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September 2, 2014

Mr. George Chow
Department of Toxic Substances Control
700 Heinz Avenue
Berkeley, CA 94710

Subject: Transmittal of the *Additional Sampling Workplan for Lendrum Court, Presidio of San Francisco, California*

Dear Mr. Chow:

Enclosed is the final *Additional Sampling Workplan for Lendrum Court, Presidio of San Francisco, California.* The workplan was revised as discussed with you and Dr. Kimi Klein on our August 22 call.

The objective of the investigation activities is to determine the extent of Army-era debris fill at the Lendrum Court Site, conduct additional characterization of the debris fill, and collect engineering data to facilitate evaluation of potential remedial alternatives. The investigation is in response to your March 7, 2014 letter indicating further investigation was required at the Lendrum Court site.

Please feel free to contact me (415) 561-4259 or John DeWitt (650) 292-9100, ext. 355, if you need any additional information.

Sincerely,

Eileen Fanelli

Eileen Fanelli
Environmental Remediation Program Manager

Enclosures

cc: Denise Tsuji, DTSC
Bruce Handel, Army

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30 August 2014

Ms. Eileen Fanelli
Presidio Trust
67 Martinez Street
Post Office Box 29052
San Francisco, California 94129-0052

Subject: Additional Sampling Workplan for Lendrum Court
Presidio Trust, San Francisco, California
(EKI B00025.07 T 4C)

Dear Ms. Fanelli:

Erler & Kalinowski, Inc. ("EKI") is pleased to present this Additional Sampling Workplan for Lendrum Court. EKI is prepared this workplan for the Presidio Trust to determine the extent of Army-era debris and evaluate risks posed by potential chemicals of concern. EKI is prepared to implement this workplan upon your authorization.

If you have any questions please do not hesitate to call.

Very truly yours,

ERLER & KALINOWSKI, INC.

John J. DeWitt

John DeWitt, P.E.
Project Manager

ADDITIONAL SAMPLING WORKPLAN FOR LENDRUM COURT

PRESIDIO OF SAN FRANCISCO, CALIFORNIA

Prepared for:
The Presidio Trust
San Francisco, CA

Prepared by:
Erler & Kalinowski, Inc.
Burlingame, California
EKI B00025.07 T 4C

August 2014

ADDITIONAL SAMPLING WORKPLAN FOR LENDRUM COURT

Presidio of San Francisco, California

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Presidio of San Francisco, California

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Appendix A Copies of Reviewed Maps and Photos of Lendrum Court, Armistead Road, Hoffman Street, and Ramsel Court

Appendix B Notice to Tenants Regarding Upcoming Work

1 INTRODUCTION

On behalf of the Presidio Trust ("Trust"), Erler & Kalinowski, Inc. ("EKI") has prepared this Additional Sampling Workplan for field investigation of Lendrum Court ("Site") in the North Fort Scott Area, located in the northwest corner of the Presidio of San Francisco (Figure 1). This Workplan has been prepared for the Trust to address data gaps identified in the February 2014 *Lendrum Court Investigation Summary Report and Screening Risk Evaluation* ("Investigation Summary Report and Screening Risk Evaluation"; EKI, 2014a) and, as directed by the Department of Toxic Substances Control ("DTSC") (DTSC, 2014a), to determine the extent of debris and to evaluate the risks posed by potential chemicals of concern ("COCs").

2 BACKGROUND

2.1 Site Description

Lendrum Court is located in the northwest corner of the Presidio, north of Doyle Drive, in the North Fort Scott Area of the Presidio (Figure 1). The Lendrum Court Site is comprised of residential Buildings 1259, 1278, 1279, 1280, and 1282. Building 1257 and 1258 are located along Armistead Road, but for purposes of this investigation are considered part of the Site as the backyards open onto Lendrum Court.

This area is comprised of residential units, paved streets and parking areas, and vegetated landscape areas.

2.2 Lendrum Court Site Investigation History

In December 2012, the Trust notified the DTSC of the likely presence of debris fill beneath Lendrum Court on the basis of visible broken glass and ash observed in limited trenching activities (Trust, 2012). In February 2013, the DTSC requested the Trust prepare a Preliminary Endangerment Assessment ("PEA") Workplan (DTSC, 2013a). The Trust prepared the PEA Workplan (EKI, 2013) and upon DTSC approval (DTSC, 2013b), the Trust implemented the work in June 2013. Findings from the PEA Workplan investigation are summarized in the Investigation Summary Report and Screening Risk Evaluation (EKI, 2014a). DTSC approved the PEA in a letter dated 7 March 2014 (DTSC, 2014a). In that letter the DTSC stated that further investigation at Lendrum Court was required to determine the extent of debris and to evaluate the risks posed by potential COCs.

In April 2014, the Trust submitted a workplan to determine if Army-era debris was present in the broader North Fort Scott and Pilots Row neighborhoods. DTSC approved that work plan on April 30, 2014. The work was completed in May 2014 and a report of findings submitted to the DTSC on July 8, 2014 (EKI, 2014b). The investigation report documents that debris fill is limited to the Lendrum Court neighborhood. In a July 24, 2014 letter, DTSC concurred with the report findings at North Fort Scott and Pilots Row (DTSC, 2014b).

This Additional Sampling Workplan was prepared as a second phase of investigation, to determine the extent of debris fill and estimate the health and environmental risk associated with the debris fill in the Lendrum Court Area.

2.3 Site Use History

A summary of the site chronology from available maps and aerial photos is provided in Table 1. Appendix A contains copies of the maps and photos.

2.3.1 Lendrum Court

Features Identified Before 1936

- Reservoir: An 80,000-gallon water reservoir is shown on maps from 1896 through 1921 in the vicinity Building 1282. Based on aerial photos of the area in 1936, the reservoir appears overgrown and is assumed to be no longer in use as of 1936.

- Coal House: Historical maps and aerial photographs from the 1920s to approximately 1932 show a coal house located southeast of Lendrum Court; around 1933, the coal house was replaced by the Storey Avenue houses.

- Incinerator: A Presidio map dated 1921 indicates the presence of an incinerator approximately 150 feet south of present day Lendrum Court; the incinerator is not shown on any later maps. The approximate historical location of the incinerator is shown on Figure 2. A structure that may potentially be the incinerator is visible in an aerial photo from 1929; in a subsequent photo of the same area from 1932, the structure is no longer visible.

- Fill: An aerial photo from 1929 shows the addition of fill or grading in the present day location of Buildings 1278 and 1279; this feature is visible in almost all subsequent aerial photos of the area.

Features Identified from 1936 to 1946

- Soil Movement: Aerial photos from 1936 show significant soil handling activities conducted in the vicinity of the current Buildings 1253 through 1258 for the construction of Highway 101 in preparation for the connection to the Golden Gate Bridge.

- Pipe Excavation: An excavation apparently for the former Fuel Distribution System ("FDS") passes underneath Highway 101 towards Building 951, beneath the present day locations of Buildings 1255 and 1282. The portion of this pipeline passing underneath Building 1282 was removed prior to 1996 and the portion of the pipeline passing underneath Building 1255 was abandoned in place (IT Corporation, 1999; Montgomery Watson, 1999). The remainder of the FDS

pipeline passing through the Lendrum Court area was removed during 1996 and 1997.

- Road Construction: Between 1939 and 1946, entrance and exit ramps for Highway 101 were constructed south of Lendrum Court in the vicinity of the former incinerator.

Features Identified After 1946

- Residential Construction: Aerial photographs and Army historical maps indicate that the current Lendrum Court residential buildings and parking areas were constructed in 1970.

2.3.2 Armistead Road, Hoffman Street, and Ramsel Court

While this sampling workplan focuses on activities in Lendrum Court, the air photos in Appendix A include the surrounding Fort Scott area. Residential construction in these areas occurred at the same time as at Lendrum Court.

2.3.3 Locations of Existing Buildings

Figure 2 shows the locations of the present day Lendrum Court, Armistead Road, and Ramsel Court Buildings superimposed on an aerial photo from 1938 using Google Earth.

- Buildings 1259, 1278, and 1279 are approximately located near the edge of the fill and grading that was observed in the 1922 aerial photo;

- Buildings 1253 through 1256 appear to be located near the edge of the area disturbed by the construction of Highway 101 in 1936;

- Buildings 1257 and 1258 are located slightly down slope (northeast) of area disturbed by the construction of Highway 101;

- The FDS pathway visible in the 1936 aerial photo appears to pass underneath Building 1255 and beneath Building 1282; Building 1282 also appears to be located at approximately the same location as the former 80,000 gallon reservoir that is observed on maps from 1896 through 1921 and is visible in aerial photos up to 1934;

- The present day Armistead Playground appears to be located at the same location as the tennis court that was installed around 1936; and,

- Buildings 1236 and 1238 appear to be located just west of the former tennis court.

3 INVESTIGATION PURPOSE AND OBJECTIVES

This section identifies the purposes and objectives of the field investigation.

3.1 Field Investigation Purpose

The goals for this Additional Sampling Workplan are to:

(1) Determine the extent of debris at the Lendrum Court Site;

(2) Conduct additional characterization of the debris fill to identify COCs for the Site and to better evaluate the potential risk to human health or the environment; and

(3) Collect engineering data to facilitate evaluation of potential remedial alternatives, such as topography in the area of debris fill.

3.2 Field Investigation Objectives

To achieve the goals identified above, the following objectives have been established:

- Clear dense vegetation in the northeastern and eastern portion of the site to allow access for inspection, sampling, and surveying.
- Find the limits of the debris fill using a combination of potholes and trenches. The potholing and trenching strategy is described in more detail in Section 4.
- Examine the debris encountered for visual evidence of ash. If ash is encountered, the ash will be documented and sampled as described in Section 4.
- Collect additional samples to complete characterization of the debris fill.
- Collect soil samples to confirm debris limits. Collect confirmation samples to confirm limits of soil impacts associated with debris fill. Samples will be analyzed for lead as an indicator of potential impacts outside of debris fill limits.
- Survey the area containing debris fill. As described above, this field event is intended to gather details for remedial design such as thickness of debris, potential for consolidating or covering the edges of the debris (such as thickness at edges, topography at debris edges, and ability to anchor cover materials), and the extent of trees that are present within the debris.

Groundwater is not expected to be encountered and therefore no groundwater samples will be collected as part of this investigation.

4 FIELD INVESTIGATIVE APPROACH

This Section describes the approach to completing the field investigation.

