (2,717 square feet)



Aerial imagery captured in July 2012.

	CLIENT:	Flatiron Kiewit JV	Hook Ramp Drainage Swale Demolished Incinerator Area Cap FIGURE 1
	PROJECT:	Doyle Drive Project	
	PROJECT NUMBER:	0068.001.012	

Photographic Log

THIS PAGE LEFT INTENTIONALLY BLANK



Photograph 1

Incinerator area before backfilling activities (looking north)


4/16/15 1430



Photograph 2

Backfilling stockpiles SP-203 and SP-204 (looking west)

4/16/15 1715

SAFETY FIRST	CLIENT: Flatiron Kiewit JV	Photographic Log
	PROJECT: Doyle Drive Project	
	PROJECT NUMBER: 0068.001.012	Page 1



Photograph 3

Backfilling continues (looking west)


4/17/15 1100



Photograph 4

Backfilling continues (looking west)

4/18/15 0645

<p>SAFETY FIRST</p>	<p>CLIENT: Flatiron Kiewit JV</p>	<p>Photographic Log</p>
	<p>PROJECT: Doyle Drive Project</p>	
<p>PROJECT NUMBER: 0068.001.012</p>		<p>Page 2</p>



Photograph 5

Orange mesh fabric over Elevated Lead Area 1, looking to the east.


4/18/15 1430



Photograph 6

Orange mesh fabric over Elevated Lead Area 1, looking to the southeast.

4/18/15 1430

<p>SAFETY FIRST</p>	<p>CLIENT: Flatiron Kiewit JV</p>	<p>Photographic Log</p>
	<p>PROJECT: Doyle Drive Project</p>	
<p>PROJECT NUMBER: 0068.001.012</p>		<p>Page 3</p>



Photograph 7

Final graded area with 2 feet of horticultural soil (looking east)


4/20/15 1430



Photograph 8

Final graded area with 2 feet of horticultural soil (looking west)

4/20/15 1430

<p>SAFETY FIRST</p>	<p>CLIENT: Flatiron Kiewit JV</p>	<p>Photographic Log</p>
	<p>PROJECT: Doyle Drive Project</p> <p>PROJECT NUMBER: 0068.001.012</p>	

Field Notes

THIS PAGE LEFT INTENTIONALLY BLANK

Date: April 16, 2015 at 6:25:24 AM



Project: Presidio Parkway
Project Number: 0068.001.001

Logged by: Kara Quan-Montgomery
Weather: Sunny, clear, 60s-70s

Time Onsite: 0710

Time Offsite: 1745

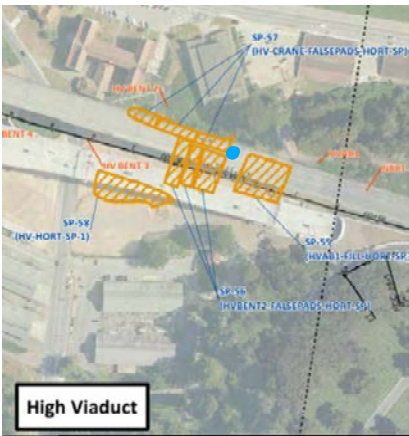


^ Looking SE.

^ Looking NW.

^ Looking W.

0715: Hook Ramp has minimal activity. Casey said he is mostly doing housekeeping. He said that Steve Roberts was grading yesterday with the horticultural soil, but they did not import and more material and just adjusted the soil that was there on top of the slope, as indicated by the photo on the above right.



0735: Steve Roberts said they are done with hort soil placement at Hook Ramp.

0800: Spoke with Brian Hatch. His crews are working on placing pipes and such on eastern side of Battery Tunnel, in between NB and SB. He said that Hook Ramp is complete. Confirmed which hort piles were used for placement. After walking the site, determined that SP-56 and SP-57 were used as placement at Hook Ramp and were also hauled to Derek for placement along Girard.

^ Looking W, taken from approximately where blue dot is on figure to left..



0820: Derek's crew is digging out the AB rock from the planter area. The native material is being exposed. Predominantly brown sand with some loamy sand.

Left: Looking NW.

Right: Looking S



0850: Eddie (Trust) on site briefly to take photos of planting area on Girard. Moved on to other areas of site.



0900: A block of slurry likely from storm drain leading to DI on east side of the street. Derek is not sure why the slurry is poured so high. He said they will work around it for now and ask Steve Mendoza about how to proceed.

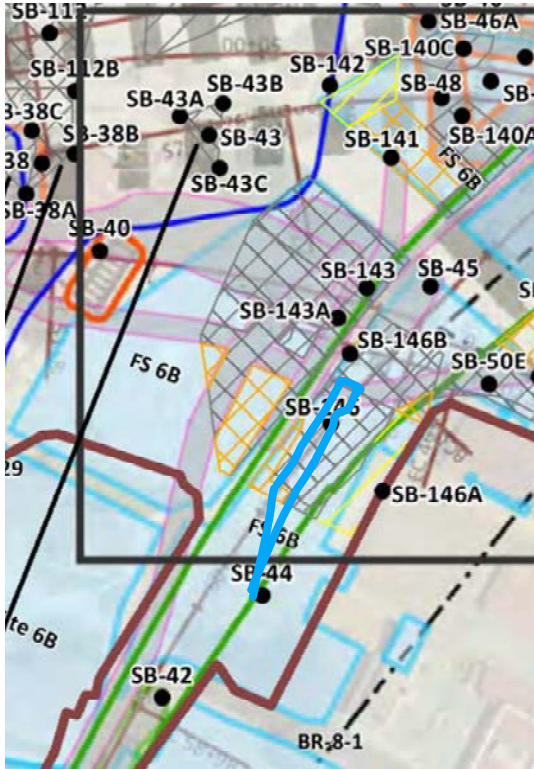
Left: Looking SE.



^ Looking S.

0915: Bay Cities chipped out asphalt that was from the former roadway. This piece was underneath a k-rail initially and got missed during the initial demo. It will be removed prior to hort placement.

Left: Figure showing approximate planter area on Girard.



0920: Clay's crew is working on filling a driveway for the veteran's apartment building. They are using imported road base.

Right: Looking S.



0930: GPS'ed planter area.

0930: Derek notified me that after talking with Steve Mendoza, they will not be placing horticultural soil today. There will be a meeting and inspection sometime tomorrow prior to placement. In the meantime his crews will finish cleaning up the planter area and move onto working near the Triangle area near the Boat section.

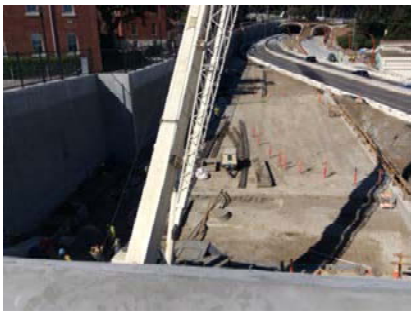
0940: Mark Hawkins crew is doing a lot of hand digging activities in manholes along Girard. They may have some AB or slurry from the hole which they will add to designated piles. He expects that they will mostly put everything back in the hole.



0945: Dale's crew is backfilling SS-9 and SS-10. They have another 10 feet or so of trenching to do.

0950: Roger told me that Dennis' crew is going to finish backfilling that manifold on the NE side of MPT. Then they will be excavating for a 4 inch watermain re route in the same area that they are working in.

^ Looking N.



1000: FKJV is drilling out concrete around DIs on western side of MPT.

Left: Looking W.



1020: Ciew of Dale's crew backfilling SS-9 and SS-10.

Right: Looking SE.



1030: GPS'ed the SB-50 excavation at Gorgas and Girard.

1040: It appears that hort soil was moved into the islands in Tennessee Hollow. Small stockpiles are in the islands.

1045: Derek's crews are working in Tennessee Hollow area directly north of boat, near TH Abutment 1R. They are cleaning up slopes.



Left: Looking SW.



Right: Looking W.

1050: Spoke with Derek. One of his crews is backfilling a trench along the wall so this man-lift can get out. He said they will bring in AB to place around the boxes for a pad around the utilities. Eventually they have to do a cut in the center and will likely place the cut material on both sides near the walls. The walls will build up and it will be about a 4 foot cut in the center for hort soil placement.



1130: A utility was installed in general area of DS-13. Material appears to be stockpiled next to the excavation. CDSM material.

Left: Looking S.

1140: Josh Stow's crews are working on grading. They sawcut the asphalt and are regrading to make the intersection flow better. Confirmed that the soil underneath the AB in the Girard planter area is native. There is some Cathedral Hills sand that covers a large storm drain across it, as shown on the left.

Left: Looking S.



^ Looking NE.





1215: RW-110 is getting prepped for pour. Phillip, structural foreman, says they would like to pour in the next couple of days.

Left: Looking E.

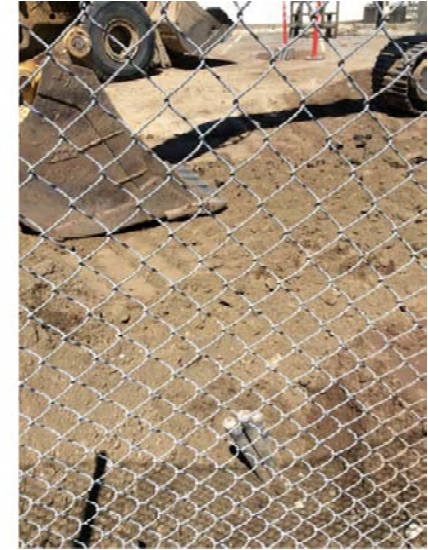


1235: St Francis drilled to 10 feet deep with the shield and backfilled a foot with rock. Used casing due to collapsing sands.

Left: Looking SE.



Right: Looking Nw.



1240: Jeremy (Mark's crew) is working on tying in electrical lines And abandoning those that are no longer going to be used.



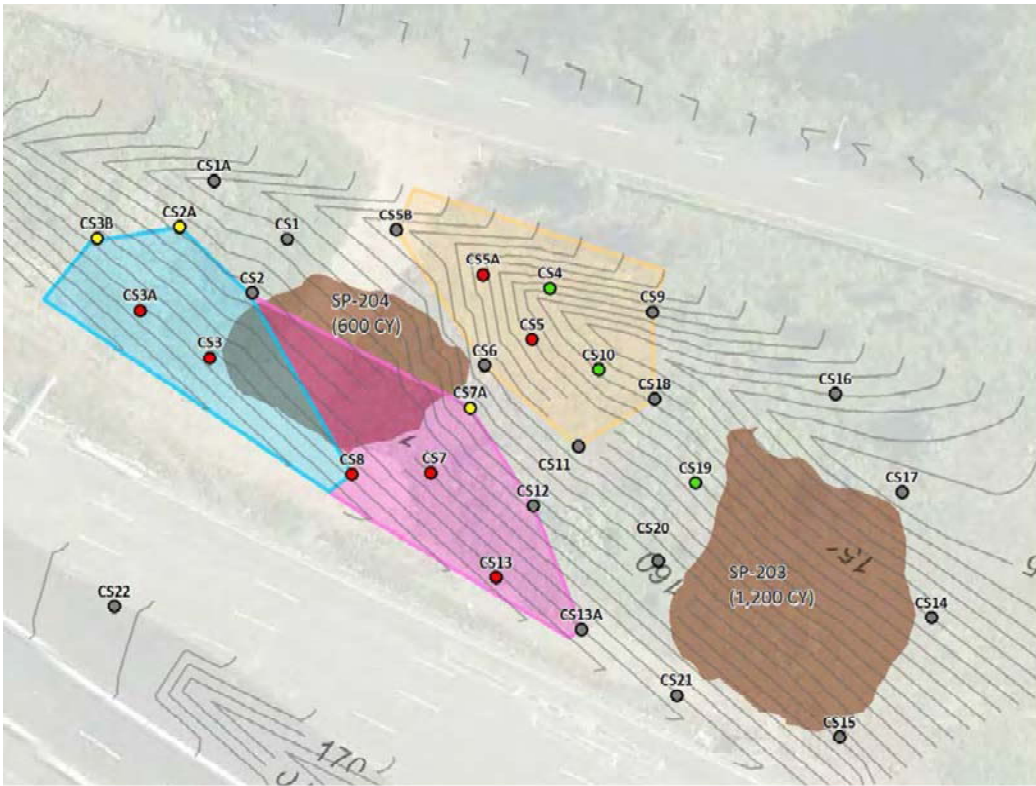
1245: Other crews are backfilling storm drain systems. I believe it is SDS-15 but the number is not confirmed

Left: Looking S

1300: Foremans meeting.

- Derek's crew hopes to finish TOS pad once the boxes come up. Would like to grade for hort to the west of TOS (RW-103). Then head up to triangle area if they can have trucks access it. Then storm drain repair at DOY 3.
- josh's crew will grade the MVP and west side of Boat. And paving support.
- Richard's crews will be working at Bus Stop. Load out/grade Bus Stop. Load out concrete to Ox. Other crew is doing DI prep on onramps at DOY3.

1330: Headed to Hook Ramp to meet with Fred, Steve Roberts, and Brian Hatch.



1400: Fred Cargile (FKJV) says the plan is to place high visibility orange mesh prior to backfilling in the elevated lead area at Hook Ramp, shown in blue on the figure to the left. Requested that I use my GPS to stake out the sample points that define the boundary. They plan to place at least 2 feet of soil on top of the elevated Pb area, so they will have to cut into native soil in order to place the mesh and then backfill with soil that does not have elevated concentrations of lead. No soil will be moved out of this area and they will use existing stockpiles to fill area.



^ Looking NW.



^ Looking NE.

Photos to the left show stockpiles prior to disturbance and movement.



^ Looking NW.

1440: FKJV started moving soil to between SP-203 and SP-204. A stockpile that was initially from the CS-22 area (on the opposite side of the newly formed NB roadway) is being moved and placed in between SP-203 and SP-204. It is being moved so that the blue area can be excavated.



^ Looking NE.

1535: The small pile that had been from the CS-22 area is now moved completely.

1545: Finished staking out the area of elevated Pb area, shown in blue on the figure. Photo taken from west of CS-3B and CS-2A.



^ Looking E.



^ Looking E.



^ Looking W.

1540: Steve Mendoza brought the GPS to confirm the elevations of fill and grades.

1545: Started moving part of SP-204 to the other side of the pile, as shown in photos left. This will remove it from the Pb exceedence area.

1540: Started moving part of SP-203. Pushing it over to the west. Class I section that was staked got put at the bottom of the fill, approximately 8 feet below subgrade.



^ Looking E.



^ Looking NE.



^ Looking NW.

1630: Status of SP-203 being pushed over is shown on the left. Also cutting 2 feet to subgrade.



1715: Steve Roberts is wrapping things up for the day at Hook Ramp. They will continue tomorrow morning. Start at 6:30a. And they have ordered hort trucks to come at 9 or 9:30a to start placing soil as they move along and grade to final.

Left: Looking W.

Date: April 17, 2015 at 6:09:10 AM



Project: Presidio Parkway
Project Number: 0068.001.001

Logged by: Kara Quan-Montgomery
Weather: Foggy, breezy, clear

Time Onsite: 0605

Time Offsite: 1815

0615: Steve Roberts used GPS and said they are about 4 feet under final grade where SP-203 is located and suggested i GPS the pile now.

0620: GPS'ed SP-203.

0630: H & S tailgate meeting. Brian Hatch will come to site later to help. Expect hort soil between 9 and 0930.

0640: Steve R used GPS around SP-203 to determine how much fill is required to get to subgrade, which is shown in blue on the photo on the right.



^ Looking N.

0645: Steve R painted the corner that they need to do 2' cut in the NE part of Hook Ramp.



Left: Looking NE.

Right: Looking W.



0650: Casey's crew started digging yesterday next to highway 1. They are widening the shoulder and will bring base rock in to prep for paving. The soil being taken out will likely be used as fill in the v-ditch area



0700: Chavo is pushing SP-204 down and over into the gap. Prepping space to do the 2 ft cut in the elevated Pb area so that the soil from the elevated area can be placed close to original area, shown in blue, for the range high visibility mesh to be placed.

Left: Looking NW.



0725: Chavo is pushing last of SP-204 down. Remarkd CS-2 stake using GPS that was originally in SP-204.

Left: Looking NW.



0730: Meeting with FKJV (Steve Mendoza, Dave Mitchell, Mike Verza, Derek Callahan). GLC and Trust (Eddie, Mark Holmbrook) on site. Dave Mitchell said plan is to place hort soil up to 1 inch below concrete.

Mark (Trust) does not consider this native material. Eddie asked if it will be screened. Dave said debris will be picked out. Eddie suggested we look into SP-56 loading to pay attention to what is being loaded



Right and Left: Looking S



0800: Steve Mendoza and Dave Mitchell instructed Derek to start placing SP-56 in the planter on Girard. Laborers will be used to hand pick debris and rocks as hort soil is added in small lifts.

0830: Electrical crews started laying pipe in planter for electrical lines. Dug small trench.

0840: Josh Stow used GPS to take elevation readings of planter so that amount of fill can be determined for those areas that will require a fill greater than 2 feet.

0850: St Francis is laying pipe to extend upwards and across the length of the planter.



^ Looking N.

0850: Spoke with Clay Carlson. His crews are busy with demolishing the bus stop at Lincoln. They are hauling concrete debris to Ox Mountain. He said today they will likely start getting into some soil with concrete debris. He expects about 3 truckloads of material to be staged at Halleck. Suggested he keep it separate and i will try to label it later today or tomorrow.



0855: Danny, laborer, started hand picking rocks out of SP-56.

ELECTRICAL



^ Looking NW.



^ Looking NE.



0925: Returned to Hook Ramp. Chavo is making the 2 ft cut in the elevated Pb area and pushing the soil to the north where fill is needed.

Left: Looking W.

0950: Steve Roberts and Brian Hatch are working on cutting the NE corner out to subgrade.

Right: Looking NE.

0955: Cutting and filling continues at Hook Ramp.

Left: Looking W.

1005: Hook Ramp status shown on right, looking W.

1100: Brian is cleaning up the east end of the v ditch. GPS'ed points where Steve took fill readings to track fill depths of hort soil.

Steve R is going to send trucks soon and start filling the east side.

Right: Looking W.



^ Looking W.



1120: Derek said they just started putting hort in the planter area. Danny is hand picking large rocks out of hort soil. They are putting small piles using a loader. Derek said an excavator will come later to help spread and sift the rocks out. SP-56/57 are loamy sand.

Left: Looking N.

Right: Looking S.



1135: Dale's crew is prepping pipe to be placed for SS-9 and SS-10.

Left: Looking S.

1140: Derek's crew is digging CDSM material on west side of SBMPT. Stockpiling next to asphalt.

Right: Looking W.





1205: Small piles along Girard planter, shown on left looking N.

1225: At Hook Ramp they started placing hort soil.

Right: Looking NE.



1245: Used GPS with Steve Roberts to determine fill in areas. He started placing stakes.

Left: Looking W.



1300: Mesh has been delivered.

Left: Looking S.



1305: Status of hort placement and cut/fill areas shown on the right, looking E.

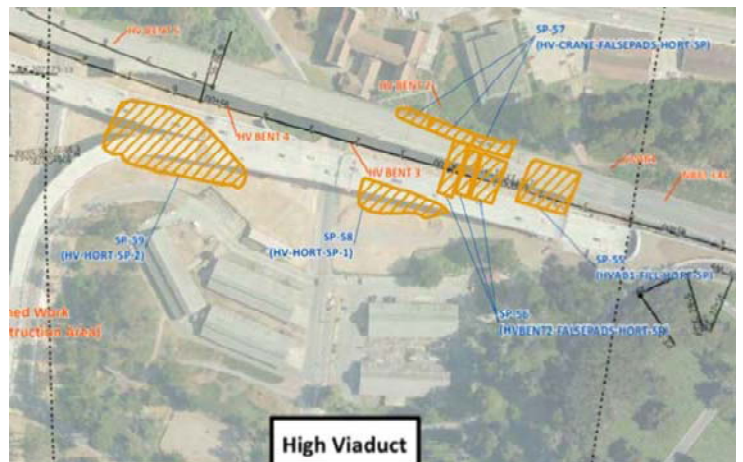


1325: Chavo continues pushing hort soil to the east. Hort is SP-56 and SP-57. Soil is consistent with horticultural soil from the stockpiles.

1340: Dave Mitchell dropped by to confirm there is at least 2 feet of uncontaminated soil (top 18 inches should be hort) to cap SP-203. Notified him they are placing between 2 and 4 feet of horticultural soil throughout the entire excavation.

^ Looking SW.

1415: Russ, who is loading the hort soil from SP-56 and SP-57. He will need to move to the western side of McDowell, to SP-59. Brian is going to head down there to facilitate moving to SP-59. This will likely result in a minor delay of trucks.





^ Looking NE.



^ Looking W.



^ Looking E.

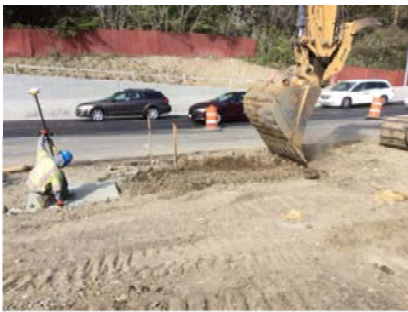
1510: Started placing a load of hort to start creating a ramp for trucks.



1545: Trucks are getting caught in traffic. Placing on east side of v-ditch.

Left: Looking N.

Right: Looking W.



1605: Started digging on western end of v-ditch near electrical pad.

Left: Looking N.

1630: Continuing to cut and fill at Hook Ramp.

Right: Looking NE.



1700: Progress of cut shown on left. Haul road has completely moved. Moving excavated soil to the area that was in between SP-203 and SP-204. Soil excavated from the western end of v-ditch is consistent with native soil in the area - serpentinite soils with cobbles and some concrete and brick debris.

Left: Looking E.



^ Looking NE.



^ Looking NE.



^ Looking SW.

1745: Status of area shown above.



1745: Steve Roberts said they are done digging and are now focusing on placement of hort soil. Subgrade seems consistent throughout area. GPS'ed areas for fill. Steve plans to haul hort soil starting at 6:30a tomorrow. Now they will focus on building ramps to give 2 access points for hort soil to be placed. He will start signing trucks out and form another haul road.

Left: Looking W.

1800: Progress on ramp shown on right.

Right: Looking E.



Project: Presidio Parkway
Project Number: 0068.001.001

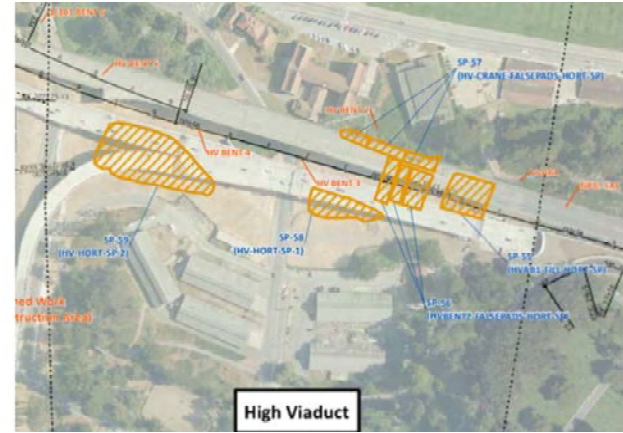
Logged by: Kara Quan-Montgomery
Weather: Foggy, windy, 50s

Time Onsite: 0610

Time Offsite: 1215



0620: Steve Roberts returned from High Viaduct area. Brian Hatch is loading trucks today with hort soil to be placed at Hook Ramp. Steve said Brian is starting to load SP-59. He has some loads out of there but needs to leave most of the stockpile to be a crane pad. He will move back over to east side of McDowell where they had stationed their conexes, and start loading SP-58.



^ Looking W.



0645: Utilizing dozers to grade out hort. Focusing on the NE corner.

0650: Casey's crew is working on installing DI's under the viaduct.



^ Looking W.

^ Looking SE.

0655: Trucks with SP-59 arrived at Hook Ramp for hort placement.

Left: Looking SW.

0710: High Viaduct - Brian is loading trucks with SP-59 to go to Hook Ramp.

Right: Looking NW.



0715: One truck is being loaded with SP-59 for Derek's operations at Girard.

0720: Noticed new debris and soil stockpile at Mason Yard.

Right: Looking S.



0730: OC Jones is digging in same area near utilities near Mason Warehouses. Installing DI 12A and have to put a 20 ft section of pipe in.

Left: Looking S.

0735: Talked to Mark Stilley. His crews are digging a little and plan to pour electrical and other utilities in area. Notified him that SB-60 is a class I area for the top 2 ft. Asked him about the debris piles at Mason Yard and he said it is not his crew's soil and is likely from nightwork near Palace of Fine Arts possibly.



0750: Derek's crew is placing hort soil in planter on Girard. FKJV are using rakes to comb out rocks and remove them from the planter area, focusing primarily on surface. Cannot confirm material was adequately screened.

Left & Right: Looking N.



SP-212



^ Looking E.

0810: Spoke with Steve Mendoza about new piles by SP-212 on northern side of MPT. He said they are from Roger Gutierrez utility work and is predominantly Cathedral Hills sand that has been placed on the southern side of MPT. He thinks they will use what they can in Roger's excavation and then likely place the rest here on the northern side of NBMPT.

0845: Spoke with Derek Callahan. They have been trying to hand screen the hort material that is being placed. His other crew is working on grading the median that is east of the triangle area.



0850: Derek's crew plans to move the soil to the sides of the wall and prep the subgrade for hort placement. Structural calls for 3 ft of soil on each wall, and hort will go down the middle to 4 ft according to Derek.

