PUBLIC NOTICE

California Environmental Quality Act
Notice of Intent to Adopt a Negative Declaration or Mitigated Negative Declaration

Date: March 16, 2018

LEAD AGENCY: **Monterey Peninsula Airport District (MPAD)**

CONTACT: **Chris Morello, (831) 648-7000 x212**

SUBJECT: **Notice of Intent to Adopt a Mitigated Negative Declaration pursuant to Section 21092 and 21092.3 of the Public Resources Code and CEQA Guidelines Section 15072**

Project Title: **Infield & Taxiway Improvements Project**

Project Location:
The Project site is located on MPAD's owned and operated property at the Monterey Regional Airport ("Airport"). More specifically, it is located adjacent to Runway 28L-10R within the secured Air Operations Area (AOA) with no public access. The Airport encompasses approximately 498 acres of property and is bordered by the City of Monterey on the northwest, west, south and east, and the City of Del Rey Oaks to the northeast. The Airport is not located within the California Coastal Zone.

Project Description: The proposed project involves several construction activities including:

- Rehabilitation of 15 infield areas;
- Removal of a non-standard segment of Taxiway "E";
- Reconfiguration of the Taxiway "F" intersection with Taxiway "A"; and
- Reconfiguration of the Taxiway "K" intersection with Taxiway "A".

The proposed project will enhance safety by:

1) Minimizing foreign object debris (FOD);

2) Increasing separation distances between aircraft;

3) Improving airfield drainage; and

4) Reducing the amount of infield areas attractive to hazardous wildlife.

Proposed Mitigated Negative Declaration:

A copy of the proposed Mitigated Negative Declaration and supporting documents are available for review on the District's website and can be accessed at: www.montereyairport.specialdistrict.org/planning-and-development. Click on the "Infield & Taxiway Improvements Project" link.

Hardcopy documents can be reviewed at the District's office at 200 Fred Kane Drive, Suite 200, Monterey, CA 93940.

Written comments on the proposed Mitigated Negative Declaration must be addressed to:

Chris Morello, Senior Manager - Planning & Environmental
Monterey Peninsula Airport District
200 Fred Kane Drive, Suite 200
Monterey, CA 93940

Comments may also be sent by email to planning@montereyairport.com. MPAD will receive comments on the proposed Mitigated Negative Declaration during the public review period beginning Friday, March 16, 2018 and closing at 1:00 pm on Thursday, April 5, 2018. Anyone interested in this matter is also invited to comment on the document by personal appearance at the Wednesday, April 11, 2018 Board Meeting located at the Monterey Peninsula Airport District Board Room 2nd Floor of the Airport Terminal building at 200 Fred Kane Drive Monterey, CA 93940.

This document is a draft. If adopted, the final document will be recorded and posted at the Monterey County Clerk Office.

State of California

MITIGATED NEGATIVE DECLARATION

Project Title:	**Infield & Taxiway Improvements Project**
Owner:	Monterey Peninsula Airport District (MPAD)
Project Location:	200 Fred Kane Drive Monterey, CA 93940
Primary APN:	013-221-020-000
Project Manager/POC:	Chris Morello, Senior Manager, Development & Environmental (831) 333-2312
Project Type:	Capital Improvement Project
Project Description:	The proposed project involves several construction activities including: Rehabilitation of 15 infield areas; Removal of a non-standard segment of Taxiway "E"; Reconfiguration of the Taxiway "F" intersection with Taxiway "A"; and Reconfiguration of the Taxiway "K" intersection with Taxiway "A". The proposed project will enhance safety by: 1) Minimizing foreign object debris (FOD); 2) Increasing separation distances between aircraft; 3) Improving airfield drainage; and 4) Reducing the amount of infield areas attractive to hazardous wildlife. **See Initial Study for detailed project description.*

STATEMENT OF ENVIRONMENTAL FINDINGS: State law requires that an Initial Study (environmental analysis) be conducted to determine if this project could significantly affect the environment. Based on the findings in the Initial Study, it has been determined that this proposed project may have a significant effect on the environment; however, mitigation measures are available which would reduce the impacts to less than significant levels. As such, a Mitigated Negative Declaration has been prepared, the MPAD is the responsible agency to ensure the Project's Mitigation, Monitoring and Reporting Program is implemented.

Decision Making Body:	**MPAD Board of Directors**
Responsible Agency:	**Monterey Peninsula Airport District**
Review Period Begins:	**Friday, March 16th 2018**
Review Period Ends:	**Thursday, April 5, 2018 at 1:00 PM**
Public Hearing Date:	**April 11, 2018 at 10:00 AM**
Public Hearing Location:	**MPAD Board Rood 2nd floor Terminal Building at 200 Fred Kane Drive Monterey, CA 93940**

MONTEREY REGIONAL AIRPORT
Monterey County, California

INITIAL STUDY
FOR THE
PROPOSED INFIELD AND
TAXIWAY IMPROVEMENTS PROJECT

Prepared For:
Monterey Peninsula Airport District
200 Fred Kane Drive, Suite 200
Monterey, CA 93940

Prepared By:
Coffman Associates, Inc.
4835 E. Cactus Road, Suite 235
Scottsdale, AZ 85254

March 2018

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Monterey County, California

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For the Proposed Infield and Taxiway Improvements Project

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INTRODUCTION

This Initial Study evaluates the potential environmental effects of the proposed Infield and Taxiway Improvements Project (proposed project) for Monterey Regional Airport (Airport or MRY). This Initial Study has been prepared pursuant to the *California Environmental Quality Act* (CEQA; Public Resources Code [PRC], Section 21000 et seq.) for the Monterey Peninsula Airport District (MPAD)[1] because the proposed improvements are a "project" subject to CEQA (Cal. Code Regs., Title 14, Section 15378 [CEQA Guidelines]). MPAD is the "lead agency" for this project (CEQA Guidelines, Section 15367), and will determine the appropriate level of CEQA documentation required for the proposed project based on the information presented in this Initial Study.

This Initial Study contains an "Environmental Checklist" used to assess potential environmental impacts of the proposed project using the form included in Appendix G of the CEQA Guidelines. A brief explanation is provided for all responses contained in the Environmental Checklist, including supportive documentation for those responses identified as "No Impact" or "Less than Significant Impact."

[1] MPAD is a Special Airport District created by the California Legislature in 1941. It is a stand-alone public entity, governed by five publicly elected members to the Board of Directors. District voting boundaries were set by the enabling legislation and encompass the cities of Monterey, Pacific Grove, Carmel by the Sea, Del Rey Oaks, and majority portions of Seaside and Sand City. Unincorporated communities within the County of Monterey include Pebble Beach, the west end of Carmel Valley, Hidden Hills, Monterra, Laguna Seca, Pasadera, and the Monterey-Salinas Highway to the Laureles Grade.

Based on the research and analysis undertaken to complete the Environmental Checklist, implementation of the proposed project has the potential to result in significant environmental impacts; however, these impacts can be mitigated to below a level of significance through implementation of the mitigation measures proposed in this document and presented in tabular form in the attached Mitigation Monitoring and Reporting Program (MMRP) (**Appendix A**). Based on this determination, MPAD proposes to adopt a Mitigated Negative Declaration (MND) for the proposed project.

In addition to this Initial Study, an Environmental Assessment (EA) for the proposed improvements is being prepared pursuant to the requirements of Section 102(2)(c) of the *National Environmental Policy Act of 1969* (NEPA), its implementing regulations, President's Council of Environmental Quality (CEQ) Regulations (Title 40 Code of Federal Regulations [CFR] Parts 1500-1508), and Section 509(b)(5) of the *Airport and Airway Improvement Act of 1982*, as amended. The Federal Aviation Administration (FAA) is the lead agency for the EA.

PROJECT DESCRIPTION

1. Project Title

Proposed Infield and Taxiway Improvements for Monterey Regional Airport

2. Lead Agency Name and Address

Monterey Peninsula Airport District
200 Fred Kane Drive, Suite 200
Monterey, CA 93940

3. Project Location

The Airport is centrally located between the cities in and around the Monterey Peninsula, in the northwest portion of Monterey County, California (**Exhibit 1**). The Airport encompasses approximately 498 acres of property and is bordered by the City of Monterey on the northwest, west, south and east, and the City of Del Rey Oaks to the northeast. The United States (U.S.) Navy also owns several parcels near the Airport, including most of the golf course located immediately to the west. Monterey Bay is slightly more than one mile to the west of the Airport; however, the Airport is not located within the California Coastal Zone (City of Monterey website, GIS portal).

4. Project Sponsor's Name, Address, and Contact

Monterey Peninsula Airport District
200 Fred Kane Drive, Suite 200
Monterey, CA 93940

Attn. Mrs. Chris Morello, Senior Planning Manager
(831) 648-7000 Ext. 212

5. Description of Project

The proposed project involves several different construction activities related by their geographic proximity to each other within the Airport. These are:

- Rehabilitation of 15 infield areas
- Removal of a non-standard segment of Taxiway "E"
- Reconfiguration of the Taxiway "F" intersection with Taxiway "A"
- Reconfiguration of the Taxiway "K" intersection with Taxiway "A"

The coordination of these construction activities would result in cost savings and the reduction of construction impacts on airport operations and the surrounding area.

The proposed project would enhance safety by: 1) Minimizing foreign object debris (FOD); 2) Increasing separation distances between aircraft; 3) Improving drainage; and 4) Reducing the amount of infield areas attractive to wildlife.

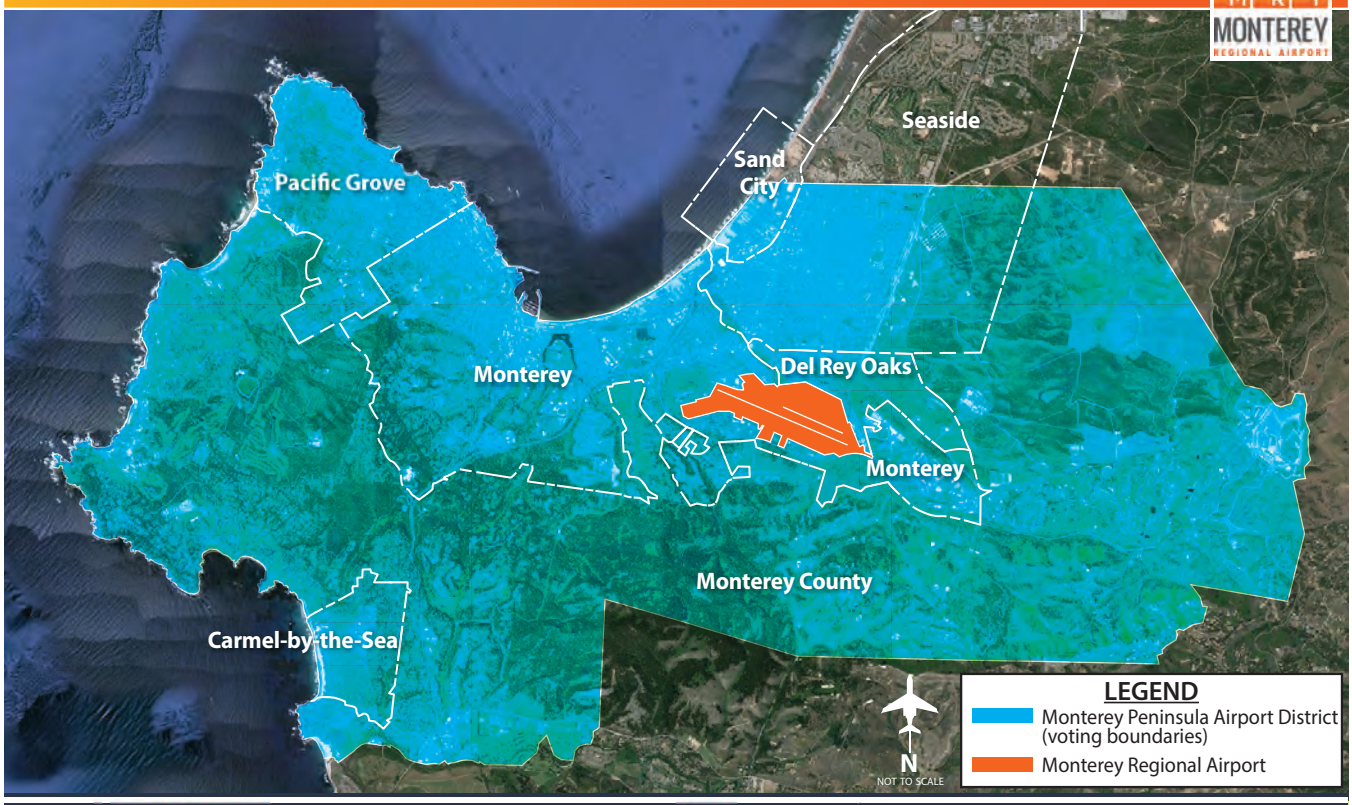
Detailed Project Description

Infield Area Rehabilitation

The proposed project involves resurfacing 15 existing infield areas located in the Air Operations Area (AOA)[2] between Runway 10R-28L and parallel Taxiways "A" and "B," located north and south of the runway (**Exhibit 2**). (The proposed project excludes Area A-3 and infield areas around Runway 10L-28R, which would be affected by future plans for a new taxiway connection to Runway 10R-28L and improvements to Taxiway "B"). Presently, nine of the infield areas are chip-sealed (Areas A-1, A-2, B-1 through B-6, and Area C-3), one infield area is a combination of chip seal and natural ground (A-4), and four are entirely natural ground (Areas C-1, C-4, C-5, and C-6). Area C-2 is currently paved with asphalt concrete.

A preliminary engineering study was conducted to determine site preparation requirements needed for each of the infield areas. Within one week prior to the start of construction activities,

[2] The AOA is defined by FAA (2009) as, "All airport areas where aircraft can operate, either under their own power or while in tow. The AOA includes runways, taxiways, and apron areas."



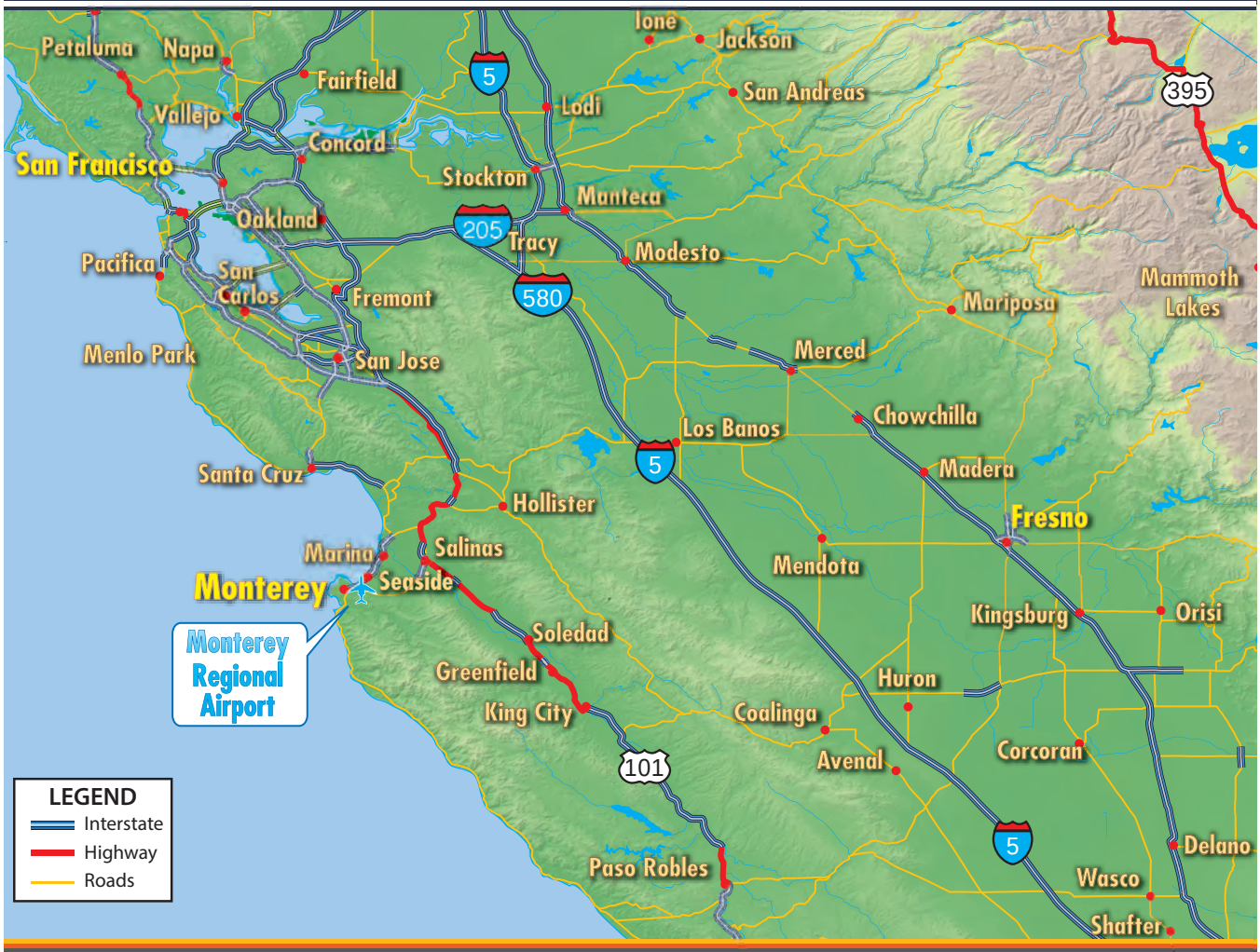


Exhibit 1
VICINITY/LOCATION MAP

N. Fremont St.

Airport Rd.

Euclid Ave.

218

Canyon Del Rey Blvd.

E

B

Runway 10L - 28R 3,504' X 60'

Grading required to expand limits of seal coat within safety area

C-6 | C-5 | C-4 | B-6 | B-5 | K | B-4 | A-4 | A-3

Runway 10R - 28L 7,175' X 150'

C-1 | C-2 | F | C-3 | B-1 | B-2 | K | B-3 | A-1 | A-2

A

E

Skypark Dr.

Fred Kane Dr.

Skypark Dr.

Garden Rd.

68

Monterey Salinas Highway

Olmsted Rd.

NORTH

0 600 1200

SCALE IN FEET

Photo Source: Google Earth 10/20/2016

LEGEND

- Airport Property Line
- A — Taxiway Identifier
- Runway Safety Area (RSA)
- Contractor Staging/Stockpile Areas (Phase 1)
- Contractor Staging/Stockpile Areas (Phase 2)
- Infield Rehab Improvement Areas
- Day-time Equipment Delivery Route
- Haul Route May Need Adjustment if Proposed New Terminal/Apron is Constructed
- On-Airport Night-time Construction Route
- Taxiway Realignment
- Airfield Road Realignment
- Pavement Removed
- Adjusted Leasehold Line

EXHIBIT 2
PROPOSED PROJECT

measures to reduce and exclude any existing California ground squirrel population from the infield areas would be undertaken to ensure that this rodent population has been removed. Specifically, the Airport will implement its *Wildlife Hazard Management Plan* (WHMP) population management techniques such as live capture and/or lethal control (MPAD 2013).[3] Additionally, for purposes of rodent control, the installment of chip seal within these infield areas will create a semi-impervious surface that would prevent rodents from burrowing within the infield areas in the future. Chip seal is considered a semi-pervious surface since it has a runoff coefficient (C) of 0.70-0.80. The runoff coefficient is the percentage of rainfall over a given area that is expected to flow off the surface and is used in the calculation of stormwater runoff under the Rational Method, based on the soil type and the drainage basin slope. The higher the runoff coefficient, the more impervious the surface.

The site preparation and construction actions for each infield area are summarized in **Table 1**. Within Areas A-2, B-1, B-4, B-5, and B-6, no grading improvements would be required. Areas A-4, C-1, C-4, C-5, and C-6 would require excavation of the existing infield areas, which are currently a combination of natural ground and chip seal surfaces, to remove the existing chip seal and to achieve the proper slope gradients. The subgrade in these areas would then be stabilized. Within three of the infield areas (Areas A-1, B-2, B-3), earthwork, including the placement of imported fill material and final grading, would be required to make these areas consistent with runway safety area (RSA)[4] grading standards. **Exhibit 3** depicts typical cross sections for Areas A-1, B-2, and B-3, and the proposed changes to the slope gradients.

TABLE 1
Site Preparation and Construction Activity
Monterey Regional Airport

Subarea	Action	Construction Activities
A-1	Site Preparation/Other Related Improvements	Re-grading required. Fill with Class 2 base rock.[1] Grind existing taxiway shoulders. Re-pave/pave taxiway shoulder to 25 feet. Raise taxiway lights and signs. Paint taxiway shoulder bars. Raise catch basins.
	Estimated quantities	Grind 90 cy of asphalt concrete. Place 1,500 cy of Class 2 base rock. Repave taxiway shoulder: 325 cy (650 tons).
	Final Surface Treatment	170 cy of chip seal

[1] The California Department of Transportation (Caltrans) identifies five types of base rock (Class 1 through 5) that must meet certain specifications (Caltrans 2015, Section 26-1.02B).

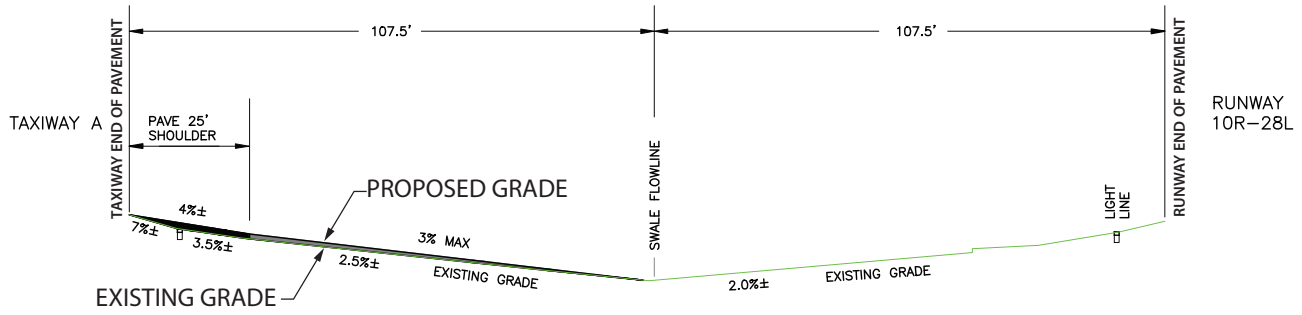
[3] California law allows the use of carbon monoxide (CO) to control burrowing rodent pests. The Airport's Maintenance and Operations Department has trained operators/coordinators for these wildlife control activities, and only targets the burrowing animals in the infield areas. No other animals are targeted. The fumigant tool used meets all California Air Resources Board (CARB) and U.S. Environmental Protection Agency (EPA) standards and is used in accordance with all existing laws and regulations, including the *California Endangered Species Act* (Division 3, Chapter 1.5, commencing with Section 2050) and sections 4002 and 4003 of the *California Game and Fish Code*.

[4] An RSA is a defined surface surrounding a runway that is prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway.

TABLE 1 (Continued)
Site Preparation and Construction Activity
Monterey Regional Airport

Subarea	Action	Construction Activities
A-2	Site Preparation/Other Related Improvements	**No grading required.** Grind existing taxiway shoulder. Re-pave/pave taxiway shoulder to 25 feet. Raise taxiway lights and signs. Paint taxiway shoulder bars.
	Estimated quantities	Grind 15 cy of asphalt concrete. Repave taxiway shoulder: 175 cy (350 tons).
	Final Surface Treatment	64 cy of chip seal
A-4	Site Preparation/Other Related Improvements	Excavate, grade, extend/construct (to the north) to stabilize RSA. PAPI foundation adjustment may be required.
	Estimated quantities	Excavate 1,500 cy of natural soil. Place 1,200 cy of Class 2 base rock. Add 100 cy of chip seal to stabilize bottom.
	Final Surface Treatment	163 cy of chip seal
B-1	Site Preparation/Other Related Improvements	**No grading required.** Grind existing taxiway shoulder. Re-pave/pave taxiway shoulder to 25 feet. Raise taxiway lights and signs. Paint taxiway shoulder bars.
	Estimated quantities	Grind 53 cy of asphalt concrete. Repave taxiway shoulder: 195 cy (390 tons).
	Final Surface Treatment	72 cy of chip seal
B-2 (includes the lengthening of Taxiway "K")	Site Preparation/Other Related Improvements	Re-grading required. Fill with Class 2 base rock. Grind existing taxiway shoulder. Re-pave/pave taxiway shoulder to 25 feet. Raise taxiway lights and signs. Install/relocate taxiway lighting system. Paint taxiway shoulder bars. Paint new taxiway markings, including access road alignment. Raise catch basin.
	Estimated quantities	Grind 33 cy of asphalt concrete. Place 1,250 cy of Class 2 base rock. Repave taxiway shoulder: 115 cy (230 tons).
	Final Surface Treatment	35 cy of chip seal & slurry seal of Taxiway "K" and Taxiway "A"
B-3	Site Preparation/Other Related Improvements	Re-grading required. Fill with Class 2 base rock. Grind existing taxiway shoulder. Re-pave/pave taxiway shoulder to 25 feet. Raise taxiway lights and signs. Paint taxiway shoulder bars. Raise catch basin.
	Estimated quantities	Grind 79 cy of asphalt concrete. Place 3,150 cy of Class 2 base rock. Repave taxiway shoulder: 300 cy (600 tons).
	Final Surface Treatment	160 cy of chip seal

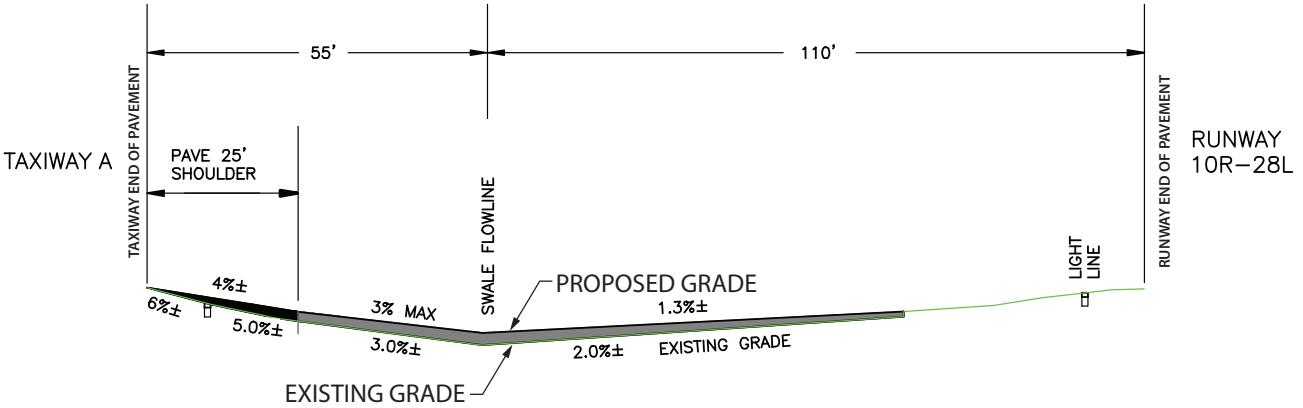
AREA A-1, SOUTHSIDE BETWEEN TAXIWAY "L" AND TAXIWAY "N"



NOTE: Typical cross section

Source: Neill Engineers Corp., 2016

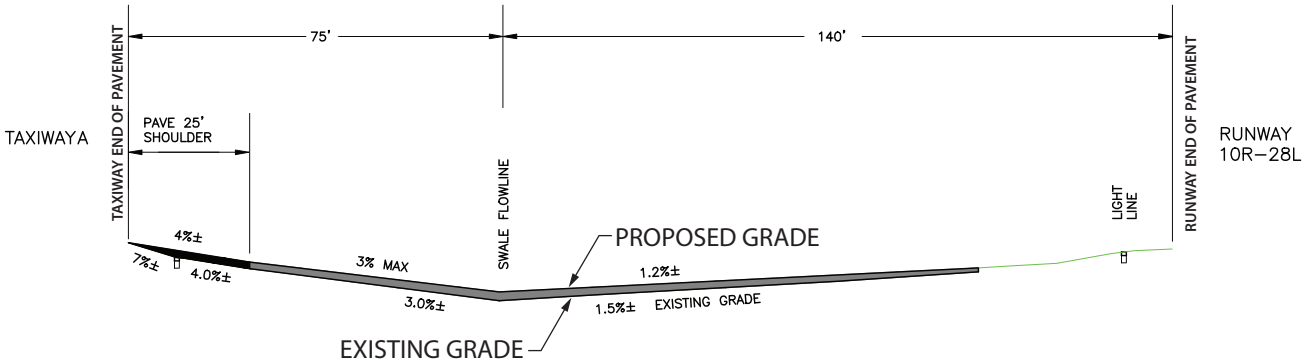
AREA B-2, SOUTHSIDE BETWEEN TAXIWAY "J" AND TAXIWAY "K"



NOTE: Typical cross section

Source: Neill Engineers Corp., 2016

AREA B-3, SOUTHSIDE BETWEEN TAXIWAY "K" AND TAXIWAY "L"



Source: Neill Engineers Corp., 2016

NOTE: Typical cross section

EXHIBIT 3
PROPOSED SLOPE GRADIENT CHANGES

TABLE 1 (Continued)
Site Preparation and Construction Activity
Monterey Regional Airport

Subarea	Action	Construction Activities
B-4	Site Preparation/Other Related Improvements	**No grading required.** Grind existing taxiway shoulder. Re-pave/pave taxiway shoulder to 25 feet. Raise taxiway lights and signs. Paint taxiway shoulder bars. Reconstruct catch basin.
	Estimated quantities	Grind 70 cy of asphalt concrete. Repave taxiway shoulder: 230 cy (460 tons).
	Final Surface Treatment	128 cy of chip seal
B-5	Site Preparation/Other Related Improvements	**No grading required.** Grind existing taxiway shoulder. Re-pave/pave taxiway shoulder to 25 feet. Raise taxiway lights and signs. Paint taxiway shoulder bars.
	Estimated quantities	Grind 37 cy of asphalt concrete. Repave taxiway shoulder: 140 cy (280 tons).
	Final Surface Treatment	50 cy of chip seal
B-6	Site Preparation/Other Related Improvements	**No grading required.** Grind existing taxiway shoulder. Re-pave/pave taxiway shoulder to 25 feet. Raise taxiway lights and signs. Paint taxiway shoulder bars.
	Estimated quantities	Grind 42 cy of asphalt concrete. Repave taxiway shoulder: 160 cy (320 tons).
	Final Surface Treatment	63 cy of chip seal
C-1	Site Preparation/Other Related Improvements	Excavate, convert existing natural ground to stabilize RSA.
	Estimated quantities	Excavate 800 cy of natural ground. Place 750 cy of Class 2 base rock.
	Final Surface Treatment	105 cy of chip seal (double layer)[2]
C-2 (includes the removal of Taxiway "E")	Site Preparation/Other Related Improvements	Possible paving along taxiway shoulder. Paint taxiway bars. Remove/relocate taxiway lighting system and signs.
	Estimated quantities	Possible taxiway shoulder paving: 50 cy (100 tons).
	Final Surface Treatment	63 cy of chip seal + 81,000 sf for old Taxiway "E"

[2] Chip seal is applied in two layers. Those infield areas without an existing base chip seal will require the application of two layers.

TABLE 1 (Continued)
Site Preparation and Construction Activity
Monterey Regional Airport

Subarea	Action	Construction Activities
Reconfiguration of Taxiway "F" (includes over-lay of portion of Taxiway "A")	Site Preparation/Other Related Improvements	Excavate, prepare subgrade. Place Class 2 base rock. Pave Taxiways "F" and "A." Install storm drain improvements. Modify runway lighting system. Paint new taxiway and service road markings.
	Estimated quantities	Excavate 1,400 cy of asphalt, subbase, and bare ground. Place 1,000 cy of Class 2 base rock. Install 520 linear feet of 48-inch and 18-inch RCP.
	Final Surface Treatment	Pave Taxiway "F" and Taxiway "A" overlay: 1,650 cy (3,300 tons).
C-3	Site Preparation/Other Related Improvements	Place Class 2 base rock for new Taxiway "F" shoulder. Grind existing taxiway shoulder. Re-pave/pave taxiway shoulder to 25 feet. Raise taxiway lights and signs. Install/relocate taxiway lighting system. Reconstruct storm drain system. Paint taxiway shoulder bars.
	Estimated quantities	For taxiway shoulder: – Grind 25 cy of asphalt concrete – Excavate 150 cy of natural soil – Place 150 cy of Class 2 base rock Repave taxiway shoulder: 175 cy (350 tons)
	Final Surface Treatment	– 56 cy of chip seal
C-4	Site Preparation/Other Related Improvements	Excavate, convert existing natural ground to stabilize RSA. Pave taxiway shoulder to 25 feet. Reconstruct catch basin.
	Estimated quantities	Excavate 820 cy of natural ground. Place 600 cy of Class 2 base rock. Pave taxiway shoulder: 115 cy (230 tons).
	Final Surface Treatment	56 cy of chip seal (double layer)
C-5	Site Preparation/Other Related Improvements	Excavate, convert existing natural ground to stabilize RSA. Pave taxiway shoulder to 25 feet. Raise taxiway lights and signs. Paint taxiway shoulder bars. Reconstruct trench drain.
	Estimated quantities	Excavate 1,200 cy of natural ground. Place 800 cy of Class 2 base rock. Pave taxiway shoulder: 80 cy (160 tons).
	Final Surface Treatment	96 cy of chip seal (double layer)

TABLE 1 (Continued)
Site Preparation and Construction Activity
Monterey Regional Airport

Subarea	Action	Construction Activities
C-6	Site Preparation/Other Related Improvements	Excavate, convert existing natural ground to stabilize RSA. Pave and widen taxiway shoulder. Construct storm drain improvements, if needed.
	Estimated quantities	Excavate 2,150 cy of natural ground. Place 1,950 cy of Class 2 base rock. Pave taxiway shoulder: 30 cy (60 tons).
	Final Surface Treatment	270 cy of chip seal (double layer)

Source: Neill Engineers Corp. March and November 2017.

cy = cubic yards
RSA = Runway Safety Area
PAPI = precision approach path indicators
sf = square feet
RCP = reinforced concrete pipe

Related Taxiway Shoulder, Lighting, Signage, and Drainage Improvements

The proposed project also includes improving all taxiway shoulders within the infield areas to 25 feet wide to provide an adequate buffer between the taxiways and the new infield material and a consistent shoulder width throughout the infield. **Table 1** includes the amount of taxiway shoulder pavement to be removed through the grinding of the existing asphalt concrete and the amount of pavement necessary to provide new taxiway shoulders. The removed material would be stockpiled and reused by the Airport for maintenance of its service roads. The taxiway shoulders would be remarked (consistent with FAA Advisory Circular [AC] 150/5340-1L, *Standards for Airport Markings* [2013]) to further delineate the paved shoulders so that pilots are less likely to mistake the shoulder as usable taxiway. In Areas C-4, C-5, and C-6, new 25-foot-wide shoulders would be paved and painted with standard shoulder markings. Existing taxiway lights and signs would be raised throughout the infield, as necessary, to accommodate the new taxiway shoulder locations and infield elevations. The precision approach path indicator (PAPI) located in Area A-4 may also need the foundation(s) of one or more boxes adjusted to accommodate the new grade in this area.

The previously discussed proposed fill and grading improvements would affect infield drainage features. For example, catch basins within Areas A-1, B-2, and B-3 would need to be raised. The proposed project also includes reconstruction of old catch basins within Areas B-4, B-5, B-6, and C-4, as well as a trench drain in Area C-5. They are the original structures and replacement parts, such as concrete grates, are no longer available.

Additional drainage improvements would be necessary in Area C-3 due to the proposed Taxiway "F" improvements discussed below. An existing catch basin and approximately 50 feet of 18-inch reinforced concrete pipe (RCP) would be removed to accommodate the reconfigured Taxiway "F." In addition, a second existing catch basin would be raised to meet the new grades and a new

catch basin at the low point of Area C-3 would be installed. By providing the additional catch basin, the remaining 18-inch RCP would not need to be relocated.

Removal of Taxiway "E"

Taxiway "E" south of Runway 10R-28L is a wide expanse of pavement with a painted "island" between two lanes and does not meet current FAA taxiway design standards. This portion of Taxiway "E" also contains a non-standard angled entrance to Runway 10R-28L. The proposed project includes the removal of the portion of Taxiway "E" between Runway 10R-28L and Taxiway "A," as well as the painted "island" (**Exhibits 2** and **4**). This includes the removal of existing taxiway lights and signs. Once the existing Taxiway "E" section between Runway 10R-28L and Taxiway "A" is no longer used, it would become part of Area C-2 and would be covered with chip seal.

