CORNERSTONE EARTH GROUP

TYPE OF SERVICES	Hazardous Materials Assessment
LOCATION	San José International Airport San José, California
CLIENT	David J. Powers & Associates
PROJECT NUMBER	118-105-1
DATE	October 24, 2019

CORNERSTONE EARTH GROUP

Type of Services	**Hazardous Materials Assessment**
Location	**San José International Airport** **San José, California 95110**
Client	**David J. Powers & Associates**
Client Address	**1871 The Alameda, Suite 200** **San José, California 95126**
Project Number	**118-105-1**
Date	**October 24, 2019**

Prepared by

Stason I. Foster, P.E.
Senior Project Engineer

Ron L. Helm, C.E.G.
Senior Principal Geologist

Table of Contents

SECTION 1: INTRODUCTION 1
1.1 PROJECT BACKGROUND AND PURPOSE 1
1.2 SCOPE OF WORK 2
1.3 ASSUMPTIONS 2
SECTION 2: SITE DESCRIPTION 2
SECTION 3: SITE HISTORY REVIEW 3
SECTION 4: PHYSICAL SETTING 3
SECTION 5: HAZARDOUS MATERIALS USE AT THE AIRPORT 4
5.1 AVIATION FUEL STORAGE AND USE 8
5.1.1 Re-Fueling of Commercial and Cargo Aircraft: 9
5.1.1.1 Swissport Fueling Services 9
5.1.2 Re-Fueling of Privately Owned Aircraft: 10
5.1.2.1 AvBase San Jose, LLC 10
5.1.2.2 Atlantic Aviation 10
5.1.2.3 Signature Flight Support 11
5.2 OTHER HAZARDOUS MATERIALS AND HAZARDOUS WASTE 12
5.2.1 Vehicle Fueling and Maintenance 12
5.2.1.1 Fleet Maintenance Facility 12
5.2.1.2 Consolidated Rent-A-Car facility 12
5.2.2 Diesel Fueled Emergency Generators and Pumps 12
5.2.3 Underground Storage Tanks 14
5.2.4 Paint Shop 14
5.2.5 Aircraft and Vehicle Washing 15
5.2.6 Firefighting Foam Usage 16
5.2.7 Aircraft De-Icing Operations 17
5.2.8 Air Transport of Hazardous Materials 17
5.2.9 Hazardous Waste Generation 18
5.2.9.1 Aircraft Sanitary Service Operations 20
SECTION 6: SPILLS, LEAKS AND RESPONSE ACTIONS 20
6.1 SOIL AND GROUNDWATER CONTAMINATION 21
6.1.1 Open VCP Cases at Signature Flight Support 24
6.1.1.1 325 Martin Avenue 24
6.1.1.2 303 Martin Avenue 24
6.1.2 Potential Impacts from Off-Site Spill Incidents 25
6.1.2.1 Former FMC Corporation Facility - 1125 Coleman Avenue 25
6.1.2.2 Stanford Applied Engineering - 282 Brokaw Road 25
SECTION 7: HEALTH AND SAFETY PROGRAMS AND REGULATORY COMPLIANCE 25
7.1 CERCLA AND EPCRA 26
7.2 RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) 26
7.3 STATE, LOCAL AND OTHER FEDERAL REGULATIONS AND AGENCIES 26
7.3.1 Hazardous Materials and Hazardous Waste Management, and Public Disclosure 27
7.3.2 Worker Safety 28
7.3.3 Emergency Response 28
7.3.4 Storm Water Pollution Prevention 28
7.3.5 Fuel Storage Tanks 29

7.3.6 Hazardous Liquid Pipelines 29
7.3.7 Ground Transport of Hazardous Materials 29
7.3.8 Air Transport of Hazardous Materials 30
7.3.9 Hazardous Building Materials.....30
SECTION 8: CONCLUSIONS AND RECOMMENDATIONS 30
8.1 AGRICULTURAL USE.....31
8.2 SOIL AND GROUNDWATER IMPACTS.....31
8.2.1 Impacts from On-Site Releases 31
8.2.2 Impacts from Off-Site Releases 32
8.3 FACILITY CLOSURES 32
8.4 FIREFIGHTING FOAM USAGE 32
8.5 FORMER SEWAGE DISPOSAL AREA.....33
8.6 ASBESTOS, LEAD PAINT AND OTHER HAZARDOUS BUILDING MATERIALS 33
SECTION 9: LIMITATIONS 34

FIGURE 1 – VICINITY MAP
FIGURE 2 – SITE PLAN
FIGURE 3 – FACILITY-TENANT LOCATIONS
FIGURE 4 – FUEL STORAGE LOCATIONS
FIGURE 5 – WASH RACKS AND OIL-WATER SEPARATORS
FIGURE 6 – POTENTIAL IMPACTS TO SOIL OR GROUNDWATER

APPENDIX A – TABLE A1 AND APN MAPS
APPENDIX B – HISTORICAL AERIAL PHOTOGRAPHS

Type of Services	**Hazardous Materials Assessment**
Location	**San José International Airport** **San José, California 95110**

SECTION 1: INTRODUCTION

This report presents the results of the Hazardous Materials Assessment performed at the Norman Y. Mineta San José International Airport (the "Airport" or "Site") located in San José, California. The Site boundaries are shown on Figures 1 and 2. This work was performed for David J. Powers & Associates in accordance with our December 29, 2018 Agreement (Agreement).

1.1 PROJECT BACKGROUND AND PURPOSE

The City of San José (the "City"), as the Lead Agency, is preparing a Draft Environmental Impact Report (EIR) for a major amendment to the Airport Master Plan in compliance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines. The existing Airport Master Plan was adopted by the San José City Council in June 1997 following the certification of the 1997 Airport Master Plan EIR. The existing Airport Master Plan consists of a comprehensive and integrated package of improvements to airside and landside facilities at the Airport, such improved facilities having the design capacity to fully accommodate the 2027 forecast demand for air passenger, air cargo, and general aviation services in a comfortable and efficient manner. The proposed amendment to the Airport Master Plan would: 1) extend the horizon year and demand forecasts from 2027 to 2037; 2) incorporate the set of airfield configuration changes recommended in the Runway Incursion Mitigation/Design Standards Analysis Study; and 3) update the layout and sizing of various landside facilities to adequately serve the projected 2037 demand.

Subsequent to the certification of the EIR and approval of the Airport Master Plan in 1997, most of the capital improvement projects have been constructed. The remaining Airport Master Plan capital projects include several taxiway upgrades/extensions, new air cargo facilities on the east side of the Airport, construction of the South Concourse of Terminal B, upgrades and expansion of various support facilities (*e.g.*, maintenance, flight kitchen, etc.), and the buildout of general aviation facilities on the west side of the Airport. The proposed amendment to the Airport Master Plan would update the layout and sizing of many of the yet-to-be constructed landside facilities to adequately serve the projected 2037 demand.

This Hazardous Materials Assessment was prepared to assist in updating the Hazardous Materials Section of the EIR that initially was prepared in 1997. In addition to other related topics, this assessment includes an evaluation of the existing uses and storage of hazardous materials at the Airport and the generation of hazardous waste; and describes locations on the Airport where there is known or suspected contamination and the status of remediation efforts.

1.2 SCOPE OF WORK

As presented in our Agreement, the scope of work performed for this Hazardous Materials Assessment included the following:

- Review of readily available information regarding current hazardous materials use and storage at the Airport. The main data sources included existing Hazardous Materials Business Plans (HMBPs); Spill Prevention, Control, and Countermeasure (SPCC) plans; and Storm Water Pollution Prevention Plans (SWPPPs) that have been prepared for the Airport and on-Site tenants.

- A cursory review of readily available files for selected Airport facilities and on-Site tenants at the Santa Clara County Department of Environmental Health (DEH), the local agency responsible for implementing California's Unified Hazardous Waste and Hazardous Materials Management regulatory program (Unified Program).

- Acquisition and review of a regulatory agency database report of public records for the general area of the Site to evaluate potential impacts to the Site from reported contamination incidents on-Site and at nearby facilities.

- Review of information regarding past on-Site and nearby spill incidents that currently are or historically were subject to oversight by the DEH, Water Board and/or the California Department of Toxic Substances Control (DTSC).

- Review of readily available maps and historical aerial photographs to help evaluate past and current Site uses.

- Preparation of a written report summarizing our findings and conclusions.

The limitations for the Hazardous Materials Assessment are presented in Section 9.

1.3 ASSUMPTIONS

In preparing this Hazardous Materials Assessment, Cornerstone assumed that all information received from the Airport and other parties is true and accurate. In addition, we assumed that all records obtained, such as regulatory agency databases, maps, related documents and environmental reports prepared by others are accurate and complete. We also assumed that the boundaries of the Site, based on information provided by David J. Powers & Associates, are as shown on Figure 2. We have not independently verified the accuracy or completeness of any data received.

SECTION 2: SITE DESCRIPTION

The Airport is owned and operated by the City and has been in operation since 1945. The Airport occupies approximately 1,050 acres generally bounded by Highway 101 to the north, Highway 880 to the south, the Guadalupe River to the east, and Coleman Avenue to the west. The Airport property consists of multiple parcels and addresses. Table A1 (in Appendix A) provides a summary of the various on-Site parcels, and corresponding addresses and occupants/tenants. Assessor's parcel maps also are attached in Appendix A. The information in Table A1 was compiled based predominantly on data obtained from the Santa Clara County Assessor's Office and information supplied by the Airport. Supplemental information also was

obtained from other data sources researched during this study. The primary Airport and tenant facility locations are shown on Figure 3.

SECTION 3: SITE HISTORY REVIEW

To evaluate the Site history, we reviewed aerial photographs dated between 1939 and 2016 obtained from Environmental Data Recourses (EDR) of Shelton, Connecticut. Copies of the aerial photographs reviewed are presented in Appendix B. Historical topographic maps also were reviewed online.

Based on the aerial photographs, the Site historically consisted mainly of agricultural land (orchards and row crops) with multiple widely spaced residences, many of which had associated outbuildings such as sheds and barns. The Guadalupe River formerly traversed portions of the Site.

By 1948, a runway and associated airport facilities were constructed on the southeastern portion of the Site. The 1948 aerial photograph also shows earthwork activities on the northwestern portion of the Site (on APN 230-03-101, -102 and -074) and on topographic maps from the 1950s this area is labeled as “sewage disposal.” The aerial photographs and topographic maps show what appears to have been a sewage treatment plant located nearby (off-Site) at the intersection of Robert Avenue and De La Cruze Boulevard in the City of Santa Clara. The on-Site earthwork appears likely to have been associated with sludge drying or disposal activities; this area is depicted on Figure 6.

During the 1950s and 1960s, a gradual expansion of airport facilities is apparent, along with a corresponding decrease in agricultural land. By the early 1960s, a second runway was added and the Guadalupe River was realigned so that it no longer traversed the Site. The former Terminal C building was constructed on the northeast side of the Airport by 1968. A third runway was added by the early 1970s for general aviation of the southwest side of the Site. Between the 1970s and the present, the Airport was gradually expanded including facilities along both the northeast and southwest sides of the Site. The expansion activities included the construction of new facilities, as well as the demolition or replacement of older facilities/structures.

SECTION 4: PHYSICAL SETTING

We reviewed readily available geologic and hydrogeologic information to evaluate the likelihood that chemicals of concern released on a nearby property could pose a significant threat to the Site and/or its intended use.

USGS 7.5 minute topographic maps were reviewed to evaluate the physical setting of the Site. The Site’s elevation ranges from approximately 35 to 60 feet above mean sea level; topography in the vicinity of the Site slopes downward gently to the northwest towards the San Francisco Bay.

Based on our experience and information presented in the California Geotracker database pertaining to the Site and nearby properties, the shallow groundwater beneath the Site typically has been reported at depths of approximately 7 to 20 feet. Groundwater likely flows generally toward the north; northeasterly and northwesterly flow directions also have been reported at on-Site locations.

SECTION 5: HAZARDOUS MATERIALS USE AT THE AIRPORT

The operation of the Airport involves the storage, use and transport of hazardous materials and the generation of hazardous wastes. Hazardous materials are transported to and from the Airport by pipeline and ground vehicles, as well as by passenger and all-cargo aircraft. The largest quantity of hazardous material used at the Airport is aviation fuel, which is consumed in operations and, therefore, generates minimum hazardous waste. In addition to aircraft refueling, industrial operations at the Airport include commercial and private airplane maintenance and cleaning, ground vehicle and equipment maintenance and cleaning, building and grounds maintenance, and material storage and transfer areas. These operations may additionally involve the use and storage of hazardous materials and the generation of hazardous waste. Facilities on the Airport are operated by both the Airport and Airport tenants.

The discussion in this section is based mainly on Hazardous Materials Business Plans (HMBPs), Spill Prevention, Control, and Countermeasure (SPCC) plans, and Storm Water Pollution Prevention Plans (SWPPPs) that have been prepared for the Airport and/or on-Site tenants, as well as other information provided by the Airport. A summary of the predominant Airport-operated facilities and tenant facilities at which hazardous materials are used/stored or hazardous wastes are generated is presented in Table 1. Further discussion is provided in the following sections.

Table 1. Summary of Hazardous Materials Storage and Waste Generation

Facility Name and Address	Hazardous Materials Storage Summary	Hazardous Wastes Generation Summary
MPOE Generator (south main point of entry) 1203 Airport Boulevard	Diesel aboveground storage tank (AST) for emergency generator	
Ground Support Equipment Wash Rack 1207 Airport Boulevard	Propane AST	
American Airlines Hangar* 1253 Airport Boulevard[1]	Oils/lubricants (5 gallon and smaller containers) along with de-icing fluid and various other miscellaneous maintenance related materials.	Used oil, oil filters, contaminated adsorbent, batteries, antifreeze and aerosols stored in drums and smaller containers.
Multi-Tenant Hangar: UPS, Alaska, JetPro* 1277 Airport Boulevard[2]	Alaska Airlines: Oil, antifreeze and de-icing fluid stored in drums and smaller containers. JetPro: ZEP degreaser in a drum.	Alaska: Used oil, jet fuel, aerosol cans, spent batteries, spent de-icing fluid and oily debris stored in drums. Universal wastes also generated. JetPro: Used oil, oil filters and antifreeze. UPS: Used oil, waste jet fuel and damaged package wastes stored in drums
Airport Sign Shop 1311-B Airport Boulevard	Inks, alcohols, lubricants, spray paint, propane and gasoline (in small containers - typically 1 to 5 gallon capacity)	Waste printer ink
Hazardous Waste Accumulation Area 1311-C Airport Boulevard		Used oil, antifreeze, absorbent, aerosol cans, latex paint, waste corrosives and acids, and universal wastes (stored in drums and smaller containers)
SJPD Airport Division (Old Bldg.) 1387 Airport Boulevard	Diesel in ASTs for emergency generators	
Fleet Maintenance/Paint Shop 1395 Airport Boulevard	Two underground storage tanks (USTs) containing gasoline and diesel. Propane, paint related products, oils, antifreeze, transmission fluid (stored in drums, ASTs and/or other containers). Compressed gasses (acetylene, oxygen and argon) also are stored.	Used oil, antifreeze and contaminated absorbent (stored in ASTs and drums)
Airport Facilities 1401 Airport Boulevard	Grounds and facility maintenance chemicals and propane	
SJ Fire Station #20 1433 Airport Boulevard	Fire Fighting Agents (Aqueous Film-Forming Foam [AFFF[3]] concentrate, Purple-K, and Halotron) stored in ASTs and drums. Diesel in ASTs for emergency generators.	
Southwest Airlines Cargo* 1521 Airport Boulevard	Propane cylinders	
Terminal B - Daily Lot 4 1639 Airport Boulevard	Propane AST	

Continued.

Table 1. Continued

Facility Name and Address	Hazardous Materials Storage Summary	Hazardous Wastes Generation Summary
Consolidated Rent-A-Car facility (CONRAC)* 1659 Airport Boulevard	Three USTs contain gasoline. Diesel AST for emergency generator. Motor oil, car wash detergents and window wash fluid stored in drums and/or ASTs. AFFF is stored in an ASTs	Used oil (stored in ASTs), used oil filters (stored in drums)
Terminal B-Hourly Lot 5 1661 Airport Boulevard	Diesel AST for emergency generator	
Terminal B 1701 Airport Boulevard	Diesel in ASTs for emergency generators	
Alaska Airlines Ramp/Terminal Facility* 1701 Airport Boulevard	De-icing fluid (propylene glycol) stored in an AST. Gasoline and diesel (storage method not described). Lead-acid batteries for ground support equipment.	
Southwest Airlines Ramp/Terminal Facility* 1701 Airport Boulevard		Used absorbent stored in drums.
Central Plant 2055 Airport Boulevard	Water treatment chemicals, refrigerants and compressed gasses (oxygen and nitrogen).	
Terminal A Parking Garage 2075 Airport Boulevard	Diesel AST for fire water pumps	
Terminal A 2077 Airport Boulevard	Diesel stored in one UST and in ASTs for emergency generators	
American Airlines Ramp/Terminal Facility* 2077 Airport Boulevard	Lead-acid batteries in ground equipment, de-icing fluid in tote, and miscellaneous lubricants and other materials in 1-gallon and smaller containers.	Used absorbent
United Airlines Ramp/Terminal Facility* 2077 Airport Boulevard		Used absorbent and universal wastes. Biohazard waste (if needed).
Delta Airlines Ramp/Terminal Facility* 2077 Airport Boulevard	De-icing fluid (propylene glycol) stored in drums and tank wagon.	Used oil, filters and absorbent stored in drums
Rocky Pond Retention Basin Pump Station 2080 Airport Boulevard	Diesel ASTs for water pumps	
CNG Fueling Station* 2151 Airport Boulevard	Compressed Natural Gas (CNG) and diesel AST for emergency generator	
North Air Cargo/Switchgear 2201 Airport Boulevard	Diesel AST for emergency generator	
Swissport Fuel Dispensing Racks* 2201 Airport Boulevard	Diesel and Jet A stored in ASTs.	
Swissport Fueling Services* (Airside Maintenance Shop and Yard) 2341 Airport Boulevard	Oils/lubricants, antifreeze stored in drums and smaller containers. Jet A, diesel and gasoline in mobile tankers.	Used oil and filters stored in drums

Continued.

Table 1. Continued

Facility Name and Address	Hazardous Materials Storage Summary	Hazardous Wastes Generation Summary
Atlantic Aviation (formerly TWC)* 1162 Aviation Avenue		Used oil and waste fuel stored in drums
Hewlett Packard* 1210 Aviation Avenue	Oil, paint, safety kleen solvent, diesel and Jet A fuel (in quantities between 25 and 260 gallons). Aerosols and other miscellaneous materials, as well as AFFF also are stored.	Unknown
Atlantic Aviation* 1250 Aviation Avenue	Jet A fuel and Avgas in ASTs at tank farm. Oils, de-icing fluid and Prist® stored in drums and totes. AFFF also is present.	Used oil, absorbents, waste fuels, spent de-icing fluid, stored in drums.
General Aviation West 1128 Coleman Avenue		Used oil and oil filters, and oily debris (stored in drums)
AvBase* 1144 Coleman Avenue	Jet A fuel stored in an AST	Used oil, waste fuel, used filters and oily rags stored in drums
Airfield Electrical Lighting Vault 273 Martin Avenue	Diesel in ASTs for emergency generators	
FAA Airport Traffic Control Tower* 275 Martin Avenue	Diesel in AST for emergency generator	Unknown
Westside Parking Lot 325 Martin Avenue	Diesel AST for emergency generator	
Signature Flight Support Terminal Building and Hangars 1 through 6* 303, 313, 323, 333, 343, 353 and 363 Martin Avenue	Jet A fuel, Avgas, MoGas, and diesel in ASTs. Also 2-(2-Methoxyethoxy) ethanol (a fuel system icing inhibitor) is stored in drums. AFFF also is present.	Used oil, used antifreeze and waste fuels in drums.
Signature Flight Support Hangar 7 and Fuel Farm* 373, 383 and 393 Martin Avenue		
Swissport Fuel Farm* 2250 Seaboard Avenue	Jet A fuel and diesel in ASTs. AFFF also is stored in an AST. Motor oil is stored in 5 gallon containers.	Used motor oil and used filters are stored in drums

* Tenant-Operated Facility

1 Note that the County Assessor's Office identifies this parcel as 1277 Airport Boulevard.

2 Note that the County Assessor's Office identifies this parcel as 1311 Airport Boulevard.

3 Regulations pertaining to AFFF (including its constituents and associated wastes) currently are being promulgated by state and federal agencies. Some common constituents are considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200) and/or are regulated under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Discharge of wastewater and runoff containing AFFF on land or to surface water bodies can be subject to regulation under the Clean Water Act. The applicability of specific regulations may vary depending upon the constituents of the AFFF product.

5.1 AVIATION FUEL STORAGE AND USE

Aircraft fueling at the Airport occurs primarily at Commercial Gates, Cargo Handling Areas and at the Fixed Base Operators (FBOs) and General Aviation (GA) areas. On the northeast side of the Airport where commercial and cargo aircraft operate, Jet A fuel is conveyed to covered fuel reloading racks via a dedicated pipeline from a fuel tank farm located on the northeast side of Highway 101 (at 2250 Seaboard Avenue); these facilities area operated by Swissport Fueling, Inc. (Swissport). Mobile fuel tanker trucks then drive to individual aircraft positioned at each gate and refuel the aircraft through a flexible pipe connection. At the FBO and GA areas on the southwest side of the Airport, three main fueling operations take place. The FBOs AvBase, Atlantic Aviation and Signature Fight Support store their fuel in their own aboveground storage tanks (ASTs), which are re-loaded via incoming tanker trucks. Mobile on-Site fueling trucks then transfer fuel from the ASTs to aircraft.

Fueling activities conducted by Swissport, AvBase, Atlantic Aviation and Signature Fight Support are described in greater detail in the following sections. A summary of fuel storage at these facilities is presented in Table 2; the locations of these facilities are shown on Figure 4. Annual aviation fuel (aviation gasoline [Avgas] and Jet A fuel) consumption at the Airport for 2017 and 2018 is presented in Table 3.

Table 2. Aviation Fuel Storage

Facility/Operator	Tanks*	Type of Fuel	Total Capacity (gallons)
Swissport	110, 102, 103, PRT-1, PRT-2 and ST	Jet A	1,919,211
Atlantic Aviation	1, 2, 3 and 4	Jet A	80,000
	5	Avgas	15,000
AvBase	1	Jet A	20,000
Signature Flight Support	1, 2 and 3	Jet A	60,000
	4	Avgas	15,000
		Total	**2,109,211**

* Tank ID as indicated by the facility/operator (see discussion below for additional details).

Table 3. Annual Aviation Fuel Consumption

Type of Fuel	2017	2018	Percent Increase
Retail Avgas	64,383	69,744	8.3 %
Retail Jet A	11,817,158	11,665,226	-1.3 %
Contract Jet A	100,547,632	110,207,934	9.6 %
Total	**112,429,173**	**121,942,904**	**8.5 %**

5.1.1 Re-Fueling of Commercial and Cargo Aircraft:

5.1.1.1 Swissport Fueling Services

Operations at the Swissport Fueling Services facility include bulk product storage, pipeline product receipt, tank truck product receipt, refueler load area product dispensing and filter separator replacement. Swissport loads fueling trucks with Jet A fuel from the Fuel Reloading Racks located on the north end of the Airport and transfers this fuel to commercial aircraft located at Terminals A and B. Diesel fuel also is stored by Swissport for operation of an emergency generator and fire water pumps. Fuel storage capacity at the Swissport facility is summarized in Table 4.

Table 4. Swissport Fuel Storage Capacity

Tank ID (ASTs)	Location	Capacity	Product	Type of Secondary Containment
Tank-101	Tank Farm	633,685	Jet-A	Imperviously lined dike area
Tank-102	Tank Farm	635,597	Jet-A	Imperviously lined dike area
Tank-103	Tank Farm	644,879	Jet-A	Imperviously lined dike area
PRT-1	Tank Farm	1,500	Jet-A	Double walled construction
PRT-2	Airside Facility	550	Jet-A	Double walled construction
ST	Tank Farm	3,000	Jet-A	Double walled construction
Diesel Generator	Tank Farm	660	Diesel	Double walled construction
Diesel Fire Water Pumps-Tank Farm	Tank Farm	500	Diesel	Double walled construction
Diesel Fire Water Pumps-Airside	Airside Facility	300	Diesel	Double walled construction

All fuel storage at Swissport is contained in a secondary manner. The large vertical ASTs (Tanks 101, 102 and 103) are contained within an imperviously lined concrete dike area. All other tanks are secondarily contained through double walled construction.

There are three oil-water separators at the facility: OWS-1 and OWS-2 are located at the tank farm and OWS-3 is located at the airside load facility. OWS-1 collects drainage from the offload/load islands at the tank farm and has a 10,000 gallon product holding capacity. OWS-2 collects drainage from the tank dike areas and the pump pad at the tank farm and has a 6,000 gallon product holding capacity. OWS-3 collects drainage from the load islands and has a 15,000 gallon product holding capacity. The three oil water separators have internal gravity oil stop valves and a motor-controlled inlet valve that will automatically shut if a high level is sensed in the product holding chamber. The oil water separators provide secondary containment for the areas served. Containment curbing is present at both the load and offload areas and at the pump pad. This curbing will contain a discharge and route it to the corresponding oil-water separator.

The Swissport facility receives Jet A fuel from a Jet A pipeline; however, the fuel facility also can receive fuel from tanker trucks. Fuel receipt from tanker trucks is an operation that rarely occurs at this facility and typically would only occur in the event of an emergency. The dedicated Jet A pipeline originates at the Wickland Pipeline facility in San Jose and terminates at the Swissport facility. The pipeline normally operates at approximately 1,500 barrels per hour and 14 psi. All fuel received is metered, filtered and pumped directly into the ASTs. While transfers of Jet A

take place, communication between the pipeline operator and facility personnel is continuous. Actuation of any emergency fuel shutoff or overflow prevention device at the Swissport facility automatically closes the motor operated valve on the inbound fuel pipeline at the Swissport Facility; sends an alarm to the Wickland Pipeline facility; and closes motor operated valves at the Wickland Pipeline facility.

Diesel fuel is received by tanker trucks and pumped directly into the diesel ASTs. These transfers take place at the tank farm and airside facility, where a discharge will be contained and/or drain to an oil-water separator.

5.1.2 Re-Fueling of Privately Owned Aircraft:

The fueling operation for privately owner aircraft involves the transference of Jet A and Avgas from ASTs located at AvBase, Atlantic Aviation and Signature Flight Support. Mobile fueling tanker trucks are utilized to transfer fuel from the ASTs to the aircraft. Fuel storage at these facilities is described in the following Sections.

5.1.2.1 AvBase San Jose, LLC

AvBase San Jose, LLC is a general aviation FBO located on the southwest side of the Airport (1140 Coleman Avenue) and stores Jet A in a single AST for aircraft refueling. The AST has a capacity of 20,000 gallons and is a double-walled tank. Jet A is delivered to the AST by common carrier transport trucks. AvBase operates a 5,000 gallon mobile refueler tank truck that is used to transfer fuel from the AST to aircraft on the tarmac.

The AST area and the adjacent loading/unloading area drain to a single inlet. The drain discharges into an underground oil-water separator with an 8,000 gallon containment capacity. The oil-water separator is connected to the sanitary sewer system.

5.1.2.2 Atlantic Aviation

Atlantic Aviation is a FBO located at the Airport (1250 Aviation Avenue) and provides fueling of general aviation and corporate aircraft. The Atlantic Aviation facility occupies approximately 22 acres on the southwest side of the Airport and includes five aircraft hangars, one aboveground fuel storage facility, mobile fuel truck parking, and ramp parking for transient aircraft. Atlantic Aviation also occupies a hangar at 1162 Aviation Avenue (former TWC Aviation facility). Typical daily operations include aircraft fueling, towing, washing, and servicing aircraft and ground service equipment. Jet fuel is stored on-Site in four 20,000-gallon double-walled steel ASTs, and Avgas is stored in one 15,000 gallon double walled steel AST. Fuel storage capacity at the Atlantic Aviation facility is summarized in Table 5.