Left: Looking SE.



^ Looking E.



0855: Ghilotti Bros continues to lay asphalt. electricians are installing lights.

Left: Looking W.



0915: FKjV continues to place hort soil. The soil from SP-59 appears to be a sandy loam with less debris. Crews are focusing on filling area to prevent the curb from falling in. Their raking and hand clearing techniques do not appear to be effective with removing rocks and debris.

Right: Looking N.

0950: Talked to Clay about his bus stop demo operation. He said that he did not generate any soil that needed to leave the area.

1010: Dale's crew is installing SS-9 and SS-10.



Right: Looking NW.

1045: Filling continues at Hook Ramp.

Left: Looking NE.



1050: Spoke with Steve Roberts. They will continue filling with hort. He said that he thinks Brian only took maybe 5 loads or so of SP-59 before moving on to SP-58. He said he will take pictures of the orange fabric before he backfills on top of it. He is not sure whether they will do that today or tomorrow.



1105: Brian is loading SP-58 to take to Hook Ramp. He said at 8:30a he moved from SP-59 to SP-58. They are removing layer of road base on top and loading out the NW portion of pile, moving eastward.



^ Looking E.

^ Looking SW.

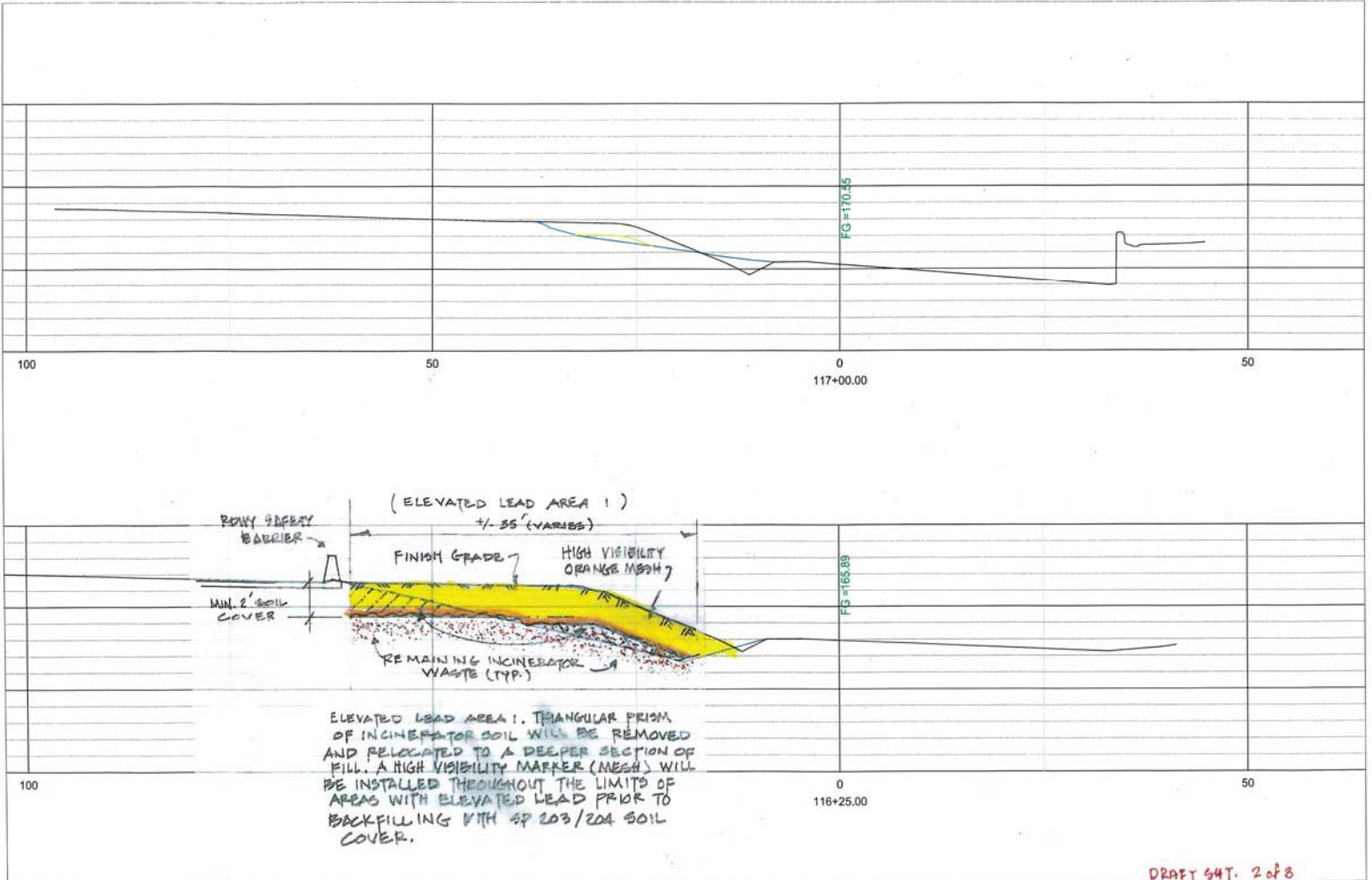


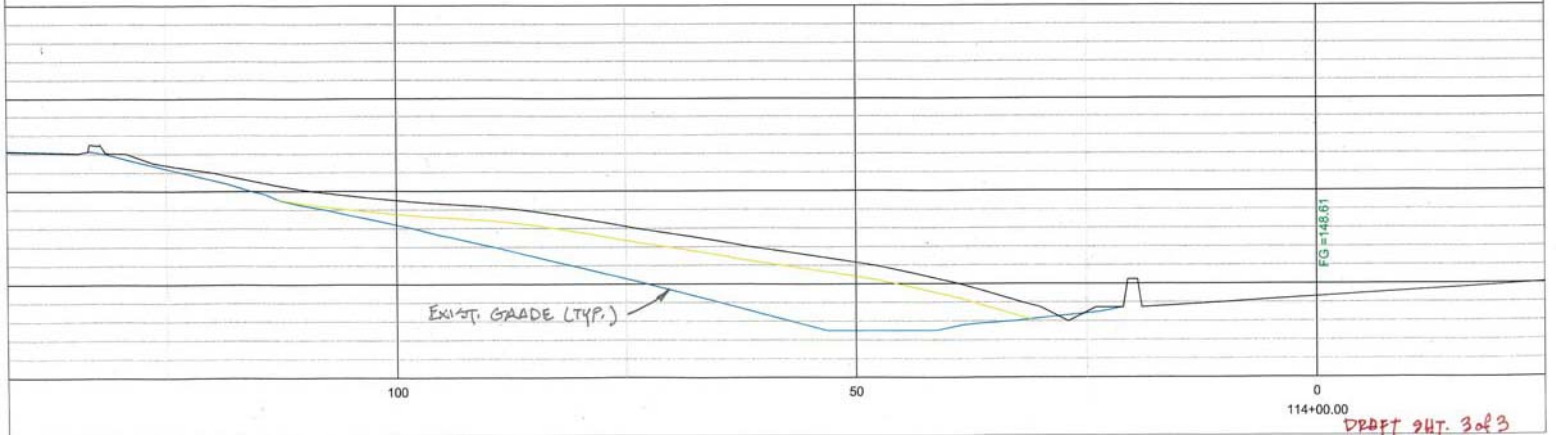
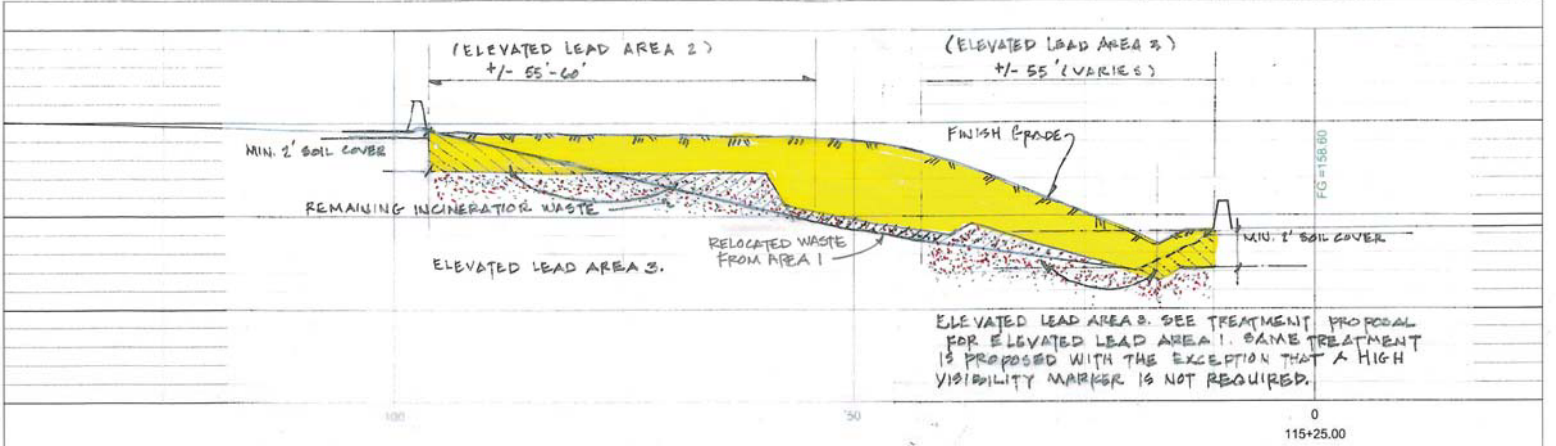
1120: Mark Stanley told me that as far as he knows, SP-230 will be moved and stationed at Halleck on Monday. Labeled the stockpile.

Left: Looking NE.

Capping Plan

THIS PAGE LEFT INTENTIONALLY BLANK





APPENDIX B

DATA SUMMARY TABLES FROM
THE REMEDIAL INVESTIGATION REPORT

TABLE 1
SOIL SAMPLING ANALYTICAL MATRIX TABLE
Lendrum Court Area
Presidio of San Francisco, California

Trench or Grid Area Location (a)	Trench or Pothole	Sample Depth (ft bgs)	Stratigraphic Layer (b)	Sample ID	Laboratory Analyses (c)			
					Title 22 Metals (EPA 6020)	Lead (EPA 6020)	PAHs (EPA 8270C)	Dioxins & Furans (EPA 1613)
301	Trench	0.5	Surface	1279TP301-S[0.5]		●		
302	Trench	0.5	Surface	1279TP302-S[0.5]		●		
303	Trench	0.5	Surface	1279TP303-S[0.5]		●		
304	Trench	3.5	Debris	1279TP304-D[3.5]	●		●	●
305	Trench	3.5	Debris	1279TP305-D[3.5]	●		●	●
A1	Trench	0.5	Surface	1279TPA1-1[0.5]S		●		
		2.0	Debris	1279TPA1-2[2.0]D	●		●	●
A2	Pothole	0.5	Surface	1279SBA2-1[0.5]S		●		
		0.5	Surface	1279SBA2-3[0.5]S		●		
		0.5	Surface	1279SBA2-4[0.5]S		●		
		0.5	Surface	1279SBA2-5[0.5]S		●		
B1	Pothole	0.5	Surface	1279SBB1-1[0.5]S		●		
C1	Pothole	0.5	Surface	1279SBC1-1[0.5]S		●		
D1	Pothole	0.5	Surface	1279SBD1-1[0.5]S		●		
D2	Pothole	0.5	Surface	1279SBD2-1[0.5]S		●		
E1	Pothole	0.5	Surface	1279SBE1-1[0.5]S		●		
		0.5	Surface	1279SBE1-2[0.5]S		●		
F0	Trench	1.5	Debris	1279TPF0-1[1.5]D	●		●	●
F2	Trench	0.0 - 1.0	Debris	1279TPF2-1[0.0-1.0]D	●		●	●
				1279TPF2-1[DUP]	●		●	●
G1	Trench	0.5 - 1.5	Debris	1279PG1-2[0.5-1.5]D	●		●	●
G2	Pothole	0.5	Surface	1279SBG2-1[0.5]S		●		
H0	Pothole	0.5	Surface	1279SBH0-2[0.5]S		●		
H1	Pothole	0.5	Surface	1279SBH1-1[0.5]S		●		
		0.5	Surface	1279SBH1-2[0.5]S		●		
		0.5	Surface	1279SBH1-3[0.5]S		●		
		0.5	Surface	1279SBH1-4[0.5]S		●		
H2	Pothole	0.5	Surface	1279SBH2-1[0.5]S		●		
I1	Trench	0.5	Surface	1279TPI1-1[0.5]S		●		
I2	Trench	0.5	Surface	1279TPI2-1[0.5]S		●		
		1.5	Debris	1279TPI2-1[1.5]D	●		●	
		0.5	Surface	1279TPI2-2[0.5]S		●		
J1	Pothole	0.5	Surface	1279SBJ1-1[0.5]S		●		
		0.5	Surface	1279SBJ1-2[0.5]S		●		
J2	Pothole	0.5	Surface	1279SBJ2-1[0.5]S		●		
		0.5	Surface	1279SBJ2-2[0.5]S		●		
J3	Pothole	0.5	Surface	1279SBJ3-1[0.5]S		●		
		0.5	Surface	1279SBJ3-2[0.5]S		●		
		0.5	Surface	1279SBJ3-2[DUP]		●		
J4	Pothole	0.5	Surface	1279SBJ4-1[0.5]S		●		
		0.5	Surface	1279SBJ4-2[0.5]S		●		

TABLE 1
SOIL SAMPLING ANALYTICAL MATRIX TABLE
 Lendrum Court Area
 Presidio of San Francisco, California

Trench or Grid Area Location (a)	Trench or Pothole	Sample Depth (ft bgs)	Stratigraphic Layer (b)	Sample ID	Laboratory Analyses (c)			
					Title 22 Metals (EPA 6020)	Lead (EPA 6020)	PAHs (EPA 8270C)	Dioxins & Furans (EPA 1613)
K	Trench	0.5	Surface	1279TPK-1[0.5]S		●		
	Pothole	0.5	Surface	1279SBK-1[0.5]S		●		
		0.5	Surface	1279SBK-2[0.5]S		●		
		0.5	Surface	1279SBK-3[0.5]S		●		
		0.5	Surface	1279SBK-4[0.5]S		●		
L	Pothole	0.5	Surface	1279SBL-1[0.5]S		●		
		0.5	Surface	1279SBL-2[0.5]S		●		
		0.5	Surface	1279SBL-3[0.5]S		●		
				1279SBL-3[DUP]		●		
M	Pothole	0.5	Surface	1279SBM-1[0.5]S		●		
		0.5	Surface	1279SBM-2[0.5]S		●		
		0.5	Surface	1279SBM-3[0.5]S		●		

Abbreviations:

- DUP – duplicate sample
- EPA – United States Environmental Protection Agency
- ft bgs – feet below ground surface
- PAHs – polycyclic aromatic hydrocarbons
- – Analyzed
- D - Sample taken within observed debris
- S - Sample taken within surface soil

Notes:

- (a) See Figure 3 for Trench Locations and Grid Areas.
- (b) Samples were collected from the surface or the layer with observed debris.
- (c) Soil samples were analyzed for lead or metals and PAHs by Curtis & Tompkins of Berkeley, California. Soil samples were analyzed for dioxins and furans by Vista Analytical Laboratory of El Dorado Hills, California.
- (d) All soil samples were analyzed for percent moisture by ASTM D2216.

Attachment 3

**THE PRESIDIO TRUST
STANDARD OPERATING PROCEDURE**

ENVIRONMENTAL HEALTH AND SAFETY

SOP No. 001
Revision No. 02
Last Reviewed: April 2021

1.0 BACKGROUND

Subsurface conditions in certain areas of the Presidio in San Francisco, California (Presidio) are known to contain or have the potential to contain hazardous substances. As a result, subsurface work and work that requires soil disturbance shall be accompanied by the development of an Environmental Health and Safety Plan (HASP) and all workers must be properly trained for the scope of work being performed.

1.1 Purpose and Applicability

This Standard Operating Procedure (SOP) applies to work conducted within Land Use Control (LUC) areas in the Presidio. The HASP explains the hazards of subsurface work and provides procedures to protect and educate workers. This SOP establishes the requirements and procedures for developing a HASP.

1.2 Scope

This SOP applies to routine and non-routine work being conducted in areas with unknown subsurface conditions or known environmental impacts, where workers have the potential to be exposed to impacted soil, groundwater, or soil vapor.

1.3 Related SOPs

- *SOP No. 003 – Air and Dust Monitoring and Mitigation Plan*
- *SOP No. 012 – Site-Specific Soil Management Plan*
- *SOP No. 013 – Construction Completion Report*

1.4 Definitions

Cap: An engineered barrier installed to prevent exposure to underlying soils with known impacts.

Contaminants of concern (COCs): Chemicals or constituents that may be present in the soil that may pose risk to humans or the environment.

Excavation: Work in which earth or other ground material, including hardscape, is displaced using manual tools or mechanical equipment

Impacted soils: Soil that contains COCs above site-specific human health and ecological cleanup levels, typically but not always below a cap (soil, hardscape, or vegetative).

Known environmental impacts: Site-specific environmental impacts that have been investigated and characterized and remain in place at the site.

Occupational Safety and Health Administration (OSHA): Regulating authority (at the federal level because the Presidio is a federal facility) to ensure safe and healthful working conditions by setting and enforcing standards and by providing training, outreach, education, and assistance.

Non-routine work: Project construction activities that alter the site configuration beyond what is described and covered in applicable LUC and operations and maintenance (O&M) documents.

Routine work: Project construction activities that do not alter the site configuration beyond what is described and covered in applicable LUC and O&M documents. Typical routine work activities include, but are not limited to:

- Accessing or installing utilities;

- Associated removal of soils;
- Making repairs to or replacing hardscape;
- Plant replacement; and,
- Construction of clean corridors, if within a LUC area

Soil disturbance: Construction or demolition activities involving clearing, grubbing, excavation, or other earthwork.

Subsurface work: Work in which the worker may be directly exposed to soil, groundwater, or soil vapor.

Unknown subsurface conditions: Site conditions that have the potential for impacts but have not been fully characterized.

1.5 References

- OSHA Standard 29 Code of Federal Regulations (CFR) 1910.120 – Hazardous Waste Operations and Emergency Response
- Occupational Safety and Health Administration (OSHA) Standard 29 Code of Federal Regulations (CFR) 1926 – Safety and Health Regulations for Construction.
- OSHA Standard 29 Code of Federal Regulations (CFR) 2916, Subpart D – Occupational Health and Environmental Controls
- Presidio Trust (Trust), 2009. *Presidio Trust Land Use Controls Master Reference Report (Presidio LUCMRR)*, Presidio of San Francisco, California. September.
- Trust, 2016. *Construction Guidelines*. April.
- Site-Specific LUCMRR Addendum
- Site-Specific Soil Management Plan (SSSMP)
- Site Construction Completion Report (CCR)

2.0 PROCEDURES

The following sections discuss roles, notifications, and procedures for preparing and implementing a HASP at a site.

2.1 Roles

All Contractors are responsible for preparing a HASP for their employees. Contractors are responsible for ensuring that the HASP complies with applicable Federal OSHA standards and current toxicological information for potential COCs at the site.

The Trust (or an authorized representative) is responsible for providing any available site-specific information regarding environmental hazards or conditions that will help the Contractor develop an effective HASP.

2.2 Notifications

At least 10 days prior to any excavation or earthwork, the responsible party must submit an “Excavation Clearance Application” (Dig Permit) to the Trust, including a description of the excavation and a site map showing where the excavation will occur. The HASP, if required, must be completed and submitted to the

Trust before the Trust may issue the Dig Permit. Projects of broader scope may require additional approvals.

2.3 Development of the HASP

Contractors must develop a site-specific HASP for their employees prior to the start of subsurface work. The HASP should be prepared in accordance with the guidance: *Outline for Site Specific Health and Safety Plan (SSHP Outline)* provided by the Trust and under the direction of a Certified Industrial Hygienist (CIH) or Certified Safety Professional (CSP) if needed for high-risk operations, such as hazardous exposures to chemicals, large scale or deep excavations, confined space entry, etc. Information provided in the HASP should be consistent with applicable occupational health and safety standards, such as OSHA Standard 29 CFR 1910.120. Contents of the HASP should include, but are not limited to, the following:

1. A description of the site, including access routes.
2. A site history and a description of known environmental impacts, if applicable.
3. A summary of activities to be conducted by the Contractor during the work.
4. A list of roles and responsibilities for health and safety (field and support staff).
5. A summary of general work practices.
6. A description of control zones, if applicable.
7. A description of physical hazards at the site and the applicable control measures to mitigate the hazards.
8. A list of personal protective equipment (PPE) and other safety equipment to be used or maintained at the site.
9. Health and safety training requirements for all employees performing work.
10. An evaluation of the necessity for personal air monitoring requirements for worker exposure.
11. A summary of accident reporting protocols and documentation.
12. Emergency information, evacuation routes, including phone numbers, standard reporting procedures, and nearest hospital information.
13. Figures depicting the site location, locations of emergency equipment on-site, and a map to the nearest emergency services facility.
14. Tables summarizing the hazards of any known COCs, including exposure symptoms.
15. Signature page with title, signature, and contact information for the plan preparer.

2.4 Location-Specific Health and Safety Protocol

Areas with LUCs may have soil beneath building foundations, pavement, or engineered caps containing unknown levels of COCs that have been remediated in the surrounding soils. Areas with LUCs are subject to the requirements of the *Presidio LUCMRR*. These areas, and any other areas of known but uncharacterized contamination, should be given additional consideration during the development of a HASP. The HASP should include provisions addressing the site-specific COCs and other site conditions, as outlined in the Site-Specific LUCMRR Addendum and the Site CCR. These provisions may include specific engineering controls, protocols, or specific PPE.

2.5 Enforcement of the HASP

The HASP is to be retained on-site by the Contractor at all times. Contractors must require all employees who may directly contact soil, soil vapor, or groundwater to perform activities in accordance with the HASP. Each Contractor is responsible for ensuring that on-site workers have the appropriate level of health and safety training and are using the appropriate PPE as specified in the HASP.

Prior to the commencement of work operations, the Contractor shall coordinate with Trust Representative

to hold a safety and Environmental Awareness Training presented by the Trust Safety Manager. The purpose of this orientation is to advise the Contractor and Subcontractor or workers of hazards that may be unique to the Presidio, such as the potential for encountering unexploded ordnance (UXO) and what procedures are to be followed in that event.

END

**THE PRESIDIO TRUST
STANDARD OPERATING PROCEDURE**

STORM WATER POLLUTION PREVENTION PLAN

SOP No. 002
Revision No. 02
Last Reviewed: April 2021

1.0 BACKGROUND

Storm water runoff at construction sites can transport sediment and other pollutants from the site to surface water. Because subsurface soils in the Presidio in San Francisco, California (Presidio) are known to contain or have the potential to contain hazardous substances, storm water that comes into contact with Presidio soils has the potential to transport site-specific contaminants off-site. As a result, the development of a Storm Water Pollution Prevention Plan (SWPPP) and implementation of best management practices (BMPs) is essential for subsurface work.

1.1 Purpose

This Standard Operating Procedure (SOP) applies to construction activities in areas greater than one acre at the Presidio. The SWPPP is intended to prevent pollutant runoff from construction activities and outlines the processes and procedures that will be implemented to protect human and environmental health. This SOP establishes the requirements and procedures for developing a SWPPP.

According to the *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ), NPDES No. CAS000002* (hereinafter referred to as the CGP), construction activities involving soil disturbance of one acre or more are subject to coverage under the CGP. However, sites within the Presidio may not be subject to coverage under the CGP due to authorization under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). The Presidio Trust (Trust) will determine the applicability of permit coverage on a project-by-project basis. Regardless of permit coverage, project SWPPPs will be developed and implemented to substantially comply with the CGP.

1.2 Scope

This SOP applies to all routine and non-routine construction activities conducted at the Presidio that disturbs one acre or more of soil.

1.3 Related SOPs

- *SOP No. 004 - Dewatering*
- *SOP No. 007 – Soil and Stockpile Management*
- *SOP No. 010 – Disturbance and Replacement of Cap Materials*
- *SOP No. 012 – Site-Specific Soil Management Plan*

1.4 Definitions

Best management practices (BMPs): Structural, vegetative, or managerial practices used to treat, prevent, or reduce water pollution.

Construction General Permit (CGP): *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* issued by the California State Water Resources Control Board (SWRCB) regulating the discharge of storm water from construction sites.

Non-routine work: Project construction activities that alter the site configuration beyond what is described and covered in applicable land use control (LUC) and operations and maintenance (O&M) documents.

Notice of Intent (NOI): Form used for notification of new construction in accordance with Section A of the CGP required prior to the commencement of soil disturbing activities.

Notice of Termination (NOT): Form used by permittees covered under the CGP to request coverage termination.

NPDES: Permit program administered by the SWRCB that regulates discharge to waters of the United States.

Phytophthora: A plant-damaging water mold that can cause damage in natural ecosystems.

Qualified SWPPP Developer (QSD): Licensed personnel qualified to develop a CGP SWPPP.

Routine work: Project construction activities that do not alter the site configuration beyond what is described and covered in applicable LUC and O&M documents. Typical routine work activities include, but are not limited to:

- Accessing or installing utilities;
- Associated removal of soils;
- Making repairs to or replacing hardscape;
- Plant replacement; and,
- Construction of clean corridors, if within a LUC area

Soil disturbance: Construction or demolition activities involving clearing, grubbing, excavation, or other earthwork.