4.1 Site Vegetation Clearing

Dense vegetation is present along the suspected perimeter of debris fill, to the east and northeast behind Buildings 1279, 1278 and 1259; to the south of Building 1259 and to the west of Building 1257. Vegetation in this area will be removed to allow access for site investigation activities. Although no trees will be removed, shrubs and ground cover less than 6-inches in diameter will be cut close to the ground surface and removed from site.

The extent of vegetation removal varies but is greatest in the area east and northeast of Buildings 1279, 1278, and 1259, where debris fill is anticipated to extend approximately 50 to 70 feet behind the buildings based on the historic photos of grading activity and visual observation of debris on the ground surface. Vegetation removal to the west and south will be less extensive and completed as needed to allow potholes and trenches to be advanced and to complete a topographic survey of the area.

The topographic survey is needed to complete the next phases of remediation, including the feasibility study and remedial design. Removing vegetation as part of this investigation will facilitate the remedial process by completing soil disturbing work in dry weather and by avoiding bird nesting season. The site will be winterized to prevent erosion following the investigation.

4.2 Combined Potholing and Trenching Strategy Rationale in Grid Areas

This investigation is designed to confirm the extent of debris fill to facilitate completion of a feasibility study and remedial action planning. The estimated extent of debris fill is shown on Figure 3. The debris fill boundary is anticipated to roughly coincide with the break in slope to the northeast and east of Buildings 1259, 1278, and 1279; Lendrum Court Road to the south of Building 1259; Armistead Road to the south of Buildings 1257 and 1258; the walking path to the west of Building 1257 leading to Building 1282; and the walking path between Building 1280 and 1279.

Sampling grids will be established at the presumed boundaries of the debris fill around the perimeter of Lendrum Court (see Figure 3). The grid system will provide a frame of reference in the field so potholes, trenches, and sample locations can be measured from known grid corners, using physical landmarks such as the edge of houses as visual reference points.

Potholes and trenches will be used together to confirm this boundary. Potholes allow quick assessment of presence or absence of debris in the upper few feet of soil. Because they are hand dug, the potential damage to tree roots is limited. Potholes will be used to identify the probable boundaries of debris fill. Trenches, excavated perpendicular to the assumed debris fill edge based on potholing, will be used to confirm the boundary of the debris fill. Trenches will be excavated approximately eight feet in length and two feet wide. In addition, shorter trenches, up to five feet in length, will be excavated in known debris fill areas in order to collect samples for chemical characterization as described below.

In grids A though H, potholes will be hand dug with a shovel or mattock. Potholes will be dug to about 24 inches in depth. Once debris is encountered, digging will stop, the location will be identified as containing debris, and a step-out pothole will be excavated. This process will continue until debris fill is not encountered. At that point a trench will be excavated perpendicular to the anticipated edge of debris to confirm the absence of debris at depth and to establish the extent of debris fill.

A similar approach will be used in grids I, J, K, and M. Based on historical photo review and topography, debris is not anticipated to be encountered in these grid cells. Initial potholes will be dug in each grid to confirm presence or absence of debris. Trenches will be excavated only if debris is present in the potholes.

In the vicinity of grid L (near Building 1282 on Figure 3), the June 2013 investigation found debris in trench 1279TP212, but the sample results from soil in the debris layer did not contain chemicals of concern above applicable screening levels. Potholing in this grid is intended to focus on the presence of debris and, if encountered, whether or not the debris is chemically impacted or inert.

The number of potholes or trenches within a specific grid area will vary based on field conditions, including topography, access, and results of other potholes or trenches. The number of potholes and trenches per grid area will be determined in consultation with DTSC once vegetation is removed and site surface conditions can be observed.

4.3 Rationale for Trench Locations 301, 302, 303, 304, and 305

Trenches 1279TP301 through 1279TP305 are located within the Lendrum Court landscaped area.

1279TP301, 1279TP302, and 1279TP305 are intended to confirm the southern and southwestern boundary of debris fill. These trenches will be excavated to depths sufficient to identify native material below any debris fill encountered. The maximum proposed depth of these trenches is approximately 8 feet below ground surface ("bgs"), the reach of the backhoe, or bedrock, whichever is shallower. Additional pot holes or trenches to the south of Armistead Road will be excavated in grid area J4 to confirm the southern boundary of the debris fill. Potholes will also be excavated in grid areas J1 through J3 and I1 through I2 unless the edge of debris fill is confirmed in Trenches 1279TP301, 1279TP302, and 1279TP305.

1279TP303 and 1279TP304 are intended to delineate the extent of the debris fill material in the vicinity of Buildings 1280 and 1282. The length of these trenches will vary depending on utilities and other subsurface structures. They may be extended or supplemented in the field to define the limits or edge of any observed debris.

As with the North Fort Scott investigation, all trenches will be photographed and logged. Debris will be inspected for the presence of ash. Samples will be collected as described below.

4.4 Sample Strategy

4.4.1 Waste Characterization

In the February 2014 Investigation Summary Report and Screening Risk Evaluation (EKI, 2014a), lead was identified as a chemical of concern ("COC") and polycyclic aromatic hydrocarbons ("PAHs"), dioxins, and furans were identified as potential chemicals of concern ("PCOCs") pending additional site investigation and analysis. This investigation is intended to provide additional data to statistically evaluate whether PAHs, dioxins, and furans are Site COCs.

Based on previous surface sample results at Lendrum Court (EKI, 2014a), soil samples collected from the debris layer overburden were found to contain lead above residential screening levels; therefore, in this investigation the overburden soil above the debris layer is assumed to be chemically impacted and will not be sampled. With the exception of confirmation samples described below, sample collection will focus on debris fill.

To create a statistically significant data set, a minimum of seven soil samples will be collected and submitted to the laboratory for analysis for metals, PAHs, and dioxins and furans for analysis as potential COCs. These data will be evaluated with previous sample results to complete the human and ecologic risk assessment.

Because dioxins and furans are associated with incinerator wastes, samples of debris fill containing ash will be preferentially collected and analyzed for dioxin and furans by EPA Method 1613B. To maintain comparability to sampling from the June 2013 investigation, samples from the debris fill layer will be collected using multi-increment sampling (see Section 4.7).

Waste characterization samples will be collected from trenches only. The trenches will be excavated in areas of known debris fill. In grid areas A1 though H2, trenches for sample collection will be located based on potholes and perimeter trench observations. If debris containing ash cannot be identified in seven distinct locations in the grid area and trenches 1279TP301 through 1279TP305, then additional trenches will be excavated. The additional trenches are shown on Figure 3 in areas anticipated to contain debris with ash based on previous trenching. Trenches will be excavated as needed to obtain sufficient samples for statistical analysis of PAHs, dioxins, and furans. Additional trenches will be numbered sequentially beginning with 1279TP306.

4.4.2 Confirmation Sampling

Soil samples will be collected from the area outside the observed perimeter of debris fill to confirm waste boundaries. Samples will be collected at a frequency of approximately one sample every 100 feet along the waste boundary perimeter. Surficial soil samples (0 to 0.5 feet bgs) will be collected from potholes or trenches as appropriate to the location. For example, if trenches 1279TP301 through 1279TP305 do not contain debris, a surface soil confirmation sample will be collected from these trenches rather than a debris sample.

Based on previous surface sample results at Lendrum Court (EKI, 2014a), lead was the primary COC detected in shallow soil, even when other COCs were present. Therefore confirmation samples will be analyzed only for lead as the indicator of waste impact.

4.5 Pothole, Trench, and Sample Identification

In accordance with the *Presidio-Wide Quality Assurance Project Plan and Sampling and Analysis Plan* ("QAPP"; Tetra Tech, 2001) and its Addendum (Trust, 2011), sample location identification codes for trench samples are based on "1279" for Building 1279, a central building within Lendrum Court; "TP" for test pit (trench); and sequential numbering starting at 301 to indicate that this is the Trust's third round of sampling for the Lendrum Court Area. The media sampled (soil) will be marked on the chain of custody form and input into the media field in the Trust database when the data are uploaded. Identifiers highlighting the material sampled and the sample depth will be appended to the sample name to identify the material the sample represents and the depth from which it was collected; "S" will be used to identify shallow or overburden soil samples, "D" will be used to identify debris or debris and ash materials, and "B" will be used to identify native material below the debris or debris and ash layers. In keeping with the QAPP, an overburden soil sample collected at 2 feet bgs from trench 1279TP301 will be designated as 1279TP301-S[2]; similarly, a debris and ash sample collected at 3.5 feet bgs from trench 1279TP309 will be designated as 1279TP309-D[3.5].

Potholes will be labeled with "SB" to indicated soil boring, their grid location, such as A2-1 for the first pothole in grid cell A2. If a sample is collected from 1 foot deep from a pothole from grid A2, the sample labeling will follow the QAPP and be designated as 1279SBA2-1[1].

4.6 Trench Excavation and Logging

Trenches will be excavated with a subcontractor-operated backhoe. Proposed trench locations are shown on Figure 3. The locations of the trenches will be finalized in the field with representatives of the Trust and DTSC, and will depend upon the presence of surface, subsurface, and overhead obstructions, as well as site topography.

A qualified person will log soil lithology during trenching, and document trench sidewalls with photographs. Potholes will also be photographed. Logging will include observation of trench sidewalls as well as excavation spoils. Field personnel will log percentage of debris present, if any debris is encountered. Field personnel will coordinate with the Trust Archeology Department if debris is encountered.

Trenches will be backfilled and compacted by wheel rolling by the backhoe on the same day they are excavated.

4.7 Sampling Method

Soil samples from trenches will be collected using a backhoe bucket or manually, if the excavation is less than four feet deep and can be safely entered. Soil samples will

generally be collected in the center of the horizon being sampled. A multi-increment sampling method (ITRC, 2012) will be employed in the field and at the analytical laboratory as a recent U.S. EPA publication indicates that multi-incremental sampling can provide more reproducible results (U.S. EPA, 2013) and because the use of multi-incremental sampling is specifically recommended by U.S. EPA for dioxin site assessment (U.S. EPA, 2011; U.S. EPA, 2013). The field multi-increment sampling method involves the collection of approximately 20 to 30 subsamples from the specific layer being sampled along all sidewalls of the trench or pothole. For multi-increment sampling of the debris layer, only the debris layer will be sampled. If the trench crosses the edge of the debris layer and debris is only present on one end and part of the two sides, only the visibly apparent debris layer will be sampled to avoid potential sample dilution by including non-debris layer material. As described in the ITRC guidance, a simple random sampling pattern will be used to collect samples, as constructing a sample gridding on the interior trench sidewalls would be difficult. Incremental samples will be collected in new one-gallon Ziploc bags, labeled, and placed on ice for delivery to the analytical laboratory under chain-of-custody procedures.