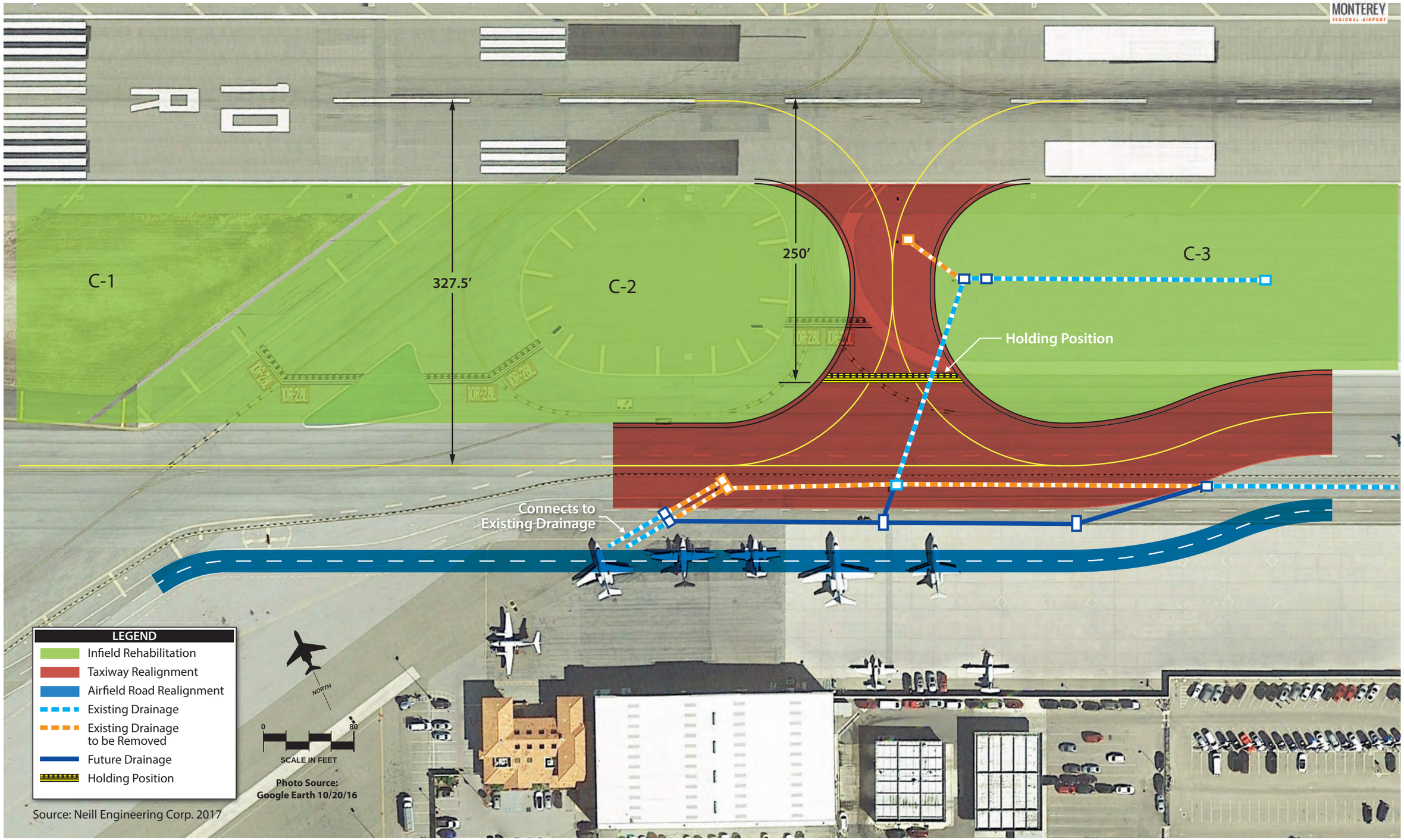
Reconfiguration of Taxiway "F" Intersection with Parallel Taxiway "A" and Drainage Improvements

The proposed project includes the relocation of the portion of Taxiway "F" between Runway 10R-28L and parallel Taxiway "A" to align with the taxiway north of the runway and to provide standard 90-degree (right angle) connections. Taxiway "F" would also be widened to 75 feet from its current width of 50 feet (**Exhibit 4**). The additional width would allow the Airport's critical design aircraft[5] to use this taxiway to access the southwest part of the Airport once the Taxiway "E" removal described above occurs. Existing Taxiway "F" electrical lines, lights, and signage would be relocated.

Between its connections with Taxiways "F" and "K," parallel Taxiway "A" is currently located 275 feet from Runway 10R-28L (centerline to centerline) and the hold line markings on Taxiway "F" are located 200 feet from the runway centerline, rather than the FAA-required 250 feet. As part of the proposed project, Taxiway "A" (for a length of approximately 640 feet at its connection with Taxiway "F") would be shifted south for a centerline to centerline distance of 327.5 feet (**Exhibit 4**). The new Taxiway "F" pavement would then be marked to locate its hold lines 250 feet south of the runway centerline. All associated Taxiway "A" lighting, signs, and markings would be moved in connection with this shift. These proposed changes in the existing taxiway system would reduce the depth of an adjacent fixed base operator (FBO) apron by approximately 50 feet and a portion of the secured access road located south of Taxiway "A" would be shifted further south and remarked as well.

In addition to the storm drain improvements discussed above for Area C-3, the improvements would require changes to the storm water drainage system along or within the Taxiway "A" pavement. An existing storm water trunk line near the Taxiway "F" improvements would be relocated along the new southern edge of Taxiway "A" and an existing drainage swale would be moved. Storm drainage improvements would involve the removal of existing 36-inch RCP and its associ-

[5] The critical design aircraft is the most demanding aircraft type, or grouping of aircraft with similar characteristics, that make regular use of an airport (i.e., 500 annual operations) (excluding touch-and-go operations, which is an operation by an aircraft that lands and departs on a runway without stopping or exiting the runway).



Source: Neill Engineering Corp. 2017

EXHIBIT 4
PROPOSED TAXIWAY "E" REMOVAL AND TAXIWAY "F" RECONFIGURATION

ated catch basins, and the installation of 480 linear feet of 48-inch RCP and associated catch basins along the southern edge of Taxiway "A" (**Exhibit 4)**. An existing 18-inch RCP between the catch basin in Area C-3, south to the existing 36-inch RCP, would be extended 40 linear feet to reach the new 48-inch RCP.

Reconfiguration of Taxiway "K" with Adjustment of Hold Line

The hold line markings on connecting Taxiway "K" at its intersection with Taxiway "A" are also located 200 feet from the runway centerline, rather than the FAA-required 250 feet. As part of the proposed project, Taxiway "A" (for a length of approximately 475 feet near Taxiway "K") would be shifted to 327.5 feet south of the runway centerline. All associated lighting, signs, and markings would be moved in connection with the shift. The pavement would then be remarked to allow the Taxiway "K" hold lines to be properly relocated 250 feet south of the runway centerline (**Exhibit 5**).

Project Phasing and Construction

Based on the preliminary engineering estimates (**Table 2**), the number of construction activity days to implement the proposed improvements would be 428 days (approximately 17 months) overall. This estimate includes preconstruction rodent control prior to grading activity, site preparation, other associated improvements described in **Table 1**, and application of the chip seal, as well as the taxiway connector and associated drainage infrastructure improvements. The proposed improvements would be constructed in two phases. Phase 1 would include Areas B-1, B-6, C-1, C-2, C-3, C-4, C-5, C-6, the closure of Taxiway "E" south of Runway 10R-28L, the reconfiguration of the Taxiway "F" connection with Taxiway "A," and associated drainage improvements. Phase 2 would include areas B-2, B-3, B-4, B-5, A-1, A-2, A-4, the reconfiguration of the Taxiway "K" connection with Taxiway "A" (unless already closed), and associated drainage improvements.

TABLE 2
Anticipated Phasing of Construction
Monterey Regional Airport

	Phase 1[1]	Phase 2[1]
Preconstruction Rodent Control	5 days	5 days
Site Preparation/Primary Construction	214 days	163 days
Surface Treatment of Infield Areas	23 days	18 days
Estimated Duration of Construction per Phase[2]	**242 days = 10 months**	**186 days = 7 months**

Source: Neill Engineers Corp., March and November 2017.
[1] Phase 1: Areas C, B-1, B-6, TW "E," TW "F"; Phase 2: Areas A-1, A-2, A-4, B-2, B-3, B-4, B-5, TW "K"
[2] Assumes 25 work days/month. Partial months have been rounded.

The use of a temporary haul road and staging/stockpile areas would be necessary during project construction. The locations of these are depicted on **Exhibit 2**. To the extent possible, construction traffic would be directed to a southern staging/stockpile area. During the daytime hours

only, one equipment delivery route could occur through a residential neighborhood northwest of the Airport using Airport Road and Euclid Avenue. The use of this route would be minimal and would be limited to single trips to drop off or remove equipment at the northern staging area.

However, the primary haul road would route traffic to the Airport from Olmsted Road. As described in **Table 1**, approximately 8,020 cubic yards (cy) of natural ground, asphalt, chip seal, and subbase would be excavated and removed offsite, and approximately 12,350 cy of Class 2 base rock would be imported. This material could be transported to the Airport from a plant as far as Prunedale, California, located approximately 20 miles north of the Airport. Trucks hauling material for the project would use Highway 68 and Olmsted Road to the southern staging areas. The proposed project would also require approximately 1,650 cy of new chip seal and 3,740 cy of asphalt concrete pavement for new taxiway shoulders and Taxiway "F."

Approximately 2,500 delivery or haul loads for import or export of materials would occur over the life of the project (**Table 3**). Based on engineering estimates, an average of four to 14 haul loads per work night would occur, with most of the trips (an average of nine round trips per night) occurring during the site preparation/primary construction phases. All construction activity will occur during late nighttime hours to minimize runway closure; commercial flights are not scheduled during the late nighttime hours, therefore, there will be less impact to commercial air carrier operations during construction.

TABLE 3
Estimated Haul Loads for Imported and Exported Material
Monterey Regional Airport

Project Element	Loads/Days
Site Preparation/Primary Construction	1,977 loads
Taxiway "F"	370 loads
Surface Treatment of Infield Areas	161 loads
Total Number of Loads	**2,508 loads**
Duration of Construction[2]	**418 days**

Source: Neill Engineers Corp., March and November 2017.
[1] Includes removal of Taxiway "E" pavement/subbase and portions of Taxiway "A."
[2] Does not include 10 days for two separate phases of preconstruction rodent control.

6. General Plan Designation

As previously discussed, the Airport is designated as a Special District. Therefore, it is not within the land use planning jurisdiction of any of the communities that are adjacent to the airport property (with the exception of a few MPAD-owned parcels that were acquired by MPAD after the District boundaries were established). None of these parcels are located within the project area for the proposed infield improvements. Thus, there are no General Plan designations applicable to the proposed project site/area.

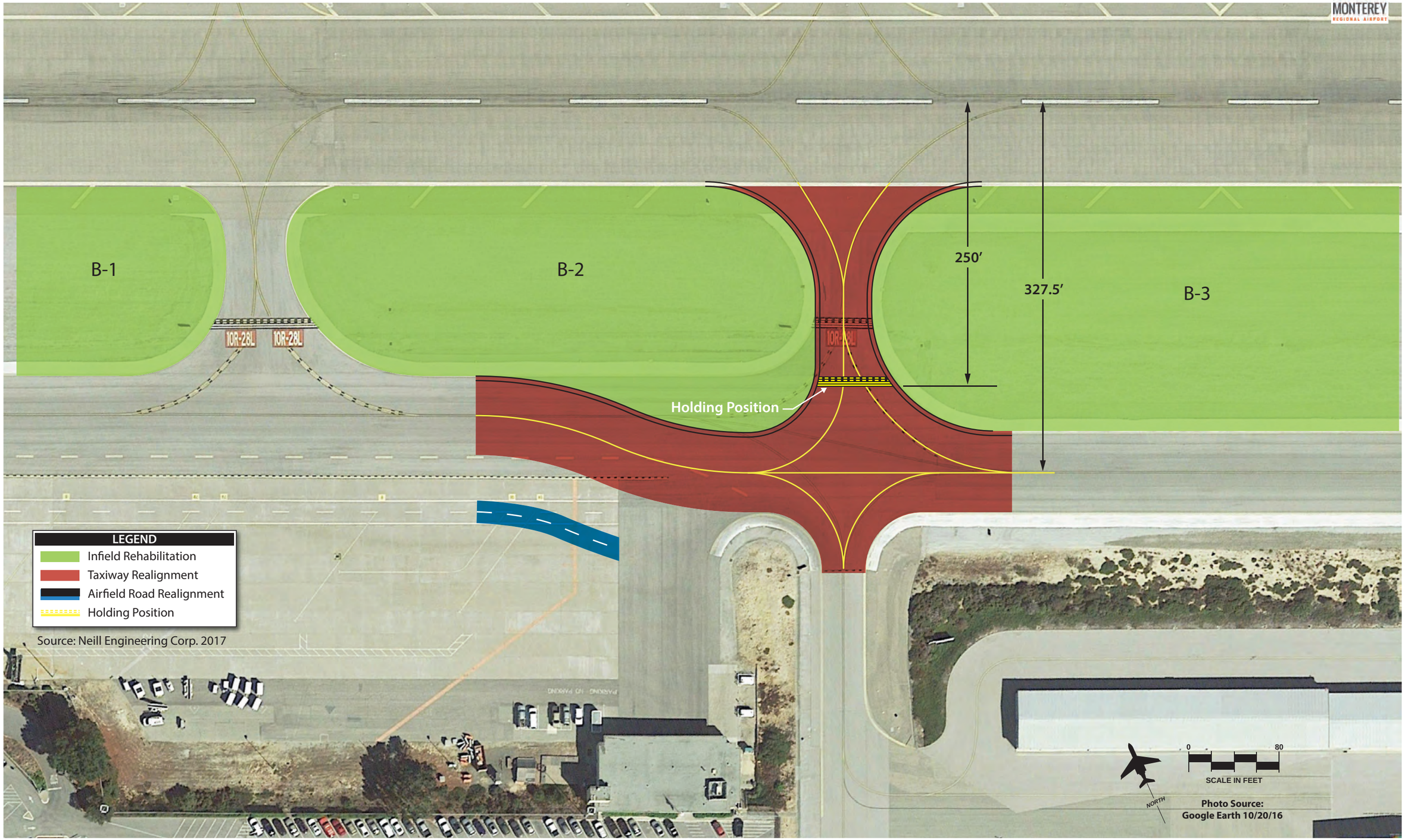


EXHIBIT 5
PROPOSED TAXIWAY "K" HOLD LINE IMPROVEMENTS

7. Zoning

See the land use planning jurisdiction discussion above under General Plan Designation. There are no local zoning ordinances applicable to the proposed project site/area. The project site, and the Airport overall, is also located outside the Coastal Zone (City of Monterey website, GIS portal).

8. Surrounding Land Uses and Setting

The Airport is in the Monterey Bay area, approximately one mile southeast of downtown Monterey and one mile from the Monterey Bay and the Pacific Ocean. The Airport is bordered by the City of Del Rey Oaks to the north and east, and the City of Monterey to the south and west (refer to **Exhibit 1**). Land uses in proximity to the Airport include the U.S. Navy golf course, a government research complex (includes the Fleet Numerical Meteorology and Oceanography Center, Naval Research Laboratory, and National Weather Service), residential neighborhoods, and commercial and light industrial development along Highways 68 and 218. To the south of Highway 68 is open space located within Monterey County. Within the Monterey area, Highways 1 and 68 are designated as scenic highways and provide scenic views of the ocean and wooded hills along their respective corridors.

The Airport is currently served by two parallel runways. Runway 10R-28L is the primary runway and Runway 10L-28R is the shorter runway. The runways are separated by 500 feet, centerline to centerline. The taxiway system consists of parallel, connecting, access, and entrance/exit taxiways. Landside facilities are those that support the aircraft and pilot/passenger handling functions, as well as other non-aviation facilities typically providing a revenue stream to the Airport. At Monterey Regional Airport, these facilities include the passenger terminal complex, cargo facilities, general aviation facilities, and support facilities, such as fuel storage, automobile parking, roadway access, and aircraft rescue and firefighting (ARFF) operations.

The Airport itself is classified as a non-hub primary commercial service airport in the *National Plan of Integrated Airport Systems (2017-2021)* (NPIAS) (FAA 2016). An airport must be listed in the NPIAS to be eligible for federal funding. During the 12-month period ending on November 30, 2017, the Airport experienced 102,947 total operations (FAA ATADS report).

Topography on the Airport is nearly flat in areas directly adjacent to the runway, but slopes steeply at the western and eastern ends creating a plateau. On the north side of the airfield, topography is more varied with several hills and drainages. Elevation at the Airport ranges from approximately 125 feet (38 meters) above mean sea level (msl) to 300 feet (91 meters) above msl; however, the proposed project area has an elevation of approximately 200 feet (61 meters) above msl.

The airport property supports several plant communities, including sensitive communities, such as maritime chaparral, coast live oak woodland, and Monterey pine forest. Numerous types of sensitive plants have also been documented on the property as well as in the general area. Monterey spineflower, a federally threatened flowering plant that is ranked as rare (List 1B.2) by the

California Native Plant Society (CNPS), and sandmat manzanita (also on List 1B.2), were both observed within the project's Biological Study Area (BSA) during field surveys conducted in May 2015, and April and July 2017.

9. Other Agencies Whose Approval is Required (e.g., permits, financing approval, or participation agreement)

Approval of the proposed project is a local discretionary action by the MPAD Board and is dependent upon Board certification of an appropriate CEQA document prior to taking action on the proposal. However, the FAA is also involved in the approval and funding process. An EA, under NEPA and applicable FAA Orders that implement NEPA, is also being prepared. The specific federal actions that are requested from FAA are:

- Unconditional approval of that portion of the airport layout plan (ALP) that depicts the Proposed Action pursuant to Title 49 United States Code (USC) Sections 40103(b), 44718, and 47107(a)(16) and 14 CFR Part 77.

- Approval of project design and a Construction Safety and Phasing Plan (CSPP) to maintain aviation and airfield safety during construction pursuant to FAA AC 150/5370-2F, *Operational Safety on Airports during Construction* (14 CFR Part 139 [Title 49 United States Code, USC, Section 44706]).

- Determination under 49 USC Sections 47106 and 107 related to eligibility of the proposed project for federal funding under the Airport Improvement Program (AIP).

Other permits or approvals that may be required for the project are listed below:

- Consultation with the U.S. Fish and Wildlife Service (USFWS) in accordance with Section 7 of the *Endangered Species Act* (federal ESA).

- Compliance with the requirements of the *Migratory Bird Treaty Act* (MBTA) during construction.

- Approval from the California Regional Water Quality Control Board (RWQCB) for modifications to the Airport's stormwater pollution prevention plan (SWPPP).

- Construction permit from the RWQCB related to applicable National Pollutant Discharge Elimination System (NPDES) General Construction permitting requirements.

- Construction Traffic Phasing Plan approval from the California Department of Transportation (Caltrans) for haul routes with direct access to Highway 68.

10. Environmental Factors Potentially Affected

The environmental factors checked below could be potentially affected by this project by at least one impact that is a "Potentially Significant Impact" or a "Less Than Significant with Mitigation Incorporated" impact as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Agriculture and Forestry Resources	☒	Air Quality
☒	Biological Resources	☒	Cultural Resources	☐	Geology /Soils
☒	Greenhouse Gas Emissions	☐	Hazards & Hazardous Materials	☒	Hydrology / Water Quality
☐	Land Use / Planning	☐	Mineral Resources	☐	Noise
☐	Population / Housing	☐	Public Services	☐	Recreation
☒	Transportation/Traffic	☒	Tribal Cultural Resources	☐	Utilities / Service Systems
☒	Mandatory Findings of Significance				

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code, Section 21080.3.1? If so, has consultation begun?

In accordance with PRC Section 21080.3.1, notification letters were sent to the Amah Mutsun Tribal Band, Xolon-Salinan Tribe, Amah Mutsun Tribal Band of Mission San Juan Bautista, Coastanoan Rumsen Carmel Tribe, Indian Canyon Mutsun Band of Coastanoan, Salinan Tribe of Monterey, San Luis Obispo Counties, Ohlone/Costanoan-Esselen Nation (OCEN) and Xolon-Salinan Tribe on August 5, 2016, to explain the purpose of the proposed project at Monterey Regional Airport and to notify the tribes of a consultation opportunity. Following the notification, a tribal consultation meeting was held on October 4, 2016, at the MPAD offices at Monterey Regional Airport and was attended by a representative of the OCEN and MPAD staff. OCEN was the only tribe that requested consultation for the proposed project.

12. Determination

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find the proposed project MAY have a significant effect(s) on the environment, but at least one effect: 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards; and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets, if the effect is a "potentially significant impact" or "potentially significant unless mitigated." An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because all potentially significant effects: (a) have been analyzed adequately in an earlier Environmental Impact Report (EIR) pursuant to applicable standards; and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project.

Chris Morello

Signature

March 15, 2018

Date

Chris Morello, Senior Planning Manager
Monterey Peninsula Airport District

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than

significant level (mitigation measures from "Earlier Analyses," as described in (5) below may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (CEQA Guidelines, Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of, and adequately analyzed in, an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources. A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

   b) the mitigation measure identified, if any, to reduce the impact to less than significant.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
I. AESTHETICS				
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state-designated scenic highway?	☐	☐	☐	X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	X
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	X	☐

I. Impact Analysis

I a-c) No Impact. The proposed project is located within the infield of the Airport and will not be visible from Highway 68, which is the closest designated scenic highway. Additionally, no scenic vistas or other scenic resources are in proximity to the infield.

I d) Less than Significant Impact. The project will not create new permanent sources of light or glare and will not change the appearance of the Airport from the surrounding areas. Nighttime lighting will be used during construction. These lights will be directed towards the construction areas, not off the airport property. The closest homes to the construction areas are separated from the airfield by both trees and other vegetation and topography. For example, the closest two homes to the western part of the project are approximately 38 feet lower in ground elevation than the construction area. (All construction will take place during the late nighttime hours to minimize runway closure; commercial flights are not scheduled during the late nighttime hours, therefore, creating less impact to operations.)

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.				
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code, Section 12220(g)), timberland (as defined by Public Resources Code, Section 4526), or timberland zoned Timberland Production (as defined by Government Code, Section 51104(g))?	☐	☐	☐	X
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	X

II. Impact Analysis

II a) No Impact. According to the U.S. Department of Agriculture, Natural Resources Conservation Service's (USDA-NRCS) Web Soil Survey, the project area is primarily comprised of Baywood sand and Dune land, both of which are classified as "Not prime farmland" (USDA-NRCS 2015). A small section of Arnold loamy sand, which is classified as "Farmland of statewide importance," is in the vicinity of Taxiway A and connector Taxiway J. However, the project area is developed with airfield land uses. Additionally, the California Department of Conservation's Important Farmland Map delineates the entire Airport as Urban and Built-Up Land or Other Land (California Department of Conservation 2012); the airport property is not used for agricultural purposes.

II b) No Impact. The Airport is not zoned for agriculture uses nor is it part of a Williamson Act contract.

II c-e) No Impact. There is no forest land or timberland (as defined in the Pub. Resources Code or Government Code) located at, or in proximity to, the Airport.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
III. AIR QUALITY Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	X	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	X	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the air basin is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	X	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	X	☐	☐
e) Create objectionable odors affecting a substantial number of people?	☐	X	☐	☐

III. Impact Analysis

Monterey County is part of the North Central Coast Air Basin (NCCAB), a designated "non-attainment" area for purposes of the California ambient air quality standards for ozone and PM_{10}

(coarse dust particles 2.5 to 10 micrometers in diameter) (CARB 2017). The Monterey Air Resources District (MBARD), formerly known as the Monterey Bay Unified Air Pollution Control District, is responsible for air monitoring, permitting, enforcement, long-range air quality planning, regulatory development, and other activities related to air pollution within the NCCAB.

The NCCAB area currently attains all national ambient air quality standards. Since the proposed improvements to the Airport do not occur in a U.S. EPA non-attainment area, no assessment of project-related air emissions with respect to the General Conformity Rule of the Federal *Clean Air Act* (CAA) is warranted.

Implementation of the proposed project will generate additional criteria air pollutant and toxic air contaminant emissions as a result of short-term construction activities. Because the improvements will not cause any additional operational activity at the Airport, no impacts with respect to operational emissions will occur. The following discussion describes the impact assessment methodology for the proposed project and identifies and evaluates any construction-related air quality impacts. Additional information, including modeling assumptions, can be found in **Appendix B**.

III a-b) Less than Significant. Air emissions occurring due to construction activity vary based on the duration and level of activity. Construction emissions occur mostly as exhaust products from the operation of construction equipment and vehicles but can also occur as fugitive dust emissions from land disturbance during material staging, demolition, and movement. Evaporative emissions also result from asphalt paving operations. The type of construction equipment commonly used can be categorized as either off-road or on-road equipment. Off-road equipment is normally used for earthwork, paving, demolition, and other onsite activities, while on-road equipment is typically used to transport and deliver supplies, material, and employees. As previously described in the Project Description (*Project Phasing and Construction*), during construction, approximately nine heavy-duty truck round-trips could occur per night during the site preparation/primary construction phases. Approximately seven worker vehicle round-trips per night would occur in private vehicles.

Table 4 summarizes the emissions associated with the proposed two-year construction schedule. The construction emissions inventory was prepared using the California Emissions Estimator Model (CalEEMod), as recommended by MBARD. The CalEEMod software model evaluates highway vehicle emissions, such as those from dump trucks or light-duty work trucks, and emissions related to non-highway approved vehicles, such as heavy construction equipment. **Table 4** also includes the MBARD significance thresholds for construction emissions outlined in the *Guidelines for Implementing the California Environmental Quality Act* (MBARD 2016). The guidelines state that a project would have a significant air quality effect on the environment if the project would exceed these thresholds.

TABLE 4
Construction Emissions Inventory[1]
Monterey Regional Airport

	Construction Emissions (pounds per day)					
	VOC[2]	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Phase 1[3]	8.19	34.52	68.83	0.12	10.87	3.70
Phase 2[3]	5.73	16.99	47.12	0.09	8.08	2.81
Significance Threshold[4]	**137**	**137**	**550**	**-**	**82**	**55-**
Emissions Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Coffman Associates analysis (see **Appendix B**).
[1] Includes emissions from on-road (worker and truck trips) and off-road (construction equipment) sources.
[2] Also referred to as Reactive Organic Gases (ROGs)
[3] Phase 1: Areas C, B-1, B-6, TW "E," TW "F"; Phase 2: Areas A-1, A-2, A-4, B-2, B-3, B-4, B-5, TW "K"
[4] MBARD's *Guidelines for Implementing the California Environmental Quality Act* state that a project would have a significant air quality effect on the environment if the project would exceed these thresholds. The guidelines do not include a threshold for SO_2.

As indicated in **Table 4**, project-related construction emissions will be well below all applicable thresholds and, therefore, the project will not conflict or obstruct the implementation of the applicable air quality plan nor will it violate any air quality standards or contribute substantially to an existing or projected air quality violation. Impacts are considered less than significant.

III c-e) Less than Significant with Mitigation Incorporated. During construction, the various diesel-powered vehicles and equipment in use on the site will create pollutant concentrations and odorous diesel particulate matter (diesel PM) exhaust emissions. Based on the analysis summarized in **Table 4,** the estimated emissions are well below the adopted thresholds for the time periods analyzed; therefore, dispersion modeling is not required for the proposed project.

MBARD has not adopted thresholds for objectionable odors. As part of a personal interview with MBARD staff regarding this topic, MBARD staff concurred with the use of other air quality management district's methodology for determining impacts when MBARD does not have adopted thresholds.[6] Based on San Luis Obispo County Air Pollution Control District's Air Quality Handbook (SLOAPCD 2012),[7] a review of a three-year complaint history related to the proposed activity can be used to establish a baseline condition for odor generating sources.

A review of the Airport's records for the previous three years, which includes construction of the recent Runway Safety Area improvements, indicates that no complaints related to construction-related odors occurred. Sources of the proposed construction emissions have a decreased prob-

[6] Nunes, Bob, MBARD Air Quality Planner. In person personal interview by Judi Krauss and Kory Lewis of Coffman Associates. August 1, 2016.

[7] San Luis Obispo County Air Pollution Control District CEQA Air Quality Handbook, http://www.slocleanair.org/images/cms/upload/files/CEQA_Handbook_2012_v1.pdf

ability of affecting the surrounding community since they will only generate odor emissions during the nighttime when most people are indoors and the closest residential home to the project area is over 500 feet away.

To further ensure impacts are less than significant for: Impact IIIc) The potential cumulative net increase of any criteria pollutant under an applicable federal or state ambient air quality standard; Impact IIId) Exposing sensitive receptors to substantial pollutant concentrations and Impact IIIe) Creating objectionable odors to a substantial number of people, the following mitigation measures will be implemented: Section III **AIR QLTY-1** and **AIR QLTY-2.**

III. Mitigation Measures

AIR QLTY-1. The Airport will require that the contractor use dust suppression measures, as stipulated by the FAA in AC 150/5370-10G, *Standards for Specifying Construction of Airports, Item P-156, Temporary Air and Water Pollution, Soil Erosion and Siltation Control* (FAA 2014). Consistent with this above advisory circular, the Airport will implement a Dust Control Plan that at a minimum includes the following:

1. Limiting the area under construction at any one time.
2. All active construction areas shall be watered to minimize dust.
3. All trucks hauling soil, sand, and other loose materials off property shall be covered with tarpaulins or other effective covers.
4. All unpaved roads and construction haul routes shall be watered to minimize dust during construction operations.
5. The contractor shall limit traffic speeds along the unpaved haul route to 15 miles per hour (mph).
6. All grading activities during periods of high wind (over 15 mph) will be prohibited.
7. Keep loader buckets low when transferring material to trucks.
8. Haul trucks shall maintain at least 2 feet of freeboard.
9. Limit entering/exiting site to controlled areas to avoid track out
10. Cover inactive storage piles.
11. Exposing the minimum area of erodible earth.
12. Apply temporary mulch with or without seeding where applicable.

AIR QLTY-2. In accordance with FAA standards the following measures for construction vehicles and/or equipment shall be implemented:

1. Construction vehicles will use a CARB Tier 3 engine when available;
2. Vehicle operators will turn off engines instead of idling;
3. All diesel equipment used for the project shall meet State of California diesel equipment requirements and be registered through the Statewide Portable Equipment Registration Program or the Diesel Off Road Online Reporting System; and
4. The contractor will use “clean air” alternate fuel vehicles when available.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
IV. BIOLOGICAL RESOURCES Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	X	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	X
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the *Clean Water Act* (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	X

IV. Impact Analysis

IV a) Less than Significant with Mitigation Incorporated. In support of this Initial Study, as well as the EA under consideration per NEPA, a biological field survey was conducted on May 5, 2015, of all proposed areas of disturbance. The USFWS and California Department of Fish and Wildlife (CDFW) typically consider survey results to be current for a period of two years. Therefore, follow-up surveys were conducted in April and July 2017 to determine if the 2015 survey results could be re-validated. The 2017 updated surveys did conclude the 2015 survey results are still valid and/or current. The BSA included approximately 133 acres located within the infields on either side of Runway 10R-28L. Prior to conducting a site visit, a literature review was performed to identify target species. **Appendix C** contains the Biological Field Survey Report, which includes

the literature and survey methodology and results. Special-status plant and animal species investigated for potential occurrence are listed in Tables 1 and 2 of the Biological Field Survey Report.

There were two special-status plant species, sandmat manzanita and Monterey spineflower, observed in the BSA during the field survey, and no special-status animal species. However, previous wildlife surveys conducted for the Airport's WHA also documented the presence of California horned larks (*Eremophila alpestris actia*) within the BSA (MPAD 2011). These occurring and potentially occurring protected species are discussed below:

- Sandmat manzanita (*Arctostaphylos pumila)*. Sandmat manzanita is a low growing (typically less than 1.5 meters tall) evergreen shrub that occurs in maritime chaparral and in openings within Monterey pine forest. It is endemic to California and limited to areas around Monterey Bay, within 3- to 205-meters elevation. Sandmat manzanita typically occurs on sandy soils associated with stabilized dunes. The CNPS has included sandmat manzanita on List 1B.2, which indicates that it is considered rare, threatened, and fairly endangered in California (i.e., 20 to 80 percent of occurrences are threatened).

  Sandmat manzanita is widespread on the airport property, and 12 sandmat manzanita plants occur approximately 20 feet outside the proposed improvement areas, but within the BSA (**Exhibit 6**). These individuals are isolated from the maritime chaparral community on other parts of the airport property and mowed to approximately two inches tall. Due to the isolation and regular mowing, they do not contribute to the ecological function of the maritime chaparral community on the airport property.

  The proposed project will improve the infield areas adjacent to the sandmat manzanita occurrences. Based on the project's preliminary grading plan, a total of three immature individual plants will be removed. Since the few individuals in the infield area are routinely mowed for fire suppression, they are rarely allowed to flower and do not have the structure to provide wildlife habitat. In addition, they are removed from the greater population on the Airport. These factors indicate that they are likely not genetically contributing to the greater population on the Airport and their loss will be less than significant with mitigation. See Section IV. Mitigation Measures: **BIO-1, BIO-2** and **BIO-3.**

  From a cumulative standpoint, the loss of four isolated individuals within the Airport's infield will not substantially reduce the number of sandmat manzanita on the Airport or in the general vicinity.

- Monterey spineflower (*Chorizanthe pungens*). Monterey spineflower is an annual herb that occurs at 3 to 450 meters in openings among chaparral, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland on sandy soils. Monterey spineflower is federally threatened under the federal ESA and listed on CNPS as 1B.2.

  The BSA supports 18.5 acres of *suitable* habitat for Monterey spineflower. At the time of the surveys, conducted in May 2015 and April 2017 during the typical blooming season,

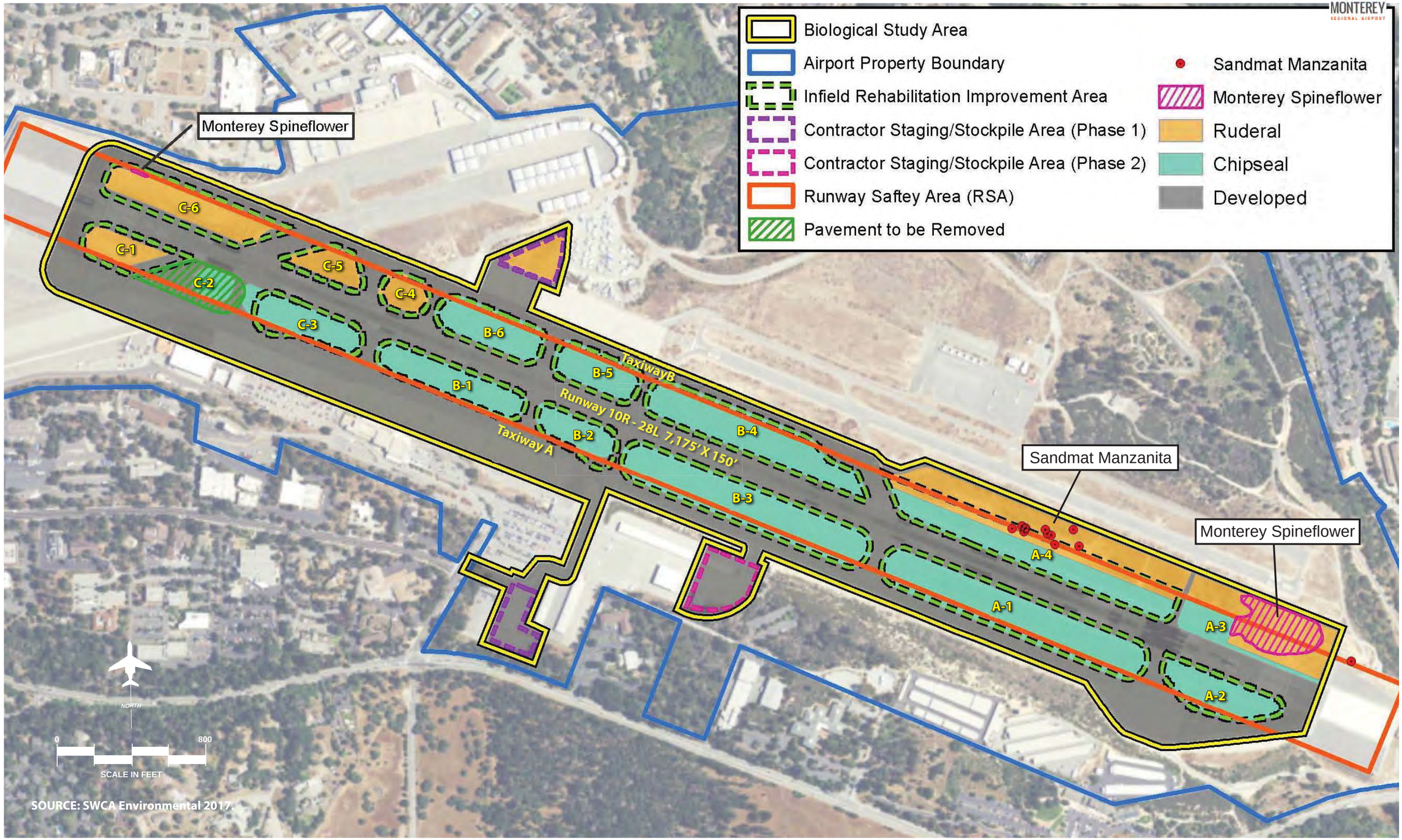


EXHIBIT 6
INFIELD HABITAT MAP

approximately 2,400 Monterey spineflower individuals were observed in the BSA. However, Monterey spineflower is an annual species. As with many annual species, the size and locations of Monterey spineflower occurrences can fluctuate through time. This factor limits the predictive value of plant location as indicators of future occurrences and makes it difficult to accurately account for the loss of individuals resulting from a proposed project. As such, an assessment of both affected *suitable* habitat and *occupied* habitat is a better indication of the effects of a project on this species.