Storm Water Pollution Prevention Plan (SWPPP): Document identifying all potential sources of pollution which may reasonably be expected to affect the quality of storm water discharge from a construction site and prescribes mitigation measures to prevent said sources from negatively impacting the water quality of the storm water discharge.

1.5 References

- California Stormwater Quality Association, 2019. *Stormwater Best Management Practice Handbook: Construction*. Updated December.
- SWRCB, 2013. *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ), NPDES No. CAS000002*. Updated January 23.
- Trust, 2016. *Construction Guidelines*. April.
- Trust, 2019. *Phytophthora Management Guidelines*. June.

2.0 PROCEDURES

The following sections discuss roles, notifications, and procedures for preparing and implementing a SWPPP at a site.

2.1 Roles

The Trust (or an authorized representative) is responsible for providing any available site-specific information regarding environmental hazards or conditions that will help the Contractor develop an

effective SWPPP. The Trust will also be responsible for determining whether the project is subject to coverage under the CGP.

Contractors are responsible for preparing a site-specific SWPPP that complies with the CGP. This permit regulates pollutants in discharges of storm water to surface waters associated with construction and land disturbance activities. If coverage under the CGP is required per Trust direction, the Contractor will be responsible for preparing and submitting the NOI and associated NOI documents (SWPPP document, erosion control plan, etc.), as well as activities required to comply with the CGP including but not limited to implementing, inspecting, maintaining BMPs, site inspections, discharge monitoring, and site stabilization.

For construction activities not subject to the CGP, but determined by the Trust to require a SWPPP, the Contractors are responsible for preparing the site-specific SWPPP that complies with the CGP as well as implementing, inspecting, and maintaining BMPs. However, submitting an NOI is not required.

2.2 Notifications

If the Trust determines that permit coverage is required under CGP, the Contractor is responsible for preparing an NOI and submitting the NOI to the Water Board via the Stormwater Multiple Application and Report Tracking System (SMARTs) database. The Contractor is also responsible for uploading required documentation to the SMARTs database throughout the project, including but not limited to SWPPP amendments, annual reports, and NOTs.

2.3 Development of the SWPPP

Contractors must develop a SWPPP to be implemented concurrently with the start of any construction activity. The SWPPP shall be prepared by a QSD and comply with all applicable practices. The SWPPP is designed to be a living document and will be modified as appropriate and as necessary during the life of the project to address changes in construction or operations that affect the discharge of pollutants from the site. The objectives of the SWPPP are as follows:

1. Identify and ensure control of all pollutants and pollutant sources, including sources of sediment that can affect the quality of storm water discharges associated with construction activity (storm water discharges) from the site;
2. Where not otherwise required to be under a Water Board permit, identify and either eliminate, control, or treat all non-storm water discharges;
3. Select and implement effective BMPs to reduce or eliminate discharge of pollutants in storm water and authorized non-storm water discharges from construction activity to the Best Available Technology/Best Control Technology standard;
 - o The Contractor shall protect all disturbed areas and stockpiles from storm-water run-on/run-off and shall have effective erosion control and dust control features. This shall include, at a minimum, installing berms or silt fences around soil stockpiles, and placing them outside of concentrated flow paths.
 - o The Project Manager shall work with the Trust Integrated Pest Management (IPM) Specialist to evaluate site drainage patterns using topography and storm drainage systems to identify work areas that may be impacted by Phytophthora and provide mitigation measures and BMPs to eliminate the potential for cross-contamination.
4. Develop a maintenance schedule for sediment and erosion control BMPs installed during construction, designed to reduce or eliminate pollutants after construction is completed (post-construction BMPs);
5. Present calculations and BMP design details for controlling site run-on;
6. Identify stabilization BMPs installed to reduce or eliminate pollutants after construction is completed;
7. Identify and provide methods to implement BMP inspections, visual monitoring, and a

- Construction Site Monitoring Program (CSMP) to comply with requirements of the CGP; and
8. Identify a sampling and analysis strategy and sampling schedule for non-visible pollutants, where discharges that are visually observed may potentially be contaminated by non-visible pollutants present in the runoff.

2.4 Amending the SWPPP

The SWPPP will be amended by the QSD when the following conditions are encountered:

1. BMPs do not meet the objectives of reducing or eliminating pollutants in storm water discharges;
2. There is a change in construction or operations which may affect the discharge of pollutants to surface water, groundwater, or a municipal separate storm sewer system;
3. Upon request by the San Francisco Regional Water Quality Control Board (RWQCB) to amend the SWPPP; or
4. As deemed necessary by the QSD or the Trust.

All amendments to the SWPPP must be documented. When amended or revised, the SWPPP will include an updated listing of the date of initial preparation and the date of each amendment, signed by the QSD. All amendments will be dated and remain in the SWPPP.

The following items will be included in all amendments:

1. Who requested the amendment;
2. The location of the proposed change;
3. The reason for the change;
4. The original BMP, if any; and
5. The new proposed or revised BMP.

2.5 SWPPP Records and Reporting

The following section describe requirements for SWPPP inspections, record keeping, and reporting.

2.5.1 Inspections

A qualified inspector will perform site inspections to ensure that all BMPs are in good working order. Regular inspections will be conducted weekly and additionally after qualifying storm events to identify any BMP deficiencies. All inspections are to be documented in an inspection report including, but not limited to the following components:

1. Inspection date,
2. Inspector information,
3. Weather information for the period since the last inspection,
4. Current weather information,
5. Description of any discharges occurring at the time of inspection,
6. Descriptions of evidence of previous or ongoing discharges,
7. Location(s) of BMPs that need to be maintained,
8. Location(s) of BMPs that failed to operate as designed,
9. Location(s) where additional BMPs are needed but do not exist at the time of inspection,
10. Corrective action required, and
11. Reference to past corrective actions.

2.5.2 Record Keeping

All SWPPP-related documents will remain with the SWPPP. This includes annual reports, inspection reports, sampling records, and all project correspondence regarding the SWPPP. The Trust will maintain a paper or electronic copy of all required records for three years from the date generated or date submitted, whichever is last. These records will be available at the site until construction is completed.

2.5.3 Non-Compliance Reporting

Reportable discharges or other violations of the CGP will be properly documented. Reportable discharges and violations include the following:

1. Violations identified by the Regional Water Board during inspections; and
2. Discharges that contain a hazardous substance in excess of reportable quantities.

2.5.4 Summary Report

To ensure site personnel are aware of the required data collection and reporting elements, a summary report will be prepared no later than September 1st each year. The summary reports will be certified in accordance with the Special Provisions in the CGP. The summary report will include but is not limited to the following information:

1. A summary and evaluation of all sampling and analysis results, including original laboratory reports;
2. The analytical method(s), method reporting unit(s), and Method Detection Limits (MDLs) of each analytical parameter (analytical results that are less than the MDL must be reported as “less than the MDL” or “<MDL”);
3. A summary of all corrective actions taken during the project;
4. Identification of any compliance activities or corrective actions that were not implemented;
5. A summary of all violations of CGP;
6. The individual(s) who performed facility inspections, sampling, visual observation (inspections), and/or measurements;
7. The date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation; and
8. The visual observations and sample collection exception records and reports.

2.6 Final Stabilization

When all conditions on-site meet those described in Section II.D.1 of the CGP, the Trust will consider elements identified in the SWPPP to be complete.

Site “final stabilization” is achieved when the site will not pose any additional sediment discharge risk than it did prior to the commencement of construction activity. These conditions include:

1. Construction materials and wastes have been properly removed;
2. All construction-related equipment, materials, and any temporary BMPs are no longer required and removed from the site;
3. There is no potential for construction-related pollutants to be discharged into site runoff;
4. Post-construction storm water management measures have been installed and a long-term maintenance plan has been established; and
5. Compliance with Post-Construction Standards in Section XIII of the CGP has been demonstrated.

Final stabilization will be demonstrated through the following methods:

1. Photographs showing 70% final cover (no computational proof required); and
2. Custom method (discharger demonstrates that the site complies with final stabilization conditions).

END

**THE PRESIDIO TRUST
STANDARD OPERATING PROCEDURE**

AIR AND DUST MONITORING AND MITIGATION PLAN

SOP No. 003
Revision No. 01
Last Reviewed: April 2021

1.0 BACKGROUND

Construction earthwork has the potential to generate fugitive dust and particulate matter that may be transported off-site or pose a threat to human health. Because subsurface soils in Land Use Control (LUC) areas in the Presidio in San Francisco, California (Presidio) are known to contain or have the potential to contain hazardous substances, monitoring of dust or other airborne contamination is important during construction projects in LUC areas.

1.1 Purpose and Applicability

This Standard Operating Procedure (SOP) applies to non-routine construction activities at the Presidio that involve excavation, consolidation, or disturbance of impacted soils, or activities that may disturb serpentinite bedrock. For projects of this nature, an Air and Dust Monitoring and Mitigation Plan (ADMMP) shall be prepared to prescribe methods for monitoring and mitigating possible offsite migration of dust generated by construction activities. Specifically, the objectives of the ADMMP are to:

- Identify action levels for dust and target compounds intended to be protective of public and worker health;
- Provide guidance for perimeter air monitoring, dust monitoring, and personal air monitoring;
- Provide an overview of air sampling and analysis methods, if required;
- Document perimeter air quality during onsite earthwork activities; and
- Identify best management practices (BMPs) for dust mitigation and assess the effectiveness of the BMPs.

The need for personal air monitoring is the responsibility of the Contractor/employer and will be determined in the site-specific Health and Safety Plan (HASP) prepared by a health and safety professional or equivalent. Requirements for the HASP are described in *SOP No. 001 – Environmental Health and Safety*.

1.2 Scope

This SOP applies to non-routine earthwork at the site that disturbs impacted soils or during which serpentinite bedrock may be encountered.

Projects with significant, non-routine earthwork at the site, regardless of contamination, should also conduct dust monitoring during earthwork activities. Please refer to *SOP No. 009 – Dust Prevention and Control* for specific details. Air monitoring (per *SOP No. 003*) may occur at times where dust control (per *SOP No. 009*) is being implemented, but air monitoring will not necessarily be implemented every time dust control is implemented.

1.3 Related SOPs

- *SOP No. 001 – Environmental Health and Safety*
- *SOP No. 009 – Dust Prevention and Control*
- *SOP No. 012 – Site-Specific Soil Management Plan*
- *SOP No. 013 – Construction Completion Report*
- *SOP No. 014 – Aerially Deposited Lead in Soil*
- *SOP No. 015 – Naturally Occurring Asbestos*

1.4 Definitions

Best management practices (BMPs): Structural, vegetative, or managerial practices used to treat, prevent, or reduce water pollution.

California Environmental Protection Agency, Department of Toxic Substances Control (DTSC): Government agency that regulates the generation, handling, treatment, and disposal of hazardous waste in California.

Contaminants of concern (COCs): Chemicals or constituents that may be present in the soil that may pose risk to humans or the environment, including naturally occurring asbestos.

Excavation: Work in which earth or other ground material, including hardscape, is displaced using manual tools or mechanical equipment

Fugitive dust: Particulate matter suspended in the air by wind action and human activities.

Impacted soils: Soil that contains COCs above site-specific human health and ecological cleanup levels, typically but not always below a cap (soil, hardscape, or vegetative).

Naturally occurring asbestos (NOA): Naturally occurring fibrous mineral classified as a human carcinogen that is found in ultramafic rocks, including serpentinite bedrock.

Non-routine work: Project construction activities that alter the site configuration beyond what is described and covered in applicable LUC and operations and maintenance (O&M) documents.

Routine work: Project construction activities that do not alter the site configuration beyond what is described and covered in applicable LUC and O&M documents. Typical routine work activities include, but are not limited to:

- Accessing or installing utilities;
- Associated removal of soils;
- Making repairs to or replacing hardscape;
- Plant replacement; and,
- Construction of clean corridors, if within a LUC area

Serpentinite bedrock: Bedrock found extensively in the Presidio containing NOA.

Soil disturbance: Construction or demolition activities involving clearing, grubbing, excavation, or other earthwork.

Soil with known contaminants: Soil that contains COCs above site-specific human health and ecological cleanup levels, typically but not always below a cap (soil, hardscape, or vegetative).

1.5 References

- Bay Area Air Quality Management District (BAAQMD), latest edition. *BAAQMD California Environmental Quality Act (CEQA) Guidelines Assessing the Air Quality Impacts of Projects and Plans*.
- California Air Resources Board, *California Ambient Air Quality Standards*, latest edition.
- DTSC, *Community Air Monitoring Plan (CAMP) Guidance*, latest edition.
- National Institute of Occupational Safety and Health (NIOSH), Occupational Safety and Health Administration (OSHA), U.S. Coast Guard (USCG), and U.S. Environmental Protection Agency (EPA), 1985. *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities*. October.
- Ordinance 176-08 of the City and County of San Francisco Dust Control Ordinance, Section

106.3.2.6.3 of the San Francisco Building Code.

- OSHA Standard 29 Code of Federal Regulations (CFR) 2916, Subpart D, 1926.55, including addenda - Occupational Health and Environmental Controls; Gases, vapors, fumes, dusts, and mists
- Presidio Trust (Trust), 2001, Amended 2011. *Presidio-Wide Quality Assurance Project Plan (QAPP) and Sampling and Analysis Plan (SAP)*.
- Trust, 2016. *Construction Guidelines*. April.
- San Francisco Health Code, Article 22B - Construction Dust Control Requirements.
- Site-Specific Soil Management Plan (SSSMP)

2.0 PROCEDURES

The following sections discuss roles, notifications, and procedures for preparing and implementing an ADMMP at a site.

2.1 Roles

The Contractor is responsible for developing a site-specific ADMMP based on known site conditions and an understanding of local, state, and federal regulations. The Contractor is also responsible for implementing dust controls and conducting air and dust monitoring and/or air sampling as prescribed in the site-specific ADMMP. The Contractor shall evaluate the monitoring results throughout construction to assess whether dust control measures are adequate or if additional dust control measures are warranted.

The Trust (or an authorized representative) is responsible for providing available site-specific information regarding environmental hazards or conditions that will help the Contractor develop an effective ADMMP.

2.2 Notifications

- At least 10 days prior to any earthwork, the responsible party must submit an “Excavation Clearance Application” (Dig Permit) to the Trust, including a description of the excavation and a site map showing where the excavation will occur. Projects of broader scope may require additional site-specific approvals, such as additional plans and/or permits pertaining to air monitoring and dust control.
- The Trust and the Contractor shall collaborate to determine whether notification of regulatory agencies is required, based on the site’s history, impacts, and regulatory status.
- For LUC areas requiring a SSSMP, the ADMMP will be an appendix to the SSSMP and submitted to DTSC for approval.
- Submittal of the ADMMP for review by other applicable agencies (see Section 1.5) may be required.

2.3 Preparation of ADMMP

A site-specific ADMMP shall be prepared for the site and shall include the following components:

1. Describe site location and land use;
2. Identify the nature and extent of contamination, which includes identifying COCs to target during air monitoring.
3. Present calculations and design details of action levels for real-time dust monitoring, target compounds, and/or asbestos fibers, as applicable.

4. Outline the air monitoring approach, including but not limited to:
 - Meteorological monitoring;
 - Dust monitoring locations;
 - Baseline sample collection;
 - Construction sample collection; and
 - Real-time monitoring for dust.
5. List and describe methods and analysis for air monitoring that includes:
 - Stationary sampling for COCs/asbestos;
 - Real-time dust monitoring;
 - Personal air monitoring;
 - Meteorological measurements; and
 - Calibration procedures.
6. List and describe required laboratory certifications and sampling and analytical quality control/quality assurance procedures, such as:
 - National Environmental Laboratory Accreditation Program (NELAP), State of California;
 - Chain-of-Custody for samples collected in the field; and
 - Collection and analysis of field blanks, laboratory blanks, laboratory matrix spike, and laboratory matrix spike duplicates (MS/MSD).
7. Determine data management and data evaluation procedures including:
 - Sample design process;
 - Record keeping; and
 - Data validation and management.
8. Identify and describe dust control BMPs, including but not limited to BMPs for:
 - Excavation activities;
 - Onsite soil transport and stockpiling;
 - Vehicle travel on both paved egress from the site and unpaved surfaces;
 - Soil hauling;
 - Placement of backfill and grading; and
 - Post grading erosion control.

2.4 Determining Action Levels for Dust and/or Target Compounds

Action levels shall be developed for particulate matter, as well as target compounds, to inform dust monitoring and air sampling activities. In general, particulate matter action levels may be based on the *California Ambient Air Quality Standards*. Action levels for target compounds should be calculated using an established risk-based methodology, and results should be used to determine compound-specific dust action levels to protect human health.

2.5 Overview of Air Monitoring Approach

The ADMMP shall include a description of air and dust monitoring procedures to be implemented at the site. Air and dust monitoring may include a combination of portable real-time direct-reading instruments and stationary samplers. In general, the ADMMP shall include the locations of air and dust monitoring equipment, the equipment used, the frequency of monitoring or sample collection, and proper procedures for monitoring and sampling.

2.5.1 Real-Time Monitoring for Dust

Instantaneous particulate matter concentrations can be measured using a portable dust monitor as a screening tool for airborne migration of COCs. To establish daily background levels for the instantaneous monitoring, readings shall be taken upwind of the remediation project area at the beginning of the day. Dust monitors may then be run continuously for the duration of earthwork activities each day. Dust

monitors shall be set up with an alert for particulate concentrations exceeding the site's action levels, as specified in the ADMMP. Alerts are required to be audible or visible during construction when action levels are exceeded. The Contractor will be responsible for monitoring dust concentrations and adding or adjusting dust control BMPs as needed.

2.5.2 Dust Monitoring Locations

The ADMMP must provide the approach for establishing dust monitoring locations based on meteorological conditions, in particular, wind patterns confirmed through a review of historic data. If meteorological conditions cannot be reliably monitored with existing stations, an onsite meteorological station is required to be set up at the site to measure wind direction, wind speed, temperature, rainfall, and humidity. The meteorological station is to be mounted at least 4 feet above the ground and 20 feet away from other obstructions that could affect flow patterns. The optimum locations for air monitoring will be chosen based on the assessment of the following factors:

- Length of remedial project work area boundaries;
- Predominant wind directions, based on the meteorological measurements for the area;
- Where earthmoving activities are occurring within the project area; and
- Security of monitoring locations.

2.5.3 Air Sample Collection

If air sampling is required, the ADMMP shall specify the locations, frequency, and methods used for sample collection. For all sites, baseline air samples shall be collected prior to the beginning of earthwork activities to characterize initial airborne concentrations of COCs. The analytical results from the baseline samples can be used to characterize background concentrations of airborne COCs and dust at the site and serve as a point of comparison for the air sampling data obtained during earthmoving activities. The ADMMP shall also specify sampling procedures, sample handling information, and an analytical program. All air sampling procedures, including collection, naming, and quality control (QC) of samples, shall be performed in compliance with the *Presidio-Wide QAPP and SAP*.

If dust or air monitoring data exceed stop work levels for target chemicals, dust control techniques will be modified, as appropriate. Applicable regulatory agencies may also be notified. The results of laboratory-analyzed air samples and direct-reading measurements will be made available to regulatory agencies upon request.

2.6 ADMMP Records and Reporting

Records of air and dust monitoring activities shall include the following information:

- Date and time of monitoring;
- Operator name;
- Instrument type and date/time of the last calibration;
- General weather conditions (wind speed and direction, temperature, precipitation, cloud cover);
- Location and measurement of background concentration;
- Location and stabilized measurement for elevated readings;
- Summary of Contractor activities and the suspected source of elevated readings (only needed if elevated readings are encountered); and
- Follow-up sampling (if needed) or other response actions.

Analytical data shall be obtained directly from the laboratory in the form of electronic data deliverables (EDDs). The Contractor will perform a review of the analytical data and the laboratory case narratives to

identify significant data quality issues including method QC failures, blank contamination, and elevated detection limits. Air monitoring and sampling records, analytical data, and supporting documentation must be presented in the Construction Completion Report (CCR).

END

**THE PRESIDIO TRUST
STANDARD OPERATING PROCEDURE**

DEWATERING

SOP No. 004
Revision No. 01
Last Reviewed: April 2021

1.0 BACKGROUND

During construction activities, dewatering may be required to facilitate earthwork or to achieve desired geotechnical conditions. Due to the presence of potentially impacted soil or groundwater in Land Use Control (LUC) areas in the Presidio of San Francisco, California (Presidio), dewatering must be conducted in a manner that is protective of human health and the environment.

1.1 Purpose

This Standard Operating Procedure (SOP) applies to work in the Presidio that requires dewatering, the removal and disposal of groundwater or surface water from construction excavation areas. This SOP establishes the requirements and procedures for dewatering and water management, intended to prevent pollutants from construction activities at the Presidio from contaminating local waterways.

1.2 Scope

This SOP applies to dewatering activity during routine and non-routine work in the Presidio.

1.3 Related SOPs

- *SOP No. 002 – Storm Water Pollution Prevention Plan*
- *SOP No. 012 – Site-Specific Site Management Plan*
- *SOP No. 013 – Construction Completion Report*

1.4 Definitions

Best management practices (BMPs): Structural, vegetative, or managerial practices used to treat, prevent, or reduce water pollution.

Contaminants of concern (COCs): Chemicals or constituents that may be present in the soil that may pose risk to humans or the environment.

Dewatering: Removing accumulated water from open pits, excavations, and trenches.

Excavation: Work in which earth or other ground material, including hardscape, is displaced using manual tools or mechanical equipment

Impacted soils: Soil that contains COCs above site-specific human health and ecological cleanup levels, typically but not always below a cap (soil, hardscape, or vegetative).

National Pollution Discharge and Elimination System (NPDES): Permit program administered by the California State Water Resources Control Board (SWRCB) that regulates discharge to waters of the United States .

Non-routine work: Project construction activities that alter the site configuration beyond what is described and covered in applicable LUC and operations and maintenance (O&M) documents.

Routine work: Project construction activities that do not alter the site configuration beyond what is described and covered in applicable LUC and O&M documents. Typical routine work activities include, but are not limited to:

- Accessing or installing utilities;
- Associated removal of soils;
- Making repairs to or replacing hardscape;

- Plant replacement; and,
- Construction of clean corridors, if within a LUC area

Storm Water Pollution Prevention Plan (SWPPP): Document identifying all potential sources of pollution which may reasonably be expected to affect the quality of storm water discharge from a construction site and prescribes mitigation measures to prevent said sources from negatively impacting the water quality of the storm water discharge.

1.5 References

- City and County of San Francisco, Public Works Code, Article 4.1, Section 123.
- Occupational Safety and Health Administration (OSHA) Standard 29 Code of Federal Regulations (CFR) 1926 – Safety and Health Regulations for Construction.
- Presidio Trust (Trust), 2001, Amended 2011. *Presidio-Wide Quality Assurance Project Plan (QAPP) and Sampling and Analysis Plan (SAP)*.
- Trust, 2016. *Construction Guidelines*. April.
- SWRCB, 2013. *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ), NPDES No. CAS000002*. Updated January 23.

2.0 PROCEDURES

The following sections discuss roles, notifications, and procedures for dewatering at a site.

2.1 Roles

The Contractor is responsible for preparing a Dewatering Plan for the site, either as a standalone document or as part of a greater Site Management Plan, prior to construction activities. For non-routine work, the Contractor is responsible for obtaining approval of the plan and conducting all dewatering activities in accordance with the plan.

For temporary discharge to publicly owned treatment works (POTW), the Contractor is required to provide a discharge permit from the appropriate regulatory entity, such as the San Francisco Regional Water Quality Control Board (RWQCB) for discharge into a stormwater drain, the San Francisco Public Utilities Commission (SFPUC) for discharge into the City of San Francisco Sanitary Sewer, or the Trust Utilities Department for discharge into the Presidio Sanitary Sewer System, prior to receiving Trust approval for discharge.

The Trust shall be responsible for reviewing the Dewatering Plan and approving the discharge or disposal method for accumulated water.

2.2 Notifications

For both routine and non-routine work, the Contractor shall notify the Trust of its intent to dewater during construction activities during submittal of the “Excavation Clearance Application” (Dig Permit). For routine work, the Contractor shall perform dewatering activities in accordance with the procedures outlined in this SOP. For non-routine work, the Contractor shall prepare a site-specific Dewatering Plan and present it to

the Trust and applicable regulatory agencies for approval prior to the start of construction. Documentation of dewatering activities, including total volumes removed, testing results, and disposal documentation, shall be compiled and shared with the Trust and included as part of the Construction Completion Report (CCR) or equivalent final project documentation.

2.3 Preparation of a Dewatering Plan (Non-Routine Work)

Prior to non-routine construction activities, the Contractor shall prepare a Dewatering Plan, which will summarize dewatering methods and BMPs to be employed at the site, types and locations of storage containers to be used, analytical sampling requirements, and disposal options. For large-scale projects, the Dewatering Plan may be developed as a standalone document; however, for most projects, it may be integrated into the Site-Specific Site Management Plan or equivalent construction planning document. Dewatering Plans for non-routine projects shall be reviewed by the Trust and applicable regulatory agencies for approval prior to implementation.

2.4 Dewatering Procedures (Routine and Non-Routine Work)

Dewatering procedures for both routine and non-routine work in the Presidio shall adhere to the following guidelines.

2.4.1 Removal and Containment of Water

Accumulated water shall be removed from construction excavation areas using pumps or other approved mechanical or manual methods. All groundwater or accumulated surface water removed from construction areas in the Presidio shall be contained in a drum, baker tank, or other equivalent containment device. Staging locations of the containment devices shall be presented in the Dewatering Plan and approved by the Trust.