Multi-increment sampling will be collected from trenches and potholes. Sampling will be conducted in accordance with the Presidio QAPP and its Addendum, including approximately 10% duplicates.

4.8 Site Survey

The topography of the site, inclusive of the area of debris fill will be made following site investigation activities. The site survey will be used in engineering evaluations completed as part of the feasibility analysis and remedial action plans.

5 ADDITIONAL FIELD PROCEDURES

Standard field methods and procedures are described in the Trust's Standard Operating Procedures ("SOPs") included in the QAPP. The SOPs include the methods and procedures for collecting soil samples, surveying sample locations, sample preservation and transportation, and general equipment decontamination. Laboratory QA/QC procedures are also described in the QAPP and its Addendum.

5.1 Preparation for Field Work

EKI, in consultation with the Trust, and a representative of the DTSC, if present, will select locations in the field for trenches.

The Trust has notified Lendrum Court residents; a copy of the notification letter distributed on 22 August 2014 is included as Appendix B.

Prior to initiation of field activities, EKI will perform the following tasks:

- update its site-specific health and safety plan;

- request and review the results of Trust utility plans and Trust underground utility surveys;
- notify Underground Services Alert ("USA") of planned subsurface work at least 48 hours prior to the initiation of all subsurface work; and
- obtain necessary dig permits from the Trust.

The trenching contractor will rely upon available plans and utility maps provided by the Trust.

5.2 Surveying of Investigation Locations

The grid coordinates, potholes, and trench locations will be surveyed by a California licensed land surveyor. The ground surface elevation and the horizontal coordinates of each location will be surveyed. The horizontal coordinates will be reported in NAD 83. The vertical coordinates will be reported in both the North American Vertical Datum 88 ("NAVD 88") as well as 1907 Presidio Lower Low Water ("PLLW") vertical datum. Local benchmarks will be provided by the Trust. Survey data will be used to update maps, and to document sample locations, if collected. Survey data will also be used to prepare design figures, including extent of debris, building corners, sidewalks and utilities, surface topography, trees, and other features that will need to be considered during remedial design.

5.3 Management of Investigation-Derived Wastes

Layers of soil will be returned to the trench in the order that they were removed and wheel-rolled to compact. Potholes will be refilled with spoils and vegetation replaced, where practicable. No investigation-derived wastes are expected to be generated as a result of this investigation.

5.4 Analytical Methods

The analytical methods planned are generally the same as those conducted at the June 2013 Lendrum Court investigation and include the following:

- PAHs by EPA Method 8270C with selective ion monitoring ("SIM");
- Title 22 metals by EPA Method 6020; and,
- If ash is encountered in debris, up to 7 samples will be analyzed for dioxins and furans by EPA Method 1613B. Any debris and ash containing samples that are not analyzed for dioxins and furans will be stored at 4 degrees Celsius in the event that additional analysis is necessary.

Because lead was a key indicator of chemical impacts in the 2013 Lendrum Court investigation, samples defining the edge of debris will only be analyzed for lead as the edge confirmation samples.

5.5 Analytical Laboratory

Soil samples will be submitted to Curtis & Tompkins, Ltd. of Berkeley, California, ("Curtis & Tompkins") for sample preparation using the Incremental Sampling Methodology ("ISM") preparation protocol. In the ISM protocol, each sample is dried, mixed, and systematically split into subsamples; small samples from each increment are then collected and mixed to create the multi-increment sample used for analysis. Samples for TPH, metals, and PAHs will be analyzed by Curtis & Tompkins. After ISM preparation, any samples for dioxins will be sent to Vista Analytical Laboratory of El Dorado Hills, California. Both of these laboratories are certified by the State of California.

Sample handling and analysis will be in accordance with the Presidio QAPP, as amended, with a Level II data report. All samples will be analyzed on a standard turnaround time.

6 SCHEDULE FOR IMPLEMENTATION OF THE SAMPLING PLAN

Field work will commence upon DTSC approval of this Additional Sampling Workplan. EKI estimates that approximately two weeks will be required to obtain permits, prepare work authorizations for contractors, mark the sampling locations, and conduct the underground utility surveys. Implementation of this Additional Sampling Workplan is anticipated to require approximately three weeks, which includes some time for vegetation removal and inspecting the site after the vegetation is removed. The results of the investigation will be presented to DTSC in an Additional Sampling Summary Report.

7 REFERENCES

DTSC, 2013a. Letter from George Chow to Ms. Eileen Fanelli of the Presidio Trust dated 19 February 2013, requesting preparation of a Preliminary Endangerment Assessment for Lendrum Court.

DTSC, 2013b. Letter from George Chow to Ms. Eileen Fanelli of the Presidio Trust dated 13 June 2013, approval of the *Preliminary Endangerment Assessment Workplan, Presidio of San Francisco, California* dated May 2013.

DTSC, 2014a. Letter from George Chow to Ms. Eileen Fanelli of the Presidio Trust dated 7 March 2014, approval of the *Final Lendrum Court Investigation Summary Report and Screening Risk Evaluation,* dated 28 February 2014.

DTSC, 2014b. Letter from George Chow to Ms. Eileen Fanelli of the Presidio Trust dated 24 July 2014, concurrence with the *Final North Fort Scott Investigation Summary Report,* dated 8 July 2014.

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TABLE 1
Historic Maps and Aerial Photos Reviewed to Develop Lendrum Court, Armistead Road, Hoffman Street, and Ramsel Court Site-Use History

Lendrum Court

Presidio Trust, San Francisco, California

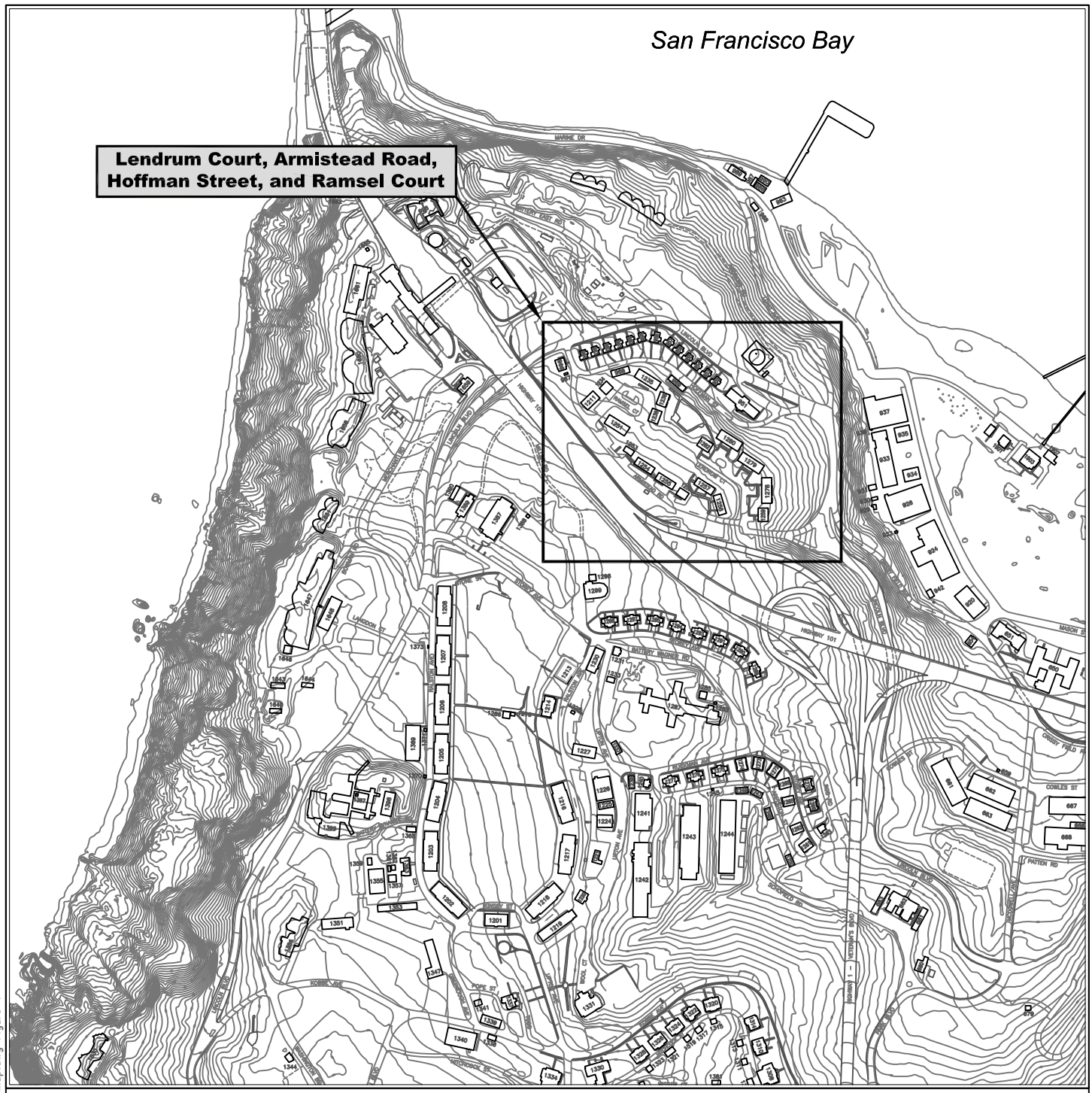
Date	Document Type	Description
1871	Map	1871 map shows a large cloud labeled "drifting sands" to the south of the present-day Lendrum Court, Armistead Road, and Ramsel Court area.
December 1921	Map	1921 map shows an incinerator located near the present-day Lendrum Court, Armistead Road, and Ramsel Court area. Coal shed and 80,000 gal reservoir also shown, with YMCA directly west of Lendrum Court, north of current Building 1208.
November 30, 1922	Photo	1922 aerial photo shows a coal shed near the future Lendrum Court area, with possible incinerator in the background. Current Building 1208 is present in foreground.
April 12, 1929	Photo	1929 aerial photo shows a coal shed near the future Lendrum Court area, with possible incinerator in the background. Building 968 is located along Hoffman Street on the left-hand side of the picture. Fill material appears to have been placed southwest (to the right) of Building 951. Reservoir visible. YMCA visible near track.
January 10, 1932	Photo	1932 aerial photo shows a coal shed near the future Lendrum Court area. No evidence of incinerator. The area of fill identified in the 1929 aerial photo is covered in vegetation. Reservoir and Aboveground Storage Tank 970 visible. An unidentified structure is located east (above and to the right) of Building 968. YMCA visible near track.
January 1934	Photo	1934 aerial photo shows that coal shed near the future Lendrum Court area has been removed, and replaced by Storey Avenue houses. Reservoir visible. YMCA previously near track removed.
1936	Photo	1936 aerial photo shows the future Lendrum Court Area and Armistead Road and Ramsel Court Area from directly above. Highway 101 is under construction and significant ground disturbance is seen alongside the future Highway 101. Outline of reservoir appears overgrown. A portion of the former Fuel Oil Distribution Pipeline passes underneath Highway 101 and cuts through the future Lendrum Court area heading northeast towards Building 951. A tennis court is visible to the south of Building 969.
March 28, 1936	Photo	1936 aerial photo shows the future Lendrum Court Area and Armistead Road and Ramsel Court Area from above. Hwy 101 access to Golden Gate Bridge has been constructed. Outline of reservoir appears overgrown. Trees appear to have been planted in the Armistead Road and Ramsel Court Area.
January 8, 1938	Photo	1938 aerial photo shows the future Lendrum Court Area and Armistead Road and Ramsel Court Area from directly above. Highway 101 is in use. A tennis court is visible south of Building 969. Outline of reservoir appears overgrown.
January 24, 1939	Photo	1939 aerial photo shows the future Lendrum Court Area and Armistead Road and Ramsel Court Area. Highway 101 has been constructed. Trees are visible in the Armistead Road and Ramsel Court Area.