Table 5. Atlantic Aviation Fuel Storage Capacity

Tank ID (ASTs)	Location	Capacity	Product	Type of Secondary Containment
1	Tank Farm	20,000	Jet-A	Double walled construction
2	Tank Farm	20,000	Jet-A	Double walled construction
3	Tank Farm	20,000	Jet-A	Double walled construction
4	Tank Farm	20,000	Jet-A	Double walled construction
5	Tank Farm	15,000	Av Gas	Double walled construction

Fuel is delivered to the bulk storage ASTs by common carrier transport trucks. On-Site mobile fuel delivery trucks then transfer the fuel into aircraft tanks. Fifty-five gallon drums of fuel additive, de-icing fluid, and oils are stored in a 3-hour, fire-rated, hazardous materials bunker equipped with secondary containment. An underground oil-water separator with a 20,000 gallon containment capacity is located adjacent to the fuel tank farm and receives liquid that drains from a grated drain inside the bermed truck rack area. Additional oil-water separators are present at the Hangar A wash rack, at Hangars C and E, and at the former TWC Aviation hangar.

5.1.2.3 Signature Flight Support

Signature Flight Support is a FBO located at the Airport (303-393 Martin Avenue). Avgas and Jet A fuel are stored at the Signature facility in ASTs and used to fuel aircraft. The facility consists of an FBO terminal building, offices, aircraft ramp, hangars and fuel tank farm, and has six mobile refueler tank trucks.

Fuel tank farm at the facility consists of six ASTs that contain Avgas and Jet A fuel used to fuel aircraft, as well as diesel fuel and motor vehicle gasoline (MoGas) used to fuel various ground support vehicles. The fuel farm also contains an oil-water separator. The Signature facility additionally has one emergency generator with an integral diesel fuel AST and two emergency fire water pumps with associated diesel fuel ASTs. The total stationary fuel storage capacity of this facility is 78,230 gallons. Fuel storage capacity at the Signature facility is summarized in Table 6.

Table 6. Signature Flight Support Fuel Storage Capacity

Tank ID (ASTs)	Location	Capacity	Product	Type of Secondary Containment
1	Tank Farm	20,000	Jet-A	Double walled construction
2	Tank Farm	20,000	Jet-A	Double walled construction
3	Tank Farm	20,000	Jet-A	Double walled construction
4	Tank Farm	15,000	Avgas	Double walled construction
5	Tank Farm	1,000	Diesel	Double walled construction
6	Tank Farm	1,000	MoGas	Double walled construction
7	Hangar 7 Emergency Generator	80	Diesel	Double walled construction
8	Hangar 7 Emergency Fire Water Pump	575	Diesel	Double walled construction
9	Hangar 7 Emergency Fire Water Pump	575	Diesel	Double walled construction

The tank farm facility is constructed with a designated loading/unloading fuel transfer area (spill pad). This location is where all transfers of fuel from delivery fuel transport trucks and into the bulk storage AST takes place and where airport mobile refueler trucks are filled. This designated area is designed to capture and retain any fuel spilled during the transfer. The fuel transfer area is constructed with a sump drain system to capture spilled fluids and a sump pump to pump rainwater and residual fuel into an oil-water separator connected to the sanitary sewer system.

5.2 OTHER HAZARDOUS MATERIALS AND HAZARDOUS WASTE

5.2.1 Vehicle Fueling and Maintenance

Most vehicle fueling and maintenance activities at the Airport occur at the Fleet Maintenance facility and at the Consolidated Rent-A-Car (CONRAC) facility that are discussed in the following sections. As discussed in the preceding Section, Signature Flight Support also stores motor vehicle gasoline and diesel in two 1,000 gallon ASTs for fueling of ground support equipment/vehicles.

5.2.1.1 Fleet Maintenance Facility

The majority of ground support vehicles are fueled at a canopy covered fuel dispenser island located on-Site at the Fleet Maintenance facility (1395 Airport Boulevard). Airport Department vehicles and equipment, including San Jose Police Department (SJPD) vehicles, San Joe Fire Department (SJFD)-Fire Station #20 rigs, and tenant ground support vehicles use these dispensers. A small percentage of airline service support vehicles are fueled by tanker trucks on the ramp. Fuel to the dispenser island is supplied by two double-walled, 10,000-gallon USTs, one containing renewable diesel fuel and the other containing unleaded gasoline. Vehicle maintenance is performed inside two maintenance shops (Bays 1 and 2). Drip pans are utilized to contain drips/leaks while the vehicles are being serviced. Spill cleanup supplies, including containers for clean and used absorbent, brooms and shovels, are kept undercover at the dispenser island in case of a small fuel spill at the dispensers.

Other hazardous materials stored at the Fleet Maintenance facility include paints, motor oil, transmission fluid, hydraulic fluid and antifreeze, among others. Used oil, used antifreeze and used absorbent are generated. These hazardous materials and wastes typically are stored in small ASTs, 55-gallon drums and/or smaller containers. The Fleet Maintenance facility has a vehicle wash rack that is connected to an oil-water separator, and a paint shop that has a wastewater clarifier.

5.2.1.2 Consolidated Rent-A-Car facility

The CONRAC facility is located on-Site at 1659 Airport Boulevard and is occupied by multiple participating rental car companies. Gasoline is stored at the CONRAC facility within three double-walled 12,000-gallon USTs. Piping from the USTs (below ground and aboveground) leads to fuel dispensers located on the 2nd, 3rd and 4th levels of the multi-level facility. Car wash equipment and vehicle service areas also are located on each of these levels. Motor oil is stored at the facility in a 2,500 gallon AST and in 55 gallon drums. Car wash detergents and windshield washer fluid also are stored. A 450 gallon AST contains diesel fuel for an emergency generator. Used oil is stored in three 1,000 gallon ASTs; used oil filters also are generated. Several oil-water separators are present at the facility that are associated with vehicle maintenance activities and car wash facilities.

5.2.2 Diesel Fueled Emergency Generators and Pumps

The majority of emergency/standby generators on-Site are stationary generators that have an aboveground diesel storage tank as part of the generator set, usually at the base of the generator. A few generators have separate ASTs located nearby. One generator (Terminal A - Generator C, ID #28538) is fueled by a 1,000 gallon diesel UST. A propane fueled generator is present at Daily Parking Lot 4.

The diesel is the fuel source for the generators, which are used for power generation in the event of a main electrical power failure. They provide emergency power for such features as parking lot lighting, airfield lighting, terminal lighting, fire sprinkler pumps and flood control pumps. Diesel powered pumps for fire water or storm water management also are present at a few locations. Fuel for the Airport-operated generators/pumps is added when needed by City of San Jose Public Works Department Fleet staff. Tenant-operated equipment is maintained by the responsible tenant. The locations of the generators, pumps and diesel storage tanks are shown on Figure 4 and listed below in Table 7.

Diesel powered generators are required to have air permits under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The generators with diesel fuel tanks of 55-gallons or greater also are permitted under Title 19, Division 2 of the California Code of Regulations (CCR). The Airport (or responsible tenant) is required to prepare and update annually the HMBPs for these facilities. The Airport occasionally has portable generators on-Site for construction activities, which are registered under the California Air Resources Board's (CARB's) Statewide Portable Equipment Registration Program (PERP).

Table 7. Diesel Fueled Emergency Generators and Pumps

Generator GSA #	BAAQMD Source #	Facility Location	Address	Fuel tank size (gallons)
Airport-Operated Emergency Generators and Pumps				
94212	S-1	Terminal A Garage - Fire Pump	2075 Airport Boulevard	60
28513	S-3	Terminal A - Generator E	2065 Airport Boulevard	240 day + 500 AST
94198	S-6	Facilities (next to Biffy House)	1401 Airport Boulevard	50
28509	S-8	Westside Parking Lot	325 Martin Avenue	200
28510	S-9	Airport SJ Police Department Building (former)	1387 Airport Boulevard	173
97057	S-10	Rocky Pond Retention Basin (Pump B)	2080 Airport Boulevard	shared tank with 97056
97056	S-11	Rocky Pond Retention Basin (Pump A)	2080 Airport Boulevard	160
94230	S-12	SJ Fire Department Station 20	1433 Airport Boulevard	90
21900	S-14	SJ Police Department (Portable)	1387 Airport Boulevard (currently in Facilities parking lot)	100
28521	S-15	Airfield Lighting Vault (western)	273 Martin Avenue	100 day + 1000 AST
28522	S-16	Airfield Lighting Vault (eastern)	273 Martin Avenue	shared tank with 28521
28548	S-19	Terminal B - H core (north)	1701 Airport Boulevard	1350
28546	S-20	Terminal B - J core (mid)	1701 Airport Boulevard	1350
28547	S-21	Terminal B - K core (south)	1701 Airport Boulevard	1350
28538	S-22	Terminal A - Generator C	2077 Airport Boulevard	50 day + 1000 UST
28553	S-23	Terminal A (north) - Generator B	2077 Airport Boulevard	1423
28554	S-24	Terminal B - L core (ticketing)	1701 Airport Boulevard	1350
28550	S-25	Terminal A - Generator D	2077 Airport Boulevard	1200

Table 7 Continued. Diesel Fueled Emergency Generators and Pumps

Generator GSA #	BAAQMD Source #	Facility Location	Address	Fuel tank size (gallons)
Airport-Operated Emergency Generators and Pumps (Continued)				
21921	NA	Terminal B - Daily Parking Lot 4 (Propane Tank)	1639 Airport Boulevard	100 (propane)
28561	S-27	Terminal B - Parking Lot 5	1661 Airport Boulevard	60
TBD	TBD	Air Cargo Ramp - Switchgear	2201 Airport Boulevard	80
TBD	NA	MPOE (Main Point of Entry)	1203 Airport Boulevard	67
Tenant-Operated Emergency Generators and Pumps				
NA	S-18	CNG Station	2151 Airport Boulevard	130
NA	NA	CONRAC Garage	1659 Airport Boulevard	450
NA	NA	Swissport Tank Farm Generator	2250 Seaboard Avenue	660
NA	NA	Swissport Tank Farm Fire Water Pumps	2250 Seaboard Avenue	500
NA	NA	Swissport Airside Fire Water Pumps	2341 Airport Boulevard	300
NA	NA	Signature Flight Support Hangar 7 Emergency Generator	303-393 Martin Avenue	80
NA	NA	Signature Flight Support Hangar 7 Fire Water Pump	303-393 Martin Avenue	575
NA	NA	Signature Flight Support Hangar 7 Fire Water Pump	303-393 Martin Avenue	575
NA	NA	FAA Airport Traffic Control Tower AST for Generator	275 Martin Avenue	2000

NA = not available or not applicable
TBD = to be determined

5.2.3 Underground Storage Tanks

As discussed in Section 5.2.1, two USTs are located on-Site at the Airport Fleet Maintenance Facility and three USTs are located on-Site at the CONRAC facility. An additional UST is located at Terminal A (2077 Airport Boulevard) and supplies diesel fuel to an emergency generator ("Generator C", ID #28538). The on-Site UST locations are shown on Figure 4.

The Fleet Maintenance USTs are re-fueled through tanker truck deliveries (Western States is the vendor). There is no set schedule for deliveries (as it is based on usage), but there is roughly one delivery every other week. The City's Public Works Department manages the fuel deliveries. The USTs at the CONRAC facility are owned by the City but operated by the facility. The UST at Terminal A supports an emergency generator that is not often used; thus, the tank does not need frequent re-fueling. When needed, the City Public Works Department's Fleet fueling truck performs that duty.

The County DEH is the lead Certified Unified Program Agency (CUPA) for the UST program. Each of the six on-Site USTs is permitted through the DEH.

5.2.4 Paint Shop

Material handling and storage areas for paint and paint related materials (PRMs) are located at the Airport Paint Shop (1395 Airport Boulevard). Storage lockers designed for the storage of PRM are utilized both indoors and outdoors at the facility. Paint waste is transported to the main Hazardous

Waste Accumulation Area located at 1311-C Airport Boulevard for subsequent proper disposal as needed. Wastewater generated during washing activities is collected through an existing water clarifier structure located adjacent to the Paint Shop that discharges to the sanitary sewer.

5.2.5 Aircraft and Vehicle Washing

The potential pollutants associated with aircraft and vehicle washing are detergents, total suspended solids, oil, grease, fuel and metals.

Commercial aircraft are washed off-Site for compliance with the Airport's Stormwater Industrial General Permit. Private/general aviation aircraft located on the Airport's southwest side are hand washed at the Airport and washwater is collected in oil-water separators and discharged to the sanitary sewer system. This washwater does not comingle with stormwater in the stormwater drainage system. Aircraft wash racks with oil-water separators are located at the General Aviation West area, Atlantic Aviation, and the Hewlett Packard facility.

Airport Standard Operating Procedures require all ground vehicles operating within the Air Operations Area (AOA) to be washed at one of two wash racks - the Fleet Maintenance Wash Rack or the Ground Support Wash Rack. The Fleet Maintenance Wash Rack is used by Airport Department vehicles. Tenant vehicles utilize the Ground Support Wash Rack. Oil-water separators are present at both wash racks that collect and separate wastewater from oils/grease and discharge to the sanitary sewer system.

The CONRAC facility has car wash facilities that are used by participating rental car companies. A water reclamation system and several oil-water separators are present at the CONRAC facility for treatment and reuse of washwater used for cleaning of rental cars.

The locations of aircraft and vehicle wash racks are depicted on Figure 5. Additional oil-water separators that collect drainage from fuel tank farms, various aircraft hangars and other facilities also are shown on Figure 5. Oil-water separator locations include the following:

- Atlantic Aviation at aircraft wash rack, fuel farm and at hangars C and E - 1250 Aviation Avenue
- Atlantic Aviation (Former TWC) hangar - 1162 Aviation Avenue
- General Aviation West at aircraft wash rack - 1128 Coleman Avenue
- Fleet Maintenance wash rack - 1395 Airport Boulevard
- Paint Shop wastewater clarifier- 1395 Airport Boulevard
- Ground Support wash rack - 1207 Airport Boulevard
- Terminal A trash compactor area - north of Terminal A
- Hewlett Packard Enterprise at aircraft wash rack - 1210 Aviation Avenue
- CONRAC facility - 1659 Airport Boulevard
- Swissport Fuel Dispensing Racks - 2201 Airport Boulevard
- Swissport Fuel Farm - 2250 Seaboard Avenue
- Signature Flight Support Fuel Farm - 393 Martin Avenue
- AvBase AST area - 1144 Coleman Avenue

5.2.6 Firefighting Foam Usage

Since the 1960s, many fire suppressant foams, often referred to as Aqueous Film Forming Foam (AFFF), contained perfluorinated compounds (PFCs). PFCs are a subset of chemicals called perfluoroalkyl and polyfluoroalkyl substances (PFAS). Two of the most studied PFCs are PFOS (perfluorooctane sulfonate) and PFOA (perfluorooctanoic acid). Some PFAS substances, including PFOS and PFOA are no longer manufactured in the Unites States, in part due to a voluntary phase-out program initiated by the USEPA in 2006.

In recent years, the USEPA has identified PFAS as emerging contaminants of concern and has identified fire training facilities and airports as potential sources of PFAS contamination. These highly soluble contaminants pose a soil leaching concern due to their mobility, they readily migrate in groundwater, and are bioaccumulative. PFAS can be persistent in the environment with degradation periods of years, decades, or longer under natural conditions.

On March 20, 2019, the State Water Resources Control Board (SWRCB) issued Water Code Section 13267 Order WQ-2019-0005-DWQ (Order) to Title 14, Code of Federal Regulations, Part 139 Airports in California, including the Norman Y. Mineta San José International Airport. The Order required the City of San José to submit a work plan for a one-time preliminary site investigation of PFAS impacts at the Airport (Work Plan). As part of the Work Plan development, Airport staff identified current and historic on-Site AFFF storage and usage locations. Some of the information presented below was identified as a result of the preparation of the Work Plan. The Work Plan was submitted and uploaded to the Geotracker database on June 14, 2019. The San Francisco Bay Regional Water Quality Control Board conditionally approved the Work Plan in a letter dated July 18, 2019. PFAS concentrations in soil and groundwater at relevant locations on Airport property will be evaluated in accordance with the approved Work Plan.

Airport-owned AFFF is stored in Building 1000, located next to Fire Station #20 at 1433 Airport Boulevard, for firefighting purposes and in automated fire suppression systems within some on-Site tenant-owned and operated structures on leased-Airport property (*e.g.*, Signature Flight Support, Hewlett-Packard Enterprise, Atlantic Aviation, CONRAC, Swissport, etc.[1]).

Based on information provided by the Airport staff[2], the Airport typically has sent Fire Station #20 personnel off-Site for live fire training whereas firefighting apparatus (*i.e.*, foam proportioning) testing has primarily occurred either off-Site at a Public Works Department location or on-Site at an oil-water separator that connects to the sanitary sewer system in the southeast corner of the Airport property. Records reviewed during the development of the Work Plan identified two aircraft incidents that required the use of fire suppression foam around runway 30L. In addition, Fire Station #20 staff have historically sprayed rinse water from AFFF equipment into the grassy area near the intersection of Taxiways B and Z, and the rinse water from the hoses may contain diluted AFFF. In November 2016, AFFF was accidentally deployed from an automated fire suppression system within Hangar 7 at the Signature Flight Support facility and exited the hangar, while a smaller incident in February 2018 was contained inside Hangar 7.

[1] An inventory of all AFFF storage at the Site was not completed during this study; this information was provided by Airport staff after the PFAS Work Plan was developed.

[2] Email correspondence and telephone conversations with Ms. Jessica Huybregts, Environmental Services Specialist, Planning and Development Division.

Historical documents and information from Airport staff indicate two former fire training areas on-Site, which have now both been paved and redeveloped as aircraft aprons. Files pertaining to the Airport obtained from the state Geotracker database (http://geotracker.-waterboards.ca.gov) include those for a Cleanup Program Site (CPS) (Case #: 43S0533) associated with a former "burn pit" at the Airport[3]. In a 1990 letter, the burn pit area was described as being under a "new American Airlines Parking Runway" and covered by a concrete apron. The 1997 EIR (Appendix A, Table 3.12.A.9) also refers to a "Fire Department Training Area" on the "North End of the Airport," which likely was the same feature. The CPS case is identified as having been closed in 1996. Per Airport staff, the burn pit noted in the 1990 letter refers to an original fire department training area that consisted of a concrete basin located on the northeast portion of the Airport, at approximately the location of the current Terminal A Gate 2 area (when Terminal A was constructed, American Airlines moved from Terminal C to Terminal A, hence the American Airlines reference). After that burn pit was closed, a new one reportedly was established just south of the Airport Traffic Control Tower. The second burn pit was removed to facilitate construction of a new hangar by Atlantic Aviation in 2003/2004; a paved apron area reportedly covers the former burn pit location. The Work Plan refers to this location as the Former Fire Training Area 2.

5.2.7 Aircraft De-Icing Operations

De-icing is performed on a limited basis due to the mild climate of the region. January temperatures average 50°F. In addition, FBO aircraft on the west side of the Airport and cargo aircraft in the north-east section typically do not engage in de-icing activities and typically do not dispatch aircraft under icing conditions. De-icing fluid (propylene glycol) is stored at various tenant facilities. Best Management Practices (BMPs) for de-icing activities consist of minimizing the amount of de-icing product sprayed on wings, the timely vacuum sweeping of the affected ramp areas (utilizing a ramp scrubber) and protecting the closest drain to the de-icing activity.

5.2.8 Air Transport of Hazardous Materials

Certain hazardous materials, termed "dangerous goods" by the airline industry, are transported by air, primarily by all-cargo carriers. Occasionally, the Airport is notified by an airline, as required by law, that a hazardous materials shipment is scheduled to occur. On those occasions, in coordination with the FAA Air Traffic Control Tower, the aircraft is parked in a remote area, with trucks or other surface vehicles escorted directly to and from the aircraft. Such flights are usually conducted by an all-cargo or cargo charter airline.

The transportation of hazardous materials by air, including packaging, labeling, and reporting, is regulated under Section 172.101 of the Hazardous Materials Transportation Act in the Code of Federal Regulations (CFR) Title 49. The regulation specifies restrictions on the type of hazardous materials that may be carried on aircraft and requires notification of airports where a transfer of the materials is planned. In addition to complying with federal regulations, air carriers operating at the Airport also comply with the guidelines of the International Air Transport Association (IATA), which are consistent with CFR Title 49 and are based on the Chicago Convention on International Civil Aviation. IATA has developed and issued detailed transport guidelines for association members worldwide that categorically prohibit air transport of certain hazardous materials that are considered too dangerous to be transported by air and that provide detailed instructions for transporting those materials that are allowed on aircraft. Restrictions on

[3] Only limited information is available on the Geotracker website. Case files were requested from the Water Board. The Water Board indicated that they have no additional information.

the type of hazardous materials that may be carried on aircraft vary somewhat between passenger and cargo flights. Prohibited goods include most explosives, any substance that could evolve heat or gas under conditions of normal transport, inhalation poisons, many flammable materials, and a long list of other chemicals. The IATA guidelines are recognized worldwide and are reviewed and updated annually; the 60th edition of the IATA *Dangerous Goods Regulations* went into effect on January 1, 2019. Individual air cargo carriers also have health and safety guidelines that cover handling of hazardous materials, employee health and safety, and specific in-flight storage for each make and model of aircraft.

5.2.9 Hazardous Waste Generation

Hazardous waste generated at the Airport originates mainly from Airport upkeep and aircraft and automobile maintenance activities. The most common hazardous waste generated at the Airport is used motor oil associated with vehicle and aircraft maintenance. Other common wastes include used absorbents (for spill and leak cleanup), used antifreeze, waste fuels, spent oil filters, aerosol cans and various universal wastes (batteries, fluorescent light tubes, and mercury-containing lamps, etc.). Used/excess de-icing fluid (propylene glycol) is also collected once it has been applied and disposed by tenants using their disposal company. The hazardous wastes are transported off-Site for recycling, treatment, and/or disposal by licensed waste disposal contractors.

Tenants are responsible for the management and disposal of the hazardous waste they generate, and they have their own storage areas and arrangements with disposal companies. The exception is the general aviation west (GA West) area (1128 Coleman Avenue). Pilots/mechanics/owners of small aircraft place used motor oil and used oil filters into 55 gallon metal drums stored inside a roll-top container with secondary containment and inspected weekly; these materials are managed and disposed by the Airport.

Hazardous waste generated by Airport operations (excluding tenant waste) is secured, collected and managed at a main Hazardous Waste Accumulation Area located at 1311-C Airport Boulevard. The Airport has a contract with Environmental Logistics Inc. to remove and dispose of hazardous waste stored at the Hazardous Waste Accumulation Area and from the GA West area, and a contract with Safety Kleen for waste generated at the Fleet Maintenance facility located at 1395 Airport Boulevard.

The Airport generates a significant amount of universal waste (e-waste, batteries, and used light bulbs/lamps/tubes). The e-waste is currently picked up and recycled by Wisetek, and the lights/bulbs and batteries are recycled by QuickLight Recycling.

The Airport and tenants manage their hazardous materials and hazardous waste in a manner that minimizes exposure to rain, thereby reducing the potential for stormwater pollution. This is detailed further in the Airport Stormwater Pollution Prevention Plan (SWPPP). Hazardous waste generators are inspected by the County DEH.

Airport facilities and tenants that generate hazardous waste are identified in Table 1. Hazardous Waste generated by Airport operations (excluding tenant waste) is summarized below in Table 9.

Table 9. Hazardous Waste Generated by Airport Operations

Waste Stream	Quantity Generated Annually (2018)	Disposal Method	Waste Hauler	Airport Location	Data Source	State waste code	Designated Facility / Notes
Used oil filters	110 Gal (475 Units)	Recycled	Safety-Kleen Systems	1395 Airport Blvd	Manifest	223	Thermo Fluids Inc.
Used antifreeze	60 Gal	Recycled	Safety-Kleen Systems	1395 Airport Blvd	Manifest	133	Thermo Fluids Inc.
Used oil	300 Gal	Recycled	Safety-Kleen Systems	1395 Airport Blvd	Manifest	221	Safety-Kleen Systems
Aqueous Parts Cleaners (solvents)	45 Gal	NA	Safety-Kleen Systems	1395 Airport Blvd	Manifest	134	Safety-Kleen Systems
Contaminated Absorbent (w/oil)	1800 lb	Recycled	Environmental Logistics	1311-C Airport Blvd/ 1395 Airport Blvd	Manifest	352	Filter Recycling Services Inc.
Used oil	110 Gal	Recycled	Environmental Logistics	1311-C Airport Blvd/ 1128 Coleman Ave	Manifest	221	Filter Recycling Services Inc.
Used oil filters	50 lbs	Recycled	Environmental Logistics	1128 Coleman Ave	Manifest	352	Filter Recycling Services Inc.
Waste corrosive bases	55 Gal	Haz Waste	Environmental Logistics	1311-C Airport Blvd	HMBP estimate	Federal waste code D002	HazMat Inc.
Waste corrosive acids	55 Gal	Haz Waste	Environmental Logistics	1311-C Airport Blvd	HMBP estimate	Federal waste code D002	HazMat Inc.
Non-PCB ballast	250 lb	Recycled	Environmental Logistics	1311-C Airport Blvd	Manifest	NA	Filter Recycling Services Inc.
Waste flammable liquids (solvents)	8 Gal	Haz Waste	Environmental Logistics	1311-C Airport Blvd	Manifest	Federal waste codes D001 & D018	HazMat Inc.
Universal waste - batteries	1100 lb	Recycled	Environmental Logistics	1311-C Airport Blvd	Manifest	Universal Waste	Filter Recycling Services Inc.
Universal waste - aerosols	100 lb	Recycled	Environmental Logistics	1311-C Airport Blvd	Manifest	Universal Waste	Filter Recycling Services Inc.
Waste latex paint	40 Gal	Recycled	Environmental Logistics	1311-C Airport Blvd	Manifest	Universal Waste	Filter Recycling Services Inc.
Used toner & printer ink	50 lb	Recycled	Environmental Logistics	1311-C Airport Blvd	Manifest	NA	Filter Recycling Services Inc.
Mercury-containing lamps/ light tubes	15 drums	Recycled	QuickLight Recycling	1311-C Airport Blvd	Manifest	Universal Waste	
Batteries	800 lb	Recycled	QuickLight Recycling	1311-C Airport Blvd	Manifest	Universal Waste	
Non-PCB ballast	40 lb	Recycled	QuickLight Recycling	1311-C Airport Blvd	Manifest	Universal Waste	

Notes: Information compiled from waste manifests obtained from hazardous waste haulers in 2018 and/or facility HMBPs (Compiled by J.Huybregts 1/29/2019).

5.2.9.1 Aircraft Sanitary Service Operations

Ground support vehicles are utilized to collect, transport and manage sanitary waste from aircraft. Lavatory waste vehicles are stationed at various ramp locations on the northeast commercial/cargo side of the Airport. When an aircraft arrives at the gate, the lavatory vehicle mobilizes and removes the lavatory waste from the aircraft via a flexible transfer hose. When nearing capacity, the vehicle drives to the lavatory waste disposal bay (Biffy House at 1431 Airport Boulevard) and empties the contents of the tank into the sanitary sewer. This waste, along with all sanitary waste from restrooms at the Airport, is conveyed via the existing sanitary collection system to the City Wastewater Treatment Plant for treatment. Stormwater rules and regulations prohibit flushing or washing any lavatory waste spills into the storm drainage system. If spills occur, individuals responsible for creating the lavatory waste spill are also responsible for the control, containment and cleanup per established procedures. Training for this procedure is included in employee Secure Identification Display Area (SIDA) badge training and in the Airport's Ramp Safety & Traffic Regulations Handbook (Ramp Handbook, 2019).

SECTION 6: SPILLS, LEAKS AND RESPONSE ACTIONS

When hazardous material spills occur, the responsible tenant reports the incident to the Airport Operations Center (AOC) who generates a Spill Report. Spill Report logs are maintained at the Airport per established stormwater rules and regulations. The Spill Report documents the causes of the spill, the type of material spilled, the approximate quantity spilled, any impacts to the storm sewer system, the cleanup methodology, and any subsequent corrective actions. Incidents that involve aircraft are the responsibility of the aircraft owner/operator to ensure the safe, expedient removal of the spilled material, and to repair any physical damage as a result of the incident. Under no circumstances are spilled materials to be flushed or washed away or be allowed to enter the Airport's stormwater collection system. Spill cleanup guidelines, methods and reporting standards are documented in the Ramp Handbook (2019) along with other operational standards.

A cursory review of provided spill logs for the past 5 years indicates that incidents occur approximately 8 times per month. The most common material spilled during operations at the Airport is jet fuel. Other materials include hydraulic fluid, oil, transmission fluid, other lubricants and fuels, and lavatory waste. Most reported spills occur on paved ramp areas and are relatively small (1 to 10 gallons); they are cleaned in general accordance with established procedures (typically through the use of absorbents) by on-Site personnel. Airport Operations will contact the Airport Fire Station if the fuel spill covers over 10 feet in any direction, or it is over 50 ft^2 in area, continues to flow, or is otherwise a hazard to persons or property (in accordance with NFPA 407 4.2.3.5.7 and the California Fire Code 2006.11.5). If the spill/release of oil/fuel is 42 gallons or more, or if the spill has discharged to, or threatens to discharge to State Waters (*e.g.,* Guadalupe River), or if the spill/release causes harm, or threatens to cause harm to the public health and safety, the environment, or property, then notifications are be made to the California State Office of Emergency Services (OES) and the United States Coast Guard National Response Center (NRC).