2.4.2 Water Analysis

Prior to disposal, containerized water shall be sampled and profiled to inform disposal decisions. Samples should be collected using grab sample methodology, as outlined in the *Presidio-Wide QAPP and SAP*. Water samples shall be submitted for analysis of the following constituents:

- pH
- California Administrative Manual (CAM) 17 Metals;
- Volatile organic compounds (VOCs);
- Semi-volatile organic compounds (SVOCs);
- Organochlorine pesticides; and
- Any additional constituents identified as COCs at the site.

Additional analysis might be necessary to comply with profiling requirements for the disposal facility or as specified in issued permits for temporary discharge to POTW.

2.4.3 Water Disposal

Based on the results of the analyses, the Contractor shall determine the disposal method for the water. In most cases, water will be transported for off-site delivery at an approved disposal facility. The Contractor shall provide analytical results to the disposal facility prior to transport to determine the appropriate waste classification. All documentation of the water disposal, including accepted waste profiles, manifests, and volume tickets, shall be maintained and provided to the Trust with final project documentation. Alternatively, the Contractor might elect to obtain a batch wastewater discharge permit

for temporary discharge to POTW as described in Section 2.1. The Contractor shall be responsible for necessary pre-treatment of water to meet permit-specific discharge conditions.

END

**THE PRESIDIO TRUST
STANDARD OPERATING PROCEDURE**

PROFILING SOIL FOR DISPOSAL

SOP No. 005
Revision No. 03
Last Reviewed: April 2021

1.0 BACKGROUND

Due to the historic nature of the Presidio of San Francisco, California (Presidio) as a military base and historic use of toxic chemicals in commercial products, such as lead-based paint and leaded gasoline, subsurface soils in the Presidio are known to contain or have the potential to contain hazardous substances. As a result, impacted soil is frequently excavated for consolidation or disposal and characterization is performed to determine the disposition of the soil. Waste characterization and profiling of excavated soil is required for transport and off-site disposal in accordance with local, state, and federal requirements.

1.1 Purpose

This Standard Operating Procedure (SOP) provides the procedures and requirements for the profiling of soil that is excavated in the Presidio and designated for disposal. Standard procedures are necessary to ensure proper methods of characterization for waste profiling, lawful management and disposal of contaminated and hazardous soils, and completion of required documentation and reporting.

1.2 Scope

This SOP applies to the characterization and disposal of all soils excavated during routine and non-routine work in the Presidio.

1.3 Related SOPs

- *SOP No. 001 – Environmental Health and Safety*
- *SOP No. 006 – Profiling Materials for Import and Reuse*
- *SOP No. 007 – Soil and Stockpile Management*
- *SOP No. 012 – Site-Specific Soil Management Plan*
- *SOP No. 013 – Construction Completion Report*

1.4 Definitions

California Environmental Protection Agency, Department of Toxic Substances Control (DTSC):

Government agency that regulates the generation, handling, treatment, and disposal of hazardous waste in California.

Contaminants of concern (COCs): Chemicals or constituents that may be present in the soil that may pose risk to humans or the environment.

Excavation: Work in which earth or other ground material, including hardscape, is displaced using manual tools or mechanical equipment

Hazardous waste: Solid or liquid waste characterized as a federal Resource Conservation and Recovery Act (RCRA) or California Title 22 (Non-RCRA) hazardous waste.

Impacted soils: Soil that contains COCs above site-specific human health and ecological cleanup levels, typically but not always below a cap (soil, hardscape, or vegetative).

Non-hazardous waste: Solid or liquid waste not characterized as a RCRA or Non-RCRA hazardous waste.

Non-routine work: Project construction activities that alter the site configuration beyond what is

described and covered in applicable land use control (LUC) and operations and maintenance (O&M) documents.

Routine work: Project construction activities that do not alter the site configuration beyond what is described and covered in applicable LUC and O&M documents. Typical routine work activities include, but are not limited to:

- Accessing or installing utilities;
- Associated removal of soils;
- Making repairs to or replacing hardscape;
- Plant replacement; and,
- Construction of clean corridors, if within a LUC area

Soil stockpile: A temporary, designated storage pile formed with excess soil from a site.

Waste: Solid, liquid, or gaseous material that is not needed or not suitable for its original intended purpose or material classified as waste by a regulatory authority.

1.5 References

- Erler & Kalinowski, 2002, As Amended. *Development of Presidio-Wide Cleanup Levels for Soil, Sediment, Groundwater, and Surface Water*. October. Tables updated November 2019.
- Presidio Trust (Trust), 2001, Amended 2011. *Presidio-Wide Quality Assurance Project Plan (QAPP) and Sampling and Analysis Plan (SAP)*.
- Trust, 2009. *Presidio Trust Land Use Controls Master Reference Report (Presidio LUCMRR), Presidio of San Francisco, California*. September.
- Trust, 2016. *Construction Guidelines*. April.
- U.S. Environmental Protection Agency (EPA), latest edition. *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods (SW-846; Update VII)*.
- Site-Specific LUCMRR Addendum (for each LUC Site)
- Site-Specific Soil Management Plan (SSSMP)

2.0 PROCEDURES

The following sections discuss roles, notifications, and procedures for characterizing, profiling, and disposing of waste soil at a site.

2.1 Roles

The Contractor is responsible for performing soil sampling and characterization activities consistent with the *Presidio-Wide QAPP and SAP* and the SSSMP. The Contractor shall communicate with the selected disposal facility(ies) and maintain all documentation for characterization, profiling, transport, and disposal activities. The Contractor is also responsible for communicating with the Trust to review soil analytical results and assess if soil reuse is a viable option (see *SOP 006 – Profiling Materials for Reuse and Import*).

2.2 Notifications

The Contractor shall contact the disposal facility prior to disposal to ensure collection and analysis of waste characterization samples is performed in accordance with the selected facility's applicable criteria.

2.3 Soil Characterization

The Contractor shall characterize excavated soil to determine the waste classification and appropriate waste disposal facility. Soil samples may be collected either prior to excavation (in-situ) or after excavation (from stockpiles). A minimum of one four-point composite sample per 250 cubic yards of material shall be collected; however, the Contractor shall coordinate with the disposal facility to confirm that the sampling frequency meets facility-specific requirements (e.g., fewer samples may be required for a greater volume of material). Each point sample shall be collected at a randomly selected location within the in-situ material or stockpile (i.e. without consideration of soil type, suspected contamination, presence of debris, etc.). Characterization samples shall be collected in a manner to ensure representative coverage of all in-situ or stockpiled soil and placed into appropriate sampling containers in accordance with the sampling procedures outlined in the *Presidio-Wide QAPP and SAP*. If multiple types of soil are documented, then representative samples will be collected from each soil type.

Samples will be transferred under chain-of-custody protocol to a laboratory that is certified by the California Department of Public Health Environmental Laboratory Accreditation Program (ELAP). Laboratory analysis methods should be selected using professional judgment based on a review of historical site use, known site COCs, and coordination with the disposal facility. COCs in soil will vary by location and are noted within the Site-Specific LUCMRR Addendum for each LUC site. Required analyses may include:

- Total petroleum hydrocarbons (TPH) by EPA Method 8015;
- Volatile organic compounds (VOCs) by EPA Method 8260/5035;
- Polychlorinated biphenyls (PCBs) by EPA Method 8082;
- Polycyclic aromatic hydrocarbons (PAHs), by EPA Method 8310;
- Organochlorine pesticides by EPA Method 8081;
- California Title 22 metals by EPA Method 6010/7470/7471;
- Analyses for site-specific COCs; and
- Any other analyses required by the selected landfill.

Analytical results may be compared to the following screening criteria, as determined by the Trust and/or the selected disposal facility:

- Title 40 Code of Federal Regulations (CFR) Section 261.24 – Toxicity characteristic, containing RCRA hazardous waste limits;
- Title 22 California Code of Regulations (CCR) Section 66261.24 – Characteristic of Toxicity, containing non-RCRA hazardous waste limits;
- DTSC screening levels (DTSC-SLs); or
- Regional Water Quality Control Board (RWQCB) environmental screening levels (ESLs).

Following the review and screening of analytical results, additional leachability analysis may be required for potential hazardous waste classification. General guidelines for additional analysis are as follows:

- If the detected concentration of a COC exceeds 20 times the Toxicity Characteristic Leaching Procedure (TCLP) limit for RCRA hazardous waste, then TCLP extraction and analysis may be required for potential RCRA hazardous waste classification.
 - If the subsequent TCLP result does **not** exceed the limit for RCRA hazardous waste, then a Waste Extraction Test (WET) may be required for potential non-RCRA hazardous waste classification.
- If the detected concentration of a COC does **not** exceed 20 times the TCLP limit for RCRA hazardous waste but exceeds 10 times the Soluble Threshold Limit Concentration (STLC) limit for non-RCRA hazardous waste, then a Waste Extraction Test (WET) may be required for potential non-RCRA hazardous waste classification.

- If the subsequent result exceeds the STLC limit for non-RCRA hazardous waste, then TCLP extraction and analysis may additionally be required for potential RCRA hazardous waste classification.
- Note that STLC and TCLP analyses may not be necessary if the detected concentration of a COC already exceeds the Total Threshold Limit Concentration (TTLC) limit for RCRA hazardous waste.

The Contractor shall comply with all local, state, and federal regulations regarding hazardous waste classification and disposal. In general, soils with COC concentrations exceeding the toxicity characteristics defined by 40 CFR 261.24 and/or 22 CCR 66261.24 shall be classified for disposal as Class I Hazardous Waste (RCRA and/or Non-RCRA, respectively). Soils with COC concentrations below the toxicity characteristics but above the DTSC-SLs or RWQCB ESLs may likely be disposed of as Class II Non-Hazardous Waste. Prior to off-site transport and disposal, the Contractor shall review the environmental testing reports and present recommendations for soil classification and disposal to the Trust for review and approval .

2.4 Soil Disposal

The Contractor shall employ Trust-approved appropriately-licensed facilities or sites for soil disposal and provide the Trust with complete waste characterization analytical results, completed waste profile applications from the disposal facility, and documentation of waste acceptance. The Contractor shall obtain Hazardous Waste EPA Identification Numbers from either EPA (for federal EPA ID numbers) or DTSC (for California State EPA ID numbers) for proper waste management when transporting and disposing of hazardous waste. These numbers are not needed for non-hazardous material.

The Contractor shall submit waste manifests for the designated disposal facilities to the Trust a minimum of three working days prior to transporting waste. The Trust will obtain the authorized signatures and retain all copies of the manifests until the Contractor is authorized to dispose of the soils. Signed manifests will be provided to the Contractor prior to off-site transport of soils. No soil will be disposed of without written authorization from the Trust.

All hazardous waste shall be properly managed, manifested, and transported by a hazardous waste hauler registered with DTSC.

3.0 DOCUMENTATION AND REPORTING

The documents below shall be maintained at the site and are required for project completion and reporting.

3.1 Documents to be Maintained On-Site

- Waste characterization profiles, transportation records (e.g., truck tags), and disposal documentation (e.g., waste manifests and weight tickets); and
- Photographs.

3.2 Documents Required for Project Completion

- Summary of disposal quantities, waste classifications, and corresponding waste facilities;
- Disposal profiles; and
- Waste manifests and weight tickets.

END

**THE PRESIDIO TRUST
STANDARD OPERATING PROCEDURE**

PROFILING MATERIALS FOR IMPORT AND REUSE

SOP No. 006
Revision No. 03
Last Reviewed: April 2021

1.0 BACKGROUND

Due to the historic nature of the Presidio of San Francisco, California (Presidio) as a military base and the historic use of commercial products containing toxic chemicals such as lead-based paint and leaded gasoline, subsurface soils at the Presidio are known to contain or have the potential to contain hazardous substances. As a result, impacted soil is frequently excavated for consolidation or disposal and materials from either a Presidio site or off-site source are imported for backfill or clean cap construction. In accordance with California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) regulations, it must be demonstrated that these import materials will not introduce new contaminants to a site. Additionally, import materials must be approved by the Presidio Trust (Trust) for other criteria, such as geotechnical or horticultural use and the presence or absence of Phytophthora, prior to import.

1.1 Purpose and Applicability

This Standard Operating Procedure (SOP) provides the procedures and requirements for the characterization of materials to be imported or reused at the Presidio, in cooperation with the Trust. Standard procedures are necessary to ensure complete profiling required for lawful and appropriate import or reuse of materials within the Presidio.

1.2 Scope

This SOP applies to Trust employees or third-party Contractors considering 1) reuse of Presidio soils at the source site or another Presidio site or 2) import of off-site materials to Presidio sites during routine and non-routine work in the Presidio. This SOP incorporates existing documents to reduce the duplication of standards, policy, or controls previously approved by the Trust and by DTSC, to avoid inconsistencies in approved methodology.

1.3 Related SOPs

- *SOP No. 005 – Profiling Soil for Disposal*
- *SOP No. 007 – Soil and Stockpile Management*
- *SOP No. 012 – Site-Specific Soil Management Plan*
- *SOP No. 013 – Construction Completion Report*

1.4 Definitions

California Environmental Protection Agency, Department of Toxic Substances Control (DTSC):

Government agency that regulates the generation, handling, treatment, and disposal of hazardous waste in California.

Contaminants of concern (COCs): Chemicals or constituents that may be present in the soil that may pose risk to humans or the environment.

Excavation: Work in which earth or other ground material, including hardscape, is displaced using manual tools or mechanical equipment

Impacted soils: Soil that contains COCs above site-specific human health and ecological cleanup levels, typically but not always below a cap (soil, hardscape, or vegetative).

Import material: Any material used to backfill an excavation or trench or to increase the elevation of an existing ground surface. This includes but is not limited to soil, aggregate, rock, sand, compost, soil amendments, etc.

Non-routine work: Project construction activities that alter the site configuration beyond what is described and covered in applicable land use control (LUC) and operations and maintenance (O&M) documents.

Phytophthora: A plant-damaging water mold that can cause damage in natural ecosystems.

Routine work: Project construction activities that do not alter the site configuration beyond what is described and covered in applicable LUC and O&M documents. Typical routine work activities include, but are not limited to:

- Accessing or installing utilities;
- Associated removal of soils;
- Making repairs to or replacing hardscape;
- Plant replacement; and,
- Construction of clean corridors, if within a LUC area

Soil stockpile: A temporary, designated storage pile formed with excess soil from a site.

1.5 References

- DTSC, 2001. *Information Advisory – Clean Imported Fill Material (Fill Advisory)*. October.
- Eler & Kalinowski, 2002, As Amended. *Development of Presidio-Wide Cleanup Levels for Soil, Sediment, Groundwater, and Surface Water*. October. Tables updated November 2019.
- TRC Solutions, Inc., 2020. *Technical Memorandum: Summary of Soil Reuse within the Doyle Drive Phase 3 Project (Technical Memorandum for Soil Reuse)*. September 24.
- Trust, 2001, Amended 2011. *Presidio-Wide Quality Assurance Project Plan (QAPP) and Sampling and Analysis Plan (SAP)*.
- Trust, 2002. *Presidio Trust Management Plan*.
- Trust, 2009. *Presidio Trust Land Use Controls Master Reference Report (Presidio LUCMRR), Presidio of San Francisco, California*. September.
- Trust, 2016. *Construction Guidelines*. April.
- Trust, 2019. *Phytophthora Management Guidelines*. June.
- U.S. Environmental Protection Agency (EPA), latest edition. *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods (SW-846; Update VII)*.
- Site-Specific LUCMRR Addendum (for each LUC Site)
- Site-Specific Soil Management Plan (SSSMP)

2.0 PROCEDURES

The following sections discuss roles, notifications, and procedures for characterizing materials for import and reuse within the Presidio, including sampling methods, test methods, and evaluation methods.

2.1 Roles

The Contractor is responsible for conducting sampling and characterization of all import materials,

consistent with the *Presidio-Wide QAPP and SAP* and DTSC's 2001 *Fill Advisory*. The Contractor is also responsible for comparing analytical results against DTSC and Trust screening levels (SLs) and providing recommendations to the Trust to determine import and reuse potential.

The Trust is ultimately responsible for approving materials for import or reuse at specific sites. Trust Remediation may consult with other Trust departments to confirm that import material meets various criteria specific to the development site.

2.2 Notifications

None required.

2.3 Profiling for Reuse or Import at the Presidio

Materials being considered for import or reuse in the Presidio shall be profiled to determine suitability for use at the project site. Source material samples may be collected either prior to excavation (in-situ) or after excavation (from stockpiles). Sampling frequency shall meet the requirements of the DTSC *Fill Advisory*, dependent on in-situ borrow area or stockpile volume; however, the Contractor shall coordinate with the Trust to ensure sampling frequency meets the import site requirements. Grab samples shall be collected from randomly selected points within the in-situ material or stockpile and placed into appropriate sampling containers in accordance with the sampling procedures outlined in the *Presidio-Wide QAPP and SAP*. While sample locations shall be selected at random, the overall sampling approach shall be reviewed and collection of characterization samples shall be conducted in a manner to ensure representative coverage of the entire volume of in-situ or stockpiled material identified for import or reuse.

Samples will be transferred under chain-of-custody protocol to a laboratory that is certified by the California Department of Public Health Environmental Laboratory Accreditation Program (ELAP). Laboratory analysis methods should be selected by an environmental professional with experience in import material handling, sampling, and profiling. Selection of analyses for complete evaluation and material profiling will be based on a review of background information for the potential source (including historical site use and prior Phase I or Phase II Environmental Site Assessment [ESA] data if available), DTSC *Fill Advisory* guidance on potential contaminants based on the fill source area, and professional judgment. If no historical site data is available, laboratory analyses shall include as a minimum, where applicable:

- Total petroleum hydrocarbons (TPH) in the gasoline, diesel, and motor oil ranges by EPA Method 8015;
- Volatile organic compounds (VOCs) by EPA Method 8260/5035;
- Semi-volatile organic compounds (SVOCs) by EPA Method 8270-SIM;
- Polychlorinated biphenyls (PCBs), by EPA Method 8082;
- Organochlorine pesticides by EPA Method 8081;
- California Title 22 Metals by EPA Method 6020/7470/7471;
- Asbestos by California Air Resource Board (CARB) Method 435 (Transmission Electron Microscopy [TEM] with reporting limit of 0.01%);
- Analyses for site-specific COCs, as confirmed by the Trust; and
- Analyses identified in the DTSC *Fill Advisory*, based on current fill source information.

All results shall be reported as dry weight corrected. Depending on the proposed function of the import or reuse material (e.g., structural, planting, ground covering, etc.), the Trust may instruct additional geotechnical or horticultural properties testing.

Analytical results shall be compared to the SLs presented in the *Presidio-Wide Cleanup Levels (CULs)* document. If the laboratory reports a constituent as being non-detectable, the laboratory reportable limit (RL) must be compared to the SL to verify that the constituent was analyzed to the accuracy required and that the RL is less than the SL. If the RL is greater than the SL, the laboratory must be contacted to determine if additional calculations and/or evaluation can be performed to report a lower RL value that is less than the SL. If a RL value below the SL is not attainable, the laboratory analysis must be redone or further explanation must be provided. The applicable SL shall be confirmed with Trust Remediation to ensure that any reused material meets the ecological and/or human health CULs of the receiving site. If the imported material is generated from a Presidio LUC site or being placed at a LUC site, regulatory approval by DTSC is required prior to placement. See **Attachment 006-A** for an example Sample Results Summary Table, which presents a standard form of documentation for the comparison of sampling results against select screening levels.

Presidio soils or other excavated or unused materials that do not meet the criteria for reuse at the Presidio shall be disposed of according to the procedures specified in *SOP No. 005 – Profiling Soil for Disposal*.

2.4 Placement of Reused Materials

Presidio CULs for project sites are based on the existing or planned land use of the site according to the *Presidio Trust Management Plan*. The Contractor shall coordinate with the Trust to ensure that chemical concentrations in the import or reuse materials meet the applicable ecological and/or human health CULs for the site. Land use designations across the Presidio (human health and ecological land uses) are detailed in **Figures 5-1 through 5-5** (attached) as well as in the *Technical Memorandum for Soil Reuse*, which describes future planned land use for the Doyle Drive Phase 3 project area. Please note that applicable CULs (presented in Figure 7-1 of the *Presidio-Wide CULs* document) may vary from land use designations shown in Figures 5-1 through 5-5; recreational CULs may be required in some areas that are designated as Commercial/Industrial land use zones.

2.5 Documentation of Import or Reuse Materials

Prior to transport or placement of any import or reuse material, the Contractor shall review the profiling results and present a recommendation for import or reuse potential to the Trust for review and approval. The recommendation shall be submitted to Trust Remediation with all necessary backup, including source site documents (e.g., Phase I & II ESAs), testing results, and other pertinent information. No materials shall be imported prior to Trust approval and, if necessary, regulatory approval. The specific locations within the Presidio where import or reuse material is generated from a LUC area or placed in a LUC area shall be documented with field notes and project photos and reported in the Presidio Annual O&M Report.

3.0 DOCUMENTATION AND REPORTING

The documents below shall be maintained at the site and are required for project completion and reporting.

3.1 Documents to be Maintained On-Site

- Environmental, geotechnical, and horticultural sampling data for import and reuse materials;
- Authorizations for import or reuse materials (obtained from Trust Remediation and, if within a

LUC area, from DTSC/Regional Water Quality Control Board [RWQCB];

- Import truckload tracking tables; and,
- Photographs.

3.2 Documents Required for Project Completion

- Environmental, geotechnical, and horticultural sampling data for import and reuse materials;
- Authorizations for import or reuse materials (obtained from Trust Remediation and, if within a LUC area, from DTSC/RWQCB);
- Summary table of import materials volumes; and,
- Summary table of reuse materials volumes.

END

Table 2
[LOCATION] Soil Analytical Results - Total Metals
[PROJECT] Sampling
Presidio of San Francisco, San Francisco, California

Sample ID	Depth (ft bgs)	Date	Total Metals (EPA 6020/7471A)								
			Barium	Cadmium	Copper	Lead	Mercury	Selenium	Silver	Thallium	Zinc
Soil (mg/kg)											
TESTSB001	1	#####	150	< 0.72	18	19	0.079	< 0.72	< 0.72	< 0.36	64
TESTSB002	2	#####	94 J+	< 0.85	18	25	0.11	< 0.91	< 0.85	< 0.42	62 J
TESTSB003	3	#####	400	2.4	130	960	0.44	0.15 J	< 0.73	< 0.37	1,100
TESTSB004	4	#####	76 J+	< 0.75	15	23	0.080	0.30 J	< 0.75	< 0.38	35 J
Presidio Cleanup Level for Residential Human Health			5,000	1.7	--	80	20	360	360	5.7	22,000
Presidio Cleanup Level Ecological Buffer Zone			500	0.23	120	300	1.6	1.1	2.0	1.0	50
Background Level for Serpentinite Formation			230	1.9	85	66	0.2	0.5	1.7	1.0	160
Background Level for Colma Formation			180	0.8	49	7.5	0.2	0.5	1.0	1.0	79
Background Level for Beach/Dune Formation			120	1.7	43	57	0.2	0.75	1.0	1.0	79
Selected Screening Level			500	1.9	120	80	1.6	1.1	2.0	1.0	160

Notes:

BOLD values indicate the concentration exceeds the cleanup level and/or screening level.

Shading indicates that the non detected value (laboratory reporting limit) is above the cleanup level and/or screening level.

If the highest Background Level is greater than the Presidio Cleanup Level, the Background Level becomes the Selected Screening Level.