TABLE 1
Historic Maps and Aerial Photos Reviewed to Develop Lendrum Court, Armistead Road, Hoffman Street, and Ramsel Court Site-Use History

Lendrum Court

Presidio Trust, San Francisco, California

Date	Document Type	Description
January 24, 1939	Photo	1939 aerial photo shows the future Lendrum Court Area and Armistead Road and Ramsel Court Area from directly above. Highway 101 is in use. A tennis court is visible south of Building 969. Trees are visible in the Armistead Road and Ramsel Court Area.
January 24, 1939	Photo	Oblique 1939 aerial photo shows the future Lendrum Court Area and Armistead Road and Ramsel Court Area. Highway 101 is in use. A tennis court is visible south of Building 969. Trees are visible in the Armistead Road and Ramsel Court Area.
July 28, 1946	Photo	Aerial photo showing the future Lendrum Court Area and Ramsel Court Area. Entrance and exit ramps to Highway 101 have been constructed. The approximate location of the former incinerator is shown on the figure. A tennis court is visible south of Building 969. Trees are present in the Armistead Road and Ramsel Court Area.
1940 to 1965	Maps	Four maps, dated May 29, 1940, October 10, 1958, December 8, 1961, and November 10, 1965 were reviewed. No changes were noted. Maps not reproduced in Appendix.
May 20, 1969	Map	1969 map shows planned Lendrum Court Area as "under construction" for 1970.
March 24, 1975	Map	1975 map shows Lendrum Court Area construction finished.
Aerial Photo Used in to Overlay Locations of Existing Buildings		
July 31, 1938	Photo	1938 aerial photo shows the future Lendrum Court Area and Armistead Road and Ramsel Court Area from directly above.
July 31, 1938	Photo	1938 aerial photo shows the future Lendrum Court Area and Armistead Road and Ramsel Court Area from directly above. Google Earth was used to overlay 3-dimensional images of the present day buildings (and building numbers) on the July 1938 aerial photo (for several buildings, only the outline is visible). Buildings 1278 and 1279 appear to be located on the edge of the fill material noted in the 1929 aerial photo. Building 1259 intersects a former dirt road. Building 1282 appears to be in the location of the former 80,000 gallon reservoir. Buildings 1257 and 1258 appear to be located slightly northeast of the materials disturbed during construction of Highway 101 and Buildings 1253 through 1256 appear to be located at the edge of these disturbed materials. A portion of the former Fuel Oil Distribution System pipeline passes underneath Highway 101, Buildings 1255 and 1282, and between Building 951 and Building 952.



Reference: Basemap source: Presidio Trust, 2006.

Note:

1. All locations are approximate.

N

0 600 1200

(Approximate Scale in Feet)

Erler & Kalinowski, Inc.

Site Location Map

North Fort Scott Area
The Presidio Trust
San Francisco, CA

August 2014
EKI B00025.07

Figure 1

20140825.10544163 G:\B00025.07\2014-08\Figure 1 - Site Location Map.dwg Figure 1

N

0 100 200

(Approximate Scale in Feet)

Legend:

1253 Building with Building Number

Notes:

1. All locations are approximate.
2. Aerial photo source: Google Earth Pro, 1938 Aerial Photograph.
3. Overlay of existing buildings from Google Earth Pro and Presidio Trust 2011 Basemap (See Note 3 on Figure 3).

Erler & Kalinowski, Inc.

Overlay of Existing Buildings on 1938 Aerial Photograph

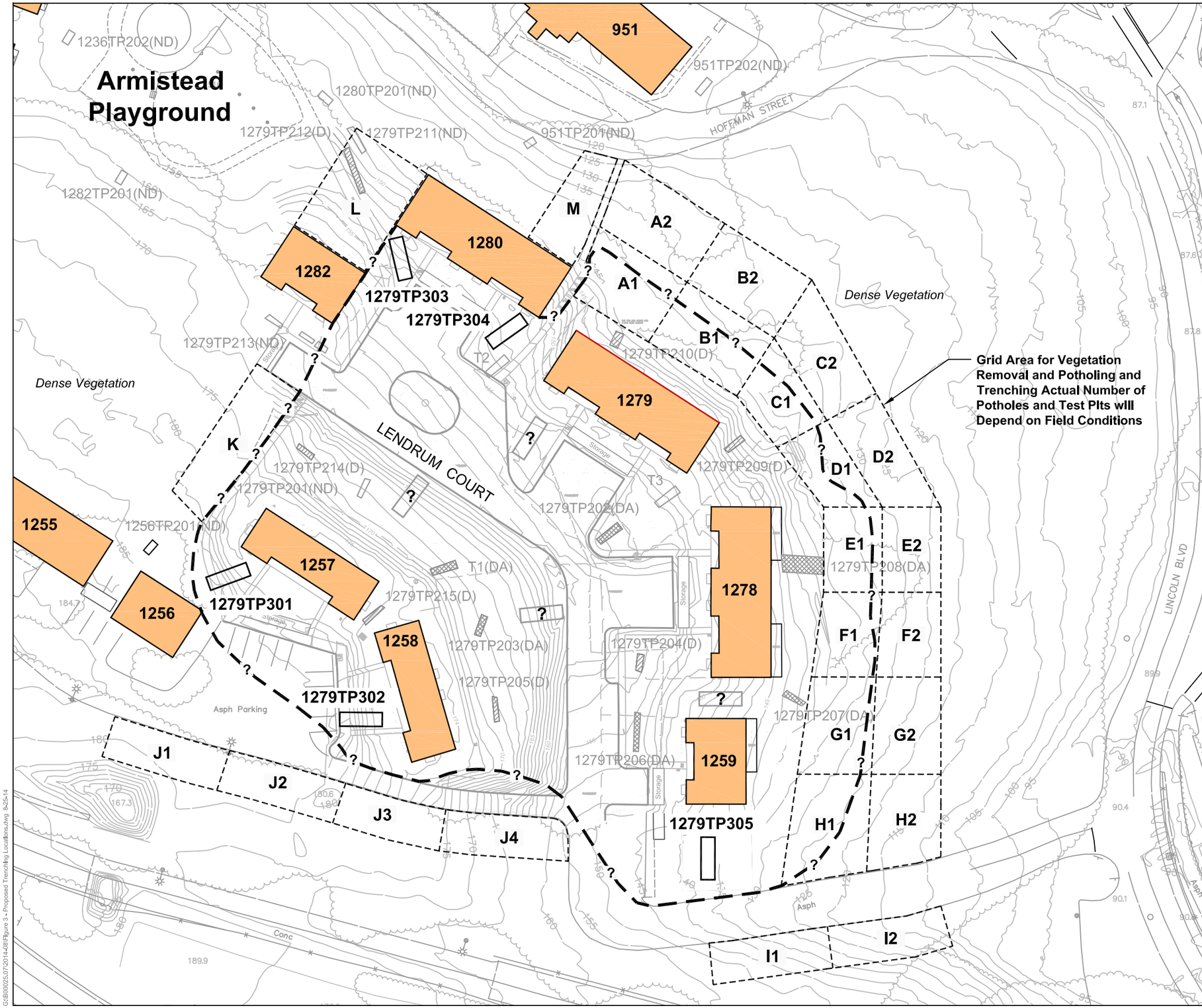
North Fort Scott Area

The Presidio Trust
San Francisco, CA

August 2014
EKI B00025.07

Figure 2

C:\B00025.07\2014-08\Figure 2 - Overlay of Existing Buildings.dwg 8-25-14



N

0 60 120

(Approximate Scale in Feet)

Legend:

- 964 — Building with Building Number
- 85 — Existing Contour
- Obscured Areas
- 1279TP301 — Proposed Trench Locations, "?" if Tentative (Not to Scale)
- ? — Estimated Extent of Debris Fill
- A1 — Grid Area with Grid Number

Existing Exploratory Trenches at Lendrum Court

- (ND) No Debris or Ash Observed
- (D) Debris Observed
- (DA) Debris and Ash Observed

Notes:

1. All locations are approximate.
2. Lendrum Court Area: by PLS Surveys, Inc., dated 9 July 2013; California State Plane Coordinate NAD27.
3. Basemap Source: by Presidio Trust, dated 30 April 2011, California State Plane Coordinate NAD83.

Erler & Kalinowski, Inc.