Approximately 2.2 acres of occupied Monterey spineflower habitat occurs in the BSA, with most of the occurrences in the northeast portion (Area A-3) (**Exhibit 6**). The Airport has redesigned the project to avoid this area. An additional 0.015 acre of occupied Monterey spineflower habitat would be affected in Area C-6. In addition, converting Areas C-1, C-4, C-5, C-6, and the northern portion of Area A-4 would result in the permanent loss of 8.51 acres of suitable, but unoccupied Monterey spineflower habitat. A loss of occupied and available Monterey spineflower habitat due to the proposed project is likely to adversely affect the species but will be less than significant with mitigation incorporated into the project. See Section IV. Mitigation Measures: **BIO-2, BIO-3, BIO-4, BIO-5,** and **BIO-7.**

- California horned lark (*Eremophila alpestris actia*). The California horned lark is listed as a Species of Special Concern in the *California Fish and Game Code* (CFGC) and is managed by CDFW. The California horned lark is a medium-sized (approximately 7 to 8 inches long), ground-dwelling bird that is a widespread occupant of open habitats across North America. The historical range of the subspecies was from northern coastal California to Mexico and east into the Central Valley, but its current distribution is uncertain. It inhabits areas with sparse vegetation and exposed soil. The California subspecies is found along coastal grasslands.

  The BSA provides suitable habitat for nesting bird species (including California horned lark) that may have protection status under the CFGC. Common passerines may use the ruderal vegetation for nesting and/or foraging; raptors may use the area for foraging. Thus, ground bird nesting habitats will be impacted by project activities, including grading and vegetation removal. If the project activities are conducted between March and September, birds may be nesting within or adjacent to the affected area and the individuals could be directly or indirectly impacted. Direct impacts may include loss of active nests during vegetation removal, but this impact will be less than significant with mitigation incorporated into the project. See Section IV. Mitigation Measures: **BIO-2** and **BIO-6**.

- Silvery legless lizard (*Anniella pulchra pulchra*). The sandy soils on the airport property also provide suitable habitat for the silvery legless lizard (a California Species of Special Concern). However, this species requires sheltering opportunities provided by shrubs, trees, or woody debris. Silvery legless lizard is a fossorial species that spends most of its life underground; therefore, they are difficult to detect without shallow excavation of the soil surface. Biologists have conducted numerous legless lizard surveys and monitoring

efforts as part of the Airport's 2015 RSA Improvements project. These surveys and monitoring efforts included excavation of approximately 40 acres of legless lizard habitat; however, only one individual was identified. Considering the lack of shelter in the BSA and the apparent low number of legless lizards on the airport property, it is unlikely that silvery legless lizards will be found in the BSA or impacted by the proposed project.

IV b) No Impact. The 133-acre BSA consists of disturbed or developed land with remnant pockets of ruderal vegetation in sandy soil (**Exhibit 6**). Of the 133-acre area, 86 percent of it is developed with chip seal, the existing runway and taxiways, and airfield markers. Due to the road-like composition of chip seal, these infield areas do not support significant vegetation. The remaining infield areas (approximately 18.8 acres) support ruderal vegetation that is routinely mowed for visibility and fire safety, but that has remnant occurrences of native forbs and shrubs. The BSA does not support any intact vegetative communities, including riparian habitat or other sensitive natural communities.

IV c) No Impact. The closest wetlands habitat to the project area are man-made ponds located on the north side of the Airport that are identified as wetlands by the USFWS National Wetland Inventory (2016). Two are identified as Freshwater Emergent Wetlands and one is identified as Freshwater Forested/Shrub Wetland. No impacts to these resources will occur as a result of the proposed project.

IV d) No Impact. The Airport implements a *Wildlife Hazards Management Plan* (WHMP) (MPAD 2013) to reduce potential hazards to aircraft and human safety associated with wildlife movements on and within the area encompassing 10,000 feet off the north and south sides of the Airport and five miles along the runway approaches (per FAA AC 150/5200-33B, *Hazardous Wildlife Attractants On or Near Airports*). No established wildlife corridors of nursery sites are located on the Airport. The proposed project is a recommended wildlife control strategy of the WHMP.

IV e) No Impact. Monterey County implements an Oak Protection Ordinance (Section 21.64.260); however, the proposed project will not require the removal of protected oaks and the Airport is not within the jurisdiction of the County.

There are no adopted Habitat Conservation Plans (HCPs), Natural Community Conservation Plans (NCCPs), or other approved local, regional, or state habitat conservation plan that will be affected by actions at the Airport. A *2nd Screencheck Draft Multi-Species Fort Ord Habitat Conservation Plan* has been prepared (ICF 2017); however, this Draft HCP does not address resources on the Airport. In addition, this HCP still needs to be approved by both the USFWS and CDFW prior to going into effect. The HCP addresses the conservation and enhancement of habitat for several special-status plants and animals known to occur on the former Fort Ord. The closest portion of the former Fort Ord to the Airport is located northeast of Highway 218, and MPAD is not a Cooperative Party to the agreement.

IV. Mitigation (or Avoidance) Measures

BIO-1. To mitigate the loss of the three sandmat manzanita plants that are located in the project footprint, the MPAD shall propagate (or purchase), install, and maintain nine sandmat manzanita container plants. In order for the mitigation plants to contribute to the maritime chaparral community on the Airport, the mitigation plants should be planted outside the AOA, but on the airport property. The existing solar facility to the north of the AOA would be a suitable planting area. To avoid unanticipated impacts to other special-status resources, the sandmat manzanita plantings should be installed along the permanent solar array fence line.

The planted individuals shall be maintained and monitored for no less than three years. Maintenance shall ensure that the plantings receive a sufficient amount of supplemental water to become established, and that the presence of non-native species does not reduce the planting's survival. Irrigation for the plantings is not expected to be installed; therefore, the plantings may be watered by hand. Water may be supplied by a water truck or installation of a temporary water tank. If a temporary water tank is installed, the tank shall be located within the solar array footprint and shall not affect any sensitive resources that occur adjacent to the solar array.

BIO-2. Prior to ground disturbance, the project sponsor shall retain an environmental monitor for all measures requiring environmental mitigation to ensure compliance with the mitigation measures. The monitor shall be responsible for: 1) ensuring that procedures for verifying compliance with environmental mitigations are implemented; 2) conducting compliance monitoring and reporting; and 3) conducting construction crew training regarding environmentally sensitive areas. Monitoring shall be at a frequency and duration determined by the project sponsor and in consultation with the USFWS.

BIO-3. Project plans shall clearly show the location of project delineation fencing or flagging that excludes adjacent Monterey spineflower and sandmat manzanita occurrences from unnecessary disturbance. The fencing shall consist of highly visible construction fence or pin-flags. The project delineation fencing shall remain in place and functional throughout the duration of the project, and no work activities shall occur outside the delineated work area without the oversight of a monitoring biologist. Project plans shall clearly show all staging areas, which shall be located within previously developed areas on the airport property.

BIO-4. To minimize Monterey spineflower impacts and promote the continued existence of the species on the airport property, MPAD shall implement a soil and seed bank conservation program that shall include seed and top soil collection and distribution.

Monterey spineflower shall be conserved in the temporarily impacted or undisturbed portions of the BSA by broadcast seeding and relocating the soil seed bank. Seed to be broadcast shall be collected from the project area prior to start of construction. All seed collection activities shall be conducted by a USFWS-approved biologist. This species flowers from April through June; therefore, seed collection shall begin in August and continue through September, or when seed production ceases. To the extent feasible, all available seeds shall be collected from plants located in the project disturbance areas.

Soil from the project disturbance areas containing Monterey spineflower seed shall be collected and reapplied. To accomplish this, the upper six inches of soil located within the vicinity of existing Monterey spineflower individuals shall be collected and redistributed prior to grading activities. Soil collection shall occur immediately following completion of seed collection and prior to the first rainfall. The collected soil shall be immediately distributed in areas within the BSA that does not have existing Monterey spineflower occurrences. Seed collected from the action area shall be broadcast over the relocated soil, and then the receptor site shall be lightly raked to cover the seed. The ruderal areas north of Subarea C-4 are a recommended soil/seed receptor site.

BIO-5. To ensure that the Monterey spineflower soil conservation and seeding efforts are successful, the project sponsor shall retain a USFWS-approved biologist to assess the receptor site for signs of germination for two seasons after completion of the project. The conservation measures shall be considered successful if Monterey spineflower germination is observed in the receptor site during at least one of the two monitoring seasons. If germination is not observed in the receptor site, MPAD shall coordinate with the FAA to determine appropriate remedial actions designed to conserve the species in the BSA. Potential remedial actions may include non-native species removal in the vicinity of existing Monterey spineflower occurrences or collecting seed from other nearby occurrences and broadcasting the seed in the BSA. Monterey spineflower is a late blooming species; therefore, the monitoring shall be conducted between June and September.

BIO-6. To the maximum extent possible, initial grading of the ruderal vegetation in the project area should be conducted between October and February, which is outside the typical migratory bird breeding season for the area. If the project schedule does not provide for late season initial grading in the ruderal vegetation, a nesting bird survey will be conducted by a qualified biologist no more than one week prior to the grading to determine presence/absence of nesting birds within the vegetated area. In the event that active nests are observed, work activities will be avoided within 100 feet of the active nest(s) until young birds have fledged and left the nest. Based on the habitat conditions, if present, active nests would likely be of killdeer or a sparrow species. The nesting period of these species is approximately three weeks. The nests shall be monitored weekly by a biologist having experience with nesting birds to determine when the nest(s) become inactive. The buffer may be reduced, but not eliminated, during active nesting if deemed appropriate by the biologist. Readily visible exclusion zones will be established in areas where nests must be avoided. MPAD and the appropriate regulatory agency will be contacted if any state or federally listed bird species are observed during surveys. Nests, eggs, or young of birds covered by the California Fish and Game Code will not be moved or disturbed until the young have fledged.

BIO-7. Any additional mitigation (or modifications to the above mitigation) that are required by the USFWS as part of a Biological Opinion regarding impacts to federally listed species (e.g., Monterey spineflower) shall also be implemented.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
V. CULTURAL RESOURCES Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in State CEQA Guidelines, Section 15064.5?	☐	X	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines, Section 15064.5?	☐	X	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	X	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	X	☐	☐

V. Impact Analysis

V a-d) Cultural resources have been identified in the past on the airport property. In support of this Initial Study, as well as a federal EA, a cultural resource records search and intensive pedestrian field survey of the project study area were conducted in December 2015 to determine the presence or lack of cultural resources (SWCA 2017). No cultural resources were identified within or adjacent to the project area.

Although no cultural resources were identified within or adjacent to the project area, there is a possibility that there could be an unanticipated discovery of cultural resources. Therefore, to ensure impacts associated with destroying any cultural resources or disturbing human remains are less than significant, the following mitigation measure will be implemented: Section V. Mitigation Measure: **CULT-1.**

V. Mitigation Measures

CULT-1: The MPAD will follow standard protocols for any unanticipated discovery of cultural resources, including human remains. If cultural resources are exposed during project implementation, work will stop in the immediate vicinity, and an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards will be retained to evaluate the find and recommend relevant mitigation measures. If human remains are discovered, MPAD will contact the County Coroner, who will notify the Native American Historic Commission (NAHC) within 24 hours if the remains are determined to be Native American. The NAHC, in turn, will notify a Most Likely Descendant to aid in the determination of the proper handling of the remains.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
VI. GEOLOGY AND SOILS Would the project:				
a) Exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	X
ii) Strong seismic ground shaking?	☐	☐	☐	X
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	X
iv) Landslides?	☐	☐	☐	X
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	X	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	X

VI. Impact Analysis

VI a, c, d) No Impact. The Airport is not within a state-designated Alquist-Priolo Earthquake Fault Zone nor is it within an area covered by the current state mapping for Liquefaction Hazard Zones (Cornerstone Earth Group 2009). In addition, a preliminary geotechnical investigation at the Airport was performed for the 2015 RSA Improvements project. Based on that report, it appears that fault rupture hazard and liquefaction have low potential to occur at the Airport. Expansive soils were also not identified in the report (Cornerstone Earth Group 2009).

Onsite geologic and soil conditions specific to the proposed project area are similar to the overall airport conditions. In addition, the proposed project does not involve any people or structures since it is an open area of the Airport within the RSA.

VI b) Less than Significant Impact. On the west end of the project area, a less than significant loss of top soil will occur due to the proposed grading of natural areas. The amount of existing top soil in these areas is very minimal and no substantial erosion is anticipated since runoff will be controlled per the Airport's SWPPP. As discussed in Section IX a, f), Hydrology and Water Quality, best management practices (BMPs) to control soil erosion and siltation will be implemented into the proposed project during construction. The central and east end of the project area is currently covered with chip seal.

VI e) No Impact. No septic tanks or alternative waste water disposal systems are proposed by the proposed project.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
VII. GREENHOUSE GAS EMISSIONS				
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	X	☐	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	X	☐

VII. Impact Analysis

In the State of California, Assembly Bill (AB) 32, the *California Global Warming Solutions Act*, establishes a statewide cap on greenhouse gas (GHG) emissions in 2020 based on 1990 levels to ensure that the provisions of Executive Order S-3-05 are met. AB 32 required CARB to prepare a Scoping Plan to outline an approach to reduce GHG emissions in California to meet this goal. The first Scoping Plan was approved in 2008 and was updated in 2014. Pursuant to Executive Order B-30-15, CARB is preparing a second update to the Scoping Plan to achieve the statewide reduction of GHG emissions to 40 percent below 1990 levels by the year 2030 and to 80 percent below 1990 levels by the year 2050.

There are no widely established or readily accepted thresholds of significance for GHG emissions for airport-related projects. Additionally, a quantitative threshold of significance for GHG emissions is not identified in the State CEQA Guidelines. Rather, these Guidelines affirm the discretion of lead agencies to establish their own significance thresholds, provided such thresholds are supported by substantial evidence. Specifically, Section 15064.4 of the State CEQA Guidelines discusses the significance evaluation for GHG emissions. Section 15064.4(a) recognizes that the

"determination of the significance calls for a careful judgment" by the lead agency that is coupled with lead agency discretion to determine whether to (1) use a model or methodology, and/or (2) rely on a qualitative analysis or performance-based thresholds. Section 15064.4(b) further states that a lead agency should consider the following, non-exclusive, list of factors when assessing the significance of GHG emissions:

1. The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;

2. The extent to which project emissions exceed a threshold of significance that the lead agency determines applies to the project; and

3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

In accordance with Appendix G of the State CEQA Guidelines, the project would result in a significant GHG emissions impact if it would: (i) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment (comparable to State CEQA Guidelines, Section 15064.4(b)(3)); or (ii) Conflict with an applicable plan, policy or regulation adopted for purpose of reducing the emissions of GHG (comparable to State CEQA Guidelines, Section 15064.4(b)(3)). In addition, if there is substantial evidence that possible effects of a particular project are cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

MBARD's *Guidelines for Implementing the California Environmental Quality Act* (MBARD 2016), includes a GHG threshold which can be used to evaluate operational emissions within the Monterey region. The MBARD GHG operational threshold states that, "A proposed stationary source project will not have a significant GHG impact, if operation of the project will: Emit less than the significance level of 10,000 metric tons per year (MT/yr) CO_2e."[8]

To date, MBARD has not finalized GHG construction significance thresholds. Therefore, to evaluate the project-related construction-only GHG emissions, the total construction emissions for the project have been amortized over the projected operational lifetime of the chip seal surface treatment. The amortized amount will be compared to the GHG operational threshold of 10,000 MT/yr CO2e discussed above. This is consistent with the guidance contained in *Beyond 2020 and Newhall: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California* (AEP 2016), which recommends this approach since, "Construction emissions, as a one-time emissions source, are not the primary focus of most of GHG reduction planning, and constitute only a small part of the state's overall inventory." This document addresses the most current statewide GHG reductions outlined in Executive Order B-30-15. Furthermore, the project

[8] Emissions totals for CO_2e (carbon dioxide equivalent) are reported in metric tons. Emissions of CO_2, CH_4 and N_2O are converted to CO_2e using global warming potentials of 1, 25, and 298, respectively, as contained in the United Nation's Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (2009).

proposes mitigation measures to lessen any impacts related to the project's construction-only GHG emissions as discussed below.

VII a) Less than Significant Impact with Mitigation Incorporated. Implementation of the proposed project will generate additional GHG emissions as a result of construction activities which proposes the use of construction vehicles and equipment that contribute to GHG emissions. These GHG emissions will not exceed established GHG thresholds as discussed in VII b) below; however, the project has included Section VII. Mitigation Measure: **GHG-1** to reduce impacts associated with GHG emissions to less than significant.

VII b) Less than Significant Impact To date, MBARD has not finalized project-level GHG significance thresholds for actions occurring in the NCCAB. However, using the construction assumptions discussed in **Appendix B**, a GHG emissions inventory was prepared. **Table 5** presents a GHG emissions inventory of construction equipment emissions that would result from the proposed project.

As outlined in **Table 5,** the proposed project's GHG emissions from the two project construction phases were summed and then amortized over a 15-year period in accordance with the projected lifetime of the chip seal surface based on the project engineer's estimates and industry standards. Based on the analysis, the proposed project would not exceed the 10,000 MT/yr CO2e threshold; implementation of the proposed project would have a less than significant impact.

TABLE 5
GHG Emissions Inventory
Monterey Regional Airport

	Emissions (metric tons per year)			
	CO_2	CH_4	N_2O	Total CO_2e[1]
Phase 1	993.96	0.07	0.00	995.64
Phase 2	626.54	0.50	0.00	627.72
Total	1,620.50	0.57	0.00	1,623.36
15-Year Amortization	108.03	0.04	0.00	108.22
Threshold (Compare to Amortization Only)[2]	-	-	-	10,000.00

Source: Coffman Associates analysis (see **Appendix B**).

[1] Emissions of CO_2, CH_4 and N_2O were converted to CO_2e using global warming potentials of 1, 34, and 298, respectively, as contained in the United Nation's Intergovernmental Panel on Climate Change, Fifth Assessment Report (IPCC 2009).

[2] Emissions from construction-only projects, such as the proposed project, have been amortized over the life of the project (15 years) and compared to the MBARD operational GHG operational threshold (10,000 MT of CO_2e/yr).

VII. Mitigation Measures

GHG-1. In accordance with FAA standards the following measures for construction vehicles and/or equipment shall be implemented:

1. Construction vehicles will use a CARB Tier 3 engine when available;

2. Vehicle operators will turn off engines instead of idling;
3. All diesel equipment used for the project shall meet State of California diesel equipment requirements and be registered through the Statewide Portable Equipment Registration Program or the Diesel Off Road Online Reporting System; and
4. The contractor will use "clean air" alternate fuel vehicles when available.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
VIII. HAZARDS AND HAZARDOUS MATERIALS Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	X	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	X	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	X	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code, Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	X

VIII. Impact Analysis

VIII a-c) Less than Significant Impact. The proposed project will not require the routine transport, use, or disposal of hazardous materials, nor will it involve reasonably foreseeable upset or accident conditions involving the release of hazardous materials. During construction activities, the proposed project will introduce construction activities within the infield areas of the Airport since the contractor will use equipment and vehicles that utilize fossil fuels and other potential hazardous materials. The closest existing or proposed school to the project site is the Casanova Oak Knoll Park Center Pre-school, located at 735 Ramona Avenue in Monterey.[9] This location is approximately 0.25 mile to the northeast of the closest project area (Area C-6).

All construction activity will be subject to existing permit procedures for the handling, transporting, and disposal of hazardous materials. If previously unknown contaminants are discovered during construction or a spill occurs, work will be halted, and the National Response Center notified. The contractor will follow standard hazardous materials containment procedures and BMPs, as required by FAA AC 150/5370-10G (FAA 2014).

No long-term fossil fuel usage will occur as a result of the proposed project. Therefore, hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials would not occur.

VIII d) No Impact. There are no Superfund or Brownfield sites in proximity to the Airport; the closest such site is at the former United States Army post, Fort Ord (U.S. EPA, EJ Screen website). In addition, the state's Cortese List indicates that there are no sites at the Airport on the state's cleanup list (DTSC website). The Airport was a former military base and there are five former U.S. Army Corps of Engineer (USACE) wells (2002) located on the northwestern area of the Airport. These wells have been remediated by the USACE and are being investigated by the Airport as a viable source of non-potable water to serve the Airport and/or other users (Allterra 2015).

Activities involving the use of hazardous materials at the Airport are associated with fueling, maintenance, and repair of aircraft and airport-related vehicles. The Airport also has a fuel farm and an ARFF facility, both of which also store and require the transport of hazardous materials. Fuel storage facilities and businesses that handle hazardous materials located at the Airport are required to comply with all applicable regulations.

None of the abovementioned existing or former hazardous materials sites are located within the proposed project area.

VIII e) No Impact. The State of California requires that each airport and Airport Influence Area (AIA) be part of an Airport Land Use Compatibility Plan (ALUCP) (Caltrans 2011). MPAD currently has an approved (1987) *Comprehensive Land Use Plan for Monterey Peninsula Airport* (CLUP). Monterey County, as the Airport Land Use Commission (ALUC), is in the process of updating that plan (i.e., an ALUCP). The proposed project will not change any existing land uses or patterns of

[9] http://monterey.org/en-us/Departments/Monterey-Recreation/Community-Centers/Casanova-Oak-Knoll-Park-Center, accessed April 2016.

aircraft operations at the Airport. No changes to the approved CLUP or the updated ALUCP will be required as a result of the project, nor will it result in a safety hazard for people residing or working in the project area.

VIII f) No Impact. The Airport is a commercial airport and there are no private airstrips within ten nautical miles (AirNav.com 2015).

VIII g) No Impact. The Airport has an approved emergency response and evacuation plan (per 14 CFR 139.325) that addresses emergency procedures for all parts of the facility. This plan does not need to be revised to incorporate the proposed project.

VIII h) No Impact. The Airport is not located within a fire hazard severity zone (FHSZ), as mapped by CAL FIRE (2008), and no change to the Airport's risk to wildland fires will occur as a result of the proposed project.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
IX. HYDROLOGY AND WATER QUALITY Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	X	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	X	☐	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or offsite?	☐	X	☐	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?	☐	X	☐	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	X	☐	☐

f) Otherwise substantially degrade water quality?	☐	X	☐	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	X
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	X
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	X

IX. Impact Analysis

IX a - f) Less than Significant Impact with Mitigation Incorporated. The proposed project would replace the infield areas of the Airport with a surface that would discourage the burrowing of the ground squirrel and other small mammals. In addition, the regrading of certain infield areas is necessary to meet FAA standards. For example, in Areas A-1, B-2, and B-3, changes to the existing grades are proposed to meet FAA runway and taxiway safety area grading standards. These aspects of the project would have ramifications upon onsite drainage and the amount and quality of runoff. The infield areas (Areas A, B, and C) total 2,473,500 sf with approximately 76 percent of the area (1,885,000 sf) currently covered by impervious surfaces, either chip seal or pavement (**Table 6**).

TABLE 6
Change in Impervious Surfaces
Monterey Regional Airport

	Existing		Proposed Project	
Project Area[1] (sf)	**Impervious Surface (sf)**	**% Impervious**	**Impervious Surface (sf)**	**% Impervious**
West End (864,500)	471,000	54%	864,500	100%
East End (1,609,000)	1,414,000	88%	1,498,000	93%
Total (2,473,500)	**1,885,000**	**76%**	**2,362,500**	**95%**

Source: Neill Engineers, March 17, 2017
[1] West End (Phase 1): Areas C, B-1, B-6, TW "E," TW "F";
East End (Phase 2): Areas A-1, A-2, A-4, B-2, B-3, B-4, B-5, TW "K"

sf = square foot (feet)

The proposed project would increase the amount of impervious surface within two different sections of the infield (**Table 6**). On the west end, the proposed project would increase the amount of impervious surface to 100 percent. In Areas C-1, C-4, C-5, and C-6, the natural ground would be covered with chip seal, with a corresponding increase in impervious surface of 393,500 sf. No changes in impervious surfaces would occur in Areas B-1, B-6, C-2, and C-3 as pavement or chip seal is already in place. The additional runoff would be collected by the Airport's existing storm drain system. A trench drain is also recommended. Additional drainage improvements would be necessary in Area C-3 and within the Taxiway "F" project area due to the proposed Taxiway "F" improvements.

On the east end (Area A-4), approximately 84,000 sf of additional chip seal surface is proposed (**Table 6**). This would increase the amount of impervious surface on the east end by approximately five percent with a corresponding increase in stormwater runoff. No changes to the existing storm drain system are anticipated to be necessary to convey the additional stormwater other than raising the existing catch basins to accommodate the new RSA grades.

Overall, the proposed project would increase the amount of impervious surface within the infield areas to 2,362,500 sf (**Table 6**). Approximately 95 percent of the infield areas would be covered, which represents an approximate 25 percent change in the percent of impervious surfaces within the infield areas. The Airport implements a SWPPP, which would be updated to incorporate this project to ensure that significance thresholds for water quality are not exceeded. If, upon further project design, it is determined that drainage improvements are needed to prevent impacts to the airport drainage system, percolation trenches may be required, as previously discussed. See Section IX. Mitigation Measures below.

In addition, water quality impacts can occur in the short term during construction. Requirements of the State's General Construction Stormwater Permit (WQO 2009-2009 and amendments) would be required and would include a construction-related SWPPP.

The Central Coast RWQCB is the governing board for the Airport's stormwater discharges. The Airport operates under a General Industrial Storm Water Permit, which requires it to: (1) eliminate unauthorized non-stormwater discharge; (2) develop and implement a SWPPP; and (3) monitor stormwater discharge. The existing SWPPP will be updated to incorporate the proposed project and submitted to the Central Coast RWQCB for approval. With this required mitigation, significance thresholds for water quality in the long term will not be exceeded.

Requirements of the state's General Construction Stormwater Permit (WQO 2009-2009 and amendments) will also be required and will include a construction-related SWPPP. To minimize project impacts during construction, BMPs will be required by the conditions of this permit to be implemented by the contractor. Required BMPs include temporary measures to control water pollution, soil erosion, and siltation, through the use of berms, fiber mats, gravels, mulches, slope drains, and other erosion control methods. See Section IX. Mitigation Measures: **HYD-1** and **HYD-2**.

IX g-j) No Impact. The only area of the Airport that is located within a mapped 100-year floodplain is the extreme southeastern corner of the Airport at the junction of Highways 68 and 218 (mapped Zone AO, Special Flood Hazard Areas Subject to Inundation by the 1% Annual Chance Flood); other parts of the corner and along the Airport's eastern boundary with Del Rey Oaks could be inundated by a 100-year flood, but with average depths of less than one foot (Zone X, Other Flood Areas) (FEMA 2009). No changes to this area of the Airport, including the construction of housing or structures that could impede the flow of floodwaters, will occur as a result of the proposed project. The remainder of the Airport is located outside the mapped 500-year floodplain (Zone X, Other Areas) and is not subject to inundation due to seiches, tsunamis, or mudflows due to its location atop a plateau.

IX. Mitigation Measures

HYD-1. Prior to construction, the contractor shall be responsible for obtaining a General Construction permit from the Central Coast RWQCB. As part of this process, a project-specific construction SWPPP shall be prepared and all approved BMPs shall be implemented throughout the construction process.

HYD-2. During project design, pre-construction and post-construction runoff rates shall be determined and drainage improvements, such as the installation of percolation trench drains, shall be incorporated into project design, as necessary, to meet the Central Coast RWQCB requirements. A stormwater management plan shall be developed to retain the runoff for an 85th percentile storm, in compliance with Resolution R3-2013-0032*, Post-Construction Requirements for Development in the Central Coast Region*. The existing SWPPP shall be updated to incorporate the proposed project and submitted to the Central Coast RWQCB for approval.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
X. LAND USE AND PLANNING Would the project:				
a) Physically divide an established community?	☐	☐	☐	X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	X	☐
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	X

X. Impact Analysis

X a) No Impact. The proposed project is located within the infield of the Airport and will not divide any established communities.

X b) Less than Significant Impact. The Airport is designated a Special District (i.e., MPAD). Land within the original Airport District boundaries are not subject to the policies and land use plans of the cities of Monterey and Del Rey Oaks, including (but not limited to) the cities' general plans, zoning ordinances, or specific plans. A few Airport land parcels purchased after the formation of the District must comply with local jurisdictional requirements in which the parcel is located. However, the proposed project is located within the original MPAD boundaries. Additionally, the airport property is not located within the Coastal Zone (City of Monterey website, GIS portal).

To aid in properly mitigating potential environmental or land use compatibility impacts related to the Airport, certain policies of neighboring local jurisdictions are considered during the planning and evaluating of development projects at the Airport. (For example, the Monterey County Oak Protection Ordinance is typically used by MPAD to identify mitigation for oak tree removal at the Airport. Another example would be level of service thresholds for local and regional roadway impacts.) The proposed project will not require the removal of protected oaks or result in an impact to the level of service on local roads or highways (refer to Section IV, Biological Resources, and Section XVI, Transportation/Traffic).

The Airport is subject to regional policies of the Central Coast Region Basin Plan (Central Coast RWQCB 2011). As discussed in Section IX, Hydrology and Water Quality, Central Coast RWQCB permit conditions will be required for post-construction stormwater controls. The new installation or replacement of impervious surfaces will require a stormwater management plan to retain the runoff for an 85th percentile storm, as well as compliance with Resolution R3-2013-0032*, Post-Construction Requirements for Development in the Central Coast Region*.

X c) No Impact. There are no adopted HCPs or other types of resource management plans addressing sensitive biological resources at the Airport. The closest plan of this type is the Draft Fort Ord HCP (2017), which still needs to be approved by both the USFWS and CDFW prior to going into effect. The HCP addresses the conservation and enhancement of habitat for several special-status plants and animals known to occur on the former Fort Ord. The closest portion of the former Fort Ord to the Airport is located northeast of SR 218, and MPAD is not a Cooperative Party to the agreement.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XI. MINERAL RESOURCES Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	X

XI. Impact Analysis

XI a-b) No Impact. No mineral extraction occurs on airport property nor is the Airport identified as an area of "Identified Mineral Resource Significance" within the Monterey County General Plan (Monterey County 2008). The amount of aggregate rock that will be needed for the proposed project will be obtained from the local or regional market. Based on preliminary estimates, a total of 12,350 cy of Class 2 base rock will be imported. This material is available within the region. There are several permitted aggregate sources within Monterey County, including one with 1.5 to 3.0 million tons of available material and several with 0.5 to 1.5 million tons of available material (California Geological Survey 2012).

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XII. NOISE Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	X	☐
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?	☐	☐	X	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	X
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	X	☐
e) For a project located within an airport land use plan or, where such a plan has not been	☐	☐	☐	X

adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	X

XII. Impact Analysis

XII a, d) Less than Significant Impact. The proposed project will not change noise related to the Airport in the long term, and there will be no short-term construction noise exceedances of the noise standards as a result of construction of the proposed project. Most of the Airport is surrounded by the City of Monterey. According to the City's Land Use and Noise Compatibility Standards, Community Noise Equivalent Levels (CNEL)[10] of 60 decibels (dB) or lower noise exposure are normally acceptable[11] for low density residential, including single family residences, duplexes and mobile homes; 65 CNEL and lower are normally acceptable for multi-family residential and transient lodging, while 70 CNEL and lower are normally acceptable for schools, libraries, churches, hospitals, and nursing homes (City of Monterey General Plan, last updated 2013).

During construction, short-term noise impacts associated with the operation of construction equipment and vehicular noise from heavy-duty haul trucks and worker vehicles will occur. As discussed in the Project Description, temporary haul roads, staging areas, and borrow/stockpile areas will be necessary (**Exhibit 2)**. One of the haul roads will route construction delivery trips through a residential neighborhood north of the Airport using Airport Road and Euclid Avenue. The use of this haul route will be restricted to daytime hours (7 AM to 7 PM) and will involve only single heavy-duty truck trips (and an accompanying worker's personal vehicle) to drop off or remove equipment at the northern staging area.

All other construction traffic will be directed to the southern staging/stockpile areas and will occur during the night time hours as previously described. The southern haul road will route traffic to the Airport from Highway 68 and Olmsted Road. Vehicular trips will also be associated with workers coming to and from the site.

Based on the proposed construction schedule, construction noise would occur during the night time hours of 12:00 to 5:30 AM in two separate phases. The construction activity would begin at the west end of the infield and finish at the east end. During Phase 1, construction activity in the area closest to the residences northwest of the Airport (Area C-6) would take approximately 45 days. As construction activity moves farther south and east from this subarea, these temporary impacts would be less. The entire phase of construction is anticipated to take approximately ten

[10] CNEL is a measure of cumulative noise exposure. It takes into account increased sensitivities to noise during the evening hours (7:00 PM to 10:00 PM.) as well as during the nighttime.

[11] "Normally acceptable" is based on the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

months. During Phase 2, construction activity in the area closest to the residences northeast of the Airport (Area A-4) would take approximately 33 days. The entire phase of construction is anticipated to take approximately seven months. During this time, trucks will move between the north and south staging areas using the on-airport route shown on **Exhibit 2**.

According to the City of Monterey's Noise Element, there are no residential areas, schools, or commercial areas impacted by high levels of noise along Highway 68 (see Goals and Policies, a. Motor Vehicle Noise). As a result, Highway 68 is a designated truck route (City of Monterey General Plan, Map 7). Canyon Del Rey Road and Highway 1 are also designated truck routes. The proposed project will use these designated routes and, thus, related construction vehicular noise impacts are less than significant.

The construction/demolition phases of the proposed project are expected to include earthwork/grading and the pouring of chip seal or rock. Based on information from the project engineer, scrapers, loaders, and dump trucks will be used during the project's excavation and site preparation activities. During primary construction, dump trucks, graders, rollers, and water trucks will be used.

The Federal Highway Administration (FHWA) has measured the average noise levels of various types of construction equipment at 50 feet from a construction site. Based on this information, the anticipated noise levels for the proposed project's construction activity are shown in **Table 6**. The closest residences to the project area are approximately 700 feet northwest of the closest portion of the project (Area C-6). These same residences are approximately 3,200 feet from the farthest portion of Phase 1 of the project (Area B-1). Phase 2 of the construction would occur on the eastern end of the airfield and would be approximately 1,200 to 1,600 feet from the closest residents, which are located north and northeast of the Airport's eastern end.

As sound travels away from its source, the sound is absorbed to a certain extent by both the atmosphere and by intervening vegetation. At 700 feet, the project's equipment noise would be reduced by four to five dB; at 3,200 feet, the reduction would be six to ten dB. In addition, the homes closest to the Airport on the northwest side received special sound insulation treatment as a mitigation measure identified in the Airport's 14 CFR Part 150 Noise Compatibility Program. The sound insulation, in addition to the normal sound reduction provided by standard construction practices, contributes another 30 dB of interior sound attenuation.

At the distances between the nearest homes and the construction areas, substantial increases in ambient noise levels will not occur and construction noise impacts will be less than significant. In addition, the Airport will incorporate all feasible measures into the project to reduce construction-related noise, including minimizing the use of construction vehicle back-up alarms to the extent allowable by law.

TABLE 6
Anticipated Project Construction Operations, Equipment Types, and Their Noise Levels
Monterey Regional Airport

Equipment	Typical Noise Level (dBA[1]) 50 feet from Source
Backhoe	80
Dozer	85
Grader	85
Loader	85
Paver	89
Roller	74
Scraper	89
Shovel	82
Truck	88

Source: FHWA 2006.
[1] A-weighted decibels, abbreviated dBA, dBa, or dB(a), are an expression of the relative loudness of sounds in air as perceived by the human ear.

XII b) Less than Significant Impact. Project activities that could cause ground-borne vibration impacts will occur only during construction phases of the project. Based on preliminary construction estimates, heavy trucks, dozers, or backhoes will be used during site preparation activities; heavy trucks, graders, cement trucks, and asphalt rollers will be used during primary construction and installation of the surface treatment. No substantial sources of ground-borne vibration, such as blasting, pile-driving, vibratory compaction, demolition, or drilling, will be necessary.

Based on the proposed construction schedule, ground-borne vibration could occur during the night time hours of 12:00 to 5:30 AM for several months for two consecutive years. Within these timeframes, the construction activity will begin at the west end of the infield and finish at the east end. The closest residences to the project area are approximately 550 feet away from Areas C-1 and C-6. According to the Federal Transit Administration's *Transit Noise and Vibration Impact Assessment* (2006), in cases where "prolonged annoyance or damage from construction vibrations are not expected, a qualitative assessment is appropriate." Due to a lack of high vibratory construction activity and the limited times that ground-borne vibration could occur (i.e., 12:00 to 530 AM), potential ground-borne vibrations or ground-borne noise for any given area will be less than significant.

XII c) No Impact. The proposed project will not result in a permanent change in ambient noise levels or expose people to noise in excess of applicable noise standards; there are no permanent noise generators associated with improvements to the airport infield safety areas.

XII e) No Impact. The proposed project will not change any existing land uses or patterns of aircraft operations at the Airport. No changes to the approved CLUP or the updated ALUCP will be required as a result of the project, nor will it result in excessive noise levels for people residing or working in the project area.

XII f) No Impact. The Airport is a commercial airport and there are no private airstrips within ten nautical miles (AirNav.com 2015).