The Airport utilizes "Safe Drains" to prevent spills and potentially contaminated stormwater from discharging into the Guadalupe River. These Safe Drains are located adjacent to taxiways, gate areas and other locations on the ramp *(i.e.,* aircraft parking areas). Safe Drains contain a valve that can be manually opened and closed with a specialized key. Safe drains are kept in the closed position during dry periods so that if a spill occurs, it will not enter the

storm drain system or the Guadalupe River. Additionally, a stormwater retention basin, known as Rocky Pond, is located at 2080 Airport Boulevard and utilizes two stationary diesel fueled engines to power pumps that pump water from the Retention Basin when it reaches capacity. The retention pond collects groundwater from parking garage basement pumps and runoff from landside non-industrial areas. The retention basin also can be used to contain an emergency spill from the Air Operations Area drainage area by diverting the flow via manual valves.

6.1 SOIL AND GROUNDWATER CONTAMINATION

The Airport has experienced several hazardous material releases that have resulted in localized impacts to soil and/or groundwater quality. A summary of these incidents is presented in Table 10; their locations are shown on Figure 6. Note that multiple adjacent rental car facilities historically were located along Airport Boulevard southeast of the former Terminal C location. These are grouped separately in Table 10 and shown as single area on Figure 6.

Investigations and remedial actions at these locations have been conducted under oversight from the County DEH and/or the Water Board. Some cases were previously overseen and closed by the Santa Clara Valley Water District (SCVWD); oversight responsibility for investigations and clean-up of releases from USTs was transferred from the SCVWD to the County DEH in 2004.

As indicated in Table 10, most leaking underground storage tank (LUST) and voluntary cleanup program (VCP) cases have been closed by the overseeing regulatory agency. The only remaining open cases are two VCP cases at Signature Flight Support (303 and 325 Martin Avenue), and a LUST case at 1615 Airport Boulevard (formerly 1661 Airport Boulevard), which was occupied by a former Chevron jet fuel AST facility until 1971 and then occupied by Dollar Rent A Car until 2002. For the open LUST case, site assessment and monitoring activities are ongoing and being conducted under Water Board oversight. As a result of the open LUST case, the Airport is included on California's Hazardous Waste and Substances Sites List, also known as the Cortese List (pursuant to California Government Code Section 65962.5). The two VCP cases are being overseen by the County DEH and are discussed further in Section 6.1.1.

At most of the closed LUST and VCP case locations, residual contamination remains in soil and/or groundwater and, as a condition of case closure, on-going management requirements were established by the overseeing regulatory agencies. The stipulated management requirements are included as footnotes in Table 10. Additional details regarding each of the cases listed in Table 10 are contained in documents available from the state Geotracker database (http://geotracker.waterboards.ca.gov).

Table 10. On-Site LUST and VCP Cases

Facility Name and Address	Case Type and Status	On-Going Management Requirements	Notes/Discussion
Marchese Farms 297 Martin Avenue	LUST case Closed 1996	Yes[1]	Former on-Site farm complex. Impacted soil and groundwater identified in 1995 during the removal of a diesel AST. Residual contaminants reported to remain.
Signature Flight Support Hangar A 303 Martin Avenue	VCP case Open	TBD	In a February 2019 letter, the DEH required revisions to a Soil Management Plan for planned construction activities, and further assessment of soil, groundwater and soil vapor. In addition to identified impacts from organochlorine pesticides, the DEH noted that groundwater impacted by volatile organic compounds (VOCs) originating from 282 Brokaw Road (off-Site) may have migrated below the Site. See Sections 6.1.1 and 6.1.2 for further details.
Signature Flight Support 325 Martin Avenue	VCP case Open	Yes[2]	Soil impacted mainly by organochlorine pesticides. See Section 6.1.1 for discussion.
SJ Airport General Aviation 1101 Airport Boulevard	LUST case Closed 2009	Yes[3]	Three USTs removed in 1990 and two USTs removed in 2004. Residual contaminants reported to remain.
San Jose Jet Center (Atlantic Aviation) 1250 Aviation Avenue	LUST case Closed 2006	Yes[3]	Four USTs and an oil-water separator were removed in 2005. Residual contaminants reported to remain.
SJ Airport Fleet Maintenance Area 1395 Airport Boulevard	LUST case Closed 2012	Yes[3]	Four USTs were removed in 1990 and one UST was removed in 2006. Residual contaminants reported to remain.
SJ Airport/Chevron 1401 Airport Boulevard	LUST case Closed 2015	Yes[3]	Former tank farms operated by Chevron and the City of San Jose. Multiple USTs and an AST were removed between 1991 and 2011. Residual contaminants reported to remain.
SJ Airport Terminal C 1661 Airport Boulevard	LUST case Closed 2005	Yes[3]	One UST was removed in 1992. Residual contaminants reported to remain.
SJC Terminal A 1701 Airport Boulevard	CPS case Closed 1996	Unkown[4]	Former "Burn Pit." See Section 5.2.6 for discussion.
AMPCO Site 1801 Airport Boulevard	LUST case Closed 2002	None specified	One UST was removed in 2000. Residual contaminants reported to remain.
Dollar Thrifty 2251 Airport Boulevard	VCP case Closed 2012	Yes[3]	An AST, carwash and an oil-water separator were removed in 2012. Residual contaminants reported to remain.
Avis Budget 2225 and 2253 Airport Boulevard	VCP case Closed 2012	Yes[3]	Three ASTs, two car washes and two oil-water separators were removed in 2012. Residual contaminants reported to remain.
Hertz 2411 Airport Boulevard	VCP case Closed 2011	Yes[3]	An AST, carwash and an oil-water separator were removed in 2011. Residual contaminants reported to remain.
Rental Car Facilities Southeast of Former Terminal C			
Avis Rent A Car case# 43-0134 1445 (1521) Airport Blvd.	LUST case Closed 1996	Yes[1]	One UST was removed in 1985. Residual contaminants reported to remain.
Avis Rent A Car case# 07S1W01A07f 1521 Airport Blvd.	LUST case Closed 2004	Yes[3]	One UST, an AST and an oil-water separator were removed in 2002. Residual contaminants reported to remain.
Budget Rent A Car 1521 Airport Blvd.	LUST case Closed 2006	None specified	One UST and an oil-water separator were removed in 2002. Residual contaminants reported to remain.

Continued.

Table 10 (Continued). On-Site LUST and VCP Cases

Facility Name and Address	Case Type and Status	On-Going Management Requirements	Notes/Discussion
National Rent A Car 1527A Airport Blvd.	LUST case Closed 2008	Yes[3]	One UST, two ASTs, an oil-water separator and two car wash sumps were removed in 2002. Residual contaminants reported to remain.
National Car Rental 1585 Airport Blvd.	LUST case Closed 1995	None specified	One UST was removed in 1992. Residual contaminants reported to remain.
Former Chevron USA Tank Area and Dollar Rent A Car 1615 Airport Boulevard (formerly 1661 Airport Boulevard)	LUST case Open	TBD	There are two separate releases at this location. One is a gasoline UST release from a former Dollar Rent a Car (Dollar) facility, and the other is a release of jet fuel from an AST(s) from a former Chevron jet fuel AST facility. The site was supplied with jet fuel by Standard Oil of California for use by United Airlines (United) until approximately 1971. Following termination of use by United, the site was used by Dollar until 2002. Dollar installed a gasoline UST in 1971, which was removed in 1990. Various other car rental businesses, including Alamo, Avis and Hertz were located adjacent to or in the immediate vicinity. The area is currently used for airport parking. Assessment and monitoring activities are ongoing and being conducted under Water Board oversight.
Hertz Corporation 1617 Airport Blvd.	LUST case Closed 2006	Yes[3]	Two USTs were removed in 1986. In 2002, two USTs, two ASTs, an oil-water separator and hydraulic lifts were removed. Residual contaminants reported to remain.
Budget Rent A Car 1661 Airport Blvd.	LUST case Closed 1992	None specified	One UST was removed in 1989. Residual contaminants reported to remain.

TBD To be determined (case still open)

CPS Cleanup Program Sites (CPS), formerly known as Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Lead agency identified as the Water Board.

1 Water Board notification and the preparation of a health and safety plan (HSP) required upon planned change in land use, use of groundwater, or excavations that disturb soil or groundwater.

2 Any soil disturbed must be managed in accordance with the DEH approved SMP. Case closure is pending and additional requirements could be stipulated.

3 Residual contamination remains in soil and/or groundwater at the site that could pose an unacceptable risk under certain site development activities such as site grading, excavation, or the installation of water wells. Therefore, the impact of the disturbance of any residual contamination or the installation of water well(s) in the vicinity of the residual contamination shall be assessed and appropriate action taken so that there is no significant impact to human health, safety, or the environment. This could necessitate additional sampling, health risk assessment, and mitigation measures. The County DEH and the appropriate planning and building department shall be notified prior to any changes in land use, grading activities, excavation, and installation of water wells. This notification shall include a statement that residual contamination exists on the property and list all mitigation actions, if any, necessary to ensure compliance with this site management requirement.

4 Only limited information is available on the Geotracker website. Case files were requested from the Water Board. The Water Board indicated that they have no additional information.

6.1.1 Open VCP Cases at Signature Flight Support

The two open VCP cases at Signature Flight Support pertain to soil impacted mainly by organochlorine pesticides. These areas reportedly were historically used for agricultural purposes until 1995 and are discussed in the two following sections.

6.1.1.1 325 Martin Avenue

In 2014, prior to the initiation of construction activities for the existing Signature Flight Support (Signature) facilities, soil sampling was conducted that identified elevated concentrations of organochlorine pesticides (OCPs). OCPs were detected at concentrations exceeding residential screening levels, and some concentrations also exceeded their respective Total Threshold Limit Concentrations (TTLCs). The TTLC is the concentration at which a solid waste is considered a hazardous waste, for waste disposal classification purposes, per Title 22 of the California Code of Regulations. The detected OCP concentrations typically did not exceeded commercial screening levels.

Signature subsequently entered into a Voluntary Cleanup Program Remedial Action Agreement with the County DEH. The DEH approved a Soil Management Plan (SMP)[4] in April 2015 that described methods to appropriately manage the impacted soil on-Site during construction activities. In general, the approved SMP allowed, under certain conditions, for the on-Site reuse of soil with contaminant concentrations that did not exceed commercial/industrial screening levels[5]. If such soil contained contaminant concentrations exceeding TTLCs, it was required to be placed below impervious surfaces or below 2 feet of acceptable soil (see the SMP for details). An As-Built Soil Reuse Report[6] was prepared in 2016 and approved by the DEH in February 2017 and the DEH indicated that the case would be evaluated for closure.

The Soil Reuse Report indicates that impacted soil was reused at three on-Site locations including: 1) within the 325 Martin Avenue study area along a taxiway to the northeast of the Signature Flight Support hangars; 2) near the VOR[7] antenna on the northwestern portion of the Airport; and 3) on APN 230-46-040 within a landscape berm along Coleman Avenue. A fourth reuse area, located off-Site at a City-owned parcel (referred to as Guadalupe Gardens) northwest of the intersection of Spring Street and West Hedding Street, also was utilized. The three on-Site locations are depicted on Figure 6. The Soil Reuse Report states that soil that may be disturbed during the future operations of the Site (*e.g.*, future construction, utility and other subsurface maintenance or repair work, paving, landscaping, etc.) should be properly managed in accordance with the DEH approved SMP.

6.1.1.2 303 Martin Avenue

To facilitate the construction of an additional hangar to the southeast of Signature Flight Support Hangar 1 (at 303 Martin Avenue), Hangar A LLC entered into a Voluntary Cleanup Program

---

[4] Woodard & Curran. March 27, 2015. Soil Management Plan, FBO Complex & Site Development Norman Y. Mineta San Jose International Airport, 1701 Airport Boulevard, San Jose, California.

[5] September 23, 2010, California Office of Environmental Human Health Assessment (OEHA) Human Health Screening Levels (CHHSLs) for the Commercial/Industrial Scenario.

[6] Woodard & Curran. July 25, 2016. As-Built Soil Reuse Report, Flight Support, 325 Martin Avenue, San Jose, California.

[7] *VOR* = Very High Frequency (VHF) Omni-Directional Range

Remedial Action Agreement with the County DEH in November 2018. A soil characterization study was undertaken on the proposed expansion site in 2017 (Woodard & Curran, 2017) that identified OCP impacted soil, similar to that identified at the adjacent 325 Martin Avenue study area. A SMP dated October 31, 2018 was submitted for DEH review. In a February 2019 letter, the DEH required revisions to the SMP and further assessment of soil, groundwater and soil vapor. In addition to identified impacts from OCPs, the DEH noted that groundwater impacted by volatile organic compounds (VOCs) originating from 282 Brokaw Road (off-Site) may have migrated below the Site. Efforts to address DEH requirements are ongoing.

6.1.2 Potential Impacts from Off-Site Spill Incidents

Cornerstone conducted a review of federal, state and local regulatory agency databases provided by Environmental Data Resources (EDR) to evaluate the likelihood of contamination incidents near the Site. The database sources and the search distances are in general accordance with the requirements of ASTM E 1527-13. A cursory review of readily available documents obtained from the state Geotracker (http://geotracker.waterboards.ca.gov) and Envirostor (http://www.envirostor.dtsc.ca.gov) databases also was performed. The potential for impacts to the Site was based on our interpretation of the types of incidents, the locations of the reported incidents in relation to the Site and the assumed groundwater flow direction. As discussed in the following two Sections, two adjacent spill incidents were identified that appear to have impacted groundwater at the Airport.

6.1.2.1 Former FMC Corporation Facility - 1125 Coleman Avenue

The former FMC Corporation facility was in operation from 1905 to 1996 and is located adjacent to the southwest of the Airport (across Coleman Avenue). Research, development and manufacturing of military tracked vehicles were conducted at the FMC property, primarily under U.S. Department of Defense contracts from 1951 to 1996 when the facility closed. FMC also operated a landfill (1/4-acre) from 1946 to 1979. The 1125 Coleman address consisted of two areas: the Test Track area and the Central Plant that have been investigated and remediated separately under DTSC oversight. Remedial efforts are ongoing. Based on the information reviewed, VOC impacted groundwater has migrated from the FMC property onto the Airport. The general areas of the identified VOC impacted groundwater are depicted on Figure 6. Note, however, that the extent of VOC migration onto Airport property has not been well established.

6.1.2.2 Stanford Applied Engineering - 282 Brokaw Road

The former Stanford Applied Engineering property is located at 282 Brokaw Road, adjacent to the southwest of the Airport. Stanford Applied Engineering was a printed circuit board manufacturing facility that operated from the mid-1970s to 1992. During the 1990s, VOCs were identified in groundwater at the property. The general area of the identified VOC impacted groundwater is depicted on Figure 6. The extent of VOC migration onto Airport property has not been established. Monitoring and characterization activities are ongoing and being conducted under Water Board oversight.

SECTION 7: HEALTH AND SAFETY PROGRAMS AND REGULATORY COMPLIANCE

The use and storage of hazardous materials at the Airport is regulated under a variety of federal, state and local statutes, with inspections undertaken by the County DEH and the City of San Jose Fire Department. Relevant agencies and regulations are summarized below.

7.1 CERCLA AND EPCRA

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress in 1980. This law provided broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous wastes at these sites; and established a trust fund to provide for cleanup when no responsible party could be identified. CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) in 1986.

One of the biggest changes instituted under SARA was the passage of the Emergency Planning and Community Right-To-Know Act or EPCRA. A separate law unto itself, it is commonly known as SARA Title III and it sets requirements for local and state emergency planning around hazardous chemicals, the right of the public to access information on chemical hazards in their community, and the reporting responsibilities for facilities that use, store, and / or release hazardous chemicals. It also requires that Material Safety Data Sheets (MSDS) are readily available in the workplace.

7.2 RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)

The Resource Conservation and Recovery Act (RCRA), initially authorized in 1976, gives the USEPA the authority to control hazardous waste from "cradle-to-grave." This includes the generation, transportation, treatment, storage and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled USEPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

7.3 STATE, LOCAL AND OTHER FEDERAL REGULATIONS AND AGENCIES

In California, the USEPA has granted most enforcement authority over federal hazardous materials and hazardous waste regulations to the California Environmental Protection Agency (Cal/EPA). In turn, local agencies (*e.g.,* the County DEH) have been granted responsibility for implementation and enforcement of many hazardous materials regulations under the Certified Unified Program Agency (CUPA) program (See Section 7.3.1). The federal EPCRA program is implemented and administered in California by the California Governor's Office of Emergency Services (Cal OES), a State Emergency Response Commission (SERC), six Local Emergency Planning Committees (LEPCs), and 83 CUPAs.

Regional agencies are responsible for programs regulating emissions to the air, surface water, and groundwater. The Bay Area Air Quality Management District (BAAQMD) has oversight over air emissions, and the Water Board regulates discharges and releases to surface and groundwater. Oversight of investigation and remediation of properties impacted by hazardous materials releases can be performed by state agencies, such as the DTSC or Water Board (divisions of Cal/EPA), or local agencies, such as the County DEH. The DEH typically oversees investigation and remediation LUST cases, as well as many VCP cases in San José.

Other agencies that regulate hazardous materials include the California Department of Transportation (transportation safety) and Cal/EPA Division of Occupational Safety and Health, better known as Cal/OSHA (worker safety).

7.3.1 Hazardous Materials and Hazardous Waste Management, and Public Disclosure

California Health and Safety Code (HSC), Division 20, Chapter 6.95 requires that businesses handling at least 500 pounds of a solid hazardous material, 55 gallons of a hazardous liquid, or 200 cubic feet of a hazardous gas prepare Hazardous Materials Business Plans (HMBPs). These plans must include floor plans of the facility; an inventory of hazardous materials handled or stored; an emergency response plan; and a safety and emergency response training program for employees.

Passage of Senate Bill 1082 in 1993 required consolidation of state-mandated hazardous waste and hazardous materials management programs within a singled Unified Program, to be administered by a CUPA. The County DEH has been certified by the state to be a CUPA and administers the following six programs:

- Hazardous Materials Business Plans (HSC Chapter 6.95)
- Hazardous Waste Generator Program (HSC Chapter 6.5)
- Hazardous Waste Tiered Permitting (HSC Chapter 6.5)
- Underground Storage Tanks (HSC Chapter 6.7)
- Aboveground Petroleum Storage Act (APSA) (HSC Chapter 6.67)
- California Accidental Release Prevention Program (CalARP) (HSC Chapter 6.95)

The San José Fire Department, Bureau of Fire Prevention, also conducts inspections of facilities that use, store, or handle hazardous materials. These facilities, including the Airport and Airport tenants, are required to operate in accordance with the California Fire Code, the City of San José Hazardous Materials Storage ordinance, and all applicable Federal and State regulations based upon the specific occupancy classification and products on-site. The Fire Department additionally provides consultation to businesses regarding the safe use, storage, and handling of hazardous materials; reviews construction documents related to hazardous materials facilities (new construction and tenant improvements); investigates complaints pertaining to hazardous materials spills and releases; and responds to emergencies when requested to provide additional technical assistance.

All of the Airport's HMBP components, including owner/operator information, inventory, maps, emergency response/contingency plans, and staff training programs, are stored on-Site with the Environmental Services Program Manager at the Airport's Administrative offices (1701 Airport Blvd Suite B-1130) and are maintained in the California Environmental Reporting System (CERS) database. CERS Modules are updated annually or when significant changes are made to the facility's use or storage of hazardous materials or generation of hazardous waste. The Airport currently maintains 19 facilities within CERS; others are maintained by tenants.

The Airport also maintains a SPCC Plan as required by 40 CFR 112, as well as California HSC, Chapter 6.67. The SPCC requirements are part of the USEPA's oil spill prevention program and were published under the authority of Section 311(j)(1)(C) of the Federal Water Pollution Control Act (Clean Water Act) in 1974. A facility is covered by the SPCC rule if it has an aggregate aboveground oil storage capacity greater than 1,320 gallons or a completely buried storage capacity greater than 42,000 gallons and there is a reasonable expectation of an oil discharge into or upon navigable waters of the United States or adjoining shorelines. The Airport's SPCC plan can be found on their website at https://flysanjose.com/environment/water-quality. On-Site tenants including Swissport, Atlantic Aviation, AvBase and Signature Flight Support maintain separate SPCC plans that are specific their facilities. The SPCC plans describe established spill prevention and response actions (*e.g.*, facility operation and incident

response procedures, engineered controls/systems, facility security, employee training, equipment inspections and testing, and recordkeeping, etc.).

7.3.2 Worker Safety

The California Division of Occupational Safety and Health and the federal Occupational Safety and Health Administration (OSHA) are the principal agencies responsible for ensuring worker safety. Federal regulations are contained in Title 29 of the Code of Federal Regulations (29 CFR). California's regulations are found in Title 8 of the California Code of Regulations (8 CCR). As a result of the Occupational Safety and Health Act, these regulations provide for inspections, citations, penalties, occupational injury reports and labor agreements. These regulations also contain standards for hazardous materials handling, including workplace conditions, employee protection requirements, first aid provisions, fire protection, and material handling and storage. Contaminated properties potentially are subject to special worker safety requirements to protect construction workers during demolition and excavation, and to protect investigation and cleanup workers who perform studies or remediation activities. In these instances, written Site Safety Plans are mandatory.

The Airport maintains an Injury and Illness Prevention Program (IIPP) and is committed to complying with applicable local, state and federal safety standards; eliminating conditions which may pose a hazard to employees; and encouraging employee participation in the ongoing development of the departmental safety program. The goal of the safety program is to reduce occupational injuries and illnesses. The IIPP describes communication of safe work practices; safety inspections and hazard assessment; hazard correction and control; injury reporting and accident/incident investigations; training and instruction; and recordkeeping, among other topics.

7.3.3 Emergency Response

The San José Fire Department provides fire protection, rescue and emergency medical services. Fire Station #20 is located at the Airport and responds to airside aircraft-related incidents only; they do not respond to building incidents nor do they provide responses to the release of hazardous materials unrelated to aircraft. Fire Station #20 is supported by other nearby Fire Stations and the Fire Department's Hazardous Incident Team for those incidents.

The California Office of Emergency Services assists state and local agencies in emergency planning, and coordinates emergency response capabilities for major incidents. OSHA and the State Fire Marshal require workplaces to be furnished with appropriate emergency equipment and supplies, such as fire extinguishers and eye washes. OSHA requires that spill response areas be inventoried and re-supplied, fire extinguishers be inspected and replenished, and eye washes and safety showers be checked on a regular basis.

7.3.4 Storm Water Pollution Prevention

The Clean Water Act, Section 402, establishes a framework for regulating industrial and municipal storm water discharges under the National Pollutant Discharge Elimination System (NPDES). The U.S. Environmental Protection Agency (EPA) requires storm water discharge permits for specific categories of industrial dischargers. These categories include shipping, trucking, and air transport facilities that conduct vehicle maintenance, or facilities where materials are stored in exposed areas. The Airport operates under an Industrial General Permit (IGP), which requires the preparation and implementation of a Storm Water Pollution Prevention

Plan (SWPPP) for preventing and responding to releases of pollutants into storm water. Airport tenants are co-permittees under the IGP. The Airport's SWPPP can be found on their website at https://flysanjose.com/environment/water-quality.

7.3.5 Fuel Storage Tanks

State and Federal laws and regulations regarding USTs used to store hazardous materials (including petroleum products) require that tank owners and operators register their tanks and permitting, monitoring/testing and closure requirements are specified. The County DEH administers the Underground Storage Tank Program. The DEH issues permits for installing and operating USTs and oversees their removal.

The Above-Ground Petroleum Storage Act (HSC Chapter 6.67) requires owners of aboveground petroleum storage tanks to prepare SPCC plans and establish monitoring programs. The above-ground storage of hazardous materials is also addressed in 8 CCR. These regulations require proper drainage, dikes, and other secondary containment and safety measures to prevent accidental discharge from endangering employees or facilities. The storage of hazardous materials in ASTs is also subject to National Fire Protection Association Standards, enforced locally by the San José Fire Department.

7.3.6 Hazardous Liquid Pipelines

Pipeline safety is regulated under the federal Hazardous Liquid Pipeline Safety Act. Related regulations cover design, construction, operation, and maintenance of pipelines; testing and inspection of pipelines; and operator reporting requirements. In California, hazardous liquid pipelines are regulated by the California Pipeline Safety Act. Associated regulations are contained in Government Code Sections 51010-51019.1 and are enforced by the Office of the State Fire Marshal (OSFM). Hydrostatic (pressure) testing is required for all new petroleum pipelines. In addition, cathodic protection and leak detection systems are required for new pipelines. New pipelines also must be designed to accommodate the passage of inspection devices capable- of examining the interior of the pipeline. Pipelines must have leak mitigation plans, emergency response plans, and equipment in place as required by the State Fire Marshall. The State Fire Marshall, at his discretion and in the interest of public safety, may approve or require test methods on a case-by-case basis other than the required hydrostatic tests.

7.3.7 Ground Transport of Hazardous Materials

The U.S. Department of Transportation regulates the transportation of hazardous materials, except for those packages shipped by mail, which are covered by U.S. Postal Service regulations. Department of Transportation regulations are contained in the 49 CFR; Postal Service regulations are in 39 CFR. Every hazardous waste package type used by a hazardous materials shipper must undergo tests that imitate some of the possible rigors of travel.

Under RCRA, the EPA sets standards for transporters of hazardous waste. California regulates the transportation of hazardous wastes originating in and passing through the state (26 CCR). California adopts the U.S. Department of Transportation's hazardous materials regulations and includes some provisions that are stricter than the federal. Two state agencies have primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies: the California Highway Patrol and the California Department of Transportation.

7.3.8 Air Transport of Hazardous Materials

Certain hazardous materials, termed "dangerous goods," may be transported as air cargo. The types and quantities of hazardous substances permitted as air cargo are restricted by the Hazardous Materials Transportation Act and regulations contained in 49 CFR. Restrictions vary somewhat between passenger and cargo flights. Prohibited goods include most explosives, any substance that could evolve heat or gas under conditions of normal transport, inhalation poisons, many flammable materials, and a long list of specific chemicals. The International Air Transport Association (IATA) also develops and issues transport guidelines for members worldwide, including guidelines for the safe transport of hazardous materials by air. These guidelines provide detailed technical instructions for transporting a broad variety of hazardous materials allowed on aircraft under the appropriate circumstances. IATA guidelines categorically prohibit air transport of many hazardous materials. The IATA guidelines are recognized worldwide and are reviewed and updated annually; the 60th edition of the IATA *Dangerous Goods Regulations* went into effect on January 1, 2019. Individual air cargo carriers also have health and safety guidelines that cover handling of hazardous materials, employee health and safety, and specific in-flight storage for each make and model of aircraft.

7.3.9 Hazardous Building Materials

Asbestos is one potentially hazardous building component regulated under the federal Toxic Substances Control Act and regulations contained in 40 CFR. Asbestos-containing material is also regulated under the federal Clean Air Act (because the primary pathway of exposure is inhalation) and by OSHA. Government regulations prohibit emissions of asbestos from demolition or construction activities, specify precautions and safe work practices that must be followed to minimize the potential release of asbestos fibers, require medical examinations and monitoring of employees engaged in activities that could disturb asbestos, and require notice to regulatory agencies prior to beginning renovation or demolition that could disturb asbestos. The Bay Area Air Quality Management District is responsible for overseeing the removal of friable asbestos from structures prior to renovation or demolition activities.

Other components encountered as part of a building demolition waste stream may also contain hazardous materials. Universal wastes (fluorescent tubes and lamps, mercury containing items such as switches and thermostats, batteries, and some electronic equipment, etc.), lighting ballasts that contain PCBs, lead pipes and roof vent flashings, lubrication fluids, refrigerants and other hazardous materials must be removed for proper disposal before structural demolition begins.

SECTION 8: CONCLUSIONS AND RECOMMENDATIONS

Construction activity associated with the Airport Master Plan project components could potentially expose workers to hazardous materials at locations on-Site where residual contaminants are known to exist. Demolition and earthwork activities also could encounter hazardous materials at locations not yet identified. Asbestos and other hazardous building materials may be encountered and require proper disposal during demolition or renovation of buildings.