Abbreviations:

EPA = Environmental Protection Agency

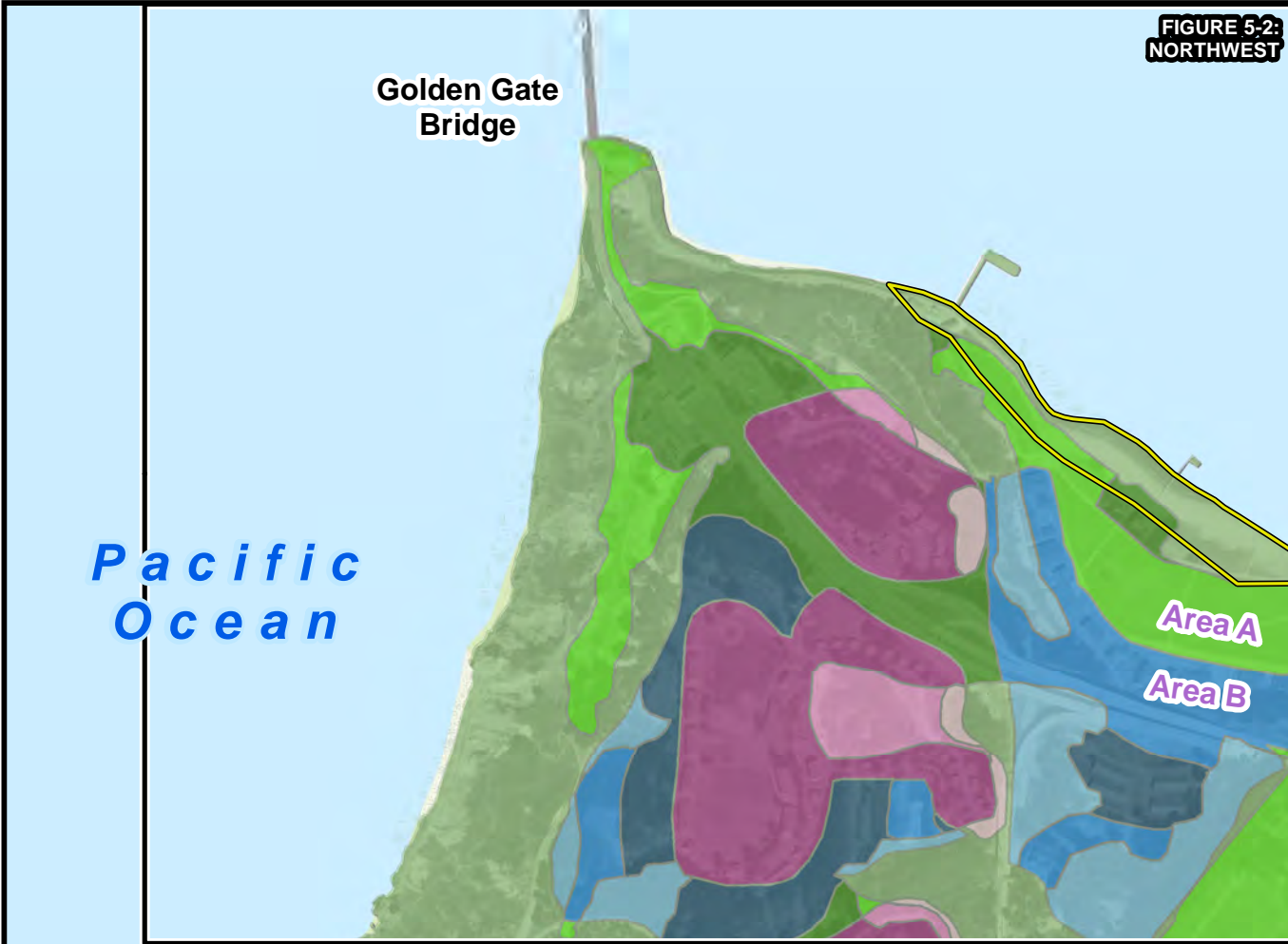
ft bgs = feet below ground surface

mg/kg = milligrams per kilogram

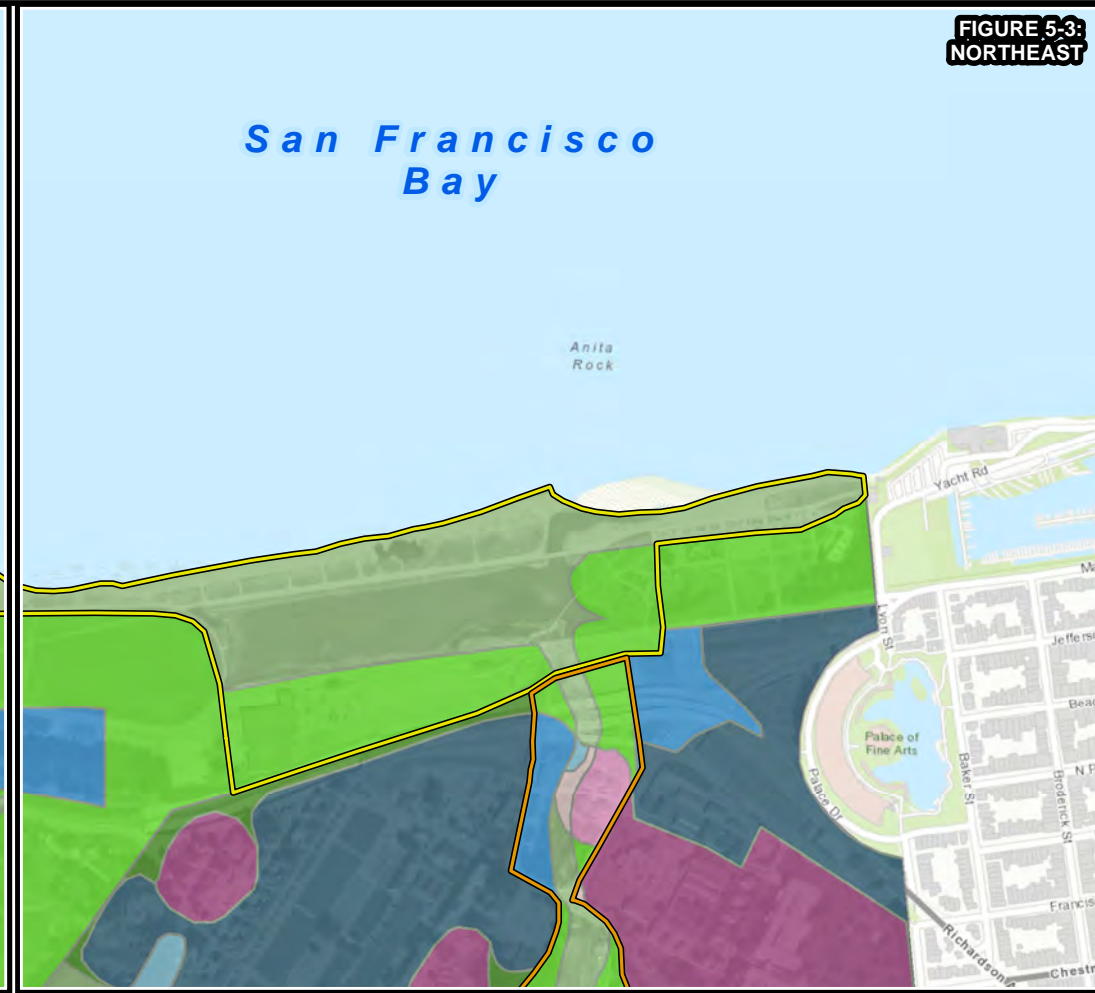
<# = not detected above the laboratory reporting limit

J = Estimated value

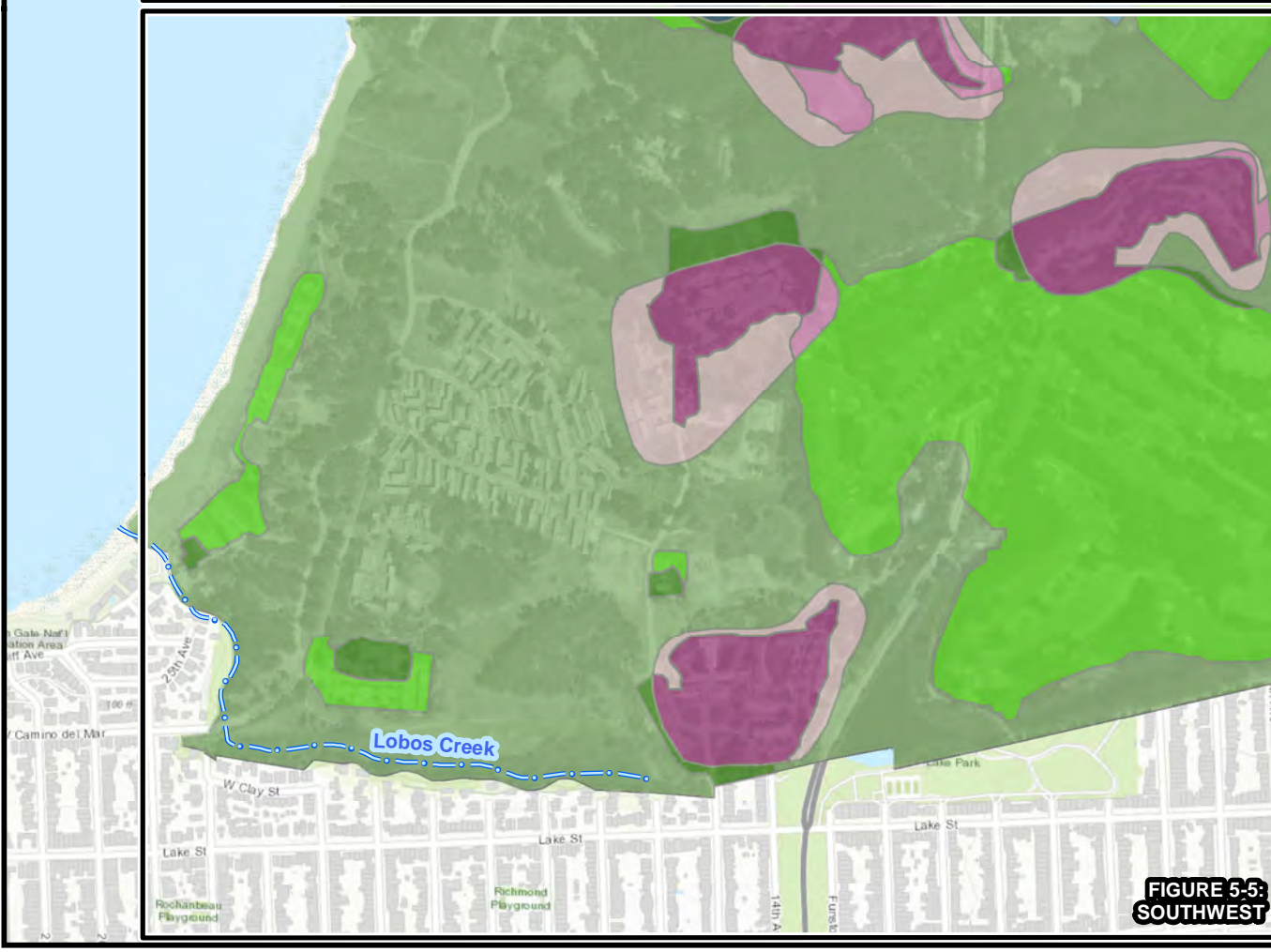
J+ = Estimated value with a potential high bias



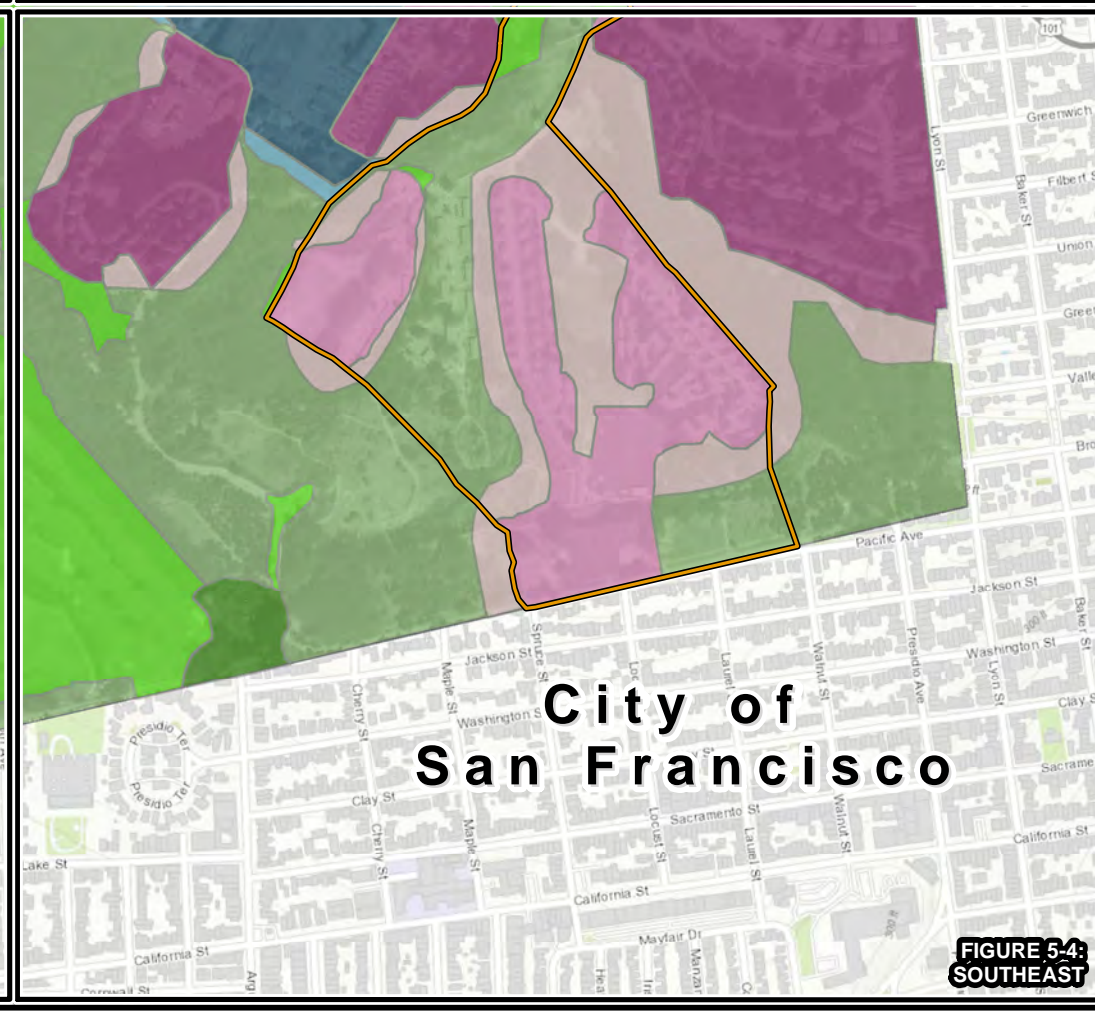
**FIGURE 5-2:
NORTHWEST**



**FIGURE 5-3:
NORTHEAST**



**FIGURE 5-5:
SOUTHWEST**



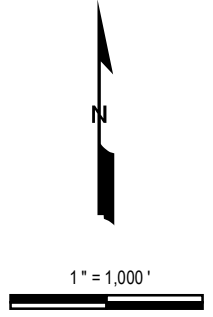
**FIGURE 5-4:
SOUTHEAST**

LEGEND

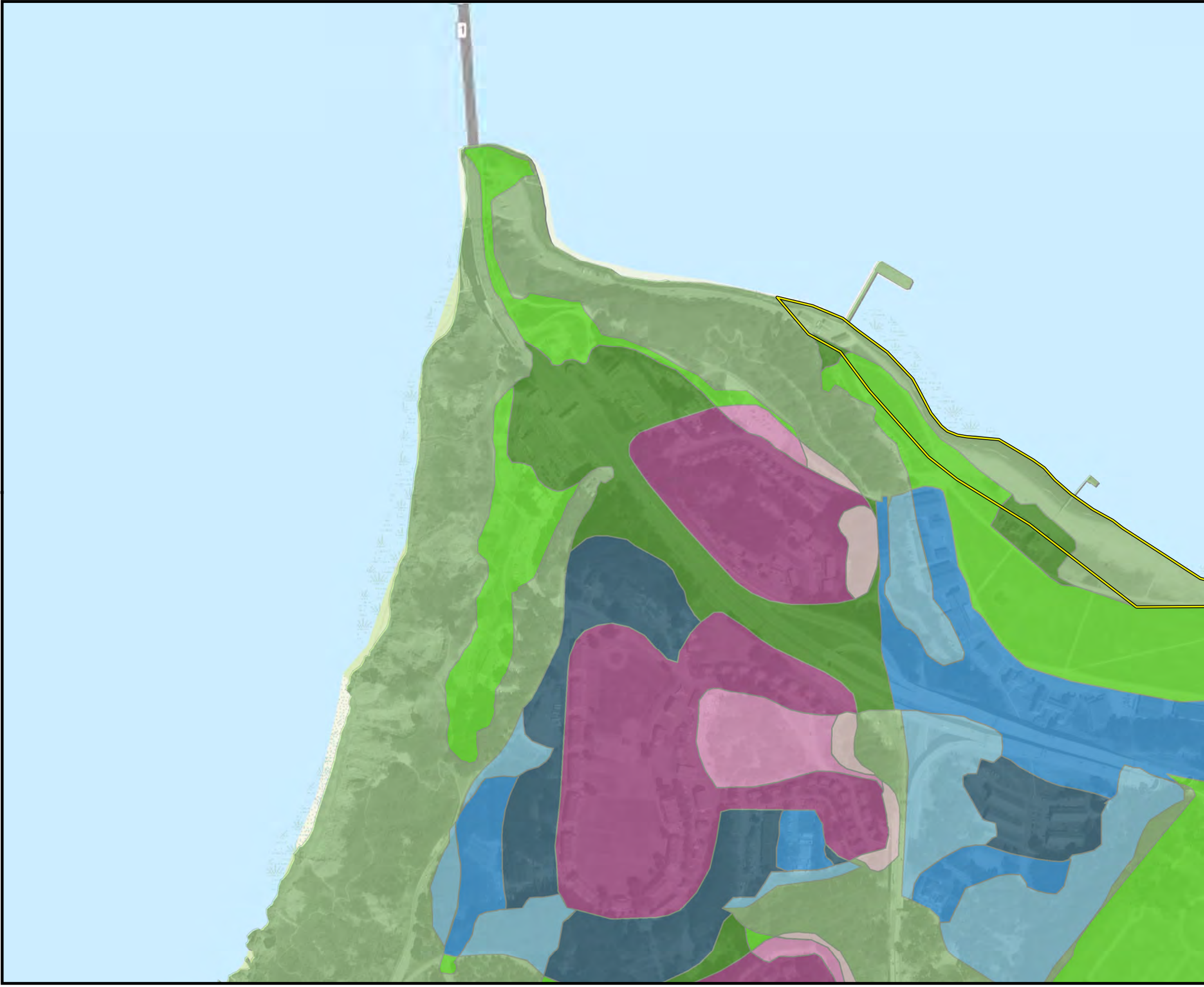
- PRESIDIO OF SAN FRANCISCO
- AREA A/B BOUNDARY LINE
- LAND USE ZONES**
- HUMAN HEALTH/NO ECOLOGICAL PROTECTION**
- A: RESIDENTIAL
- B: RECREATIONAL
- C: COMMERCIAL/INDUSTRIAL (SEE NOTE 3)
- HUMAN HEALTH/ECOLOGICAL BUFFER**
- D: RESIDENTIAL/ECO BUFFER
- E: RECREATIONAL/ECO BUFFER
- F: COMMERCIAL/INDUSTRIAL/ECO BUFFER (SEE NOTE 3)
- HUMAN HEALTH/SPECIAL STATUS ECOLOGICAL**
- G: RESIDENTIAL/SPECIAL STATUS
- H: RECREATIONAL/SPECIAL STATUS
- I: COMMERCIAL/INDUSTRIAL/SPECIAL STATUS (SEE NOTE 3)
- AQUATIC HABITAT SEDIMENT**
- J: SALTWATER ECOLOGICAL PROTECTION
- K: FRESHWATER ECOLOGICAL PROTECTION

NOTES



1. MAP PROJECTION IS CALIFORNIA STATE PLANE ZONE III, NAD 1983 HARN, US SURVEY FEET.
2. BASEMAPS FROM ESRI, "WORLD TOPOGRAPHIC MAP" & "WORLD IMAGERY," WEB BASEMAP SERVICE LAYER, INFORMATION CURRENT AS PROVIDED THROUGH SERVICE AS OF THE PUBLISHING DATE OF THIS MAP.
3. APPLICABLE CLEANUP LEVELS MAY VARY. RECREATIONAL CLEANUP LEVELS MAY BE REQUIRED IN SOME AREAS THAT ARE DESIGNATED AS COMMERCIAL/INDUSTRIAL LAND USE ZONES. PLEASE REFER TO FIGURE 7-1 OF THE PRESIDIO-WIDE CLEANUP LEVEL DOCUMENT (EKI, UPDATED NOVEMBER 2019).



PROJECT:	
THE PRESIDIO TRUST PRESIDIO-WIDE SOIL MANAGEMENT PLAN SAN FRANCISCO, CALIFORNIA	
TITLE:	
LAND USE ZONE MAP	
DRAWN BY: M. PATINKIN	PROJ NO.: 275264
CHECKED BY: A. KIM / S. SCHOEMANN	FIGURE 5-1
APPROVED BY: J. HANZEL-DURBIN	
DATE: APRIL 2021	
505 Sansome Street, Suite 1600 San Francisco, CA 94111 Phone: 415.434.2600 www.TRCompanies.com	
FILE NO: Figure 5-1 - LUZ Map.mxd	






LEGEND




-  PRESIDIO OF SAN FRANCISCO
-  AREA A/B BOUNDARY LINE

LAND USE ZONES




HUMAN HEALTH/NO ECOLOGICAL PROTECTION

-  A: RESIDENTIAL
-  B: RECREATIONAL
-  C: COMMERCIAL/INDUSTRIAL
(SEE NOTE 3)

HUMAN HEALTH/ECOLOGICAL BUFFER

-  D: RESIDENTIAL/ECO BUFFER
-  E: RECREATIONAL/ECO BUFFER
-  F: COMMERCIAL/INDUSTRIAL/ECO BUFFER
(SEE NOTE 3)

HUMAN HEALTH/SPECIAL STATUS ECOLOGICAL

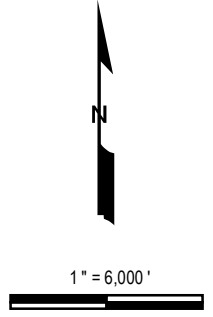
-  G: RESIDENTIAL/SPECIAL STATUS
-  H: RECREATIONAL/SPECIAL STATUS
-  I: COMMERCIAL/INDUSTRIAL/SPECIAL STATUS
(SEE NOTE 3)


AQUATIC HABITAT SEDIMENT

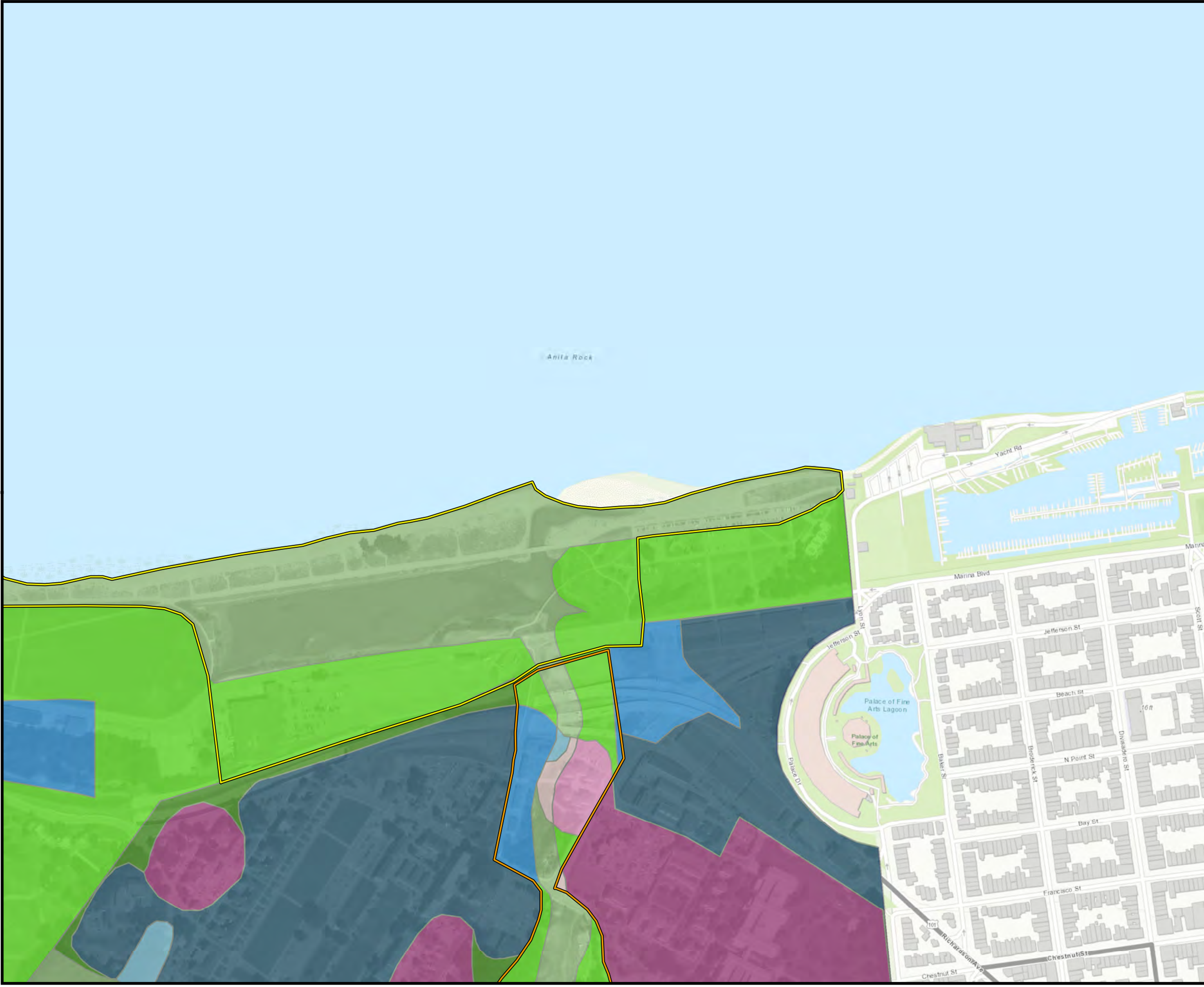
-  J: SALTWATER ECOLOGICAL PROTECTION

NOTES

1. MAP PROJECTION IS CALIFORNIA STATE PLANE ZONE III, NAD 1983 HARN, US SURVEY FEET.
2. BASEMAPS FROM ESRI, "WORLD TOPOGRAPHIC MAP" & "WORLD IMAGERY," WEB BASEMAP SERVICE LAYER, INFORMATION CURRENT AS PROVIDED THROUGH SERVICE AS OF THE PUBLISHING DATE OF THIS MAP.
3. APPLICABLE CLEANUP LEVELS MAY VARY. RECREATIONAL CLEANUP LEVELS MAY BE REQUIRED IN SOME AREAS THAT ARE DESIGNATED AS COMMERCIAL/INDUSTRIAL LAND USE ZONES. PLEASE REFER TO FIGURE 7-1 OF THE PRESIDIO-WIDE CLEANUP LEVEL DOCUMENT (EKI, UPDATED NOVEMBER 2019).