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XIII. POPULATION AND HOUSING Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	X

XIII. Impact Analysis

XIII a-c) No Impact. The proposed project is located within the Airport's infield and is a safety improvement project. No changes in the level of activity or operations at the Airport will occur as a result of its implementation. The proposed project will not displace existing housing or people.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XIV. PUBLIC SERVICES Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services**:**				
a) Fire protection?	☐	☐	☐	X
b) Police protection?	☐	☐	☐	X
c) Schools?	☐	☐	☐	X
d) Parks?	☐	☐	☐	X
e) Other public facilities?	☐	☐	☐	X

XIV. Impact Analysis

XIV a) No Impact. The Airport has an ARFF building that handles fire protection on the facility as well as providing structural response units for off-airport needs. The ARFF is staffed by City of Monterey employees. The purpose of the proposed project is to enhance the safety of the Airport's infield by reducing the amount of FOD on the runway and taxiways, improve transverse grading compliance with FAA safety standards, decrease the potential for wildlife hazards, and improve drainage. All these safety improvements will reduce the risk of aircraft emergencies and the demand for ARFF services.

XIV b-e) No Impact. The proposed project is a safety improvement project located within the Airport's infield and will not result in the development of any residential units or generate additional residents or students, nor would it create an increased demand on police services, schools, parks, or other public facilities.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XV. RECREATION				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	X

XV. Impact Analysis

XV a-b) No Impact. The proposed project is a safety improvement project located within the Airport's infield and will not result in an increased demand on parks or other recreational facilities.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XVI. TRANSPORTATION/TRAFFIC Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and	☐	☐	☐	X

non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?				
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	X
e) Result in inadequate emergency access?	☐	☐	☐	X
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	X	☐	☐

XVI. Impact Analysis

In the short term, construction traffic will include workers driving to and from the Airport (automobiles or light-duty trucks), heavy-duty trucks to move dirt, chip seal, and/or rock, and other heavy equipment, such as graders, loaders, and rollers. Most of the heavy construction equipment will be brought to the Airport and stored at one of the staging areas until the equipment is no longer required. This onsite storage of equipment will limit the trips related to the construction equipment to one trip in and one trip out.

All other construction traffic will be directed to the southern staging/stockpile area and will occur during the nighttime hours as previously described. The southern haul road will route traffic to the Airport from Highway 68 and Olmsted Road. Vehicular trips will also be associated with workers coming to and from the site. As previously discussed, all construction activity will occur during late nighttime hours to minimize runway closure; commercial flights are not scheduled during the late nighttime hours, therefore, creating less impact to operations. During this time, trucks will move between the north and south staging areas using the on-airport route shown on **Exhibit 2**.

For purposes of disclosure, construction trips related to heavy-duty truck trips have been estimated by the project engineer based on construction activities for the various stages of the project. These trips are summarized within **Table 7**. The average number of heavy-duty truck trips that are anticipated to occur during construction are between 8.2 and 9.9 round trips per night.

TABLE 7
Heavy-Duty Construction Truck Trips by Phase[1]
Monterey Regional Airport

Phase	Trips/Days
Round Truck Trips	
Phase 1	1,456
Phase 2	1,052
Duration[2]	
Phase 1	147 days
Phase 2	128 days
Average Trips/Night	
Phase 1	9.9
Phase 2	8.2

Source: Neill Engineers Corp., March and November 2017
[1] Phase 1: Areas C, B-1, B-6, TW "E," TW "F"; Phase 2: Areas A-1, A-2, A-4, B-2, B-3, B-4, B-5, TW "K"
[2] The duration shown in this column is the duration of the haul trip construction activity, not the total project duration shown in **Table 2C**.

XVI a-b) No Impact. No impacts to transportation-related local or regional policies will occur. Implementation of the proposed project will not result in additional long-term airport-related traffic or physical improvements and other changes to the existing circulation system.

XVI c) No Impact. Implementation of the proposed project will not result in changes to air traffic patterns, which are under the control of FAA, or in increases in air traffic levels.

XVI d, e) No Impact. Impacts to design features or uses of Highway 68 or Olmsted Road, as well as to their usage as emergency access, will not occur.

XVI f) Less than Significant Impact with Mitigation Incorporated. Although no significant traffic impacts are anticipated since project-related construction will occur at night, Caltrans requires the development and implementation of a Traffic Control Plan for construction routes and activities. See Section XVI. Mitigation Measure: **TRAFFIC-1**.

XVI. Mitigation Measure

TRAFFIC-1. The contractor shall be required to prepare a Traffic Control Plan, as required by Caltrans for construction routes and activities, and submit it to Caltrans for review and approval. A copy of the approved plan will also be provided to the Airport for their files.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XVII. TRIBAL CULTURAL RESOURCES Would the project cause a substantial adverse change in the significance of a Tribal Cultural Resource as defined in Public Resources Code, Section 21074, as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code, Section 5020.1(k), or	☐	X	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code, Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code, Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	X	☐	☐

XVII. Impact Analysis

Section 1(a)(9) of AB 52 establishes that "a substantial adverse change to a tribal cultural resource has a significant effect on the environment" and should be considered under CEQA.

XVII a, b) Less than Significant with Mitigation Incorporated. In accordance with PRC Section 21080.3.1, notification letters were sent to the Amah Mutsun Tribal Band, Xolon-Salinan Tribe, Amah Mutsun Tribal Band of Mission San Juan Bautista, Coastanoan Rumsen Carmel Tribe, Indian Canyon Mutsun Band of Coastanoan, Salinan Tribe of Monterey, San Luis Obispo Counties, Ohlone/Costanoan-Esselen Nation (OCEN) and Xolon-Salinan Tribe on August 5, 2016, to explain the purpose of the proposed project and to notify the tribes of a consultation opportunity. Following the notification, a tribal consultation meeting was held on October 4, 2016, at the MPAD offices at Monterey Regional Airport and was attended by a representative of OCEN and MPAD staff. OCEN was the only tribe that requested consultation for the proposed project. During the consultation meeting, a project overview was provided. The representative of OCEN requested that a monitor be present during any proposed soil movement.

As previously discussed, cultural resources have been identified in the past on the airport property. In support of this Initial Study, as well as a federal EA, a cultural resource records search and intensive pedestrian field survey of the project study area were conducted in December 2015

to determine the presence or lack of cultural resources (SWCA 2017). No cultural resources, specifically tribal cultural resources, were identified within or adjacent to the project area.

Although no tribal cultural resources were identified within or adjacent to the project area, there is a possibility that there could be an unanticipated discovery of tribal cultural resources. Therefore, to ensure there are less than significant impacts associated with destroying any tribal cultural resources or disturbing tribal human remains, the following Section XVII. Mitigation Measures will be implemented: **TRIBAL-1** and **TRIBAL-2.**

XVII. Mitigation Measures

TRIBAL-1. The MPAD will follow standard protocols for any unanticipated discovery of cultural resources, including human remains. If cultural resources are exposed during project implementation, work will stop in the immediate vicinity, and an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards will be retained to evaluate the find and recommend relevant mitigation measures. If human remains are discovered, MPAD will contact the County Coroner, who will notify the Native American Historic Commission (NAHC) within 24 hours if the remains are determined to be Native American. The NAHC, in turn, will notify a Most Likely Descendant to aid in the determination of the proper handling of the remains.

TRIBAL-2. If tribal cultural resources, including tribal human remains are found, the Airport will also contact the Tribe that requested consultation for the proposed project (in accordance with AB 52) and permit the tribe to have a tribal monitor onsite during construction and/or during the handling of the discovered tribal cultural resources/human remains.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XVIII. UTILITIES AND SERVICE SYSTEMS Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	X
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	X	☐
d) Have sufficient water supplies available to serve the project from existing entitlements	☐	☐	X	☐

and resources, or are new or expanded entitlements needed?				
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	X	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	X	☐

XVIII. Impact Analysis

XVIII a, b, e) No Impact. The proposed project will not result in wastewater or require wastewater treatment.

XVIII c) Less than Significant Impact. Since the proposed project is to replace the infield areas of the Airport with surfaces that will discourage the burrowing of the ground squirrel and other small mammals, the project will increase the amount of impervious surfaces. In addition, the regrading of certain infield areas is necessary to meet FAA standards.

As previously described, on the west end, the proposed project would increase the amount of impervious surface to 100 percent. In Areas C-1, C-4, C-5, and C-6, the natural ground would be covered with chip seal, with a corresponding increase in impervious surface of 393,500 sf. No changes in impervious surfaces would occur in Areas B-1, B-6, C-2, and C-3 as pavement or chip seal is already in place. The additional runoff would be collected by the Airport's existing storm drain system. A trench drain is also recommended. Additional drainage improvements would be necessary in Area C-3 and within the Taxiway "F" project area due to the proposed Taxiway "F" improvements, as described above.

On the east end (Area A-4), approximately 84,000 sf of additional chip seal surface is proposed. This would increase the amount of impervious surface on the east end by approximately five percent with a corresponding increase in stormwater runoff. No changes to the existing storm drain system are anticipated to be necessary to convey the additional stormwater other than raising the existing catch basins to accommodate the new RSA grades.

During project design, pre-construction and post-construction runoff rates shall be determined and drainage improvements, such as the installation of percolation trench drains, shall be incorporated into project design, as necessary, to meet the Central Coast RWQCB requirements. (See Section IX. Mitigation Measure: **HYD-2**.)

XVIII d) Less than Significant Impact. Water will be used to wash dust from trucks before leaving the project area and to implement other dust control measures, as well as during various construction processes. Similar to the Airport's 2015 RSA Improvements project, water will be obtained from on-airport wells or an offsite provider (i.e., California American Water Company, CalAm). No new or expanded entitlements are needed.

XVIII f-g) Less than Significant Impact. Solid waste disposal for the Monterey area is managed by the Monterey Regional Waste Management District (MRWMD) and disposed of at the Monterey Peninsula Landfill. The Solid Waste Facility Permit for the District operation states that the peak tonnage of incoming waste shall not exceed 3,500 tons per day. The landfill currently receives less than 1,000 tons per day of municipal solid waste for disposal. The remaining landfill waste capacity is approximately 71 million cy and is projected to reach its full capacity in the year 2161 (MRWMD 2016). Construction of a new 23-acre lined landfill module was completed in June 2013 on the 70-acre MRWMD site. This lined landfill module has a waste capacity of approximately 5,000,000 tons and a service life of approximately 17 years (MRWMD 2016). *The California Integrated Waste Management Act of 1989* (AB 939) required all counties to prepare a County Integrated Waste Management Plan. In Monterey County, the Monterey Regional Waste Management District coordinates the County's reuse and recycling efforts.

No long-term generation of solid waste will occur as a result of the proposed project. Solid waste will be generated as a result of the construction phase of the proposed project due to the grinding of existing asphalt concrete shoulders within several of the infields areas. As summarized in **Table 1**, approximately 8,020 cy will need to be removed from the project area and deposited in the Monterey Peninsula Landfill. This solid waste removal will not adversely impact the landfill, which has a remaining capacity of approximately 71 million cy, as well as a new landfill module that can accept another approximately 5 million tons.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XIX. MANDATORY FINDING OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	X	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are consid-	☐	X	☐	☐

erable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?				
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	X	☐	☐

XIX. Impact Analysis

XIX a) Less than Significant with Mitigation Incorporated. The proposed project has the potential to have a substantial adverse effect on Monterey spineflower, a federally threatened plant and one ranked as 1B.2 on the CNPS, if not mitigated. It may also have an adverse effect on individual sandmat manzanitas (CNPS 1B.2 ranking) and nesting birds protected by the California Fish and Game Code, including the California horned lark, a state Species of Concern. Cultural or tribal cultural resources could be adversely affected if unanticipated cultural resources are discovered during construction. Therefore, the Mitigated Negative Declaration will include the following mitigation (or avoidance) measures:

BIO-1. To mitigate the loss of the three sandmat manzanita plants that are located in the project footprint, the MPAD shall propagate (or purchase), install, and maintain nine sandmat manzanita container plants. In order for the mitigation plants to contribute to the maritime chaparral community on the Airport, the mitigation plants should be planted outside the AOA, but on the airport property. The existing solar facility to the north of the AOA would be a suitable planting area. To avoid unanticipated impacts to other special-status resources, the sandmat manzanita plantings should be installed along the permanent solar array fence line.

The planted individuals shall be maintained and monitored for no less than three years. Maintenance shall ensure that the plantings receive a sufficient amount of supplemental water to become established, and that the presence of non-native species does not reduce the planting's survival. Irrigation for the plantings is not expected to be installed; therefore, the plantings may be watered by hand. Water may be supplied by a water truck or installation of a temporary water tank. If a temporary water tank is installed, the tank shall be located within the solar array footprint and shall not affect any sensitive resources that occur adjacent to the solar array.

BIO-2. Prior to ground disturbance, the project sponsor shall retain an environmental monitor for all measures requiring environmental mitigation to ensure compliance with the mitigation measures. The monitor shall be responsible for: 1) ensuring that procedures for verifying compliance with environmental mitigations are implemented; 2) conducting compliance monitoring and reporting; and 3) conducting construction crew training regarding environmentally sensitive areas. Monitoring shall be at a frequency and duration determined by the project sponsor and in consultation with the USFWS.

BIO-3. Project plans shall clearly show the location of project delineation fencing or flagging that excludes adjacent Monterey spineflower and sandmat manzanita occurrences from unnecessary disturbance. The fencing shall consist of highly visible construction fence or pin-flags. The project

delineation fencing shall remain in place and functional throughout the duration of the project, and no work activities shall occur outside the delineated work area without the oversight of a monitoring biologist. Project plans shall clearly show all staging areas, which shall be located within previously developed areas on the airport property.

BIO-4. To minimize Monterey spineflower impacts and promote the continued existence of the species on the airport property, MPAD shall implement a soil and seed bank conservation program that shall include seed and top soil collection and distribution.

Monterey spineflower shall be conserved in the temporarily impacted or undisturbed portions of the BSA by broadcast seeding and relocating the soil seed bank. Seed to be broadcast shall be collected from the project area prior to start of construction. All seed collection activities shall be conducted by a USFWS-approved biologist. This species flowers from April through June; therefore, seed collection shall begin in August and continue through September, or when seed production ceases. To the extent feasible, all available seeds shall be collected from plants located in the project disturbance areas.

Soil from the project disturbance areas containing Monterey spineflower seed shall be collected and reapplied. To accomplish this, the upper six inches of soil located within the vicinity of existing Monterey spineflower individuals shall be collected and redistributed prior to grading activities. Soil collection shall occur immediately following completion of seed collection and prior to the first rainfall. The collected soil shall be immediately distributed in areas within the BSA that does not have existing Monterey spineflower occurrences. Seed collected from the action area shall be broadcast over the relocated soil, and then the receptor site shall be lightly raked to cover the seed. The ruderal areas north of Subarea C-4 are a recommended soil/seed receptor site.

BIO-5. To ensure that the Monterey spineflower soil conservation and seeding efforts are successful, the project sponsor shall retain a USFWS-approved biologist to assess the receptor site for signs of germination for two seasons after completion of the project. The conservation measures shall be considered successful if Monterey spineflower germination is observed in the receptor site during at least one of the two monitoring seasons. If germination is not observed in the receptor site, MPAD shall coordinate with the FAA to determine appropriate remedial actions designed to conserve the species in the BSA. Potential remedial actions may include non-native species removal in the vicinity of existing Monterey spineflower occurrences or collecting seed from other nearby occurrences and broadcasting the seed in the BSA. Monterey spineflower is a late blooming species; therefore, the monitoring shall be conducted between June and September.

BIO-6. To the maximum extent possible, initial grading of the ruderal vegetation in the project area should be conducted between October and February, which is outside the typical migratory bird breeding season for the area. If the project schedule does not provide for late season initial grading in the ruderal vegetation, a nesting bird survey will be conducted by a qualified biologist no more than one week prior to the grading to determine presence/absence of nesting birds within the vegetated area. In the event that active nests are observed, work activities will be

avoided within 100 feet of the active nest(s) until young birds have fledged and left the nest. Based on the habitat conditions, if present, active nests would likely be of killdeer or a sparrow species. The nesting period of these species is approximately three weeks. The nests shall be monitored weekly by a biologist having experience with nesting birds to determine when the nest(s) become inactive. The buffer may be reduced, but not eliminated, during active nesting if deemed appropriate by the biologist. Readily visible exclusion zones will be established in areas where nests must be avoided. MPAD and the appropriate regulatory agency will be contacted if any state or federally listed bird species are observed during surveys. Nests, eggs, or young of birds covered by the California Fish and Game Code will not be moved or disturbed until the young have fledged.

BIO-7. Any additional mitigation (or modifications to the above mitigation) that are required by the USFWS as part of a Biological Opinion regarding impacts to federally listed species (e.g., Monterey spineflower) shall also be implemented.

CULT-1/TRIBAL-1. The MPAD will follow standard protocols for any unanticipated discovery of cultural resources, including human remains. If cultural resources are exposed during project implementation, work will stop in the immediate vicinity, and an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards will be retained to evaluate the find and recommend relevant mitigation measures. If human remains are discovered, MPAD will contact the County Coroner, who will notify the Native American Historic Commission (NAHC) within 24 hours if the remains are determined to be Native American. The NAHC, in turn, will notify a Most Likely Descendant to aid in the determination of the proper handling of the remains.

TRIBAL-2. If tribal cultural resources, including tribal human remains are found, the Airport will also contact the Tribe that requested consultation for the proposed project (in accordance with AB 52) and permit the tribe to have a tribal monitor onsite during construction and/or during the handling of the discovered tribal cultural resources/human remains.

XIX b) Less than Significant with Mitigation Incorporated. The proposed project has the potential to cumulatively affect air quality, GHGs, groundwater resources and contribute additional surface runoff, including erosion, siltation, or other sources of pollution. Therefore, the Mitigated Negative Declaration will include the following mitigation measures:

AIR QLTY-1. The Airport will require that the contractor use dust suppression measures, as stipulated by the FAA in AC 150/5370-10G, *Standards for Specifying Construction of Airports, Item P-156, Temporary Air and Water Pollution, Soil Erosion and Siltation Control* (FAA 2014). Consistent with this above advisory circular, the Airport will implement a Dust Control Plan that at a minimum includes the following:

1. Limiting the area under construction at any one time.
2. All active construction areas shall be watered to minimize dust.
3. All trucks hauling soil, sand, and other loose materials off property shall be covered with tarpaulins or other effective covers.

4. All unpaved roads and construction haul routes shall be watered to minimize dust during construction operations.
5. The contractor shall limit traffic speeds along the unpaved haul route to 15 miles per hour (mph).
6. All grading activities during periods of high wind (over 15 mph) will be prohibited.
7. Keep loader buckets low when transferring material to trucks.
8. Haul trucks shall maintain at least 2 feet of freeboard.
9. Limit entering/exiting site to controlled areas to avoid track out
10. Cover inactive storage piles.
11. Exposing the minimum area of erodible earth.
12. Apply temporary mulch with or without seeding where applicable.

AIR QLTY-2/GHG-1. In accordance with FAA standards the following measures for construction vehicles and/or equipment shall be implemented:

1. Construction vehicles will use a CARB Tier 3 engine when available;
2. Vehicle operators will turn off engines instead of idling;
3. All diesel equipment used for the project shall meet State of California diesel equipment requirements and be registered through the Statewide Portable Equipment Registration Program or the Diesel Off Road Online Reporting System; and
4. The contractor will use "clean air" alternate fuel vehicles when available.

HYD-1. Prior to construction, the contractor shall be responsible for obtaining a General Construction permit from the Central Coast RWQCB. As part of this process, a project-specific construction SWPPP shall be prepared and all approved BMPs shall be implemented throughout the construction process.

HYD-2. During project design, pre-construction and post-construction runoff rates shall be determined and drainage improvements, such as the installation of percolation trench drains, shall be incorporated into project design, as necessary, to meet the Central Coast RWQCB requirements. A stormwater management plan shall be developed to retain the runoff for an 85th percentile storm, in compliance with Resolution R3-2013-0032*, Post-Construction Requirements for Development in the Central Coast Region*. The existing SWPPP shall be updated to incorporate the proposed project and submitted to the Central Coast RWQCB for approval.

XIX c) Less than Significant with Mitigation Incorporated. The proposed project will create temporary increases in pollutant concentrations, odors, and traffic levels during project construction. To ensure impacts are less than significant, the Mitigated Negative Declaration will include the following mitigation measures:

AIR QLTY-2. In accordance with FAA standards the following measures for construction vehicles and/or equipment shall be implemented:

1. Construction vehicles will use a CARB Tier 3 engine when available;
2. Vehicle operators will turn off engines instead of idling;

3. All diesel equipment used for the project shall meet State of California diesel equipment requirements and be registered through the Statewide Portable Equipment Registration Program or the Diesel Off Road Online Reporting System; and
4. The contractor will use “clean air” alternate fuel vehicles when available.

TRAFFIC-1. The contractor shall be required to prepare a Traffic Control Plan, as required by Caltrans for construction routes and activities, and submit it to Caltrans for review and approval. A copy of the approved plan will also be provided to the Airport for their files.

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LIST OF ACRONYMS:

AB – Assembly Bill
AC – Advisory Circular
AEP - Association of Environmental Professionals
AIA - Airport Influence Area
AIP – Airport Improvement Program
ALP - airport layout plan
ALUC – airport land use commission
ALUCP – airport land use compatibility plan
AOA - Air Operations Area
APCD - air pollution control district
ARFF – aircraft rescue and firefighting
ATADS – Airport Traffic Activity System

BMPs – best management practices
BSA – Biological Study Area

CAA – *Clean Air Act*
CalAm – California American Water Company
CalEEMod- California Emissions Estimator Model
Caltrans – California Department of Transportation
CARB – California Air Resources Board
CDC – California Department of Conservation
CDFW – California Department of Fish and Wildlife

CEQ - Council on Environmental Quality
CEQA – *California Environmental Quality Act*
CFGC – California Fish and Game Code
CFR – Code of Federal Regulations
CH_4 - methane
CLUP – Comprehensive Land Use Plan
CNEL - Community Noise Equivalent Level
CNPS – California Native Plant Society
CO – carbon monoxide
CO_2 – carbon dioxide
CO_2e – carbon dioxide equivalent
CSPP – Construction Safety and Phasing Plan
cy – cubic yard(s)

d(B) - decibel
d(B)A – A-weighted decibel
DTSC – California Department of Toxic Substances Control

EA- Environmental Assessment
EIR – Environmental Impact Report
EPA –Environmental Protection Agency
ESA – *Endangered Species Act*

FAA – Federal Aviation Administration
FBO - fixed base operator
FEMA – Federal Emergency Management Agency
FHSZ – Fire Hazard Severity Zone
FHWA – Federal Highway Administration
FOD – foreign object debris

GHG(s) – greenhouse gas (or gases)
GIS – geographic information system

HCP – Habitat Conservation Plan

IPCC – International Panel of Climate Change

MBARD – Monterey Bay Air Resources District
MBTA – *Migratory Bird Treaty Act of 1918*
MMRP – Mitigation Monitoring and Reporting Program
MND – Mitigated Negative Declaration
MPAD – Monterey Peninsula Airport District
MRWMD – Monterey Regional Waste Management District
MRY – Monterey Regional Airport
msl – mean sea level

MT - metric ton(s)

NAHC – Native American Heritage Commission
NCCAB – North Central Coast Air Basin
NCCP - Natural Community Conservation Plan
NEPA – *National Environmental Policy Act*
NOx – nitrogen oxides
NPDES – National Pollutant Discharge Elimination System
NPIAS – *National Plan of Integrated Airport Systems*
N_2O – nitrous oxide

PAPI – precision approach path indicator
PM2.5 – fine particulate matter less than 2.5 microns in size.
PM10 – respirable particulate matter less than 10 microns in size.
PRC – Public Resource Code

RCP - reinforced concrete pipe
ROG – reactive organic gases
RSA – runway safety area
RWQCB – Regional Water Quality Control Board

sf – square foot (feet)
SLO - San Luis Obispo
SO_2 – sulfur dioxide
SWPPP – storm water pollution prevention plan
sy – square yard(s)

U.S. – United States
USACE – United States Army Corps of Engineers
USC – United States Code
USDA–NRCS – United States Department of Agriculture, Natural Resources Conservation Service
USFWS – United States Fish and Wildlife Service

VOC – volatile organic compounds

WHA – Wildlife Hazard Assessment
WHMP – Wildlife Hazard Management Plan

Zone AO (Special Flood Hazard Areas Subject to Inundation by the 1% Annual Chance Flood) – FEMA flood zone definition indicating flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

Zone X (Other Flood Areas) – FEMA flood zone definition indicating areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with

drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

Zone X (Other Areas) – FEMA flood zone definition indicating areas determined to be outside the 0.2% annual chance floodplain.

Appendix A

MITIGATION, MONITORING, AND REPORTING PROGRAM

APPENDIX A

MITIGATION, MONITORING, AND REPORTING PROGRAM FOR THE PROPOSED INFIELD AND TAXIWAY IMPROVEMENTS PROJECT FOR MONTEREY REGIONAL AIRPORT

The following mitigation, monitoring, and reporting program (MMRP) has been prepared pursuant to Section 15097 of the *California Environmental Quality Act* (CEQA). Section 15097 requires all state and local agencies establish monitoring or reporting programs for projects approved by a public agency whenever approval involves the adoption of either a mitigated Negative Declaration or specified environmental findings related to an Environmental Impact Report.

The following MMRP for the proposed Infield and Taxiway Improvements Project for Monterey Regional Airport describes the mitigation measures identified in the Initial Study, identifies responsible entities for implementing and monitoring the plan, and outlines the mitigation measure timeline. The MMRP is to be used by the Airport staff and mitigation monitoring personnel to ensure compliance with mitigation measures during project implementation.

Airport staff will be responsible for the following:

- Onsite, day-to-day monitoring of construction activities;
- Review construction plans and equipment staging/access plans to ensure conformance with adopted mitigation measures;
- Ensure contractor knowledge of and compliance with the MMRP;
- Obtain assistance, as necessary, from technical experts in order to develop site-specific procedures for implementing the mitigation measures; and
- Maintain a log of all significant interactions, violations of permit conditions or mitigation measures, and necessary corrective measures.

MONTEREY REGIONAL AIRPORT
MITIGATION, MONITORING, AND REPORTING PROGRAM
FOR PROPOSED INFIELD AND TAXIWAY IMPROVEMENTS PROJECT

Potential Impact	Description	Implementing Entity	Monitoring Entity	Implementation Schedule	Date Initiated/ Date Completed
Air Quality (Construction Only)					
Cumulative Increases of Criteria Pollutants, Exposure of Sensitive Receptors to Pollutant Concentrations, and Objectionable Odors (Impacts III c-e)	**AIR QLTY-1: The Airport will require that the contractor use dust suppression measures, as stipulated by the FAA in AC 150/5370-10G, *Standards for Specifying Construction of Airports, Item P-156, Temporary Air and Water Pollution, Soil Erosion and Siltation Control*. Consistent with this above advisory circular, the Airport will implement a Dust Control Plan that at a minimum includes the following:** **1. Limiting the area under construction at any one time.** **2. All active construction areas shall be watered to minimize dust.** **3. All trucks hauling soil, sand, and other loose materials off property shall be covered with tarpaulins or other effective covers.** **4. All unpaved roads and construction haul routes shall be watered to minimize dust during construction operations.** **5. The contractor shall limit traffic speeds along the unpaved haul route to 15 miles per hour (mph).** **6. All grading activities during periods of high wind (over 15 mph) will be prohibited.** **7. Keep loader buckets low when transferring material to trucks.** **8. Haul trucks shall maintain at least 2 feet of freeboard.** **9. Limit entering/exiting site to controlled areas to avoid track out** **10. Cover inactive storage piles.** **11. Exposing the minimum area of erodible earth.** **12. Apply temporary mulch with or without seeding where applicable.**	Contractor	Airport staff	During construction	

MONTEREY REGIONAL AIRPORT
MITIGATION, MONITORING, AND REPORTING PROGRAM
FOR PROPOSED INFIELD AND TAXIWAY IMPROVEMENTS PROJECT

Potential Impact	Description	Implementing Entity	Monitoring Entity	Implementation Schedule	Date Initiated/ Date Completed
Air Quality/Greenhouse Gases (GHGs) (Construction Only)					
Cumulative Increases of Criteria Pollutants, Exposure of Sensitive Receptors to Pollutant Concentrations, and Objectionable Odors (Impacts III c-e); Generate GHGs (Impact VII a)	**AIR QLTY-2/GHG-1. In accordance with FAA standards the following measures for construction vehicles and/or equipment shall be implemented:** **1. Construction vehicles will use a CARB Tier 3 engine when available;** **2. Vehicle operators will turn off engines instead of idling;** **3. All diesel equipment used for the project shall meet State of California diesel equipment requirements and be registered through the Statewide Portable Equipment Registration Program or the Diesel Off Road Online Reporting System; and** **4. The contractor will use "clean air" alternate fuel vehicles when available.**	Contractor	Airport staff	During construction	
Biological Resources					
Impacts to Special Status Species (Biological Resources Impact IV a)	**BIO-1. To mitigate the loss of the three sandmat manzanita plants that are located in the project footprint, the MPAD shall propagate (or purchase), install, and maintain nine sandmat manzanita container plants. In order for the mitigation plants to contribute to the maritime chaparral community on the Airport, the mitigation plants should be planted outside the Air Operations Area (AOA), but on the airport property. The existing solar facility to the north of the AOA would be a suitable planting area. To avoid unanticipated impacts to other special-status resources, the sandmat manzanita plantings should be installed along the permanent solar array fence line.**	Airport staff and project biologist	Airport staff	Before and after construction	

MONTEREY REGIONAL AIRPORT
MITIGATION, MONITORING, AND REPORTING PROGRAM
FOR PROPOSED INFIELD AND TAXIWAY IMPROVEMENTS PROJECT

Potential Impact	Description	Implementing Entity	Monitoring Entity	Implementation Schedule	Date Initiated/ Date Completed
Biological Resources (Continued)					
Impacts to Special Status Species (Biological Resources Impact IV a) (continued)	**The planted individuals shall be maintained and monitored for no less than three years. Maintenance shall ensure that the plantings receive a sufficient amount of supplemental water to become established, and that the presence of non-native species does not reduce the planting's survival. Irrigation for the plantings is not expected to be installed; therefore, the plantings may be watered by hand. Water may be supplied by a water truck or installation of a temporary water tank. If a temporary water tank is installed, the tank shall be located within the solar array footprint and shall not affect any sensitive resources that occur adjacent to the solar array.**	Airport staff and project biologist	Airport staff	Before and after construction	
Impacts to Special Status Species (Biological Resources Impact IV a)	**BIO-2. Prior to ground disturbance, the project sponsor shall retain an environmental monitor for all measures requiring environmental mitigation to ensure compliance with the mitigation measures. The monitor shall be responsible for: 1) ensuring that procedures for verifying compliance with environmental mitigations are implemented; 2) conducting compliance monitoring and reporting; and 3) conducting construction crew training regarding environmentally sensitive areas. Monitoring shall be at a frequency and duration determined by the project sponsor and in consultation with the USFWS.**	Airport staff and project biologist	Airport staff	Before and during construction	
Impacts to Special Status Species (Biological Resources Impact IV a)	**BIO-3. Project plans shall clearly show the location of project delineation fencing or flagging that excludes adjacent Monterey spineflower and sandmat manzanita occurrences from unnecessary disturbance. The fencing shall consist of highly visible construction fence or pin-flags. The project delineation fencing shall remain in place and functional throughout the duration of the project, and no work activities shall occur outside the delineated work area without the oversight of a monitoring biologist. Project plans shall clearly show all staging areas, which shall be located within previously developed areas on the airport property.**	Contractor and project biologist	Airport staff	Before and during construction	

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MITIGATION, MONITORING, AND REPORTING PROGRAM
FOR PROPOSED INFIELD AND TAXIWAY IMPROVEMENTS PROJECT

Potential Impact	Description	Implementing Entity	Monitoring Entity	Implementation Schedule	Date Initiated/ Date Completed
Biological Resources (Continued)					
Impacts to Special Status Species (Biological Resources Impact IV a)	**BIO-4. To minimize Monterey spineflower impacts and promote the continued existence of the species on the airport property, MPAD shall implement a soil and seed bank conservation program that shall include seed and top soil collection and distribution.** **Monterey spineflower shall be conserved in the temporarily impacted or undisturbed portions of the Biological Study Area (BSA) by broadcast seeding and relocating the soil seed bank (see attached exhibit). Seed to be broadcast shall be collected from the project area prior to start of construction. All seed collection activities shall be conducted by a USFWS-approved biologist. This species flowers from April through June; therefore, seed collection shall begin in August and continue through September, or when seed production ceases. To the extent feasible, all available seeds shall be collected from plants located in the project disturbance areas.** **Soil from the project disturbance areas containing Monterey spineflower seed shall be collected and reapplied. To accomplish this, the upper six inches of soil located within the vicinity of existing Monterey spineflower individuals shall be collected and redistributed prior to grading activities. Soil collection shall occur immediately following completion of seed collection and prior to the first rainfall. The collected soil shall be immediately distributed in areas within the BSA that does not have existing Monterey spineflower occurrences. Seed collected from the action area shall be broadcast over the relocated soil, and then the receptor site shall be lightly raked to cover the seed. The ruderal areas north of Subarea C-4 are a recommended soil/seed receptor site.**	Airport staff and project biologist	Airport staff	Before and after construction	

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MITIGATION, MONITORING, AND REPORTING PROGRAM
FOR PROPOSED INFIELD AND TAXIWAY IMPROVEMENTS PROJECT

Potential Impact	Description	Implementing Entity	Monitoring Entity	Implementation Schedule	Date Initiated/ Date Completed
Biological Resources (Continued)					
Impacts to Special Status Species (Biological Resources Impact IV a)	**BIO-5. To ensure that the Monterey spineflower soil conservation and seeding efforts are successful, the project sponsor shall retain a USFWS-approved biologist to assess the receptor site for signs of germination for two seasons after completion of the project. The conservation measures shall be considered successful if Monterey spineflower germination is observed in the receptor site during at least one of the two monitoring seasons. If germination is not observed in the receptor site, MPAD shall coordinate with the FAA to determine appropriate remedial actions designed to conserve the species in the BSA. Potential remedial actions may include non-native species removal in the vicinity of existing Monterey spineflower occurrences or collecting seed from other nearby occurrences and broadcasting the seed in the BSA. Monterey spineflower is a late blooming species; therefore, the monitoring shall be conducted between June and September.**	Airport staff and project biologist	Airport staff	After construction	
Impacts to Special Status Species (Biological Resources Impact IV a)	**BIO-6. To the maximum extent possible, initial grading of the ruderal vegetation in the project area should be conducted between October and February, which is outside the typical migratory bird breeding season for the area. If the project schedule does not provide for late season initial grading in the ruderal vegetation, a nesting bird survey will be conducted by a qualified biologist no more than one week prior to the grading to determine presence/absence of nesting birds within the vegetated area. In the event that active nests are observed, work activities will be avoided within 100 feet of the active nest(s) until young birds have fledged and left the nest. Based on the habitat conditions, if present, active nests would likely be of killdeer or a sparrow species. The nesting period of these species is approximately three weeks. The nests shall be monitored weekly by a biologist having experience with nesting birds to determine when the nest(s) become inactive. The buffer may be reduced, but not eliminated, during active nesting if deemed appropriate by the biologist. Readily visible exclusion zones will be established in areas**	Contractor and project biologist	Airport staff	Before construction	

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FOR PROPOSED INFIELD AND TAXIWAY IMPROVEMENTS PROJECT

Potential Impact	Description	Implementing Entity	Monitoring Entity	Implementation Schedule	Date Initiated/ Date Completed
Biological Resources (Continued)					
Impacts to Special Status Species (Biological Resources Impact IV a) (continued)	**where nests must be avoided. MPAD and the appropriate regulatory agency will be contacted if any state or federally listed bird species are observed during surveys. Nests, eggs, or young of birds covered by the California Fish and Game Code will not be moved or disturbed until the young have fledged.**	Contractor and project biologist	Airport staff	Before construction	
Impacts to Special Status Species (Biological Resources Impact IV a)	**BIO-7. Any additional mitigation (or modifications to the above mitigation) that are required by the USFWS as part of a Biological Opinion regarding impacts to federally listed species (e.g., Monterey spineflower) shall also be implemented.**	Airport staff and project biologist	Airport staff	Before or after construction	
Cultural Resources/Tribal Cultural Resources					
Potential Impacts to Cultural or Paleontological Resources or Human Remains (Impacts V a-d); Potential Impacts to Tribal Cultural Resources (Impacts XVII a-b)	**CULT-1/TRIBAL-1: The MPAD will follow standard protocols for any unanticipated discovery of cultural resources, including human remains. If cultural resources are exposed during project implementation, work will stop in the immediate vicinity, and an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards will be retained to evaluate the find and recommend relevant mitigation measures. If human remains are discovered, MPAD will contact the County Coroner, who will notify the Native American Historic Commission (NAHC) within 24 hours if the remains are determined to be Native American. The NAHC, in turn, will notify a Most Likely Descendant to aid in the determination of the proper handling of the remains.**	Airport staff and consultant archaeologist	Airport staff	As necessary, during construction	
Tribal Cultural Resources					
Potential Impacts to Tribal Cultural Resources (Impacts XVII a-b)	**TRIBAL-2: If tribal cultural resources, including tribal human remains are found, the Airport will also contact the Tribe that requested consultation for the proposed project (in accordance with Assembly Bill 52) and permit the tribe to have a tribal monitor onsite during construction and/or during the handling of the discovered tribal cultural resources/human remains.**	Airport staff and/or consultant archaeologist	Airport staff	As necessary, during construction	