The above findings are similar to those identified during the 1997 EIR, which stated: *The Airport should conduct "due diligence" or screening investigations of each potentially contaminated site where demolition, renovation, or earth-moving activities are to be conducted. These investigations should determine the potential for workers to encounter hazardous materials contamination, identify the likely presence of contamination, and determine the need to notify*

regulatory agencies and take further precautions as prescribed by law, regulation, and local procedures to protect the health and safety of site workers.

Based on the information reviewed during this study, known and potential impacts at the Site associated with hazardous materials use and storage are discussed in the following sections.

8.1 AGRICULTURAL USE

The Airport historically was used for agricultural purposes for several decades. Pesticides likely were applied to crops in the normal course of farming operations. If elevated concentrations of agricultural chemicals are present, mitigation or soil management measures may be required during construction/earthwork activities. Pesticide concentrations in soil likely are variable across the Site based on differences in past farming practices and crop types; multiple different on-Site orchard and row crop areas are apparent on historical aerial photographs. Prior to initiation of construction activities that would disturb soil, sampling should be conducted to evaluate potential impacts from agricultural chemicals, and appropriate soil management and health and safety protocols should be established.

Residual pesticide concentrations have been identified in soil on the southwest portion of the Site in the vicinity of the Signature Flight Support facility. Two open VCP cases (at 303 and 325 Martin Avenue) are associated with identified pesticide impacts in this area. During construction of the existing Signature Flight Support facilities, pesticide impacted soil was reused at three on-Site locations: 1) within the 325 Martin Avenue study area along a taxiway to the northeast of the Signature Flight Support hangers; 2) near the VOR antenna on the northwestern portion of the Airport; and 3) on APN 230-46-040 within a landscape berm along Coleman Avenue. Soil within these reuse areas that may be disturbed during the future operations of the Site (*e.g.*, future construction, grading, utility and other subsurface maintenance or repair work, paving, landscaping, etc.) should be properly managed in accordance with the DEH approved SMP. Because the VCP cases under DEH oversight at 303 and 325 Martin Avenue are still open, additional site management requirements could be stipulated. Compliance with DEH requirements should be maintained.

8.2 SOIL AND GROUNDWATER IMPACTS

8.2.1 Impacts from On-Site Releases

The Airport has experienced several on-Site hazardous material releases that have resulted in localized impacts to soil and/or groundwater quality. These include the two open VCP cases discussed in the preceding Section, and multiple closed LUST and VCP cases that are associated mainly with prior fuel storage and rental car facilities, and associated features such as prior vehicle maintenance areas, car wash facilities and oil-water separators, etc. The only remaining open LUST case is 1615 Airport Boulevard (formerly 1661 Airport Boulevard) consisting of the former Chevron USA and Dollar Rent A Car area. Site assessment and monitoring activities for this case are ongoing and being conducted under Water Board oversight. Any development activities in this area that would disturb soil or groundwater should be coordinated with the Water Board.

At most of the closed LUST and VCP case locations, residual contamination remains in soil and/or groundwater and, as a condition of case closure, on-going management requirements were established by the overseeing regulatory agencies. The stipulated management

requirements are included as footnotes in Table 10. Compliance with the established Site management requirements should be maintained.

8.2.2 Impacts from Off-Site Releases

VOC releases from off-Site facilities including FMC Corporation (1125 Coleman Avenue) and Stanford Applied Engineering (282 Brokaw Road) appear to have impacted on-Site groundwater. The general areas of identified groundwater impacts from these facilities are depicted on Figure 6. Note, however, that the lateral extent of VOC impacts to on-Site groundwater have not been well defined. If construction activities will encounter groundwater within or down-gradient of the areas, appropriate health and safety, and groundwater management measures should be implemented. The potential for vapor intrusion[8] impacts to new and existing occupied structures within areas of VOC impacted groundwater also should be evaluated in accordance with published guidance documents[9] and, if warranted, vapor intrusion mitigation measures should be implemented under regulatory agency oversight.

8.3 FACILITY CLOSURES

Hazardous materials are used and stored at multiple facilities at the Airport, and on-Site features, such as wash racks and oil-water separators, are potential sources for contaminants that could impact soil and/or groundwater quality. Some of these facilities and associated features will be closed to facilitate construction of planned improvements. As part of the facility closure process, the DEH (and/or the San José Fire Department) typically requires that a closure plan be submitted that describes required closure activities, such as removal of remaining hazardous materials, cleaning of hazardous material handling equipment, decontamination of building surfaces, removal of sumps, oil-water separators and USTs, documentation of waste disposal practices, and confirmation sampling, among others. We recommend that facility closures be coordinated with the appropriate oversight agency (DEH and/or San José Fire Department) to ensure that required closure activities are completed prior to demolition and redevelopment activities.

8.4 FIREFIGHTING FOAM USAGE

Since the 1960s, many fire suppressant foams contained PFAS. In recent years, the USEPA has identified PFAS as emerging contaminants of concern and has identified fire training facilities and airports as potential sources of PFAS contamination. These highly soluble contaminants pose a soil leaching concern due to their mobility; they readily migrate in groundwater and are bioaccumulative. PFAS can be persistent in the environment with degradation periods of years, decades, or longer under natural conditions.

Two former firefighter training areas were previously present on-Site, and fire suppressant foams have been used on-Site during past aircraft incidents and accidentally deployed from an

[8] Vapor intrusion is the movement of chemical vapors from contaminated groundwater or soil into a nearby building. Vapors primarily enter through openings in the buildings foundation, such as cracks in the concrete slab and gaps around utility lines. It is also possible for vapors to pass through concrete, which is naturally porous. Once inside the building, vapors may be inhaled posing potential health risks to building occupants.

[9] The DTSC, State Water Board, and the San Francisco Bay Regional Water Board are currently developing a supplemental vapor intrusion guidance document for conducting uniform vapor intrusion evaluations in California. This guidance document when finalized (reportedly in 2019) will serve as a supplement to existing guidance (namely, DTSC 2011 Vapor Intrusion Guidance and San Francisco Bay Water Board 2014 Interim Framework).

automated fire suppression system at Signature Flight Support Hangar 7. As a result of the March 2019 SWRCB Order, the Airport prepared a PFAS Work Plan detailing current and historic AFFF storage and usage locations, and identified potential soil and groundwater sample locations for Work Plan implementation. The Water Board conditionally approved the Work Plan in a letter dated July 18, 2019. The Airport intends to coordinate efforts with the Water Board to evaluate potential impacts to the Site from PFAS. Data collected from the PFAS Work Plan implementation will be used to inform the Airport prior to initiation of construction activities that would disturb soil or groundwater in areas where firefighting foams have been or are suspected to have been deployed. If impacts are identified, appropriate soil and groundwater management and health and safety protocols should be established.

8.5 FORMER SEWAGE DISPOSAL AREA

A 1948 aerial photograph reviewed during this study shows earthwork activities on the northwestern portion of the Site and on topographic maps from the 1950s; this area is labeled as “sewage disposal.” The aerial photographs and topographic maps show what appears to have been a sewage treatment plant located nearby (off-Site) at the intersection of Robert Avenue and De La Cruze Boulevard in the City of Santa Clara. The on-Site earthwork appears likely to have been associated with sludge drying or disposal activities; this area is depicted on Figure 6. Sewage sludge refers to the solids separated during the treatment of wastewater. Often, sewage sludge meets pollutant concentration limits allowing for land application and surface disposal. However, depending upon the wastewater source (*e.g.*, industrial or municipal, etc.) the sludge can contain elevated concentrations of metals and other persistent contaminants. Because no detailed information is available regarding the apparent on-Site sewage sludge disposal, we recommend that soil quality be evaluated prior to initiation of construction activities that would disturb soil within the identified disposal area. If impacts are identified, appropriate soil management and health and safety protocols should be established.

8.6 ASBESTOS, LEAD PAINT AND OTHER HAZARDOUS BUILDING MATERIALS

Due to the age of some on-Site structures, building materials may contain asbestos. If demolition, renovation, or re-roofing of a building is planned, an asbestos survey may be required by local authorities and/or National Emissions Standards for Hazardous Air Pollutants (NESHAP) guidelines. NESHAP guidelines require the removal of potentially friable asbestos containing building materials prior to building demolition or renovation that may disturb these materials.

Some components encountered as part of a building demolition waste stream may contain hazardous materials. Universal wastes, lubrication fluids, refrigerants and other hazardous materials should be removed before structural demolition begins. Materials that may result in possible risk to human health and the environment when improperly managed include lamps, thermostats, and light switches containing mercury; batteries from exit signs, emergency lights, and smoke alarms; lighting ballasts that contain PCBs; and lead pipes and roof vent flashings. Demolition waste such as fluorescent lamps, PCB ballasts, lead acid batteries, mercury thermostats, and lead flashings have special case-by-case requirements for generation, storage, transportation, and disposal. Before disposing of any demolition waste, the demolition contractor should determine if the waste is hazardous and ensure proper disposal of waste materials.

The Consumer Product Safety Commission banned the use of lead as an additive in paint in 1978. Based on the age of some on-Site buildings, lead-based paint may be present. If

demolition is planned, the removal of lead-based paint isn't required if it is bonded to the building materials. However, if the lead-based paint is flaking, peeling, or blistering, it should be removed prior to demolition. In either case, applicable OSHA regulations must be followed; these include requirements for worker training, air monitoring and dust control, among others. Any debris or soil containing lead must be disposed appropriately.

SECTION 9: LIMITATIONS

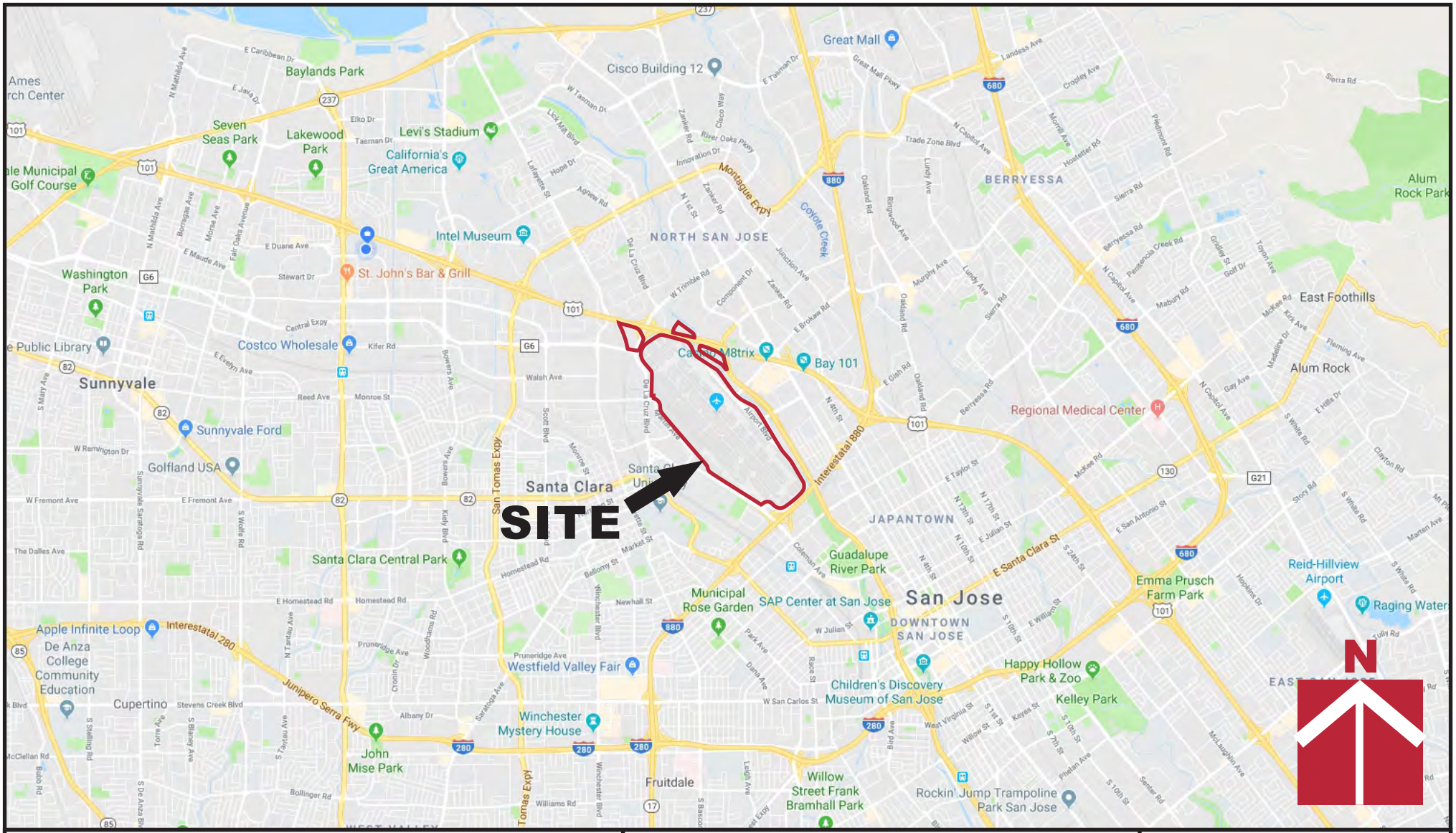
Cornerstone performed this Hazardous Materials Assessment to support David J. Powers & Associates in evaluation the Site. David J. Powers & Associates understands that the extent of information obtained is based on the reasonable limits of time and budgetary constraints.

Findings, opinions, conclusions and recommendations presented in this report are based on readily available information, and information readily identified by the interviews and/or the records review process. The findings are developed based on information obtained from a non-intrusive Site evaluation. Cornerstone does not accept liability for deficiencies, errors, or misstatements that have resulted from inaccuracies in the publicly available information or from interviews of persons knowledgeable of Site use. If a greater degree of confidence is desired regarding Site conditions, soil, groundwater, soil vapor and/or air samples should be collected by Cornerstone and analyzed by a state-certified laboratory to establish a more reliable assessment of environmental conditions.

David J. Powers & Associates and Airport staff provided Cornerstone environmental documents prepared by others. David J. Powers & Associates understands that Cornerstone reviewed and relied on the information presented in these documents and cannot be responsible for their accuracy.

This report, an instrument of professional service, was prepared for the sole use of David J. Powers & Associates and may not be reproduced or distributed without written authorization from Cornerstone. An electronic transmission of this report may also have been issued. While Cornerstone has taken precautions to produce a complete and secure electronic transmission, please check the electronic transmission against the hard copy version for conformity.

Cornerstone makes no warranty, expressed or implied, except that our services have been performed in accordance with the environmental principles generally accepted at this time and location.

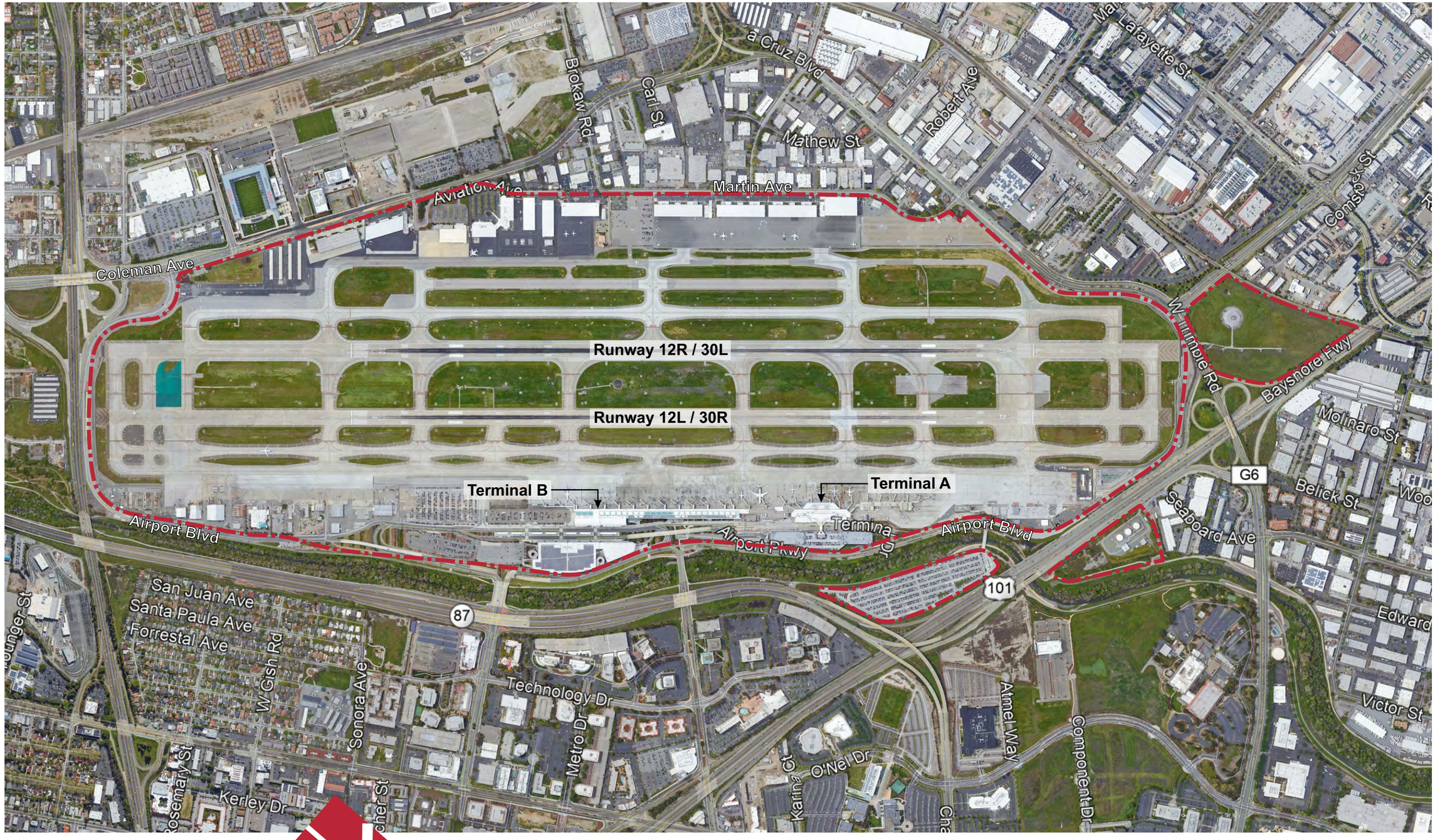


CORNERSTONE EARTH GROUP

Vicinity Map

Norman Y. Mineta
San Jose International Airport
San Jose, CA

Project Number	118-105-1
Figure Number	Figure 1
Date	July 2019
Drawn By	RRN



Legend

Approximate Site Boundary

0 1000 2000

APPROXIMATE SCALE (FEET)

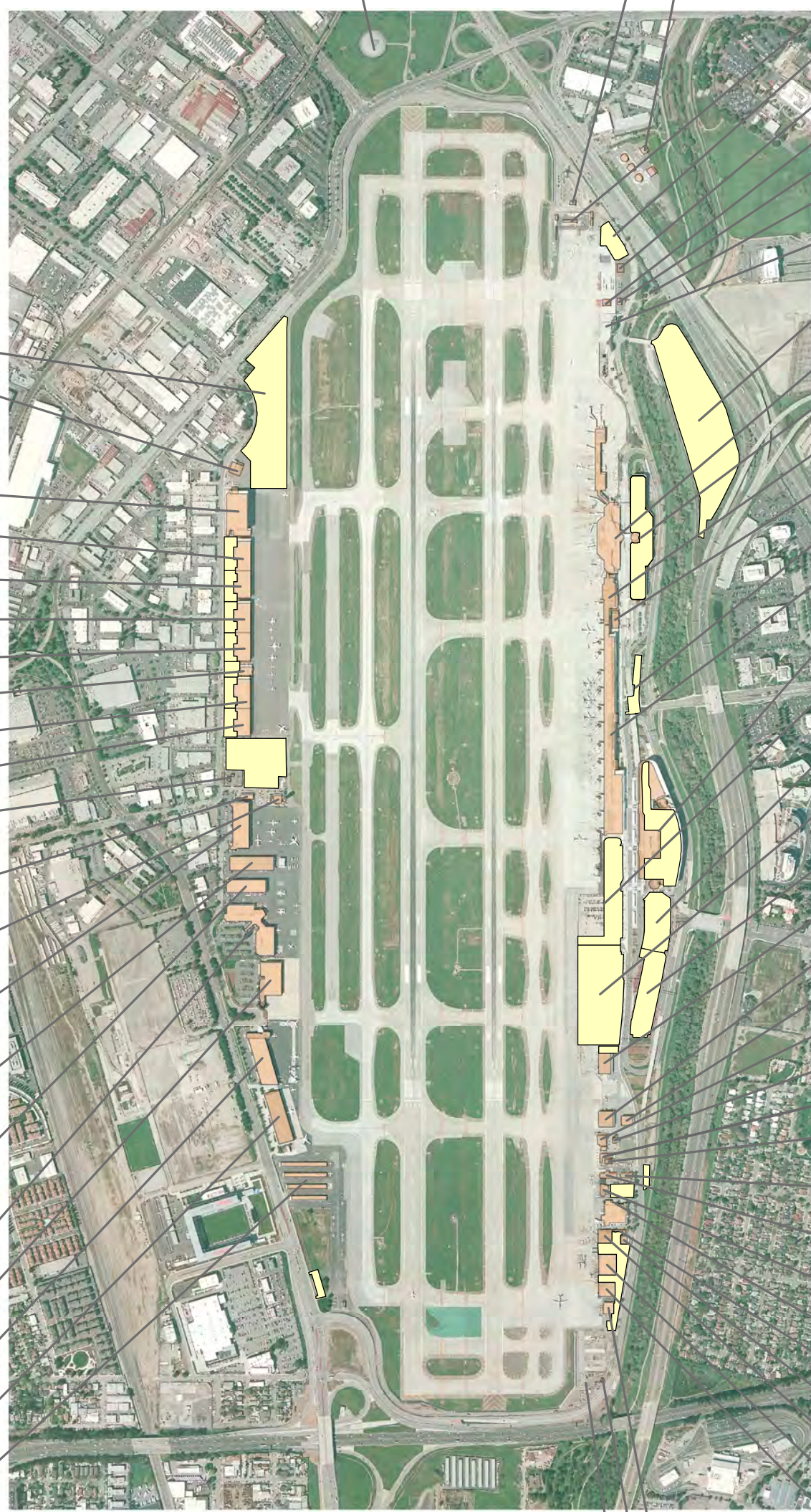
Base by Google Earth, dated 3/28/2018

CORNERSTONE EARTH GROUP

Site Plan

Norman Y. Mineta San Jose International Airport San Jose, CA

Project Number	118-105-1
Figure Number	Figure 2
Date	July 2019
Drawn By	RRN



0 1200 2400

APPROXIMATE SCALE (FEET)

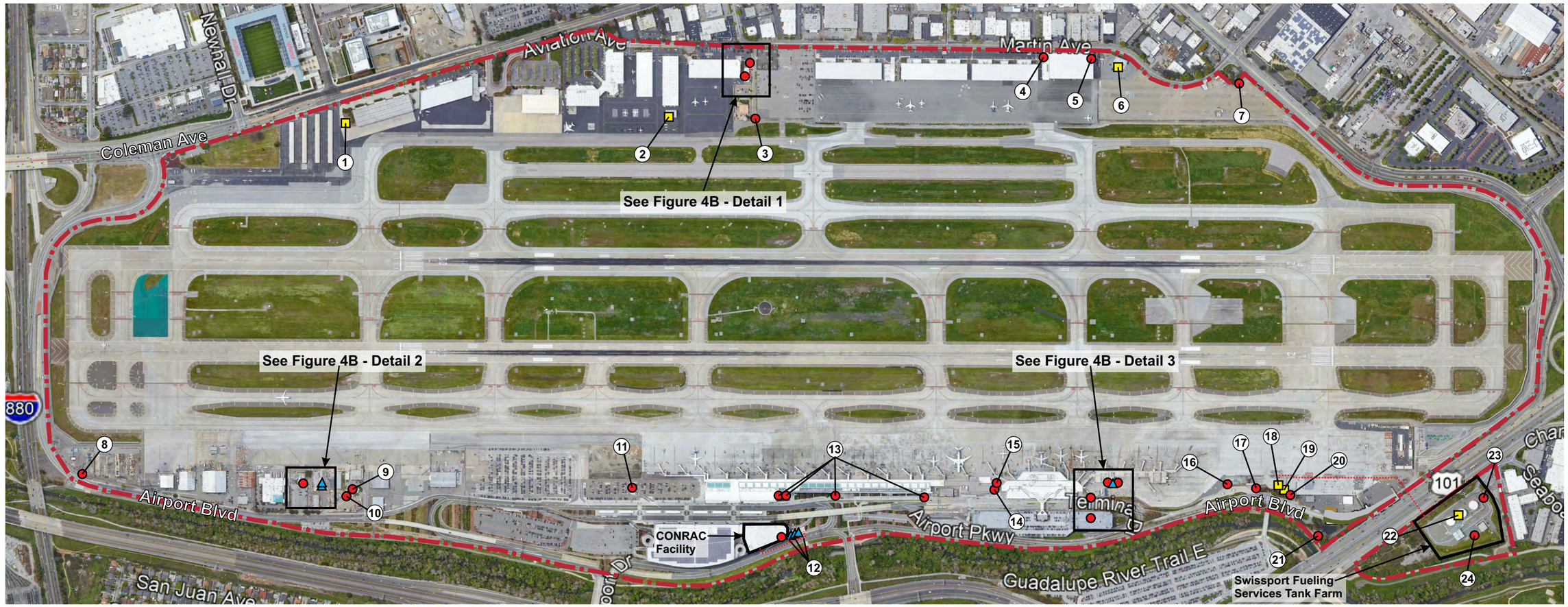
Base: Norman Y. Mineta San Jose International Airport, Attachment #2, SJC Airport, Facility Tenant Map, dated 8/27/2018

CORNERSTONE EARTH GROUP

Facility/Tenant Locations

Norman Y. Mineta
San Jose International Airport
San Jose, CA

Project Number	118-105-1
Figure Number	Figure 3
Date	July 2019
Drawn By	RRN



ID	SJC Fuel Storage/Generator Areas	Address
1	Fuel Storage AST at Avbase Flight Services	1144 Coleman Avenue
2	Fuel Storage ASTs at Atlantic Aviation	1250 Aviation Avenue
3	Diesel AST at FAA Airport Traffic Control Tower	275 Martin Avenue
4	Diesel ASTs for Emergency Fire Pumps at Signature Flight Support	325 Martin Avenue
5	Emergency Generator at Signature Flight Support	325 Martin Avenue
6	Fuel Storage ASTs at Signature Flight Support	393 Martin Avenue
7	Emergency Generator Westside/Former Long Term Parking Lot	325 Martin Avenue
8	Emergency Generator at MPOE	1207 Airport Boulevard
9	San Jose Fire Department Emergency Generator	1433 Airport Boulevard
10	Facilities Emergency Generator	1401 Airport Boulevard
11	Emergency Generator Terminal B Hourly Lot 5	1661 Airport Boulevard
12	Three gasoline USTs and Generator at CONRAC Facility	1695 Airport Boulevard
13	Emergency Generators Terminal B	1701 Airport Boulevard
14	Emergency Generator Terminal A	2065 Airport Boulevard
15	Diesel AST for Generator	2065 Airport Boulevard
16	Emergency Generator at CNG Fueling Station	2151 Airport Boulevard
17	Emergency Generator Switchgear	2201 Airport Boulevard
18	Fuel Dispensing Racks-Swissport Airside Facility	2201 Airport Boulevard
19	Jet-A AST, 550 gallons-Swissport Airside Facility	2201 Airport Boulevard
20	Diesel AST for fire water pump-Swissport Airside Facility	2201 Airport Boulevard
21	Rocky Pond Flood Control Pumps with Diesel ASTs	2080 Airport Boulevard
22	Fuel Storage ASTs at Swissport Tank Farm	2250 Seaboard Avenue
23	Diesel AST for Fire Water Pumps at Swissport Tank Farm	2250 Seaboard Avenue
24	Emergency Generator at Swissport	2250 Seaboard Avenue

Legend

- Approximate Site Boundary
- Below ground piping or pipeline
- Jet Fuel/Avgas Storage Facilities (ASTs)
- Gasoline and Diesel Storage USTs
- Diesel fueled emergency generator or pump (or associated AST)

N

0 800 1600

APPROXIMATE SCALE (FEET)