PROJECT: THE PRESIDIO TRUST PRESIDIO-WIDE SOIL MANAGEMENT PLAN SAN FRANCISCO, CALIFORNIA	
TITLE: LAND USE ZONE MAP: NORTHWEST	
DRAWN BY: M. PATINKIN	PROJ NO.: 275264
FIGURE 5-2	
CHECKED BY: A. KIM / S. SCHOEMANN	
APPROVED BY: J. HANZEL-DURBIN	
DATE: APRIL 2021	
	
505 Sansome Street, Suite 1600 San Francisco, CA 94111 Phone: 415.434.2600 www.TRCompanies.com	
FILE NO.: Figure 5-2 - LUZ Map NW.mxd	



LEGEND

- PRESIDIO OF SAN FRANCISCO
- AREA A/B BOUNDARY LINE

LAND USE ZONES

HUMAN HEALTH/NO ECOLOGICAL PROTECTION

- A: RESIDENTIAL
- B: RECREATIONAL
- C: COMMERCIAL/INDUSTRIAL (SEE NOTE 3)

HUMAN HEALTH/ECOLOGICAL BUFFER

- D: RESIDENTIAL/ECO BUFFER
- E: RECREATIONAL/ECO BUFFER
- F: COMMERCIAL/INDUSTRIAL/ECO BUFFER (SEE NOTE 3)

HUMAN HEALTH/SPECIAL STATUS ECOLOGICAL

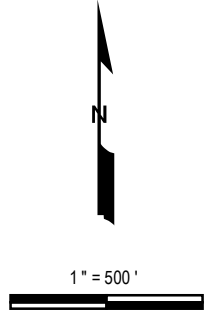
- G: RESIDENTIAL/SPECIAL STATUS
- H: RECREATIONAL/SPECIAL STATUS
- I: COMMERCIAL/INDUSTRIAL/SPECIAL STATUS (SEE NOTE 3)

AQUATIC HABITAT SEDIMENT

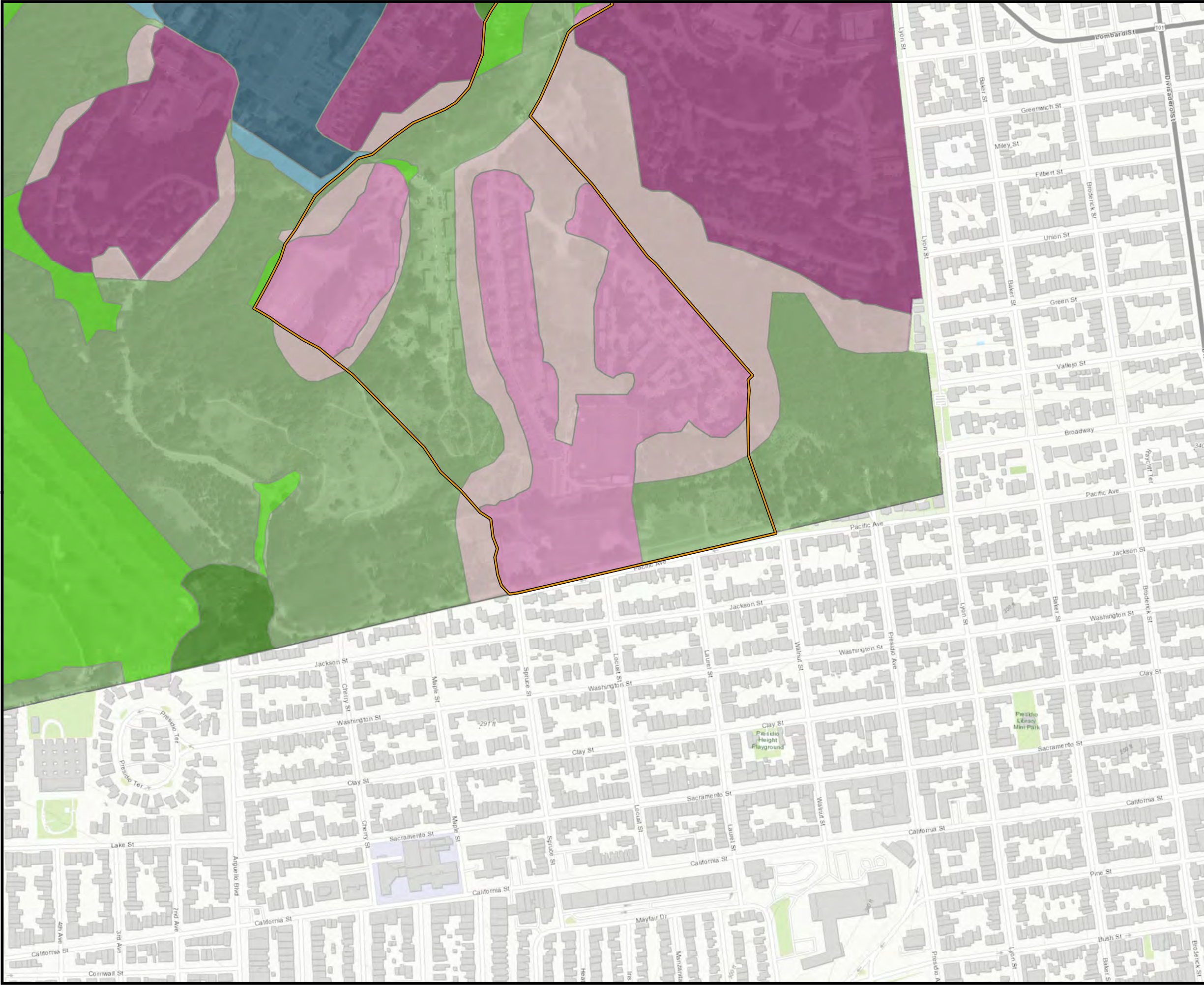
- J: SALTWATER ECOLOGICAL PROTECTION
- K: FRESHWATER ECOLOGICAL PROTECTION

NOTES

1. MAP PROJECTION IS CALIFORNIA STATE PLANE ZONE III, NAD 1983 HARN, US SURVEY FEET.
2. BASEMAPS FROM ESRI, "WORLD TOPOGRAPHIC MAP" & "WORLD IMAGERY," WEB BASEMAP SERVICE LAYER, INFORMATION CURRENT AS PROVIDED THROUGH SERVICE AS OF THE PUBLISHING DATE OF THIS MAP.
3. APPLICABLE CLEANUP LEVELS MAY VARY. RECREATIONAL CLEANUP LEVELS MAY BE REQUIRED IN SOME AREAS THAT ARE DESIGNATED AS COMMERCIAL/INDUSTRIAL LAND USE ZONES. PLEASE REFER TO FIGURE 7-1 OF THE PRESIDIO-WIDE CLEANUP LEVEL DOCUMENT (EKI, UPDATED NOVEMBER 2019).



PROJECT:		THE PRESIDIO TRUST PRESIDIO-WIDE SOIL MANAGEMENT PLAN SAN FRANCISCO, CALIFORNIA	
TITLE:		LAND USE ZONE MAP: NORTHEAST	
DRAWN BY:	M. PATINKIN	PROJ NO.:	275264
CHECKED BY:	A. KIM / S. SCHOEMANN	FIGURE 5-3	
APPROVED BY:	J. HANZEL-DURBIN		
DATE:	APRIL 2021		
		505 Sansome Street, Suite 1600 San Francisco, CA 94111 Phone: 415.434.2600 www.TRCompanies.com	
FILE NO.:	Figure 5-3 - LUZ Map NE.mxd		

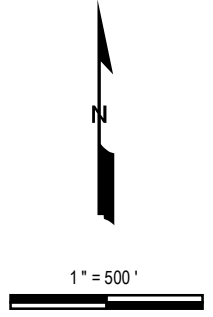


LEGEND

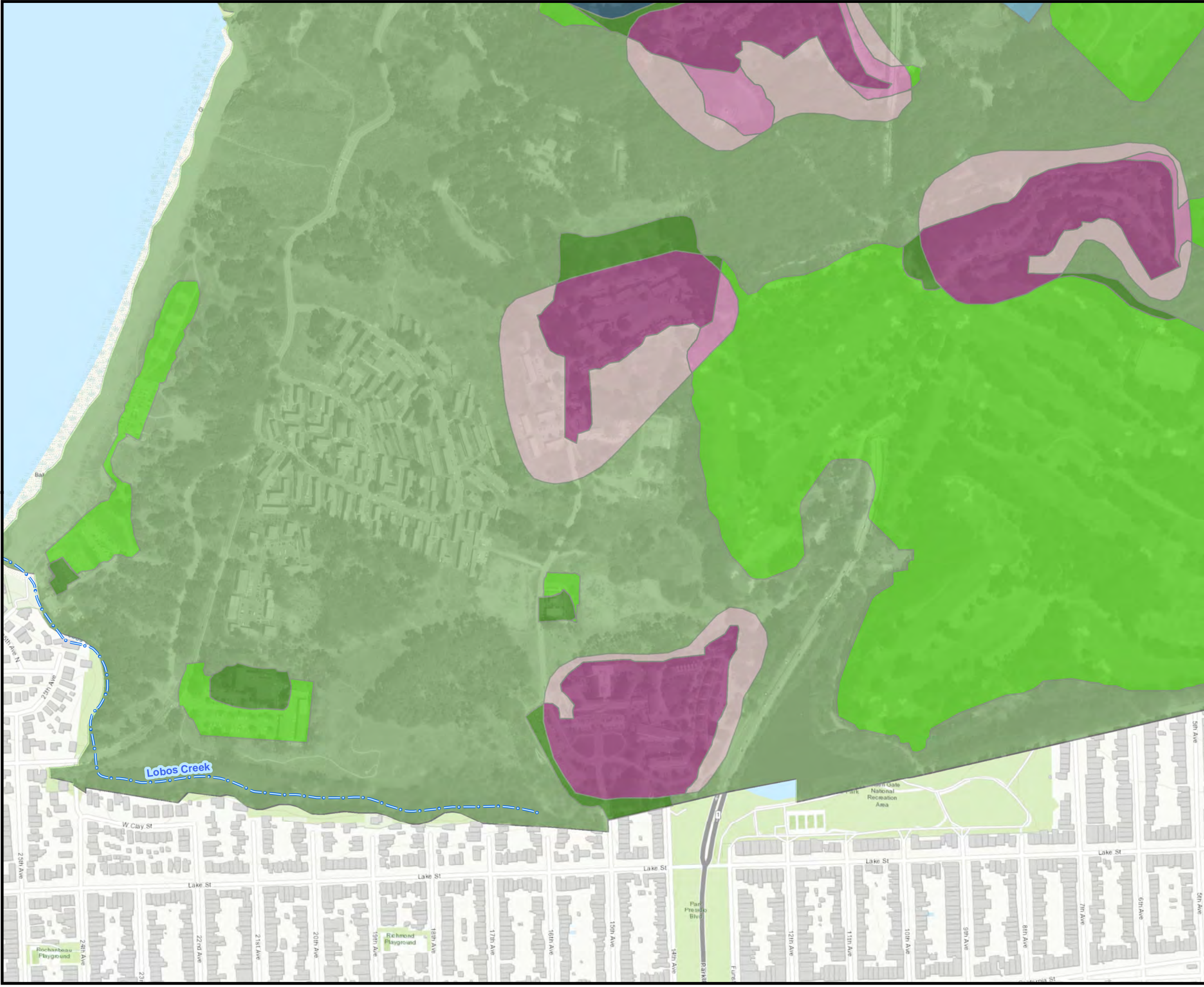
- PRESIDIO OF SAN FRANCISCO
- AREA A/B BOUNDARY LINE
- LAND USE ZONES**
- HUMAN HEALTH/NO ECOLOGICAL PROTECTION**
- A: RESIDENTIAL
- B: RECREATIONAL
- C: COMMERCIAL/INDUSTRIAL
(SEE NOTE 3)
- HUMAN HEALTH/ECOLOGICAL BUFFER**
- D: RESIDENTIAL/ECO BUFFER
- E: RECREATIONAL/ECO BUFFER
- HUMAN HEALTH/SPECIAL STATUS ECOLOGICAL**
- G: RESIDENTIAL/SPECIAL STATUS
- H: RECREATIONAL/SPECIAL STATUS
- I: COMMERCIAL/INDUSTRIAL/SPECIAL STATUS
(SEE NOTE 3)
- AQUATIC HABITAT SEDIMENT**
- K: FRESHWATER ECOLOGICAL PROTECTION

NOTES

1. MAP PROJECTION IS CALIFORNIA STATE PLANE ZONE III, NAD 1983 HARN, US SURVEY FEET.
2. BASEMAPS FROM ESRI, "WORLD TOPOGRAPHIC MAP" & "WORLD IMAGERY," WEB BASEMAP SERVICE LAYER, INFORMATION CURRENT AS PROVIDED THROUGH SERVICE AS OF THE PUBLISHING DATE OF THIS MAP.
3. APPLICABLE CLEANUP LEVELS MAY VARY. RECREATIONAL CLEANUP LEVELS MAY BE REQUIRED IN SOME AREAS THAT ARE DESIGNATED AS COMMERCIAL/INDUSTRIAL LAND USE ZONES. PLEASE REFER TO FIGURE 7-1 OF THE PRESIDIO-WIDE CLEANUP LEVEL DOCUMENT (EKI, UPDATED NOVEMBER 2019).



PROJECT:		THE PRESIDIO TRUST PRESIDIO-WIDE SOIL MANAGEMENT PLAN SAN FRANCISCO, CALIFORNIA	
TITLE:		LAND USE ZONE MAP: SOUTHEAST	
DRAWN BY:	M. PATINKIN	PROJ NO.:	275264
CHECKED BY:	A. KIM / S. SCHOEMANN	FIGURE 5-4	
APPROVED BY:	J. HANZEL-DURBIN		
DATE:	APRIL 2021		
		505 Sansome Street, Suite 1600 San Francisco, CA 94111 Phone: 415.434.2600 www.TRCompanies.com	
FILE NO.:		Figure 5-4 - LUZ Map SE.mxd	



LEGEND

- PRESIDIO OF SAN FRANCISCO
- AREA A/B BOUNDARY LINE

LAND USE ZONES

HUMAN HEALTH/NO ECOLOGICAL PROTECTION

- A: RESIDENTIAL
- B: RECREATIONAL
- C: COMMERCIAL/INDUSTRIAL
(SEE NOTE 3)

HUMAN HEALTH/ECOLOGICAL BUFFER

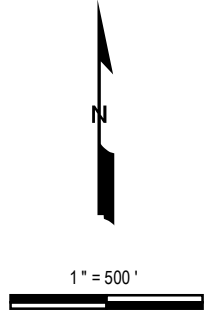
- D: RESIDENTIAL/ECO BUFFER
- E: RECREATIONAL/ECO BUFFER

HUMAN HEALTH/SPECIAL STATUS ECOLOGICAL

- G: RESIDENTIAL/SPECIAL STATUS
- H: RECREATIONAL/SPECIAL STATUS
- I: COMMERCIAL/INDUSTRIAL/SPECIAL STATUS
(SEE NOTE 3)

NOTES

1. MAP PROJECTION IS CALIFORNIA STATE PLANE ZONE III, NAD 1983 HARN, US SURVEY FEET.
2. BASEMAPS FROM ESRI, "WORLD TOPOGRAPHIC MAP" & "WORLD IMAGERY," WEB BASEMAP SERVICE LAYER, INFORMATION CURRENT AS PROVIDED THROUGH SERVICE AS OF THE PUBLISHING DATE OF THIS MAP.
3. APPLICABLE CLEANUP LEVELS MAY VARY. RECREATIONAL CLEANUP LEVELS MAY BE REQUIRED IN SOME AREAS THAT ARE DESIGNATED AS COMMERCIAL/INDUSTRIAL LAND USE ZONES. PLEASE REFER TO FIGURE 7-1 OF THE PRESIDIO-WIDE CLEANUP LEVEL DOCUMENT (EKI, UPDATED NOVEMBER 2019).



PROJECT: THE PRESIDIO TRUST PRESIDIO-WIDE SOIL MANAGEMENT PLAN SAN FRANCISCO, CALIFORNIA	
TITLE: LAND USE ZONE MAP: SOUTHWEST	
DRAWN BY: M. PATINKIN	PROJ NO.: 275264
CHECKED BY: A. KIM / S. SCHOEMANN	FIGURE 5-5
APPROVED BY: J. HANZEL-DURBIN	
DATE: APRIL 2021	
505 Sansome Street, Suite 1600 San Francisco, CA 94111 Phone: 415.434.2600 www.TRCompanies.com	
FILE NO.:	Figure 5-5 - LUZ Map SW.mxd

**THE PRESIDIO TRUST
STANDARD OPERATING PROCEDURE**

SOIL AND STOCKPILE MANAGEMENT

SOP No. 007
Revision No. 01
Last Reviewed: April 2021

1.0 BACKGROUND

Construction excavation and earthwork in the Presidio of San Francisco, California (Presidio) may generate excess soil that requires handling and temporary stockpiling prior to off-site disposal or reuse. Proper management of soil and stockpiles with known or potential impacts is important to prevent cross-contamination of unimpacted soils or transport of soil via wind or water erosion.

1.1 Purpose and Applicability

This Standard Operating Procedure (SOP) is to assist in the operation, maintenance, and decommissioning of temporary soil stockpiles for construction activities in the Presidio. Stockpile management includes measures to minimize erosion and sediment transport from stockpiles and control public access to impacted soil. These measures are intended to prevent the transport of pollutants into local waterways, minimize the comingling of impacted and unimpacted soils, and minimize worker and public exposure to impacted soil.

1.2 Scope

This SOP applies to routine and non-routine work at construction sites requiring temporary storage of excess soil. This SOP is to be used in conjunction with *SOP No. 001 – Environmental Health and Safety*, *SOP No. 002 – Storm Water Pollution Prevention*, and *SOP No. 009 – Dust Prevention and Control*.

1.3 Related SOPs

- *SOP No. 001 – Environmental Health and Safety Plan*
- *SOP No. 002 – Storm Water Pollution Prevention Plan*
- *SOP No. 005 – Profiling Soil for Disposal*
- *SOP No. 006 – Profiling Materials for Import and Reuse*
- *SOP No. 009 – Dust Prevention and Control*
- *SOP No. 012 – Site-Specific Soil Management Plan*

1.4 Definitions

Best management practices (BMPs): Structural, vegetative, or managerial practices used to treat, prevent, or reduce water pollution.

California Environmental Protection Agency, Department of Toxic Substances Control (DTSC): Government agency that regulates the generation, handling, treatment, and disposal of hazardous waste in California

Contaminants of concern (COCs): Chemicals or constituents that may be present in the soil that may pose risk to humans or the environment

Excavation: Work in which earth or other ground material, including hardscape, is displaced using manual tools or mechanical equipment

Impacted soils: Soil that contains COCs above site-specific human health and ecological cleanup levels, typically but not always below a cap (soil, hardscape, or vegetative).

Non-routine work: Project construction activities that alter the site configuration beyond what is described and covered in applicable Land Use Control (LUC) and operations and maintenance (O&M) documents.

Routine work: Project construction activities that do not alter the site configuration beyond what is described and covered in applicable LUC and O&M documents. Typical routine work activities include, but are not limited to:

- Accessing or installing utilities;
- Associated removal of soils;
- Making repairs to or replacing hardscape;
- Plant replacement; and,
- Construction of clean corridors, if within a LUC area.

Soil stockpile: A temporary, designated storage pile formed with excess soil from a site.

Storm Water Pollution Prevention Plan (SWPPP): Document identifying all potential sources of pollution that may reasonably be expected to affect the quality of storm water discharge from a construction site.

1.5 References

- Presidio Trust (Trust), 2001, Amended 2011. Presidio-Wide Quality Assurance Project Plan (QAPP) and Sampling and Analysis Plan (SAP).
- Trust, 2009. *Presidio Trust Land Use Controls Master Reference Report (Presidio LUCMRR), Presidio of San Francisco, California*. September.
- Trust, 2016. *Construction Guidelines*. April.
- Site-Specific LUCMRR Addendum (for each LUC Site)
- Site-Specific Soil Management Plan (SSSMP)

2.0 PROCEDURES

The following sections discuss roles, notifications, and procedures for installing and maintaining a stockpile.

2.1 Roles

The Contractor is responsible for constructing and maintaining soil stockpiles in accordance with this SOP. The Trust or a Trust representative is responsible for quality control of all soil and stockpile management and must periodically conduct field oversight of Contractor activities.

2.2 Notifications

No notification required.

2.3 Location and Construction of Stockpiles

The proposed locations of soil stockpiles shall be depicted on site logistics plan drawings if prepared for a SSSMP (*SOP No. 012 – Site-Specific Soil Management Plan*). Soil stockpile areas shall be constructed away from drainage courses, drain inlets, and concentrated storm water flow pathways to the extent possible. Soil stockpiles shall be placed in locations that will not be impacted by construction activities. If the whole site will be impacted construction activities, the Contractor shall select stockpile locations in areas least likely to be impacted, to reduce the need to move stockpiles over the course of the project. Existing site utilities shall be protected and avoided if possible, when locating stockpiles.

Soils shall be segregated into different stockpiles based on contamination levels, disposal/reuse designation, dispositions, etc. In general, all stockpiles shall be constructed on tear-resistant heavy-duty plastic that is a minimum of 10 mils thick to prevent cross-contamination of underlying soils left in place. In certain circumstances, soil stockpiles may be constructed without bottom liners in active excavation areas, if the soil on which the stockpile is constructed is slated for excavation or capping. The Contractor shall receive approval from the Trust prior to the construction of any stockpiles in excavation areas or without bottom liners.

2.4 Stockpile Erosion and Pollution Prevention

Stockpiles are to be covered at the end of each workday with weighted tear-resistant heavy-duty plastic that is a minimum of 6 mils thick. Stockpiles shall be constructed with berms to contain water that drains from the soil. Additional BMPs shall be implemented if deemed necessary, in accordance with *SOP No. 002 – Storm Water Pollution Prevention Plan*. For control of wind erosion on active stockpiles, water or other dust palliatives shall be applied to stockpiles as specified in *SOP No. 009 – Dust Prevention and Control*. Stockpile heights shall be limited to a maximum height of 10 feet unless otherwise approved by the Trust.

Additionally, stockpiles shall be continuously covered during periods of forecasted precipitation and as necessary to maintain the moisture content of soils designated for use as fill.

2.5 Inspection and Recording

Stockpiles shall be frequently inspected to:

- Monitor the effectiveness of the control measures and ensure environmental impacts are being minimized in accordance with the SWPPP; and
- Ensure all stockpiling and inspection requirements are being met.

At a minimum, the Contractor shall inspect stockpiles daily during active construction and weekly when no active construction is occurring. At a minimum, the Trust or Trust representative(s) will inspect stockpiles weekly during active construction and monthly when no active construction is occurring. The frequency of Trust or Trust representative inspection will be discussed with the Contractor and determined based on each stockpile's location, the material being stockpiled, the surrounding environment and potential impacts, and any other site-specific issues.

Any deficiencies identified during inspection shall be managed in accordance with a non-conformance procedure. Any new issues or considerations not covered in the original requirements shall be managed as corrective action requests to improve management and documentation procedures.

The non-conformance and corrective action procedures and documentation will include the following:

- Details of the stockpile site;
- Issues observed;
- Corrective action taken; and
- Preventative action.

Inspection reports and non-conformance reports shall be forwarded to the compliance manager through the field technician or field engineer.

2.6 Clean Closure Soil Confirmation Procedures

If the project results in removal of contaminated soil to the extent that clean closure of a portion of the LUC is viable, then the following activities will be required:

- Segregate and stockpile contaminated soils as described above and perform profiling and disposal in accordance with *SOP No. 005 – Profiling Soil for Disposal*.
- Document that remaining soils meet approved cleanup levels (CULs) by conducting confirmation sampling and analysis per the *Presidio-Wide QAPP and SAP*. At a minimum:
 - One sample will be collected for every 625 square foot bottom area and
 - Every 50-foot of sidewall (minimum of one per sidewall)
 - Geographical Positioning System (GPS) coordinates shall be recorded for all sampling locations.
 - All samples will be analyzed for site COCs.

2.7 Clean Closure Reporting

The results of the confirmation sampling shall be tabulated and compared to site CULs. The data, along with a map delineating the sample locations, shall be included in project completion documents and provided to the Trust Remediation Program Manager. The clean closure area shall be surveyed by a licensed surveyor to determine the boundaries of clean closure. The Trust will follow the LUC Termination process, as described in Section 3.5 of the *Presidio LUCMRR* to remove this portion from the LUC area. Updates to the Site-Specific LUCMRR Addendum will be included in the Presidio Annual O&M Report that is submitted to regulatory agencies.