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Potential Impact	Description	Implementing Entity	Monitoring Entity	Implementation Schedule	Date Initiated/ Date Completed
Hydrology and Water Quality					
Future Potential Hydrologic and/or Water Quality Impacts (Impacts IX a-f)	**HYD-1. Prior to construction, the contractor shall be responsible for obtaining a General Construction permit from the Central Coast RWQCB. As part of this process, a project-specific construction SWPPP shall be prepared and all approved BMPs shall be implemented throughout the construction process.**	Contractor	Airport staff	Prior to construction	
	HYD-2. During project design, pre-construction and post-construction runoff rates shall be determined and drainage improvements, such as the installation of percolation trench drains, shall be incorporated into project design, as necessary, to meet the Central Coast RWQCB requirements. A stormwater management plan shall be developed to retain the runoff for an 85th percentile storm, in compliance with Resolution R3-2013-0032*, Post-Construction Requirements for Development in the Central Coast Region*. The existing SWPPP shall be updated to incorporate the proposed project and submitted to the Central Coast RWQCB for approval.	Project engineer and/or contractor	Airport staff	Prior to construction	
Transportation/Circulation (Construction Only)					
Impacts Related to Caltrans Safety Procedures (Impact XVI f)	**TRAFFIC-1. The contractor shall be required to prepare a Traffic Control Plan, as required by Caltrans for construction routes and activities, and submit it to Caltrans for review and approval. A copy of the approved plan will also be provided to the Airport for their files.**	Contractor	Airport staff	Prior to construction	

FAA = Federal Aviation Administration
CARB = California Air Resources Board
MPAD = Monterey Peninsula Airport District
USFWS = United States Fish and Wildlife Service
RWQCB = Regional Water Quality Control Board
SWPPP = storm water pollution prevention plan
BMPs = best management practices
Caltrans = California Department of Transportation

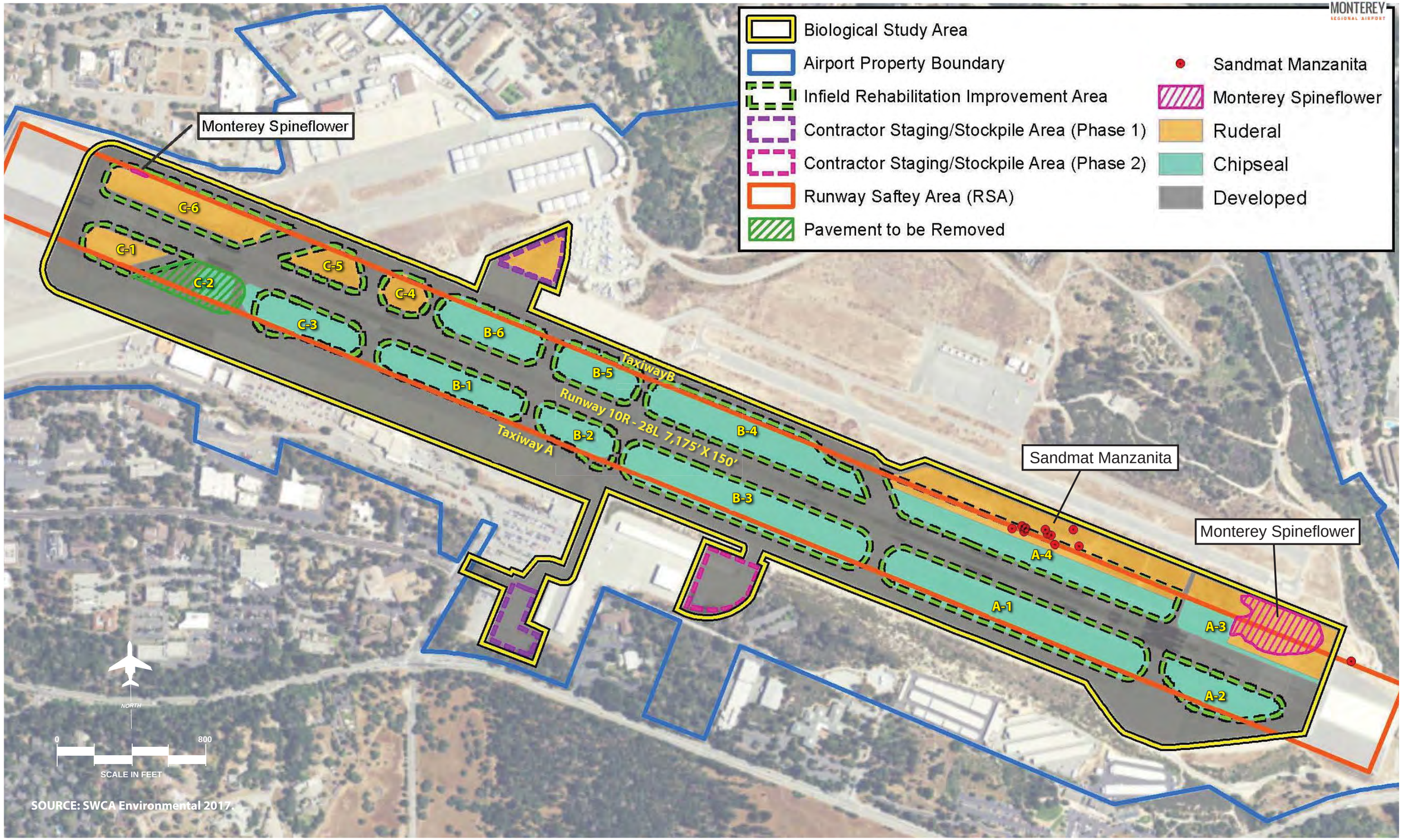

EXHIBIT 6
INFIELD HABITAT MAP

Appendix B

AIR QUALITY INFORMATION

Appendix B
AIR QUALITY INFORMATION

This Appendix provides information regarding air quality in the North Central Coast Air Basin (NCCAB) and modeling assumptions to evaluate construction emissions that may occur due to the proposed improvements planned at Monterey Regional Airport (MRY). Specifically, this section addresses the environmental and regulatory setting as it pertains to the NCCAB, including: topography and meteorology; attainment of applicable ambient air quality standards (AAQS); existing air quality conditions and data; and applicable state and federal regulations.

Topography and Meteorology

The NCCAB encompasses the central California coastal counties of Monterey, Santa Cruz, and San Benito, and is bounded by the Santa Cruz Mountains to the northwest, the Gabilan Mountains to the west, and the Diablo Mountains to the northeast. Average temperatures in the Monterey area range from approximately 43 to 71 degrees Fahrenheit with maxima occurring in August and September. Precipitation is concentrated during the winter and spring months and can total as much as four inches per month, while summer months typically experience much less rainfall. Overall, the area receives approximately 20 inches of rain on average per year.

Summertime atmospheric circulation is controlled by the Pacific High pressure system in the eastern Pacific Ocean, which typically causes a temperature inversion in the NCCAB that restricts vertical air mixing and draws onshore air currents into the area from the west and northwest. The nearby mountain ranges also intensify the onshore currents, both by channeling air flow and creating low pressure systems in the afternoon and evening as landmasses cool. Onshore air movement is dampened in the fall. Instead, the area experiences more frequent stationary air

masses and occasional offshore currents, which facilitate air pollutant transport from the San Francisco Bay and Central Valley to the north and east. The influence of the Pacific High pressure system increases the persistence of these air pollutants at ground level during the fall until the pressure system migrates southward during the winter and spring, allowing for fewer temperature inversions to restrict air circulation, as well as a reduction in ambient pollutant concentrations in the NCCAB.

State and National Ambient Air Quality Standards

Title I of the *Federal Clean Air Act* (CAA) requires the United States Environmental Protection Agency (EPA) to promulgate and enforce National Ambient Air Quality Standards (NAAQS). The NAAQS represent levels of pollutants in the ambient (i.e., "outdoor") air that, when exceeded, cause negative impacts to human health (primary NAAQS) and environmental quality (secondary NAAQS). The EPA established NAAQS for the following "criteria" pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), particulate matter (PM), ozone (O_3), sulfur dioxide (SO_2), and lead (Pb). Notably, there are two sizes of regulated PM – PM measuring 10 micrometers or less in diameter (PM_{10}) and particulate matter measuring 2.5 micrometers in diameter ($PM_{2.5}$).

An area with ambient air concentrations exceeding the NAAQS for a criteria pollutant is said to be "nonattainment" for the pollutant's NAAQS, while an area where ambient concentrations are below the NAAQS is considered "attainment." The EPA requires areas designated nonattainment to demonstrate how they will attain the NAAQS by an established deadline. To accomplish this, states prepare State Implementation Plans (SIPs). SIPs are typically a comprehensive set of reduction strategies and emissions budgets designed to bring the area into attainment.

Table 3A details the NAAQS, as well as NCCAB's attainment status, for all regulated pollutants at the federal level. As shown, the NCCAB is currently designated attainment for all of the criteria air pollutants and all of the NAAQS. Because the NCCAB currently attains all NAAQS, there are no SIPs for the area.

Given regional air quality concerns, individual states have the authority to adopt air quality standards that are more stringent than the NAAQS. Pursuant to requirements of CEQA and the *California Clean Air Act* (CCAA), the California Air Resources Board (CARB) established the California Ambient Air Quality Standards (CAAQS). The CAAQS have more stringent standards for each of the EPA "criteria" pollutants mentioned above. The CAAQS also include requirements for visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. Similar to federal regulations, an area within California that violates the CAAQS is considered "nonattainment" and an area with ambient air concentrations below the CAAQS is designated "attainment." As with the federal regulations, air quality management agencies in areas designated "nonattainment" for any of the CAAQS must develop air management plans, including strategies and timelines required to bring the air basin into "attainment" of standards as expeditiously as possible.

Table B1 details the CAAQS and describes the NCCAB's current status with respect to the standards. As shown, the area in which the airport is located is in violation of the CAAQS for O_3 and PM_{10}.

TABLE B1
Federal and State Level Ambient Air Quality Standards

Pollutant	Averaging Time	NAAQS	NCCAB Attainment Status	CAAQS [b]	NCCAB Attainment Status
Carbon Monoxide (CO)	8-hour	9 ppm [c]	Attainment	9 ppm	Attainment
	1-hour	35 ppm [c]	Attainment	20 ppm	Attainment
Nitrogen Dioxide (NO_2)	Annual	0.053 ppm	Attainment	0.030 ppm	Attainment
	1-hour	0.100 ppm	Undetermined [i]	0.18 ppm	Attainment
Particulate Matter (PM_{10})	24-hour	150 µg/m^3 [d]	Attainment	50 µg/m3	Nonattainment
	Annual	--	--	20 µg/m3	
Particulate Matter ($PM_{2.5}$)	Annual	15.0 µg/m^3 [e]	Attainment	12.0 µg/m3	Attainment
	24-hour	35 µg/m^3 [f]	Attainment	--	--
Ozone (O_3)	8-hour	0.075 ppm [g]	Attainment	0.07 ppm	Nonattain-ment-Transi-tional
	1-hour	0.12 ppm [h]	Attainment	0.09 ppm	
Sulfur Dioxide (SO_2)	Annual	0.03 ppm	Attainment	--	--
	24-hour	0.14 ppm[c]	Attainment	0.04 ppm	Attainment
	3-hour	0.5 ppm[c]	Attainment	--	--
	1-hour	--	--	0.25 ppm	Attainment
Lead (Pb)	Rolling 3-month	0.15 µg/m^3	Attainment	--	--
	Quarterly	1.5 µg/m3	Attainment	--	--
	30-day	--	--	1.5 µg/m3	Attainment
Visibility Reducing Parti-cles	8-hour	--	--	0.23 [a]	Attainment
Sulfates	24-hour	--	--	25 µg/m3	Attainment
Hydrogen Sulfide	1-hour	--	--	0.03 ppm	Attainment
Vinyl Chloride	24-hour	--	--	0.01 ppm	Attainment

Source: National Primary and Secondary Ambient Air Quality Standards (40 CFR Part 50); Table of Standards, 17 California Code of Regulations, § 70200

[a] The visibility reducing particles standard refers to an extinction coefficient of 0.23 per kilometer; visibility of ten miles or more when relative humidity is <70%

[b] The CAAQS for O_3, CO, SO_2 (1 and 24 hour), NO_2, particulate matter and visibility reducing particles are not to be exceeded. All other standards are not to be equaled or exceeded

[c] Not to be exceeded more than once per year

[d] Not to be exceeded more than once per year on average over three years

[e] To attain this standard, the 3-year average of the weighted annual mean $PM_{2.5}$ concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m^3

[f] To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m^3

[g] To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm

[h] The 1997 1-hour O_3 NAAQS, including any implementation rules, only applies to limited areas, but shall remain in place for implementation purposes until EPA undertakes rulemaking to address the transition from the 1997 standard to the 2008 8-hour standard. The 1-hour standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is ≤ 1.

[i] The 1-hour NO_2 standard was promulgated on February 9, 2010. To meet this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor must not exceed 0.100 ppm. EPA has not yet designated non-attainment areas for the 1-hour standard. State agencies are to submit non-attainment area recommendations to EPA by January 2011.

Existing Air Quality Conditions

CARB and the Monterey Bay Air Resources District (MBARD) maintain a permanent network of ambient air monitors which record air pollutant concentrations and meteorological data in the NCCAB.[1] The network consists of nine active monitors, four of which are located within 30 miles of MRY. **Table B2** summarizes data measurements from these monitors between the years 2013 and 2015.

Table B2
Ambient Air Monitoring Data (2013-2015)

Local Site Name	Pollutant Standard	NAAQS	CAAQS	Year	Monitor Result
Salinas	CO 1-hour 1971	35 ppm	20 ppm	2013	0.29
Salinas	CO 1-hour 1971	35 ppm	20 ppm	2014	0.30
Salinas	CO 1-hour 1971	35 ppm	20 ppm	2015	0.29
Salinas	CO 8-hour 1971	9 ppm	9 ppm	2013	0.33
Salinas	CO 8-hour 1971	9 ppm	9 ppm	2014	0.33
Salinas	CO 8-hour 1971	9 ppm	9 ppm	2015	0.33
Salinas	NO2 1-hour	--	0.18 ppm	2013	0.014
Salinas	NO2 1-hour	--	0.18 ppm	2014	0.012
Salinas	NO2 1-hour	--	0.18 ppm	2015	0.011
Salinas	NO2 Annual 1971	0.053 ppm	0.030 ppm	2013	0.005
Salinas	NO2 Annual 1971	0.053 ppm	0.030 ppm	2014	0.005
Salinas	NO2 Annual 1971	0.053 ppm	0.030 ppm	2015	0.004
Carmel Valley	Ozone 1-hour Daily 2005	-	0.09 ppm	2013	0.04
Hollister	Ozone 1-hour Daily 2005	-	0.09 ppm	2013	0.04
King City	Ozone 1-hour Daily 2005	-	0.09 ppm	2013	0.04
Pinnacles National Monument	Ozone 1-hour Daily 2005	-	0.09 ppm	2013	0.05
Salinas	Ozone 1-hour Daily 2005	-	0.09 ppm	2013	0.04
Santa Cruz	Ozone 1-hour Daily 2005	-	0.09 ppm	2013	0.04
Carmel Valley	Ozone 1-hour Daily 2005	-	0.09 ppm	2014	0.04
Hollister	Ozone 1-hour Daily 2005	-	0.09 ppm	2014	0.04
King City	Ozone 1-hour Daily 2005	-	0.09 ppm	2014	0.04
Pinnacles National Monument	Ozone 1-hour Daily 2005	-	0.09 ppm	2014	0.05
Salinas	Ozone 1-hour Daily 2005	-	0.09 ppm	2014	0.04
Santa Cruz	Ozone 1-hour Daily 2005	-	0.09 ppm	2014	0.04
Carmel Valley	Ozone 1-hour Daily 2005	-	0.09 ppm	2015	0.04
Hollister	Ozone 1-hour Daily 2005	-	0.09 ppm	2015	0.04
King City	Ozone 1-hour Daily 2005	-	0.09 ppm	2015	0.04
Pinnacles National Monument	Ozone 1-hour Daily 2005	-	0.09 ppm	2015	0.05
Salinas	Ozone 1-hour Daily 2005	-	0.09 ppm	2015	0.04
Santa Cruz	Ozone 1-hour Daily 2005	-	0.09 ppm	2015	0.04
Carmel Valley	Ozone 8-Hour 2008	0.075 ppm	0.07 ppm	2013	0.03
Hollister	Ozone 8-Hour 2008	0.075 ppm	0.07 ppm	2013	0.04
King City	Ozone 8-Hour 2008	0.075 ppm	0.07 ppm	2013	0.04
Pinnacles National Monument	Ozone 8-Hour 2008	0.075 ppm	0.07 ppm	2013	0.04
Salinas	Ozone 8-Hour 2008	0.075 ppm	0.07 ppm	2013	0.03
Santa Cruz	Ozone 8-Hour 2008	0.075 ppm	0.07 ppm	2013	0.03
Carmel Valley	Ozone 8-Hour 2008	0.075 ppm	0.07 ppm	2014	0.03
Hollister	Ozone 8-Hour 2008	0.075 ppm	0.07 ppm	2014	0.04

[1] Notably, local industries and the National Parks Service assist in the operation of select MBARD monitors.

King City	Ozone 8-Hour 2008	0.075 ppm	0.07 ppm	2014	0.04
Pinnacles National Monument	Ozone 8-Hour 2008	0.075 ppm	0.07 ppm	2014	0.04
Salinas	Ozone 8-Hour 2008	0.075 ppm	0.07 ppm	2014	0.03
Santa Cruz	Ozone 8-Hour 2008	0.075 ppm	0.07 ppm	2014	0.03
Carmel Valley	Ozone 8-Hour 2008	0.075 ppm	0.07 ppm	2015	0.04
Hollister	Ozone 8-Hour 2008	0.075 ppm	0.07 ppm	2015	0.04
King City	Ozone 8-Hour 2008	0.075 ppm	0.07 ppm	2015	0.04
Pinnacles National Monument	Ozone 8-Hour 2008	0.075 ppm	0.07 ppm	2015	0.04
Salinas	Ozone 8-Hour 2008	0.075 ppm	0.07 ppm	2015	0.03
Santa Cruz	Ozone 8-Hour 2008	0.075 ppm	0.07 ppm	2015	0.03
Carmel Valley	PM25 24-hour 2013	35 µg/m^3	-	2013	6.18
Hollister	PM25 24-hour 2013	35 µg/m^3	-	2013	5.97
King City	PM25 24-hour 2013	35 µg/m^3	-	2013	6.66
Salinas	PM25 24-hour 2013	35 µg/m^3	-	2013	5.45
Salinas	PM25 24-hour 2013	35 µg/m^3	-	2013	6.65
Santa Cruz	PM25 24-hour 2013	35 µg/m^3	-	2013	6.69
Carmel Valley	PM25 24-hour 2013	35 µg/m^3	-	2014	6.44
Hollister	PM25 24-hour 2013	35 µg/m^3	-	2014	4.63
King City	PM25 24-hour 2013	35 µg/m^3	-	2014	3.16
Salinas	PM25 24-hour 2013	35 µg/m^3	-	2014	4.82
Salinas	PM25 24-hour 2013	35 µg/m^3	-	2014	4.53
San Lorenzo Valley Middle School	PM25 24-hour 2013	35 µg/m^3	-	2014	5.34
Santa Cruz	PM25 24-hour 2013	35 µg/m^3	-	2014	5.34
Carmel Valley	PM25 24-hour 2013	35 µg/m^3	-	2015	7.05
Hollister	PM25 24-hour 2013	35 µg/m^3	-	2015	4.40
King City	PM25 24-hour 2013	35 µg/m^3	-	2015	6.20
Salinas	PM25 24-hour 2013	35 µg/m^3	-	2015	4.62
Salinas	PM25 24-hour 2013	35 µg/m^3	-	2015	4.51
San Lorenzo Valley Middle School	PM25 24-hour 2013	35 µg/m^3	-	2015	5.69
Santa Cruz	PM25 24-hour 2013	35 µg/m^3	-	2015	4.98
Carmel Valley	PM25 Annual 2013	15 µg/m^3	12 µg/m^3	2013	6.18
Hollister	PM25 Annual 2013	15 µg/m^3	12 µg/m^3	2013	5.97
King City	PM25 Annual 2013	15 µg/m^3	12 µg/m^3	2013	6.66
Salinas	PM25 Annual 2013	15 µg/m^3	12 µg/m^3	2013	5.45
Salinas	PM25 Annual 2013	15 µg/m^3	12 µg/m^3	2013	6.65
Santa Cruz	PM25 Annual 2013	15 µg/m^3	12 µg/m^3	2013	6.69
Carmel Valley	PM25 Annual 2013	15 µg/m^3	12 µg/m^3	2014	6.44
Hollister	PM25 Annual 2013	15 µg/m^3	12 µg/m^3	2014	4.63
King City	PM25 Annual 2013	15 µg/m^3	12 µg/m^3	2014	3.16
Salinas	PM25 Annual 2013	15 µg/m^3	12 µg/m^3	2014	4.82
Salinas	PM25 Annual 2013	15 µg/m^3	12 µg/m^3	2014	4.53
San Lorenzo Valley Middle School	PM25 Annual 2013	15 µg/m^3	12 µg/m^3	2014	5.34
Santa Cruz	PM25 Annual 2013	15 µg/m^3	12 µg/m^3	2014	5.34
Carmel Valley	PM25 Annual 2013	15 µg/m^3	12 µg/m^3	2015	7.05
Hollister	PM25 Annual 2013	15 µg/m^3	12 µg/m^3	2015	4.40
King City	PM25 Annual 2013	15 µg/m^3	12 µg/m^3	2015	6.20
Salinas	PM25 Annual 2013	15 µg/m^3	12 µg/m^3	2015	4.62
Salinas	PM25 Annual 2013	15 µg/m^3	12 µg/m^3	2015	4.51
San Lorenzo Valley Middle School	PM25 Annual 2013	15 µg/m^3	12 µg/m^3	2015	5.69
Santa Cruz	PM25 Annual 2013	15 µg/m^3	12 µg/m^3	2015	4.98

Note: µg/m3 = micrograms per cubic meter; ppm = parts per million
Source: EPA and MBARD, 2016

Regulatory Setting

Federal, state, and local air quality regulations applicable to improvements at MRY are summarized below.

Federal Regulations

The CAA charges the EPA with the responsibility of safeguarding air quality from new or continued deterioration from mobile and stationary sources of air pollutant emissions. EPA's program responsibilities under the CAA include identifying air pollutants that have a harmful effect on human health and/or environmental welfare, setting standards to control these pollutants, designating areas of the county that do not meet the established air quality standards, requiring technological controls and improvements on emissions sources and fuels, and requiring operating permits for new or significant existing emissions sources.

Section 176(c) of the CAA requires projects overseen by federal agencies to demonstrate that they conform to state air quality plans in EPA-designated air quality non-attainment areas. Pursuant to this responsibility, EPA codified the General Conformity regulations of the CAA. According to these regulations, federal actions in nonattainment areas must demonstrate that annual project-related air emissions do not cause or contribute to continued air quality violations in the area by remaining within the applicable de minimis thresholds. Annual project-related emissions beneath the de minimis thresholds are considered to conform to state air quality attainment plans; annual emissions exceeding the thresholds require additional analysis to determine if the emissions are in violation of the air quality plans.

In December 2009, EPA signed a final rule declaring that greenhouse gases (GHG) including carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) constitute a threat to public health and environmental welfare, enabling their regulation under the CAA. Since promulgation of this notice in the Federal Register, EPA has introduced GHG emissions and fuel economy standards for model year 2012 and later light-duty vehicles. Additionally, in May 2010, EPA finalized a ruling stating that stationary sources of air emissions must secure permits to operate if a) newly constructed facilities exceed 100,000 tons of carbon dioxide equivalent gases (CO_2e) in a given year, or b) existing facilities increase their CO_2e emissions by 75,000 tons in any given year.

State Regulations

The CARB ensures that federal regulations promulgated and enforced by EPA are met at the state level. Enforcement responsibilities include creating and maintaining air monitoring networks, supplementing NAAQS with CAAQS, developing SIPs, and creating controls and strategies by which California air quality can meet or exceed federal air quality standards. CARB also authors and enforces air quality regulations and programs on mobile and stationary sources of air emissions in the State of California. It is within CARB's jurisdiction to enforce the following state-level air quality regulations, initiatives, and programs potentially pertinent to the planned improvements at MRY:

- Assembly Bill 32 (AB 32) – The California Global Warming Solutions Act: AB 32 establishes a statewide cap on GHG emissions in 2020 based on 1990 levels in order to ensure that the provisions of Executive Order S-3-05 are met, and directs CARB to create programs by January 2011 that will attain maximally technologically feasible and cost-effective GHG reductions
- California Code of Regulations Title 13, Division 3, Chapter 9, Article 4.8 §2449(d)(3): Off-road equipment engines are not to idle for longer than five minutes (with exemptions)
- California Code of Regulations Title 13, Division 3, Chapter 10, Article 1 §2485: On-road vehicles with a gross vehicular weight rating of 10,000 or more are not to idle for longer than five minutes at any location (with exemptions)
- Executive Order S-3-05: In 2005, Governor Schwarzenegger mandated that GHG levels would be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 levels by 2050
- Executive Order B-30-15: CARB is preparing a second update to the Scoping Plan to achieve the statewide reduction of GHG emissions to 40 percent below 1990 levels by the year 2030 and to 80 percent below 1990 levels by the year 2050.

Additionally, in August 1998, the CARB identified particulate emissions from diesel-fueled engines as a Toxic Air Contaminant (TAC). TACs are pollutants that are associated with acute, chronic, or carcinogenic effects but for which no NAAQS or CAAQS have been established. TAC impacts are evaluated by determining if a particular chemical poses a significant risk to human health and, if so, under what circumstances. In 2000, CARB published the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*[2] and the *Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines*.[3] The documents represent proposals to reduce diesel particulate matter (DPM) emissions, with the goal being to reduce emissions and the associated health risk by 75 percent in 2010 and by 85 percent in 2020. The program aims to require the use of state-of-the-art catalyzed diesel particulate filters and ultra-low-sulfur diesel fuel.

Local Regulations

The MBARD assists CARB in air quality regulation and program enforcement within the NCCAB and is the agency responsible for adopting and updating air quality management plans (AQMPs) to ensure attainment of the state AAQS. MBARD coordinates closely with the Association of Monterey Bay Area Governments (AMBAG) and other regional and local governmental agencies to develop and implement the AQMP. The 2012-2015 Air Quality Management Plan updates the 2008 Air Quality Management Plan and outlines planning requirements necessary to maintain the state-level O_3 standard and continue the 5 percent per year O_3 reduction goal established by CARB. MBARD has also promulgated local rules to help further the goals of the AQMP, of which the following are potentially relevant to the proposed improvements at MRY:

[2] California Air Resources Board (CARB), *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel–Fueled Engines and Vehicles*, September 28, 2000.

[3] California Air Resources Board (CARB), *Risk Management Guidance for the Permitting of New Stationary Diesel–Fueled Engines*, September 28, 2000.

- Rule 400 – Visible Emissions: Imposes general and industry-specific restrictions on particulate emissions that would obscure visibility in the NCCAB
- Rule 402 – Nuisances: Restricts discharges of air contaminants or other materials that cause injury, nuisance or annoyance to the public or businesses
- Rule 403 – Particulate Matter: Establishes an overall emissions discharge limit of 0.15 grain per standard dry cubic foot of exhaust gas, as well as hourly limits based on process rates
- Rule 412 – Sulfur Content of Fuels: Restricts burning of gaseous fuels containing more than 50 grains per 100 cubic feet of hydrogen sulfide, or any fuels with a gross sulfur content exceeding 0.5 percent by weight
- Rule 425 – Use of Cutback Asphalt: Imposes restrictions on the manufacture, sale, and use of rapid cure, medium cure, slow cure, and emulsified asphalts within the district

Modeling Outputs

The following attachments are output reports from the California Emissions Estimator Model (CalEEMod). This software was used to estimate construction emissions based on engineering estimates for the proposed project.

Monterey Infield Alternative 1 Year 1

Monterey Bay Unified APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	1.00	1000sqft	0.02	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	3			**Operational Year**	2019
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Off-road Equipment - Based on engineering estimates.

Trips and VMT - Based on engineering estimates.

Grading - Based on engineering estimates.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Parking	150	0
tblAreaCoating	Area_Nonresidential_Exterior	500	0
tblAreaCoating	Area_Nonresidential_Interior	1500	0
tblConstructionPhase	NumDays	2.00	150.00
tblConstructionPhase	NumDays	5.00	12.00

tblConstructionPhase	NumDays	1.00	47.00
tblFleetMix	HHD	0.04	0.00
tblFleetMix	LDA	0.53	0.00
tblFleetMix	LDT1	0.03	0.00
tblFleetMix	LDT2	0.20	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD2	6.1070e-003	0.00
tblFleetMix	MCY	7.4320e-003	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MH	1.1020e-003	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	3.0650e-003	0.00
tblFleetMix	SBUS	1.1210e-003	0.00
tblFleetMix	UBUS	2.9310e-003	0.00
tblGrading	AcresOfGrading	33.75	0.00
tblGrading	AcresOfGrading	10.58	0.00
tblGrading	MaterialExported	0.00	6,520.00
tblGrading	MaterialImported	0.00	5,250.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	HorsePower	130.00	125.00
tblOffRoadEquipment	HorsePower	187.00	81.00
tblOffRoadEquipment	HorsePower	130.00	125.00
tblOffRoadEquipment	HorsePower	130.00	255.00
tblOffRoadEquipment	HorsePower	80.00	97.00
tblOffRoadEquipment	HorsePower	367.00	361.00
tblOffRoadEquipment	HorsePower	367.00	361.00
tblOffRoadEquipment	HorsePower	263.00	253.00

tblOffRoadEquipment	HorsePower	263.00	253.00
tblOffRoadEquipment	LoadFactor	0.41	0.73
tblOffRoadEquipment	LoadFactor	0.42	0.40
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.80
tblOffRoadEquipment	UsageHours	7.00	2.20
tblOffRoadEquipment	UsageHours	7.00	2.20
tblOffRoadEquipment	UsageHours	6.00	2.50
tblOffRoadEquipment	UsageHours	7.00	2.20
tblOffRoadEquipment	UsageHours	8.00	2.50
tblProjectCharacteristics	OperationalYear	2018	2019
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	15.00	355.00
tblTripsAndVMT	WorkerTripNumber	20.00	1,125.00
tblTripsAndVMT	WorkerTripNumber	10.00	120.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	8.1931	34.5186	68.8258	0.1190	9.9953	0.8787	10.8740	2.8654	0.8334	3.6987	0.0000	11,801.0305	11,801.0305	0.8455	0.0000	11,822.1675
2018	7.2600	16.0367	60.9687	0.1162	9.9953	0.7754	10.7707	2.8654	0.7351	3.6004	0.0000	11,517.8146	11,517.8146	0.7630	0.0000	11,536.8889
Maximum	**8.1931**	**34.5186**	**68.8258**	**0.1190**	**9.9953**	**0.8787**	**10.8740**	**2.8654**	**0.8334**	**3.6987**	**0.0000**	**11,801.0305**	**11,801.0305**	**0.8455**	**0.0000**	**11,822.1675**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	8.1931	34.5186	68.8258	0.1190	9.9953	0.8787	10.8740	2.8654	0.8334	3.6987	0.0000	11,801.0305	11,801.0305	0.8455	0.0000	11,822.1675
2018	7.2600	16.0367	60.9687	0.1162	9.9953	0.7754	10.7707	2.8654	0.7351	3.6004	0.0000	11,517.8146	11,517.8146	0.7630	0.0000	11,536.8889
Maximum	**8.1931**	**34.5186**	**68.8258**	**0.1190**	**9.9953**	**0.8787**	**10.8740**	**2.8654**	**0.8334**	**3.6987**	**0.0000**	**11,801.0305**	**11,801.0305**	**0.8455**	**0.0000**	**11,822.1675**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0214	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	3.9000e-004	3.5200e-003	2.9600e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		4.2289	4.2289	8.0000e-005	8.0000e-005	4.2540
Mobile	0.0000	0.0000	0.0000	0.0000	0.0325	0.0000	0.0325	7.9800e-003	0.0000	7.9800e-003		0.0000	0.0000	0.0000		0.0000
Total	**0.0218**	**3.5200e-003**	**3.0600e-003**	**2.0000e-005**	**0.0325**	**2.7000e-004**	**0.0328**	**7.9800e-003**	**2.7000e-004**	**8.2500e-003**		**4.2291**	**4.2291**	**8.0000e-005**	**8.0000e-005**	**4.2542**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0214	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	3.9000e-004	3.5200e-003	2.9600e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		4.2289	4.2289	8.0000e-005	8.0000e-005	4.2540
Mobile	0.0000	0.0000	0.0000	0.0000	0.0325	0.0000	0.0325	7.9800e-003	0.0000	7.9800e-003		0.0000	0.0000	0.0000		0.0000
Total	**0.0218**	**3.5200e-003**	**3.0600e-003**	**2.0000e-005**	**0.0325**	**2.7000e-004**	**0.0328**	**7.9800e-003**	**2.7000e-004**	**8.2500e-003**		**4.2291**	**4.2291**	**8.0000e-005**	**8.0000e-005**	**4.2542**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/31/2017	6/5/2017	5	47	
2	Grading	Grading	6/6/2017	1/1/2018	5	150	
3	Paving	Paving	1/2/2018	1/17/2018	5	12	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	1.80	174	0.41
Site Preparation	Pavers	1	0.30	125	0.42
Site Preparation	Rollers	1	2.30	80	0.38
Site Preparation	Scrapers	1	0.90	361	0.48
Site Preparation	Surfacing Equipment	1	0.10	253	0.30
Site Preparation	Tractors/Loaders/Backhoes	1	2.50	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Graders	1	1.80	81	0.73
Grading	Pavers	1	0.30	255	0.40
Grading	Rollers	1	2.30	97	0.37
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Scrapers	1	0.90	361	0.48
Grading	Surfacing Equipment	1	0.10	253	0.30
Grading	Tractors/Loaders/Backhoes	1	2.50	97	0.37
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	2.20	125	0.42
Paving	Rollers	1	2.20	80	0.38
Paving	Tractors/Loaders/Backhoes	1	2.20	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	6	355.00	1.00	1,471.00	10.80	1.00	60.00	LD_Mix	HDT_Mix	HHDT
Grading	8	1,125.00	1.00	0.00	10.80	1.00	60.00	LD_Mix	HDT_Mix	HHDT
Paving	4	120.00	1.00	0.00	10.80	1.00	60.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0388	0.0000	0.0388	5.8700e-003	0.0000	5.8700e-003			0.0000			0.0000
Off-Road	0.5658	5.9936	3.6860	5.0500e-003		0.3367	0.3367		0.3097	0.3097		517.0324	517.0324	0.1584		520.9928
Total	**0.5658**	**5.9936**	**3.6860**	**5.0500e-003**	**0.0388**	**0.3367**	**0.3754**	**5.8700e-003**	**0.3097**	**0.3156**		**517.0324**	**517.0324**	**0.1584**		**520.9928**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9700	26.6191	5.1918	0.0703	1.6393	0.2535	1.8928	0.4491	0.2425	0.6917		7,417.3388	7,417.3388	0.1923		7,422.1470
Vendor	3.2500e-003	0.0835	0.0243	1.0000e-004	9.5000e-004	3.4000e-004	1.2900e-003	2.8000e-004	3.3000e-004	6.0000e-004		10.4942	10.4942	1.5200e-003		10.5321
Worker	2.1510	1.8224	19.1494	0.0336	2.9162	0.0277	2.9440	0.7735	0.0256	0.7992		3,335.0797	3,335.0797	0.1891		3,339.8060
Total	**3.1242**	**28.5250**	**24.3655**	**0.1040**	**4.5565**	**0.2815**	**4.8380**	**1.2229**	**0.2685**	**1.4914**		**10,762.9126**	**10,762.9126**	**0.3829**		**10,772.4850**

3.2 Site Preparation - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0388	0.0000	0.0388	5.8700e-003	0.0000	5.8700e-003			0.0000			0.0000
Off-Road	0.5658	5.9936	3.6860	5.0500e-003		0.3367	0.3367		0.3097	0.3097	0.0000	517.0324	517.0324	0.1584		520.9928
Total	**0.5658**	**5.9936**	**3.6860**	**5.0500e-003**	**0.0388**	**0.3367**	**0.3754**	**5.8700e-003**	**0.3097**	**0.3156**	**0.0000**	**517.0324**	**517.0324**	**0.1584**		**520.9928**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9700	26.6191	5.1918	0.0703	1.6393	0.2535	1.8928	0.4491	0.2425	0.6917		7,417.3388	7,417.3388	0.1923		7,422.1470
Vendor	3.2500e-003	0.0835	0.0243	1.0000e-004	9.5000e-004	3.4000e-004	1.2900e-003	2.8000e-004	3.3000e-004	6.0000e-004		10.4942	10.4942	1.5200e-003		10.5321
Worker	2.1510	1.8224	19.1494	0.0336	2.9162	0.0277	2.9440	0.7735	0.0256	0.7992		3,335.0797	3,335.0797	0.1891		3,339.8060
Total	**3.1242**	**28.5250**	**24.3655**	**0.1040**	**4.5565**	**0.2815**	**4.8380**	**1.2229**	**0.2685**	**1.4914**		**10,762.9126**	**10,762.9126**	**0.3829**		**10,772.4850**