Proposed Sampling Locations

Lendrum Court Area
The Presidio Trust
San Francisco, CA

August 2014
EKI B00025.07

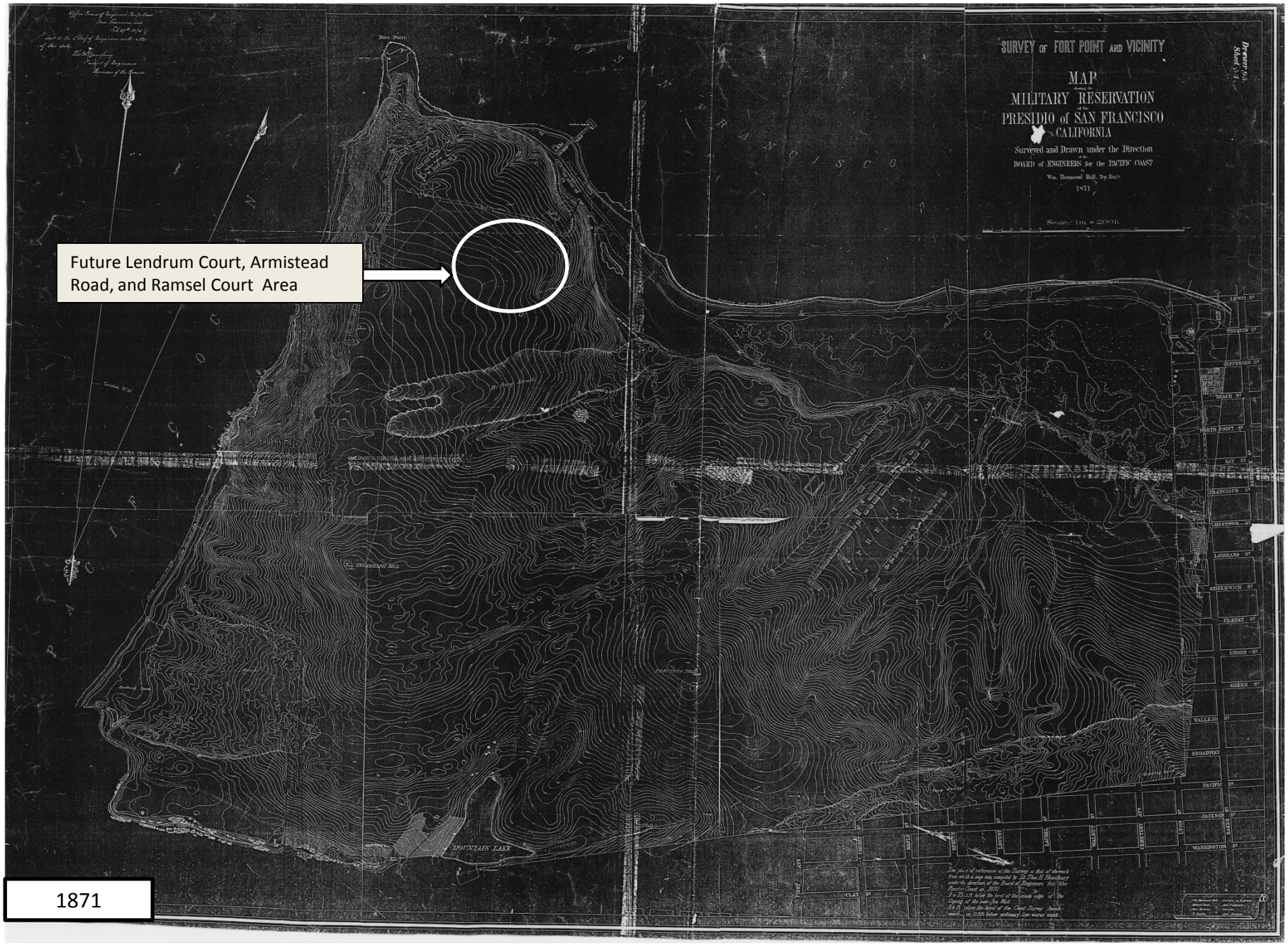
Figure 3

G:\B00025.07\2014-08\Figure 3 - Proposed Trenching Locations.dwg 8-25-14

Appendix A

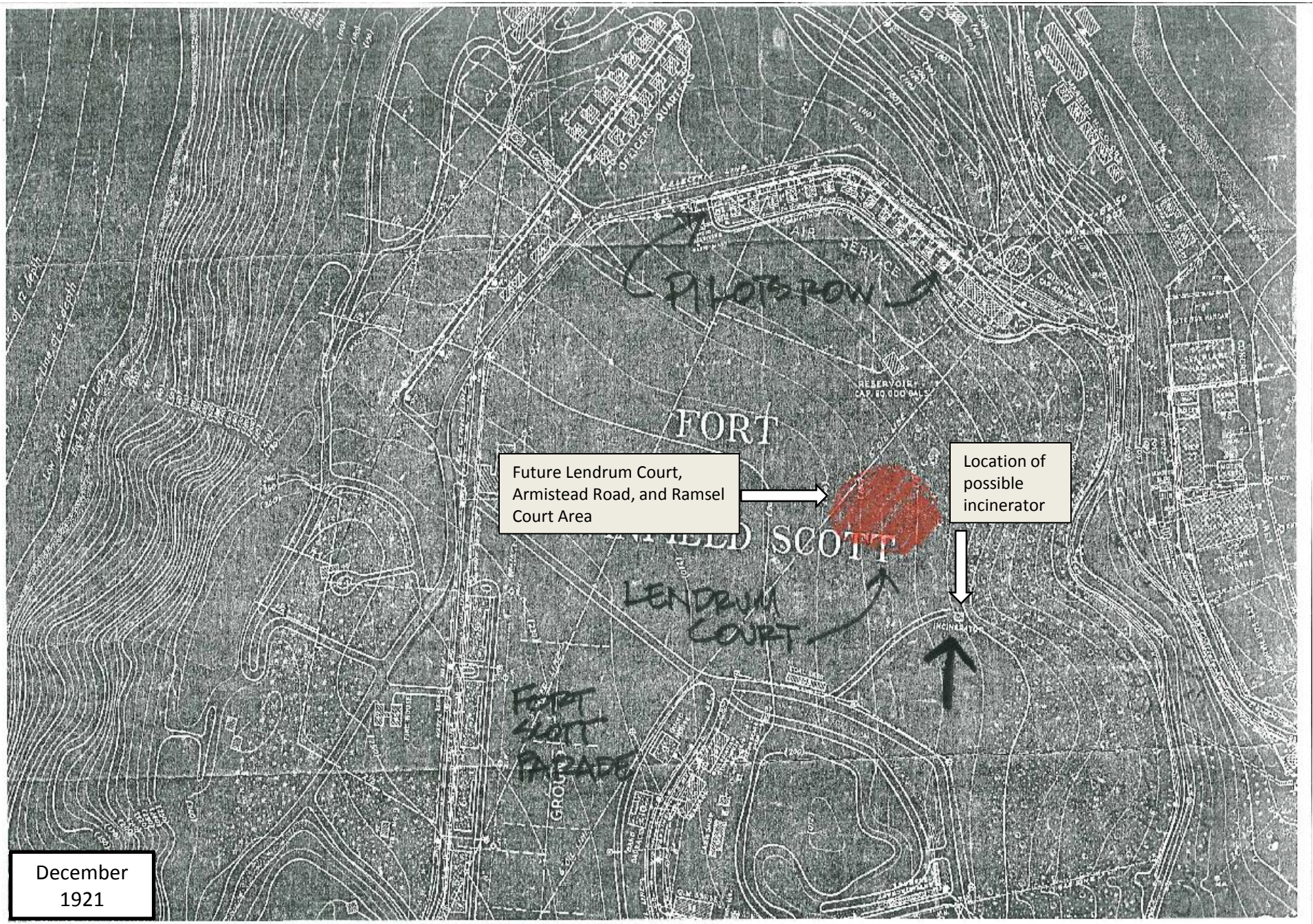
Copies of Reviewed Maps and Photos of Lendrum Court,