2.8 Clean Corridor

When installing a new utility within a LUC, a clean corridor shall be constructed to allow for ease of future maintenance activities. The clean utility corridor must be demarcated during backfilling by installing a barrier or marker to physically separate the clean import fill from existing site soils. For example, a layer of geotextile or filter fabric could be placed in the excavated utility corridor (bottom and both sides) prior to the installation of the utility and the subsequent placement of backfill. To facilitate future access to the corridor and utility location, the corridor may be a wider trench than may be normally required for the installed pipe size, and metallic tracer wires could be installed over the pipe as well as along the sides of the trench limits. The specific area of the clean corridor, as well as the depth, shall be noted in the utility installation record drawings and provided as part of project completion documents. The clean corridor shall be surveyed by a licensed surveyor to determine the boundaries of the clean corridor. The Trust may request from the DTSC that the clean corridor be removed from the LUC Area, in accordance with Section 3.5 of the *Presidio LUCMRR*.

END

**THE PRESIDIO TRUST
STANDARD OPERATING PROCEDURE**

TRAFFIC CONTROL AND HAUL ROUTES

SOP No. 008
Revision No. 02
Last Reviewed: April 2021

1.0 BACKGROUND

Construction projects within the Presidio of San Francisco, California (Presidio) may cause an influx of traffic at and around the active construction site. Traffic may include worker vehicles, construction equipment, delivery and haul trucks, or other motorized vehicles or equipment. Increased traffic has the potential to cause safety hazards, damage roadways, and disrupt normal traffic patterns. As a result, construction sites with vehicles moving in and around the workplace are subject to the implementation of traffic controls and the establishment of designated haul routes.

1.1 Purpose and Applicability

This Standard Operating Procedure (SOP) applies to routine or non-routine work where there is an increase of traffic in and around the construction site. This SOP establishes the requirements for the development and implementation of Traffic Control Plans to protect people and assets from moving vehicles and to minimize disruptions to normal traffic flow. This SOP also details the risk assessment process and compliance requirements to eliminate or minimize risks related to construction vehicular traffic.

1.2 Scope

This SOP applies to routine and non-routine work conducted at Presidio construction site that results in an increase in vehicular traffic or disrupts normal travel routes.

1.3 Related SOPs

- *SOP No. 001 – Environmental Health and Safety*
- *SOP No. 009 – Dust Prevention and Control*

1.4 Definitions

Best management practices (BMPs): Structural, vegetative, or managerial practices used to treat, prevent, or reduce water pollution.

Non-routine work: Project construction activities that alter the site configuration beyond what is described and covered in applicable Land Use Control (LUC) and operations and maintenance (O&M) documents.

Pedestrians: People walking along roadways within the Presidio, who may include residents, visitors, employees, or workers.

Routine work: Project construction activities that do not alter the site configuration beyond what is described and covered in applicable LUC and O&M documents. Typical routine work activities include, but are not limited to:

- Accessing or installing utilities;
- Associated removal of soils;
- Making repairs to or replacing hardscape;
- Plant replacement; and,
- Construction of clean corridors, if within a LUC area.

Traffic: All vehicles, persons, or animals traveling on or entering/exiting a roadway.

Traffic Control Plan: Plan specifically developed for the management of traffic on, or adjacent to roads. These may include plans for short- or long-term work.

1.5 References

- California Department of Transportation (Caltrans), 2014. *California Manual on Uniform Traffic Control Devices (CA MUTCD)*. Revision 5, March 27, 2020.
- Code of Federal Regulations (CFR) Title 36, Chapter X. Presidio Trust, Part 1004 – Vehicles and traffic safety
- Presidio Trust (Trust), 2009. *Construction Guidelines*. April
- Trust *Technical Provisions*, Section 27, “Traffic Control.”
- Site-Specific Construction Management Plan (CMP)

2.0 PROCEDURES

The following sections discuss roles, notifications, and procedures for preparing and implementing a Traffic Control Plan.

2.1 Roles

The Contractor is responsible for the preparation of the Traffic Control Plan in accordance with Trust, City of San Francisco (City), and Caltrans requirements. The Contractor is responsible for implementing the Traffic Control Plan, including the installation of temporary traffic control markings, signs, barricades, and roadway protection equipment, and providing traffic control personnel as needed. The Trust shall be responsible for providing Presidio-specific information for the development of the Traffic Control Plan, as well as for providing final approval of the Traffic Control Plan.

2.2 Notifications

Prior to the start of construction, the Contractor and the Trust shall coordinate with regulatory agencies on an as-needed basis for approval of the Traffic Control Plan and to obtain any right-of-way permits or additional approvals required for the project.

2.3 Preparation of a Traffic Control Plan

Traffic hazards and mitigation procedures should be identified in the Contractor’s site-specific Health and Safety Plan (HASP). Based on the scope of the construction work and traffic impacts, the Traffic Control Plan may be prepared as a standalone document or may be integrated into other project planning documents, such as a Site-Specific CMP. The Traffic Control Plan shall be reviewed regularly or following an incident or near-miss at the site to ensure its ongoing effectiveness.

2.3.1 Traffic Control Plan Components

The Traffic Control Plan shall detail control measures including but not limited to:

- Signage, barricades, or other control devices to be implemented to manage traffic flow;
- Closures or blockages required for completion of construction activities;
- Measures to be implemented to separate pedestrians and vehicles;
- Haul routes to be utilized in accordance with Trust or City requirements;
- BMPs for vehicle track-out;
- Pedestrian safeguards for walkways;
- Designated parking areas;
- Best practices for vehicle loading and unloading ;

- Risks associated with reversing vehicles;
- Safety signs and road markings;
- Adequate lighting;
- Use of traffic control personnel;
- Hours of construction traffic;
- Delivery vehicles and visitors; and
- Control of noise, dust, and emissions.

The Traffic Control Plan shall also include figures illustrating preferred haul routes and location of traffic controls, as specified in the list above. All traffic control recommendations shall be prepared in accordance with Section 27 “Traffic Control” of the Trust’s *Technical Provisions*, Section 3.2.2 “Traffic Control Plan” of the Trust’s *Construction Guidelines*, the Caltrans *CA MUTCD*, and this SOP.

2.3.2 Implementation of the Traffic Control Plan

The measures specified in the approved Traffic Control Plan must be implemented and maintained as long as the site is active. Traffic control measures shall be regularly inspected to ensure proper condition and effectiveness throughout the duration of the project.

END

**THE PRESIDIO TRUST
STANDARD OPERATING PROCEDURE**

DUST PREVENTION AND CONTROL

SOP No. 009
Revision No. 01
Last Reviewed: April 2021

1.0 BACKGROUND

Construction projects in the Presidio of San Francisco, California (Presidio) involving demolition or earthwork have the potential to create dust emissions. Airborne dust is a form of erosion and may facilitate off-site transport of materials potentially containing contaminants of concern (COCs). Dust prevention and control measures are necessary to prevent possible migration of dust generated by construction activities that may impact human health and the environment.

1.1 Purpose and Applicability

This Standard Operating Procedure (SOP) applies to soil-disturbing work that has the potential to generate fugitive and airborne dust emissions. This SOP contains guidelines for creating a Dust Prevention and Control Plan (DPCP), required for non-routine work, and implementing dust control measures. The objectives of the DPCP are to:

- Outline general procedures to prevent dust generation;
- Identify potential sources of fugitive dust; and
- Specify and implement best management practices (BMPs) for dust control and visually assess the effectiveness of the BMPs.

1.2 Scope

This SOP applies to routine and non-routine construction activities that have the potential to generate significant dust. This SOP does not cover air quality action levels or comprehensive air monitoring, which are covered in *SOP No. 003 – Air and Dust Monitoring and Mitigation Plan*. Air monitoring (per *SOP No. 003*) may occur at times where dust control (per *SOP No. 009*) is being implemented, but air monitoring will not necessarily be implemented every time dust control is implemented. When air monitoring is deemed unnecessary, dust will be visually monitored.

1.3 Related SOPs

- *SOP No. 001 – Environmental Health and Safety*
- *SOP No. 003 – Air and Dust Monitoring and Mitigation Plan*
- *SOP No. 007 – Soil and Stockpile Management*
- *SOP No. 013 – Construction Completion Report*

1.4 Definitions

Best management practices (BMPs): Structural, vegetative, or managerial practices used to treat, prevent, or reduce dust generation and migration.

Contaminants of concern (COCs): Chemicals or constituents that may be present in the soil that may pose risk to humans or the environment.

Control measures: Processes and procedures to reduce the potential for exposure to a hazard.

Demolition: The manual and/or mechanical tearing down of man-made structures.

Excavation: Work in which earth or other ground material, including hardscape, is displaced using manual tools or mechanical equipment.

Fugitive dust: Particulate matter suspended in the air by wind action and human activities.

Non-routine work: Project construction activities that alter the site configuration beyond what is described and covered in applicable Land Use Control (LUC) and operations and maintenance (O&M) documents.

Routine work: Project construction activities that do not alter the site configuration beyond what is described and covered in applicable LUC and O&M documents. Typical routine work activities include, but are not limited to:

- Accessing or installing utilities;
- Associated removal of soils;
- Making repairs to or replacing hardscape;
- Plant replacement; and,
- Construction of clean corridors, if within a LUC area.

Soil disturbance: Construction or demolition activities involving clearing, grubbing, excavation, or other earthwork.

Soil stockpile: A temporary, designated storage pile formed with excess soil from a site.

1.5 References

- California Stormwater Quality Association (CASQA), 2019. *Stormwater Best Management Practice Handbook: Construction (BMP Handbook)*. Updated December
- Ordinance 176-08 of the City and County of San Francisco Dust Control Ordinance, Section 106.3.2.6.3 of the San Francisco Building Code.
- OSHA Standard 29 Code of Federal Regulations (CFR) 2916, Subpart D, 1926.55, including addenda - Occupational Health and Environmental Controls; Gases, vapors, fumes, dusts, and mists
- Presidio Trust (Trust), 2001, Amended 2011. *Presidio-Wide Quality Assurance Project Plan (QAPP) and Sampling and Analysis Plan (SAP)*.
- Trust, 2016. *Construction Guidelines*. April.
- San Francisco Health Code, Article 22B - Construction Dust Control Requirements

2.0 PROCEDURES

The following sections discuss roles, notifications, and procedures for preparing a DPCP and implementing dust control measures at a site.

2.1 Roles

The Contractor shall be responsible for preparing the DPCP (if applicable), implementing dust control measures at the site, and monitoring/adjusting control measures as necessary throughout the project.

The Trust is responsible for reviewing and approving the DPCP.

2.2 Notifications

No notifications required.

2.3 Preparation of a DPCP

For non-routine projects, a DPCP shall be prepared prior to the start of construction. For projects with known COCs in the soil, the DPCP may be included as part of the Air and Dust Monitoring and Mitigation Plan (ADMMP) described in *SOP No. 003 – Air and Dust Monitoring and Mitigation Plan*. If air monitoring is not required for the project, the DPCP may be prepared as a standalone document.

At a minimum, the DPCP shall contain the following information:

- Known or potential COCs in the site soils;
- Known or potential COCs in the structures scheduled for demolition;
- Project activities that have the potential to generate dust;
- BMPs to be implemented during earthwork to reduce dust emissions;
- Dust monitoring procedures, if required;
- Dust control inspection requirements; and
- Post-construction dust control measures.

2.4 Potential Fugitive Dust Sources

Any soil-processing or soil-disturbing activities may generate fugitive dust, depending on the scope of work and environmental conditions at the site. Whenever soil-disturbing activities are planned, potential fugitive dust generation and subsequent dust mitigation and control efforts should be considered. Potential sources of fugitive dust that require the employment of dust control measures include, but are not limited to, the following work activities:

- Excavation activities;
- Onsite soil stockpiling;
- Placement and grading of import backfill soil;
- Vehicle travel – site egress and travel on unpaved surfaces;
- Soil and debris hauling; and
- Structural demolition activities.

2.5 Implementation of BMPs

Specific BMPs shall be implemented during the construction activities listed in Section 2.4. Implementation of activity-specific BMPs, applicable to both routine and non-routine projects, are described in the following sections.

2.5.1 General Dust Control Measures

Fugitive dust emissions can be minimized by following general dust control procedures at a site. Implementation of the measures below shall assist in preventing overall dust generations.

1. Keeping paved areas on site free of tracked soil or fill materials. Paved areas shall be cleaned at a minimum of once daily and shall be left clean at the end of each day.
2. Keeping exposed, disturbed ground surfaces moist during working hours.
3. Leaving the site in a condition that will prevent dust generation during non-working hours.
4. Covering and maintaining soil stockpiles daily and keeping active surfaces moist.
5. Stabilizing construction entrances at active locations in accordance with Tracking Control (TC)-1 guidance outlined in the *CASQA BMP Handbook* to help keep paved areas clean.

2.5.2 BMPs for Excavation Activities

Excavation activities may generate windborne dust and particulate matter emissions. Excavation activities will be visually monitored for the generation of fugitive dust. If dust is being generated, the Contractor will implement BMPs to control fugitive dust emissions, which may include the following:

- Pre-wetting the excavation area and actively wetting exposed surfaces during excavation as necessary to prevent visible emissions;
- Minimizing drop heights when direct-loading excavated soil onto haul trucks;
- Spraying excavations or other soil-disturbed areas with an all-natural and biodegradable dust control product;
- Operating misters within or along the perimeter of the fenced construction area; and
- Taping windows and doors of residences located adjacent to the construction area.

The Contractor is required to provide Material Safety Data Sheets (MSDS) for soil stabilizers and dust control products in the DPCP.

2.5.3 BMPs for Onsite Soil Stockpiling

The Contractor shall implement BMPs to control fugitive dust emissions from soil stockpiles generated on site. BMPs may include the following:

- Covering stockpiles with a weighted plastic liner with a minimum thickness of 6 mils at the end of each workday;
- Wetting the soil stockpiles as necessary to reduce visible emissions; and
- Spraying soil stockpiles with dust control product that is natural and biodegradable.

2.5.4 BMPs for Vehicle Travel

The following sections discuss BMPs to reduce the potential for dust generation when operating vehicles in the project area.

2.5.4.1 Egress from the Site

The Contractor shall implement BMPs to control dust emissions from construction traffic during egress from the site. BMPs may include the following:

- Removing visible track-out of soil onto paved roads at locations where vehicles exit the project area, by sweeping at the end of the workday or at least once per day; and
- Installing gravel pads or rumble strips as an additional track-out measure at access points from the project area to paved roads.

2.5.4.2 Unpaved Surfaces

The Contractor shall implement BMPs to control dust emissions from construction traffic traveling on unpaved surfaces. BMPs may include the following:

- Wetting and/or spraying unpaved surfaces in the project area with a dust control product as necessary to minimize the creation of dust; and
- Limiting vehicle speed to 15 miles per hour on the unpaved surfaces within the project area.

2.5.5 BMPs for Soil Hauling

The Contractor shall implement BMPs to control dust emissions during soil hauling. Haul trucks that are used to transport excavation soils off site and import backfill material on site shall be equipped with a tarp cover capable of covering the entire length of the truck bed.

2.5.6 BMPs for Placement of Backfill and Grading

The Contractor shall implement BMPs to control the generation of dust during backfilling and grading activities. BMPs may include the following:

- Minimizing drop heights when placing backfill materials;
- Wetting and/or spraying the area with a dust control product after backfill is placed, as necessary to minimize visible dust creation; and
- Monitoring wind speed using a calibrated windsock or meteorological station. Grading and backfilling activities will be halted during periods of sustained wind speeds of 25 miles per hour or greater.

2.5.7 BMPs for Post-Grading Erosion Control

The Contractor shall implement BMPs to control dust generated from wind and water erosion following grading activities. BMPs may include the following:

- Placing surface erosion control measures to minimize erosion of exposed, graded surfaces. Surface erosion control measures may include fiber blankets, straw wattles, straw bales, hydromulch, etc. made of sterile, weed-free straw or other natural fibers.

END

**THE PRESIDIO TRUST
STANDARD OPERATING PROCEDURE**

DISTURBANCE AND REPLACEMENT OF CAP MATERIALS

SOP No. 010
Revision No. 02
Last Reviewed: April 2021

1.0 BACKGROUND

Activities in select areas of the Presidio of San Francisco, California (Presidio) are regulated by Land Use Controls (LUCs). Residual soil contamination at several LUC sites is capped or otherwise contained by hardscape (e.g., building foundations, concrete or asphalt pavement, etc.) or landscape (e.g., clean soil caps). These caps act as barriers over soils with known environmental impacts. Occasionally, the caps may need to be disturbed or removed and replaced for routine maintenance. Cap design and structure are specific for each site. Site-specific LUC, Operation and Maintenance (O&M), and remedial documents must be reviewed to determine the nature of the designed cap and requirements for associated maintenance activities.

1.1 Purpose and Applicability

This Standard Operating Procedure (SOP) establishes the requirements and procedures for temporarily removing and replacing hardscape or landscape materials acting as a cap at Presidio LUC sites. This SOP only applies to work that temporarily disturbs and restores the cap materials as part of routine maintenance, without disturbing contaminated soil beneath the cap. This SOP does **not** allow for activities that have the potential to disturb impacted soils below the cap. This SOP also does not apply to non-routine work where construction activities alter the site configuration beyond what is described and covered in the LUC and O&M documents.

1.2 Scope

This SOP applies to routine maintenance being conducted in LUC areas in which engineered hardscape and landscape cap elements are present. Routine work that extends beneath the cap into soil with known impacts is **not** covered by this SOP and should be performed in accordance with *SOP No. 011 – Penetration of Cap Materials* and *Environmental SOP No. 012 – Site-Specific Soil Management Plan*, with air monitoring in accordance with *SOP No. 003 – Air and Dust Monitoring and Mitigation Plan*. If unexpected impacted soil is encountered during routine maintenance activities, work shall proceed in accordance with the *Contingency Action Plan*, an attachment to the *Presidio-Wide Soil Management Plan (SMP)*.

This SOP does not cover non-routine work, which should be performed in accordance with *SOP No. 012 – Site Specific Soil Management Plan*.

1.3 Related SOPs

- *SOP No. 001 – Environmental Health and Safety*
- *SOP No. 002 – Storm Water Pollution Prevention Plan*
- *SOP No. 003 – Air and Dust Monitoring and Mitigation Plan*
- *SOP No. 005 – Profiling Soil for Disposal*
- *SOP No. 006 – Profiling Materials for Import and Reuse*
- *SOP No. 007 – Soil and Stockpile Management*
- *SOP No. 009 – Dust Prevention and Control*
- *SOP No. 011 – Penetration of Cap Materials*
- *SOP No. 012 – Site-Specific Soil Management Plan*
- *SOP No. 013 – Construction Completion Report*

1.4 Definitions

California Environmental Protection Agency, Department of Toxic Substances Control (DTSC):

Government agency that regulates the generation, handling, treatment, and disposal of hazardous waste in California.

Cap: An engineered barrier installed to prevent exposure to underlying soils with known impacts.

Excavation: Work in which earth or other ground material, including hardscape, is displaced using manual tools or mechanical equipment.

Hardscape: Manmade features, such as a building foundation or paved area.

Impacted soils: Soil that contains contaminants of concern above site-specific human health and ecological cleanup levels, typically but not always below a cap (soil, hardscape, or vegetative).

Import material: Any material used to backfill an excavation or trench or to increase the elevation of an existing ground surface. This includes but is not limited to soil, aggregate, rock, sand, compost, soil amendments, etc.

Landscape: Area in which the ground surface is covered by soil and vegetated or otherwise stabilized by natural materials such as wood mulch or gravel.

Non-routine work: Project construction activities that alter the site configuration beyond what is described and covered in applicable LUC and O&M documents.

Routine work: Project construction activities that do not alter the site configuration beyond what is described and covered in applicable LUC and O&M documents. Routine work that does not extend beneath the cap is covered in this SOP. Typical routine work activities include, but are not limited to:

- Accessing or installing utilities;
- Associated removal of soils;
- Making repairs to or replacing hardscape;
- Plant replacement; and,
- Construction of clean corridors, if within a LUC area.

Soil disturbance: Construction or demolition activities involving clearing, grubbing, excavation, or other earthwork.

1.5 References

- Presidio Trust (Trust), 2009. *Presidio Trust Land Use Controls Master Reference Report (Presidio LUCMRR)*, Presidio of San Francisco, California. September.
- Trust, 2016. *Construction Guidelines*. April
- TRC Solutions, Inc. (TRC), 2019. *Draft Contingency Action Plan*. February.
- TRC, 2020. *Draft Presidio-Wide Soil Management Plan (SMP)*. August 21.
- Site-Specific LUCMRR Addendum (for each LUC Site)
- Site-Specific Soil Management Plan (SSSMP)
- Site-Specific O&M Manual
- Site Construction Completion Report (CCR)

2.0 PROCEDURES

The following sections discuss roles, notifications, and procedures for cap disturbance/removal and replacement of cap materials without impacting potentially contaminated soil beneath the cap.

2.1 Roles

Contractors performing routine work and Trust personnel performing routine maintenance on landscapes and utilities are responsible for preparing and submitting the “Excavation Clearance Application” (Dig Permit) to the Trust and ensuring that all disturbance and replacement of cap materials are performed in accordance with this SOP. The Contractor and Trust personnel are also responsible for providing information for all proposed cap materials to the Trust for written approval before import to the site. If a new source of import material will be placed at a LUC, DTSC approval will be required as well. Please allow a minimum of 30 days for DTSC review of new import sources.

The Trust (or an authorized representative) is responsible for providing any site-specific information regarding cap construction that may affect construction activities.

2.2 Notifications

The following notifications are required for work that disturbs and replaces cap materials:

- All work that disturbs a LUC cap must comply with this SOP and all applicable protocols within the *Presidio-Wide SMP* and the *SSSMP*. Once a proposed work area has been determined to be at a LUC site containing cap elements, Trust Remediation shall be notified and site-specific LUC documents shall be requested prior to submittal of the Dig Permit.
- At least 10 days prior to any excavation work, the party responsible must submit an “Excavation Clearance Application” (Dig Permit) to the Trust, including a description of the excavation and a site map showing where the excavation will occur. Projects of broader scope may require additional submittals and approvals.
- Underground Service Alert must be notified at least 2 business days prior to the start of excavation.

2.3 Preparation of Site-Specific Health and Safety Plan

Prior to starting any work which may expose workers to soil, soil vapor, or groundwater with known environmental impacts, a site-specific Health and Safety Plan (HASP) must be prepared. The HASP must include, among other items, roles and responsibilities, site- and job-specific hazards, and emergency response protocol. The HASP must be submitted to the Trust prior to issuance of the Dig Permit. Please refer to *SOP No. 001 – Environmental Health and Safety* for a full description of HASP requirements.

2.4 Preparation of Construction Site – Dust Monitoring and Storm Water Control

Any disturbance of a cap has the potential to generate dust and impact storm water. Regardless of the size of the disturbance, workers should take measures to prevent erosion of cap materials and underlying soil via wind or water, although the scope of these measures will vary based on the size, scope, and duration of the work. Excavation and trenching activities should comply with the information presented in *SOP No. 009 – Dust Prevention and Control* and *SOP No. 002 – Storm Water Pollution Prevention Plan*.

2.5 Disturbance and Replacement Procedures

The following subsections describe the required procedures for disturbance or removal of the cap and subsequent replacement of cap materials.

2.5.1 Disturbance or Removal of Cap

All excavation and trenching activities must be conducted in a manner so as not to disturb the underlying impacted soils. If as-built documents show a demarcation or impermeable barrier between the cap and underlying impacted soils, then test pits shall be performed ahead of excavation to confirm the depth of the cap and prevent damage to the barrier. Removed cap materials shall be stockpiled according to the requirements of *SOP No. 007 – Soil and Stockpile Management* and staged for reuse or disposal.

This SOP does **not** cover activities that fully penetrate the cap, leaving the underlying impacted soils exposed. Please refer to *SOP No. 011 – Penetration of Cap Materials* for projects that penetrate the cap.

2.5.2 Replacement of Cap

When excavation or trenching activities are complete, the Contractor and Trust personnel must document how the disturbed cap was replaced with materials equally as or more protective than the original cap, in accordance with the LUC and O&M documents for that specific site. Replacement materials may include:

- a) The original, clean, segregated cap soil;
- b) Clean import material of site-specific designated thickness and potential demarcation layer, approved by the Trust Remediation Project Manager (and DTSC, where applicable); or
- c) Hardscape elements approved by the Trust Landscape Architect and Trust Remediation.

The cap is to be completely replaced to original grade following completion of excavation or trenching activities. Changes to the cap (consistent with the approved site remedy) will be summarized and submitted to DTSC via the Annual O&M Report.

2.6 Documentation

Cap disturbance activities shall be documented from start to finish and completion documents provided to Trust Remediation within two weeks of completion of the work. The Contractor and Trust personnel will be required to document cap thickness compliance using survey, field measurements, and photographs. Additionally, the Trust or a Trust representative will perform periodic quality control inspections to verify cap compliance, including field work oversight and review of documentation. Documentation shall include field logs, photographs of the work, a project deliverable of the survey (requirements explained below), material import list, description of the replaced cap including measurements, description of any deviations from the work plan (if applicable), and a statement signed by the responsible work party indicating that all work was performed in accordance with this SOP and the *Presidio-Wide SMP*.

2.7 Survey Requirements

Requirements for the survey of the replaced cap are as follows:

- Cap thickness confirmation shall be achieved through survey completed by a California-licensed surveyor.
- Survey shall be conducted at three specific phases of activity: (1) prior to excavation, (2) at the completion of excavation and prior to backfill, and (3) upon reaching final grade.
- Survey data shall be reviewed by Trust Remediation at each of the afore-mentioned phases prior to advancing to the next phase of activity.

- A project deliverable in AutoCAD format in the project coordinate system and elevation datum shall be available for review by Trust Remediation at any point during field activities and upon completion of the project.