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.3734	12.0803	8.1168	0.0124		0.7905	0.7905		0.7518	0.7518		1,221.6219	1,221.6219	0.2449		1,227.7433
Total	**1.3734**	**12.0803**	**8.1168**	**0.0124**	**0.7528**	**0.7905**	**1.5433**	**0.4138**	**0.7518**	**1.1656**		**1,221.6219**	**1,221.6219**	**0.2449**		**1,227.7433**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2500e-003	0.0835	0.0243	1.0000e-004	9.5000e-004	3.4000e-004	1.2900e-003	2.8000e-004	3.3000e-004	6.0000e-004		10.4942	10.4942	1.5200e-003		10.5321
Worker	6.8165	5.7751	60.6848	0.1065	9.2416	0.0878	9.3294	2.4513	0.0812	2.5325		10,568.9144	10,568.9144	0.5991		10,583.8921
Total	**6.8197**	**5.8586**	**60.7090**	**0.1066**	**9.2426**	**0.0882**	**9.3307**	**2.4516**	**0.0816**	**2.5331**		**10,579.4085**	**10,579.4085**	**0.6006**		**10,594.4242**

3.3 Grading - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.3734	12.0803	8.1168	0.0124		0.7905	0.7905		0.7518	0.7518	0.0000	1,221.6219	1,221.6219	0.2449		1,227.7433
Total	**1.3734**	**12.0803**	**8.1168**	**0.0124**	**0.7528**	**0.7905**	**1.5433**	**0.4138**	**0.7518**	**1.1656**	**0.0000**	**1,221.6219**	**1,221.6219**	**0.2449**		**1,227.7433**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2500e-003	0.0835	0.0243	1.0000e-004	9.5000e-004	3.4000e-004	1.2900e-003	2.8000e-004	3.3000e-004	6.0000e-004		10.4942	10.4942	1.5200e-003		10.5321
Worker	6.8165	5.7751	60.6848	0.1065	9.2416	0.0878	9.3294	2.4513	0.0812	2.5325		10,568.9144	10,568.9144	0.5991		10,583.8921
Total	**6.8197**	**5.8586**	**60.7090**	**0.1066**	**9.2426**	**0.0882**	**9.3307**	**2.4516**	**0.0816**	**2.5331**		**10,579.4085**	**10,579.4085**	**0.6006**		**10,594.4242**

3.3 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.2287	10.9160	7.8195	0.0124		0.6921	0.6921		0.6581	0.6581		1,211.5098	1,211.5098	0.2385		1,217.4733
Total	**1.2287**	**10.9160**	**7.8195**	**0.0124**	**0.7528**	**0.6921**	**1.4448**	**0.4138**	**0.6581**	**1.0718**		**1,211.5098**	**1,211.5098**	**0.2385**		**1,217.4733**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.8200e-003	0.0816	0.0215	1.0000e-004	9.5000e-004	2.7000e-004	1.2200e-003	2.8000e-004	2.6000e-004	5.4000e-004		10.6749	10.6749	1.4100e-003		10.7102
Worker	6.0284	5.0391	53.1277	0.1037	9.2416	0.0831	9.3247	2.4513	0.0768	2.5281		10,295.6300	10,295.6300	0.5230		10,308.7054
Total	**6.0312**	**5.1207**	**53.1492**	**0.1038**	**9.2426**	**0.0834**	**9.3259**	**2.4516**	**0.0770**	**2.5286**		**10,306.3049**	**10,306.3049**	**0.5244**		**10,319.4156**

3.3 Grading - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.2287	10.9160	7.8195	0.0124		0.6921	0.6921		0.6581	0.6581	0.0000	1,211.5098	1,211.5098	0.2385		1,217.4733
Total	**1.2287**	**10.9160**	**7.8195**	**0.0124**	**0.7528**	**0.6921**	**1.4448**	**0.4138**	**0.6581**	**1.0718**	**0.0000**	**1,211.5098**	**1,211.5098**	**0.2385**		**1,217.4733**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.8200e-003	0.0816	0.0215	1.0000e-004	9.5000e-004	2.7000e-004	1.2200e-003	2.8000e-004	2.6000e-004	5.4000e-004		10.6749	10.6749	1.4100e-003		10.7102
Worker	6.0284	5.0391	53.1277	0.1037	9.2416	0.0831	9.3247	2.4513	0.0768	2.5281		10,295.6300	10,295.6300	0.5230		10,308.7054
Total	**6.0312**	**5.1207**	**53.1492**	**0.1038**	**9.2426**	**0.0834**	**9.3259**	**2.4516**	**0.0770**	**2.5286**		**10,306.3049**	**10,306.3049**	**0.5244**		**10,319.4156**

3.4 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2744	2.6392	2.1800	3.3500e-003		0.1559	0.1559		0.1443	0.1443		321.5821	321.5821	0.0923		323.8884
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2744**	**2.6392**	**2.1800**	**3.3500e-003**		**0.1559**	**0.1559**		**0.1443**	**0.1443**		**321.5821**	**321.5821**	**0.0923**		**323.8884**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.8200e-003	0.0816	0.0215	1.0000e-004	9.5000e-004	2.7000e-004	1.2200e-003	2.8000e-004	2.6000e-004	5.4000e-004		10.6749	10.6749	1.4100e-003		10.7102
Worker	0.6430	0.5375	5.6670	0.0111	0.9858	8.8600e-003	0.9946	0.2615	8.1900e-003	0.2697		1,098.2005	1,098.2005	0.0558		1,099.5952
Total	**0.6459**	**0.6191**	**5.6885**	**0.0112**	**0.9867**	**9.1300e-003**	**0.9959**	**0.2618**	**8.4500e-003**	**0.2702**		**1,108.8754**	**1,108.8754**	**0.0572**		**1,110.3054**

3.4 Paving - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2744	2.6392	2.1800	3.3500e-003		0.1559	0.1559		0.1443	0.1443	0.0000	321.5821	321.5821	0.0923		323.8884
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2744**	**2.6392**	**2.1800**	**3.3500e-003**		**0.1559**	**0.1559**		**0.1443**	**0.1443**	**0.0000**	**321.5821**	**321.5821**	**0.0923**		**323.8884**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.8200e-003	0.0816	0.0215	1.0000e-004	9.5000e-004	2.7000e-004	1.2200e-003	2.8000e-004	2.6000e-004	5.4000e-004		10.6749	10.6749	1.4100e-003		10.7102
Worker	0.6430	0.5375	5.6670	0.0111	0.9858	8.8600e-003	0.9946	0.2615	8.1900e-003	0.2697		1,098.2005	1,098.2005	0.0558		1,099.5952
Total	**0.6459**	**0.6191**	**5.6885**	**0.0112**	**0.9867**	**9.1300e-003**	**0.9959**	**0.2618**	**8.4500e-003**	**0.2702**		**1,108.8754**	**1,108.8754**	**0.0572**		**1,110.3054**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0325	0.0000	0.0325	7.9800e-003	0.0000	7.9800e-003		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0325	0.0000	0.0325	7.9800e-003	0.0000	7.9800e-003		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	6.83	2.49	0.73	13,997	13,997
Total	6.83	2.49	0.73	13,997	13,997

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	3.9000e-004	3.5200e-003	2.9600e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		4.2289	4.2289	8.0000e-005	8.0000e-005	4.2540
NaturalGas Unmitigated	3.9000e-004	3.5200e-003	2.9600e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		4.2289	4.2289	8.0000e-005	8.0000e-005	4.2540

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Industrial Park	35.9452	3.9000e-004	3.5200e-003	2.9600e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		4.2289	4.2289	8.0000e-005	8.0000e-005	4.2540
Total		**3.9000e-004**	**3.5200e-003**	**2.9600e-003**	**2.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.7000e-004**	**2.7000e-004**		**4.2289**	**4.2289**	**8.0000e-005**	**8.0000e-005**	**4.2540**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Industrial Park	0.0359452	3.9000e-004	3.5200e-003	2.9600e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		4.2289	4.2289	8.0000e-005	8.0000e-005	4.2540
Total		**3.9000e-004**	**3.5200e-003**	**2.9600e-003**	**2.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.7000e-004**	**2.7000e-004**		**4.2289**	**4.2289**	**8.0000e-005**	**8.0000e-005**	**4.2540**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0214	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	0.0214	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0214					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**0.0214**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0214					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**0.0214**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Monterey Infield Alternative 1 Year 2

Monterey Bay Unified APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	1.00	1000sqft	0.02	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	3			**Operational Year**	2019
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on engineering estimates.

Construction Phase - Based on engineering estimates.

Trips and VMT - Based on engineering estimates.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Parking	150	0
tblConstructionPhase	NumDays	2.00	165.00
tblConstructionPhase	NumDays	5.00	24.00
tblConstructionPhase	NumDays	1.00	52.00

tblGrading	AcresOfGrading	29.16	0.00
tblGrading	AcresOfGrading	9.19	0.50
tblGrading	MaterialImported	0.00	4,000.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	HorsePower	130.00	125.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	HorsePower	130.00	125.00
tblOffRoadEquipment	HorsePower	130.00	125.00
tblOffRoadEquipment	HorsePower	367.00	361.00
tblOffRoadEquipment	HorsePower	367.00	361.00
tblOffRoadEquipment	HorsePower	367.00	361.00
tblOffRoadEquipment	HorsePower	263.00	253.00
tblOffRoadEquipment	HorsePower	263.00	253.00
tblOffRoadEquipment	HorsePower	263.00	97.00
tblOffRoadEquipment	LoadFactor	0.30	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	2.05
tblOffRoadEquipment	UsageHours	7.00	3.06
tblOffRoadEquipment	UsageHours	7.00	3.06
tblOffRoadEquipment	UsageHours	6.00	2.70
tblOffRoadEquipment	UsageHours	7.00	3.06
tblOffRoadEquipment	UsageHours	8.00	2.70
tblProjectCharacteristics	OperationalYear	2018	2019
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripLength	20.00	60.00

tblTripsAndVMT	HaulingTripNumber	500.00	351.00
tblTripsAndVMT	HaulingTripNumber	0.00	351.00
tblTripsAndVMT	HaulingTripNumber	0.00	351.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	15.00	229.00
tblTripsAndVMT	WorkerTripNumber	20.00	725.00
tblTripsAndVMT	WorkerTripNumber	25.00	144.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	5.7260	16.9884	47.1156	0.0854	6.8331	0.7850	7.6182	2.0273	0.7477	2.7750	0.0000	8,491.2563	8,491.2563	0.6284	0.0000	8,506.9651
2018	5.0614	16.3919	41.9845	0.0835	7.3994	0.6794	8.0788	2.1663	0.6471	2.8134	0.0000	8,300.4292	8,300.4292	0.5719	0.0000	8,314.7279
Maximum	**5.7260**	**16.9884**	**47.1156**	**0.0854**	**7.3994**	**0.7850**	**8.0788**	**2.1663**	**0.7477**	**2.8134**	**0.0000**	**8,491.2563**	**8,491.2563**	**0.6284**	**0.0000**	**8,506.9651**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	5.7260	16.9884	47.1156	0.0854	6.8331	0.7850	7.6182	2.0273	0.7477	2.7750	0.0000	8,491.2563	8,491.2563	0.6284	0.0000	8,506.9651
2018	5.0614	16.3919	41.9845	0.0835	7.3994	0.6794	8.0788	2.1663	0.6471	2.8134	0.0000	8,300.4292	8,300.4292	0.5719	0.0000	8,314.7279
Maximum	**5.7260**	**16.9884**	**47.1156**	**0.0854**	**7.3994**	**0.7850**	**8.0788**	**2.1663**	**0.7477**	**2.8134**	**0.0000**	**8,491.2563**	**8,491.2563**	**0.6284**	**0.0000**	**8,506.9651**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0252	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	3.9000e-004	3.5200e-003	2.9600e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		4.2289	4.2289	8.0000e-005	8.0000e-005	4.2540
Mobile	0.0199	0.0898	0.2187	5.5000e-004	0.0382	7.6000e-004	0.0390	0.0102	7.2000e-004	0.0110		55.6107	55.6107	3.2200e-003		55.6913
Total	**0.0455**	**0.0933**	**0.2217**	**5.7000e-004**	**0.0382**	**1.0300e-003**	**0.0392**	**0.0102**	**9.9000e-004**	**0.0112**		**59.8398**	**59.8398**	**3.3000e-003**	**8.0000e-005**	**59.9455**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0252	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	3.9000e-004	3.5200e-003	2.9600e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		4.2289	4.2289	8.0000e-005	8.0000e-005	4.2540
Mobile	0.0199	0.0898	0.2187	5.5000e-004	0.0382	7.6000e-004	0.0390	0.0102	7.2000e-004	0.0110		55.6107	55.6107	3.2200e-003		55.6913
Total	**0.0455**	**0.0933**	**0.2217**	**5.7000e-004**	**0.0382**	**1.0300e-003**	**0.0392**	**0.0102**	**9.9000e-004**	**0.0112**		**59.8398**	**59.8398**	**3.3000e-003**	**8.0000e-005**	**59.9455**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/31/2017	6/12/2017	5	52	
2	Grading	Grading	6/13/2017	1/29/2018	5	165	
3	Paving	Paving	1/30/2018	3/2/2018	5	24	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Monterey Infield Alternative 1 Year 2 - Monterey Bay Unified APCD Air District, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	2.05	174	0.41
Site Preparation	Pavers	1	0.30	125	0.42
Site Preparation	Rollers	1	2.38	80	0.38
Site Preparation	Scrapers	1	0.39	361	0.48
Site Preparation	Surfacing Equipment	1	0.26	253	0.30
Site Preparation	Tractors/Loaders/Backhoes	1	2.70	97	0.37
Grading	Graders	1	2.05	174	0.41
Grading	Pavers	1	0.30	125	0.42
Grading	Rollers	1	2.38	80	0.38
Grading	Scrapers	1	0.39	361	0.48
Grading	Surfacing Equipment	1	0.26	253	0.30
Grading	Tractors/Loaders/Backhoes	1	2.70	97	0.37
Paving	Graders	1	0.00	174	0.41
Paving	Pavers	1	3.06	125	0.42
Paving	Rollers	1	3.06	80	0.38
Paving	Scrapers	1	0.00	361	0.48
Paving	Surfacing Equipment	1	0.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	3.06	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	6	229.00	1.00	351.00	10.80	1.00	60.00	LD_Mix	HDT_Mix	HHDT
Grading	8	725.00	1.00	351.00	10.80	1.00	60.00	LD_Mix	HDT_Mix	HHDT
Paving	10	144.00	1.00	351.00	10.80	1.00	60.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0221	0.0000	0.0221	2.9000e-003	0.0000	2.9000e-003			0.0000			0.0000
Off-Road	0.5292	5.4419	3.3030	4.5300e-003		0.3225	0.3225		0.2967	0.2967		463.6278	463.6278	0.1421		467.1791
Total	**0.5292**	**5.4419**	**3.3030**	**4.5300e-003**	**0.0221**	**0.3225**	**0.3446**	**2.9000e-003**	**0.2967**	**0.2996**		**463.6278**	**463.6278**	**0.1421**		**467.1791**

3.2 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2092	5.7409	1.1197	0.0152	0.3536	0.0547	0.4082	0.0969	0.0523	0.1492		1,599.6946	1,599.6946	0.0415		1,600.7316
Vendor	3.2500e-003	0.0835	0.0243	1.0000e-004	9.5000e-004	3.4000e-004	1.2900e-003	2.8000e-004	3.3000e-004	6.0000e-004		10.4942	10.4942	1.5200e-003		10.5321
Worker	1.3875	1.1756	12.3527	0.0217	1.8812	0.0179	1.8991	0.4990	0.0165	0.5155		2,151.3612	2,151.3612	0.1220		2,154.4100
Total	**1.6000**	**7.0000**	**13.4967**	**0.0370**	**2.2357**	**0.0729**	**2.3086**	**0.5961**	**0.0692**	**0.6653**		**3,761.5500**	**3,761.5500**	**0.1650**		**3,765.6737**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0221	0.0000	0.0221	2.9000e-003	0.0000	2.9000e-003			0.0000			0.0000
Off-Road	0.5292	5.4419	3.3030	4.5300e-003		0.3225	0.3225		0.2967	0.2967	0.0000	463.6278	463.6278	0.1421		467.1791
Total	**0.5292**	**5.4419**	**3.3030**	**4.5300e-003**	**0.0221**	**0.3225**	**0.3446**	**2.9000e-003**	**0.2967**	**0.2996**	**0.0000**	**463.6278**	**463.6278**	**0.1421**		**467.1791**

3.2 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2092	5.7409	1.1197	0.0152	0.3536	0.0547	0.4082	0.0969	0.0523	0.1492		1,599.6946	1,599.6946	0.0415		1,600.7316
Vendor	3.2500e-003	0.0835	0.0243	1.0000e-004	9.5000e-004	3.4000e-004	1.2900e-003	2.8000e-004	3.3000e-004	6.0000e-004		10.4942	10.4942	1.5200e-003		10.5321
Worker	1.3875	1.1756	12.3527	0.0217	1.8812	0.0179	1.8991	0.4990	0.0165	0.5155		2,151.3612	2,151.3612	0.1220		2,154.4100
Total	**1.6000**	**7.0000**	**13.4967**	**0.0370**	**2.2357**	**0.0729**	**2.3086**	**0.5961**	**0.0692**	**0.6653**		**3,761.5500**	**3,761.5500**	**0.1650**		**3,765.6737**

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.2640	11.3739	7.6305	0.0119		0.7109	0.7109		0.6785	0.6785		1,165.5378	1,165.5378	0.2277		1,171.2296
Total	**1.2640**	**11.3739**	**7.6305**	**0.0119**	**0.7528**	**0.7109**	**1.4636**	**0.4138**	**0.6785**	**1.0923**		**1,165.5378**	**1,165.5378**	**0.2277**		**1,171.2296**

3.3 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0659	1.8093	0.3529	4.7800e-003	0.1237	0.0172	0.1410	0.0336	0.0165	0.0500		504.1462	504.1462	0.0131		504.4730
Vendor	3.2500e-003	0.0835	0.0243	1.0000e-004	9.5000e-004	3.4000e-004	1.2900e-003	2.8000e-004	3.3000e-004	6.0000e-004		10.4942	10.4942	1.5200e-003		10.5321
Worker	4.3928	3.7217	39.1080	0.0686	5.9557	0.0566	6.0123	1.5797	0.0523	1.6321		6,811.0782	6,811.0782	0.3861		6,820.7305
Total	**4.4620**	**5.6145**	**39.4851**	**0.0735**	**6.0804**	**0.0742**	**6.1546**	**1.6136**	**0.0692**	**1.6827**		**7,325.7185**	**7,325.7185**	**0.4007**		**7,335.7355**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.2640	11.3739	7.6305	0.0119		0.7109	0.7109		0.6785	0.6785	0.0000	1,165.5378	1,165.5378	0.2277		1,171.2296
Total	**1.2640**	**11.3739**	**7.6305**	**0.0119**	**0.7528**	**0.7109**	**1.4636**	**0.4138**	**0.6785**	**1.0923**	**0.0000**	**1,165.5378**	**1,165.5378**	**0.2277**		**1,171.2296**

3.3 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0659	1.8093	0.3529	4.7800e-003	0.1237	0.0172	0.1410	0.0336	0.0165	0.0500		504.1462	504.1462	0.0131		504.4730
Vendor	3.2500e-003	0.0835	0.0243	1.0000e-004	9.5000e-004	3.4000e-004	1.2900e-003	2.8000e-004	3.3000e-004	6.0000e-004		10.4942	10.4942	1.5200e-003		10.5321
Worker	4.3928	3.7217	39.1080	0.0686	5.9557	0.0566	6.0123	1.5797	0.0523	1.6321		6,811.0782	6,811.0782	0.3861		6,820.7305
Total	**4.4620**	**5.6145**	**39.4851**	**0.0735**	**6.0804**	**0.0742**	**6.1546**	**1.6136**	**0.0692**	**1.6827**		**7,325.7185**	**7,325.7185**	**0.4007**		**7,335.7355**

3.3 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.1185	10.1493	7.4111	0.0119		0.6135	0.6135		0.5858	0.5858		1,155.8721	1,155.8721	0.2212		1,161.4026
Total	**1.1185**	**10.1493**	**7.4111**	**0.0119**	**0.7528**	**0.6135**	**1.3662**	**0.4138**	**0.5858**	**0.9995**		**1,155.8721**	**1,155.8721**	**0.2212**		**1,161.4026**

3.3 Grading - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0551	1.6406	0.3141	4.7300e-003	0.6900	0.0121	0.7021	0.1725	0.0116	0.1841		498.9207	498.9207	0.0123		499.2272
Vendor	2.8200e-003	0.0816	0.0215	1.0000e-004	9.5000e-004	2.7000e-004	1.2200e-003	2.8000e-004	2.6000e-004	5.4000e-004		10.6749	10.6749	1.4100e-003		10.7102
Worker	3.8850	3.2474	34.2379	0.0668	5.9557	0.0536	6.0093	1.5797	0.0495	1.6292		6,634.9616	6,634.9616	0.3371		6,643.3879
Total	**3.9429**	**4.9696**	**34.5734**	**0.0716**	**6.6467**	**0.0659**	**6.7126**	**1.7526**	**0.0613**	**1.8139**		**7,144.5571**	**7,144.5571**	**0.3507**		**7,153.3253**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.1185	10.1493	7.4111	0.0119		0.6135	0.6135		0.5858	0.5858	0.0000	1,155.8721	1,155.8721	0.2212		1,161.4026
Total	**1.1185**	**10.1493**	**7.4111**	**0.0119**	**0.7528**	**0.6135**	**1.3662**	**0.4138**	**0.5858**	**0.9995**	**0.0000**	**1,155.8721**	**1,155.8721**	**0.2212**		**1,161.4026**

3.3 Grading - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0551	1.6406	0.3141	4.7300e-003	0.6900	0.0121	0.7021	0.1725	0.0116	0.1841		498.9207	498.9207	0.0123		499.2272
Vendor	2.8200e-003	0.0816	0.0215	1.0000e-004	9.5000e-004	2.7000e-004	1.2200e-003	2.8000e-004	2.6000e-004	5.4000e-004		10.6749	10.6749	1.4100e-003		10.7102
Worker	3.8850	3.2474	34.2379	0.0668	5.9557	0.0536	6.0093	1.5797	0.0495	1.6292		6,634.9616	6,634.9616	0.3371		6,643.3879
Total	**3.9429**	**4.9696**	**34.5734**	**0.0716**	**6.6467**	**0.0659**	**6.7126**	**1.7526**	**0.0613**	**1.8139**		**7,144.5571**	**7,144.5571**	**0.3507**		**7,153.3253**

3.4 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4962	4.3865	3.6316	6.0500e-003		0.2449	0.2449		0.2288	0.2288		545.5696	545.5696	0.1384		549.0296
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4962**	**4.3865**	**3.6316**	**6.0500e-003**		**0.2449**	**0.2449**		**0.2288**	**0.2288**		**545.5696**	**545.5696**	**0.1384**		**549.0296**

3.4 Paving - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3788	11.2788	2.1592	0.0325	0.7661	0.0832	0.8493	0.2099	0.0796	0.2895		3,430.0798	3,430.0798	0.0843		3,432.1872
Vendor	2.8200e-003	0.0816	0.0215	1.0000e-004	9.5000e-004	2.7000e-004	1.2200e-003	2.8000e-004	2.6000e-004	5.4000e-004		10.6749	10.6749	1.4100e-003		10.7102
Worker	0.7716	0.6450	6.8004	0.0133	1.1829	0.0106	1.1936	0.3138	9.8300e-003	0.3236		1,317.8406	1,317.8406	0.0670		1,319.5143
Total	**1.1532**	**12.0054**	**8.9811**	**0.0459**	**1.9500**	**0.0941**	**2.0440**	**0.5239**	**0.0897**	**0.6136**		**4,758.5953**	**4,758.5953**	**0.1527**		**4,762.4116**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4962	4.3865	3.6316	6.0500e-003		0.2449	0.2449		0.2288	0.2288	0.0000	545.5696	545.5696	0.1384		549.0296
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4962**	**4.3865**	**3.6316**	**6.0500e-003**		**0.2449**	**0.2449**		**0.2288**	**0.2288**	**0.0000**	**545.5696**	**545.5696**	**0.1384**		**549.0296**

3.4 Paving - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3788	11.2788	2.1592	0.0325	0.7661	0.0832	0.8493	0.2099	0.0796	0.2895		3,430.0798	3,430.0798	0.0843		3,432.1872
Vendor	2.8200e-003	0.0816	0.0215	1.0000e-004	9.5000e-004	2.7000e-004	1.2200e-003	2.8000e-004	2.6000e-004	5.4000e-004		10.6749	10.6749	1.4100e-003		10.7102
Worker	0.7716	0.6450	6.8004	0.0133	1.1829	0.0106	1.1936	0.3138	9.8300e-003	0.3236		1,317.8406	1,317.8406	0.0670		1,319.5143
Total	**1.1532**	**12.0054**	**8.9811**	**0.0459**	**1.9500**	**0.0941**	**2.0440**	**0.5239**	**0.0897**	**0.6136**		**4,758.5953**	**4,758.5953**	**0.1527**		**4,762.4116**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0199	0.0898	0.2187	5.5000e-004	0.0382	7.6000e-004	0.0390	0.0102	7.2000e-004	0.0110		55.6107	55.6107	3.2200e-003		55.6913
Unmitigated	0.0199	0.0898	0.2187	5.5000e-004	0.0382	7.6000e-004	0.0390	0.0102	7.2000e-004	0.0110		55.6107	55.6107	3.2200e-003		55.6913

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	6.83	2.49	0.73	13,997	13,997
Total	6.83	2.49	0.73	13,997	13,997

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.526310	0.032374	0.198537	0.139584	0.026888	0.006107	0.017909	0.036642	0.003065	0.002931	0.007432	0.001121	0.001102

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	3.9000e-004	3.5200e-003	2.9600e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		4.2289	4.2289	8.0000e-005	8.0000e-005	4.2540
NaturalGas Unmitigated	3.9000e-004	3.5200e-003	2.9600e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		4.2289	4.2289	8.0000e-005	8.0000e-005	4.2540

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Industrial Park	35.9452	3.9000e-004	3.5200e-003	2.9600e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		4.2289	4.2289	8.0000e-005	8.0000e-005	4.2540
Total		**3.9000e-004**	**3.5200e-003**	**2.9600e-003**	**2.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.7000e-004**	**2.7000e-004**		**4.2289**	**4.2289**	**8.0000e-005**	**8.0000e-005**	**4.2540**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Industrial Park	0.0359452	3.9000e-004	3.5200e-003	2.9600e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		4.2289	4.2289	8.0000e-005	8.0000e-005	4.2540
Total		**3.9000e-004**	**3.5200e-003**	**2.9600e-003**	**2.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.7000e-004**	**2.7000e-004**		**4.2289**	**4.2289**	**8.0000e-005**	**8.0000e-005**	**4.2540**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0252	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	0.0252	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.8100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0214					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**0.0252**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.8100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0214					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**0.0252**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix C

BIOLOGICAL FIELD SURVEY REPORT

MONTEREY REGIONAL AIRPORT PROPOSED INFIELD AND TAXIWAY IMPROVEMENTS PROJECT

BIOLOGICAL FIELD SURVEY REPORT

June 2015

Revised November 2017

PREPARED FOR

Monterey Peninsula Airport District
200 Fred Kane Drive, #200
Monterey, CA 93940

PREPARED BY

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BIOLOGICAL FIELD SURVEY REPORT FOR THE MONTEREY REGIONAL AIRPORT PROPOSED INFIELD AND TAXIWAY IMPROVEMENTS PROJECT MONTEREY COUNTY, CALIFORNIA

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SWCA Project No. 31806 and 46006

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1 INTRODUCTION

SWCA Environmental Consultants (SWCA) prepared this Biological Field Survey Report (BFSR) at the request of the Monterey Regional Airport ("the airport") Planning and Development Department. The intent of this BFSR is to evaluate potential impacts to habitats and special-status species that could result from the proposed Infield and Taxiway Improvements Project (proposed project). Where potential impacts have been identified, mitigation recommendations have been included to avoid or minimize the impacts. This BFSR is prepared in a format consistent with California Environmental Quality Act (CEQA) biological report standards. This report includes the results of an in-depth literature review and surveys of the biological study area (BSA).

1.1 Project Location

The proposed project is located at the Monterey Regional Airport in Monterey, California (refer to Figures 1 and 2). The airport is a commercial service aviation facility located immediately south of Fremont Street and between Highways 68 and 218. The proposed project and BSA includes 132.9 acres located within the runway safety areas (RSA) situated on either side of Runway 10R-28L and three staging areas located just outside of the RSA but within developed parts of the airport.

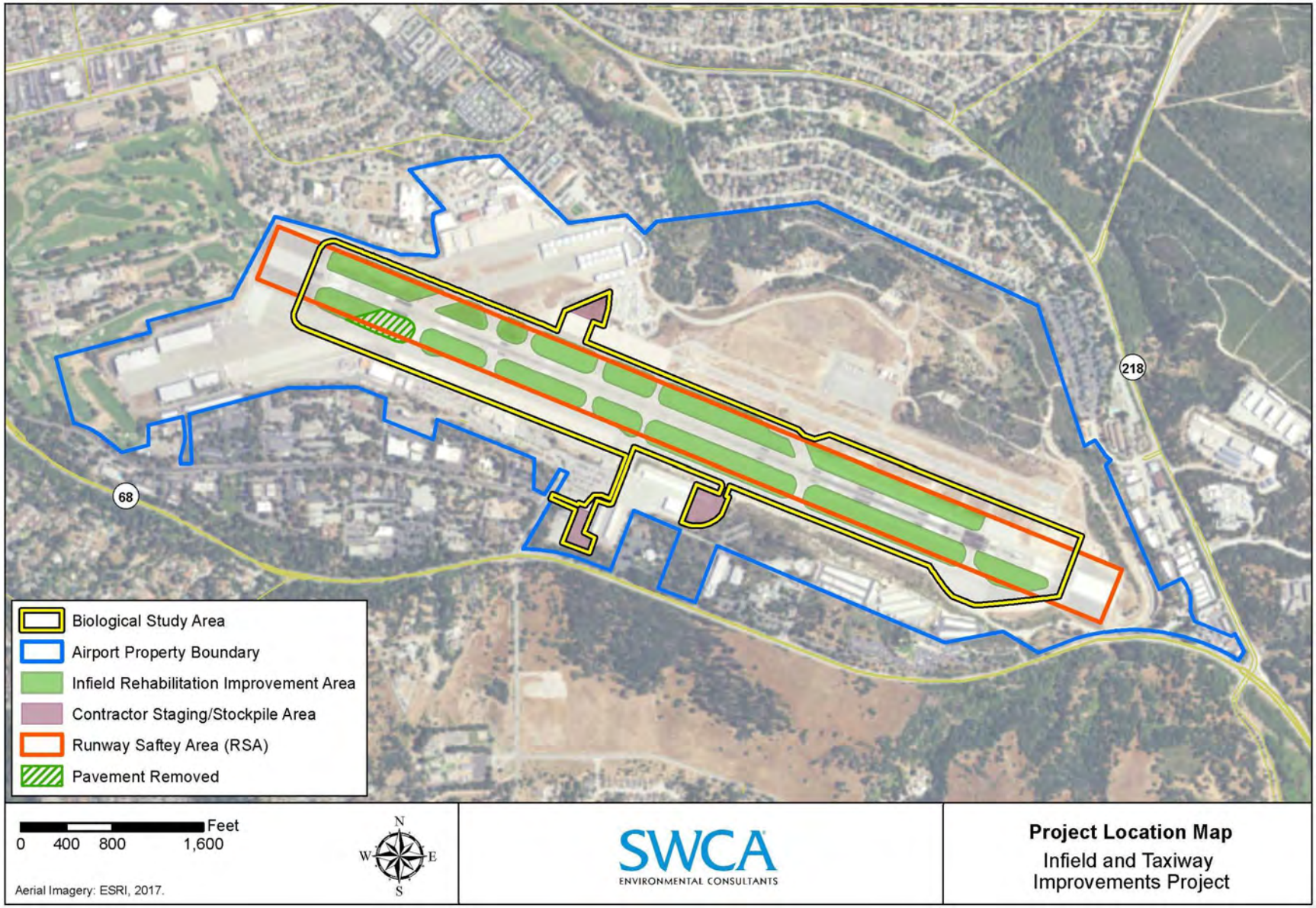
1.2 Project Description

The proposed project is to resurface 15 existing infield areas located between Runway 10R-28L and parallel taxiways located to the north and south of the runway to enhance safety. Most of these infield areas are covered with a "chip seal" pavement surface treatment of liquid asphalt and fine aggregate. This chip seal treatment is decomposing into small pieces of material (foreign object debris [FOD]) which can be blown into aircraft. FOD can damage propellers, engines, and other parts of the aircraft, resulting in aircraft component failures that can cause aircraft accidents. The proposed project also includes the removal of Taxiway "E," and the reconfiguration of the Taxiway "F" and Taxiway "K" intersections and associated infield areas between Runway 10R-28L and Taxiway "A" in order to enhance safety by providing sufficient separation between aircraft to meet Federal Aviation Administration (FAA) taxiway and hold line design standards. To accommodate the reconfiguring of Taxiways "F" and "K," Taxiway "A" (and its associated storm drains and service road) at its connection with these taxiways would be shifted south. As part of this project, the surface grades of the infield areas will be modified to meet FAA design standards, which will minimize the presence of ponded water on the airfield during storm events. Several different surface materials for the infield areas are under consideration, including chip seal, crushed aggregate (rock), asphalt concrete, or other similar materials (refer to Appendix A). In addition to reducing FOD on the airfield and improving drainage, the new surface treatments will discourage wildlife, including burrowing animals, from using the infield areas. This will reduce the potential for wildlife-aircraft collisions with burrowing animals, such as ground squirrels, or collisions with birds or mammals that prey on ground squirrels.

Three staging areas will be used during construction of the project; two will be located at the south side of the airport off Olmstead Road. The two staging areas off Olmstead Road will be located on previously developed land that includes asphalt and gravel. The third staging area will be located on the north side of the airport situated between the military ramp and the Recreational Vehicle storage area. This site was used for staging during the Runway Safety Area Improvement Project and currently includes fill dirt and gravel.

Figure 1. Vicinity Map

Figure 2. Project Location Map



2 SURVEY METHODOLOGY

2.1 Literature Review and Field Survey

Prior to conducting a site visit, SWCA performed a literature review to gain familiarity with the project area and identify target species. The review consisted of a search of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Data Base (CNDDB) RareFind 5 (CNDDB 2017) that focused on the Seaside, California U.S. Geological Survey (USGS) 7.5-minute quadrangle map and the surrounding quadrangles (i.e., Monterey, Marina, Salinas, Spreckels, Soberanes Point, Mt. Carmel, and Carmel Valley). Additionally, an official species list of federally threatened and endangered species that may occur in the BSA was obtained from the U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Conservation System (IPac). Previous biological surveys and documents reviewed or used in preparation of this document include:

- Runway 28R-10L Asphalt Concrete Overlay, Precision Approach Path Indicator Installation, and Runway End Identifier Light Installation Project Botanical Survey (SWCA 2017);
- Biological Screening and Constraints Analysis for the Monterey Regional Airport, Monterey County, California (SWCA 2014);
- Wildlife Hazard Assessment for Monterey Peninsula Airport (SWCA 2011);
- Biological Assessment for the Monterey Peninsula Airport Improvement Project (SWCA 2009a);
- Botanical Resources Survey Report for the Monterey Peninsula Airport Improvement Project (SWCA 2009b);
- California Red-legged Frog and Tiger Salamander Habitat Assessment for the Monterey Peninsula Airport Improvement Project (SWCA 2009c); and,
- Monterey Airport Botanical Survey (Environmental Science Associates 2004).

SWCA biologists have conducted several field surveys in and adjacent to the BSA. SWCA biologist Travis Belt conducted a botanical and wildlife survey of the BSA on May 5, 2015; the survey was conducted over approximately 6 man hours. In addition, the infields located east of Taxiway "L" were surveyed on April 27, 2017; the infields located west of Taxiway "L" were surveyed on July 27, 2017. The surveyor mapped biological resources with a Trimble® GeoXT Global Positioning System (GPS) Unit capable of sub-meter accuracy. In addition to surveys of the BSA, SWCA has conducted numerous biological surveys on the airport property since February 2009. Over the last 8 years, SWCA biologists have spent over 500 man hours surveying botanical and wildlife resources throughout the airport property.