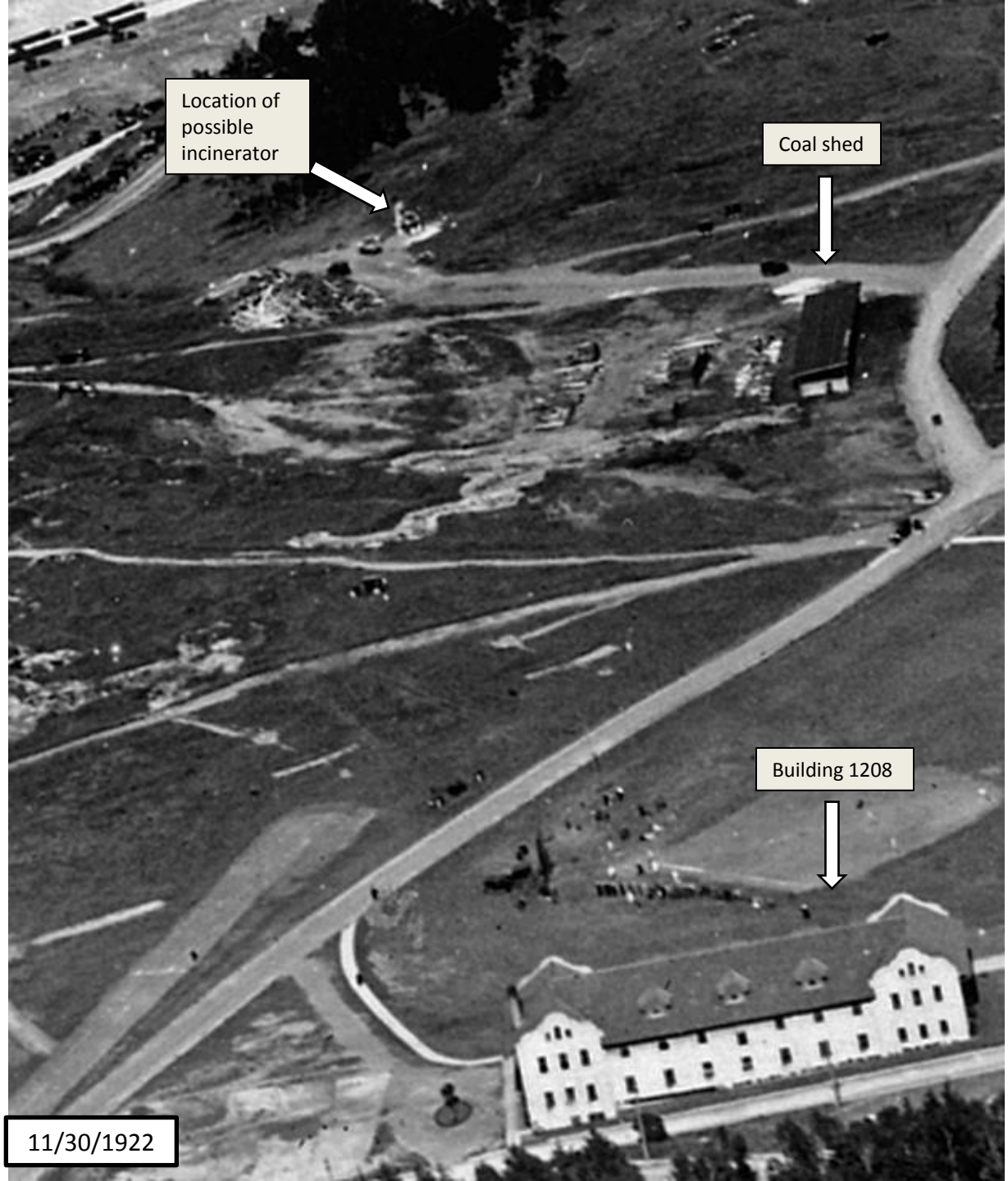
Armistead Road, and Ramsel Court

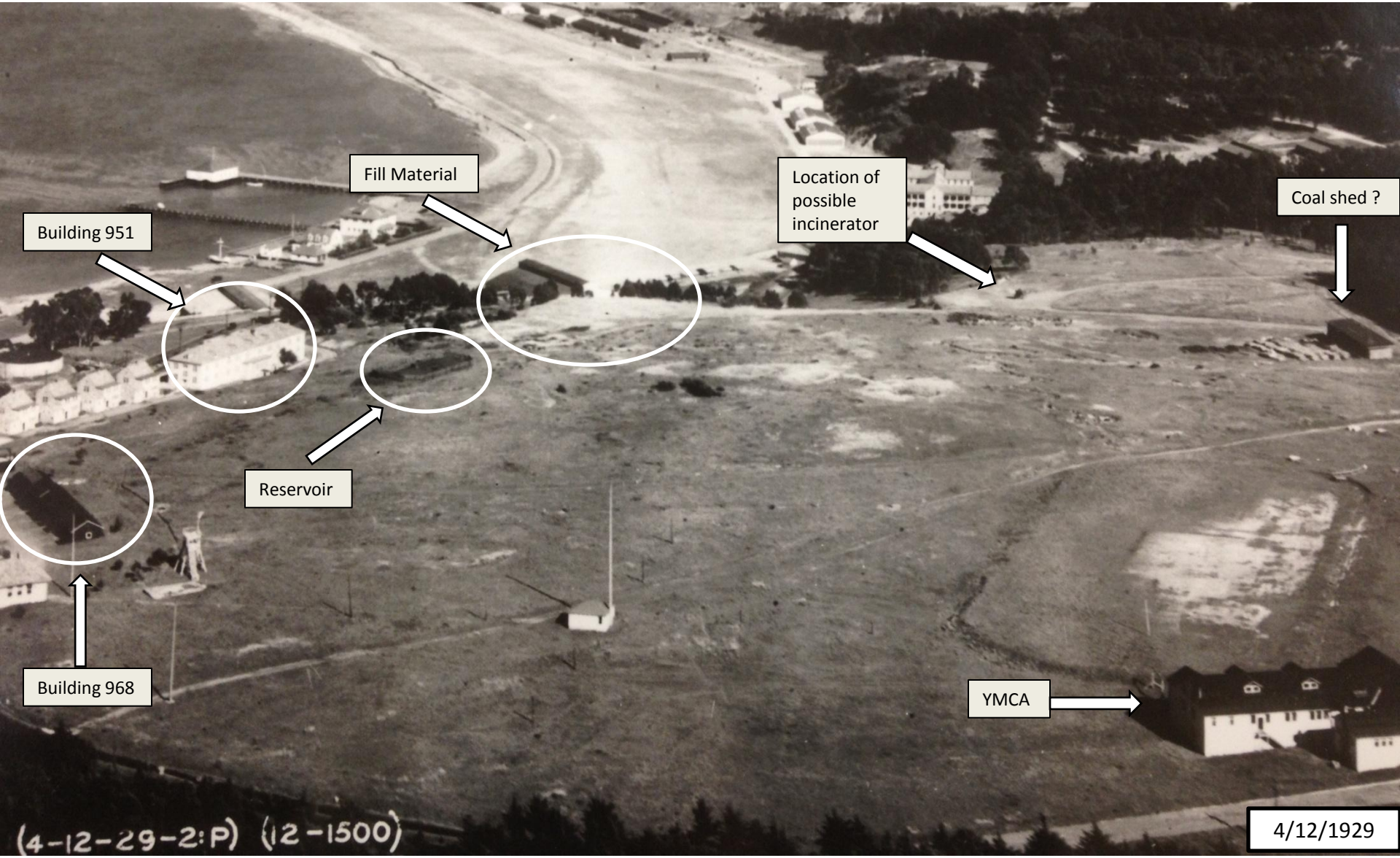


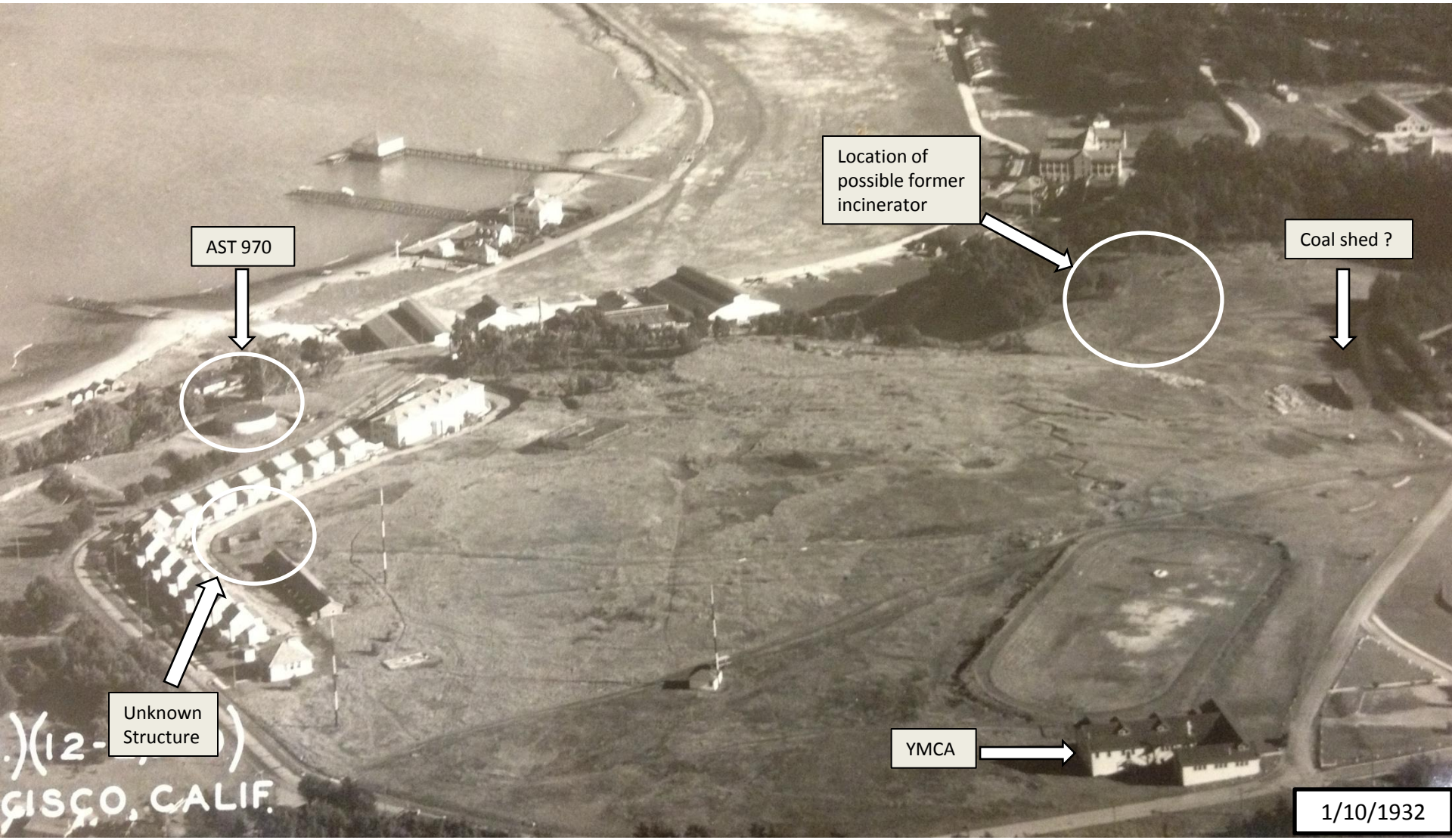
1871

Golden Gate NRA, Park Archives, Drawer 311 Folder 1


PILOTS ROW
FORT
Future Lendrum Court, Armistead Road, and Ramsel Court Area
Location of possible incinerator
LENDRUM COURT
FORT SCOTT PARADE
December 1921


Location of possible incinerator
Coal shed
Building 1208
11/30/1922


Fill Material
Location of possible incinerator
Coal shed ?
Building 951
Reservoir
Building 968
YMCA
(4-12-29-2:P) (12-1500)
4/12/1929