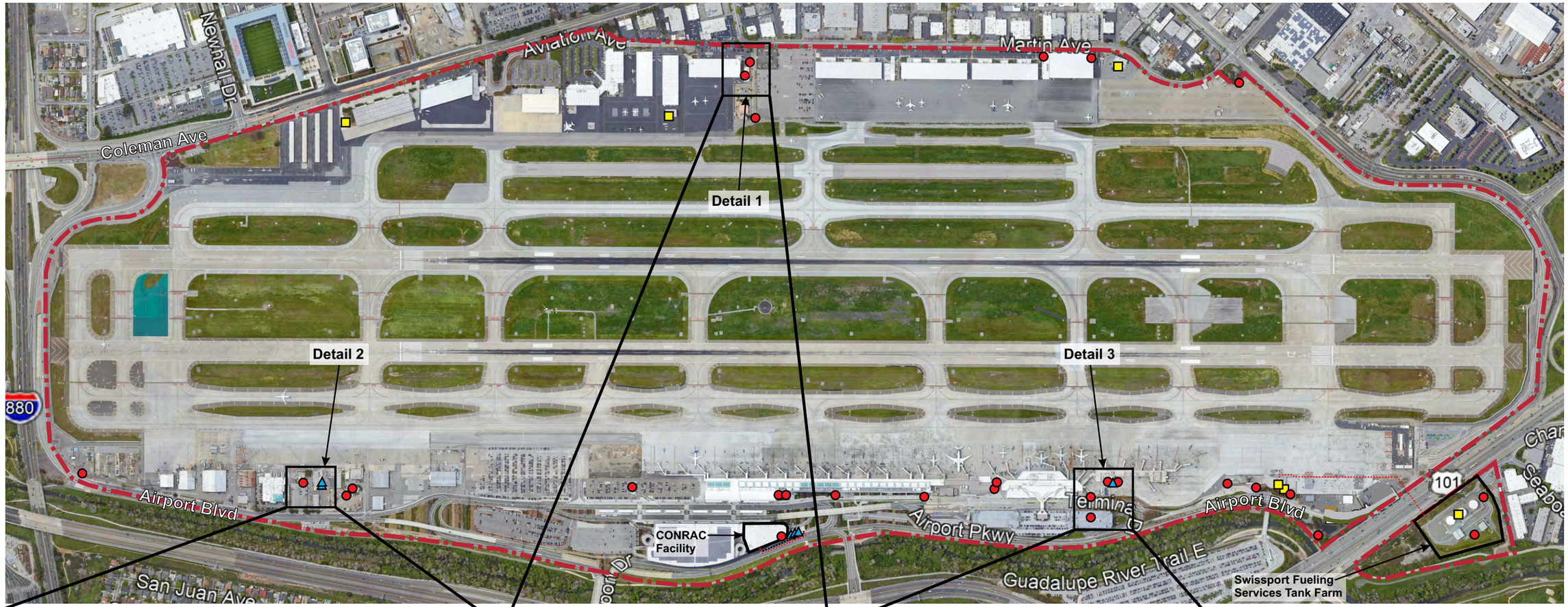
Base by Google Earth, dated 3/28/2018

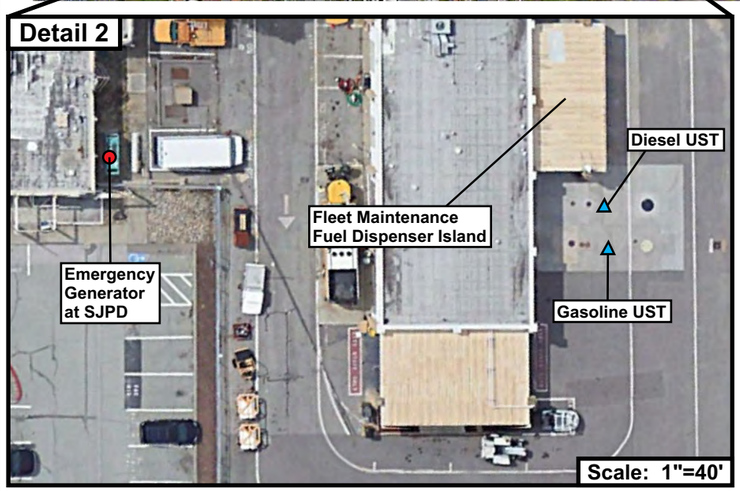
CORNERSTONE EARTH GROUP

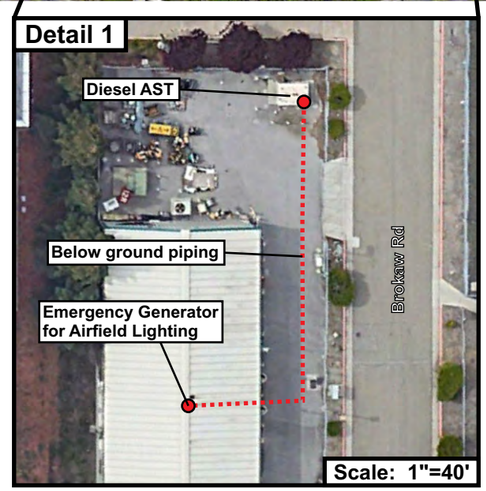
Fuel Storage Locations

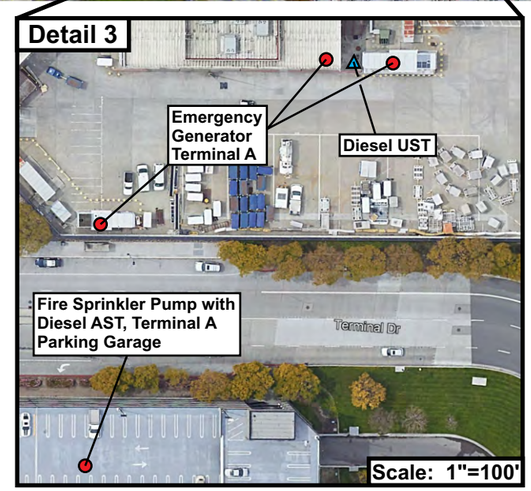
Norman Y. Mineta San Jose International Airport San Jose, CA

Project Number	118-105-1
Figure Number	Figure 4A
Date	July 2019
Drawn By	RRN









Legend

- Approximate Site Boundary
- Below ground piping or pipeline
- Jet Fuel/Avgas Storage Facilities (ASTs)
- Gasoline and Diesel Storage USTs
- Diesel fueled emergency generator or pump (or associated AST)

N

0 800 1600

APPROXIMATE SCALE (FEET)

Base by Google Earth, dated 3/28/2018

CORNERSTONE EARTH GROUP

Fuel Storage Locations

Norman Y. Mineta San Jose International Airport San Jose, CA

Project Number	118-105-1
Figure Number	Figure 4B
Date	July 2019
Drawn By	RRN

ID	SJC Oil-Water Separators Areas	Address
1	Oil-Water Separator at General Aviation Wash Rack (GA West)	1128 Coleman Avenue
2	Oil-Water Separator at AvBase AST area	1144 Coleman Avenue
3	Oil-Water Separator at Atlantic Aviation (Former TWC) Hangar	1162 Aviation Avenue
4	Oil-Water Separator at Hewlett Packard Enterprise at Aircraft Wash Rack	1210 Aviation Avenue
5	Oil-Water Separator at Atlantic Aviation Aircraft Wash Rack	1250 Aviation Avenue
6	Oil-Water Separator at Atlantic Aviation Hangar	1250 Aviation Avenue
7	Oil-Water Separator at Atlantic Aviation Fuel Farm	1250 Aviation Avenue
8	Oil-Water Separator and Adjacent AFFF Containment Tank	1250 Aviation Avenue
9	Oil-Water Separator at Signature Flight Support Fuel Farm	393 Martin Avenue
10	Oil-Water Separator at Ground Support Equipment Wash Rack	1207 Airport Boulevard
11	Oil-Water Separator at Fleet Maintenance Wash Rack	1395 Airport Boulevard
12	Oil-Water Separator at Paint Shop	1395 Airport Boulevard
13	Oil-Water Separator at CONRAC Facility (multiple oil-water separators, ground floor)	1659 Airport Boulevard
14	Oil-Water Separator at CONRAC Facility UST Area	1659 Airport Boulevard
15	Oil-Water Separator at Terminal A Trash Compactor Area	2201 Airport Boulevard
16	Oil-Water Separator at Swissport Airside Facility	2201 Airport Boulevard
17	Oil-Water Separator at Swissport Tank Farm	2250 Seaboard Avenue

Legend

- Approximate Site Boundary
- Aircraft or vehicle wash rack with oil-water separator
- Other oil-water separator

N

0 800 1600

APPROXIMATE SCALE (FEET)

Base by Google Earth, dated 3/28/2018

CORNERSTONE EARTH GROUP

Wash Racks and Oil-Water Separators

Norman Y. Mineta San Jose International Airport San Jose, CA

Project Number: 118-105-1

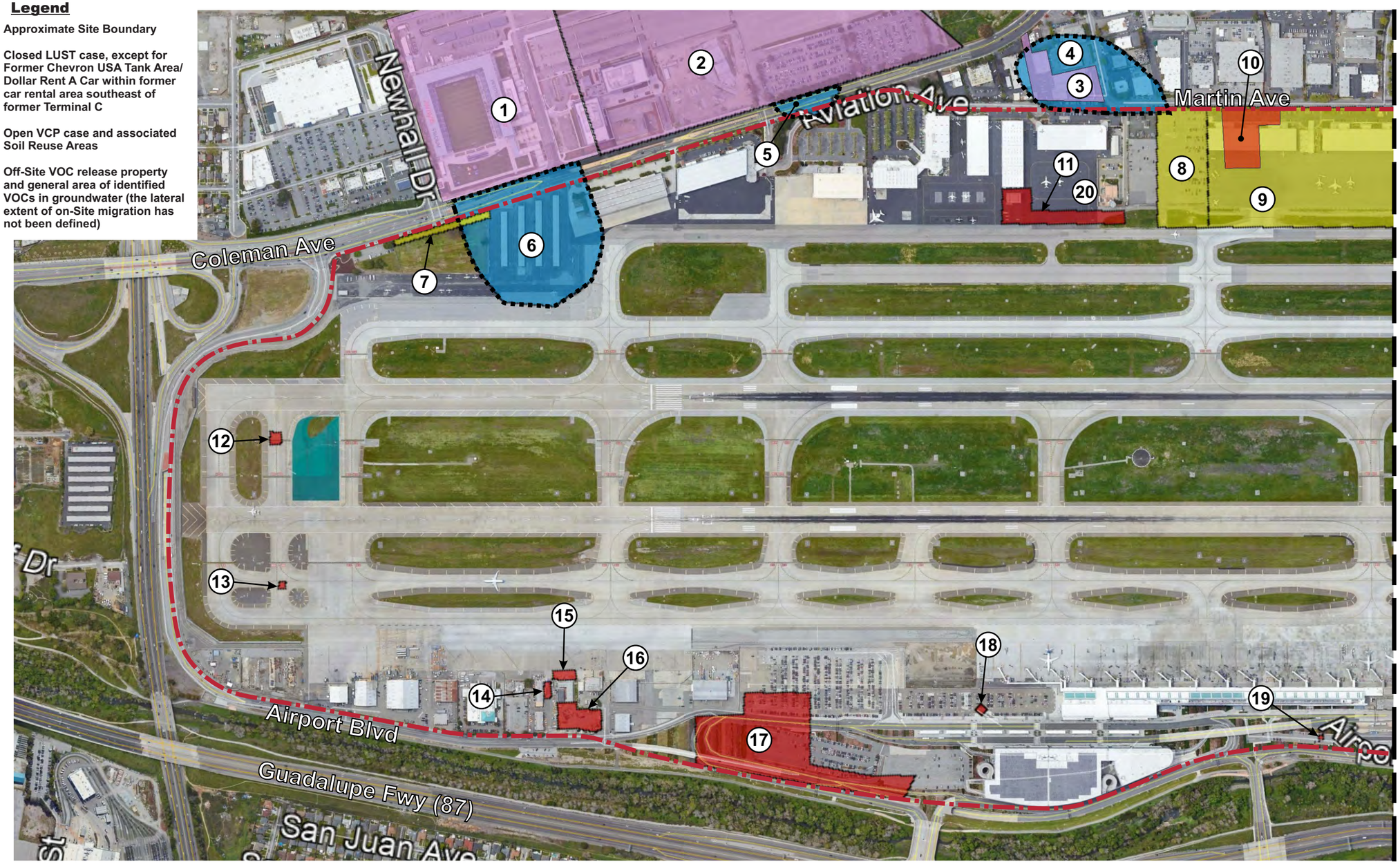
Figure Number: Figure 5

Date: July 2019

Drawn By: RRN

Legend

- Approximate Site Boundary
- Closed LUST case, except for Former Chevron USA Tank Area/ Dollar Rent A Car within former car rental area southeast of former Terminal C
- Open VCP case and associated Soil Reuse Areas
- Off-Site VOC release property and general area of identified VOCs in groundwater (the lateral extent of on-Site migration has not been defined)



Matchline: See Figure 6B

ID	SJC Areas	Address
1	FMC Corporation Central Plant Area	1125 Coleman Avenue
2	FMC Corporation Former Test Track Area	1125 Coleman Avenue
3	Stanford Applied Engineering	282 Martin Avenue
4	General area of identified VOCs in groundwater (lateral extent is not defined)	
5	General area of identified VOCs in groundwater from FMC (lateral extent not defined)	
6	General area of identified VOCs in groundwater from FMC (lateral extent not defined)	
7	Soil Reuse Area (landscap berm)	Associated with #9 - 325 Martin Avenue Study Area
8	Signature Flight Support	303 Martin Avenue Study Area
9	Signature Flight Support	325 Martin Avenue Study Area

ID	SJC Areas	Address
10	Marchese Farms	297 Martin Avenue (AST Removed in 1995)
11	San Jose Jet Center	1250 Aviation Avenue (Four USTs removed 2005)
12	Former GA Area	1101 Airport Boulevard (2 USTs removed June 2004)
13	Former GA area	1101 Airport Boulevard
14	Fleet Maintenance Facility	1395 Airport Boulevard (4 USTs removed Oct/Nov 1990. One UST removed 2006)
15	Former Fuel Dispenser/Loading Rack Area	Associated with #16
16	Former Chevron and SJ Fuel Terminals	1401 Airport Boulevard
17	Former Car Rental Area	Multiple Rent A Car companies, southeast of former Terminal C
18	Terminal C	1661 Airport Boulevard (one UST removed 1992)
19	AAMPCO	1801 Airport Boulevard (one UST removed 2000)
20	General area of reported former burn pit	

Base by Google Earth, dated 3/28/2018

N

0 600 1200

APPROXIMATE SCALE (FEET)

Project Number 118-105-1

Figure Number Figure 6A

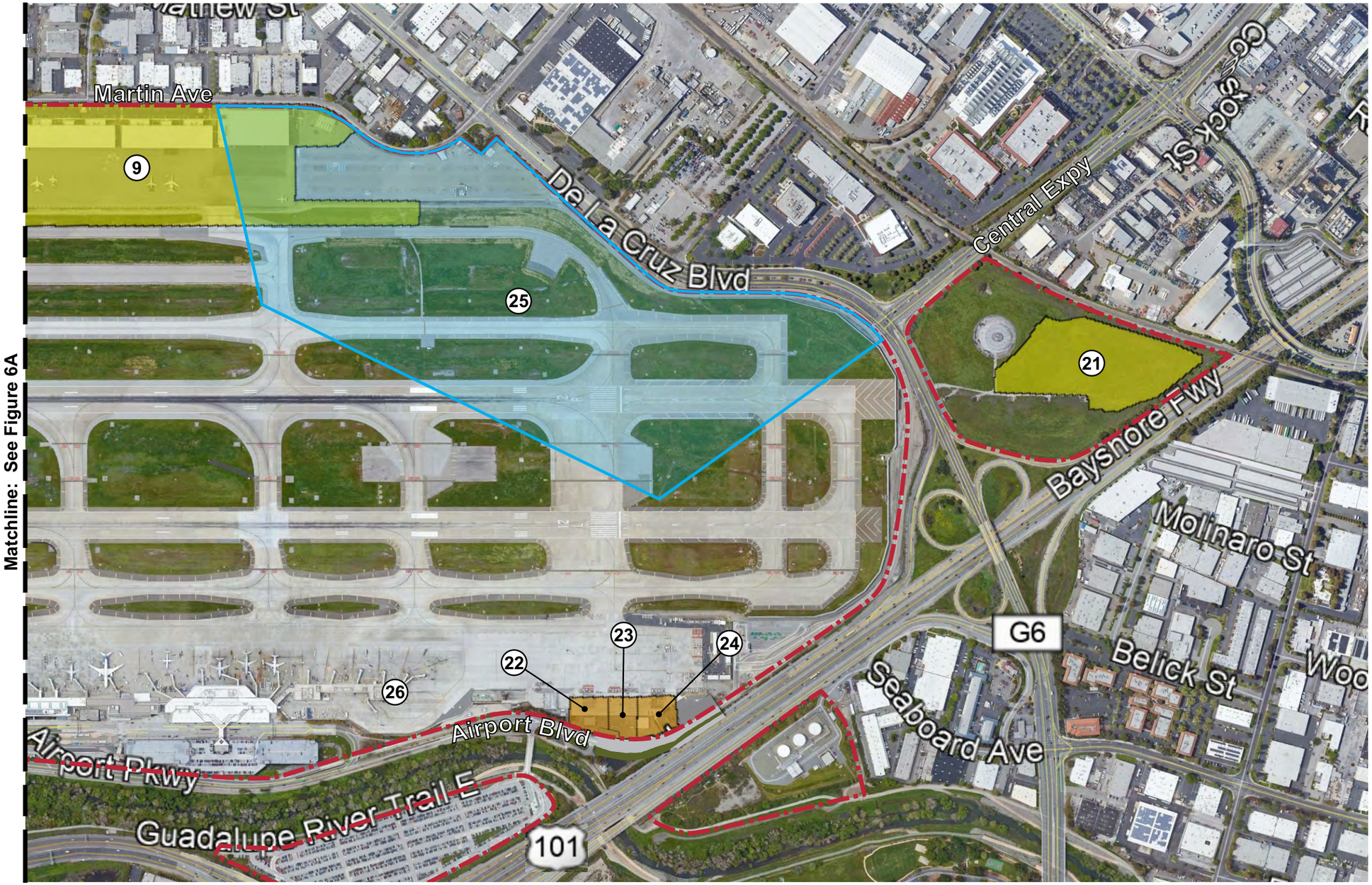
Drawn By RRN

Date July 2019

Potential Impacts to Soil or Groundwater

Norman Y. Mineta
San Jose International Airport
San Jose, CA

CORNERSTONE EARTH GROUP



ID	SJC Areas	Address
9	Signature Flight Support	325 Martin Avenue Study Area
21	Soil Reuse Area (VOR Antenna Area)	Associated with #9 - 325 Martin Avenue Study Area
22	Dollar Thrifty	2251 Airport Boulevard
23	Avis Budget	2225 and 2253 Airport Boulevard
24	Hertz	2411 Airport Boulevard
25	Former Sewage Disposal Area (circa 1940s/1950s)	
26	General area of reported former burn pit	

Legend

- Approximate Site Boundary
- Closed VCP case
- Open VCP case and associated Soil Reuse Areas

N

0 600 1200

APPROXIMATE SCALE (FEET)

Base by Google Earth, dated 3/28/2018

Project Number 118-105-1

Figure Number Figure 6B

Date July 2019

Drawn By RRN

Potential Impacts to Soil or Groundwater

Norman Y. Mineta
San Jose International Airport
San Jose, CA

CORNERSTONE EARTH GROUP

APPENDIX A – TABLE A1 AND APN MAPS

Table A1. Site Addresses and Occupants/Tenants

Address	APN	Facility/Tenant Name
1101 Airport Boulevard	230-46-065	Former Airport address and closed LUST case
1203 Airport Boulevard	230-46-065	NA
1203 Airport Boulevard	230-25-005	MPOE Generator (south main point of entry)
1207 Airport Boulevard	230-25-005	Ground Support Equipment Wash Rack
1239 Airport Boulevard	230-25-005	South Maintenance Yard
1239 Airport Boulevard[1]	230-46-018	Southwest Airlines Provisioning and GSE
1253 Airport Boulevard[2]	230-46-019	American Airlines Hangar
1277 Airport Boulevard[3]	230-46-020	Multi-Tenant Hangar: UPS, Alaska, JetPro
1311-A Airport Boulevard	230-46-036	Airport offices
1311-B Airport Boulevard	230-46-036	Airport Sign Shop
1311-C Airport Boulevard	230-46-036	Hazardous Waste Accumulation Area and Multiple Tenant Hangar
1355 Airport Boulevard	230-46-045	LSG Sky Chefs
1387 Airport Boulevard	230-46-045	SJPD Airport Division Generator (old bldg)
1395 Airport Boulevard	230-46-045	Fleet Maintenance/Paint Shop
1401 Airport Boulevard	230-46-045	Airport Facilities
1431 Airport Boulevard	230-46-045	Biffy House lavatory waste disposal facility
1433 Airport Boulevard	230-46-045	San Jose Fire Station #20
1445 Airport Boulevard	230-46-065	Former AVIS Rent A Car
1455 Airport Boulevard	230-46-046	Airline Services Hangars A and B
1475 Airport Boulevard	230-46-046	NA
1521 Airport Boulevard	230-46-065	Air Freight (multi-airline)/Southwest Airlines Cargo
1527 Airport Boulevard	230-46-022	NA
1615 Airport Boulevard	230-46-065	NA
1617 Airport Boulevard	230-46-024	Former Hertz car rental
1639 Airport Boulevard	230-46-065	Terminal B - Daily Lot 4
1641 Airport Boulevard	230-46-065	Terminal B Daily Parking Lot 6
1659 Airport Boulevard	230-46-065	Consolidated Rent-A-Car facility (CONRAC)
1661 Airport Boulevard	230-46-045	NA
1661 Airport Boulevard	230-46-065	Terminal B-Hourly Lot 5
1701 Airport Boulevard	230-46-065	Terminal B
1701 Airport Boulevard	230-46-065	Alaska Airlines Ramp/Terminal Facility
1701 Airport Boulevard	230-46-065	Southwest Airlines Ramp/Terminal Facility
1755 Airport Boulevard	230-02-006	Terminal B Employee Parking Lot
1795, 1815 and 1817 Airport Boulevard	230-02-006	NA
2055 Airport Boulevard	230-02-006	Central Plant
2065 Airport Boulevard	230-02-006	Terminal Federal Inspection Services (FIS)
2075 Airport Boulevard	230-02-006	Terminal A Parking Garage
2077 Airport Boulevard	230-02-006	Terminal A
2077 Airport Boulevard	230-02-006	American Airlines Ramp/Terminal Facility
2077 Airport Boulevard	230-02-006	United Airlines Ramp/Terminal Facility
2077 Airport Boulevard	230-02-006	Delta Airlines Ramp/Terminal Facility
2080 Airport Boulevard	230-02-021	Rocky Pond Retention Basin Pump Station
2091 Airport Boulevard	230-02-021	FedEx-North Cargo Ramp
2091 Airport Boulevard	230-02-025	NA
2151 Airport Boulevard	230-02-025	CNG Fueling Station
2200 and 2250 Airport Blvd	230-01-058	NA

Continued.

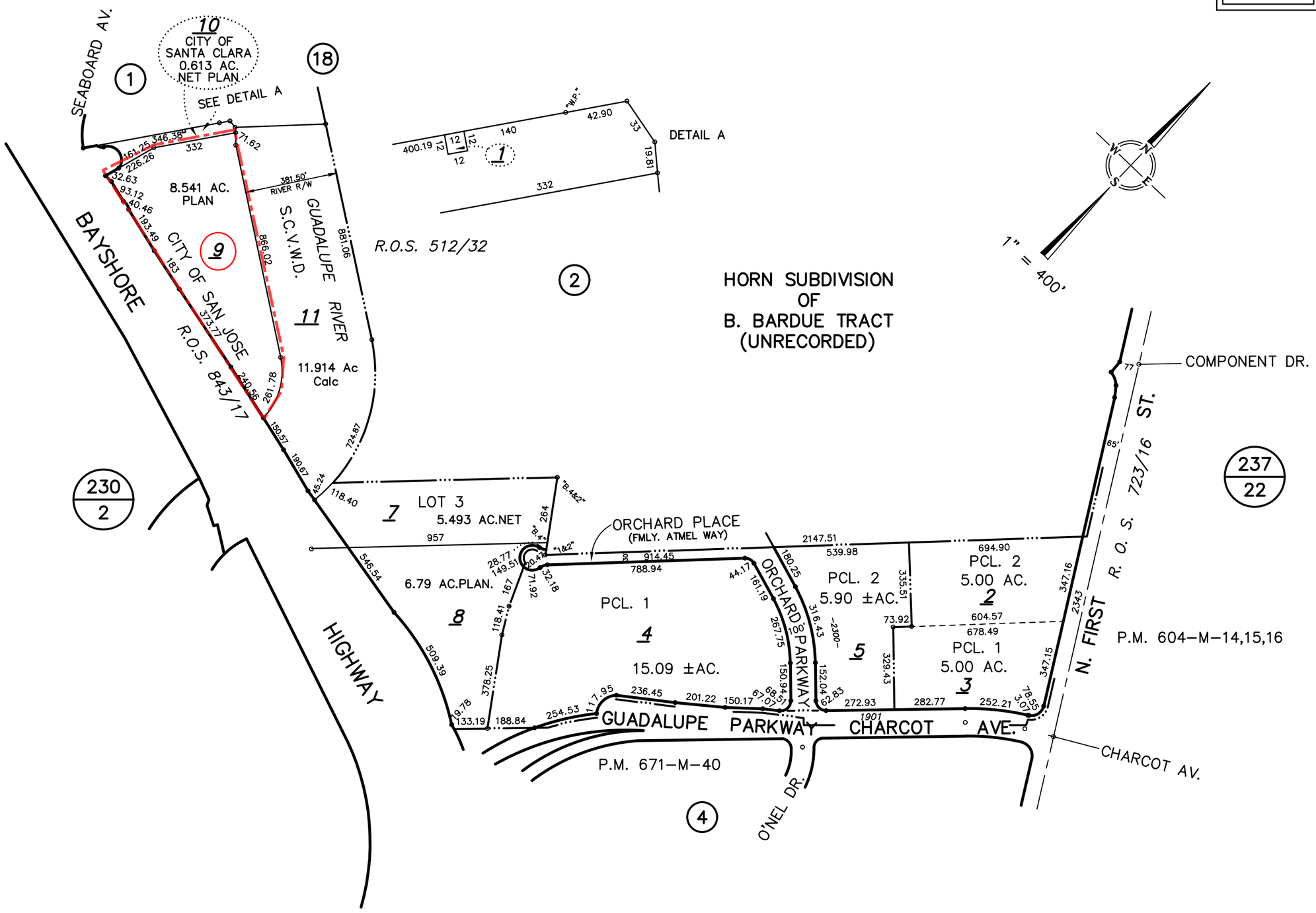
Table A1. Continued

Address	APN	Facility/Tenant Name
2201 Airport Boulevard	230-02-025	North Air Cargo/Switchgear
2201 Airport Boulevard	230-02-025	Swissport Fuel Dispensing Racks
2251, 2253, 2265, 2411 and 2413 Airport Boulevard	230-02-021	NA
2300 Airport Boulevard	230-01-058	Economy Parking Lot-1
2341 Airport Boulevard	230-02-021	Swissport Fueling Services (Maintenance Shop and Yard)
2361 Airport Boulevard	230-02-021	Shuttle Bus Staging
2385 Airport Boulevard	230-02-021	SJPD Airport Division
2401 Airport Boulevard	230-02-021	NE Tenant Employee Parking Lot
2470 Airport Boulevard	230-02-021	Taxi Staging Office
1162 Aviation Avenue	230-46-044	Atlantic Aviation (formerly TWC)
1210 Aviation Avenue	230-46-051	Hewlett Packard
1250 Aviation Avenue	230-46-049	Atlantic Aviation facilities and fuel farm
1128 Coleman Avenue	230-46-065	General Aviation (GA) West
1144 Coleman Avenue	230-46-041	AvBase fuel farm
1144 Coleman Avenue	230-46-042	AvBase hangar
269 Martin Avenue	230-46-049	NA
269 Martin Avenue	230-46-065	NA
273 Martin Avenue	230-46-011	Airfield Electrical Lighting Vault
275 Martin Avenue	230-46-065	FAA Airport Traffic Control Tower (ATCT)
277 Martin Avenue	230-02-007	Remote transmitter/receiver (RTR) Site
297 Martin Avenue	230-02-026	Former Marchese Farms closed LUST case
303, 313, 323, 333, 343, 353 and 363 Martin Avenue	230-02-026	Signature Flight Support Terminal Building and Hangars 1 through 6
325 Martin Avenue	230-02-026	Open VCP case at Signature Flight Support
325 Martin Avenue	230-03-101	Westside Parking Lot
373, 383 and 393 Martin Ave	230-03-101	Signature Flight Support Hangar 7 and Fuel Farm
2250 Seaboard Avenue	101-03-009	Swissport Fuel Farm
--	230-02-022	NA
--	230-02-024	NA
--	230-02-035	NA
--	230-03-041	NA
--	230-03-074	NA
--	230-03-081	NA
--	230-03-102	NA
--	230-24-006	NA
--	230-25-004	NA
--	230-46-017	NA
--	230-46-023	NA
--	230-46-037	NA
--	230-46-040	NA
--	230-46-051	NA

APN Assessors Parcel Number (APN) on which the identified facility is located.
Green Address in use or formerly used but not assigned to the APN per the County Assessor's Office
-- No address assigned to APN per County Assessor's Office
NA Address assigned to APN but not currently in use
1 County Assessor's Office identifies this parcel as 1253 Airport Boulevard.
2 County Assessor's Office identifies this parcel as 1277 Airport Boulevard.
3 County Assessor's Office identifies this parcel as 1311 Airport Boulevard.