With the exception of the Monterey spineflower (*Chorizanthe pungens* var. *pungens*), the special-status plant species that occur or have potential to occur in the BSA are perennial; therefore, they are identifiable at all times of the year. Monterey spineflower is an annual species that typically flowers from April through June. The April 2017 and May 2015 surveys were conducted during the typical blooming period for Monterey spineflower. Prior to conducting the July 2017 botanical survey, Mr. Belt referenced a known population of the species that is immediately adjacent to the BSA. The known population was used as a reference site to verify that the species was in an identifiable condition during the survey. The reference population included mature individuals with flowering parts present. Therefore, it was determined that the survey period was appropriate to determine the presence/absence of Monterey

spineflower in the BSA. When necessary, the surveyors referred to the *Jepson Manual* (Baldwin 2012) and *Monterey County Flora* (Matthews 2015) to identify plant species. Photos of the BSA are included in Appendix B. A complete list of species observed within the BSA is included in Appendix C.

2.2 Special-status Biological Resources Investigated for Potential Occurrence

Prior to conducting surveys, SWCA performed a search of the CNDDB and obtained a list of species to consider from USFWS. This data was used to determine which species have potential to occur in the BSA. Table 1 provides a description of the special-status plant species reviewed and a rationale for expecting their presence or absence in the BSA, Table 2 includes natural plant communities considered, and Table 3 includes special-status animal resources including the "other nesting birds" category for nesting birds protected by the federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Code Section 3503. The vegetative communities, soils, and topography in the BSA provide suitable conditions for 22 special-status plant species and two special-status animal species, including the "other nesting birds" category. Species/resources with occurrences in the BSA are listed in bold. Special-status resources observed during the surveys or otherwise warranting specific focus are discussed in Sections 3.4 and 3.5.

Table 1. Special-Status Plant Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/State/ CNPS	Rationale for Expecting Presence or Absence
vernal pool bent grass *Agrostis lacuna-vernalis*	Annual herb that occurs in vernal pools. Only known from two occurrences on Fort Ord National Monument. 115–145 meters.	April-May	--/--/1B.1	**Suitable Conditions Absent:** The BSA does not support any vernal pools. **Species Absent:** Species was not observed during the survey conducted in the appropriate season.
Hickman's onion *Allium hickmanii*	Usually occurs on sandy loam in grasslands. Also found in closed cone coniferous forest, chaparral, and coastal scrub. 5–200 meters.	March-May	--/--/1B.2	**Suitable Conditions Present:** Suitable soil and grassland occurs in the BSA, but past grading and routine mowing of BSA is not conducive to many rare plants. **Species Absent:** Species not observed during surveys conducted in the appropriate season.
little sur manzanita *Arctostaphylos edmundsii*	Evergreen shrub occurs on sandy soils in coastal bluff scrub and chaparral. 30–105 meters.	November-April	--/--/1B.2	**Suitable Conditions Present:** Suitable soil occurs in the BSA. **Species Absent:** Species not observed during surveys conducted in the appropriate season.
Hooker's manzanita *Arctostaphylos hookeri* ssp. *hookeri*	Evergreen shrub that occurs on sandy soils, shaly soils, and sandstone outcrops. Associated with closed cone coniferous forest, chaparral, and coastal scrub. 85–536 meters.	January-June	--/--/1B.2	**Suitable Conditions Present:** Suitable soil occurs in the BSA. **Species Absent:** Species not observed during surveys conducted in the appropriate season.
Toro manzanita *Arctostaphylos montereyensis*	Evergreen shrub occurs in cismontane woodland, chaparral, and coastal scrub on sandy soils. 30–730 meters.	February-March	--/--/1B.2	**Suitable Conditions Present:** Suitable soil occurs in the BSA. **Species Absent:** although this species occurs on other parts of the airport property, it was not observed in the BSA.
Pajaro manzanita *Arctostaphylos pajaroensis*	Evergreen shrub occurs in chaparral on sandy soils. 30–760 meters.	December-March	--/--/1B.1	**Suitable Conditions Present:** Suitable soil occurs in the BSA. **Species Absent:** Species not observed in the BSA. Species has not been documented on the airport property.

Table 1. Special-Status Plant Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/State/ CNPS	Rationale for Expecting Presence or Absence
sandmat manzanita *Arctostaphylos pumila*	**Low growing evergreen shrub occurs in maritime chaparral and openings within Monterey pine forest. 3–205 meters.**	**February-March**	**--/--/1B.2**	**Suitable Conditions Present: BSA supports suitable habitat.** **Species Present: Sandmat manzanita is widespread on the airport property. Twelve individuals are located in the BSA.**
marsh sandwort *Arenaria paludicola*	Marshes and swamps. Grows through dense mats of *Typha*, *Juncus*, *Scirpus*, etc. in freshwater marsh. 10–170 meters	May-August	FE/SE/1B.1	**Suitable Conditions Absent:** BSA does not contain any wetland habitat. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property.
alkali milk-vetch *Astragalus tener* var. *tener*	Annual herb occurs on playas, valley and foothill grassland, vernal pools within adobe clay and alkaline soils. 1–60 meters.	March-June	--/--/1B.2	**Suitable Conditions Absent:** BSA does not contain suitable soils or habitat. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property.
coastal dunes milk-vetch *Astragalus tener* var. *titi*	Annual herb occurs in coastal bluff scrub, coastal dunes, and coastal prairie. Often in vernally mesic areas. 1–50 meters.	March-May	FE/SE/1B.1	**Suitable Conditions Absent:** BSA does not contain suitable soils or habitat. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property.
twisted horsehair lichen *Bryoria spiralifera*	An epiphytic lichen that is typically associated with conifers. Largest known population is on Samoa Peninsula in Humboldt County. 0–30 meters.	NA	--/--/1B.1	**Suitable Conditions Absent:** BSA does not contain suitable coniferous habitat. **Species Absent:** Species not observed in the BSA. Species has not been documented on the airport property.

Table 1. Special-Status Plant Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/State/ CNPS	Rationale for Expecting Presence or Absence
pink johnny-nip *Castilleja ambigua* ssp. *insalutata*	Annual herb occurs in coastal prairie and coastal scrub. 0–100 meters.	May-August	--/--/1B.1	**Suitable Conditions Present:** Suitable open habitat occurs in the BSA. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property.
Congdon's tarplant *Centromadia parryi* ssp. *congdonii*	Depressional areas within valley and foothill grassland known to occur in clay soils. 1–230 meters.	June-November	--/--/1B.2	**Suitable Conditions Absent:** BSA does not contain suitable habitat. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property.
Fort Ord spineflower *Chorizanthe minutiflora*	Annual herb that occurs in openings among maritime chaparral and coastal scrub on sandy soils. 55-150 meters	April-June	--/--/1B.2	**Suitable Conditions Present:** Suitable open habitat occurs in the BSA. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property.
Monterey spineflower *Chorizanthe pungens*	**Annual herb occurs in chaparral, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland on sandy soils. 3–450 meters.**	April-June	FT, CH/--/1B.2	**Suitable Conditions Present: BSA supports suitable habitat. Species Present: Monterey spineflower was observed in the BSA.**
robust spineflower *Chorizanthe robusta* var. *robusta*	Annual herb occurs in chaparral, cismontane woodland, coastal dunes, and coastal scrub with sandy or gravelly soils. 3–300 meters.	April-September	FE, CH/--/1B.1	**Suitable Conditions Present:** BSA supports suitable sandy soil. **Species Absent:** Species not observed during surveys conducted in the appropriate season. Species has not been documented on the airport property.

Table 1. Special-Status Plant Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/State/ CNPS	Rationale for Expecting Presence or Absence
Jolon clarkia *Clarkia jolonensis*	Annual herb occurs in chaparral, cismontane woodland, coastal scrub, and riparian woodland. 20–660 meters.	April-June	--/--/1B.2	**Suitable Conditions Absent:** the appropriate habitats do not occur in the BSA. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property.
purple amole *Chlorogalum purpureum* var. *purpureum*	Bulbiferous herb; occurs in chaparral, cismontane woodland, valley and foothill grassland on gravelly or clay soils. 205–350 meters.	April-June	FT, CH/--/1B.1	**Suitable Conditions Absent:** BSA does not contain suitable soils and the elevation is lower than this species documented range. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property.
San Francisco collinsia *Collinsia multicolor*	Annual herb occurs in closed-cone coniferous forest and coastal scrub. Occasional found in serpentinite. 30–250 meters.	March-May	--/--/1B.2	**Suitable Conditions Absent:** The appropriate habitats do not occur in the BSA. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season.
seaside bird's-beak *Cordylanthus rigidus* ssp. *littoralis*	Annual herb occurs in closed-cone coniferous forest, chaparral, cismontane woodland, coastal dunes, and coastal scrub with sandy soils. Often found in disturbed sites. 0–425 meters.	April-October	--/SE/1B.1	**Suitable Conditions Present:** BSA supports suitable sandy soil, but marginal habitat conditions for this species. **Species Absent:** Species not observed during surveys conducted in the appropriate season.
Hospital Canyon larkspur *Delphinium californicum* ssp. *interius*	Perennial herb that occurs in wet meadows and canyon bottoms among cismontane woodland and coastal scrub communities. 195–1095 meters.	April-June	--/--/1B.2	**Suitable Conditions Absent:** BSA does not contain wet areas and the elevation is lower than documented range for this species. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property.

Table 1. Special-Status Plant Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/State/ CNPS	Rationale for Expecting Presence or Absence
Hutchinson's larkspur *Delphinium hutchinsoniae*	Perennial herb occurs in broadleaf upland forest, chaparral, coastal prairie, and coastal scrub. 0–427 meters.	March-June	--/--/1B.2	**Suitable Conditions Absent:** BSA does not support associated habitats. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property.
umbrella larkspur *Delphinium umbraculorum*	Perennial herb. Occurs in cismontane woodland. 400–1,600 meters.	April-June	--/--/1B.3	**Suitable Conditions Absent:** BSA does not support woodland areas and the elevation is lower than documented range for this species. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property.
Eastwood's goldenbush *Ericameria fasciculata*	Perennial shrub occurs in closed-cone coniferous forest, chaparral, coastal dunes, and coastal scrub. Within openings on sandy soil. 30–275 meters.	July-October	--/--/1B.1	**Suitable Conditions Present:** BSA supports suitable sandy soil, but marginal habitat conditions for this species. **Species Absent:** Species not observed in the BSA.
Pinnacles buckwheat *Eriogonum nortonii*	Annual herb occurs in chaparral and valley and foothill grassland with sandy soils. Often colonizing recently burned areas. 300–975 meters.	May-August	--/--/1B.3	**Suitable Conditions Absent:** BSA supports the appropriate soils but the elevation is lower than this species documented range. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property.
sand-loving wallflower *Erysimum ammophilum*	Perennial herb occurs in chaparral, coastal dunes, and coastal scrub with sandy soils and openings. 0–60 meters.	February-June	--/--/1B.2	**Suitable Conditions Present:** BSA supports suitable sandy soil, but marginal habitat conditions for this species. **Species Absent:** Species not observed during surveys of the BSA conducted in the appropriate season.

Table 1. Special-Status Plant Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/State/ CNPS	Rationale for Expecting Presence or Absence
Menzies' wallflower *Erysimum menziesii* ssp. *menziesii*	Perennial herb occurs in coastal dunes. 0–35 meters.	March-June	FE/SE/1B.1	**Suitable Conditions Present:** BSA supports suitable sandy soil, but marginal habitat conditions for this species. **Species Absent:** Species not observed during surveys of the BSA conducted in the appropriate season. Menzies' wallflower has not been observed on airport property.
fragrant fritillary *Fritillaria liliacea*	Bulbiferous herb occurs in cismontane woodland, coastal prairies, coastal scrub, and valley and foothill grassland; often associated with serpentinite. 3–410 meters.	February-April	--/--/1B.2	**Suitable Conditions Absent:** BSA does not support the appropriate soils. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property.
sand gilia *Gilia tenuiflora* ssp. *arenaria*	Annual herb occurs in chaparral, cismontane woodland, coastal dunes, and coastal scrub in sandy soil with openings. 0–45 meters.	April-June	FE/ST/1B.2	**Suitable Conditions Present:** BSA supports suitable sandy soil and open habitat conditions for this species. **Species Absent:** Species not observed during surveys conducted in the appropriate season.
Gowen cypress *Hesperocyparis goveniana*	Evergreen tree occurs in closed-cone coniferous forest and maritime chaparral. Typically associated with sandy soil. Known from only three native occurrences in the Monterey area including the Del Monte Forest/Huckleberry Hill, Point Lobos, and Pacific Grove. 30–300 meters	NA	FT/--/1B.2	**Suitable Conditions Absent:** The airport is not located within any of the three known stands of this species. **Species Absent:** Species not observed during surveys conducted in the appropriate season. Species has not been documented on the airport property.

Table 1. Special-Status Plant Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/State/ CNPS	Rationale for Expecting Presence or Absence
Monterey cypress *Hesperocyparis macrocarpa*	Evergreen tree occurs in closed-cone coniferous forest. Known from only two native occurrences in the Monterey area. 10–30 meters	NA	--/--/1B.2	**Suitable Conditions Absent:** The airport is not located within any of the two known stands of this species. **Species Absent:** Species not observed during surveys of the BSA. Monterey cypress trees on airport property are planted for landscape purposes.
Kellogg's horkelia *Horkelia cuneata* ssp. *sericea*	Perennial herb. Occurs in closed-cone coniferous forest, maritime chaparral, and coastal scrub with sandy or gravelly openings. 10–200 meters.	April-September	--/--/1B.1	**Suitable Conditions Present:** BSA supports suitable sandy soil and open habitat conditions for this species. **Species Absent:** Species not observed during surveys of the BSA conducted in the appropriate season.
Point Reyes horkelia *Horkelia marinensis*	A perennial herb that occurs in coastal dunes, prairie, and scrub habitats with sandy soil. 5-755 meters. Only one occurrence documented in Monterey from 1968.	May-September	--/--/1B.2	**Suitable Conditions Present:** BSA supports suitable sandy soil and open habitat conditions for this species. **Species Absent:** Species not observed during surveys conducted in the appropriate season.
Contra Costa goldfields *Lasthenia conjugens*	Annual herb occurs in mesic sites with cismontane woodland, playas, valley and foothill grassland, or vernal pools. 0–470 meters.	March-June	FE, CH/--/1B.1	**Suitable Conditions Absent:** BSA does not support mesic areas in the appropriate habitats. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property.
beach layia *Layia carnosa*	Annual herb occurs in coastal dunes and coastal scrub on sandy soils. 0–60 meters.	March-July	FE/SE/1B.1	**Suitable Conditions Present:** BSA supports suitable sandy soil and open habitat conditions for this species. **Species Absent:** Species not observed during surveys of the BSA conducted in the appropriate season. Species has not been documented on the airport property.

Table 1. Special-Status Plant Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/State/ CNPS	Rationale for Expecting Presence or Absence
legenere *Legenere limosa*	Annual herb that occurs in vernal pools. 1–880 meters.	April-June	--/--/1B.1	**Suitable Conditions Absent:** BSA does not support vernal pools. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property.
Tidestrom's lupine *Lupinus tidestromii*	Rhizomatous herb occurs on coastal dunes. 0–100 meters.	April-June	FE/SE/1B.1	**Suitable Conditions Present:** BSA supports suitable sandy soil and open habitat conditions for this species. **Species Absent:** Species not observed during surveys conducted in the appropriate season. Species has not been documented on the airport property.
Carmel Valley bush-mallow *Malacothamnus palmeri* var. *involucratus*	Perennial shrub; occurs in chaparral, cismontane woodland, and coastal scrub. 30–1,100 meters.	May-August	--/--/1B.2	**Suitable Conditions Absent:** The airport is located at a lower elevation than the species documented range and does not support rocky soils. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property.
Santa Lucia bush-mallow *Malacothamnus palmeri* var. *palmeri*	Deciduous shrub occurs in chaparral with rocky substrates. 60–360 meters.	May-July	--/--/1B.2	**Suitable Conditions Absent:** The airport is located at a lower elevation than the species documented range and does not support rocky soils. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property.

Table 1. Special-Status Plant Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/State/ CNPS	Rationale for Expecting Presence or Absence
Carmel Valley malacothrix *Malacothrix saxatilis* var. *arachnoidea*	Rhizomatous herb occurs in chaparral and coastal scrub with rocky substrates. 25–1036 meters.	June-December	--/--/1B.2	**Suitable Conditions Absent:** The BSA does not support rocky soils. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property.
Oregon meconella *Meconella oregana*	Annual herb that occurs in coastal prairie and coastal scrub habitats. 250 – 620 meters	March - April	--/--/1B.1	**Suitable Conditions Absent:** The BSA is located at a lower elevation than this species range and does not support the appropriate habitat. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property
marsh microseris *Microseris paludosa*	Perennial herb occurs in closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grassland. 5–300 meters	April-June	--/--/1B.2	**Suitable Conditions Absent:** The BSA does not support vernal pools or the associated habitats. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property.
northern curly-leaved monardella *Monardella sinuata* ssp. *nigrescens*	Annual herb that occurs in sandy soil among chaparral, lower montane coniferous forest, coastal dunes, and coastal scrub with openings. 0–300 meters	April-September	--/--/1B.2	**Suitable Conditions Present:** CNDDB documents occurrences along Highway 68, south of airport fence, east of Olmstead Road, and west of Canyon Del Ray. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property.

Table 1. Special-Status Plant Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/State/ CNPS	Rationale for Expecting Presence or Absence
San Joaquin wooly-threads *Monolopia (Lembertia) congdonii*	Annual herb; occurs in chenopod scrub and valley and foothill grassland on sandy soils. 60–800 meters.	February-May	FE/--/1B.2	**Suitable Conditions Absent:** BSA does not support the appropriate habitats and the BSA elevation is lower than documented range for this species. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property.
woodland woollythreads *Monolopia gracilens*	An annual herb associated with serpentine soil. Often found in openings within broadleafed upland forest, chaparral, cismontane woodland, north coast coniferous forest, and valley and foothill grassland. 100–1200 meters	February - July	--/--/1B.2	**Suitable Conditions Absent:** BSA does not support the appropriate soil or habitats and the BSA elevation is lower than documented range for this species. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property.
Yreka phlox *Phlox hirsuta*	A perennial herb that occurs in lower and upper montane coniferous forests in association with serpentinite and talus. 820–1,500 meters	April-June	FE/SE/1B.2	**Suitable Conditions Absent:** BSA does not support the appropriate soil or habitats and the BSA elevation is lower than documented range for this species. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season. Species has not been documented on the airport property.
Monterey pine *Pinus radiata*	Evergreen tree; only native stands restricted to Año Nuevo, Cambria, and the Monterey Peninsula. Occurs in closed-cone coniferous forest and cismontane woodland. 25–185 meters.	n/a	--/--/1B.1	**Suitable Conditions Present:** BSA supports suitable sandy soil and habitat conditions for this species. **Species Absent:** Monterey pines are not present in the BSA.

Table 1. Special-Status Plant Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/State/ CNPS	Rationale for Expecting Presence or Absence
Yadon's rein orchid *Piperia yadonii*	Perennial herb occurs in coastal bluff scrub, closed-cone coniferous forest, and maritime chaparral with sandy soil. 10–510 meters.	May-August	FE, CH/--/1B.1	**Suitable Conditions Present:** Suitable soil occurs in the BSA but the lack of Monterey pines or maritime chaparral results in marginal habitat conditions for Yadon's piperia. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season.
Choris' popcorn-flower *Plagiobothrys chorisianus* var. *chorisianus*	Annual herb that occurs in vernal pools and other wet areas among chaparral, coastal prairie, and coastal scrub habitats. 15–160 meters	March-June	--/--/1B.2	**Suitable Conditions Absent:** Vernal pools are not present in the BSA. CNDDB documents two occurrences in Fort Ord National Monument. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season.
hooked popcorn-flower *Plagiobothrys uncinatus*	Annual herb occurs in chaparral, cismontane woodland, and valley and foothill grassland with sandy soils. 300–760 meters.	April-May	--/--/1B.1	**Suitable Conditions Absent:** Suitable soil occurs in the BSA but the elevation of the BSA is lower than this species range. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season.
Hickman's cinquefoil *Potentilla hickmanii*	Perennial herb occurs in wet areas associated with coastal bluff scrub, closed-cone coniferous forest, meadows and seeps, and freshwater marshes. 10–149 meters.	April-August	FE/SE/1B.1	**Suitable Conditions Absent:** Wet areas are not present in the BSA. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season.
angel's hair lichen *Ramalina thrausta*	An epiphytic lichen that grows on dead twigs and other lichens in north coast coniferous forests. 75–430 meters	n/a	--/--/2B.1	**Suitable Conditions Absent:** The BSA does not support north coast coniferous forests. **Species Absent:** Species not observed in the BSA during surveys.

Table 1. Special-Status Plant Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/State/ CNPS	Rationale for Expecting Presence or Absence
pine rose *Rosa pinetorum*	Perennial shrub occurs in closed-cone coniferous forest. 2–300 meters.	May-July	--/--/1B.2	**Suitable Conditions Absent:** The BSA does not support coniferous forests. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season.
maple-leaved checkerbloom *Sidalcea malachroides*	Perennial herb occurs in broad-leafed upland forest, coastal prairies, coastal scrub, north coast coniferous forest, and riparian woodland. Often found in disturbed areas. 2–730 meters.	April-August	--/--/4.2	**Suitable Conditions Absent:** The BSA does not support the appropriate habitats. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season.
Santa Cruz microseris *Stebbinsoseris decipiens*	Annual herb occurs in broadleaf upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, and valley and foothill grassland. Associated with open areas; occasionally occurring in serpentinite. 10–500 meters.	April-May	--/--/1B.2	**Suitable Conditions Absent:** The BSA does not support the appropriate habitats. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season.
California screw moss *Tortula californica*	Moss that occurs in chenopod scrub and valley and foothill grassland associated with sandy soil. 10–1,460 meters.	n/a	--/--/1B.2	**Suitable Conditions Absent:** The BSA does not support the appropriate habitats. **Species Absent:** Species not observed in the BSA during surveys.
Santa Cruz clover *Trifolium buckwestiorum*	Annual herb occurs in broadleaf upland forest, cismontane woodland and coastal prairies with gravelly margins. 105–610 meters.	April-October	--/--/1B.1	**Suitable Conditions Absent:** The BSA does not support the appropriate habitats. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season.
saline clover *Trifolium hydrophilum*	Annual herb that occurs in marshes and swamps, valley and foothill grassland (mesic, alkaline), and vernal pools. 0–300 meters.	April-June	--/--/1B.2	**Suitable Conditions Absent:** The BSA does not support the appropriate habitats. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season.

Table 1. Special-Status Plant Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/State/ CNPS	Rationale for Expecting Presence or Absence
Pacific Grove clover *Trifolium polyodon*	Annual herb usually associated with mesic sites in closed-cone coniferous forest, coastal prairies, meadows and seeps, and valley and foothill grassland. 5–120 meters.	April-June	--/SR/1B.1	**Suitable Conditions Absent:** The BSA does not support mesic conditions. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season.
Monterey clover *Trifolium trichocalyx*	Annual herb occurs in closed-cone coniferous forest with sandy openings or burned areas. 30–240 meters.	April-June	FE/SE/1B.1	**Suitable Conditions Absent:** The BSA does not support the appropriate habitats. **Species Absent:** Species not observed in the BSA during surveys conducted in the appropriate season.

General references: California Department of Fish and Wildlife (CDFW) 2015, Hickman (ed.) 1993, Matthews 1997, CNDDB 2015

Status Codes
--= No status

Federal:
FE = Federal Endangered
FT = Federal Threatened
CH = Federal Critical Habitat

State:
SE = State Endangered
ST= State Threatened
SR= State Rare

California Native Plant Society (CNPS):
Rank 1B = rare, threatened, or endangered in California and elsewhere.
Rank 2 = rare, threatened, or endangered in California, but more common elsewhere.
Rank 3 = plants that about which more information is needed.
Rank 4 = a watch list plants of limited distribution.

Threat Code:
.1 = Seriously endangered I California (over 80% of occurrences threatened
.2 = Fairly endangered in California (20-80% occurrences threatened)
.3 = Not very endangered I California (<20% of occurrences threatened)

Table 2. Natural Communities of Concern Investigated for Potential Occurrence

Community	Description	Rationale for Expecting Presence or Absence
Central Dune Scrub	A back dune plant community characterized by low growing, drought tolerant shrubs that develop considerable cover. Diagnostic species include *Ericameria ericoides* and *Lupinus chamissonis*.	The BSA does not support dune habitats.
Central Maritime Chaparral	A variable scrub community of moderate to high cover dominated by various *Arctostaphylos* sp. Found on well drained sandy soils in areas subject to summer fog.	The BSA does not support maritime chaparral.
Monterey Cypress Forest	A moderately dense forest dominated by *Callitropsis macrocarpa;* understory usually consist of scattered shrubs and perennial herbs. This community is confined to rocky granitic soils of coastal bluffs.	The BSA does not support Monterey cypress forest.
Monterey Pine Forest	Open to dense forest dominated by *Pinus radiata* with a significant presence of coast live oak. The understory is variable in density and composition. Monterey pine forests are limited to areas with well-drained sandy soils and marine fog.	The BSA does not support Monterey pine forest.
Monterey Pygmy Cypress Forest	A lower growing scattered forest occurring on marine terraces with sterile, acidic, and poorly drained soils. Often intergrades with Monterey pine forest. Typical understory species include *Arctostaphylos hookeri* and *Vaccinium ovatum*.	The BSA does not support Monterey pygmy cypress forest.
Northern Bishop Pine Forest	Open to dense serotinous forest dominated by *Pinus muricata*. This community often intergrades with northern coastal scrub on rocky soils, upland redwood forest on protected sites, or pygmy cypress forest on coastal terraces with podzol soils.	The BSA does not support northern bishop pine forest.
Northern Coastal Salt Marsh	Marsh habitat supporting herbaceous, suffrutescent, salt tolerant hydrophytes often active in summer and dormant in winter. Characteristic species include *Jaumea carnosa*, *Limonium californicum*, and *Frankenia salina*. Developed around Humboldt Bay, Tomales Bay, San Francisco Bay, Elkhorn Slough, and Morro Bay.	The BSA does not support northern coastal salt marsh.
Valley Needlegrass Grassland	A mid-height (to 2 feet) grassland dominated by perennial, tussock-forming needlegrass (*Nassella* spp.). Native and introduced annuals occur between the perennials, often actually exceeding the bunchgrasses in cover. Usually on fine-textured (often clay) soils, moist or even waterlogged during winter, but very dry in summer.	The BSA does not support valley needlegrass grassland.

Table 3. Special-Status Animal Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Legal Status Federal/State/ CDFW	Rationale for Expecting Presence or Absence
Invertebrates			
vernal pool fairy shrimp *Branchinecta lynchi*	Occur in vernal pool habitats including depressions in sandstone, to small swale, earth slump, or basalt-flow depressions with a grassy or, occasionally, muddy bottom in grassland.	FT, CH/--/--	BSA does not support suitable habitat. The project will have no effect on vernal pool fairy shrimp and will not adversely modify critical habitat.
California linderiella *Linderiella occidentalis*	Seasonal ponds in grasslands, sandstone depressions, and alluvial flats with hardpan beneath.	--/--/SA	BSA does not support suitable habitat. Not expected to occur.
globose dune beetle *Coelus globosus*	Inhabitant of coastal sand dune habitat. Inhabits foredunes and sand hummocks, burrowing beneath the sand surface. Most common beneath dune vegetation.	--/--/SA	BSA does not support suitable habitat. Not expected to occur.
monarch butterfly *Danaus plexippus*	Species occurs along the coast from northern Mendocino to Baja California, Mexico. Winter roosts in wind protected tree groves (eucalyptus, Monterey pine, and cypress) where nectar and water sources are abundant.	--/--/SA	BSA does not support suitable habitat. Not expected to occur.
Smith's blue butterfly *Euphilotes enoptes smithi*	Coastal dunes and coastal sage scrub plant communities in Monterey and Santa Cruz counties. Utilizes *Eriogonum latifolium* and *Eriogonum parvifolium* as a host plant for larval and food.	FE, PCH/--/--	BSA does not support the necessary host plant or suitable habitat. The project will have no effect on Smith's blue butterfly and will not adversely modify proposed critical habitat.
Fish			
tidewater goby *Eucyclogobius newberryi*	Brackish shallow lagoons and lower stream reaches where water is fairly still, but not stagnant.	FE, CH/--/SSC	BSA does not support any suitable aquatic habitat. The project will have no effect on tidewater goby and will not adversely modify critical habitat.
steelhead – south/central California coast DPS *Oncorhynchus mykiss irideus*	Clear, cool water with abundant in-stream cover, well-vegetated stream margins, relatively stable water flow, and a 1:1 pool-to-riffle ratio.	FT, CH/--/SSC	BSA does not support any suitable aquatic habitat. The project will have no effect on steelhead and will not adversely modify critical habitat.

Table 3. Special-Status Animal Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Legal Status Federal/State/ CDFW	Rationale for Expecting Presence or Absence
Amphibians			
California tiger salamander *Ambystoma californiense*	Vernal pools within grassland or oak woodlands; require seasonal water, ground squirrel burrows, or other underground refuges.	FT, CH/ST/--	BSA does not support any suitable aquatic breeding habitat or upland habitat. The project will have no effect on California tiger salamander and will not adversely modify critical habitat.
Foothill yellow-legged frog *Rana boylii*	Frequents rocky streams and rivers with rocky substrate and open, sunny banks, in forests, chaparral, and woodlands. Range in California includes the north and central coasts and the western Sierras.	--/--/CSC	BSA does not support any suitable aquatic breeding habitat or upland habitat.
California red-legged frog *Rana aurora draytonii*	Aquatic habitats with little or no flow and surface water depths to at least 2.3 feet. Presence of fairly sturdy underwater supports such as cattails.	FT, CH /--/SSC	BSA does not support any suitable aquatic breeding habitat or upland habitat. The project will have no effect on California red-legged frog and will not adversely modify critical habitat.
Coast range newt *Taricha torosa torosa*	Breed in ponds, reservoirs, and slow-moving streams. Frequents terrestrial habitats such as oak woodlands.	--/--/CSC	BSA does not support any suitable aquatic breeding habitat or upland habitat.
Reptiles			
southwestern pond turtle *Emys marmorata*	Quiet waters of ponds, lakes, streams, and marshes. Typically in the deepest parts with an abundance of basking sites.	--/--/SSC	BSA does not support any suitable aquatic habitat or upland habitat. Not expected to occur.
silvery legless lizard *Anniella pulchra pulchra*	Sandy or loose loamy soils with high moisture content under vegetation.	**--/--/**SSC	The BSA supports appropriate soils but lacks necessary soil moisture content and shelter. Recent surveys for this species have indicated that the airport property supports very few legless lizards. Due to the lack of shelter in the BSA and the marginal conditions in the BSA, legless lizards are not expected to occur in the BSA.

Table 3. Special-Status Animal Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Legal Status Federal/State/ CDFW	Rationale for Expecting Presence or Absence
coast horned lizard *Phrynosoma blainvillii*	Frequents a wide variety of habitats. Most commonly occurring in lowlands along sandy washes with scattered low bushes.	--/--/SSC	BSA supports marginal sandy soil habitat, but these areas are highly disturbed and lack shelter. Coast horned lizard has not been observed on the airport property.
two-striped garter snake *Thamnophis hammondii*	Occurs in coastal California from Salinas to Baja California and occurs at elevations up to 7,000 feet. Found along streams with rocky beds and permanent freshwater.	--/--/SSC	BSA does not support any suitable aquatic habitat. Not expected to occur.
Birds			
tricolored blackbird *Agelaius tricolor*	(Nesting colony); requires open water, protected nesting substrate, and foraging area with insect prey.	--/CE/SSC	BSA does not support suitable nesting habitat. Not expected to occur.
burrowing owl *Athene cunicularia*	(Burrow and wintering sites); open, dry grasslands, deserts and scrublands. Subterranean nester, dependent upon burrowing mammals.	BCC/--/SSC	Due to ongoing maintenance, over wintering burrowing owl is not expected to occur in the BSA.
marbled murrelet *Brachyramphus marmoratus marmoratus*	(Nesting); spends most of the non-breeding season in off shore or near shore environments near coniferous forests. The only California alcid species to nests inland. Typically nests in the upper branches of redwoods or Douglas-fir forests. Builds its nests with lichens and mosses.	FT, CH/SE/--	BSA does not support suitable nesting habitat. The project will have no effect on marbled murrelet and will not adversely modify critical habitat.
ferruginous hawk *Buteo regalis*	(Non-breeding and wintering); occurs in open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon-juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice.	BCC/--/WL	BSA supports suitable foraging habitat. Impacts to the species are not expected to occur.
western snowy plover *Charadrius alexandrinus nivosus*	(Nesting); occurs on sandy beaches, salt pond levees, and shores of large alkali lakes. Needs sandy, gravelly, or friable soils for nesting.	FT, CH/--/SSC	BSA is removed from any aquatic sites with shoreline for foraging thus does not support suitable nesting habitat. The project will have no effect on western snowy plover and will not adversely modify critical habitat.

Table 3. Special-Status Animal Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Legal Status Federal/State/ CDFW	Rationale for Expecting Presence or Absence
western yellow-billed cuckoo *Coccyzus americanus*	(Nesting); occupies forests to open riparian woodlands with thick under story. Prefers extensive deciduous riparian thickets or forests with dense, low-level or understory foliage, associated with slow-moving watercourses, backwaters, or seeps. Willows are typically a dominant component of the vegetation.	FC/SE/--	BSA does not support suitable nesting habitat. The project will have no effect on western yellow-billed cuckoo.
black swift *Cypseloides niger*	(Nesting); occurs along the coastal belt of Santa Cruz and Monterey counties, central and southern Sierra Nevada, and in the San Bernardino and San Jacinto Mountains. Breeds in small colonies on cliffs, near waterfalls and on sea bluffs above the ocean.	BCC/--/SSC	BSA does not support suitable nesting habitat. Not expected to occur.
Southwestern willow flycatcher *Empidonax traillii extimus*	Occurs in riparian woodlands of southern California.	FE/SE/--	The BSA does not support any riparian habitat. The project will have no effect on southwestern willow flycatcher. The BSA is outside of designated critical habitat.
California horned lark *Eremophila alpestris actia*	**Occurs in short grass prairies, coastal plains, fallow grain fields and alkali flats. Found in coastal regions from Sonoma to San Diego county, and west to the San Joaquin Valley. .**	--/--/WL	**The BSA supports marginal conditions for California horned lark and other ground nesting birds.**
prairie falcon *Falco mexicanus*	(Nesting); occurs in dry, open terrain that is either level or hilly. Nesting habitat is limited to cliffs.	BCC/--/WL	BSA does not support suitable nesting habitat. Not expected to occur.
California condor *Gymnogyps californianus*	Occurs in open savannahs, grasslands, and foothill chaparral, in mountain ranges with moderate altitudes. Nest in deep canyons on rock walls with clefts.	FE, CH/SE, FP/--	BSA does not support suitable habitat. The project will have no effect on California condor and will not adversely modify critical habitat.
California black rail *Laterallus jamaicensis coturniculus*	Shore birds known to frequent tidal salt marshes. Utilize densely vegetated mud flats and high tide line in salt water marsh systems.	--/ST/--	BSA does not support any saltmarsh habitat. Not expected to occur.
ashy storm-petrel *Oceanodroma homochroa*	(Rookery site); colonial nester on offshore islands. Usually nests on driest part of islands. Forages over open ocean. Nest sites on islands are in crevices beneath loosely piled rocks or driftwood, or in caves.	--/--/SSC	BSA does not support rookery habitat. Not expected to occur.

Table 3. Special-Status Animal Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Legal Status Federal/State/ CDFW	Rationale for Expecting Presence or Absence
California brown pelican *Pelecanus occidentalis californicus*	(Nesting colony and communal roosts); nests on coastal islands in colonies.	FE/SD, FP/--	BSA does not support nesting or roosting habitat. The project will have no effect on California brown pelican.
California clapper rail *Rallus longirostris obsoletus*	Occurs within salt and brackish marshes dominated by pickleweed and Pacific cordgrass. Currently, this species is restricted to marsh areas within the vicinity of San Francisco Bay.	FE/SE, FP/--	BSA does not support suitable marsh habitat. The project will have no effect on California clapper rail.
bank swallow *Riparia riparia*	Nests in colonies in vertical sand banks. Forages over meadows and water.	--/ST/--	BSA does not support cliffs or banks for nesting habitat. Not expected to occur.
California least tern *Sternula antillarum brown*	Largely a coastal species that feed on fish and nest on sandy dunes or beaches. Once a common species in California; currently nesting colonies are isolated to Southern California and scattered Bay Area beaches.	FE/SE/--	The BSA is not located on the coast and does not support sandy beach habitat. The project will have no effect on California least tern.
least Bell's vireo *Vireo bellii pusillus*	(Nesting); summer resident of southern California. Occurs in low riparian areas in the vicinity of water or in dry river bottoms below 2000 feet. Nests along the margins of bushes or twigs of willow, Baccharis, or mesquite.	FE, CH, BCC/SE/--	BSA does not support suitable nesting habitat. The project will have no effect on least Bell's vireo and will not adversely modify critical habitat.
Other nesting birds Class Aves	**(Nesting); various habitats.**	**MBTA/CDFW Section 3503**	**Marginal nesting habitat occurs within vegetation in the BSA. No areas with vegetation will be directly affected, but indirect effects of noise and disturbance could occur. Pre-activity nesting bird surveys are recommended.**
Mammals			
Townsends big-eared bat *Corynorhinus townsendii*	Occurs in a wide variety of habitats; most common in mesic (wet) sites. May use trees for day and night roosts; however, requires caves, mines, rock faces, bridges or buildings for maternity roosts. Maternity roosts are in relatively warm sites.	--/SC/SSC	BSA does not support suitable roosting habitat or mesic areas for foraging.