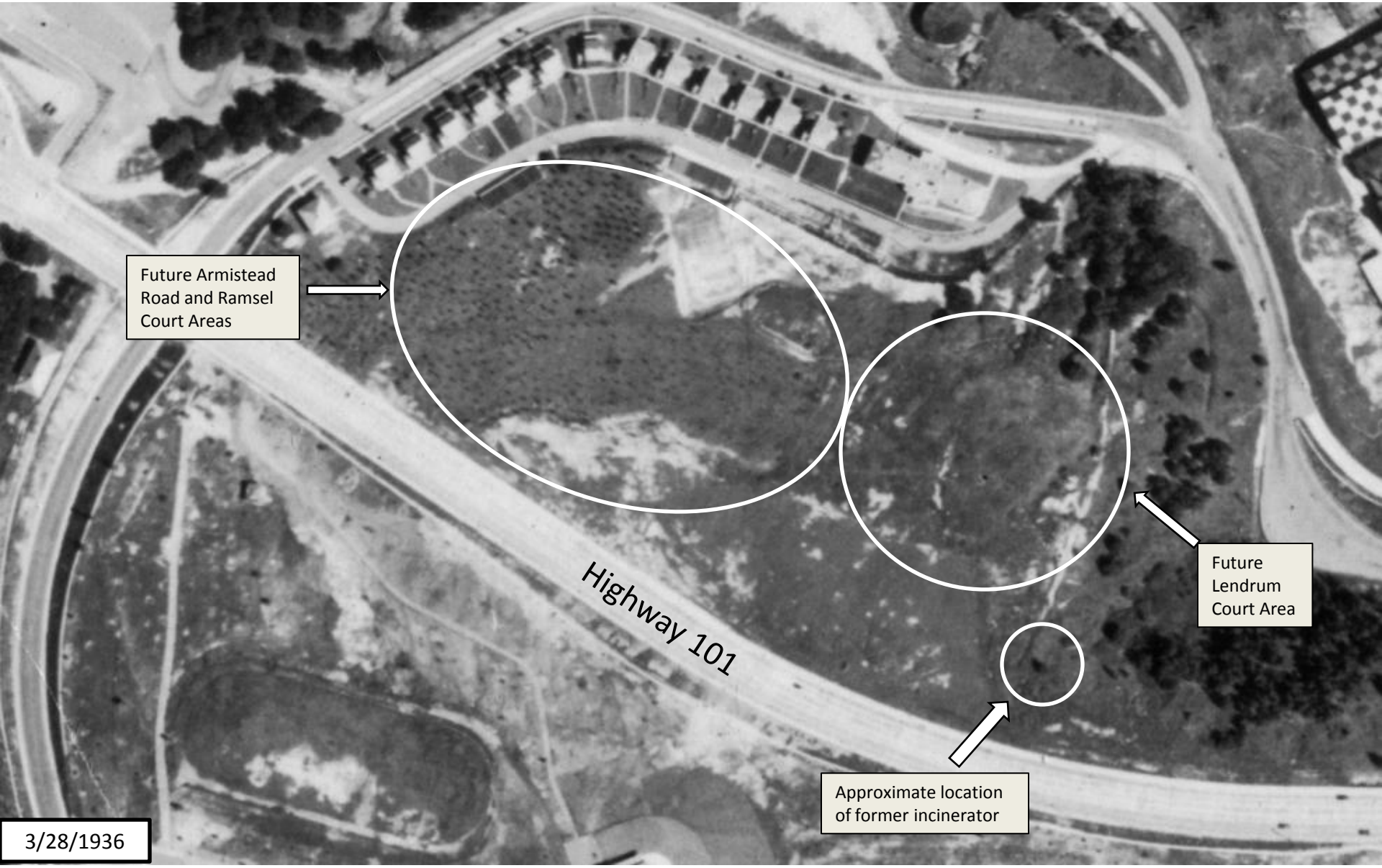

AST 970
Location of possible former incinerator
Coal shed ?
Unknown Structure
YMCA
1/10/1932

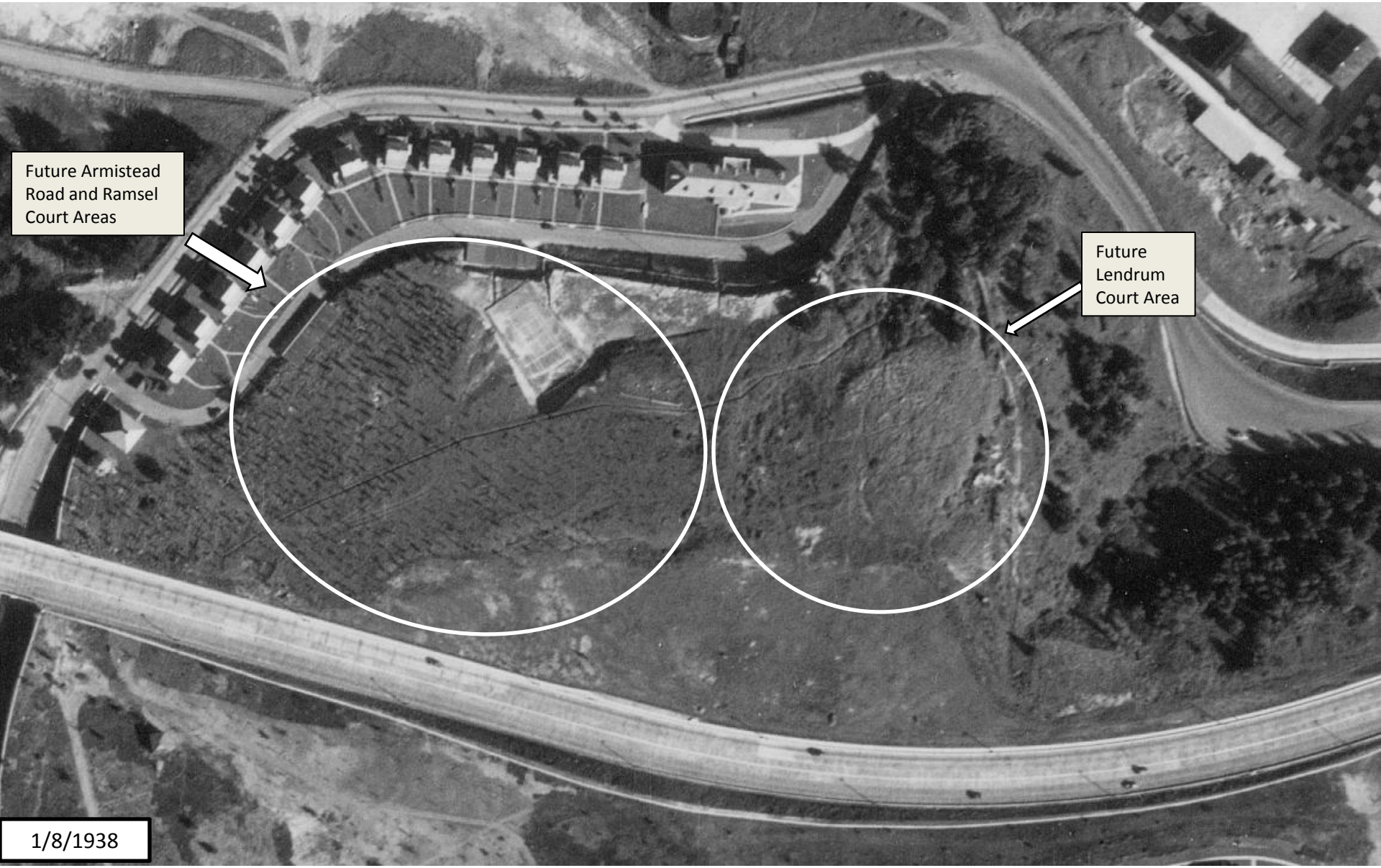
Location of former YMCA
2-1000 CRISSY FIELD SAN FRANCISCO, CALIF. (

Jan 1934

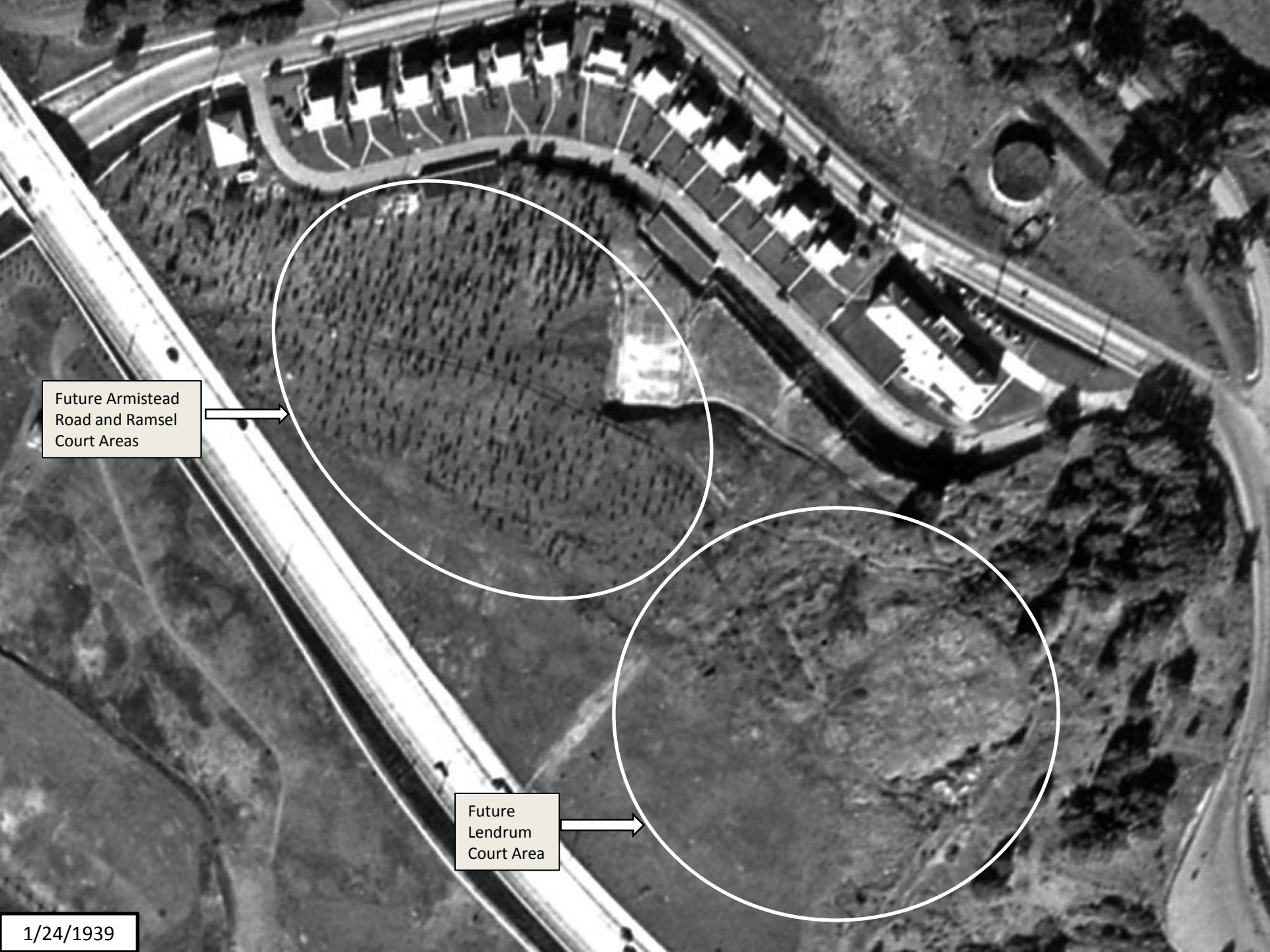
Building 969
Building 951
Tennis Courts
Future Armistead Road and Ramsel Court Areas
Future Highway 101
Pathway for Former Fuel Oil Distribution System Pipeline
Future Lendrum Court Area