APPENDIX B – HISTORICAL AERIAL PHOTOGRAPHS

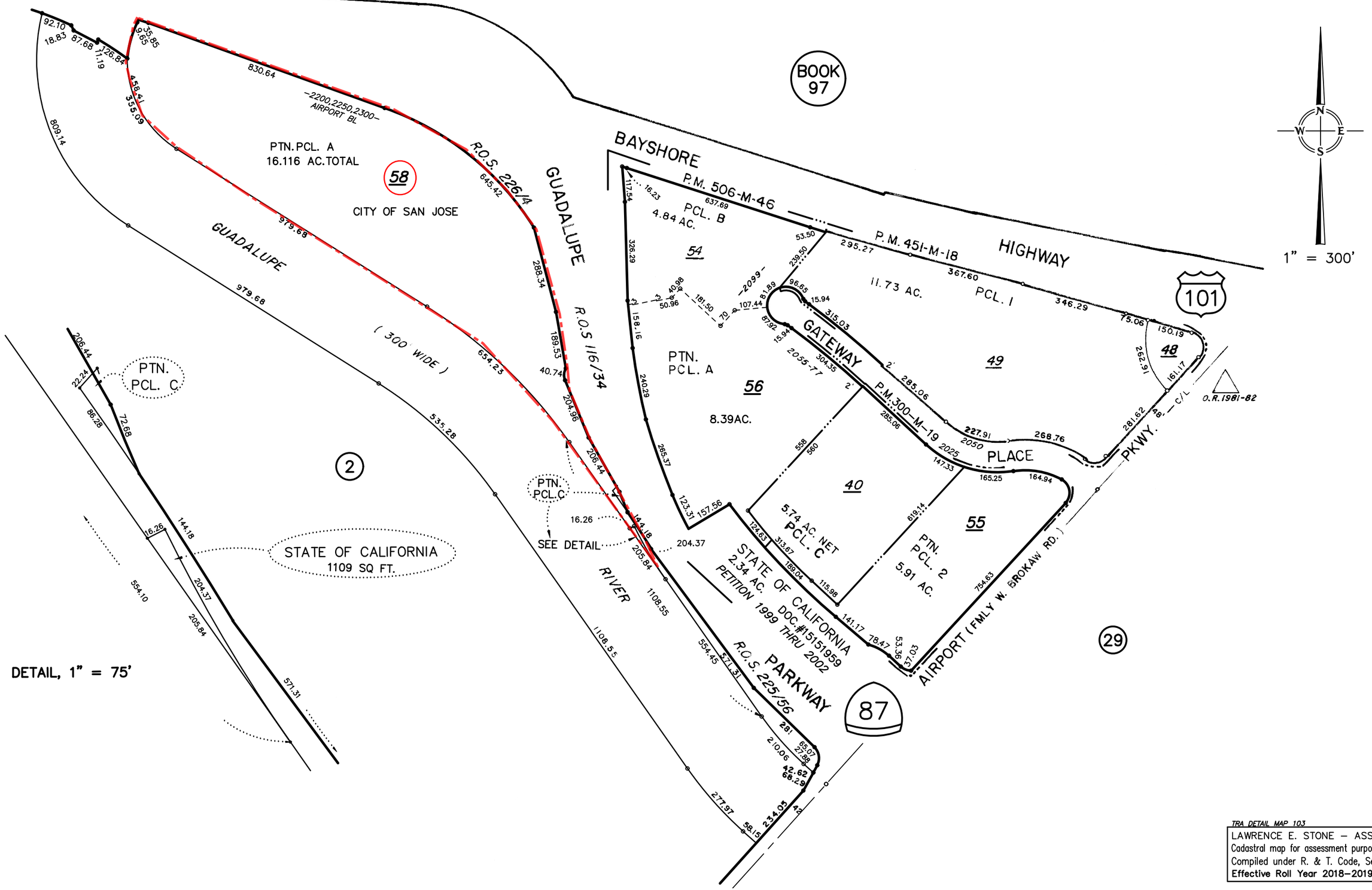
BOOK	PAGE
101	3



TRA DETAIL MAP 103

LAWRENCE E. STONE – ASSESSOR
Cadastral map for assessment purposes only.
Compiled under R. & T. Code, Sec. 327.
Effective Roll Year 2018–2019

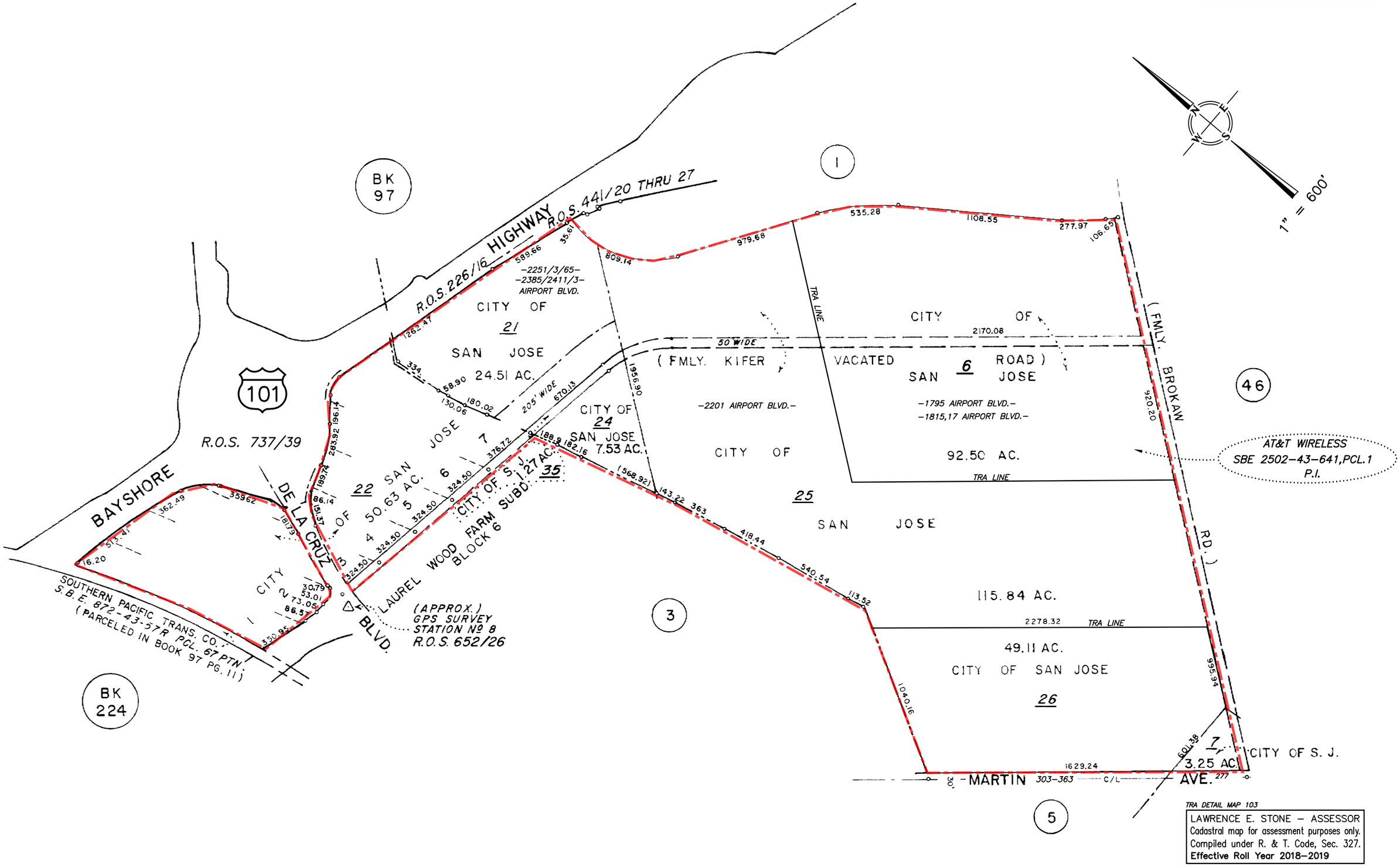
BOOK	PAGE
230	1



TRA DETAIL MAP 103

LAWRENCE E. STONE – ASSESSOR
Cadastral map for assessment purposes only.
Compiled under R. & T. Code, Sec. 327.
Effective Roll Year 2018–2019

BOOK	PAGE
230	2



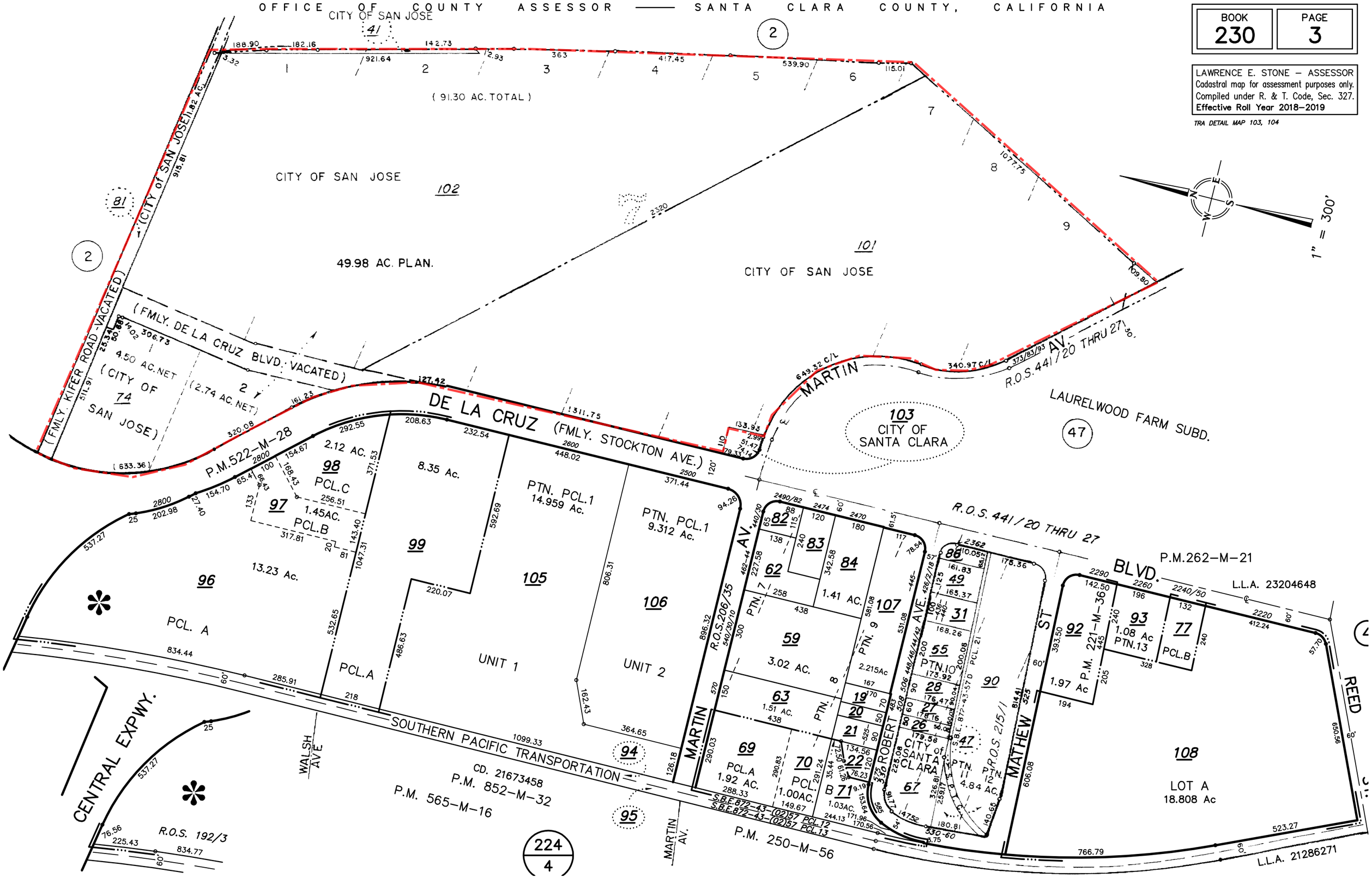
TRA DETAIL MAP 103

LAWRENCE E. STONE – ASSESSOR
Cadastral map for assessment purposes only.
Compiled under R. & T. Code, Sec. 327.
Effective Roll Year 2018–2019

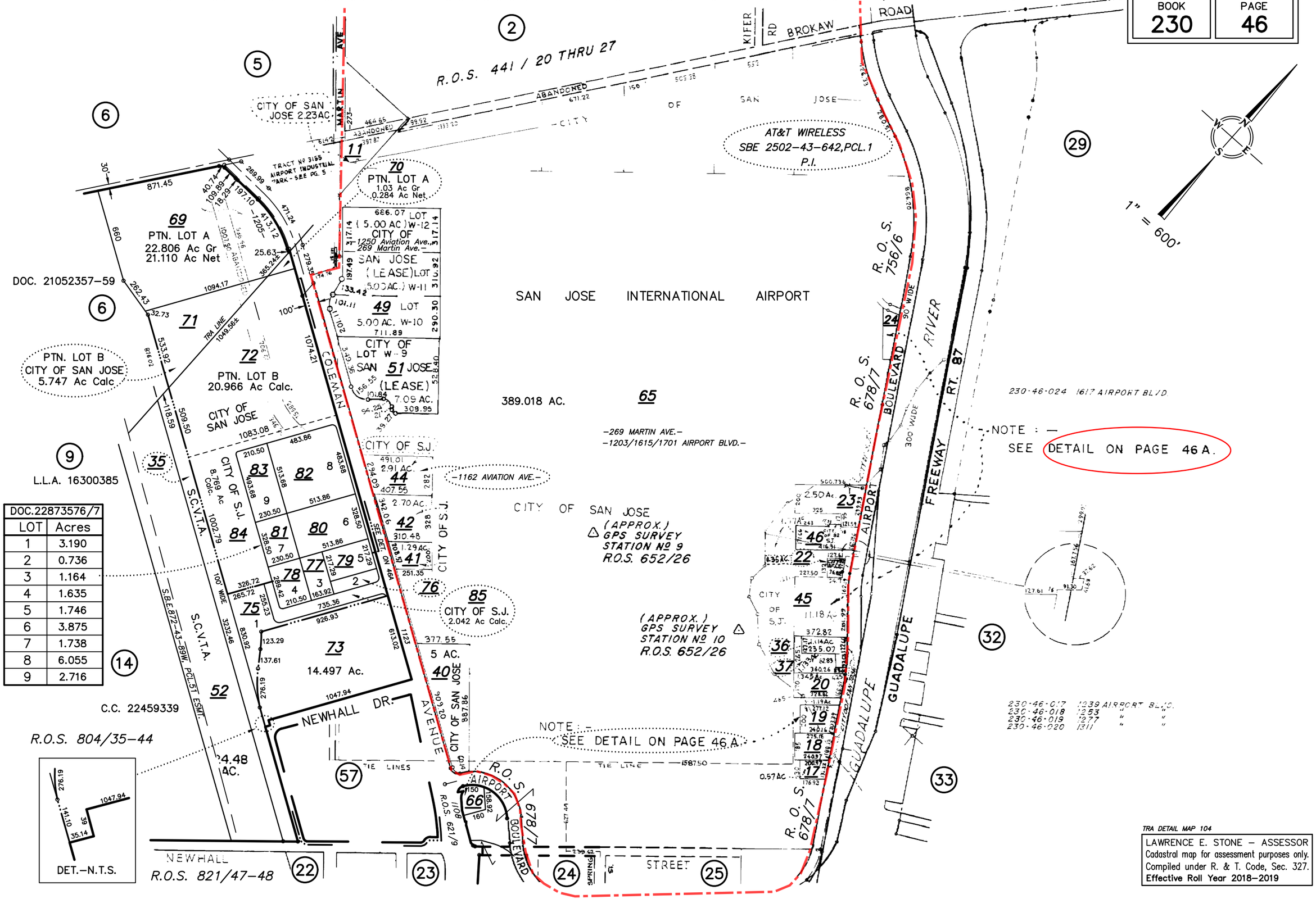
BOOK	PAGE
230	3

LAWRENCE E. STONE – ASSESSOR
Cadastral map for assessment purposes only.
Compiled under R. & T. Code, Sec. 327.
Effective Roll Year 2018–2019

TRA DETAIL MAP 103, 104



BOOK	PAGE
230	46



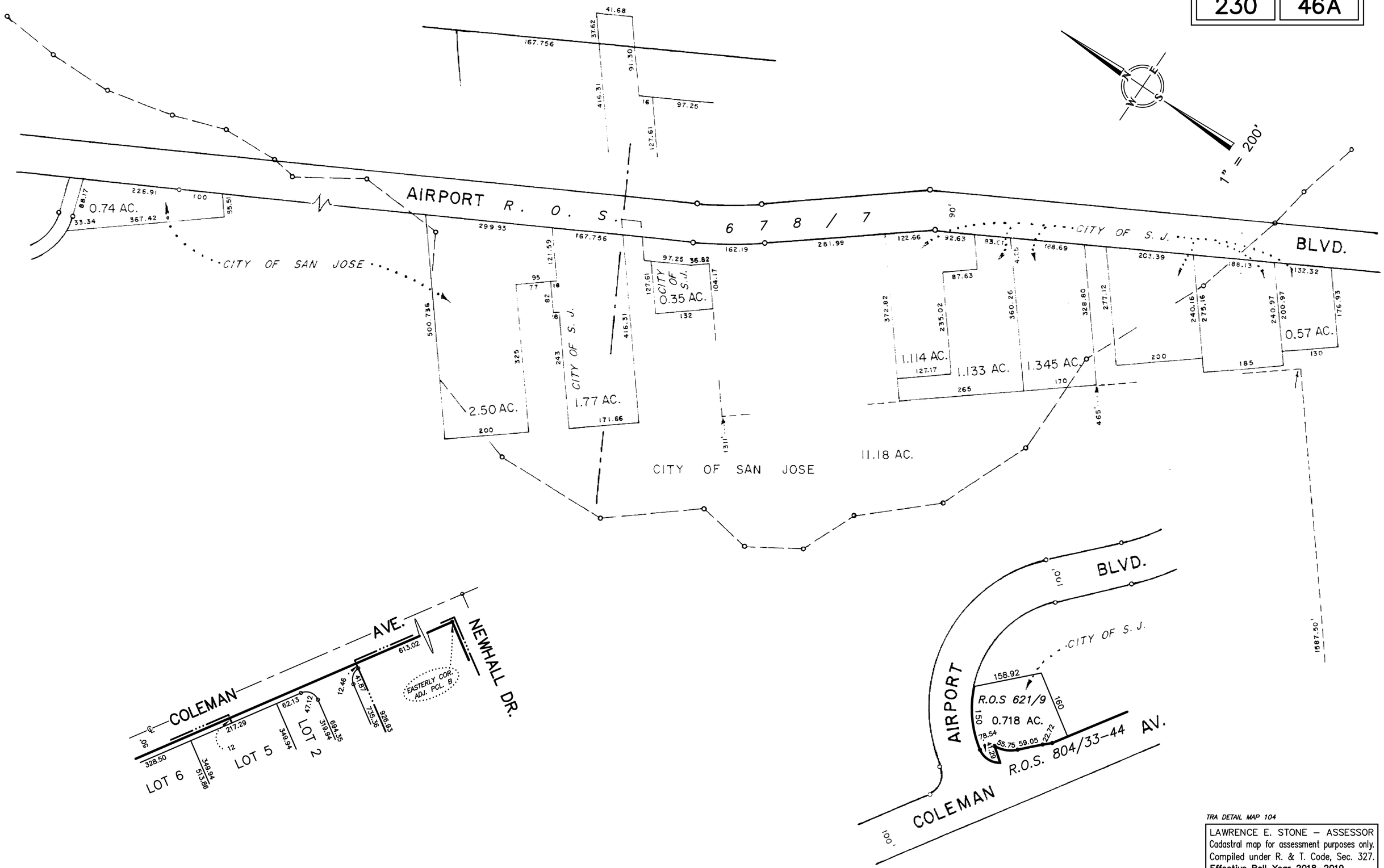
DOC.22873576/7	
LOT	Acres
1	3.190
2	0.736
3	1.164
4	1.635
5	1.746
6	3.875
7	1.738
8	6.055
9	2.716

TRA DETAIL MAP 104

LAWRENCE E. STONE – ASSESSOR
Cadastral map for assessment purposes only.
Compiled under R. & T. Code, Sec. 327.
Effective Roll Year 2018–2019

OFFICE OF COUNTY ASSESSOR — SANTA CLARA COUNTY, CALIFORNIA

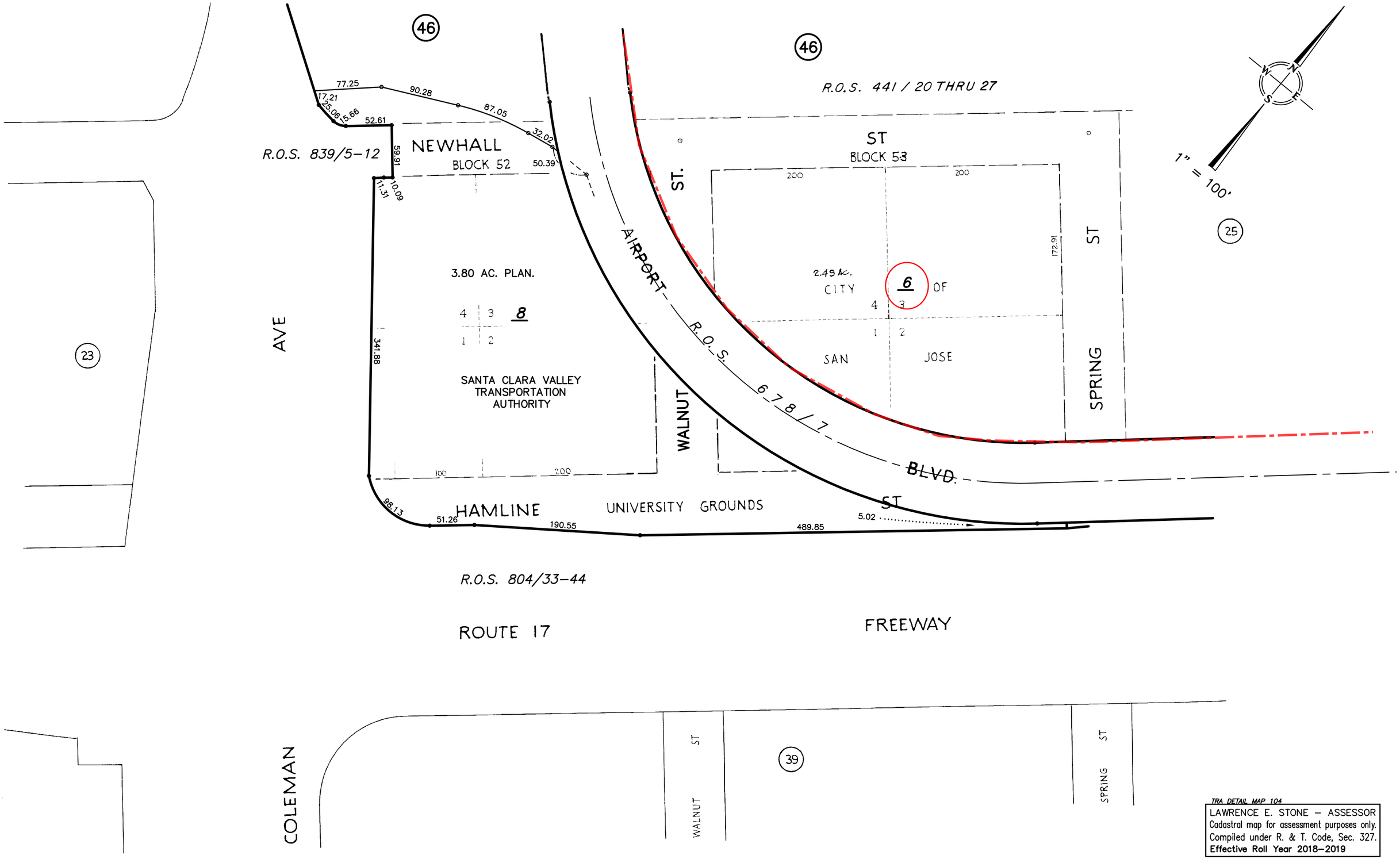
BOOK	PAGE
230	46A



TRA DETAIL MAP 104

LAWRENCE E. STONE – ASSESSOR
Cadastral map for assessment purposes only.
Compiled under R. & T. Code, Sec. 327.
Effective Roll Year 2018–2019

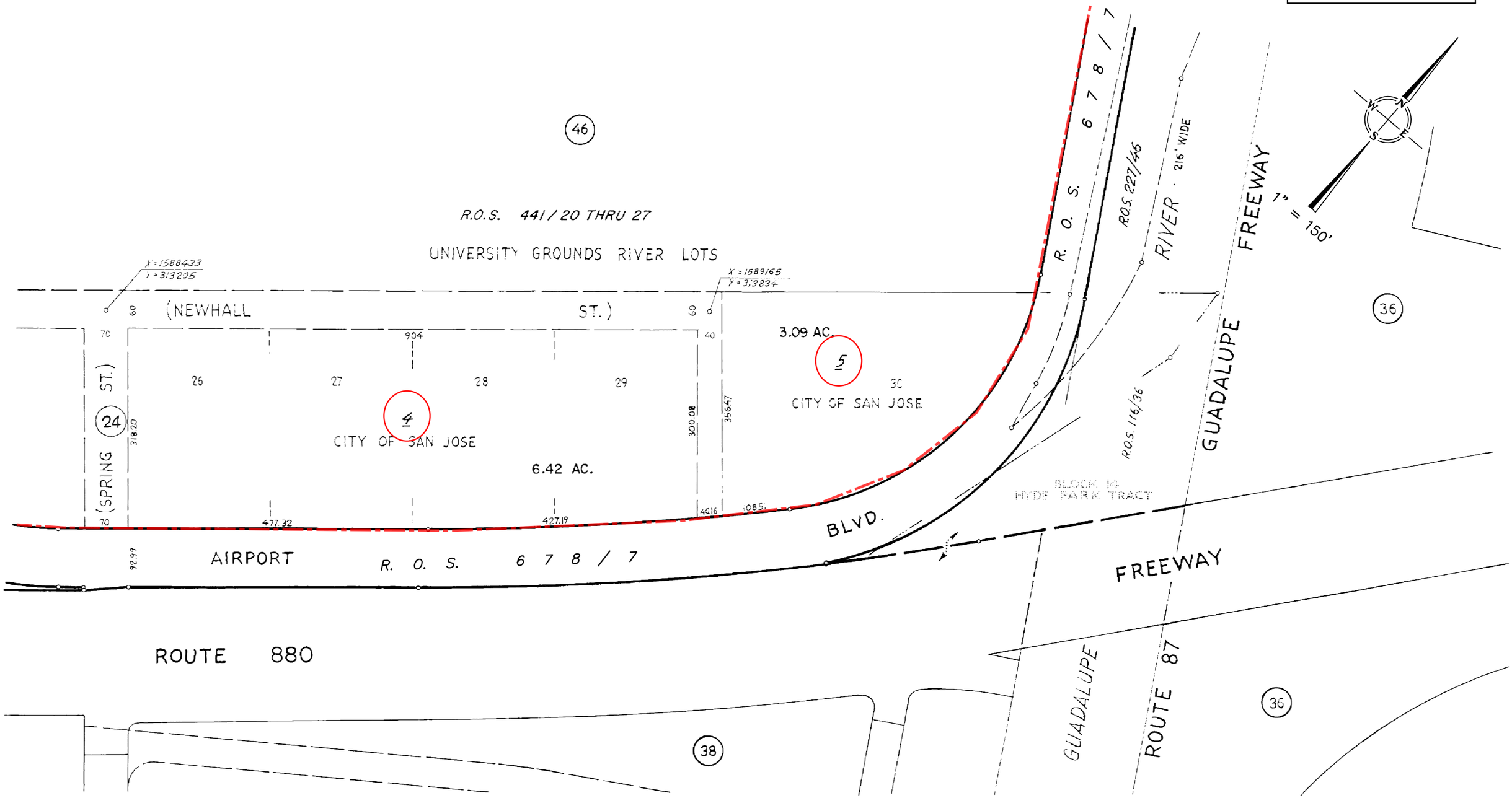
BOOK	PAGE
230	24



TRA DETAIL MAP 104

LAWRENCE E. STONE – ASSESSOR
Cadastral map for assessment purposes only.
Compiled under R. & T. Code, Sec. 327.
Effective Roll Year 2018–2019