Table 3. Special-Status Animal Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Legal Status Federal/State/ CDFW	Rationale for Expecting Presence or Absence
southern sea otter *Enhydra lutris nereis*	Sea otters are found in nearshore marine environments of California from Año Nuevo, San Mateo Co. to Point Sal, Santa Barbara Co.	FT, MMPA/FP/--	BSA does not support any suitable marine habitat. The project will have no effect on southern sea otter.
hoary bat *Lasiurus cinereus*	Occurs in open habitats and habitat mosaics with access to trees for cover. Roosts in dense foliage of medium to large trees.	--/--/SA	BSA does not support roosting habitat. Not expected to occur.
Salinas harvest mouse *Reithrodontomys megalotis distichlis*	Known only from the Monterey Bay region. Occurs in fresh and brackish water wetlands and probably in the adjacent uplands around the mouth of the Salinas River.	--/--/SA	BSA does not support suitable marsh habitat. Not expected to occur.
American badger *Taxidea taxus*	Occurs in open stages of shrub, forest, and herbaceous habitats; needs uncultivated ground with friable soils for burrowing.	--/--/SSC	BSA does not support suitable habitat. Not expected to occur.

Status Codes
--= No status

Federal:
FE = Federal Endangered
FT = Federal Threatened
FC = Federal Candidate
CH= Federal Critical Habitat
PCH = Proposed Federal Critical Habitat
BCC = USFWS Bird of Conservation Concern
MBTA= Protected by Federal Migratory Bird Treaty Act
MMPA = Protected by Marine Mammal Protection Act

State:
SE = State Endangered
ST = State Threatened
SD = State Delisted
FP = Fully Protected Species
SC = State Candidate

California Department of Fish and Wildlife (CDFW):
SSC= California Species of Special Concern
WL = Included on CDFW Watch List
SA= Included in CDFW "Special Animals" List
CDFW Section 3503 = Protected by Section 3503 of CDFW code

3 SURVEY RESULTS

3.1 Existing Conditions/Setting

The BSA occurs within the Seaside 7.5-minute USGS quadrangle map and includes disturbed/developed land with remnant pockets of ruderal vegetation in sandy soil (refer to Figure 3). Of the 132.9 acres in the BSA, 86% of it is developed with chip seal, the existing runway and taxiways, airfield markers, or other anthropogenic ground covering. The project would improve the ground surface of 15 infield areas. Thirteen of these areas are currently covered with chip seal or asphalt. Due to the road-like composition, these infield areas do not support significant vegetation. Likewise, two of the three staging areas are currently covered with asphalt and road base/gravel. The northern staging area supports bare dirt that is comprised of mixed fill soils including gravel, road base, and native soils. The northern staging area and two of the infield subareas support ruderal vegetation that is routinely mowed for visibility and fire safety. Approximately 18.5 acres of ruderal vegetation occurs in the BSA.

3.2 Topography and Soils

The topography within the BSA is relatively level with an elevation of approximately 200 feet (60 meters). According to the Natural Resources Conservation Service (NRCS) Soils Survey, soils at this area of the airport consist of Baywood fine sand (2–15% slopes), which is a deep excessively drained soil occurring on slopes and stabilized dunes formed by windblown sand. Typically, Baywood fine sand supports chaparral and oak woodland communities.

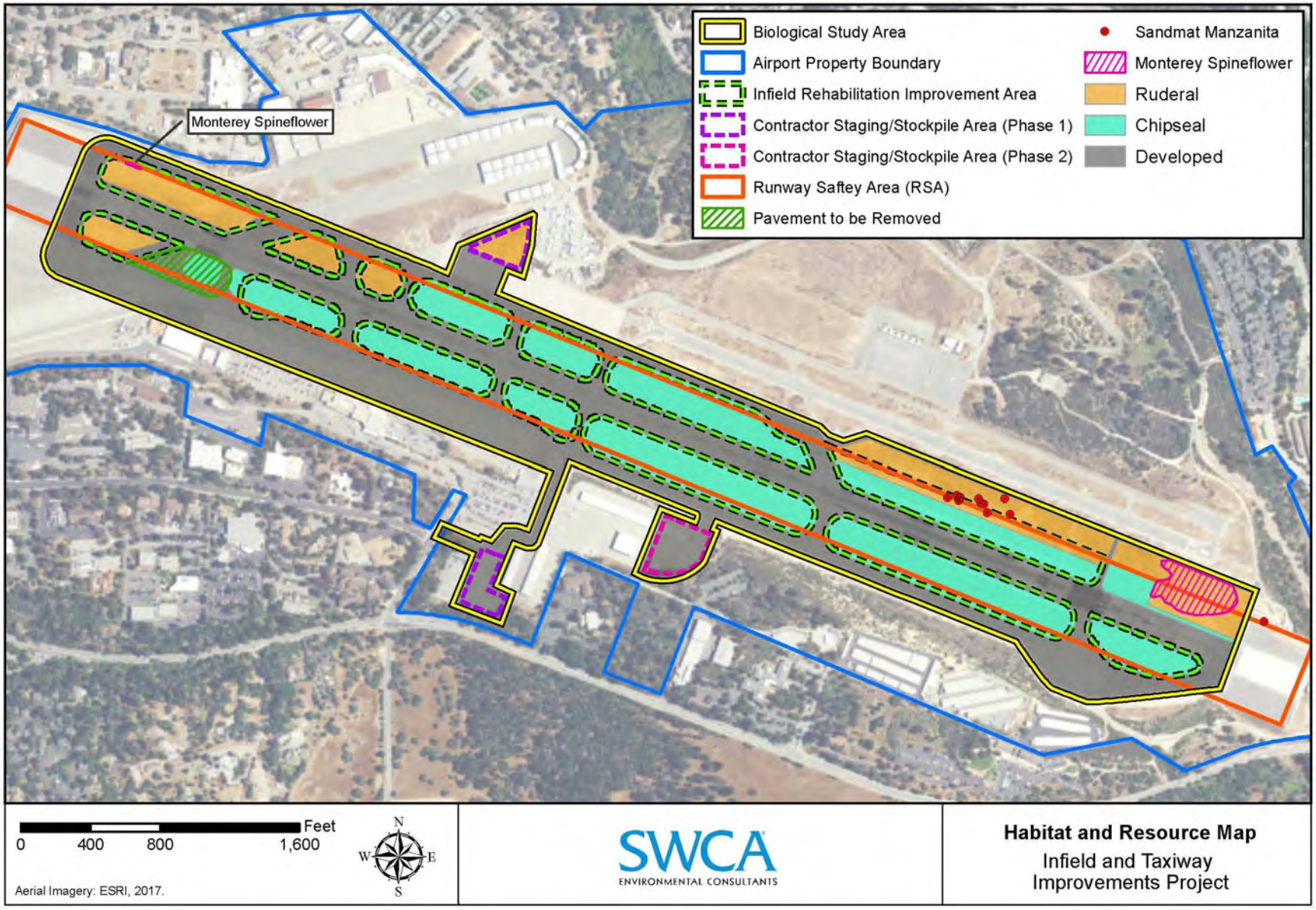
3.3 Vegetative Communities Observed in the BSA

Due to ongoing mowing and maintenance in the BSA, the BSA does not support any intact vegetative communities. The vegetated areas in the BSA support ruderal vegetation with remnant occurrences of native forbs and shrubs.

3.3.1 Ruderal

Ruderal vegetation is usually found in disturbed areas that have been significantly altered by construction, landscaping, or other types of land-clearing activities. Ruderal habitats often occur along roadsides and fence-lines, near developments, and in other areas experiencing severe surface disturbance. Plants found within this habitat are typically introduced Mediterranean species that colonize disturbed lands. Few occurrences of hardy native species such as Monterey spineflower, sandmat manzanita (*Arctostaphylos pumila*), purple owl's clover (*Castilleja exserta*), and annual lupine (*Lupinus bicolor*) have been able to exist in the ruderal vegetation. Approximately 18.8 acres of ruderal vegetation occur in the BSA; 8.51 acres would be permanently removed by the proposed project and 1.09 acres in the northern staging area would be temporarily impacted.

Figure 3. Habitat and Resource Map



3.4 Special-Status Plant Species Observed in the BSA

The special-status plant species observed in the BSA are discussed below.

*3.4.1 Sandmat manzanita (*Arctostaphylos pumila*)*

Sandmat manzanita is a low growing (typically less than 1.5 meters tall) evergreen shrub that occurs in maritime chaparral and in openings within Monterey pine forest. It is endemic to California and limited to areas around Monterey Bay, within 3- to 205-meters elevation. Sandmat manzanita typically occurs on sandy soils associated with stabilized dunes. The California Native Plant Society (CNPS) has included sandmat manzanita on List 1B.2. Sandmat manzanita is widespread on the airport property, and few occurrences were observed growing within the BSA (refer to Figure 3). The individuals located in the BSA are isolated from the maritime chaparral community on other parts of the airport property and mowed to approximately 2 inches tall. Due to the isolation and regular mowing, these individuals do not contribute to the ecological function of the maritime chaparral community on the airport property. The proposed project would remove three of the sandmat manzanita occurrences.

*3.4.2 Monterey Spineflower (*Chorizanthe pungens*)*

Monterey spineflower is an annual herb that occurs at 3 to 450 meters in openings among chaparral, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland on sandy soils. Monterey spineflower is federally threatened under the Federal Endangered Species Act (FESA) and listed on CNPS List 1B.2. Approximately 2.2 acres of occupied Monterey spineflower occurs in the BSA, with most of the occurrences in the northeast portion of the BSA (refer to Figure 3). The Monterey Peninsula Airport District (MPAD) has designed the project to avoid the Monterey spineflower occurrences located in the northeast corner of the BSA.

3.5 Special-Status Animal Species Observed in the BSA

No special-status animal species were observed in the BSA during surveys. However, wildlife surveys conducted for the airport's Wildlife Hazard Assessment documented the presence of California horned larks (*Eremophila alpestris actia*) in the BSA (SWCA 2011). California horned larks and other ground nesting birds that are protected by the MBTA may nest in the vegetated areas of the BSA. In addition, California horned lark is listed as a Species of Special Concern by CDFW.

*3.5.1 California Horned Lark (*Eremophila alpestris actia*)*

The California horned lark is a medium-sized (approximately 7 to 8 inches long), ground-dwelling bird that is a widespread occupant of open habitats across North America. The historical range of the subspecies was from northern coastal California to Mexico and east into the Central Valley. The current distribution is uncertain. It inhabits areas with sparse vegetation and exposed soil. The California subspecies is found along coastal grasslands.

4 REGULATORY OVERVIEW

4.1 Federal Policies and Regulations

4.1.1 Federal Endangered Species Act of 1973

The FESA (Code of Federal Regulations [CFR] Title 50, Part 17) provides legal protection for plant and animal taxa that are in danger of extinction, and classified as either threatened or endangered under the FESA. The FESA requires federal agencies to make a finding on all federal actions, including the

approval by an agency of a public or private action, such as the issuance of a U.S. Army Corps of Engineers (USACE) permit under Section 404 of the Clean Water Act (CWA), as to the potential to jeopardize the continued existence of any listed species potentially impacted by the action.

Section 9 of the FESA protects federally-listed plant and animal species from unlawful take. "Take" is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." The USFWS regulates activities that may result in "take" of listed species. Federally designated critical habitat is also regulated. Constraints to listed species resulting from the implementation of a project would require the responsible agency or individual to formally consult with the USFWS to determine the extent of impact to a particular listed species.

Project-related activities that could result in impacts, such as take, to listed species require federal agencies to consult with the USFWS to determine the extent of impacts to listed species. Once USFWS reviews a Biological Assessment for a project, they may issue a federal Biological Opinion and Incidental Take Statement under FESA Section 7 that includes provisions for legal take, provided that specific mitigation measures are employed for construction.

The BSA supports Monterey spineflower, which is listed as threatened under the FESA. Due to the presence of this species in the BSA, FAA coordination with USFWS is warranted. Potential project effects on Monterey spineflower are discussed in Section 5 below.

4.1.2 Migratory Bird Treaty Act of 1918

The MBTA protects all migratory birds, including their eggs, nests, and feathers. The MBTA was originally drafted to put an end to the commercial trade in bird feathers, popular in the latter part of the 1800s. The MBTA is enforced by USFWS, and potential impacts to species protected under the MBTA are evaluated by USFWS in consultation with other federal agencies.

The ruderal vegetation in the BSA supports marginal habitat for ground nesting birds that are protected under the MBTA. Recommendations for avoiding impacts to MBTA protected species are discussed in Section 5 below.

4.1.3 Section 404 of the Clean Water Act

USACE is responsible for the issuance of permits for the placement of dredged or fill material into "waters of the United States" pursuant to Section 404 of the CWA (33 United States Code 1344). As defined by USACE in 33 CFR 328.3(a)(parts 1–6), "Waters of the United States" are summarized as those waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; tributaries and impoundments to such waters; all interstate waters including interstate wetlands; and territorial seas.

If a project would result in dredge or fill of "waters of the United States," the project would be subject to Section 404 of the CWA, based on review by USACE. The airport airfield, including the BSA, does not contain any jurisdictional wetlands or other waters that would be subject to the CWA. Therefore, implementation of the proposed project would not require coordination with or authorization from USACE.

4.1.4 Section 401 of the Clean Water Act of 1977

Section 401 of the CWA and its provisions ensure that federally permitted activities comply with the federal CWA and state water quality laws. Section 401 is implemented through a review process that is conducted by the Regional Water Quality Control Board (RWQCB), and is triggered by the Section 404

permitting process. The proposed project is not subject to Section 404 of the CWA; therefore, Section 401 of the CWA does not apply to the project.

4.2 State Policies and Regulations

4.2.1 California Fish and Game Code

California Fish and Game Code Section 3511 includes provisions to protect Fully Protected species, such as: (1) prohibiting take or possession "at any time" of the species listed in the statute, with few exceptions; (2) stating that "no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to "take" the species; and (3) stating that no previously issued permits or licenses for take of the species "shall have any force or effect" for authorizing take or possession. The CDFW is unable to authorize incidental take of "fully protected" species when activities are proposed in areas inhabited by those species. Sections 3503 and 3503.5 of the Fish and Game Code state that it is unlawful to take, possess, or destroy the nest or eggs of any bird, with occasional exceptions. In addition, Section 3513 states that it is unlawful to take or possess any migratory bird as designated in the MBTA or any part of such migratory birds except as provided by rules and regulations under provisions of the MBTA.

The BSA does not support suitable habitat for any Fully Protected species. The ruderal vegetation in the BSA supports marginal habitat for ground nesting birds that are protected under the Sections 3503 and 3503.5 of the Fish and Game Code. Recommendations for avoiding impacts to nesting birds are discussed in Section 5 below.

4.2.2 California Endangered Species Act of 1984

California has a parallel mandate to the FESA, which is embodied in the California Endangered Species Act (CESA) and the Native Plant Protection Act (NPPA) of 1977. The CESA ensures legal protection for plants listed as rare or endangered, and wildlife listed as threatened or endangered. The CDFW regulates activities that may result in the "take" of such species. CDFW also maintains a list of California Species of Special Concern based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. Under state law, CDFW is empowered to review projects for their potential to impact state-listed species and Species of Special Concern, and their habitats.

Take of state listed species would require a Section 2081 Incidental Take Permit from CDFW. This process requires submittal of a sensitive species study and permit application package, and is similar to the FESA Section 10 process, except that CDFW is the regulatory and decision-making agency. A CDFW 2081 Incidental Take Permit typically has mitigation requirements similar to a federal USFWS Biological Opinion. If CDFW concurs that impacts to a state listed species would likely occur as a result of a proposed project, alternatives and measures to avoid or reduce the impacts must be identified in a Section 2081 permit to allow for incidental take authorization. CDFW may also include compensatory mitigation (mitigation/conservation bank) requirements for impacts to habitat for listed plants and wildlife.

Botanical surveys conducted in the appropriate season confirmed the absence of CESA listed species in the BSA. Coordination with CDFW to obtain a Section 2081 Incidental Take Permit will not be necessary.

4.2.3 Section 1602 of the Fish and Game Code

CDFW is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the law requires any person, state, or local government agency or public utility proposing a project that may impact a river, stream, or lake to notify CDFW

before beginning the project. If CDFW determines that the proposed project may adversely affect existing fish and wildlife resources, a Lake or Streambed Alteration Agreement (Section 1600) is required. The proposed project would not affect any river, stream, or lake; therefore, a streambed alteration agreement would not be required.

4.2.4 California Environmental Quality Act

Guidance for determining CEQA significance thresholds is based on Appendix G of the State CEQA Guidelines. Using these guidelines, activities requiring CEQA review would have a significant impact on biological resources if they would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by CDFW or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA;
- Interfere substantially with the movement of any resident or migratory species of wildlife, wildlife corridors, or wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources; and/or,
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

5 IMPACT ASSESSMENT AND MITIGATION

This impact assessment focuses on identifying potential impacts associated with implementation of the proposed project and is based on the site's existing conditions and the regulatory setting at the time the BFSR was prepared. This section focuses on determining the potential effects of the project on special-status species, habitats, and potentially jurisdictional areas within the BSA. Adverse impacts could occur if the proposed project would result in temporary or permanent modification to sensitive habitats or to habitats occupied by special-status species. Where potential impacts to sensitive resources have been identified, measures for avoiding, minimizing, or mitigating adverse effects to these resources are recommended. Impact calculations are based on conceptual site plans and are subject to refinement.

5.1 Sufficiency of Biological Data

The biological surveys conducted in support of this BFSR were sufficient to inventory the biological resources in the BSA. No additional field surveys or specialized investigation is needed to determine which resources may be impacted by the proposed project and the appropriate avoidance/mitigation measures.

5.2 Impacts

5.2.1 Project Effect on Unique or Special-Status Species or their Habitats

5.2.1.1 SPECIAL-STATUS PLANT SPECIES

Twelve sandmat manzanita plants occur in the BSA. Implementation of the proposed infield improvements would permanently remove three of these individuals. Avoidance and Mitigation Measure BIO-1 below provides mitigation for the removal of these three sandmat manzanita plants.

The BSA supports 18.8 acres of suitable habitat for Monterey spineflower. At the time of the surveys, approximately 2,400 Monterey spineflower individuals were observed in the BSA. Monterey spineflower is an annual species. As with many annual species, the size and locations of Monterey spineflower occurrences can fluctuate through time. This factor limits the predictive value of plant location as indicators of future occurrences, making it difficult to accurately account for the loss of individuals resulting from a proposed project. As such, an assessment of affected suitable habitat and occupied habitat is a better indication of the effects of a project on this species.

The surveys identified 2.2 acres of occupied Monterey spineflower habitat in the BSA (refer to Figure 3). MPAD has designed the project to avoid impacts to all but 0.015 acre of occupied Monterey spineflower habitat. The avoidance was accomplished by eliminating the proposed improvements in Subarea A-3. The 0.015 acre of Monterey spineflower that will be impacted includes a small grouping located in Subarea C-6 (refer to Figure 3). Converting the ruderal portions of the infield Subareas C-1, C-4, C-5, and C-6, as well as the northern portion of A-4, would result in the permanent loss of 8.51 acres of suitable but unoccupied Monterey spineflower habitat. The loss of suitable but unoccupied habitat would result from converting the ruderal habitat to developed infield areas. The loss of occupied and available (not occupied) Monterey spineflower habitat indicates that the proposed project is likely to adversely affect the species. Avoidance and Mitigation Measures BIO-4 and BIO-5 provide mitigation for the anticipated impacts to Monterey spineflower.

5.2.1.2 WILDLIFE

The BSA provides suitable habitat for nesting bird species (including California horned lark). Common passerines may use the ruderal vegetation for nesting and/or foraging; raptors may use the area for foraging. The ground bird nesting habitats would be impacted by project activities including grading and vegetation removal. If the project activities are conducted between March and September, birds may be nesting within or adjacent to the affected area and the individuals could be directly or indirectly impacted. Direct impacts may include loss of active nests during vegetation removal. Avoidance and Mitigation Measure BIO-6 recommends measures to avoid impacts to nesting birds during project implementation.

The sandy soils on the airport property provide suitable habitat for silvery legless lizard (*Anniella pulchra pulchra*). However, this species requires sheltering opportunities provided by shrubs, trees, or woody debris. Silvery legless lizard is a fossorial species that spends most of its life underground; therefore, they are difficult to detect without shallow excavation of the soil surface. SWCA biologists have conducted numerous legless lizard survey and monitoring efforts as part of the recent Runway Safety Area and Solar Array Installation projects. These survey and monitoring efforts included excavation of approximately 43 acres of legless lizard habitat, and only one individual was identified. Considering the lack of shelter in the BSA and the apparent low number of legless lizards on the airport property, it is unlikely that legless lizards would be found in the BSA or impacted by the proposed project.

5.2.2 Project Effect on Extent, Diversity, or Quality of Native or Other Important Vegetation Types

The BSA is comprised of developed land and ruderal vegetation. Ruderal vegetation does not qualify as a native or important vegetation type. Therefore, the project will have no effect on native or other important vegetation types.

5.2.3 Project Effect on Wetland or Riparian Habitat

The BSA does not contain any wetland or riparian habitats. Therefore, the project will have no effect on wetlands, riparian habitats, or potentially jurisdictional waters of the United States or California.

5.2.4 Project Effect on Movement of Resident or Migratory Fish and Wildlife Species

The airport airfield is confined by a perimeter fence and does not support any aquatic habitats. The fence greatly limits the movement of residential wildlife. Therefore, the proposed project will have no direct or indirect effect on the movement of resident or migratory fish and wildlife species.

5.3 Avoidance and Mitigation Measures

BIO-1 To mitigate the loss of the three sandmat manzanita plants that are located in the project footprint, the MPAD shall propagate (or purchase), install, and maintain nine sandmat manzanita container plants. In order for the mitigation plants to contribute to the maritime chaparral community on the airport, the mitigation plants should be planted outside of the air operations area but on the airport property. The existing solar facility to the north of the air operations area would be a suitable planting area. To avoid unanticipated impacts to other special-status resources, the sandmat manzanita plantings should be installed along the permanent solar array fence line.

The planted individuals shall be maintained and monitored for no less than 3 years. Maintenance shall ensure that the plantings receive a sufficient amount of supplemental water to become established and that the presence of non-native species does not reduce the planting's survival. Irrigation for the plantings is not expected to be installed; therefore, the plantings may be watered by hand. Water maybe supplied by a water truck or installation of a temporary water tank. If a temporary water tank is installed, the tank shall be located within the solar array footprint and shall not affect any sensitive resources that occur adjacent to the solar array.

BIO-2 Prior to ground disturbance, the project sponsor shall retain an environmental monitor for all measures requiring environmental mitigation to ensure compliance with the mitigation measures. The monitor shall be responsible for: 1) ensuring that procedures for verifying compliance with environmental mitigations are implemented; 2) conducting compliance monitoring and reporting; and 3) conducting construction crew training regarding environmentally sensitive areas. Monitoring shall be at a frequency and duration determined by the project sponsor and in consultation with USFWS.

BIO-3 Project plans shall clearly show the location of project delineation fencing or flagging that excludes adjacent Monterey spineflower and sandmat manzanita occurrences from unnecessary disturbance. The fencing shall consist of highly visible construction fence or pin-flags. The project delineation fencing shall remain in place and functional throughout the

duration of the project and no work activities shall occur outside the delineated work area without the oversight of a monitoring biologist. Project plans shall clearly show all staging areas, which shall be located within previously developed areas on the airport property.

BIO-4 To minimize Monterey spineflower impacts and promote the continued existence of the species on the airport property, MPAD will implement a soil and seed bank conservation program that will include seed and top soil collection and distribution.

Monterey spineflower will be conserved in the temporarily impacted or undisturbed portions of the BSA by broadcast seeding and relocating the soil seed bank. Seed to be broadcast will be collected from the project area prior to start of construction. All seed collection activities will be conducted by a USFWS-approved biologist. This species flowers from April through June; therefore, seed collection would begin in August and continue through September, or when seed production ceases. To the extent feasible, all available seed would be collected from plants located in the project disturbance areas.

Soil from the project disturbance areas containing Monterey spineflower seed would be collected and reapplied. To accomplish this, the upper 6 inches of soil located within the vicinity of existing Monterey spineflower individuals will be collected and redistributed prior to grading activities. Soil collection would occur immediately following completion of seed collection and prior to the first rainfall. The collected soil should be immediately distributed in areas within the BSA that does not have existing Monterey spineflower occurrences. Seed collected from the action area would be broadcast over the relocated soil, and then the receptor site will be lightly raked to cover the seed. The ruderal areas north of Subarea C-4 are a recommended soil/seed receptor site.

BIO-5 To ensure that the Monterey spineflower soil conservation and seeding efforts are successful, the project sponsor will retain a USFWS-approved biologist to assess the receptor site for signs of germination for two seasons after completion of the project. The conservation measures will be considered successful if Monterey spineflower germination is observed in the receptor site during at least one of the two monitoring seasons. If germination is not observed in the receptor site, MPAD will coordinate with FAA to determine appropriate remedial actions designed to conserve the species in the BSA. Potential remedial actions may include non-native species removal in the vicinity of existing Monterey spineflower occurrences or collecting seed from other nearby occurrences and broadcasting the seed in the BSA. Monterey spineflower is a late blooming species; therefore, the monitoring should be conducted between June and September.

BIO-6 To the maximum extent possible, initial grading of the ruderal vegetation in the project area should be conducted between October and February, which is outside of the typical migratory bird breeding season for the area. If the project schedule does not provide for late season initial grading in the ruderal vegetation, a nesting bird survey will be conducted by a qualified biologist no more than one week prior to the grading to determine presence/absence of nesting birds within the vegetated area. In the event that active nests are observed, work activities will be avoided within 100 feet of the active nest(s) until young birds have fledged and left the nest. Based on the habitat conditions, if present, active nests would likely be of killdeer or a sparrow species. The nesting period of these species is approximately three weeks. The nests shall be monitored weekly by a biologist having experience with nesting birds to determine when the nest(s) become inactive. The buffer may be reduced but not eliminated during active nesting if deemed appropriate by the biologist. Readily visible exclusion zones will be established in areas where nests must be avoided. MPAD and the

appropriate regulatory agency will be contacted if any state or federally listed bird species are observed during surveys. Nests, eggs, or young of birds covered by the MBTA and California Fish and Game Code will not be moved or disturbed until the young have fledged.

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Appendix A.
Proposed Action Alternatives

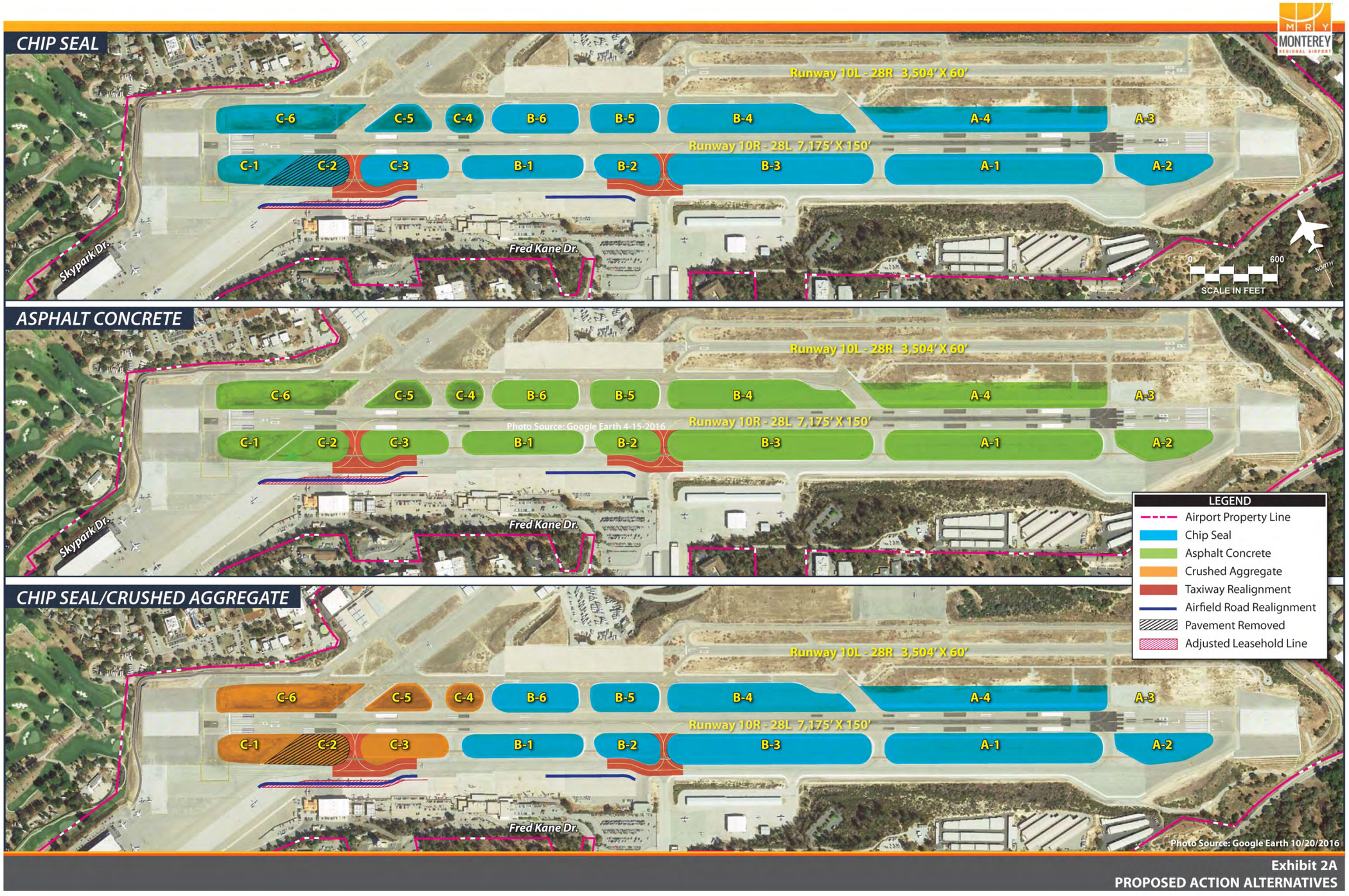

Exhibit 2A
PROPOSED ACTION ALTERNATIVES

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Appendix B.
Survey Photos

PHOTO 1:

Representative view of the ruderal vegetation in the BSA.

Photo taken on May 5, 2015.

PHOTO 2:

Representative view of the ruderal vegetation in the BSA.

Note the abrupt loss of vegetation where the native sand transitions to chipseal.

Photo taken on May 5, 2015.

PHOTO 3:

Representative view of the existing chipseal in the BSA.

Photo taken on May 5, 2015.

PHOTO 4:

View of a Monterey spineflower occurrence in the BSA.

Photo taken on May 5, 2015.

PHOTO 5:

View the ruderal vegetation located in the northern staging area.

Photo taken on November 3, 2017.

PHOTO 6:

View the road base substrate in the southwestern staging area.

Photo taken on November 3, 2017.

PHOTO 7:

View the developed conditions in the southeastern staging area.

Photo taken on November 3, 2017.

Appendix C.
Species Observed

Plant Species Observed

Scientific Name	Common Name	Native	Species Status / Notes
Vascular Plants nomenclature follows " The Jepson Manual" and http://ucjeps.berkeley.edu/interchange.html			
LYCOPHYTES			
Selaginellaceae	**Spike-moss family**		
Selaginella bigelovii	Bigelow's moss fern	yes	
ANGIOSPERMS (DICOTS)			
Aizoaceae	**Fig-marigold family**		
Carpobrotus chilensis	ice plant	No	Cal-IPC: moderate
Conicosia pugioniformis	false ice plant	No	Cal-IPC: limited
Asteraceae	**Sunflower family**		
Baccharis pilularis var. *consanguinea*	coyote brush	Yes	
Corethrogyne filaginifolia	California aster	Yes	
Ericameria ericoides	mock heather	Yes	
Erigeron bonariensis	South American horseweed	No	
Heterotheca grandiflora	telegraph weed	Yes	
Hypochaeris glabra	smooth cat's ear	No	Cal-IPC: limited
Hypochaeris radicata	rough cat's ear	No	Cal-IPC: moderate
Layia platyglosa	tidy tips	Yes	
Lessingina pectinata		Yes	
Logfia gallica	narrow-leafed filago	No	
Madia sativa	Coastal tarweed	Yes	
Senecio vulgaris	ragwort	No	
Taraxacum officinale	dandelion	No	
Boraginaceae	**Borage family**		
Cryptantha clevelandii	Common cryptantha	Yes	
Caryophyllaceae	**Pink family**		
Cardionema ramosissimum	sand mat	Yes	
Silene gallica	catchfly	No	
Spergula arvensis	corn spurry	No	
Cistaceae	**Rock-rose family**		
Helianthemum scoparium	broom rose	Yes	
Ericaceae	**Heath family**		
Arctostaphylos pumila	sandmat manzanita	Yes	1B.2

Scientific Name	Common Name	Native	Species Status / Notes
Euphorbiaceae	**Spurge family**		
Croton californicus	croton	Yes	
Fabaceae	**Pea family**		
Acacia longifolia	golden wattle	No	
Acmispon americanus	Spanish lotus	Yes	
Acmispon glaber	deer weed	Yes	
Genista monspessulana	French broom	No	Cal-IPC: high
Lotus corniculatus	bird's foot trefoil	No	
Lupinus bicolor	miniature lupine	Yes	
Lupinus chamissonis	dune lupine	Yes	
Lupinus nanus	sky lupine	Yes	
Medicago polymorpha	bur clover	No	Cal-IPC: limited
Trifolium campestre	hop clover	No	
Trifolium hirtum	rose clover	No	Cal-IPC: Moderate
Geraniaceae	**Geranium family**		
Erodium cicutarium	red-stemmed filaree	No	Cal-IPC: limited
Erodium botrys	filaree	No	
Montiaceae	**Minor's lettuce family**		
Calandrinia ciliata	redmaids	Yes	
Onagraceae	**Evening primrose family**		
Camissonia cheiranthifolia	beach Primrose	Yes	
Camissonia strigulosa	contorted primrose	Yes	
Orobanchaceae	**Broomrape family**		
Castilleja exserta	purple owl's clover	Yes	
Plantaginaceae	**Plantain family**		
Plantago erecta	California plantain	Yes	
Plantago lanceolata	English plantain	No	Cal-IPC: limited
Plantago coronopus	cut leaf plantain	No	
Polemoniaceae	**Phlox family**		
Navarretia hamata	hooked navarretia	Yes	
Polygonaceae	Buckwheat family		
Chorizanthe pungens	Monterey spineflower	Yes	FT/List 1B.2
Rumex acetosella	sheep sorrel	No	Cal-IPC: moderate

Scientific Name	Common Name	Native	Species Status / Notes
Primulaceae	**Primrose family**		
Anagallis arvensis	scarlet pimpernel	No	
Rosaceae	**Rose family**		
Adenostoma fasciculatum	chamise	Yes	
Heteromeles arbutifolia	toyon	Yes	
Horkelia cuneata ssp. *cuneata*	coast horkelia	Yes	
ANGIOSPERMS (MONOCOTS)			
Cyperaceae	**Sedge family**		
Carex pansa	sand dune sedge	Yes	
Poaceae	**Grass family**		
Aira caryophyllea	silver European hairgrass	No	
Avena barbata	slender wild oats	No	Cal-IPC: moderate
Briza maxima	rattle snake grass	No	Cal-IPC: limited
Bromus diandrus	ripgut brome	No	Cal-IPC: moderate
Bromus hordeaceus	soft chess brome	No	Cal-IPC: limited
Bromus madritensis ssp. *madritensis*	Spanish brome	No	
Cordaderia jubata	pampas grass	No	
Cynodon dactylon	Bermuda grass	No	
Deinandra corymbosa	Coastal tarweed	Yes	
Festuca myuros	rattail fescue	No	Cal-IPC: moderate
Stipa pulchra	purple needle-grass	Yes	

Note: Cal-IPC = California Invasive Plant Council

Wildlife Species Observed

Scientific Name	Common Name	Notes
BIRDS		
Diurnal Raptors		
Cathartes aura	turkey vulture	
Buteo jamaicensis	red-tailed hawk	Foraging in Airfield
Plovers, Oysercatchers, Stilts, Avocets		
Charadrius vociferous	killdeer	Loafing and foraging on Runway shoulders
Pigeons and Doves		
Zenaida macroura	mourning dove	Many groups moving around airfield
Tyrant Flycatchers		
Sayornis nigricans	black phoebe	Foraging in landscape trees
Tyrannus verticalis	western kingbird	Many groups moving around airfield
Jays, Crows, and Allies		
Corvus brachyrhynchos	American crow	
Thrushes		
Sailia mexicana	western bluebird	
Waxwings, Silky-flycatchers, and Starlings		
Sternus vulgaris	European starling	
Emberizine Sparrows and Allies		
Zonotrichia leucophrys	white-crowned sparrow	
Junco hymalis	dark-eyed junco	
Finches and Old World Sparrows		
Carpodacus mexicanus	house finch	Many groups foraging in airfield
MAMMALS		
Rodents		
Spermophilus beecheyii	California ground squirrel	
REPTILES		
Sceloporus occidentalis	western fence lizard	Several sitting in airfield

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