END

**THE PRESIDIO TRUST
STANDARD OPERATING PROCEDURE**

PENETRATION OF CAP MATERIALS

SOP No. 011
Revision No. 02
Last Reviewed: April 2021

1.0 BACKGROUND

Activities in select areas of the Presidio of San Francisco, California (Presidio) are regulated by Land Use Controls (LUCs). Residual soil contamination at several LUC sites is capped or otherwise contained by hardscape (e.g., building foundations, concrete or asphalt pavement, etc.) or landscape (e.g., clean soil caps). These caps act as a barrier over soils with known environmental impacts. Occasionally, the caps may need to be disturbed or removed and replaced for routine maintenance, resulting in the disturbance or exposure of the underlying impacted soils. Cap design and structure are specific for each site. Site-specific LUC, Operation and Maintenance (O&M), and remedial documents must be reviewed to determine the nature of the designed cap and requirements for associated maintenance activities.

1.1 Purpose and Applicability

This Standard Operating Procedure (SOP) provides guidelines to control and minimize exposure to impacted soils during routine maintenance activities that penetrate the cap. Routine work may be conducted by the Presidio Trust (Trust) or Third Parties within LUC areas of the Presidio, where LUC caps are temporally disturbed in such a manner that the underlying impacted soil is disturbed or exposed. This SOP establishes the requirements and procedures for temporarily removing and replacing hardscapes or landscapes acting as a LUC cap, and managing and stockpiling clean cap materials and underlying impacted soil. This SOP does not apply to non-routine work where construction activities alter the site configuration beyond what is described and covered in the LUC and O&M documents.

1.2 Scope

This SOP applies to routine maintenance being conducted in LUC areas in which engineered hardscape and landscape cap elements are present and the work penetrates the cap and extends into the underlying soil with known impacts. Any work that disturbs the cap and is covered by this SOP shall also be performed in accordance with *SOP No. 010 – Disturbance and Replacement of Cap Materials* and *SOP No. 007 – Soil and Stockpile Management*.

This SOP does not cover non-routine work, which should be performed in accordance with *SOP No. 012 – Site Specific Soil Management Plan*.

1.3 Related SOPs

- *SOP No. 001 – Environmental Health and Safety*
- *SOP No. 002 – Storm Water Pollution Prevention Plan*
- *SOP No. 003 – Air and Dust Monitoring and Mitigation Plan*
- *SOP No. 005 – Profiling for Soil Disposal*
- *SOP No. 006 – Profiling for Import or Reuse*
- *SOP No. 007 – Soil and Stockpile Management*
- *SOP No. 009 – Dust Prevention and Control*
- *SOP No. 010 – Disturbance and Replacement of Cap Materials*
- *SOP No. 012 – Site-Specific Soil Management Plan*

1.4 Definitions

California Environmental Protection Agency, Department of Toxic Substances Control (DTSC): Government agency that regulates the generation, handling, treatment, and disposal of hazardous waste in California.

Cap: An engineered barrier installed to prevent exposure to underlying soils with known impacts.

Contaminants of concern (COCs): Chemicals or constituents that may be present in the soil that may pose risk to humans or the environment.

Excavation: Work in which earth or other ground material, including hardscape, is displaced using manual tools or mechanical equipment.

Hardscape: Manmade features, such as a building foundation or paved area.

Impacted soils: Soils with known environmental impacts that have been covered with a cap.

Import material: Any material used to backfill an excavation or trench or to increase the elevation of an existing ground surface. This includes but is not limited to soil, aggregate, rock, sand, compost, soil amendments, etc.

Landscape: Area in which the ground surface is covered by soil and vegetated or otherwise stabilized by natural materials such as wood mulch or gravel.

Non-routine work: Project construction activities that alter the site configuration beyond what is described and covered in applicable LUC and O&M documents.

Routine work: Project construction activities that do not alter the site configuration beyond what is described and covered in applicable LUC and O&M documents. Typical routine work activities include, but are not limited to:

- Accessing or installing utilities;
- Associated removal of soils;
- Making repairs to or replacing hardscape;
- Plant replacement; and,
- Construction of clean corridors, if within a LUC area.

Soil disturbance: Construction or demolition activities involving clearing, grubbing, excavation, or other earthwork.

1.5 References

- Presidio Trust (Trust), 2009. *Presidio Trust Land Use Controls Master Reference Report (Presidio LUCMRR), Presidio of San Francisco, California*. September.
- Trust, 2016. *Construction Guidelines*. April
- TRC Solutions, Inc., 2000. *Draft Presidio-Wide Soil Management Plan (SMP)*. August 21.
- Site-Specific LUCMRR Addendum (for each LUC Site)
- Site-Specific O&M Manual
- Site Construction Completion Report (CCR)

2.0 PROCEDURES

The following sections discuss roles, notifications, and procedures for penetration of cap materials.

2.1 Roles

Contractors are responsible for preparing and submitting the “Excavation Clearance Application” (Dig Permit) to the Trust and ensure that all disturbance and replacement of cap materials are performed in accordance with this SOP. The Contractor is also responsible for providing and submitting material information for all proposed cap components to the Trust for written approval before import to the site. If

a new source of import material will be placed at a LUC, DTSC approval will be required as well

The Trust (or an authorized representative) is responsible for providing any site-specific information regarding cap construction that may affect construction activities.

2.2 Notifications

The following notifications are required for work that penetrates cap materials:

- All work that disturbs a LUC cap must comply with this SOP and all applicable protocols within the *Presidio-Wide SMP* and the SSSMP. Once a proposed work area has been determined to be at a LUC site containing cap elements, Trust Remediation shall be notified and site-specific LUC documents shall be requested prior to submittal of the Dig Permit.
- At least 10 days prior to any excavation work, the party responsible must submit an “Excavation Clearance Application” (Dig Permit) to the Trust, including a description of the excavation and a site map showing where the excavation will occur. Projects of broader scope may require additional submittals and approvals.
- Prior to any soil disturbance activities, DTSC must be notified by the Trust in most cases unless otherwise noted in the *Presidio LUCMRR Addendum*. Refer to the Site-Specific LUCMRR Addendum for specific notification requirements.
- Underground Service Alert must be notified at least 2 business days prior to the start of excavation.

2.3 Preparation of Site-Specific Health and Safety Plan

Prior to starting any work that may expose workers to soil, soil vapor, or groundwater with known environmental impacts, Contractors must develop and implement a site-specific Health and Safety Plan (HASP). The HASP must include, among other items, roles and responsibilities, site- and job-specific hazards, and emergency response protocol. The HASP must be submitted to the Trust prior to issuance of the Dig Permit. Please refer to *SOP No. 001 – Environmental Health and Safety* for a full description of HASP requirements. The HASP should include provisions for known COCs in the impacted soils to be encountered during cap penetration activities, and all staff shall be properly trained and certified to handle the impacted soils.

2.4 Preparation of Construction Site – Dust Monitoring and Storm Water Control

Any disturbance of a cap has the potential to generate dust and impact storm water. Regardless of the size of the disturbance, workers should take measures to prevent erosion of cap materials and underlying soil via wind or water, although the scope of these measures will vary based on the size, scope, and duration of the work. Excavation and trenching activities should comply with the information presented in *SOPs Nos. 009 – Dust Prevention and Control* and *002 – Storm Water Pollution Prevention Plan*.

2.5 Cap Penetration Procedures

The following subsections describe the required procedures for disturbance or removal of the cap, penetration of the cap and management of impacted materials, and replacement of cap materials.

2.5.1 Disturbance or Removal of Cap

Cap materials shall be removed and handled according to the guidelines presented in *SOP No. 010 – Disturbance and Removal of Cap*. Removed cap materials shall be stockpiled separately from the underlying materials.

2.5.2 Penetrating Cap Materials

Excavation and trenching activities shall be conducted carefully so as not to mix the cap materials with the underlying impacted soils. Test pits shall be performed ahead of the excavation to confirm the depth of the cap and aid in the proper management of cap materials separately from underlying impacted material. Test pits shall also aid in locating any demarcation or impermeable barrier that may be present between cap materials and underlying impacted material. If a demarcation or impermeable barrier is shown in as-built documents and present, it shall be located and cut in a manner such that it can be either repaired or replaced, restoring the integrity of the barrier.

2.5.3 Soil Management During Cap Penetration Activities

Cap materials and the underlying impacted soils shall be handled and stockpiled separately to prevent cross-contamination of the excavated materials. Equipment used in the handling of impacted soils shall be thoroughly decontaminated following contact with impacted soils. Impacted soils that are removed during work activities may be used to backfill the excavation or trench, provided that the material is suitable for reuse (geotechnically) and the cap is replaced over the soils, in accordance with the original specifications.

If impacted soils removed during cap penetration activities are designated for disposal, they should be profiled in accordance with *SOP No. 005 – Profiling Soil for Disposal*. Analytical results for soil profiling and disposal documentation shall be maintained with final documentation materials (see Section 2.6). The excavation or trenches from which the disposed soils originated shall then be backfilled with clean import material, profiled in accordance with *SOP No. 006 – Profiling Soil for Import and Reuse*.

2.5.4 Replacement of Cap

When excavation or trenching activities are complete, the Contractor must document how the disturbed cap was replaced with materials equally as or more protective than the original cap, in accordance with the LUC and O&M documents for that specific site. Replacement materials may include:

- a) The original, clean, segregated cap soil;
- b) Original or replacement demarcation layer (if present);
- c) Clean import material of site-specific designated thickness and potential demarcation layer, approved by the Trust Remediation Project Manager (and DTSC, where applicable); or
- d) Hardscape elements approved by the Trust Landscape Architect and Trust Remediation.

The cap is to be completely replaced to original grade following completion of excavation or trenching activities. Changes to the cap (consistent with the approved site remedy) will be summarized and submitted to DTSC via the Annual O&M Report.

2.6 Documentation

In addition to the documentation requirements listed in *SOP No. 010 – Disturbance and Replacement of Cap Materials*, completion documentation for activities that penetrate cap materials should include a description and photographs of soil segregation and stockpiling during construction. The Contractor will be required to document cap thickness compliance through use of surveys, field measurements, and photos. Additionally, the Trust or a Trust representative will perform periodic quality control inspections to verify cap compliance, including field work oversight and review of documentation. If applicable, the completion documentation should include analytical results from soil profiling and any soil import and soil disposal documentation. All closure documentation shall be provided to Trust Remediation within two weeks of completion of the work.

END

**THE PRESIDIO TRUST
STANDARD OPERATING PROCEDURE**

SITE-SPECIFIC SOIL MANAGEMENT PLAN

SOP No. 012
Revision No. 01
Last Reviewed: April 2021

1.0 BACKGROUND

The *Presidio-Wide Soil Management Plan (SMP)* was developed as a reference document for soil-disturbing activities within Land Use Control (LUC) sites at the Presidio of San Francisco, California (Presidio). While the *Presidio-Wide SMP* will effectively address proper soil management for routine work at LUC sites, more complex sites may require additional site-specific planning and management procedures. A Site-Specific Soil Management Plan (SSSMP) may be required at non-routine work sites, such as those with extensive earthwork or complex site conditions.

1.1 Purpose and Applicability

This Standard Operating Procedure (SOP) outlines the processes and procedures for developing a SSSMP for non-routine construction sites in the Presidio. The purpose of the SSSMP is to ensure that soil management activities at construction sites within LUC areas are protective of human health and the environment.

The SSSMP will establish site-specific procedures for soil management during non-routine work at LUC sites to ensure the segregation of soils that may be put to beneficial reuse within other portions of the Presidio and prevent the inadvertent use or reuse of environmentally impacted soils. Finally, the SSSMP outlines the procedures to document soil quality for soils that are beneficially reused at LUC sites within the Presidio.

1.2 Scope

This SOP applies to non-routine construction being conducted within the Presidio by the Presidio Trust (Trust) or Third Parties. The SSSMP is designed to be flexible such that it addresses soil management activities beyond those required by regulatory agencies (e.g., soil management at non-regulated sites, and soil management by tenants and third parties). The SSSMP incorporates existing documents to reduce the duplication of standards, policy, or controls previously approved by the Trust and by the California Environmental Protection Agency, Department of Toxic Substances (DTSC) to avoid inconsistencies in approved methodology.

1.3 Related SOPs

- *SOP No. 001 – Environmental Health and Safety*
- *SOP No. 002 – Storm Water Pollution Prevention Plan*
- *SOP No. 003 – Air and Dust Monitoring and Mitigation Plan*
- *SOP No. 004 – Dewatering*
- *SOP No. 005 – Profiling Soil for Disposal*
- *SOP No. 006 – Import Soil Sampling and Analysis*
- *SOP No. 007 – Soil and Stockpile Management*
- *SOP No. 008 – Traffic Control and Haul Routes*
- *SOP No. 009 – Dust Prevention and Control*
- *SOP No. 010 – Disturbance and Replacement of Cap Materials*
- *SOP No. 011 – Penetration of Cap Materials*
- *SOP No. 013 – Construction Completion Report*

1.4 Definitions

California Environmental Protection Agency, Department of Toxic Substances Control (DTSC):

Government agency that regulates the generation, handling, treatment, and disposal of hazardous waste in California

Cap: An engineered barrier installed to prevent exposure to underlying soils with known impacts.

Excavation: Work in which earth or other ground material, including hardscape, is displaced using manual tools or mechanical equipment

Impacted soils: Soil that contains contaminants of concern above site-specific human health and ecological cleanup levels, typically but not always below a cap (soil, hardscape, or vegetative).

Non-routine work: Project construction activities that alter the site configuration beyond what is described and covered in applicable LUC and operations and maintenance (O&M) documents.

Routine work: Project construction activities that do not alter the site configuration beyond what is described and covered in applicable LUC and O&M documents. Typical routine work activities include, but are not limited to:

- Accessing or installing utilities;
- Associated removal of soils;
- Making repairs to or replacing hardscape;
- Plant replacement; and,
- Construction of clean corridors, if within a LUC area.

Soil disturbance: Construction or demolition activities involving clearing, grubbing, excavation, or other earthwork.

1.5 References

- Erler & Kalinowski, 2002, As Amended. *Development of Presidio-Wide Cleanup Levels for Soil, Sediment, Groundwater, and Surface Water*. October. Tables updated November 2019.
- TRC Solutions, Inc., 2000. *Draft Presidio-Wide Soil Management Plan*. August 21.
- Trust, 2001, Amended 2011. *Presidio-Wide Quality Assurance Project Plan (QAPP) and Sampling and Analysis Plan (SAP)*.
- Trust, 2009. *Presidio Trust Land Use Controls Master Reference Report (Presidio LUCMRR), Presidio of San Francisco, California*. September.
- Trust, 2016. *Construction Guidelines*. April.
- Site-Specific LUCMRR Addendum

2.0 PROCEDURES

The following sections discuss roles, notifications, and procedures for the development and implementation of an effective SSSMP.

2.1 Roles

The Trust (or an authorized representative) is responsible for providing any available site-specific information regarding environmental hazards or conditions that will help the Contractor develop an effective SSSMP.

A DTSC-approved SSSMP is required for LUC sites covered by this SOP. The Contractor is responsible for preparing the SSSMP for the site, acquiring appropriate approvals, and implementing the practices described in the SSSMP before, during, and after construction.

2.2 Notifications

- All work that disturbs a LUC cap must comply with this SOP and all applicable protocols within the *Presidio-Wide SMP*. Once a proposed work area has been determined to be at a LUC site containing cap elements, Trust Remediation shall be notified and site-specific LUC documents shall be requested prior to submittal of an “Excavation Clearance Application” (Dig Permit).
- At least 10 days prior to any excavation work, the party responsible must submit an “Excavation Clearance Application” (Dig Permit) to the Trust, including a description of the excavation and a site map showing where the excavation will occur. Projects of broader scope may require additional submittals and approvals.
- Prior to any soil disturbance activities, DTSC must be notified, as required by the *Presidio LUCMRR*. Refer to the Site-Specific LUCMRR Addendum for specific notification requirements.
- Underground Service Alert must be notified at least 2 business days prior to the start of excavation.

2.3 Preparation of the SSSMP

A SSSMP shall be prepared for the Site and shall include the following components (when applicable):

1. A project description that includes agreements between relevant parties, location of work within the Presidio, a proposed work notice, and a short description of soil disturbing activities. The proposed work notice will specify work hours, public safety measures, and exposure controls.
2. A full site description of soils present at the site, proposed actions, and management approach including:
 - a. Location;
 - b. Expected soil contaminants;
 - c. Approximate depth;
 - d. Estimated area and volume of soil to be excavated;
 - e. Methods for segregation, excavation, and disposal; and
 - f. Confirmation sampling.
3. Soil management protocols including:
 - a. Site preparation (dewatering, utilities, permits);
 - b. Soil profiling and waste characterization;
 - c. Segregation, staging, and stockpile management;
 - d. Transportation and disposal including figure depicting haul routes for soil transport;
 - e. Confirmation sampling; and
 - f. Construction completion reporting.
4. Construction management measures including:
 - a. Health and safety;
 - b. Project-specific worker training requirements;
 - c. Equipment decontamination;
 - d. Dust control and air monitoring;
 - e. Storm Water Pollution Prevention Plan (SWPPP);
 - f. Public safety measures and exposure controls;
 - g. Public access and traffic controls, including a site control diagram; and
 - h. Unexpected Condition Contingency Plan.
5. Schedule for work.
6. Roles and responsibilities, including an organization chart of staff involved, their role, authority,

and responsibility for construction quality assurance.

7. References including figures, tables, and appendices.

2.4 Implementation of the SSSMP

The SSSMP shall be implemented as approved by the Trust and/or applicable regulatory agencies. Construction measures that differ from the SSSMP shall be discussed with and approved by a Trust representative prior to being implemented.

- At the end of the project, implementation of the SSSMP shall be summarized in a Construction Completion Report (CCR; see *SOP No. 013 – Construction Completion Report*). The CCR shall document the implementation of the SSSMP and any variances during implementation.

END

**THE PRESIDIO TRUST
STANDARD OPERATING PROCEDURE**

CONSTRUCTION COMPLETION REPORT

SOP No. 13
Revision No. 01
Last Reviewed: April 2021

1.0 BACKGROUND

The *Presidio-Wide Soil Management Plan (SMP)* was developed as a reference document for soil-disturbing activities within Land Use Control (LUC) sites at the Presidio of San Francisco, California (Presidio). While the *Presidio-Wide SMP* will effectively address proper soil management and documentation requirements for routine work at LUC sites, more complex sites may require additional site-specific planning and management procedures, including a Site-Specific Soil Management Plan (SSSMP) for non-routine work. A Construction Completion Report (CCR) may be required for non-routine construction to provide a final summary report that details processes and procedures implemented through the various phases of completed construction.

1.1 Purpose and Applicability

This Standard Operating Procedure (SOP) applies to non-routine work conducted by the Presidio Trust (Trust) or Third Parties within the Presidio. This SOP establishes the practices and procedures for developing a CCR to document the construction measures implemented at a site, as well as the final site conditions. This SOP does not apply to routine projects where construction activities do not alter the site configuration beyond what is described and covered in the LUC and Operations and Maintenance (O&M) documents.

1.2 Scope

This SOP applies to non-routine work being conducted within LUC areas in the Presidio, as confirmed by Trust Remediation. Any work that disturbs a LUC cap should also refer to *SOPs No. 001- No. 012*.

1.3 Related SOPs

- *SOP No. 001 – Environmental Health and Safety*
- *SOP No. 002 – Storm Water Pollution Prevention Plan*
- *SOP No. 003 – Air and Dust Monitoring and Mitigation Plan*
- *SOP No. 004 – Dewatering*
- *SOP No. 005 – Profiling Soil for Disposal*
- *SOP No. 006 – Import Soil Sampling and Analysis*
- *SOP No. 007 – Soil and Stockpile Management*
- *SOP No. 008 – Traffic Control and Haul Routes*
- *SOP No. 009 – Dust Prevention and Control*
- *SOP No. 010 – Disturbance and Replacement of Cap Materials*
- *SOP No. 011 – Penetration of Cap Materials*
- *SOP No. 012 – Site Specific Soil Management Plan*

1.4 Definitions

Cap: An engineered barrier installed to prevent exposure to underlying soils with known impacts

Contaminants of concern (COCs): Chemicals or constituents that may be present in the soil that may pose risk to humans or the environment

Control measures: Processes and procedures to reduce the potential for exposure to a hazard.

Demolition: The manual and/or mechanical tearing down of man-made structures.

Excavation: Work in which earth or other ground material, including hardscape, is displaced using manual tools or mechanical equipment

Hardscape: Manmade features, such as a building foundation or paved area.

Impacted soils: Soil that contains COCs above site-specific human health and ecological cleanup levels, typically but not always below a cap (soil, hardscape, or vegetative).

Import material: Any material used to backfill an excavation or trench or to increase the elevation of an existing ground surface. This includes but is not limited to soil, aggregate, rock, sand, compost, soil amendments, etc.

Non-routine work: Project construction activities that alter the site configuration beyond what is described and covered in applicable LUC and O&M documents.

Pre-construction activities: The overall planning, coordination, and planning of a project beginning at inception.

Post-construction activities: Services that ensure comprehensive closeout and allow for continued adjustment, optimization, and modification to maintain the full performance of the site.

Routine work: Project construction activities that do not alter the site configuration beyond what is described and covered in applicable LUC and O&M documents. Typical routine work activities include, but are not limited to:

- Accessing or installing utilities;
- Associated removal of soils;
- Making repairs to or replacing hardscape;
- Plant replacement; and,
- Construction of clean corridors, if within a LUC

Soil disturbance: Construction or demolition activities involving clearing, grubbing, excavation, or other earthwork.

Soil stockpile: A temporary, designated storage pile formed with excess soil from a site.

Storm Water Pollution Prevention Plan (SWPPP): Document identifying all potential sources of pollution which may reasonably be expected to affect the quality of storm water discharge from a construction site and prescribes mitigation measures to prevent said sources from negatively impacting the water quality of the storm water discharge.

Waste: Solid, liquid, or gaseous material that is not needed or not suitable for its original intended purpose or material classified as waste by a regulatory authority

1.5 References

- Eler & Kalinowski, 2002, As Amended. *Development of Presidio-Wide Cleanup Levels for Soil, Sediment, Groundwater, and Surface Water*. October. Tables updated November 2019
- TRC Solutions, Inc., 2000. *Draft Presidio-Wide Soil Management Plan*. August 21.
- Trust, 2016. *Construction Guidelines*. April.
- Site-Specific SSSMP

2.0 PROCEDURES

The following sections discuss roles, notifications, and procedures for preparing a CCR.

2.1 Roles

The Trust (or an authorized representative) is responsible for providing background information as necessary for the development of the SSSMP and CCR. The Trust is also responsible for approving construction activities and/or variances from the SSSMP, which are to be described in the CCR.

The Contractor is responsible for preparing the CCR in accordance with the guidelines presented in this SOP following completion of construction activities.

2.2 Notifications

All work that disturbs a LUC cap must comply with this SOP and all applicable protocols within the *Presidio-Wide SMP* and SSSMP. Following the completion of work, the Contractor shall work with Trust Remediation to prepare any LUC documentation.

2.3 Preparation of Construction Completion Report

A site-specific CCR shall be prepared for the site and shall include the following components when applicable:

1. An introduction including purpose, background, and the project team summary.
2. A remedial action summary that details remedial action objectives, COCs, and site-specific cleanup levels.
3. Pre-construction activities including but not limited to:
 - a. Stakeholder coordination;
 - b. Public outreach;
 - c. Regulatory approvals; and
 - d. Planning documents, permits, and submittals including:
 - i. Key planning documents;
 - ii. Permit submittals;
 - iii. Site-specific Health and Safety Plan (HASP);
 - iv. Storm Water Pollution Prevention Plan (SWPPP); and
 - v. Air and Dust Monitoring and Mitigation Plan (ADMMP).
4. Summary of actions taken to protect natural and cultural resources.
5. Site preparation activities including:
 - a. Utility evaluation;
 - b. Fencing, temporary facilities, and site security;
 - c. Clearing, grubbing, and tree removal;
 - d. Topographic survey; and
 - e. Demolition.
6. Excavation activities including:
 - a. Work area layout;
 - b. Excavation, consolidation, and grading methods;
 - c. Soil stockpile management; and
 - d. Survey and grading plan revisions.
7. Soil confirmation sampling including:
 - a. Sampling methods, analytical program, data validation, and database reporting;
 - b. Pre-excavation soil confirmation sampling; and

- c. Excavation confirmation sampling.
8. Waste management and disposal including:
 - a. Soil and groundwater;
 - b. Construction debris; and,
 - c. Disposal documentation.
9. Backfill and grading including:
 - a. Import fill details;
 - b. Soil cap construction;
 - c. Clean closure grading;
 - d. Compaction observation;
 - e. Post-construction grading survey;
 - f. Total soil volume imported; and
 - g. Placement of interim erosion control measures.
10. Final surface completion including:
 - a. Hardscape features;
 - b. Placement of final erosion control measures; and
 - c. Irrigation and vegetation plans.
11. Demobilization
12. Site inspections and meetings
13. Post-construction activities including:
 - a. Project completion;
 - b. Establishing as-built conditions; and
 - c. Erosion control monitoring.
14. Long-term monitoring program.
15. Implementation of LUCs.
16. Summary and conclusions.
17. Reference list including (but not exclusively):
 - a. Permits;
 - b. Photographs;
 - c. Figures;
 - d. Tables;
 - e. Analytical results;
 - f. Waste disposal documents; and
 - g. External references.

The completed CCR shall be presented to the Trust and any applicable regulatory agencies within six months of completion of work.

END