BOOK	PAGE
230	25



TRA DETAIL MAP 104

LAWRENCE E. STONE – ASSESSOR
Cadastral map for assessment purposes only.
Compiled under R. & T. Code, Sec. 327.
Effective Roll Year 2018–2019

San Jose International Airport

1701 Airport Boulevard

San Jose, CA 95110

Inquiry Number: 5583152.1

March 12, 2019

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

03/12/19

Site Name:

San Jose International Airport
1701 Airport Boulevard
San Jose, CA 95110
EDR Inquiry # 5583152.1

Client Name:

Cornerstone Earth Group
1259 Oakmead Parkway
Sunnyvale, CA 94085
Contact: Stason Foster

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	*Scale*	*Details*	*Source*
2016	1"=1000'	Flight Date: January 01, 2016	USGS
2014	1"=1000'	Flight Date: January 01, 2014	USGS
2010	1"=1000'	Flight Date: January 01, 2010	USGS
2005	1"=1000'	Flight Date: January 01, 2005	USGS
1998	1"=1000'	Flight Date: January 01, 1998	USGS
1993	1"=1000'	Flight Date: January 01, 1993	USGS
1987	1"=1000'	Flight Date: January 01, 1987	USGS
1982	1"=1000'	Flight Date: January 01, 1982	USGS
1973	1"=1000'	Flight Date: January 01, 1973	USGS
1968	1"=1000'	Flight Date: January 01, 1968	USGS
1963	1"=1000'	Flight Date: January 01, 1963	USDA
1956	1"=1000'	Flight Date: January 01, 1956	USDA
1948	1"=1000'	Flight Date: January 01, 1948	USGS
1939	1"=1000'	Flight Date: January 01, 1939	USDA

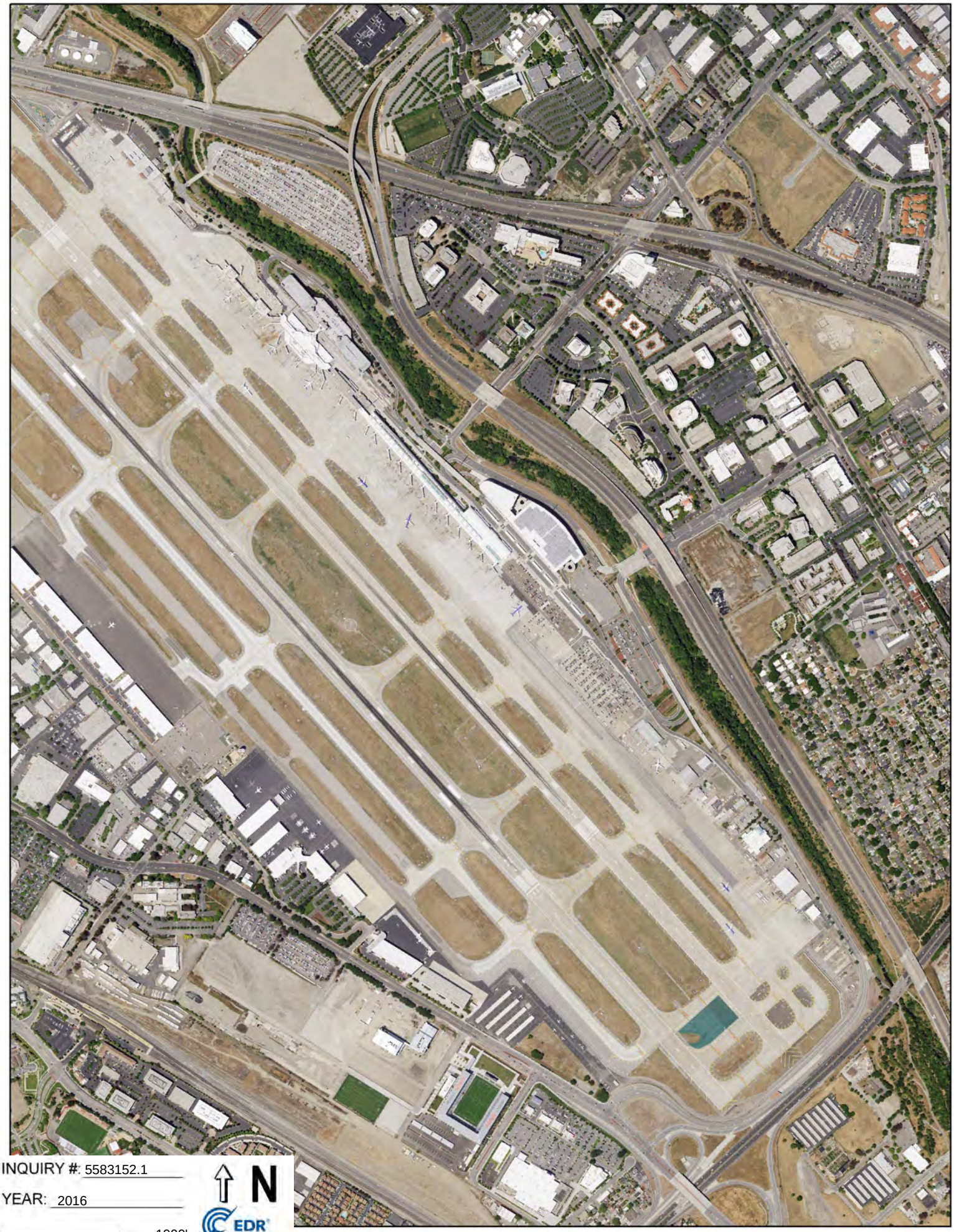
When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2019 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.



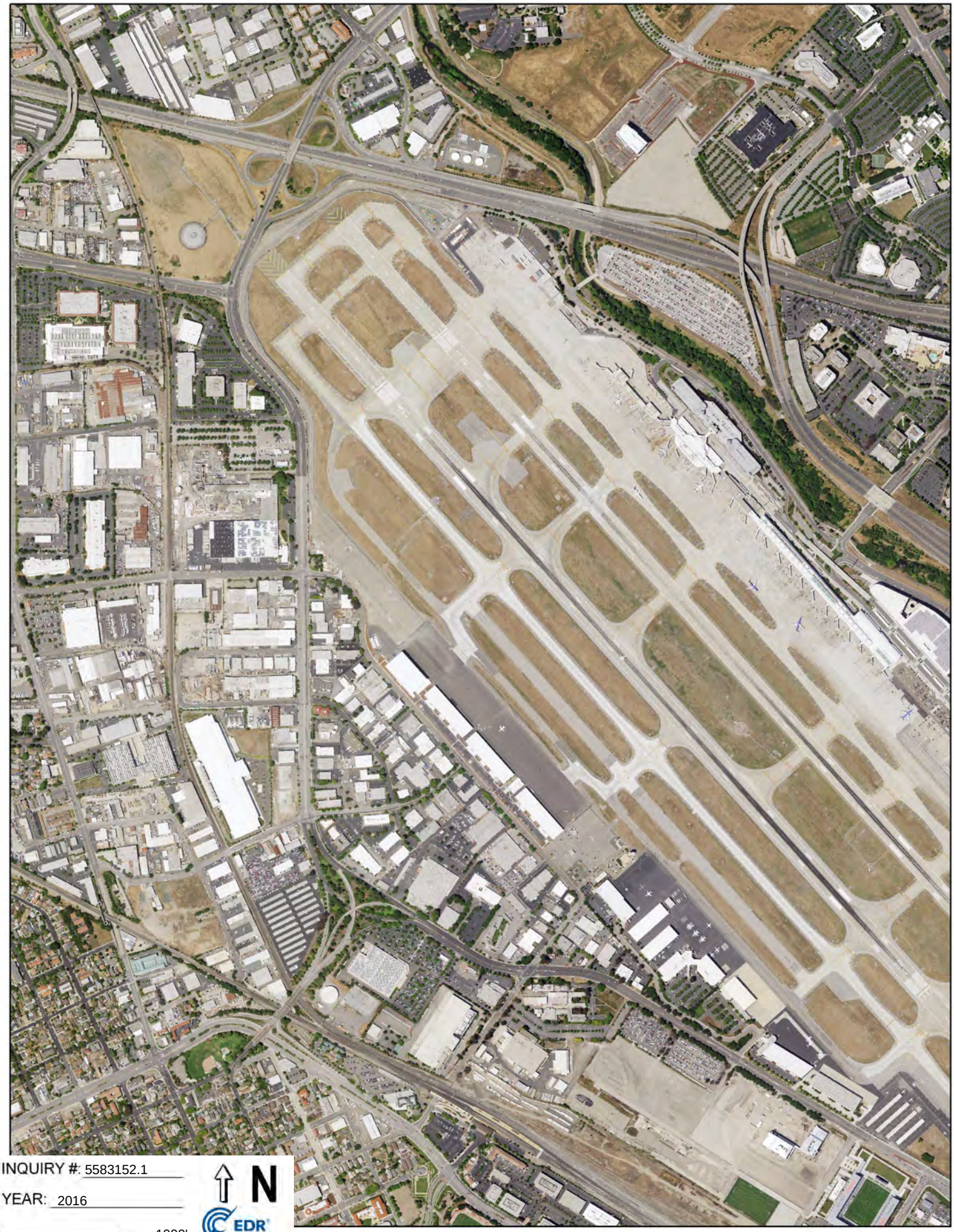
INQUIRY #: 5583152.1

YEAR: 2016

= 1000'

N

EDR



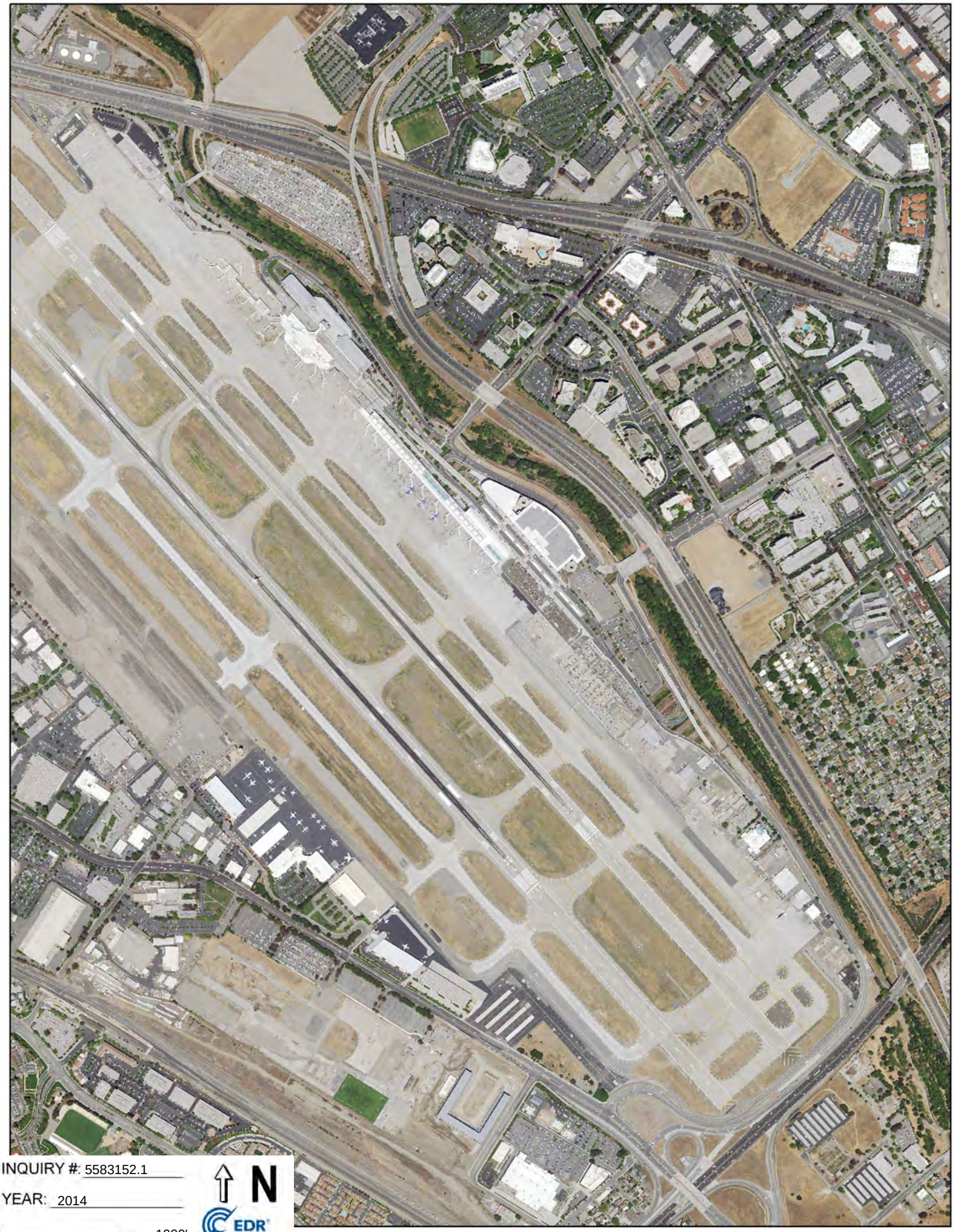
INQUIRY #: 5583152.1

YEAR: 2016

= 1000'

N

EDR



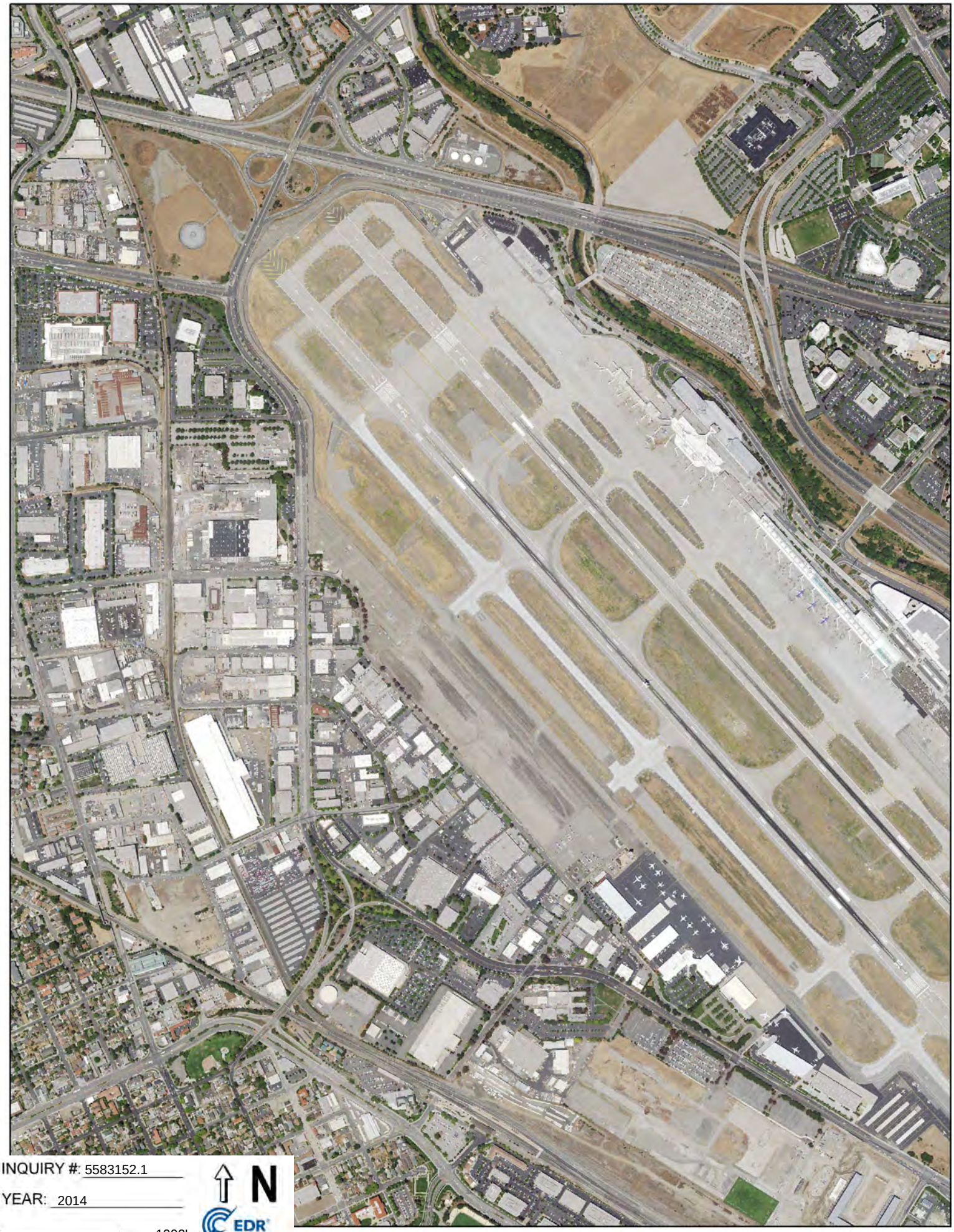
INQUIRY #: 5583152.1

YEAR: 2014

= 1000'

N

EDR



INQUIRY #: 5583152.1

YEAR: 2014

= 1000'

N

EDR

INQUIRY #: 5583152.1

YEAR: 2010

= 1000'

N

EDR

INQUIRY #: 5583152.1

YEAR: 2010

= 1000'

N

EDR

INQUIRY #: 5583152.1

YEAR: 2005

= 1000'

N

EDR

INQUIRY #: 5583152.1

YEAR: 2005

= 1000'

N

EDR

INQUIRY #: 5583152.1
YEAR: 1998
= 1000'
N
EDR

INQUIRY #: 5583152.1

YEAR: 1998

= 1000'

N

EDR

INQUIRY #: 5583152.1
YEAR: 1993
= 1000'
N
EDR

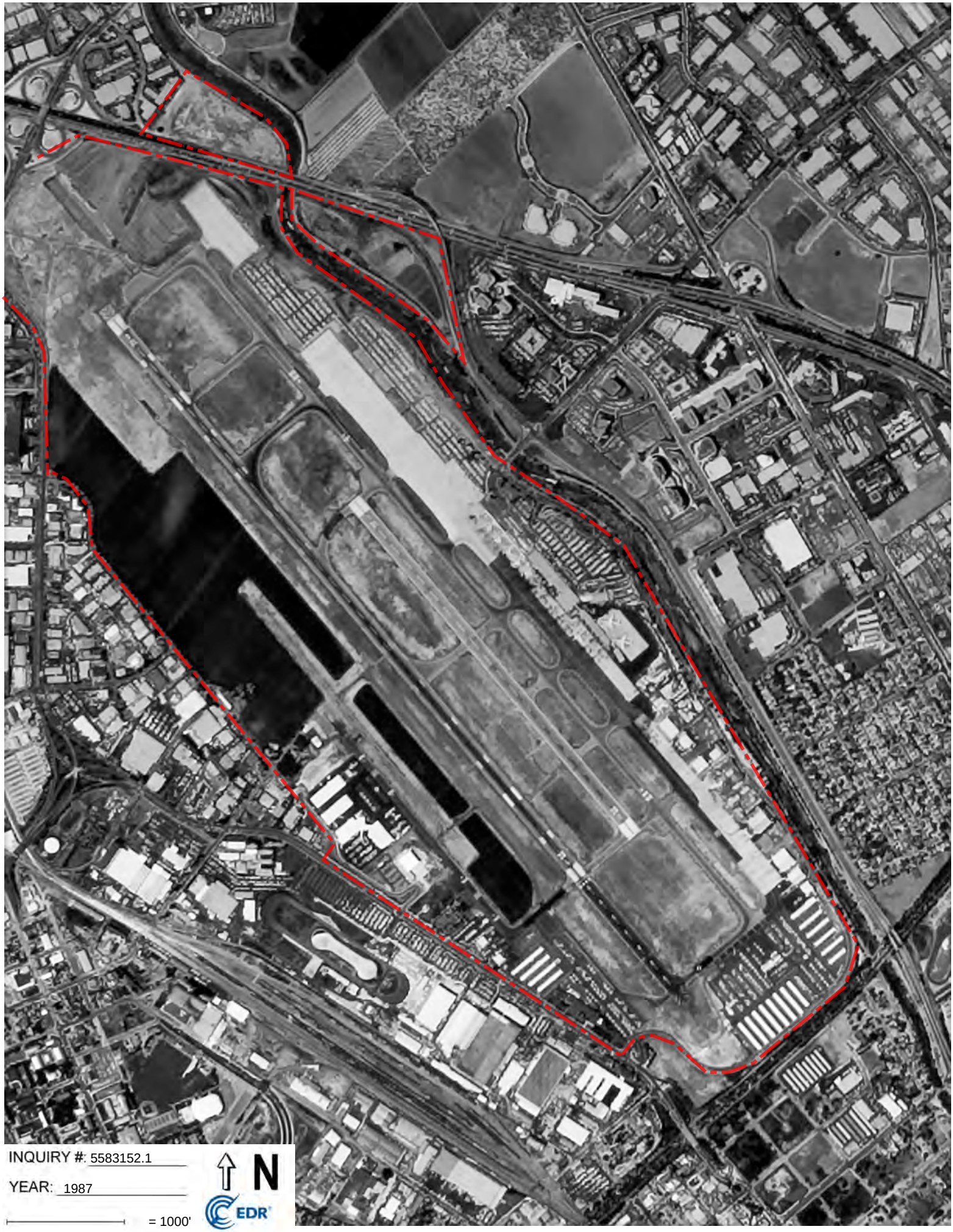
INQUIRY #: 5583152.1

YEAR: 1993

= 1000'

N

EDR


INQUIRY #: 5583152.1
YEAR: 1987
= 1000'
N
EDR

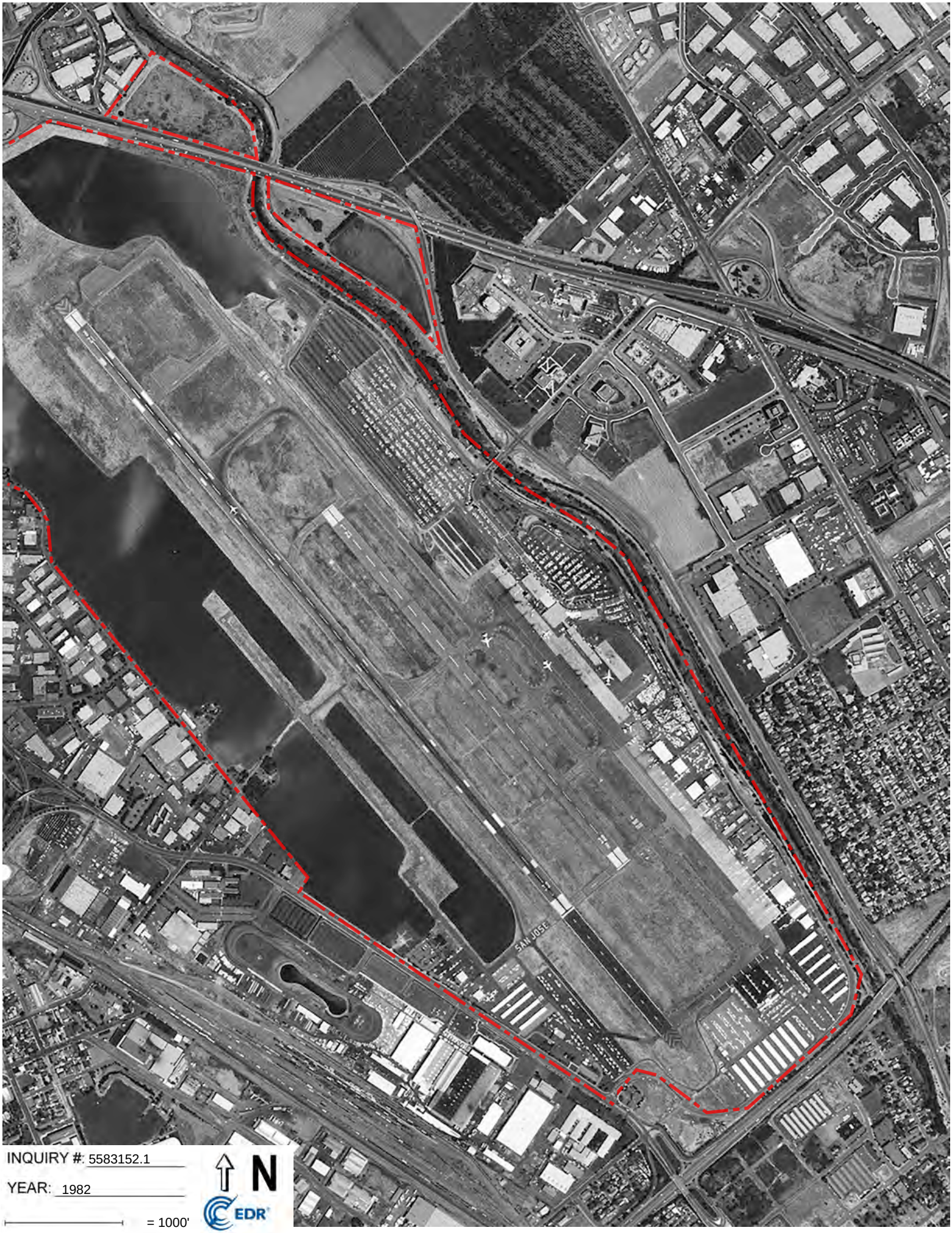
INQUIRY #: 5583152.1

YEAR: 1987

= 1000'

N

EDR



INQUIRY #: 5583152.1

YEAR: 1982

= 1000'