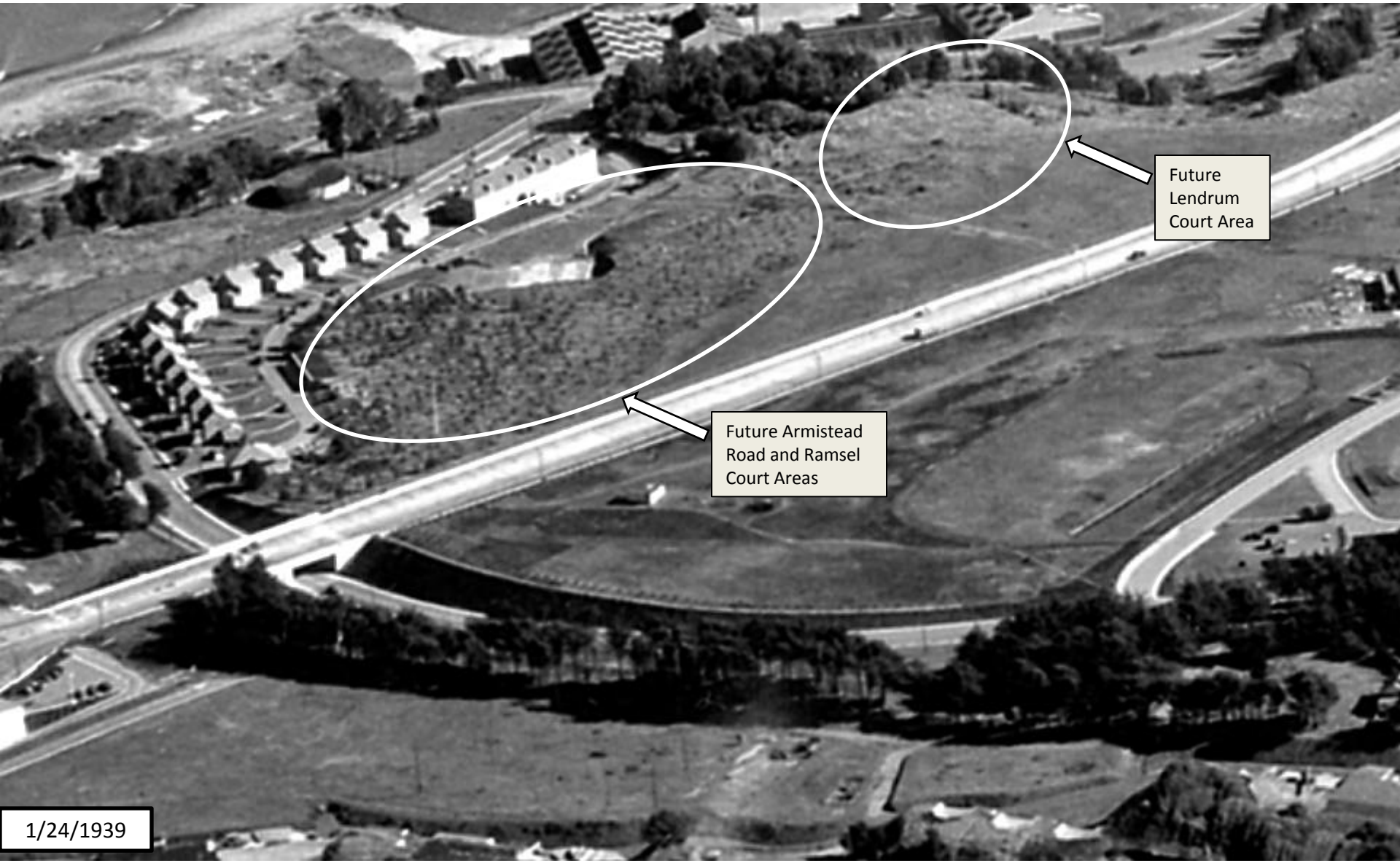
1936

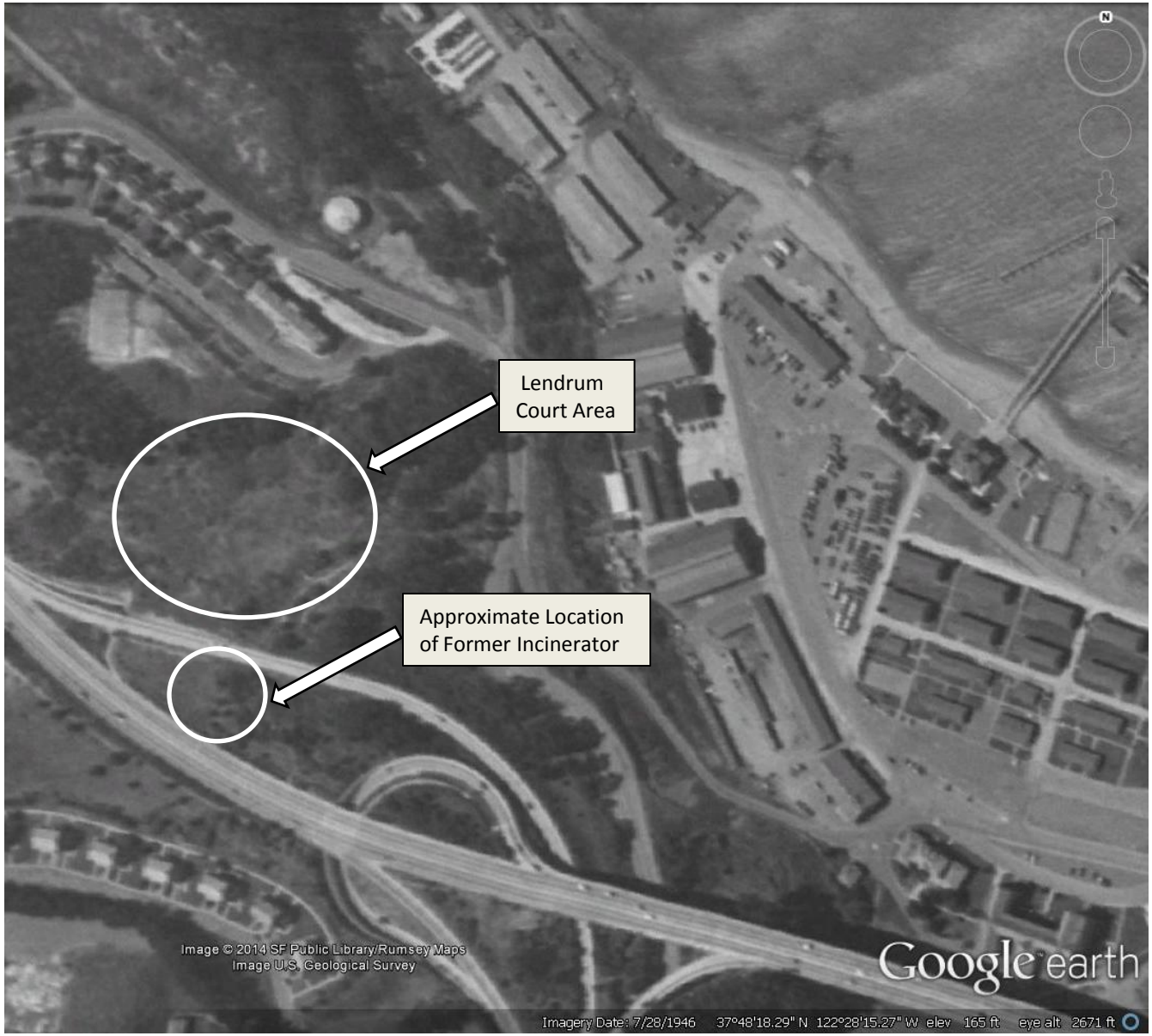

Future Armistead Road and Ramsel Court Areas
Highway 101
Future Lendrum Court Area
Approximate location of former incinerator
3/28/1936


Future Armistead Road and Ramsel Court Areas
Future Lendrum Court Area
1/8/1938

Future Armistead Road and Ramsel Court Areas
1/24/1939
Future Lendrum Court Area


Future Armistead Road and Ramsel Court Areas
Future Lendrum Court Area
1/24/1939


Future Lendrum Court Area
Future Armistead Road and Ramsel Court Areas
1/24/1939


Lendrum
Court Area
Approximate Location
of Former Incinerator
Image © 2014 SF Public Library/Rumsey Maps
Image U.S. Geological Survey
Google earth
Imagery Date: 7/28/1946 37°48'18.29" N 122°28'15.27" W elev 165 ft eye alt 2671 ft

1946

5/29/1969

Golden Gate NRA, Park Archives, Drawer 312 Folder 3

Golden Gate NRA, Park Archives Drawer 312 Folder 3 37-93

7/31/1938

7/31/1938 (with overlay of current Buildings)

Appendix B

Notice to Tenants Regarding Upcoming Work

dewitt, john

To: dewitt, john
Subject: FW: Lendrum Court - Second Phase of Soil Invesigation

From: Presidio Trust Resident Advisory [mailto:noreply=presidiotrust.gov@mail38.atl111.rsgsv.net] **On Behalf Of** Presidio Trust Resident Advisory
Sent: Friday, August 22, 2014 11:15 AM
To: Ostrander, Ann
Subject: Lendrum Court - Second Phase of Soil Invesigation

Is this email not displaying correctly? View it in your browser.

Dear North Fort Scott Residents,

Beginning September 2, 2014, under the Department of Toxic Substances Control's (DTSC) oversight, the Trust will be conducting a second phase of soil investigation within the Lendrum Court area of your neighborhood. The purpose of this investigation is to:

- find how widely the sub-surface debris is dispersed in the Lendrum Court area
- characterize potential contaminants of concern (COCs) associated with the debris
- collect data to evaluate possible clean-up alternatives.

During this time, multiple trenches will be excavated in front, behind, or between most of the buildings in Lendrum Court and on the hillside towards Lincoln Boulevard. Trenches will be backfilled on the same day they are excavated. A copy of the draft work plan is posted on the Trust's webpage: http://www.presidio.gov/about/Documents/2014_08_06_AdditionalSamplingPlanLendrumCourt.pdf

Work will include removal of selective shrubs and vegetation growing beneath the trees on the hill behind Buildings 1279, 1278, and 1259. The vegetation removal is necessary to provide access for site investigation work, including trenching and site survey. Larger trees will not be removed.

Work hours will be from 8:00 AM to 5:00 PM, Monday through Friday. It is expected that the work will be completed in 5 to 6 weeks. I will provide you a copy of the investigation findings when they are available. For your safety, the areas will be fenced off and I request that you stay out of these areas during non-work hours.

Please give me a call if you have any questions. You may also contact George Chow, DTSC Project Manager, by telephone at 510-540-3879 or by email at George.Chow@dtsc.ca.gov.

Thank you for your continued understanding and support during the investigative and clean-up process.

Sincerely,

Eileen Fanelli
Environmental Remediation Program Manager
Presidio Trust
efanelli@presidiotrust.gov
(415) 561-4259

c: Pilots' Row residents

You are receiving this email because you are a resident of the Presidio. If you unsubscribe you will no longer receive important updates about projects of interest to your household, including Doyle Drive and other activities. To unsubscribe click here.

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