N

EDR

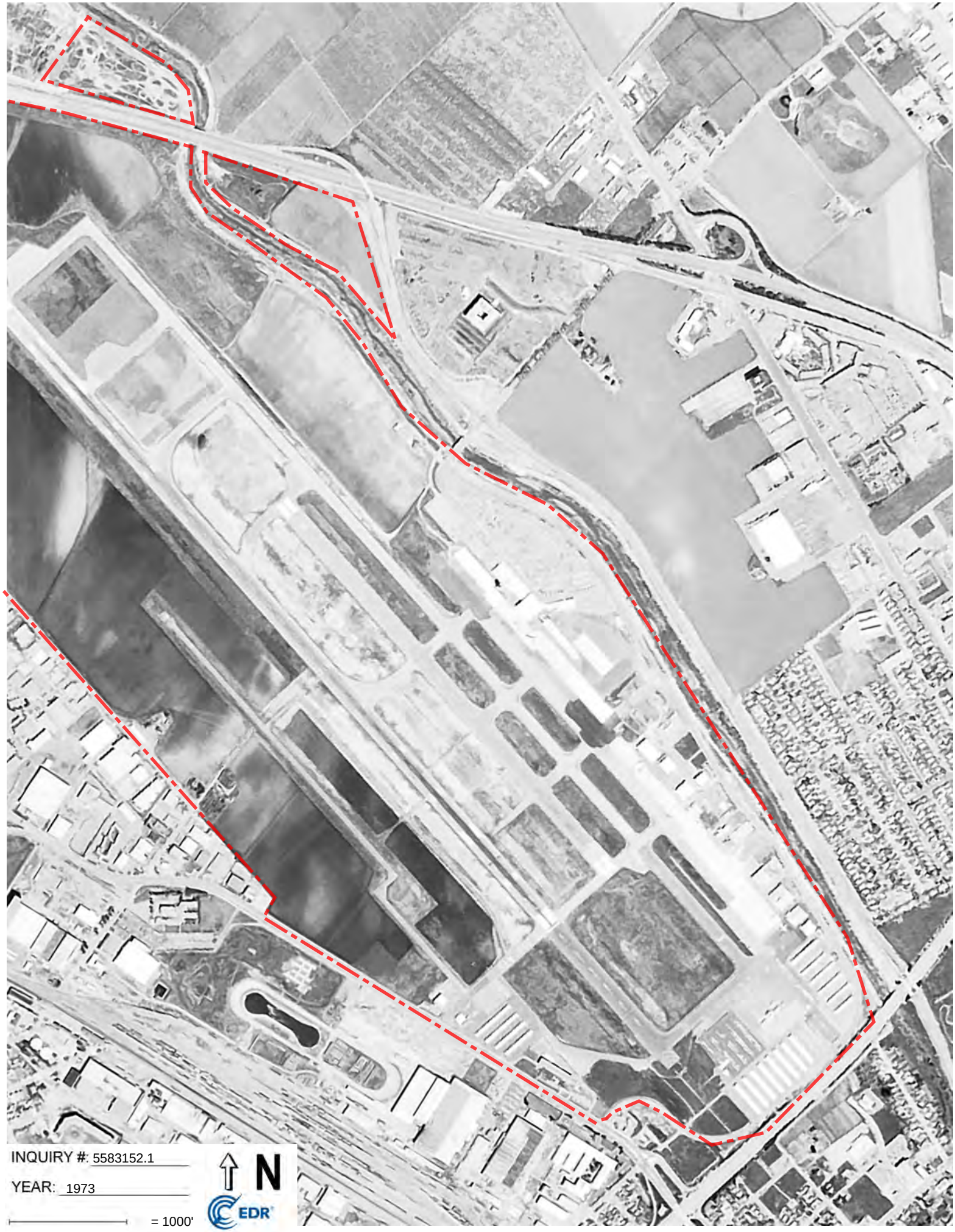
INQUIRY #: 5583152.1

YEAR: 1982

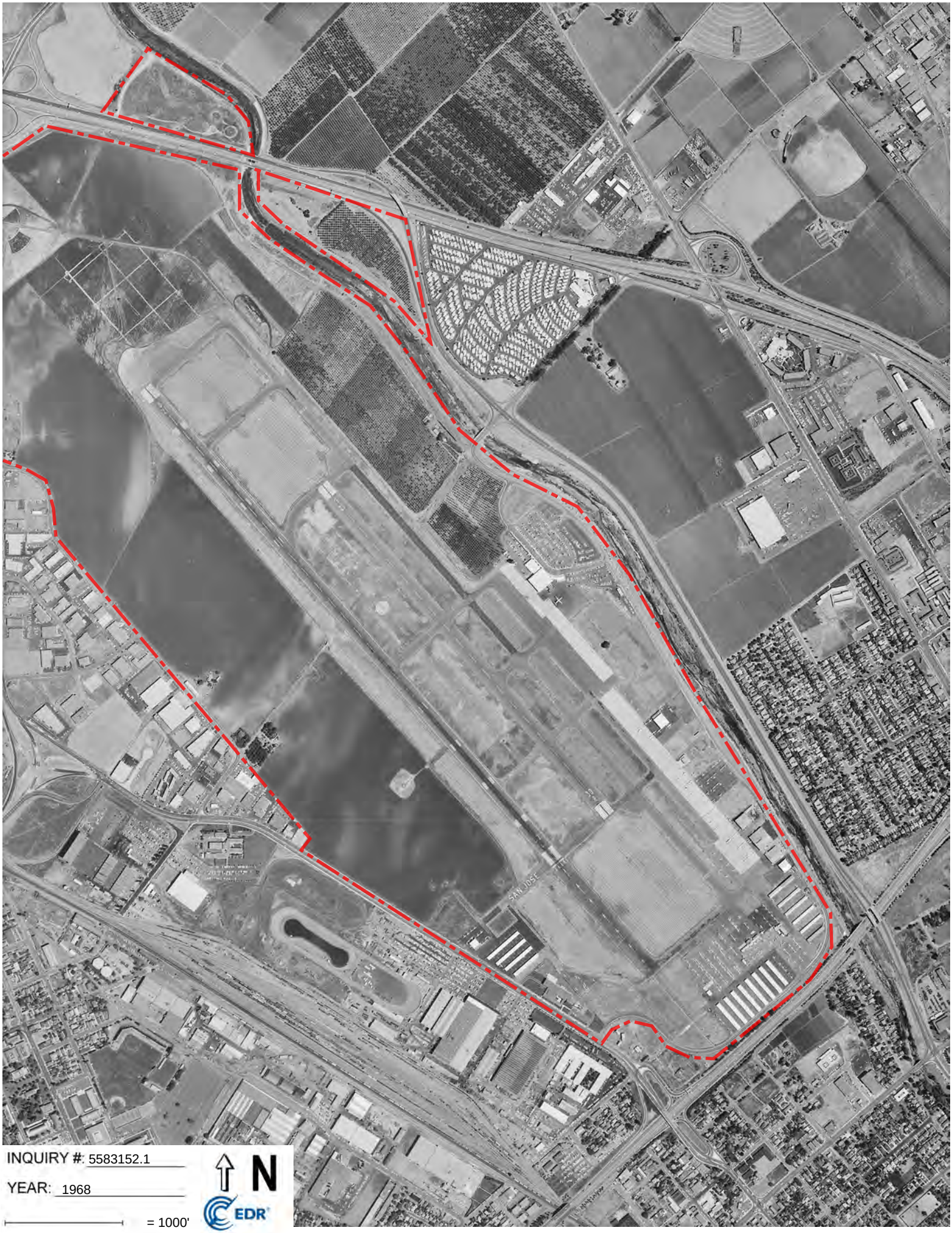
= 1000'

N

EDR


INQUIRY #: 5583152.1
YEAR: 1973
= 1000'
N
EDR

INQUIRY #: 5583152.1
YEAR: 1973
= 1000'
N
EDR



INQUIRY #: 5583152.1

YEAR: 1968

= 1000'

N

EDR

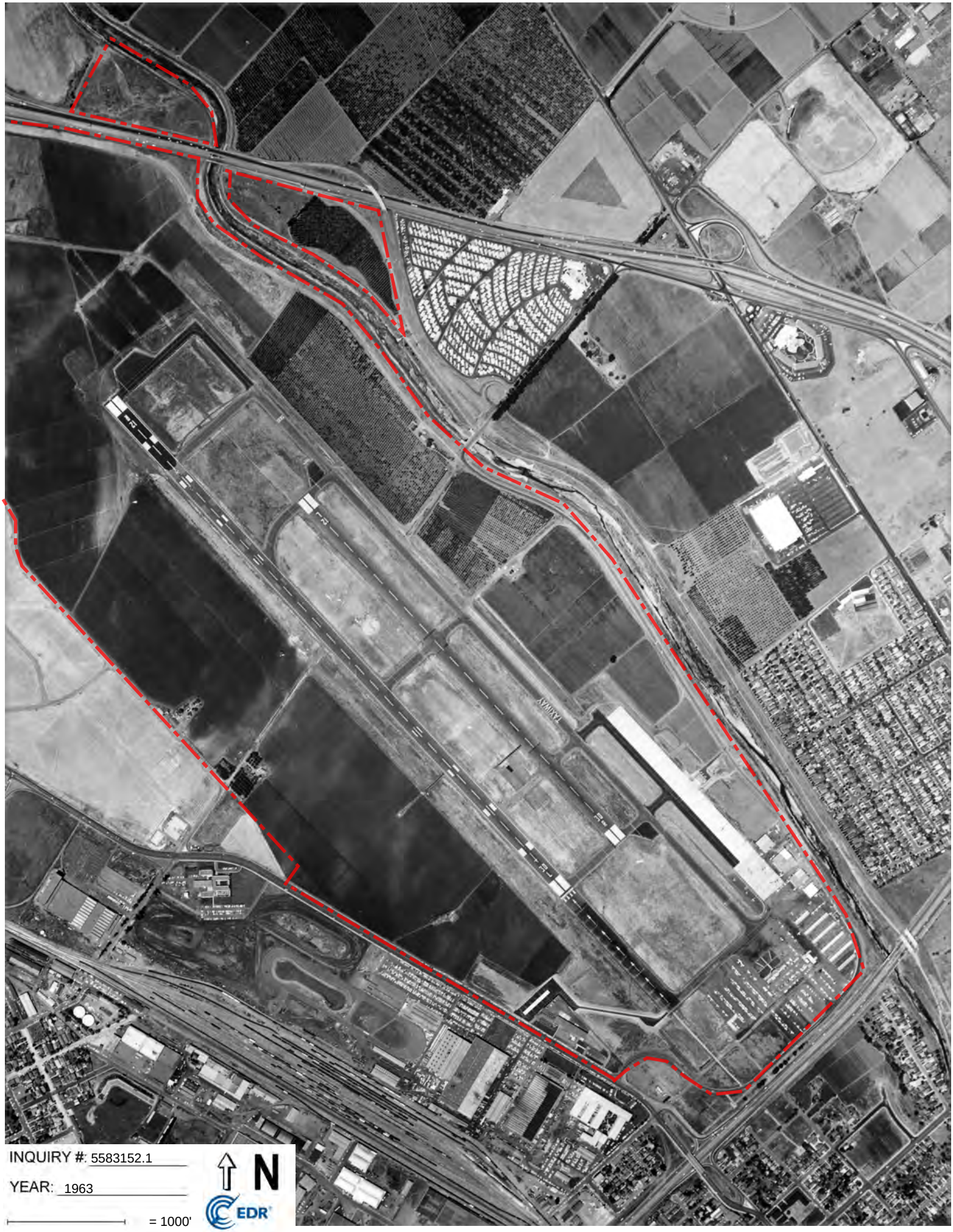
INQUIRY #: 5583152.1

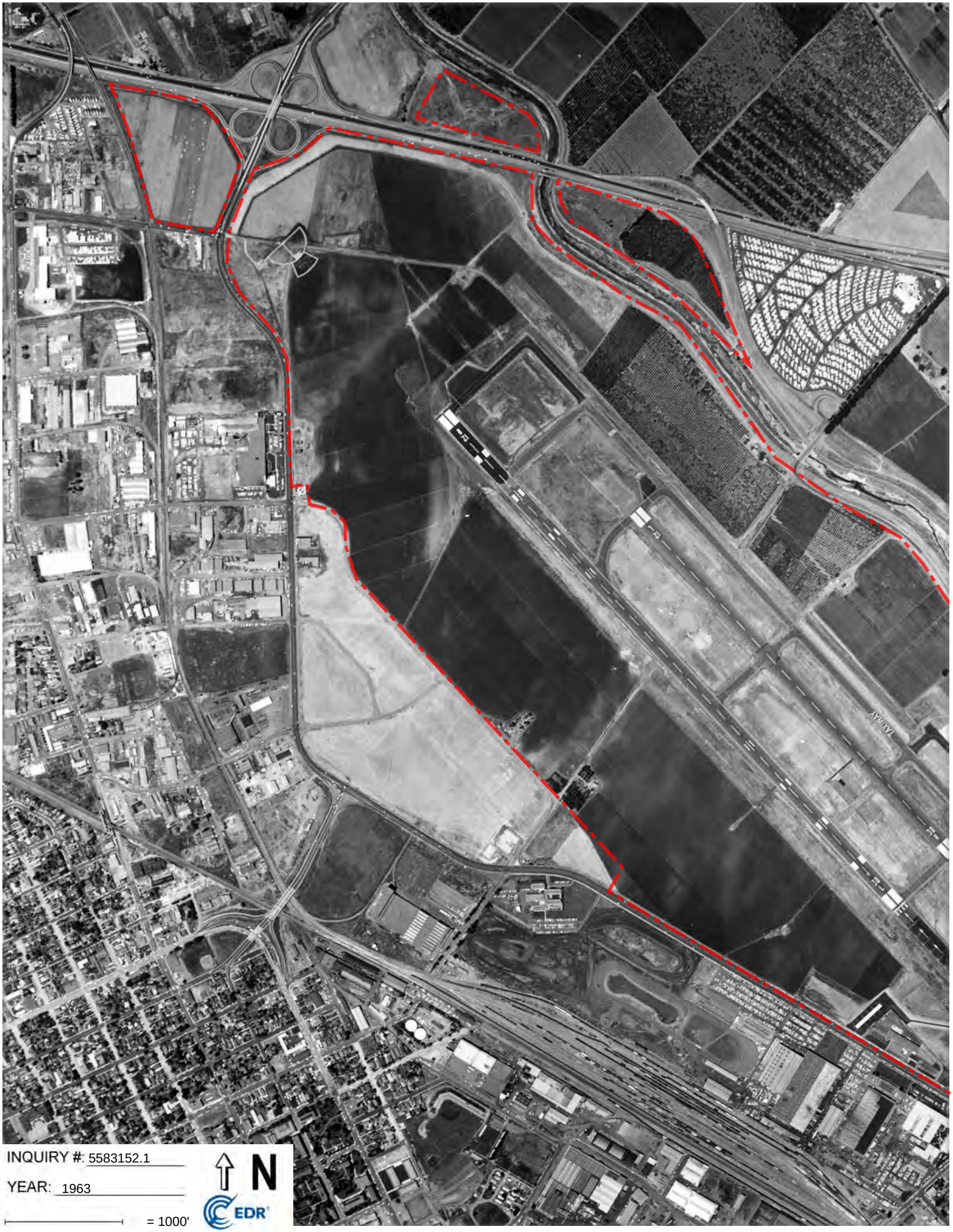
YEAR: 1968

= 1000'

N

EDR


INQUIRY #: 5583152.1
YEAR: 1963
= 1000'
N
EDR



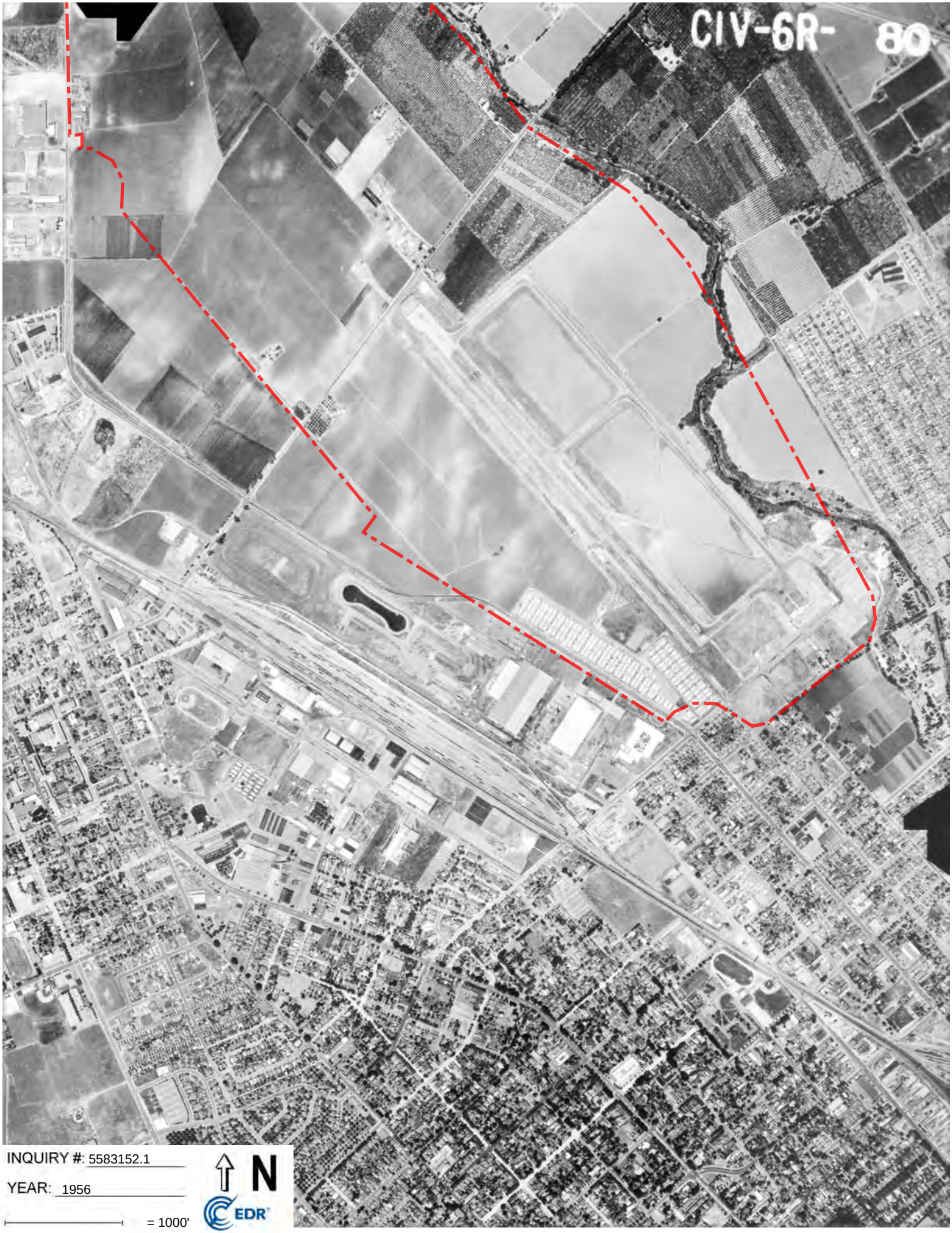
INQUIRY #: 5583152.1

YEAR: 1963

= 1000'

N

EDR



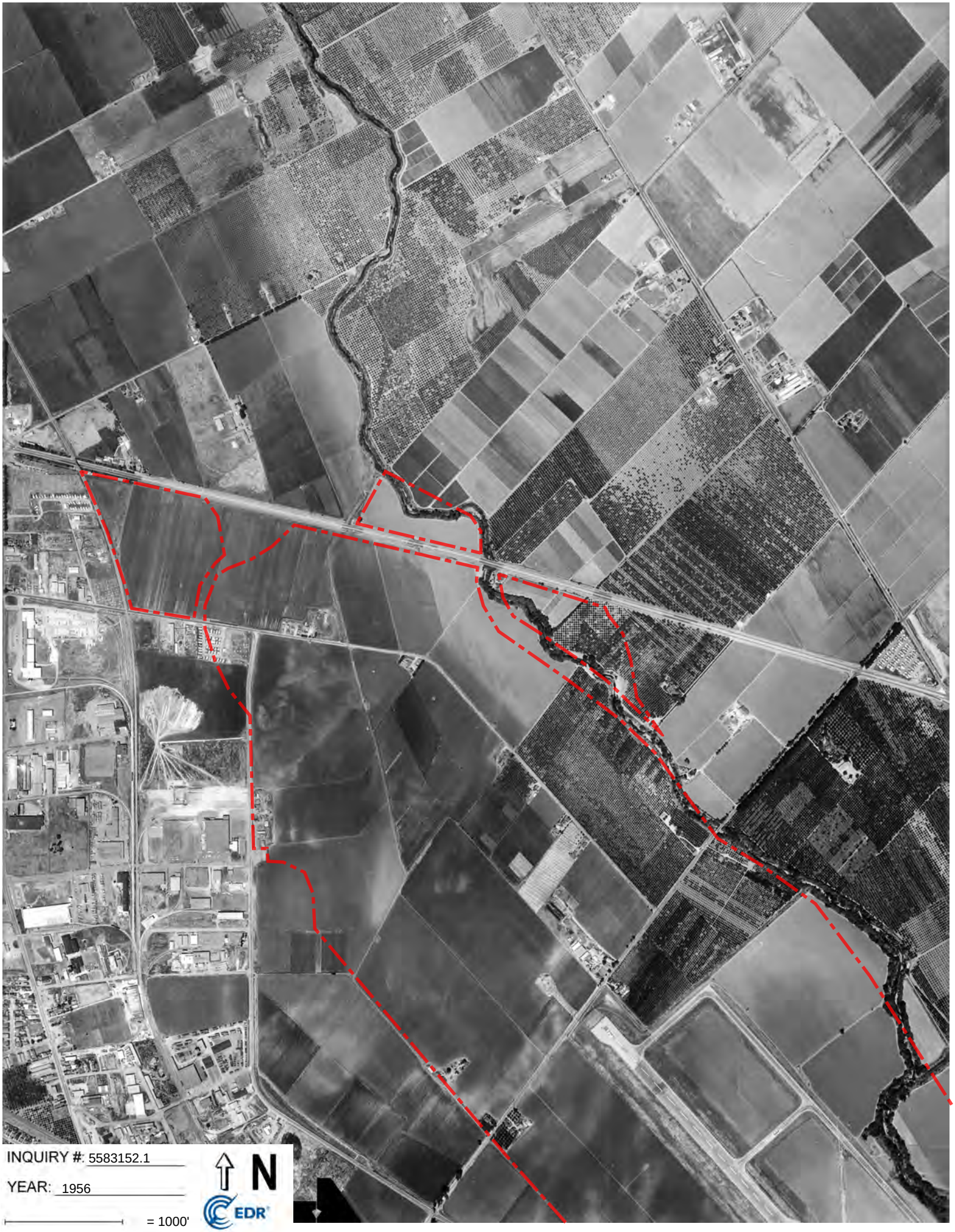
INQUIRY #: 5583152.1

YEAR: 1956

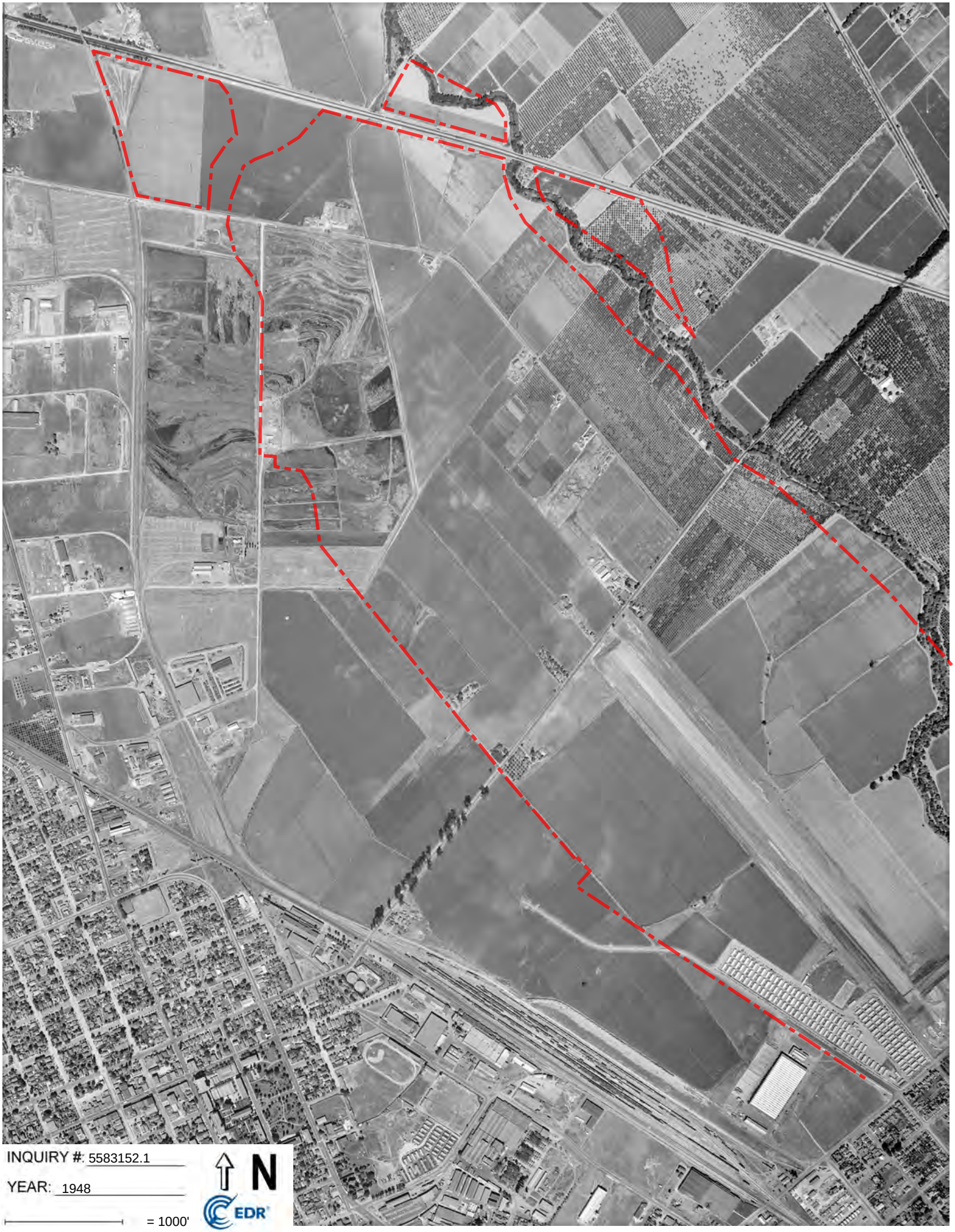
= 1000'

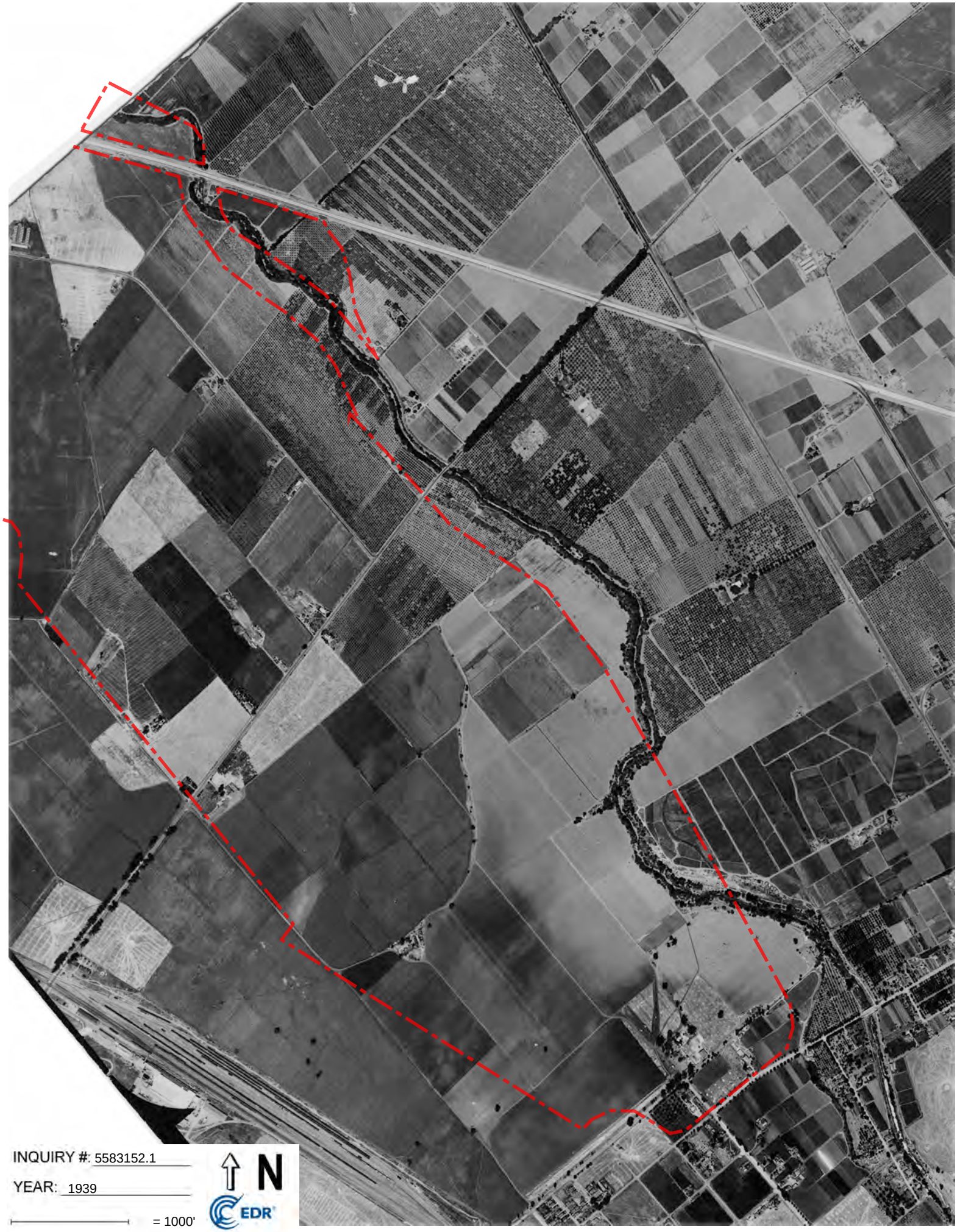
N

EDR


INQUIRY #: 5583152.1
YEAR: 1956
= 1000'
N
EDR

INQUIRY #: 5583152.1
YEAR: 1948
= 1000'
N
EDR


INQUIRY #: 5583152.1
YEAR: 1948
= 1000'
N
EDR


INQUIRY #: 5583152.1
YEAR: 1939
= 1000'
N
EDR

INQUIRY #: 5583152.1

YEAR: 1939

= 1000'

N

EDR